

Observatorio de San Fernando

Observatorio de Marina
BIBLIOTECA

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Plan: Leigh

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A N
A C C O U N T
Of Several L A T E
Voyages & Discoveries

T O T H E
S O U T H and **N O R T H.**

T O W A R D S
**The Streights of *Magellan*, the *South Seas*, the vast
Tracts of Land beyond *Hollandia Nova*, &c.**

A L S O

**Towards *Nova Zembla*, *Greenland* or *Spitsberg*,
Groymland or *Engronddland*, &c.**

B Y

Sir **JOHN NARBOROUGH**, Captain **JASMEN
TASMAN**, Captain **JOHN WOOD**, and
FREDERICK MARTEN of *Hamburgh*.

To which are Annexed a L A R G E
Introduction and **Supplement**,
G I V I N G
An Account of other N A V I G A T I O N S
to those Regions of the *G L O B E*.
The Whole Illustrated with
C H A R T S and **F I G U R E S.**

London: Printed for **Sam. Smith** and **Benj. Walford**, Printers to the
Royal Society, at the *Prince's Arms* in *S. Paul's Churchyard*, 1694.

**OBSERVATORIO DE MARINA
DE
SAN FERNANDO,**

Charles II 1702

To the Honourable
SAMUEL PEPYS, Esq;
SECRETARY

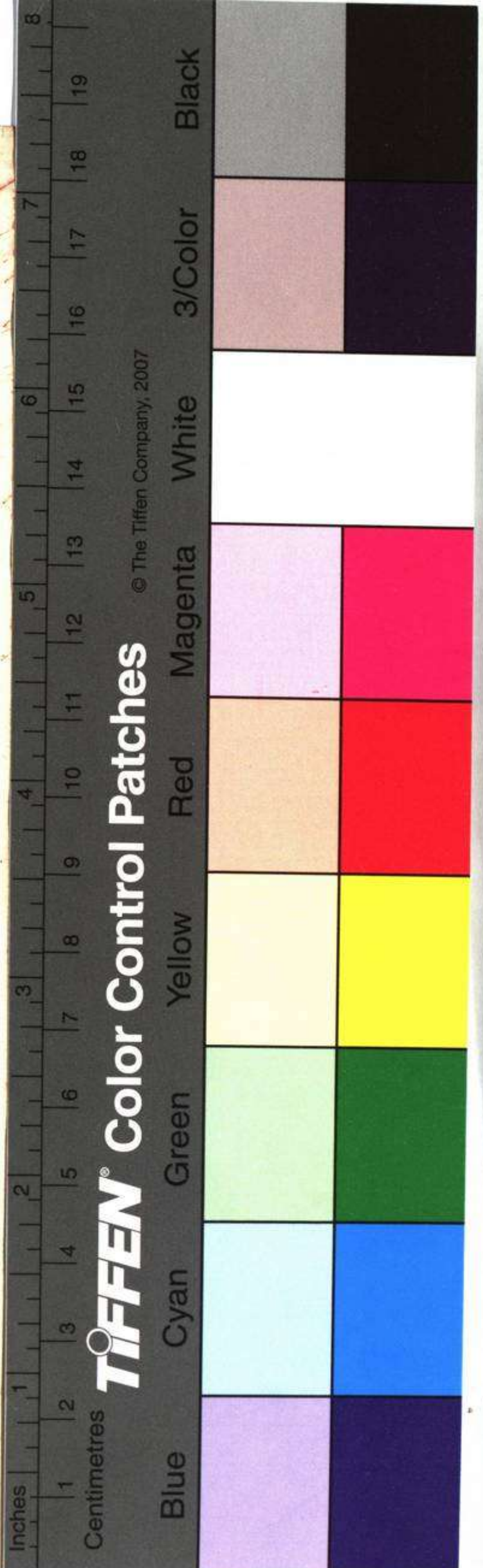
OF THE
Admiralty of England,

TO

K. CHARLES and K. JAMES II.

S I R,

THE Design of this Dedication is neither to flatter, nor to beg; but barely to present you with a simple and hearty Acknowledgment of your Kindness and Generosity to the Publick, in communicating your exact Memorials, in advancing the Progress of Useful Knowledge, and encouraging Men of Letters, or Invention: which Noble Endowments of
A 2 Mind



The Epistle Dedicatory.

Mind render'd you most Worthy of those High Stations, wherein you have been Eminent, as well in the Chair of *Philosophy*, as *Navigation*; and the same will preserve you through all Ages in the good Esteem of the best part of Mankind. No Revolution, no Storm, no Time, can shake such Foundations.

Monumentum Ære perennius.

Sir,

Your most devoted Servants,

*Samuel Smith,
Benjamin Walford.*

THE

THE
 BOOKSELLER'S
 PREFACE,
 OR
 INTRODUCTION.

THE Advantages of taking judicious and accurate Journals in Voyages and Itineraries, are so great and many, as the Improvements of Geography, Hydrography, Astronomy, Natural and Moral History, Antiquity, Merchandise, Trade, Empire, &c. that few Books can compare with them either for Profit or Pleasure. Therefore Ramusio, the De Brys, Hackluit, Purchas, John de Laet, Thevenot, &c. have begun a very commendable Design, and their Works are like to be always useful.

The Collection now published, containing some curious Voyages, and accurate Journals, never before printed, both towards the South and North, beyond and through the Magellan Streights; as also to Greenland or Spitsberg, Nova Zembla, and Groneland or Groyneland. 'Twill be necessary to

premise in general, what other Navigators have gone before to those parts, and what additional Knowledge may be reap'd from the ensuing Work; in doing of which, we shall observe Order of Place and Time.

First of some Discoveries and Navigations towards the Southern Parts of the Globe, South-West and South-East.

A. D. 1519. Ferdinand Magalianes, a Portuguese Gentleman, upon some disgust taken at his Master King Emanuel, applied himself to the Court of Castile, offering to make great Discoveries of the rich Spice-Islands by the West, and to sail round the Globe. He was furnish'd with five Ships and 250 Men, by the Command of Charles V. They departed from Sevil August 10. 1519. and after having in vain attempted to pass through by the great River La Plate, and having winter'd in Fort S. Julian, they found out a great Streight leading into the South Sea, called afterwards, by the Inventor's Name, the Magellan Streight; through which he was the first that passed from the Atlantick into the Pacifick Ocean, and so round the Globe home again by the Molucco's and Cape of Good Hope, having spent above three years in this Circumnavigation. Entering the Streight of his own Name, he found on the Shoar many Sepulchres or Graves, whither the Inhabitants resort in the Summer time to bury their Dead; he also observ'd a great Whale thrown up, and many Bones.

Anno Dom. 1525. Garcias de Loyasa a Spaniard, entred into Magellan's Streight, and gave Names to several Places; as did also Simon de Alcazova in the year 1534. Afterwards the Bishop of Placentia fitted out three Ships, in the Year 1539,

one of which got through the Streights of Magellan to Arica in Peru.

Anno Dom. 1577. Sir Francis Drake, with five Ships and Barks, and 164 Men, began his Famous Voyage round the Globe; sailing through the aforementioned Streight of Magellan to the Coasts of Peru, New Spain, Mexico, and California; returning to England, by the East Indies, and Cape of Good Hope. Captain John Winter was separated from Sir Francis upon their Entrance into the South Sea, and by Storms was forced back again into the Streights of Magellan, through which he repassed home, being the first that sailed from the Pacifick into the Atlantick Ocean, through these Streights. Ladriller, a Spaniard, being sent from Chili, to attempt this passage, was driven back by Storms and the approach of Winter. Anno 1579. the Viceroy of Peru, thinking that Sir Francis Drake was sailed to the Magellan Streights, equipt Don Sarmiento in the Port of Lima with two Ships to pursue him. This Spaniard coasted Chili and Patagonia, entering the Streights, and so passed to Brasil. Sarmiento upon his return to Spain, persuaded Philip II, to send two Colonies to plant and fortifie in the Streights of Magellan, in order to prevent and obstruct the Navigations, Depredations, or Settlements of the English and Dutch in those parts; but they all miscarried partly by Shipwrack, partly by Famine, and the Barbarities of the Patagons. This happened in the years 1584, 1585, 1586. The Project was contrary to the Advice of the Duke of Alva.

Sir Francis, in the Magellan Streight, saw several of the Patagons, or Inhabitants, in their Canoes and Huts; their Boats were made of the Barks of Trees and Seal Skins very artificially interwoven, the Head whereof was semilunar. They painted their Faces either with an Earth or a Vegetable. In their Huts, made of Boughs and Skins of Fishes, he found Sea-Wolves and huge Muscles, whose Shells they sharpen so with rubbing of Stones, that they cut every thing with them. Their Fresh Water was kept in Vessels made of the Barks of Trees, and their Vestments were chiefly made up of the Skins of Penguins, Seals, and other Animals peculiar to the Climate.

Anno Dom. 1586. The third Circumnavigation of the Globe was undertaken and performed by Thomas Candish Esq; who very prosperously finish'd that in two Years and two Months, which took both Magellanus and Sir Francis Drake three years in compassing.

Anno 1593. Sir Richard Hawkins made his Voyage into the South Sea by the same Streight that the aforementioned Navigators did before him. He gives the most accurate Description of the Tree that bears the famous Winter-bark, see his Observations in fol. Printed 1622. pag. 88. This Spicy Aromatick Tree (says he) bears Leaves of a whitish Green, not unlike the Aspen; and bears its Fruit in Clusters like the Hawthorn, but that it is green; each Berry of the bigness of a Peppercorn, and every one of them containing within four or five Grains or Seeds, twice as big as Mustard Seed, which broken are white within and bite like the good Pepper; the Bark hath the
Taste

Taste of all Sorts of Spices, very Stomachick and Medicinal. We found it in all places of the Streights where any Trees grew. Here are abundance of *Muscles*, very refreshing Diet and full of *Pearl*; also *Limpets*, and incredible Numbers of *Penguins* and *Seals*.

Anno Dom. 1598. *The Fourth Circumnavigation of the Globe was performed by Oliver Noort a Dutchman, his chief Pilot being Captain Melis an Englishman, who had accompanied Mr. Candish in his Voyage. This Noort steer'd much the same Course with Magalianes, Drake, and Candish, having spent near three years in encompassing the Earth. He saw, upon the Land of Patagonia, some Deer, a sort of Bufalo, and Ostriches.*

We may note here, that in the Year 1589, the Delight of Bristol, one of the Consorts of John Chidley Esq; and Mr. Paul Wheel, got into the Streights of Magellan; but meeting with Misfortunes, was forced back, having reach'd only Cape Froward. Also in the year 1598. Verhagen's Fleet, under Sir James Mahu, Simon de Cordes, Sebald de Wert, &c. wherein William Adams, was chief Pilot, suffered great Miseries in these Streights. This Sebald de Wert gave Clufius a description of the Winter-bark-Tree growing up and down Patagonia. They preserv'd themselves with Geese, Ducks, vast large Muscles, Penguins, Seals, &c. Returning out of the Strait, and sailing Southwards they discovered Sebald's Isles.

Anno Dom. 1614. George Spilbergen General of a Dutch Fleet of six Ships, passed through the Streights of Magellan and the South Sea to the
East

East Indies, from whence he returned by the Cape of Good Hope to the Texel, having been out about three years. This was the Fifth Circumnavigation of the Globe.

Ann. Dom. 1609, 1610. Pedro Fernandez Giros a Portugese, and Captain Ferdinand de Quir a Spaniard, do both affirm, That they sailed at several times above 800 Leagues together on the Coast of a Southern Continent, until they came to the height of 15 degrees of South Latitude, where they found a very fruitful, pleasant, and populous Country. Giros began to take his Course in the height of the Streights of Magellan. This vast Tract of Land perhaps may be one side of, or may belong to, Jansen Tasmen's Land, Van Diemen's Land, Zelandia Nova, Hollandia Nova, Carpentaria, and New Guiney; which the Dutch afterwards coasted, detected, and gave Names to many Bays, Rivers and Capes, in the Years 1619, 1622, 1627, 1628, 1642, and 1644. from the Equinoctial to 44 deg. South Lat.

The Hollanders have indeed made the greatest Discoveries towards the South Terra Incognita, which they have not yet divulg'd. Dirk Rembrantse about 15 or 16 years ago published, in Low Dutch, a short Relation out of the Journal of Captain Abel Jansen Tasman upon his Discoveries of the South Terra Incognita in the year 1642, to the Southward of Nova Hollandia, Vandemen's Land, &c. 'Tis remarkable that all the Circumnavigators of the Globe enter'd into the East Indies, either by the Philippines or the Molucco's, being peradventure hindred from passing round more Southwards by that vast

vast long Chain of Land, which seems to stretch almost from the Equinoctial to the 50 degree of South Lat. Therefore they generally steer'd upon the South Sea, either for the Isles of Salomon, or those called the Ladrones.

Anno Dom. 1615. Will. Cornelius Schouten of Horn, and Jacob le Maire of Amsterdam, undertook the Sixth Circumnavigation of the Globe, by a new Passage Southwards from the Streights of Magellan in Terra del Fuogo, which they happily discovered and passed, finding out Sebald's-Isles, Staten-Land, Maurice-Land, Barnevelt-Isles, and so by Cape Horn, in the 57 deg. of S. Lat. they found out a new way into the South Sea, called ever since Le Maire's Streight, in this Voyage they gave Names to several Islands and Countries, returning to Holland by the East Indies, having been out two years and Eighteen days. Afterwards a Spanish Fleet, under Bartolemeo Garcias de Nodal, Anno 1618. sailed through Le Maire's Passage: and in the year 1623. part of Prince Maurice his Fleet steered the same Course, discovering some small Isles. Nodal saw People near Le Maire's Streight, all painted and clad with Birds Skins; they fed upon yellow Flowers like Marigolds.

Anno 1643. Brewer, or Brower, went another way into the South Sea, by a Passage called after his own Name, which is east of Le Maire's Streight; but whether Brewer went through a New Streight with Land on each side, or had a wide Sea on the East we cannot inform you, having never seen the Diary of his Voyage; but most Maps make it a new Streight, tho perhaps he might sail near the same Course

Course which Captain Sharp afterwards did; they who have his Voyage may soon determine this Doubt.

The Southern part of Terra Magellanica, commonly called Terra del Fuego, from the great Fires seen upon it by the Sailors; seems, by the Observations of the Dutch, to be divided into many Isles and Streights leading into both Seas. The Country appears mountainous, with fair and green Vallies, Springs, Rivulets, and much Herbage. The Creeks are fit for Shipping, Water and Wood being plentiful. The Air is tempestuous from the vast quantity of Vapours from both Oceans. The Natives paint their Bodies, and deck themselves with Shells and Skins. They make their Baskets and Nets of Rushes, out of which they twist Lines, and hanging Hooks made of Stone, and baited with Muscles, they take abundance of Fish. Their Knives are made of sharpened Bones, and all their Arrows are armed with them. Their Canoes are like the Venetian Gondola's. For the Description of the Northern part of Terra Magellanica, commonly called Patagonia, we refer the Reader to Sir John Narbrough's Journal, printed at the beginning of this Collection.

Anno 1669. His Majesty of Great Britain, His Royal Highness the Duke of York, and several others of the Nobility, design'd a better Discovery of Chili; in order whereunto two Ships were sent out under the Conduct of that great Navigator and worthy Commander Sir John Narbrough, who returned June 1671, having been out above two years, passing and repassing the Streights of Magellan, and coasting Patagonia and Chili. His Observations and Draughts are the most judicious and exact of any that went before him. Anno

Anno 1680. and 1681. Captain Sharp made many bold Adventures on several Islands and Coasts in the South Sea. In his return, he being quite out of all hopes of recovering the Streights of Magellan, or those of Le Maire or Brewer, was forced to seek for a Passage farther South than by Cape Horn; he went to about 60 deg. South Lat. meeting with many Islands of Ice, Snow, Frosts and Whales, departing from a small Place, named by him the Duke of York's Island, in the South Sea, he steered near 800 Leagues to the Eastward, and afterwards as many to the Westward. The first Land he saw in those three Months was the Island of Barbadoes; so that Land in the Stright of Le Maire, and in Brewer's Passage, must be Islands, and not join'd to any great Southern Continent, as suppos'd by some.

Since these Attempts and Undertakings, several English Ships have passed into the South Sea both by the Streights of Magellan, and by the South of Cape Horn; but what Trade they manage in those Parts, or what Discoveries they have made, or what Articles and Treaty they are engaged in with the Spaniard, we cannot inform the Reader, being no Merchants our selves, nor having seen any Journals or Voyages of those Quarters of the World, besides those before-mentioned.

In these Navigations to the Streights of Magellan, through the South Sea, and by the East Indies home again, the Common things noted in the several Voyages, (besides the Winds, Longitudes, Latitudes, Variations of the Compass, Tydes, Soundings, &c.) are Flying Fishes, Dolphins, Albacores, Bonito's, Sharks, Tropick Birds; The Sea Weeds
called

called Sargasso and Tromba; the Aromatick Tree bearing Winter's Spicy Bark; Guanico's, or Indian Sheep, a Species of small Camels; Infinite Numbers of Penguins, Seals, Muscles, Whales, Ostriches, &c. These observed in sailing to and through the Streights of Magellan, by the several Navigators aforementioned.

In the Islands on the South Sea, Coco-trees, Plantanes, Bonana's, Pine Apples, Indian Figs, Limes, Hogs with Scent-bags on their Backs, a sort of Coney, Monkeys, Goats, Turtle, Almonds of four sorts, Sugar Canes, Oysters on Trees, &c.

Entring upon the Molucco's, Nutmeg Trees with Mace, Clove Trees, Birds of Paradise, and great Heats.

On the Islands of Java, Sumatra and Borneo, the Faufel Palm or Arek, Pepper Shrubs, Betele Shrubs, Jacks, Mango's, Durio's, Cajou's, Jambo's, Pappao's, Arbor Rays, Arbor Triftis, Bambou's, Ginger, Cardamums, Lacca Trees, Benzoin Trees, Camphire Trees, Tamarinds, Cassia, Mirobolanes, Cubebs, Costus, Galanga, Bangué, Dutroy, Snake-wood, Calambac, Lignum Aloës, &c.

Towards the Gulf of Bengal, Elephants, Rhinocerot's, Lions, Tygers, Crocodiles, &c. Upon the Maldives and Ceylon, Maldiva Nuts floating, Woods of Cinamon Trees, Oranges, Limons, Plantations of Rice, great Varieties of Palms, &c.

At the Cape of Good Hope, Hippopotami, Zebra's, Gazells, Jacalls, Flammants, Penguins, Pelicans,

Pelicans, Ostriches, Cassowares, vast numbers of Divers, Duckers, and other Sea Birds, great Varieties of Crustaceous and Testaceous Animals, of Lizards, Serpents, &c.

At the Canary Islands, several Vulcano's, Brimstone, the Fountain Tree in Ferro, the Rhodium Plant, Euphorbium, Dates, Gum Dragon Trees, &c.

But we must note here, that besides and since the aforementioned Navigators and Voyagers, more particular and fuller Observations have been made upon several of those parts of the World towards the East and West Indies, by Physitians and Others, who have resided long in those Regions, or else received rich Collections from thence. But as to the most Northerly Countries all we have is from the Navigators. The best of whose Observations are all contained in the Volume we here publish.

'Tis now high time to hasten to the North, and to give a short Chronological Account of the several Navigations and Discoveries made towards the North East and North West, viz. Nova Zembla, North East Greenland or Spitsberg, and North West Greenland, commonly called Groneland and Engronelandt.

Anno Dom. 1380. Nicolo and Antonio Zeni, two rich Venetians and Brothers, sailed from Gibraltar, intending for Flanders and England, but by great Storms were driven Northwards to Friseland, Iceland, Groneland or Engronland, for which we refer the Reader to Hackluyt and Purchas.

Anno

Anno Dom. 1497. John Cabot and Sebastian Cabot his Son, Venetians, were sent out of England by Henry VII. These, after their Return, gave an Account and Draught of some North West parts of America, and brought four of the Natives back with them.

Anno Dom. 1553. Sir Hugh Willoughby went out to discover a North East Passage, and sailed above 160 Leagues North Easterly from Seynam, which lies in 70 deg. North Lat. 'Tis very probable he landed on Nova Zembla and Greenland, from whence the Cold and Ice forced him to return more Southerly, till he came to Arzina, a River in Lapland; where, the next Spring, that great Man with all his Company were found frozen to death in the Ship, in this year the Russia Company began to incorporate.

Anno Dom. 1556. Stephen Burrows, searching a Passage by the North East to the Indies, sailed to 80 deg. 7. min. and thence to Nova Zembla, having been in all likelihood upon Greenland, by the desolate Land, the blue Ice, and great numbers of various Fowls, which he mentions.

About this time the Russia Company was established, and sent yearly Ships and Factors, and presently after Ambassadors from Queen Elizabeth.

Ann. Dom. 1576, 1577, 1578. Sir Martin Forbisher, made three several Voyages to find out a North West Passage, in which he made several new Discoveries of great Sreights, Bays, Islands and Capes, as well as Land on both sides, to all which he gave Names. His Men brought home great store of glittering Marchasites, which the London Goldsmiths

smiths took to be Gold Oars. He met with Inhabitants on the Shores of the Streight called by his Name; their Canoes were made of Seal-skins at top, but wood Keels: They exchanged Salmon and other Fish, for Toyes: In their Tents abundance of Red Beans were found, like unto those of Guinea: But more of Frobisher's Observations in our Supplement at the end of this Work.

Anno Dom. 1580. Arthur Pet, and Charles Jackman, sailed all over these Northern Seas, and passed into Waigats Streights, plying along the East part of Nova Zembla, so far as the Ice would give them leave, and finding no possibility of Passage, returned back the latter end of the year.

Anno 1583. Sir Humfrey Gilbert, by the instigation of Secretary Walsingham, sailed to Newfoundland, and the great River of S. Laurence in Canada, which he took Possession of in the Name of Queen Elizabeth, and settled a Fishing-Trade there.

An. Dom. 1585. Mr. John Davis was employ'd to search out to the North-West, beyond where Frobisher went: he made further Discoveries in those Parts; which see in Hakluyt, and Purchas. This Davis made three Voyages to the North-West: During his stay at Cape Desolation, he found many pieces of Fur and Wooll, like to Beaver, and exchanged Commodities with the Country People. Upon the Rocks and in the Moss, grew a Shrub whose fruit was very sweet, full of red juice like Currans, perhaps 'tis the same with the New-England Cranberry, or Bear-Berry, (call'd so from the Bears devouring it very greedily;) with which we make Tarts. Vitis Idæa palustris fructu majore apud Josselin, de

Nova Anglia. The Natives often repair'd to him in their Canoes, bringing with them Stag's Skins, white Hares, small Cod, dry Caplin; several Copper Oars, Muscles, &c. In his returning out of the Fretum Davis (see our Chart of the Northern Reigons) he meets marvellous store of Sea Fowl, and Cod, Woods of Pine-Apple, Spruce, Elder, Ewe, or Tew, Withy, Birch, Geese, Ducks, Black-Birds, Thrush, Feyes, Partridge, Pheasant, &c. Black Pumice-stones, and Salt, kerned upon the Rocks, white and glistening; Unicorn, and other Whales. See more of Davis in our supplement at the end of this Volume.

An. Dom. 1594, 1595, 1596. William Barents, a Dutchman, made three several Voyages to the North-East, at the Charge of the United Provinces, in the last of which, he was compell'd to winter in Nova Zembla, about the 75 deg. of North Lat. In these Voyages they Discovered Bear, or Cherry-Island, and went upon Greenland. These Dutch Navigations were written by Gerart de Veer, and contain great variety of curious Observations, to which Mr. Boyle owns himself much beholden, in the composing his History of Cold. They conversed with, and described the Samoyeds; coasted Nova Zembla, giving Names to several Points, Capes, Bays, Islands, &c. They discovered the Bernacle Goose, or Clakis, sitting upon their Eggs, under the 80th. deg. North Lat. They give good Descriptions of the Whales, Morses, Birds, &c. and relate Phænomena of Cold (during their melancholy winter Abode there) with ingenuity and judgment.

An. Dom. 1611. *That worthy Seaman Sir Thomas Button, Servant to Prince Henry, pursued the North-West Discoveries, at the instigation of that glorious young Prince. He passed Hudsons Streight, and leaving Hudsons Bay to the South, sailed above 200 Leagues to the South-West-ward, over a Sea above 80 Fathom deep, and discovered a great Continent, called by him New Wales; where, after much misery and sickness in his wintering at Port Nelson, he beat and searched the whole Bay with great Industry, (called afterwards Button's Bay,) even back again almost to Digge's Island. He discovered the great Land he called Cary's Swans-nest. Many men were lost during his abode in that River, named by him Port Nelson, in North Lat. 57 deg. 10 min. tho he kept three Fires in his Ship all the Winter, and was supply'd with great store of white Partridges, and other Fowl, of which his Company is reported to have kill'd 1800 Dozen, besides some Deer, Bears, and Foxes. On the Shores of those North-West Bays grows abundance of Orpine, Sorrel, and Scurvygrass, very much Angelica, whose Root the Gronelanders eat. They kill Morfes, and make their Cords, or Ropes of Whalebone.*

In the years 1610, 1612, 1615, 1626. Mr. Hudson, James Hall, and William Baffin, proceeded much further in the North-West Parts, giving Names to their several Discoveries; which may be seen in the Northern Maps, and in the Collection of Voyages, as also in our Supplement at the end.

The King of Denmark observing the progress of his Neighbours in the Northern Seas, began to send out Ships for making Discoveries, in the year 1605,

1606, 1607, but these performed little. At last in the year 1619, he equipp'd John Munck with two Ships, who tracing Forbisher and Hudson, came to the 63 deg. 20 min. where he was forced to winter, and called it Muncks Harbour, and the Country New Denmark. (It seems to be near Diggs Island.) See Muncks Voyage, Printed in French at Paris; also our Supplement at the end.

In 1608. Henry Hudson was sent out by the English Company to discover the North Pole; he proceeded to the 82 deg. of Lat. as also did Thomas Marmaduke of Hull, 1612. who saw divers Islands beyond that, and gave names to divers Places upon Greenland. He went upon Nova Zembla in June and July, and observed Deer feeding here and there on green places, tho at that very time of the year it freezes in that Climate.

In the year 1610. the Company began to apply themselves to the killing of Morfes, and to the Whale Fishing, which they found most plentiful about Cherry Island, and Greenland; they began also to find those long Bones commonly called Unicorns Horns. In the years 1611, 1612, 1613, 1614, 1617, 1619, 1620, 1622. the English Company, finding these Northern Expeditions so very profitable, encreas'd the number of their Shipping to 13, or 14 yearly, under the Conduct of Poole, Fotherby, Edge, Heley, and others, who gave names to several Sounds and Points, &c.

Yet we find little worth relating of Greenland till 1630. in which year some English, commanded by Captain Goodler, were forced to wander up and down the Country, and to Winter there. A full Relation whereof

whereof being Published by Dr. W. Watts, we shall refer the Reader thereunto.

Some English also wintered in Greenland in the year 1633. and another Company in 1634; the last all perished there.

In these several Navigations to Greenland, our Men gave Names to many places, as Hackluit's Headland, Whale-Bay, Horn-Sound, from the long Bones call'd the Unicorns, Ice-Point, Bell Point, Lowness-Isle, Black-Point, Cape-Cold, Ice-Sound, Knotty Point, Deer-Sound, Smiths-Bay, Hope-Island, Edges Island, Wyches Island, Bear-Island, Charles Island. Afterwards the Dutch gave other Names of their own to these places, which has bred some confusion in Maps and Books.

Our men that wintered in Greenland, 1630. lost the light of the Sun October 14. and saw him not again till February 3. Those that staid there in 1633, say, that Octob. 5. was the last day they perceived the light of the Sun, tho they had a twilight, by which they could read, till Octob. 17. On the 22. the Stars were plain to be seen all the 24 hours, and so continued all Winter. Jan. 15. they perceived, for 6 or 7 hours about noon, so much light as to read by it. Feb. 12. they saw the Rays of the Sun upon the tops of the Mountains, and the next day his whole Body. Our men that remained in Greenland, 1634. left in writing before they perished, that the Sun disappeared October 10. and was seen again Feb. 14. The Dutch that wintered in Nova Zembla in 1596. lost the Sun on Novemb. 4. but the Moon in her highest degrees was seen night and day. Jan. 24. they saw the edge of the Sun above the Ho-
(23)
rizon,

rizon. The difference of these appearances, doth not proceed from different Refractions, but from the difference of Latitude, in which the English and Dutch wintered, tho the cold in Nova Zembla exceeded that felt in Greenland. In these Countries there is a continued Day for four or five months in the year, as well as a perpetual Night for three months, so for the most part there is either all Light, or all Darkness.

The English that were necessitated to winter in Greenland, liv'd upon Venison (of which there is great store, perhaps 'tis of the Rhin-deer) upon Morses, Bears, Foxes, &c. The Bears Flesh was tolerably pleasant and wholsom, but the Liver made their skins peel off; which was also observed by the Dutch that wintered in Nova Zembla. As the Sun and Day-light began to appear, the Fowls, and Foxes crept abroad, for which they set Traps and Springs, and so took vast numbers: The Foxes proved wholsom Food, for by it the Dutch were also relieved in their Scurveys. In May they found great store of Eggs laid by Willocks. The cold had prodigious Effects on our Men in Greenland, and on the Dutch in Nova Zembla, as blistering and ulcering their Flesh, freezing their Sack and spirits, stopping their Clocks, freezing every thing by the fire side; all which Captain James suffer'd in the Island of Charleton, tho only in the 51 Deg. of North Lat. whereas the English and Dutch winter'd in 75 and 78 Deg. of North Lat. In the building of Houses, Tents, and Cabins, upon these melancholy occasions, 'twas found expedient to make them under ground, and to line them with the skins of Beasts, thereby to keep out the sharp impressions of the air. An-

Authors are a little confus'd in the History of Whales, some reckon up 10 Species, but Wormius and Bartholine, make them up 22. giving them various Names from their difference in Colours, in Fins, in Teeth, in Whalebone, in Spouts, in Oyl, in Sperma Ceti, &c. Rondeletius, Gefner, Belonius, Schonveld, Faber, Clusius, and Tulpius, seem indeed to describe 6 or 7 distinct sorts of Whales, as the Balæna Vulgaris, the Balæna Vera, the Orca or Balæna dentata, (perhaps our Grampus,) the Physeter or Whirle-Pool, the Cete or Pot-Walfish, the Monoceros or Unicorn Whale. The Trumpha Whale or Spouter, may perhaps be the Physeter, and the Sperma Ceti Whale the Pot-Walfish, tho' the Spout and Sperma Ceti may be common to many of them. We find in the Philosophical Transactions, Numb. 205. An Account of Whales by Sir Thomas Sybbalds, who has had opportunities of viewing them on the Coasts of Scotland, and therefore seems to be more exact than other Writers; but we having never read this Book, must be content to refer the Reader to it; expecting in the mean time more clear distinctions of them from the Excellent Mr. Ray, in his intended Synopsis of Fishes and Birds.

Anno Dom. 1653. The King of Denmark resolv'd to advance the Northern Trade and Discoveries, and therefore equipp'd, and set out three Ships, with Orders to take the most exact Account of all the Coasts and Places they came at, and to Report them at their return with all possible Curiosity, that thereby the Voyage might be every way beneficial. They passed the Weygat Streights, and found some Inhabitants of Nova Zembla in their Canoes, or little

Fishing-Boats : These people were very nimble on Foot, and were cloath'd with Vestments of the Skins of great Birds, like Penguins, and Pelicans, with the Feathers upon them. Their Boots were made of the Hides of Morfes, or great Seals; they had Qui- vers at their backs full of Arrowes, with a Hatchet of Fish-Bones; their Temper untractable and indocil, abhorring our Beer, Spirits, and Meats. Leaving Nova Zembla they steer'd to Greenland. These Countries afford no Trees, or Shrubs, except a little Juniper, and a few dwarf Firs; abundance of Moss, Heath, a sort of Cabbage, Lettice, Scurvygrafs, Sorrel, Snake-weed, Harts-tongue, a kind of Strawberry, divers species of Ranunculus, and Houseleek. In the Holes and Rocks infinite quantity of Fowls Nests, whose dung with the moss washed down, makes a mould in the Valleys or Clefts, which produce the aforementioned Plants; otherwise the Country is generally made up of vast heaps of Rocks, broken Stones, and Ice heaped up from many Generations.

Of Water-Fowl there is incredible variety, and in so great abundance, that with their flight they darken the Sun, and cover the Sea. There are also great quantities of Dog-Fishes, Lobsters, Gernels, Star-Fish, Mackrel, Dolphins, &c. a sort of Sea-Spider found in Whales Stomachs. For all which see the French Relations of the Danish Voyages, Printed at Paris both by M. Peyrere, and Martiniere.

Anno Dom. 1630. Captain Luke Fox was sent out in His Majesties Pinnace the Charles, Victu- aled for 18 Months, young Sir John Wolstenholme being Treasurer, to search out a North-West Passage. He traced Frobisher, Hudson, Davis, Bassin, and
Button,

Button; meeting with Whales, much Ice, and Fowls. He built a Pinnace in River Nelson, where he found several remains left there by Sir Thomas Button: he observed abundance of small spruce Fir-Trees on both sides that River almost covered with moss, and other sorts of Trees, but small; the Valleys had good grass, Black-Berries, Strawberries, Vetches, Venison, &c. but no Natives or Inhabitants to be met with in this place, tho in other parts of these Seas he saw several Savages. Captain James departing from England soon after Captain Fox, upon the same design, they both met and caress'd each other near Port Nelson, in the month of August. Fox got home before winter, but the other was forced to stay till the next Summer. Of which, more in the following Paragraph, and in our Supplement at the end.

Anno 1631. The most ingenious Captain Thomas James was employ'd by the inquisitive Merchants of Bristol, to attempt and discover a North-West Passage into the South-Sea, and was designed for so difficult a work by King Charles the First; who was pleased to command him to publish his Voyage in the year 1633. wherein he gives a very accurate and judicious Account of the hardships both in going, wintering, returning; as also of the Streights, Capes, Bays, Tydes, Soundings, Variations of the Compaſs, and of the Natural Rarities both Philosophical and Mathematical, together with a Plat or Card, and divers Tables. Out of this Journal Mr. Boyle confesses that he took many Passages and Phanomena related in his History of Cold. This excellent Navigator seems to be of opinion, that there is no passing by the North-West to China, Japan, &c. His
Reasons

Reasons may be read at large in his Journal printed at London, in Quarto, 1633. Yet in the year 1667. this design was renewed, and undertaken by several of the Nobility of England, and Merchants of London, who equipp'd and sent out Zachariah Gillam Commander in the Nonfuch Ketch: he passed through Hudson's Streights, then into Baffins Bay, to the Latitude of 75. from thence Southerly to the Lat. of 51. or thereabouts, in a River now called Prince Ruperts River: he found here a friendly Correspondence with the Natives; built a Fort called Charles Fort; returned with good success; and laid the Foundation of an advantageous Trade in those parts. But in the year 1687. this place was seized upon by the French. See more of Captain James's Voyage and Discoveries in our Supplement at the end.

Anno 1671. Frederick Martens, an Hamburger, undertook the Greenland Voyage, upon a desire, as may be suppos'd, in great part to satisfy the Curiosity and Enquiries of the Royal Society; which he performed in his admirable Diary printed in High Dutch in Quarto, being assisted therein by the famous Fogelius.

*Anno 1676. The industrious and most ingenious Captain Wood, was again sent out by his Majesty King Charles the Second, to make a more perfect Discovery of the North-East Parts for a passage to the East-Indies: He went no further than the 76 Degree of North Lat. where he lost his Ship on the Coast of Nova Zembla. His opinion is, there is no sailing this North-East Way to China, Japan, &c. The like opinion Captain James hath given of
the*

the North-West Passage, being both perswaded thereunto by the stretching of the Land, by the distraction and reversion of half Tides, by the motion of the Ice, &c. besides the Fogs, Snow, Frosts, vast Islands of Ice, and the Weather, are insuperable.

Mr. Witsen in his Letter to the Royal Society Anno 1691. writes against the North-East Passage to Japan: he retracts his former Opinion of making Nova Zembla join upon the Continent with Tartary, having since been better inform'd. He thinks the Tartarian Points may run very far North, and perhaps reach to America. Captain Wood fancies, that Nova Zembla and Greenland are the same Continent, If these Conjectures of Captain James, Captain Wood, and Mr. Witsen, concerning the North-East, and North-West Passages to the East-Indies should not be true, yet the difficulties of sailing those ways would be invincible.

But now it seems convenient to come to the present Work, and to give an account what is contained therein. The Authors are Four, viz. Sir John Narborough, Captain Jansen Tasman, Captain Wood, and Frederick Marten.

I. Sir John Narborough is so well known in England, and so famous beyond the Seas, that I need say nothing of his great Abilities. His Voyage into the South-Sea is mentioned before, but this is the first time of Publishing it.

II. Captain Abel Jansen Tasman's Voyage from Batavia in the Island of Java, to the South Terra Incognita is the more considerable, in that 'tis the Discovery of a New World, not yet known to the English.

'Tis

'Tis probable by Abel Jansen Tasman's Navigation, that New Guinea, New Carpentaria, and New Holland, are a vast prodigious Island, which he seems to have encompassed in his Voyage, setting out from Batavia to Maurice Isle, East of Madagascar; from whence bearing away South to 49 deg. of South Lat. and then East and by North to Lat. 42 and 44, he fell upon those new Tracts of Land call'd Van Diemen's, and afterwards upon New Zealand, to the South-East of New Holland; returning to Batavia through part of the South Sea (wherein he Discover'd new Islands) and so Northwards of New Guinea to the Molucco's, and Java.

III. Captain Wood was a most excellent Navigator: He, together with Sir Cloudsly Shovel, accompanied Sir John Narborough to Chili: Afterwards he was sent by Charles II. to Discover a North-East Passage to China and Japan by Nova Zembla and Tartary; of which you have here an Abstract never Printed before.

IV. Frederick Marten of Hamburgh Published his Observations made in Greenland in the High Dutch, a Language little understood in England. His Voyage being the last and best was much desired here, it being full of Draughts and curious Remarks; the Copying and Translating of which, are perform'd with all possible diligence.

These four make up the Volume, together with many new Carts and Designs, drawn upon the several places, which do much illustrate the Work, and improve both Natural and Mathematical Science. To these we thought fit to tack a Supplement containing some Observations on Groneland, or Engroneland,

land, *as also upon some Northern Islands, North-East, and North-West.*

'Tis to be lamented, that the English Nation have not sent along with their Navigators some skilful Painters, Naturalists, and Mechanists, under publick Stipends and Encouragement, as the Dutch and French have done, and still practise daily, much to their Honour as well as Advantage. The English have Capacity, Industry, and Judgment in these Matters, equal to, if not beyond their Neighbours, Sincere Mæcenates, We are apt to imitate a certain Prince in every thing, except in the most glorious and best Part of him, viz. The Encouraging and Rewarding great Men in all Professions, and the promoting Arts and Sciences with his Treasure: A Secret which some Ministers think not fit to practise, or perhaps may be insensible of, for want of penetration. This makes a great Figure in the present and future Ages, covers many Spots and Deformities, and secures the best Heads, and Hands to carry on, and effect great Designs.

CON.

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A

A JOURNAL

KEPT BY

Captain *John Narbrough, &c.*

MAY 15. 1669. This day being *Saturday*, I received from the Honourable *Mr. Wren*, Secretary to his Royal Highness the Duke of *Tork*, my Commission to Command his Majesty's Ship the *Sweepstakes*, the Ship being at *Deptford*, in the River of *Thames* near *London*.

Sunday *September 26. 1669.* Set out at his Majesty's proper Cost, one of his own Ships named the *Sweepstakes*, Burthen 300 Tuns, with 36 great Ordnance, and all other Munion proportionable; manned with 80 Men and Boys, victualled for fourteen Months, at whole allowance of all Provisions both good and wholesom, having Oat-meal for Fish, and four Tuns and an half of Brandy in lieu of Beer, stores of all sorts compleat for twelve months, with provision of Craft to take Fish and Fowls, a feyne Net, and hooks, and lines, and fishing-gigs, and harping Irons, twelve Fowling-pieces,

B

with

with shot, and pigs of Lead to make Shot, if occasion, &c. And the *Batchelour Pink*, burthen 70 Tuns, with four great Ordnance, and all other Munition proportionable; mann'd with nineteen Men, one Boy, victualled for twelve months, at whole allowance of all Provision good and wholesome, as the *Sweepstakes* had, and stores proportionable for the time, and Craft to take Fish and Fowl, &c.

Having a sort of Goods to the value of three hundred pounds, as followeth, Knives, Sissors, Glasses, Beads, Hatchets, Bills, Hoes, Nails, Needles, Pins, Pipes, Bells, Boxes, &c. Daffels Linnen, Cloth, Ofenbrigs, Tobacco, and Pipes, &c. to trade with the Natives, at his Majesty's Charge.

Wednesday September 29. Hazy weather, the Wind to the North-west and by West, a fresh gale: I stood to the South-west-ward as near as I could; this day at twelve a Clock, the *Lizard* bore North of me a little Easterly, distance about 12 Leagues, according to my account; Latitude by account, is 49 d. 35 m. This day I spoke with a *French Banker*: *Lizard* in *England* lies in the Lat. of 50 d. 10 m. and in Longitude East, from the Meridian of the West part of *St. Michael*, one of the Islands of the *Azores* 18 d. 30 m. From the *Lizard* I take my departure, and keep my daily account of the difference of my Longitude from that Meridian.

October the 17. I made the *Madera*; which Island is high Land, and irregular in Hills, with Wood on the top and down the sides; Planted with Vines: there is some Sugar made in the Island; the Inhabitants *Portugueses*. The City of *Fonchiale*

is the Metropolis, and is situated in a Bay on the South part of the Island, close to the Sea side, walled next the Sea, and well fortified with Ordnance; fresh water comes running into the Sea in the middle of the Bay, in a fair Rivulet from under an Arch in the Wall; the shoar-sides are great pebble stones in the Bay, and Rocks in the other places; the Road is foul ground, to the East part of it: the Ships ride in shot of Ordnance of the City: this City is about an English mile in length, and three quarters of a mile in breadth.

The Desarts are barren rocky Isles of a good height, and lie at the South-east point of *Madera*, above a mile distant from the shore; there is water enough between *Madera* and the Desarts in the midway, and no danger; the Desarts trent to the South-east. *Fonchiale* Bay in the Isle of *Madera* lies in the Latitude of 32 d. 10 m. North, and in Longitude West from the *Lizard* of England 10 d. 1 m. and Meridian distance 143 Leagues.

Sunday being the 17th. fair Weather and little wind at North-west, Course by my Compass South-west. I make my true Course from *Fonchiale* Bay, till to day at noon South-south-west, distance, sailed 34 miles six tenths departure West 13 miles; Diff. Lat. 00 d. 32 m. Lat. by account 31 d. 38 m. Meridian distance from the *Lizard* West, 147 leagues, 1 mile; Longitude from the *Lizard* West 10 d. 17 m. Difference of Longitude from *Fonchiale* West 00 d. 16 m. To day at noon I saw the Island of *Madera*, bearing Nb. E: the body of the Isle distant by estimation 11 leagues; it makes in a bluff body at the West end, and trent to the

4 Sir John Narbrough's Voyage

East: Course by the Compass this afternoon *SW.* little wind to night; I shap'd my nearest Course for the Island of *St. Fago* with all the sail I could make, the *Batchelour Pink* in Company; I gave order to my Master to make the best of his way to *St. Fago* Island, but not to leave the Company of the *Batchelour*.

Saturday *October 23.* The wind at *N.b. E.* a gale: this day in the forenoon I crossed the *Tropick* of *Cancer*, all my men in good health, I praise the Almighty God for it: many of my men that had been with me in the *Indies* formerly, were let blood; for I take bleeding in these hot Climates to be a great preserver of health, diverting Cautures; I experienc'd it in two Voyages before to the Island of *St. Helena*, and in one to the Coast of *Guinea*, where several of my men under that distemper, were preserved by bleeding; in all these Voyages I was never sick one day, nor in two years time in the *Mediterranean Sea*, nor at the *Canaries*; for when I came near the *Equinoctial* I always breathed a Vein.

Thursday *October 28.* the Wind at *East-North-East* a stiff gale; this Morning I saw the Isle of *Mayo* bearing *S. b. W.* distant by estimation eight Leagues; it makes a high Hill, and Craggy to the East part, and low land towards the shore-side, to the North-west part of the Island; it lies from *Bonavist S. b. W.* distant near 18 leagues. This day at 11 a Clock I anchored in the Road in seven fathom water, sandy Ground, about a mile from the shore; the Northernmost point of the Road bearing *N. N. W.* half a point to the West, and the Souther

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thern point of the Road, bearing South-east from me; distant about a mile and an half: there are craggy Rocks to the South of the Road on the shore side, but to the North a low sandy shore; the Road is on the North-west and by West part of the Island in a small sandy Bay; there's the Salt-pond a bow's shot from the Sea in the low flat Land; fresh water is very scarce here: I went ashore presently after I had anchored, and found a heap of Salt of about 20 Tuns; I got aboard again immediately, and sent the Long-boat ashore, which brought off 2 Tuns and $\frac{1}{2}$, the Suff came in so much that no more could be got off; we halled the Seyne here, and caught abundance of good Mulletts, with some *Cavalle* and silver Fish; one of the Islanders a *Negro* came aboard, whom I sent ashore, to tell the People that if they brought down some Cattle I would buy some of them; I rode here all Night; fair Weather, the Wind Easterly. This side of the Island is dry land without wood; here are many Goats, and Guinea Hens.

Friday *October* 29. fair Weather, the wind at *NE.* a fine gale: this Morning I sent my Boat ashore, and bought of the Islanders some Goats at $\frac{1}{2}$ a piece of Eight per Head, and 8 Cows excellent good meat at 6 pieces of Eight a Cow, giving the skins again; my men caught a great many Fish with the Seyne, which this day we split, and laid in pickle four Hours, then dried them to keep, which they will a long time in any Climate, as I have experienced in other Voyages, and are very good Victuals at Sea: I made what dispatch I
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could to be gone for St. *Jago* Island. This day in the forenoon, a Ship passed by to the Westward on the South side of the Isle, and in the afternoon we saw several Ships coming from the Northward, which were the *Portuguese* Fleet bound for *Brazil*; they halled into *Port Praya* in the Isle of St. *Jago* to water: this night I weighed, and stood away at twelve a Clock South-south-west for *Port Praya*, with the Pink in Company; I touched at the Isle of *May* for Salt, which I knew would be a great help to get Provisions in the Voyage.

Saturday *October* 30. fair wind at North-east and by North a fresh gale. This Morning I steered South-west for the South side of St. *Jago*; where is the Road of *Port Praya*, lying near South-west from the Road of the Isle of *May*, and distant nine Leagues. This day at 12 a Clock I cast my best Bower-anchor in *Port Praya* Road, in 10 fathom rough Ground, the East Point bore East of me, and the West Point about West-south-west, about half a mile off; I could not go into the best of the Road, the *Portuguese* Fleet of about thirty six Sail riding in it; the Great *Padre Eternel* Admiral, bound for *Brazil*, is a very great Ship and well built, they say she is in Burthen 1700 Tuns, she hath Ports for three Tier of Guns flush, but now she had but eighty, and poorly mann'd with Seamen, and so were all the rest, six Frigats might have taken most of the Fleet. At my coming in to Anchor, the Admiral saluted me with seven Guns, I thanked him with as many; Captain *Francis Wilksheir* in the *Jerusalem* fired five, I returned him

him three; so did the Reer-Admiral, and I return'd the Complement in the like number, several of the Fleet fired three, whom I answer'd in conclusion with three for all. I rode on the broad side of the Admiral, and saluted the Fort with five Guns, which return'd three, then I sent my Lieutenant ashore to ask leave of the Governour to water, which he granted forthwith; my Coopers, got the Cask ready, and this Evening put one boat's lading aboard.

Sunday *October* 31. fair Weather, the wind at North-east a fine gale. This Morning *Don Carolus* went ashore to *Pryam*; with much ado I got off a boats lading of Water, for the *Portuguese* boats were filling too, and a great many Soldiers at the watering place snatch'd some of our mens Hats off, and run away, wherefore I would not let my men go any more this day for fear of quarreling. This Bay of *Port Praya*, as they call it, is no Port, but a fine round Bay, having high steep Cliffs on the East side, and in the bottom a steep Hill, where the Castle is, that hath but four Guns, and is of no force; there is a small Fort on the top of a Hill on the East side, which hath three Guns. On the North-west part of the Bay the shore is gravelly and sandy, and there's a Grove of Coco-nut trees: A fresh water Rivulet runs down into the Valley, and thence through the Sand soaks into the Sea: this Water is in great quantity, very good, and keeps well at Sea: to the west part of this Bay lies a small Island close on the shore, which has Grass on it that may be cut off for Cattle, which I did; this Road is no safeguard for Shipping, for a Man

of War may take any Ship out of the Bay, without receiving any damage from the Forts ashore, and with Fire-Ships a whole Fleet may be spoiled at pleasure; for it's a fresh gale every day, and there's but two points of Land by which a man may fetch into any part of the Bay; also the Bay lies open to the Sea from the East, Southerly to the *W.S.W.* I called for my Lieutenants and Master, and acquainted them, that I had Orders to sail from thence to the Coast of *America* to the Southward of the River of *Plate*, to the streights of *Magellan*, through which we were to pass into the South Seas, and that we must shape our Course to make the shortest way of it, and be careful to keep Easterly enough of it, to weather the shoals of *Brazil*, called the *Abroholls*, lying in and about eighteen degrees of Southerly Latitude, for the Wind blows for the most part thereabouts between the Latitude of ten South, and the Latitude of twenty South, at East by South and East South-east fresh gales; whilst this pass'd, in came the Master, and told me all things were stowed, and the Wind at *E. b. N.* fresh; I concluded with him that our best Course at present would be South and by East, and as we got Southerly and the Wind grew large, we might alter our Course when we would: we steered a Point or two from the Wind, that the Ship might have fresh way through the Sea. I ordered my Master to steer South and by East by the Compass, and my Lieutenant to call all hands to Prayer, read Service, and beg'd of God Almighty a prosperous Voyage, continuance in Health, and love to one another, *and that we might prosper in this Undertaking, &c.*

Instructions for Mr. *Humphrey Fleming*, Commander of his Majesty's hired Pink the *Batchelour*; By vertue of an Order from *His Royal Highness*, dated the twenty ninth day of *August* 1669. to me directed.

YOU are hereby required to sail with his Majesties hired Pink the *Batchelour*, which you are Commander of, and to keep Company with his Majesties Ship the *Sweepstakes* to the Coast of *America* to the Southward of *Rio de la Plata*, and along the Coast of *America* to the Southward, till you come to the Strights of *Magellan*, lying in about 53 Degrees of South Latitude; through which you are to pass into the South Sea, and sail along the West Coast of *America* Northerly, till you come as high as *Baldavia*, which lies in about 40 Degrees of South-lat. there you shall receive further Orders from me, or in my absence, from the Commander in Chief on board his Majesties Ship the *Sweepstakes*, in case you keep Company with her, whose Company you are not to depart from or leave, upon any occasion whatsoever, as you will answer the contrary at your peril, unless you have Order from me so to do, or in my absence from the Commander in Chief on board her; You are also to understand, that you are to be employed by me as I shall see occasion to employ you, to discover Lands, Bays, Havens, Rivers or Streights, &c.

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The Design of this Voyage on which you are employed, being to make a Discovery both of the Seas and Coasts of that part of the World, and if possible to lay the foundation of a Trade there. You are not to meddle with the Coast of *America*, nor send on shore, unless in case of great necessity, till you get to the Southward of *Rio de la Plata*; and you are not to do any injury to such *Spaniards* as you shall meet with, nor meddle with any place where they are planted: You are to take Observations with as much Accuracy as you can, and also to cause your Mate and Company to do the like, to observe all Headlands, Islands, Bays, Havens, Roads, Mouths of Rivers, Rocks, Shoals, Soundings, Courses of Tides, flowings and settings of Currents, where you come, both in the North and South Seas, &c. and cause Draughts and Designs to be made of them; and also you are to take notice of all Trade-Winds, &c. you meet with, and of the Weather, and especially to observe Harbours in the Streights of *Magellan*; You are in all places where you land to observe the nature of the Soil, and what Fruits, Woods, Grain, Fowls, and Beasts it produces, and what Stones and Minerals, and what Fish the Rivers and the Sea doth abound with; You are to do your utmost to procure of the Minerals to carry to *Eng-land*, and to deliver them to His Royal Highness's Secretary. You are also to mark the temper and inclinations of the *Indian* Inhabitants, and where you can gain any Correspondence with them, you are to make them sensible of the great Power.

Power and Wealth of the Prince and Nation to whom you belong, and that you are sent on purpose to set on foot a Trade, and to make Friendship with them ; but above all for the Honour of our Prince and Nation, you are to take care, that your Men do not by any rude behaviour or injuries to them, create an Aversion in them to the English Nation ; but that on the other side they endeavour to gain their Love by kind and civil Usage toward them, and whosoever shall act otherwise, you are to correct him or them for so doing, which you are to acquaint your Men with, that they be not ignorant. You are to be careful of your Provisions and Liquor, and to husband it to the best advantage, that there be no wastful Expence made of it, nor of your Ships Furniture, as Sails, Anchors, Cables, and Rigging, &c. and that you endeavour at all places where you come to get Provisions, Wood and fresh Water, so as you do not endanger your Ship and Men, which you are to be very careful of, and in no cause to expose any one of your Men to the hazard of his Life, but always be careful that they be well guarded, and be watchful, for there have been many cut off by their own neglect. You are to be careful to keep a good Command aboard over your Men, and in case any mutinous practice happen under your Command, you are forthwith to make it known to me. You are to be careful to have your Ship kept sweet and clean for the preservation of your Men's healths : And God prosper us.

Given

Given under my Hand on board his Majesties Ship the *Sweepstakes*, riding at the Island of Saint Jago, in Port Praya Road, November 5. 1669.

John Narbrough.

To Captain Humphrey Fleming, Commander of the Batchelour Pink, these.

Instructions for the better finding each other, after separation by Chance, foul Weather, or otherwise.

YOU are hereby required to Sail with his Majesties hired Ship the *Batchelour* under your Command, and to keep Company with his Majesties Ship the *Sweepstakes*, along the Coast of *America*, to the Southward of *Rio de la Plata*, to Port *St. Julian* on that Coast, which lies in about 49 d. 20 m. South Latitude, which your Draughts mention. In case of Separation at Sea in this Voyage from each other, you are to use all means to endeavour to meet again, that is to say, by looking well abroad at Sea, and so to observe the Order in your sailing Instructions, to know each other at sight: the next Post of Rendezvouz will be at *Port St. Julian*, which is on the Coast of *America*, as is said before; You are to make all the hast that you can thither, and to stay for the *Sweepstakes* there two whole Months, if you get thither before her, and she shall do the like for you;

you ; In your way thither, after you have passed to the Southward of *Rio de la Plata*, 'twill be best for you to Sail along the Coast of *America*, to see if you can fall with me, and to make *Cape Blanco* which lies in about 17 d. 20 m. South Latitude, and so to *Port St. Julian*, where you are to stay ; you may also enquire for me at *Port Desire*, which lies in about 48 d. South-Lat. If I shall come to any place and be gone again before you come thither, I will leave a piece of Board nailed to a Pole or a Tree, engraven, mentioning the Ship's name, and the day of my departure, and the next Port I intend to go to ; I desire you would do the same, and at *Port St. Julian* I will do likewise, and also leave an Order for you tied to a Pole, being put in a glass Bottle ; the Pole shall be placed on the Island which lies in the Harbour at the West end thereof, where I shall build a Tent ; pray be careful to look for it, and I shall do the same for you ; it may be I may have an opportunity to touch on the Coasts as I sail along, if I can find any Trade with the Natives ; you may be sure where ever I come to find those Memorials of my being there before you ; so God prosper our Intentions.

Given under my Hand at *Port Praya*, Road on Board the *Sweepstakes* riding there at the Island of *St. Jago*, *Novemb. 5. 1669.*

John Narbrough.

To Captain *Humphrey Fleming*, Commander of the *Batchelour Pink.*

December

December 4. Many flying Fish seen to day, and Bonetto's, Sharkfish, and Albycores, a Fish larger than a Bonetto, but of that Mackrel shape, and feaverish Diet, they live upon the flying Fish like the Bonetto's; to day we caught some of them with Hooks, and one Shark; our Men eat them both, and account the Shark a good Fish.

December 7. To day the Cooper found two Buts of Beer had leaked out: this day all of us drank Water only, for it was ever my order that the meanest Boy in the Ship should have the same allowance with my self, so that in general we all drank of the same Cask, and eat one sort of Provision, as long as they lasted: I never permitted any Officer to have a better piece of Meat than what fell to his Lot, but one blinded with a Cloth serv'd every Man as they were called to touch and take, by which means we had never any Difference upon that score.

Saturday December 18. All the Ship's Company God be praised in good health, most of them were let blood after I had cross'd the Tropick of *Cancer*, and none troubled with the Calenture in this Voyage.

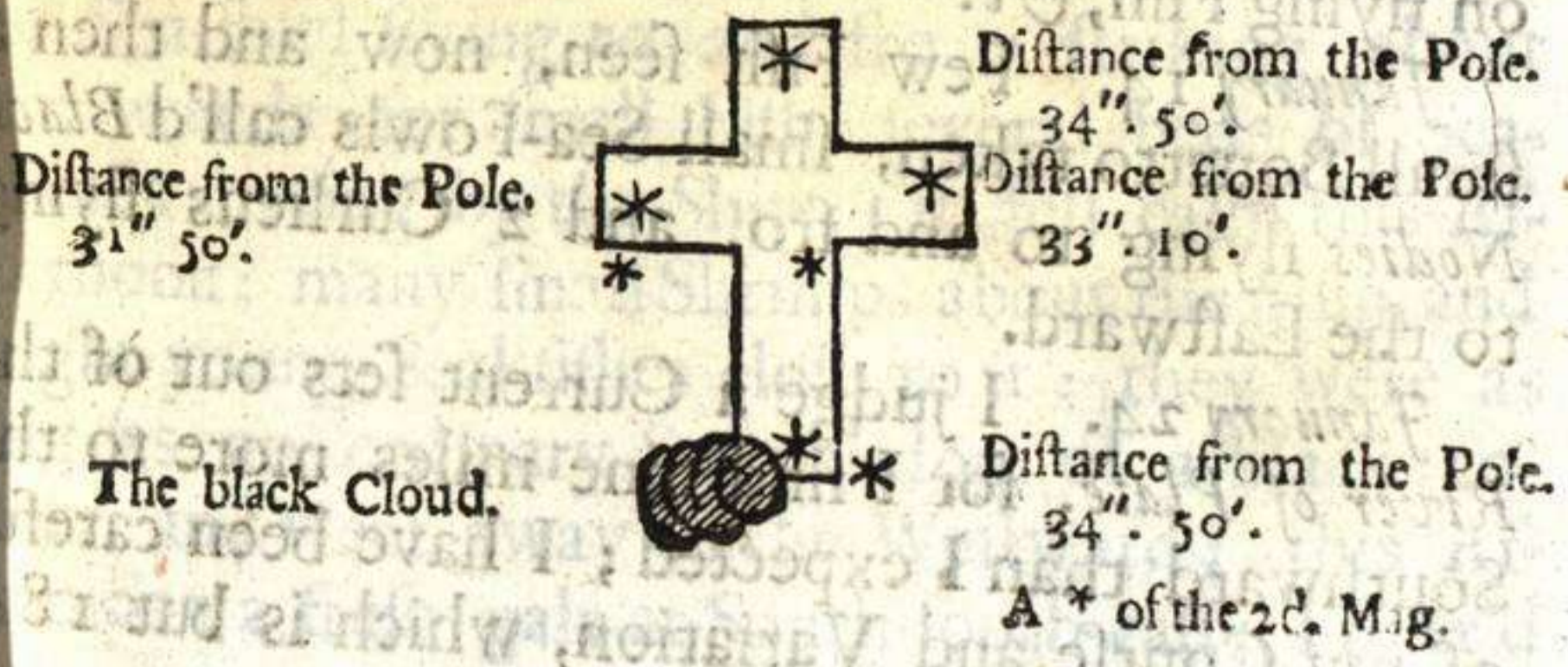
Whilst I am in the hot Weather I allow a quart of Vinegar to 6 Men *per Week*, and also to eat with their fresh Fish, which I divide equally among the whole Ship's Company, be it little or much, or caught by whomsoever.

Friday December 24. I find great Difference within this 48 hours between my dead Account,

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as we call it, which is kept by the Log, and the Observations I made these 2 days when the Sun was on the Meridian; for I find I have gone more Southerly by 12 Miles than the Log allows; I can't perceive any variation, and the Log is well kept, and the half minute Glass good; I judge the Current sets to the Southward, now the Winds are at the East, and the Moon near the full.

December 30. This Afternoon I took an *Azimuth*, and find six degrees ten minutes variation Easterly, my Observation being of a good one; fair Weather to Night at 9 a Clock, *Nebeles major* was very visible in the Heaven, and seems to be a piece of the Milky-way broke from it; the Southern Constellations appear which are near the Pole *Antarctick*, the *Camelion*, the *Bird of Paradise*, the Tail of little *Hydra*, and the *Water-snake*, which are all small Stars of the 5th and 6th Magnitude; no Pole-star nor any Star fit for Observation to be seen within 15 degrees of the Pole, the *Crofers Stars* of the first and second Magnitude are good for Observation, and are in this form when they are on the Meridian above the Pole.



Some

Some Fowls flying to and fro, a kind of Sea-gulls, and Gannet, a black Sea-Fowl as big as a Pigeon, and some large ones of that kind, three Tropic Birds flying over the Ship of a grey Colour, with a long spired Tail as big as Pigeons.

Some Bonetto's taken to day; A great broad flat Fish like a Scate following the Ship, called by the Seamen a *String-Ray*, having a long Tail and a sharp bow at the end of it, when it pricks a Man it puts him to much pain, they are called by some *Cloke-fishes*, the lesser sort are good to eat.

January 5. Variation of the Compass by an Amplitude in the Morning 06 d. 46 m. East; this Afternoon I brought the Ship to, and sounded one hundred and eighty four fathom right down, and had no ground; I being thwart of the Shoals of *Brazil* caused me to sound, I thought the Sea look'd whiter than usual, variation at Sun-set 6 d. 46 m. East; little Wind this Afternoon, at East by North; I made all the Sail I could, Stay-fails, Steering-fails, Boats-fail and Bonaventure misen, all set to draw away Southerly, some Fowls flying over the Ship which we call *Men of War*, they prey on flying Fish, &c.

January 14. Few Fish seen, now and then a small Bonetto taken, small Sea-Fowls call'd *Black Nodies* flying to and fro, and 2 *Curlicus* flying to the Eastward.

January 24. I judge a Current sets out of the *River of Plate*, for I find nine miles more to the Southward than I expected; I have been careful of my Course and Variation, which is but 18 d.

20 *m.* East, by an amplitude taken to Night ; I am open of the mouth of the River of *Plate*, founded to Night, but no ground at one hundred and forty five Fathom ; Wind at North and by East, all Night close Weather ; I steered South-west and by South.

Monday *January* 31. Calm this Morning at 8 a Clock the Wind came to the North-west a fine gale ; at eleven a Clock the Wind went round the Compass, and came to North ; with much thunder, lightning, and some rain ; very dark Clouds, cold hazy Weather ; several spots of Sea-weeds driving in the Sea, and a great many Sea-fowls of a brown colour swimming in it : smooth Water ; Course steered is South-west by my Compass ; this day one main shroud and one fore-shroud broke, and to strop of the Main-jeer block ; Variation of Sun-rising by an Amplitude is 19 *d.* 43 *m.* East ; all my Men in good health, God be praised.

All the Albycores, Bonettos, and flying Fish have quite left the Ship ; no Fish to be seen but Whales.

Tuesday *February* 1. Cloudy foggy Weather this Morning, and little Wind at South-east. I stood to the South-westward, I saw abundance of Sea-fowl flying to and fro ; striking about the weeds for small Fish, several beds of Sea-weeds driving by the Ship ; it fell calm this Afternoon ; many small Shrimps about the Ship, and eight young Seal-fishes close to it ; they were as big as an ordinary Spaniel-dog, of a black colour, and went away to the Westward ; this Afternoon a fresh gale at South-south-east ; I steer'd
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away Southward and by West by my Compass; the Air as cold here on a sudden, as 'tis in *England* in *September*. These Seas are very much exposed to sudden Gusts and variable Winds, for the Wind has run round the Compass twice or thrice a day these 3 days, the Sea-water is changed whiter than the usual colour, whence I conjecture, I must be in Soundings, also by my account of Longitude, kept from the *Lizard*, I am not 1 d. 28 m. off from Land, according to *Mercator's* Draught: This Evening I sounded, but had no ground at 130 Fathom; Wind at South a fine gale: I steer'd in West-south-west; at ten a Clock to Night, I observed the Water to ripple as if it were over a shoal, and had ground at seventy Fathom; I caused the Head-sails to be braced to the Mast, and sounded; fine red Sand inclining to grey at 70 Fathom.

February 2. Meridian distance from the *Lizard*, West 839 Leagues, 2 miles $\frac{8}{10}$; Longitude at Noon from the *Lizard* West 49 deg. 43 m. little Wind this Afternoon, and fair Weather; we lay sometimes one way, sometimes another; Wind at South-west and by South a small gale. I hoisted out my Boat, and sounded, but no ground at 140 Fathoms; I tried the Current with my Boat, but found little or none worth notice: the Sea rippled in many places; I sounded on them, but no ground at 108 Fathom; several Beds of Sea-weed driving to and fro in knots; these Weeds are five or six Fathom long, in strings, with broad leaves on them of a brown colour, at the root hangs a Clod or Rock of 2 or 3 pound weight; several Sea-
Fowls

Fowls flying and swimming near the Ship ; it being quite calm, my Men kill'd some of them with their Birding-pieces, for they were very tame, not moving at the report of a Gun ; they are very like to Sea-Gulls, and good meat ; some Seals and Whales seen.

February 5. were seen several beds of Rock-weed, and Sea-Fowls, much like Gannets ; some black, others white, pied, and grey ; small Seal-fishes like so many Dogs, for their Heads resemble Bull-dogs, which they'l keep above Water a long time, and look at the Ship ; they are very nimble at diving and skipping out of the Water : This Afternoon at seven a Clock I was in the Latitude of 41 degrees South, and in Longitude, West from the *Lizard of England*, 52 deg. and 50 min. and in Meridian distance from the *Lizard* 895 Leagues ; Meridian distance from *Port Praya*, 616 Leagues, Longitude from *Port Praya*, West, 36 d. 34 m.

This Night I advised with *Don Carolus* where it would be best for us to hale in with the Land, in what Latitude, or at what Cape or Harbour on this Coast of *America*, being now to the Southward of the River of *Plate*, and according to my Instructions, before the Coast to be discover'd, and a Trade set on foot with the Natives ; He told me I might do what I would, for he did not understand the Coast, nor where 'twas inhabited ; 'twas his whole Discourse in the Voyage, that he had been here in a Galley, and knew all the Coasts from the River of *Plate* to the *Streights*, and thorow the *Streights* all along the West Coast

to *Baldavia* and *Lima* ; being arrived here, as far as I can perceive by him , he knows nothing of the matter, nor any thing appertaining to Navigation ; all I can fancy of him is, that he may have liv'd with a *West-Indian* Governour, whom he has heard talk of these Parts.

February 8. at 7 a Clock this Afternoon the Wind came to the West South-west, a stiff gale. I stood to the Southward ; much Rock-weed pass'd by the Ship to day, and several Sea-Fowls seen ; very cold for the Season, being Summer, which *Don Carolus* began to complain of, and told me, he did not think we should have come so far Southerly ; I shew'd him by my Plates how far we were to go through the *Streights*, and along the West Coast ; he said, the *Spaniards* went to *Chile* a nearer way ; I answer'd, 'twas into the River of *Plate* and over Land, which we could not do.

My Company are all in good health, but some of a puny Race grow weak in being so long on Shipboard ; I give them Vinegar once a Week, which is very good to prevent the Scurvy in their Mouths ; also I order'd every Man to wash his Mouth, Face and Hands before he receive his daily Allowance of Bread, and appointed one Man to see it performed ; if any neglected it, the Steward kept their Allowance for one day ; likewise every Man is commanded to keep himself clean, and free from Lice, upon forfeiture of his daily Allowance to the Party accusing him ; by these means the Ship is kept neat, sweet and clean, tho' the dirty foggy Weather is a great Enemy to this Discipline.

Feb.

February 19. I sounded often to day, and had fifty and fifty three Fathom; dark black Sand with some bright fine Sand in it; Beds of Rock-weed, Seals, and Porpoises, such as are in the *European* Seas, seen to day; three Whales, many Fowls flying about. and some Penguins in the Sea, swimming near the Ships; at 2 a Clock in the Afternoon the Wind was at *E. b. S.* a stout gale and a great Sea; I stood to the Southward, close haled under my Courses; the Pink half a Mile to Wind-ward of me under her's; she out-fails us now it blows, and puts us past our Top-sails, and steers along with us with only her Main-sail set; the Sea runs lofty.

Monday February 21. At a quarter of an hour past eight this Morning I saw the Land bearing West of me, and distant about 4 Leagues: I sounded, and had 21 Fathom; small Stones and Sand; still I stood in West by my Compass. The Land makes but an ordinary height towards the Sea side, but farther up, round high Hills, and looks reddish; the Northermost Land I could see, which was *Cape Blanco*, bore North-north-west of me about two Leagues, and the Southermost Land at the face of the Cape.

The Land trended away to the Southward of me Southwesterly, of an ordinary height by the Water side, but up in the Land are Hills like Tables on the top, a little higher than the rest; the Land makes in Hills and Valleys all along, like Downs of an ordinary height; at nine a Clock this Morning I braced the Head-sails to the Mast, and lay so half an hour till the Fog cleared up, that I might make

the Land plainly, being within five miles of the shore side, which made a kind of Bay, breached on the shore; I sounded, and at 17 Fathom had rough ground, with some small stones drawn up in the Tallow of the Lead, which was dinted by Rocks; between nine and ten a Clock there was a fine clear, by which I saw the Land very plainly; it look'd reddish like seared Grass; no Woods to be seen on any of the Hills or Valleys, but all as bare as the Grass-Downs in *England*; I durst not send my Boat a-shore for fear of losing her in the Fog, or being sunk at the shore, whereon the Sea breaks very much: the Wind was at North and by East; a fresh gale blew almost along the shore, and being out but 24 hours before, made the Sea run high; the Land lies by the Sea-side South-south-west, and North-north-east, as far as I could see to the Southward; no fire or smoak to be seen upon the Land.

Course made true after several Courses, from yesterday Noon till to day at nine a Clock, when I was 3 Leagues off the Land; true Course is West 6 d. 50 m. Northerly distance; sailed fifty miles seven tenths. Departure West, 50 miles; difference of Longitude West 1 d. 15 m. difference of Latitude North 0 d. 6 m. Latitude by account is 47 d. 14 m. South; no Observation this three days being foggy Weather.

Meridian distance from the *Lizard* West 1014 League, 1 mile, 7 tenths, Longitude at 9 a Clock, from the *Lizard*, West, 61 d. 56 m. 6 tenths, Longitude from *Port Praya* West, 44 deg. 38 m. 5 tenths. Meridian distance from *Port Praya* West,

735 Leagues, 1 mile, 5 tenths. Variation of the Compass Easterly, 18 Degrees.

I concluded we had shot past *Port Desier* Harbour in the Fog, for the Islands and Rocks which we saw, were *Penguin*, and other Isles lying about it, which lies to the Southward of the Harbour of *Port Desier*. Many Seals, Penguins, pied Porpoises, and several Sea Fowls, &c. seen to day.

Thursday Febr. 24. Hasey Weather; Wind at West-north-west, a fresh gale. I sent Men up to the Top-mast-head to look abroad; this Morning no sight of the Pink; I judge she must be in *Port Desier*: I weighed about 8 a Clock this Morning, and stood to the Northward with my Ship; I went in my Pinnace along the shore to the Northward, whilst the Ship sail'd in the Offing, about two Leagues from the shore: the Shore-side is in Beaches and scatter'd Rocks; in many places the Tide of Flood was with us: at the North-end of *Seals Bay*, lies a small rocky Island coping up like a Haycock. It is cover'd with grey-colour'd Fowls Dung; a very strong Tide runs here, between the Island and the Main, 'tis a little more than a Cables length from the Point of the Main; there's a great many broken Rocks about it by the Sea-side; here the main Land is low and sandy, up the Country in large Downs and Hills; without Wood or fresh Water any where: On this Island are abundance of Seals, and Sea Fowls; we gave it the name of *Tomahauke* Island, from an *Indian* Club lost here, called by the *Caribbe-Indians* at *Surinam* a *Tomahauke*, 'tis all a craggy Rock, a little bigger than *Seal-Island*, and

is eight Leagues to the North-north-east: distant from it to the Northwest of this Island, is a deep rounding Bay, called in the Charts *Spiring's Bay*, wherein lie three small Islands of an indifferent height: the Land, in the Country over this Bay is large high Hills, Rocks lie in the North part of the Bay; I cross'd it in the Pinnacle, and sound-ed as I went over, and had 21 Fathom, rough ground in the mid-way: 'tis seven Miles broad, and near 3 Leagues deep; it rounds with a turning up to the North-north-westward, behind a Point farther than I saw; upon which rounding Point stand black Rocks, which make like a ragged Building, and a Tower in it: at my coming in with the Land, I sail'd close under this shoar with my Boat; the shore is steep, black Rocks, and low Bays, with Pebble-stones and sandy Beaches; green Grass on the Hills, no Wood nor fresh Water to be seen; at the North-east Point of this *Spiring's-Bay*, the Land makes out full like a foreland; a fair high Land in large plain Hills, with sandy small Bays; at the face of this Foreland lie six rocky Islands; one is a Musket-shot off the Main, the rest farther off; the outwardmost is the biggest, a Mile from the Point of the Main, and is called *Penguin-Island*; it is indifferent high at the ends and low in the middle; 'tis near three quarters of a Mile long, North-north-east and South-south-west, and near half a Mile broad East and West; it is all craggy Rocks, except in the lowest part of the middle, which is gravelly, and in the Summer time has a little green Grass; the great black Gannets lay their Eggs here, and the Pen-guins,

guins, all over the Island upon and under the Rocks in Holes; Seals lie all about the sides, on the tops of the highest Rocks and in the middle of it; the number of Seals, Penguins, and Sea-Fowl upon these Islands, is almost incredible to them that never saw them; for the multitude of each Creature that's there daily, is numberless: the Six Islands are full of Seals, but the Penguins frequent the biggest most; I put a-shore at one of them, and took into my Boat three hundred Penguins, in less than half an hour, and could have taken three thousand in the time, if my Boat would have carried 'em, for 'tis but driving 'em in flocks to the shore, by the Boats side, where two or three Men knock them on the head with short Truncheons, and the rest heave them into the Boat; the Seals will run over a Man, if he does not avoid 'em; mean time the Ship was standing to the Northward; about 2 Leagues off many broken Rocks and foul ground lie among these Islands, and without the Point of the outermost it makes a great ripling, which is the strength of the Tide, reversed from the Islands against the other Tide; to the Northward of these Islands is a Bay, four Leagues long, and a League and half deep; in the Northwest thereof lies the Harbour of *Port Desier*, which we could see from *Penguin Islands*, bearing North-north-west from *Penguin Island*, distant about 3 Leagues: about the middle of this Bay are steep white Cliffs, near two miles long; the upper part of the Cliff has black streaks down a fourth part, caused by the Water draining down on it; the Land is plain on the top of
these

these Cliffs, but further into the Country high rounding Hills and Downs, and toward the Water-side low; on the South part of the Bay are craggy Rocks on the Main like great Walls; near the Sea there's a sandy Cove, to hale a Boat up in foul Weather; the Cove is just under these wall-like Rocks.

Saturday Feb. 26. Fair Weather, the Wind at West, a stiff gale. I kept a Light out all Night, that the Pink might see if she came along; the first part of the Night a great Fire was made on the shore for the same purpose: Cold weather: this Morning at 7 a Clock I manned both my Boats, and went into the Harbour; the Ship rode moored at the Harbour-mouth, within the Musclemank, in six Fathom at low Water; I sent my Men upon the Hills on the North shore to look abroad for the Pink, and make a Fire in the dry Grass, that she might see the smoak if she were thereabouts, but they could not see her; I sounded the Harbour in many places to day at low Water, and found it a very good one for great Ships to ride in, provided they have good Cables and Anchors; I searched the shore, but found no Wood, and very little fresh Water; on the hilly and large Downs, very few Bushes, but dry, long Grass growing in tufts and knots; the Soil is gravelly and dry, in some Valleys well mixt with black mould; no People, fire or smoak but our own to be seen; I saw several places where they had lain, behind Bushes upon Grass, which they had plucked up, and that they had made small fires, and roasted Lumpets and Muscles; there
lay

lay Wooll, Feathers, bones of Beasts, and shivers of Flints; I went to a Flag which I left on a Hill yesterday with Beads at it, but finding no body had been at it, let it stand; no Beasts seen any where, except two Hares running over the Hills: this day we were taken up with viewing the Harbour, so that we did not advance above a mile and a half into the Land: in the Valleys between the Rocks grows abundance of wild Pease, which had green leaves and blewish blossoms, both tasting like green Pease-leaves in *England*, growing on vines and tangled together; also very sweet smelling Herbs much like Tares, very green, and white and yellow Flowers, likewise green Herbs much like Sage, but grow in knots near the ground like Lettice; these Herbs with the Pease-leaves, made a good Sallad to refresh such as were inclining to the Scurvy; for want of which fresh Trade several of my Men were falling into it. Here are abundance of very good Muscles, and Limpets on the Rocks, and an Island frequented by many Seals, and Fowls; in the River were pied Divers as big as Ducks, some of them grey and black shags; Ducks and other Sea-Fowls breed on them amongst the Rocks and Bushes: to day I went upon one of these Islands, and caught as many young black Shags in their Nests as loaded the Pinnace; when I have discovered better the particulars of the Fowls and other things seen here, I will mention them hereafter: Night coming on, and it beginning to blow hard, I went aboard with Herbs, Fowls, and what else I had got to day; and divided all things equally among the Company, the
Boys

Boys Dividend being as large as my own, or any Man's; it blew very hard this Evening, and looked very black in the South-west, an ordinary gale; I kept a Light out all Night in the Poop for the Pink: this day all the Company eat of young Seals, and Penguins, and commended them for good Food; I judged this a very fit Harbour to fit the Ship in, for the main Mast must be unrig'd, and a new gang of shrouds fitted, and Ballast be had; and it might be a means to fall in with the Pink, for from the tops of the Hills we could see a great way into the Sea, so that if she should come near the Coast, we could not miss her.

We found 2 Springs of fresh Water, one in a Valley close by the Water-side, in a gully above the Ship, half a mile up the River; the other up a Valley between the Rocks, just a-brest where the Ship rode, about half a mile from the River's side, right from *Coopers-Bay* in the same Valley; these Springs are but small, and the Water's a little brackish or saltish, for in the dry Valleys the Earth is naturally saltish; the Ground and Rocks have a white Rhime of Salt-petre hanging on them; I went into the Land 2 miles North-west, and saw the Country hilly, and dry Land without Wood or Water; some craggy Rocks and Valleys, low, but dry and of a Salt-petre nature; here and there some Bushes with prickly Branches, and Leaves like White-Thorn Bushes in *England*; the lesser Bushes have small dry Gauls growing on them, with a small dry Seed as hot in the Mouth as Pepper; not a Tree to be seen: the Soil is gravelly

velly and sandy generally, with tufts of dry fear-
ed Grass growing on it; I digged in several places
but saw nothing but gravelly Sand and Rocks;
no sort of Metals or Minerals; I looked also a-
mong the broken Rocks for Metals, but saw no
sign of any; from the tops of the Hills I could
see a great way into the Land, which is all
Hills and Downs like *Cornwall*: toilsom travelling
to those that were not used to it; I could travel
as far in an hour as many of my Men could in
two; to day we saw nine Beasts feeding on the
Grass, very like Deer, but larger, and had longer
Necks, but no Horns; reddish coloured on the
Back and aloft, whitish under their Bellies and up
their Flanks; when we had got within a Fur-
long of them they fell a neighing like Horses, one
answered another, and then all run away.

Tuesday *March 1*. Fair Weather this Morning,
Wind at North, a fine gale and a cold Air. This
Forenoon I filled the Casks out of the Spring, and
dug them deeper; I set up a long Pole with a
white Cloath upon it, on a Hill near a mile into
the Land, where 'twas most likely to be seen by
the Inhabitants; with it I left Beads, a Looking-
glass, a Knife, a Hook and an Hatchet, to invite
the People of the Country to shew themselves, for
I was willing to see 'em, that I might discover
what they had; but though I went about the
Hills this Afternoon, I could see neither People,
Fire, nor Smoak. I saw three Ostriches, but could
not get near enough to make a shot at them; they
were feeding on Grass, and at first sight of me ran
away; I had a Greyhound with me, which I turn'd
loose

loose upon 'em, who gave Chase to one of them, and at last gave her a turn, which she recovered, took to the Hills, and so escaped; they are grey coloured, and larger than a great Turkey-cock in *England*; they can't fly, but have long Legs, and trust to their running: I saw two handfuls of Wooll among the Grass, where the Natives had made a Fire; it was the *Spanish* red Wooll, which they bring out of *India*, and very fine; I brought it away with me, and set the Greyhound at 3 of the large Beasts like Deer, but they were too swift for him: Night coming on I returned on Board; at 7 a Clock this Night the Wind came to the North, a fresh gale, and hasey Weather; no sight of the Pink to day: I could see a long way on the Sea: at 10 a Clock it rain'd, and the Wind came to the South-East.

Friday *March* 4. Fair Weather this Morning, the Wind at East, a fine gale, I went ashore and filled fresh Water, the rest of the Seamen fitted rigging; this day at 12 a Clock I went with both the Boats, and forty Men to *Seal-Island*, into the Harbour, every Man with his Staff and Club; we landed, drove the Seals up together, beset them round, and in half an hours time killed four hundred young and old; striking them on the head kills them presently; as soon as they were knocked down we cut their throats, that they might bleed well whilst they were hot; then loading both the Boats with them, I carried them to the Bay where the Tent was, landed, and laid them upon the Rocks; to Night the Boat fetch'd them all off: the great Male Seals are as big as Calfs and resemble

semble a Lion in their shaggy Necks, Heads, and Faces, as well as in their Roar; the Females are like Lionesses before, only they are hairy all over like a Horse, and smooth, and the Male is smooth all over his hind-parts; their shape is very deformed, for their hind-part tapers till it come to a point, where grow two Fins or Feet, two more grow out of their Breast, so that they can go on Land a great pace, and climb Rocks, and Hills of a good height; they delight much to lie and sleep ashore; some are very large, upwards of eighteen Foot in length, and thicker about than a But in the Bilge, and excessive fat; there are thousands fourteen foot long, the common sort are about five foot and all very fat; they'l gape at you when you come to them, as if they would devour you, and 'tis labour enough for two Men to kill one of the great ones with a Hand-spike, which is the best Weapon for that purpose.

Saturday *March 5.* Fair Weather, Wind at South-west, a fine gale. This Morning we went ashore to flay some Seals, and cut the Bodies in good handsom pieces, and salted it up well in Bulk on Deal-boards, ashore, that the blood might drain from it; the Meat looks as well and as white as Lamb, and is very good Victuals now, but when 'tis a little salt it will eat much better; those we dress'd were all young Seals, for they suckled their Dams, who as soon as they come ashore bleat, immediately come her young ones, and bleat about her like Lambs, and suck her; one old Female suckles four or five, and beats away other young ones that come near, whence I believe they have

four

four or five at a time; the young ones which we killed and eat were as big as a midling Dog; we cut the fat off of the Great ones, and made Oil of it for the Lamps, and other uses in the Ship; the Oil of the young ones we fried, and eat with our Provisions; it is very sweet and good to fry any Food with; our Men will have it to be as good as Olive Oil; most of my Men to day gathered of those green Pease-leaves and other Herbs for Salads, which some eat raw, some boiled; it is refreshing to their Bodies.

Sunday March 6. Blowing Weather, Wind at West: This day, after Prayers, I went ashore on the South-side of the River, and travelled eight miles into the Land, South-west and by West, having twelve armed Men with me; my Lieutenant went up the River in the Boat nine or ten miles, to see for People that way; my other Lieutenant went on the North-side with ten armed Men to see for People, and view the Land; I found in my Travels one of those great Beasts like a Deer, dead and whole, the Vermin had not touched him; all his Back had pretty long Wooll of the colour of dried Rose-leaves, and down his sides, his Belly white Wooll; he was as big as a small Colt, he had a long Neck, a Head like a Sheep, so was his Mouth and Ears; his Legs very long, and Cloven-footed like a Deer, a short bushy Tail of a reddish colour; no Horns nor ever had any, it was a Male: I believe these Beasts are *Peruvian* Sheep; (*Guianacoes*) I had his Paunch opened, and searched for the Bezoar-stone in it, and in the Pipe to the Stomach, I turned them in-

side

side outward, but found none ; I had heard *West-Indian Spaniards* say, that they have taken the Bezoar-stone of Guianacoes, and therefore opened this, which I take to be the same Beast : In travelling to day I saw several herds of them, sometimes ten, thirty, or forty together ; I could not get near enough to shoot at them ; they neigh like young Horses, and so wander away : I saw nine Ostriches, but they would not suffer me to come within shot of them ; I let the Greyhound at them, but they out-run him up the Hills : we saw a Fox, a wild Dog, and five or six Hares, of which the Greyhound killed one ; they are shaped like *English Hares*, and much larger, and instead of a Tail have a little stub about an inch long, without Hair on it ; they have holes in the ground like Coneys : no Woods to be seen, only a few Bushes like White-Thorns. The Land is dry, of a sandy gravelly Soil, in large rounding Hills, not very high, but in Downs and Valleys, bearing nothing but Grass ; here and there are gullies of fresh Water in the Valleys, which is made in the Winter-time when the Snow dissolves : I saw several places of salt Water in the Land, which is occasioned by the natural saltness of the Earth ; here are no Fruits nor Herbs : When I was at the farthest, and on a Hill, I could not see any sign of People, or Woods, but still Hills and Valleys as far as we could descry ; no Birds to be seen but Kites, which are like those in *Europe*, and small Birds like Sparrows, and Linnets ; some Flies and Humble-bees here : we saw some small four-footed Animals running in the Grass ; speckled-Grey,

D

shaped

shaped like a small Creature in *England* called an Eft, Newt or Lizard; no Adder nor Snake, nor any venomous Creature; Cattle would live here very well, such as Horses, Cows, Sheep, Goats, &c. Evening growing upon us, I returned to the Ship, and 'twas within Night when we got aboard our Boat, and ten a Clock when we entered the Ship; I found on Board my Lieutenant that went up the River, but they which went on the North-side were not come back; up the River they saw five small Islands, which had Sea-fowls on them and Bushes for fewel; the River grows broader upwards and has several Rocks in it; on the shoar they saw Guianacoes, Ostriches, and Hares; no People, Fire or Smoak; they saw where People had been, and Fires made, and Muscles and Lumpets roasted; no fresh Water nor Wood, nor any Metal or Mineral; the Land hilly with Grass on it: At twelve a Clock to Night those that went on the North-side came aboard; they had been about eight miles into the Land North-west, and saw no People, but found where People had been, and made Fires in the Grass, and Grass laid to fire the Bushes; also where some had lain on open places, and set little Bushes in Half-moons, to shelter them from the Weather; on the top of a Hill they made a fire with Grass to see if any would answer them; they sat down by it all day, but could see none made any where else: the Land is in rounding large Hills, not very high, but like Downs, as the Coast of *Yorkshire* about *Burlington*; no Woods nor Trees seen, nor fresh Water; here and there a Bush growing in a Valley; indif-

ferent

ferent good Grass; the Soil gravelly and sandy, and some ridges of Rocks; they saw Guianacoes, Ostriches, Hares, and Kites; several little Creatures like Efts; no kind of Fruit or Berry, Mineral or Metal: I charged them as they travelled in any Gullies where Water had run to search for grains of Gold, or other Metal, &c. for Gold is found in grains in such Gullies, and much Gold is found in the Land on the other side, not two hundred Leagues distant from us; much Salt-peter hangs on the Earth where Water has been, in a kind of Flower; the plashes of Water they met with were as salt as Brine, which the Earth made. I saw Smelts here eighteen Inches long lying dead on the Shore, but hitherto have not seen one Oyster, or other shell-Fish, Crawfish, Lobster, or Crab, though 'tis possible the place may have 'em all. Whilst we were standing by the Water-side, a Seal chased on shore a Fish as large as a Mackrel and like a Mullet; one of the Men took it up, and dressed it, when he came on Board, 'twas excellent good; here must be a great quantity of Fish to maintain all the Seals, Penguins, and other Fowls that live upon nothing else, and yet are all extream fat, and innumerable in multitude; besides what Creatures we have not seen yet; I have seen Seals in this Harbour swimming with their heads above Water, with large Fish in their Mouths.

Sunday *March* 13. Indifferent Weather, Wind at West, a fresh gale; The Air cold this Morning. I went up the River in my Boat with fourteen Men armed; I past the Island, where the brushy

Bushes are, and where we took the young Shags; there the River grows broader, near a mile from the North shore over to the South, and continues that breadth four miles, then it becomes narrower, and turns away to the South-west; at this turning is an Island of a mean height and Rocky, bearing some small Bushes and Grass; I went upon it, and saw a Post of five foot long set up (it had been the timber of a Ship) with a piece of Board about a foot square nailed to it, at the foot of it one of my Men took up a piece of Sheet-Lead, and gave it to me, it had this Inscription engraven on it,

M D C X V.

EEN SCHIP ENDE EEN IACHT GENAEMT
EENDRACHT EN HOORN GEARRIVEERT
DEN VIII DECEMBER VERTROKEN MET EEN
SCHIP D'EENDRACHT DEN X: IANVARY: MDCXV

C: IACQUES LE MAIRE

S. WILLEM CORNS SCHOVTS

ARES CLASSEN

IAN CORNS SCHOTS

CLAES IANSSSEN BAN

In a hole of the Post lay a latten or tin Box, (which we found by a long Plug that stuck in the hole) with a sheet of written Paper enclosed in it, but so eaten by the rust of the Box, that 'twas not to be read ; I cut out with my Knife upon a Board the Ship's Name, and the date of the Year and Month, which I nailed to the Post ; and brought away the Lead with me, and named the place *Le Mair's Island* : we found on it several pieces of Boards, of the Wreck of some Ship, that had been burned ; they were drove up here by the Tide ; the People of the Country can't get upon this Island : From hence I went on the North side of the River two miles into the Land ; no Trees to be seen, but many Ostriches and Guianacoes in many places ; the Soil is marly and good, the Hills not very high, but plain large Downs, with Grass on them all over ; digging in two or three places I found sandy dry ground near a foot deep, then Marle : In my opinion it might be made excellent Corn-ground, being ready to Till ; 'tis very like the Land on *New-market* Heath ; no People to be seen ; I searched the Gullies and broken Rocks, for grains of Gold or Minerals, but found neither : I returned to the Boat again, rowed farther under the shore, landed, and mounted a steep high Hill to view the Country ; on the top of this rocky Hill grow small Bushes : I could see the course of the River a long way further, and the Land all Grass ; here and there a white spot of Marle on the side of a Hill ; no People to be seen nor Boats on the River ; I came down to the Boat : several Creeks run from hence a mile or two into

the Land : I cross'd the River to the South-east shore ; we made the Boat fast in a Creek in a Valley, and went all hands up the Land three miles ; we saw many Guianacoes, and Ostriches, but could not come within shot of them ; I saw the Footsteps of five Men that had been upon the Oar ; I measured my Foot with them, which was larger and longer by half an Inch than any of them ; we could not see any People : it being near Night we plucked up Grass, and laid it to the best advantage for shelter ; here we lay all Night, keeping watch two by two ; cold Air to Night, wind at West.

Monday *March* 14. Fair Weather but cold. This Morning by day-light we turn'd out, and march'd into the Land four miles South-west and by South ; we could not find any fresh Water ; we made a Fire on the Grass, but saw no sign of any People ; we saw *Guianacoes*, Hares, Foxes, wild Dogs, pretty large, and a grey Cat like an *English* one, running up the Hills : to day we caught an *Armadillo* ; the Dogs put her to ground ; they have holes like *Coneys* ; we soon dug her out, 'twas as big as a great *Hedg-hog*, and not much unlike one ; the *Armadillo* is cas'd over the Body with a shell, shutting one under another like shells of Armour ; the Dogs could not hurt her : we saw Rats in many places, and a kind of *Polecat*, with two white streaks on the Back, all the rest black ; our Dogs killed two of them ; they stink much, several *Ostriches*, some *Partridges* and many *Kites* : the Land in fair Hills without Wood or fresh Water ; the Soil a sandy Gravel with Grass all over it ; no
Mineral

Mineral or Metal seen. This afternoon we returned to our Boat, and went through a Creek two miles long, which is dry at low Water, and not more than thirty foot broad; it makes a fair Island of a mean height, plain on the top, and Grass growing all over it, but no Wood nor Water upon it; the greatest part of it is a sandy marly Soil; 'tis two miles long, and half a mile broad; the Greyhound killed two Hares on it presently, and we saw above twenty; I called it *Hare-Island*; it is adjacent to the South-shore; eight miles up the River from the narrow, I went down the River and went aboard: this Evening cold Air, Wind at West, a stout Gale; towards Morning it came to the North; I cannot perceive the *Indians* have any Canoas or other Boats here.

March 24. Blowing Weather, Wind at West. We fetch'd all our things off the shore, and got the Ship ready to Sail; I went a-shore on the South-side to the peaked Rock, and found it a natural Rock, standing on a small round Hill, as if it had been built there by Man; it hath a Cleft on the top of it as big in circumference as a But: 'tis near forty foot high above the Hill it stands on; about it lie little lumps of Rocks; I saw nothing else worth notice, so I return'd to the Ship; the biggest stick growing in or near this Harbour, or in the Countries as far as we went, which was twenty Miles, would not make a Helve for a Hatchet, but there are Bushes which will serve for firing at Sea: before Night I had all things on Board, and the Ship fitted with intent to sail next Morning, and look'd along the Coasts for the Pink, till I arrived

at *Port St. Julian's Harbour*; fresh Water is scarce in *Port Desier Harbour* in the Summer-time; the places from whence I fetch'd Water, are small Springs on the North-side, out of which I filled near forty Tuns; the first Spring is on the North-side, as you enter the Harbour half a mile up a Valley, in a gully of Rocks: it bears North-north-west from the lower Rock; that we called *Peckets Well*, is a mile up the River, within a Bow-shot of the salt Water, 'tis in a gully: the Land in these Valleys has very green and sweet Grass, and abundance of wild Pease; small Nut-galls growing on the Bushes, but in no great quantity, and but few Bushes; Salt may be made here, for on the Shore-side, and on the Rocks I gathered several handfuls of good Salt.

March 25. Gentlemen, You are by me desired to take notice, that this Day I take possession of this Harbour and River of *Port Desier*, and of all the Land in this Country, on both Shores, for the use of his Majesty *King Charles the Second, of Great Britain*, and his Heirs; God save our King, and fired three Ordnance.

Saturday March 26. Wind at West, a stout Gale. I stood to the Northward; this Morning at six a Clock when the Sun appeared above the East Horizon, the Moon set in the West-horizon, being eclipsed at *London* at Eleven a Clock, ten minutes in the Forenoon; but here at six a Clock thirty minutes past, which gives four hours forty minutes difference of time, between the Meridian of *London* and the Meridian of *Cape Blanco*; which Cape lies in the Latitude of *47 d. 20 m.* South;

South; on the South-east Coast of *America*, where I saw this Eclipse 70 degrees in Longitude to the Westward of the Meridian of *London*, by this Observation; I could not see the whole Eclipse the Heavens being clouded; I find *Cape Blanco*, by my account of Sailing, to lie in the Longitude of 69 d. 16 m. to the Westward of the Meridian of *London*; If the Moon had not been clouded, I might have been exact in the Longitude, but I presume my Account is not much out.

Cape Blanco lies in the Latitude of 47 d. 20 m. South; and in Longitude from the *Lizard*, West, 61 d. 56 m. and in Meridian distance from the *Lizard*, West, 1014 Leagues, 1 Mile. ⁶.

Port Desier in *America*, lies in the Latitude of 47 d. 48 m. South, and in Longitude from the *Lizard*, West, 61 d. 57 m. Meridian distance from the *Lizard*, West, 1015. Leagues, 2 Miles, ².

Penguin Island, or the plentiful Isles, Latitude 47 d. 55 m. South, and in Longitude from the *Lizard*, West, 61 d. 57 m. Meridian distance from the *Lizard*, West, 1014. Leagues, 2 Miles

Variation of the Compass here is Easterly 17 d. 30 m.

April 1. The Sweepstakes off of *Seal's Bay* in the Latitude of 48 d. 10 m. South, on the Coast of *Patagonia*.

Saturday April 2. Fair Weather this Morning, Wind at North-north-west, a fine gale. I filled at Day-light, and steered away South-south-west, and South and by West by my Compass, as the Coast lies; I failed along in twenty Fathom-water: black Sand distant from the shore near three Leagues;

Leagues: this forenoon at nine a Clock, I saw a small flat Island to the Westward of me, about a League off the Land; it lies in the Latitude of $48^{\circ} 40'$ South; the Land against it is high, in large Hills, and some round coping tops; two Leagues more to the Southward, the Land is low, in a great Plain, and a Beach by the Sea-side, but the shore against this Island is rocky; I was two Leagues East from the flat Island, and had twenty three fathom black Sand; I haled close in for the shore, and sail'd within five Miles of it; all along from this Island to *Port St. Julian* I sounded as I sail'd along, and had 18 or 20 fathom fine black Sand; the Land is low in a Valley; the Sea-shore is a Beach, here and there a Rock; it is in a long Beach for four Leagues; after you are to the Southward of the Flat-Island one League, the shore lies South-south-west and North-north-east; at the South-end of this Beach in-land are high round Hills, but at the Sea-side is a steep white Cliff, of an indifferent height with a black streak in it; over the Cliff the Hill rounds up to the top, having some small black Bushes growing on the side; no Wood or Tree seen.

In this Bay is *Port St. Julian*; the Harbour's mouth is in the middle of the Bay, but you cannot see it without, for one Point shutting in the other; you must send your Boat in to discover the Harbour at Low-water, and the Bar without, for 'tis a barred Harbour: the Land in the Country over *Port St. Julian*, on the West-side, is high coping round Hills, like blunt Sugar-loaves on the top; 'tis the highest Land I saw in all the Country,
and

and there are no such Hills besides on the Coast; the Land is plain to the South without any Hill, as far as we could see at this time: this Afternoon it proved a Calm; I anchored in the Bay before *St. Julian*, in twelve fathom Water, black oary Land, the Harbour's mouth bearing West-south-west of me, about two Leagues off: I sent in my Boat to discover the Harbour, and see if the Pink was there, which returned to Night at six a Clock; my Lieutenant told me there was a safe Harbour, and Water enough for a bigger Ship, but no Pink, nor any sign of her having been there; now I despaired of ever seeing her more, after my hopes were frustrated here; nevertheless I doubted not the success of my Voyage, though the Company thought 'twould be dangerous being a lone Ship, a stormy Sea to sail in, and unknown Coasts to search out, and if we should happen to run a-ground any where, could expect no relief; these suspicions I soon put out of their Heads, by telling them of the great Riches of the Land, and that *Captain Drake* went round the World in one Ship, when in those days there were but ordinary Navigators; and was it for us to question our good fortune, who beyond Comparison are better Seamen, if we would put our selves in Action; and for me, I would expose no Man to more danger than my self in the Attempt. Calm to Night; I rode fast, a small Tide running where I rode; the Water ebb'd near three fathom perpendicular: it is near nine Leagues from the *Flat Island* to *Saint Julian*, South-south-west and North-north-east as the shore lies.

The

The Mouth of *Port Saint Julian*, in Latitude 49 d. 10 m. South, and in Longitude from the *Lizard* 63 d. 10 m. and in Meridian distance from the *Lizard*, West 1030 Leagues; by an Amplitude here, the Compass has varied 16 d. 10 m. East.

Wednesday *April* 13. Fair Weather, Wind at West, a small gale. Frosty and cold Air, no sign of the Pink: I went ashore and haled the Seyne on the East-side; at the first of the Flood we caught five hundred Fishes, as big as large Mulletts, and much like them, grey, and full of Scales: some as big as a Man's Leg; we caught them all in four hours time, returned aboard, and divided them among the whole Ship's Company: they eat admirably well; many good Muscles lie on the Rocks, and Oyster-shells on the Shore-side, and growing in Veins on the Rocks, but no Meat in them: Wind at West to Night, a fresh gale.

Monday *April* 18. Wind at South-west, a stiff gale. Cold Air and some Snow this Morning; the Winter is come strong and stormy, so that 'twill be impossible to hold the Coast into the Streights; for the Wind blows altogether from the West or West-southerly, and in such Gusts as will force a Ship off the Coast. This day I ordered my Purser to serve the Company Brandy-wine for their Allowance, at a Quart *per* Week a Man: I got a Boats lading of the Wood of the Country aboard for firing; to Night it blew hard at South-west; all the Company eat salt Seal, and Penguins for their Allowance: sweet and very good Meat, and keeps well and long in Salt.

Friday

Friday April 22. Wind at South-west, a stiff gale, and cold Air. This Morning I went ashore on the North-west side with twenty Men to the Salt-pond, which is rusted all over like a Pavement, with very white and good Salt, two Inches thick, for two miles long: in *February* here's Salt enough to fill a thousand Ships; we filled two Bags and laid up near two Tuns out of the Water, for there was Water over the Salt, which began to decay with the Rain and Weather beating on it: at Night I returned aboard, we brought as much Salt with us as filled a Punchion, very good white Stone-salt, whiter than *French-Salt*, and of a very pleasant smell; I saw some Guianacoes, and Ostriches: the Hills and Valleys dry Earth, and Grass on them: on the higher Hills lies Snow, no People, but many places where they had made fires, and lain under a Bush for shelter; no Mineral or Metal, Tree, or Fruit.

Wednesday April 27. Close Weather, and little Wind; a cold Air, it freezes hard, the Ice bears a Man.

Thursday April 28. Wind at West and by South, a fine gale, cold frosty Weather. We unrig'd the Ship, and made all snug, intending to Winter in this Harbour; the Ice will not suffer us to pass the Streights; the Winds are so stormy, and generally out of the Western quarter; the Nights so long and cold, that the passage is impossible: this Winter. The Port I found safe to ride in, and good refreshment to be had of Fowls: as Ducks, Peekes, and Divers, &c. In the Spring I may be ready to sail to the Southward, when we shall have

have the year before us, and the Sun in the Southern Signs, which will give long Days and short Nights, and temperate Weather; Wind at North-north-east this Evening, and Rain: it blew a great storm to Night, the Boat sunk at the Ship's stern, and lost the Oars: less Wind towards Night, and veared to the West.

Friday *May* 6. Wind at West-north-west, a fine gale. I went a-shore on the North-west side with thirty Men, and travelled seven or eight miles up the Hill, saw no People: the Land is great Grass-Downs in most places; and on the tops of the Hills, and in the Ground are very large Oyster-shells they lie in Veins in the Earth, and in the firm Rocks: and on the sides of Hills in the Country; they are the biggest Oyster-shells that ever I saw; some six, some seven Inches broad, yet not one Oyster to be found in the Harbour; whence I conclude, they were here when the Earth was formed: no sign of Mine or Metal, no Woods or Tree; We found a good Spring of fresh Water up in the Hills, it drains into salt Water-swashes: We saw several Salt-water Ponds six miles in the Land, made by the saltness of the Earth; we saw Ostriches, Guianacoes, and a Fox. I made a Fire on the top of the highest Hill, but could see no answer; I returned aboard with my Company very weary; some of my Men fetched Salt to day: fair Weather to Night.

Friday *May* 13. Indifferent Weather, Wind at West-south-west, a fine gale. This day we fetched Salt: a Gentleman of my Company, Mr. *John Wood*, walking on the *Island of Justice*, found three
small

small pieces of Gold Wire in two Muscle-shells: which Shells were made together by a green Gut-string: the Gold was to the value of two shillings English, and had been hammered, the wire as big as a great Pin.

Monday *June 6.* Cloudy cold Weather, Wind at South-west, a fresh gale. This day I went a-shore with sixteen Men, and travelled ten miles West into the Land; the Hills there are covered with Snow: 'tis very cold, we could not go any further for Snow; and the Air is so cold that we could not endure to lie on the ground; on the Hill that I was on, we could see nothing but Hill beyond Hill; no Woods, nor Trees, nor Bushes, all grass Downs: the Land is flat on the tops of the Hills; fresh Water runs down in several places, which is melted Snow, and when the Water leaves running, there's no Snow. I saw many Guianacoes, and Ostriches; no People or sign of any: close by the Water-side we saw many places, where they had lain on open Hills in the Snow, and some places where they had killed and eat Guianacoes and Ostriches; they make but small Fires with little sticks; I do not find they roast their flesh at them, for we saw some raw Flesh hanging to the Bones, which they had gnawed with their Teeth: their Fires are only to warm their Children's Fingers, as we imagine: I gathered some handfuls of Guianacoes Wool that lay here; I am persuaded these People must needs see us travelling to and fro every day, but won't come near or be seen by us: they live like wild Beasts, or rather worse, for sometimes they must be in great want of Food; here's

here's neither Fruit, Root, or Herb for it: The Land is a dry gravelly Soil, with Sand, and in many places a Marle two foot below the Surface; the Grass, which is dry, grows in knots, not very long but thick; in the Valleys the Earth is of a Petery or nitrous Nature; Ostriches seen; no sign of Metal or Mineral; I and my Company have looked in most places where we travelled for it: to Night we got down but very weary.

Tuesday *June 7.* close dark Weather, Wind at North-east and by East, a fair gale: a new Moon to day, fine Weather to Night, but cold; the Stars near the *Pole Antartick* are very visible; some of the small Stars in the Constellation of little *Hydra* are near the *Pole*; Here are many good Stars near the Pole, good for Observation, of the first and second Magnitude: the Star at the South-end of *Ariadne*, the Star at *Hydra's Head*; the Star in the *Peacock's eye*, and the Stars in *Tucan's bill*, and the Stars in *Tucan's thigh and back*; the Stars in *Grus's head and wing and body*; but the brightest Stars are the Stars in the former foot of *Centaurus* and the *Crossers*; the other Stars are of the third, fourth and fifth Magnitude: The two Clouds are seen very plainly, and a small black Cloud, which the foot of the *Cross* is in, is always very visible when the *Crossers* are above the Horizon, as they are alway here in these Latitudes. The Heavens in this South Hemisphere are as the Heavens in the North Hemisphere; but no Stars within eighteen degrees of the Pole fit for Observation; no Pole-star, as the Star in the Tail of the little *Bear* is in the North

North : the Air cold to Night, but very healthy for stirring Men ; I have not had my Finger ached as yet ; a Man hath an excellent stomach here ; I can eat Foxes and Kites as favourily as if it were Mutton ; every Fox and Kite as we kill, we eat, which is ever now and then one killed. Nothing comes amiss to our stomachs, not one Man complains of cold in his Head or of Coughs. Young Men well grown and of good shape are most fit for this Country, it being a dry and an hungry Air, and Provisions to be got with pains. The Ostriches are nothing so big as the Ostriches in *Barbary*, nor of the Colour nor Feather ; these are grey on the Back, and shaggy Feathers of no use, and the Feathers on their Bellies are white ; they have long Legs and small Wings ; they cannot fly ; they have a long Neck, and a small Head, and beaked near like a Goose ; they are much like a great Turkey-cock, and good lean dry Meat and sweet : to Night I came aboard ; it blew fresh at West.

Wednesday *June 22.* Wind at West-north-west, a stout gale. This day I went ashore on the East-side, saw no People ; this day Mr. *John Wood* went ashore on the West side, and three Men with him ; they were armed ; they travelled into the Land West and by North about four miles ; where they saw seven People of the Country on a Hill, making a noise and wafting them to the Ship : Our Men went up the rise of the Hill to them ; three of the *Indian* Men came to Mr. *Wood* with their Bows and Arrows in their Hands, and a loose skin about their Bodies, and a Furr-skin

E about

about their Heads, and pieces of skins about their Feet, and all the other parts of their bodies naked; they were painted red and white on their Faces; they would not come so near as to let our Men touch them, but stepped back as you moved forward; they continuing their noise, and wafting with their Hands towards the Ship, and and kept talking, but no Man could understand them: they repeated *Ozse, Ozse*, very often; they have an harsh Speech and speak in the Throat; they received any thing that you cast to them on the ground. Mr. *Wood* gave them a Knife, and a Shash, and a Neckcloath, and a bottle of Brandy: they would not drink; Mr. *Wood* could not perceive any Bracelets they had, or any thing about them save their Skin: they are People of a middle stature, and well-shaped; tawny Olive-colour'd, black Hair, not very long: they seem to be of a rude behaviour, for they returned nothing for what they received, nor took no notice of any thing; the rest of their Company stayed at the Hill: they can endure much cold, for their Legs, Buttocks, and lower parts are naked. Mr. *Wood* was taller than any of them, and he judged the eldest of the three to be upwards of forty years old, the other thirty. They seemed to be very fearful; they took their own time, and went away into the Land. Mr. *Wood* returned aboard and acquainted me with what he had seen. This Night we saw a Fire in the Hills. It blew hard to Night at West. They have small Dogs with them; they would not have come near our People, if they had not fallen accidentally in the Hills and Valleys with

with them. I have thought that they have heard of the cruel dealings of the *Spaniards*, and dare not trust us.

Saturday *July 2*. Wind at West, a fine gale. I went a-shore on the East-side; we killed a great Guianacoe with the Greyhound. I looked in his Paunch for the Bezoar-stone, but found nothing. I travelled to and fro but saw no People: I saw where People had made earthen Pots, and had glased them, for there lay some of their stuff run together: at Night I went aboard.

Sunday *July 3*. Wind at South, close Weather. The Guianacoe weighed, cleaved in his Quarters, two hundred and fifty pounds neat. He served all the Company for a days Flesh, and is good Meat.

Tuesday *July 12*. Close Weather, and little Wind at North and by West. I went up to the head of the Harbour, but saw no People: There is in the Fullers-Earth Cliffs at the head of the Harbour, a Vein made like rotten Ising-glass; I took some out, but cannot find it good for any thing: I digged in the Cliff, but saw nothing to be taken notice of. I saw in two places pieces of floor Timbers of a Ship; they have laid a long time rotting. We saw that the biggest of these Bushes here, have been cut down by some Christian People. I saw wooden Plates, and a piece of Cork, and a piece of an old Oar: some Christian Ship had been here formerly. I lay ashore to Night.

Sunday *July 31*. Fair Weather, Wind at South-west, a stiff gale. The Weather as cold as it is

in *England* in the height of Winter, and the Air rather sharper and dryer; I have now twelve Men lame with the cold, and their Legs and Thighs are turned as black as a black Hat, in spots, the cold having chilled the Blood; yet they use bathing and stuping those places, and all that they can to prevent it, but it rather encreaseth on them than otherwise: These are such People as I could not make stir by any means; they that stir are as well as any Men in the World can be.

Tuesday *August* 2. Close Weather, Wind at South-west, a gale and cold Air. We fall on fitting of our Rigging and getting the Ship fit: Here are hundreds of Guianacoes in companies near the Water-side: my Greyhound is lame, so that I cannot make her run; also here are many Ostriches, together with many green Plovers at the Water-side, and some Swans, but not full so large as ours: They are white, save a black Head, and half the Neck and Legs black: Here are some white Geese, as *European* Geese; the brant-Geese are some white, some black and grey; The Mallards and Ducks are grey; and the Teals are grey.

Tuesday *August* 16. Close Weather, Wind at West and at North-west, a fine gale. I sent the Boat for Water to a Swash on the East-side; two of my Men saw two of the People of the Country on the East-side behind a Bush; my Men went toward them; they went away and left a bundle of Skins under the Bush; my Men made signs to speak with them, but they would not stay; my Men did not go after them but sat down, they would not stay; they were but of a middle stature:

ture: my Men brought the Bundle aboard to shew it to me, and two mungrel Dogs, which were coupled together. I opened the Bundle and it was several bags of Skins, with red Earth and white Earth, and Soot or Paint in a Bag: this is the Trade they paint themselves with; they had Flint-stones and Arrow-heads in the Bundle; I searched the Bundle all over to see for grains of Gold, but could not find any: There were Bracelets of Shells, and bits of Sticks, and braided Thongs, and Arrows, and Muscle-shells, and Armadillo-shells, and a small point of a Nail in a stick for a Bodkin: Their Skins were pieces of Seal-skins, and pieces of Guianaco-skins, sewed together with small Guts; all very old and full of holes, and smelt of grease: There were pieces of Flints made fast with a green Gut, in the split of a Stick, which they hold fast to knock their Arrow-heads into shape: There were also pieces of Sticks to get Fire with. This was all that was in the Bundle; it was made fast with Leather-thongs, braided round like Whip-cord, and the Dogs were coupled with such strings: The Muscle-shells are their Knives. I put all things up in the Bag, and made it fast. Their Dogs are much of the Race of *Spanish* Dogs; a good large mungrel Cur, but very tame; any Man might handle them; they were grey in colour, and painted red in spots: they were very lean; there were two great Staves of four foot long, which was tough Cane in short joints: I carried them a-shore next day.

Tuesday *August* 30. Foggy close Weather this Morning, Wind at North. We travelled away

West into the Land ten or twenty miles farther: The Land all dry, with Grass, and Bushes in some places like Thorns; the Hills high, and many, and Snow on the tops; no Woods, nor Trees to be seen; Fresh-water comes running out of the Hills in a fine Rivulet; no Fruit; many fedgy Bushes grow on the Brink, and brave green Grass, and a green Herb of a pretty strong hot taste; some Teal in the Water, and Water-birds; this is all I saw about the Rivulet. Many large Ponds in the Country, but salt Water in those Ponds; we saw Fowls like Herons, but all red; in the Valleys we saw hundreds of Guianacoes in a company, and twenty Ostriches: some Hares and some Partridges, greyer and bigger than ours; some Snipes and small Birds; several Penne-wrens: we saw several Kites, and small Hawks, and Owls; we caught two Armadilloes: I saw two Foxes and a wild Dog, and many brant-Geese: the Land is in Hills and Valleys as far as we could see, and bad travelling on foot; the Soil is gravelly and dry Sand, of a Salt-petre nature; the Grass in some places long and dry, and in some places short and dry; the Hills are rounding aloft like large Downs: We saw red Earth in some places, such as the *Indians* use; we saw the Footsteps of People in many places in the Clay, and places where they had been, and had killed Guianacoes, and made a fire there; I gathered Guianacoes-Wooll, and Ostriches Feathers were scattered about the place, and Bones: there lay the Skulls of three People, no flesh on them; they were very clean, and no larger than the Skulls of *European* Men; smooth

smooth and even Teeth, close set; one of those Skulls was broken. Whether these People be *Man-eaters* or not I cannot tell; I judge they have Wars one with another, by reason here are so few People in this great Land, and food enough to live on, and the Land all clear and good Pasturage for Cattle, and no Mountains; in all the Land there are Plains and grassy Meadows: here wants only Wood to build with; if that were here, it would be as good a Land as any part of *America*, for the Country is very healthy. This Afternoon it rained, and was very thick and foggy, so as we could not tell which way to go, although we had a Compass with us; for there is no going into the Land without one, because a Man will mistake his way, the Country is so open in great Plains and Downs: We were very much wet and cold; We got to Bushes, and there made a Fire and dried our selves: we stayed here all Night; we neither heard nor saw any thing to Night.

Tuesday *September* 1. 1670. Close hazy Weather, the Wind at North, a small gale, so as I could not Sail this day; we tried for Fish, but caught none, the Water is so cold. I was on the Land, when I was at the farthest, twenty five miles West-north-west from the Harbour-mouth, and all things as I saw I have mentioned, excepting some small Creatures like Efts, which run in the Grass; no manner of Snake or venomous Creature have I seen in this Country; here are some Earth-worms, and Caterpillers, and other Buggs, but few in number: no wild Beast of prey, or

any other thing to annoy the Inhabitants, but Cold and Hunger: Here lies a large Country, open to receive any Inhabitants from forein Parts, and large enough to fatisfie the Undertakers: The Land would produce *European* Grain, if planted here, and breed Cattle.

September 16. I considering my Men, being very weak, thought it most fit to go for *Port Desier*, and there to refresh the Men, for I knowing there I could have what Penguins and Seals I would have, which are good Provisions; also I do intend to salt up a quantity of each, to carry to Sea with me, to lengthen out my Provisions. This Forenoon I steered from *St. Julian* North-north-east, and made what Sail I could to get to *Port Desier*: This Night it was a small gale, and veered to the West-south-west; I judge it best to make my easie Sail in the Night, for fear of running up with the Eady Stone-Rocks before daylight.

Wednesday September 21. Fair Weather to day, the Wind veerable round the Compass. This Morning I had both the Boats laden with Seals, and Penguins and Penguin-eggs; ten Men may kill ten thousand Penguins in less than an hours time; the Seals and Penguins are numberless: a Man cannot pass on the Island for them. This Evening I got on board and landed our lading ashore; fair Weather to Night. The Eggs are very good Nourishment, and the Fat serves for Oil to the Lamps.

Thursday September 22. Fair Weather, Wind at West. This day I divided the Eggs amongst
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the Men: we skinned the Seals and the Penguins, and salted the Flesh in bulk on the Rock, and covered it to keep the Wind from it: good Weather and little Wind to Night.

Friday *September* 30. The Wind at North this Morning; this forenoon it came to the Southeast, and blew hard, and rained. This day I went up the River about ten miles, and *Don Carolus* with me, and ten Men to see for People: we lay out all Night on the South-side, but saw no People; this Night the People of the Country came to our little Well, which is up in the Valley, and stole an Iron Pot, and three suits of Cloaths of the Mens, that were laid there a drying, with some other Linnen; but did not meddle with the Beads, which are hung up on a Pole on the Hills, and they will not come near it nor meddle with it: The People of the Country have made in a Valley, the form of the Ship in Earth and Bushes, and stuck up pieces of sticks for Masts, and redded the Bushes all over with red Earth; the Model I imagine is to record our Ship, for they cannot have any Records but by imitation: This Fancy we let alone untouched, only I laid a string or two of Beads on it and came away: close Weather to Night. These People must certainly have received some injury in former times, from some People that have been here in Shipping, otherwise they would come in fight of us; or else they have heard of the cruel dealings of the *Spaniards* toward the *Indians*, where they lived near: I have used all endeavours possibly by fair means to have Conference with them, but all is in vain.

Tuesday

Tuesday *October* 11. The Wind at West-south-west, a stout gale; very cold, Hail and sleety Snow to day. Our Men are all in good health and are lusty and fat, those which had the Scurvy are got very well with eating of fresh Meat, and such green Herbs as they can get on the shore, as green Pease-leaves and such trade; they mince it, fry it with Eggs and Seal-oil; and it hath raised every Man in as good health as they were at our coming out of *England*: We fare very well, and have great plenty of good Provisions: Here is Provision enough of Seals and Penguins, if salt be plenty, to lade Ships; I can confidently say, that on the *Island of Penguins* there are more Seals and Penguins at this present, than three hundred Tuns of Cask can hold, when dressed and salted, besides what are going off and coming on; If any Men should have occasion for provisions of Flesh, if they have Salt, here they may furnish themselves with what quantity shall seem fit for them, and I can assure them it will last four Months sweet, if not longer, if care be taken in bleeding, and dressing, and salting, as I have prescribed before; the Salt may also be had at *Saint Julian's Salt-pond* in Summer-time; also I believe that Salt may be made at *Port Desier* in the Summer-time, for here is some dried Salt on the holes of the Rocks: Here are several Flats, where Men may make Pits and let in Salt-water, and so make Salt, as I have seen in other places.

The Penguin is a Fowl that lives by catching and eating of Fish, which he dives for, and is very nimble in the Water; he is as big as a brant-goose,

goose, and weighs near about eight pounds; they have no Wings, but flat stumps like Fins: their Coat is a downy stumped Feather; they are blackish, grey on the Backs and Heads, and white about their Necks and down their Bellies: they are short legged like a Goose, and stand upright like little Children in white Aprons, in companies together: they are full-necked, and headed and beaked like a Crow, only the point of their Bill turns down a little: they will bite hard, but they are very tame, and will drive in herds to your Boats-side like Sheep, and there you may knock them on the head, all one after another, they will not make any great hast away: Here are a great many Sea-Pies, and Ducks, and Ox-Birds, and Sea-Mews, and Gulls, and white Sea-Pigeons, and white-breasted Divers, and Dobchicks.

October 13. I weighed, and sailed out of *Port Desier*, standing Southward. *Octob. 16.* I was in *Lat. 49 d. 8 m. South.* *Octob. 19.* I passed by the Cape, called *Beachy-Head* by our Men, and the Hill of *St. Ives*, *Lat. 50 d. 10 m.* The Compass has variation *16 d. 37 m. Easterly.* The Land here makes in a Bay, where the River of *St. Cruce* goes in.

Octob. 21. We passed by *Cape Fair-weather* in *51 d. 30 m. South-Lat.* Here goes on the River of *Gallegoes.* *Octob. 22.* We came to *Cape Virgin-Mary*, at the entrance of the *Streight of Magellan.*

Cape Virgin-Mary, at the North-entrance, lies in the Latitude of *52 d. 26 m.*

And in Longitude, from the *Lizard in England*, West, *65 d. 42 m.*

Meridian

Meridian distance from the *Lizard* in Leagues, West 1062. Leagues.

Variation of the Compass here I find to be Easterly, 17 Degrees.

Here is Anchoring all about this Part of the *Streights*, in the fair way from *Cape Virgin-Mary*, till you come into the Narrow. I did not find much Tide any where hereabout, but in the Narrow, and there the Tide runs stronger than it does in the *Hope* a good matter; the floud Tide sets into the *Streights*, and the Ebb sets out; it keepeth its course, as on other Coasts: it is six hours Floud and two hours Ebb; it riseth and falls near four Fathom perpendicular; it is an high Water here, on the change day of the Moon at eleven of the Clock, as far as I could perceive. Many beds of Rock-weed are driving to and fro here. This day at two of the Clock I was a-breast of Point *Possession*; I steered from thence West-north-west about two Leagues, and then West and West-south-west, and South-west and by South, rounding by the North-shore: As I shoaled my soundings I had 22, and 18, and 16, and 12, and 9 Fathoms, sandy, and sometimes gravelly Ground and pebble Stones; I failed, rounding the shore being unacquainted, and could not tell certainly where the Narrow lay, for it was shut in one Land with the other, so as I could not see the opening: I was open of the Narrow at five a Clock, having a fine gale at North-north-east. I steered in South-west and by South into the chops of it, but could not get past a League into it; the Tide being bent out and run so strong as I could not stem it;

I was in danger of running the Ship against steep Rocks, which lie in the North-side, she taking a shear with the Tide, and the Wind was a fresh gale at North-north-east. There grew long Rock-weed on the Rocks; I went and founded over them, and had five foot Water on them, and fourteen Fathom by the side of them, next the Channel: they come trenting from the point of the Narrow of the North-side, a mile off. At six of the Clock the Wind came to the North; at eight of the Clock it came to the North-west; it fell very dark and rained much; I was forced to fall back again out of the Narrow as well as I could; the shore I could not see, it was so dark; it fell a flat Calm, I finding twenty five Fathom Water, pebble Stones and oary; I anchored and rode all Night; little Wind at South-west, and dark.

It is eight Leagues from the first Narrow to the second, and something better; the Course from one to the other is West and by South, and East and by North. This Reach from the first Narrow to the second is seven Leagues broad, from the North-shore to the South-shore; it shews like a little Sea when one comes into it, for we could not see to the second Narrow, till I had sailed therein three Leagues or more. At the point of the second Narrow, on the North-shore; up to the North-east-ward a mile or two, there is a Bay on the North-shore, and a white Cliff of an ordinary height, which is called *Cape St. Gregory*: In this Bay you may ride in eight Fathom Water, fine clean sandy Ground, and a good half mile off the shore; This is a good Road, if the
Wind

Wind be between the North-east and the South-west to the Westward; the Winds are given most to blow on the Western-quarter. As I sailed thro' the second Narrow, I sounded in the fair way, and had twenty eight, and thirty Fathom small stones: The North-shore on this Narrow makes in a Bay at the East-point, and is white Cliffs all the way through: This Narrow lies throughout West-south-west, and East-north-east, and at the West-end of the Narrow the Land is steep up, in white Cliffs, and the South part rounds away in a Fore-land: The South-shore rounds away Southeast from this Fore-land, and then it trends away to the Southward in low Land: The North-shore of this Narrow or Streight, rounds up to the Northward in white Cliffs, and falls into shores; there goes in a Harbour which hath four Fathom in the Channel, at High-water; it is a flat round Harbour within, and oary; I called this *Oaz-harbour*: When you are at the West-part of this Narrow, you will see three Islands come open, which shew to be steep up Cliffs: they lie Triangle-wise one of another; they are four Leagues distant from the Narrow, West-south-west: The smallest and Eastermost Isle is called *St. Bartholomews*, the biggest and Westermost is called *Elizabeth*; the middlemost and Southermost is called *S. George's*, and by some *Penguins-Isle*, and indeed there are many Penguins on it. This Evening I got up to *Elizabeth's*, and anchored in eight Fathoms and an half fine black Sand, two miles off the Island. The East-point bears South and by East of me: fair Weather all Night, the Wind at South and by West.

This

This Morning I went ashore on *Elizabeth-Island*, and at my landing nineteen of the Countrey-people came off the Hills to me: I had Conference with them, and exchanged Knives and Beads for such things as they had: which were Bows and Arrows, and their Skin-Coats, which are made of young *Guianacoes* skins; I gave them a Hatchet and Knives, and Beads, and Toys, Trumps, &c. they seem'd to be very well-pleas'd; I shew'd them Gold, which they would have had; I made them signs, that if they had any, I would give them Knives and Beads, &c. for it, or if any where in the Land: I laid Gold and bright Copper into the Ground, and made as if I found it there, and looked to and fro on the Earth as if I looked for such things; they looked one on another and spake to each other some words, but I could not perceive that they understood me, or what I meant; nor that they knew Gold, or any other Metal: they would gladly have had every thing they saw; they tried to break the Boats Iron-grapnel with stones, and would have carried it away; I let them alone, and observed their actions and behaviour, which was very brutish: they catch'd at every thing they could reach, although I caus'd them to sit down, and I put strings of Beads about their Necks; still they desired more: My Lieutenant *Peckett* danced with them hand in hand, and several of my Men did dance with them, and made all the shew of Friendship as was possible; My Lieutenant changed his Coat for one of theirs, for they desired it because it was red, which colour they much esteem: I was in great hopes I might

might find Gold among them; I gave them all the courteous respect I could: After two hours Conference with them, I made signs I would go and get more things and come again to them; They went, and would have us to Land again under a Cliff, which I judge was their Design, to heave stones into the Boat to sink her, for the place was very convenient for such a purpose: They set themselves down on the Grass, and immediately set fire on the Grass on the side of the Bank: by what means they got Fire so suddenly I could not understand. I went and sounded the Channel between *Elizabeth-Island*, and *St. Bartholomew's-Island*, and found it a fair Channel to Sail through, of a mile broad nearest and deep Water: in the middle thirty eight Fathom, and nine and ten Fathom near the Shore-side, gravelly Sand.

These People are of a middle stature, both Men and Women, and well-limbed, and roundish Faced, and well shaped, and low Fore-headed; their Noses of a mean size, their Eyes of the mean and black; they are smooth and even toothed and close set and very white; small Ears: their Hair is smooth flag Hair, and very black and harsh on the fore-part, even and round; and the Locks of a mean length, both Men and Women alike: they are full Breasted, they are tawny Olive-coloured, and redded all over their Bodies with red Earth and Grease; their Faces dawbed in spots down their Cheeks with white Clay, and some black streaks with smut, in no Method; their Arms and Feet the like: they have small Heads and short
Fingers:

Fingers : they are active in Body, and nimble in going and running ; their Cloathing is pieces of Skins of Seals, and Guianacoes, and Otters skins sewed together, and sewed soft ; their Garment is in form of a Carpet, of about five feet square, or according to the largeness of the Person ; this they wrap about their Bodies, as a *Scottish* Man doth his *Plading* : they have a Cap of the Skins of Fowls, with the Feathers on ; they have about their Feet pieces of Skins tied to keep their Feet from the Ground : they are very hardy People to endure cold ; for they seldom wear this loose Skin when they are stirring, but are all naked of Body from Head to Feet, and do not shrink for the Weather ; for it was very cold when I saw them, and the Hills all cover'd with Snow : they have no Hair on their Bodies nor Faces, nor any thing to cover their privy Parts, excepting some of the Women, which had a Skin before them ; otherwise the Men and Women are cloathed alike ; only the Men have Caps and the Women none : The Women wear Bracelets of Shells about their Necks, the Men none ; the Men are somewhat larger than the Women in Stature, and more fuller Fac'd ; the Men have a harsh Language, and speak rattling in the Throat, and gross ; the Women shiller and lower : they pronounce the word *Ursah*, but what it means I could not understand, nor one word they spake ; if they did not like any thing, they would cry *Ur, Ur*, rattling in their Throats : their Food is what they can get, either Fish or Flesh : they are under no Government, but every Man doth as he thinks fit ; for

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they

they had no respect to any one, nor under any Obedience of any in this Company; neither did they make any shew of Worshipping any thing, either Sun or Moon, but came directly to us at our first going on Land, making a noise, and every Man his Bow ready strung, and two Arrows a Man in their Hands: their Bows are about an Ell long, and their Arrows are near eighteen Inches long, and neatly made of Wood, and headed with Flint-stones, neatly made broad-Arrow-fashion, well fastned to the Arrow; and the other end is feathered with two Feathers, and tied on with the Gut of some Beast, when it is green and moist; the Bow-string is some twisted Gut. These People have very large mungrel Dogs, much like the race of *Spanish* Dogs, and are of several colours: I did not see any other domestick Creature they have, neither could I at this time see their Boats; for they lay at the other end of the Island, next the Main; they waited on this Island for an opportunity of fair Weather, to go to the other Islands for Penguins, there being great numbers of those Birds on the southermost of the three Islands, and many other white-breasted Divers.

October 30. To Night I anchored in a small Bay in eleven fathom Water, gravelly Ground, half a mile off the Shore; no Tide runs here as to thwart up a Ship; the Water riseth and falls perpendicular ten Feet. This Bay hath two Rivulets of fresh Water in it, and good Timber-trees of eighteen Inches through, and near forty Feet long: the Wood is much lik a Beech; here are wild Currant-trees, and many such like Bushes:
the

the Woods are very thick and green, and much old Wood lies on the Ground, so as there is no travelling into the Woods. I was a-shore looking to and fro here three hours : I called this *Fresh-water Bay* ; this is near nine Leagues to the Southward of *Sweepstakes Bay* ; Sand-point is a mean low Point, lies out more than the other Points of the Shore, and few Trees grow on it.

It is six Leagues from *Fresh-water Bay*, to *Port Famen* South and North from the one to the point of the other : that nearest *Port Famen* cannot be seen, as you come from the Northward, till you come to bring the Point *S. Anne* up on the North-west of you, for the Bay lies up in a little hook North-west, and the Land on the West-side of the Bay is low in a Point, and sandy, and some Grass grows on it, and much drift-Wood lies on it like a Carpenters-yard : a little within Land from the Water-side grow brave green Woods, and up in the Valleys, large Timber-trees, two foot throughout and some upwards of 40 Feet long ; much like our Beech-timber in *England* ; the Leaves of the Trees are like green Birch-tree Leaves, curiously sweet ; the Wood shews in many places as if there were Plantations : for there are several clear places in the Woods, and Grass growing like fenc'd Fields in *England* ; the Woods being so even by the sides of it, and on Point *Saint Anne* as you come sailing from the Northward, you will see good Bushes and tall Trees grow on the very point of it : This Point is rocky on the Shore-side, but no danger lies of it ; you may be bold on it to get into *Port Famen Bay*,

Here is good Wooding, and Watering, and good catching of Fish with the Seyne or Net : I haled above five hundred large Fishes a-shore at one hale, much like to a Mullet, all scaly Fishes, here are many large Smelts of twenty Inches long, and many Anchovies, and some small made Scates : Here is great plenty of Fish, so much as we feed wholly on it, and salt up much of the Mulletts and Anchovies. Here grow many Trees of good large Timber, forty Inches through : the Leaves are green and large, much like Bay-tree Leaves in *England*; the rind is grey on the out-side and pretty thick rined; this Rind or Bark of these Trees, if you chew it in your Mouth, is hotter than Pepper and more quicker; it is of a spicy smell when it is dry; I cut of the Bark and made use of it in my Pease, and other Provisions instead of Spice, and found it very wholesom and good: wee steeped it in our Water, and drank it, and it gave the Water a pretty flavor. There grow of these Trees in the Woods, in many places in the Streight on both Shores, and on the Coasts on both sides of *Patagonia*, before you enter them. This may be the *Winter-bark* of the Shops, which has an Aromatick pepper-like or spicy tast.

Port Famen lies in the Lat. of 53 d. 35 m. South; and in Longitude West, from the *Lizard*, 68 d. 9 m. and Meridian distance 1092. Leagues West, as my Account is in my Sailing: this Voyage, I give no credit to the plain Sailing: therefore this Meridian distance signifies very little as to Navigation.

I travelled in many places, but could not see any Fruit-trees, or Oak, or Ash, or Hasel, or
any

any Timber like ours in *England*: Here are but two sorts of Timber in all these Woods, and one is the Pepper-rind Tree, which is indifferent Wood, and the other is the Timber much like Beech: Here are the best and biggest Trees in all the *Streights*; here are Trees of two foot and an half through, and between thirty and forty feet long; there may be great Planks cut out of them. I could not see any grains of Metal or Mineral in any place, and I looked very carefully in Gul- lies, and places where Water had guttered. Here are some Herbs to be plucked up, as we boiled for Salleting, and green Grass with it, which relish- ed pretty well. The Land in the Woods is dry, and of a gravelly and sandy Soil, and some places good brown Earth; it is bad travelling in the Woods for old Trees and Under-woods: the Woods trent all up on the sides of the Hills; the Land all about on the North-west and West of *Port Famen*, trents up to very high Hills, and the In-land is very high Hills; for we can see the tops of them all barren and ragged, peeping over those Mountains next to the Shore-side; much Snow lies continually on them: the Land on the South-shore is very high and peaked.

I saw many Ducks and brant-Geese on the Shore-sides, and in the fresh Waters, together with some Whales spouting in the main Channel.

I do verily believe that in these Mountains, there is some Metal either Gold or Copper, for the Man that went aboard pointed up to the Mountains, and spake to me when I shewed him my Ring. These People eat up the Provision

which was carried to them, and greased themselves all over with the Oil, and greased their Skin-Coats with it: I made signs to them to go and get some Gold and bring it to me: some of them went away to their Boats, the rest sat still on the Grass, talking one to another, and pointing to the Ship. Their Language is much in the Throat, and not very fluent, but uttered with good deliberation: I could not perceive but only the younger were obedient to the elder, and the Women were in obedience to the Men; for I took the Mens Coats and put about the Women, but the Men would not suffer them to keep the Coats long, and themselves to be naked, but took the Coats from the Women, and put them about themselves: I proffer'd them to exchange one of my Lads for one of theirs, and they laugh'd; but the *Indian* Lad would not go with me, but hung back: I gave to the Men Knives and Fish-hooks, and to the Lads Jews-trumps and Pipes, and to the Women Looking-glasses and Beads. I did this to gain their loves, and in hopes to have Trading with them for the future; they refus'd Brandy.

Cape Froward is the southermost Land of the great Continent of *America*, and it is very high Land on the back-side of it; the Face is steep up, of a Cliff of Rocks, and it is blackish grey, of a good height, and deep Water very near it. I founded with my Boat close to it, and had forty Fathom: A Man may lay a Ship close to the face of the Cape, for there is Water enough: there is no Ground in the Channel at two hundred Fathoms,

thoms, and but little Tide, or any ripling as I saw, but a fair Channel to sail throughout; of three Leagues broad from the North-shore to the South-shore. It is best for a Ship to keep nearer the North-shore than the South-shore; for the Winds are more generally of the Western Quarter.

Cape Fromard, in *Magellan Streights*, lies in the Latitude of 53 d. 52 m. South

And in Longitude West, from the *Lizard*, in *England* 68 d. 40 m. West.

And in Meridian distance in Leagues 1099. and two Miles West.

The Compass hath sixteen degrees of Variation Easterly at *Cape Fromard*. As to the Fir-ling Points I cannot say any thing; I wanted a Needle.

November 4. 1670. I was in *Wood's Bay*, called so by my Mate's Name. November 5. I was a-brest of *Cape-Holland*; near which lies *Cape Coventry* and *Andrew's Bay*, also *Cordes* and *Fostcues Bay*, *Cape* and *Port Gallant*: but for a more exact Situation of the several Promontories, Bays, Ports, Rivulets, Soundings, &c. I refer the Reader to the large Draught of the *Magellan Streights*, drawn by my own Hand on the place.

A-brest of the Bay, two Leagues off, is the Island which I called *Charles-Island* and *Monmouth-Island*; more to the West-ward is *James-Island*, and *Ruperts-Island*, and the Lord *Arlingtons-Island*, and the Earl of *Sandwich's-Island*, and Secretary *Wren's Island*: this Reach I called *English Reach*; a League more to the West-ward of *Fostcues Bay* is *Cape-Gallant*,

The Streight shews now as if there were no farther passage to the Westward; for the South Land rounds up so much to the North-Westward, that it shuts against the North-Land to a Man's sight. At this distance I saw two large openings into the South-Land, one opposite to *Charles-Island*, the other more to the Westward, up of the round South Bite; there I saw many Whales spouting, that place I called *Whale-Bay*: I saw several Brant-geese and Ducks here: I left in the *Indians* Houses Beads and Knives, in hopes of further Commerce: I saw on the South-side, a Fire made in the Grass by the Natives.

From the pitch of *Cape-Froward*, to the pitch of *Cape-Holland*, the Streight lies in the Channel West and by North, nearest, and is distant full five Leagues; and from the pitch of *Cape-Holland*, to the pitch of *Cape-Gallant*, the Streight lies in the Channel, West and by North, a little Northerly, and is distant eight Leagues: From the pitch of *Cape-Gallant*, to a low Point three Leagues to the Westward, the Streight lies in the Channel North-west and by West, a little Northerly: This Reach is not more than two miles broad, from the North-shore to the Islands, which I called *The Royal Isles*: when I was a-brest of the Westernmost Island, which I called *Rupert's-Island*, I being on the middle of the Channel with the Ship, shot off one of my Sakers with a shot, and the shot lodged close to the Islands side. This low Point, a brest of *Rupert's-Island*, on the North shore, I called *Point-Passage*. This Evening at six of the Clock, I was shot past *Point-Passage*, half a mile

a mile to the Westward of it ; having a fine Easterly gale.

Monday November 7. Cloudy gusts, foggy Weather, the Wind at West, and sometimes at North-west : I rode fast all day close aboard the shore. This Afternoon I went in my Boat over to the South-side, opposite to *Elizabeth's-Bay*, at the Point called *Whale-point*, for the many Whales spouting thereby. I travelled up the Hills two miles, but could not see any Gold or Metal; the Land very irregular and Rocky, with mossy kind of Grass growing on it, and very boggy and rotten ; for I thrust down a Lance of sixteen feet long, into the Ground with one hand very easily : Here grow many Juniper Trees, some of a foot throughout, the Wood not very sweet : Here I saw many brant-Geese and Ducks, much Snow on the inland Mountains, so as I could not travel any farther : I returned down to the Boat again ; I saw where the Natives had been by the evening of the Grass, but I could not have a sight of any. Here are many good Muscles on the Rocks of five Inches long, and good Fish in them, and many feed Pearls in every Muscle : Here are also large Limpets and Sea-eggs among the Rocks.

All the Ripling is not worth the taking notice of, for it is but an hours time on both Tides Ebb and Floud, when the Tide runs strong ; neither are the Tides any thing prejudicial to the Navigation of the Streight, but rather advantagious to help to turn from Road to Road either way : For I have had a benefit of them in plying from place to place. The Weather indifferent this Afternoon ;

noon; I went a-shore after I had done Sounding but saw no People nor any Metal; the Woods very thick, and several Trees of the hot Bark, the other Trees much like Beech-timber: some Ducks and brant-Geese seen on the Shore-side.

The Streight in this Reach between *Elizabeth's Bay* and *St. Ferom's River* is about two Leagues, broad and high Land on the South-side; which hath several brave Coves on it like the Wet-dock at *Deptford*, and safe to lay Ships in them from either much Wind or any Sea. This Bay I called *Muscle-Bay*, for in it there are many and great plenty of good Muscles. The Shore-sides are rocky, steep too in most places; no Ground in the main Channel at an hundred Fathom; also in the Bays on the South-side it is deep Water, and small Islands lie in the Bays, and close along the South-shore lie small Islands. Here are many Whales, and I saw many Penguins, and some Seals: The Shores are woody on both sides, but ragged Timber and boggy Ground; the tops of the Hills bare Rocks and irregular: several streams of Snow-water run down in the Cliffs of the Hills, two Leagues to the Westward of *Elizabeth's-Bay*. On the North-shore the Land is low and woody near the Water-side, and up of a Valley in this Low-land: In this Valley there runs a fresh Water-River; I went into it with my Boat: It is but shallow at low Water, hardly Water enough for my Boat: Here I saw several Arbors of the *Indians* making, but no People. This River is a very convenient place to lay Shallops, or such like small Vessels in it; they may go into

it at high Water; for the Tide riseth here eight or nine feet: this River I called by the name of *Batchelor's River*. Before the mouth of this River, in the *Streights*, there is good anchoring, in nine, or ten, or twelve Fathom Water, sandy Ground; a fair birth off the Shore: the Tide runs but ordinary, and the Floud-tide comes from the Westward, and the Tide that comes out of *St. Jerm's Channel*, makes a ripling with the Tide that comes along the stream of the *Streight*: I called this Road that is before *Batchelor's-River*, *York-Road*: This is a good place to ride in with Westerly Winds, for here cannot go any great Sea; neither shall a Man be embayed; that if a Cable give way, he may have the *Streight* open to carry it away; for the Westerly Winds are the greatest Winds that blow here by the Trees, for they all stoop to these Winds, and lean to the Easterward, and the West-side of all the Trees that stand open, are made flat with the Winds: the tops of the Mountains look to the Eastward; the Easterly Winds seldom blow strong here as to what I have observed. By the Shore-side which lies open to the East, the Grass grows down to the Water-side, and they are the greener Shores, and the Trees are streight and tall on the East-side of the Hills, but on the West-shores, the Grass and Trees are much weather-beaten, worn away, and crippled, and the Shore-sides much tewed with the surge of the Waters.

At *Cape Quad*, the Lands shut one with the other, as if there were no farther passage: but as you make nearer to it, you will see the opening

more

more and more, as the Streight rounds there more to the Northward again. *Cape Quad* is on the North-shore; and it is a steep up Cape, of a rocky greyish Face, of a good height before one comes at it: it shews like a great building of a Castle; for it points off with a Race from the other Mountains, so much into the Channel of the Streight, that it makes shutting in against the South-land, and maketh an Elbow in the Streight: the Streight is not past four miles broad here, from shore to shore; and the Land is steep too on both sides, and rocky; the Mountains high on both Shores, and craggy barren Rocks: some Trees and Bushes growing here, and much Snow on the Mountains on both sides. Opposite to *Cape Quad* on the South-side, there is a fine large Bay, which is called *Rider's Bay*: I did not go into it; if there be Anchoring in it, it is a fair Road for any Winds: the Water is very deep here in the Channel, no Ground at one hundred Fathom: this part of the Streights, from *Point Passage* to *Cape Quad*, is the most crooked part of all the Streight; therefore I called this *Crooked-Reach*. Here are two small Islands in the North-shore, to the Eastward of *Cape Quad*.

November 14. This Morning I was a-brest of *Cape-Munday*, so I called it, it being a Cape on the South-side, and is distant from *Cape de Quad* about thirteen Leagues: the Streight here is about four miles broad, and the North-shore makes into the Land with great sounds and broken Islands; the Land on both Shores is high rocky Hills, and barren, very little Wood or Grass growing on them:

them: Here at *Cape Munday*, the Streight grows broader and broader to the Westward, but keeps all one Course, North-west and by West to *Cape Upright*; which is a steep upright Cliff on the South-side, and it is distant from *Cape Munday* four Leagues. Here the Streight inclines to the Westward near half a Point: the Streight lies from *Cape Munday* West-north-west, half a Point Northerly right out into the South-Sea, if you be in the middle of the Channel, or nigh the North-shore; I find little or no Tide to run here, or Current: no Ground in the Channel at two hundred Fathom, a Musket shot off the Shore on either side. Here run into the South-shore many Sounds and Coves; I have sailed fair along by the South-shore all this day; for the North-shore makes in broken Islands and Sounds: Here lie all along the South-shore several small Islands, but no danger, for they are all steep too: the Streight is a very fair Channel to sail throughout. This day at Noon, I was a-breast of an Island, which lies on the North-side of the Streight, I called it *Westminster-Island*; there lie a great many Islands between that and the North-shore, and to the Eastward and Westward, as also some broken Ground, and Rocks lie about it: These Islands I called *The Lawyers*, and this Island which I called *Westminster-Island*, is an high rocky Island shewing like *Westminster-Hall*; the Streight is five Leagues broad, between *Westminster-Island* and the South-shore; but between that and the North-shore, there are many rocky Islands and broken Ground.

The Streight lies from *Cape Munday* to *Cape Deseada* West-north-west, and East-south-east, half a point Northerly, and half a point Southerly nearest, and they are distant from one another near fifteen Leagues: from *Cape Quad* to *Cape Deseada*, it is about twenty eight Leagues; and the Streight lies near North-west, and by West from *Cape Quad* into the South-Sea, and near in one Reach, which I called *Long-Reach*: and some of my Company called it *Long-Lane*. This part may properly be called the *Streights*; for it is high Land all the way on both Shores, and barren Rocks, with Snow on them; and indeed from *Cape Quad* into the South-Sea, I called this Land *South-Desolation*, it being so desolate Land to behold.

Cape Deseada lies in the Latitude of 53 d. 10 m. South.

In Longitude West from the *Lizard* of *England* 72 d. 56 m.

And in Meridian distance 1149.

The Compass hath 14 d. 10 m. Variation Easterly here.

Cape Pillar lies in the Latitude of 53 d. 5 m.

In Longitude West from the *Lizard* of *England* 72 d. 49 m.

And in Meridian distance 1148. Leagues West.

I make the whole length of the *Streights* of *Magellan*, from *Cape Virgin-Mary* to *Cape Deseada*, with every Reach and turning, to be one hundred and sixteen Leagues: and so much I sailed from the one Sea to the other, according to my estimation.

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The best Land-fall in my Opinion, is to make the face of *Cape Deseada* for to come out of the South-Sea to go into the Streight of *Magellan*; they lie in East and West at the first, till you come a-brest of *Cape-Pillar*; then the Course is South-east and by East nearest. Be careful to keep the South-shore in fair view; for the North-shore is broken Islands and Sounds, that a Man may mistake the right Channel or Streight, and steer up into one of them, as he comes out from the South-Sea, if he lose sight of the South-shore.

Here lie four small Islands at the North part of the mouth of the Streight, in the South-Sea; they lie pretty near together: the Eastermost stands singly by it self, and is round coping up of a fair height like an Hay-cock, or Sugar-loaf: the other three are flattish; they lie from *Cape-pillar* North-north-west, by the true Compass 6 Leagues off; they are distant from *Cape-Victory*, near four Leagues South-west; I called them *The Islands of Direction*; they are good wishing to fall with the Mouth of the Streight.

November 26. The Land makes in Islands, lying near the main Land, is high and large Hills In-land, which stretch North and South, some Snow lying on the tops of the highest Hill. At eight of the Clock I made the Island of *Nuestra Sennora del Socoro*; in the *Spanish* Tongue it is called *The Island of our Lady of Sucore*; I steered with it North-east and by East; it made rounding up at the Eastermost end, and lower in the middle than at either end: it maketh with a ridge running from one end to the other, and Trees grow-
ing

ing on it : the Shore-side is rocky on the South-side of the Island, and some broken Rocks lie near the Shore-side, and on the South-east end of the Island there stand two peaked coping Rocks close to the Shore; they are white on the top with Fowls dung. The Island is of a fine height, and all woody on the North-side of it; the Trees grow down to the Water-side, and fresh Water runs down in five or six Gullies : the Woods are all green, and very thick spicy Trees,

Meridian distance at Noon from *Cape-pillar*, East 20 d. 0 m. 4 ten.

Longitude at Noon from *Cape-pillar*, East 1 d. 19 m.

Longitude at Noon, from the *Lizard*, West 71 d. 42 m.

Meridian distance at Noon, from the *Lizard*, West 1128 leag. 2 mil. 9 ten.

The Island *Nuestra Senora di Socoro*, lies in the Latitude of forty five degrees South, and in Longitude East from *Cape-pillar* one degree nineteen minutes; Meridian distance from *Cape-pillar*, East 20 leag. 0 min. 4 ten.

Meridian distance from the *Lizard*, West 1128 deg. 2 min. 9 ten.

Longitude from the Meridian of the *Lizard*, West 71 deg. 42 min.

The Compass hath eleven Degrees, Variation Easterly here.

I went a-shore with my Boats for fresh Water, which I had them laden with presently; for here is fresh Water enough, and very good; I searched the Shore what I could, I saw an old Hutt or
Arbour

Arbour of the *Indians* making, and several sticks that were cut, but all old done. I could not see any sign of People on the Island now; I believe the People come rambling to this Island from the Main in the best season of the Year to get young Fowls: for I do not see any thing else in the Island for the sustenance of Mans Life; I could not see any kind of Mineral or Metal: the Soil is a sandy black Earth, and some Banks of Rocks: the Island is irregular, and grown all over with impenetrable thick Woods, so as I could not see the inward part of it: the Woods are ordinary Timber, none that I saw was fit to make Planks of; the nature of the Wood is much like Beech and Birch, and a sort of heavy Wood good for little but the fire, it is white: no Fruit or Herbs; very little Grass, the Woods are so thick; much kind of long sedgy Grass; no wild Beast to be seen; several small Birds in the Woods like Sparrows: there are several Fowls like Kites in the Woods, several black and white brant-Geese and pied Shags, and other such Sea-Fowls, as Pinks and Sea-mews: what else the Island affords I cannot tell. I made a Fire on the Shore, in hopes to have some answer of it on the Main, but had not. At Noon I went aboard, and sent my Boats a-shore again for more Wood and Water, whilst the Weather permitted landing.

November 30. This Forenoon I was over on the main side, the Ship lay off, and in. I went a-shore with my Boat on an Island which lieth adjacent to the Main: There runs a Channel between that and the Main, and many Rocks lie

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in it, and foul Ground, so as I durst not venture the Ship in it. This Island shewed as if it had been the Main, till I went to it with the Boat; being about four Leagues long from the North-point to the South-point, and in some places a League broad. The Island is of a mean height, and in some places two Leagues broad, and grown all over with Woods very thick: the Timber is such like as is on the Isle of *Socoro*: I could not see any kind of Mineral or Metal in it; the Shore-side sandy in many places, and rocky in others; the Earth on this Island is of a sandy black soil, but very wet with the continual Rains that are here. Not finding this noted in my Draughts, I called it after my own Name *Narbrough's-Island*; I took possession of it for his Majesty and his Heirs: I could not see any People, or any sign of them here.

South-east from *Narbrough's-Island* on the Main distant about three Leagues, there runs into the Land a River or Sound, and some broken ground lies before it. The Shore-side is rocky, and the Hills are high in the Land on both sides of it; this opening lies in East and West, I take it for that place which in the Draughts is called *Saint Domingo*. This place lies in the Latitude of forty four Degrees, fifty Minutes South; and more to the Southward thereof lie many round coplin high Islands grown over with Woods: all along the Coasts as far as I could see, there lie Islands adjacent to the Main, and they are of a great height.

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This Day all the Bread in the Ship is expended : all the Company of the Ship, my self as well as any other, eat Pease in lieu of Bread ; my Company are all indifferent well in health, I thank God for it, being seventy two in Company : no Fish to be taken with Hooks : many Porpusses seen, and some Whales ; several Sea-Fowls seen swimming to day : much Wind to Night at Northwest ; I ride fast, but doubtful of my Cable.

No-Man's Island lies in the Latitude of forty three Degrees, forty seven Minutes South, and in Longitude West from the *Lizard* in England seventy one Degrees, thirty two Minutes. And in Meridian distance from the *Lizard* of England, one thousand one hundred and twenty six Leagues and one Mile ; and in Meridian distance from *Cape-pillar* East, twenty two Leagues, two Miles, and two tenths ; and in Longitude East from *Cape-pillar*, one degree, twenty nine minutes $\frac{1}{10}$. The variation of the Compass is ten Degrees Easterly here.

This Island is that which the Draughts make to lie at the South-end of the Island of *Castro*, at the Mouth of the going in of that Channel, which is between *Castro* and the Main ; the Draughts are false in laying down of this Coast ; for they do not make any mention of the several Islands that lie on it, but lay it down all along to be a streight Coast : the Latitude of most places are laid down very near as what I have found. Here are many Islands adjacent on the Coasts more Southerly, in the Latitude of forty five and an half, but none are laid down.

December 15. *Don Carlos* was put a-shore, and carried with him a Sword, and a Case of Pistols, and his best Apparel, and a Bag with his Beads and Knives; together with Scissars, Looking-glasses, Combs, Rings, Pipes, Jews-harps, Bells and Tobacco; all which things he had of me to give to the Natives. At seven of the Clock *Signior Carlos* was set a-shore, on the South-side of the Harbour of *Baldavia* without the Mouth of it a Mile, in a small sandy Bay, about two Miles within *Point Gallere*, between the Point and the Mouth of the Harbour. When he was a-shore, he took his leave of my Lieutenant, and bad him go aboard and look out for his Fire in the Night. He went from the Boat along the Sea-side in the path toward the Harbour's Mouth: the Men in the Boat saw him go along for the distance of a quarter of a Mile, till he turned behind a point of Rocks out of sight. The Shore-side is low and sandy, and some scattered Rocks lie in it: the Land riseth trenting to large Hills: the Land is all woody and very thick, that there is no travelling but by the Water-side. My Lieutenant went a-shore to the edge of the Woods, and gathered several green Apples off the Trees: for there grow Apple-trees on the Shore-side, much like our *European* Winter-Fruit; the Apples are bigger than Walnuts with their shells on; whether these Trees were planted by the *Spaniards*, or grow naturally in the Country, I cannot tell.

I do not find any Current or Tide to set on this Coast, that is any way prejudicial to Navigation; neither do I find the Winds to blow Trade: but

but they are veerable, and are given to blow hard on the Western Quarter, and rain much.

The Mouth of the Harbour of *Baldavia* on the Coast of *Chile*, in the South-Sea, lieth in the Latitude of 39 d. 56 m. South.

And in Longitude, West from the *Lizard* of *England* 70 d. 19 m.

And in Longitude East, from *Cape-pillar* 2 d. 41 m.

And in Meridian, distance from *Cape-pillar*, East 41 leag. 2 mil. $\frac{1}{10}$.

The Account I make by my failing from the Meridian of the *Lizard*, according to my daily Account of my Ships way : I do not make any Account of plain Sailing to be fit for Seamen to observe ; but the best Navigation is by *Mercator*, failing according to the Circle of the Globe, which I ever failed by, and keep my Account of Easting and Westing by Longitude, which is the best and most certain Sailing, to give the true description of the Globe. I have noted down the Meridian distance I made daily, whereby such Navigators and Seamen as know better, may have that to give them the knowledge of the distances of Places, according to their Understanding. Most of our Navigators in this Age fail by the Plain Chart, and keep their Accounts of the Ships way accordingly, although they fail near the Poles ; which is the greatest Errour that can be committed ; for they cannot tell how to find the way home again, by reason of their mistake ; as I have some in the Ship with me now that are in the same Errour, for want of Understanding the

true difference of the Meridians, according to their Miles of Longitude, in the several Latitudes. I could wish all Seamen would give over sailing by the false plain Card, and sail by *Mercator's* Chart, which is according to the truth of Navigation; But it is an hard matter to convince any of the old Navigators, from their Method of sailing by the Plain Chart; shew most of them the Globe, yet they will walk in their wonted Road.

At eight of the Clock in the Forenoon my Boat put from me, and rowed to the Shore within point *Gallery*, to the place where *Don Carlos* was landed: I laid off and on with the Ship before the Port; the Boat rowed all along the Shore by the place where *Don Carlos* was landed, and along the Shore into the Harbour; at the Points on the South-side of the Harbour stands a small Fort of seven Guns called *S. James's Fort*: My Boat came suddenly on it, and before they perceived it to be a Fort, they were within shot of it. The *Spaniards* stood on the Shore; and wafted with a white Flag, and called to them; My Lieutenant rowed to them, and asked of them what Country they were? they answered, of *Spain*: They asked my Lieutenant of what Country he was? He answered, of *England*; they asked him to come a-shore, which he did, in hopes to have seen *Don Carlos* there, for that path that *Don Carlos* went in when he was landed, led directly to this Fort by the Sea-side, and it was not a Mile from the Fort to the place where he was landed, so as he must go to this Fort, and be upon it before he was aware of it, unless he knew it before. The path

path went all along between the Woods and the Sea : In the Woods there is no travelling, they are so thick, and grow on the side of an Hill ; the Fort stands just by the Wood-side on a race of the Bank, of five yards ascent from the Sea, with a bank of Earth cast up before the Ordnance, and slight Pallisadoes plac'd in an Half-moon, four yards distant from the Guns to the Southward, which Pallisadoes are to keep the Natives from running violently on the Ordnance : so these *Spaniards* guard themselves with long Lances against the Natives in the Fort. The *Spaniards* have Match-lock Musquetoons, but they are very ordinary ones, and they are as silly in using them.

At my Lieutenants landing, about twenty *Spaniards* and *Indians* came to the Water-side in Arms, and received him and his Company a-shore, and carried him some twenty yards from the Water-side up the race of the Bank, under a great Tree, where the Captain of the Fort, and two other *Spanish* Gentlemen, received him under the shade with great Courtesie, after the *Spaniards* Ceremony ; they sat them on Chairs and Benches placed about a Table, under the shade ; for the Sun shone very warm, it being a very fair Day. The *Spanish* Captain called for Wine, which was brought to him in a great Silver Bowl ; He drank to my Lieutenant, and bid him welcome a-shore, and caused five of his Ordnance to be fired, being glad to see *English* Men in this place, and told him that this was *Baldavia*, speaking very kindly, and how welcome they were to him : After every

one had drank, and my Lieutenant had thanked him for his Entertainment, he desired my Gentlemen to sit down, and he discoursed with them, and asked from whence they came, and what way they came into this Sea, and what their Captains Name was, and if there were Wars in *England*? My Lieutenant answered him to his demands: My Lieutenant asked him, if they were in peace with the *Indians*? He answered, that they were at Wars with them round about, waisting his Hand round the Harbour, and that they were valiant People and very barbarous, and fought on Horse-back, and did them much spoil; and that two days before, the *Indians* came out of the Woods and killed a Captain, as he stood at his Duty by the side of the Fort, and cut off his Head and carried it away, sticking on their Lance. He shewed my Lieutenant the place where the *Indians* came out of the Woods, and the place where the Man was killed. They seem to be very fearful of the *Indians*, for they will not stir any way, but they will have their Piece or their Lance with them. It is a manifest sign they are much affraid of the *Indians*: also they have no more ground than the Fort; neither do they clear any of the Woods on this side of the Harbour, nor walk at a Musquet-shot distance from the Pallisadoes, along the Woods-side. The *Spaniards* say that the *Indians* have much Gold, and that their Armour for their Brest is fine beaten Gold, &c.

In the Afternoon a Dinner was brought out of the Fort to the Tent, where they were, and placed on the Table: The first Course was Soppas, then
Olleos,

Olleos, then Pullets, then fresh Fish, all dressed with hot Sawce, and very good Diet it was; the last Course was Sweet-meats: every Course was served in Silver Dishes, and all the Plates were Silver, and the Pots and Stew-pots, and all the Utensils belonging to the dressing of the Provisions were Silver; the Bason wherein they brought Water to wash their Hands was in like manner made of Silver, very large, and the Hilts of the Soldiers Swords were Silver, but the Hilts of the Officers Swords were Gold of good value: Moreover, the Plate at the But-end of the Stock of their Musquetoons was of the same Metal, and the Pipe that the Rod runs in was Silver; as also the tip of the Gun-stick, and their Tobacco-Boxes, and Snuff-Boxes, and the Staves which they walk with were headed and ferrelled with Silver, and ferrelled on the joints with Silver. Indeed they are Masters of much Silver and Gold, and it is but little esteemed among them. Their boasting was *Plata no vallanada mucho in terra.*

Four *Spanish* Gentlemen desired to go aboard with my Lieutenant, and see the Ship, and Pilot her into the Harbour, if I would come in, which they did not question but I would, as I understood afterward by a *Spaniard* that came aboard to me, who revealed to me their whole Design, how they intended to surprize the Ship, which I ever took care to prevent, giving them no opportunity: For it hath been a general practice with the *Spaniards* in *America*, to betray all forein Interest in these parts; as I had read of their treacherous

cherous dealings with Captain *Hawkins* at Saint *Juan de Ulloa*.

I had much Discourse with the *Spanish* Gentlemen this day concerning *Baldavia*, and the Country of *Chile*: They tell me they have much Gold here at *Baldavia*, and that the Natives do much hinder their getting of it; for they are at cruel Wars with them, and will not permit them to plant any thing near here about, nor at *Baldavia*, but they come and destroy it with Fire. And that the Natives are very cruel and barbarous; if they take any *Spaniard* they cut off his Head, and carry it away on their Lances end. These *Spaniards* tell me that they live here, as the *Spaniards* do at *Mamora* in *Barbary*, having their Enemies round about them. These *Spaniards* say, that the *Indians* are tall Men, and of a Gigantick stature and extreamly Valiant, and that they fight on Horseback, eight and ten thousand Men in Arms, and well disciplin'd. The *Indians* have much Gold; and their Weapons are long Lances, and Bows, and Arrows, and Swords, and some Musquets, which they have taken from the *Spaniards*, and know how to use them in Service; taking also Ammunition, &c. The *Indians* are very populous in the Land about *Baldavia*, and at *Orsono*, and on the Island of *Castro*, and at *Chile*, and that they have much Gold on these parts about *Orsono*, and *Chilue*, and that they trade with the *Spaniards*, and give them Gold.

This Captain said, that they have six great Ships going yearly from *Lima* to the *Philippine* Islands, to the Port of *Mannelos*, and that they have

have a great Trade with the *Chineses*; and that these Ships sail from the *Calleo*, that is the Port of *Lima* in the Month of *January*, and their passage is but little more than two Months, from *Lima* to the Port of *Mannelos*, and they sail it within the Tropicks, and have much Easterly Winds; and they return back by the Northwards, to gain the Westerly Winds, which brings them to *California*, and to the Port of *Aquapulco*, which lieth on the West-Coast of *Nova Espana*, and from thence they come to *Panama*, and then to the Port of *Lima*. They bring rich Lading, much Silks and other rich Commodities, and Spices and Callicoes. The *Mannelos* have a great Trade with the *Japoneses* and *Chineses*, which is very beneficial to them. The Captain demanded of me whither I was bound? I answered him, I was bound for *China*, and that I had rich Lading for that Country; and that I only touched in at this place, knowing here were Settlements of the King of *Spains* Subjects, hoping here to have Wood and fresh Water, and refreshing for my Men, whereby I might the better proceed on my Voyage. He said, I should have what the Country would afford, and that the Captain of the Fort had sent for Provisions for me, and that I might have Water on the Shore-side, pointing his Hand to the place which was near by; the Captain said, it was *Aqua del oro* (which is *Water of Gold* in *English*.) This saying caused me to laugh; then he said, it came running from the Hills where they find Gold, and that there was Gold in that Rivulet. I asked him how they get the Gold? He said, they wash
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the Earth which is in the Mountains, and find the Gold in the Bowl or Tray when the Earth is washed out. And they buy much Gold of the *Indians*, which they gather in the Gullies of the Hills, which is washed in there by the Rains, and snow dissolv'd, which descend from the high Mountains, which they say are very high and barren Rocks, thirty Leagues In-land from the Sea-shore. The Land between those barren Hills and the Sea-shore, is mighty good Land, and the Country very fruitful, abounding in many Plains, and much Cattle that the *Indians* have, as Horses and Cows, and Goats and Sheep, which they have taken from the *Spaniards*, since they came into this Country. The *Spaniards* call the high rocky Mountains the *Andes*, and say that those *Andes* run all along the Land from *Magellan* Streights in a row to *S. Martha*, which is in *Terra firma*, not far from *Cartagean*.

The most Gold in all the Land of *America* is in *Chile*, as what is known at this time. But I find the *Spaniards* have but little knowledge of the Land all along to the Southward, from *Baldavia* to the Streights Mouth, as far as I can understand by them, excepting at the Island of *Castro*: There they have a Settlement, and on the Main against *Castro* at a place called *Orsono*: At these two places they have good store of Gold, and there are many *Indians*: but farther Southerly than *Castro*, they know nothing of the Country, or of the Sea-Coast. *Castro* lieth in the Latitude of 43 d. 30 m. the South end of the Island, and the North end lies in the Latitude of 41 d.

40 *m.* It is a fine Island, and near the Main, there grows good Wheat on it. The *Spaniards* are but few in number there, but there are many *Indians*, and those too valiant and of a large stature; but not Giants as I understand: These *Indians* have Wars with the *Spaniards*, and will not suffer them to search the Country for Wealth.

A Ship brought from *Lima* Provisions for the City of *Baldavia* and the Forts, and Cloaths, and Ammunition, and Wines, and Tobacco, and Sugar; and she lades away from *Baldavia* Gold and Bezoar Stone, and red Wool, &c. and *Indian* Slaves that the *Spaniards* take here in these parts; they carry them to *Peru*, and make perpetual Slaves of them there; and the *Indians* of *Peru* they bring hither, and make Soldiers of them against the *Chile-Indians*, of which Soldiers there are many hereabout, whom my Men saw when they were at the Fort. There were about thirty *Indians* and *Musteses* Soldiers there, and some sixteen white Men who were Officers. Moreover, the *Spaniards* make use of the *Peru-Indians* to Trade with the *Chile-Indians* for Gold, although they are at Wars. For they of *Chile* without doubt are desirous of Trade, whereby they may furnish themselves with Knives, and Scissers, and Combs, &c. which are wanting among them; as also with Arms that many times by stealth are sold to them, although they be prohibited; Traders will be dealing; so as they can get benefit, they do not consider the future danger by its means, provided it misse them at the present.

I asked them how far it was to *Baldavia*? they answered me, three Leagues, and that the Boats could go up to it, and that it was situated by the side of the River and the Plains, and that there were five great Ordnances in a Fort to command the City, and that there were one thousand Inhabitants in the City of all sorts of Men, Women and Children. I asked him, if there were any passage by Land from *Baldavia* to the other parts of *Chile*? they said there was, and they sent every Week, but they went with good Guards to go secure from the *Indians*. Then I asked them if they built Shipping here? they said no, but at *Velperrazeo* they did build great Ships. I asked them who lived in the Island of *Mocha*? they said *Indians*, many Men and Women, and that they were *Poco amigo's* to them; in *English*, they were but small Friends to the *Spaniards*. There are many Sheep, Goats, Hogs and Hens, which the *Indians* will sell for Hatchets, Knives and Beads. As to the Island of *St. Mary*, the *Spaniards* are Masters of it, and have a Fort on it with five Guns, but few *Spaniards* live there: it is plentiful of Provisions, as Hogs, and Sheep, and Corn, and Potatoes: and they said there is some Gold, that the *Indians* have on the Island of *Mocha*, but they will not part from it. The *Spaniards* did not care for answering me to such things as I would gladly have heard of these parts; for I laid the Draught of all that Coast on the Table before them, and asked them who lived at this Port, and who lived at that: at some places they would say the *Spaniards* lived there, and at some the *Indians*, but they

they did not care to answer my desires, but frame other Discourses to wave mine. I find that they are but little acquainted on the Coasts to the Southward of *Baldavia*; they say, they have *Spaniards* living on the Island of *Castro*, and that much Corn grows there, more especially *European* Wheat; and that on the Main there are *Spaniards* living at a place called *Orsono*, which is against *Castro*, and that there they have Gold, and there are many *Indians*. I asked him if Shipping could go in between *Castro* and the Main? they could not tell me, or would not; but they said some Ships went thither, which come from *Lima* with Furniture for the People.

The Anchoring at the Island of *Mocha* is on the North-north-east part of it, in a sandy Bay in eight Fathom Water near the Shore; a North-east Wind is the worst Wind for the Road: on the South-side of *Mocha* there lies a ledg of Rocks, and some broken Rocks on that part of the Island, scatter'd from the Shore.

The Anchoring at the Island of *St. Mary* is on the North-side in a fine sandy Bay, in eight or nine Fathom Water, a fine Birth from the Shore; the North-north-west Wind is the worst Wind for that Road. There is Wood and fresh Water on both the Islands, as the *Spaniards* report. The Tides are but mean on the Coast, and the Flood comes from the Southward, and rise about eight or nine feet Water.

The Island of *Mocha* lies in the Lat. of 38 d. 30 m. South.

The Island of *St. Mary* lies in the Lat. of 37 d. 14 m. South, They

They have Apples, and Plums, and Pears and Olives, Apricocks, Peaches, Quinces, Oranges, Lemmons, and many other Fruits: There are also Musk-Melons, and Water-Melons, &c. These *Spaniards* report it to be the finest Country in the whole World, and that the People live with the greatest Luxury of any on the Earth; they enjoy their Health with so much delight, and have so much Wealth and Felicity, that they compare the Land to *Paradise*, abounding above other Countries with all Delights for Mankind.

I saw a good Testimony of the healthiness of the Country; for these four Men who are on Board, are as well-complexioned Men as ever I saw in my days; and the People a-shore, both Men and Women of the *Spaniards* are well-complexioned People, of a ruddy colour, and seem to be mighty healthy. Some of the Men are very corpulent, and look as if they came from a very plentiful Country, where there is great store of Provisions, and abundance of Gold and Silver.

December 17. 1670. There went a-shore in the Boat eighteen of my best Men I had in the Ship, and Men of good Observation to inspect into matters of this Concern, which I had acquainted them with; as touching the manner of the Harbour, and the Fortifications the *Spaniards* have, and the disposition of the People; and that it was my whole desire to have Conference with the Natives of the Country that are at Wars with the *Spaniards*, if by any means possible it may be obtained; for it is my whole desire

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fire to lay the Foundation of a Trade there for the *English* Nation for the future ; for I see plainly this Country is lost for want of the true knowledg of it.

My Men in the Boat observed the Harbour and the Fortifications, and took good notice of the People. The *Spaniards* bought several things of my Boats Crew : and paid for what things they bought in good Pillar pieces of Eight ; they would not part from any Gold, although my Men were desirous to have some rather than Silver for their Goods : neither would they part from any Bread in payment, pretending that they should have Bread to morrow from *Baldavia*. The things which they bought of my Men at this time, were two Fowling-pieces, which cost in *England* about twenty shillings a piece, and the *Spaniards* gave sixteen pieces of Eight apiece for them ; and Cases of Knives of three shillings the piece in *England*, the *Spaniards* gave five pieces of Eight for them ; and for single ten-penny Wires, they gave a piece of Eight a piece for them ; and for ordinary Leather-gloves, of ten pence the pair, they gave a piece of Eight a pair ; for Broad-Cloath-Coats of the Seamens, which cost sixteen shillings in *England*, they gave nine pieces of Eight for a Coat : They were very desirous to buy Cloaks, and pieces of Bays-cloath. The Men were very gallant in Apparel in their Plush-Coats, and under-Garments of Silk and Silver wrought together, and good Linnen, and good *Flanders* Laces, and broad about the Crown of of their Hats, in fashion of an Hat-band, and a great Silk-scarf with Gold Lace on the ends of

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it, that was cross over their Shoulders : a short Cravat of Linnen about their Necks, and a Cane in their Hand headed with Silver ; their Shoes, and Stockings, and Breeches after the *Spanish* fashion. They were very kind to my Lieutenant and Men, and treated them very courteously. They were not permitted to go into the Fort, but were entertained in a Tent by the Fort. Four of the *Spaniards* Wives would needs go into the *English* Boat, and sit down on the Benches, to say that they had been in a Boat which came from *Europe*. These were very proper white Women born in the Kingdom of *Peru* of *Spanish* Parents : they never had been in *Europe*. The *Spaniards* have some *Indian* Women to their Wives: the Women were all well Apparelled in Silks after the *Spanish* fashion, and about their Necks great Gold Chains, and Pendants at their Ears of Saphir Stones, &c.

The Captain of *St. Jago's Fort* presented my Lieutenant with a Silver Tobacco-box, and a Silver-headed Cane, and a Plume of Ostriches Feathers, which he wore on his Hat at the same time: the Feather of the Plume is but small, nothing so good as the *Barbary*-Feather : this Plume was of red, and white, and blew Feathers died in the Country. I saw another Plume which a *Spanish* Gentleman gave to Mr. *Wood*, which was black and large, and a very fair one, made of the Ostriches Feather of the Country. There are many Ostriches in the plain Lands, and *Guianacoes*, which are the Beasts that bear the red Wooll, whereof Hats are made in *England*. There is much
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of this Wooll in the Kingdom of *Peru* and *Chile*.

My People could not by any means come to Converſe with the Natives who are at Wars with the *Spaniards*, and have the Gold, without violating the *Spaniard's* Power: for on the Shore within the Harbour, the *Indians* made a Fire by the Woods ſide, and hung out a white Flag on a long Pole, and kept waſting of it a long time. My Lieutenant would have gone in his Boat to them, but the *Spaniards* would not permit him, and ſaid that they were their own People who lived there.

My Seamen which came aboard in my Boat, came to me, and told me, that the Lieutenant had been at Fort *St. Jago*, and had deliver'd my Meſſage there to the Captain, but he had no Order for my fetching of Water, and that he wiſhed my Lieutenant to go to Fort *St. Peter*; which he did, and a Frier and two *Spaniards* went over with him in the Boat, the Flag of Truce flying in the Boat, and the Trumpeter ſounding, according to my Order, all the time till they landed at the Fort. At their Landing, the Lieutenant was received very courteouſly by ſeveral *Spaniſh* Gentlemen, and deſired to walk up to the Governour; which my Lieutenant did to a Tent where the Governour was; the Governour received the Lieutenant very kindly, and deſired him to ſit down. My Lieutenant preſented my reſpects to the Governour, and delivered to him the Cheeſe and Butter, together with the Spice, Glaſſes and Tobacco-pipes, which I ſent to him, and acquainted him, that I ſent him to deſire to know if he would be pleaſed to permit my Boat to Water

to day, for my Boats lay ready, and had the Cask in them, and I waited his Answer. The Governour caused my Lieutenant and Mr. *Fortescue* to sit down, and drank to them in a Silver Bowl with *Chile Wine*? He gave no Answer to the Lieutenant at present, but sent an Officer and Soldiers and seized on my Boat; My Lieutenant desired to know what the meaning was that possession was taken of the Boat? The Governour answered, he had Order from *Don Pedro de Montaies*, Captain General of *Chile*, to keep them till the Ship was brought into the Harbour under the command of the Castle, and he was sorry he had no more Officers of the Ships in possession.

A Letter

Vera Copia.

A LETTER from Lieutenant Armiger to
Captain Narbrough.

Sir,

MY self and Mr. Fortescue are kept
here as Prisoners, but for what
cause I cannot tell; but they still pretend
much Friendship, and say, that if you will
bring the Ship into the Harbour, you shall
have all the Accommodation that may be,

Sir, I need not advise you further,

I am,

Thomas Armiger.

December 18.

1670.

John Fortescue.

I examined my Seamen which came in my
Boat from the Lieutenant, and they related to me
the whole matter, and they believed that the *Spa-*
niards had a design to betray the Ship, but they
could not agree among themselves: I talked with
the two *Indians* that came aboard, they could
speak the *Spanish* Tongue indifferently well; they
told me that I was a Friend to the *Indians* of the
Mountains, and that I was not a *Spaniard*: they

would needs know of me where my Country is, and if I would come again; I made them answer, that my Country is a little way off, on the other side of the Sea, and that I would come again, and bring Knives, Hatchets, Beads, Glasses, &c. and live in the Country with them, and that they should see my Country; and that my King would give them many things, and they should live with us; and that my King is the greatest King in the World, and Commands all other Kings, and that our Names are *English*; the *Indians* laughed and seemed to be very glad: I bad them acquaint the *Indians* of the Mountains, or In-lands, that I came to speak with them, and that I was their Friend, and would give them many Hatchets, and Knives, and Swords, &c. if they would come to me, and that I came purposely to speak with them; and that my *Master* the *Great King* of *England*, hath sent them many things, and would willingly see them.

After these People had heard all that I said to them, they sat for a time mute, and considering of the Kindnesses they received from me and my Company, and that they must go a-shore again under the Command of the cruel *Spaniards*, they weeped extreamly, and uttered these words, *Numbra Spanalos muccho Deablo, &c.* In *English* it is, *The Spanish men are much Devils, &c.* I verily believe that these poor innocent Creatures speak truth, for they are great Devils in abusing these poor Souls so unmercifully as they do. In sight of my Men the *Spaniards* with a great Staff would strike an *Indian* on the Head as he talked with him,

him, and beat him all along, for no cause at all ; but this they do to shew their Greatness and Imperiousness. The best Name the *Spaniards* can afford to call an *Indian* by, is Dog, and Devil, and such like Names.

These *Indians* say, that there is much Gold in the Land, and that the *Spaniards* have much *Oro* ; I gave to each of these *Indians* a Knife, and a small Looking-glass, and some Beads : they were very thankful, and I put them in mind again to speak to the *Indians* of the In-land, that I would give them Knives and Glasses if they would come to me. I was in great hopes all this time, that I should have the opportunity to speak with my Golden Friends, by the means of these People ; for they seemed to be glad of the Message, or of the things which I gave them to do it.

These People are of a middle stature, strongly set and well-fleshed ; they are tawny coloured, and have long black flaggy Hair ; their Features tolerable , of a somewhat melancholy Countenance ; they are very active in Body , and hardy in enduring of Weather or Diet : They wear small Caps on their Heads like to Mounteers, and their Garment is a long Mantle ; but most of their Garments are a square piece of Wollen Cloth like a Carpet, of their own weaving of the Wool of Guianacoes : they cut an hole in the middle of this Carpet through which they put their Head, and it hangs upon their Shoulders, and covers their whole Bodies like a Cloak, when it is buttoned down before. Some have these Cloaks so long as it reacheth down to their

middle Leg, and some to the Knee; some wear half-Stockings on their Legs, but no Shoes nor Shirts: some have Breeches after the *Spanish* Fashion, but close to their Thighs and Knees.

A NOTE which I sent to Lieutenant *Armiger*, enclosed in a Letter.

Lieutenant, take what notice you can of the Fortification of the Fort, and what strength they have of People in it, and whether they are able to withstand a Ship; and what quantity of Provisions they have in it; and whether Don Carlos be there; send me an Account thereof by John Wilkins; I will use all endeavours to have you off, when I understand the strength of the place.

I remain your loving Friend,

John Narbrough.

Burn all the Letters you receive from me, and in case of Examination —

December

December 18. 1670. This Evening I took the Suns Amplitude with my Compass, and I had a good Observation. I find the variation of the Compass to be eight Degrees ten Minutes Easterly.

I do much reason with my self as to the Variation, that it differs so much in the same Latitude, between the East and West-side of the Land of *America*; for on the East-side as I sailed in the Latitude of forty Degrees, I found the Compass to have twenty Degrees variation Easterly, by several good Observations, which I took with the same Instrument as I now do use, which is a large *Azimuth* Compass; and here I find but eight Degrees and ten Minutes variation; and it is but eight Degrees of Longitude more Westerly in the same Parallel, differing between these Observations, and the difference of Variation.

I find the Land to be but one hundred and twenty five Leagues broad, from the East-side to the West-side, in the Latitude of forty Degrees South of the Equinoctial; certainly the attractive quality of the Magnet, must be very powerful in the Eastern part of the Land, more than in the Western, which causeth the difference: yet I admire, being on both sides of the Land, the Compass should always have the same variation Easterly. I was of the Opinion that the variation would have been Westerly on the West-side, it being Easterly on the East-side: but I find the contrary by experience; therefore I believe that the attractive quality is not much in this part of *America*, but in some other part more

to

to the Eastward than I was ; for if the attractive quality had been in this Land, and I sailing on both sides of it, the variation must have been Easterly on the one side, and Westerly on the other. This Discourse I leave to a better Understanding ; for I am not as yet satisfied what occasioneth the variation and the great difference of it, although I have been on several Voyages, and have made great benefit of the Understanding of the variation of the Compass, in directing of the true Course, &c.

In the Port of *Baldavia* there are three fair Rivers, which come out of the Country, and empty themselves into the Port with a brisk stream of fresh Water, which causeth the stream always to set out of the Harbour, and the Waters to be fresh just within the Harbours-mouth : one River runs up into the South-east part of the Harbour into the Country ; another River runs into the Country to the Eastward, on the back-side of *St. Peter's* Fort : the third River runs into the Country, about the North-point of the Harbours-mouth, between the point and the North-end of *St. Peter's* Island : it runs up in the North-Eastward, and nine or ten Mills stand upon the River from the Harbours-mouth. The City of *Baldavia* is situated on the Bank of the River, as the *Spaniards* tell me.

I judge this City of *Baldavia* is but a small place, and kept only as a Garrison, and a place for Trade with the *Indians* for Gold, Bezoar-stones, Guianacoes-Wooll, &c. The *Spaniards* that were aboard, and the *Indians* said, that there

were

were but five great Guns in it, and three hundred Men. I know that they speak of the most of every thing in the matters as concerning their strength and number of Men.

I believe that these Rivers may run into the Country a long way, and the *Spaniards* to have but little knowledge in the inward parts of this Country: for the *Indians* will not suffer the *Spaniards* to search into the In-lands. I believe also that these Rivers are not Navigable for Shipping; for the Bark which was there would certainly have gone up the River to the City of *Baldavia*, and delivered her Goods there, and not troubled themselves to carry the goods up in Boats, and small flat-bottomed Barges, which they have there for the purpose: The Barges are built much like our West-Country Barges, and smaller by much. These Boats or Barges will carry about ten or twelve Tuns: they steer with a Rudder, and have one Mast and Sail, as our Barges have; the Sail is made of Cotton-cloth, and the Ropes are made of the rind of *Mangrove Trees*; and instead of Anchors, they have wooden Crab-claws or Kellocks. Anchors of Iron and Grapnels are scarce in these Countries: Ropes and Cables of Hemp are also scarce there, and good Fir-masts much wanted in all these Countries for their Ships. The Masts for their Ships are made of white Cedar, and such like Wood; they are very heavy and short-grained, and will break short. There are not any Fir-trees growing in all the Land: Good Workmen for the building of Ships are also much wanted here, and Seamen.

The

The smaller Boats which they have here are Canoas, being cut out of the Body of a large Tree, and shaped somewhat like a Shallop at the ends: some are thirty feet long, and built one strake of Board upon them, to raise them higher on their sides; they will carry near twenty Men a piece: some are rowed with Oars, and some are less, and rowed with Paddles: those which are walt, have a great Beam lashed fast along each side without Board, which keeps them from over-setting. These Boats are very ill built, for I saw not any one of them fit to row in any Sea-gate, or for any Service, or to carry any Person of Quality in. The *Indians* are the *Spaniards* Slaves to row them to and fro, and to do all manner of labour; for the *Spaniards* will not lay their Hands to any thing in that nature, accounting it beneath them to foul their Fingers with Work; for they scorn to be Servants one to another, let the one be never so Potent, and the other not worth the Rags which he weareth: yet he scorns to be a Servant to him, and live in *America*.

The Land about the Harbour of *Baldavia* is of a good height, and in Land it riseth in large Hills: it is low by the Water-side, and the Shore is sandy in some Bays, and broken shatty bits of glittering Rocks like Gold, lie shatter'd along by the Shore-side. All the whole Country is overgrown with green Woods, as what I could see of it, and by the Rivers sides: there is no travelling in the Woods, they are so thick with Under-brush, old rotten Trees, and Leaves, and such Trash.

The Harbour is near a Mile and an half broad, and the Guns cannot command from one side to the other: *St. Peter's* Fort is near two Miles from the Harbours mouth; any Ship may come in and beat them from their Guns, in *St. Jago* Fort, and in *St. Andrew's* Sconce, which are on the South-west side of the Harbour. After you are in, *Saint Peter's* Fort can do very little or no hurt at all to your Ship, excepting it be accidental dropping shot. The *Spaniards* have no Plantation on this South-west side, they only keep the Forts for possession, that no forein Ship may come and have the Port free to ride in, and Trade with the Natives. The Harbour is like a Sound, after one is within the Mouth of it toward the South part.

Here grow many good Canes on the Shore-side, such as are brought from the *East-Indies*, which are called *Bamboas*; these are very stiff Sticks, firm and heavy; they grow among the Trees on the sides of the Woods like Vines, and wind about the Trees: some are above twenty feet long, and taper from the root to the top, like an Angling-Rod.

All Commodities which come from *Europe* are very dear here, and scarce, for they have none brought to them, but by the way of *Panama*, and by the River of *Plata*, which pass through several Merchants hands before they come into these parts, and the transporting of them from place to place, is very chargeable. Many also are but of little esteem, here being such plenty of them: *French* Hollands, Silks, *Flanders-Laces*, Silk-Stockings,

stockings, Ribbaning, *French* Linnen, Looking-glasses, and such like Commodities were much enquired for here, and would have sold at great Rates.

Gun-powder for Fowling-pieces, is worth a piece of Eight *per* pound: and Bird-shot is worth two Ryals of Plate a pound, and a Ryal and an half a pound. All Commodities of *European* Workmanship are of great worth here, as I understand; and believe that more Northerly on the Coast of *Chile* about *Vale Parazo*, and *Coquinto*, and *Areca*, where there are more Inhabitants, Commodities would bear a much greater price than what I mention, and there would vent greater quantities: for Silver is more plentiful by much in these parts than at *Baldavia*, they being nearer the Mines of the *Potossea*; for the Silver of *Potossea* comes down to the Port of *Areca*, and from thence it is carried to *Lima* by Sea.

I am of Opinion that the most advantageous Trade in the World, might be made in these parts, if it were but follow'd, and that leave were granted by the King of *Spain* for the *English* to Trade freely in all their Ports and Coasts: for the People which inhabit there are very desirous of a Trade: but the Governours durst not permit it without Orders, unless such Ships of force were to go thither and Trade *per* force, and not take notice of the Governours; which might be easily performed by four Ships of twenty and thirty pieces of Ordnance a Ship; and I believe that the Natives in the Southern parts of *Chile*, about
Castro,

Castro, and *Orsono*, and at *Baldavia*, would be brought to a rich Trade of Gold, when once they grew to be acquainted with those that should be employed on the design, and they did but use them civilly at the first, and gain their loves; which may be easily done by giving them Knives, Scissars, Glasses, Beads, Combs, Hatchets, and the like Commodities, and treat them kindly. For what I understand by the *Indians*, who were aboard of me, they are Masters of the Golden part of the Country.

My intent being, if Weather permit me, to sail all along the Coast from *Baldavia* to the Southward, till I come to the Streights-Mouth at *Cape Desiade*. I came in great hopes to meet with the *Indians* in some part of the Coasts, and to Trade with them for Gold, and to find good Harbours. I resolve also to see in at the Islands of *Castro* and *Orsono*, and try what I can find among those *Spaniards* who are settled there, and whether they live accordingly as the *Spaniard* informed me here.

The Names of the four Men of my Company, whom the *Spaniards* detained at *Baldavia*, and whom I left there.

Thomas Armiger Lieutenant, aged forty Years, and born in *Norfolk*.

John Fortescue Gentleman, aged twenty seven Years, and born in *Kent*.

Hugh Cooe Trumpeter, aged twenty eight Years, and born in *Wappen*.

Thomas

Thomas Highway Linguist, aged thirty five Years, and born in *Barbary* of *Moorish* Parents: He turned Christian and lived in *London*. This *Thomas Highway* is a *Tawny-Moor*; he speaks the *Spanish* Tongue very clear, for he had lived formerly at *Cadiz* with an *English* Merchant.

All these four were very healthy sound Men, and of good Presence and Spirit; which gives me great hopes that they will live to give an Account of that Country, and of their Travels.

Cape-Gallery, which is the outermost Point on the South-side of the Harbour of *Baldavia*, lieth in the Latitude of thirty nine Degrees, fifty seven Minutes, South of the Equinoctial; as also in Longitude to the Westward of the Meridian of the *Lizard* of *England*, seventy Degrees, twenty Minutes, according to my Account; and in Meridian distance, one thousand one hundred and eight Leagues West; and in Longitude East from the West-mouth of *Magellan* Streights and *Cape-Pillar*, two Degrees and forty Minutes; and in Meridian distance 42 Leagues nearest, according to my reckoning.

Thursday *December* 22. This Morning it prov'd very fair Weather; at Day-light the Wind was at South-west, a fresh gale; the Sea indifferent smooth: I plied to the Windward along the Coasts, and was about three Leagues off the Shore, somewhat to the Southward of *Cape-Gallery*, out of sight of the People of *Baldavia*; for the Cape was shut in with the Land to the Northward of the Harbour. At twelve of the Clock I had

had a good Observation of the Sun with my Quadrant; and I found my self in the Latitude of 40 degrees 3 minutes South: I was then three Leagues off the Shore, and could not get ground at eighty Fathom. I was to the Southward of *Baldavia* Harbour.

December 31. This afternoon it blew hard at *N.W.* and rained; I steered South-west and by South, by my Compass, this Afternoon and to Night. Here are several sorts of Porpus Fishes in these Seas, unlike ours in *Europe*: some pied white and black, and some grey and large ones. Rainy Weather to Night, and no Observation to be made of the Shore.

January, Anno Dom. 1670.

Sunday January 1. Raw, cold, cloudy Weather; Rain and some Hail, the Wind at *N.W.* a stout gale, and a great Sea: I was much afraid that I should lose my Main-mast, it fetched such way, and broke the spikes that fastned the Fetches with working. I steered *S. S. W.* to ease the Ship from rolling what I could. After several Courses made from Saturday Noon till to day Noon, I make the true Course to be South 39 *d.* 00 *m.* Westerly, and distance, sailed 105 Miles, and departure West 66 Miles, and difference of Longitude 101 *d.* 37 *m.* 4 tenths: difference of Latitude 1 *d.* 22 *m.* 3 tenths: Latitude by Account 47 *d.* 47 *m.* South.

Wednesday January 4. Indifferent fair Weather, the Wind at North-west, and sometimes at *W.N.W.* a fine gale: I kept on my Course South. Some Porpus Fishes seen to day, and some Whales

and Sea-Fowl: many little Peterels. This Morning I took the Suns Amplitude, and I find the Compass to have 10 Degrees 28 Minutes variation Easterly; My Course made true from Tuesday Noon till to day Noon, is South; distance sailed 84 Miles, and the difference of Latitude is 1 d. 24 m. 8 tent. Lat. by good Observation of the Sun on the Meridian 51 d. 31 m. South: Meridian distance from *Point-Gallery*, West 70 leag. 1 mil. 5 ten. Longitude at Noon from *Point-Gallery*, West 4 d. 48 m. 4 ten. Longitude at Noon from the *Lizard*, West 75 d. 8 m. 4 ten. Meridian distance from the *Lizard*, West 1178 Leagues, 1 Mile, 5 Tenths.

Friday January 6. Hazy, foggy Weather this Morning, the Wind at *W. S. W.* a stout gale: I steered in for to make the four Islands, which I called the *Isles of Direction*, or to make *Cape Desiade*: My Course was *E. N. E.* by my Compass, the Nights being but short, and light; for the Moon was at the full, so that I could see at some time clear a League before us.

At four of the Clock this Morning, it being fair day-light, I caused the Lead to be cast forth, but could not get ground at eighty Fathom: I reckon my self about ten Leagues from *Cape Desiade*, and on the Latitude of 52 d. 53 m. South. A little past four of the Clock, it cleared up on the East Horizon: we looked well abroad, and saw the four Isles, called *The Directions*, which lie at the Mouth of the Streights *N. N. W.* from *Cape Desiade*; distance from thence about eight Leagues. These Islands made in four *Hormac-*
ro. like Hay-cocks, when I saw them: they bear
 N. E.

N.E. of me, distant about four Leagues: they lie in the Latitude of $52^{\circ} 42'$ and at five of the Clock the Islands bore North of me, distant three Leagues off; I sounded, but could not get ground at 70 Fathoms; I saw *Cape Deshade*; it cleared up, for the Fog was much on the Hills; the *Cape* was *E.S.E.* of me, distant near eight Leagues: the tops of the ragged Hills, or rocky Spires were clouded with the flying Fog, so as I could not see the *Cape* sooner; for in clear Weather, the Land at *Cape-pillar* and *Cape Deshade* may be seen fifteen or sixteen Leagues, it is so high and ragged.

I steered by *Cape-pillar* East and by South, the Wind at West-south-west, a fresh gale; a great humming Sea ran here, which came out of the South-west; I saw the Sea break upon broken ground, which lieth at least four Leagues from the point of *Cape Deshade* West into the Sea, and many Rocks that were sunk, and prints of Rocks above Water, which the Sea breaketh terribly: these lie off *Cape Deshade* about two Leagues, and a League, and some not half a Mile off, very dangerous.

As I came nearer the Streights-mouth, I raised the Land on the North-side by *Cape Victory*, and the broken Islands within the Streights, which I called *Westminster Isle*, and the *Lodgers Isle*: they make ragged in Hillocks at the first sight. At nine of the Clock *Cape-pillar* bore South of me, being distant about a Mile and an half from me.

No Tide or Current as I could perceive, set either in or out of the Streights, so as to prejudice Navigation.

The difference of Longitude, East is 1 *d.* 39 *m.* 4 tenths: the Latitude by my Account now, is but 52 *d.* 51 *m.* South: but formerly my Account of the Latitude of this place, was South 52 *d.* 58 *m.*

Meridian distance at 9 of the Clock, from Point Gallery, West 35 *leag.* 00 *mil.* $\frac{1}{2}$.

Longitude at 9 of the Clock, from Point Gallery, West 2 *deg.* 43 *min.* $\frac{1}{2}$.

Longitude at 9 of the Clock, from the Lizard, West 73 *d.* 3 *m.* $\frac{1}{2}$.

Meridian distance at 9 of the Clock, from the Lizard, West 1153 *leag.* 00 *mil.* $\frac{1}{2}$.

I find but very little Tide or Current in this Sea of *Mare del Zur*; for I am but 3 Minutes of Longitude out of my Account, in sailing between *Cape-gallery* and *Cape-pillar*, forwards and backwards.

At any time if you have a desire to enter the Streights of *Magellan* at the West-mouth, it will be safest in my Opinion, to bear in for the Land, in the Latitude of 52 Degrees, and 50 Minutes South, and then you will see the four Isles of *Direction*, which lie before the Mouth of the Streights, somewhat toward the North-side; they lie North-north-west from *Cape-pillar*, near eight Leagues distant. These Islands may be known, for there are but four of them, and they be but of an indifferent height, and but small, and bare irregular Rocks, and they be near together: the Eastermost Isle is near a Mile distant from the other

ther three, and it is pecked up like a Sugar-loaf: the Sea breaks much on these Isles with Westerly Winds, &c. *Cape-pillar* is the steep Point of Rocks on the South-side of the Streights-mouth, at the entring into the Streights; *Cape Desiade* is the Westerly Point, for it falleth off from *Cape-pillar* near South-west, and they are distant about two Leagues one from another, which is the Face of the Lands between these two Capes: for at the Point of *Cape Desiade*, the Land on the South-side of the Cape trends off to the South-south-eastward, all high ragged rocky Mountains: what I saw of it, at the pitch of *Cape Desiade*, there lie many shatter'd Rocks which are above Water, and shew like the Ruins of old Houses: and there are ledges of Rocks that are sunk, which lie near four Leagues off of the Cape, West; the Sea breaks much on them, and they are dangerous: they lie in the Latitude of $53^{\circ} 10'$ South, by my reckoning; I called these Rocks *The Judges*; they are near ten Leagues distant South and by West from the *Isles of Direction*, so broad is the first opening of the Streights; for when you can but once see the Land, to make it, there is no danger; but a Stranger that should pass out of the South-sea, and had not passed the Streights before, will find it very difficult to pass the Streights from the West to the East; for at the first entring into it out of the South-sea, as we call it, there are many Openings and Sounds on the North-side, which seem fairer for a passage than the Streight it self doth: therefore it is best to keep the South-side, far aboard all along from *Cape-pil-*

lar, which is the point at the Entrance: the Course will be East and by South for a Mile or two, and then East-south-east, and South-east and by East: so the Channel lieth to *Cape Quade*.

The North-side of the Streights from *Cape Victory*, all along to the Eastward to *Cape Forward*, is all a ragged, rocky, mountainous, desolate Country; many high rocky Islands, and small Rocks, and sucking Rocks lie on the North-side of the Streights, at coming out of *Mare del Zur*, fifteen Leagues in distance into the Streights to the Eastward. There also run great Sounds and Waters into the North-Land, which shew like a passage more than the Streights doth. There is no safety for a Ship to keep the North-shore aboard in this part; for here lie so many Islands and Rocks, so that if the Weather prove foggy and thick, a Man may mistake the right Channel, and steer in among the broken Islands and Rocks, so far as to endanger his Ship, if the Wind be Westerly, and it is for the most part of the Winter there, very thick and foggy.

Here are many Sounds and Coves on the North-side, between *Cape-Victory* and *Cape Quad*: but how far they run into the Land, I know not. I wanted a Sloop, or some other small Vessel, to discover those Sounds: and many other places in the Streights, which I would gladly have seen.

January 6. In *Tuesday-bay* and *Island-bay*, there grow thick shrubby Bushes on the lower Land, which have many Berries like Hurts growing on them: these Bushes grow in a mossy loose Earth, which lieth four or five Feet thick on the Rock; these

these Bushes will serve for Fuel: there grows also long sedgey Grass very thick; many Geese and Ducks do make their Nests and breed in it, and other Sea-Fowl: here are Ducks, white and pied brant-Geese, grey Gulls, Sea-Mews, Sea-Divers and Penguins on the Water; I could not see any People now, but some have been there; for I saw where they had made Fires, and an Harbour. Here are Muscles and Limpets on the Rocks, but as for other Fishes I saw none. I rowed two Miles up the Sound, and could have gone farther, but it rained so much, and blew so hard, as I durst not be absent from the Ship; the Water is mighty deep in the Sound. At Night I got aboard, my Seamen were joyful to see me, for they were afraid that the Ship would have broke loose in the time of my absence. Much Rain to Night, and Fogs, the Wind at West-south-west, a short gale at Night; I rode fast on the smooth Water, having the Point on the North-west of me: Here is a great deal of fresh Water comes running in streams down the sides of the bare rocky Mountains into the salt Water; many Whales spouting to and fro in these Bays and Sounds, and some Seals on the Rocks: this part is very desolate, and a mere Chaos, &c.

At eight of the Clock this Evening, I anchored before the place called *Batchelors River*, in nine Fathom Water, clear sandy Ground, two Cables length from the shore. Here is very good clear sandy-ground before the River, and good Anchoring in six, or seven, or eight, or nine, or ten, or eleven Fathom: a fine barth of shore, and good Ri-

ding with Westerly Winds, and Northerly : the worst Wind is a South-Wind, for it blows right on in this Reach ; but there cannot go much Sea here ; for the Streight in this Reach is but two Leagues broad. This *Batchelors* River is near five Leagues to the Eastward of *Cape Quade*, and two Leagues to the Eastward of *St. Ferom's* Channel: on the North-side of it, the Tide runs of an indifferent strength in this place, both Ebb and Flood ; it sets in and out of *St. Ferom's* Channel, rising and falling about eight or nine Feet perpendicular : here is not above ten Foot Water at a High-water, at the going in of *Batchelor's* River. This River is a good Harbour for Barks and Sloops, or the like. This River lieth in a Valley, and a fine Grove of green Trees grows on the West Point : At the entrance here is very good fresh Water, and a good place to Wood at. The *Indian* People or Natives frequent this place often ; for here are many Arbours, which are their Houses: Calm Weather to Night, and Foggy ; I rode fast, the Ship being moored.

Sunday *January* 8. Calm Weather, and a fine warm Sun-shine ; This Morning at Day-light, I went in my Boat with twenty Men into *Batchelor's* River, and rowed four Miles up the Creek, or River, which was as far as the Boat could go ; the Water being high : the River ends in a small Creek, coming out of a Lake of fresh Water, in a Valley amongst the Hills : we made the Boat fast, and marched all into the Land five or six Miles, being stop'd from going further, by Hills rising very steep, and Mountains, and impenetrable Woods:

Woods : we made several Fires, but could not see any sign of them so far in the Land. No Beast or other Creature to be seen ; many small streams of fresh Water come running from the snowy Mountains, with great Falls from the steep Rocks : we looked in many places of the Earth, and in the streams of Water for Gold, &c. but found none, nor any other Metal or Mineral : Here grow on the Bushes many small red Berries, much like Hurts, very good to eat ; the Grass-Land is very loose and Boggy : the Rocks are a kind of white Marble ; the Trees like those at *Port Famen* ; here are small Pepper-trees. To Night I got on Board ; Calm Weather : I rode fast with the Ship.

Here ends *Sir John Narbrough's* Manuscript Journal, which we shall continue home to *England*, from the *MS Diary*, taken by *Sir John's* ingenious *Lieutenant, Nathaniel Pecket*.

Wednesday *January 11*. Fair Weather, Wind variable, from South-east to South-west. This Morning we made the best of our way to get into *Port Famen* ; Here we had Fishes from the Shore to Fish our Main-mast : At twelve a Clock we Anchored in nine Fathom Waaer. This place afforded what we wanted, as very good large Trees for Fishes : good Water, good wild Fowl, good Fish, like Mulletts, and large Smelts. Here we fitted our Ships Mafts, and Rigging as well as we could ; Careen'd her , and filled our Casks with good fresh Water, and took as much Wood aboard, as we thought fit.

January

January 16. Fair Weather, and little Wind, Westerly. This Morning the Lieutenant was ordered to go up with the Boat in *Segars* River, as high as he could with convenience, and to see for *Indians*: He went up about nine Miles, but could not get higher with the Boat, by reason of the Trunk-timber, and shoalness in the Water. So I landed, and went up two Miles by Land to see for *Indians*: but I could not see any, nor any thing worth the Observation. How far the River runs up, I know not, for I saw not the end of it: so I returned a-board again.

January 29. Fair Weather, and little Wind at South-west. This Morning the Captain went over with the Pinnace to the South-shore to see for *Indians*, and if there were an Harbour for Shipping, short of *Port Famen*. This day came an *Indian* to the Point of *Port Famen*, and made a Fire; and I went a-shore to see what he had: but he had neither Bow, nor Arrow, nor any thing else to the value of a Farthing: I would have had him come a-board with me, but he would not; as far as I understood by the Signs he made to me, he had been a Slave to some other *Indians*, and had run away from them, and was travelling home.

Tuesday January 31. Fair Weather, Wind variable. This Evening the Captain came a-board again, having been over on the South-shore, to see for an Harbour, but could find none, nor see any *Indians*.

Saturday February 4. Fair Weather, Wind at West by North. This Morning, at four a Clock

we

we set Sail for *Port Famen*, and at eleven a Clock we were short of *Fresh-water Bay*; and at six a Clock in the Evening, we Anchored in twelve Fathom Water, in a fine sandy Bay, about four Leagues to the Northward of *Freshwater Bay*.

February 5. Fair Weather, but very much Wind, at South-west, and West-south-west. This Morning the Captain sent me to *Freshwater Bay* to see for *Indians*, but I saw none there, so I returned again aboard.

February 7. Fair Weather, Wind Northerly. This Morning the Captain ordered me to take the Pinnace, and to go along the North-shore, and between *Elizabeth's Island* and the Shore, to see for *Indians*. In the Afternoon, it blew hard Northerly, that we could not row a head; so I put back into a sandy Bay, and went a-shore, and stayed there all Night; and in this Bay we haled the same, and got a great many good and large Smelts: Smelts of twenty Inches long, and eight Inches about.

Wednesday February 8. Fair Weather, Wind West-south-west. This Morning at four a Clock, I run down the Streights with the Pinnace, keeping the North-shore a-board, and run betwixt it and *Elizabeth's Island*, but saw no *Indians*: yet saw several places, where they had been very lately, and where they had built their Canowes. From *Cape Desiade* to *Elizabeths Island*, there is Wood and fresh Water plenty; but from *Elizabeths Island*, to *Cape Virgin-Mary*, Wood and fresh Water is very scarce to come by. This Afternoon at three a Clock, I got a-board again, and at four a Clock

a Clock, we came to an Anchor in eight Fathom Water, black Sand; we rid within a Mile of the North-shore: *St. Georges*, and *St. Bartholomew's* Island were both shut in one, and they bore South-south-east of me; and *Elizabeths* Island bore South and by East: And here we rid with the Ship all Night.

February 9. Fair Weather, Wind Westerly. This Morning the Captain sent me to see for *Indians*, but I could see none; yet I fell with a good Harbour for small Vessels, on the North-side, and at the South-end of a great deep Bay, thwart of *Elizabeths* Island; the entrance of this Harbour is not a Bow-shot from side to side: I sounded it, and there was twelve foot Water at a low Water; but within there was three Fathom Water, at low Water: From the entrance of this Harbour to the upper end of it, is about seven Miles; Here is in this Harbour great store of Geese and Ducks; and a-shore there is great store of Heath-berries, and Hicts, and small Black-berries, good and well-tasted; but I saw no *Indians*, so I returned a-board again; the Captain went into another Harbour, a Mile to the Southward of the second Narrow on the North-shore, and sounded, and had four Fathom Water in it; it is very broad within, and there is great store of Sea-Crabs.

Saturday February 11. Fair Weather, Wind variable. This day the Captain ordered me to go with the Pinnace, and discover the North-shore, and if I could with convenience discover some part of the South; and to go to the first Narrow,
and

and there to stay for the Ship; so I went through the second, and landed on the South-side, in a fine sandy Bay, or Cove, expecting to fall with *Indians*, for I saw a many Fires up in the Land; I went up about five or six Miles, but could see no *Indians*. Then the Night coming on, I returned again to the Boat, and there we pitched a Tent to lie in, and lay all Night; and at High-water we set the same thwart a Pond of Water, and there it stood until Low-water; then we halled the Pond all over, and haled a-shore about 700 good and large Fish like Mulletts. This Land is very dry, barren Land, and nothing to be seen in it worth the Observation.

February 12. Fair Weather, Wind Northerly. This Morning I went over to the North-shore, and there I fell with a fine sandy Bay; I founded it, and had 6, 7, 8, 9, and 10 Fathom Water above half a Mile from the Shore. This Bay is between the second Narrow, and *Cape Gregory*; close under *Cape Gregory*; this Cape is about five or six Miles to the Eastwards of the second Narrow: here I landed, the Winds being Northerly, a fresh gale, and haled the Boat up dry; and went up into the Country to see for *Indians*, but saw none, and I returned to the Boat again, where we pitched our Tent, and lay all Night.

February 13. Fair Weather, and a fresh gale of Wind Westerly. This Morning I run all along the North-shore from *Cape Gregory*, to the first Narrow: and I was no sooner entred into the first Narrow, but I saw three Anchors, which lay up above *High-water Mark*, in a small sandy Cove: there

there I landed, and haled up the Boat; and searched about to see if we could fall with any Guns, or other Trade. One of the Men found an Iron Commander for some Ships Poop: one of those Anchors were twelve Foot long in the Shank, and the other two were eleven Foot a piece, and they were all *Spanish* Anchors. The Land here is barren, dry Land, and affords neither Wood, nor fresh Water; and for the space of five, or six Miles about, the Land is full of Rats; they have Holes in the Ground like Coney-burroughs: their Food I suppose to be Limpet, for there is great store of Limpet-shoals lying close to their Holes: I saw no *Indians* here, nor any thing worth Observing. Night coming on, we here pitched our Tent, and lay all Night; here are very good sandy Bays on the North-side, all the way betwixt the first and second Narrow: for I founded all along as I came down in the Boat, and had ten and twelve Fathom Water, a good Burth off.

Tuesday *February* 14. Close, hazy Weather, with some Rain, and very much Wind Westerly. This Morning I saw the Ship coming down the Streights; and after she was through the Narrow, they brought her to, and I got a-board; and we made all the Sail we could, and by Night we got clear of the Streights into the North-sea; and at three a Clock *Cape Virgin-Mary* bore North-west; a Point Northerly, distance 4 Leagues.

Thursday *February* 23. Fair Weather, the Wind variable, from the North-north-west, to the West-north-west. This Evening at nine a Clock, we came to an Anchor in 22 Fathom Water, sandy
Ground

Ground on the South-part of *America*, in the Lat. of 47 d. 16 m. South; and then *Cape-Blanco* bore North-north-west of me, distant about six Leagues.

February 24. Fair Weather, and little Wind, Northerly. This Morning we weighed, to go to *Port Desire-Bay*, and in the Evening at six a Clock we Anchored in the Bay, in fourteen Fathom Water.

February 25. Fair Weather, and a fresh gale of Wind Easterly. This day the Long-boat went into *Port-Desire* for fresh-Water, but could not fill above five or six Puncheons; for there was no more to be had there, and all they brought aboard was brackish: Fair Weather, Wind variable.

Sunday February 26. Fair Weather, and a fresh Wind at South-south-west. This Morning we set Sail from *Port-Desire*, to go for *England*; and at twelve a Clock, I was in the Latitude of 47 deg. 10 m. South. And then *Cape-Blanco* bore North-west of me, but not by the Compass; for here is a Point and half variation Easterly: and at four a Clock *Cape-Blanco* bore West-north-west of me, by the Compass, distance nine Miles, and then we had twenty Fathom Water: but when it bears West-north-west from you, and you are 8 Miles off, you will have but ten Fathom Water. Here is very good Sounding all the Coast along, from this Cape to *Cape Virgin-Mary*, which lies in 52 d. 15 m. South. Within five Leagues off the Main, you will have 25 and 30 Fathom Water; and 10 Leagues off, you will have 50, and 55 Fathom Water, it is black oasie Sand.

Wednesday

Wednesday *May* 17. The Weather fair. This Evening at six a Clock, we saw the Island of Saint *Mary*, one of the Isles of *Azores*, it bore East-north-east of me, distant about sixteen Leagues by Estimation: fair Weather, Wind at South-east.

May 19. Fair Weather, Wind Easterly. This Morning at seven a Clock, the Town of *Puntelegada*, upon the Island of *St. Michaels*, one of the Isles of *Azores*, bore North of me, distant about two Miles; and my Longitude difference from *Cape-Blanco* to this Town is My Meridian distance from *Cape-Blanco* to this Town is Leagues, Miles, Tenths, Easting this Town, lying so far to the Eastward of the Cape. This day the Captain sent me a-shore to *Puntelegada*, to enquire News from *England*, whether we had War, or Peace with any other Nation, or not; and I was informed by Mr. *Richard Nuchenfon*, that we had War with none, but the *Argea-Men*. So I returned a-board again, and we made all the Sail we could for *England*.

Tuesday *May* 23. Fair Weather, and much Wind at North-east; our Provisions being almost done, and but little Water in the Ship; we bore up to go for *Angria* at the *Terceras*.

May 24. Close, hazy Weather, and a fresh gale of Wind at North-east and by North. This Forenoon we Anchored in *Angria-Rode*, in sixteen Fathom Water.

Friday *May* 26. Fair Weather, and little Wind at North-east. This Forenoon we set Sail out of *Angria-Rode*, to go for *England*.

Saturday

Saturday June 10. 1671. It was hasey, dirty Weather, Wind at S. W. This morning I saw *Scilly*, at seven a Clock; it bore N. E. by N. of me, distant about 5 Leagues; and at six a Clock in the Afternoon the *Lizzard* bore North of me, distant about 3 Leagues. Now, I make my difference of Longitude, from Cape *Blanco* to the *Lizzard* in *England*, to be 60 d. 45 m. $\frac{1}{2}$. and my Meridian distance is 840 Leagues; I am so far to the Eastwards of the Cape.

K

A Rela-

to the Swagbiter of Mr. Magellan.

Saturday June 10 1521. It was a very fair day
Weather, Wind at S.W. In the morning I saw
a flock of seven or eight N.E. by N. birds
at about 7 leagues, and at 10 a flock
of 15 or 20. In the afternoon I saw a flock
of 15 or 20. Now I make my estimate
of the distance, from Cape Blanco to the
Islands in England, to be 60 leagues. The
Mediterranean distance is 80 leagues; I am
to the Eastwards of the Cape, 10 leagues
from the Islands of England, 10 leagues
from the Town of London.

At this distance from the Cape, I
am 10 leagues from the Town of London.
The distance from the Cape to the
Town of London is 10 leagues.

The distance from the Cape to the
Town of London is 10 leagues.

The distance from the Cape to the
Town of London is 10 leagues.

Bartholomew

A Relation of a Voyage made towards the South Terra Incognita ; extracted from the Journal of Captain Abel Jansen Tasman, by which not only a new Passage by Sea to the Southward of Nova Hollandia, Vandemens Land, &c. is discovered, and a vast Space of Land and Sea incompassed and sailed round, but many considerable and instructive Observations concerning the variation of the Magnetical Needle in parts of the Worlds almost Antipodes to us : and several other curious remarks concerning those Places and People are set forth. Not long since Published in the Low Dutch by Dirk Rembrantse, and now in English from Dr. Hook's Collections.

IN the year 1642. Aug. 14. He set Sail with two Ships from *Batavia*, to wit, the Yacht *Heemskirk* and the Fly-boat *Seehane* ; and the 5. of *September* came to an Anchor at the Island *Mauritius* 20 d. South Latitude, and 83 d. 48 m. Long. They found this Island 50 Dutch Miles more Easterly than by their reckoning, which make 3 d. 33 m. of Longitude. The

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8. of *October* they departed from thence, and went nearly South, till the 40, or 41 *d.* having North-west var. 23, 24, and 25 *d.* to the 22. of *October*. From that time they bore away East, fomewhat Southwardly, till the 29. when they were in South Latitude 45 *d.* 47 *m.* Longit. 89 *d.* 44 *m.* variation North-west 26 *d.* 45 *m.* The 6. of *November* they were in South Latitude 49 *d.* 4 *m.* Long. 114 *d.* 56 *m.* N. W. var. 26 *d.* with much dirty, misty, windy, and gusty Weather, and with hollow Waves out of the S. W. and S. so that we could not conceive there could be any Land very near upon these Points. *November* 15. Latitude S. 44 *d.* 3 *m.* Longitude 140 *d.* 32 *m.* N. W. var. 18 *d.* 30 *m.* which decreased apace, so that on the 21. being in 158 *d.* Longitude, the variation was no more than 4 *d.* The 22. being the next day, their Compass would not stand still as it ought, therefore they guessed there was here some Mines of Load-stone, for that their Compass stood not still upon any of the eight Points. The 24. of *November* in South Latitude 42 *d.* 25 *m.* and their middle Longitude of 163 *d.* 50 *m.* they saw Land E. by N. distant from them 10. Miles, which they named *Anthony van Diemens Land*. Here the Compass stood right at this Land in the Longitude of 163 *d.* 50 *m.* They had much stormy bad weather, so they went away S. by E. along the Coast to 44 *d.* of South Latitude, where the Land runs away E. and after N. E. and northerly: here in the Longitude 167 *d.* 55 *m.* and Latitude 43 *d.* 10 *m.* they came to Anchor in a Bay, which on the 1. of

December

December they named *Frederick Hendricks Bay*: They heard as they thought the noise of Men, but saw none; they saw also two Trees about two or two and a half Fathom thick, and 60, or 65 Foot high below the Branches; the Bark of these Trees was cut with Flint, peeled off in form of Steps, to help the Inhabitants to climb them, and take the Birds Nests thereon: these Steps were about 5. Foot asunder, so that we must either conclude these People very great, or else that they have some unknown trick to make use of the said Steps for climbing these Trees. In the one Tree the Steps seemed so fresh and green as if it had not been four days since they were cut: the noise of men, and the play which they heard was much like that of a *Jews-Trump*, or little *Gom*, which was not far off, but they saw no body. They saw the footing of wild Beasts having Claws like a *Tyger*, and of other Beasts: They found also Gum of the Trees, and Gum-Lac of the Ground. The Ebb and Flood was here about three Foot. The Trees stood not thick, nor incumbred with thick bushes or underwood: they saw likewise in several places the smoak of fire. Here they did nothing but only set up a Stake with the Companies mark, and a Princes Flag thereon; there was here 3 d. N. E. variation. December 5. S. Lat. 41 d. 34 m. Long. 169 d. they went away E. from *Anthony van Diemens Land* with purpose to run away E. to the Long. of 195 d. to find the Islands of *Solomon*. December 9. with S. Lat. 42 d. 37 m. Long. 176 d. 29 m. N. E. variation 5 d. Decemb. 12. they had hollow Waves

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out of the S.W. therefore from that Quarter no Land is to be expected.

December 13. Latitude S. 42 d. 10 m. Longitude 188 d. 28 m. N.E. variation 7 d. 30 m. they had Land in sight which was very high and hilly, and which in the Charts is now called *New Zealand*; they went N. Eastwards along the Land as the Chart shewed it, till they Anchored in a Bay, in South Latitude 40 d. 50 m. Longitude 191 d. 41. m. N. E. variation 9 d. and that on the 18. of *December 1642.* These Inhabitants were rough of voice, thick and gross made, they came not within a Stones cast on Board of us, and blew several times on an Instrument which made a noise like a *Moorish* Trumpet, in answer thereto we blew ours. Their colour was between Brown and Yellow; they had black Hair, bound fast and tight upon the crown of their Head, in the same manner as the *Japanners* have theirs behind their Head, and near as long and thick of Hair, upon which stood a great thick white Feather: their Clothes were of Mats, others of Cotton, but their upper parts were naked.

December 19. these Antipodes began to be somewhat bolder, and more free, so that they indeavoured to begin a Truck or Merchandize with the Yacht, and began to come on Board; the Commander seeing this began to fear, lest they might be fallen upon, and sent his Boat or Prow with seven Men to advertise them that they should not trust these People too much: they went off from the Ship, and not having any Arms with them, were set upon by these Inhabitants, and three or

four

four of them were killed, and the rest saved themselves by swimming: this they indeavoured to revenge, but the water going high they were hindred; this Bay was by them for this reason named *Murderers Bay*, as it is marked in the Charts. From this Bay they went on E. and found the Land all round about them: It seems a very good Land, fruitful, and well scituated, but by reason of the bad Weather and West Wind they had a great deal of trouble to get out. The 24. of *December* because the Wind would not well suffer them to go to the Northward, they not knowing if they should find any Passage to the North, and the Flood coming out of the S. E. they concluded to go back again into the Bay, and there seek a Passage; but the 26. the Wind better serving, they went away Northerly somewhat to the West. *January 4. 1643.* in South Latitude 34 d. 35 m. Longitude 191 d. 9 m. N. E. variation 8 d. 40 m. they came to the N. W. cape of this Land, and had hollow Waves out of the N. E. and therefore doubted not there must be a great Sea in the N. E. whereupon they were glad, as having now gotten a Passage. Here lay an Island which they named *three Kings Island*, to which they went to refresh themselves, and being come near they saw upon the Hill thirty or thirty five Men, being of tall Stature (as well as might be discerned from far) with Sticks or Clubs, who called to them with harsh or loud voices, but they could not understand them; and those Men when they walked made very wide paces or steps. In turning about this Island there

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appeared very few Men, and they saw little or no Cultivated Land, but only found a fresh River, where our People intended to get fresh water, but by some unlucky accident were prevented; whereupon it was resolved to go with an Eastern Course to the Longitude of 220 d. and then Northward to the South Latitude of 17 d. and from thence Westward to the *Cocos and Horns Islands*, first discovered by *William Scouten*; and then if not sooner to recruit, for they had indeed been upon *Anthony van Diemens Land*, but had met with nothing, and upon *New Zealand* they had not so much as once been a-shore.

Jan. 8. in S. Latitude 30 d. 25 m. Longitude 192 d. 20 m. N. E. variation 9 d. they had great Waves out of the S. E. so that upon that Point no Land can be hoped. January 12. South Latitude 30 d. 5 m. Longitude 195 d. 27 m. N. E. variation 9 $\frac{1}{2}$ d. they had hollow Waves out of the S. E. and S. W. January 16. in S. Latitude 26 d. 29 m. Longitude 199 d. 32 m. N. E. variation 8 d.

The 19. in S. Latitude 22 d. 35 m. Longitude 204 d. 15 m. N. E. variation 7 $\frac{1}{2}$ d. they saw an Island about two or three Miles round, high, steep and barren in appearance; they would willingly have come nearer to it, but could not, because of the S. E. and S. S. E. Wind; they gave it the name of *Piilstreets Islands*, because of the multitude of those Fowls: the next day they saw again two Islands. The 21. of January in S. Latitude 21 d. 20 m. Longitude 205 d. 29 m. N. E. variation 7 $\frac{1}{4}$ d. they came to the Northernmost

most Island, which was the biggest and not high; they gave it the name of *Amsterdam*, and the other *Middleburgh*. On this *Amsterdam* they got many Hogs, Hens, and all sorts of Fruits; the Inhabitants were friendly, had no Weapons, and appeared to know no evil, excepting that they take the liberty to Steal: there the Current is not great, the Ebb runs near N. E. and the Flood S. W. a S. W. Moon makes high Water, and it flows seven or eight Foot at least; the Wind is continually S. E. and S. S. E. wherewith the Yacht *Hemskirk* was a drift, but saved her self off the Island, yet took in no Water, which here was not easie to come by. *January 25.* in South Latitude $20^{\circ} 15'$. Longitude $206^{\circ} 19'$. N. E. variation $6^{\frac{1}{2}}^{\circ}$. after having seen several little Islands they came to the Island *Rotterdam*, as you see it in the Chart. The People were friendly and without Arms as the former, but likewise very thievish: here they got fresh Water and other refreshment; they went through this Island, and found the Cocos or Clappus Trees in great plenty, planted orderly one by another, and Gardens whose Beds were made square and very handsome, and set with all sorts of Fruit Trees, which in almost all places were planted in a right Line, so that it was a pleasure to behold them, on all sides giving a fragrant and delightful smell. From this Island *Rotterdam* they departed, and saw some other Islands which you see in the Chart, and now designed according to their former resolution to go away North till the 17. degree of South Latitude, and then West; not to pass by
the

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the *Traitors* and *Hornese Island*; they had the Wind at S. E. and E. S. E.

February 6. in South Latitude 17 d. 19 m. Longitude 201 d. 35 m. they were intricated among about eighteen or twenty Islands, which were all incompassed with Sands, Shoals, Banks and Rocks, which Islands are marked in the Charts by the name of *Prince Williams Islands* and *Hemskirks Shoals*.

February 8. In S. Latitude 15 d. 29 m. Longitude 199 d. 31 m. they had a great deal of Rain, and hard Wind out of the N. E. and N. N. E. with hazy and dark Weather, and fearing lest they might be more Westwardly than by their Reckoning, that they might not fall to the Southwards of *Nova Guinea*, or on unknown Coasts; also by reason of the windy dark Weather they concluded to go on N. or N. N. W. to 4, 5, or 6 d. of South Latitude, and then away West to *Nova Guinea*, and so to be in less danger.

February 14. in South Latitude 16 d. 30 m. Longitude 193 d. 35 m. till this time they had every day Rain with Storms, but now 'twas more Calm: they halled the Ship *Seahaen* and found their Reckonings to agree.

February 20. in S. Lat. 13 d. 45 m. Long. 193 d. 35 m. they had still thick, dark, misty and rainy Weather, the Sea coming out of all Quarters, and the Wind variable. February 26. Lat. S. 9 d. 48 m.

Long. 193 d. 43 m. the Wind was constantly N. W. they had not had one dry day in twenty one.

March 2. Lat. S. 9 d. 11 m. Long. 192 d. 46 m. N. E. variation 10 d. the Weather and Wind variable.

towards the South Terra Incognita. 139

riable. *March 8.* Latitude South 7 d. 46 m. Longitude 190 d. 47 m. Weather and Wind as before. *March 14.* South Latitude 10 d. 12 m. Longitude 186 d. 14 m. N. E. variation 8 d. 45 m. Before this, for twelve days time, they could get no Observation, because every day it was thick, dark, and dirty Weather with much Rain. *March 20.* South Latitude 5 d. 15 m. Longitude 181 d. 16 m. N. E. variation 9 d. the Weather grew better. *March 22.* South Latitude 5 d. 2 m. Longitude 178 d. 32 m. good Weather with Easterly Trade Wind; they got sight of Land four Miles West from them: it was a number of small Islands, about twenty in all, named in the Charts *Onthong Java*, which lye about ninety Miles from the Coast of *Nova Guinea*. *March 25.* South Latitude 4 d. 35 m. Longitude 175 d. 10 m. variation 9 d. 30 m. they were up with the Islands of *Mark*, all found by *William Scouten* and *John le Mair*, being fourteen or fifteen in number: The Natives are Savage, and have their black Hair tyed up like the Rogues of *Murderers Bay* in *Nova Zealandia*. *March 29.* they passed by *Green Island*: the 30. by *St. Johns Island*. *April 1.* in South Latitude 4 d. 30 m. Longitude 171 d. 2 m. variation 8 d. 45 m. they reached the Coast of *New Guinea* at a Cape called by the *Spaniards Cabo Saint Maria*, and went along the Coast which lies about N. W. to *Anthony Caens Island*, *Gardeners Island* and *Fishers Island*, to the Promontory called *Struis Hook*, where the Land falls away S. and S. Eastwardly which they followed, and went Southerly until they should disco-

discover the Land, or else find a Passage to the South. *April 12.* S. Latitude 3 d. 45 m. Longitude 167 d. 00 m. N. E. variation 10 d. here they had a sudden Earth-quake, that all they that were fast asleep came up out of their Cabins very much affrighted, imagining that the Ship had struck upon a Rock, but casting the Lead, found no ground; they had afterwards several shakes of the Earth-quake, but never so violent as the first: they were then within the *Struis Hook*, standing into the *Bight Bay of Good Hope.* *April 14.* South Latitude 5 d. 27 m. Longitude 166 d. 57 m. N. E. variation 9 d. 15 m. Here they saw the Land from the E. N. E. into the S. and so on to the S. S. W. they intended to find a Passage between both, but found this to be all one Land even into the West, wherefore they turned their Course Westward along the Coast, and had much Calms. *April 20.* in S. Latitude 5 d. 4 m. Longitude 164 d. 27 m. N. E. variation 8 d. 30 m. by night they came by the *Burning Island*, and saw a great Fire come out of the top of the Hill; of which also *William Scouten* writes: they went between this Island and the Main, and saw many Fires close by the Water, as towards the middle of the high Hill; whence they argued this to be a populous and well inhabited Island: they had along this Coast of *Nova Guinea* much Calms, and saw frequently drift Wood, as small Trees, Bamboes and other filth, from the Land that came out from the Rivers, which made them conclude that there are many Rivers, and that it must be a good Land,

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The next day they past the *Burning Mountain*, and went along the Shore W. N. W. *April 27.* in South Latitude 2 d. 10 m. Longitude 156 d. 47 m. they thought they were at the *Island Moa*, but it was *Fama* a little more Easterly than *Moa*; here they got many Coco-Nuts and other things: The People were wholly black, and what they heard our People speak they could very perfectly repeat, which is a certain sign that their Language is very copious in Words, and difficult to be pronounced, because they use much the Letter R. and sometimes two or three times in a Word. The next day they came before *Moa*, where likewise they got much refreshment; here by reason of contrary Winds they stayed till the 6. of *May*, so that they Trucked for near 6000 Coco-Nuts, and 100 Bundles of *Pysanghs*; about the beginning of their Traffick on the *Island Moa*, whether maliciously or otherwise, one of our Company was hurt with an Arrow shot by one of the Inhabitants: whilst this past they were getting their Ships nearer to the Land, where-with this People were so frightened, that of their own accord they brought aboard him that had shot the Arrow, for us to do with him what we pleased, and from that time they were better to be spoken withal, whether it were in their Traffick or otherwise, so that our People took pieces of Iron Hoops and fitted them into Hafts, and made them somewhat bright and sharp, and so put them off for Knives. It is probable they still remember what befel them with *William Scouten* 27. years before: 'Twas in the
year

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year 1616. *July 16.* for they having dealt very traiterously and perversly with him; *Jacob le Mair* went with the Ship close to the Land between the Islands, and shot with his great Guns along the Strand, and into the Woods, so that the Bullets flew through the Trees with a great noise, whereupon these Negroes fled, and durst not once peep out; but at length they grew very tractable. *May 12.* in S. Lat. 0 d. 54 m. and Long. 153 d. 17 m. N. E. variation 6 d. 30 m. they sailed along the N. side of *William Scoutens Island*; it seems that the People are nimble, and that the Island is well inhabited, it is about 18 or 19 Miles long. *May 18.* S. Lat. 0 d. 26 m. Long. 147 d. 55 m. N. E. variation 5 d. 30 m. they had past the *Cape of good Hope* and come to the West end of *New Guinea*, a broken Point of Land. They had much variable Calm and contrary Winds with rain: From hence they went Southward for *Seram*, and came on the North side thereof. On the 27. of *May* they went on through the Streights to the North of *Boure* or *Bouton*, and so for *Batavia* where they arrived *June 15.* in South Latitude 6 d. 12 m. and Longitude 127 d. 18 m. the Voyage was finished in ten Months.

A Relation of a Voyage for the Discovery of a Passage by the North-East, to Japan and China; Performed in his Majesties Ship the Speedwel, and Prosperous Pink, Anno Domini 1676. Where is shewed the Reasons and Grounds of the probability of a Passage before the Attempt, with some good Observations made in the said Voyage, by Captain John Wood.

TO Write a full Relation of all those Navigators that have attempted to find a Passage by the N.E. to *China* and *Japan* will be needless, since their Narratives have passed most Hands, they being Recorded in *Hackluit* and *Purchass*; but my intent is to shew wherein those failed that have formerly undertaken it, and then to shew the probable Reasons that induced me to undertake the said Voyage, with the event thereof.

The first that ever Attempted the said Voyage was *Sir Hugh Willoughby* in the year 1553. with three Sail of Ships, and he failed to the North Cape of *Finmarke*, and then into the Lat. of 72. where he saies he saw Land; but to this day it cannot be found again, and I am of Opinion that it was some Fog Bank that he saw; for in
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my return Home, I run over the same place where our Chard-Makers lay down that Land: but certain it was that by foul Weather he was forced into a Harbor in *Lapland*, called *Arzena*, where by the continuance of bad Weather he could never return out, but was there frozen to Death with all his Ships Company: so that of this Voyage there was no Light given to find a Passage that way.

The second that Attempted was one Captain *Stephen Burrough*, afterward Comptroller of the Navy to Queen *Elizabeth*. In the Year 1556. he set forward and passed the North Cape, and sailing farther Easterly, discovered the Waygates, that is the Streight that runneth between the South part of *Nova Zembla*, and the *Sammoyds* Country, where he entred, and believing that *Sinus*, or by the Eastward of the Streights, to be a free and open Sea, he returned with hope of Passage that way to *China* and *Japan*.

The third that Attempted was Captain *Arthur Pett*, and Captain *Charles Jackman*, in the Year 1580. being sent out by Queen *Elizabeth* to follow the Track of *Burroughs*; so setting forwards they came to the Waygates, and passed the Streights, and came into the Sea to the Eastward, where they met with such a vast quantity of Ice and bad Weather, that they with great Hazard, Peril, and Labour were forc'd to return, but by foul Weather lost one the other, and *Pett* was never heard of since; so the Passage through the Waygates was in *England* laid by, as thought not possible that way, and then the *Hollanders* undertook it.

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The fourth that Attempted it was *William Barrans*, a well Experienced Navigator and Artist, sent out of *Holland* by Prince *Morrice* in the Year 1606. He sailed into the *Waygates*, but being entred, he found the same Incumbrance with Ice that *Pett* and *Jackman* had done before; so tasting of the Water, and finding of it fresh, which neither *Burrough*, *Pett*, nor *Jackman* had observed; he returned without any hope or probability of a Passage that way: but this not discouraging him, he resolved a second Adventure to the Northward of *Nova Zembla*, to see what might be Performed that way.

So in the Year 1607. he set forward, and arrived on the Coast of *Nova Zembla* in the Lat. of 73. where he met with Ice; and so coasted the Shore till he came to the Lat. of 76. where he could get no farther, and by the Ice was there driven on Shore, and his Ship broke in peices by it, and he confined to Winter there, where they all indured the greatest extremity of Cold that ever Mortals did: the Winter being past they with difficulty, in two Boats, got to *Cola* in *Lapland*, but before their arrival there *William Barrans* dyed, to the great grief of all his Company.

The next that Attempted it, was that famous Discoverer of our own Nation *Mr. Henry Hudson*, in the Year 1610. but he being disheartned by the Voyage of *Barrans*, attempted but little.

So the thought of a Passage by the North-East was wholly laid aside, till of late within this Year or two some Novile Accidents happening;

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the Opinion of the North-East was received in some, and something relating thereunto was printed in the *Transactions* of the *Royal Society*.

Now will I come to the Reasons of that induced me to believe there was a probability of a Passage, and then the cause of my undertaking of the said Voyage.

My first Reason was grounded on the Opinion of *William Barrans* before spoke of; which was, that *Nova Zembla* and *Greenland* being 200 Leagues distance between one and the other, that if he had Steered away North-East from the North Cape, which would have brought him in the mid-way betwixt the two Lands, that then he might have probably found an open Sea, free from Ice, and so Consequently a Passage; and in that Opinion he remained to his dying day; for he did verily believe that the Ice was not to be met off of either Shore more than 20 Leagues, and the rest to be free and open, and that his being too near the Shore of *Nova Zembla* was the cause of his meeting so much Ice, which was the overthrow of his Voyage, and if he had lived, he had purposely intended another Voyage, and to have failed the mid-way.

The second Reason that made me believe a Passage, was a Letter sent out of *Holland*; which is Published in the *Transactions* of the *Royal Society*, which affirmeth, the Grand *Zar* of *Moscovia* had caused a particular Survey of the Land of *Nova Zembla*, and that they had found it to be no Island, but to joyn to the main Land of *Tartaria*, and that to the Northward of it was a free and open Sea.

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The third was a Journal, Printed in *Holland*, of a Voyage from *Batavia* to *Japan*, wherein the Ship was cast away upon *Corea*, a Peninsula of *China*, where by the Natives they were made Slaves. The Relator having been there 16 years, at last escaped to *Japan*, and writ this Journal, wherein amongst other Observations he Relates this; that in a Bay on the Coast of *Corea*, there doth at several times drive in dead Whales with *English* and *Dutch* Harping Irons in them, which if true had been a great Argument of a Passage.

The fourth was a Relation of Mr. *Joseph Moxons*, who being in *Holland* above 20 years since, heard a *Dutchman* relate (as he did believe the real Matter of Fact) that he had been under the Pole it self; and that it was as warm there as it was at *Amsterdam* in Summer time.

The fifth was a Relation of one Captain *Goulden*, who had made above thirty Voyages to *Greenland*, and this he did relate to his Majesty; that being at *Greenland* some twenty Years ago, he was in Company with two *Hollanders* to the Eastward of *Edges* Island, and that the Whales not appearing on the Shore, the two *Hollanders* were resolved to go farther Northerly, and to Fish amongst the Ice; so they departed from him and went to the Northward, and in a Fortnights time returned to him again, and gave it out, that they had sailed unto the Lat. of 89. that was within one Degree of the Pole, and that they did meet with no Ice, but a free and open Sea, and that there run a very hollow grown Sea

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like that of the Bay of *Bisca*. Mr. *Goulden* being not satisfied with the bare Relation, they produced him four Journals out of the two Ships, which testified the same, and that they all agreed within four minutes one of the other.

The sixth Inducement that made me believe there was a Passage, was a Relation from the same Captain *Goulden*, which was, that all the drift Wood that they found at *Greenland*, was eaten with a Sea-Worm to the very Heart, which if so, it must of necessity come out of a Hot Climate; for Experience sheweth, that the Worm biteth in no Cold Country, therefore it could not be supposed that it came from any other Country than *Jedzo*, *Japan*, or some Land thereabout.

The seventh Argument was another Narration Printed in the *Transactions*, of two Ships of late that had attempted the Passage, sailed 300 Leagues to the Eastward of *Nova Zembla*, and had after prosecuted the Voyage, had there not a difference arose betwixt the Undertakers and the *East-India-Company*, against whose Interest it was to suffer it to be found out; so they being a Body, and more powerful than the other, suppressed it.

These seven were the main Arguments, though I had many more, that Converted me into the Opinion of there being a possibility of a Passage to the Northward of *Nova Zembla*, to *China* and *Japan*; these being as I supposed, or as any Man would have done, if he had well considered them, to be Matter of Fact, and no Fables.

Besides

Besides these Arguments, I had some grounded upon Reason and Nature, which seemed to be assistant in the Design of the Attempt, supposing the aforesaid Arguments to be true, and there being no Land nor Ice in the way as an Obstacle to hinder it.

The first was, That being near the North-Pole in the Summer time, it might be as warm as under the *Artick* or *Antartick* Circle, or warmer than with us in the Winter time; for under the Pole it self, in *June* the Sun being 23 degrees high, and having no Depression towards the Horizon, but always swimming about at the same height, might illuminate that part of the Hemisphere with more heat than it doth ours in Winter, when he is no more then 15 degrees high, when he is at the highest, that is on the Meridian, and not more than eight Hours above the Horizon; or that it might be as hot as any place near either Polar Circle, because there the Sun hath a Declination toward the Horizon, and so the Atmosphere hath almost as much time to cool, as it hath to heat, which under the Pole should have no intermission. And one Argument to favour this Opinion, was the Relation of most *Greenland* Traders, who affirm, that the farther North they go on the Coast of that Land, that they meet with more green Herbs and Grass, than they do to the Southward, and consequently more Deer.

The second was (that which I most feared) which was foggy Weather, which I did imagin, if it should happen, it could not at the same

time blow hard; because it is usual in all other Climates, when Wind happeneth, to disperse the Fog; so that if it should so happen, one might lie by, or make little way till Wind came that one might see before them.

The third was the Solution of a Doubt that most men had fancied, which was, that if one came near the Pole, the Septentreal Declination of the Needle of the Compass should be quite taken away, which would of necessity follow if the Pole of the World, and the Pole of the Magnet were all one; which I am certain is not, but is placed so far off, that one might go under the Pole of the World, if Land or Ice did not hinder, with this supposition, that one must know where the Pole Magnetical is, to allow the Variation that will there happen.

Having considered all these Arguments and Reasons, with many more I met with, which will be too tedious to Relate; and the possibility of a Passage being now imprinted in my Mind and Inclination, I do intend to shew the Reasons in short, that induced me to undertake the said Voyage,

The first was, That the King, whom God Preserve, should Reap the Honour and Glory thereof, and his Subjects the Profit.

Secondly, There being no Actions within the Hemisphere of His Majesties Dominions wherein any vacancy was, but all being supplied, I chose, rather than to be Idle, to apply my self to His Majesty for the Prosecution of the Design; and being advised to it by a great many of the best Mer-

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Merchants of the City of *London*; where, after divers Consultations with them, and the Reasons and Arguments before-mentioned being debated, it was by many thought Practicable, and by more thought Profitable to the Nation: the particulars to relate would swell into a considerable Volume.

The third Reason was peculiar to my self, though when known, to the Use and Benefit of all Mankind; which was, that having for some years past framed an Hypothesis of the motion of the two Magnetical Poles, for two such there be; and by the Observations of all, or most that writ of that Subject, with my own Observation, and costly Experiment upon a great many Places of the Superficies of the Terrestrial Globe; I having found out their Motion very near, and thereby the Inclination of the Magnetical Needle under the Horizon, in all Latitudes, and all Longitudes; and Variation of the Compass may be found in any place in this World, without assistance of any other Luminary. But not being so fully satisfied as I might be, if I could come so near the Pole as was supposed, it prompted my Inclination, as far as any other Argument whatever, to Attempt this Voyage.

So having all these Reasons that there was a Passage, and Reasons for me to undertake it; I advanced. The first step to it was, I drew a Polar Draught, whereing I traced all those Navigators that had Attempted the North-East, which I presented to His Majesty, and Royal Highness, and applyed my self to them with the Reasons

aforesaid : which after their Royal Consideration, and Consult with many Merchants, and Seamen, that had used to Sail Northward ; and if thought by all feafable, His Majesty was Graciously pleased to grant me the *Speedwell* Frigot, to be Manned and Victualled at his Royal Charge, with all other Appurtenances thereunto belonging.

But because in all Attempts of this Nature it was not Convenient to venture one Ship alone, for the many Accidents that are incident to a single Ship in an Enterprize of this Nature ;

Therefore His Royal Highness the Duke of York.

The Honourable *John* Lord *Barklet*.

Sir *Joseph* *Williamson*.

Sir *John* *Bankes*.

Mr. *Samuel* *Peepps*.

Captain *Herbert*,

Mr. *Dupey*.

Mr. *Hoopgood*.

These Eight Honourable Persons, at their own proper Charge, bought a Pink, called the *Prosperous*, of the Burthen of a Hundred and twenty Tuns, fitted her to Sea, Men, Amunition, Provision, and Merchandize, which was such as was Reasonably purposed to Vend on the Coast of *Tartaria*, or at *Japan*, if a Passage had been found.

Now the Ships being fitting out, the *Speedwell* at *Deptford* in the King's Yard, where the Builder,
Mr.

Mr. *John Sish*, took no ordinary Care in Strengthening her, and in her Shething, which was as well performed as in any Ship that ever sailed on the Sea. Thus being fitted, I was to satisfy most People the Advantage to our Nation that would accrue, if there was a Passage.

The first Advantage that I purposed, was, that on the Coast of *Tartaria*, it being a cold Climate, we might Vend our *English* Cloth, which now is grown a Drug; and certain it is that they wear Cloth which is sent them from *Russia* and *Moscovia*, which before it arrive at their Hands must needs be very Dear in the Price; so if one could come on their Coast, one might Vend a great deal more, and abundance Cheaper.

The second Advantage, as would have been, that in six Weeks one might have sailed to *Japan*, which in the other Way is nine Months; and the Passage that way being as hazardous and perillous as this would have been, if there had been any Passage by the North-East; for by the South way, all the way betwixt *Bantam* and *Japan* are an innumerable Company of Sands, Shoals, and Islands, where many Ships are yearly lost, and all that way one must turn up to Windward, and be in perpetual fear of the *Hollanders*, whom if we meet, they do their utmost indeavours to Destroy us.

Then if there had been a North-East Passage, and that one might Sail in such a short time to *Japan*, the King might send out Men of War to *Japan*, and force them to Trade; which the other way is not to be done, because they cannot carry
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Provision for so long time; besides the certain Diseases that are incident to Ships, that have many Men in hot Weather, renders it unpracticable: these and many other Reasons I used, which would be too tedious to Relate, they being as yet fresh in the memory of most I told them to. Now after all these Arguments and Reasons, the time of the Year growing on for us to be gone, we made our Ships ready for the Sea, being as well fitted for a Discovery as ever any Ships were; having on Board each Ship sixteen Months Provision of all sorts, with Sixty eight Men and Boys in the *Speedwell*, and eighteen Men in the *Prosperous*.

Journal,

*Journal, In His Majesties Ship the Speedwell,
 Captain John Wood Commander, Bound
 for the Discovery of a Passage to the East-
 Indies, by the North-East: Sailing about
 Nova Zembla, and Tartary, and so to
 Japan. 1676.*

Sunday, May 28. the Wind at S. W. sailed from the Buoy of the Noar in Company of the *Prosperous*, Captain *Flaves* Commander, being bound upon the Discovery with us.

At Eight at Night the *Naze* Land boar West North about six Leagues, we steered away North-east, and North-north-east.

Monday, May 29. The Wind at South-west, and West-south-west, a fresh Gale with Showers of Rain. Course per Compass between the North-east and the North; distance sailed by the Log 73 Miles, true Course Protracted since last Night Eight a Clock to this Day Noon, is North 28 *d.* East difference of Lat. 68 Miles, and departure East from the *Naze* Land 36 Miles; Lat. by Judgment, as in the Margent. Thick cloudy Weather.

Tuesday, May 30. From yesterday Noon to this Day Noon, the Wind variable from South-west

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to the South-east, thick cloudy Weather, and a fresh Gale. Course *per* Compass North-north-west and North-west by North; distance sailed by the Log 95 Miles, true Course is North 28 *d.* West, distance of Lat. 83 Miles, departure West 45 Miles, Lat. *per* Judgment; Meridian distance West nine Miles.

Wednesday, May 31. From yesterday Noon to this Day Noon, the Winds variable with Calms and Rains. Courses *per* Traverse; true Course Protracted, with all impediments allowed, is North 43 *d.* West 60 Miles, difference of Lat. 42 Miles, departure West 40 Miles, Lat. *per* Judgment 54 *d.* 13 *m.* Lat. by a good Observation at Noon 55 *d.* 30 *m.* at which time the Land between *New-Castle* and *Berwick* bore West about 8 or 9 Leagues: Meridian distance Current from the bearing of the Land, and the Lat. is 88 Miles, 50 Fathom Water: saw two Ships standing to the Southward, but would not show their Colours.

Thursday, June 1. From yesterday Noon to this Day Noon, a fresh Gale from the West by South to the South-west. Course *per* Compass between the North, and the North-west; distance sailed by the Log 76 Miles, true Course Protracted is North 16 *d.* West Lat. by a good Observation 56 *d.* 41 *m.* departure West 21 Miles.

At nine in the Morning we gave Chase to a *Scotch* Fisherman, and at Noon came up with her, and bought some Fish of him; at Noon a hard Gale steered away North, being about seven or eight Leagues from the Land, between *Montross* and *Edenburgh*: we steered along,
the

the Course North by East till eight a Clock.

Friday, June 2. From yesterday Noon to this Day Noon, the Winds variable with fair Weather. Course *per* Compass North; distance failed by the Log 117 Miles, but by a good Observation 120 Miles, Lat. 58 d. 41 m. Winds from the West-fourth-west to the South-west.

At two a Clock a great gust of Wind at North-west with Rain; we hand our Top-fails, and at three it blew a Storm of Wind; we lay a Try under a Main-fail till ten a Clock, then sent our Fore-fail.

Saturday, June 3. From yesterday Noon to this day Noon, true Course Protracted Leeward way, and all impediments allowed is North $\frac{1}{2}$ East 42 Miles, Lat. by a good Observation is 59 d. 23 m. Meridian distance from the *Naze* Land is 100 Miles: at Noon saw a small Island, called *Foril*, lying to the South of *Shetland*, bearing West-north-west about four Leagues: in the Afternoon little Wind.

Note that we found the Ship more to the Westward than expected being caused by a variation of 6 or 7 d. East.

Sunday, June 4. This Forenoon little Wind, with Calms till about 12 at Noon, at which time sprung up a Gale West-north-west blowing very hard; we ply to windward, and turned into *Brace-Sound*, and anchored in nine Fathom Water, right against the Town called *Lermick*; here is the remains of a Fort that was built in the time of War with *Holland*, but upon the Peace with the *Hollanders* it was demolished, for fear any other Nation

Nation might come and take it, and so keep it.

Saturday, June 10. Rid still till *Saturday* seven a Clock, at which time Weighed, the Wind at South-west; we took in a Pilot, and failed out through the North end of *Brace Sound*, having three Fathom Water over the shallowest place.

Sunday, June 11. At four in the Morning *Scau* bore West by North about six Leagues; a fresh Gale at South-west, hasey Weather.

From four in the Morning till twelve at Night Course North-north-east, distance failed by the Log 35 Miles: true Course allowed from the bearing of the Land is North-east 41 Miles, difference of Lat. 30 Miles, Lat. by Judgment 61 d. 26 m. Meridian distance from *Shetland* 30 Miles East.

From yesterday Noon to this Day Noon, a strong Gale at South-west, West-south-west, West and West-north-west. Course per Compass North-north-east, distance failed by the Log 147 Miles, difference of Lat. 135 Miles, departure East 56 Miles, Lat. by Judgment 63 d. 42 m. Meridian distance East 86 Miles; thick cloudy Weather, at Noon little Wind.

Tuesday, June 13. From yesterday Noon to this Day little Wind, and variable, with Calms from the North-west to North-north-east; we ply to windward. True Course Protracted, all impediments allowed, is North-north-east 23 Miles, difference of Lat. 21 Miles North, departure East 8 Miles, Lat. by Judgment 64 d. 03 m. Meridian distance 94 Miles, Lat. by a good Observation 64 d. 03 m.

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Wednesday, June 14. From the 13. Noon to this Day Noon the Winds variable, with fresh Gales, Rains, and little Winds. Course *per* Traverse, between the North-east and the North, distance sailed by the Log 92 Miles, true Course Protracted, all impediments allowed, is North 18 *d.* difference of Lat. 81 Miles, departure East 30 Miles, Meridian distance 124 Miles.

Thursday, June 15. From the 14. Noon to this Day Noon the Winds variable, with Calms from the West to the South-west. Course *per* Compass North-north-east; distance sailed by the Log 67 Miles, true Course Protracted, with allowance, is North 22 $\frac{1}{2}$ *d.* East, difference of Lat. 62 Miles, departure East 26 Miles, Lat. *per* Judgment 66 *d.* 26 *m.* Meridian distance 150 Miles East. At Noon broke our Main Top-sail-Yard, being rotten in the Slings; thick hazy Weather.

Friday, June 16. From the 15. Noon to this Day Noon, a fresh Gale at West-north-west, and West-south-west, with Rains and thick Weather. Course *per* Compass North-north-east, and North-east by North; distance sailed *per* Log 126 Miles, true Course Protracted, is North 30 *d.* East, difference of Lat. 108 Miles, departure East 63 Miles, Lat. *per* Judgment 68 *d.* 14 *m.* Meridian distance 223 Miles.

Saturday, June 17. From the 16. Noon to this Day Noon, a fresh Gale at West-north-west and West, with Rain and cloudy Weather. Course *per* Compass North-east, distance sailed by the Log 127 Miles, difference of Lat. 90 Miles, departure East 90 Miles, Lat *per* Judgment 69 *d.* 48 *m.*

48 *m.* Meridian distance 303 Miles, but by a good Observation at Noon Lat. 69 *d.* 53 *m.* difference of Lat. between the Dead Reckoning and Observation is 9 Miles, which imputed to a westerly variation, which is found by an Azimuth 7 *d.* Meridian distance Corrected is 300 Miles; fair Weather.

Sunday, June 18. From the 17. Noon to this day Noon, the Wind from West-north-west, to the West-south-west, fair Weather. Course *per* Compass North-east by East; distance sailed by the Log 83 Miles, true Course Protracted, and variation allowed, is East 33 *d.* North, difference of Lat. 47 Miles, by Observation, departure 66 Miles, Lat. by a good Observation 70 *d.* 30 *m.* Meridian distance 367 Miles East. Yesterday and this Day we saw many Whales.

Monday, June 19. From the 18. Noon to this Day Noon, a fresh Gale at West by South; thick hazy Weather with Rains; at seven a Clock in the Forenoon saw many Sea Fowles, more than at any time yet, with many Jubartesses: at ten a Clock saw the Land, being the Islands that lie about 20 Leagues to the Westward of the North Cape; true Course allowed for variation, is North-north-east; distance sailed by the Log 135 Miles, difference of Lat. 50 Miles, departure East 30 Miles, Lat. *per* Judgment 71 *d.* 20 *m.* Meridian distance 497 Miles. At Noon the Island *Sanden* bore South by East; about 8 or 9 Leagues off this Island is a high craggy Land, with some Snow on the Land.

Tuesday,

Tuesday, June 20. From the 19. Noon to this day Noon, Course *per* Compass between the East-north-east and the North-east; distance failed by the Log 128 Miles, true Course allowed for the variation, is North 43 *d.* East, difference of Lat. 91 Miles, departure 88 Miles East, Lat. *per* Judgment 72 *d.* 51 *m.* Meridian distance 585 Miles. From yesterday Noon to this day Noon, the first 12 Hours a fresh Gale at South-west, but the last 12 Hours much Wind, with small Rains and great Fogs: saw many Sea Fowles.

Wednesday, June 21. From the 20. to the 21. Noon, a stiff Gale with Gusts, and small Rains. Course *per* Compass North-east, distance failed by Log 35 Miles, true Course allowed by variation, is North 40 *d.* East, difference of Lat. 103 Miles, departure East 86 Miles, Lat. *per* Judgment 74 *d.* 34 *m.* Meridian distance 671 Miles: thick cloudy Weather, saw many Sea Fowles.

Thursday, June 22. From the 21. Noon to this 22. Noon, Course *per* Compass North-east, distance failed *per* Log 116 Miles, true Course allowed by variation, and Leeward way, is North 43 *d.* East, difference of Lat. 85 Miles, departure East 79 Miles, Lat. *per* Judgment 75 *d.* 59 *m.* Meridian distance 750 Miles East: the Wind at North-west a fresh Gale, Weather variable, sometime cloudy, and sometimes fair, but very cold.

At Noon we saw Ice right a Head about a League off, we sailed close to it, and found it to lie away East-south-east, and West-north-west, we bore away East-south-east along the Ice: in the Afternoon we had some small Snow, and very cold Weather.

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Friday,

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Friday, June 23. From yesterday Noon to this Day Noon, we steered along the Ice, finding it to have many openings, which we failed into, but found them to be Bays, our true Course failed along the Ice, the variation allowed, was East 14 *d.* South 77 *m.* Lat. *per* Judgment 75 *d.* 41 *m.* difference of Lat. 19 *m.* departure 74 Miles, Meridian distance 824 Miles, Wind N. N. W.

At Noon we sounded and had 158 Fathom soft green Oar, and found the Current to set South-south-east; we have found very smooth to Leeward of this Ice, and in some places found pieces of the Ice driving off a Mile, sometimes more or less from the main body of the Ice; finding it to be in several strange shapes, resembling Trees, Beasts, Fishes, Fowles, &c. The main Body of the Ice being low, but very Craggy, being many pieces lying close together, and some a top of each other, and in some places we saw high hillocks of blue colour, but all the rest of the Ice very white, as though it were Snow. In some places we saw drift Wood amongst the Ice, we took up some of the Ice and melted it, and the Water very fresh and good: this Day we found very cold and freezing.

Saturday, June 24. From the 23. Noon to this Day Noon little Wind at North by West, we steered close along the Ice, failing into every opening, but could not find any Passage through, neither could we see over the Ice in any place from our Topmast-Head; true Course Protracted, as we failed along the Ice, is East 34 *d.* South difference of Lat. 24 Miles South, departure East 34 Miles,

34 Miles, Lat. *per* Judgment 75 d. 18 m. but by a good Observation at Noon the Lat. 74 d. 50 m. the difference between the Dead Lat. and the observed Lat. is 28 Miles, which difference hath been caused by the Current setting South-south-east.

At Noon we sounded and had 128 Fathom Water, and the Current as yesterday South-south-east: this last 24 Hours fair Weather, with little Winds, having some small Fogs, but lasted not above half an Hour at a time. Meridian distance 858 Miles.

Sunday, June 25. From the 24. Noon to this Day Noon, little Wind, with Calms, and the most part foggy, so that we durst not venture in the Ice, but lay by, and stood off; true Course Protracted is East 30 d. South difference of Lat. 13 Miles, South departure East 19 Miles, Lat. *per* Judgment 74 d. 37 m. Meridian distance 877 Miles, East Wind variable from the North-west to the West-south-west.

At One in the Afternoon the Fog broke up; hard freezing Weather, our Rigging and Sails frozen, for as fast as the Fog fell it freezed.

Monday, June 26. From the 25. Noon to this Day Noon little Wind from the North-west to North; Course *per* Compass between the West-south-west, and the North-east; distance sailed by the Log 63 Miles, difference of Lat. 7 Miles North, departure East 58 Miles; true Course Protracted is East 7 d. North Lat. *per* Judgment is 74 d. 40 m. Meridian distance 935 Miles.

At Noon we stood in close with the Ice, and saw something to move, we judging it might be

Sea-Horses, or *Morses*, lying on the Ice, we sent our Boat to see, and they found two Sea-Horses upon the Ice: they fired several shot at them, but could not kill them: notwithstanding that they were much wounded they got into the Water, and so went under the Ice. We have found the Ice to lie away East, these 24 Hours the Wind at North, and very cold, and at 12 at Night 70 Fathom green Oar: at 9 in the Evening saw Land, the North part of it bearing East, and the South part South-east, being high and covered with Snow, about 15 Leagues off. Sounded and had 125 Fathom.

Tuesday, June 27. From *Monday* the 26. to *Tuesday* 27. little Wind from the North-west to the North by East, with Calms: we kept close with the Ice, and found it joyn to the Land of *Nova Zembla*; true Course Protracted is East by North 30 Miles, difference of Lat. 16 Miles, departure East 29 Miles, Lat. *per* Judgment 74 d. 46 m. Meridian distance 964 Miles, at Noon 83 Fathom Water, about 6 Leagues from the Shore, we rowed in towards the Shore, and found the Ice to lie about 5 Leagues from the Shore, we went out of our Boat on the Ice, and killed a young Sea-Horse, or *Mors*, and saw many more, but could not kill them with Muskets, notwithstanding we fired 7 Muskets into one of them, neither could we come to lame them; for they get into the Sea before you can come to them; they keeping Watch, and are very shy, always lying on the brink of the Ice, ready to take the Sea. We Sounded and had 80 Fathom Water green Oar,

Oar, at which time we saw the Ground plain, being very smooth Water. Meridian distance from the Ship to the Land 15 Miles, which maketh Meridian distance from the Land to this place 980 Miles.

Wednesday, June 28. From the 27. Noon to this Day Noon, very little Wind, but the most part Calm from the North to the West; true Course Protracted West-north-west 10 Miles, Lat. *per* Judgment 74 d. 46 m. Meridian distance 970 Miles. In the Afternoon stood in close with the Ice, and found it to joyn to the main Land; at Night stood off from the Ice.

Thursday, June 29. From the 28 Noon to this Day Noon, little Wind, with Rains: we stood away from the Ice to Sea; true Course allowed is South 27 d. West 20 Miles, difference of Lat. 16 Miles, departure 8 Miles, Lat. *per* Judgment 74 d. 40 m. Meridian distance 964 Miles. At Noon the Wind at West and West and by South, a fine Gale, but very foggy Weather; we stand away South to get from the Ice, we being in-bayed in it. At 11 at Night the *Prosperous* Pink fired a Gun, and bore down upon us, crying out Ice on the Weather-Bow, with that we clap'd the Helm hard a Weather, Veered out the Main-Sheet to Ware the Ship; but before the Ship could Ware, and bring to upon the other Tack, She struck on a ledge of Rocks which lay funk.

From 12 at Noon to 11 at Night thick foggy Weather, the Wind from the North-west to the West by South. Course *per* Compass between the South-west, and the South by West, close Haul'd;

but at Night the *Prosperous* Pink saw the Sea break on the Weather-Bow, bearing down upon us cryed out it was the Ice; with that we presently bore up round to bring to upon the other Tack, but our Ship not wearing round, run on a ledge of Rocks, there stuck fast, but Captain *Flawes* Ship got clear, wearing more rounder: we fired several Guns to give Captain *Flawes* notice of our distress, we used all means possible to get her off, by carrying out a Hasser and Anchor, and staving of Water and Beer, and throwing Provision over Board, but could not get the Ship off, for the Water did Ebb, and the Ship Sued above 3 Foot; but when the Flood came it brought a great Sea with it, and the Ship beat very hard: we used all means to heave her off, but could not, and the Ship making Water more than we could Pump; with that we cut our Masts by the Board, and sent our Yaul unto the Shore to discover some place to Land, at whose return aboard brought word that there was landing, with that we got up Bread out of the Bread Room, and brought it up into the great Cabbin: and the Carpenter made ready to save some Tools, and necessaries to Rebuild our Long-Boat to save our lives, if so necessitated, that Captain *Flawes* should not return to us. So about 12 at Noon we got all our Men ashore, except two which were drowned in the Pinnace, by a Sea which broke into her, just as she put off from the Ship side: having Bread, Powder, and Provisions in her, and all lost with the Pinnace. Also, to our great grief, having nothing but the Long-Boat,

Boat, to trust in, to save our lives, which could not carry above 30 Men of 70. We used all means to save Bread, but the Ship filling up to the upper Deck, we were forced to leave her, having saved but two Bags of Bread, with some pieces of Pork, and a little Cheese: this being all on Shore, we carried our Provisions, and other Necessaries, upon a Hill, where came to visit us one of the Natives, which was a Prodigious great white Bear, which one of our Men shot at, and as we supposed hit her, which made her run away: with that we made all hast to build us a Tent to keep us from the cold, and to keep our Provisions dry, having saved Canvas for the purpose, which we laid over Oars and Spars, and threw up a Trench of Earth round us, to preserve us from Wild Beasts; but all this time indured much cold, most of our Men being wet, and having no firing; therefore all our Hopes and Prayers were that God would send us the Ship ashore.

Friday, June 30. A fresh Gale, and very foggy, with a great Sea; our Ship began to split, and much Wreck came ashore; so that we got Oars, Spars and Deals, to build us Tents, and firing, of which we saved as much as we could; but the Weather proved very foggy to our great grief, being we could not expect Captain *Flaves* as long as the Fog continued. The Wind at West-north-west.

Saturday, July 1. The Wind at North-west a fresh Gale, the Ship brake in pieces, so that we had much Wreck came ashore, and Provisions, which we indeavoured to save with much pains

and trouble, the Sea breaking much on the Shore, and the Weather very cold and foggy. We saved two Casks of Flower, some Brandy, and a Butt of Beer, and a Cask of Oil: the Flower did us great kindness to save our Bread, for we made of the Flower Pan-Cakes, and Pudding, and baked Cakes on Stones, to our great refreshment.

Sunday, July 2. The Wind at West, and very foggy; we saved more Flower, Butter, and a few pieces of Beef and Pork, the Cask being Staved. The Gunner as he was saving of Provision, there came a great White Bear to him, which he shot at, and fell'd her down, but she rose again and at him; with that there came more Men and fired at her: she was a very great one, and very Fat, and the Flesh very good, and look'd delicate, and Eat well.

Saturday, July 8. The Wind at West-north-west; a very great Fog, and all our Men in great despair of our seeing Captain *Flaves*: we beginning to consider our most miserable Condition, and contriving how to save our Lives; the Long-boat not being able to carry above 30 Men, and a Deck built on her, and her Waist raised; with that we concluded to lengthen her 12 Foot, and to carry all our Men; but upon consideration of wanting Materials, and the Carpenters bad assistance, the Men would not agree to have her cut asunder, for fear she could not be lengthened; but were willing to Travel by Land towards the Waygates, in hopes to find some *Russia* Lodges. With that we began to raise her Waist, and build a Deck, the Weather continuing very foggy till

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Saturday Morning, at which time we espyed Captain *Flames* to our great joy; with that we made presently a great Fire, and sent our Yaul to meet him, who immediately saw our Fire and steered into us, and sent his Boat to help to bring off our Men; with that we broke up our new Work, which was done to our Long-Boat, and Lunched her; and about Noon got all on Board Captain *Flames*, in good Health.

Journal

*Journal on Board the Prosperous,
Captain William Flawes Com-
mander, From Nova Zembla to
England. 1676.*

Sunday, July 9. From the 8. 12 at Night to this 9. 12 at Noon, the Winds variable, with Fogs and small Rain; we stand off to the Westward: true Course Protracted, with allowance for variation, is West 8 *d.* South, difference of Lat. 8 Miles, departure 67 Miles, Lat. *per* Judgment 73 *d.* 42 *m.* Meridian distance, from Point *Staten*, being the Westermost Land off of *Nova Zembla*, and the last Land we saw, 67 Miles: very cold Weather.

Monday, July 10. From the 9. Noon to this Day Noon, the Winds variable from the South-west by West, to the West, and so to the North, and North-north-east, with small Rain, great Fogs, and very cold Weather; true Course Protracted is West 35 Miles, variation allowed 12 *d.* West; Meridian distance 102 Miles: a great Sea from the Westward.

Tuesday, July 11. From the 10. Noon to this Day Noon, the Winds variable from the North-north-east to the North-west. Course *per* Compass West by South; distance sailed by the Log 102 Miles,

Miles; true Course, allowed for variation, is West $68\frac{3}{4}$ South, distance of Lat. 34 Miles, departure 96 Miles, Lat. *per* Judgment 73 *d.* 06 *m.* Meridian distance 198 Miles: thick cloudy Weather, and very Cold.

Wednesday, July 12. From the 11. Noon to this Day Noon, little Wind and variable, with Calms, small Rains, and Fogs: distance sailed by the Log 27 Miles, between the West by North, and the West by South; true Course allowed, with all impediments is West: at Noon Lat. by Observation 73 *d.* 34 *m.* which is 34 Miles more northerly than expected; the variation, I suppose, came from the Lat. we departed from on *Nova Zembla*; Meridian Distance Corrected is 222 Miles West: at Noon calm and fair Weather.

Thursday, July 13. From the 12. Noon to this Day Noon, the Wind variable from the West to the South-south-west a fresh Gale; we ply to the Westward close Haul'd. Course *per* Compass between the South-south-west, and the West-north-west; true Course Protracted, all impediments allowed, is West by North $\frac{1}{2}$ North 69 Miles, difference of Lat. 17 Miles, departure 59 Miles; Lat. by Judgment 73 *d.* 51 *m.* Meridian distance 279 Miles: Cold cloudy Weather, with small Rains.

Friday, July 14. From the 13. Noon to this Day Noon, the Winds variable from the South-south-west to the West-north-west a fresh Gale, and sometimes little Wind: we ply to the Westward, sometimes on one Tack, and sometimes

on

on the other; true Course Protracted, all impediments allowed, is West-south-west $\frac{1}{2}$ South; difference of Lat. 9 Miles South, departure West 20 Miles. Lat. *per* Judgment 73 *d.* 35 *m.* Meridian distance 299 Miles.

Saturday, July 15. From the 14. Noon to this Day Noon, the Winds fresh, with gusts from the North-west to the West: we ply to the Westward, sometimes to the Southward; distance failed by the Log 70 Miles, true Course Protracted is South-west 33 *d.* 45 *m.* difference of Lat. 52 Miles, Departure West 34 Miles, Lat. *per* Judgment 72 *d.* 43 *m.* Meridian distance 333 Miles: cold and cloudy.

Sunday, July 16. From the 15. Noon to this Day Noon, the Wind at West-south-west, and West by South, a fresh Gale; but from 8 at Night, till 8 in the Morning much Wind, we lay a try under a Main-sail: true Course Protracted Leeward-way, and variation allowed, is North by West $\frac{1}{4}$ West 31 Miles; difference of Lat. 30 Miles, departure West 7 Miles, Lat. *per* Judgment 73 *d.* 13 *m.* Meridian distance 340 Miles: Rain with very thick Weather.

Monday, July 17. From the 16. Noon to this Day Noon, little Wind from the West by North to the West, with Rains, Fogs, and Calms: we ply to the Westward close upon a Wind; true Course Protracted, all impediments allowed, is West by South $\frac{3}{4}$ West; distance of Lat. 3 Miles, departure 23 Miles, Lat. *per* Judgment 73 *d.* 10 *m.* Meridian distance 360 Miles: at 11 in the Forenoon the Wind came up at South-south-east, and foggy.

Tuesday,

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Tuesday, July 18. From the 17. Noon to this Day Noon, the Winds from the South to the West-south-west: we ply to the Westward close haul'd, between the West and North-west; distance failed by the Log 87 Miles; true Course Protracted is West by North $\frac{1}{4}$ North 80 Miles, distance of Lat. 18 Miles, departure 77 Miles, Lat. *per* Judgment 73 *d.* 28 *m.* Meridian distance 437 Miles: thick foggy Weather.

Wednesday, July 19. From the 18. Noon to this Day Noon, the Wind at South-west, and South-south-west, with very thick Fogs. Course *per* Compass West-north-west and West, close Haul'd; distance failed by the Log 74 Miles, true Course, variation and Leeward-way allowed, is West-north-west $\frac{1}{2}$ North 70 Miles, difference of Lat. 32 Miles, departure 60 Miles, Lat. *per* Judgment 74 *d.* Meridian distance 497 Miles: at Night much Wind, we hand our Top-sails.

Thursday, July 20. From the 19. Noon to this Day Noon, for the most part much Winds at West-south-west, and South-west, with great Fogs: we ply close upon a Wind North-west by West, and West-north-west; distance failed by the Log 65 Miles; true Course, variation and Lee-way allowed, is North-north-west $\frac{1}{4}$ West, distance of Lat. 55 Miles, departure 33 Miles, Lat. *per* Judgment 74 *d.* 55 *m.* Meridian distance 530 Miles.

Friday, July 21. From the 20. Noon to this Day Noon, the Wind from the South-west to the West. Course *per* Compass South by West upon one Tack, and West-north-west on the other, close

close Haul'd ; distance failed by the Log 61 Miles ; true Course Protracted, all impediments allowed, is South by West $\frac{3}{4}$ West 48 Miles, distance of Lat. 45 Miles, departure 16 Miles, Lat. *per* Judgment 74 d. 12 m. very thick, foggy and cold, till about Noon it cleared up.

Saturday, July 22. From the 21. Noon to this Day 4 in the Morning, the Wind at South-west by West, and South-west, with thick Fogs. Course West by North, and North-north-west 46 Miles, at which time it was very foggy Weather : we saw many Willocks, and other Sea Fowles more than usual, which made us think that we were near the Land of *Cherry-Island* : we cast the Lead, and had 60 Fathom, a rough Sand, with that we Tack'd and stood off South-south-east, and South-east by East 9 Miles, till Noon, at which time we Sounded, and had 78 Fathom ; Lat. at 4 in the Morning by Judgment 74 d. 26 m. Meridian distance 589 Miles, at which time I was, by my Reckoning, 13 Leagues West from *Cherry-Island*, according to the Meridian distance I made from the Cape to *Nova Zembla*, and from *Nova Zembla* back here ; Lat. at Noon, by Judgment, 74 d. 20 m. Meridian distance 582 Miles.

Sunday, July 23. From the 22. Noon to this Day Noon the Winds variable, with great Fogs, from the South-south-east to the West-north-west. Course *per* Compass between the South-west and the West ; distance failed by the Log 91 Miles ; true Course Protracted is South-west by South 87 Miles, difference of Lat. 76 Miles, departure 43 Miles, Lat. *per* Judgment 73 d. 08 m. Meridian

ridian distance 625 Miles : At Noon no ground with 160 Fathom Lines.

Monday, July 24. From the 23. Noon to this Day Noon little Winds, and variable, with Calms ; true Course allowed is South-south-west $\frac{3}{4}$ West 22 Miles, distance of Lat. 18 Miles, departure 11 Miles, Lat *per* Judgment 72 d. 50 m. Meridian distance 636 Miles.

Tuesday, July 25. From the 24. Noon to this Day Noon, the Wind variable, with fresh Gales from North by West to the East, with Fogs. Course between the West-south-west and South-west ; distance failed by the Log 88 Miles, true Course allowed for 9 d. variation is South-west $\frac{1}{2}$ Westerly, distance of Lat. 54 Miles, departure 69 Miles, Lat. *per* Judgment 71 d. 56. m. Meridian distance 705 Miles.

Wednesday, July 26. From the 25. Noon to this day Noon, the Wind variable from the East by North to the South, with thick Fogs. Distance failed by the Log 73 Miles ; Course *per* Compass between the South-west by West and West-north-west : true Course Protracted is West $\frac{1}{2}$ South, distance of Lat. 7 Miles, departure 67 Miles.

Thursday, July 27. From the 26. Noon to this Day Noon, the Winds from the South to the South-west, with great Fogs. Distance failed by the Log 68 Miles, true Course allowed West $\frac{1}{2}$ South, difference of Lat. 7 Miles, departure 62 Miles West.

Friday, July 28. From the 27. Noon to this Day Noon, the Wind from the South-south-west

to the South-east. Course *per* Compass between the West by North, and the South-west, close upon a Wind; distance sailed by the Log 85 Miles; true Course Protracted is South-west by West $\frac{1}{2}$ 80 Miles; distance of Latitude 46 Miles South, departure 64 Miles West: thick Fogs with small Rain.

Saturday, July 29. From the 28. Noon to this Day Noon, much Wind from the South to the South-west: we tryed under a Main-sail three Watches; true Course allowed is West 15 Miles.

Sunday, July 30. From the 29. Noon to this Day Noon, the Wind variable from South-east to the South, and so to the North-west, with sudden gusts, with much Rain, then little Wind: at 8 this Morning much Wind at North-west; true Course Protracted, all impediments allowed, is South-south-west 66 Miles; distance of Lat. 60 Miles, departure 25 Miles.

Monday, July 31. From the 30. Noon to this Day Noon, much Wind at North-west, with Rain. Course *per* Compass South-west by South, and South-west; distance sailed by the Log 104 Miles; true Course allowed for Leeward-way and variation South by West $\frac{1}{2}$ West; difference of Lat. 103 Miles, departure 11 Miles; Lat. *per* Dead Reckoning 68 d. 13 m. but by Observation 68 d. 00 m. departure accordingly Corrected 15 Miles; Meridian distance 953 Miles.

Tuesday, August 1. From the 31. Noon to this Day Noon, the Wind variable from the North-west to the South-west by West: distance sailed

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by the Log 80 Miles; we ply to Windward: true Course Protracted, variation and Leeward-way allowed, distance West-south-west, difference of Lat. 72 Miles, departure 51 Miles: thick cloudy Weather, with some small Rains and Fogs.

Wednesday, August 2. From the 1. Noon to this Day Noon, from the South by West to the South-west, thick Fogs. Course per Compass between the West by South, and the West-north-west; distance failed by the Log 51 Miles, true Course allowed is West by North, difference of Lat. 12 Miles, departure 49 Miles; Lat. per Judgment 67 d. 50 m. but by a good Observation Lat. 67 d. 55 m. at Noon clear Weather.

Thursday, August 3. From the 2. Noon to this Day Noon, the Wind from the West to the South-south-west, with Fogs and Rains. Course per Traverse; we ply to Windward; true Course Protracted, is South-south-west; distance of Lat. 21 Miles, departure 10 Miles; at Night much Wind at South, we lay under a Main-sail.

Friday, August 4. From 8 at Night to this Day Noon a Storm of Wind at South, and S. S. W. True Course Drift, and all impediments allowed, is North-west by North $\frac{1}{4}$ West; difference of Lat. 18 Miles, departure 16 Miles: at Noon less Wind, we set our Fore-sail.

Saturday, August 5. From the 4. Noon to this Day Noon, the Wind from the West by South to the North-west, a very cold Storm: true Course allowed is South by East, difference of Lat. 75 Miles, departure 15 Miles: in the Afternoon little Wind.

Sunday,

Sunday, August 6. From the 5. Noon to this Day Noon fresh Gales, and little Wind from the West-north-west to the West-south-west. True Course allowed South $\frac{1}{4}$ East, distance of Lat. 67 Miles, departure 8 Miles.

Monday, August 7. From the 6. Noon to this Day Noon, the Wind at South and South-west, sometimes much Wind, and then Calm again. True Course allowed *per* Judgment is West-north-west $\frac{1}{4}$ North 53 Miles; difference of Lat. 22 Miles, departure West 47 Miles; at Noon the Wind came about to the West-north-west, much Wind, and at 8 it blew a Storm at North-west.

Tuesday, August 8. From yesterday 8 at Night to this Day Noon, a Storm of Wind at North-west, we run away with our Fore-sail Reefed. Course *per* Compass South-south-west; distance failed by the Log 116 Miles, true Course allowed is South, distance of Lat. 107. Miles, departure West 5 Miles.

Wednesday, August 9. At 3 in the Morning a fresh Gale, saw many Willocks, and other Sea-Fowls, and at 5 we saw the Land East-south-east from us; being high Land, and making like Islands, being the Isles of *Fero*. At Noon Lat. by a good Observation 61 d. 45 m. at which time the Westernmost Island bore East about 8 Leagues off.

Distance failed from yesterday Noon to this Day Noon 120 Miles; true Course allowed South by West $\frac{1}{4}$ Westerly, distance of Lat. 116 Miles, departure 26 Miles; Lat. *per* Judgment

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62 d.

62 d. 04 m. distance between the Dead Lat. and the observed Lat. 20 Miles; so that the Ship is 20 Miles more Southerly, and consequently more Westerly; Meridian distance 1129 Miles, but by Correction 1136 Miles: we saw a small Vessel, and gave chase to her, but she made from us.

Thursday, August 10. From the 9. Noon to this Day Noon, a fresh Gale at North-west. Course between the South and East-south-east to get clear of the Islands in the Night; distance sailed by the Log 102 Miles; true Course Protracted is South-east by East $\frac{1}{4}$ South, distance of Lat. 58 Miles, departure 76 Miles: spoke with the Ship we saw yesterday, being a *Lyn-Man* come from the Island.

Friday, August 11. From the 10. Noon to this Day Noon, the Wind at North-north-west. Course per Compass South-east by east; distance sailed by the Log 83 Miles: at Noon the Island *Foule* bore North-east by East about 3 Leagues off: the Wind came about at South.

Saturday, August 12. From the 11. Noon to this Day Noon, the Wind variable, with great gusts, and Rain: at Noon the *Ockney* Islands bore West about 4 Leagues; the *Ockney* Isles are low, such as we saw at the same time we saw *Fair* Isle, being high Land, and about 6 Leagues off: we found the Tide of Flood to set in very strong between the *Ockney* and *Fair* Isles,

At 8 at Night came a sudden strong gust, and put us under a Main-sail Reef, at which time *Catnose* bore by Judgment about 8 Leagues off,
West

West by South; we tryed away South-east, the Wind at West-south-west, a great Storm.

Sunday, August 13. From last Night 8 a Clock to this Day 4 in the Afternoon, a great Storm of Wind from the West by South to the West-north-west; we tryed away under a Main-fail Reef, making her way good by Judgment South-east 37 Miles. Lat. per Judgment 58 d. 16 m. departure from *Catnose* 47 Miles East; saw many Pitterals about the Ship: at Night less Wind.

Monday, August 14. From the 13. Noon to this Day Noon, a fresh Gale. Course per Compass South; Lat. per a good Observation 56 d. 38 m. fair Weather.

Tuesday, August 15. From the 14. Noon to this Day Noon, little Wind from the West-north-west. Course per Compass South; distance sailed by the Log 53 Miles; fair Weather: at Noon the Wind came at South; we stood in for the Land, spake with two fishing Busses under *English* Colours, but they were *Dutch*; at 6 at Night we got in with the Land, about 2 Leagues to the Northward of *Tinmouth* Castle; we tack'd and stood off, the Wind at South.

Wednesday, August 16. The Wind from the South to the South-south-east. At Noon *Tinmouth* Castle South-west about 2 Leagues off; we ply to the Southward.

Thursday, August 17. From the 16. Noon to this Day Noon, the Wind at West-south-west. At Noon much Wind, we Reefed our Courses, and stand along the Shore to the Southward; at 2 a Clock *Flambrough* Head West about 2 Miles.

Friday, August 18. The Wind at West-south-west. At Noon we anchored a League to the Northward of *Cromer*, the Tide being spent.

Saturday, August 19. At 6 in the Morning Weighed with the Tide, and turned up *Tarmouth* Roads, anchored right against the Town; at 8 at Night Weighed and turned up above the Pier and anchored, the Tide being spent; the Wind at South-west.

Sunday, August 20. At 8 in the Morning Weighed with the Tide of Flood, and turned to Windward; at 4 in the Afternoon anchored with the Tide of Ebb in *Southmole-Bay* in 8 Fathom Water, the Church bearing North-north-west; Winds from the South-south-west to the South-south-east, a fresh Gale.

Monday, August 21. At 8 at Night Weighed with the Tide of Flood, and turned up into *Albrough* Road, and anchored there: at 4 the next Morning Lieutenant *Whitlock* went ashore at *Albrough* to take Horse for *London*.

At 9 in the Morning Weighed with the Tide of Flood, the Wind at West-south-west, a fresh Gale, and turned up into the Sleeway, and anchored there, about 5 in the Evening in 9 Fathom Water, the *Naze* Land bearing West by North.

Tuesday, August 22. At 10 a Clock Weighed, the Wind at West-south west, and turned to Windward with the Flood.

At 5 in the Morning anchored upon the Tide of Ebb, two Miles below the Middle ground.

At Noon Weighed with the Flood, and turned to Windward, the Wind at West by South, at 6 anchored below the Shore.

Wednesday, August 23. The Wind at West-north-west; at 4 in the Morning Weighed Anchor, and turned up a Mile above the *Buoy* of the *Noar*, and anchored upon the Ebb about 8 a Clock.

At one a Clock Weighed Anchor, the Wind at West-north-west, we turned up the River.

N 4

Now,

At Noon Weighed with the Flood, and turned to Windward, the Wind at West by South, and anchored below the shore. Wedn^y day, August 23. The Wind at West-north-west; at 4 in the Morning Weighed Anchor, and turned up a Mile above the Bay of the New, and anchored upon the Ebb about 8 a Clock. At one a Clock Weighed Anchor, the Wind at West-north-west, we turned up the River.

At 5 a Clock we weighed anchor, and turned up the River, the Wind at West-north-west, and anchored upon the Ebb about 8 a Clock. At one a Clock Weighed Anchor, the Wind at West-north-west, we turned up the River.

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Now, after the JOURNAL, I do intend to shew my Conceptions of the said Voyage, and a true Relation of our Miscarriage; with some Observations made in the said Voyage.

THE first was the following the Opinion of *William Barrans*, that was to steer directly North-east from the North Cape, and to fall in the midway betwixt *Greenland* and *Nova Zembla*: so having made the Land to the Westward of the North Cape, the 19. Day of *June*, I steered away North-east by Compass, which was not so much by the true Course, because of the variation that is there Westerly; and the 22. Day at Noon we saw the main Body of Ice, being in the Lat. of 76 d. and about 60 Leagues to the Eastward of *Greenland*. At the first seeing of Ice, I did imagin it had been the Ice that joyned to *Greenland*; and that if I went more Eatterly there might be a free Sea; so Dran close by the Ice, it lying away East-south-east, and West-north-west, and every League, or less, that we

ran,

ran, we met with a Cape of Ice; so when we were about that, we could see no Ice to the Northward; so standing in North-east, sometimes two Glasses, that is one hour, we could see more Ice a Head, and then we were forced to go out the same way we came in, and thus I continued Coasting the Ice, sometimes with great hopes of a clear Sea, and then again disheartened by seeing more Ice; till at last I had no hopes at all, which was when I saw the Land of *Nova Zembla*, and the Ice joyn to it. So here the Opinion of *William Barrans* was Confuted, and all the rest of the *Dutch* Relations, which certainly are all forged abusive Pamphlets; as also the Relations of our own Countrymen. But certainly, if Men did really consider the many individual dangers and mischiefs that comes upon the broaching of such untruths, they would never do it; for I do now verily believe that if there be no Land to the Northward of the Lat. of 80° *d.* that the Sea that is there is all frozen, and always continueth so; for I that could get no farther than 76° *d.* found it so frozen without intermission; and some of the Ice that we saw, that was on the main Body of it, had been conveyed 10 Degrees more Southward, would have taken some Centuries of Years to Thaw it: for the loose Ice that lay about the Edges of the main Body, was not more than a Foot thick in some pieces above the Superficies of the Water, and the rest of the Cake that was sunk, was more than 18 Foot below. So I conclude that those vast Mountains that were on the main Body were

all

all on Shore, as of necessity they must, if they hold the same proportion; and considering the shallowness of the Water, which I found all along the Ice, which in the mid-way between the two Lands, I found to be no more than 70 Fathom, was doubtless a sign that to the Northward is Land, and that the main Body of Ice that lyeth crufted about the Shore, may be 20 Leagues or more, and that *Nova Zembla* and *Greenland* are the same Continent; for if there had been any Passage, there would have been some Current, which I could never, or very hardly find to be any, and the little that was run East-south-east along the Ice, which is nothing else but a small Tide which riseth some 8 Foot. Thus the Ice having been an obstacle in our way, as also the cause of my coming so far to the Eastward, which before I never intended.

I will come to the misfortune that happened to us in the loss of our Ship: which was thus, being amongst the Ice the 29. Day of *June* in the Morning, we had like to have been inclosed in it: it proving likewise foggy Weather, I stood out to the Southward, thinking to lye there till fairer Weather, or to spend some time to the Southward, and then come up to the Ice again, to see if there might be any alteration in it as to its removal either East, West, North, or South; but all this Day it proved foggy dirty Weather, the Wind being at West; so we lay South-south-west with the Stem, and by our Judgment and Reckoning, the Westernmost Land of *Nova Zembla* bore from us East-south-east, that was 4 Points under

under our Lee Bow. But such was our misfortune that it proved not so, for about 10 of the Clock Captain *Flaves*, being upon our Weather Quarter, fired a Gun and bore to me, and called out that there was Ice a Head; then I looking out a Head, saw something white just under the Bow, which presently I perceived to be a breath, and no Ice; now if I had staid with the Ship, Captain *Flaves* being to Windward, I should have been on Board of him, and then certainly we had been both lost, so I was forced to bear up with hope that I might get clear of it; but the Ship being a great while wearing struck on the Rock, her Head lying to Seaward, which if it had not, but that the Broadside had been to the Sea we had all perished without Gods great mercy: Captain *Flaves* in the mean time (being a shorter Ship) wore round, and came close under our Stern, and with great Providence escaped, and stood off to Sea: here we lay beating on the Rock in most cruel manner for the space of 3 or 4 hours, using all possible means to save her, but all in vain, for it blew so hard that it was impossible to carry out an Anchor capable to do us any service, though we had an opportunity to carry a small Anchor, and warp to haul another out by, which signified but little: the Ship all this while lay, and at the end of 4 or 5 hours we saw Land close under our Stern, to the great amazement of us all, which before we could not see for the foggy Weather; so I commanded the Men to get out our Boats before our Mast came by the Board, which was done. I sent the Boatswain toward
the

the Shore in the Pinnace, to see if there was any possibility of landing, which I much feared, because the Sea ran so high. In half an hour he returned with this answer, that it was impossible to save a Man, the Sea ran so high, and the Snow being in high Cliffs on Shore was unaccessible, which was but bad tidings: so then it was high time to think on the safety of our Souls, and we went all together to Prayers, to beseech God to have Mercy on us, for now nothing but individual ruin appeared before our Eyes: after Prayers being done it proved a little clearer Weather; and I looking over the Stern saw a small Beach directly with the Stern of the Ship, where I thought might be some possibility of landing; so I sent the Pinnace again with some Men to be landed, but they durst not venture on Shore; so I sent the Long-Boat with some 20 Men to Land, who attempted it, and got safe on Shore; so they in the Pinnace seeing that, followed them and their Men likewise, and both returned on Board again: now the Men on the Shore sent to me desire some Fire-Arms and Ammunition, for there was many Bears on Shore; so I caused to be put into the Pinnace two Barrels of Powder that we had saved dry, before the Ship was belged, and some small Arms, and some Provision, with my own Papers, and Mony; but as she put off from the Ship side, a Sea overfet her, so that all was lost, with the life of one Man, by name *John Bosman*, being Coopers Mate, and several others taken up for dead; the Long-Boat being then on Shore to Land more Men,

Men, and they hearing us call from aboard, (when as then we could not see the Shore) they came on Board and saved the Men, but the Pinnace was all broke to pieces, which was no small grief to us; so the Long-Boat being on Board, and the Sea running prodigious high, the Boat-swain and some others would compel me and the Lieutenant to leave the Ship, saying that it was impossible for the Boat to live any longer in that Sea, and that they had rather be drowned than I; but desiring me when I came on Shore (if it were possible) to send the Boat again for them: so I being half way on Shore the Ship over-set; so I made all the hast possible to Land them Men I had in the Boat, and having landed them I went off to the Ship again to save those poor Men that had been so kind to me before: so with great hazard I got with the Boat to the Quarter of the Ship, and they came down the Ladder into the Boat, only one Man who was left for dead, which was one that had been cast away in the Pinnace, whose name was *Alexander Frazor*, a very pretty Saylor. So I returned to the Shore and got safe to Land, though very wet and cold; so we hauled up the Boat on Shore, and went up the Land about a flight shoot, where our Men were making a Fire, and a Tent with Canvas and Oars, which we had saved for that purpose; so we lay all that Night very cold, wet, and weary. The next Morning the Man that we left on Board recovered, and got unto the Mizen-Top; for that Mast we left standing when we came away, the other we had cut all down.

The

The Ship laboured and beat violently, but it blew so hard, and the Sea ran so high that it was impossible to save him; so the Weather continuing blowing, with extreme Fogs, and with Frost and Snow, and all the ill compacted Weather that could be imagined together. We built more Tents to preserve our selves, and the Ship breaking in pieces came all ashore to the same place where we landed, which served for shelter and Firing; besides there came to us some Hogheads of Flower, and Brandy good store, which was no little Comfort in our great Extremity. Here we lay betwixt hope and despair, hoping for fair Weather that Captain *Flames* might find us, which was impossible that ever he should do if it continued foggy; and some despairing of his being safe, but that he might be Lost as well as we. But supposing we never was to see him again, I was resolved to try the utmost to save as many as I could in the Long-Boat; in order thereunto we raised her two Foot, and laid a Deck upon her to keep the Sea out as much as was possible, and with this Boat and 30 Men (for she could carry no more) I intended to Row and Sail to *Russia*; but the Men not being satisfied who should be the Men, began to be very unruly in their mind and behaviour; every one having as much reason to save himself as another, some holding Consultation to stave the Boat, and all to run the like Fortune. But here Brandy was our best Friend, for it kept them alwaies Fox'd, so that in all their Designs I could prevent them; some were of the mind to go by
Land,

Land, but that I knew was impossible to any Man ; neither had we Provisions, nor Ammunition to defend us from the Wild Beasts ; and if it had been passable, that is any going on the ground for Bogs, that they would have met with Rivers that they knew not whether to go : so there being no probability of going by Land, nor for any to attempt going in the Boat, without forty Men having been first destroyed. I will leave it to the consideration of any, whither we were not in a very miserable condition without Divine Providence : to Write my thought I had at that time, to save as many Men as I could, it is not pertinent at all to the Discourse, since it cannot but be imagined to be Tragical. The Weather continued still very bad with Fogs, Snow, Rain, and Frost, till the 9. Day of our being on Shore, which was the 8. Day of *July*, when in the Morning it cleared up, and to our great joy, one of the Sailors cried out a Sail, which proved Captain *Flaves*, as reasonable may be imagined ; so we set fire to our Town that he might see where we was, which he presently saw, so came to us, and sent his Boat to us (but before I went off) I Writ a brief Relation of the intention of the Voyage, with the Accidents that had befallen us, and put it in a Glass-Bottle, and left it in the Fortification I had there built. So by twelve a Clock we all got safe on Board, but left all on Shore that we had saved from the Ship ; for we much feared it should prove foggy again.

Now

Now I intend to give a brief description of the Land, and the Observations I made there.

Nova Zembla, is so called by the Russians, which signifieth *New Land* in their Language; to prove it is either an Island, or whither it joyneth to the Continent of *Tartaria*, would be a very hard Task, nor is it certainly known to any; for by Circumstances I think it impossible to prove, and by Experience the search thereof is so impossible that it will hardly be tryed.

But let it be either, I think the matter is not much, since it is the most miserable Country that lyeth on the Foundation of the Earth; a Country most part of it covered perpetually with Snow, and that that is bare is not to be walked on, being like Bogs, upon whose Superficies grows a kind of Moss, which beareth a small blue and yellow Flower, and this is all the Product of the Earth of this Country. Under the superficies of this Earth, about two Foot deep, after we had dug so low, we came to a firm Body of Ice; which, as I think, was never heard of before: so these Men that did imagin, if they were forced to Winter to the Northward, would dig Caves in the Earth to preserve themselves from cold, would find

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here

here but very bad Lodging. The Snow lieth here contrary to what it doth in any other Country; for in all other Climates the Snow melteth soonest away near the Sea side, but here the Sea beateth against the snowy Clifts, which in some places are as high as either of the Forelands in *Kent*: the Sea has washed underneath the Snow a prodigious way, and the Snow over hanging, most fearful to behold, and up from the Water side, upon the first Ridge of Hills, the Snow was melted till you come to the next Ridge, which are Mountains, and they all the way up are covered with Snow, which I believe hath lain there evere since the Creation; but after we had ascended this, which in some places was almost Perpendicular, we came to the top of all the Mountains, as we supposed, for we could not see far; for we could hardly see one the other the Fog was so thick, and remained so all the time we were in the Country; but on the top of these Hills we found it bare from Snow, and indifferent good walking. The best that I found in the Country were only Bears: I continued on the top of those Hills some two hours, and went as far as was convenient, that we might find the way back again. Here I found the Track of many large Deer, also we found an Horn of Beam of Deer; besides Deer, there be abundance of large White Bears, and some Foxes, and a little Creature much like a Coney, but not so big as a Rat; and some few little Birds like Larks, and these be all the Beasts or Fowls we found in the Country. Every quarter of a
Mile

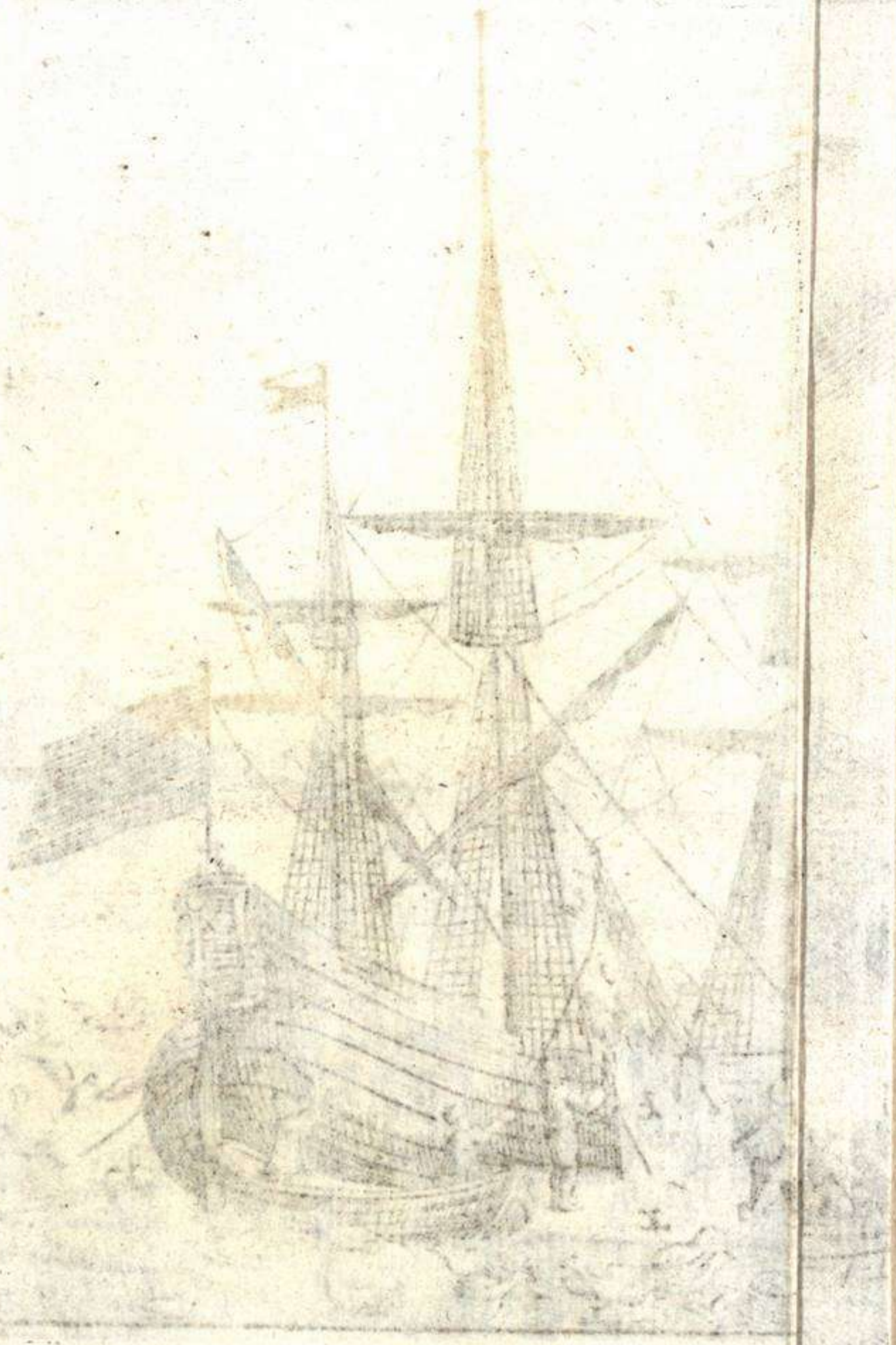
Me there runneth down from the Hills into the Sea a small Rivulet of very good Water, which is melted from Snow. Upon the Hills we found abundance of Slate-stone, which made it good walking; but at the Sea side, where the Rivulet came down, we found very good Black Marble, with White Veins in it.

The Point where we lost our Ship I called Point *Speedill*: the high Hills I called King Charles's Snow Hills; and the next Point to the Southward, which is the Westermost Point of *Nova Zembla*, I named *James Foreland*, and the Point to the Northward, *Tork Point*. Point *Speedill* lieth in the Lat. of 74 d. 30 m. North, and in the Longitude East from the City of *London* 63 d. 00 m. The variation of the Compass is 13 d. West, and it is full Sea at South-west Moon. The Tide riseth 8 Foot, and setteth directly upon the Shore, which is a certain sign that there is no Passage to the Northward. The Sea Water, about the Ice and Land, is very salt, and much salter than any I ever tasted, and a great deal heavier, and I may certainly say the clearest in the World, for I could see the ground very plain in 80 Fathom Water, which is 480 Foot, there being few Steeples so high as that was deep, and I could see the Shells at the bottom very plain.

If the Voyage had succeeded, I should, God willing, have given a more full and nice account of all the Experiments I had, and should have made, especially those of the Magnet, which I forbare here to mention, because I intended to
Publish

Publish them in a Treatise by themselves: ſo having with the Ship loſt all my Papers, and with them all I had in the World beſide; I moſt humbly beg Pardon that I have given no more Ample a Relation.

A Collection of Curious Travels and Voyages in two Tomes. The firſt containing Dr. *Leonhart Rauwolff's* Itinerary into the Eastern Countries, as *Syria, Palestine, or the Holy Land, Armenia, Meſopotamia, Aſſyria, Chaldea, &c.* Tranſlated from the *High Dutch* by *Nich. Staphorſt*. The ſecond in taking many parts of *Greece, Aſia Minor, Egypt, Arabia Felix, and Petraea, Ethiopia, the Red Sea, &c.* From the Obſervations of *Monſieur Belon, Mr. Vernon, Dr. Spon, Dr. Smith, Dr. Huntingdon, Mr. Greaves, Alpinus, Veſlingius, Thevenot's* Collections, and others. To which are added three Catalogues of ſuch Trees, Shrubs, and Herbs as grow in the *Levant*. By *John Ray*, Fellow of the Royal Society. London. Octavo 1693. Printed for *S. Smith and B. Walford*, at the Prince's Arms in *S. Pauls Church-Yard*.



B

The



THE
FIRST PART
OF THE
VOYAGE

INTO
Spitzbergen and Greenland:

CONTAINING
The Passages of the whole Voyage, together with some Account of the Weather, from the 15th of *April* to the 21th of *August*, An. 1671.

CHAP. I.

Of the Voyage from the Elbe to Spitzbergen.

WE set Sail the 15th of *April*, 1671. about noon from the *Elbe*. The Wind was North-east. At night, when we came by the *Hilge-land*, it bore to North-west. The name of the Ship was *Fonas in the Whale*, Peter Peterson of *Friseland* Master.

B

The

The first Part of the Voyage

The 27th we had storms, hail and snow, with very cold weather, the wind North-east and by east, we were in 71 degrees, and came to the Ice, and turned back again. The *Island* of *John Maien* bore from us South-west and by west, as near as we could guess within ten Miles. We might have seen the *Island* plain enough, but the Air was haizy and full of fogs and snow, so that we could not see far. About noon it blew a storm, whereupon we took down our Top-sails, and furling our Main-sail, drove with the Miffen-sail towards South-east.

The 29th it was foggy all day, the wind North east and by north, we came to the Ice, and failed from it again, as you may see in the *Plate A*.

The 30th, the first Sunday after *Easter*, was foggy, with rain and snow, the wind at North, at night we came to the Ice, but failed from it again; the Sea was tempestuous, and tossed our Ship very much.

The 3d of *May* was cold, snowy, with hail, and misty Sun-shine, the wind North-west and by west, the Sun set no more, we saw it as well by night as by day.

The fourth we had snow, hail, and gloomy Sun-shine, with cold weather, but not excessive, the wind at North-west, the weather every day unconstant. Here we saw abundance of *Seales*, they jump'd out of the water before the Ship, and which was strange, they would stand half out of the water, and as it were dance together.

The 5th in the forenoon it was moderately cold, and Sun-shine, but toward noon darkish and cloudy, with snow and great frost, the
wind

wind North-west and by North. We saw daily many Ships, failing about the Ice, I observed that as they passed by one another, they hailed one another, crying *Holla*, and asked each other how many fish they had caught, but they would not stick sometimes to tell more than they had. When it was windy, that they could not hear one another, they waved their Hats, to signify the number caught. But when they have their full Freight of *Whales*, they put up their great Flag as a sign thereof; then if any hath a Message to be sent, he delivers it to them, as you may see in the Plate *A* by *A*.

The 7th we had moderate frost, clouds and snow with rain. In the evening we failed to the Ice, the wind was quite contrary to us, and the Ice too small, wherefore we failed from it. In the afternoon we saw *Spitzbergen*, the South point of the North-foreland, we supposed it the true Harbour. The Land appeared like a dark Cloud, full of white streaks; we turned to the West again, that is, according to the Compass, which is also to be understood of the Ice and Harbour.

The 9th was the same weather, and cold as before, the Wind South-west and by west. In the afternoon a *Fin-fish* swam by our Ship, which we took at first to be a *Whale*, before we saw the high fins of his tail, and came near to it. We had let down our Sloop from the Ship, but that labour was lost, for he was not worth taking.

From the 25th of *April* to this day, we had not taken the Sun's altitude, we were then in 70 degrees and 3 minutes, and failed towards the North and the Ice. It may seem strange, that we so often failed to the Ice and from it

again, but I shall give you a reason for that hereafter.

The 12th it was stormy and excessive cold, the wind North; and we had the greatest frosts in this Month of *May*.

On the 14th the wind was North-west, fine weather, with Sun shine, we were within 75 degrees and 22 minutes. We told twenty Ships about us, the Sea was very even, and we hardly felt any wind, yet it was very cold.

In this place the Sea becomes smooth presently again after a storm, chiefly when the wind blows from the Ice; but when it blows off the Sea, it always makes a great Sea.

The same day we saw a *Whale* not far off from our Ship, we put out four Boats from on board after him, but this labour was also in vain, for he run under water, and saw him no more.

On the 19th we had a dull Sun-shine, the wind was North, and it was so calm that we could hardly feel it; we rowed in the Ship-boat to the Ice, and killed two *Sea-bounds* or *Seales*; there were so many of them on the Ice that they could not be numbred.

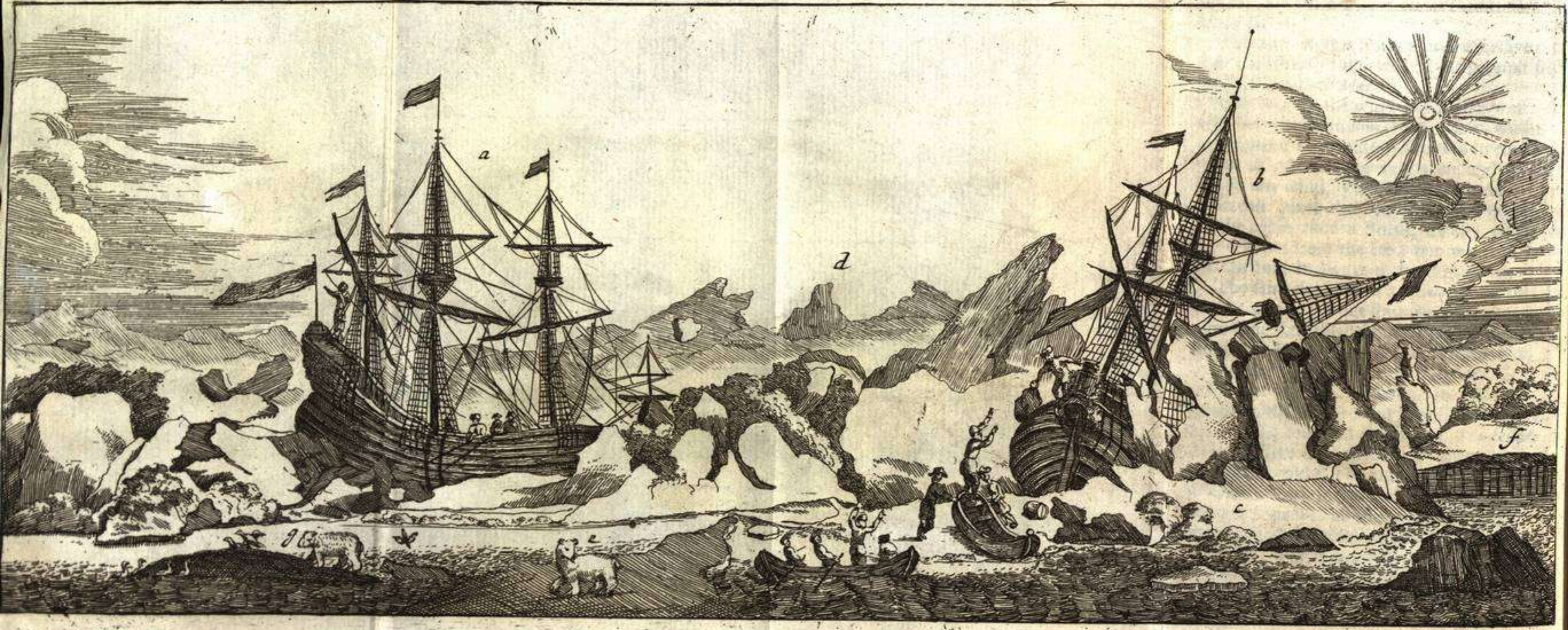
On the 20th it was exceeding cold, so that the very Sea was all frozen over; yet it was so calm and still, that we could hardly perceive the wind, which was North; there were nine Ships in our Company which failed about the Ice; we found still the longer we sailed the bigger the Ice.

On the 21th (which was the fourth Sunday after *Easter*) we sailed into the Ice in the forenoon, with another *Hamburger-ship*, called the *Lepeler*, with 8 *Hollanders*. We fixed our Ship with Ice-hooks to a large Ice-field, when the Sun was South-west and by south; we numbred



B 3

where



into Spitzbergen and Greenland.

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numbered 30 Ships in the Sea ; they lay as it were in an Harbour or Haven (as you may see Plate *A* at *B*.) Thus they venture their Ships in the Ice with great hazzard.

On the 30th it was fair weather in the morning, snowy about noon, the wind was South-west and very calm. We rowed in the great Sloop, before the Ship, farther into the Ice. In the morning we heard a *Whale* blow, when the Sun was in the East, and brought the *Whale* to the Ship, when the Sun was at South-west and by east ; the same day we cut the Fat from it, and filled with it 70 Barrels (which they call *Kardels*.) By this fish we found abundance of Birds, most of them were *Mallemucks*, (that is to say foolish Gnats) which were so greedy of their food, that we kill'd them with sticks. This fish was found out by the Birds, for we saw every where by them in the Sea where the *Whale* had been, for he was wounded by an Harping-Iron that stuck still in his flesh, and he had also spent himself with hard swimming ; he blowed also very hollow, he stank alive, and the birds fed upon him. This *Whale* fermented when it was dead, and the steam that came from it inflamed our eyes, and made them sore.

See Tab. *A* at *a*.

This same night *Cornelius Seaman* lost his Ship by the squeezing and crushing together of the Ice, for in this place are very great Sheets or Islands of Ice, and the Seamen call it *West-Ice*, because it lieth towards the West, as you may see in the Plate *B* marked with *b*.

On the 2d of *June* we had a severe frost in the forenoon, and in the night we saw the Moon very pale, as it used to look in the day time in our Country, with clear Sun-shine,

B 3

where-

whereupon followed mist and snow, the wind North-east and by north.

In the morning, *June* the 4th, we were a hunting again after a *Whale*, and we came so near unto one, that the Harponier was just a going to fling his Harpoon into her, but she sunk down behind, and held her head out of the water, and so sunk down like a stone (as is to be seen by *d* on the cut *A*) and we saw her no more; it was very like that the great Ice-field was full of holes in the middle, so that the *Whale* could fetch breath underneath the Ice. A great many more Ships lay about this sheet of Ice, one hunted the *Whales* to the other, and so they were frightened, and became very shy. So one gets as many fishes as the other, and sometimes they all get one. We were there several times a hunting that very day, and yet we got never a one.

On the 8th it was foggy, and snowed all day; we saw that day very many (*Sea-dogs* or) *Seales* on the Ice about the Sea-side, so we set out a Boat and killed 15 of them.

On the 12th it was cold and stormy all day, at night Sun-shine; he that takes not exact notice, knows no difference whether it by day or night.

On the 13th in the afternoon it was windy and foggy, we were in 77 degrees; we sailed along by the Ice somewhat easterly towards *Spitzbergen*, as is to be seen in the Cut *A* at *e*. That night we saw more then 20 *Whales* that run one after another towards the Ice; out of them we got our second fish, which was a male one; and this fish, when they wounded him with Lances, bled very much, so that the Sea was tinged by it where he swam: we brought him

him to the Ship when the Sun was in the North: for the Sun is the Clock to the Seamen in *Spitzbergen*, for else they would live without order, and mistake in the usual seven weekly days.

On the 14th it was cold and windy, the night foggy, the wind blew West, that day we came to *Hans Lichtenberg*.

We arrived at *Spitzbergen*, June the 14th. First we came to the *Foreland* thereof, then to the seven *Ice-hills* or Mountains, then we passed the Harbour or Bay of the *Hamburgers*, *Magdalens*, *English* men and *Danes*, and sailed into the South-bay: we were followed by 7 Ships, 3 *Hamburgers* and 4 *Hollanders*, as is to be seen by *a* in the Plate C. For here it is just the same, as when they will sail into the Ice, if more then one is there, for no body cares to be the first, because they do not know in what condition the Harbour or the Ice is within. In our Voyage thither we saw no Ice at all, until we came to *Spitzbergen*, for the wind had blown it all away; in the night we did cut off the fat of the fish, and filled with it 65 Kardels or Vessels.

That night we sailed with three Boats into the *English* Harbour or Bay, and saw a *Whale*, and flung into him three Harpoons, and threw our Lances into him; the *Whale* run underneath the small Ice, and remained a great while under water before he came up again, and then ran but a very little way before he came up again; and this he repeated very often, so that we were forced to wait on him above half an hour, before he came from underneath the Ice. The Harpoons broke out at length, and we lost him. On the Ice we saw two great *Sea-horses*

or *Morses*, that were got upon the sheet of Ice, through a hole that was in it, and were asleep; we cut off their return by covering the hole with a piece of Ice; then we awaken'd them with our Lances, and they began to defend themselves for a while before they were killed. We saw also many White-fish.

On the 22th we had very fair weather, and pretty warm; we were by *Rehenfelt* (*Deersfeild*) where the Ice stood firm: we saw six *Whales*, and got one of them that was a male, and our third fish; he was kill'd at night when the Sun stood westward: this fish was kill'd by one man, who flung the Harpoon into him; and kill'd him also, while the other Boats were busy in pursuing or hunting after another *Whale*. This fish run to the Ice, and before he died, beat about him with his tail; the Ice settled about him so that the other Boats could not come to this Boat to assist him, till the Ice separated again, that they might row, when they tied one Boat behind the other, and so towed the *Whale* to the great Ship, where they cut him up into the Vessels, and filled with him 45 Barrels. This night the Sun shined very brightly.

On the 29th we had fair weather, Sun-shine and calm. On the same day we sailed before the wide Harbour or Bay, where we found a great quantity of the fat of a *Whale*, three Vessels full, together with the Image of *St. Nicholas*, which stood behind a Ship that was lost, driving in the Sea. There was also here and there still much Ice.

On the 1st of *July* about noon, two *Whale* came near to our Ship; we saw that they had a mind to couple together; we set our Boat for

for them, and the Harpoonier hit the female, which when the other found, he did not stay at all, but made away. The female run all along above the water straight forward, beating about with her tail and fins, so that we durst not come near to lance her; yet one of our Harpooniers was so fool hardy to venture too near to the fish, which saluted him with a stroak of her tail over his back so vehemently, that he had much ado to recover his breath again. Those in the other Boat, to shew their valour also, hasten'd to the fish, which overturned their Boat, so that the Harpoonier was forced to dive for it, and hide his head underneath the water; the rest did the same; they thought it very long before they came out, for it was cold, so that they came quaking to the Ship again.

In the same morning a *Whale* appear'd near our Ship before the wide Harbour, we put out four Boats from our Ship after him, but two *Holland* Ships were about half a League from us, one of them sent out a Boat towards us; we used great diligence and care to take him, but the fish came up just before the *Dutchman's* Boat, and was struck by him with a Harpoon. Thus he took the bread out of our mouths.

On the 2d of *July* we had Sun-shine all day and night long, and it was pretty warm withal; about midnight we went a hunting, and caught the fifth fish, who was a male; we cut the fat off, and flung it into the Forecastle. This is done when they are very busie in *Whale* catching, that they may not lose time, then they cut great pieces off of the *Whale*, that they may have done the sooner, for it doth not harm the fat if it should lie so for several days; nay, some reckon it to be the better for

The first part of the Voyage

for it, but that cannot be, for the fat runs away from it.

On the 4th we had Sun-shine all day and night. We still were *Whale*-hunting, and that night we got the sixth fish, a male also, he held 49 *Kardels* of fat.

On the 3d and 4th day of *July* we saw more *Whales* than we did in all our Voyage.

On the 5th of *July* in the forenoon it was bright Sun-shine, and pretty warm, in the afternoon it was foggy, at night Sun-shine again, which lasted all the night. We hunted all that day long, and in the morning we struck a *Whale* before the *Weigatt*; this fish run round about under the water, and so fastned the Line whereon our Harpoon was about a Rock, so that the Harpoon lost its hold, and that fish got away. This *Whale* did blow the water so fiercely, that one might hear it at a Leagues distance.

The same day about noon, the wind south, and Sun-shine, we got the seventh fish, which was a female, and had 45 *Kardels* of fat; this we cut also into the Hold, and so we sailed from *Weigatt*, a little toward the west before the *Muscle-Harbour*, where we dropped our Anchor; we were employed with cutting the great pieces of fat into lesser pieces, to fill our *Kardels* with them: in the mean while the wind turned to North-west and west, and the single Anchor was dragg'd by the Ship, so we dropped another, and would have weigh'd up the former, but our Cable broke, the Anchor being fastned to a Rock.

On the 6th we had the same weather, and warm Sun-shine all night. Hard by us rode a *Hollander*, and the Ships crew busie in cutting the

the fat of a *Whale*, when the fish burst with so great a bounce, as if a Canon had been discharged, and bespattered the Workmen all over.

On the 8th the wind turned North-west, with snow and rain. We were forced to leave one of our Anchors, and thank'd God for getting off from Land, for the Ice came on fiercely upon us; at night the wind was laid, and it was colder, although the Sun shined.

On the 9th we got another male *Whale*; being the eighth, which was yellow underneath the head; we filled with him 54 *Kardels* with fat; the Sun shined all night.

On the 12th we had gloomy Sun-shine all day. At night we sailed with three Boats into the Ice before the *Weigatt*, and got three white Bears, an old one with two young ones, they swam in the water like fish. On the Ice lay abundance of *Sea-horses*, and the further we came into the Ice there were the more of them, we rowed up to them, and when we came near to them we killed ten of them, the rest came all about our Boat, and beat holes through the sides of the Boat, so that we took in abundance of water, we were forced at length to row away from them because of their great number, for they gathered themselves more and more together; they pursued us as long as we could see them, very furiously. Afterwards we met with another very great one who lay in the water fast asleep, but when he felt our Harpoon within him he was very much frightened, and ran away before the Boat again, where he was soon eased of his fright by our Lances. We saw but very few *Whales* more, and those we did see were quite wild, that we could not
come

come near them. That night it was so dark and foggy, that we could hardly see the Ships length; we might have got *Sea-horses* enough, but we were afraid of loosing our Ships, for we had examples enough of them that had lost their Ships, and could not come to them again, but have been forced to return home in other Ships. When after this manner any have lost their Ships, and cannot be seen, they discharge a Cannon from the Ship, or sound the Trumpets, or Haut-boys, according as they are provided in their Ships, that the men that are lost may find their Ship again.

On the 13th we had cloudy Sun-shine, the wind towards night turned to North-east and by east. The Ice came a floating down apace, we sailed from the South-east Land to the west, and we could but just get through by the North side from the *Bear Harbour* or Bay. We sailed on to the *Rebenfelt* (or *Deer-field*) where the Ice was already fixed to the Land, so that we could but just get through; we sailed further to the *Vogelsanck* (*Birds-song*) as you may see by *b* in the Plate *D*. Then we turned toward the East with a North-east wind, in company with twelve Ships more, to see whether there were any more *Whales* left, with *George* and *Cornelius Mangelsen*, and *Michael Appel*, who sailed in four fathoms water, and touched upon the wreck of a Ship that was lost there.

On the 14th in the morning we sailed still amongst the Ice, the wind being North-east and by east; we had a fogg all that day, with Sun-shine, with a Rainbow of two colours, white and pale yellow, and it was very cold, and we saw the Sun a great deal lower.

On

On the 15th it was windy, cold, and foggy the whole day; the wind turned North-west, and the Ice came on in abundance, so that we could hardly sail, for it was every where full of small sheets of Ice. At this time there were many ships beset with Ice, in the *Deer* or *Muscle-Bay*. We sailed all along near the shoar, and at night we entred the *South-Harbour* (marked with *c* in the Cut *D*) where 28 Ships lay at Anchor, 8 whereof were *Hamburgers*, the rest *Dutchmen*. From that time, when we sailed out of the *South-bay*, we kept always within sight of the Land, and saw it always, except it was foggy; and so long the Skippers stay by the Ice, to see whether there is any more *Whales* to be had. That night we fetched water from the Land, near the *Cookery* of *Harlingen*, out of a hole, marked by *b* in the Plate *C*.

On the 16th in the morning we saw the Moon, and afterwards it was windy, with abundance of snow.

On the 18th we had fair weather, with Sunshine, and we were also becalmed that we could not sail, wherefore we towed with a Boat into the *Danish Harbour*, to gather some Herbs from the Rocks. In the *South-Haven* rode 30 Ships at Anchor.

On the 19th we had warm Sun-shine and fair weather, but in the night stormy and rain.

On the 20th storms, rain, and a great deal of snow, the wind South-west.

On the 21th rain all day long.

CHAP.

C H A P. II.

Of our home Voyage from Spitzbergen
to the Elbe.

ON the 22th day of *July* in the morning, when the Sun was North-east, we waied our Anchors, and sailed out of the *South-Haven*: we had a fogg all day long, and Sun-shine at night; in the night we saw abundance of *Fin-fishes*.

On the 24th it was so warm with Sun-shine, that the Tarr wherewith the Ship was daubed over melted; we drove, it being calm, before the Haven or Bay of *Magdalen*.

On the 25th it was cloudy, and Sun-shine, but cold withal; at night we came to the *Forelands*; the night was foggy, the wind South-west.

On the 26th we had the very same weather all day, the Sun was very low in the night.

On the 28th we turned from the side of the *North-Foreland* towards the west, when the Sun was South-east; and we did sail South-west and by west towards the Sea; then we changed our Course southwards, and stood South-east.

On the 29th, 30th, and 31th we sailed South-east and by south all along by the Land, the south side of the *Foreland* was 8 Leagues from us, bearing North-east, then we sailed South-west and by south, it was very cold with

into Spitzbergen and Greenland.

15

a North-west wind. We saw daily abundance of *Fin-fishes*, but no more *Whales*.

On the 9th of *August* it was windy all day, with a gloomy Sun-shine in the forenoon; it cleared up towards noon; the wind was South-east, when we took the Meridian height of the Sun, and were at 66 degrees 47 minutes; we sailed South-westward all along the Northern shoar of the Country.

On the 13th, being *Sunday* in the morning, the wind was North-west, stormy, with rain and west winds. In the night we had very clear Moon and Star-light. In the morning we saw the northern part of *Hitland*, we sailed southward; after the rain we saw *Fair-Isle*, and sailed in betwixt *Hitland* and *Fair-Isle*, first South-west, and afterwards South-west and by south, and then southward.

On the 20th it was fair weather, warm Sun-shine, and somewhat windy. When the day began to appear we saw *Hilgeland*, South-eastward of us, when we sailed South-east; there we took in a Pilot, on purpose chosen by the Magistrates of *Hamburg*.

On the 29th it was fair weather, and warm Sun-shine all day; we sailed before the *Elbe*, and lay at Anchor by the first Buoy (called the *Red-Buoy*) in the afternoon we weighed our Anchor, and sailed to *Kucks-Haven*; in the night we had thunder, and lightning, and rain.

The End of the first Part.

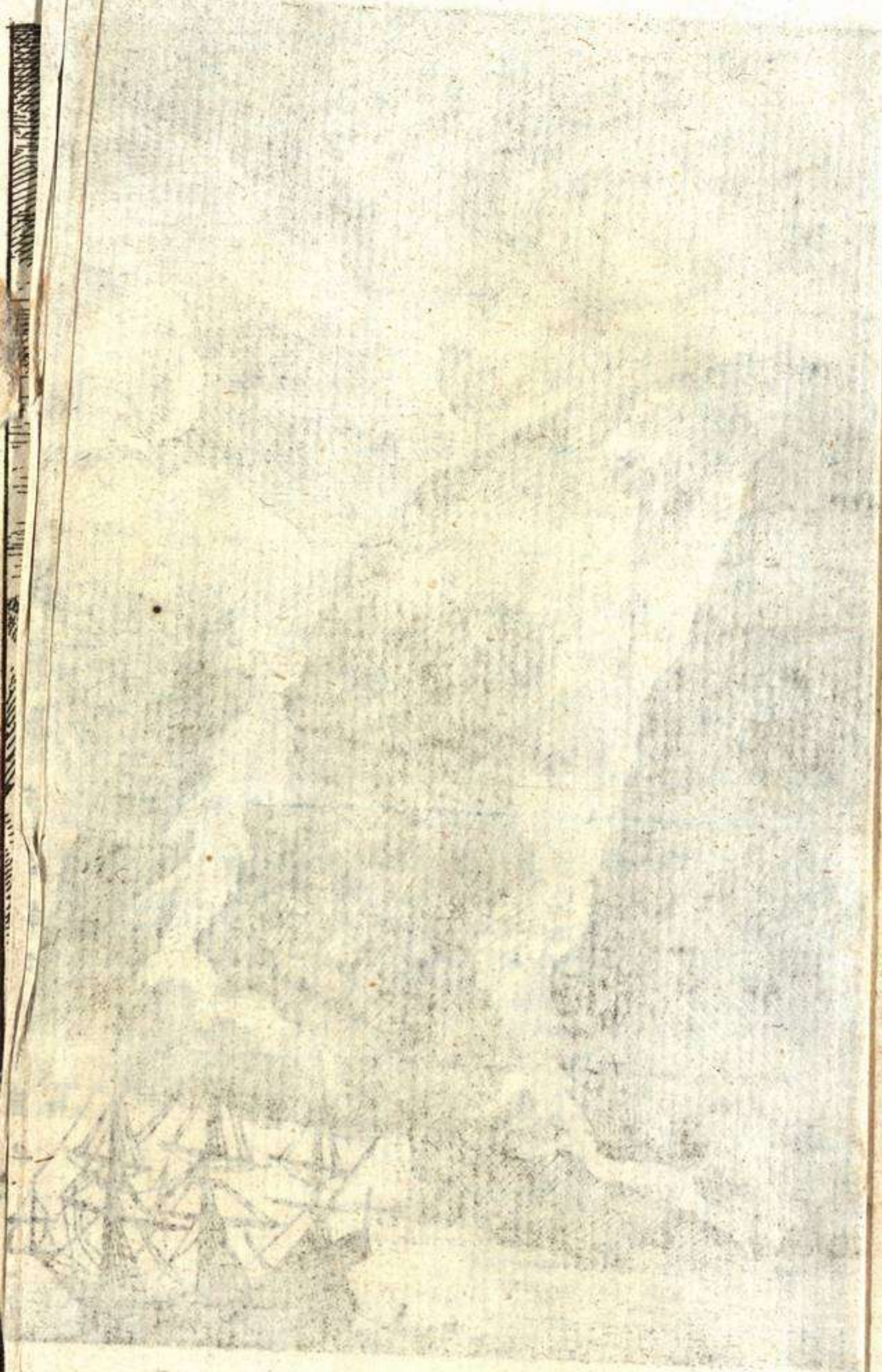
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THE
 SECOND PART
 OF THE
 VOYAGE
 TO
 SPITZBERGEN:

CONTAINING
 The Description of *Spitzbergen*.

CHAP. I.
*Of the External Face and Appearance
 of Spitzbergen.*

THE lowermost parts of these Countries that are called *Spitzbergen*, from the sharp and pointed Hills or Mountains, (for *Spitz* is pointed) are situated under 76 degrees and 30 minutes. We failed to the 81th deg. and no Ship ventured farther that year;







year ; but how far this Country is extended to the North, is still unknown.

It seemeth, because the Ice stands firm, and floats not, as that in the Sea doth, that there should be land not far behind it.

As the highest Countries are surrounded with Mountains, as a Fortification is with Walls and Works, so are these Countries naturally surrounded with high Hills.

The inward Condition of this Country we do not know, but it seemeth, since we see one Hill behind another, that it is so throughout the whole Country.

At the *Muscle-Haven*, or *Muscle-Bay*, we find plainer and leveller Ground ; and the farther we sail toward the East, the Ground groweth the lower, yet it is all stony, and with prospects of smaller Hills ; it doth not look at all as if it could be inhabited by Men.

I believe also that the Land there must of necessity be lower and lower ; for else we should see it higher above the other, as we do the other Mountains.

Concerning the Beasts that live on this Land, I believe they come over the Ice in the Spring, when the Ice stands firm, into these Countries, and that the same way they go away from thence again, when the long nights begin.

Concerning the Birds, we have partly a good account of them, their places and food is known, as I shall mention when I come to write of them.

When on the 18th of *June*, on a *Sunday* in the forenoon, we first came to the Foreland of *Spitzbergen* ; the foot of these Mountains looked like fire, and the tops of them were covered with foggs ; the snow was marbel'd, and look'd

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as

as if it were boughs or branches of Trees, and gave as bright and glorious a shining or gloss to the Air or Skies, as if the Sun had shin'd.

When the Mountains look thus fiery, a hard storm generally ensues.

These Countries are in the Winter encompassed with Ice from divers places, according as the winds blow ; as if it be East from *Nova Zembla*, if North-west from *Greenland*, and the Island of *John Mayen* : it also happeneth sometimes that the Land is begirt with Ice in the Summer, as they have often seen, that go thither every year.

But when the Ice comes floating on too hard, or in too great a quantity, then the Ships make to the Harbours, Havens, Bays or Rivers, as they call them, that run up into the Country ; the wind useth to receive us something unkindly, when we sail into them, roaring over the dry Hills with small Whirl-winds. The water in these Rivers is salt.

We meet here with no fresh Streams or Rivulets ; nor did I ever see a Spring there.

Of some Rivers we know their beginning, of others it cannot be found out, because of the danger of the Ice, which they are never free from ; some because of the hidden Rocks underneath the water, which are discovered by the vehement breaking of the Sea, or by great quantity of white foam.

The Names of the Havens you find all in order one after another in the Map of *Spitzbergen*, as far as we have been.

These Havens they reckon to be the safest, *viz.* the *Safe-Harbour*, and the *South* and *North-Bay*, which are the most known of any in *Spitzbergen*.

The

The other Havens, of what names soever, we commonly sail by, because they lye open to the Sea.

Others we pass by because of the constant Ice that is in them, and the hidden Rocks.

In the *South* or *North-Haven* or *Bay*, ride commonly the most Ships; I told several times ten, twenty, nay thirty Ships, that lay at Anchor, as you may see in the Plates *C* and *D*, marked with *c* and *d*.

Concerning the Birds, we see abundance more of them by and on the Land, then among the Ice, chiefly when they hatch their Eggs; we do not find they make their Nest up with far-fetcht things, neither do they gather any thing for them from *Norway*, *Schetland*, or the like.

The Seeds of several Herbs might grow in *Spitzbergen*, but the Herbs nature hath bestowed on those Countries are such as are fit for the Diseases and Distempers that are common there.

We saw abundance of *Sea-horses* by *Spitzbergen*, on the low Land, and upon the Ice; but we saw but very few *Seales* on the Ice thereabout.

The Country (as is aforesaid) is stony, and quite throughout it are high Mountains and Rocks.

Below, at the feet of the Mountains, stand the Hills of Ice very high, and reach to the tops of the Mountains; the Cliffs are filled up with Snow; wherefore these Snow-Mountains show very strange to those that never saw them before, they appear like dry Trees with Branches and Twigs, and when the Snow falleth upon them they get Leaves as it were, which

soon after melt, and others come in the room of them.

There are seven large Ice-Mountains in a Line in these Countries, that lye between the high Rocks, which look of a glorious blew colour, as also is the Ice, with a great many cracks and Holes in them; they are hollowed out, melted away, and cut in Groves by the rain and snow-water that runs down; they are increased greatly by the Snow, as the other Ice that swimmeth in the Sea is also: they are augmented likewise by the melted Snow from the Rocks, and from the Rain that falls on them.

These seven Mountains of Ice are esteemed to be the highest in the Country; indeed they shewed very high as we sailed by them, underneath: the Snow look'd dark from the shades of the Skies, which shewed very neat and curious, with the blew cracks where the Ice was broken off.

About the middle of the Mountains some foggy Clouds hovered over; above these the Snow was very bright.

The true Rocks look't fiery, and the Sun shin'd pale upon them, the Snow giving the Air a bright reflection. They were covered with Clouds, so that you could scarce see the tops of them.

Some of these Rocks are but one stone from the bottom to the top, appearing like an old decayed Wall; they smell very sweet, as the green Fields do in our Country in the Spring when it rains. See *c c* in the Plate C.

The stones for the most part are vein'd differently, like Marble, with red, white, and yellow: at the alteration of the weather the stones sweat, and by that means the Snow is stained

stained or coloured; and also if it raineth much, the water runs down by the Rocks, and from thence the Snow is tinged red.

On the foot of the Mountains, where no mounts of Ice stand, lye great loose Rocks, as they chance to be fall'n one upon the other, with Caves and Holes, so that it is very ticklish walking upon them; both great and small Stones or Rocks are mixt together: these stones are of a grey colour, or grey with black veins, they glister like Silver-oar. Most of the Rocks that are at the bottom of the Mounts are like the Pebles we pave our Streets withal. On these Rocks grow all sorts of Herbs, Graves, and Moss very plentifully; they grow up in the two Months of *June* and *July*, from the seed to bear seed again. Look *f* in the Plate C.

The Herbs grow thickest where the water runs or falls down from the Hills, (and also where they are defended from the North and East winds) from whence always some Dust or Moss is carried down with it, which after a long time becomes Earth (yet it is rather dung than a true earth) and the Birds do contribute by their dung towards it.

These Mountains seem as if they were Earth at top by reason of the height, but when you are at the top of them, they are Rock as well at the top as the bottom, which we also see, when great pieces of them fall down. If stones are flung down from these Mountains, it sounds as if it thundred with an Echo and Rattling in the Valleys, as if very great pieces were thrown off from the top of them.

The Mountains also are full of cracks wherein the Birds make their Nests; they all fly down from the Mountains to seek their food in the

water ; some eat the Carrion of Fishes, others eat small Fishes and Shrimps, as I shall say, when I treat of the Birds.

There are also White-Bears, Deer and Foxes in these Countries. The Bear liveth upon dead Whales or dead Men; the Fox feeds upon Birds and their Eggs ; and the Deer eat the Herbs.

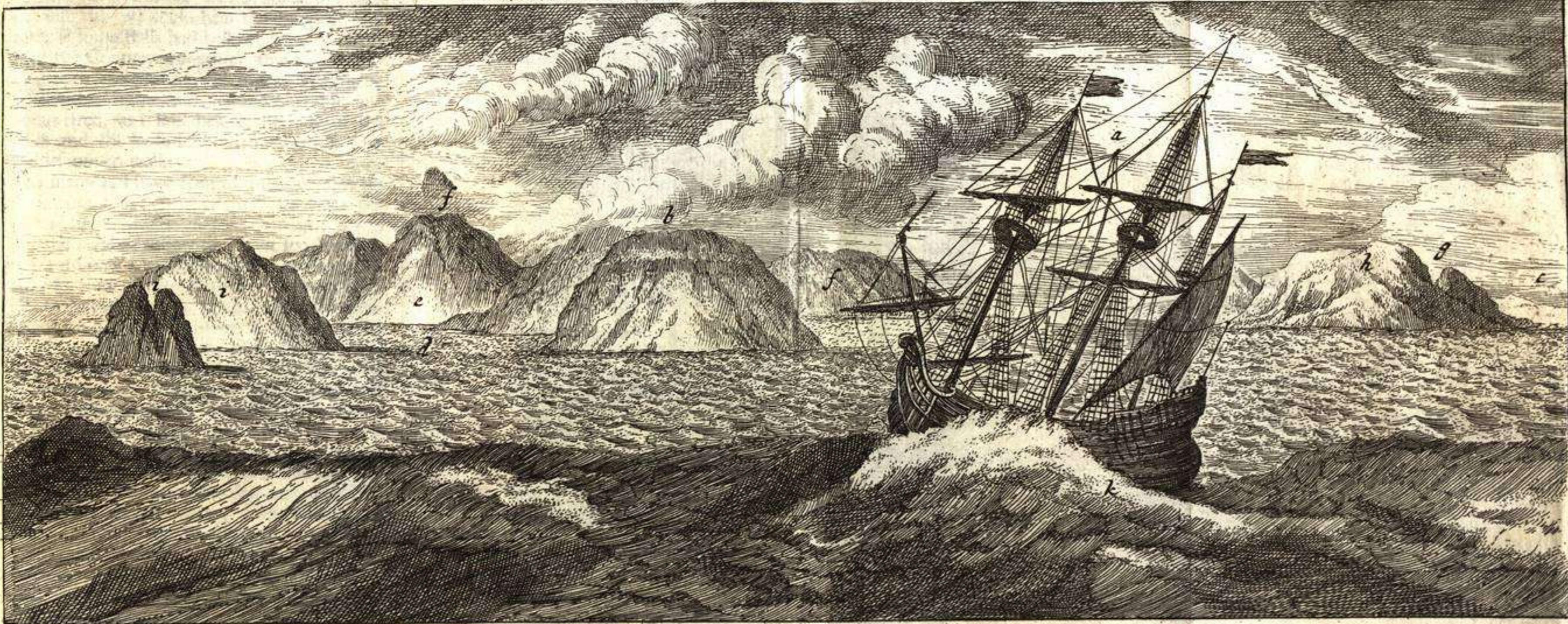
One may conjecture at the height of these Mountains by this, when the Skies are not very clear, the Mountains stand, to about the middle, in the Clouds ; some of them look as if they were a coming down every moment, as in the Plate D at f.

The reason why the lowermost Hills do not seem so high, is because so very great ones stand near them. A Ship with its Masts and Rigging, is no more to be compared with these Mountains, than a small House with a high Steeple. The Miles seem also to be very short, but when you go to walk them upon the Land, you find it quite another thing, and you will soon be tired ; and also because of the roughness and sharpness of the Rocks, and for want of a Path, you will soon get warm be it never so cold : a new pair of Shoes will not last one long here.

We went in the night, when it was a very clear Sun shine, upon one of the Rocks near the *English* Haven, about a Mile long, to look after a *Whale* that had got away from us ; in the middle of this Harbour others were a rowing in their Long-Boats, which we could hardly discern : a great part fell down from one of these Mountains, which sounded very loud. The Mountains look'd black, strip'd with veins of Snow. It was so calm that we could hardly perceive any breeze of wind, and not very cold.

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cold. The shoar was very full of *Sea-horses*, which roared so that we could hear them a great way off, as if some Bulls had bellowed.

In the Country we travel thus; We take along with us two or more Guns and Lances, to resist the Highway-men the Bears, but one is soon tired, as I said before, because of the stones and the loose Ice, whereon it is very troublesome to walk.

As many as I have seen of these Mountains are situated thus; The highest are from the *Foreland* to the *Muscle-Haven* (or *Muscle Bay*;) after the *Foreland* follow the seven Ice Mounts, which are very high Mountains; and they are called so from the Ice-Hills that fill up the Valleys, or lye between the Rocks. These mountainous Rocks are not so sharp or pointed at the top as the two foremost Rocks at the *Haven* of *Magdalen* are. Then cometh the *Haven* of the *Hamburgers*, *Magdalen*, the *English* and *Danish* Harbour, and at last the *South-Haven*. At the *Magdalen-Haven* the Rocks lye in a round or semi-circle, at each side by one another, stand two high Mountains that are hollow within, as if they were dug out: after the fashion of a Breast-work, with points and cracks at the top, like Battlements; at the bottom within the Hill, stands a Snow-hill that doth reach to the very top of the Mountain, like a Tree with branches and twigs; the other Rocks look rudely.

In this *South-Haven* the Ships ride at Anchor between high Mountains; on the left as we sail into it, is a Hill called the *Beehive* in the Cut C and D, marked with g; called so from its resemblance of a *Beehive*; close to it lieth a large and high Mount, called the *Devils Huck*,

commonly covered with a fogg, and if the wind bloweth over it, it darkneth the Haven, and seemeth as if it smoaked, filling the Haven therewith; on the top thereof are three small white Hills covered with Snow, in the Cut C and D, marked with *b*; two of them stand near to one another. In the middle of this Harbour is an Island in the Cut C marked with *i*, which is called the *Dead-man's Island*, because they bury the dead men there after this manner; They are put into a Coffin, and covered with a heap of large stones, and notwithstanding all this, they are sometimes eaten by the white Bears.

I have seen no other sort of Ground but great stones at *Spitzbergen*, so that the frost cannot penetrate far into such Ground. I admired that the Snow was at that time all melted away, and in the Cliffs between the great Rocks was no more Snow to be seen, although the holes were very deep. I fancy that abundance of rain had fallen in the Spring, and that the weather had been tolerable, or else we must have seen more Snow there.

There are also more small Islands here and there in this Harbour, that have no particular names, but are called *Birds Islands*, because we gather thereupon the Eggs of Mountain Ducks and *Kirmeums*.

Then you come to *Schmeremburg*, so named from *Schmer*, which signifieth grease; there are still Houses standing, formerly built by the *Dutch*, where they used to boil their Train-Oil. Some *Dutchmen* once attempted to stay there all the Winter, but they all perisht: in the Cut C it is marked with *k*.

It is observable that a dead Carcase doth not easily rot or consume; for it has been found, that a man buried ten years before, still remained in his perfect shape and dress; and they could see by the Cross that was stuck upon his Grave, how long he had been buried.

These Houses are now from year to year destroyed and burnt.

This year were yet standing several Houses, like a little Village, some whereof were then burnt.

Over-against *Schmerenburg* were also several Houses standing, and a Kettle or Boyler; they call that place the *Cookery of Harlem*. This year four Houses remained, whereof two were Ware-houses, in the others they dwelt. They are built after this fashion, not very large; there is a Stove before with a Ceiling at top, and behind a Chamber taking in the whole breadth of the House: the Ware-houses are something larger; therein were still several Barrels or Kardels that were quite decayed, the Ice standing in the same shape the Vessels had been of. An Anvile, Smith's Tongs, and other Tools belonging to the *Cookery*, were frozen up in the Ice. The Kettle was still standing as it was set, and the wooden Troughs stood by it. From thence you may go to the *English Haven*; on the other side is the place where the dead are buried; this is something even, like earth, but it is levelled on purpose. Behind these Houses are high Mountains; if one climbeth upon these, as we do on others, and doth not mark every step with Chalk, one doth not know how to get down again. When you go up, you think it to be very easie to be done; but when you are to descend, it is very difficult
and

and dangerous, so that many have fallen and lost their lives.

The River there is called the *South Harbour*, or *Bay*; and if the Ships suffer any damage at Sea, they refit there.

At the entry into the *South Harbour*, in the Valley between the Mountains, is collected great quantities of fresh Water from the Snow and Rain, upon the shoar stand abundance of Kardels or Barrels; we used this Water for our Victuals, and other occasions: it is also found in the Clifts of the Icy-hills on shoar; but true Springs out of the Ground I never saw in *Spitzbergen*.

The shoar there is not very high, but the water is deep, there was no Ice at all to be seen in it, from whence I conclude that it had not been a severe Winter; for it is impossible that the Ice could have been melted in so short a time, not only here, but also in the *English Haven* or *Bay*, where the Ice stood firm still, and hardly lay above half a Fathom under water.

The Ice doth melt much sooner in Salt-water than in fresh River-water, but yet it is impossible that so thick Ice could have melted in so short a time. We saw also that the Snow melted on the tops of the high Rocks, and the water ran down, although it was there much colder then below; yet above and below it melted alike: differently from what I observed since in *Spain* in the Month of *December* 1672. the wind being North-west, when the Rain fell below about a quarter of a League, yet above it the Mountains were all covered with Snow, all in the streight Line, one not higher than the other, as if they had been levell'd.

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In the *Northern Haven* or *Bay*, lyeth a very large Mountain, flat at top; this Island is called the *Birds Song*, from the great number of them that build and hatch there; for when they fly up, they make so great a noise, that one can hardly hear his own words: This is marked with *b* in the Cut *D*.

Beside these there are more *Islands* named in the Map, as the *Clifted Rock*, and such other.

The *Rebenfeld* is a low Land, and it is called so from the Deer commonly seen there.

I was informed that it is all Slats, that stand up edgewise, so that it is very troublesome to go on, it is all over-grown with Moss. There is a Hill upon it that looketh like fire.

Behind the *Rebenfeld* are high Mountains again, they are not pointed at top, they lye as it were in a Line; by the *Rebenfeld* runs up a River into the Country, and is called the *Halfmoon-Bay*, from its shape. On the other side of the River is a Mountain, flat at the top, and full of cracks all filled up with Snow. Then cometh the *Liefde-Bay* (*Bay of Love*) where two Hills stand together very like unto *Spitzbergen* at *Magdalens Bay*, and those two Harbours are very much like one another.

Then we come to lower Ground behind the *Muscle Harbour*, where the Grass was so high, that it covered our ankles, as far as we went.

Next is the *Weibgatt*, or the *Straights of Hindelopen*. The *Weibgatt* is called so from the Winds, (for *weihen* signifieth blowing) because a very strong South-wind bloweth out of it. On the *Rear-Haven*, upon the Land, are all red stones.

Behind the *Weibgatt* followeth the *South-west Land*, which is also low; it seemeth as if it was adorned with small Hills: then follow the seven *Islands* which we could see. We

We saw no Ships go any farther, neither could I understand that ever any Ships did go farther, nor can they go so far every year towards the East, because of the danger of the Ice that swimmeth, and is brought from thence by the wind and stream.

In *May* and *June* is the best fishing in the Ice between the *Island* of *John Mayen* and *Spitzbergen*. In *July* and *August* the *Whales* run Eastward by *Spitzbergen*, we saw at the latter end many *Whales* that run to the *Weigatt*. It is unknown whether the Haven of this *Weigatt* goeth through the Country, or no. But this is not that *Weigatt* whereof so many things are written.

More I do not know of this Country. Rocks and Snow and Ice-hills we find in abundance there, and the Creatures that live upon them, I shall describe hereafter.

CHAP.

C H A P. II.

Of the S E A.

THE Waves begin to raise themselves at first from a small breeze of wind, and by the increase and continuance of the breeze they grow longer, higher and bigger.

The Sea is not immediately made rough in the beginning of high winds, but the Waves swell by degrees and slowly, until they come to be as bigg as Mountains; then they expand and break themselves, and fall over with dashing and foaming, as you may see by *k* in the Cut *D*.

Then the following Wave from behind raises it again, with much curled and foaming Scum, neatly spotted with the white Foam, looking like Marble. This breaking and foaming of the Waves is successively repeated.

So the swelling Waves continually follow one another, moving before the wind with a quick motion, but when these Waves are short, they dash over the Ship, and break much, so that the Ship is hardly able to live.

In stormy weather little Waves curl on the top of the great ones, and lesser again upon them.

The

The Ships do not feel these smaller Waves but only the great ones, that are called Sea-Mountains, which heave and mount the Ship with them, but nevertheless she always keeps her strait way through these unpathed Waves, which is wonderful to behold.

In a hard storm the froth of the Sea drives like dust, and looketh as when the wind driveth the Snow along upon the Ice, or as the Dust of the Earth does in dry weather, and you see the Sea every where to look like curled Ice, that when it is a freezing is hindred from it by the wind, all covered with a white foam, and one Wave blows over the precedent, with a great roaring and noise, as if a Water-mill were a going; and this same noise the Ships make likewise when they cut through the Sea.

It is also to be observed, that the Waves dash against one another when the wind changeth, and cross over through one another, with great dashing over the Ships, before they move all one and the same way.

I did not observe here the Seawater so clear, nor found it so salt as near the Ice; it may be by reason of the shallow ground or bottom, and the many fresh Rivers that run into it; or because the Frost cleareth the water more.

Concerning the manner of their Sailing; they sail and change their Ways and Sails according as they think fit. If there be a fresh Gale, they make use of all their Sails; if a storm, with the two lowermost Sails, whereof they call the first the *Fock* or *Fore-sail*, the middlemost *Schumfer* or *Main-sail*, and the third the *Basan* or *Mizen-sail*.

In

In hard storms they furl the fore Sail, and sail only with the Main-Sail and the Mizzen-sail.

In the greatest storm of all, with these Sails reefed or half tied in, as they call it, or with the Mizzen-sail half furled up; this they do because the Ship goeth the steadier by reason of the wind, for else it would rowle too much up and down in the Sea, and the water would dash in too much on the sides thereof.

One man stands always at the Helm to steer the Ship, but in hard weather ten men can hardly hold the Helm, wherefore they fasten it with a Tackle, and so let it go too and fro, as the Compass directs them.

In and after a storm we have oftentimes strangers come to visit us in our Ships, viz. Blackbirds, Starlings, and all sorts of small Birds, that have lost their way in a storm from the land, and fly to the Ships to save themselves, and prolong their lives, when others fly about till they are spent, and then fall into the Sea, and are drowned.

The Lumbs, and other Water-fowl, come not near us; which I mention on purpose to confute the erroneons Opinion of some, that believe that the before-mentioned Birds come to the Ships as Messengers, to bring the ill news of bad weather.

Yet notwithstanding, these following signs or marks commonly fore-tell a storm or hard weather, when great fish come near to the Ships in great numbers, when they play, dance, rowl about, and leap out of the water, which is not always playing in them, but rather their Bodies are afflicted with some pain or other. We saw several Whales in the Sea, that threw them-

themselves about as if they were sick, or a dying.

When the Sea is tempestuous, it is not to be thought that it doth proceed from the Sea only, but a hard and tempestuous storm and wind followeth upon it, that sendeth the Waves like Messengers before it, until it arriveth it self with a tempest; but this is not to be understood of the North-sea, but only of the Sea betwixt *Hitland* and *Spitzbergen*.

When the Air is so disposed, as the Stars do not only look bigger, but as if they were more in number also, it is a great Prognostication, and often proveth true also; It is a sign that the Air is full of Mist, which causeth upon changing of the Frost, great foggs, and a high wind follows soon after.

At night, when the Sea dasheth very much, it shines like fire, the Sea-men call it burning: This shining is a very bright glance, like unto the lustre of a Diamond.

But when the Sea shines vehemently in a dark night, and burns; a South or West-wind followeth after it.

At the stern of the Ship, where the water is cut through, you see at night very deep under water, bubbles rise and break, then this shining or lustre is not there.

Hitherto we have discoursed of the North-sea, but next of the Waves between *Hitland* and *Spitzbergen*; near *Hitland* the stream runneth very swift toward the North, and it grows daily colder.

It is to be observed, that here the Waves of the Sea run longer, almost as they do before the narrow Channel between *England* and *France* in the *Spanish Sea*, (and what hath been
observed

observed heretofore of the rowling and tossing of the Sea belongeth properly to this) with a continual tossing of the Ships, which maketh the men Sea-sick.

The vomiting and sickness is attributed to the Sea-water; but it really proceedeth from the great and continual motion of the Body, when oftentimes we are forced to creep on all four.

Neither Meat nor Drink tastes well, the head akes and is giddy, and they are always reaching to vomit. Costiveness of the Body doth generally accompany this Distemper, and the Urine is highly tinged. I reckon it no more then if one is not used to ride in Coaches or Waggon; only that it is always accompanied with a bad stomach and restlessness.

The best Remedies for this Distemper, I believe, are Aromaticks chewed in ones mouth, as Cinamon, Cloves, Galengal, Ginger, Nutmegs, and the like. Many think to drive this Distemper away with fasting, but they will find themselves mistaken. Some drink Sea-water, and believe that will make them vomit, which notwithstanding is not occasioned by the Sea-water, but by the loathsomeness thereof.

To take away the ill taste out of ones mouth, in my opinion, the best means is to eat and drink plentifully, it easeth quickly; neither ought one to sleep too much, but keep in the Air, and look into the Wind, and to walk up and down in the Ship, is also very proper.

But now let us return to the Waves again; they rise, although it be not windy, as high as Mountains, very smooth, and run away as
D far

far as one can discern them, which is to be understood when the Sea is turbulent, whereupon quickly a hard Gale of wind followeth. In a storm the Waves run after the same manner, as is just now said, but with many curling and foaming whirls, as is described in the storm of the North-sea. These Waves run a great way, so that you may see between them at a great distance.

If any Ships be in your Company, oftentimes you cannot see them.

These Waves are a great deal larger then in the North-sea, and have also greater power when they fall over, but do not dash so easily over the Ships as they do in the North-sea. The Waves in the North-sea are presently lay'd after a storm, but the commotion of these lasteth often to the third day; if it be never so calm, the Ships are moved very violently, that you cannot walk, sit, or lie; it is best to keep in the middle of the Ship, for before and behind the Sea beats hard against them. The Sails are driven against the Masts, and have no steadiness from the wind. If in a brisk Gale of a full wind the Sails are all full and round, the Ship sails best upon the Sea.

There is as great difference in Ships, as to sailing, as there is in Horses, concerning easiness and swiftness; the motion of the Ships is therefore different; the stillness and quietness, when nothing is tumbled up and down in the Ship, furthereth also sailing very much.

The Ships swim something higher in the Sea then they do in Fresh-water; for there is almost a foot difference in a Ship with the same loading. 'Tis generally agreed upon, that one
may

may see a Ship in a calm Sea three, or three and a half *German* Miles off, and beyond that distance the Sea loseth it self in the Air, and the Air in the Sea. If a Ship faileth on the main Sea at one and half *German* Miles distance, you have lost the sight of half the Ship; at two Miles you see only the uppermost Mast, at three Miles distance you see only the Flagg, and when it goeth farther, you have quite lost it.

Land and Mountains may be seen at a great distance at Sea; we saw *Spitzbergen* at twelve Miles distance off at Sea; the Country looked like a black Cloud full of white stroaks, as is in the Cut *D* marked with *a, b, c, g, h, i*. Near the Ice of this Sea it is coldest where the Waves are quiet; and the Sea-water is so clear, that at twelve and more Fathoms deep you may see the bottom. There is no ground to be found near the Ice to drop an Anchor.

It is also to be observed, that according to the colour of the Skies, the colour of the Sea is changed. If the Skies be clear, the Sea looks as blew as a Saphir; if it is covered somewhat with Clouds, the Sea is as green as an Emerald; if there be a foggy Sun-shine, it looketh yellow; if it be quite dark, like unto the colour of *Indico*; in stormy and cloudy weather, like black Sope, or exactly like unto the colour of black Lead.

If the wind be quite calm, one may hear beating or knocking at a great distance on the the Sea, by which we also observe the *Whale* hears, as shall be mentioned in its proper place.

Among the Ice the stream runs Southwards, which we observed by our driving back a great way. At the *Muscle-Haven* the stream ran Northwards. Those that sail yearly to those places, cannot give any certain information concerning ebbing and flowing; only they have observed the water to be higher about the Land, when the winds have been higher then at other times. And this I have also observed, that if there was an orderly or continual ebbing and flowing, the Eggs of the Birds would be drowned upon the Islands.

Certain information, concerning ebbing and flowing, is not easily to be had, I know no more of it then what I have written.

CHAP.

C H A P. III.

Of the I C E.

IN the Months of *April* and *May* the west Ice breaks, because it lyeth Westward, which drives disperfed in the Sea, by the Island of *John Mayen*, and reacheth to *Spitzbergen*, where at that time it was firm still, as you may fee in the Plate *A* marked with *e*.

The difference between the Ice of *Spitzbergen*, and that of our Country, is, that it is not smooth there, fo as to slide upon it.

Neither is it fo clear nor transparent, nor fo sharp and cutting, but a great deal harder, and is not easily broke or split; but it looketh likeft unto the Ground-Ice of the Rivers in our Country, or like unto Loaf-sugar.

Where the Ice is fixed upon the Sea, you fee a snow-white brightness in the Skies, as if the Sun shined, for the Snow is reflected by the Air, just as a Fire by Night is; but at a distance you fee the Air blew or blackish: where there is many small Ice-fields, that are as the Meadows for the *Seales*, you fee no lustre or brightness of the Skies.

The Sea dasheth against these Ice-fields, which occasioneth several fine Figures; not that they are naturally framed fo, but just as Ice flowers on our Glas-windows, get all sorts of figures; for these are framed by the dashing of the Sea, like unto Mountains, Stee-

ples, Tables, Chappels, and all sorts of Beasts.

These Ice-fields are a great deal deeper under water, then they are high above it, and are of a paler colour under water then above; the top of them might be called the Kernel and Marrow of the Ice, because the colour is much deeper then that of the other.

The highest colour is delicate blew, of the same colour with the blewest Vitriol, somewhat more transparent, yet not so clear as that in our Country, which you may see through, let it be never so thick; it is as hard as a stone, and it is not easily split or cleav'd, because it is spungy, like unto a Punice stone. Among this Ice the Ships sail up and down, until they come to bigger Ice-fields, for the small ones incumber the Sea, that the Ships sail often against them and perish; for when the winds arise the Waves drive against the Ice-fields, as if it was against Rocks, and beat the Ships to pieces.

When we are passed by these small Ice-fields that swim at a great distance from one another, then we sail in between them, and draw a small Ice-field behind the stern of our Ship, that it may be the sooner stopt, and kept from swift sailing, without letting the Sails strike, for else it might easily run against an Ice-field. Every Ship's Master is left to his free will, whether he will sail into the Ice, because in the Spring the *Whales* are in great numbers seen there in the *West-Ice*, as they call it.

The Masters do not willingly sail in amongst the Ice, when it is dark, or foggy, or stormy, which must be expected in the Spring, and the small sheets of Ice swim up and down
in

in the Sea, which the Skippers must avoid, lest they lose their Ships.

It may seem something strange, that they sail so often to the Ice and back again, but there is the same reason for it as is in hunting after Deer, if we do not find Whales in one place, we must seek them in others; for the fortune in ketching of *Whales* is like the Chances of Gaming, and there is no great understanding required to find them: some see and catch more then they desire, and others but at half a mile distant from them, see not one, which is very common.

When they go in amongst the Ice, the men stand ready with great Ice-hooks to keep them off, that the Ship may not run against them.

The farther you sail into, and amongst the Ice, the greater Ice-fields you shall see, so that you cannot look over them; for about the West, as they call it, are larger Ice-fields to be seen then about *Spitzbergen*, quite white at the top, covered with Snow, so that there is but ill walking upon them, because you fall deep into the Snow. (See *A* marked with *l*, and *B* marked *c*.)

The prints of the *Bears* footing we saw on the shoar of the Ice-fields, for they seek their Prey in the water, which is the dead Carcases of the *Whales*, the *Foxes* generally accompany them, for their choicer food of Birds is here scarcer then at *Spitzbergen*, for they flock not together, but fly singly.

When they sail some Miles into the Ice, where there is pretty large Ice-fields, they joyn their Ships to them with great Ice-hooks, fastened to strong Cables, where they lie at An-

chor, several Ships about the same Ice-field, but they rather chose to be alone, because they are an hindrance to one another in *Whale*-catching, and the hunting of them from one to another maketh them shie.

Amongst the Ice we find no great Waves, but it is pretty smooth, even when it is somewhat stormy. All the danger is from one Ice-field being bigger then the other, and the little ones swimming faster then the great ones, which often causeth a stoppage, so that they crowd upon one another, not without great danger of the Ships, which are often caught between, and broken by them. See the Plate *B* at *a*.

The Seamen hinder the pressing on of the Ice as much as in them lieth, with great Ice-hooks; but what small help this affordeth them daily experience testifies sufficiently. In fair weather the mischief is as soon done as in tempestuous, because the Ice drives in the Sea either with the stream or wind, as either of them is the more prevalent, crashing and grinding against each other whence the danger arises to the Ships, for after such a manner many Ships perish. See Plate *B*.

They say that a dead *Whale* tied to the Ship, is the best defence against the Ice. Others hang the Tails and Fins about their Ship, which way is not to be rejected, for it is of great use to them to prevent the danger of the squeezing of the Ice; they have examples, that in such squeezing of the Ice a dead *Whale* hath preserved them.

The

The Ice rises out of the Sea as high as a Mountain; the striking of them together makes so great a noise, that one can hardly hear his own words; and from this joyning together of the Ice, the great Ice-hills are made, that drive up and down in the Sea.

Other great Ice fields are not so high as the Ice hills, yet notwithstanding they are hardly ever quite plain, and without a Hill; you see the Ice under water as deep as you can see. It is all of a blew colour, but the deeper you look the purer blew you see; which beautiful colour changes with the Air, for if it be rainy weather, this colour groweth paler. I also have often seen the Ice underneath the water very green, the occasion whereof was the troubled Air, whence the Sea assumeth this colour.

I wonder that upon the largest Ice-fields no high Mountains are seen, as are seen where the Ice grinds and dashes one against the other.

I am of opinion, that the Ice melts towards the bottoms, for one may see it spungy; for else, if one would compute from the beginning, it must have reached the very ground, even in the middle of the depth of the Sea.

I have seen in *Spitzbergen* white Ice that was frozen quite curled, it look'd just like Sugar-candy, was very hard and thick, and swam even with the Seas surface. The Ships are not always in this danger of squeezing, for often times there is little or no Ice to be seen there, although you are a great way in the place where it usually is; but as soon as a wind arises, you would admire from whence
so

so great a quantity of Ice should come in less than an hours time.

At the greatest Ice-fields of all, Ships do not always ride the safest; since by reason of the bigness, and the motion of the Sea, these Ice-fields break, not without danger.

When such Ice-fields break they part a-funder, which causeth a Whirl-pool in the Sea, where all the out-parts press to the Centre, and by that means the pieces of the Ice-fields raise themselves up, and dash and grind against each other.

When we came to 71 degrees in the Month of *April* we saw the first Ice, and so we sailed up and down by the Ice, until that Month was spent, for so early in the year nobody dares venture himself into or amongst the Ice, by reason of the stormy winds; and some times the Ice is still fixed, and stands firm, and therefore there is but a few *Whales* seen, for underneath the Ice they cannot breathe.

Into the Ice we sailed at 77 degrees and 24 minutes, and drove with that sheet of Ice towards the South. In this Month, and also in the following Month of *May*, are the most *Whales* seen here, which run towards the East, and we follow them all along by the Ice to *Spitzbergen*.

Near to the Land smaller Ice-fields are seen, because the Ice cannot give way by reason of the Land, which causeth greater grinding and breaking, and upon that account smaller Ice than is in the open Sea. Yet for all this, some greater Ice-Mountains are seen there, that stand firm on the shoar, and never melt at bottom, but increase every year higher and higher,

higher, by reason of the Snow that falls on them, and then Rains that freezes, and then Snow again alternately; and after this manner the Icy-hills increase yearly, and are never melted by the heat of the Sun at the top. These Ice-Mounts change their first colour in time by the Air, by Rain and by the Clouds; and the fairest blew that can be, is seen in the cracks of these Ice-hills. From these same Ice-hills, oftentimes break off great pieces, that swim in the Sea, and is more compact than the other Ice by far. I once saw one of these pieces that was curiously workt and carved, as it were, by the Sea, like a Church with arched Windows and Pillars, the Doors and Windows hung full of Icikles, on the inside thereof I saw the delicatest blew that can be imagined; it was bigger than our Ship, and somewhat higher than our stern, but how deep it was under water, I cannot exactly tell. Near unto the *Muscle-Haven*, a great Ice-hill came driving towards our Ship, that was as high as our Poop, and went so deep under water, that it took up our Anchor, which lay fifteen Fathoms deep. I have also seen several others, and of other figures, *viz.* round and four-square Tables, with round and blew Pillars underneath, as in Plate B marked with *f*: the Table was very smooth and plain at the top, and white with the Snow; at the sides hung down a great many Icikles close to one another, like a fringed Table-cloth; I believe that near forty men might have sat about it. I have seen of these Tables with one foot, and with two or three Pillars, and abundance of *Seales* swam about it. The Dishes that furnisht this Table, were a piece of Ice like an Horses head,

head, and a Swan, I doubt they were but salt. You must observe that this Ice becometh very spongy by the dashing of the Sea, and from thence grows salt, like Sea-water, and thence also changeth its colour, *viz.* from the Sea and Rain-water mixt with it; for you shall commonly see the Water look blew or yellow, if you walk under water, with your eyes open, and look upwards.

The other Ice, as far as it is above water, is of a taste like other Ice, but that below the Sea salt like the Sea-water.

When we arrived at *Spitzbergen*, the Ice at *Rebenfelt* was as yet fixed, but a few days afterwards it was driven away by the winds.

The Ice begirts these Countries on all sides: as the Wind sets either from the *Island of John Mayen*, *Old Greenland*, and *Nova Zembla*. We found at this time, that the Ice reached from the other side of *Spitzbergen*, and the Ships sailed between the Ice and the Land, as if it were in a River.

As soon as this Ice is drove thither by the winds, the Ships must give way, or go into the Harbour, until the Winds have blown or driven the Ice away, or else they are lost; but if there be other Ships that escape, the men are saved.

On this Ice I did not see many *Sea-hounds*, but a great many *Sea-horses*, and many Birds and Fowl.

We sailed still on till we saw the *Seven Islands*, but could go no farther.

CHAP.

C H A P. IV.

Of the AIR.

THE Frost is unconstant in our Country but it is not so in *Spitzbergen*. In the Month of *April*, at 71 degrees, it was so cold that we could hardly keep warmth within us. They say that in this Month, as also in *May*, the hardest Frosts happen every year.

All the Rigging, by reason of its being wet, is covered over with Ice, and stiff.

They do not send their Ships so soon as they did a few years ago, and yet they come time enough there, for if they arrive too early, there is nothing for them to do, because the Ice is not yet dissipated, and therefore but few *Whales* to be seen.

In the two first Summer Months of *Spitzbergen*, their Teeth chatter in their Heads commonly, and the Appetite is greater than in any other Countreys.

The Sun sets no more after the third day of *May*, and we were about 71 degrees, when we could see as well by night as by day. I cannot say much of constancy of the weather in these two first Months, for it changed daily. They say also, if the Moon appears cloudy and misty, with a streaky Sky, that then there commonly follows a storm. Whether the Moon doth prognosticate such storms, I cannot tell, because we have observed, that
after

after we have seen the Moon, in a clear Sky, the Air has grown foggy, which happeneth often, chiefly if the wind changes. When the Hills show fiery, it is from Fogs, which after spread themselves every where, and the Cold encreaseth: These Fogs look blew, like *Indico*, and black afar off, which upon changing of the Weather are driven along by the wind, so that in less than half an hour the Sea is so covered with a thick Fogg, that you can hardly see from one end of the Ship to the other.

On the 14th of *May* the Air was bright and clear, and yet very cold; we could see the *Whales* farther off in the Sea, then usually at this time: We could not distinguish the Air from the Sea, for it shewed as if the Ships danced in the Air like naked Trees or Poles.

After the same manner *Spitzbergen* looks at a distance like a Cloud; the Mountains are so reflected by the Sea, that he that knows not the Country very well, cannot easily discern it from the Air; and so other Countries very often appear. The other three Months, *June*, *July*, and *August*, were very calm.

Concerning the Cold, it is much according to the quality of the Winds; so North and East winds cause very intense Frosts; so that one can hardly keep alive, especially if the wind blows hard.

West and South winds, when somewhat constant, cause much Snow, and sometimes Rain also, and moderate cold.

The other winds of the 32 according to the Compass, whatever names they have, are changed by the Clouds, so that sometimes
when

when the wind was Southwest and by South in one place, at a few Miles distance, there blows quite another wind.

What heat the Sun oftentimes affords we saw by our Eyes watering, and the tears that ran continually down our Cheeks. Yet this severe Cold is not always, as is already mentioned, for if it were, how could any Herbs grow there.

Neither is there every year a constancy of winds or weather ruled by the Moon, but an alteration, as is in other places, sometimes a milder, and sometimes a severer Winter.

Skilful Ship-masters and Harpooners, commend those years for *Whale* catching, that have not many foggy and cloudy days.

Whether, according to the New and Full Moons, the Spring-tydes happen, cannot be known.

Such clear Skies as we have sometimes in a Summers day, with pleasant curled Clouds, I have not seen at *Spitzbergen*; but on the contrary, several dark and foggy ones. Rising Thunder-clouds I have not seen, nor ever heard of any body that had seen them.

Above the Ice the Air appears white, from whence we know where the firm or fixed Ice lies, as I have before observed in the Chapter of the Ice.

In the two last Summer Months, chiefly in *July*, before the *Weigatt*, the Sun shin'd so warm, that the Tarr of the Ship between the Seames, where the wind could not come at it, melted.

There

There is hardly any difference of Cold between Night and day, yet at Night when the Sun shineth, it seemeth to one that rightly considereth it, as if it was only clear Moonlight, so that you may look upon the Sun, as well as you can upon the Moon; so that thereby one may distinguish Night and Day from each other. Increase of Cold, and changing of the Compass, we did not observe as far as we went.

It is also to be observed, that the Frost doth not let a dead Body be consumed easily in the Ground, as is already observed, in the Chapter of the Description of *Spitzbergen*.

The second day of *August*, in our Voyage homeward, we observed the Sun first to set.

Concerning the Meteors generated in the Air, I observed that the *Rime* fell down in the shape of small Needles of Snow into the Sea, and covered it as if it was sprinkled all over with Dust: these small Needles increased more and more, and lay as they fell cross one over the other, and looked very like a Cobweb; they are formed by the cold of the Air, and increased to that degree, that the Sea seemed covered by them, as with a Skin, or a tender Ice, which had the taste of Fresh-water; as also the Sea-water that is taken up into the high Air is changed, and falleth down again in sweet or fresh Rain.

This hapneth in clear Sun-shine and intense cold weather, and it falleth down as the Dew doth with us at Night invisibly, in dull weather; when the Sun doth not shine, you cannot see this; but you see it plainly, if you look when the Sun shines towards a shady place;
for

for then it sparkles as bright as Diamonds ; shews like the Atoms in Sun-shine, all day long it falleth in so small Particles, that nothing sticks or hangs on your Cloaths of it to make them wet.

At Noon when the Sun shines very warm, these small Needles melt in the Air, and fall down insensibly like Dew.

Sometimes we see in our Country, something a little like these small Needles, which is what we call Rime, and falleth from the Trees in Atoms like Dust. This is small Snow, and may be seen as well in the Shade as in the Sun. These Needles are not the Exhalation or Vapour that rises in cold Weather, to stick to the Hair of Men and Beasts. I must not forget, that we see in these falling Needles a Bow like a Rain-bow of two colours, white and a pale yellow, like the Sun, reflected by the dark Shadows of the Clouds.

After this I proceed to the Description of an other Bow, which I call a Sea-bow. This is seen when the Sun shines clear and bright, not in the great Waves, but in the Atmosphere of the Sea-water, which the Wind blows up, and which looks like a Fog. Commonly we see this before the Ship, and sometimes also behind to the Lee-ward (so they call that side of the Ship towards the Sea) over-against the Sun, where the Shadow of the Sail falleth. It is not the Shadow of the Sail, but a Bow sheweth it self in the Shadow of the Sail. We see this pleasant reflexion, in the small drops of the Salt-water of several colours, like the Rain-bows in the Skies, that are seen over-against the dark Clouds.

E

This

This brings to my Mind another Phænomenon, *viz.* that in the Clouds near the Sun, a very bright Light is seen, like a Parelion or Mock-sun. These Lights are called Weather-galls by the Sea-men.

This bright Light we find in the lower-most Air, in the dark shady Clouds, that are not unlike to a Cloud of Rain, because it is full of drops, wherein the Sun is represented, as things are in a Looking-glass.

This clearness of the Sun causeth a Heat, which drives from it a Rain-bow, figured by the Sun, which Bow are the Drops that by the Heat of the Sun are changed into a Vapour or Fog, and this Vapour shews like smoak in the Air, when the Cold remits, wherein these Colours are no more seen.

But in these raised Drops, as aforesaid, the Sun represents it self, and causeth these Colours, which are truly distinct, and represent Blew, Yellow and Red; which are the three primary Colours of the Bow.

Concerning the bigness thereof, I did considered and minded the Bow that I saw in *Spitzbergen*, and found that it moved about with the Sun by Day and by Night, and that it appeared much bigger in the Morning, Evening, and at Night, than in the Day-time.

I will not mention the Whirlwinds which are unknown in these cold Countries; that used to take up the Water into the Air: But yet I will not omit the small Whirlwinds, that proceed from the high Mountains, from whence the Wind recoils, and so turneth round about.



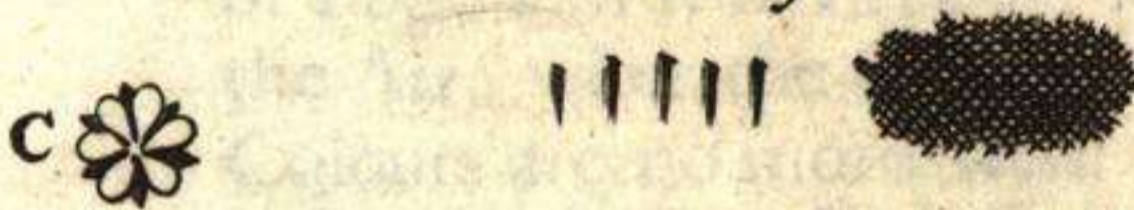
N.º 1.



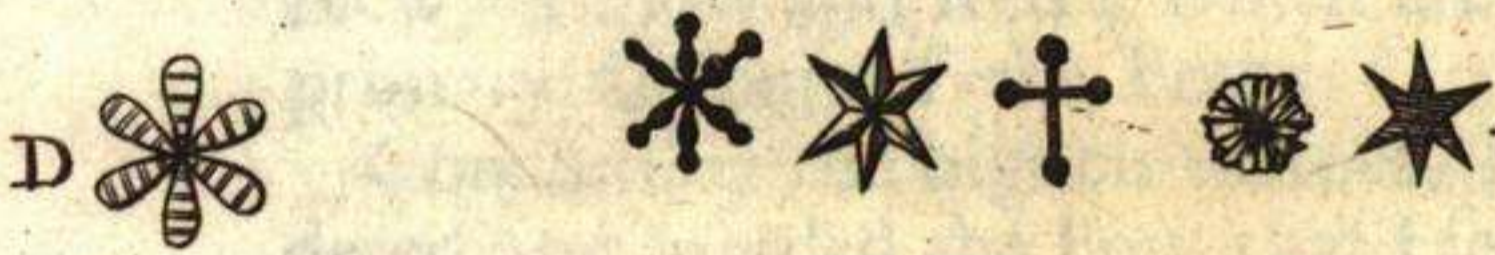
N.º 2.



N.º 3.



N.º 4.



N.º 5.



N.º 6.



Star : And this is the Formation of the snowy Star, which is seen in the severest Frost so long until at last it loseth all its Points. See *F.* as to the many sorts of Snow that fall in *Spitzbergen*, and in what Weather I have made these following Observations and Distinctions, Number 1. in the Plate of *E.* sheweth the Snow that falleth, when it is tolerable cold and rainy withal, then it falls like unto small Roses, Needles and small Corns. When the cold Weather doth remit the Snow falleth like Stars, with many points like the Leaves of *Ferne*. Plate *E.* Numb. 2. If it be only a Fog, and it snoweth much, it looketh as you see Numb. 3. If it is very cold and windy like Numb. 4. When it is very cold and not windy withal, the Snow falleth like unto Stars in a cluster, because the Wind cannot blow them asunder, like Numb. 5. When the Wind was *North-West*, or the Skies were thick of Clouds, and it was stormy withal, there fell Hail that was round and oblong all over full of Prickles, and of the same bigness as you see it at Number 6.

There is many more sorts of starry Snow to be seen, with more Points, and some like unto a Heart, but they are all generated after the same manner, by the Eastern and Northern Winds. The needly Snow is generated by Westerly and Southerly Winds: If the Snow is not dispersed by the Wind, it falleth down in clusters.

But when the Wind driveth it, Stars or Needles only fall, every piece by it self, like the Atoms in the Sun.

Thus

Thus much have I observed hitherto of the Snow, and find that also when it is cold and a North Wind blows, all sorts of Snow, both starry and of other shapes, fall as well in these Countries as in *Spitzbergen*.

The End of the Second Part.

THE
E 3

THE
THIRD PART
OF THE
VOYAGE
TO
SPITZBERGEN.

CHAP. I.

Of the Plants of Spitzbergen.

Generally the Figures of the Plants I here present you with were all drawn by the Life upon the place when they were fresh, and of their natural size, except the Rock-plant with but one Leaf, and the Plant like Horse-Tail, that stands by it, which because of their largeness could not be well drawn so big at
the

the Life. All the Herbs and the Mosses grow upon the Grit and Sand of the Stones, where the Water falleth down, and on that side of the Hill which the East and North Winds cannot easily come at. The Plants owe much of their growth to the Dung of the Birds.

There were a great many small Herbs, which for want of time I could not delineate, but I purpose to do it hereafter, if God b'lesseth me with Life and Health, when I make my second Voyage thither.

I omitted the white Poppy, whereof we stuck the Flowers in our Hats; the whole Plant was but about a Span long.

Besides I have not mentioned the *Red Sorrel*, I mean that which was shewed to me at *Bremen* by the *Dutch Gardener*, which was of the same size, but the Leaves of that of *Spitzbergen* are Red.

I desire the courteous Reader to accept at present of these for a Sample, to shew him that on these rough, barren and cold Mountains, there yet grow some Plants, for the Nourishment both of Man and Beast. The Herbs grow to their perfection in a short time, for in *June*, when we first arrived at *Spitzbergen*, we saw but very little Green, and yet in *July* most of them were in flower, and some of them had their Seeds already ripe, whence we may observe the length of their Summer.

I proceed to the Description of those Plants, which I had time to delineate, and begin with those, that put forth their Leaves only at, and about their Roots, and have but few or no Leaves on their Stalks.

Then shall follow those that have single Leaves on their Stalks; then those that have pairs of Leaves or opposite ones, afterward those with three Leaves, and then conclude with the imperfect Plants.

C H A P. II.

Of a Plant with Aloe-Leaves.

IT is a very pretty Herb, and puts forth thick, prickly and sad green Leaves like those of Aloes, a brown naked Stalk, about half the length of your Finger, whereon hang round Heads of Flesh-coloured Flowers in Bunches, which are hardly to be discerned by the naked Eye, one Flower close above another, and near to one another Tab. G. marked with *a*.

Sometimes two Stalks shooke out of one Plant, one bigger than the other. Yet each Stalk has two of these Bunches of Flowers.

I could not delineate its Seed for want of time. The Root consists of many small Fibers.

We gathered it in great plenty on the 17th. of July, behind the Cookery of *Harlem*, in the running Water.

I know not well, to what kind this may be referred. *Caspar Baubin* maketh mention of an Herb in his *Prodromus* of his *Amphitheatrum* of Plants in the 5th. Book and 15th. Chapter, which he calls *Limonium Maritimum*, which he describeth

scribeth with small, roundish and thick Leaves, like House-leek, between which spread forth small Stalks with pale red Flowers; but the Root doth not agree with our Plant, for his is long, red and parted at top, whereas this Root consists in many small Fibers, and is not red.

C H A P. III.

Of small House-leek.

THE Leaves of this are indented and very like those of our Daisies, for which I should have taken it also, had not it been for the Flower, only the Leaves are thicker and more juicy, like those of House-leek, or, as we call it, those of the lesser House-leek: The Leaves grow round about the Root, betwixt them is a small Stalk of the length of your little Finger, which is round and hairy, and generally without Leaves, save only where it divides into another Stalk, at which place is a small Leaf.

The Flowers grow in scaley Heads (like unto the Flowers of *Stæchas*) are of a brown colour, and have five pointed Leaves, as I think with five small Chives within, like unto the Flowers of Wall-pepper or Stone-crop. I found only the Flowers, for the Seed was not yet ripe. The Root is somewhat thick and strait, with many strong and thick Fibers from the sides of it; it may be referred to the House-leeks,

leeks, and called small indented or crenated House-leek, with scaly Heads.

This Plant I found in the *Danish* Harbour or Bay on the 18th. of *July*, it is figured in Tab. *F.* at *a.*

CHAP. IV.

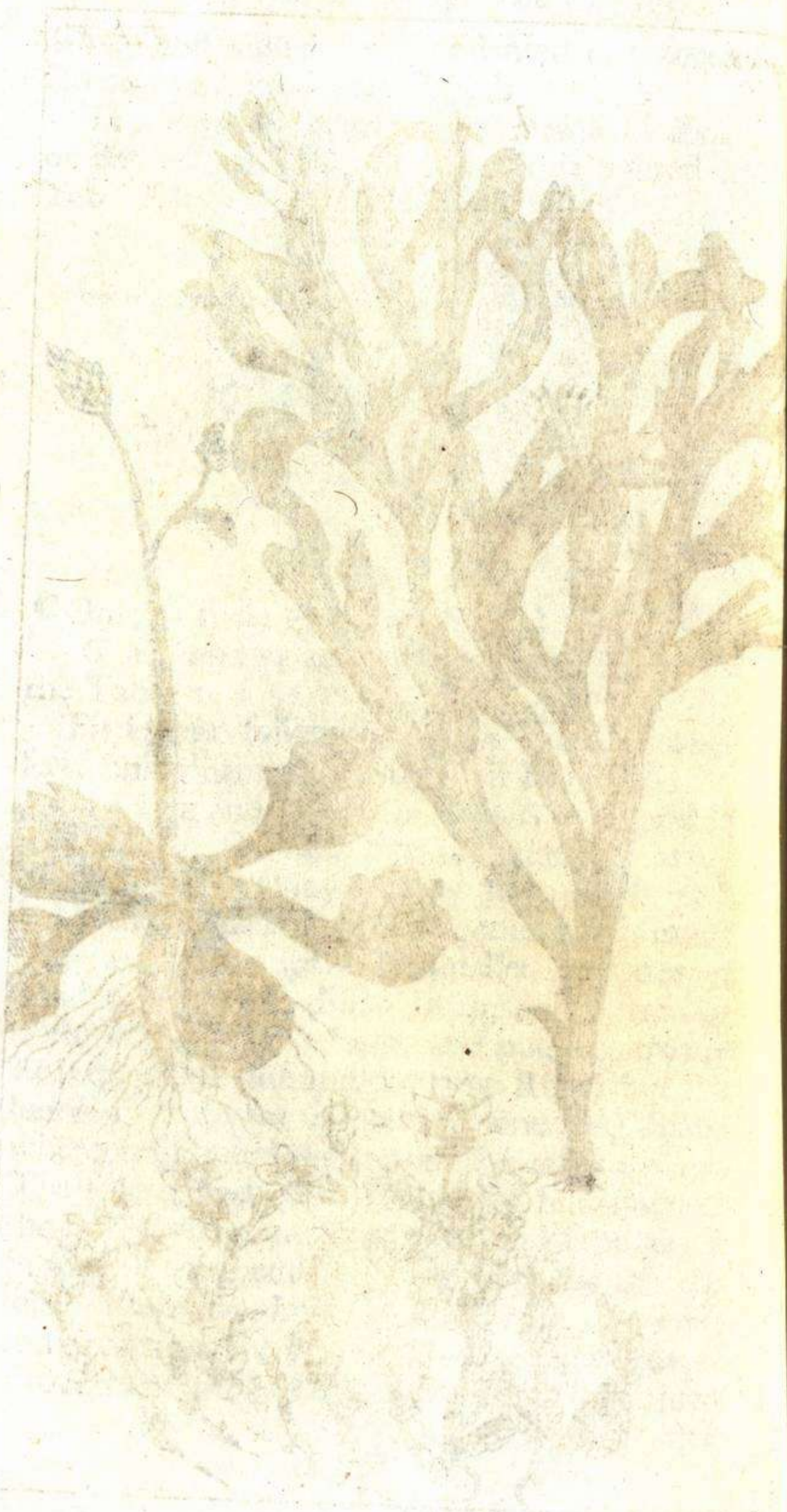
Of Crows-foot.

SOME of these Plants are figured in the Tab. *G* at *c* and *e*, and the Tab. *H* at *c*, and in the Tab. *I* at *d*.

These four following Plants are all Crows-feet, only distinguished by their Leaves.

The first and fourth in Tab. *G* at *c*, and in Tab. *I* at *d*, are very like one another as to their Leaves, whereof they have both two sorts, the undermost broader, and not so much cut, and the uppermost smaller and deeper divided, yet they differ in this, that the first doth not grow so high, and puts out many Leaves out of one and the same Root, but the fourth in Tab. *I* at *d*, hath but one long Stalk, whereon sprouted out one single Leaf at a place. The fourth hath yellow Flowers, but whether the first hath yellow ones (which I suppose) I cannot well remember. The Flowers of the fourth hath five Leaves, broader at the ends and smaller at the bottom; they grow out of a rough *Perianthium* or Cup that is split into five









H. Art





five also. See Tab. I at *d*. The Flowers of the first have six Leaves, they are small and the Seed-vessels are like one another.

The Roots are differing, that of the first hath many small Fibers, and the fourth hath a thicker and longer, with tender and small Fibers. The first burns the Tongue like *Persicaria* or Flea-bean, but somewhat less than in our Countries. The Leaves of the fourth do not burn so.

I found them both in the *Danish* Haven, the first in great quantities; they flower in *July*.

The second hath somewhat differing Leaves from the two former, for although the lowermost Leaves agree with them of the first, yet they are less, and those that grow higher, and come up after the lowermost, are in two places deeper cut, so that the first part of the Leaf that stands out before, is not very unlike a Tongue, but the two sides are but a little indented in Table G it is marked with *e*.

There is also a difference in the Leaves of this Plant, as well as in the two before mentioned, for the Leaves that are nearest to the Flowers are small and deeply cut, and that with two incisions, and it burns the Tongue. The Flower is small, and hath six and sometimes seven Leaves. The Seed-vessel is like unto the former, only it is less. The Root is like that of the first, only it hath more Fibers; there is also a kind of thick sheath that surroundeth the Stalk, as is also to be seen in the fourth. I found this Plant near the first, in the *Danish* Haven the 16th. of *July*. The third is yet smaller, but fuller of Leaves, only

ly they are less, and not so deep cut, although they have also four Incisions like the second, in this I did not find that difference in the Leaves, between the lowermost and those that are nearer the Flower, it is in the Tab. *H* marked with *c*. The Flower is of five white Leaves, its Seed-vessel I could not yet see. Its Roots are small Fibers, I found it in the *South Haven* on the Sixteenth of *July*; it burns the Tongue, the Leaves are thick and juicy.

I found in the same place another small Plant, exactly like to these, only the Flowers thereof were of a purple Colour, and the Leaves not so juicy; wherefore I did not draw it.

C H A P. V.

Of Scurvy-grass.

THis *Scurvy-grass* sends forth a great many Leaves from one Root, that spread themselves round about it upon the Ground. The Stalk grows out of the middle of these Leaves, which is a great deal lower than in our Country, with a few Leaves underneath the Sprouts. The Flowers are of four white Leaves, they grow many on the same Stalk one above the other, when one Flower fades, another cometh in its room when the Flower is past; the Seed appears in a longish Box, as you may see in the

the Figure; when on the contrary in ours the Seed is found in a round one. The Root is white, somewhat thick and streight, with some small Fibers below.

A great quantity of this Plant is found on the Rocks, where they are not much exposed to the East and North Winds; I found it most in the *South, English, and Danish Harvens*, the Earth was quite covered with it in the *Danish*.

It was the first Herb I found in *Spitzbergen*, when we Landed the first time, it was so small that I could hardly discern it to be Scurvy-grass, but afterwards we found it in its full perfection, and it seeded in the Month of *July*.

It is observable, that the Leaves of this Herb have but little sharpness at *Spitzbergen*, and therefore it is much weaker than the Scurvy-grass of our Countries, so that we eat it instead of Salads in *Spitzbergen*, which we could not do our Scurvy-grass.

My Figure is like that cut, given in the Third Book, and the 35th. Chapter of the *German Herbal* of *Matthiolus*. See Tab. *H* at *a*.

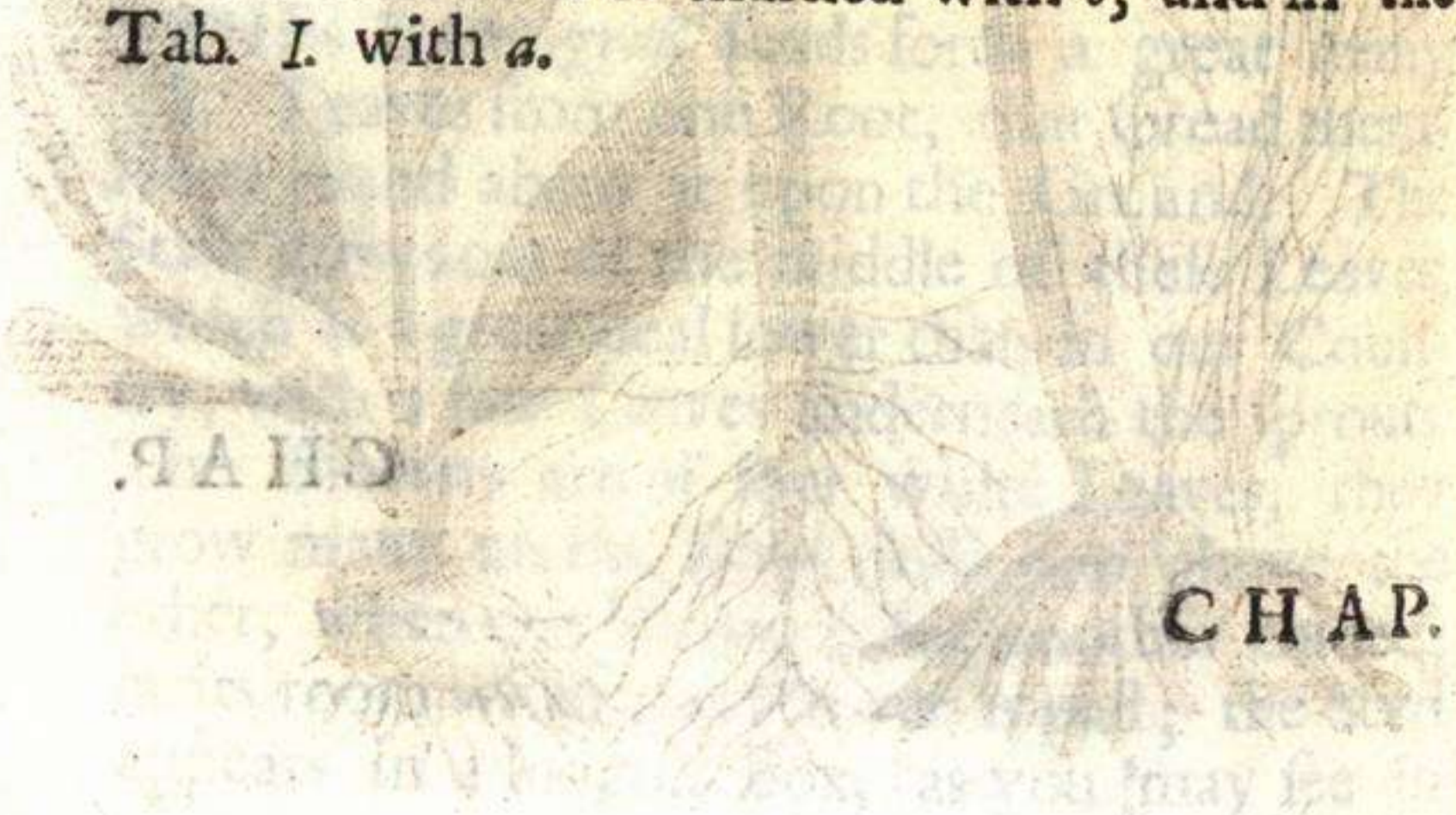
CHAP.

C H A P. VI.

Of an Herb like Stone-crap.

THIS Plant is doubtless a kind of a Stone-crap, but the Leaves are rough or hairy, not so thick, nor so juicy as ours are, neither doth it burn or bite, like unto ours.

Before the Flower fully appears, it looks like unto that of *Esula*; but when it is quite blown and opened, it is of a purple Colour, and hath sometimes five, sometimes six, and sometimes I have seen nine Leaves, the Stamina of the Flower I did not tell, neither did I ever see the Seeds thereof. The Root thereof is very small, and one Plant grows close to the other. We found this Herb on the low Lands of the *English* Haven. Afterwards we found abundance of it amongst the Mosses on the 26th. of *June*. In the Tab. *F.* it is marked with *c*, and in the Tab. *I.* with *a*.



C H A P.





C H A P. VII.

Of a Snake-weed.

THis is a small *Snake-weed*, and is found very rarely in *Spitzbergen*; the undermost Leaves of this Plant are the biggest, but they are not above the breadth of ones Nail, they grow singly on the Stalk, yet not above three of them, except the lowermost: the nearer the Flower, the smaller they are; they have within, not far from the edge many small knobs or spots answering to the points of the Leaves, wherein the Veins or Nerves are terminated, besides the Leaves are not quite plain, but somewhat ruffled at the brims. Out of the Root sprouts forth sometimes single and sometimes double Stalks, as you may see in the Cut, and this by-stalk is always somewhat lower than the chief Stalk.

The Flower grows in a close Spike, with many small Flesh-coloured Flowers, it was so small, that I forgot to tell the Leaves thereof: The Seeds were not then come to maturity.

The Root sheweth of what kind the Plant is, and wherefore it may be called *Bistorta* or *Snake-weed*, for it lieth twisted in the Ground, it is about the thickness of your little Finger where thickest, hath small Fibers, is brown without, and Flesh-coloured within, and of an astringent Taste. I

I found this Herb in the *Danish Harbour*, on the 18th. of *July*. My Figure agrees most with that which *Camerarius* hath given in the Fourth Book and Third Chapter of *Matthiolus*, its marked with *a* in the Tab. I.

C H A P. VIII.

Of an Herb like unto Mouse-ear.

THIS Herb bringeth forth smooth edged Leaves by pares, they are rough and like Mouse-ear.

The Stalks are smooth at their first putting out, but afterwards they grow rough, where the uppermost Leaves grow, they are roundish at the bottom.

At the end of the Stalk groweth a white Flower, out of its *Perianthium*, the number of its Leaves I did not tell, nor had I time enough to observe the Seed. The Root is round and slender, with small and tender Fibers.

It seemeth, this Plant should belong unto the hairy or rough *Alsine*, and perhaps it may be the third or fourth kind of the hairy *Alsine*, of *Dodoneus* in the Fifth Book and Tenth Chapter of his first *Latin Herbal*, if the Leaves of his were not cut, as these are not. I gathered this Plant in the *South Harven*, on the 17th. of *July*. See *d* in Tab. G.

C H A P. IX.

Of a Plant like unto Periwinkle.

THis Plant runneth upon the Ground, and bringeth forth roundish Leaves by pairs on creeping Stalks.

The Leaves as I think are like those of *Periwinkle*, but they are somewhat rounder, and the largest of them are bent in before. The Stalk is somewhat knotty and woody.

The Flower appeareth at first, wrapt up like a Leaf, but after it is grown out a little more, one may see it to be a Flower, it grows out between the Leaves on the same Stalk.

The colour and shape of these Flowers, I could not at that time observe, because they were not yet blown, much less could I gather the Seed.

The Root is long, slender, round, woody and knotty, it hath small branched Fibers at the bottom: I found it in the *South Bay*, behind the Cookery of *Harlem* on the 19th. of *June*, and 17th. of *July*.

Since I neither saw the Flower nor Seeds, and in probability, it would have put forth more Leaves; I cannot determine, whether it be the *Pyrola minima*, whereof *Clasius* giveth us a Cutt and Description in the Fifth Book of his rare Plants, in the 20. Chapter; or whether it may be *Pseudochamae buxus* of the *Hortus Eichstetensis*, which

which is given by *Clusius*, in the 72th. Chapter of the before-mentioned Book, by the Name of *Anonymos Coluteæ flore*, and accurately described, and *Camerarius* in his *Hortus*, giveth it us under the Name of *Anonymos Pervincæ folio*. In the Tab. G. it is marked with *b*.

C H A P. X.

Of an Herb like a Strawberry.

THis agreeth in its Leaves with the *Strawberry*, for it hath three cut Leaves on the end of the Stalks, and its Flower hath commonly fives Leaves (seldom but four) and is like a Strawberry Flower, the Stalks are round and rough, and so are the Leaves.

On the Stalks you see two Leaves one against the other of a differing figure and bigness, for one looketh like a Hand, and the other like a Finger, the size also is different, for some have but three Fingers, and others have more.

The Flower is yellow, the Leaves of the Flowers are roundish, how many, I observed not: The Root is woody, somewhat thick with small Fibres, a little scaley at the top, it tastes dry and astringent like *Tormentill*.

In the Herbals I could find none liker it, than that which *Lobelius* calleth *Fragaria Sylvestris minime Vesca sive sterilis*, and in the universal *Iserdumish* Herbal, in the 70th. Chapter of the 17th. Book, by the Name of *Fragaria non fragifera vel non vesca*, yet it differs in the Flower and Leaf; for the Leaves in my Plant are cut deeper, and the Flower of his is white. In Tab. H. it is marked with *b*.

CHAP.

C H A P. XI.

Of the Rock Plant.

THis Plant belongeth to those called *Wier* by the *Dutchmen*, and *Fucus* in *Latin*.

It has a broad flat Stalk like a Leaf, and yet there sprout out of it many equally broad Leaves like it, as Twigs out of a Tree, at the top of the Stalks there are little narrow longish Leaves, some have five, others seven of these, of a yellow Colour, as the Herb is also, and they are transparent like Glew, I know not whether one may take them for its Flowers. Close to these there grow other oblong Leaves, that are hollow, and as it was blown up, and fill'd with Wind, and many lesser Bladders round about close to one another: The Leaves that are blown up have nothing in them but Wind; for when I pressed them together, they gave a little bounce, whether these small Bladders have Seeds in them or no, I could not observe.

The Seamen informed me, That from the Seeds of that Plant, the small Sea Snails are produced, but I am not satisfied, whether they proceed from these Bladders, or from Eggs as our Snails do.

It may be after the same manner, as we find on many Leaves in our Country, Bladders filled up with the Seeds of Worms or Caterpillers, yet I dare not assert it, because I had no opportunity, to search narrowly into the Matter; the Root groweth out of the Rocks, where-

fore I call it a Rock Plant, it hath some Fibers, and is sometimes round; I found this Herb in great plenty, first in the *South Bay*, near the *Cookery of Harlem*, where we take up the Water; then in the *Mussel Haven* at *Spitzbergen*; then at *Cales* in *Spain*.

When this Herb is dried, it looketh brown and blackish, it gives and groweth wet again when a South or West Wind blows, because of the Salt that penetrates it; but when the Wind is East or North it is stiff and dry.

Among all the Figures that I have seen, I find none liker than that given in the 39th. Book, and the 50th. Chapter of the *Iferdunish Herbal*, by the Name of *Alga Marina Platyceros porosa*, only that this is porous or spongy and white. In the Tab. F. it is marked with b.

The Leaves of the great Rock Herb, are very like unto a Man's Tongue, it is on each or both sides curled, but plain before and not curled, through the middle of it run two black Stroaks or Nerves to the Stalk, and on the outside of them appear many black spots, within the black stroaks, on each side, to the middlemost plain stroak; the Herb is adorned with small curls, in the middle it is quite smooth to the Stalk, on the end of the Leaf, next the Stalk, are two white stroaks almost to the middle of the Leaf, bending round outwards, if they were quite closed, they would make an Oval.

The Leaf is above six Foot long, and yellow, and the Stalk yet longer; the Stalk is round and smooth, of a yellow colour like un-boiled Grew, near the Root it is thicker than at the Leaf, and it smells of Mussels.

The

The Root hath a great many Branches that are divided again, and stick very close unto the Rock underneath the Water. The whole Plant groweth under Water several Fathoms: When we wayed our Anchor, we pulled it up in great quantity from the Ground.

Together with this Herb we pulled up the hairy Plant that stands by it, about six Foot long, and it is very like an Horses Tail, only that here and there it hath some small knobs like nitty Hair, or such as are split at the ends; the whole Plant was browner of colour than the former, and its Roots was fixed unto the former.

In these Plants were some redish Worms wrapt or folded up like Caterpillers, with many Legs. They are figured Tab. P. at i.

The Herb was like Dodder, wherefore it may be call'd Water or Rock Silk. Amongst all the Icons that I have seen in printed Herbals, I find it comes nearest to that hairy Plant, which *Antony Donat*, in his Book of Plants, growing about *Venice*, calleth in his second Book, *Muscus argenteus Marinus, similis Plumæ*, only this is not as white as Silver, but rather yellow or brownish.

Of these two Herbs we found great plenty in the *South Haven* on the 20th. and 21th. of *July*.

There is another Sea Plant, which I called Sea-grass, whereof there is plenty in the *English Haven* underneath the Water above eight Foot long. The Leaves were about two or three Fingers broad, of a yellow Colour like Grew, and transparent, ending in a blunt point, at the top smooth edged, without nicks or prickles

prickles, every where plain and even, the Leaves grew from the Root round about it, as it were out of one hole in the Tab I. it is marked with b. C.

The End of the Third Part.

The Herb was like Dodder; wherefore it
 may be call'd Water of Rock. Amongst
 the Woods that I have seen in the
 I find it comes nearest to that hairy Plant
 which I saw in the Book of Plants
 growing about Rome, call'd in his second
 book, *Artemisia* *hirsuta*, *hirsuta* *Plant*,
 and this is not as white as silver, but rather
 yellow or brownish.

THE
 these two Herbs we found great plenty
 of in the Woods on the side and side of
 there is another set Plant, which I call'd
Artemisia, which there is plenty in the Bay-
 to have underneath the Water above eight
 foot long. The Leaves were about two or
 three Fingers broad, of a yellow Colour like
 yellow, and transparent, ending in a blunt point,
 with the top inward edged, without ticks or
 prickles.

THE
 FOURTH PART
 OF THE
 VOYAGE
 TO
 SPITZBERGEN,
 OF THE
 ANIMALS of *Spitzbergen.*

The **PREFACE** of the Animals,
 but chiefly of the Birds in general.

TH E *Animals of Spitzbergen here described, are either those with two or with four Legs.*

About Spitzbergen also are some Creatures that live only in the Water, and have no Legs (except one would take their Fins, that are about their
 F 4 *Breast,*

Breast for Legs, because as hereafter shall be shewn, their Fins are jointed like Legs underneath the Skin.) Some live in the Water, and also upon the Ice and Land, and have either two or four Legs.

We will begin with them that have two Legs, or with the Birds whereof the most live upon the Water, and but few of them upon the Ice or Land.

C H A P. I.

Of Birds with Toes or divided Feet.

OF Land-birds I observed but one sort:
Viz:

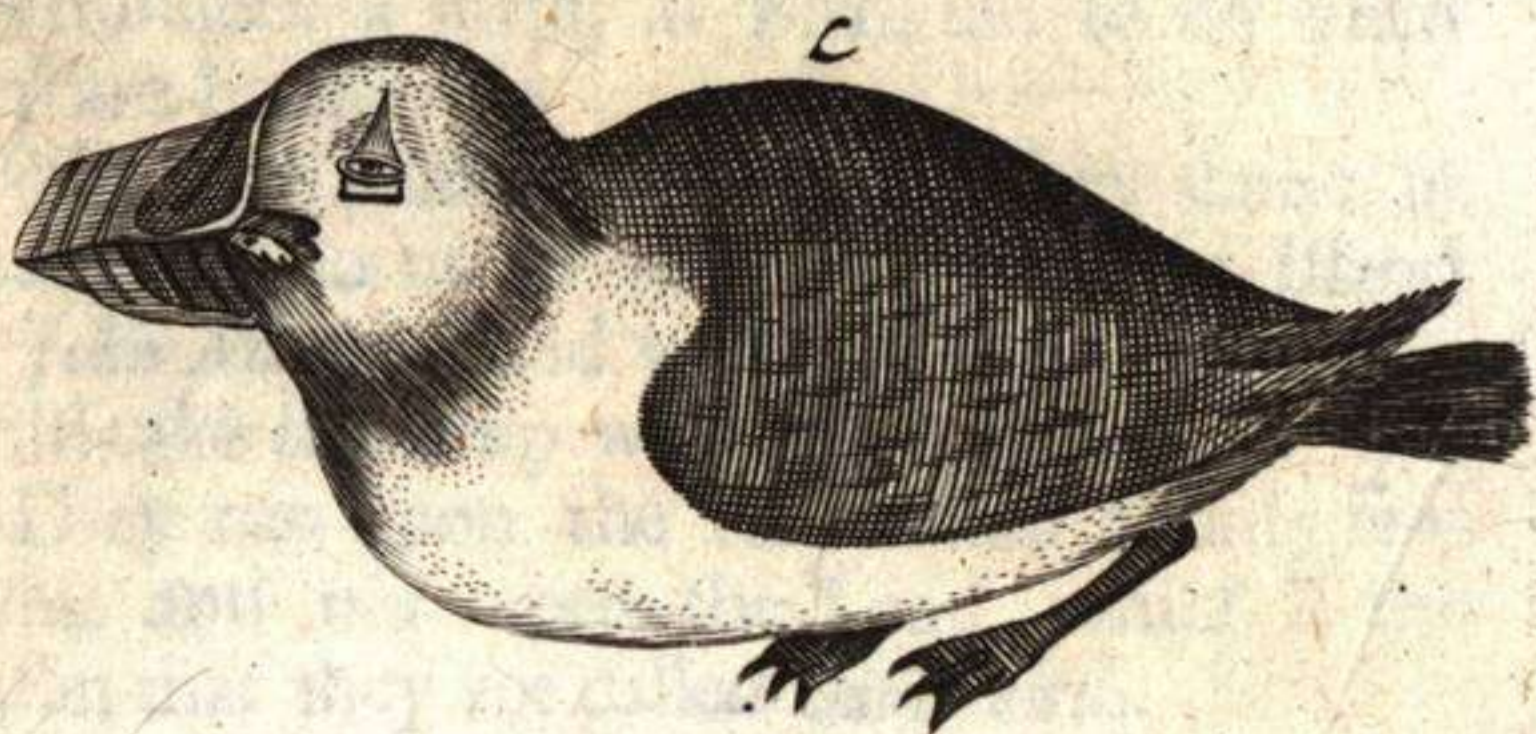
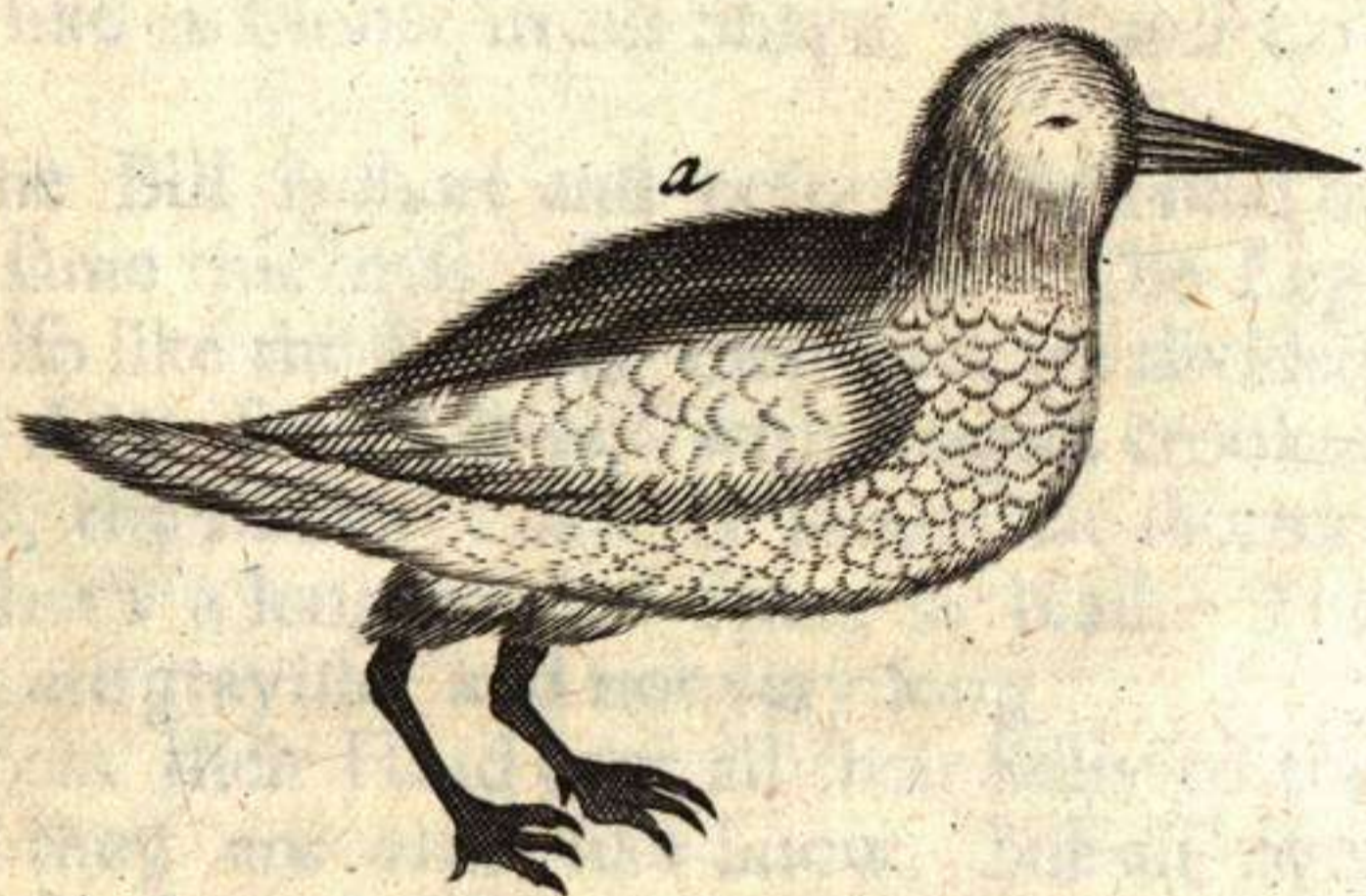
I. Of a Snite.

This Snite which is also called the Strand-runner (because it keepeth about the Strand) is no bigger than a Lark.

Its Bill is narrow, thin, and corner'd with-all. Our Snites Bills are at the farther end broader and roundish, and cut in with cross notches like a Rasp to rasp Wood withal; so that the whole upper Jaw and Bill looketh exactly like a Rasp with its handle. Our Snites are also bigger than those of *Spitzbergen*, otherwise they are very like one another in Shape and Colour; this Bill both above and below is four square, of a brownish colour, and about two Inches long. The Head is roundish, and of the same thickness with the Neck.

Their Feet are made of three divided Claws before, and one behind which is very short, their Legs are not very long. It is of the colour

Tab: K. pag: 73.





lour of a Lark ; but when the Sun shines upon it, it shews blewish, very like those two Colours observed on our Ducks Necks when the Sun shines upon them. They feed upon the little gray Worms and Shrimps.

We shot some of them in the South Harbour, near the Cookery of *Harlem*, they had not the taste of Fish at all. See Tab. K. at *a*.

II. Of the Snow-bird.

The *Snow-bird* is no bigger than a Sparrow, and like a Linnet in his Shape, Bill and Colour.

The Bill is short and pointed, its Head of the same thickness with its Neck. The Legs are also like the Linnets, their Feet are divided into three fore Claws, with longish crooked Nails, the hinder Claw is somewhat shorter, but hath a long bended Spur, or Nail. The Legs are grayish, and not very long.

From their Head over all their Belly to the Tail they are white like Snow, but all over their Backs and Wings they are gray. Some of them are gray all over, but these are little Ones.

I can tell nothing of its singing, only that it whiffleth a little, as Birds use to do when they are hungry.

When we sailed near the Ice, they came in great flocks to us in our Ship, near the Island of *John Mayen*, and were so tame, that you could take them up with your Hands.

They run upon the Ice where I only saw them, and not upon the Land, which is the reason that they are called *Snow birds*.

They

They kept with our Ship till we catch'd the first Whale, and after that the other Birds frightened them away.

We fed them with Oatmeal, but when their Bellies were full, they would not suffer themselves to be taken up. We put some of them in a Cage, and hung them up in the Cabin, but they did not live long.

We eat some of them, and they were not of an unpleasant taste, but very lean. If I may give my Opinion, why the Birds flie to the Ships, I believe that they are stray'd from the Island, and that so the Hunger compels them to the Ships for Food. Tab. K. at b.

III. Of the Ice-birds.

I saw also in the *English Haven*, a very beautiful *Ice-bird*, which was so tame, that we might have taken him up almost with our Hands, but we would not go too near him with our Gun, for fear that we should shoot him all in pieces, and so spoil his curious Feathers, so we missed him, and he flew away.

The Sun shined at that time upon him, which made him look like Gold, so as it dazled our Eyes almost. He was as big as a small Pigeon.

I would willingly have delineated him, if we could have catched him. I saw but this one of the Kind.

CHAP.

C H A P. II.

Of the Broad or Web-footed Birds.

THERE are several sorts of these about *Spitzbergen*. Some of them have thin pointed Bills, others have thick and broad ones.

Some of the thick billed ones have them divided or parted as the *Malle-mucken* (mad Gnats in *English*) others have undivided ones, as the *Parret* so called.

There is also a considerable difference in the Heels of these Birds, for some of them have Heels, as the *Mountain-duck*, *Kirneu* and *Malle-mucks*: Others have them not at all, as the *Burgermeister*, *Rathsher*, *Strundjager*, *Kutyegebf*, *Parret*, *Lumbe*, *Pigeon*, and the *Red Goose*; no Water sticks to their Feathers no more than on the Swans and other Water Fowl, for it runs off from them, as if they were oiled all over.

Some are Birds of Prey, others not. There is also a difference in their flying.

Some flie like unto a Partridge, as that called the Pigeon, others like Swallows, as the *Lumbs* and *Red Geese*, others like the Mews, as the *Malle-mucke*, *Rathsher* and *Strundjager*, others like the *Stork*, as the *Burgermeister*.

The Birds of Prey are, the *Burgermeister*, *Rathsher*, *Strundjager*, *Kutyegebf* and *Malle-mucke*. There is also a great difference in their Flesh; the Birds of Prey are not so good to eat as the others, except you hang them up by their Legs for some days, that the Train Oil may run out of them, and the Air blow through them,
and

and then you do not taste the Train Oil so strong, for else it would make you vomit.

The Pigeons, Parrets, Red Geese and Ducks, are the most fleshy, the old Lumbs have a very tough and dry Flesh, not to disparage the Rotges, Kirmews and young Lumbs when boiled, and the Fat taken away from them, and afterwards fryed in Butter; for then one may make a shift to eat them; but if you should eat their Fat, it would vomit and disorder the Stomach very much. These Birds except the *Strundjager*, *Kirmew* and *Mountain-duck*, all make their Nests upon the high Rocks, where they are secured from the Foxes and Bears; but some of them make their Nests higher than others.

They sit in so great numbers or flocks upon the Rocks, chiefly at the time when they hatch their Young ones, which is about the latter end of *June*, and beginning of *July*, that if they flie up when the Sun shineth, they shade the Ground like a Cloud, and make so great a noise, that one Man can hardly hear the other.

The *Kirmews* and *Mountain-ducks*, and also the *Strundjagers*, make their Nests on low Grounds, (that one would think that the high Water must needs run over them) on the small Islands, where they are secure from the Foxes, but not from the white Bears, for they swim in the Water from one Island to the other. We took up great store of their Eggs.

The Nests of these Birds are not all made after the same manner. For the *Mountain-duck* makes its Nest of the Feathers of its own Belly, mixing them with Moss.

The Feathers of these Nests are not the Edder Down, brought us from Island, for that cometh from great Birds (that the Inhabitants

tants

tants there call *Edder*) and costeth when it is cleansed from the Moss a Crown a Pound, as I have been informed; But the Feathers of the *Mountain-ducks* of *Spitzbergen*, which they call *Down*, the Seamen put into their Pillows, and Straw-sacks, which if they should be cleansed would be more worth.

The *Kirmew* layeth their Eggs upon Moss, and so do the *Rotges*. The Nests of the rest of the Birds were too high for us, so that we could hardly, and not without great difficulty reach them. If it be never so dark by reason of a Mist, yet every Bird knoweth how to find their own Nest again, and flyeth directly to it.

Concerning the Names of the Birds I have made use of those, that the Seamen have given them formerly, according to their own Fancy, that he that heareth them called by these Names, may also know how to find them by them in this Book.

Some of these Birds, as *Lumbs*, *Strundjagers*, *Malle-mucks*, *Kirmews*, and the *Mews* called *Kutyegekhsen*, I have also seen about *England*, *Scotland* and *Ireland*; and also in the *Spanish Seas*, nay even upon the *Elve* by *Hamburg*, I have heard the *Kirmew* and *Kutyegekhsen* cry, but there is a difference, as well between the Beasts as Men of other Countries.

I. Of the *Rathsher*.

First of the *Rathsher* (or *Alderman* in *English*) for this is the first of the thin billed Birds that have three Claws, and is called so by the Seamen, because he is a very stately and handsome

some Bird, but less than that which they call *Burgermeister* (or Major in *English*.)

This Bird hath a sharp, narrow and thin Bill, and hath only three Claws or Toes, that are joined together by a black Skin, but he hath no Claw behind. His Legs are not very long, and black, as the Eyes are also.

This Bird is whiter than the Snow, for when you see him upon the Ice, you may distinguish him from the Snow; he shews very beautiful, with his white Body, his black Bill and Eyes, black Legs and Feet, and besides he is very well shaped.

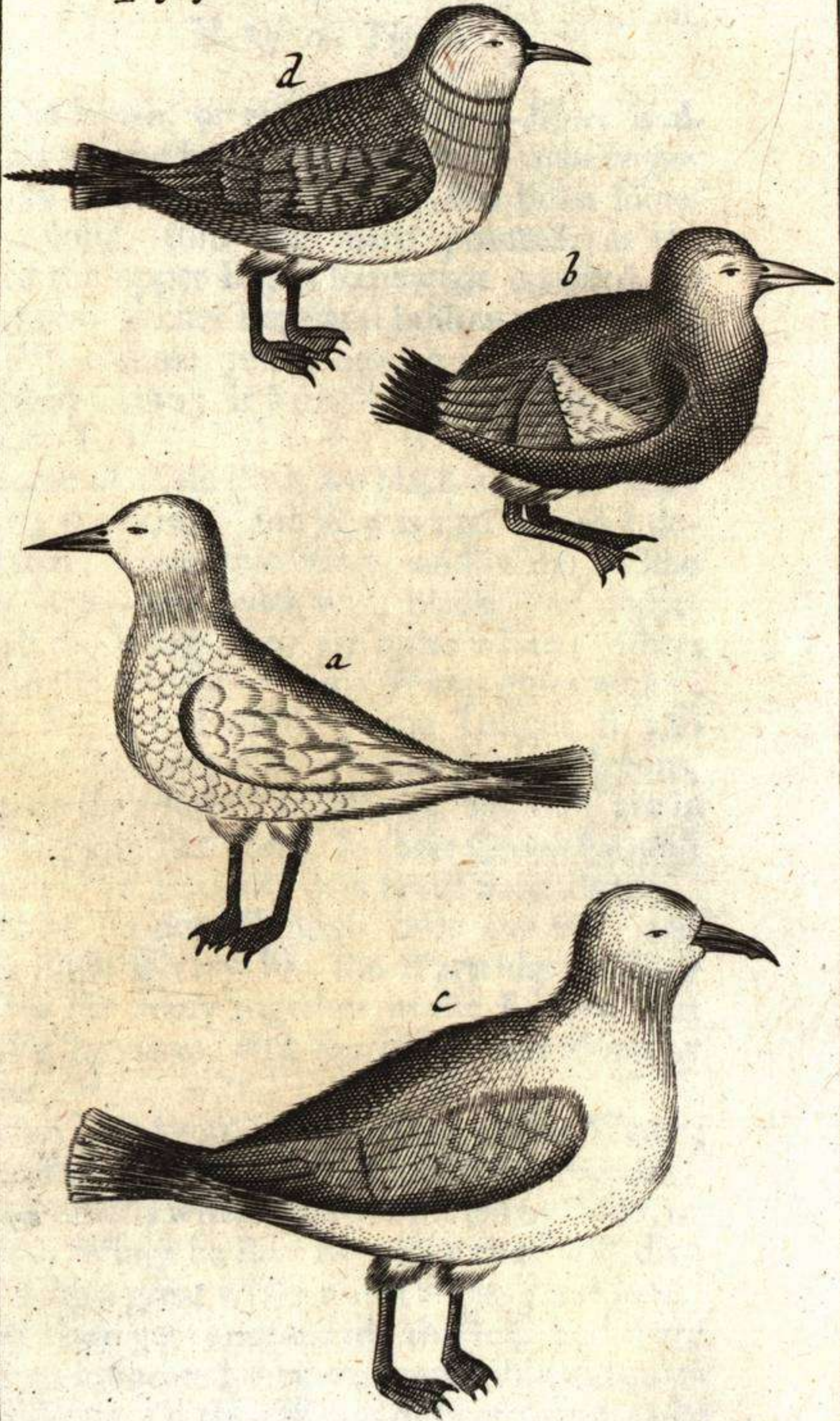
His Tail is pretty long and broad, like a Lady's Fan.

His Cry is somewhat lower than the little *Kirmews*, as if he did say *Kar*, when she cries *Kir*, he spreads his Wings and Tail out when he flies, as the *Strundjager* or Crow doth. He doth not willingly swim in the Water as the other Birds do, nor doth he much care for wetting his Feet, but he stays rather where it is dry, yet he loves Fish mightily; and so the Proverb that we commonly say of the Cats is true of him; *The Cat loves to eat Fish, but does not love to wet her Feet.*

I have seen him upon the Ice feed on the Dung of a Sea-horse, upon whose Body he will rest while he is alive, as Crows will do in our Countries. He flieth commonly alone by himself, but where there is a Prey they flock in great numbers.

I did delineate them in the shallow Corner (called shallow Point) in *Spitzbergen*, on the 10th. of *July*, when we shot him, he was not wild at all, so that I could have knock'd him down with the Gun. See Tab. *L.* at *a.*

Tab: L pag: 78.





II. Of the Pigeon.

The Pigeon, or rather the Pigeon-diver, is also one of the beautifullest Birds of Spitzbergen. It is of the bigness of a Duck, the Bill is somewhat long, thin and sharp pointed, at the point the upper Bill is somewhat crooked, about two Inches long and hollow within. It hath but three red Toes on its Feet, with crooked Claws; it hath short redish Legs, and a short Tail.

Some of these Birds are black all their body over; but others, and so was that which I delineated; about their Wings, and in the middle they are white pyed with black, but underneath the Wings they are quite white; others are in the middle of their Wings quite white; their Bill is red within; the Tongue is also red and hollow; they cry like young Pigeons, whence they have their Name, for they are in nothing else like them. In their Crops I found Shrimps, or Prawns, and small Sand-stones.

They do not flie high over the Sea, and their flight is very like the Partridges: They do not flie many together as the Lumbs, but usually by pares, and sometimes one alone by its self.

They can keep a great while under Water; wherefore they may be called Diving Pigeons.

But chiefly when they are pursed by Men, or if their Wings be hurt by a Shot, they will dive and keep a great while under Water; and sometimes they get underneath the Ice, and there they are suffocated, they were as nimble and quick under Water (if their Wings or Feet are not quite shot off) as we could row with our Boat. Their
Flesh

Flesh is good to eat when the Fat is taken away from it, if afterwards it be fryed in Butter.

The first Diving Pigeon I got the 23th. of May on the Ice, and afterward at *Spitzbergen*, where they are seen more frequently. See Tab. L. at b.

III. Of the Lumb.

This Bird is the likest in his Bill unto the Diving Pigeon, only it is somewhat stronger and crookeder.

He hath black Feet, with three black Toes, and as many black Nails; his Legs are black also and short.

He is quite black at the top, but underneath his Belly even to the Neck he is snow white; his Tail is short.

His Cry is very unpleasant, most like that of a Raven, and they cry more than all the other Birds, except the *Rotger-divers*, he is bigger than the Diving Pigeon, as big as a midling Duck. In their Crops I find small Fish and Prawns, and also some Sand-stones; and one of them flying over our Ship dropp'd a large red Prawn into the Ship. I also delineated it in the mentioned place. They say likewise, that small fresh River Fish are their Prey; but this I cannot relate for certain.

When they have young ones, they commonly sit by the old ones one or two on the Water, who teach them to dive and swim. After the old ones have brought their young in their Bill, from the Rocks to the Water, the Preying Bird called *Burgermeister* sometimes catches the young ones, when the old ones are not present,

present, and sometimes when they are also, for they are not able to resist them.

They love their young ones so well, that they will be killed before they will leave them, (and will defend them as a Hen doth her Chickens, swimming about them) at other times they are very hard to be shot; for as soon as they see the Fire, they are immediately under Water, or fly away. They fly in great flocks, with pointed Wings like Swallows, and move their Wings much in their flight. One can hardly know the young *Lambs* from the old ones, at the first sight, if you do not take exact notice of their Bills; for the upper part turns beside the under part, at the point, and the undermost beside the uppermost, as you see in the Cross Bill, yet not so much in these; and it is commonly done in the 15th, 16th, to the 20th year of their Age. The old ones are full of Flesh, but it is very dry and tough, and therefore unpleasant to eat.

They boil them like the Pigeons, and scum off the Fat when they boil, then they fry them in Batter. I did not see them upon the Ice, but abundance of them upon the Mountains: They go waddling from one side to the other, like the diving Pigeons. I have seen many Thousands of them together in the *Danish Harbour*, on the Mountains, on that side where the East and Northern Winds could not blow hard or not fully upon them, (and so do all other Birds chuse such places on the Mountains for their Habitations) where the Herbs do grow.

But I saw not so many by the Haven of *Magdalen*, where I drew my Figure on the 25th of July. Afterwards I saw some of them in the

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Spanish and North Sea, not far from the Heilg-land. See Tab. M at a.

IV. Of the Mew called Kutge-gehes.

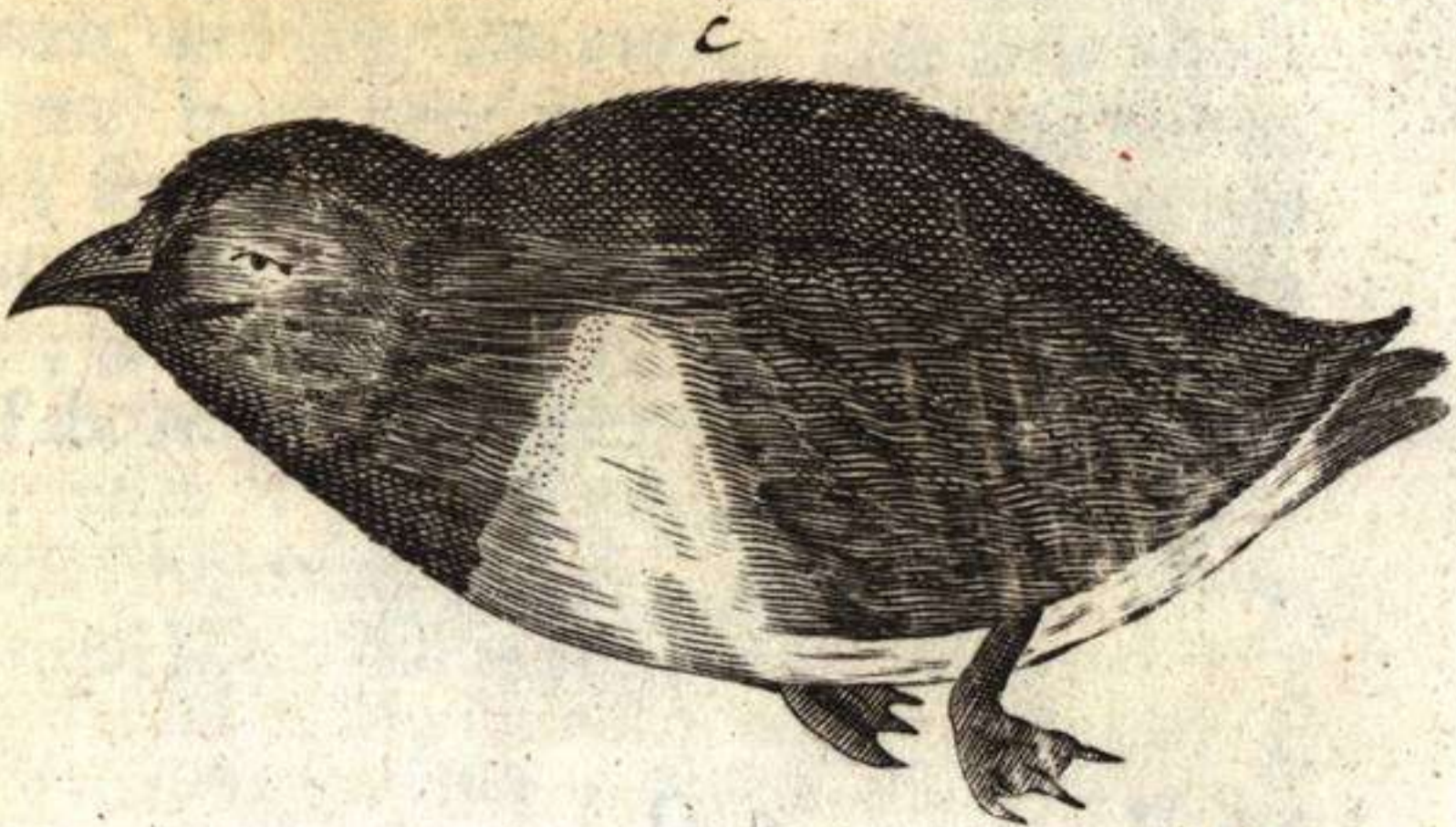
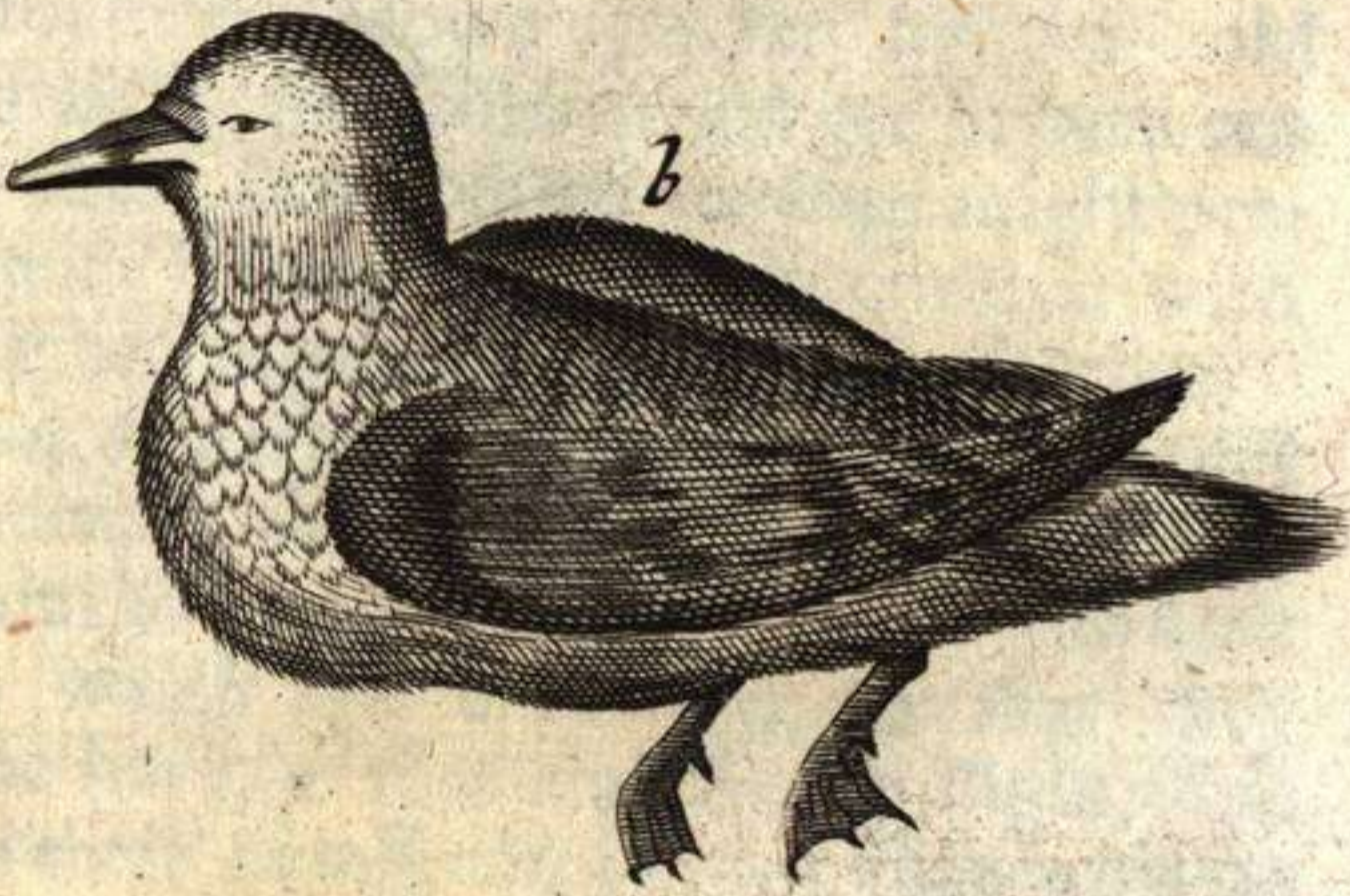
This is a beautiful Mew, and is called *Kutge-gehes*, because it cryeth so: He hath a Bill somewhat bent, as the *Burgermeister*; on the undermost part of its Bill is a small knob or rising: About his black Eyes he hath a red circle, as the *Burgermeister*; and he hath but three Claws, joyned together with a black Skin.

The Legs are also black, and but short; the Tail is somewhat long and broad, like a Fan.

All the Belly is as white as Snow; the Wings and Back are grey, and the point of the Wings black. He is almost as big as an ordinary Mew, but something less than the *Strunt-jager*. When we cut the fat off from the Whales, we saw abundance of them fly by the Ship, and heard them cry.

When the Seamen have a mind to catch some of them, they bait their Hooks with a piece of Whales Fat, and so tye the Hooks to a Line, and sling it into the Sea, and so they catch not only these, but all the other Birds of Prey. He flieth with small Wings as a common Mew, and dives not. His Food is the Fat of the Whale. He is hunted by the *Strunt-jager* (in English *Dung-bunter*) who leave him not till he dungs, which the *Strunt-jager* eats.

This I could hardly believe at first, until afterwards I saw it my self very often: That which I drew was catched by our Ship-boys with





with a Hook, in the *South Haven*. I did peculiarly observe in this Bird, that it used to swim upon the Water, and hold its Head up against the Wind, if it was never so great a Storm; and so we found whole flocks of them swim upon the Water together.

This is not only to be understood of this Bird, but also of all the rest, for they look against the Wind, that their Feathers may not be blown asunder and opened; for if they should sit or swim with the Wind, their Feathers would be blown asunder by the cold Wind, and so the Cold would get in between them to their Skin, which perhaps might prejudice their Health, for Birds are covered with their Feathers as Men are with their Clothes.

And so, when they fly up, they press against the Wind with their Bodies, and expand their Wings, and so fly away very swiftly; also their Feathers would be entangled, so that they could not have a sure and steady flight, but falter in their flying, like Birds that learn to fly. There is but little Meat upon them; we eat but the Legs and the Breast, for the Wings are nothing but Skin and Bone. We have a Proverb, and say, *Thou art as light as a Mew*: This we may very well say of these Mews. I have seen them since in the *Spanish Sea*, and also in the *North Sea*, but yet they differ from these; and so do the Beasts of all Countries. See Tab. N. it is marked with *a*.

V. *Of the Burgermeister.*

The *Burgermeister* (in English *Major*) is the biggest of all the Birds of *Spitsbergen*, wherefore this Name is given him as being the Chief of them. His Bill is crooked, of a yellow colour, narrow and thick; his Under-bill is somewhat rising or knobby at the point or end, a great deal more than the *Kutge-gebef*, which looketh very pretty, as if he had a Cherry in his Mouth; he hath longish Nostrils, and a red Ring about his Eyes, as I mentioned when I spoke of the *Kutge-gebef*; he hath but three Claws of a grey colour, his Legs are grey, and not quite so long as those of a Stork, yet he is almost equally big with him.

His Tail is broad, like a Fan, and white, which is chiefly to be understood of these Birds when they fly; his Wings are of a pale colour, and so is all the Back, but the Wings are white at the tip, and so is the whole Body. He builds his Nest very high in the Clifts of the Rocks, where you can neither shoot nor catch them any other way; which was the reason I could not see their Nests. I have seen sometimes two, three and four of their young ones together; we shoot most of them when we draw a dead Whale behind our Ship, where they flock in great numbers, and bite off great pieces of the fat of the Whale; at other times we must shoot at them a great distance, as at other wild Birds, such as Ravens, Hens, and the like.

His

His Cry is like the Cry of some Ravens that I have sometimes heard ; he flyeth in the Air like a Stork ; he preys upon young Lumbs as the Hawk doth upon all sorts of Birds ; he feeds also upon the fat of the Whale, whereof he doth swallow down pieces as big as ones Hand whole.

The *Malleucks* are mightily afraid of him, they will lye down before him (when they are upon the Carcass of a dead Whale) then he bites them about the Neck, which I believe doth not hurt them much, because they have a very thick Skin, for else they would oppose and resist him, or fly away, but they do not matter it, neither will they leave their Meal for his biting. I have seen him also about the Sea-Horses, whose Dung he eats. He flyeth commonly single, except when they meet at their Prey. He loves to rest on the water, but doth not care much for diving ; we shot one before the *Weibegat*, on the 10th day of July. You see him at *c* in the Tab. *L*.

VI. Of the Rotges.

This Bird is a Diver, and might be rather called the *Diving Rotge*. His Bill is crooked, but short, somewhat thick, of a black colour ; his Feet have but three Claws, with as many black Nails, and are joyned by a black Skin ; his Legs are short and black ; he is almost all over black, except his Belly, which is white.

Some of this kind have their Wings spotted with white and black, like the diving Pigeon ; no Water sticketh to their Feathers, no more than to a Swans ; they are most of them like Hair on a very thick Skin : Their Tail is short.

G 3

They

They are very much like a Swallow in their shape; I took them at first to be Swallows, for they fly like them; they are in great flocks together, as the Swallows are when they are about to hide themselves against the Winter.

They go wabbling from side to side, as the Divers do; they cry very loud *Rottet, tet, tet, tet, tet*, at first high, and so by degrees lower and lower; and this their calling or crying is the occasion of their Name. They make more noise than any other Bird, because their Voice is shriller; but the *Lumbs* in this are not much inferiour to them, although they cry lower; the *Burgermeister*, *Rathsher*, and the whole crew of Birds of *Spitzbergen* strike in with them, so that one can hardly hear another's words.

The calling or crying of the *Rotges* amongst one another sounds almost, at a distance, as if you hear a great many Women scolding together: They are somewhat bigger than a Starling.

They build their Nests in the Clifts of the Rocks, yet not all of them, for some make their Nests upon the Hills or Mountains, of Moss, where we found them, and we killed abundance of their young ones with Sticks. They feed upon the grey Worms that are like Crawfish, which are delineated hereafter: They also eat the red Shrimps or Prawns. We got the first of them on the Ice on the 29th day of *May*, and afterwards more of them by *Spitzbergen*.

They are very good Food, and the best next the *Strandrunner*, are fleshy and fattish; we boyl and then roast them. In *Tab. M* they are mark'd with *b*.

VII. Of the *Struntjager* (or *Dung-hunter*.)

This Bird hath a Bill somewhat blunt before, and crooked, and is thick; if I remember, it is black.

He hath but three Claws, which are joyned together with a black Skin; his Legs are not very long; his Tayl, which is like unto a Fan, hath this mark, that one Feather thereof stands out before all the rest: He is black on the top of his Head: His Eyes are black; about his Neck he hath a dark yellowish Ring or Circle; his Wings, as well as his Back, are brown; underneath his Belly he is white; he is somewhat bigger than the Mew called *Kutgegebef*; he hunts and flies in the Air after the Mew *Kutgegebef*, so long torments her, until she avoideth her Dung, on which this Bird feeds, which he catches dexterously before it falls down into the Water; and this is the reason why they call him *Strunt-jager*, in English the *Dung-bunter*.

He flyeth with the Mews called *Kutgegebef*, which do not fear him in the least, and they are both equally swift in their flying, but when he intends to make them dung, he hunts them and makes them cry out very loud, but he himself seldom cries: He generally keepeth but to one Mew, but if two or three of the Mews be together, and one makes her escape from him, then he hunts the other two, and flyeth sometimes above and sometimes underneath them. I could never see him hunt after any other Birds, but once I saw him fly after a Malle-muck, but I saw him soon leave her, perhaps because her Dung did not please him. I am of opinion

that this Dung, because it is thin, serves him instead of Drink, for else he eats the Fat of the Whale for his Food : He builds his Nest not very high.

He goes upright upon his Legs, like the *Burgermeister*, *Rhatsher*, or *Kutge-gebef*. It is a rare Bird, and I saw but very few of them : He flies commonly alone ; I saw very seldom two or three of them together ; he flies like the *Rhatsher*, or like a Crow, but his Wings are somewhat more pointed at the ends.

He hath a loud Voice, when he cries it sounds as if he did say, *I Ja*. To some it seemeth, if it be at a distance, as if he cried, *Jo ban*. His Flesh is not better than that of the other Birds of Prey. I got him on the 11th of July near to the *Dear-haven*, or *Dear-bay*, in *Spitzbergen* ; afterwards I saw this Bird behind *Scotland*, hunt after the new *Kutge-gebef*. In the *Tab. L* it is marked with *d*.

VIII. *Of the Diving Parret.*

This is commonly called the *Parret*. Amongst all the web-footed Birds that have three Claws, this hath a peculiar Bill ; and because it seem'd to those that gave him this Name to be like that of a Parret, therefore they called him also a Parret ; but in truth his Bill is not at all like that of a Parret, its Bill is broad, and full of slender strokes of several colours, *viz.* red, white, and the broad part thereof is black ; the uppermost as well as the undermost are both pointed ; the uppermost arch is red, and his upper Bill hath a thin bended Hook ; the undermost hath a yellowish arch, and is towards the end downwards cut off somewhat
sloap-

floaping: The upper part of its Bill, as well as the lower part, is about three fingers broad, and about the same length, if you measure the upper and undermost together: He hath on the upper Bill four arched or bended oblong pitted holes, and on the lower he hath as many, although the furthest is not altogether so plain.

These holes or pits of the upper and lower Bill make together a Half-moon; and the parts that are elevated make in the same manner, as well as the pitted or hollow ones, a Half-moon.

By these holes are as many raised or elevated parts; the uppermost of them is as broad as the three furthest ones together, and hath underneath on each side a longish hole, which without doubt are his Nostrils; but the undermost on the under Bill is about a Straws breadth broader; the upper broad part is blackish, and sometimes blew.

On this broad part of the upper Bill that is thus elevated above the rest, is towards the Eye a long whitish piece of Cartilage that is full of holes, whereon you see towards the inner part of the Mouth something like a Nerve, which also reacheth towards the under part, and there endeth itself, whereby the Bill is opened and shut.

His Feet have also but three Claws, joyned with a red Skin between them, with three short and strong Nails; the Legs are but short, and of a red colour; he walks wabbling.

About his Eyes he hath a red ring, and above this Ring stands upright a little Horn, and underneath the Eyes lyeth another little, longish, black Horn cross over; as you may see in the Figure. His

His Tail is short: The Head is black at the top unto the Horn; but his Cheeks are white; about his Neck he hath a black Ring; all his Back and Wings also, at the top or the outside, are black, but underneath the Belly is white. They fly either singly or by pairs, and have sharp pointed Wings like the Lumbs. He will keep a great while under Water. He eats like the rest, red Shrimps or Prawns, small Fish and Worms, and also the Sea-spiders and Star-fish, for I found something in his Stomach that looketh like pieces thereof, but they were almost digested.

He hath more Flesh upon him than the diving Pigeon, and is very good to eat: I never saw him among the Ice. This whereof I shew you the draught was shot at *Schmerenberg* in *Spitzbergen*, on the 20th day of *June*, but afterwards we got several more. In the *Tab. K* see *d.*

IX. *Of the Mountain-Duck.*

Hitherto we have described the web-footed Birds that have three Claws that are not divided, that I saw and got about *Spitzbergen*; I must now describe those that have undivided Feet with four Claws, whereof I found three sorts, *viz.* the *Mountain-Duck*, *Kirmew*, and *Malle-mucke*.

The *Mountain-Duck* is a kind of our wild Duck, or rather wild Goose, for she is of the bigness of a middling Goose, and is more like a Goose about the Bill. It is a very handsome Bird, because of its delicate spotted Feathers. They dive under Water as other Ducks do. The Drake hath black and white spotted Feathers,

thers, and the Duck hath Feathers of the colour of a Partridge. The hindmost Claw is broad and short, with a short Nail; the Tail is bobb'd, like that of other Ducks: I could find nothing in their Maws or Gizzards that could make me certain of their Food, but only Sand-stones. They fly a great many of them in flocks like other wild Ducks; when they do see any Men, they hold up their Heads and make a very long Neck. They make their Nests upon the low Islands; they make them of the Feathers of their Bellies, which they mix with Moss; but these are not the same Feathers which are called the Edder-down.

We found their Nests with two, three, or four Eggs in them, the most whereof were rotten when we came to *Spitzbergen*, but some of them were good to eat; they are of a pale green, somewhat bigger than our Duck-eggs; the Seamen made an hole at each end, and so blew the White and the Yolk out, and strung the Shells upon a Packthread. I would have brought some of them to *Hamburgh*, but they began to stink, so that I was forced to fling them away, although the Shells were entire. These Ducks have a very good Flesh, we boyl'd and roasted them as we did the other Birds, but the fat of them we flung away, for it tasted of Train-oyl, and made us vomit.

The Ships that arrived at *Spitzbergen* before us got a great many of them.

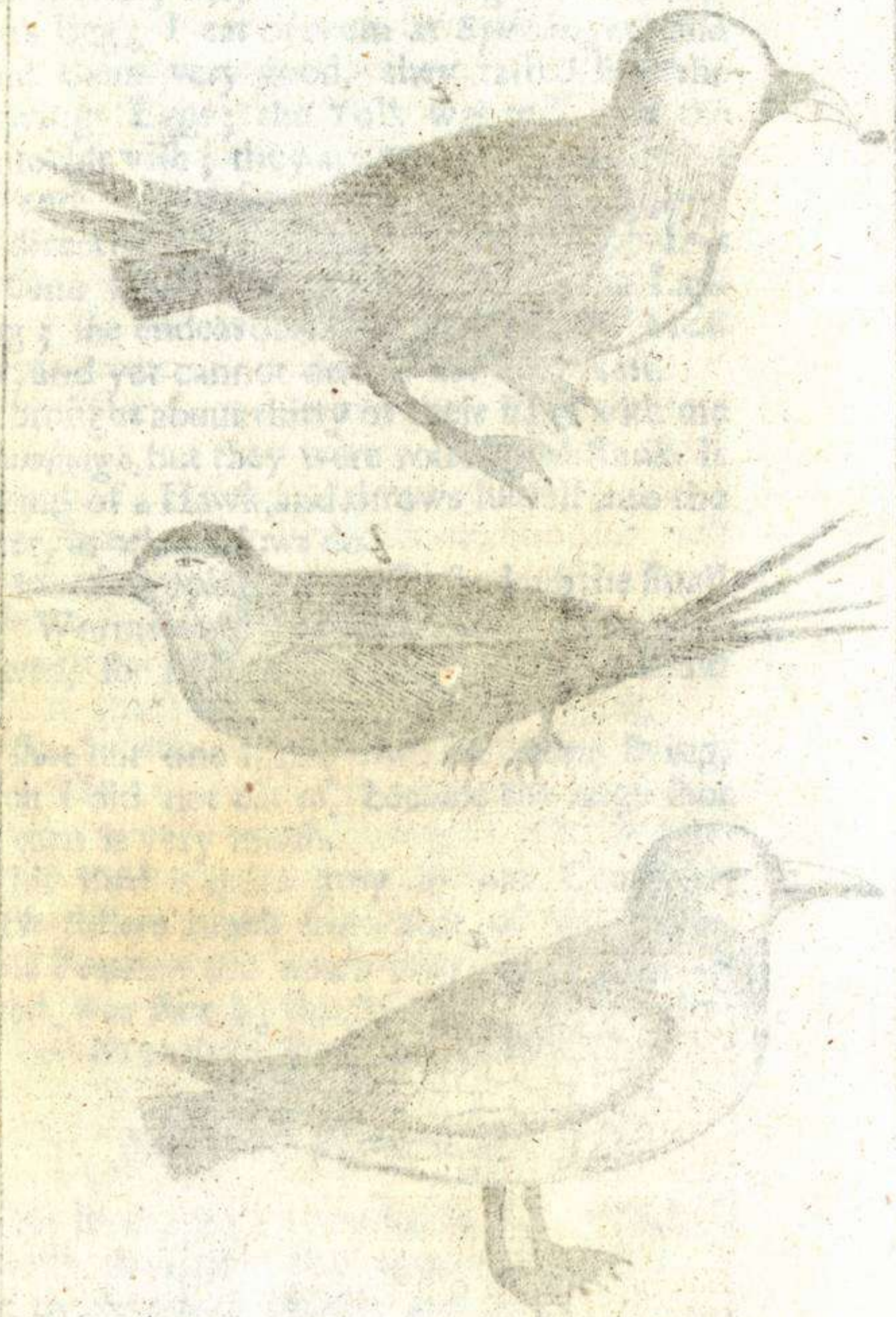
These *Mountain-Ducks* are not at all shy, or afraid of Men, when we first arrive there, but afterwards they grow quite wild, so that you can hardly come near enough to shoot them. That which I have drawn here was shot in the
South

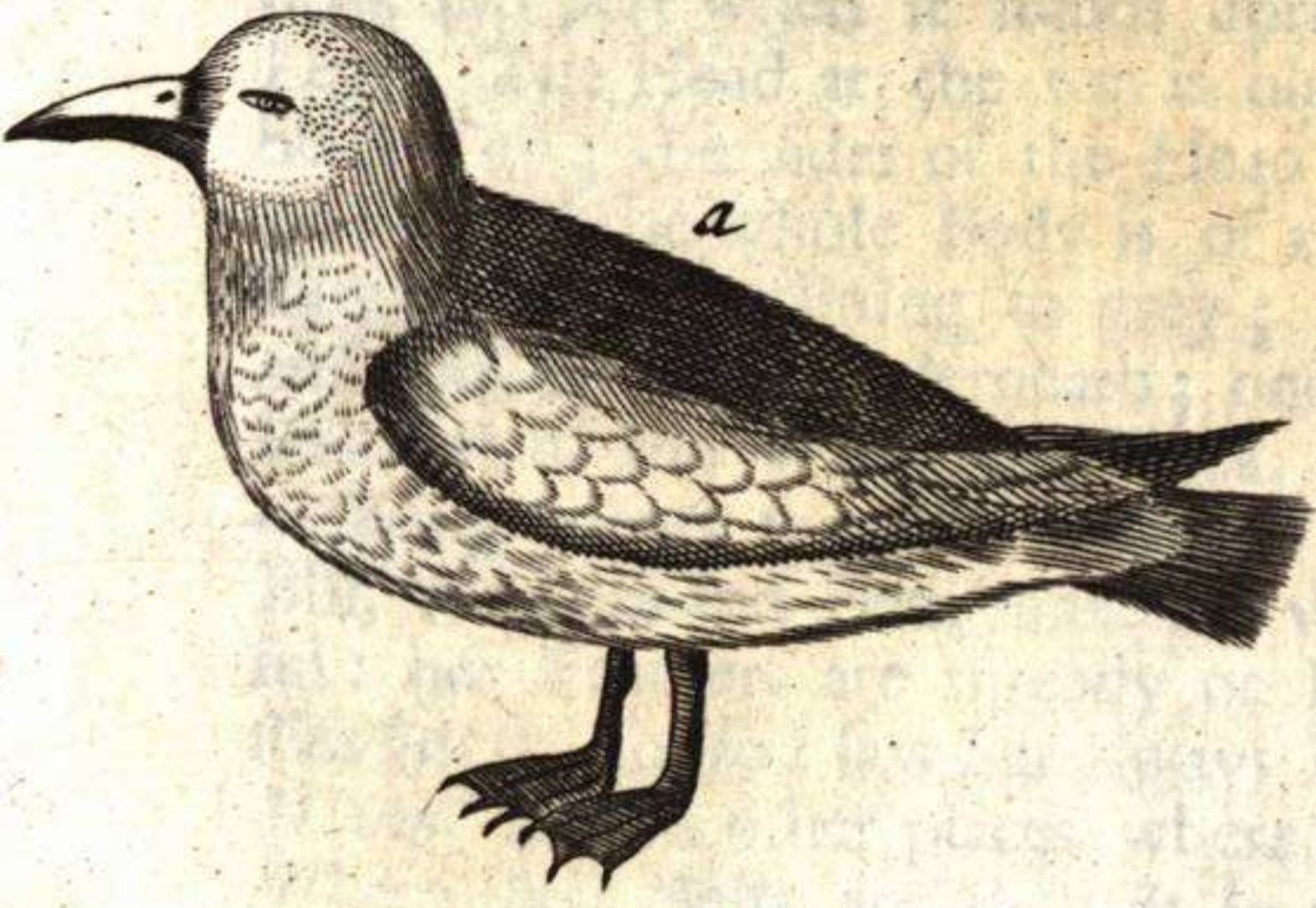
South Bay (in *Spitzbergen*) on the 18th of *June* ; it is marked with *c* in the *Tab. M.*

X. *Of the Kirmew.*

The *Kirmew* hath a thin sharp-pointed Bill, as red as Blood ; she shews very large, especially when she stands upright, because of her long Wings, and Feathers of her Tail, but when the Feathers are off, there is no more Meat than upon a Sparrow. It is peculiar to this Bird to have very sharp pointed Wings, and its Tail is longer than that of a Swallow, and as long as the longest Feather of the Wings. Because of these long and sharp-pointed Feathers in her Wing and Tail, she might very properly be called the *Swallow-mew*, but it is commonly called *Kirmew* from its Cry. The Claws, as well as the Skin between them, are as red as Blood ; the Nails are black on all the four Claws ; the hindmost Claw is very little : The Legs are short and red : It shews very brisk and pert when it stands upright on its Legs. The Head at the top is black, like a black Cap ; the sides of the Head are Snow white, and the whole Body is of a Silver colour, or white enclining to grey ; the Wings and Tail are white underneath ; one side of the Feathers of the Wings are black. All these differing colours, together with the Blood-red Bill, red Legs and Feet, make her very beautiful : her Feathers are thready or hairy ; she flies singly, for so I saw her always in the *South Haven*, and in other places where we were. Where their Nests are they fly in great numbers ; these they make of Moss. One can hardly

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ly discern their Eggs from their Nests, for both of them are of a dirty white, but the Eggs have black specks; they are of the bigness of a Pigeon's Egg; I eat of them at *Spitzbergen*, and found them very good, they tasted like the Lapwings Eggs; the Yolk was red, and the White blewish; they are very sharp-pointed at one end. She defends her Nest and Eggs, and flies directly at a Man, biting and crying. It is the same with her as what we say of the Lapwing; she endeavours to defend all the Meadow, and yet cannot defend her own Nest.

I brought about thirty of their Eggs with me to *Hamburg*, but they were rotten and stunk. It is a kind of a Hawk, and throws herself into the Water, as other Mews do.

I am of an opinion, that she feeds on the small grey Worms, and perhaps on Shrimps and Prawns, for I found no other Food they could get.

I shot but one single Bird of them flying, which I did not eat of, because the large shot had torn it very much.

This Bird is quite grey in our Countries, which differs much from that of *Spitzbergen*, whose Feathers are much finer. That here delineated, was shot, by the *Birds Song* in *Spitzbergen*, on the 20th of *June*. See it Tab. N, at b.

XI. Of the Malle-mucke.

This Bird hath a remarkable Bill, which is severally divided: The uppermost Bill hath next to the Head oblong and small Nostrils; underneath them groweth out as it was a new Bill, that rises up, is crooked and very sharp-pointed.

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The under part of the Bill consists partly of four pieces, two whereof meet in a point together downwards, the other two gape upwards; the two undermost that meet in a point, meet exactly with the point of the upper Bill. The hinder Claw of the Feet of this Bird is very small, of a grey colour, and so are the other Claws and the Skin between them. The Tail is somewhat broad, the Wings are longish after the manner of the *Kirmew*. They are not always of the same colour; some are quite grey, which we take to be the oldest, others are grey on their Back and Wings, but their Head and Belly are white, which are the young ones: This is generally thought, but I am of opinion, that this difference of colour proceeds rather from a difference in kind than from a difference in age; for the grey ones I only saw about *Spitzbergen*, but the grey and white ones, although I have seen some few of them at *Spitzbergen*, yet we saw abundance more about the *North Cape*, and also about *Hitland* and *England*. He flies like a great Mew, hovers near the Water with a very small motion of his Wings.

They do not avoid a Storm as our Mews do, but they take good and bad together, as it happens; ours bend themselves like an Ear of Corn with the Wind, which the *Malle-mucks* do not: They do not much care for diving, but when they wash themselves they sit upon the Water, and put their Wings a-cross one over the other: They fly singly; when they go to fly up they wabble a great way before they can raise themselves upon the Wind, but the *Lumbs* and *Parrets* that have but small Wings do it more. When they ran upon the Deck of the Ship, they could not fly up before they came

to

to a place where a steep went down, or from some advantageous rise. They flock in great numbers when we catch Whales, and light down upon the live Whales, bite them in their Backs, and pick out great pieces of his fat, even when he is yet alive, and when we cut up the dead Whales, there came so many of them about us, that we could not imagine from whence they could all come, so that we were forced to kill them with Sticks and with broad Nets in Frames, such as they use in the Tennis-Court, to be rid of them: They are so bold, that they would not fly away, although they saw us come upon them, but suffered themselves to be killed in great numbers, which we hung upon the Tackle of our Ship.

But after they began to be more shy of us, and would not stay so long. They flock in so great numbers after the Whales, that many of them are discovered by them; wherefore I fancy, that he flings up some fat when he blows the Water out, which the Malle-mucks eat. But a great many more, when the Whale is wounded, follow the bloody track left in the Water, for then they are numberless. They also often discover a dead Whale, and so we get them sometimes without any great trouble.

His Name is given him, because he is so silly or mad (which the Dutch call *Mall*) to suffer himself to be so easily killed, whereunto is put the word *Mucke*, which signifies a Gnatt, because they are as numerous as Gnatts; so that the Name *Malle-mucke* signifieth as much as silly Gnatts, or mad Gnatts.

They eat so much of the fat of the Whales, till they spew it up again, and tumble themselves over and over in the water until they vo-

mit

mit up the Train-oyl, and then they begin to eat afresh, until they grow weary of eating: They bite one another, and fight together, which is very good sport, about a piece of Fat, fiercely, although there is enough for them all, and to spare.

When they are full they rest upon the Ice or Water. I really believe it is the most devouring Bird of all, for he eats till he can stand no longer, but falls down. He bites very hard, but the Burgermeister bites yet harder, to whom he submits himself, and lies down before him to be bit by the Burgermeister, which he does very severely, yet the Malle-mucke feels little or nothing of it, his Feathers are so thick; which I conclude, because he is not easily shot, but will endure a great blow; nor is it easie to kill him with a Stick at one blow. When they steer themselves in the Water with their Legs, they have continually an eye upon their Prey, yet they mind both the Man and their Prey; but if you have a long Stick, they cannot get up so soon or swift but you may have a blow at them. He is the first and commonest Bird of all you see in *Greenland*; they cry all together, and it sounds afar off as if they were Frogs. He walks but ill upon the Land and Ice, like a Child that just learns to go, but he understands better to fly; you see him always near unto the surface of the Water, for he is very light. Of all the Birds of Prey, I believe, he hath the least Meat on him. He builds his Nest high on the Mountains, yet not so very high as the Burgermeister, yet it was too high for me, I could not come at them. His Breast and Legs only are to be eaten, they are tough, and taste strong of Train oyl; when
you

you will eat them you must hang them up by the Legs, that the Fat of the Whales, or the Train-oyl, may run out of them, for two or three days, and that the Wind may blow thro' them, and the Frost pierce them also; then you lay them into fresh Water, that the rankness may be drawn out, afterwards boil and fry them in Butter. They are every where seen in the North Sea, as I have said before, yet they are differing. This that you see here I did design among the Ice the first of *June*.
Tab. N at c.

C H A P. III.

Of some other Birds that I did not catch or delineate.

Amongst these are the *Red Gees*, which were shewn unto me as they were flying: They are Geese with long Legs, that fly in flocks; there is many of them in *Russia*, *Norway*, and *Futland*.

Then I saw another Bird flying singly with broad Feet, a very handsom Bird, called *John of Ghent*; it is as big as a Stork, and of the same shape with white and black Feathers; he hovers in the Air, and moveth his Wings but very little; when he cometh to the Ice he turns back again. It is a kind of a Hawk, and I have reason to believe that he hath a very sharp sight, for he shoots down from a great height into the Water. They say, that the Brains of this Bird are in great esteem, but for what I could never learn.

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He is also seen in the *Spanish Sea*, and every where in the *North Sea*, but most commonly he is seen where they catch Herrings.

I was also informed, that a black Crow was seen in *Spitzbergen*; other Birds are not seen there, except it may be now and then a single one that strays and so cometh thither, as the Crow did. All these Birds come at certain times, and abide at this place as long as the Sun shines; afterwards, when the Cold begins to encrease, and the Nights lengthen, every one of them returns to its own place again. When they are going from thence they gather all together, and when they are all met they fly away, every kind by themselves, which hath been very often observed: Whence I conclude they cannot live in this intolerable cold place in the Winter. They rest as well upon the Water as the Land, (and when they fly up they look against the Wind) for else they would quite be tired in this long Journey.

Whether the Mew called *Rathsher*, that does not love the Water, performs its Journey in one day, I cannot tell; or whether Necessity compels him to rest upon the Water.

Which way those Birds that have divided Claws on their Feet, as the Snite, the Snow-bird, and the Ice-bird, get over the Water, I know not.

CHAP.

C H A P. IV.

*Of the Four-footed Creatures.*I. *Of the Hart or Deer.*

THIS is not very unlike unto the *Hart*, it hath cloven Feet like it, and its Horns are also like unto a *Hart* or *Elke*; they have three or four branches on each side, which are about two inches broad, and about a foot long; their Ears are long, and Tail very short: He is of a greyish yellow colour, like an *Hart* or *Deer*. When they see a Man they run away; if you stand still they stand also, then you must immediately fire at them if you have a mind to hit them. They eat the Herbs and Grass. They are every where about *Spitzbergen*, but above all in the *Rene-field* (or *Deers-field*) that hath its Name from thence, where they'r very plentiful, and also upon the *Foreland* near the *Muscle haven*. I never saw them swim in the Water. As I was informed, some Men did kill 15 or 20 of them on the *Vogel-song* (*Birds-song*) the meat thereof roasted is of a very pleasant taste: We killed some of them presently, at our first arrival in the Spring, that were very lean; wherefore we may conclude, that they remain in this barren and cold Country of *Spitzbergen* all Winter long, and are contented with what they can get. See Tab. O, at *a*.

II. *Of the Fox.*

Between our Foxes and those of *Spitzbergen* there is no great difference; one of them I saw run by our Ship, very near it, his Head was black and Body white: They make such a noise, as afar off it sounds as if a Man laugh'd. We saw them also run on the Ice. Their Food falls but short there, they live upon Birds and Eggs.

They go not at all into the Water; we were hunting one of them in the *South Haven*, and had surrounded him with twenty Men, the Water was on one side of him, and we endeavoured to drive him into it, but he would not, but jumped through one Man's Legs, and run up into the Mountains, where we could not follow him.

The Ships Crew inform'd me, that when he is hungry he lies down as if he was dead, until the Birds fly to him to eat him, which by that trick he catches and eats. But I believe that this is a Fable. Tab. O, see *b*.

III. *Of the white Bear.*

These *Bears* are quite otherwise shaped than those that are seen in our Country; they have a long Head like unto a Dog, and a long Neck, and they bark like Dogs that are hoarse, and all their whole Body is much otherways shaped than ours. They are slenderer in the Body, and a great deal swifter.

Their Skins are brought to us, which are very comfortable to those that travel in the Winter; they prepare or dress the Skins at
Spitz-

these at *Spitzbergen*, for we struck them with large and thick Cudgels, upon their Heads, with such blows that would have knock'd down a Bullock, and yet they did not matter it at all. When we had a mind to kill them, we were forced to run them through with our Launces.

They swim from one sheet of Ice to the other, they also dive under Water, when they were at one side of our Long-boat, they did dive, and came up again on the other. They also run upon the Land. I did not hear them roar so as ours do, but they only bark.

We could not discern the young ones from the old ones, but only by the two furthest long Teeth, which in the young were hollow within, but those of the old ones were close and solid. If you burn their Teeth, and powder them, and give them inwardly, it disperseth coagulated Blood. The young ones keep constantly close to the old ones; we observed that two young ones and an old one would not leave one another, for if one ran away, it turn'd back again immediately as soon as it did hear the others, as if it would come to help them. The old one run to the young one, and the young one to the old one, and rather than they would leave one another, they would suffer themselves to be all killed.

They feed upon the Carcasses of Whales, and near them we killed the most: They also eat Men alive when they have an opportunity to master them: They remove or roll away the Stones of the burying places, open the Coffins, and eat the dead Men, which many have seen, and we can also conclude it from hence, because we find the dead Mens Bones lye by the Coffins

Coffins that are opened. They also eat Birds and Eggs. We kill them with Guns, or any other way we can. We caught three of them, one whereof I drew after the life, on the 13th of July.

What becometh of these *Bears* and *Foxes* in the Winter-time I do not know, in the Summer they have in some places, for a few months, Provision enough, but in the Winter, when the Rocks and Hills are covered with Snow, there is but very little to be had for them; yet being it is supposed that the Deer stay also there all Winter long, I believe that these Beasts do the same. Tab O, see e.

IV. Of the Sea-dogs, called *Rubbs* and *Seales*.

I have still two more Beasts to describe, that live as well in the Water as on the Land and Ice, and they have also on their Feet five Claws like Fingers, that are joyned together with a thick Skin, like unto the Feet of a Goose: The most known of these is the Seale, which they also call *Salldogg* and *Rubbe*, in the German Language; the Head thereof is like unto a Dog's Head, with cropt Ears: Their Heads are not all alike, for some are rounder, and others longer or leaner: he hath a Beard about his Mouth, and Hair on the Nose and the Eyelids, yet seldom above four: the Eyes are very large, hollow, and very clear: their Skin is grown over with short Hair: they are of several colours, spotted like Tygers, some are black with white spots, some yellow, some grey, and others red: their Teeth are sharp like a Dogs, wherewith he can bite off a Stick as thick as ones Arm: On their Toes they have black,

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long,

long, and sharp Nails or Claws ; their Tail is short ; they bark like hoarse Dogs ; their little or young ones mew like Cats ; they go lame behind ; they can climb upon the high Ice, whereon I saw them sleep, chiefly when the Sun shined, wherein they take great pleasure, but when it is stormy weather they must march off and leave it, for the Waves of the Sea beat with great violence against it, as if it were against Rocks, as I have mentioned already in the Chapter of Ice.

We saw most of them upon the Ice about the West side near to the shoar, where there was an incredible number of them, that if the Master of a Ship should not catch Whales enough, they might lade their Ship with *Seales* only ; and we have Examples that little Ships have taken their Lading only of them, but it is very troublesome to flea them : Nor are they all alike fat at the time when we arrive there.

By *Spitzbergen* we see but a few of them, but instead of them there is plenty of Sea-horses. Where many *Seales* are seen, that is not a good place to catch Whales in. It seemeth as if they leave but very little for the Whale to live upon, because there is so great a number of them. They feed upon small Fishes, as far as I could understand ; we cut open several of them, and found nothing in their Stomachs but great and long whitish Worms of the thickness of ones little Finger. We come up to them where they lye upon the large sheets of Ice ; we make a great noise with shouting, which astonisheth them perhaps, or else out of novelty they hold up their Noses very high, and make a long Neek, as our Grey-hounds do, and bark : In
this

this fright of theirs we strike them with Half-pikes, or long Poles upon their Noses, and knock them down half dead, but for all that, they recover themselves, and rise again: Some of them stand upon their defence, bite at, and run after the Men, and they run as fast as a Man, and their lame way of going doth not hinder them at all, for they shove themselves along just like an Eel: Some run from the Ice to the Water, and leave a yellow Dung behind them, which they squirt out at their Hunters, as the Hern does: They stink naturally abominably. Others stand in the Water with half their Belly, and look about them to see what is done upon the Ice: When they are going to dive under the Water, they hold up their Noses, and make a long Neck: When they jump from the Ice under Water, and also when they make a dance of *Seales*, as they call it, about the Ships, they constantly dive with their Heads under water. They have their young ones by them, one whereof we took away with us to the Ship alive, but it would not eat any thing, but did mew just like a Cat, and if we touch'd him he would snap at us, so we killed him. The biggest of them that I have seen were from five to eight foot long, out of which we cut so much fat, that we filled half a Barrel with it. He that I have drawn here was eight foot long. Their Fat is about three or four Fingers thick, it covers the Flesh just under the Skin, and we do flea it off as a Skin: This Fat yields the best Train-oyl; the Flesh is quite black. They have abundance of Blood, as if they were only filled up with it. They have great Livers, Lungs, and Hearts, which we eat after we have drawn out the rankness with

Water,

Water, we boil them, but this Dish is very loathsome, so that I could not eat it, it tasted so of Train-oyl. He hath abundance of Guts, which are very small: I found no Fat within them; their parts of generation is a hard Bone, like unto that of a Dog, about a span long, covered with Sinews; some were hardly so long as your little finger, and yet they were not young ones neither. The Crystal of their Eye is not of the same colour always, for some were like a Crystal, others white, others yellowish, others reddish; they are bigger than a Pea; if one will keep them he must let them dry gently, or one may wrap them in Linnen Rags, and so lay them in a moist place, for else they fly or crack to pieces. I am informed, that when they couple they are very fierce, so that a Man dares not come near them upon the Ice, then they bring their Long boats near the Ice, and so kill them out of the Boats. They do not quickly dye when the Blood is almost all run out, after they have been mortally wounded and flea'd, they still live, and it looks ill to see them tumble themselves about in their own Blood. We had an Example of that in him that was eight foot long, for when he was flea'd, and most of the Fat cut off, notwithstanding all the blows he had had upon his Head and Nose, he would still snap at us, and bite about him, and took hold of a short Pike with his Teeth after such a rate, as if nothing ailed him. Then we run a short Pike through his very Heart and Liver, and there ran out as much Blood as if it had been a Bullock. The Masters of the Ships will not suffer these nasty doings in their Ships, for it fouls them mightily. Not only this was so vivacious, but all the rest

rest are the same, for when we thought that they lay dead in our Long-boats, they snapt about them, so that we were forced to kill them.

For Sports sake I went once along with them upon the Ice, and run one through the Body with my Sword several times, which he did not matter at all; I fell into the Snow up to my Knees, and he barked at me, and offered to bite me, which I avoided, and when I got up again I ran after him, and gave him several wounds more, which he was not concerned at, but ran swifter than I could, and flung himself off from the Ice into the Sea, and went down to the bottom. Tab. P, see a.

V. *Of the Sea-horse, called by some the Morfe.*

The *Sea-horse* is not unlike unto the *Seale* in the shape of the Body, only is much bigger than the other: He is as big as an Ox: Their Legs are also like those of the *Seale*, for they have five Claws as well on the fore as the hinder Feet, but they have only short Nails: Their Head is thicker, and rounder, and also much stronger: Their Skin is an inch thick, chiefly about the Neck, covered with short Mouse-coloured Hair, some reddish, some grey, some have but little Hair, and are mangy, and full of Scarrs that are bitten, and look as if they were flea'd; every where about their Joints their Skin is full of Lines, as the inside of a Man's Hand: They have two great and long Teeth in their upper Jaw-bone, that hang down below their under Lips, that are about a foot and two foot long, sometimes they are longer: The young ones have no great Teeth
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at all, but they grow in time as they grow older. All the Sea-horses have two firm long Teeth; yet I have seen old ones that had but one; it may be that sometimes they loose them when they fight, or otherwise they may fall out of themselves, for I observed that some of them had foul, hollow, rotten Teeth. These two long Teeth are esteemed beyond Ivory, because they are so very white, and are dearer; they are close and firm within, and heavy, but the Root thereof is hollow. Of their Teeth are made Knife-hafts, Boxes, &c. The *Futlanders* make Buttons for their Clothes of the other Teeth. Their Mouth is very broad before, like a Bullocks, whereon grow above and underneath several Bristles that are hollow within, and of the bigness of a Straw: Of these Bristles the Seamen make Rings, which they wear on their Fingers for the Cramp. Above the uppermost Beard they have two semicircular Nostrils, whereout he blows the Water, like the Whale, yet with a less noise. Their Eyes are at a good distance from the Nose; they have Eyelids as other fourfooted Beasts have; his Eyes are naturally as red as Blood when he doth not turn them, and I could see no difference when they were moved, for they always turn'd their Eyes when they did look upon me, and then they look much uglier, though they are never handsom. Their Ears are somewhat higher than the Eyes, but very near to them, which are like those of the *Seales*. Their Tongue is at least as big as a Neat's, when it is but newly boiled it may be eaten, but if it is laid by for two or three days, it becomes rank, like Train-oyl. Their Neck is very thick, wherefore he does not readily
turn

turn his Head about, and this is the reason why he turneth his Eyes generally. Their Tails are short, like those of the *Seale*.

From their Flesh we cut no Fat, it is all mixed together like unto Hogs-flesh, to which it is the likest: Their Heart and Liver we did eat; they taste well enough, chiefly where we have no great variety of Dishes. Their Yards are of a hard Bone, about two foot long, thick at the bottom, and less before, somewhat bent in the middle, at the side towards their Belly it is flat, but it is round without, and it is every where covered over with Sinews. They turn also *Knife hafts* and other things out of this Bone. What their Food is I cannot certainly tell, they may perhaps eat both *Herbs* and *Fish*; that they eat *Herbs*, I conclude from hence, that their Dung looks like Horse-dung: That they eat *Fish* I judge, because when we cut the Fat off a Whale one of them did often take the Skin with him under Water, he did also fling it up, and catch it again. The *Burgermeister* doth eat his Dung, as is said before when I writ of the Birds. The *Sea-horses* keep generally about *Spitzbergen*, for amongst the Ice-hills I saw none. They lye upon the Ice, as I have already mentioned in the First Part, by the 12th of *July* very nastily, as the *Seales* in great numbers, and roar most terribly. They dive with their Head under the Water before, like the *Seales*. They sleep and snore, not only upon the Ice, but also in the Water, so that we take them several times for dead ones.

They are very stout and undaunted Creatures, they stand by one another as long as they have Life, and if any of them be wounded they make to the Long-boat, notwithstanding that

that the Men strike, and cut, and push at them; some will dive under the Water near unto the Long-boats, and cut holes in them with their great Teeth under Water; and others without any fear at all make to the Boat, and stand up with half their Body out of the Water, and endeavour to get into the Boat.

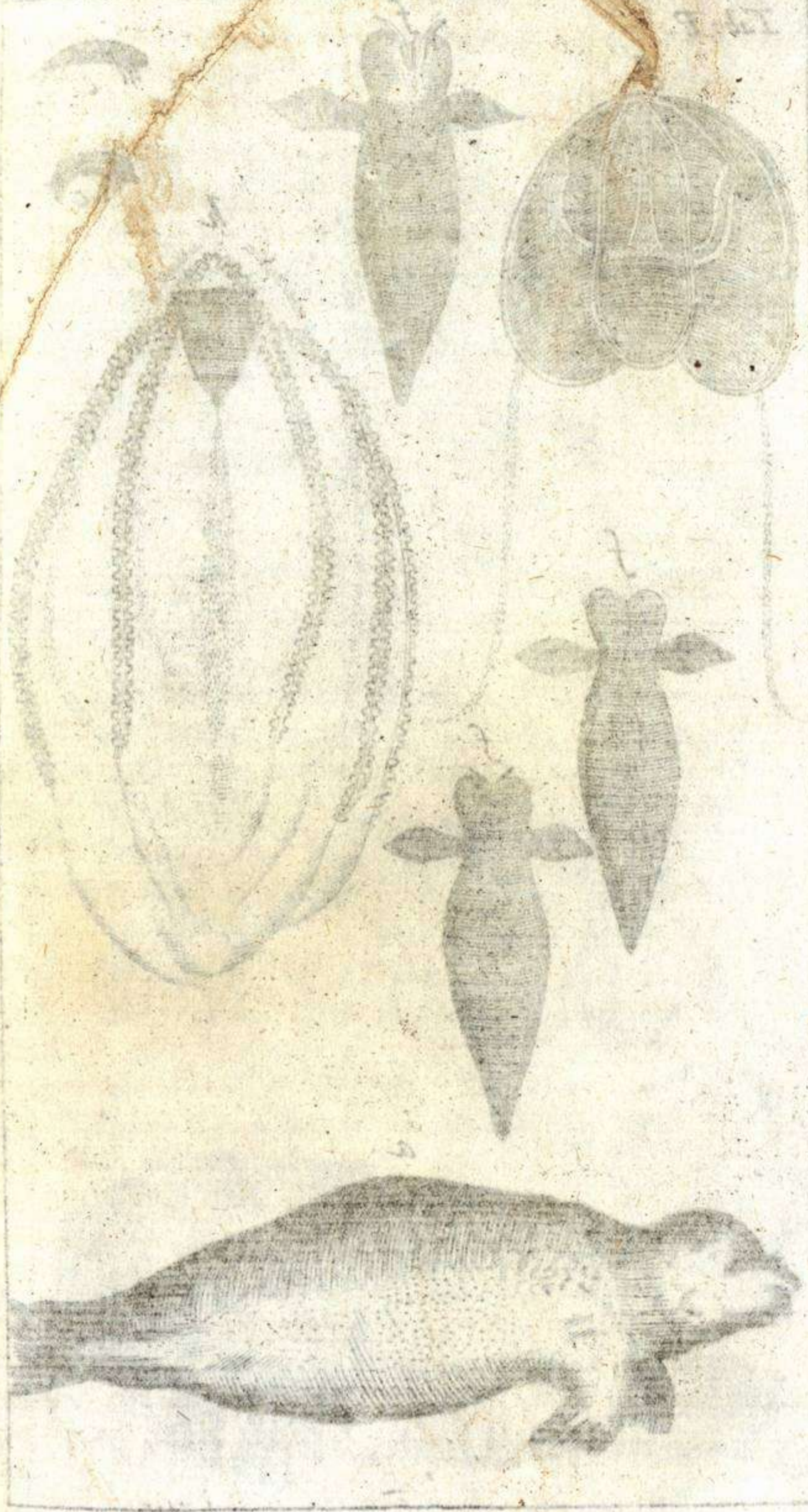
In such a Battel a Sea-horse did once strike with his *Teeth* or *Tushes* into the Boat, and took hold of our Harponier with his long Tooth, between his Shirt and the Waistband of his Breeches, so that the Waistband broke, otherwise he had pulled him under Water.

When they roar, if they are imitated, they strive which shall get underneath the Water, and fall a fighting and biting one another till they fetch Blood: Others strive to set at liberty the Sea-horses taken by the Men, striving before each other to get to the Boat, biting and gnashing with their Teeth, and roaring terribly: They never give over so long as one of them is alive, and if you are forced to fly, because of their unspeakable number, they will follow the Boat till you lose them out of sight, for they cannot follow far, their great number hindring one another. This we found by *Weibegat* by *Spitzbergen*, where they got together in great numbers, and made our Boat take in Water, so that we were forced to flee, yet they followed us as long as we could see them, on the 12th day of *July*. We take them only for their Teeth: You shall see almost a hundred of them before you find one that hath good Teeth, for some of them are but small, others have but one, and others none at all.

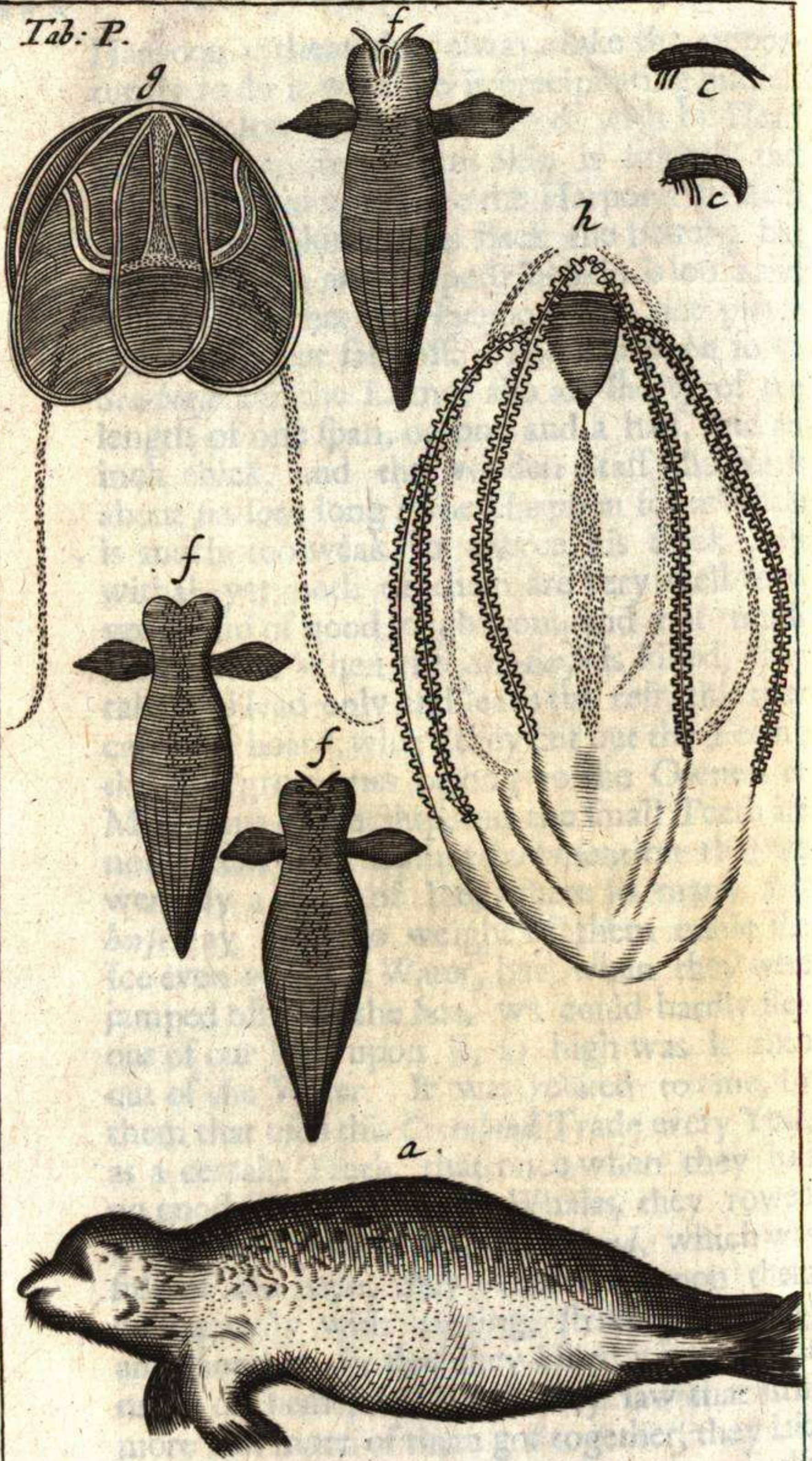
I saw

I saw one in the *English Haven* lying on a sheet of Ice, at first we took him to be a *Seale*, but we found it was an old, bald, and mangy *Sea-horse*. We gave him some blows, which he took, and dived under Water. When they see them lye upon the Ice, or hear them roar, they row with their Boats to them, where they lye in great numbers, but I believe one of them keeps watch, for I have several times observed that one of them did strike him that was next to him with his Tooth, and so it went on: When they awake they rise up and stand upon their fore-foot, look terribly, and roar, and strike with their long Teeth into the Ice for madness, and so draw themselves along by the help thereof, when they run apace, or climb upon the Ice, as the *Seales* do. Their greatest strength lyeth in their Head, and their Skin is thickest about the Neck, it is thicker than that of an Elk, and it is also a great deal firmer; wherefore if they were dressed like an Elk's Skin, they would serve instead of the best Buff-coat. When great multitudes of them lye upon a sheet of Ice, and they do awake and fling themselves into the Sea, you must keep off your Boat at a distance from the Ice, until the greater part of them are got off, for else they would jump into the Boat to you, and overset it, whereof many Instances have been; then the Harponier runs after them on the Ice, or he darts his Harpon out of the Boat at the *Sea-horse*, who runs on a little until he is tired, then the Men draw on the Rope or Line again, and fetch him to the Boat, where he begins to resist to his utmost, biting and jumping out of the Water, and the Harponier runs his Launce into him till he is killed. When they dart the
Har-

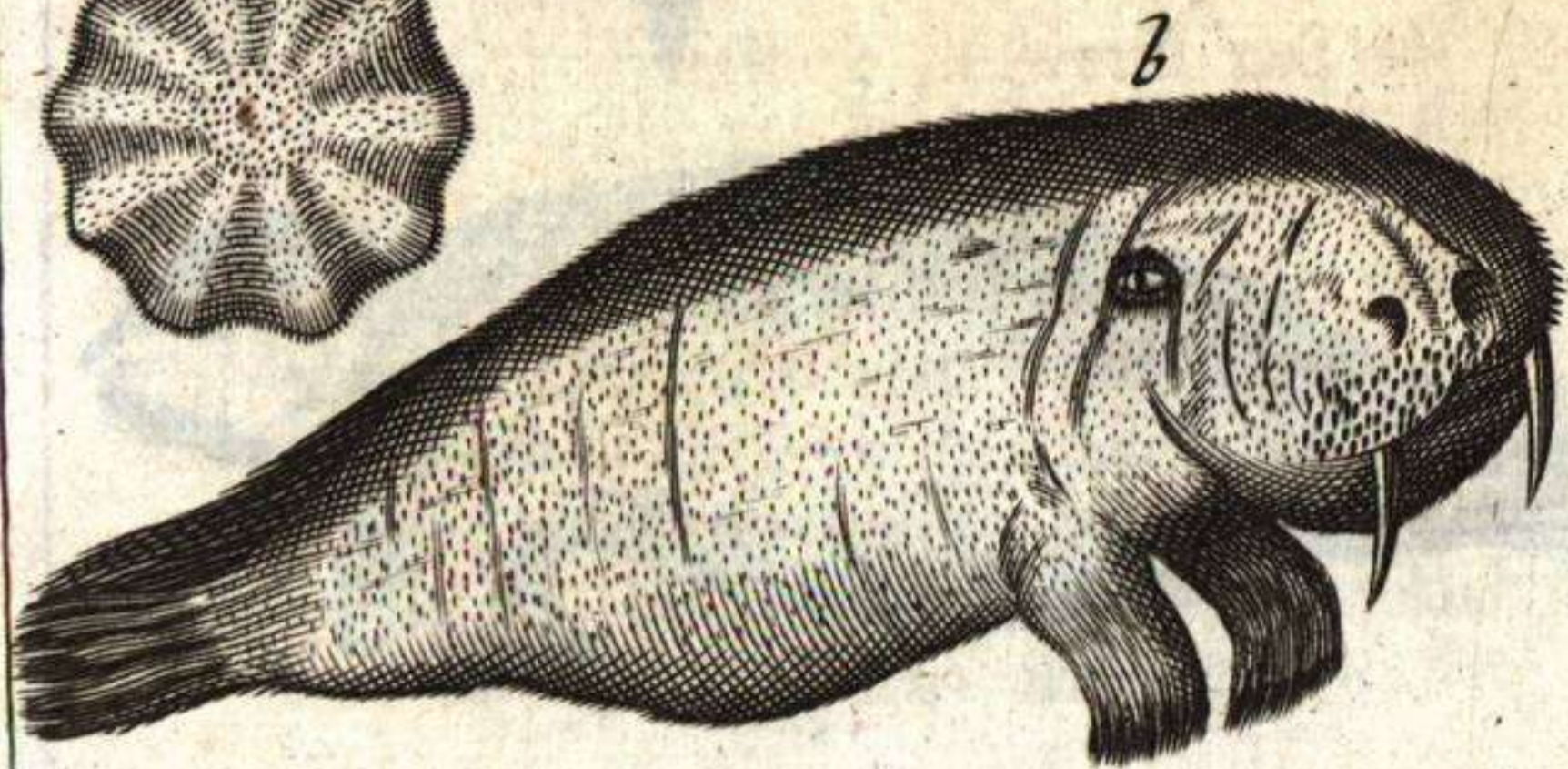
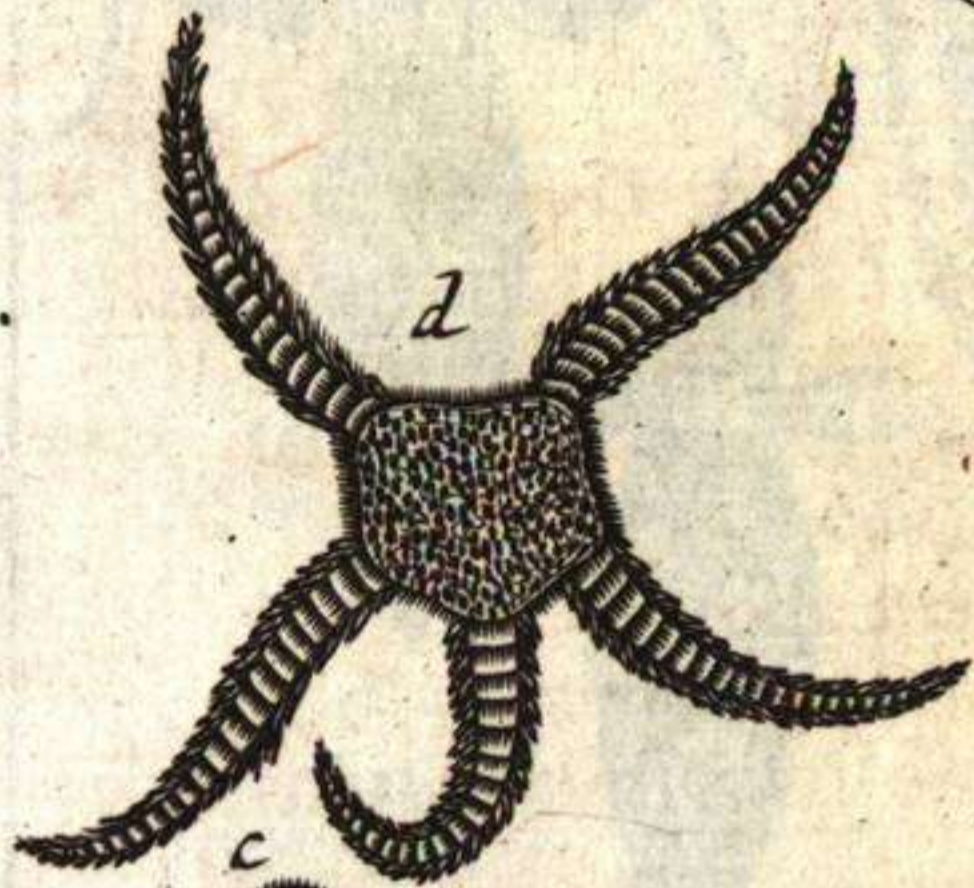
Harpoon at them, they always take the opportunity to do it when he is precipitating himself from the Ice, or when he diveth with his Head under Water, for then his Skin is smooth and extended, and therefore the Harpoon striketh through the Skin on his Back the better; but when he lyeth and sleepeth his Skin is loose and wrinkled, so that the Harpoon does not pierce the Skin, but falls off. The Harpoon for a *Sea-horse* and the Launce also are short, of the length of one span, or one and a half, and an inch thick, and the wooden Staff thereof is about six foot long; the Harpoon for a Whale is much too weak to pierce his thick Skin withal, yet both of them are very well temper'd, and of good tough Iron, and not much hardened. When the *Sea-horse* is killed, they take his Head only and leave the rest, this they carry on board, where they cut out the Teeth; the two great ones belong to the Owners or Merchants of the Ship, but the small Teeth are not esteem'd. I cannot but mention that we went by a Field of Ice, where so many *Sea-horses* lay that the weight of them made the Ice even with the Water, but when they were jumped off into the Sea, we could hardly step out of our Boat upon it, so high was it risen out of the Water. It was related to me, by them that used this *Greenland* Trade every Year, as a certain Truth, that once when they had no good fortune to catch Whales, they rowed with their Boats to the *Mus's Island*, which was full of *Sea-horses*, they ventur'd upon them couragiously with cutting, striking, pushing, and shooting, so that they killed a very great many of them; but when they saw that still more and more of them got together, they laid the



Tab: P.







the dead *Sea-horses* round about them, and stood in the middle of them, as in a Castle, leaving a place open where the others might come in to them, as through a Gate; and after this manner they have killed several hundreds of them, and made a good Voyage of it, for some years ago their Teeth have been in greater esteem than now. The Figure of this Beast you may see in the Tab. P, marked with *b*.

CHAP. V.

Of the Crustaceous Fish that I observed.

I Found two sorts of them, *viz.* *Crawfish* and *Starfish*; of the *Crawfish* I saw four sorts, the *Sea-spider*, as the French-men call them, the *red Prawn*, the *small Prawn*, or the little small *Shrimp*, and the *Whale's Louse*.

The *Starfish* I put to them also, because they have their Arms or Legs, wherewith they move themselves, and are incrustrated with Shells.

I. *Of the Sea Crawfish without a Tail, or Sea Spider.*

This sort of *Crawfish* has no Tail, but six Feet and two Claws. They are else very like *Lobsters* in the shape of their Body. They are of a dark brownish colour, somewhat prickly on their Backs, and hairy all over their Body. I have seen many of this kind with six Feet and

I two

two Claws, in my Voyage to *Spain*, whereof I have also made a draught in my Voyage into *Spain*, (which I shall, God willing, communicate to the Curious) but they differ from these of *Spitzbergen*, in their Bigness and Head; this of *Spitzbergen* hath a Head like a Lobster, but the male of them that I saw in my Voyage to *Spain*, made with its Head and Tail just the shape of a Lute. I did not eat any of the *Spitzbergen Sea Crawfish*, neither have I drawn them at *Spitzbergen* for want of time, for I thought to have them brought along with me, but they were carried away by the Rats. I got them in the *English Harven*, on the 19th of *June*, I afterwards saw them in the North Sea, not far from *England*, where we bought from the *Hilgeland-Fishermen* a great Tarbut, in whose Stomach we found a Sea Crawfish two spans long when its Feet were spread out.

II. Of the Garnels or Prawns.

Betwixt our *Prawns* and those of *Spitzbergen* is no difference, only that those of *Spitzbergen* are red before they are boiled. Their Head is peculiar, consisting of two parts, with several Horns; the whole Head is broad, at the end of the Head are the Eyes, which stand out as Crawfishes do; he doth not look downwards, but streight before, and sidwards. The Scale of his Back is like a Back-piece of Armour, which also behind the Head, in his Neck, is somewhat bended in, and behind it, is a Prickle. After that follow six Plates, like the Armour for the Arms and Legs, and about the brims thereof are small black spots, as if they were the Nails of the Armour. These Plates lye exactly round

one

one upon the other. The Tail consisteth also of five parts; when he expands it, it is like the Tail of a Bird. He hath two Claws before, the further part whereof looks somewhat like the Phangs of a Tooth-drawer. He hath 18 Legs, whereof those that are nearest to the Claws are the shortest. The first eight Legs have four Joints, whereof the uppermost is the longest, and the undermost the shortest: They are not hairy at all. The ten hindmost Legs, whereof the furthest are the longest, and the uppermost Joint is much thicker and shorter than the lowermost long ones have but two Joints, the Feet whereof are somewhat bended under, and are hairy. On these hindmost and undermost Joints grow out two shoots below, on the rest but one. He shoots very swiftly along in the Water. He was as big as I have delineated him, according to the Life. They are Food for the Birds, as I have mentioned before.

III. Of the lesser Garnel or Shrimp.

I have also taken notice, in my Voyage to Spitzbergen, a sort of *Shrimps* that are like Worms; the Head thereof is like the Head of a Fly; it hath on the foremost part of its Head two Horns standing out; it hath Scales like the *Hog-louse*; its Back is round, and broad downwards; it hath 12 Legs; on each side of the foremost Scale it hath three Legs; after you have told four Scales more, there is on each side three Legs more; they are no bigger than I have drawn them. The Birds eat them as their best Food, being always in great numbers in those places where these Worms were. I

found great plenty of them in the *Danish Harbour*, between and underneath the Stones in the Water; afterwards on the Eighth of *July* I found them in the *Mussel-bay*. I have also found them in the Seed of the Whales that swam upon the Water. See *c* in the Tab. P.

IV. *Of the Louse of the Whale.*

The *Whale's Louse* hath no resemblance at all to our Lice, except in the Head, and therefore it belongs rather to the *Crustaceous Animals*. Their Scales are as hard as those of the Prawns. They have a Head like a Louse, with 4 Horns; the two short Horns that stand out before have two knobs, like Kettledrum-sticks; the two other bended Horns are sharp before. Its Head hath almost the shape of an Acorn, is cut very deep behind. It hath two Eyes, and but one Nostril. The Neck is not made of stiff Scales, but its Skin is like that between two Scales or Plates of a Lobster. It hath six Plates on the Back; the foremost of them is shaped like a Weaver's Shuttle. The Tail might be compared unto a Shield, but it is very short. On the foremost Plate it hath Feet shaped like a Sythe; they are round before, and bent, like the first Quarter of the Moon; but on the inside they are toothed like a Saw, and at the end thereof there is a sharp point: On each side of the second and third Plait grow out four Legs that are his Oars; they have a short Joint below, wherein these Oars are moved; these they lay in a cross one over the other, upon their Back, when they feed upon the Whale; or they put them upwards together, as the Vaulters do when they jump over Swords: The six hindmost
Legs

Legs are like those of a *Crawfish*; they have three Joints on each Leg, the foremost whereof are crooked like a Half-moon, but before, or on their ends they are very sharp pointed, so that they can take firm hold as well of the Skin of Men as of that of the Whale, so that you must cut them in pieces before you can pull them from the Skin. He that will have them alive, must cut the Skin of the Whale out with them. They sit on certain places of the Whale's Body (as between his Finns, on his *Paddenda*, and on his Lips) where he cannot easily rub himself, and bite pieces out of his Skin, as if the Birds had eaten him.

Some Whales are full of Lice, and others have never a one: The warmer the Weather is, the more Lice they get, as I am informed. The Figure that I give you here I delineated in the *Mussel-bay*, on the 7th of *July*. See Tab. *Q* at *d*.

V. Of the Star-fish.

I have seen but two sorts of these in my Voyage, the first of them hath five Points or Rays like Legs; it is quite otherwise shaped than those that I have seen in the *North*, *Spanish*, and *Mediterranean Seas*. It is of a red colour: Above, upon the plain of its Body it hath five double rows of sharp knobs or grains; between each of these double rows is a single row of the same knobs, so that in all there is 15 rows of knobs on the whole plain. These 15 rows together make a Star of five outward bended points.

As for the rest, this Plain looketh like the Back of a Spider, but if he is turned he looketh neatly, and in this posture is seen in the middle a five-corner'd plain Star, which I take to be its Mouth, which he can open and draw together like a Purse. Round about this Star are small black Spots, in rows, of the shape of a Star. Further forwards, about the middle Star or his Mouth a broader one is, like unto the Flower of the Crowsfoot. From the middle Star proceed five Legs or Arms, which have no knobs where they begin, but begin first to have some behind the Flower like shaped Star, on both sides to the end. The knobs between the Legs are soft to the touch, like the Skin of an Egg. Their Legs are scaley, about three fingers breadth long, broader at their beginning, where they have knobs, and afterwards by degrees they grow narrower. Between the Scales on both sides the Knobs come out commonly three or four together, and look like Warts. When he swims in the Water he spreads out these Knobs on each side, just as a Bird doth his Feathers when it is going to fly. See Tab. P, at *d.*

Of the Second Starfish.

Besides this, another fine *Starfish* came to my Hands, which rather ought to be called the *Coralfish*, because he is like Twigs of Coral, for which I took them also, before I perceived that he was alive. This is of a brighter colour than the other, for the other is dark red. Its Body hath ten corners, and it hath a Star above with as many Rays; each of these one may compare

un-

unto a Sail of the Windmills that the Children run against the Wind withal, or to a piece of such Crosses that are broad before, and narrow where they meet together; that is to say, of the shape of a Dove-tail: It feeleth rough: The lower part of the Body is very neat; in the middle thereof is a Star with six points, which I take to be his Mouth: About the Mouth he is soft, to the place where his Legs begin: Between the beginning of his Legs he had soft Cavities. His Legs are where they begin thick, and have in the middle a longish hollow or gutter, which feeleth soft; on the Brim they are adorned with Scales that lye one over the other, no otherwise than if they were a row of Coral, but underneath the Scales are twisted, and have in the middle forwards small black Strokes, but the Scales lye over one another like unto the Plaits of the *Crawfish*: Besides, where the Legs come out of the Body, they spread themselves double into Twigs, and are, as is said before, hollow in the middle, until the place where they divide themselves into several Branches, and so grow slenderer by degrees. The undermost small Branches are scaly all round, but not twisted like Ropes; they are sharp pointed on their ends like unto the Feet of a Spider, wherefore the Seamen call them Sea-spiders. When they swim in the Water they hold their Legs together, and so they row along. I had one of this sort that was a span long, from the extremity of one Foot to the other; but this I have delineated is less. The biggest are the handsomest for colour. They dye soon after they are out of the Water, and when they are a dying they bend their Legs towards the Mouth. The

14

Body,

Body, when it is dead, soon breaks to pieces, which is the reason that I could not keep the great ones. See Tab. P, at e. *Rondeletius*, in his Book of Fish, hath delineated one of the same shape, but this is not the same species, for his is black; neither do I find the Plaits in his, except he that drew it did not observe them. Some of both these sorts I got on the fifth of July, before the *Weibegat*, where a Whale made his escape from us, because the Line whereunto the Harpoon was fasten'd was entangled about a Rock: On this they hung, and so I got them alive.

C H A P. VI.

BEfore I come to treat of the Whale, I think it convenient to say something of some Finn'd Fishes, which I met withal in my Voyage to *Spitzbergen*, some whereof are propagated by the shooting of their Row, and others bear and bring forth young ones alive.

I will begin with the First kind, whereof the first that I met withal was the Fish that we call *Macarel*.

I. Of the Macarel.

This Fish is like unto a *Herring* in his shape, but hath on his Back a large Finn, and somewhat below it a very small one. Then lower there is another greater and broader one, but

not

not so high as the uppermost : Underneath this are five small ones, that are all of the same bigness, and at an equal distance one from another. Very near to the Tail there is another less one ; so that on the whole Back there is two great ones, and seven little ones. Near unto the Gills is a Finn on each side : Underneath the Belly there are again on each side one almost of the same bigness of that that is near to the Gills. Underneath towards the Tail is one of the same bigness of the third on the Back. Behind this there are again five of an equal bigness ; and below that still a less one ; so that those of the lower part of the Back are equal to those of the lower part of the Belly. Their Head is like unto that of a *Herring*. He hath a great many small holes on the Cover of his Gills, and also underneath the Eyes. They have a great variety of colours, that look more glorious when they are alive than when they are dead, for when they are a dying the colours fade and grow pale. From his Back towards the Side he hath black Stroaks. The uppermost part of his Back is blew till to the middle, and the other half underneath it is green, and as if some blew did shine through it. Underneath his Belly he is as white as Silver, and his Finns are white every where. All the colours of this Fish shine like to a Silver or Golden Ground, done over with thin, transparent or illuminating colours. Their Eyes are black. It is the beautifulest Fish of all that ever I saw. This that I describe here was caught in the North Sea ; afterwards, on the 27th day of *June*, in the Year 1673. we did catch some Macarels behind *Scotland*, by the Island of *St. Kilda*, which were half blind ; it is occasioned

ned by a black Skin that groweth over their Eyes in the Winter, and cometh off again in the beginning of the Summer. We do not see them in the Winter, for they run towards the North: In the Summer we see them in the North Sea, and I have seen them also in *Spain*. We caught them after the following manner; we fastened a Bullet that weighed about two or three pounds to a Line, about a Fathom distance from the end, whereon we had fastened a Hook; this Hook we baited with a piece of a red Cloth, and so we flung it into the Sea, and towed it behind our Ship, then when the *Macarel* doth swiftly shoot at it, he bites upon the Hook, and so is hung, which you presently perceive by its pulling, as you do when you catch any other Fish, notwithstanding that the Rope of its own accord doth pull or draw very hard, by reason of the Sea, so that if you should rowl it about your Hand, it would benumb your Hand in a little time to that degree, that you would not be sensible, if one should cut it; wherefore they tye their Ropes to the carved Work on the Stern of the Ship, so that sometimes many of them are tyed to the Ship by one another, when the Ship fails apace, but this doth hinder the Ship very much in its failing, and I dare say two such Ropes draw as much as a Man's Strength. They catch them also with *Herring*, with a piece whereof they bait the Hook, at which they bite sooner than at a red piece of Rag or Cloth. They eat best if you boil, or broil, or roast them fresh as they are caught, or dry them: They are hard to be digested.

II. Of

II. Of the Dragon-fish.

It is peculiar to this Fish to have two Finns on his Back, the foremost whereof hath very long Strings, about two inches high above the Back; the hindmost Finn of the Back is not so high, but yet it goeth a great way all along the Back, and hath no such Strings. He hath no Gills, in the room of them he hath two blowing holes in his Neck, and on each side of these holes there are two short Finns, and underneath these, on each side a broad one: Underneath his Belly he hath a long very narrow Finn, that reaches to the Tail. His Head is oblong, composed of many Bones: He hath before on his Nose a raised part: His Tail is about an inch broad: His Body is long, thin, and roundish, of a greyish Silver colour, and shining: His Shape is likest to that of a young Hay, as well the Head as the rest of the Body. They are caught between the *Bears-Island* and *Spitzbergen*. We got one off of *Hitland*, when our Cook flung out his Bucket for Water, in which he took up one with some small Fish of the shape of an *Herring*, but they were not bigger than a joint of your little Finger. Our Seamen informed me of some other small Fish, that are in the deep holes between the high Mountains, in the *South Haven*.

III. Of the Dolphin.

This is also a common Fish, because we see them in great numbers, every where in the Sea, chiefly before a Storm or hard Weather, for then they jump in great numbers out of the Sea,
like

like *Seales*. The Head of it, chiefly the Nose, is very like that of the *Place's* Head. Its Mouth is full of little sharp Teeth. He hath a Finn on the middle of his Back, which is hollowed out towards the Tail, like an Half-moon. On its Belly are two Finns, like those of the Whale; these Finns are not like them of small or little Fishes, that are boney, joined together with a thin Skin, but they are all over fleshy, and covered with a thick Skin, and made of jointed Bones within. The Tail is broad, and of the same shape as that of the Whale, but it is not cut in, and is crooked from one end to the other, like a Sickle. He hath two small round Eyes. The greatest part of the Body is of a black colour, but the Belly is white; they are five or six feet long. They run very swift against the Wind, as an Arrow: They are generally caught by chance. Because Figures thereof are in other Books, I did not think it convenient to delineate him.

IV. Of the *Butskopf*, or *Place's* Head.

The *Butskopf's* Head is blunt before, whereon is a Bill or Beak of an equal bigness all-along, which distinguishes him from the *Dolphin*, which is thicker behind, and more pointed before. The Finns are like those of the *Dolphin*, but the foremost on his Belly are liker those of the Whale; its Tail is also liker a Whale's. He hath a *Spout-hole* above in his Neck, whereout he spouts the Water, but not with such a strength, nor so high as a Whale doth. There is also a difference in the sound of the Fishes, for this, when he bloweth out Water, makes but a small noise, but the blowing of a Whale roareth

roareth that you may hear it afar off. His Eyes are very small in proportion to his bigness. I have seen them sixteen, eighteen, and sometimes twenty foot long. Their Back is of a brown colour; the Head brown and marbled; underneath their Belly they are white. They run very near unto the Ships, so that one may push at them with a Stick, and they keep up with a Ship for a long time, which other Fishes do not, for when they see the Ships they are afraid of them. They all swim against the Wind, as *Whales*, *Finn-fish*, and *Dolphins*. I am of opinion, that they endeavour to run away from the Storm, and that they find some Pain or other in their Bodies some days before, for you shall see some Fish tumble about strangely in the Water, which I do not take to be playing, and this generally continues until their Tormenter the *East Wind* ceases. We saw another sort of great Fishes, that might rightly be called *Butskopf*, for their Head is quite blunt before, and have a Finn that stands up three times higher than the other *Butskopf* has; they are somewhat of a darker brown colour, but of the same bigness. We saw them tumble several times out of the Water; one might easily take them, because of their high Finn that stands on the top of their Back. They are not *Sword-fish*, nor of the same kind we call *Tumblers*, which we see between the *Elbe* and the *Hilgeland*.

V. Of the White-fish.

I do not by this Name mean the Fish we call so here in our Country, that are but small, but I mean a bigger sort, as large as a *Butskopf*,
in

in shape like a Whale, and without Finns on his Back; he hath two Finns on his Belly, as I am informed by others that have caught them. The Tail is like unto a Whale's. He hath a *Spout-hole* on his Head; he hath also an *Hoffel* on his Head like a Whale. He is of yellowish white colour. He hath fat enough in proportion to his bigness; I was told by them that had caught one, that they did fill a Barrel of Fat from one; but this Fat is very soft, and the Harpoon easily breaks out, wherefore they do not care to catch them. When we see plenty of them, the Skippers say, it is a sign of a good year for catching of Whales; for, if these find good Food, the Whales find the same also. We saw on the 19th of *June* some hundreds of them.

VI. *Of the Unicorn.*

The *Unicorn* is but seldom seen in these parts, neither had I the good Fortune to meet with one in all my Voyage; and yet sometimes many of them are seen. I do not find that the Cuts that I have seen in some Books agree with the description that I heard thereof; for I was informed, that he hath no Finn on his Back, as he is drawn, he hath also a *Spout-hole* in his Neck. When they swim swiftly in the Water they say that they hold up their Horns, or rather Teeth, out of the Water, and so go in great shoals. The Shape of their Body is like a *Seal*; the undermost Finns, and the Tail, are like unto those of the Whale. The Skin of some of them is black, some like a grey dappled Horse; underneath their Belly they are white. They are from sixteen to twenty foot long.
They

They swim very swiftly, that although they are seen, yet they are but seldom caught.

VII. Of the Saw-fish, sometimes called the Sword-fish.

This Fish hath his Name from a Saw, which is a long broad Bone fixed to his Nose, that hath on each side many pointed Teeth or Peggs, like a Comb. He hath two Finns on his Back, the uppermost of them is like the *Butskopf's*, the undermost hath behind, towards the Tail a hollownes like unto a Sickle. Underneath his Belly he hath four, on each side two, the uppermost thereof towards the Head are the broadest and longest, but the lowermost are somewhat shorter, and narrower; they stand directly underneath the uppermost Finns of the Back. The Tail is like unto a piece of Board, whereon the Dyers widen or stretch their Stockins, which is pointed behind and underneath. The Tail is not divided, &c. Towards the undermost Finn of the Back the Tail is thinner. The other shape, from the top to the Tail, is like a Man's naked Arm. The Nostrils are oblong. The Eyes stand high out of his Head. Their Mouths are just directly underneath the Eyes. They are in bigness from two to twenty foot.

These *Saw* or *Sword-fish* are great Enemies to the *Whale* and *Finn-fish*. Many of them gather about him, and they do not leave the *Whale* until they have killed him, then they eat of him only the Tongue, all the rest they leave behind them, as doth appear by the *Whales* that are killed by the *Sword-fish*. I saw my self, in our Home-voyage or Return, a Fight between a
Whale

Whale and a *Sword-fish*, where both of them made a great bustle, beating and jumping about ; and I understood that in calm Weather the Seamen let them alone until the *Whale* be killed, where they take him without any trouble. But if they set out their Long-boats after the *Whale*, they frighten the *Sword-fish*, and so the *Whale* escapes.

VIII. *Of the Hay.*

There are several sorts of them ; they have two Finns on their Backs, the highest whereof is like to the uppermost of the *Butskopf*, but the lowermost is of an equal breadth at the top and bottom, but it is hollowed out like a Sickle : He hath six Finns underneath his Belly, whereof the foremost two are the longest, and shaped like a Tongue, but the two middlemost are somewhat broader than those towards the Tail, and of the same shape ; the two last underneath by the Tail are of an equal breadth from top to bottom, something shorter than the middle ones. The Tail is of a peculiar shape, like unto one half part of that of the *Sword-fish*, but it is split below ; and the other part is like a Leaf of a Lilly. He hath a long Nose. The whole Fish is long, round, and thin, and he is thickest towards the Head : his Mouth is shap'd as that of the *Sword-fish* ; it is full of sharp Teeth, three upper and three under rows, one by the other : his Eyes stand something more out before than behind, after the same fashion as those of the *Sword-fish*, they are oblong, and very clear : he hath five Gills on each side, as the *Sword-fish* : his Skin is hard and thick, and rough if you touch it or strike it upwards ; it is of a greyish

co-

colour; they are from one fathom long to three: It is a very devouring Fish, and bites great pieces from the *Whale*, as if they had been dug out with Shovels. They devour of many *Whales*, all the Fat underneath the Water, and this is the reason that the Seamen say, *They have caught half a Whale that was dead.* And the Birds do help them also, and what is not taken away underneath, ferments out at the top. They have a large Liver, whereof they make Oyl. Out of their Backs we cut the Flesh, which we hang up for some days in the open Air, then we boil and roast it, and this tastes very well, when we have nothing that is better. They do not fling away the *Hays* in *Spain*, but sell them: The little ones are the best. They are very eager after Man's Flesh, and eat many a Man that goeth to swim or wash in the Sea, whereof we have many Instances. They are easily caught after the following manner; we take a great Hook fastned to a strong Iron Chain, baited with a piece of Flesh, and let it hang down into the Sea; the *Hay*, as soon as he doth perceive it, snaps at it, and is catch'd; but when the *Hay* perceives that he is fast, he doth use his utmost endeavour to bite off the Hook, which he cannot for the Iron.

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CHAP.

C H A P. VII.

Of the Whale.

THE Fish properly called the *Whale*, for whose sake our Ships chiefly undertake the Voyage to *Spitzbergen*, is differing from other *Whales* in his Finns and Mouth, which is without Teeth, but instead thereof long, black, somewhat broad, and horny Flakes, all jagged like Hairs : he differs from the Finn-fish in his Finns, for the Finn-fish hath a great Finn on his Back, but the Whale, properly so called, hath none on his Back ; and there is two Finns behind his Eyes of a bigness proportionable to the Whale, covered with a thick black Skin, delicately marbled with white Strokes, or as you see in Marble, Trees, Houses, or the like things represented. In the Tail of one of the Fishes was marbled very delicately this number 1222 very even and exact, as if they had been painted upon it on purpose. This marbling on the Whale is like Veins in a piece of Wood, that run streight through, or else round about the center or pith of a Tree ; and so go both white and yellow strokes through the thick and the thin strokes, that is like Parchment or Vellam, and give to the Whale an incomparable Beauty and Ornament. When these Finns are cut up, you find underneath the thick Skin Bones that look like unto a Man's Hand ; when it is opened, and the Fingers are expanded or spread, between these Joynts there are Riff Sinews, which flye up and rebound again
if

if you fling them hard against the Ground, as the Sinews of great Fish, as of a Sturgeon, or of some four-footed Beasts generally do. You may cut pieces of these Sinews of the bigness of your Head, they squeeze together when thrown on the Ground, and so rebound very high, and as swift as an Arrow from the String of a long Bow. The Whale hath no other Finns but these two wherewith he steers himself, as a Boat is rowed with two Oars.

Their Tail doth not stand up as the Tails of almost any other Fish, but it doth lye horizontal, as that of the *Finn-fish*, *Butskopf*, *Dolphin*, and the like, and it is three, three and an half, and four fathoms broad. The Head is the third part of the Fish, and some have bigger Heads; on the upper and under Lip are short Hairs before. Their Lips are quite plain, somewhat bended like an S, and they end underneath the Eyes before the two Finns: Above the uppermost bended Lip he hath black Streaks, some are darkish brown, and they are crooked as the Lips are. Their Lips are smooth, and quite black, round like the quarter of a Circle; when they draw them together they lock into one another: Within, on the uppermost Lip is the Whale-bone, of a brown, black, and yellow colour, with streaks of several colours, as the Bones of a *Finn-fish*. The Whale-bones of some Whales are blew, and light blew, which two are reckoned to come from young Whales. In one of my Cutts here you may see the Whale-bone in the Tab. Q marked with *a*. In the other Cutt, where his Mouth is shut up, you do not see the Whale bone. Just before, on the under Lip, is a cavity or hole which the upper Lip fits exactly into, as a Knife into a

K 2

Sheath.

Sheath. I do really believe, that he draws the Water that he bloweth out through this hole, and so I have been informed also by Seamen.

Within his Mouth is the Whale-bone, all hairy as a Horse's Hair, as it is also in the *Finn-fish*, and it hangs down from both sides all about his Tongue. The Whale-bone of some Whales is somewhat bended like unto a Cimeter, and others like unto a half-Moon.

The smallest Whale-bone is before, in his Mouth, and behind towards his Throat; and the middlemost is the greatest and longest, it is sometimes about two or three Men's length, from whence you may easily conjecture how large this Fish must be. On one side, all in a row, there is two hundred and fifty pieces of Whale bone, and as many also on the other side, which maketh five hundred in all, and there is more over and above this number, for they let the least Whale-bone of all remain, because they cannot well come at it to cut it out, because it is very narrow where the two Lips meet together. The Whale-bone is in a flat row one piece by the other, somewhat bended within, and towards the Lips every where like a half-Moon.

The Whale-bone is broad at the top, where it sticketh fast to the upper Lip, every where overgrown with hard and white Sinews towards the Root, so that between two pieces of Whale-bone you may put in your hand. These white Sinews look like boiled *Sea-catts* or *Black-fish* (in Spanish called *Cattula la Mar*) they are of a pleasant Smell, so that we might eat of them; they are not tough at all, but break as easily as Cheese, but they did not taste so well; when they

they putrifie or rot they smell horribly, just like unto a foul or rotten Tooth. Where the Whale-bone is broadest, as underneath by the Root, there groweth small Whale-bone, the other greater, as you see small and large Trees one amongst the other in a Wood. I believe the small Whale-bone doth not grow bigger, as one might think that some of the great pieces thereof might come out, and that so this small Whale-bone might grow up again in the room thereof, or as in Children the Hair grows again when cut off; but it is not so, for this Whale-bone is quite another sort, for it is from one end to t'other of an equal thickness, and full of long Jacks like Horses Hair. The Whale-bone is underneath narrow and pointed, and all overgrown with Hair, that it may not hurt that that is young: But without the Whale-bone hath a Cavity, for it is turned just like unto a Gutter wherein the Water runs, where it lyeth one over the other, as the Shields or Plaits of *Craw-fish*, or the Pan-tiles of an House, that lye one over the other, for else it might easily wound or hurt the under Lips. I am of opinion that one might use Whale-bone in any thing that we use Boards for, for they make of Whale-bone, Boxes, Knife-hafts, Walking-sticks, and the like. I should think that out of the Hair of the Fish might be made something, as the *Spaniards* do out of the wild *Sempervive Aloes*, (by them called *Savila*) they prepare it like Flax or Hemp, and so make Packthreads Clothes and the like Manufactures of it.

To cut the Whale-bones out is also a peculiar Trade, and abundance of Iron Tools belong thereunto. The lower part of the Whale's Mouth is commonly white. The Tongue ly-

eth amongst the Whale-bones ; it is very close tyed to the undermost Chap or Lip ; it is very large and white, with black spots at the edges : It is a soft spongy Fat, which cannot easily be cut ; it makes a great deal of work to the Cutter (for so they call the Man that doth cut the Fat into small pieces with a large Knife, which cannot well be done with other Knives, because it is tough and soft) wherefore they fling the Tongue away, else they might get five, six or seven Barrels of Train-oyl out of it ; but, as I said before, they fling it away, because of its softness ; and this is the most pleasing Food for the *Sword-fish*. Upon his Head is the Hovel or Bump before the Eyes and Finns : At the top of this Bump, on each side, is a Spout-hole, two over-against one another, which are bended on each side like an S, or as the hole that is cut on a Violin, whereout he doth blow the Water very fiercely, that it roars like a hollow Wind which we hear when the Wind bloweth into a Cave, or against the corner of a Board, or like an Organ-pipe. This may be heard at a leagues distance, although you do not see him by reason of the thick and foggy Air. The *Whale* bloweth or spouts the Water fiercest of all when he is wounded, then it sounds as the roaring of the Sea in a great Storm, and as we hear the Wind in a very hard Storm. Behind this Bump the *Whale* is somewhat more bended in than the *Finn-fish*, yet when they swim you cannot well discern one from the other, except you observe it very exactly, for it is only the Finn on the *Finn-fish's* Back that distinguishes him from the *Whale*. The Head of the *Whale* is not round at the top, but somewhat flat, and goeth down sloaping, like

like unto the tyling of an House, to the under Lip. The under Lip is broader than the *Whale* is in any part of the Body, and broadest in the middle; before and behind it is something narrower, according to the shape of the Head. In one word, all the whole Fish is shaped like unto a Shoemaker's Last, if you look upon it from beneath. Behind the Knob or Bump where the Finns are, between that and the Finns, are his Eyes, which are not much bigger than those of a Bullock, with Eye-lids and Hair, like Mens Eyes. The Crystal of the Eye is not much bigger than a Pea, clear, white, and transparent as Crystal; the colour of some is yellowish, of others quite white: The *Seale's* are three times as big as those of the *Whale*. The Eyes of the *Whale* are placed very low, almost at the end of the upper Lip. Some bring along with them from *Spitzbergen* some Bones, which they pretend to be the Ears of the *Whale*; but I can say nothing to this, because I never saw any; but thus much I do remember, that I have heard them say that they lye very deep.

The *Whale* doth not hear when he spouts the Water, wherefore he is easiest to be struck at that time. His Belly and Back are quite red, and underneath the Belly they are commonly white, yet some of them are Coal black; most of them that I saw were white. They look very beautiful when the Sun shines upon them, the small clear Waves of the Sea that are over him glisten like Silver. Some of them are marbled on their Back and Tail. Where he hath been wounded there remaineth always a white Scar. I understood of one of our Harpooniers that he once caught a *Whale* at *Spitzbergen* that was white all over. Half white I

have seen some, but one above the rest, which was a Female, was a beautiful one; she was all over marbled black and yellow: Those that are black are not all of the same colour, for some of them are as black as Velvet, others of a Coal black, others of the colour of a *Tench*. When they are well they are as slippery as an Eel, but one may stand upon them, because they are so soft, that the Flesh thereof giveth way to our weight: And the outward Skin is thin, like Parchment, and is easily pulled off with ones Hands when the Fish grows hot. I know not whether the Skin is thus burnt by the inward heat of the Fish when he lies dry a floating upon the Water. The Sun beams seem not to have so great power as to dry the Skin so. We found our first *Whale* was so much heated by his hard swimming that he stunk alive; we could pull off great pieces of the Skin, of the length of a Man, which we could not do to other Fishes that were not so much heated: But from *Whales* that have been dead some days, and are dry, where also the Sun shines upon them, or when it doth not rain, one may pull off a great deal of the Skin, but it stinks basely of Train-oyl, or Fat, that ferments thro' the Pores of the Skin. I know not what use to make of this Skin, but I have seen Women tye their Flax with it about the Distaff.

The *Whale* loseth this beautiful white colour when it groweth dry, for before there is more black amongst it, which maketh the white shew the better, neither doth the black look so well after it is dry, for it groweth then brownish. When you hold the Skin against the light, you see many small Pores in it, where the Sweat cometh through.

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The Yard of the *Whale* is a strong Sinew, and according as they are in bigness, six, seven or eight foot long, as I have seen my self. Where this Yard is fixed the Skin is doubled, so that it lies just like a Knife in a Sheath, where you can see nothing of the Knife but only a little of the Haft. The part of Generation in the Female is just shaped like as that of four-legged Beasts. At the sides of *Pudendum* stand out the two Breasts, with Nipples on them, like unto those of Cows: Some of these Breasts are quite white, some are speckled with black and blew spots, like a *Lapwing's* Egg. When they have no young ones they have but small Breasts. I am informed, that when they couple together they stand upright, close to one another, with their Heads out of the Water; which seemeth very probable, because they cannot keep long under Water, and chiefly in such a heat. They say that they have but two young ones at a time, for they have never found more than two young ones within them. How long they carry their young is not easily determined; some say they go as long as a Cow, but it is very uncertain, he that will believe it may. The Sperm of a *Whale*, when it is fresh, smells like Wheaten-flower that is boiled in Water, when it is still hot it is very white; one may draw it out in Threads like hot Sealing-wax, Grew, or the like; when it groweth cold it turnsto a Musk-colour, and smells strong, and little red Worms grow in it, like unto the grey ones, that you may see in the Tab. P. marked with C. I have tryed several ways to keep this Sperm sweet and fresh, but I could never make it like unto that *Sperma-ceti* which the *Apothecaries* sell in their Shops. One may dip
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of this Sperm whole Pails-full out of the Water, for as well this as that of the *Sea-horses* and *Seals* swims upon the Sea like Fat, and we see abundance of it in calm weather, so that it doth make the Sea all foul and slimy. I tryed to dry this Sperm of a *Whale* in the Sun, and it lookt like Snot, and when the thin Slime was dried away from it, looked like unto *Fila meteorica*, save only that they are thicker and more heavy. Another parcel I boiled in Sea-water, just as I took it out of the Water, until the Water was evaporated from it, then I had some Sea-salt, and a nasty brown Slime. The third parcel I boiled in fresh Water, and afterwards again in Sea-water, and the longer I kept it afterwards the more it stunk, and the harder it grew. The fourth parcel I intended to keep in the Salt Water, with an intention to carry it along with me to *Hamburg*, but it dissolved in the Water, like Grew, and the Water became foul and stinking, so that I could no ways make it like the *Sperma-ceti* of the *Apothecaries*. Where the Yard doth begin it is four-square, consisting of many strong Sinews; if you dry them they are as transparent as Fish-glew; out of these Sinews the Seamen make twisted Whips. Their Bones are hard, like unto them of great four-footed Beasts, but porous, like unto a Sponge, and filled with Marrow, when that is consumed out they will hold a great deal of Water, for the holes are big, like unto the Wax of a Honeycomb. Two great and strong Bones hold up the under Lip, they lye one against the other, and both of them make a Figure like unto an Half-moon, but one alone by itself makes a Figure like to a quarter of the Moon. Some of these Bones I saw at *Spitzbergen*, lying on the
Strand

Strand, about 20 foot long, of a very white colour, as if they had been calcined. Our Seamen bring some of these along with them home, to shew us how big some *Whales* are, which are already whitened to their Hands, for those that come fresh from a Whale stink abominably, because of the Marrow that is in them. Their Flesh is coarse and hard, and it doth look like unto that of a Bull; it is intermix'd with many Sinews; it is very dry and lean when it is boiled, because their Fat is only between their Flesh and Skin: Some looks green and blew as our Poulder'd Beef, chiefly where the Muscles meet together; if one lets it lye a little, it grows black and stinking. The Flesh of the Tail boils tenderest, and is not quite so dry as that of the Body. When we have a mind to eat of a *Whale*, we cut great pieces off before the Tail, where it is four-square, and boil it like other Meat; good Beef I prefer far before it, yet rather than be starved, I advise to eat *Whale's Flesh*, for none of our Men dyed of it, and the French-men did eat almost daily of it, they fling it sometimes on the tops of their Tubs, and let it lye until it is black, and yet they eat it for all that. The Flesh of a *Whale*, as well as that of the *Seales*, is alone by itself, and the Fat at the top thereof, between the Flesh and Skin. It is about six inches thick on the Back and Belly, but I have also seen it a foot thick, upon a Finn, according as they are great or little Fish. The Fat of their under Lip is thicker than two foot, and is the thickest of all the *Whale*. The Tongue, as I have said before, is fasten'd to it, but very soft, but it costs too much labour to cut it. The Fat of some Whales is much thicker than than that of others, as it is with

with other Animals or Men, where one is much leaner than another. In the Fat are little Sinews, interspersed which hold the Oyl, as a Sponge does Water, which one may squeeze out: The other strong Sinews are chiefly about the Tail, where it is thinnest, for with it he turns and winds himself, as a Ship is turned by the Rudder, but his Finns are his Oars, and according to his bigness he rows himself along with them as swiftly as a Bird flies, and doth make a long track in the Sea, as a great Ship doth when under Sail, so that it remains divided for a while.

The *Whales of the North Cape* (they are so called, because they are caught between *Spitzbergen* and *Norway*) being not so big, therefore do not yield so much Fat as those of *Spitzbergen*, for of those of the *North Cape* you shall not fill above ten, twenty, or thirty Cardels of Fat; the middling sort of those of *Spitzbergen* yield commonly seventy, eighty, or ninety, and they are about fifty or sixty foot long. Our biggest *Whale* was fifty three foot long, and we cut off him as much Fat as filled seventy Cardels; his Tail was about three fathom and an half broad. The Skipper *Peter Peterson* of *Friesland* informed me, that they found a dead *Whale*, whereof they did cut as much fat as filled One hundred and thirty Cardels, his Tail was three fathom and an half broad, but he was not much longer than our biggest, as one may guess by the Tail also, yet much thicker and fatter; from whence one may infer, that they do not grow much longer, but only in thickness or fatness, as we daily see: Nor did I ever hear that a bigger or fatter *Whale* was ever caught, and even those but seldom, for if there were many such, our
Ships

Ships could not hold so much Fat as is cut from ten, fifteen, or twenty *Whales*, as some of them have sometimes taken in.

Over the Fat is, besides the uppermost thin Skin already described, another Skin of about an inch thick, proportionable to the bigness of the *Whale*; it is coloured according to the colour of the Fish; if the Fish be black, this undermost thick Skin is so; if the outmost Skin that is like Parchment is white or yellow, the thick one underneath it is of the same colour. This thick Skin is not stiff nor tough at all, so that one might dress it like Leather, but it dries just like unto the Fungus that grows on Elder, which we call *Jews-ears*, which are thick and turgid when they are green and fresh, but brittle when they are dried; wherefore this Skin is not esteemed at all. This and the uppermost thin Skin that covers this, are the occasion that the *Whale*, which I take to be the strongest and biggest of all Creatures in the Water, cannot make use of his Strength, because they are too soft to do much.

I have nothing to relate of the inward parts of the *Whale*, but only that his Guts seem to be of a Flesh colour; they were full of Wind, and the Dung that was within them was yellow.

The Food of the *Whale*, as it is believed, are the small Sea-snails, the Draught whereof you may see at *c*, in the Tab. *Q*, whereof I have made mention in another place, which some take for Spiders; whether these afford such great nourishment, I cannot exactly tell. Some say, that they live only by the Wind, but then methinks they must have nothing in them but Wind, which I found otherwise. I was informed

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med by others, that about *Hitland* a small *Whale* was caught, had about a Barrel of *Herrings* in his Belly. They are smaller *Whales* than those we catch at *Spitzbergen*, but there is more danger in catching of them, they being less and nimbler than the great ones, to whom the Water doth not so easily give way as to these, for they jump and play in the Water, and keep their Tail commonly above Water, so that one dare not come near to them to launce them. Concerning the *Whale's* Valour, we do find that he is not very couragious, according to his strength and bigness, for if he sees a Man or a Long-boat, he goeth under Water, and runs away. I did never see nor hear, that out of his own Malice he endeavour'd to hurt any Man, but when he is in danger; what then he doth is of necessity, and then he doth not value a Man no more than a Sand, nor a Long-boat, for he doth beat them all into Splinters. His Strength may be guess'd by the Fishermen that catch with great Nets other Fishes, when they are going to draw their Nets towards the Land, what a great Strength they must use, which is nothing at all to be compared to his Strength. The *Whale* doth swim sometimes away with some thousand fathoms of Rope-line, swifter a great deal than a Ship can sail, or a Bird can fly, so that it makes their Heads giddy; yet a great Ship is too many for him, for although he should strike against it with his Tail, yet it doth him more hurt than he does the Ship.

The *Whales* keep, in the Spring, Westward from *Spitzbergen*, near old *Greenland* and the Island of *John Majen*; then they run Eastwards to *Spitzbergen*: After them come the *Finn-fish*,
and

and then there is no more *Whales* seen. It is probable they go after a tolerable cold place ; for after that, I have seen *Finn-fish* in the *Spanish Sea* in the year 1671. in the Month of *December*, and in the Year 1672. in *January*, and also afterwards in the year 1673. in the *Straights of Gibraltar* in *March*, and also in the *Mediterranean*.

He swims against the Wind, as all other *Whales* or great Fish do. The *Sword-fish* is his mortal Enemy, he might rather be called *Comb-fish*, because his long Tooth is on each side full of Teeth or Prickles, most like a Comb. In our Home-Voyage to *Hamburg* I saw an Example of this Enmity of a *Northcaper-Whale* and a *Sword-fish*, near to *Hitland*, they fought and struck at one another so vehemently, that the Water flew about like Dust, sometimes one and sometimes the other was uppermost ; the weather was a little stormy, or else we had stayed to have seen the end of the Battel, so we were forced to leave them.

The dead *Whale* killed by the *Sword-fish* stinks at a great distance, but not presently, and those that have been wounded some days before they are caught smell the worst, and drive high above the Sea-water, when others drive even with the Water ; and some sink.

The *Whales* have, as well as other Beasts, their peculiar Distempers and Ailments, but I can only write of what I know by Hear-say. An ancient and experienc'd Harpoonier informed me, that he did once catch a *Whale* that was very feeble, and that all his Skin, but chiefly near unto the Tail and Finns, hung like Films, as if they were old Rags dragg'd along
be-

behind him, and that he was quite lean, so they made but very little Train-oyl of his fat, for the fat was quite white, and light withal as an empty Honey-comb. Before a Tempest they beat the Water, that it doth fly about like unto Dust, with their Tail; but they have the greatest strength when they strike side-wards as if they did mow, so that one might think that they were in a great agony, and a dying. They are mightily tormented by the Lice, whereof I have treated more at large above: The Draught of this Louse you may see at *d*, in the Tab. *Q*.

The Wounds that are given unto the *Whale* by the Harpoons, into the fat, heal up again of their own accord, for the Salt-water cannot stick on it. Many *such Fishes* are caught, that have been struck by others with a Harpoon, and are healed up again, and so have white Scarrs.

CHAP.

C H A P. VIII.

How they Catch the Whale.

First, it is to be observed, that when it is like to be a good Year to catch *Whales* in, there is many *White-fish* to be seen before: But where we see many *Seales*, there we do not expect to meet with many *Whales*; for they say, that they eat up the Food of the *Whale*, wherefore the *Whales* will not stay in such empty places, but go to find out better, and so come to *Spitzbergen*, for there, at the Shoar, we see great plenty of the small *Sea-snails*, (you may see them marked with *e* in the Tab. *Q*) and perhaps some other small Fish. They are caught after the following manner: When they see *Whales*, or when they hear them blow or spout, they call in to the Ship, *Fall, fall*; then every Body must be ready to get into the Long-boat that he doth belong to, commonly six Men go into every Long-boat, and sometimes seven, according as the Long-boats are in bigness, they all of them row until they come very near unto the *Whale*, then doth the Harpoonier arise, who sits always before in the Boat, where the Harpoon or the sharp Iron made like unto an Arrow fixed to a Stick, doth also lye on the foremost Board of the Long-boat, which the Seamen call the *Staffen*, that is, the broad piece of Wood that cometh up before the Boat from

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the bottom, and stands up higher than all the rest. But when the *Whale* runs streight down towards the bottom underneath the Water, then he doth draw the Rope very hard, so that the upper part of the Long-boat is even with the surface of the Water; nay, he would certainly pull it down to the bottom, if they should not give him Rope enough: This he doth commonly where the Sea is deepest; and this doth require an incredible force to draw so many hundred fathoms of Rope under Water. This giveth me occasion to remember, that when we on the 27th of *April*, in the Year 1672. did sling out our Lead, near *St. Kilda*, behind *Scotland*, into the Sea, where it was 120 fathom deep when the Weather was calm, and when we would pull it up again, it was so heavy that 20 Men had much to do to heave it. The Harpoonier taketh his Harpoon, and holds the Point or the Iron thereof, together with the Fore-runner, towards his Left hand: this is a Rope or Line of five or seven fathom long, about an inch thick, and is laid up round like a Ring, that it may not hinder the Harpoon when it is flung, for as soon as he doth sling or dart the Harpoon this Line follows, for it is more plyable than the rest that are fastened to it, wherewith they pursue the *Whale*. It is made of the finest and softest Hemp, and not daubed with Tarr, but it doth swell in the Water, and so it grows hard. The Harpoonier darts his Harpoon with the Right hand at the Fish; as you may see by *m* in the Tab. *A*. When the *Whale* is hit with the Harpoon, all the Men that are in the Long-boat turn themselves about and look before them, and they lay their Oars nimbly upon the sides of the Long-boat. There

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is a Man in the Long-boat, whose business it is to look after the Rope ; as you may see at *N*, in the Tab. *A* ; for in each of these Long-boats there is a whole heap of Lines , between the two Seats or Benches ; this Heap is divided into three, four, or five parts, and each of them is of eighty, ninety, to one hundred fathoms long. The first of them is tyed to the Fore-runner, or small Line ; as the *Whale* runs under the Water, they tye more and more Line to it, and if in one Boat there should not be enough, they make use of those that are in the other Long-boats. These Ropes or Lines are thicker and stronger than the Fore-runner, and are made of strong and tough Hemp, and Tarr'd over. The Line-furnisher, or the Man that doth look after the Ropes, and also the other Men that are in the Long-boat, must have great care that the Ropes or Lines may not be entangled when they run out so swift, or that they may not run towards the side of the Long-boat, for then the Long-boat would be overset, and many Men lose their Lives, if other Long-boats were not near to their assistance. The Line must run just before, in the middle of the Long-boat, that is called the *Stave* by the Seamen, and by reason of this strong and violent motion the Wood and Rope, would be set on fire. But to prevent this, the Harpooner hath a wet Rag tied to a Stick (like unto a Mop) ready at hand, wherewith he wets the Wood without ceasing. The other three Men that are in the Long-boats take also care of the Lines, as well when they are let out, as when they are taken in again, and when they cannot hold it with their Hands, they wind it about the Staves of the Boat, and so they do stop it

from going any further. Another that is called the Steerman, stands behind in the Long-boat, as you may see by *o* in the Tab. *A*, and steers the Boat with an Oar, and he takes great care, and minds the Rope, to see which way it runs out, for if it doth go towards either side, and doth not run just before over the Stave, he so guides the Boat, that it may run exactly out before. The Whale runs away with the Long-boat as swift as the Wind. If the Harpoonier can, he doth dart the Harpoon just behind the Spout-hole of the *Whale*, or in the thick Fat of his Back, where they also do launce him, for that maketh him spout Blood sooner than if wounded in any other place, and dye sooner than if you should launce them into their Belly, or through the Guts. The first *Whale* we caught spouted Blood, in such a quantity, that the Sea was tinged by it where-ever he swam, where-unto the *Malle-mucks* flock'd in great numbers, as I have mentioned before. They also launce the *Whales* near their privy parts, if they can come at it, for if they are run in there it doth pain them very much; nay, even when they are almost dead, if you run in your Launce thereabout, it causes the whole Body to tremble. For the most part they do not much mind where they launce or push them, for there is no time to take great deliberation, but they strike at him as well as they can. But about the Head the Harpoon can do him no hurt, because the Fat is but very *thin* there upon the Bones, which the *Whales* know as well as we; for when they find themselves in danger, so that they cannot escape the Harpoon, they rather leave their Head than their Back undefended, for there the Harpoon breaks out easier, and

and so the *Whale* gets away, like one that hath no mind to fight any longer. The Use of the Harpoon is, to tye, as it were, the *Whales* with them, that they may not run away: It is shaped like an Arrow before, as you may see at *f*, in the Tab. *Q*; it hath two sharp Beards, they are sharp at the edge, and have a broad Back, like unto a Hatchet that is sharp before and blunt behind, or on the Back, so that it may not cut with its Back, for else it would tear out and all your Labour would be lost. The Iron Handle is thicker behind than before, and it is hollow, whereinto they put the Stick, as you may see in the Tab. *Q*, marked with *b*. Before this hollow part, the Fore-goer is fasten'd or tyed, that is to say the foremost Rope, as you may see in the Tab. *Q*, marked with *i*. Those are the best Harpoons that are made of clean and fine Steel, and are not hardened too much, so that you may bend it without snapping, for oftentimes Two hundred Pounds are lost (for a midling *Whale* is esteem'd at so much) in a minutes time for want of a good and well-temper'd Harpoon. The Wooden Stick is fastened within the Iron Collet or Funnel of the Harpoon, with Packthread wound all about the Iron; somewhat higher up, about two spans off, there is a hole made through the Stick, as you may see marked with *k*, in the Tab. *Q*. The Harpoon is light behind, and heavy towards the point, or before, like an Arrow, that is made heavy before with Iron, and light behind with Feathers, so that fling it which way you will, it doth fall always upon the point. Through this hole cometh a piece of Packthread, wherewith the end of the Fore-runner is fastened to the Handle or Stick of the Har-

poon, but this is soon torn off, and it serveth for nothing more after the Harpoon sticks in the Body of the *Whale*; neither is the Wooden Handle of any further use, and so it doth soon come out from the Iron. When the *Whale* is struck with the Harpoon, all the other Long-boats row out before, and take notice which way the Line doth stand, and sometimes they pull at the Rope or Line (as you may see in the Tab. *A*, marked with *p*.) If it is stiff and heavy, the *Whale* doth draw it still with his might; but if it doth hang loose, so that the Long-boat is before and behind equally high out of the Water, then the Men pull in the Rope again, (as you may see in the Tab. *A*, marked with *q*) and the Rope-giver layeth it down in very good order (as you may see at *n*, in the Tab. *A*) round, and one row above the other, that if the *Whale* should draw on again, he may have it ready to give him without being entangled. Here is also this to be observed, that if the *Whale* runs upon the level they must not give him too much Rope, for if he should turn and wind himself much and often about, he might easily wind the Rope about a Rock or heavy Stone, and so fasten it to it, and so the Harpoon would come out, and all the Labour would be lost; which hath often hapned, and we ourselves lost one that way. The other Long-boats that are towed behind, wherein the Men look all before them, and sit still, and let the *Whale* draw them along: If the *Whale* doth rowl upon the Ground, so that the Long-boats or Sloops lye still, they draw their Lines in again by degrees, and the Rope-master doth lay them down again in their proper places, as they had been laid before. When they

they kill the *Whale* with Launces, they also pull their Lines in again, until they come near to the *Whale*, yet at some distance, that the others may have room to launce: But they must have great care, that all the Lines of every Sloop may not be cut off together, because some *Whales* sink, and others do swim even with the Water when they are dead, which no body can tell beforehand, whether they will do one or the other. The fat ones do not sink presently after they are fresh killed, but the lean ones sink immediately after they are dead, but after some few days they come up again, and swim on the Water: But it would be too long a while for a Man to stay until he cometh up again, and the Sea is never so quiet that one can stay long in the same place, and where the Sea is quiet, and without Waves, there the Stream doth carry the Ships and the Ice along together, so that we should be forced to leave the *Whale* unto others, that would find him dead some days after. 'Tis true, this is the easiest way to catch *Whales*, but it is very nasty and stinking work; for long and white Maggots grow in their Flesh, they are flat like unto Worms that breed in Mens Bellies, and they smell worse than ever I smelt any thing in my Life. The longer the *Whale* lies dead in the Water, the higher he doth swim above it; some swim a foot high above the Water, others to their middle, and then they do burst easily, and give a very great report. They begin immediately to stink, and this encreases hourly, and their Flesh boils and ferments like unto Beer or Ale, and holes break in their Bellies, that their Guts come out. If any Man is enclined to sore Eyes, this Vapour enflames them immediately, as if Quicklime

was flung into them. But when the live *Whales* rise and swim again, some of them are astonish'd, others wild or stark mad: To those that are wild we come softly or gently from behind, as we do when we are going to trapan them; for when the Wind is down, the Weather calm, and Air serene, so that the Sea doth not foam or roar, the *Whales* hear immediately the striking of the Oars.

If many small Ice-sheets lye near to one another, so that we cannot follow the *Whale* with our Sloops or Long-boats, we fetch in our Line with all might and strength, and if with one or more pulls we can fetch out the Harpoon it is well, if not, we chop off the Rope or Line. The *Whale* is best and surest struck with a Harpoon when he spouts Water, as is already said above, for we do observe, that when they lye still and very quiet, that they then listen, and are sometimes under, and sometimes above Water, so that their Back doth not quite dry, and before we are aware of it he flings up his Tail behind out of the Sea, and so bids us good-b'wy; as you may see at s, in the Tab. A. The *Whales* may easily be caught when the Air is very serene and clear, and the Sea quiet, and where there float neither great nor small Ice-sheets, so that we may go in between them with our Boats or Sloops, to follow them; for at the Ice-fields the *Whales* do commonly lye and rub themselves at them, perhaps by reason of the Lice that bite them. Besides, against the Ice-sheets the Sea beats, dashes, and foams, with small curling Waves, so that the *Whales* do not observe nor mind the striking of the Oars, and so they are easily struck with the Harpoon. It is very

very dangerous to kill a Female, chiefly when she is big with young, for they defend themselves very long, and are harder to be killed than a Male one. Oftentimes the Long-boats wait six or seven hours, nay, a whole day, for a *Whale*, before they see one.

Where great quantity of small Ice is crowded together, there it is also very dangerous, and hard to come to the *Whale*, for he is so cunning, that when he perceives where the Ice is he retires thither immediately. The Harpooner stands at the Head of the Long-boat, and doth draw on the Rope, as you may see at *p*, in the Tab. *A*, to try whether it is heavy or light; if it feels heavy, so that we are afraid that it will pull the Boat under Water, then we give him more Rope, if he runs streight out before, he draweth the Sloops after him. If he doth run underneath a great Ice-field, the Harpooner taketh a Knife into his Hand, as you may see at *R*, in the Tab *A*, which they call the Chopping-Knife, and if the Ice-field be hollow, or spungy, or full of holes in the middle, so that the *Whale* can fetch breath underneath it, and the Rope is not long enough to follow him, and if the Ice be several miles long, they draw the Rope in as much as possibly they can, until it be streight, and then he chops it off, loosing the piece of the Rope whereon the Harpoon is fastened, that sticketh in the Body of the *Whale*, yet not without great loss, for oftentimes they run away with the Lines that belong to five and more Sloops. It happens very often, that they run to the Ice with the Long-boats, so that they dash against it, as if they would break it into pieces, which also very often happens. But
when

when the *Whale* rises again, they oftentimes fling one or two more Harpoons into him, according as they find he is tired more or less, then he dives under Water again. Some swim or run even all along on the Water, and they play with their Tail and Finns, so that we must have great care that we may not come too near them. When the *Whales* fling their Tails about after this manner, they wind the Line about their Tail, so that we need not to fear the Harpoon tearing out, for then they are ty'd strong and firm enough with the Rope. After they are wounded, they spout with all their might and main, so that you may hear them as far off as you may a Cannon; but when they are quite tired, it cometh out only by drops, for he hath not strength enough to force the Water up, and therefore it sounds as if you held an empty Mug or Bottle under Water, and the Water runs into it. And this sound is a certain sign of his feebleness, and that he is going to expire. Some *Whales* blow Blood to the very last, after they have been wounded, and these dash the Men in the Long-boats most filthily, and dye the Sloops as red as if they were painted with a red colour; nay, the very Sea is tinged red all along where they swim. Those *Whales* that are mortally wounded heat themselves, that they reek while they are alive, and the Birds sit on them, and eat on them while they are still alive. When the *Whales* blow up the Water, they fling out with it some fattish substance that floats upon the Sea, like Sperm, and this Fat the *Malle-mucks* devour greedily, of which several thousands attend him, so that a *Whale* often hath more Attendants than a King hath Servants; as you may

may see by T, in the Tab. A. Sometimes also the Harpoons break out; then often Long-boats of other Ships attend, and as soon as they see that the Harpoon is come out, they fling their own into him, and the *Whale* is theirs, although the first Harpoon hath almost killed the *Whale*, yet if he doth get loose, the second Party claims him, and the first must look for another. Sometimes at the same time two Harpoons, belonging to two several Ships, are struck into the *Whale*, such ones are divided equally, and each one hath half; as you may see at MM, in the Tab. A; the other two, or three, or more Sloops, as many as there is of them, wait for the *Whale's* coming up again, and when they see that he is tired, they kill him outright with Launces. In doing this is the greatest danger, for the first that do fling the Harpoon into him are drawn along by the *Whale*, and are at a good distance from him, but those that kill him with Launces are as well upon his Body as at his Sides, according as the *Whale* turns and winds himself, and they receive many severe Blows. Here the Steersman must take care to observe how the *Whale* runs and turns himself about, that the Harpooner may reach him with his Launces; all the other Men in the Sloops row diligently, sometimes forwards, and sometimes backwards, which they call *rowing on* and *striking*, and when the *Whale* lifts up himself out of the Water, he commonly doth strike about with his Tail and Finns, that the Water dasheth up like Dust. A Long-boat he values no more than Dust, for he can beat it all into shatters at a blow: but a great Ship is too hard for him, and if he strikes against it with his Tail, he feels it more than the Ship,
for

for he doth so paint the Ship with his own Blood, that it maketh him very feeble. A good Steerman is next unto the Harpoonier most useful in the Sloop ; he steers with one Oar, and doth look out before ; the other four Men turn their Back to the Head, and look towards the Stern, therefore doth the Steerman and Harpoonier always cry, *Row on, or strike,* that is to say, row near to the *Whale,* or else keep farther off. The Launces have a Wooden Stick or Handle above two fathoms long, or somewhat shorter than a Pikestaff ; as in the Tab. Q you may see at g ; the Iron thereof is commonly a fathom long, and pointed before like unto a Pike ; it is made of Steel or tough Iron, that it may bend without breaking : for after you have made a deep hole in his Body with your Launces, you poke into it with them one way and the other way, as they do when they poke for Eels, as you may see at Z, in the Tab. A ; but if he doth get one or more out of your Hands, you take another, for every Sloop hath at least five, six, or seven, and yet sometimes he has them all out of three, four, or more Boats sticking in his Body.

CHAP.

C H A P. IX.

What they do with the dead Whale.

After the *Whale* is killed they cut off his Tail; some keep the Tail and Finns, and hang them up at the outside of their Ship, for that defends them from the Ice when it presseth upon the Ship: The Tail hinders the Boat in its course, because it doth lye cross, and that is the reason why they cut it off. Before the Tail they fasten a piece of a Rope, and at the other end at the Stern of the last Sloop, as you may see in the Tab. *A*, marked with *W*. There is in all four or five Sloops fastened to one another behind, and so they row one behind the other to the great Ship. When they have brought the *Whale* to the Ship, they tye it with Ropes fast to the Ship; that part where the Tail is cut off they fasten to the fore-part of the Ship, and the Head towards the Stern, about the middle, near the great Shrowds of the Mainmast on the Larboard of the Ship; it is seldom that a *Whale* doth reach farther than from the Poop to the middle of the Ship, except the Vessels are very small; as you may see at *X*, in the Tab. *A*.

By the Larboard is to be understood that side of the Ship that is at your Right Hand as you go from before towards the Stern; but that side of the Ship that is on your Right Hand as you go

go from the Stern towards the Fore-part is called Star-board, because you go from the Steer forward.

Whoever of the Ships Crew sees a dead *Whale*, cries out *Fish mine*, and therefore the Merchants must pay him a Ducat, for his Care and Vigilance. Many of them climb often up into the Mast, in hopes to have a Ducat, but in vain.

When the dead *Whale* is thus fastened to the Ship, two Sloops hold on the other side of the Fish or *Whale*, and in each of them doth stand a Man or Boy, that has a long Hook in his Hands, wherewith he doth hold the Boat to the Ship, and the Harpoonier stands before in the Sloop, or upon the *Whale*, with a Leathern Suit on, and sometimes they have boots on. Underneath the Hook are some sharp Nails fixed, that they may be able to stand firm, for the *Whale* is very slippery, so that one may easily fall, as upon slippery Ice. These two Men that cut the Fat off have their peculiar Wages for it, *viz.* about four or five Rix Dollars. First, they cut a large piece from behind the Head, by the Eyes, which they call the *Kenter-piece*, that is as much as to say the Winding-piece; for, as they cut all the other Fat all in rows, from the *Whale* towards the end, so they cut this great *Kenter-piece* larger and wider than all the rest. This piece, when it is cut round about from the *Whale*, reaches from the Water to the Cradle, (that is the round Circle that goeth round about the middle of the Mast, and is made in the shape of a Basket) from whence you may guess at the bigness of a *Whale*. A strong and thick Rope is fixed to this *Kenter-piece*, and the other end is fixed underneath

derneath the Cradle, whereby the Whale is as it was born up out of the Water, that they may come at it, and by reason of the great weight of the Whale, the Ship leans towards that side. One may judge how tough the Fat is, for in this piece an hole is made, through which the Rope is fastened, yet not deep into the Fat, wherewith they turn the Fish at pleasure; as you may see at *K*, in the Tab. *A*. Then, as is before said, they cut another piece down hard by this, that is also halled up to the Ship; as you may see at *L*, in the Tab. *A*; and then in the Ship they cut it into less pieces about a foot square. These two Men have in their Hands, as well as those that stand on the Whale, long Knives, wherewith they cut these square pieces. These Knives are, with their Hafts, about the length of a Man; and the more the Fat of the Whale is loosened, just as the Hide is flea'd from an Ox, the higher must they pull up the Fat with their Pulleys, that they may cut it the easier. And when they have drawn up this Fat, the Men take it in to them into the Ship, and loosen the Rope that it was fastened unto. The Rope is fastened with a Ring, whereinto they put a great Iron Hook, which is fastened to a strong Tackle, and also sometimes, before in the Ship, are fixed two other Tackle, wherewith all the Fat is drawn up into the Ship. In the Ship stand two Men, with Hooks as long as a Man, wherewith they hold the great piece of Fat, which the two Men cut into square pieces with their long Knives. By them stands another, that hath a short Hook with a Ring in his Hands, which he thrusts into the pieces of Fat that are cut square, and puts it upon the Bench or Dressing-board, where
it

it is cut by others into less pieces. The two first Men with their long Knives, that cut the large pieces of Fat, stand near the Larboard of the Ship, at that side where the Whale is fixed, and the other Men that afterwards cut it into less pieces, stand on the other side called Starboard, as you may see at I, in the Tab. A. When it is a good time to catch Whales, and they will not lose it, they tow sometimes several Fish behind their Ship, and catch more; and they cut only the great pieces of Fat of them, and fling them underneath into the Ship. But when they have no more Vessels to put their Fat into, they sail into an Harbour; or if it be calm weather, and not windy, they stay in the Sea, and fasten themselves to a sheet of Ice, and so they drive along with the Stream. The other Men cut the Fat into small pieces, on a Table; on the further side of the Table is a Nail fastened, whereunto they fasten a Hook, which they put into the Fat, that it may lye steady when they cut it into small pieces, the Fat is tough to cut, wherefore it must lye firm. That side whereon the Skin is they lay undermost, and so cut the Fat from it by pieces. The Knives wherewith they cut the Fat into small pieces are less than the other, about three foot long with their Hafts. They all cut from them that they may not be bedaubed with the Fat, which might occasion a shrinking up and lameness of the Sinews of their Hands and Arms. One of them cuts the soft and tough Fat into small pieces with a long Knife; this Man they call the *Chopper*, and he is mightily daubed, wherefore he doth hang about him all sorts of Rags and Clouts he can get. The Fat of some Whales is white, of others yellow, and of some red.

red. The white Fat is full of small Sinews, and it does not yield so much Oyl as the yellow. The yellow Fat that looks like Butter is the best. The red and watery Fat cometh from dead *Whales*, for in the place where the Fat runs out the Blood settles in its room, and yields the worst and least Oyl. Before the Table is a Gutter made of two Boards nailed together, whereinto the small or minced Fat is flung; by it stands a Boy that shuffles the Fat by degrees into a Bag that is fixed to the end of the Gutter, and is like unto a Pudding-bag, so long that it reaches down into the Ship; out of this Bag the Fat runs down into a Tub or Wooden Funnel, which they put upon empty Vessels or Cardels, as they call them, and the Men that are below in the Ship fill them with it, and so it is kept until they try it up into Train-oyl. When the Fat is cut off from one side of the *Whale*, before they turn him, they cut out the Whale-bone in one entire piece, and this is so heavy, that all the Ship's Crew hath enough to do to pull it up. They make use, for that purpose, of a peculiar sort of Hooks, two whereof they fix on the sides, and one on the middle of it, very well provided with strong Tackle, as you may see in the Tab. R, and afterwards they cut out the Whale-bone of the other side of the Fish, and draw it up also with Pulleys into the Ship, where it is cut into such pieces as they bring it hither in. The Whale bone doth only belong to the owners of the Ship, and the others that run their hazard, whether they catch few or many *Whales*. The rest, which take their Pay by the Month, receive their Money when they come home, whether they have caught many or none, and the Loss

M

or

or Gain falls upon the Merchants. The Hooks that they crane up the Whale-bone withal are made on purpose for it, like a Beam of a pair of Scales; on each end are two sharp points, which they knock in between the Whale-bone; in the middle of the Beam is fastened a long Handle with a Ring, whereon the Ropes are fastened; on this Handle there are fixed two other crooked Hooks like Birds Claws; in the Ring where the Ropes are fastened is another crooked Hook, at the top fastened by a Ring, such a one as we make use of here when we wind any thing up by a Crane; but in the middle between these two Hooks is fastened another Rope, which keeps the lowermost Hook steady; the two hindmost points are knocked into the Whale-bone behind, and the two foremost short ones before, which hold the Whale-bone fast between them when it is wound or pulled up.

The dead *Whales*, when the Fat is cut off of them, they let float, and are the Food of the Birds of Prey, when they are hungry, but but they had rather have dead *Whales* that have still their Fat left on them. The white Bear is generally not far off, whether there be any Fat left on them or no, and look like Dogs that only feed upon Carrion, and at that time their white Furr is turned into a yellow colour, and at the same time they shed their Hair, and their Skins are worth very little. Where a dead *Whale* is near we see it by the Birds, whereof are many, and also the white Bears discover it, as you may see at *g* in the Tab. *B*, chiefly in the Spring, when but a few *Whales* are caught, for then they are greedy of their Prey; afterwards when many *Whales* float on the Sea, they have
their

their Bellies full, and we do not find so many by a *Whale*, because they are dispersed.

C H A P. X.

Of the Trying out of the Train-oyl from the Fat.

FOrmerly the *Dutch* did try out their Train-oyl in *Spitzbergen*, at *Smerenberg*, and about the Cookery of *Harlingen*, where still, for a remembrance, all sorts of Tools belonging thereunto are to be seen, whereof I have made mention before. The *French-men* try up their Train-oyl in their Ships, and by that means many Ships are burnt at *Spitzbergen*, and this was the occasion of the burning of two Ships in my time. They try out their Train-oyl at *Spitzbergen*, that they may load the more Fat in their Ships; and they believe it to be very profitable, for they go their Voyage upon part, that is to say, they receive more or less, according to what they catch: But I do not account it Wisdom to fill up the room of the Ship with Wood, where they might stow Vessels. But our Country-men, as I told you before, put the Fat into the Vessels, wherein it doth ferment just like Beer, and I know no instance that ever any Vessel did fly in pieces, although they are stopt up very close, and so it becometh for the greatest part Train-oyl in them. Of the fresh Fat of *Whales*, when it is burnt out you lose Twenty in the Hundred, more or less, ac-

cording as it is in goodnes. At the place
 where they try up the Fat into Train-oyl, near
Hamburgh, they put the Fat out of the Vessels
 into a great wooden Trough or Tub, and out
 of this two Men empty it into a great Kettle
 that stands near it, that doth hold two Cardels
 of Fat, that makes 120, 130, and sometimes
 140 Gallons: Underneath this Copper that is
 made up with Bricks they put the Fire, and so
 they boil it, and try it up into Train-oyl, as
 you try up other Fat. This Copper is very well
 secured, as the Dyers Coppers use to be: it is
 very broad and flat, just like a Frying-pan,
 made of Copper. When the Fat is well tryed
 or fryed out, they take it out of the Pan with
 small Kettles, into a great Sieve, that the liquid
 only may run through, the rest is thrown away.
 This Sieve stands over a great Tub, which is
 above half filled with cold Water, that the hot
 Train-oyl may be cooled, and that what is
 unclean and dirty of the Blood and other Soil
 may fall to the bottom, and only the clear
 Train-oyl swim at the top of the Water, like
 other Oyl. In this great Tub or Trough is a
 small Spout or Tap which doth run out over
 another as big as a Tub, out of which the Train-
 oyl runs into another Tub, when it is almost
 ready to run over, which is also filled with cold
 Water to the middle, wherein it is more cooled,
 and becomes clearer, and more refined than it
 was before. In this Trough is another Spout,
 through which the Train oyl runs into the
 Warehouse into a Vatt, whereout they fill it
 into Cardels or Vessels. Some have but two
 Tubs. A Cardel or Hoghead holds 64 Gallons.
 A true Train oyl Barrel doth hold 32 Gallons.
 The Greaves they try up the second time, and
 make

make brown Train-oyl out of it, others that think it not worth their while fling them away.

CHAPTER XI.

Of the Finn-fish.

THE *Finn-fish* is of the length of a *Whale*, but in bulk the *Whale* is three times as big. They know the *Finn-fish* by the Finns that are upon his Back, near unto his Tail, and also by his vehement blowing and spouting up of the Water, which the *Whale* doth not do. His Knob on the Head is split in length, that is at his blowing hole, through which he forces up the Water higher than the *Whale*, and with more fierceness, which is not so high as that of the *Whale*, neither is the Back bended or dented in so much. His Lips are of a brownish colour, and like a twisted Rope. On his upper Lip the Whale-bone hangs, as it doth on the *Whale*; but whether he doth open and shut his Mouth there are different Opinions: Some believe that he cannot open his Mouth, yet this is not true; but he doth not always run open Mouth'd, that the Whale-bone may not hang out of his Mouth at the sides, as it doth in Whales, for else he can open his Mouth if he pleases. Within his Mouth, between the Whale-bone, he is all over hairy, like unto Horses Hairs, which grows within to the Whale-bone that is but new growing, and it is

of a blew colour. The other Whale-bone is of a brown colour, and dark brownish with yellow stroaks, which are esteemed to be the oldest: The blew Whale-bone cometh from young Whales and Finn fishes. He is not as black as Velvet, as the Whale is, but like a Tench. The shape of his Body is long and small, neither is he so fat as a Whale, wherefore we do not much care to catch him, for he doth not pay us for our Labour. It is much more dangerous to kill him than to kill a Whale, because he moves quicker, and beats about him with his Tail, and from him with his Finns, so that we dare not come near unto him with our Sloops or Long-boats, for the Launces kill him soonest. I was informed, that once some, before they were aware of it, did fling, by a mistake, their Harpoon into a Finn-fish, whereupon he drew both Boat and Men, all on a sudden, underneath a large Ice-sheet before they were aware of it, and not one of them escap'd. His Tail lies flat, like unto that of the Whale. When these Finn-fishes appear we see no more Whales.

The Train-oyl of the Whale is used by several, *viz.* by the *Frize-makers*, *Curriers*, *Cloath-workers*, and *Soap-boilers*; but the greatest use that is made of it, is to burn it in Lamps instead of other Oyl.

The *Greenland Ships* carry 30 or 40 Men, and sometimes more, chiefly the great Ships, that have six Sloops belonging to them, such Ships hold from 800 to 1000 Cardels of Fat; the less Ships have commonly fewer Cardels or Vessels, from 400 to 700, and have commonly five Sloops or Boats belonging to them. There also go Galliots to *Spitzbergen* to catch Whales; they

they have three or four Sloops belonging to them : Some put the Sloops upon the Deck of the Ships, others hang them overboard, as they do at *Spitzbergen*, when they are amongst the Ice, that as soon as they call *Fall, fall*, they may immediately let down their Sloops into the Water.

Then there remains onboard in the Ships the Steersman, the Barber, the Chyrurgion, the Cooper, and a Boy, to look after the Ship; the Skipper or Commander himself goeth out with the rest of the Men, for they are all obliged to go a Whale-catching.

In each Ship there are sixty Launces, six Sea-horse Launces, forty Harpoons, ten long Harpoons wherewith they strike the *Whales* under Water, six small Sea-horse Harpoons, thirty Lines or Ropes, and each of them is about eighty or ninety fathoms long. When they go a hunting they take along with them into each Sloop two, and sometimes three Harpoons, six Launces, two or three Sea-horse Launces, three Lines, and five or six Men, according to the bigness of the Sloops, therein is the Harpooner, Line-keeper or Giver, and the Steersman : They all row equally, until they come near to the *Whale*, except the Steersman, for he guides the Boat with his Rudder. They also have in each Sloop a Chopping-knife, to cut off the Rope when they cannot follow the *Whale*, and a Hammer, and other Instruments, as Hatchets, Drags, and several sorts of Knives, wherewithal they cut the *Whales*. Meat and Drink is also given them according to the usual Custom, he that will have better must take it along with him. Lazy Fellows are in this Voyage troubled with the *Scurvy*, but those

that fear neither Air nor Wind, and bestir themselves, escape pretty well; else the *Scurvy* is the common Distemper in this Voyage, besides Feavers, Impossthumes, and other accidental Distempers, and therefore the Chyrurgion must take care to provide himself.

C H A P. XII.

Of Rotz-fishes and Sea-qualms.

Rotz-fish (or *Slime-fishes*) I call these, that in themselves are nothing else but Slime, and they are transparent. I have observed several kinds of these, some whereof have parts like Finns, as that same which I call the *Sea May-flye*. Others are like unto the flat Snails, only instead of Finns they have Stalks like unto Feathers. Besides these, I have seen four other sorts, that are quite differing in shape from the others, and are called *Sea-qualms* by the Seamen, as if they were a thick Scum of the Sea coagulated together. They are also called after the Latin Name *Sea-nettles*, because they cause a burning Pain like unto Nettles. I have formerly had some Thoughts, that the *Rotz* or *Slime fishes* might be a Seed flung out and so putrefied, and that they did cause this burning Pain by reason of their putrefaction; and so I did think that they received their shape or form according to the several kinds of Fishes from whence they came, and that some did take after

Thorn.

Thornbacks, others after *Whales*, and the like; but this doth not seem to be agreeable to Reason, for I have considered it better since, and find Life to be a far more noble thing, than that it should proceed from putrefied Seed cast away. They cleanse the Sea mightily, for all the filth and uncleanness sticks to them, just as a Burr doth unto Cloth.

I. Of the Sea-May-flye.

These small Fish are very like unto the *Sea-nettles*, because of their transparent Body, and they also dissolve like the same, if you hold them in your hand. They have two Finns underneath, about the Neck, which are likest unto those of the *Whale*. They are in their shape like unto our white Rowls, broad and thick in the middle, and thin and pointed at each end. As for the rest of the Body, it is very like unto our *May-flye*, save only that the Tail or Body is all along thicker, and only begins to be pointed towards the end. The Head is broad and round, split in the middle; it hath small Horns about the breadth of a Straw; on his Head before it hath two rows of six red little Knobs, three of them in each row; whether they be Eyes or no I cannot exactly tell. Its Mouth is divided or split. From his Mouth down into his Belly are its Guts, which one may easily see because of its transparency. It is of yellow and black colour; but the colour of the whole Fish is like unto the White of an Egg. He moves in the Water just like a *Sea-nettle*. I have drawn him here in his proper bigness. I am of opinion, that the Birds feed upon them, because the *Lumbs*, *Pigeon-divers*, and *Parret-divers*,

divers are plentifully seen in those places where these Fish or Sea-Insects are seen. The same that I have delineated here I found in the *South Bay* in *Spitzbergen*, on the 20th of *June*; in the *Tab. P* it is marked with *f*.

II. Of the Snail Slime-fish.

These are also quite transparent, like unto the *Sea-nettles*, but they are flat, and wound about like a Snail, and so we find upon the Land the Shells of such flat Snails. It is very remarkable, that out of the utmost part of him come two Stalks, like unto the Beam of a pair of Scales, hairy or rough on each side, like unto a Feather. With these Stalks he moves himself up and down like the *Sea-nettle*. They are of a brown colour: They swim in great numbers in the Sea, as numerous as the Dust in the Sun. It is believed that the *Whales* feed upon them, but I cannot believe that they can be so nourishing a Food for the *Whales*, as to make them so fat; I rather believe that the *Lumbs*, *Pigeon-divers*, and the *Parret-divers* feed upon them. They are not bigger than I have delineated them. We saw many of them in the *South Harbour* at *Spitzbergen*, on the 20th day of *June*. Amongst the Ice I saw none. The Seamen take these small Fish for *Spiders*, and I should also have taken them to be such, if I had not had them in my Hand, and looked more curiously upon them, and found that they had no affinity at all with the *Spiders*. In the *Tab. Q* it is marked with *e*.

III. Of

III. Of the Hat Slime-fish.

Its upper part is like the Fungusses or Toad-stools, for it is as it were a round and thick Stalk, that goes just into the middle of the Head. It hath a blew Button or Knob, that is as thick again as the Stalk: And this upper part may also be compared unto such a Straw Hat as our Women wear. From the Stalk downwards it doth grow thick again, and round, yet it is a great deal less than the Button. I have seen them force themselves up from below, and then from the top down again, just as a Stick that is forced down underneath the Water reboundeth up again. I got them in the North Sea, between *Holly-Land* and the *Elbe*, where the Sea-water mingles with that of the *Elbe*. I have also seen them at *Kuck's-Haven* in the *Elbe*. And I am also informed, that sometimes they come as far down as to *Freyburg*. By reason of its shape, it may be called *The Hat Slime-fish*, or *Stalk Slime-fish*.

IV. Of the Rose-like-shaped Slime-fish.

This *Slime-fish* is as round as a Circle, yet in his circumference between his double strokes a little indented. The Rays spring out single from the middle of the Body, and there are sixteen of them in number, but they divide themselves into two branches, where they run somewhat closer together, and are split in two. The Body thereof is white and transparent, as
is

is mentioned before ; he draws it together, and opens it again as he pleaseth ; but the Rays or Spokes are brownish red. On the end of these Spokes, towards the outward circumference are several Spots, 32 in number. In the middle of this Plate is another small Circle, and from the circumference of that the before-named Spokes begin. It is hollow within, which Cavity may perhaps be his Belly, wherein I found two or three of the small Shrimps. Round about did hang down seven brown small Threads, like spun Silk, or like unto the Threads that flye in the Air about Autumn ; he cannot move these. I believe he weigh'd about half a pound ; he was about half a span broad ; the Threads were about a span long. This sort we got about *Hitland*. One might very well call him the *Plate*, or *Rose-like Slime-fish*, by reason of his figure and shape. I have heard some relate, that the *Macarels* do suck their Colour out of these two, but I cannot affirm it, but leave it undecided, until I can assert it by my own Experience. These three first *Sea-qualms* are numerous in the *North Sea* as *Atomes* in the Air, but about *Spitzbergen* we do not find many of them. I have seen them swim at top only in calm weather, but in stormy weather they sink to the bottom.

V. Of the Slime-fish like a Cap. IV

At Spitzbergen, near the *Muscle-Harbour*, on the 8th of *July*, when the weather was calm, I saw two sorts of *Slime-fish*, whereof one had six, the other eight Corners: That with six Corners had also six purple Streaks with blew Brims. Between these Streaks the Body is divided like unto a Pumpkin into six Ribs. From the middle of his Body hang down two Threads that are red like Vermilion, and rough, of small Hairs, they are shaped like unto the Letter [V]. I did not see him move them when he swam. Within his Body he hath other broader Streaks, of a purple colour, and on the edges or brims of a lightish blew one; they represent themselves like unto a great [W]. The whole Body is as white as Milk, and not so transparent as the Body of that that cometh next. It is shaped just like a Cap with Corners, wherefore one might call it the *Cap-like Fish*.

It is about as big again as it is delineated here. It weighed about two ounces. I did not perceive, when I had him in my Hand, that he did burn me, but it dissolved like Snot or Slime. In the Tab. P it is marked with g.

VI. of

VI. *Of the Slime-fish like a Fountain.*

The sixth and last is a very notable Fish; it hath a hole at the top like unto a Quill of a Goose (that may perhaps be his Mouth) which goes into a cavity like a Funnel, wherefore we might call him a *Funnel-fish*. From this hole come down four Strokes, two and two, exactly opposite to one another; two of them are cut transversedly, and two are not cut. Those that are not cut are about half the breadth of a Straw, and the others that are like unto the Back-bones of a Snake, are as broad as a Straw; both of them come down beyond the middle of the whole Body. From the middle of the Funnel come down four others, like unto the Back-bones of a Snake, and they come down lower than the others; so that all of them make eight in number. They changed their colour as we looked upon them, into blew, yellow, and red, with such delicate colours as a Rainbow. They looked in my Eyes to be like unto a Fountain with eight Streams or Spouts, wherefore we might call it a *Fountain-fish* with eight Streams. Within him came down from the end of the Funnel something like a Cloud that divides itself into rows, which I take to be his Intrails. Where the before-mentioned outward Streaks end themselves the Body is first bent in somewhat, then it turns round, and there it hath many small Streaks. The whole Body is as white as Milk, of the same bigness as it is here delineated. I believe it weighed about four ounces. I did not per-

perceive that he did burn ones Skin, but he did, like him I mentioned before, dissolve like Slime.

Since I have seen other sorts of these *Sea-nettles* in the *Spanish Sea*, that weighed several pounds, and they were of a blew, purple, yellowish, and white colour, that burn more violently than those of the *North Sea*; they suck themselves so close to the Skin, that they raise Blisters, and cause sometimes *St. Anthony's Fire*. The Cutts whereof, together with the Description, I hope to communicate to the Reader at another time. This is marked with *b* in the Tab. P.

A SUP.

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in the Tab. P. ...

...

...

A
SUPPLEMENT

To Capt. *Wood's* and *Marten's*
North - East Voyages.

CONTAINING

Some Observations and Navigations
to the *North-West*, of *Groneland*, and other
Northern Regions.

N

A
SUPPLEMENT

To Capt. Wood's and Martin's

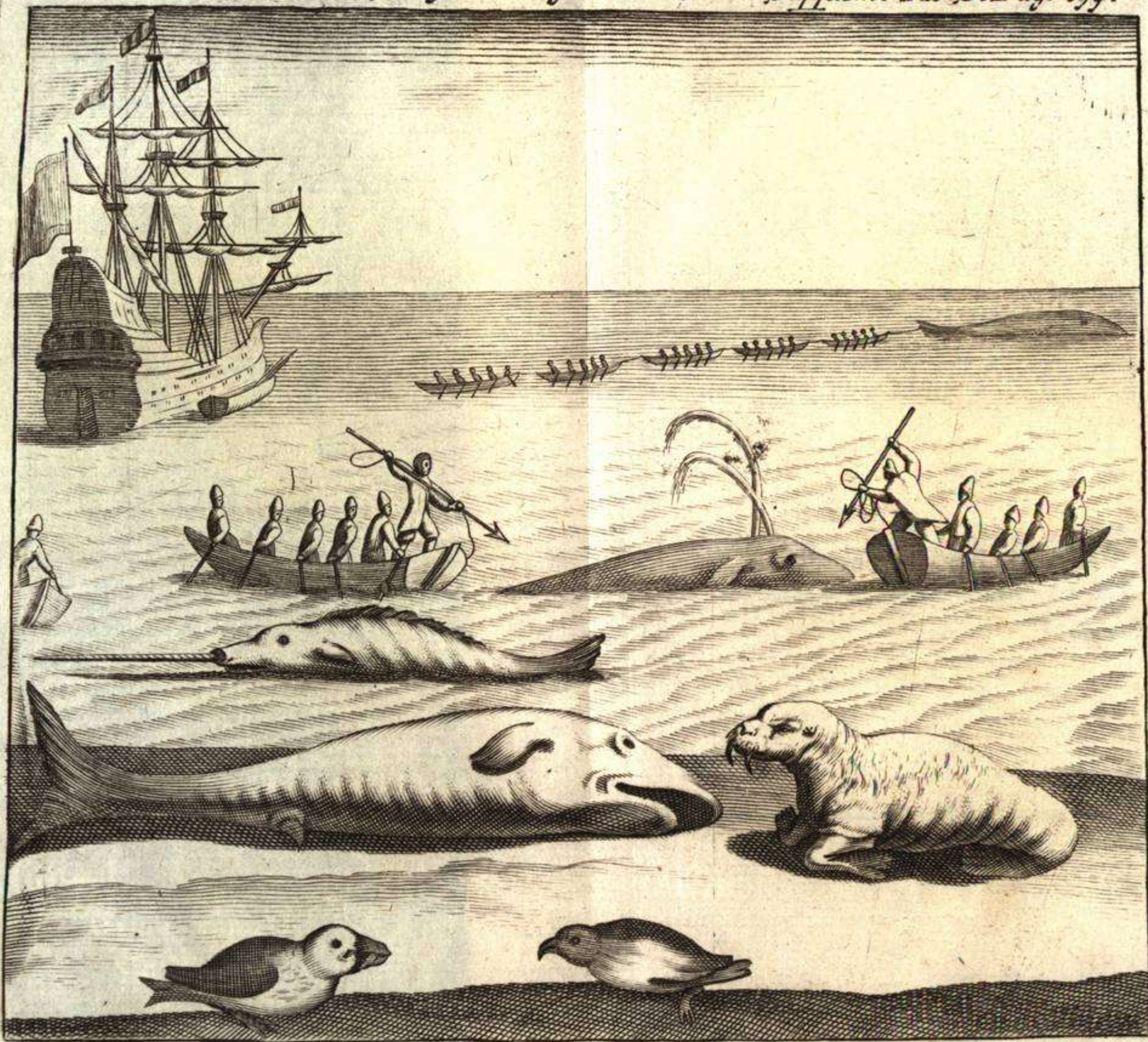
North-East Voyages.

CONTAINING

Some Observations and Navigations
to the North-West of Greenland, and other
Northern Regions.



The Whale fishing & killing of Morvses. Supplem^t Tab: S. Pag: 179.



A

SUPPLEMENT

To Capt. *Wood's* and *Marten's*

North-east Voyages, &c.

CHERRY- and other Islands.

OUR Men conceive *Greenland* to be bro-^{Northern}ken Land, or a great number of Islands ^{Islands.} at least, very near to one another. On the West side they discovered as far as 82 deg. the most Northerly Point they called *Point Purchas*, there they found very many Islands, which they thought not worthy to give Names to, being careful only to take notice of those six or eight Harbours which were commodious for their Fishing. On the East side, they went no farther than 78 deg. because the *Dutch* disturbed their Trading on that side. There are also many Islands, some of which are named, as *Hope-Island*, discovered in ^{Hope-}1613, which may be that the *Dutch* call *Wil-*^{Island.}*loughby's-land*, or *John Mayen's Island*, though indeed it corresponds well to neither; but rather to the later. It belongeth to *Greenland*, and is

N 2

but

Edges-
Island.Wyches-
Island.

but a small Island, and lies North-east and South-west; whereas the Countrey Sir *H. Wilboughby* landed upon, was a large Countrey, (inasmuch as he sailed many days by the side of it) and lies North and South, which must be *Greenland*. *Edges-Island* was discovered 1616, by Capt. *T. Edge*, who had made that Voyage ten times. *Wyches-Island* (so called from a Gentleman of that Name) was found out 1617, but there being nothing remarkable come to our knowledge concerning these, we pass them over. Only it is worth noting, that both the Whale and Morfs-fishing was known and practised 800 years ago, as appears by the Relation which *Octber the Norwegian* made to his Lord *Alfred King of England*; where he also saith, that the *Morsses* were hunted for their Teeth, which were mightily esteemed.

Cherry-
Island.

Cherry-Island, when first discovered I know not, but it received not its Name, nor was known to be of any profit till 1603, when a Ship set out at the charges of Sir *Francis Cherry* touched upon it, and found there some Lead, and a Morfs Tooth; but stayed not to fish, because the year was too far spent. However, they called it (in honour of Sir *Francis Cherry*, for whose use they took possession of it) *Cherry-Island*.

Morfs-
fishing.

In 1604. a Ship set sail (Mr. *Welden* the Merchant, and *Stephen Bennet* the Master) from London, April 15, and arrived at *Cola* in *Lapland* May 1. They stayed in *Lapland* till July 1. and July 8. they came in sight of *Cherry*; and they came to an Anchor on the South-south-east side, but, because of the Stream, could not land: so that they sailed round about the Isle, and at length anchored two miles from the Shore.

Going

Going on Land, one of them with his Gun killed as many Fowl as almost laded their Boat.

July 9. they found on Shore nothing but store of Foxes; that part of the Island was in 74 deg. 45 min. *July 10.* they weighed Anchor, and stood into another Bay, and came to an Anchor in eight fathoms, where they saw an incredible number of Morffes swimming in the Sea. Coming to shore, they espied a vast company of them lying on the Ground; they shot at them with three Guns they carried with them, but with all their Weapons they could kill but fifteen of above 1000, that lay there like Hogs huddling together on heaps, but they found as many Teeth as filled an Hogshhead. Before the 13th, they killed near 100 more, making use only of their Teeth.

In 1605. the same persons went again, arriving there *July 2.* They went on Shore, and *July 6.* flew abundance of Morffes, and not only with Shot, as they did the year before, but with Launces dexterously used, directing them to certain places of their Bodies; they began also to boil their Blubber, and made eleven Tuns of Oyl, (five of their Bellies will yield one Hogshhead) and abundance of Teeth. Here also they found a Lead-mine under *Mount-misery*, and brought away about Thirty Tun of the Oar.

In 1606. the same Ship with the same Persons was sent again, and landed *July 3,* in 74 deg. 55 min. where they stayed till the Ice was all cleared; for the Morffes will not come to Shore till the Ice be all vanished, where, at one time in six hours, they flew betwixt Seven and Eight Hundred Morffes, and Two great
N 3
Bears;

Bears ; they made 22 Tuns of Oyl, and 3 Hogsheads of Teeth.

In 1608. *June 21*, was so hot that the melted Pitch ran down the sides of their Ship : in seven hours time they flew above 900 Morsses, making 31 Tuns of Oyl, and above 2 Hogsheads of Teeth, besides 40 more. They took alive into their Ship two young Morsses, a Male and Female ; the Female died, the Male lived ten weeks in *England*, where they taught it many things.

In 1610. at another Voyage with two Ships, they killed many Bears, and saw divers young ones, no bigger than young Lambs, very gamesome and lusty ; they brought two of them into *England*. Much Fowl also they flew, and many Seals ; and *June 15*. set up an Ensign in token of possession of the Island for the *Muscovia* Company : in *Gull-Island* they found three Lead mines, and a Coal mine on the North side of the Island. Three Ships more also came to fish at *Cherry-Island*, they killed 500 Morsses at one time, at other times near 300 more, one Man killing 40 with his Launce at one days hunting.

Morsses.

The Morss, Walrus, Horse-whale, Rosmarus, or Sea-horse, (for so he is by the Ancients often called, though of late they have discovered another Fish not unlike him, with streight Teeth, which they call the Sea-horse) hath a Skin like a Sea-calf, (with short and sad yellow Fur) a Mouth like a Lion ; if any, hardly discernable, Ears, yet they hear well, and are frightened with noise ; (which also is said of the Whale, that he is driven away with the sound of a Trumpet) large Breast, short Thighs, four Feet, and upon each Foot five Toes with short sharp Nails,

Nails, with which they climb the Ice ; and as large as a great Ox, having a great semicircular Tusk growing on each side of their upper Jaw, which are very much valued, especially by the Northern People, partly for their uses in Medicines, as to make Cramp-rings, (which they make also of the Bristles upon his Cheeks) to resist Poison, and other malignant Diseases, wherein they are at least equal to that called the Unicorn's Horn ; but more for their Beauty, which is equal to, if not surpassing Ivory. The heaviness of it makes it much sought after for Handles of Swords. Their Skins, being dressed, are thicker than two Ox-hides, yet light, and excellent to make Targets against Darts and Arrows of the Savages. They feed upon Fish and Herbs, and sleep, if there be Ice, upon that ; where if surprized, the female casts her young ones (of which she hath commonly two at a time) into the Sea, and her self after them, swimming away with them in her Arms ; and if provoked, after she hath secured them, returning many times to set upon the Boat, into which if she can fasten her Teeth, she will easily sink it. But if they be farther from the Water, they all arise up together, and with their weight and force falling upon the Ice, endeavour to break it ; as they did when surprized by *Jonas Pool* in 1610, where himself and divers of his Men escaped drowning very narrowly ; one of them being in the Sea, the Morffes set upon him with their Teeth, but with very great labour and hazard of his company he escaped Death, though sore wounded. Frequently also they sleep on the shore, and if they have convenience, upon an high and steep place. They always go in great companies, and set one to

keep watch; which if surprized asleep, 'tis an easie matter to kill all the rest; but if he give warning by grunting, they clap their hinder Feet under their two Tusks, and so roll into the Sea. But if they be caught on plain ground, yet are they hardly slain, being both strong and fierce, and all hasting one way to the Water. The *Dutch* at first were very much troubled to kill them, their Shot the Beast valued not much, their Hatchets and Half-pikes would not pierce them; nor did they think they could be killed, except struck with great force in the midst of the Forehead. The first time they set upon them, of 200 they could not kill one, but went for their Ordnance to shoot them. Our Men, after a little experience, found the way to dispatch them with Javelins, as is before rehearsed.

Some imagine this to be *John Mayen's Island*, but it seems rather that it is not; for the Northernmost point of that is in 71 d. 23 m. whereas this is 74 d. 55 m. except the *Dutch* be not so accurate in their Observations and Calculations as were to be wish'd, which I much suspect, v. *Nova-Zembla*. Besides, *Cherry-Island* is round, not frequented with Whales, but Morsses. Our Men also have travelled it on Foot from North to South, which on *Mayen's Island* cannot be done; and though they tell many particulars of the place, yet they never mention the great *Beerenberg*. *Hope-Island* indeed is a long Island, lies much what as they say of *Mayen's*, and hath been visited by the Whale-fishers, but it is more North than they place their Island. The itch of ascribing Discoveries to themselves hath brought (as I fear) Confusion both in this and many other matters of this nature.

JOHN

JOHN MAYEN'S Island.

John Mayen's Island, so called from the name of the first Discoverer, (as the Dutch pretend) seems by the English to be called Hope-Island, or if not, I know not whether the English have been upon it. It seems not to be of any great consequence, all that is spoken of it being that it extends in length from South-west to North-east. The farther it shoots out in length, the more contracted and narrower it grows in breadth; so that in the middle the distance is very small between both Shores. Before the Whale-fishing was removed to *Greenland*, in the Summer-time this Island was much frequented by the Seamen whom Trade invited thither; and the Island was well known to most of the Northern Adventurers of *Europe*; but since the Whales have deserted those Shores, and have removed their Sea-quarters farther to the North, the Seamen and Fishermen have been forced to follow their Prey to *Greenland*. For it seems the Whales, either weary of the place, or sensible of their own danger, do often change their Harbours. In the Spring time the western side of the Island is not so much enclosed with Ice, as that which lies in the North, where it runs out into the Sea, with a sharp point behind the *Mountain of Bears*; for on this side, all the year long, the Ice never removes from the Shore, above ten miles; and in the Spring time so besieges it, that there is no passage through it. For which reason the Mariners, who are bound for this Island, use all the care they can to avoid the Eastern,

Eastern, and to make directly to the Western Shore, there to lye while the Fishing-season continues; if by miscarriage they come upon the East-side, they are then forced to fetch a compass about the North part of the Island, whereby they are not only exposed to the terrible winds that blow off from *Bears-Mountain*, but also to the dangers of the floating Ice: for here the Sea flows from South to North, and ebbs from North to South. At the Northern end of the Island appears the *Bears-Mountain*, of a prodigious height, and so perpendicularly steep, that it is impossible to climb to the top of it. This Mountain, from the Bears there frequently seen, called *Beerenberg* or the *Bears-Mountain*, at the bottom takes up the whole space between the Eastern and the Western Shore; on the North side it leaves a little room for level ground to the Ocean; and being of prodigious height, may be descryed 30 miles off at Sea.

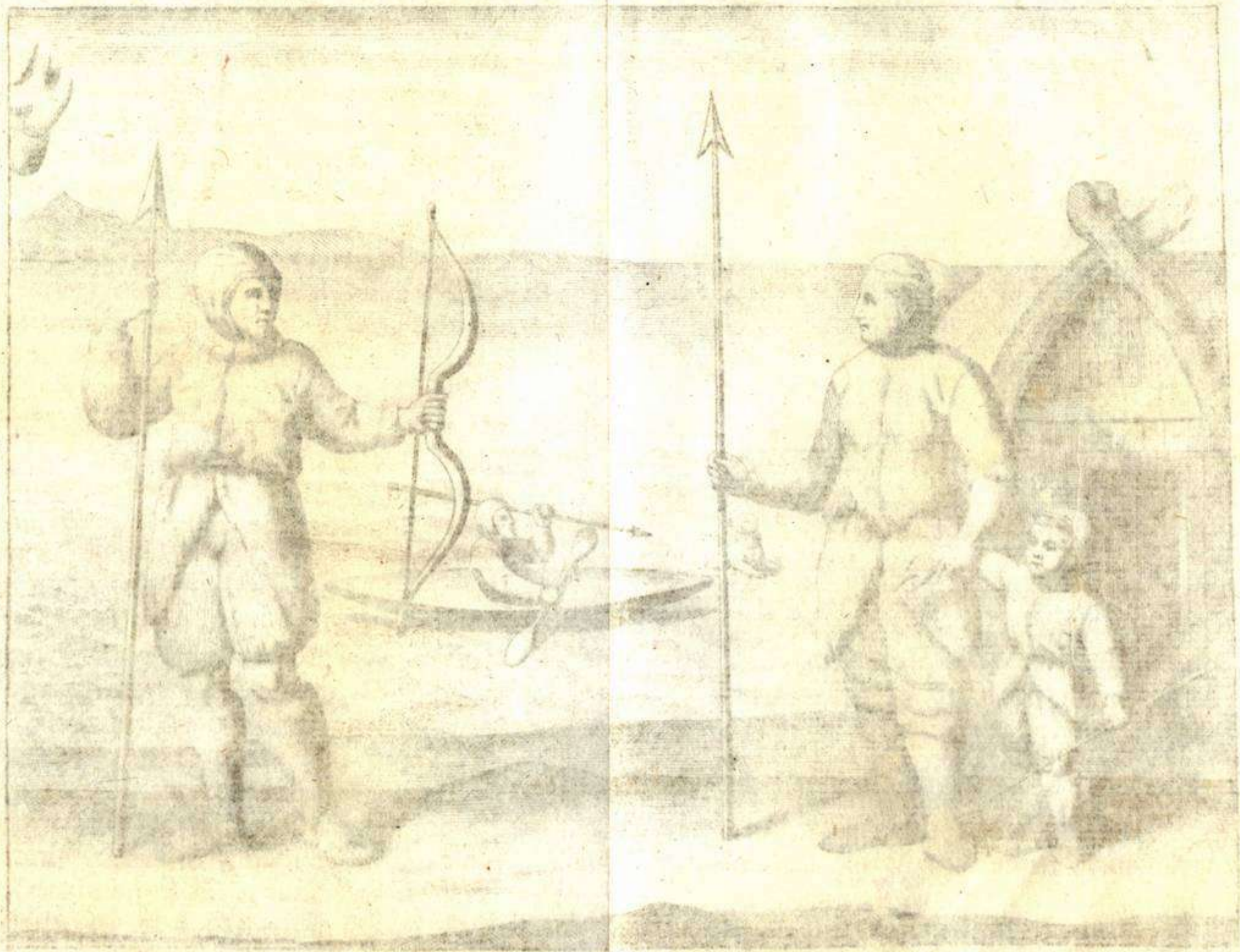
The Sea-coast lies thus: 1. *Noords-hoeck*, or the *Northern Angle*, is the extream point shooting out to the North. 2. *Oosthoeck* is the most Eastern point. *Isbergh*, mark'd 1, 2, 3, are three Mountains of Ice, or rather vast heaps of congealed Snow, which dissolved by the heat of the Sun, falls from the top of *Bears-Mountain*, but upon the Sun's retiring freezes again. 3. *Zuydoost-hoeck* is the South-east Angle. From this point the Shore extends itself from East to West to a little Island, and then winds again to the West and South; in some places not passable by reason of its steepness, in others smooth enough. 4. *Cleyn Sand-bay* or *Little Sand-bay*, *Eyerland*, or *Eggland*, being certain Rocks full of Birds; here, about a Musket shot from the shore, the Sea is 60 fathom deep, and a little farther,

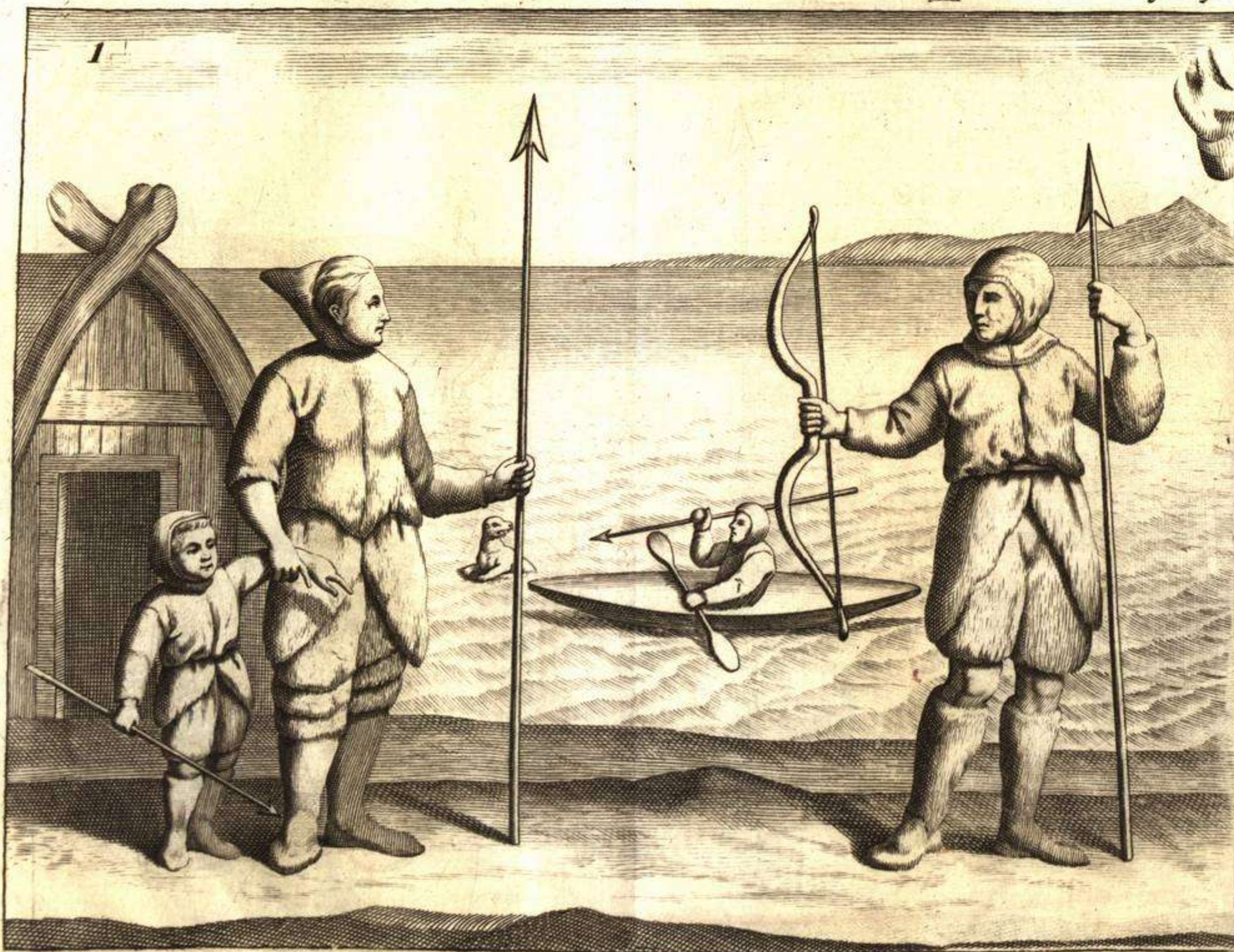
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The habits of the Americans
Suppl. Tab. 21. 1767





The Fishes of the



ther, the sounding line will not reach to the bottom. 5. *Groote Hoot-bay* or great Wood-bay, by reason of the great pieces of rotten Timber, that are there found. In this, which is the narrowest part of the Island, are certain Mountains not very steep, from the top whereof any person calling them that stand upon either shore, may be heard by both. 6. *Cleyn Hoot-bay*, or *Little Wood-bay*. 7. *English Bay*, and several others, to which the *Dutch* have given such Names as they thought fit.

G R O N E L A N D.

Called also *Groenland*, *Groinland*, and more The Name and Situation. anciently *Engroenland*, lies (as the Islanders say) like an Half-moon about the North of their Countrey, at the distance of four days sailing. But it seems not to lye so much East, but rather on the North of *America*. From *Cape Farewell*, in 60 deg. 30 min. on the South, it is unknown to how many degrees in the North. The East and West are encompass'd by two great Oceans, but at what degrees of Longitude is not yet discover'd. Only *Mr. Fotherby* found it near the Coast of *Groneland*, in 71 deg. and the South of *Greenland* to be above two hundred Leagues.

It is said to have been discovered first by a Ancient Discoveries *Norwegian* Gentleman, whose Name was *Eric Rotcop*, or *Red Head*; who having committed a Murther in *Iseland*, to save his Life, resolved to adventure to another Country, whereof he had heard

heard some obscure flying Reports. He succeeded so well, that he arrived in a safe Harbour called *Sandstasm*, lying between two Mountainous Promontories; the one upon an Island over against *Groneland*, which he called *Huidserken*, or *White Shirt*, because of the Snow upon it: the other on the Continent, called *Huarf Eric*. He winter'd in the Island, but when the season suffer'd, pass'd into the Continent: which because of its greenness and flourishing he called *Groneland*. Thence he sent his Son to *Olaus Trugger* King of *Norway*, to get his Pardon, which was easily granted, when he was inform'd by him of this new Discovery. Whereupon divers Gentlemen adventur'd to plant there, who multiplying, not long after divided the whole Country into the Eastern and Western, and built two Cities, *Garde* and *Albe*. In *Albe* was a Bishop's See, and a Cathedral Church dedicated to *St. Anthony*; the Seat also of the Viceroy sent thither from time to time by the *Norwegian*. They write also of a great Monastery called of *St. Thomas*, wherein was a Spring, whose Water was so hot, that it dressed all their Meat; and being convey'd into the Cells and other Rooms in Pipes, heated all the Monastery as if it had been so many Stoves. They say also, that this Monastery is built all of Pumice-stones, and that this hot Water falling upon them, mixeth with the outer parts, and produces a sort of clammy matter, which serves instead of Lime.

By the
Norwegi-
ans.

But what the *Norwegians* conquered or possessed in this Country was an inconsiderable corner of that large Continent. Themselves mention a Nation, whom they call *Skrelingers*, to have inhabited in the middle of the Land,
but

but what they were we know not. But whether their Paucity exposed them to the merciflessness of the Natives, or whether it were an Epidemical Disease, which they called the *black Plague*, which swept away not only most of that Nation in *Groneland*, but also the Merchants and Mariners in *Norway*, that maintained that Traffick; or whether it were some other Reason, which is now forgotten: so it is, that since 1349, little Intelligence hath descended to us concerning *Groneland*, till seeking the North-west passage to *China*, occasioned more knowledge of it. In 1389. they say, that the King of *Denmark* sent a Fleet thither, with intention to re-establish his Dominion in those parts; but that being cast away, discouraged him from any further Enterprize; till now of late *Christian IV.* renewed somewhat again of that Navigation, of which by and by. In 1406. the Bishop of *Drontheim* sent a Priest (called *Andreas*) to succeed *Henry* Bishop of *Garda*, if dead; if alive, to return and bring notice of the state of the Church there. But *Andreas* never came back; nor hath there been since any further care taken to supply Bishops, or maintain Christianity there. There is a Relation in *Purchas's Pilgrim*, par. 3. of one *Ivor Boty* a *Gronelander*, translated 1560, out of the *Norweighish* Language, which gives a sufficiently particular account of all the places in that Country inhabited by Christians, but nothing besides.

The occasion of our Voyages to those Coasts was to find out a way to *China*, &c. by the North-west, which had been fruitlessly sought toward the North-east.

Later Discoveries by the English.

The

Sir Martin
Frobisher.

The first whom we read to have searched the North-west for a passage, was *Martyn Frobisher*, who in 1576, with two Barks coming to the height of 62 deg. found a great Inlet, called by him *Forbisher's Straits*, whereinto having sailed 60 leagues with main Land on either side, returned. He found there a certain Oar, which he conceived to be of Gold; and the next year he made a second Voyage to fetch a quantity of it, but it proving to be nothing but black Lead, answer'd not expectation; yet they found a Silver Mine, which lay so deep and fast in the Rocks, that they could not dig it. They melted Gold also, but in very small quantities, out of several Stones they found there upon *Smith's Isle*. They found also a dead Fish, of about twelve foot long, not unlike in shape to a Porpoise, having an Horn six foot long (such as is commonly called *Unicorn's Horn*) growing out of his Snout, which is still kept at *Windsor*. In 1578. he went out again upon a Discovery, wherein passing as far as he thought good, he took possession of the Land in the name of *Queen Elizabeth*, calling it *Meta incognita*.

Sir Hum.
Gilbert.

In 1583. Sir *Humphrey Gilbert* upon the same design went to the great River of *St. Lawrence*, in *Canada*, took possession of the Countrey, and settled a Fishing-trade there. This Voyage I suppose was made upon suggestion of a *Greek* Mariner, who assured some of our Nation, that himself had passed a great Strait, North of *Virginia*, from the West or South Ocean, and offered to be Pilot for the Discovery, but died before he came into *England*.

In

In 1585. Mr. *John Davis* was employ'd with Mr. Davis two Barks to the same search. The first Land he came to, he named the *Land of Desolation*, and is one part of *Groneland*; then he arrived in 64 deg. 15 min. in *Gilbert's Sound*, where they found a great quantity of that Oar which *Frobisher* brought into *England*, and also *Lapis Specularis*. Thence they went to 66 deg. 40 min. to *Mount Raleigh, Totness Sound, &c.* where they saw some few low Shrubs, but nothing else worth noting.

In 1586. he made a second Voyage to the same place, where he found amongst the Natives Copper Oar, as also black and red Copper. Thence they searched many places Westward, and returned with good hopes of discovering the desired passage.

In 1587. he made a third Voyage, to 72 deg. 12 min. the Compass varying to 82 deg. Westward, the Land they called *London-Coast*; and there they found an open Sea, and forty leagues between Land and Land, thinking this to be the most likely place to find the passage; and it was from him called *Fretum Davis*.

Thus from time to time proceeded the discovery of these Countries, but now not upon Mr. Hud-
son. hopes of a passage to the *Indies*, but for the profit of Trading; till Mr. *Hudson*, in 1610, after he was satisfied that there was no passage North-easterly, was sent to make a Tryal here also. He proceeded an hundred leagues farther than any before had done; and gave Names to certain places, as *Desire-provokes, Isle of God's Mercies,*
Prince

Prince Henry's Cape, King James's Cape, Queen Ann's Cape, and the like; but the Ice hindered him from going further, and the Sedition of his Men from returning home.

James Hall.

In 1612. *James Hall* returning into *England*, and with him *William Baffin*, who discovered *Cockin's Sound*, in the height of 65 deg. 20 min. which differed in Longitude from *London* 60 deg. 30 min. Westward. They saw also the footing of a great Beast they supposed an Elk, or the like. *James Hall* was killed in the Boat by a Native pretending to trade with them. They tryed the Mine at *Cunningham's River*, which the *Danes* had digged before, and found it to be nothing worth. There were Rocks of very pure Stone, finer and whiter than *Alabaster*, and *Angelica* growing plentifully in many places, which the Savages use to eat.

Mr. Baffin.

In 1615. *Mr. Baffin* was sent again; he found *Fair-Point* to differ in Longitude from *London* 74 deg. and 5. min. Westward. But the chief thing they discover'd was, that there was no passage in the North of *Davis Straits*, it being no other than a great Bay; but that profit might be made by fishing for Whales, Morffes, and Unicorns, of which there are good store.

In 1616. *Mr. Baffin* went again. In *Sir Tho. Smith's Sound*, 78 deg. Lat. their Compass varied 56 deg. Westward, the greatest variation that is any where known. Despairing to discover their desired North-west passage, they returned home, and since that we hear of no more Voyages made from *England* upon that design, except by *Capt. James*, in 1631.

This

This Ingenious and most Skilful Navigator, Capt. *Tho. James* was pester'd with much Ice in these North-west Seas in *June* and *July*, sailing from *Cape-Farewell*, by the Island of *Resolution*, to *Mill's* and *Nottingham Isles*, as also that call'd *Mansfield*, from whence he steer'd over a great Bay to the Westward, near *Port-Nelson*, and named the Land *New South-Wales*. He met hereabouts with Capt. *Fox*, in one of his Majesty's Ships, who had been in *Port-Nelson*, but they were soon parted by bad weather. Capt. *James* continued to roving up and down these Seas, and giving Names to his Discoveries, as *Cape Henrietta Maria*, *Lord Weston's Island*, *The Earl of Bristol's Island*, *Sir Thomas Roe's Island*, *Earl of Danby's Island*, *Charlton Island*, where he winter'd in the Lat. of 52 deg. 03 min. from whence he returned home in 1632. having built a little Pinnace out of his Ship, in which he passed over to *Cary's Swans-Nest*, and so by *Cape Charles* and *Salisbury-Isle* homewards, having made many additional Discoveries beyond *Hudson*, *Button*, and *Baffin*.

This Island (saith Capt. *James*) and all the rest (as well as the Main) is a light white Sand, cover'd over with a white Mofs, and full of Shrubs and low Bushes, excepting some bare Hills and Patches, where the Sand will drive with the Wind like Dust. 'Tis full of Trees, as *Spruce Firrs*, and *Juniper*, which together with the Mofs will take fire like Torches or Flax. We found great store of an Herb like *Scurvy-grass*, which boil'd, did extreamly refresh us. We saw some Deer, abundance of Foxes, a few Bears, and some little Beasts. In *May* there came some Fowl, as Ducks and Geese; white
O
Par-

Partridges we saw; Fish we could never see any in the Sea, nor any Bones of Fish on the Shore side, excepting a few Cockle-shells. The *Muskitoes* upon our coming away in *July* were most intolerable, there being no Fence against them. The Climate (of the *Isle of Charleton*) is most unnatural, the Days in Summer being excessive hot, and the Nights sharp Frosts, even to an inch thickness in the Ponds, and all this in *June* and *July*. Here are divers sorts of Flies, as Butter-flies, Butchers-flies, Horse-flies, infinite numbers of Ants and Frogs, plenty of Vetches, which recover'd our Scorbutick Men. And yet that which is most wonderful, the Winter is as severe here as in any place lying 30 degrees more Northerly.

By the
Danes.

The King of *Denmark* also, partly to advance the Trading of his own, and partly to renew his ancient Pretence to that Country, if any thing should be discover'd worth the claiming, whilst the *English* were busie in these Discoveries, set out two Ships and a Pinnace 1605. the Admiral was Capt. *John Cunningham* a Scot, *Godske Lindenaw* a noble Dane was Vice-Admiral, the chief Pilots were *James Hall* and *John Knight*, *Englishmen*. *Godske* arrived on some part of the Countrey where he traffick'd some small matters with the Natives, took two of them, and returned into *Denmark*. The other two Ships arrived at *Cape Farewell*, thence went to *Frobisher's Straits*, gave *Danish* Names to divers places, traded with the Natives, of whom they brought away three, and found certain Stones in a place called *Cunningham's Ford*, out of an hundred pound of which were extracted twenty-six ounces of fine Silver.

III

In 1606. he sent again four Ships and a Pinnace, *Godske Lindenaw* Admiral, and *James Hall* Pilot-General, they brought away five of the Natives.

In 1607. *James Hall* was sent again, but the Seamen mutining as soon as he came to the Coast, brought the Ship back again into *Denmark*, without any thing done.

The King of *Denmark* set out two Ships more, under *Christian Richardson* an *Holsteiner*, with *Norwegian* and *Iselandish* Mariners, who returned before they saw Shore. More of their Expeditions we know not, till 1619, when he sent out *John Munck* with two Ships. They arrived safe at *Cape Farewell*, 60 deg. 30 min. where their Tackle was so frozen, and full of Isicles, that they could not handle them; the next day was so hot; that they could not endure their Clothes, but wrought in their shirts. The South part of *Hudson's Bay* he called *Mare Novum*; that part towards *Groneland*, *Mare Christianum*. He arriv'd in 63 deg. 20 min. where he winter'd, and called it *Munck's Winter-harbour*, and the Country *New Denmark*, (it seems to be near *Digg's Island*.) In that long Winter he there endured, little of note happen'd, but that in *April* it rained, and then came thither vast quantities of Fowls, of divers sorts, to breed in those quiet, undisturbed places. Of all his Company, which was forty-six in one Ship, and sixteen in the Pinnace, scarce so many were left alive, as were able to bring the Pinnace thorow very horrid dangers, to their own Country.

Gronelanders in Denmark.

If any one desire to know what became of the eight *Gronelanders* brought at several times into *Denmark*, the account is this: The King commanded great care should be taken of them, appointed certain persons to attend them, to give them liberty enough, so as they prevented their escape. No Necessary or Convenience was wanting; their Food such as they could eat, Milk, Butter, Cheese, Flesh, and Fish, but raw. They could eat no Bread, nor boil'd Meat, but nothing so much abhorr'd by them as Wine, or Brandy. Their pleasantest Beuvrage was Train-Oyl. But whatever was done to, or for them, could never take away that Melancholy and Chagrin which they continually lived in for the want of their beloved Country. They could never be brought to learn much of the *Danish* Language, or to apprehend any thing of Christian Religion. Three of them were sent back towards their own Country 1606. the most towardly and hopeful, who might serve for Interpreters and Brokers to the *Danes*; but two of them, *Oxo* and *Omeg*, died in the Ship, and the third (because the *Danes* durst not land or trade by reason of the great numbers of Natives that appeared in Arms on the Coast, ready to revenge them that had been before carried away) was brought back into *Denmark*, to his former Treatment. An Ambassador arriving there from *Spain*, the King was pleased to shew him those Savages, and their dexterity in rowing, which was by all the Spectators admired. The Ambassador sending them Money, one of them had the courage to buy him Clothes after the *Danish* Fashion, got a Feather in his Cap, Boots and Spurs, and all things *ala cavaliere*; he came
also

also to the King, and desired to serve him ; but this fervor was quickly decay'd, and the poor man returned to his sadness and complaints. Some of them endeavoured to get to Sea in their little Boats, but being retrieved, dyed of Melancholy. Two lived divers years at *Koldingen* in *Futland*, where they were employ'd in diving for Pearl-Muscles ; in which their skill and dexterity was such, that every one that saw them believed they had practised the same employment in their own Country. Such Success they had, that the Governour promised himself great Profit thereby ; and that in a short time he should sell Pearls by the quart, if they continued. But his Covetousness destroyed his Gain ; for not content with what they fished in Summer, he also compelled them under the Ice in Winter time ; where one of them fell into such a Disease, from the cold so contracted, that he dyed. After whose death the other never enjoyed himself ; but finding an opportunity, he got his little Boat, and before he was overtaken got to the main Sea. But being brought back, they represented to him the impossibility of his ever getting home to *Groneland* ; but he slighted their Advice, and told them, That he intended to go northward so far, and when he was there the Stars would direct him into his own Country.

The Country is mostly all High-land and Mountains, cover'd with Snow all the Year, but the southern parts more than the northern. They have very little or no Wood growing there, except some few Bushes, and not many Plants or Herbs ; consequently not many Beasts

O 3

there

*The Soil,
&c. of
Groneland*

there nourished, but their chief subsistence is upon Fishing. There are divers Mountains, which promise rich Mines of Metal ; and some have been found to contain it actually, others only to make a shew. The Inhabitants know neither sowing nor planting ; tho' the Soil seem'd to be fertile and pleasant, especially between the Mountains. The northern parts, by reason of the terrible Ice and Cold, are wholly undiscover'd ; the southern consist of many Islands, different in shapes and bigness : which seems to be the reason, that in these Seas are many various and strong currents, and (as *Ivor Boty* saith) very many dangerous Whirlpools towards the West and North, none of which however have been found by our Mariners. The Country seems much subject to Earthquakes, else very healthful ; only it was observed, that those who went thither infected with any Venereal Disease grew worse immediately, and could not there be cured. Which they attributed to the purity of the Air, perhaps they might have done it more rationally to the Cold.

Beasts. *Ivor Boty* speaks much also of their great numbers of Cows and Sheep ; but our Men found no Beasts there, but Bears, Foxes, (very many of which are black) Rain-Deer, and Dogs, whereof are two sorts, a bigger, which they use to draw their Sleds ; and a lesser, which they feed for their Tables. Our Men observed this peculiarity both in their Foxes and Dogs, that their Pizzles were of Bone. Tho' it is very likely, that there are the same sorts which are in *Lapland* and *Samoieda* ; but our

our Men have not searched any more than the Shores, both because of their short stay, and the Treachery of the Inhabitants.

Of Fishes there is great both Plenty and Variety, Whales, Seals, Dog-fish; but in these are caught the greatest quantity of Sea-^{Fishes.} Unicorns, whose Horns are so much esteemed, and kept as Rarities in the Cabinets of Princes. The Natives here are so well stored with it, that they have sufficient both for truck and their own use. They make of them (besides other Utensils) Swords, and Heads for their Darts and Arrows; which they work and grind with Stones, till they make them as sharp-piercing as ours. This Horn grows in the Snout of the Fish, and is his Weapon, wherewith he fears not to fight the Whale, and to assault and sometimes endanger a Ship. The Fish itself is as large as an Ox, very strong, swift, and hard to be caught, except left on the Shore by the Tide, or entangled by the Weeds.

Fowls are here in great abundance and variety. ^{Fowls.} Our Men have seen those they call *Bass-Geese*, or such as once a year come to breed in the *Bass*, a famous Rock or Island near *Edinburgh*. The Natives also have a very great Art and Dexterity in making and setting Snares and Springs to catch them; which they do chiefly for their Skins and Feathers. Two or three of our Men with their Guns killed in one day Fifteen hundred, and found them worse tasted, but better clothed than those of the same kind in these Countries; they could not eat them till flay'd, their Skins being very thick, tough,

and more cover'd with Feathers ; which also were not easily pluck'd off ; which is the reason that the Natives dress their Skins as they do those of Beasts, and Seals, and make Garments of them, using them to all purposes like other Furrs ; with the Feathers outward in Summer, inward in Winter : which is also observed in all other cold Countries, as well as *Groneland*.

Of the
North light

All Persons, that have been there, give a wonderful and strange account of a certain *North-light*, as they call it, not easily conceived by them who have not seen it. It appears usually about the time of the new Moon, and tho' only in the North, yet doth it enlighten the whole Country : sometimes also *Norway*, *Iseland*, and even these Regions of ours, as *Gassendus* (*vita Piresk, & exercit. In Doctorem Flud*) saith, himself observed, and at large describes. Nor should I much doubt to affirm, that it is that which is sometimes seen in *England*, and especially in the Northern parts, call'd *Streaming*. It is said to be like a great Pillar (or Beam) of Fire, yet darting out Rays and Streams every way, moving also from place to place, and leaving behind it a Mist or Cloud ; continuing also till the Sun-beams hide it.

Division of
the Country.

The Country seems to be inhabited by divers Nations, differing in habit, manners, and language. Those whom *James Hall* found and brought with him, differed much from those with whom *Gotske Lindenaw* had to do. That part which the *Norwegians* are said to have anciently possessed, was an inconsiderable part of that whole Country, and they found several Na-

Nations there besides themselves ; govern'd by several Kings ; tho' they write not, that they had Wars one with another, but only against them. Our late Discoverers in 66 deg. 50 min. found a Country which the Natives (as they could understand them) called *Secanunga*, who also said, that they had a great King, carried upon Mens Shoulders, and they called him *Cachico*. But more particulars than these, I find not.

The Inhabitants are generally of a low stature, black hair, flat nos'd, broad fac'd, lips turned up, and of a ripe Olive colour, some of them also quite black. Their Women (for their greater ornament doubtless) stain their faces in blew, and sometimes in black streaks, which colour they let into the Skin, by pricking it with a sharp Bone, that it will never be taken nor worn out. In all things they resemble the *Samoieds* and *Laplanders*. They are very active and strong, yet could some of our *English* run swifter, and leap farther than any of them ; but they were hard enough for any of ours at wrastling. They are also very couragious, and sometimes desperate ; for rather than be taken by our Men, they would throw themselves down the Rocks and Mountains. Extreamly thievish, treacherous, and revengeful they proved ; nor could any kindness or fair-dealing win them ; but as true Barbarians, never omitted any opportunity of fulfilling their Desires ; they would steal when they saw the Mariners look upon them. After they had been well used and treated at their Tables, they would shoot at, sling Stones, wound and kill our Men, if

if they could. Yet are they apprehensive enough, and quickly conceive yours, and express their own meaning. If they had not seen what was asked them, they winked, or cover'd their Eyes; if they understood not, stopt their Ears, and the like. They delight exceedingly in Musick, to which they would keep time both with their voice, hands, and feet: wonderful also affectionate one to another, and to their Country. In one Voyage there went a *Danish* Mariner, with black hair, flat nos'd, and other, though not very exact, resemblances of a *Grone-lander*; as soon as they saw him, they came about him, kissed him, hung upon him, and shewed to him all possible demonstrations of Kindness and Affection. And those who were in *Denmark* never enjoy'd themselves, nor had any content, but continually pined away, and languish'd with Discontent for their condition, and love of their country. Their Religion, such as it is, seems to be unto the Sun; for when our People invited them to conversation, bartering, &c. they held up their hands towards the Sun, and cried *Yotan*; nor would they come near us, till our men had done the like. But *John Munck*, and divers others, having gone farther into the country, found images, such as we make of Devils, with horns, beaks, claws, cloven feet, &c. very ill made; Altars also and quantities of Bones of Beasts, as of Deer, Foxes, Dogs, and the like, near unto them. They seem also, as all Idolaters, given to Enchantments and Sorceries. Our men have seen them lying flat upon the Earth, and muttering their Prayers or Charms into the Ground, worshipping the Devil, whose proper habitation they con-

conceive to be under them. In some Diseases they tye a stick to a great stone, to which they pay their Devotions; and if they can lift it up easily and lightly, they think their Prayers are heard, and Recovery granted. In Winter they retire from the Sea side, unto the warmer Valleys, where they have their Houses and Towns, which are commonly Caves at the foot of an hill, round like an Oven, close to one another, and passages in the inner parts from one to another; their Doors, which are low and round, open to the south; and they dig trenches also to draw away the water that falls or drains from the hill. The entrance, and some part of their house, stands without the cave, which they frame very handsomly and commodiously of the ribs of Whales join'd artificially at the top, and cover'd with Seals skins. They raise also one part of their floor higher than another, which they strow with moss to sleep upon. But in their fishing-time they have Tents, which they remove from place to place in their larger Boats. They set up four Poles, and cover them with Skins, which serves very well in summer: when fishing is done, they return with them to their Houses. Their manner of bartering, is to make two heaps, one of such things as they desire, the other of what they would part with; and they cease not to take away from the one or other, till the Trade is ballanced. The chiefest things of ours which they valued, were Knives, Needles, little pieces of Iron, Looking-glasses, &c. for these they would sell their Bows and Arrows, their Boats, and strip themselves of their Clothes, but never, like some other Barbarians, sell their Wives and Children.

Their

Their Cloathing.

Their clothing is either of Birds-skins, with the Feathers and Down upon them, or Seals, Dogfish, or the like. Seals they use most in their fishing, because that fish there abounds, and are easily deceived, by seeing one clad in their own Livery : besides, that these kind of Furs are not so apt to be wet, though dip'd in Water. They wear the hair sides outward in summer, inward in winter, and in great colds carry two or more suits one upon another. They dress their Skins very well, making them dry, soft, and durable, and sow them also very strong with Sinews of Beasts, and Needles made of Fish-bones.

Their Boats

But in nothing do they shew so much Art, as in their Boats or Canoes. They are made of that we call Whalebone, about an inch thick and broad, and these not set like ribs, but all along from prow to poop, fast sowed to one another with strong Sinews, and covered over with Seals-skin. They are from ten to twenty foot long, and about two foot broad, made like a Weaver's Shuttle, sharp at both ends, so that he can row either way ; and in making this pointedness they are of all things most curious, for therein consists the strength of their Vessel. In the middle of it are the ribs, both to keep the sides asunder, and to make the hole in the covering, wherein the Rower sits. They have a deck made of the same materials, which is closely fasten'd to the sides, in the midst whereof is a round hole, as big as the middle of a Man ; so that when he goes to Sea, he sets himself in that hole, stretching out his feet forward

ward

ward into the hollow of the Boat ; he stops up the hole so close with his frock, or loose upper garment, that no water can enter, tho' it were in the bottom of the Sea. His frock is strait tyed at the hand-wrists, and to his neck, and his capouch sowed also close to it ; so that if the Boat be overturned or overwhelmed in the Sea, he rises up again, without any wet either upon his Skin or in his Boat. They have but one Oar, which is about six foot long, with a paddle six inches broad at either end ; this serves him both to ballance his Boat and move it ; which he doth with that incredible scelerity, that one of our Boats with ten Oars is not able to keep company with them : The *Danish* relation saith, that they rowed so swift, that they even dazled the Eyes of the Spectators ; and tho' they crossed frequently, yet never interfered or hit one another.

Their fishing ordinarily is darting ; their darts are long, strongly barbed, and at the other end have Bladders fastened to them, that when they have struck the Fish, he may spend himself with struggling to get under water, which yet he cannot do, and so is easily taken. *Their Fishing.*

Besides these, they have greater Boats for the removing their Tents and other Utensils, as also to carry their Fish they have caught to their Houses ; these are thirty and forty foot long, and have sometimes ten, and sometimes more seats for Rowers. Cardinal *Bembus* (in his *Venetian History*) saith, that in his time one of these, with seven Persons in it, was by storm cast upon the coast of *Britany*. I know not whether
it

it be worth mentioning, that they have Kettles and Pans made of Stone (some say of Loadstone) that endures the fire wonderfully, but not having tools fit to hollow them sufficiently, they make up the edges of Whalebone.

**F R E E S L A N D, or
F R I S E L A N D,**

Lieeth in 60 deg. more westerly than any part of *Europe*: distant from *Iseland* leagues. It is reported in bigness not to be much lesser than *England*; a ragged and high land, the mountains cover'd with snow, and the coast so full of drift Ice, that it is almost inaccessible.

Its Discoveries.

It was first discovered to us by *Nicolao* and *Antonio Zani*, two *Venetian* Gentlemen, that were here shipwrack'd. They describe the Inhabitants to be good Christians, very civil, and to be governed by a great Lord whose Name was *Zichmay*, whose mighty conquests, and strange accidents may be read in *Hackluit*. It is not our business to write or repeat Romances. Those men whom our Seamen (touching there accidentally) saw, were like in all things to the *Gronelanders*, both in features of body, and manner of living, as much as they could judge; so like, that many of them thought it continued to *Groneland*; in which opinion also they were confirm'd by the multitudes of the Islands of ice, which

which coming from the north, argued land to be that way : for many of our Mariners hold, that salt water doth not freeze, but that all the Ice they find in the Sea comes from the Bays, and mouths of fresh-water Rivers ; for the ice it self is sweet and fresh, being dissolved, and serves to all purposes, as well as Spring or River water. Besides, the salt Sea (they say) is always in motion, and so cannot freeze. But the *Dutch*, who winter'd in *Nova Zembla*, took notice, that the salt water freez'd, and that two inches thick in one night.

There seems to be good fishing every where upon the coast. In their soundings they brought up a sort of pale Coral, and little Stones clear as Crystal. They call'd it *West England*, and one of the highest mountains they called *Charing-Cross*.

T H E E N D .

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THE END.

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