



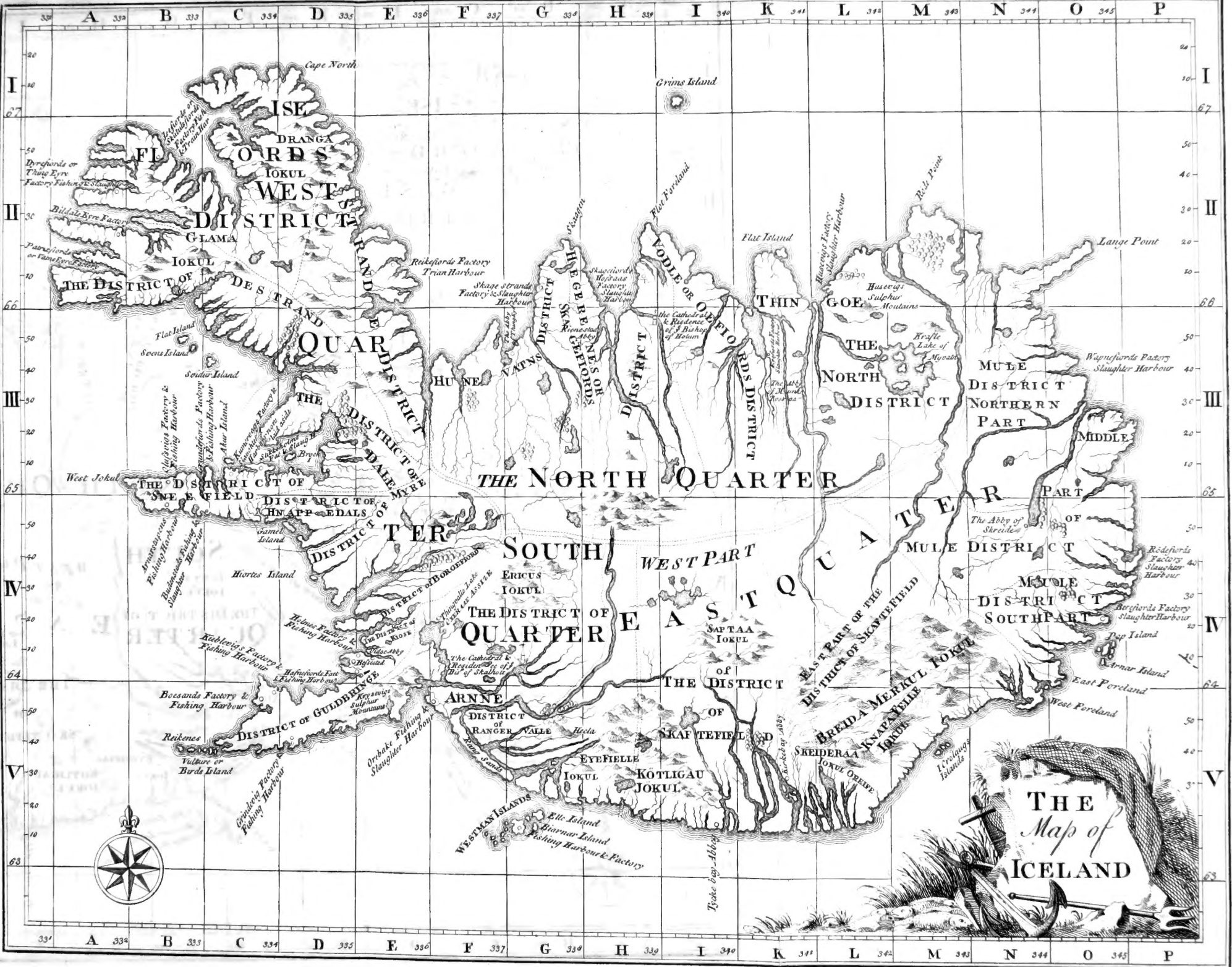


JULY 2 1905

Albert Davis Mead



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THE
NATURAL HISTORY
OF
ICELAND:

CONTAINING

A particular and accurate Account of the different Soils, burning Mountains, Minerals, Vegetables, Metals, Stones, Beasts, Birds, and Fishes; together with the Disposition, Customs, and Manner of Living of the Inhabitants. Interspersed with an Account of the Island, by Mr. ANDERSON, late Burgo-master of Hamburgh.

To which is added,

A METEOROLOGICAL TABLE, with REMARKS.

Translated from the DANISH ORIGINAL of

Mr. N. HORREBOW.

And illustrated with a New General MAP of the Island.



L O N D O N :

Printed for A. LINDE in Catherine-Street, D. WILSON, and T. DURHAM in the Strand, G. KEITH in Grace-church-street, P. DAVEY and B. LAW in Ave-mary-lane, T. FIELD in Cheapside, C. HENDERSON at the Royal-Exchange, and J. STAPLES in Stationers-court.

MDCCLVIII.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 309

LECTURE 10: THE HADRONIC COLLIDER

10.1. THE COLLIDER

10.2. THE COLLIDER

10.3. THE COLLIDER

10.4. THE COLLIDER

10.5. THE COLLIDER

T H E

P R E F A C E.

ICELAND is next to Great-Britain, the largest island in Europe, and in my humble opinion, deserves in a great measure to be rescued from the obscurity in which it has long drooped; so much the more, as there is scarce a country the world has less knowledge, or has conceived a less genuine idea of, chiefly by reason of the accounts published of it, which are far from being true, or to be depended upon. The Icelanders themselves have been as careful as any people on the globe, in noting down in a simple, plain and honest manner, all the remarkable occurrences that have happened in the island since its first discovery, and their first settling in it; the former of which is supposed to be in the year 861, and the latter in 874. It were to be wished, that from their accounts any one had compiled a history of Iceland; as such, no doubt, would convey a true idea of *à nascente republicâ*: but however careful they were in collecting, it must be said, that they have been somewhat remiss in satisfying the public with an accurate description of their country; for the small treatises of Arngrimo Jonæ, and Theodoro Thorlacio, which are conducted in the disputative form of controversy, cannot be looked upon as complete performances, though prettily written. This work is therefore likely to be left for foreigners, though the natives are certainly best qualified for it: and indeed, it can be no easy task for a foreigner, if we consider the extent of the country, and the many strange phenomena it contains, which make it almost impossible for him to execute the same properly, unless by living there a considerable time, he has made himself master of the language, and informed himself faithfully of every particular. Notwithstanding these difficulties, strangers and foreigners
have

have thought themselves qualified to give a description of this island; some who had only been a short time in the island, having clapt together a history in a hurry; and others who had never seen the place, having collected all the accounts they could receive from travellers, upon which they founded their history.

Of the first sort is the famous Blefkenius, who lay a little while on the coast in a Dutch ship, was two or three times ashore, and hardly understood any thing of the language. This gentleman after his return, published a small treatise on Iceland, or rather a false and scandalous libel, which was refuted in another small treatise published by Arngrimo Jonæ, and intitled *Anatome Blefkeniana*.

Of the second sort is the learned Mr. John Anderson, formerly first burgo-master in Hamburg, who, as he himself acknowledges in his preface, had compiled his history from accounts of masters of ships, super-cargoes, factors, &c. who traded there, and whom he invited to his house from Gluckstad, and by interrogating them, and shewing them his collection of natural curiosities, induced them to give him, as he imagined, a faithful and circumstantial account of all they knew, either by experience or hearsay, relatively to the natural, political, or commercial state of Iceland, together with the various occupations and manner of life of the inhabitants. Thus it was, that all he could discover of them, or otherwise have as a piece of intelligence to be depended upon, he has thrown together, in a crude, indigested treatise, and so transmitted it to the public. Hence we may see the foundation his performance leans upon, and to shew, that the deceased good gentleman, did not intend to present the public with any thing that should convey a disadvantageous or false idea of the island, he asserts, that what he writes is true. As a sensible and curious man, he had a strong desire, and gave himself a great deal of trouble to learn something more new and more important, as also more complete and better grounded, concerning this great, and for many reasons, remarkable island, in lieu of the old and imperfect accounts then extant, which abound with romantic tales and

T H E P R E F A C E.

and falſities, as he declares in his preface: but as he unwittingly addreſſed himſelf to very improper perſons, in order to acquire the deſired intelligence of that iſland, the old falſe accounts and romantic tales, ſtill ſubſiſt with their additions, the author's good intention is fruſtrated, and the public deceived.

Maſters of ſhips, ſuper-cargoes, and the like, from whom the late burgo-maſter Anderſon had his whole account, cannot be deemed competent judges in this reſpect, though even ſome of them ſhould be allowed underſtanding enough to examine into the natural and political ſtate of the country. It is natural to think, that their employments deprive them of the opportunity of coming at any intelligence to be depended upon: for they lie in a harbour in one corner or other of the iſland, and are ſo buſy all the while, ſome with merchandizing, and others with loading and unloading their ſhips, that they have little or no leiſure time to examine into the nature and conſtitution of the country, much leſs into the occupations of the inhabitants, who while the company's ſhips lie there, have nothing to do but to take care of their hay and harveſt: they do not fiſh much at that time, becauſe they cannot ſo well dry the fiſh: and ſome of them are a good deal employed in trading with the merchants, and keep conſtantly at the factories. If then theſe maſters of ſhips and others, cannot judge properly of the conſtitution of the country, by a better reaſon they may be thought little converſant with the air of the climate, and the degrees of heat and cold, ſo much the more, as thoſe that trade to Gluckſtad are there only in the ſummer. Thoſe who gave an account that it was ſo hot, that they were obliged to go almoſt naked, had that day, I ſuppoſe, great quantities of fiſh to weigh off, and ſend aboard their reſpective ſhips. On the other hand, perhaps ſome of them being obliged by ſome accident happening to the ſhip, to winter there againſt their will, became ſo unhappy, and out of humour, that all things ſeemed bad to them, or much worſe than they really were, and conſequently deprived them of all inclination to bring matters to an impartial ſcrutiny. Hence may be derived the accounts of long perpetual piercing colds, &c. whereas neither heat nor cold can be

determined so well by external sensation, as by thermomical observations, the only proper test in this respect.

These reasons may evince the extent of their experience, or rather how very slight it was, which, no doubt, they displayed in glaring colours, when they had the honour to be invited and received so politely by the first burgo-master of the great city of Hamburg. They thought it incumbent on them at least, to inform this learned gentleman, of all that he seemed desirous to know, and they would not appear so simple or devoid of curiosity, as not to give some account of every particular in the island, which perhaps they made several voyages to, and consequently full of their own knowledge and experience, could not help telling some things they knew, and others they knew nothing of.

In this manner the late burgo-master Anderson's credulity has been imposed upon, not doubting, but all these accounts were authentic and incontestable, as being received from persons who visited the island every year, and had collected all their intelligence at first hand, and from their own knowledge and experience. As he also knew, that the public had little or no knowledge of this remote country, he was willing to oblige them in some measure, by giving his manuscript to be perused by every one that desired it, and his upright and laudable intentions were at last fully completed by his heirs printing and publishing the same.

This work, afterwards translated from the High-Dutch into the Danish language, was well received and read in both, with a great deal of pleasure, and besides, was believed to be a perfect illustration or genuine account of that country. Though it must be allowed, that it abounds with many pretty and ingenious notes and remarks, answerable to the character of so learned and admirable an author, yet it is certain, that the facts on which it is grounded, are for the greater part false, and expose the ignorance, the mistaken ideas, and withal the bad dispositions of the hearts of those against the Icelanders, who foisted such spurious accounts upon the late Mr. Anderson's credulity.

To

To undeceive the public, and make void the severe and false accusations contained in that book against this island, I have made it my business to publish this treatise, which contains a very faithful account of the island, the air, the people, and their various occupations. In order to this, I have followed Mr. Anderson, article by article, declaring what is false in each, relating what is true and matter of fact, and introducing a variety of new things, of which he has taken no manner of notice. As his account of Iceland is entirely false, and conveys a wrong idea of the country, and every thing belonging to it, it was highly necessary that the public should have the affair cleared up, and placed in a true light, notwithstanding the name of this learned and admirable man, which gives such a sanction to his book, that scarce any doubt of the truth of the facts alleged in it; though I dare say, that had that worthy man known how he had been abused, he never would have suffered it to appear.

Of a different nature is this treatise which I here give to the public concerning Iceland. It is founded upon what I myself have seen and experienced, during the two years I lived in the island: the historical part of the events that happened before my arriving there, I received from worthy and learned people in the country, who have been eye-witnesses themselves of them, and were capable of giving better accounts than the common people, from whom the masters of ships or super-cargoes, had their intelligence. I made several observations with an excellent Paris quadrant, and ascertained the elevation of the pole, by means of a lunar eclipse, which happened December 1750. By a telescope accurately furnished with a micrometer, I took the exact latitude of the island, and having determined it in a nicer manner than it ever was before, found that Iceland lies almost four degrees more to the east than it has hitherto been computed.

On the barometer and thermometer, I made observations during two years, by which the weight of the atmosphere, and the degrees of heat and cold, were discovered, and found to be quite the reverse of what was imagined. In short, I had the happiness to make such meteorological and physical observations,

tions, in regard to the air and earth, that many things are now brought to light, which before were either buried in obscurity, or hinted at in a confused and imperfect manner.

Such is this treatise, I now have the honour to lay before the public. It is not to be considered as a complete description of the island, which none can be capable of effecting, unless they have lived there a considerable time, are versed in the necessary sciences, and have a sufficient support; but it contains such an account of the country, as is literally true, and may be depended upon, and which at present the public may be satisfied with, till that performance appears to answer the pompous title taken notice of in the * journal of the *literati*, which I sincerely wish any one was capable of executing.

As this treatise therefore is of a different complexion to any other hitherto published, so also is the annexed map. All others of this kind are far from being exact, more especially that published with Mr. Anderson's treatise. As to the annexed, it was carefully copied and taken from a large original map of Iceland, the work of some years, and done by some of the officers of his Majesty's corps of engineers, who were sent for this purpose to Iceland. In 1734, it was completed by captain Knopff, and by his Majesty's gracious command, delivered to me, that I might publish a copy of it with this history. This map, which was never before published, is the exactest of any extant of Iceland, and I do not doubt but that the public will receive it with a great deal of pleasure and satisfaction.

A few remarks have been made upon the map by way of introduction to the treatise, and to render it more plain and distinct.

The meteorological observations which I made during my two years stay there, are printed at the end of the treatise, with remarks and explanations, how they were performed.

* A periodical or public paper so called.

Remarks on the map.

I before observed, that the annexed map was the work of some of his Majesty's engineers, and completed by captain Knopff. No alteration is made in it, except the placing of Besssted according to my observations in Iceland, in its true latitude and longitude, and consequently ascertaining the situation of the whole island, by removing it four degrees more to the east, than has hitherto been known.

The physical length of Iceland, as I have set it down in the treatise, is about seven hundred and twenty miles, but in this map it appears to be something less. However, none I suppose, are able to determine which is the juster. My calculation, in regard to the length of the island, is founded partly upon some ancient Icelandish writers, and partly upon the reckonings of the inhabitants, according to their Thing-manna-leid, which is a certain length of ground that a man travels each day when he is on a journey to the assizes. These are not a certain number of measured miles; but a Thing-manna-leid, according to the acceptation of the word, makes sometimes thirty, and sometimes forty-eight English miles, and in consequence of this way of measuring, they make the island one hundred and twenty Danish, or seven hundred and twenty English miles long.

The map is divided into four quarters, as east, south, west and north, which are marked with double dots, in contradistinction to the divisions with single ones, which are the syffels, or certain districts under a syffelmann or tax-gatherer, who is a justice of the peace.

The names of the harbours and principal places, to make them more intelligible, I have put in the Danish language, but such as are easy to understand, I have left as they were, as thingey, eyefjord, ey signifying an island.

In order that any place may be found out expeditiously in the map, I have drawn angles through the degrees, which are lettered at the top and bottom, and figures in roman characters on the sides, and have made an alphabetical table of the names

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of all the places on the map, with the letters and numbers prefixed, to shew where each place lies, which table for explanation sake is bound up with it.

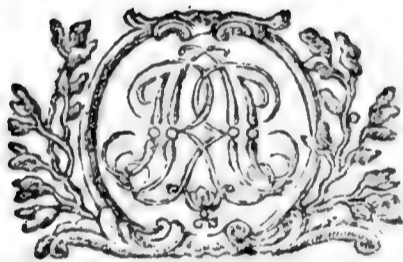
An ALPHABETICAL TABLE
Of the names of the places on the map.

The letters stand at top and bottom, the numbers on the sides, and the place sought in the angle on the map.

A.

Akur ey C. III

Vide the printed table for the rest.



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THE
NATURAL HISTORY
OF
ICELAND.

CHAPTER I.

Its Situation and Extent.

ICELAND is an island in the Atlantic ocean, which, by the nicest observations I could make with a very good French quadrant, from a feat of his Danish majesty, situate in the south part of this island, and called Besssted; lies 64 deg. 4 min. north latitude. By a lunar eclipse I took the longitude, which from the meridian of London is 25 degrees west, being 4 degrees more to the east than it has hitherto been computed. This discovery, I hope, will be of use to those that navigate these seas. To be particular in the length and breadth would be a very difficult matter, by reason of its requiring very long and tedious journies to make the necessary observations. The length from east to west may be computed at 120 Danish or 720 English miles, and the breadth in the narrowest parts at 41 Danish or 246 English, though in most parts from north to south it is 60 Danish or 360 English. Thus the breadth may safely be reckoned at 50 Danish or 300 English miles. This calculation, I am certain, is very moderate. Mr. Anderson, late burgo-master of Hamburg, wrote and published some time ago an account of this island with a map an-

NATURAL HISTORY of ICELAND.

nexed to it, which takes in 11 degrees in length and 3 and a half in breadth*.

C H A P. II.

Concerning the Earth and the different Soils.

VERY probable it is, that this island has undergone a considerable change by the universal deluge, as well as many other places: for it is an uneven country covered with rocks and rugged mountains, much like Norway and a great part of Italy †. The Alps and Pyrenean mountains make on the Italian borders a great tract of land. In Europe we find many countries, whose face appears as irregular as Iceland, with vast mountains and valleys. The coast is not crowded with little islands and rocks like Norway, but for the better part lies exposed to the ocean. To the south, but very few appear; and these are called (Fugle Skiarene) or Birds Rocks, because birds breed on them in abundance. At the entrance of some of the harbours, particularly Oreback, Grindevig and Boefand, are many little rocks and banks in the sea near the coast, which failors ought to avoid, as also in the midst of the entrance into the harbour of Hafnefiorden, otherwise a very fine and safe harbour ‡.

Some few islands lying in the sea off the coast, are very fertile, and bare excellent grass. They are not inhabited. Most of them lie westward from Bredefiord, and extend a little beyond Dalefssel, in which district are many of such valuable and important islands. Very few appear to the north and south; Papoe, I believe, is the only one to the east. In the interior parts of the island are very extensive heaths and plains, together with vast ||

* Mr. Anderson in his description of Iceland published at Hamburg, says, that the island of Iceland lies pretty far up in the north sea, and is generally reckoned seventy Danish or four hundred and twenty English miles long, and forty-one Danish or two hundred and forty-six English broad. This our author, even by Mr. Anderson's maps, proves to be wrong, as also that it does not lie in the north sea, but in the Atlantic ocean, the north sea, as he says, ending at Hetland.

† Mr. Anderson calls it an irregular spot abounding with a multiplicity of barren Mountains.

‡ The same Author says the coast is covered all round with a multitude of broken rocks, or as he calls them (blind) scarce peeping above the surface of the water.

|| He also alledges that the interior parts of this island abound with vast high rocks and mountains, shattered and torn from each other; always covered with ice and snow, and uninhabitable by the human species.

mountains, many of which are always covered with ice and snow. The greater part of them are passable, and have roads over them, where some hundreds of horses and men pass every year. Most of the northern people travel across the large chain of rocks that run along the country, and fetch their winter stock of dried fish from the south and west parts. The mountains in the common road are not so difficult to pass as those on the Alps and Pyrenees. On the top of some of these mountains are plains of twenty or twenty-five English miles extent. There are also in several places large tracts of land with good grass for pasture, and great lakes abounding with variety of fine fish, and in some places sand ground. Some of the mountains, which at all times are covered with ice and snow, are called Jokeler. From the tops a dark, fatty, thick, stinking water continually flows like a great river. These Jokeler are not the highest part of the mountains, there being many near them much higher, yet without snow continually on them. This may probably be owing to the nitrous quality of the earth. There appears a very extraordinary phenomenon in these places, which may rather belong to a metaphysical than historical description. However, it will not be amiss to give a brief account of it in the strange property of these places called Jokells, which increase in bulk, and again diminish and change their appearance almost every day. For instance, paths are seen in the sand, made by travellers that passed the day before. When followed, they lead to a place, like a large pond or lake, frozen over, very dangerous to pass, and not there the day before. This obliges travellers to go two or three English miles round. Then they come again to the very path opposite to that they were obliged to leave. In a few days the interrupted path appears again, all the ice and water having, as it were, vanished. Sometimes travellers are bold enough to venture over the ice rather than go so much about. But it often happens that their horses falling into the great breaks which are sometimes in the ice, it is not in their power to save them. A few days after these very horses are seen lying on the top of the flat ice, where before was a hole several fathom deep, but now closed up and frozen. The ice must therefore in this intermediate time melt away, and the water freeze again. Hence it may be concluded, that there is

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no sure road round and over these mountains, but by thus continually passing and repassing. Sometimes travellers meet with accidents, but not very often. These kind of Jokells are only in Skaftefields Syffel, a south part of the country. Hecla and the western Jokells are of another kind, and do not change their appearance in this manner. These consist of many stony rocks and mountains. Most of the latter produce some vegetable.

C H A P. III.

The manner of travelling in this country.

THERE has not been a fiery eruption from any of these mountains, neither has the ground taken fire since the year 1730. This very seldom happens, and even when it does, it occupies but a small tract at a time. Travellers cannot therefore be much obstructed by it. The rocks sometimes crack and are rent asunder here as in all other mountainous places, and by falling, chance sometimes to cover a good piece of ground, and bury a hut or farm*. This also happens but very seldom. If in a road, it is soon cleared away and the passage made free. They are obliged to transport every thing on the backs of horses. Carts and waggons are not used, though in many places they may. As an instance of the goodness of some of the roads, I have known those, that in a summer's day, from the rising of the sun, to the setting, have rode 120 English miles, and that across the mountains from north to south. The annual circuits of the judges, their attendants, and baggage are performed on horseback. Some of them from the eastward make a circuit of upwards of 400 English miles. I only mention these particulars to shew that the roads are tolerable, and that the inhabitants may transport their goods and wares to and from any part of the island. When the Iceland company's ships arrive, the people flock from all parts of the island to purchase their commodities. From Hoolum upwards of 100 horses set out every year for the south-

* Mr. Anderson says that the whole country is overspread with stones and broken rocks; that there is no possibility of using carts or waggons; that the people must travel mostly afoot, and that the best part is hardly fit for a horse, it being excessive dangerous either to climb, ride or walk.

ward to buy up dried fish. Other parts according to their abilities, send 10, 20 or 30 horses, for the same kind of trade. From the north country they generally carry butter and a quantity of their woollen manufactures to barter them in the south country against fish, by which means several thousand horses annually pass and repass these great mountains*.

C H A P. IV.

In what manner it is inhabited.

THIS island is not very populous †, although the natives, as well as foreigners who settle among them, seldom leave the country; and those that do, have as strong a propensity to return as any people whatever to their native place. What chiefly wasted this country of inhabitants, was a pestilential disease that raged in the fourteenth century, called the ‡ forte död, or black death. It almost swept away every soul from off the island. None scarce remaining to relate the circumstances of the dreadful calamity, it was accordingly left out in the annals of Iceland, where nothing else remarkable is omitted. Since its being first peopled, those that escaped this great devastation saved themselves by taking refuge in the mountains, and by tradition relate, that the low and flat country was covered with a thick fog during the time of this plague. This disease extended itself to Norway, Sweden and Denmark and carried off so many thousands in those countries, that they could not spare people for this colony ||. However the few remaining inhabitants since increased to, I believe, about fourscore thousand souls; which is but a small number for a country of 700 miles extent, and therefore

* Mr. Anderson says that none take the trouble of clearing away the broken rocks and stone-heaps that fall into the roads; because the inhabitants here, as in most barren and desolate mountainous countries, have little or no occasion, much less encouragement to travel.

† The same Author is of opinion that the reason why Iceland is but thinly inhabited, is owing to its being from time to time afflicted with earthquakes and devastations, which still continue.

‡ Bishop Pontoppidan takes notice of this disease in his natural history of Norway.

|| Mr. Anderson says the inhabited part of this island is chiefly along the coast, or at most not farther than thirty English miles from it, and there only a few small houses. As for any towns of trade, they are not at all to be met with.

not one tenth part of this island is properly inhabited or cultivated. Besides this plague or *forte död*, several other calamities raged at sundry times. In 1697, 1698, and 1699, many died of hunger, and in one only parish 120. In 1707, the small pox carried off upwards of 20,000, and was succeeded by a sort of plague. The small pox is very fatal here. Many other reasons may be added why this place is usually thin of people: but as this is not owing immediately to any property in the earth or quality in the air, we shall omit speaking farther on this head. The greatest number of the inhabitants live near the sea along the coast. A great many notwithstanding live scattered about 100 or 120 English miles from the sea. There are also several trading towns or factories. At each of the twenty-two harbours of this island is a trading town or factory, where the company of merchants trade with the inhabitants. These trading towns are not to be compared with places of that denomination in other countries; for they consist only of three or four dwelling houses for the merchants of the Iceland company, with a shop, warehouse and kitchen. This, which in the main, is no more than a factory, they call a trading town; the rest of their buildings about the country are single houses or hutts with a yard round about, and a field contiguous which they call (*tun*). The rest of their land the proprietor lets out sometimes to different people to build on. These proprietors are called *Hiauleymænd*: for *Hia* in the Iceland language is *near*, and imports a people, who have grounds near their houses. The house is called *Hiauleye*. They are also distinguished from those that have only hutts, as being possessed of ground and grafs to keep a cow or more, which the others have not. This manner takes place over the whole country, so that no villages are met with. The intire country is divided into parishes, and each house stands separate. However, in some places may be seen 20, 30, and even 50 buildings with their grounds, besides hutts. If these can be deemed villages, there are many of the kind in the island. This is not the only country inhabited in this manner. The island of Bornholm in the Baltic, a fine spot of ground has not a village in it. In many of the Danish provinces each farm stands detached, and I cannot help observing, that it seems most convenient for every farm house to stand apart, and to have its
ground

ground contiguous, if for nothing more than to prevent the accidents of fire from spreading. In mountainous countries it is also more rational to build where a spot of ground is found fit for culture, than to stand for form and order*. That the inhabitants are more numerous towards the sea-coast than the interior parts of the country is owing to the fisheries, which yield a better maintenance than the produce of the land, the cultivating of which has not been much attended to since the dreadful plague.

C H A P. V.

Concerning earthquakes in this island.

THERE are but two places where the earth is sulphureous, namely, in the district of Husevig and to the south near Kryfevig. It is true, in some other parts, where warm baths have been discovered, the earth retains a kind of sulphureous smell. The inhabitants informed me that sometimes they had earthquakes, but that they seldom do any great mischief. During the two years I was there I felt none, though I was once told there had been one. I suppose the shock was but slight †. To the southward in Rangervalle and Arnefs parishes earthquakes are perceived, and sometimes in Guldbringe and the parishes adjacent; but hardly ever westward or northward. There have been instances of houses shook down, but the inhabitants usually save themselves. I don't find, that the greatest shocks they ever had, were ever attended with any eruption of fire or water out of the bowels of the earth. Clefts have been perceived in the rocks and chasms in the earth, and it is very probable that such have been occasioned by earthquakes; but from all that I could gather it seems that earthquakes are not there very common; neither do any extraordinary accidents happen by them, if compared with those in Italy, Sicily and the American islands ‡. As
many

* Mr. Anderson says that the old fashioned way of building continues to this day, without any regular order.

† The same Author asserts, that this island is but as one rock full of deep holes and caverns, mines, minerals, and burning vapours; therefore the most likely place in the world for earthquakes. He adds, that they often happen, and sometimes very dreadful.

‡ The same Author gives the following account of a dreadful earthquake that happened in 1726, at Skagestrand in the north part of this island. There was, says he,
a violent

many fabulous stories have been told about this country and the dreadful earthquakes which happened in it, I made it my business to get the best intelligence I could in this respect. In the year 1720, near Skagestrand in the parish of Hunnevatn, a rock of an enormous size, probably undermined by length of time and a continual current of melted snow from it, fell down upon a subterjacent valley, and made a most horrid noise. The valley was remarkable for very fine pasture land; a rivulet ran through it, and a cottage stood not far off. This great rock filled the valley, crushed the cottage, and killed every soul in it but one. The course of the water being hereby stopt, the rivulet overflowed all the country about, till it rose so high as to flow over the rock. Then it fell into its usual channel, but on one side all the low land is still overflowed, not unlike a spacious lake. This heavy fall must have shook the earth considerably all around, and the person that escaped must have heard a great noise. The neighbouring people might very likely take this to be an earthquake, but it certainly was not.

C H A P. VI.

Concerning fiery eruptions and volcanos in the earth.

I HAVE before observed that sulphur is only found in two parts of the island, in the district of Husevig and Krysevig. The last place affords also some saltpetre. It were to be wished one could discover more of it in other parts of the island. Excepting these two places, sulphur is scarce found in any other part*. I have even stood by to have deep holes dug in the earth in different parts, but never discovered sulphur or saltpetre any where else. The turf here has a sulphureous sort of smell, as it has in most countries †. Here are also various sorts of earth, clayey,

a violent earthquake in the night time, and a very great rock sunk into the earth to an immense depth, which afterwards was filled with water, and became a very spacious lake. About the distance of eight or nine English miles from this place there stood a lake, which the neighbouring inhabitants imagined bottomless. This at the same instant became dry, and the bottom thereof rose up higher than the adjacent land.

* Mr. Anderson says that when they have dug five or six inches deep in the ground, they find intire lumps of sulphur and a deal of saltpetre, which destroys the fertility of the earth.

† This Author also alledges, that the earth often takes fire by the fermentation of various combustibles, as of iron ore, saltpetre, sulphur, &c. This fire runs frequently along the surface of the earth. It likewise burns underground, and makes the earth quite unserviceable.

fandy, stony, and very good mould in many places fit for vegetation when properly cultivated: This I know by experience as shall appear in the sequel. In 1728, in the parish of Norderfyssel, fire happening to issue out of a mountain, set the sulphureous earth around in flames, melted and made it run like water to a place called My-vatne, where it flowed into a lake. This efflux of melted matter can only happen in the two aforementioned places. It has not been heard of from the year 1000 till 1728. In the south country it was never heard of, but in the parishes of Guldbringe and Arnes, and in those of Hnappedals, Borgefjords and Snefeldsnes. There are some slight accounts of the like in the high mountains between the north and south country. But a few tracts of land, and exceeding small in comparison to the whole island, are thus liable to take fire. Such grounds as have been burnt in this manner, are called by the inhabitants Hraun, and most of them were in the same condition they now are when the Norwegians first began to settle here; for the present inhabitants can give no account of any happening from the year 1000 till 1728*, which I shall relate according to the most authentic accounts I could receive from very credible and worthy people in the island. In the year 1726, in the parish of Norderfyssel a few shocks of an earthquake being felt, a great mountain called Krafle made a horrid and frightful rumbling noise, succeeded by thick smoke and fire that burst forth and threw out stones and ashes in a manner terrible to behold. Two persons at that instant happened to be travelling along the foot of the mountain. The fire rushed about them; they were sorely frightened, and every moment expected to be consumed, but happily escaped unhurt. It being very calm weather the ashes and stones were not carried to any great distance, and by this means the adjacent country was not much damaged. This mountain continued burning for some time, abating at in-

* Mr. Anderson tells us, that in the year 1729, in the parish of Huuswich, there broke out a fire from the earth and destroyed the little town of Myconfu and all the neighbouring land. All the churches, houses, sheep, horses and horned cattle were at once consumed to ashes. The flames grazed the surface of the ground with such rapidity that the inhabitants could hardly save themselves by the most precipitate flight. Six parishes were in the utmost danger of being totally destroyed by the fire; but three miraculously escaped, and the fire, which no human skill could conquer, was in a few days extinguished by a thick fog and heavy rains.

tervals, and then breaking out again. No earthquake was perceived, except some slight shocks before the fire began to rage. In the year 1728, from the flames that gushed out, the sulphureous earth in the mountain took fire, burnt for some time, and afterwards became a fluid, running in a slow stream down the south side of the hill, to the low land, as far as a great lake called Myvatne, of thirty-six English miles circumference and eighteen from the mountain. The neighbouring inhabitants being apprehensive of the danger, moved away in the spring of 1729; and the summer following, having stripped their churches and houses of all their timber, brought the same away with them. In the autumn of that year the stream had reached, in the valley or low lands the edge of the lake. It overflowed the three farms of Reikehlid, Groef and Fagrenefs, and run all over the grounds belonging to them; it also passed round the church, which happily standing on higher ground escaped. At last it took its course into the lake and made a horrible crackling and hissing. It continued still running till the year 1730, and then ceased of itself; probably for want of fuel to keep it alive. This running matter being afterwards congealed, looked like calcined stones. It is called by the natives Hraun. The inhabitants soon rebuilt their huts and churches. Reikehlid, with half its grounds was totally destroyed; but was soon after reinstated on a more convenient spot. As for the other two farms which suffered the same fate, no ground could be found near the place to rebuild them upon. The only damage sustained was in these farms; for not a living creature was hurt. The lake of Myvatne into which this burning matter flowed was filled up at the place where it emptied itself. Before this accident the water was there very deep, and was well stocked with a great many fish, especially small herrings; but for a long time after hardly any were seen: they avoided the place from an aversion to the sulphur, or perhaps died of the stench. At present they are as plenty as ever. This matter as it ran slowly along, appeared like fluid metal and probably consisted of melted brimstone, stones and gravel; but it did not throughout its course set any of the earth on fire. Its flames were confined to the burning rock, which abounded with sulphur. The Icelanders call it the burning stone. This is the truth of what happened

happened by the mountain of Krafla's taking fire. The same lasted four years. Since that time no fiery eruption of any kind appeared in the island. I spoke with a person who travelled in those parts, whilst this stuff was flowing. He said that it ran very even and quiet, that he went up to the edge of it, and lighted his pipe by it.

C H A P. VII.

Concerning the burning mountains.

THIS extensive and mountainous island is reported to abound with burning mountains: but from all the accounts I could gather, I do not find twenty all over the island that have ever burn'd*. I before observed, that here are all sorts of earth, and a great deal of sand, especially about the mountains called Jokells, which are continually covered with ice and snow. Fiery eruptions from these mountains have sometimes occasioned great overflowings by melting the ice and snow, which washed away all the mould upon the slopes of the mountains and the adjacent parts, leaving nothing but the bare sand. Ashes and calcined stones are only found about Hecla, Krafla and such mountains as have burned with violence, and thrown up great quantities of bituminous matter. It cannot be said that these mountains frequently emit fire; no such thing having been perceived since the year 1728. This happened at the Jokell Oraife, eastward in the district of Skaftefield, and two years before at Krafla in the north district. Those that live near these mountains have learned by experience, that, when the ice and snow swell to such a pitch as to stop up the holes from whence the fire issues, the earth begins to shake, and soon after fiery eruptions ensue. At the time of this writing, they were apprehensive that the mountain in Skaftefield which burnt in the year 1728, would very soon disgorge flames again, having observed that the ice and snow covered the aperture, and consequently kept the air and vapours from having vent †. The

* Mr. Anderson says this island appears like a calcined rock, being totally destroyed by the many fiery eruptions from the mountains and the burning earth around them: for hardly any thing else is met with, but ashes of mountains, and no where such sand as in other places, being chiefly a compound of calcined stones and ashes.

† The same Author relates, that when the snow melts, it flows from the mountains like a torrent, carrying with it huge pieces of ice, burnt matter and minerals,
and

The fatal consequences of such eruptions cannot be beheld without the greatest horror. They are usually attended with rapid torrents, pouring down from the mountains and washing away every thing before them. The people generally save themselves, and it very seldom happens that they do not escape; as may appear from the mountain in Portlandsbay in the year 1721, which not less suddenly than violently overflowed. This I shall relate in its proper place; but not one perished. Two travellers who beheld this violent eruption retreated to the top of a higher mountain, where they were obliged to stay a day and half. Afterwards they pursued their journey across part of the mountain that had overflowed. No cattle were destroyed by this accident. It is natural to suppose that wherever these overflowings reach, the earth must be greatly damaged*: but these mountains are chiefly crowded in one tract of the island and the eruption usually happens at the same place.

An account of the overflowing of the Jokell Kotlegau, in 1721.

This happened in 1721, in the district of Skaftefield to the south, at a mountain called Kotlegau, about 30 or 36 English miles from the sea, near Portland's bay. After several warnings by shocks of an earthquake, it first disgorged fire which melted down the ice. A most rapid torrent of water ensued †, bearing away with it an incredible quantity of sand and earth,

and overflowing and washing away every thing before it in a manner most dreadful to behold, nothing being able, whether people, cattle or houses to escape, or withstand its fury.

* Mr. Anderson observes, that the united power of fire and water has totally destroyed this country, and left it full of chasms and frightful rugged and torn mountains.

† The same Author relates, that the violent force with which the air rushed forth and expanded itself, tore away a great part of the mountain, and carried it not only six miles to the sea-side, but six miles farther into the sea, and there left it standing: it was of such bulk that part of it was considerably above the surface of the water. He likewise says, that the ashes were swept away by the wind, not only over the whole island, but many miles out at sea, and that all the fish that lay a drying were totally spoiled. The horses and cattle had their mouths cut and festered, and were otherwise much hurt the two following years by the ashes and sand that were scattered about. He further adds, that the foot of the mountain took fire and spread itself underground, taking a course of more than 100 miles, and continually burning for the space of a whole year. The Author of this History contradicts this account and assures us, that the mountain stands 30 or 36 miles from the sea, that the rain washed all the dust and ashes away in one day, and that he never could find any one that could give any account of subterraneous fires at that place.

and destroying all the ground it went over by washing away all the mould. The intire current rushed with the same violence into the sea and filled it up like a hill, to near three miles distance from the shore. It since gradually declined to its present condition, appearing not much above the surface of the water. Between this mountain and the sea there is a rock called Haver Ey, to the top of which the two travellers retired. Though the inundation overspread all adjoining parts to the height of several fathoms, and destroyed a deal of fine ground and grafs, they notwithstanding, about a day and a half after, pursued their journey across the country that had been overflowed, and were able to give the best account of this frightful sight, which they beheld without any danger from the top of the rock Haver Ey.

This mountain stands in an extensive sandy plain, called Mid-dals Sand.

Many years before, the same misfortune happened to this place and destroyed the valley, where there was good grafs. The houses that then stood thereon were intirely consumed, but it received no additional hurt this time, as being ruined before. The prodigious quantity of sand, stones, and earth, carried into the sea, may be ascertained from what still remains to be seen, as also from the account given of the island of Westman, which lies 72 miles out at sea; where the sea all of a sudden rose with a violent motion to such an uncommon height, that it was with the greatest difficulty, the fishermen saved their vessels from being tossed ashore, and washed over by the waves. Such a violent agitation of the sea, and at such a distance, sufficiently proves what an excessive quantity of sand, &c. must have been poured with the water into the sea.

The fiery eruption, together with the ashes, sand, and smoke that followed, so eclipsed the sun, that it did not appear for a whole day. The ashes and sand were carried to an incredible distance, and almost to all parts of the island where the wind blew. The grafs newly mowed, the hay that was out, and all the fish that were hanging to dry, were covered by them: But a day's rain washed all clean again. The fire only continued flaming with this great violence at intervals. Whenever it ceased, it was succeeded by thick dark smoke and vapour. Probably the

fire was smothered by the great quantity of melted snow that poured in and occasioned this dark thick steam. This inundation lasted about three days. It was dangerous travelling for a long while after. In many places sand covered the snow and ice, and travellers sunk through; but I do not find that any considerable accident happened. In such a flood every thing mixed together, for when it subsided all things were found promiscuously jumbled with one another.

An account of the eruption from the Jokell Oraife, in 1728.

As Jokell Kotlegau overflowed, so did also, the Jokell, or mountain Oraife to the east of the district of Skaftefield. The fire broke out between Ladyday and Midsummer, and continued burning till the beginning of October of the same year. The water flowed from the mountain between two farm-houses called Hoff and Sandfeld, which lie not above six miles from the foot of the mountain, and about the same distance from each other. It spread itself beyond these houses in the flat country, and washed through the lower house and dairy, and carried off all the milk, butter, &c. the people saved themselves by getting on the tops of the houses. The water did not rise so high, and only filled the inside. Numbers of the cattle from both farms were carried off, and some of them were afterwards found parboiled. It ran along the vallies and emptied itself into the sea; but the stones, sand and earth, carried away by the current were not any way equal in quantity, nor rushed on so violently as the former, though greater damages were sustained. No cattle were lost in the other eruption, nor any field of grass destroyed, the same being entirely demolished by former inundations: but the stream of the eruption we are now talking of, passed over fine fields, and destroyed the better part of the cattle that were grazing in them.

This is a faithful relation of the whole history of these two Jokells, which in 1721 and 1728, broke out in flames, and by melting vast quantities of snow and ice, occasioned very great inundations and all the dangerous consequences we have enumerated; by which providentially no human creature came to any hurt.

hurt. These mountains remain as they were, though the shocks of earthquakes and the heavy pieces of ice that fall and tear down from them heavy stones, may have altered their external form*. They must, no doubt, hereby receive great cracks and gaps, but it is certain they are not rent asunder.

Though the earth round these mountains seems not to be impregnated with sulphur, yet it is most likely that the interior parts of the mountains are full of such combustible matter, by reason of the violent fiery eruptions which happen. None of the adjoining mountains or the ground took fire, as at Krafla in the northern district. The ground there, it is well known, abounds with sulphur.

C H A P. VIII.

Concerning the mountain Hecla.

HECLA has always been famous for one of the most noted burning mountains in the known world. Some are of opinion that it has a communication with the mountain Vesuvius in Italy: for as soon as the one begins to disgorge flames, the other does the same.

At present, Hecla makes no great figure among the burning mountains in Iceland; having ceased to emit flames these many years: but others have exerted themselves as much as even Hecla has done, as Krafla in the northern district, and Kotlegau and Oraife in the district of Skaftefield. It likewise appears that Hecla has no kind of communication or connection with Ætna or Vesuvius: for these two mountains have lately burned and Hecla has been quiet. Certain it is, that Hecla has many times burned with great fury; but that it continued so for several hundred years together, is not to be credited. It cannot be said to burn continually, when many years have passed since it entirely ceased, and not the least symptom of fire or smoke appeared. During the term of the 800 years that Iceland has been inhabited, Hecla burned ten times, namely, in 1104, 1157, 1222, 1300, 1341, 1362, 1389, 1558, 1636, and 1693. This last time the flames appeared the 13th of February, and continued

* Mr. Anderson tells us this mountain stands 30 or 36 miles from the sea.

till the August following. In the same manner every other time, it continued burning several months together. By this account we see that in the 13th Century it was most disturbed, having broke out several times*. It afterwards ceased 169 years including the whole 14th century. In the 15th century, it burned but once, and in the 16th only twice. It now has been quiet upwards of 60 years; from whence I draw this inference, that by its gradual decrease the fire got vent in another place, broke out in some of the other mountains, and may probably entirely cease. Now not the least symptom of smoke or fire is perceptible. Some small cavities are discoverable in the rock, full of boiling hot water; but of this kind are many much more considerable in several parts of the island.

It is remarkable and worthy of observation; that the last time Hecla had an eruption, the country all around was strewed with sand, pumice-stone, and other bituminous matter. But length of time, rain and wind have gradually cleared the high ground and washed away this matter into low marshy places, which, by that means, have been dried up and now bear grass. The hills as if manured by it, are finer and fatter than ever, being now covered with the finest grass. In other places mould has gathered over the ashes a foot or two deep. At the foot of this mountain, there are houses and farms. Many people out of curiosity have gone to the top of this mountain. In the year 1750 two Icelanders, students in the university of Copenhagen, came home to make some physical observations. Arriving at this place they ascended the mountain, and found great heaps of ashes and sand, great cracks and chasms, and several cavities filled with boiling hot water. After they had tired themselves with walking in ashes and sand up to their knees, they came down safe and well, but very much fatigued. Many others have had the same curiosity, but none discovered the least appearance of fire or any thing burning. Hecla is a very high mountain, and one of the highest in the island. It is also what they call a Jockell; for the top, which none can come at, is continually covered with ice and snow.

* Mr. Anderson tells us it has burned successively for many hundred years, and that it is now only recovering itself to burn and disgorge with greater rage and fury.

The particulars of these eight chapters have been set forth by other authors in such manner, as to convey to the readers strange ideas of this place, and very different from what I myself experienced. For the satisfaction therefore of the public, I will in one chapter give a succinct and general description of this island and its properties, with regard to extent and the peculiar qualities of the earth, the mountains, and the soil, in order to place in a clearer light, and lay down more exact notions of what has already been but confusedly handled.

C H A P. IX.

A brief and general description of Iceland with regard to its size, and the peculiar properties of the earth and mountains.

ICELAND is one of the largest islands in Europe, and inferior in magnitude to none but the island of Great Britain. The length from east to west I compute at about 720 English miles, and the breadth upon an average about 300.

This great country is very uneven and has vast ridges of mountains, both lengthways from east to west, and across the country. Between these mountains are fine and fruitful vallies, and some very large openings several miles in length and breadth; by which the country is divided into 18 fyssells or shires, each of which is as extensive as a province in Denmark, and some are so considerable that two fysselmænd, or justices, are appointed for them. The fyssells or shires are parted in several places by great lakes and rivers.

The mountains which lie in the midst of the island are exceeding rugged, barren and desolate; though some few among them are covered with grass. The mountains that part the shires, are for the better part very fruitful, and yield great plenty of excellent grass. The barren mountains are of two kinds: the one, nothing but sand and stone, the other vast huge rocks, covered with ice and snow all the year round, and distinguished by the name Jokeler. Though continually covered with ice and snow, they are not the highest among the rocks. Some are rather low and surrounded by much loftier, on which the snow melts away in the summer. This must be owing to some pecu-

liar quality in the nature of the soil. From those barren desolate mountains fire will sometimes break forth, and chiefly from those called Jokells, such as Hecla, Kotlegau and Oraife. As for Kraffe in the northern district, it never was a Jokell or perpetually covered with ice and snow.

Along the country are several ridges of rocks, between which are large vallies, but not so deep as those towards the sea side, being rather upon a level with the mountains that lie nearer the sea. However, these vallies are deep in proportion to the high mountains that surround them, as may appear by travelling into the heart of the country, the ascent being continual and, as it were, insensible. The heart of the country is entirely uninhabited, though containing many very fine and fruitful spots, where sheep are often kept to feed all the year round, and sometimes several years together; exposed to all sorts of weather without ever being housed. When these sheep are driven away to be sent to market, they are found exceeding fine and fat, and by far better than those kept about the farms in other vallies. Here are also pleasant rivulets, brooks and ponds of fine clear and good water, and quantities of fine fish. The large vallies which are inhabited, lie all much lower than those up the country, gradually descending to the sea side. Some extend along the coast, and may be about 25 or 30 miles in breadth towards the mountains. Others again run in between the mountains. All of the several tracts that constitute properly the shires, have small vallies between the hills for the grazing of cattle, and in the summer-season huts are built, where proper persons are appointed to manage and look after the milk, butter, wool, &c.

From some of the mountains flow large and small rivers, besides rivulets and streams, all which water the flat or low country, and abound with very fine fish. There are also many bays, creeks and harbours towards the sea, very convenient for fishing, and up the country fine large lakes 30 or 36 miles in circumference, and some less, which abound with most excellent fish. Thus the inhabitants are not in want of many good conveniences for nourishment and subsistence. Woods are scarce, though there are some few, chiefly in the northern district; but in no proportion to those other countries are productive of. As to the soil,

it differs as in most countries. Fine mould is found in some places, clayey and sandy ground in some others, besides very large bogs, or marshes commonly overflowed with water, though in the summer they dry up and may be rode over. These marshes, when drained, become very fine grounds. Turf is found almost every where, and in some places exceeding good.

The disadvantages that attend this country are chiefly the following. Burning mountains, which occasioned conflagrations of the earth, as already related in discoursing of the mountain of Krafle, where the earth abounds with sulphur. When the Jokells take fire, they occasion great inundations, by melting the vast quantity of ice and snow with which they are covered, as has been seen in the account of Skaftefield. These two calamities, God be praised, happen but seldom, and cause not such havock as represented by some authors and travellers. As an account of the excellencies of this country, its fine fisheries, its breeding of cattle and many other things of note, require more room than is intended in this short and general description, I shall treat more at large of the same in their proper places. However, I thought it not improper to give a short sketch of the face of the country, the mountains, rocks, valleys, &c. so much the more, as some authors and travellers have most unmercifully pictured their description like hell itself, and consequently transmitted to the public a very false and wretched idea of the country. I shall therefore now proceed according to my first intention, which was to discuss and elucidate each subject in a separate article.

C H A P. X.

Concerning a lake which takes fire three times a year.

ABOUT Hecla are several little springs, and at the foot of the mountain several ponds, both perpetually hot, and some hotter than others. I do not find that any one with a thermometer has made experiments whether they are hotter in winter than summer, or whether they are of an equal heat all the year round. Certain it is, that sometimes a stronger steam arises from them than at other times. This I have observed myself; and it is known by experience, that when the steam or vapour

vapour is very thick it is likely to be rainy and damp weather, and vice versâ, when the air is fine and clear, it is by far less dense, and the steam does not rise so fast. But neither here, nor at any other of the hot springs, of which there are many, have ever any flames been seen *. The smoke or steam, as before observed, is sometimes stronger but not periodical. Two opposite elements will not unite in this country no more than in any other. Those that made this relation happened to come a day too late and only found the water smoking, which may be seen in many hundred parts of the island, as also some very strange and surprising phænomena, which I shall treat of in the next article.

C H A P. XI.

Concerning the hot waters.

HOT waters are found in many parts of this island. But though a physical disquisition be not the plan I lay down for myself, yet I presume the same causes assigned by philosophers in other countries may be allowed here. I have visited many of these warm baths, but never found the least appearance of sulphur in the ground near them; nor do the waters taste of any mineral, which I tried by several experiments. Where these hot springs are, there is frequently a small basin at the place they flow out, which may contain about twenty or thirty gallons. In some places the water that runs from the rocks over hot grounds is heated to such a degree as to send forth smoke or steam: but these can hardly be called brooks. The ground does not smoke, though so hot, that it would be impossible to stand upon it without shoes. This I have observed in a dry summer when the waters above were dried up. Where I found these hot grounds, it has been chiefly stony, with small cracks about the breadth of the little finger. From thence the heat has been much stronger than from other places. When the

* Mr. Anderson tells us that about three English miles from Hecla there is a small fresh-water lake always warm, rather hotter in the winter, and according to the accounts of the people in the neighbourhood, endowed with the peculiar property of taking fire three times a year, and burning about a fortnight together in small bright flames. When they go out, it steams or smokes for several days after. He adds, that his factor went on purpose to see this strange phænomenon, but that it happened to go out the day before he arrived.

water runs over these narrow cracks it boils up stronger than elsewhere. These hot waters are called in the native language Hver, and in Iceland consist of three sorts. Some moderately hot that a person may hold his hand in; others boiling hot, and others that boil to such a degree, as to throw the water up like a fountain. Of the last are two sorts, some that boil promiscuously throwing up the water in a common manner; others that clear at certain intervals and afterwards in a regular order throw up the water. Of the latter sort that in the district of Huusevig, is the most remarkable in the country; a short description of it, will not, I presume, be disagreeable.

C H A P. XII.

A short description of a hot spring in the district of Huusevig.

THIS extraordinary spring is to be met with in the north shire and parish of Huusevig near a farm called * Reykum, about 50 or 60 miles from the mountain Krafle, which has been before spoken of. At this place are three springs which lie about 30 fathom from each other. The water boils up in them by turns in the following manner. When the spring or well at one end has thrown up its water, then the middle one begins, which subsiding, that at the other end rises, and after it the first begins again, and so on in the same order by a continued succession, each boiling up three times in about a quarter of an hour. They are all in a flat open place, but the ground hard and rocky. In two of them the water rises between the cracks and boils up about two feet only above the ground. The third has a large round aperture, by which it empties itself into a place like a basin, as if formed by art, in a hard stone rock, and as big as a brewing copper. On discharging itself here, it will rise at the third boiling ten or twelve feet high above the brim, and afterwards sink four feet or more in the basin or reservoir. At this interval it may be approached near enough, to see how deep it sinks; but those that have this curiosity, must take care to get away before it

* By such like names many are called in this island, because they adopt the name of the springs they lie near: for Reyk in the Iceland language signifying smoke, the farm is therefore so called from the smoke and steams that arise out of these springs.

boils up again. As soon as it has sunk to the deepest ebb, it immediately rises again, and that in three boilings. At the first, it rises half way up to the edge or brim; in the second, above the brim; in the third, as before observed, 10 or 12 feet high. Then it sinks at once four feet below the brim of the reservoir, and when sunk here, rises at the other end, and from thence proceeds to the middle one, and so on by a constant regular rotation.

Having now given a description of these springs and the surprising manner of their rising, I shall add a short account of some extraordinary effects of the water. If the water out of the largest well is poured into bottles it will still continue to boil up twice, or thrice, and at the same time with the water in the well. Thus long will the effervescence continue after the water is taken out of the well, but this being over it soon quite subsides and grows cold. If the bottles are corked up the moment they are filled, so soon as the water rises in the well they burst in pieces: this experiment has been proved on many score bottles, to try the effects of the water. Whatever is cast into the well when the water subsides, it attracts with it down to the bottom, even wood, which on another like fluid would float: but when the water flows again, it throws every thing up, which may be found at the side of the basin. This has been often tried with stones as large and as heavy as the stoutest fellows have hardly been able to tumble in. These stones made a violent noise on being plunged to the bottom; but when the water rose again, they were ejaculated with force beyond the edge of the well. A vast many stones lie about that have been used in such experiments. The water by continually flowing over, has formed a little brook, which, it seems, grows cool by degrees, and at last falls into a little river. It is a pleasant water to drink, when cold, and hardly tastes of any mineral. On the neighbouring plain there is generally a very fine growth of grass, but within three or four yards of these wells, or springs, the place being continually wet by the splashing of the water, all the mould is washed away, and nothing but the naked stone rock appears. There is a farm at a small distance and close by it this water runs from the well. It is here but just warm. The cattle water in it, and the cows yield a much greater quantity of milk than others that do not

water at that place. This is a thing universally known, and is a very extraordinary effect of the water. Such are the strange and remarkable properties of these wells or springs, of which there are several others much of the same kind, but the alternate boiling up of the water is intirely peculiar to these three. Where any of these hot springs are, they continually exhale a vapour or steam, which is greater or less according as the water is agitated, or the air lighter or heavier. This steam is sometimes seen at a very great distance.

The use the inhabitants make of these springs.

They that live near these hot baths, of which in this island there are many, whose water is continually boiling hot, employ the same for several uses. They sometimes take a pot or any vessel filled with cold water, put the meat or whatever they have to boil in it, and hang the vessel at a certain depth in the well *. It presently boils, and in this manner they dress their boiled victuals without being at any expence for fuel.

I have met with travellers, who having their tea-kettle with them, filled it with water and boiled it instantly in one of these baths; and I have seen people sit the whole day bending of hoops for barrels at the edge of these boiling hot baths, by the heat of which they bent some of an extraordinary thickness. Every two hours or less, they were obliged to set aside their work, and take fresh air to prevent any ill effects from the sulphureous and other bad smells of the steam, which expands itself to a considerable distance. The stench has been so strong at some of them, that I was not able to bear it. The ground about these hot wells is generally of various colours, and contains some sulphur, alum and saltpetre.

Besides the benefit the inhabitants have of boiling their victuals and water at these places, they make use of them to wash or bathe in. The water that continually overflows and runs at some distance is of proper heat for bathing. Sometimes they contrive to bring cold water to the basons: for as before observed, there are actually basons at the mouth of some of the springs, as if they were hewn out and fashioned by a stone-cutter. By this means they assuage the heat of the water, and make it fit for

* Mr. Anderson tells us they fasten their meat to a piece of wood and dip it in the hot well till it is boiled.

bathing.

bathing. I have seen one of these basons most remarkably capacious, smooth within, and well shaped for the purpose. It was in a solid rock without any cracks, the bottom very smooth, and at any time could be covered with a tilt-cloth. It had besides this advantage; that there was an aqueduct to it from hot and cold springs, some so hot that one could not bear a finger in them, others so cold as ice, and both conveyed to or from the bason at pleasure, by which means the water in the bason could be brought to any desired degree of warmth. At the bottom of this reservoir, so formed by nature, was a hole made, through which the water could easily be carried off into a little adjoining rivulet. A fresh supply of clean water was always at hand to fill it again on stopping up the hole. The people that live here, bathe frequently in it, and chiefly on this account are a very healthy people, and generally live to a good old age.

The common people are full of a superstitious notion that some strange birds are continually hovering and harbouring about these hot wells †.

They relate this, as matter of fact, and believe it, though on hear-say only from their fathers and great-grand fathers; but upon enquiry not one is to be met with, that ever saw any of these strange birds.

Besides, it is highly improbable, that birds should harbour about or swim on water, so hot, that a piece of beef may be boiled in it. Very likely birds may resort to the water that overflows and runs in a continued stream, cooling by degrees, and at last emptying itself into some river: but it cannot be said that birds particularly harbour about any of these places. In the rivers, which the different streams of these hot wells flow into, is found the same kind of fish, as in most other rivers; such as, salmon, trout and a variety of other fish, which is a convincing proof that the waters have no strong mineral quality in them, it being known by experience, that fish will not live in water that is any way tinged with sulphur, or any other mineral quality.

The waters in general are very good in this island; but this is not owing to any mineral quality in them, having found my-

† Mr. Anderson says there is a sort of black-birds with long bills, much like a snipe, continually harbouring about these hot wells.

self by repeated experiments, that they retain but very little of any mineral, except in a few parts, where they seem impregnated with small portions of a chalybeat, or vitriolic substance*. In most places they are quite pure, without the least foreign tincture any way discoverable by common experiments, or by the taste. It is therefore evident, that the earth all over the island does not abound with sulphur, saltpetre, and other salts; the waters in the district, as I have before related, where the ground is full of sulphur, have a strong sulphureous taste and smell †.

C H A P. XII.

Concerning the property and quality of the rocks and mountains, in which probably marble may be found.

WHAT has been already said concerning the rocks and mountains in Iceland, might seem more than sufficient, had not my design been to enter into a proper detail of things. However, to avoid unnecessary repetitions, I refer my readers to what has been said before on this subject, wherein I presume, I made it appear, that many of these mountains yield great store of very good grafs. As to their containing marble, I will not pretend that I ever discovered any. 'Tis true, that along the coast I found stones of very beautiful colours, some red, some greenish, and others finely variegated: the same I also found in some of the mountains; but none of them are marble stones, though it is very probable, that marble may be found in the island ‡. His Danish majesty sent miners there to break the rocks and make experiments. The natives, will, no doubt, reap some advantage from their instructions, and in process of time, probably marble, and other valuable minerals may be discovered.

* Mr. Anderson says that most of the springs in this island both hot and cold, are good and wholesome waters, because all, more or less, contain some mineral quality.

† The same Author here again alledges, that the whole country abounds with sulphur, and that a spade cannot be put half way into the ground, but it brings up sulphur instead of mould.

‡ This Author says on this head, that the mountains and hills are nothing but sand and stones, tho' he allows, that, in all probability, marble may be found in the rocks, because found both in Sweden and Norway. He adds, that some stones found along the coast may be deemed a species of marble.

C H A P. XIII.

Concerning crystals.

CRYSTALS are sometimes found here, but as they never happened to fall in my way, I will not take upon me to assert or deny that there is any such thing *. The peculiar property of that which goes under the denomination of Chrystallus Islandica, consists in representing the object, seen through it, double. But this is not properly what is commonly called crystal, though it retains that appellation. It is nothing but spar, and is said to be found eastward, on a mountain near Rodefiord. Very likely it may; but as I have not been eastward, I cannot vouch for the truth of this assertion.

C H A P. XIV.

Concerning pumice stone.

WHERE vulcano's or burning mountains are, there pumice stone is generally found. Whether that which is found here is clean or foul I cannot determine, being unacquainted with the properties it should have to be deemed good and clean †.

C H A P. XV.

Concerning the metallic ores found in this country.

THERE are not only grounds to presume that there are ores and minerals in the Iceland mountains, but very sufficient demonstration; it being very well known, that the country people frequently find great lumps of ore, so rich, that a common wood fire will melt them. Of this ore they themselves have cast seals and buttons, some of which have been found to

* Mr. Anderson says that the crystal found in Iceland is very soft, friable, and unfit for any manufacture.

† The same Author tells us, that two sorts of pumice stone are here found, the one grey, the other black. Both, in his opinion, are foul. This stone is disgorged in the eruption of burning mountains.

be pure silver. Many of the inhabitants for soldering the ward of a key, will go into the field to seek after a kind of stuff, which they know will answer the purpose. Having applied it to the place they want to have fastened, they put clay round it, and throw it into the fire till they think it has received sufficient heat. Then they take it out, strike off the clay, and find the parts strongly soldered together. What can this be they find in the field, unless pieces of ore that contain a metal proper to solder with? Probably it is copper-ore, that metal being fit for soldering iron. It is certainly known, that many places are remarkable for being productive of very rich copper-ore. Several of the inhabitants have prepared for themselves various utensils of iron, made out of an ore which they find in abundance, without any great trouble, in many places. Hence it is plain, that the island contains not only iron, but other valuable metals*. Probably a time may come when some will undertake to search for these hidden treasures. Nothing is likely to obstruct the enterprise but the scarcity of wood; but if the mines should be found rich enough to defray the expences, this obstruction may be easily removed. Great things, in my opinion, may therefore be expected from the Iceland ore, and so much the more, as pure metal of the aforesaid three sorts, has often been found above ground †.

C H A P. XVI.

Concerning rosin and turf.

IT is not to be questioned, but that the Iceland mountains contain rosin, pitch, and other bituminous matter. This is demonstrable by the mountains, which sometimes have taken fire, as it must be something of this kind that feeds the fire so long, especially where it takes a course over the ground for several miles. Turf is in plenty, and in the southern parts, the best I

* Mr. Anderson intimates, that there is no judging what metals may be found, none having ever given themselves the trouble to look after any such thing.

† The same Author assigns two reasons, the first, that the mountains are frightful and dangerous; the second, that there is too great a scarcity of timber for erecting works, and going through the operations of smelting, refining, &c.

have

have ever seen *. The inhabitants in those parts where it is to be found, hardly burn any thing else. In other places they burn brush-wood and furze, of which there is great plenty almost every where. They cut also a sort of turf at low water along the shore. It is black and heavy, and much the same as the other on land. In the south parts they use much of this, either to save the grass turf, which is scarcer there than in other places, or to save themselves the trouble of going far to fetch it, which those that live along the coast would otherwise be necessitated to do.

C H A P. XVII.

Concerning agates.

ICELAND produces two sorts of agate. The one will burn like a candle, and is in fact a species of bitumen. The other, which the Icelanders call Hrafn tinna (black flint stone) does not burn. It is harder than the former, and will break into thin flakes, which are very transparent, and not unlike glass. This makes me think it is a vitrification, and as great quantities of it is found about Krafle in the northern district, it confirms me the more in my opinion. At this place pieces are found as large as a small sized table, and some have weighed 100 or 120 pounds and upwards. The natives set apart the first sort, or inflammable agate for some superstitious ceremonies, which are conducted in the same manner, as is described in Cæsius *de mineralibus*. Others reject this use, and abhor all such practices.

C H A P. XVIII.

Concerning sulphur.

PURE native sulphur is not to be found any where above ground, so as to be scraped up and gathered. The earth being neither good nor fruitful where it is; the chief sign for discovering it, is a strong heat underneath that smokes through the

* Mr. Anderson says there is not much turf in this country, and in the southern parts very indifferent, because it is full of sulphur, stinks abominably, and wastes away too fast; but again he contradicts himself, for he says at Hafnesfiord it is very good, being black, heavy and firm.

ground. Generally speaking, where the soil is of this kind, there also are hot springs. Sulphur is equally found in the rocks, mountains and plains. Sometimes it shoots to a very considerable distance from the foot of the mountains *. There is always a lay of barren earth upon the sulphur, which is properly nothing but sand and clay. This same earth is of several colours, white, yellow, green, red and blue. When this lay is removed the sulphur lies underneath, and may be taken up with shovels. By frequently digging as deep as a man's middle, the sulphur is found in proper order. They seldom dig deeper, because the place is generally too hot, and requires too much labour, as also, because sulphur may be had at an easier rate, and in greater plenty, in the proper places. Four score horses may be loaded in an hour's time, each horse carrying 250 pounds weight. The best veins of sulphur are known by a kind of bank or rising in the ground, which is cracked in the middle. From hence a thicker vapour issues, and a greater heat is felt than in any other part. These are the places they choose for digging, and after removing a layer or two of earth they come to the sulphur, and find it best just under the bank or rising of the ground, where it looks like candid sugar. The farther from the middle of the bank the more it crumbles, at last appearing like mere dust, which may be shovelled up. But the middle of the bank is an intire hard lump, and with difficulty broken through. The loose dust is likewise good sulphur, but not quite so good as the hard lumps. In this manner they follow the vein, and when exhausted, look out for another, of which there are plenty in that part of the country, as I before observed. The labourers not being able to bear this work in hot weather, choose the nights, which are light enough here in the midst of summer to do any labour in. When they dig, they are obliged to tye woollen rags about their shoes to keep them from burning. The brimstone when first taken out, is so hot that it can hardly be handled, but

* Mr. Anderson tells us, that native sulphur grows every where under the upper lay of mould, especially in fenny and marshy grounds. Frequently whole lumps are found as big as a man's fist, and it breaks out of the rocks so thick, that every two or three years it may be scraped off with irons and gathered; but our author assures us, that sulphur entirely destroys the fertility of the earth, and that it is quite inconsistent that sulphur, which requires hot and dry grounds, should ever be produced in bogs and marshes.

grows cooler by degrees. In two or three years these veins are filled with sulphur again, the mines being always quick with a surprizing vegetation. This is the genuine nature and disposition of the sulphur in this island, with all the circumstances relating to the digging and gathering of it *. From the year 1722, to the year 1728, sulphur was taken out of the veins, and exported to foreign parts, with the consent, and to the great advantage of the inhabitants; but a ship having since been cast away near the harbour, the cargo, which was sulphur, so affected the water for a considerable time, that no fish were seen in it. The inhabitants being still desirous of turning this commodity to some account, continued gathering and transporting it to the trading towns, till such time as the merchants would not take any more from them. Thus it was, that those who had a third share in this concern, and had ordered large quantities to be gathered, lost very considerably by it, being never able to dispose of it. A great many more of the inhabitants suffered in the same manner; for when they had often gathered it, by not being able to dispose of it at market, vast quantities were wasted. In reality, it was not owing to the inhabitants that this sulphur trade ceased, a thing very much to be pitied; but, I presume, I can in some measure assign the cause, which was the death of the person at Copenhagen, who had the sole and exclusive privilege. This death happening soon after he obtained the same, put a stop to the concern, and no one since has taken it up, perhaps for want of knowledge and experience to set it on a proper footing. That fish have an aversion to sulphur is not at all strange, there being several instances to confirm this opinion, among which may be alledged, the ship at Huusevig that was cast away with its cargo of sulphur; the matter that flowed into the lake of My-vatne from the burning mountain called Krafle, and the boat that was employed in putting the sulphur on board the ship in Huusevig's harbour, which could never afterwards be used for fishing.

* Mr. Anderson tells us, that they now leave off gathering sulphur, as they did several times before, having found it very hurtful to their fisheries, which are their principal support.

C H A P. XIX.

Concerning salt, whether any be found in Iceland.

IT is more than I can pretend to say, that common salt is not to be found in Iceland. Whoever positively asserts that it is not, must have traversed the whole country, and be possessed of the knowledge and experience requisite to examine into the matter, and to make the necessary experiments for a convincing proof*. It is true, that having no where myself met with salt-springs, or rock-salt, (*sal petrae*) I can only say, that upon a specimen of the latter being shewed me, I was assured, that there are great quantities in a certain part of the island, which is very probable. That there are salt springs about this island at some distance in the sea is pretty certain, and it is very probable, that such are in the country. I have observed in several places along the coast, after a high flood, and the water being cleared off again, that the moisture, when dried up by the sun, left a crust of salt all about the rocks, which the people being very watchful of, scrape off, and gather for the use of their families. Thus it cannot positively be said, that no common salt is found in the island. Moreover it may appear from ancient grants to the church in the catholic times, that salt works and other privileges, particularly northward, were assigned for soul-masses to certain ecclesiastics and monasteries; by which it is demonstrable, that in former times they made salt; for the ecclesiastics not easily satisfied with titular gifts and privileges, must have the substance and not the shadow. Two gentlemen having here made experiments on sea-water, I was assured by one of them, that one tun of French salt which he boiled in sea water, produced one tun and a quarter of good white salt. This was done without the proper boilers and other vehicles for this purpose, and without any other knowledge of the matter than what common reason dictated. By this alone we may see, that it is not impossible to make salt in Iceland.

* Mr. Anderson says, there is no common salt to be found in any part of this island.

C H A P. XX.

Concerning forests and trees.

I BEFORE observed, that forests and wood are scarce in this country, yet not so very scarce as some travellers have represented. In the north district is a wood called Fnioskadal, about four English miles and a half long. In the same district are several of the kind; and but few farms there, are without a little adjoining nursery of young trees, some as thick as an arm*. This north district, which is also called to this day the district of Thingöe, from an island so called, where formerly assizes used to be held, has, besides the aforesaid Fnioskadal, another pretty large wood, by name Aaskov, and several others less considerable †. There is a wood as large as either of the former eastward, in the district of Mule, which is called Hallormstade, and another in the south quarter in the district of Borgefiord, called Huusefell ‡. It is therefore plain, that there are many woods in the several quarters and divisions of this island; but in proportion to its extent and bigness, it may with a deal of justness be said, that there is a scarcity. However, this want is compensated in several places, by the great quantities of fine large timber, that every year comes floating ashore. Of this they have more than they know what to do with; for being under no necessity to consume it, they let it lie in heaps and rot, not having vessels to transport it to their fellow-countrymen, who want it in other parts of the island. Besides the woods already mentioned, shrubs and bushes lie scattered about, some high enough to shade one from the sun. These shrubs consist for the better part of juniper and blackberry bushes, of which the people burn charcoal for their

* Mr. Anderson says, that there are no trees in the whole island, except in the northern part; but that a Copenhagen merchant told him, that between Huusvig and Olfiord (rather Oefiord) about 36 English miles distant from each other, he came into a wood four or five English miles long.

† The same Author says he was informed, that near Thingöre abbey, there is a small wood chiefly of birch trees; but he confounds Thingöre abbey with Thingöe.

‡ He also alledges, that in other parts of the island, there are only to be seen along the rivers a few low water willows, and blackberry, and juniper-berry bushes, of which the inhabitants are very saving, using them only to burn charcoal of for their forges.

forges.

forges. The numerous families in this island, and all those that live near the sea coast, have boats, houses, chests, cupboards, &c. with doors, locks and keys, and as I before observed, live at such distance from each other, that they cannot easily lend a mutual assistance; for which reason they are obliged to keep in their houses an apparatus for various sorts of mechanical functions, and though ever so poor, have at least a smith's forge, which they cannot dispense with*. The smith's work they do themselves, every one as well as he can, as also every other kind of mechanical business, they are under a necessity of performing. There is some reason to think, that in ancient days there was no scarcity of wood in this island. This I cannot ascertain for fact; because not the least sign appears that ever pine or fir-trees grew in this island, though the forests in the northern and much colder countries generally consist of pine and fir-trees. No other kind of trees but birch is seen; perhaps the seed of the former was never brought here; for I presume that there is no room to doubt, but that they would have grown here as well as in more severe climates. In several places, roots of trees have been found in the ground; from whence it may be supposed with good reason, that in former days woods stood in the parts that are now plains, without a tree to be seen †. A very extraordinary sort of wood, which they call forte brand, or black brand, very hard, heavy and black, like ebony, is found somewhat deep in the ground, in broad, thin, and pretty long pannels or leaves, fit for a moderate size table. It is generally wavy or undulated, and is always found between the rocks or great stones, wedged, as it were, quite close in. At first, on considering its situation, I was very doubtful whether it was wood or a petrification; but as it could be planed and managed in every respect like wood, the shavings also having the appearance of such, I was induced to think that it is nothing but wood. However, as a very extraordinary phenomenon, it may deserve a longer dissertation than this historical account will admit of.

* Mr. Anderson says there are but very few smiths forges in the island.

† The same Author says, a kind of very hard rotten wood is found under ground.

C H A P. XXI.

Concerning the pasture-land and grafs.

ALL over the island are seen spacious tracts, that yield plenty of fine grafs for feeding of cattle, which are here kept during the whole summer, till the severe cold weather comes in *. In some places, though left out all the year round, and for years together, they grow exceeding fat, and as fine as can be wished. The reason why the several districts of the north country have the greatest reputation for breeding of cattle, is, because the inhabitants make it their chief trade; those of other parts of the island relying more on their fisheries, and some entirely depending upon fishing, whereby they neglect the breeding of cattle, though they have as fine grafs, and as good conveniencies for this purpose as any in the north. Rather than to attribute this to neglect, properly speaking, the inhabitants are too few to attend both articles. It is certain, that the grafs grows faster in the north country than in the south; for sometimes the snow hardly disappearing till midsummer, no grafs is observed to sprout up; but in about 12 or 14 days after, it grows near two foot high, exceeding fine, and fit to be mowed. This probably may be accounted for from the snow's continually covering the ground, and warming, and defending it from the frost. In the midst of summer also, the sun (in this latitude) continues so long above the horizon, that vegetation is thereby greatly promoted. The same cannot be said of the south parts, where the snow not constantly covering the earth, they must naturally be liable to the usual injuries of frosts. Besides what has been related of the manner they keep their cattle, by sending them to pasture in the mountains, at some distance from their farms and habitations, it is to be understood, that none are kept at home, or near their houses, which they generally contrive to build on or near a fertile spot of ground, somewhat remote from the

* Mr. Anderson says, that though the lay of mould that covers the rocks, sand, sulphur, stones, &c. be very thin, yet very good pasture-land is met with, especially in the northern countries along the rivers and lakes, the grafs growing there a foot high.

mountains.

mountains. Every farm has such a field or piece of ground, which the Icelanders call Tun. It is watched by dogs, that none of the cattle may come near it. They manure it in the best manner they respectively can afford for the producing of grass, which they mow down, and reserve for a winter supply. As for the grass that grows in the mountains, they always let the cattle eat it, and never cut any down*. These (Tuner) or meadows, are generally very clear from rocks or stones. Many, no doubt, of them (for they cannot be all alike) are uneven and have a great many little hillocks and stones upon them, together with rocks rising out of the ground; but it cannot be said, that all are indiscriminately so, or that the country is all over craggy and rugged; for even in the very mountains are found large and fine fertile plains, which are never mowed, though not any wise incumbered with stones or hillocks. They cut down their grass, and get in their hay with as much ease as any where in Denmark. They also use the same instruments. Their scythes 'tis true, are not quite so long, neither is the blade so broad, by reason of their not having it in their power to manage such long ones in hilly or stony grounds. With those they use, they dispatch a great deal of work, one man being able to cut down 30 square fathom a day.

C H A P. XXII.

Whether there are wholesome herbs and roots in this island.

AMONG the several herbs and roots of the growth of this island, and very beneficial to the health of the human body, is the *Cochlearia* and *Acetosa*, with many others. A botanist would certainly find here very good amusement. I must not omit mentioning the angelica root, which is found in abundance, and of an uncommon size and goodness. Some places produce such great quantities of it, that the inhabitants use it for food, and it agrees extremely well with them. They have no no-

* Mr. Anderson says, that what the cattle and sheep leave in the fields, is cut and gathered for the winter, but in a painful and toilsome manner, the ground being so uneven, full of mole-hills, stones and rubbish, that they cannot make use of a scythe to cut it down, but must use a small hand sickle, with which they carefully cut the grass between the hillocks, stones, and little rocks.

tion of taking any of these things by way of medicine, being a very healthy people, and as little afflicted with diseases as any nation whatever*. They make no great use of cochlearia, but of acetosa they do, to mix with their drink, which is the whey of four milk, and called by them Syre. This herb or root they put to it merely to increase the quantity. It is an adulteration, as they call it; for when this herb is mixed with the whey, it will not keep; for which reason, they say their good whey is adulterated by it. Thus they make no great account of using it, neither do they think it wholesome, but rather a deceit, or only out of necessity. There is another herb called *Muscus Catharticus Islandiæ*, or mountain grass, which they cook up into a delicate dish. I have often eat of it; at first out of curiosity, but afterwards for its palateableness and wholesomeness †. The excellent qualities of this herb are described in the memoirs of the society of arts and sciences in Sweden. It grows in great abundance, and those that live near the places where it grows, gather great quantities for their own use, and to send to market. People that live at a great distance will send and fetch horse loads away. Many use no meal or flower at all, when they are stocked with this herb, which in every respect is good and wholesome food. It is a sort of moss, and only grows on the rocks. There is another herb confounded with this, called Fiöru-grass. It is a sea weed, thrown up by the sea, and found at low water. The cattle are fond of it, and it is gathered by the inhabitants at ebb tide, which Icelanders call Fiöre, from whence this weed has the name of Fiöre-grass.

C H A P. XXIII.

Concerning the fruits of the earth.

ALL kinds of things may be produced fit for a kitchen-garden, and brought to proper maturity, and why not; for this island is as proper for vegetation as Norway, having large

* Mr. Anderson says, that God's providence causes a great quantity of wholesome and medicinal herbs to grow here, suitable to the climate, and the diseases of the country.

† The same Author says he has been told of an herb found only in a few places, of which his author could neither give him the name, nor description, further than that when boiled in milk, it tastes like a millet pudding.

plains and fields, and a great deal of good ground*. With regard to the climate and piercing north winds, I will refer my readers to the meteorological observations I made there two years successively. These observations may be seen in the conclusion of this work. By them, I am satisfied, it will plainly appear, that the cold during these two winters, in the south part of the country, was not severer than at Copenhagen. Nay, I question if the weather is not often colder there. How far those piercing north winds extend, may likewise be seen in the tables of these meteorological observations. The last winter I made these observations in, was reckoned by the inhabitants much severer than the winters in general are. It is plain, from what I have related, that there is nothing here to obstruct vegetation, more than in Norway or Denmark. In the year 1749, when I came to Besssted, one of his majesty's palaces or seats in Iceland, I found the garden in excellent order, and full of all kinds of vegetables fit for a kitchen, such as parsley, sallary, thyme, marjoram, cabbage, parsnips, carrots, turnips, peas, beans, in short, all sorts of greens wanted in a family. I can vouch with the greatest truth, that I never saw a garden with better things of the kind in it. They were all of good growth, and had all the properties that good garden stuff ought to have. They were also in such plenty, that considerable parcels of them were dried, and laid by for the winter, such as sugar-peas, and the like. I myself have taken up a turnip that weighed two pounds and a half. Hereby I do not intimate that all were so big, but only that they are of a very good size. They have gooseberry bushes that produce fine and ripe berries. Thus there is no manner of doubt, but that various fruit trees would bear here, and bring their fruit to maturity, provided they were properly and carefully managed. The greatest difficulty is to get the trees over, in order to be transplanted in a right season, which is lost, by reason that the ships for this voyage leave not Copenhagen till the middle of May, at which time all trees are in bloom. However, with proper care and caution they might be brought there, and made

* Mr. Anderson tells us, that the earth will produce no fruit, chiefly on account of the badness of the soil, the excessive cold, and north winds. Experiments, he says, have often been made with various roots, but all to no purpose.

to thrive. Gardens are not only met with at Besssted, the king's seat, but also at the seats of the bishops, justices, and some of the lawyers; so that, there are gardens in every part of the island, and even in the most northern parts. At Skalholt, they have produced fine white cabbages. That the fruits of the earth do not attain the same perfection every where in all parts of this island, is not owing either to the ground or the air, but to the ignorance of those, who neither properly prepare the ground, nor sow in due season. Here the fault lies, and it is not therefore surprizing, if things will not thrive. I have seen two gardens adjoining each other, but very different in their produce. That which was best situated to receive the sun, and was sheltered from the wind more than the other, was in the worst condition: a remarkable instance, which shews plainly, that the ground in general may be cultivated in Iceland, though the winters are severe. I saw some cabbage in a garden, the latter end of Autumn in 1750, which by being neglected, was run to seed. This seed was then perfectly ripe, but being left to itself, dropt off, and in the spring of 1751, a great number of young cabbages sprung up all round from the fallen seed which had planted itself, although the winter happened to be a very severe one, and the seed as good as lay on the top of the ground in a very disadvantageous part of the garden, where little or no sun could come *. After so many instances, who can be under any doubt of this country's producing vegetables, or can say, that the earth will not bring forth any fruit?

C H A P. XXIV.

Concerning the cultivating of the land.

WHAT has been already said of the earth, the air, and their properties, will determine partly the present subject; which is, whether the earth can be cultivated and made to produce corn †. The ground that will produce garden fruit,

* Mr. Anderson says, they have often attempted to sow turnips, and various other roots, but always in vain; for nothing could be brought to maturity.

† The same Author says, that the ground cannot be cultivated, so as to be made capable of producing corn.

I presume, will likewise produce corn. In ancient days, the farmers cultivated the land, and sowed corn for their own use. This is beyond contradiction; the people relate it, and it has been handed down to them from generation to generation. Besides, among their old laws are several chapters concerning ploughed lands, and land for sowing corn; by which it is also observable, that several disputes and law-suits had hereupon existed. These laws would certainly have never been made, unless corn and other grain had been actually sown. Even to this day, some pieces of land are met with, which are divided like corn-fields, and seem to have been ploughed, and properly tilled. Several farms, plains and fields, still bear the name of *agre*, or plough'd land; as for instance; *Akrekot* and *Akregierde*, both adjoining *Besssted*; *Akreness*, about 18 English miles from it, and near it a place called *Akrefield*: all which serve to confirm that the inhabitants formerly plowed and sowed their lands. How this most essential part of husbandry has happened to be set aside, and how all the people have forgot to plow and sow, is not so easily accounted for, unless we charge it to that dreadful plague called *fortedöd*, which raging with so much violence in the fourteenth century, almost wasted this island of all its inhabitants, and left none able to till the land. By this means, agriculture was entirely neglected and forgot, and since that time, in the annals of this country, no mention is made of tilling, manuring, or cultivating any land. At present, there is a prospect, with the blessing of God, of reviving that part of husbandry; his Danish majesty, having sent thither from Denmark and Norway able husbandmen to introduce tillage, and to instruct the inhabitants how to cultivate and improve their land. If all the land in Iceland was tilled that is fit for this purpose, more arable land would be found than in all *Seeland* and *Fyen* together. There is no occasion to take any trouble with those lands that are stony and sandy. The other grounds which have rested now some hundred years are sufficient, and they stand in no need of any manure, though if they did, manure is not wanting; but I am very certain, if the ground is properly managed, it will produce excellent grain without any manure. In like manner,

I am not of opinion, that the summer, or warm weather, is of too short continuance to bring any thing to maturity. If the warm weather continues long enough to bring most things wanted in a kitchen garden to proper maturity and perfection, and afterwards to feed, there is no doubt of the same being long enough also to produce grain, which by the annals of the country we find has been. One need only remark, how very quick the grass grows here, and as I before observed, how in some places it runs up in the space of 12 or 14 days two foot high*. The heat of the sun operates better than in more southern climates, and promotes vegetation in a stronger degree; for whatever is sowed, though later than in the countries more to the south, the same still ripens in season, and even in colder climates than Iceland. In Lapland, where it is much colder, they sow, reap and gather in their harvest, all in the space of six or seven weeks. The reverend Mr. Högelström gives an account in the memoirs of the Royal Society of Sweden, of rye in the space of 66, and corn in 58 days sown, and grown to perfect ripeness. Why should not the same happen in Iceland, where the summers are both warmer and longer than in Lapland, which is proved by meteorological observations made in both places. In short, nothing but experience shall ever make me believe the contrary. It is very probable, the seed may not prosper every year alike, which sometimes happens in most countries †. Iceland at present, must be supplied by other countries with meal, flour, and bread, great quantities of which are annually imported. Each harbour is furnished with, according to the number of the neighbouring inhabitants, from 300 to 600 tun of meal, besides biscuit, of which they generally are provided with one third, in proportion to the quantity of flour or meal. The inhabitants purchase according to their abilities, and some stock themselves so well, that they are never in want of bread all

* Mr. Anderson says, that no corn can grow in this island; for if even the inhabitants were to put themselves to the labour and pains of removing and gathering up all the stones scattered about on the ground, and of cultivating and manuring it, the summer, or warm weather is of so short a duration, that nothing can be brought to proper maturity.

† The same Author repeats here again as another reason, why the earth will not bring forth fruit, and this is, because every where it is impregnated with sulphur.

the year round. Those that have it not in their power to do the like, must make other shifts; but it cannot be said of any of them, that they know not what bread is. In the district of Skaftefield grows a sort of wild corn, of which the inhabitants make bread, and though growing wild, it is in every respect as good as the Danish; nay, they will not exchange it for the foreign that is imported. This grows in sand, and the seed that drops off sows itself, and produces new corn regularly every year. The straw, which is very good, they use to thatch their houses with. This serves also for a proof, that corn may grow there, and that it will attain to a proper maturity. At least they may sow the seed that grows wild in every part of the island, this very seed, in all probability, being the relics of what they formerly sowed their ground with.

C H A P. XXV.

Concerning sea-weeds, and vegetables of the ocean.

THERE is a weed or vegetable that grows in the sea, called *Alga-marina Saccharifera*, and by the Icelanders *Sol*. This the cattle are very fond of, and the sheep also greedy after it, are often lost by going too far out from the land at low water. It is very nourishing and fattens them, and the people also fond of it, gather and use it for their own eating, and sell it to those that dwell in the interior parts, where it bears half the price of dry fish. Hence it may be concluded, that as it is a thing the natives are fond of, they do not eat it out of scarcity or necessity. On the contrary, they always choose to have some of it by them. It is also very wholesome food, and it may be said, that in this one particular, the ocean imparts a great blessing to this land. For a description at large of this weed or vegetable, I will refer my readers to a dissertation published by Mr. Bjarne Poulsen an Icelander, and student in physic, concerning the *Alga marina Saccharifera**. Besides this

* Mr. Anderson says, that he could not be informed of any other sea-weed than the *Alga marina*, which both fresh and dry, for want of hay, they give their cattle. It fattens them but makes the meat very nauseous. In time of distress, the people also use it for food.

vegetable of the ocean, there are many other sea-weeds and herbs, which the sheep and cattle run greedily in quest of, though they have good grass. Most likely it is the salt taste in all these weeds, that makes them so palatable. The natives have peculiar names for the many sea-weeds and herbs found here, which is a science alone in itself. Coral is sometimes found, but few are curious enough to search for it. When it appears, it is so chiefly by accident, as when fishing hooks happen to catch hold of any. It were to be wished, that some would think it worth their while to institute a coral fishery. Since the above-mentioned student in physic has began and given a treatise on one herb or weed, he may probably pursue so laudable an undertaking, more especially as he now is there, and maintained at the king's expence for some such purpose, or to make a general collection of curious and extraordinary things*.

C H A P. XXVI.

Whether there are wild beasts in this island.

BEARS are sometimes seen there, but they come from Greenland on the floating ice, and are not native but foreign guests, and such as the inhabitants do not choose to naturalize among them †. Therefore so soon as a bear is seen to set foot on land, or his track is noticed, they cease not in their pursuit, till they have found and destroyed him, without much ceremony. Those that live along the coast have a sharp look out in winter and spring, to see whether the floating ice brings any bears ‡. They are likewise careful to survey the snow for the footsteps of that animal; and if they discover any, one man alone is not afraid to pursue, attack, and kill him, and that generally with a gun, though many use spears. In the northern district, near Langeness, where bears often come ashore, there lived an

* Mr. Anderson declares, it is a pity that botanists, especially Germans, have not attempted to collect and describe the sea-weeds and herbs that are here found in great abundance and variety.

† The same Author asserts, that no kind of wild beasts, either noble or ignoble, or beasts of prey, are here met with but the fox.

‡ He also says, that as soon as they discover the footsteps of a bear, they assemble like a little army, and leave not off their pursuit till they have destroyed him.

old man but lately dead, who had killed more than twenty in his time, and though a good marksman, always made use of a spear. He was greatly delighted when he saw a bear, and would pursue him alone, with no other armour than his spear, and never failed of victory, by charging him in front, and running the spear into his breast. This man did not degenerate from his ancient fore-fathers, the valiant Norwegians; nor did he want to raise an army to defeat a bear. If a bear unawares comes upon a man, who is not used to such an encounter, or has not power to resist, the bear may very likely fall upon him; but the natives here know pretty well how to get out of the way, by throwing something at him to amuse him. A glove is very proper for this purpose; for he will not stir till he has turned even every finger of it inside out; and as they are not very dextrous with their paws, this takes up some time, and in the mean while the person makes off. It once happened in the northern district, that a person was killed by one of them; but the Icelanders are usually very vigilant that none should settle among them, chiefly on account of their cattle. Besides, there is a reward for the hide, which must be delivered to the justice of the peace for the king. The Greenland bear skins are counted the finest and best that are, being white, grey, brown, and spotted.

C H A P. XXVII.

Concerning the Fox.

FOXES are the only wild beasts in Iceland, and of them there is great store*. They are generally of a dark red colour, (as the Icelanders call it) whereof are also a great many of the sheep. This is the common colour of foxes in Norway and Denmark. The black ones, which are very scarce, are not natives of Iceland, but sometimes are driven hither on flakes of ice. There are many white, and but very few grey. Those that are white are so always, and don't change their co-

* Mr. Anderson says, that the foxes in this country are never red; a few are black, and the rest grey in the summer, and white in winter.

lour either winter or summer, which I myself can witness: neither do those of other colours suffer any considerable change, except when they cast their coat, at which time every creature differs in its appearance, a thing common and known by all. They use a kind of gin to catch them in, which they call a fox-shear; but more frequently destroy them by dragging the stinking carcass of a dead horse a good way about, which they leave on some field*. The smell invites numbers together to feed on the carrion, near which the people stand prepared to shoot them, and thus destroy a great many at once. It was also customary with them to dig deep holes, and make traps for them, in the manner of the wolf-traps in Norway; but this way they have quite left off †. Foxbane they make no great use of, not having the ingredients in their country, even the honey, that is used therein they must import, which makes the drug too expensive for them. These several ways they endeavour to destroy that hurtful animal the fox, that often robs them of a great many of their sheep.

C H A P. XXVIII.

Concerning horses.

THE horses are properly of the Norwegian breed, their fires being imported from that country, though perhaps some of them came from Scotland, the Icelanders in ancient times, having carried on with that people a considerable trade. From them a great many Iceland words were introduced in the English, which I could not find out the derivation of, till I became acquainted with the Iceland language. The horses are not all equally small, a great many being large, and all in general very strong, lively, and brisk. They are the tamest creatures I ever met with. Some of the stone-horses are very mettlesome, as they usually are in most places ‡. The horses that are

* Mr. Anderson says, that they are very industrious in catching foxes in nets and traps, much like a taylor's shears, and rather this way, than by shooting at them, out of a natural aversion to fire arms.

† Bishop Pontoppidan, in his natural history of Norway, describes the wolf-traps used there.

‡ Mr. Anderson says, that the horses in Iceland, are extremely vicious and untractable.

set apart for labour in the summer, are kept out all the year round, and never come into any stable*. They break the ice, and scrape it away with their hoofs, till they get at the ground for something to nourish them. The saddle horses are kept in a stable during the whole winter. Their superfluous horses they mark, and afterwards turn out into the mountains, and there let them run for years together. Whenever they want them, they are obliged to catch them in a snare; for they are entirely wild. A great many foal in the mountains, but the owners watch the time, and take care to mark the young foals. Among these wild horses are some very fierce and formidable stone-horses, who resolutely defend their own seraglio. Before they are caught and tamed, they will fly at the people that ride on the backs of other horses to take them, and they often kill young stone-horses out of jealousy. If they tame these horses when they are about five or six years old, they turn out very fine, keep their fat, and are never sensible of any cold weather. The horses kept entirely for labour, and out all the year round, are excessive hardy, and very strong. In the winter they have longer and thicker hair, which helps them to bear the cold better, but towards summer they get a new coat, and are very smooth and handsome.

C H A P. XXIX.

Concerning the sheep:

THE sheep in general are as big as in Norway, Sweden, and Denmark, and I found them much alike in size in all the parts of Iceland I travelled through. At Skastefield they let the weather-sheep run about the mountains, all the year round, without ever housing them; but such as give milk, they keep within in severe weather. This custom is not universal all over the island, for eastward and northward, at Arnes and Borgfjorrs, and indeed in most places, where they make it their business to breed cattle, all their sheep, mares, and cows, are housed every night, and in severe weather kept in all day, and at no time ever turn'd out in the snow. Every farmer is

* Mr. Anderson says, that the horses are kept to grass, and exposed to all weathers all the year round.

provided with stables and folds sufficient for his stock of sheep, in the midst of which is a manger for hay*. I have seen four or five such sheep-folds to each farm, where they keep separate the lambs, the weathers, and the sheep. At Guldbringe, and a few other places, where they keep hardly any sheep, they have no sheep-folds; neither do I think they have any great occasion for them: for the two winters I was there, the cold was not too great for the sheep to be out during the whole winter, except three or four weeks in each, at which time some of the farmers, more tender than others, took the lambs into their houses, and fed them; because the lambs under a year cannot bear the cold so well as the old sheep, whose backs are better covered to keep it out. There are caves and holes in the mountains capable of sheltering 100 or more sheep, where they very cordially retreat in bad weather. These holes are in such mountains as have formerly burned, and are of infinite service to them both winter and summer; in the winter for shelter, and in the summer for very good pasture, which they find in plenty all about †. No inconveniency is apprehended from this their abode, except the treachery of their mortal enemy the fox, who harbours or lurks generally in those places, on account of the many holes and apertures in the rocks, and to pick up a nice fat bit among the sheep. If they happen to be out in frosty weather, they can make shift to scrape away the frozen snow and ice, to get at the grass underneath ‡. As for moss, they never eat any, and I never heard but that there was always grass enough upon the ground to satisfy the sheep. Though they have folds or housing for their sheep, where they keep them in the winter, yet when there is not much snow, and the weather is fine and fair, they generally turn them out, partly to refresh

* Mr. Anderson says, the sheep are very small, and are put to as great hardships as the horses; for they never are taken in, but suffered to be out in all weathers all the year round; their chief shelter, if any, being under the rocks, and in caves and holes.

† According to the same Author, the sheep always in winter keep close by the horses, and continually follow them, because in frosty weather they cannot with their feet break through the ice and snow; but when the horses have broke the way, they then can make shift to get at a little moss, (which the horses leave) for their nourishment.

‡ He also asserts, that the sheep have been seen through hunger and distress, to eat of the horses tails.

them,

them, and partly to save provender at home, a good deal of the latter being required for 4 or 500 sheep belonging to one man. If it happens, when out, that suddenly bad weather should come, together with storms of hail and snow, they may sometimes be driven by the wind down to the sea-side, and many of them may perish *. Nay, I have seen even in summer a flock of sheep carried away by a storm 60 or 70 English miles. In the winter they may be also caught in heavy showers of snow, and buried in it, especially as they generally seek the valleys at that time, and they may possibly be two or three yards under the snow, and lost for several days, till the weather admits their owners to seek after and release them †. In order to find them, they look out for a hole in the snow, which indicates that the fox has been there. By his scent he can find them out better than the people can with all their sagacity. The sheep are often rescued without any hurt. Sometimes they have been scrouged and crushed by the heavy weight of snow upon them, but this happens according to the situation of their place of refuge ‡. Sometimes they happily get to a cave, where they are well secured, but it is a general rule with the Icelanders, to keep them within when they suspect any such weather. When the sheep are thus buried in the snow, and are obliged to stand a few days under it, they are often so pinched with hunger, that they eat the wool off from one another's backs, which they make shift of for subsistence, till their deliverance. All sheep will not do this: some do, and get such a habit of it, that ever after they follow the same practice; but as soon as the proprietor observes it, he kills them out of the way, on one side, to prevent their becoming sickly, and on the other, the spoiling of the coat of the rest, whereof, if stripped, they cannot bear the cold so well.

* Mr. Anderson says, that when it both snows and blows hard, the sheep have been carried before the wind from the mountains down to the sea, where they have perished.

† He again says, that when heavy snow falls, they are sometimes buried in it, and generally creep together, and with their heads close to one another, to let the snow fall upon their backs; but sometimes are so frozen together, that they cannot be separated.

‡ His opinion is, that from such a flock of sheep, a warm effluvium arises, which opens a hole in the center of them like a chimney, whereby they are found out.

Young colts and calves have often the habit of laying hold of the horses tails, and nibbling them, which will, as well as the wool in the sheep, gather up in balls as big as a walnut, and lie in the stomach undigested. In the south parts they do not tend the sheep so well as in the north country, which there, is their principal concern. They seldom house them in these southern districts, by reason of the snows annoying them but little; which according to my own observations, I never remarked above a foot deep at a time. They keep no shepherds to watch them, but to the eastward, and in the north they do, whose sole occupation it is to give attendance, with a horse or two allowed them, and a couple of dogs trained up for this purpose. In the summer these shepherds take care of the cows, and in the winter, if the weather be fine, they turn out all the cattle, and at night drive them home again. The south inhabitants think this not worth their while, because they keep but few, though some farmers among them have from 100 to 500 sheep, besides oxen, cows, horses and mares. But as this island is very large, it is natural to think, that in places very remote, their oeconomy must be very different. One, who has only been in the south, must give as poor and as contemptible an account of their manner of keeping and breeding sheep and other cattle, as one who had only been in the north, of the Iceland fishing and fisheries. Both would conceive a very wrong idea of the island, and consequently must give as indifferent a description, as many have already done, by only touching at particular places. The wool of these sheep is of different fineness and goodness, as I apprehend it is every where. When sorted and prepared, they make tolerable good cloth of it: but exclusive of the wool, God in his goodness, has provided these animals with an extraordinary coat, the better to endure the severity of the climate. For this purpose there grows a very coarse wool much longer, extending over, and covering the other wool. This the Icelanders call tog, which when mix'd with the other wool, it appears very coarse, but when carefully picked away, is not so very coarse, but that it makes very good woollen stuff. The coarse they spin thread of, which is very strong, and is commonly used to sew with. It is not always separated, when brought to market,

ket, to be fold to the merchant; and as before observed, it appears in that condition, extremely coarse and rough. Their manner also of sheering it, renders it worse to appearance; for they never cut it till the skin is dead off the sheep, which they lay on their knees, and scrape the wool off with a knife, by which means a deal of dirt and filth is at the same time scraped and rolled up with it. In the spring of the year, towards the beginning of the warm weather, the wool falling off of itself, they watch and keep the sheep nearer home, that they should not lose the wool. When it is quite ready to fall, the people pull it off quite clean, and afterwards send them adrift. By degrees they get a new coat again before the cold weather comes in*. I have before observed, that the sheep, commonly speaking, are kept near the houses in the winter, when the weather is severe; that a shepherd is appointed to watch them, and that in the time of milking them, they never turn them out in the mountains, except where some have seler or hutts to live in, and to house the sheep and cattle in the plains that lie between the mountains in the heart of the island †. Among these shepherds, some are so expert, that at one view in a flock of two or 300, they can tell whether any of their sheep are missing, which are, and what strange ones may be among them. They have a couple of dogs taught on purpose to keep them together, and to drive them wherever they please. They make use of no horn, or any other signal than a hallow, which both dogs and sheep have learned to understand, and in this manner they manage them, that every man may easily muster all his own sheep together, without much loss of time. When the merchants at the meat

* Mr. Anderson says, the sheep drop their coat about the middle of the summer, and that the outside coarse wool serves to preserve them from the extreme severity of the weather and piercing cold. But in order to save the wool at the time they cast it, they are obliged to hunt and bring them together. For this purpose, the huntsman going to the top of a hill with his dogs, and sounding a signal with his horn, the dogs separate, and drive the sheep together from all corners into a pen, which is narrow at the entrance, but wide at the farther end, to prevent their slipping out again. At the time they kill their weather-sheep for victualling the shipping, which lie in the meat harbour ready to take in their cargo, they are obliged to drive them together in the same manner, which is done in the presence of judges, to prevent the disputes that may arise about any one's claiming another's property; and as they are all intermixed, every one may go to the pen, and claim his sheep by his own mark.

† Bishop Pontoppidan, in his natural history of Norway, describes the places they call Seler.

or slaughter harbour, want to buy up any quantity, they give notice some time before, upon which one man from each farm in the parish or district they intend to buy of, meet together on an appointed day, to go to the mountains and look for their sheep. When arrived at the place of destination, the dogs collect all the sheep in one flock, and fence them in, perhaps to the amount of 8 or 10,000. All the sheep of the district being thus gathered together, and fenced in, each farmer picks out his own sheep by the mark he has put upon them, and pens them up. As soon as each has his compleat number, they draught out as many as they chuse to sell. This is their way of collecting their sheep, which they do two or three times a year, so that those which escape the first time, they get the second or third, and by this means each person musters together his own sheep before the winter, in order to bring them home and house them. This custom they call in their language Saude-ret, which is as much as to say to gather the sheep, that each man may pick out his own by his mark. No dispute can likely arise; for they put a very distinct mark upon them, and each farmer in the district is well acquainted with another's mark. The affair is carried on very peaceably among themselves, though sometimes they have judges and justices to decide differences, who likewise have their sheep there, but on their own account never appear in any other character than as farmers or proprietors of land in the district. Some of the sheep have four horns, and sometimes besides them a little one, which may be called a fifth*: but these being rather looked upon as curiosities, are usually sent to Copenhagen for presents. It cannot be said that they are common or all so; for in a flock of 500, scarce six can be found with four horns, and fewer with five. As for more than five, I never saw nor heard of any such. A particular friend, who had a large flock of sheep, declared to me, he never saw any with more than five; and among all his flocks, he never had more than six at a time with four, and very rarely any with five†. One third

* Mr. Anderson says, the sheep and rams have large curled horns, and generally more than four; some have even eight, and frequently one in the middle of their forehead. On the contrary, the cattle, commonly called horned cattle, have here no horns at all.

† The same Author says, that the sheep in general have horns.

of the sheep here in general are without horns: even rams sometimes, and weathers, which usually have larger horns than the sheep. Two horns is what is common here, as in most other countries. Among the many thousand sheep delivered every year to the trading towns, very few have more than two horns. A sheep with more horns bears a better price, and this chiefly out of curiosity, and for the sake of rarity. Cows and bullocks have horns, though some have none; but northward there are far more cows and steers with, than without horns*. I before observed, that in most parts of the island, the farmers make it their chief business to breed sheep, except in the district of Guldbringe, and I think they take a great deal of pains to rear them all over the island †. Whilst the lambs suck their dams, they keep them at home, but when weaned, they send them adrift, yet towards winter drive them home again. As the rams are let to run about among the sheep, to prevent unreasonable leaping, they tie a cloth under their bellies, which is taken off towards Christmas. A great many fine young lamb-skins are exported from hence; for the people kill a great many for their own eating, and many die by accidents; but few are destroyed by birds of prey, being watched when they are young ‡.

C H A P. XXX.

Concerning goats.

I HAVE before observed, that at Thingöe, in the northern district, and at Mule and Borgefiord, are considerable woods, but chiefly in the first place, and that there are in several places little thickets, bushes, shrubs, and heath enough, consequently no want of sustenance for goats in this country. In some places are great numbers, particularly in the north district, where I may say, there is three times the number of goats to sheep §. East-

* Mr. Anderson says that the cows and steers in Iceland have no horns.

† The same Author says in some places their greatest trade is with sheep, and there the farmers take more care of them, and turn only the weathers into the mountains.

‡ He also says the ravens destroy many of the young lambs.

§ His opinion is, that they cannot keep goats in Iceland for want of food for them, which consists of the young leaves of trees.

ward I have met with them also; they thrive very well, and yield great store of milk.

C H A P. XXXI.

Concerning cows and bullocks.

THE cattle in Iceland, both cows and bullocks, are as fine as any I have met with in Denmark. The cows yield a great deal of milk, I mean those of the better sort; for there is a difference here in cattle as well as in other countries*. Some cows yield 20 quarts of milk a day, others not above 10 or 12, and others less. This being a proper place to resume the subject concerning their horns, I cannot help observing, that I believe upon a just average, that in the whole island there are considerably more with horns than without. I allow, that to the south more are met with without horns; but northward, where the greatest number of cattle are bred, the horned have by far the majority. I before observed, that sheep as well as saddle-horses are kept in stables in the winter, and there fed in proportion to the foregoing harvest, which if bad, their allowance must necessarily be scanty †. However, the farmer is careful to feed his cows in the best manner he possibly can, chiefly for the sake of the milk, a thing of too great consequence to be neglected. The cows are fed with hay, and sometimes with a sea-weed called *sol*, which they seem very fond of; but this weed is rather too expensive to feed cattle with; because the inhabitants eat it themselves, and sell it for half the value of dried fish. To the south in the right fishing places, where the most populous part of the country is, there is a necessity of keeping many cows, though pasture-land is scarce, to compensate which, the inhabitants use their cows to eat fish bones boiled soft, as also to drink the water they boil their fish in. The cows in these parts,

* Mr. Anderson says, that the finest cattle they have in Iceland are not bigger than the smallest in Germany, and observes again, that in general they have no horns.

† The same Author says, that the cows only and young steers have the good fortune to be shelter'd in the winter, and fed, though very sparingly, with hay, which costs the inhabitants a great deal of trouble and pains to get; when hay is wanting, he adds, that they then feed them with a dried sea-weed called *sol*.

by being accustomed to this manner of food, like it well, thrive upon it, and yield a deal of good milk.

C H A P. XXXII.

Concerning their milk, curds and whey.

THE Icelanders are very fond of milk, and always eat it, either raw or boiled; but do not choose that sick people should eat it before boiled*. Their chief liquor for drinking is whey, which they prepare in a particular manner. They make their butter of sweet cream, and when the butter is churned enough, they pour off the butter-milk, warm it, and as it grows cold, put rennet into it to make it curdle. Then they strain it through a linen cloth; the curds they eat, and the whey they keep for their common drink; the older it grows, the sourer and clearer it becomes. They keep it till it is as sour as vinegar, and make use of it to pickle with, but when they drink it, they must mix water with it.

C H A P. XXXIII.

Concerning butter and-cheese.

AS there is plenty of milk in this island, consequently there must be a great deal of butter, which is generally made of sweet cream. First, they strain this milk through a sieve, before they skim it, and when the butter is churned, they put it in tubs or firkins†. But when they send their butter from one place to another by horses, they generally lay it up in clean sheep-skins, it being more convenient for the horses to carry it so than in tubs; this they do all over the country. They never salt their butter, and even cannot bear the taste of any salt in it; this I say of the people in general, for some among them, that have travelled and been in Denmark, by learning to like salt-

* Mr. Anderson says, that milk is the Icelander's chief medicine, and is used by none but the sick, who take it just as it comes from the cow.

† The same Author says, that their butter is always full of hairs: for they never strain their milk through any sieve, and when the butter is made, they put it in sheep-skins sewed up like bags.

butter, salt theirs. Salt being a scarce commodity in the island, the people have used themselves to eat it without, and the taste is therefore more agreeable to them. What can be alledged against custom, and who will dispute any one's palate? Their butter looks very well, and I could have eat it for the looks, if my nose did not tell me, that it could not taste well*.

C H A P. XXXIV.

The manner of slaughtering their cattle, and curing the meat.

THEY sometimes knock their cattle on the head to kill them, and sometimes stick them in the throat with a knife †. The meat is generally eaten fresh, because they do not love salt provisions, and the reason probably is, upon account of the scarcity of salt, and their not being used to it. The entrails made use of, they wash very clean, in the same manner as people of other nations. When they lay in their winter provision, instead of pickling, they hang it up to dry, or they smoak it, by which means they preserve it from putrefaction, and have provision all the winter round ‡. Many can well afford to salt it, but do not, having no relish for salt meat, and they thrive and do as well with their provision after their manner as other countries after their own.

* Mr. Anderson says their butter looks green, black, and of all colours.

† The same Author says, that the Icelanders do not knock their cattle down when they are about killing them, presuming that the blood stagnates or penetrates into the flesh, and prevents its keeping. Their manner of slaughtering, according to him, is to thrust a thin penknife into their necks, and when the creature falls, to tie its legs with ropes, and afterwards to cut its throat, that all the blood may run out.

‡ He also says, that those that can afford it, and have a mind to live better than their neighbours, buy salt, and before the carcass is quartered, make three or four deep gashes in different parts, into which they put salt, thinking that it will pervade the whole as much as is necessary to preserve it, during the drying or smoaking. The poorer sort soak it two or three times in sea-water, then hang it in the air, and afterwards in the chimney to be smoaked.

C H A P. XXXV.

Concerning their hogs.

NOT many hogs are now seen in this island, though there is great reason to believe, that in former days there have been many. In the northern district a few are kept, which thrive very well. The old annals of the country prove, that the country was formerly stocked with a considerable number. I found an account in them of two hogs, a boar, and a sow, being brought over, when this island first began to be peopled. By some accident they were lost, and three years after, found in a valley up the mountains, where they encreased to upwards of 100. The place to this day is called swine-dale. This is a plain proof, that they will thrive and multiply here. Many places in the island still retaining the name of swine, there is no room to doubt, but that they formerly were in great plenty. There is Swine-næs, Swine-vatne, and a church near it, called Swine-vatne church, Swine-skarde, Swine-hage, and Swine-völlum. By a piece of ground at Akrekor, near Besssted, it is very obvious, that the same was formerly hedged in, and that a hutt stood therein for the swineherd, which spot to this day is called Swine-akre. Hence it is evident, that hogs were formerly bred here, and that they can find food enough, and will thrive; but the chief reason why the inhabitants do not still keep them, is because they spoil those grounds near their farms, which they call tuner; besides, they cannot afford to keep people on purpose to watch them. They may also well dispense with them, having a superfluity of other animals necessary for their subsistence*. Dogs and cats are in plenty; especially the former, which the shepherds, and those that look after the cattle, break and use for this purpose. The people here are never seen without a dog, and every farm has a large house dog or two. Cats are not quite so plenty, though very useful among them to destroy the abundance of mice.

* Mr. Anderson says, they cannot keep hogs for want of food for them, of which a sufficiency can neither be found in the fields nor houses.

C H A P. XXXVI.

Concerning tame fowl.

HERE are common fowls, such as cocks, hens, chickens, ducks, pigeons, &c. the same as in other countries. Eastward, and where the wild corn grows, which is very good food for them, they are chiefly kept, as also by those whose circumstances enable them to lay in corn and peas. They endure very well the weather, especially in the south parts, where the winters can neither be called severe, nor of a very long continuance *. In the northern district, which is the coldest in the island, I have met with pigeons and fowls, and I hardly ever heard of any perishing of cold. Sometimes a hawk or falcon will snap up a hen or chicken, but this I believe, happens oftner in Denmark or Norway; because having a much greater plenty of both wild and tame fowl. The reason why tame fowl are not kept so much here as in Denmark, is chiefly owing to the expence of corn, peas, &c. which must be from thence imported †. Here is plenty of wild ducks, and at certain seasons of the year, eggs of wild fowl in greater quantities than the inhabitants can consume. It would therefore be a folly to keep tame fowl at a great expence, when such plenty of wild fowl may be had without any expence at all.

C H A P. XXXVII.

Concerning wild land-fowl.

HERE are all sorts of snipes, ouzels, and beccafines in abundance; but quails there are none in the island. Partridges are native as well as in Norway, and in great plenty. The inhabitants shoot them, and can always procure a sufficiency of them for sale. They are never caught alive, but by the people

* Mr. Anderson says, that there is no such thing as keeping pigeons, or other tame fowl here, on account of the long and severe cold, want of nourishment, and the many various birds of prey.

† The same Author says, a few of the richest inhabitants that love a nice bit, keep a couple of fowls, which they make shift to feed with chopt hay, and a little rye meal mix'd with water.

that catch the falcons, who use them for a lure, and they too meet with difficulties in catching them alive, because these birds finding food almost every where, are not therefore easily decoyed into a snare *. As the falcon-catchers cannot depend upon getting these birds, they always keep pigeons and chickens for the purpose, which they would have no occasion to do, if these birds were easily caught.

C H A P. XXXVIII.

Concerning birds of prey.

NO great variety of birds of prey is observed here. There are eagles, falcons, some small hawks, and ravens, of which last are great numbers †. It were to be wished, that falcons were more plenty. Owls and kites there are none. But as each of these birds requires a separate article, I shall therein treat of them more particularly.

C H A P. XXXIX.

Concerning the eagle.

THE inhabitants are not acquainted with more than one species of eagle, which by what I have seen, seems to me to be a large sort. I did not hear that they do much mischief, by destroying any of their animals; if they do, it must chiefly be the young and tender lambs ‡. But as the people very carefully watch their sheep and lambs, there is not much for them in this respect. I have often seen the eagle hovering over the sea-side, where there is a little inlet or creek, and there catch the fish that come into shallow water. They also have a way of frightening the hawk and falcon from the prey they have made, and taking it from them; for as the eagle cannot with

* Mr. Anderson says, that their finest wild fowl are snipes, quails, and partridges, called ryper, and that they run more than they fly, and are therefore easily caught.

† The same Author says, that birds of prey are here in such variety and abundance, as hardly can be described; viz. large eagles, kites, hawks, falcons, owls, ravens, and many more that have names, and many without.

‡ He also asserts, that here are various species of eagles, which do the inhabitants a deal of mischief, by destroying all the young animals they can lay hold of.

such agility dart upon a partridge, or other wild fowl, they make no scruple of robbing the hawk or falcon, who catch them very easily*.

C H A P. XL.

Concerning the hawk.

THERE is but one species of hawk known here. Those I have seen, are very small, and cannot be reckoned among the terrible birds of prey. They are also few in number, and seldom pursue any thing but small birds, such as sparrows, except now and then a young chicken happens to fall in their way. They are mostly caught on the masts of ships out at sea, where they straggle some times a vast way, and too far to get back.

C H A P. XLI.

Concerning the falcon.

HERE likewise is but one species of the falcon. The cocks are in general remarkably smaller than the hens, which makes them appear to those that do not know the difference like different species. Some are white, some half white and half grey, but they are all of the same kind, and sometimes in one and the same nest, a young one of each colour has been hatched. This the inhabitants have declared to me, and I dare say, there is hardly a falcon-nest in the island without being known; for every falcon-catcher in his district takes care to watch them close, and to place his nets pretty near the place where they build. In winter sometimes whole flights of falcons come over from Greenland, and are chiefly white. The Iceland falcons are eminently the best of any for sport. A Norwegian falcon, or one of any other country, cannot be used above two or three years, but those of this island will last ten or twelve years and upwards. They are superior in size to any, and are endowed with many extraordinary qualities. The king of Denmark sends every year a falconer, with a couple of attendants to Iceland, to buy up the

* Mr. Anderson relates, that eagles have carried off children four or five years old to their nests; but our author assures us, that this is mere romance, no such thing having ever been heard of in the country.

falcons. They go to Besssted, where the king's falcon-house is, but it is not their business to catch them; for in every district there is a certain number of people licensed for this purpose. They are all native Icelanders, and get by it a pretty deal of money when they are successful*. It is about Midsummer that the falcon-catchers bring what they have caught to Besssted. They come on horseback, holding a pole with another fixed across, on which ten or twelve, falcons will fit all capped: the pole they hold in their hand, and rest it on the stirrup. The falconer's business is to examine them, to return those that are not good, and send the rest on board the ship, to take back with him to Copenhagen. To the persons that bring them for sale, a written testimony of their respective qualities is given, by virtue of which, they receive of the king's receiver-general, fifteen rixdollars for a white falcon, ten rixdollars for one half white, and a gratuity from two to four rixdollars to encourage them for their pains in this business †. For a grey falcon they had formerly five rixdollars, but for several years past, they have had seven rixdollars for every one of this kind.

An account of the manner the Icelanders catch falcons.

They strike two posts into the ground, a little distance from each other; to the one they tie a partridge or pigeon, (or for want of either, a cock or a hen) by a small line two or three yards long, that they may flutter about a little, and that the falcon may the sooner observe them; to the leg of the partridge or pigeon they tie another string, 100 yards long or more, which goes through a hole in the other post, in order to draw the bait to that post, where a net is fixed, like a fishing net, with a hoop in a semi-circle of six foot diameter. This being pulled down, it goes over and covers the post, for which purpose, there is another string fastened to the upper part of the hoop, which goes through the first post to which the bait is tied. These two strings the falcon-catcher has hold of, that he may pull the bait

* Mr. Anderson says, the king of Denmark sends every year a falconer and two servants to Iceland to catch falcons, and to bring those that are good to Copenhagen.

† A rixdollar is about 3 s. 6 d. sterling.

where

where he pleases, as also the net over his prey. These nets they fix near a nest, or where they see a flight of falcons approach. As soon as the falcon sees the bait fluttering on the ground, he takes a few sweeps about in the air just over the place, and looks about to see if there be any danger; then he strikes with such violence, that he takes the bait's head off as clean as if cut off with a knife. The moment he has struck the bait, he generally flies up again, unless very hungry, to look about if any danger be at hand, or any thing to interrupt him in the enjoyment of his prey. In the mean time of his flying up, the falcon-catcher pulls the string and dead bait to the other post close under the net, which the falcon not observing, presently darts to devour his prey, but the other string being pulled, he is caught in the net*. He is taken out with the greatest caution, for fear of breaking any of his feathers in the wing or tail, and has a cap clapped over his eyes. The falcon-catcher is generally hid behind some stones or bushes, or else lies flat on the ground, 100 yards or more off, where even if the falcon sees him, he has no mistrust, being at such a distance. When the falconers return to Denmark with their complement, they lay in as much fresh meat as they think they shall have occasion for to feed them, and besides take some live cattle and sheep with them to kill by the way. They generally lay in store for seven weeks, for fear the voyage should prove so long; for they do not choose to put in any where by the way, not even in Norway, except they are under a necessity †. They moisten the meat with a little milk for them, but if sick, they mix oil and eggs with it, which presently relieves them. They keep always the caps on, both aboard and on shore. During the voyage, the falcons are kept between the decks, tied to poles, two rows of a side, and these poles are covered with coarse cloth, and stuffed with straw, and lines are slung from one side to the other pretty close, that

*Mr. Anderson says, the falcon is caught by a bird (taught on purpose) in a cage, put near the place where the net is fixed, which bird can see the falcon at an incredible distance, and by a certain noise gives notice, whereupon the falcon-catcher, who conceals himself in a bush, throws out a pigeon to flutter about, which as soon as the falcon espies, he strikes down upon, and immediately the net is pulled over him.

† The same Author says, that in their passage they put in wherever they can for fresh provision.

they

they may have something to catch hold of, if the ship should be tossed about, or if any of them should overfet, that they might fall soft, and not too low to receive damage. By this account it is plain, that the falcon is no terrible bird of prey, and that one need not pity the Icelanders, when they acquire for them some money, and only rob them of a few partridges, of which they have more than they know what to do with.

C H A P. XLII.

Concerning owls.

THERE are no owls of any kind in the whole island*.

C H A P. XLIII.

Concerning ravens.

THE ravens here are black, and have nothing peculiar to distinguish them from those of other countries. They keep about the houses and farms, and steal what they can. Sometimes they kill a young and tender lamb †. No crows, magpies, or any of the kind are seen here; but there are four or six sorts of small birds, which I believe they have not in Denmark, and which, as they have nothing particular to characterize them, I shall omit speaking of.

C H A P. XLIV.

Concerning the shore, or coast-birds.

Notwithstanding the vast quantity of birds about the shore, most people that live along the coast know them all, and have a name for every one: but in a general description of a

* Mr. Anderson says there are various species of owls in Iceland, as the cat-owl, the horn-owl, and the stone-owl. He likewise published a print of one caught in the farther part of Iceland, on a ship homeward bound from Greenland.

† The same Author says, it has been observed, that in some of the small islands, especially the uninhabited about the coast, a couple of old ravens will settle, and not suffering any other to come near them, will fight and drive all away that offer to come. Our author says, he could not be informed of any such thing, though he took much pains to come at the truth of it.

country, it cannot be expected that a full account can be given of every particular; much less when the ornitography alone of Iceland could furnish out matter for a large volume. The few cliffs and small islands about the coast, abound with all sorts of sea-birds, and look quite white, by being covered with their dung. These birds in large flights will stray out at sea 30 or 40 leagues; but I cannot say that I have ever seen such vast flocks so as to darken the sun*. Along the coast, where there are high and steep mountains for them to build in, the shore is covered with them; but it is not so round the island: for most places being low and flat towards the sea, but few harbour in them, except when the shoals of herrings come in. At that time the birds follow to catch them, which gives the fishing people timely notice, and is an agreeable warning to them. At the same time also, great numbers of cod and other fish persecute the herrings underneath, as the birds do from above. Some of these sea-birds are here during a stated time, others wander up and down, such as the oufel, the wild-goose, &c. and others live perpetually in the high rocks and cliffs towards the sea, and the small adjacent islands and rocks, where they lay their eggs, and hatch their young †. It is the large quantity of fish these seas are stocked with, that makes such flocks of birds to harbour here, add to which, their security in the high rocks for their nests, though they are not so secure, but people can get at them, and take away their eggs, which shall be related in its proper place, to shew that the people are more cunning than the fox, for they can get where he cannot. There is a fish called rōdmave, which delights to be near the shore in shallow water. The sea birds catch many of them, among others the sea-gull, who eats only the entrails ‡. The blackbird (as they call it in

* Mr. Anderson says, there are such vast flights of sea birds, that they darken the sun 30 or 40 leagues out at sea, and that their number and variety is so great, that none of the inhabitants know them, much less have a name for them.

† The same Author says, the fewest part of these birds stay there the winter, towards which season they generally go away, probably to some warmer climate, and return in the spring. He adds, that this island is very convenient for them, by reason of the high rocks and mountains, where they securely make their nests and hatch their young, undisturbed either by man or fox.

‡ He also says, that the sea-gull catches a certain well tasted fish called runmave, a good deal like a karuffe, and brings it ashore, and only eats the liver. To this he adds, that the farmers teach their children to scare away the gull from his prey as soon as he has brought it ashore, which they take up and bring home.

Iceland) takes a great many, and only eats the liver; but sometimes he is caught, or hunted from his prey, and if they find it fresh, will take it away. The young children catch this fish in the shallow water among the stones, they also catch several in nets, and with rods: for when they throw out their line for a cod, they frequently get only a rödmave. In most parts they take them with a spear, like an eel-spear; for they are chiefly close to the ground in very shallow water, and in calm weather vast quantities of them may be seen, the variety of red colours which they have, distinguishing them from other fish. This fish has a large head, and several thick scales like lumps upon it: the belly is quite red, from whence the Icelander calls it rödmave or red-belly.

C H A P. XLV.

Concerning the shore-birds that are fit to eat.

SWANS and wild-ducks, as some imagine, do not leave this island in the winter*. During the summer, they resort to the fresh water rivers, and in winter, when the fresh waters are frozen up, they come down to the sea and open waters, where continually great flocks of both sorts are seen, not by scores, but by several hundreds together. In the spring they return to the fresh waters, and there hatch their young. I never any where met with more swans and wild-ducks than in Iceland. The swan being the largest and most excellent bird, deserves to be enlarged upon somewhat more than the rest, to shew the advantages the Icelanders reap from it. The swan is a constant inhabitant of Iceland, and vast numbers of them keep in the fresh rivers up the country, where they lay their eggs, and hatch their young. The eggs are large and very good eating. The season approaching when they cast their feathers, and cannot very well fly, the people go to the fresh rivers, and hunt and kill them. The breast of a young swan, when well dressed is exceeding nice; but the excellent down and feathers they get by them, fetch a deal of money. At all other times of the year, they shoot them, and

* Mr. Anderson says, that among the eatable and well tasted shore-birds, the swans, geese, and ducks are the first in rank, and never fail to appear in the spring.

frequently

frequently kill several at a shot, by reason of the large flocks they assemble in.

C H A P. XLVI.

Concerning the wild geese.

THE wild geese are not constantly here, but come in the spring, and go away at the latter end of autumn. Here are five different species of geese, divided into the mar-goose, the helfinger, and the grey-goose. The mar-goose is but a little bigger than a duck; the helfinger is the largest of all, and has the whitest feathers. As for the grey-geese, the Icelanders have a particular name for each, and the sole difference between them, consists in that the bill and legs in the one are red; in the other, yellow; and in the third, black. In other respects they are all grey, and very good eating. It is not certain, that all those that come in the spring, stay here and breed; because in the northern parts of the island, they have been seen to set off again in great flocks farther north; so that it is presumed, they sometimes only stop here to rest. However, they pay for stopping; for the country people shoot as many of them as they can, though their excessive shyness makes them not very easy to be shot at: for while some of them are at rest, others are watching, and upon the least alarm, all fly away. Those that stay grow tamer, and easier to be shot; but in general they are difficult to be got at. When they come, several hundreds of them appear in one flock*.

C H A P. XLVII.

Concerning wild ducks, and down-birds.

IN Iceland there are upwards of 10 different species of wild-ducks, which the natives have names for. Six sorts of them are fit to eat, and are well flavoured. All the different kinds in

* Mr. Anderson relates, that when the wild geese come, they rest in the eastward part of the island, and are on their first arrival so fatigued, that at that time they may be knocked down by thousands.

Denmark, are also here. The best tasted are very small, their body being not bigger than a pigeon *. The Icelanders call them örteænder, or trout ducks; because they generally harbour where trout are; but of this sort there are not so many as of the others. All the ducks in general are fit for eating, those only excepted that have a fishy taste. They are of three sorts, and may be eaten, their taste, as some have imagined, being neither rank nor strong †. The natives call them langviget, lunder and alker. Among the various species of ducks, the down-bird may justly have the preference. This bird is much esteemed for its fine soft downy feathers, which the inhabitants turn to great account. Their eggs are also very fine. The drake is as large as a goose, and has a great many white feathers, but the duck not much bigger than that of the common size, is of a dark brown, yet somewhat lighter on the breast. Numbers of them are met with all over the island, though the greater part abide to the west, upon account of the several islands they seem to delight in. The inhabitants make little islands on purpose to invite them, and by thus consulting their convenience, get a great many more to come and settle, being very sensible of the advantage they bring. They like best to build in desolate and lonely islands, and if well treated, will build among people, and even close to houses; but in this case, if the people choose to make them continue in this abode, they must send all their cattle and dogs at some distance up the country, and if they live on a little island, they must send all their cattle away to the main land. It is very rare, though I have seen it, that this bird builds on the main land; but the people have enticed them to it by tender usage, and by keeping them from being disturbed. If they do not disturb them, they may go about among them, even while they sit upon their eggs, and they will not stir. They will also bear to have the eggs taken away from them, perhaps once or twice, yet still will lay others, and hatch their young, and the next year come to the same

* Mr. Anderson says, all their ducks have such a fishy taste, that none are fit for eating.

† He also says, that the Icelanders are quite regardless of the taste of birds; for whether taken in the rocks where they climb to catch them, or on the sands, all are thrown into the pot and dressed, according to their fashion, and so eaten, their stomachs being so good as not easily to be turned.

place, and continue multiplying as long as they are well used. The advantage received from them, is in the down and eggs. When these birds build their nest, they pluck the down from their breast for the eggs to lie on, and to keep them warm. They lay four eggs, as big as goose eggs, and green; and when they have done laying this number, the people perhaps finding them, take them away, as also the down, and so spoil the nest. Notwithstanding, the ducks going to work again, pluck more down from their breast, and lay other eggs: the people then come and take the down and eggs away a second time. Still patiently they go to work a third time, but the ducks having plucked themselves bare before, the drakes now supply the nest with down. The last is therefore best and whitest, (for the drake is white, the duck brown on the breast). She then lays her number of eggs over again; but if taken away, lays no more, nor ever builds a nest there, but looks out for another place the next year. For which reason, a good oeconomist will take care and watch, that the third lay of eggs is not taken from them, and that they are suffered to lie peaceably, and to hatch them. Then they may be certain, that the next season, she and her young will come there again, and instead of one nest, will make two or three. When the young ones leave the nest with the old, the people gather the down a third time from the nest, and in this manner get two sets of eggs, and three parcels of down from each nest. Hence it may be judged, what vast advantage they have by them, considering how many thousands build among them. Their eggs are as good as any hens eggs. The down they pluck off themselves is much the finest, though all the rest of their feathers are very good and useful*. The good oeconomist will not suffer any of these birds to be shot, or a gun to be fired near them, especially while they are building, for fear of frightening them away. In this manner they get great quan-

* Mr. Anderson says, the feathers that are pulled off when they are dead are of no use; because they are fat, and putrify very soon. He adds, that when the young ones fly out of the nest, the people who are upon the watch, go and take the down away. Bishop Pontoppidan observes the same in his natural history of Norway, where he says they lay many eggs which are long, and of a dark green colour; and if a stick a foot long is stuck in the middle of the nest, they will continue laying till it is covered, that they may lie convenient, but this weakens the birds to such a degree, that they sometimes die.

tities of down and eggs, without destroying or hurting the birds. The down they export, and rather make a pecuniary advantage of, than use it to gratify their own ease.

C H A P. XLVIII.

Concerning the diver or the plungeon.

WE have but one sort of these ducks called divers or plungeons. They are well tasted and fit to eat*. They are not very fishy; for the Icelanders not liking any fowl that has a trainy or fishy taste, are under no necessity of using that which is not good, amidst such plenty and variety.

C H A P. XLIX.

Concerning the lomen, or northern diver †.

THE lomen or northern divers, much about the bigness of a goose, have a narrow bill and small wings, and grow very fat and heavy. Their legs standing very much behind, they walk with as much difficulty as they fly, on account of their small wings and heavy body. They make a frightful noise, and are far from a pleasing bird to look at; at least I could see no beauty in them. Neither their flesh nor eggs are fit to eat. This bird is unmolested; for the people give themselves no trouble to look after its nest or brood ‡. They build in remote places near fresh water, that they may reach to drink without moving from their eggs, or if they should want to move, that they might do it the more conveniently, by reason of their being such bad walkers and fliers. As this bird also does not build about the sea-shore, it is improperly called a shore-bird.

* Mr. Anderson says, some of the divers or plungeons are fit to eat, but many not.

† In the Orkneys they call this bird embergoose.

‡ Mr. Anderson relates, that the Icelanders having never been able to discover where the northern divers build, pretend that they hatch their young under their wings.

C H A P. L.

Concerning the geir or vulture.

THE vulture-rocks, called also bird-rocks, lie beyond Reikenes, in the south district, about six or eight leagues west of this place. On these cliffs and rocks are a great many vultures, which besides harbour in other parts of the island. The inhabitants at a certain season go to these islands, though the expedition is very dangerous, to seek after the eggs of this bird, of which, they bring home a cargo in a boat big enough for eight men to row. The danger and difficulty consists in getting ashore near these cliffs which lie six or eight leagues out at sea, where the water generally runs so high, that if the boat be not very carefully managed, it runs the risque of being dashed to pieces against the rocks by the violence of the waves*. Though there are not so many of these birds as of other sea-birds, yet they are not scarce. They are frequently seen, and those that go to take their eggs from them see enough of them. The eggs are very large, and almost as big as ostriches eggs.

C H A P. LI.

Concerning the shore-birds nests.

IN the high and perpendicular cliffs near the sea side, and in the cracks and holes, and where the rocks hang over the water, the sea and shore birds build in incredible numbers. The inhabitants get at these places, notwithstanding all the caution the birds take to hide their eggs, or to build in almost inaccessible places, and they plunder the nests of their eggs and feathers. It being impossible for them to climb the rocks, by reason of many hanging considerably over the water, they therefore, in order to get at the birds and their nests, thrust out a long beam

* Mr. Anderson says, that the geir or vulture is not often seen here, except on a few cliffs to the west, and that the Icelanders, naturally superstitious, have a notion that when this bird appears, it portends some extraordinary event. Of this he assures us his being told, that the year before the late king Frederic IV. died, there appeared several, and that none had been seen before for many years.

towards the top of the rock, which they fasten at one end to the ground, and at the other with a long rope that slides through a hole made in the beam. By this machine, they raise up, or let down the man that is to take the eggs, who, when he has got as many as he can carry away with him, gives a signal for retiring*. In this manner they go on as long as eggs are to be found, or as long as they are able to hold out. The man that is let down has a pole with him, by which he pushes himself out, or draws himself farther in, just as he sees occasion. When the birds are attacked by these people, they fly away by thousands, making a terrible noise and shrieking. In the parts where these high cliffs are, the inhabitants have vast benefit and advantage by the birds. Besides the eggs they take, they catch vast numbers of the birds, many of which, as I before observed, are very fine eating, and of the feathers they make a very good trade, exclusive of what they keep in the island for their own use. I have seen the people catching the birds in this manner, and must confess, that it is very dangerous work. Sometimes accidents happen through carelessness, by the beams giving way, or by using a rope that is not strong enough. These birds, though they build so thick and close together in the rocks, and are some thousands in number, yet all find the spot at once where they have built, never mistaking their nest, though so like each other, as not in any respect to be distinguished.

C H A P. LII.

Concerning the shore-birds eggs.

THE eggs of the sea and shore-birds are of a greenish colour with black or brown spots. They have a thicker shell than land birds, so ordered, I suppose, by Providence: for as these birds are obliged to seek nourishment at a very great distance from the place where they build, and lay their eggs, and consequently are sometimes a long while absent from their roost, the thickness of the shell must preserve so much longer the in-

* Mr. Anderson says, it is with the greatest danger of their lives that they climb the steep and rugged rocks to get at these birds nests.

ternal heat, and prevent the external cold from penetrating to destroy the tender life within. These eggs are for the better part well tasted. There is also a small bird here which the Icelanders call kreye, whose eggs are extremely nice.

C H A P. LIII.

Concerning the vast quantity of shore-fish.

TOO much cannot be said of the great blessing which God has bestowed on this island, by the vast quantities of fish the shores abound with all round the island, and the vast variety, both large and small, for nourishment and use. It is supposed these immense multitudes of fish come from more northern parts to Iceland in their peregrination to the southern, though many proceed no farther, which is very reasonable to think; because in some parts of this island there is good fishing all the year round, chiefly of fine small cod, which very probably are only the young of the larger sort, being in every respect like them. The inhabitants relate by the observations they have made, that the codling goes three times round the whole island with the wind, and when gone the third time, are grown to a full size, and become what is properly called the large cod. The cod that come in shoals towards the spring of the year, being much fatter and finer than those fished for at other times, there will be no improbability in supposing, that they have lain under the land all the winter. The people in particular remark the course the fish take; they appear first eastward of the island, then southward, and afterwards about the great creek or bay between Reikenefs and Wester Jokel. This creek is twenty or twenty-four leagues broad, and runs sixteen or twenty leagues up into the country. Here are their greatest fisheries, and from hence most of the harbours to the south are supplied, except the harbour of Grindevig. To this place also they come from all parts round to fish, even from the northward in the fishing season, which they call vertiden, and sometimes stay the whole summer and autumn a fishing. More shall be said with regard to this place, in the chapter concerning the fishing seasons.

C H A P. LIV.

Concerning the shore-fish, or such as in general keep along the coast.

AS in a general description of a country, a complete ichthyology, or particular description of all the fish throughout the country cannot be expected; it is not my intention to make a voluminous work, which I know myself not qualified for, not having furnished myself with sufficient materials for such an undertaking, though I lived upwards of two years in the island. I shall therefore pursue what I chiefly intended, which is to give a brief account of the island, and to range every thing in proper order, to make every article intelligible, and convey a true idea of the place to my readers. I presume to say, that I know much more of the place than many, who have published their accounts of this island, according to very imperfect and false ideas, and consequently their publications, must have propagated the same, which I am very desirous to remove, hoping that this short treatise will have that effect, at least on those, who have not received too strong a prejudice from those false and erroneous accounts that have before been published.

C H A P. LV.

Concerning herrings.

HERRINGS come from the most northern parts, where they breed, and send forth vast colonies to all Europe at certain seasons. They return again to the north, and in that manner annually make their progressions. In passing by Iceland, they are usually driven by the whales and other large fish, as chaff before the wind, and sometimes they are chased into the bays and creeks of this island in such numbers, that a boat can hardly be rowed through them, and they well might be taken up by pails full; though this happens but seldom. The Icelanders do not apply themselves to herring fishing, having neither materials for it, nor knowledge how to cure the fish; add to which, their great scarcity of salt. It is therefore for these reasons that they

do not trouble themselves about taking more than they can make use of fresh. Very likely if they had salt sufficient, and understood how to cure them, the merchants would not take them off their hands, because they are not taxed; from whence one may conclude, that Iceland is not a proper place for herring-fishing, except when the above-mentioned extraordinary accident of their being driven into the creeks and bays in such excessive quantities happens*. Otherwise the Icelanders would no doubt have laid themselves out for herring-fishing, and their price would have been taxed as other fish are: for they are very sufficient for the undertaking, in respect to the number of hands that should be employed; neither are they so indigent in circumstances, as not to be able to manage a very considerable fishery, especially since the king has generously supplied them with a considerable quantity of necessary implements, which may put this and other fisheries upon a very good footing. What I mean by herrings, that do not appear in the creeks and harbours of this island in great shoals, unless by accident, are the fine large fat herrings fit for pickling †. At all other times a vast plenty of small young herrings like pilchards or sprats, arrive with the cod, which this fish feeds very agreeably on, as do also from above the birds, by whom they are snapt up. Together with these persecutors, the whale swallows them up in heaps, which has been often seen here; and once in particular, a whale pursuing his prey too greedily, run aground, and the tide setting out, left him helpless on the shore. The inhabitants soon gave him his quietus, and found in his belly upwards of 600 fine live cod, together with a great quantity of herrings, and some birds. These small herrings are of two sorts; the one is called by the inhabitants sand-herrings, because they lie upon the sand banks in the sea about the coast, almost all the year round; they are often also found in the bellies of large fish when any are

* Mr. Anderson says, he knows very well, that all the creeks and harbours in Iceland abound with the finest and fattest herrings, and that if it was not for the scarcity of people, and their indigent circumstances, they would be able to carry on the greatest and most advantageous trade imaginable in this very one respect.

† He also says, there are many different species of herrings, but he never met with any who had been curious enough to make proper observations or remarks. He speaks of one sort eighteen inches long, and three or four inches broad, but our Author says he never heard of any such.

caught.

caught. The other are called the hairy herrings, because they have a stripe all along the back like hair, and when seen or found in the bellies of any fish, the people are sure the cod is not far off, because this fish is only periodically about the island. Herrings, especially the large ones, are the best bait to catch cod with, though not used by the Icelanders, because they cannot always get them*. It is remarkable, that the cod and large herrings do not always come together, if they did, the people would suffer greatly in their cod-fishing. The large herrings resort not to this coast every year, but the small sprat kind always attend the cod, and are their common food. The Icelanders catch none of these small herrings, being unprovided with nets for this purpose, and depending principally on their cod-fishery. It is a diverting sight to see, when these small herrings come in such gluts on the coast, how the birds by thousands hover above, and like a dart strike down upon and catch them. This continually happens, whilst the fish are making all the way they can to the coast to get into the creeks and bays, though even there they become an easier prey to the birds.

C H A P. LVI.

Concerning the cod.

THIS fish, called by the Icelanders *torfk* or *kabbelau*, which names are synonymous, is caught mostly about the south and west parts of the island †. Northward and eastward, they hardly catch enough for their own consumption, and are often obliged to have them from the south and west quarters, where they buy them up dried, or send their people there to fish and cure them for their use. But the great quantities of flesh, train of whales, seals and cods, the down and feathers of the birds, and the wrought and unwrought wool of the sheep, afford subsistence to as many of the inhabitants as the fishery does. In the right fishing places,

* Mr. Anderson says, that the Greenland traders when they intend to catch cod, and are in want of a fresh herring for a bait, make use of an artificial one made of tin, which serves as well as the natural one. Our Author says he tried the same experiment, but it did not answer; for they would rather lay hold of a bit of beef.

† Mr. Anderson also says, that cod is the chief food of the people of this island.

variety of other fish is caught besides cod, which I shall presently make appear, and though not a merchantable commodity, they still are of great use for the food and subsistence of the inhabitants. In certain places up the country, are fresh rivers and lakes, with great plenty of trout, and there the people have no great occasion for the dried sea-fish; for they dry the fresh water fish, and lay it up for use; and indeed dried trout is very delicate eating. They catch all their fish with a hook and line of sixty fathom length, and put for a bait eight or ten muscles on the hook*. The muscles here are very large and fine, and full as large as any I ever saw in Holstein. Very seldom they make use of the gills of cod, rather chusing to take a piece of another fish. Besides muscles, they dig at low water a black ugly worm out of the bottom of the sea, which they use for a bait; as also the entrails of shore-birds, and their raw flesh, which is reckoned a very good bait. All are not equally lucky at fishing: for when a parcel of boats have been together on the sand-banks a fishing, some of them will go away full, whilst others have got hardly any thing, though they use the same bait. They have plenty of wild fowl at hand, if they find the same a good bait. There is no law against their using any thing, and I am persuaded they use what bait they like best. When the fish come in great shoals, it may be perceived on the water, as also when they are pursued by the whale; for then they are in great confusion, and are sometimes seen above the water. At that time they will not bite, and scarce ever but when they are quiet on the sand-banks in the sea, which the people well know, because they then bite, and are caught apace†. They likewise will bite, even sometimes at a hook without any bait, if tinned and bright, when they come in great heaps without being hunted in or scared by the whale.

* Mr. Anderson says, that they catch all their fish by angling, putting a bit of a muscle on for a bait, or some of the gills of the cod they have caught; but they bite best at a bit of raw flesh of the birds while warm, or the heart of a sea-gull just shot. With such a bait one may catch twenty, while another with the bait they commonly use, will hardly catch one; but those artifices are forbid by the king, that one might not have the advantage of the other.

† The same Author avers, that when the shoals of fish come, the number is so prodigious, that their fins appear above the water, and that they will bite at any thing, even at the bare hook, without any bait at all.

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They generally in this case keep very deep in the water. The right fishing season, which is called by the Icelanders *vertiden*, begins the third of February, and lasts till the twelfth of May. At this time multitudes of the inhabitants come from the north and east, (in which parts no fishing is carried on in that season) and some of them continue here during the whole summer a fishing, before they return home to the north. Their season begins the twelfth of May, and lasts till the harvest is in*. They cannot begin before, on account of the floating ice that comes from Greenland; so that the fishing seasons cannot be at one and the same time throughout the island, though sometimes it happens, that after the twelfth of May, when the season ought to end in the south quarters, they get the most fish, and dry them, both for home consumption and exportation †. Though the season is over, if they have had but little success, their heart not failing them, they wait still longer, and are sometimes plentifully rewarded. They always fish whilst any thing is to be got, and while the weather permits. They are out often night and day, sometimes in the deep, sometimes in the shallows, and never miss any convenient opportunity, especially from about the middle of April; because then the nights beginning to be very short, they can remain out the whole night, and it is light enough for them to go any where. Before that time they only fish a days, and are generally out two hours before the sun rises, and return home when it sets. But if they have not got their cargo, and find the weather promises fair, they stay all night, so that they do not confine themselves to any time, but make use of night or day in some places, just as it happens. In general, the finest and most delicate fish are caught in forty, fifty, or a hundred fathom deep of water; but it cannot from hence be inferred, that the fish taken in the gulphs or near the shore, are not so fat and fine; for when the fish first arrive, they are as fat and fine as any where in the deep waters. It is true, they fall off some time after; but those far out at sea, and on the banks, keep up better

* Mr. Anderson says, the right fishing season begins the second of February, and lasts till the first of May; for then it begins to be too warm to cure and make them fit for keeping.

† The same Author says they fish in the gulphs and deep sea by day, but near shore, or in eight or ten fathom water by night.

than

than those near shore or in the creeks, where they probably do not meet with such nourishment. The Icelanders cure their cod but one way, and when cured, they call it flat-fish. It is exported to Copenhagen and Gluckstad, and is a fish very well known, and as well tasted as any found or cured elsewhere. Westward they hang them up to dry, and call them hang-fish. They have houses on purpose to dry them, which are built of lathes, pretty wide asunder, for the air to draw through, and a covering to keep out the rain. To cure them this way, they slit open their backs, and run a pole through them, and then hang them up to dry. The flat-fish have their bellies slit open, and are afterwards spread out to dry. The hang-fish are something cheaper than the flat-fish, because flat-fish is the merchantable sort, and therefore there are a hundred slit and dried flat on the ground, to one that is hung. When the fishermen land with their cod, they lay them out along the shore, cut off their heads, slit open their bellies, gut them, then slit them quite down, and take out the backbone from the head down to three joints below the navel. This the men do themselves. The foreman of the boat divides the fish, and every one that went has his lot*. When they have slit them, and taken the back-bone out, they double them up together again, and lay them one by one, if the weather promises fair the next day, to spread them out to dry; but if the weather looks otherwise, they spread the fish out, and lay them one over the other, the skin side upwards, and so let them lie a day and night; but take care not to let them lie too long so for fear of spoiling. The women have nothing to do in the affair, except sometimes, when some of them may come to help their wearied husbands. When they have prepared their fish so as to get it ready to lay out to dry, the next day they return home no doubt much fatigued after their days hard labour, to take rest and refreshment, and have some of their finest fish dressed for themselves and their families; but as they always catch other fish with the cod, they rather choose to eat them fresh, or if

* Mr. Anderson says, that when the men come ashore with the fish, the women go down to the sea-side and begin to work upon them, by cutting their heads off, slitting and gutting them, &c. He calls them slit-fish, because they are slit open; but our author calls them flat-fish, because they are spread flat on the ground to dry.

they

they boil a cod, they boil the head with it*. The heads they cut off they dry as well as the fish, and get a good price for them in the country. The bones that are taken out of the fish are used in some places for firing by the poor people, where there is a scarcity of fuel, as there generally is along the coast. They likewise use them, as has been before observed, to feed their cows and cattle with, by first softening them in boiling water. The livers they stow up in a vessel, and boil them all together to make train-oil. Brandy is a scarce commodity with them, and but few can afford it. That which is offered to them for sale, is seldom fit to drink after Easter. Thus they do not much care for that liquor; but if they could, as the fishing people in most countries, take a good dram before they go out, and have another when they come home, it would do them no harm, and perhaps, in a great measure, would allay the sense of the almost incredible hardships they suffer. They are sometimes eight or ten leagues out at sea before the day breaks, and all night long when it is light and fine weather. All this time they continue fishing with their long lines, without any victuals, or any refreshment but their common drink called fyre, (which I have already described). When they have rowed themselves back again with their cargo, sometimes with the greatest danger of their life, in tempestuous weather, their next care is to get ready their fish for drying, which being done, they must take a long walk to their respective habitations. After all this, it is reasonable to suppose, that they require rest and refreshment, and a good dram; but the last hardly one in a hundred has. The only thing they indulge themselves with at sea, beside their liquor, is tobacco, which they make use of three different ways, each according to his taste.

I will now give a short and circumstantial account of their manner of managing their flat-fish. When they have cut the head off, and slit open the belly, the entrails are taken out, then the fish is quite laid open, and the back-bone taken out, afterwards it is doubled up, or two are put together, the flesh part to each other. This is done when the weather is clear, and

* Mr. Anderson says, when they have done this work, the women carry home the cods heads to dress for their family; the bones they use for fuel, and the livers they save to boil oil out of; the men then go home, and indulge themselves with brandy according to their circumstances.

the air dry, that they may the next day spread the fish out upon the stones; but when the weather is damp, or a frost happens, they then lay them in little heaps upon one another, with the skin upwards, and let them lie till the weather is fit for drying, at which time they spread them out upon stones if they can, but where they have no stones, along the coast, and this they do the day after they arrive with them if the weather will admit of it, for it makes the fish much better, though they generally receive no damage by lying three or four weeks in kase, as they call it, which is in little heaps upon one another, provided it is not very foggy or damp weather, or too hard a frost. Whilst they lie to dry, the women go and turn them several times a day, that both sides may imbibe equal portions of the sun and air. In fine weather they will thoroughly dry in fourteen days, though they generally take more time. When the fish is quite dry, they are heaped up together upon the stones, and then will receive no damage from any kind of weather*. Each lays his lot together, and piles it up about as high as a man can reach; but when the fish are brought to market from each district, they pile them then as high as houses, or like great stacks of hay. They sell all they can, without ever bringing them under roof; but what they keep for their own consumption they lay up in their houses. When the merchants have got them in stacks, and it threatens wet weather, they cover them to keep off the rain, till they can conveniently ship them, which they do as soon as possibly they can. In sending them aboard, care is taken that they contract no damp in the place they are deposited; the reason is, because there is a great difference between their being packed down close in a ship, and their standing in stacks, where the air draws through, and dries them immediately after they have been moistened. The hang-fish are prepared in the same manner as the flat-fish, saving that they are slit down the back to run the pole through, whereon they hang to dry in houses built for that purpose, as has been already described †. They also are hanged

* Mr. Anderson says the skin side is always turned upwards when they dry them, for fear the rain should spoil the flesh, and if there happens to come a north wind, the fish may be thoroughly dried in three days.

† The same Author says, that for the houses to dry fish in, they only raise four walls of scraps of stone heaped on one another, without any thing to bind them together, and make it as open as they can for the wind to draw through, covering it with boards and turf to keep out the rain.

up the day after they come from sea. Fish is only cured in the west after this manner, and not in every place, though most people have a house to dry fish in of other sorts, where they only dry them in the air without the sun. The fish dried along the shore where no stones are found, are laid upon the hard white sand, and not upon the bones of fish. Dried in this manner, the fish is whiter, and dries faster than otherwise, because the sun has more power to act and insinuate itself. It also will keep as long as any other, and the only accident it is liable to, is that it becomes sandy, and may for this reason be rejected by the merchant *. It is the fine dry and clear air here that dries the fish so well. The days at this season are longer than in more southern countries, and the heat of the sun not so piercing. They continue to dry fish all the summer, though in the midst of summer they turn not out so well. The great heat breeds maggots in, and spoils them; the strong smell also of the fish attracts the flies, and I have seen them even in April, as thick as possible about them. In the autumn the fish will dry very well, if the weather does not turn out too wet †. The Danish merchants in Iceland pickle several hundred casks of cod a year, which they export to Copenhagen, besides curing a great deal of klip-fish. The inhabitants do the same with regard to the klip-fish, but it is generally for their own use, or to dispose of at home, because they know not how to cure it well enough, to make it answerable for a foreign market. At best, they cure not much this way, upon account of the expence of salt, and the fish not fetching more than the dried, even exclusive of the salt and casks, it costs much more trouble than the dried, which

* Mr. Anderson says, that the fish dried on stones is much preferable to that dried on the sand, being firmer, whiter, and keeping longer; whereas that dried on the sand, being laid upon the bones taken out of the fish for want of stones, changes colour, and will not keep so well.

† The same Author says, it is very surprising how such large fat fish can be cured in the Iceland manner without salt, and piled up in the open air without corrupting; but on the contrary, be so sound as to keep for years in different climates and parts of the world. For this he urges as a sufficient reason, the cold which is excessively piercing, especially at the time of the year for curing the fish. Sharp drying north winds reigning at this juncture, fetch out all the moisture, which is the internal cause of corruption; besides at this time of curing no flies exist, and the few that appear about the latter end of the season, are kept off by the strong smell of the fish. Thus no flies come near them to lay their eggs, consequently no maggots or worms grow in them, which is the external cause of putrefaction.

is only laid to dry, and turned now and then by the women, and receives no damage from a little rain; whereas the klip-fish, after lying at first three days in pickle, must be washed in sea-water, then picked and laid out to dry, like the other fish, and towards the evening made up in heaps, pressed with heavy stones, and covered from the air. Every morning it must be laid out again on the stones to dry, and if it happens to rain in the day, it must be immediately got under cover, because the rain will quite spoil it.

C H A P. LVII.

Concerning the ling.

THE ling is a species of cod, but longer and narrower, from whence it takes the name of lange or ling. The inhabitants cure it in the manner they do cod, and make klip-fish and flat-fish of it, as may appear from the printed tax of prices of fish. By law double the price is allowed for ling, and the merchants must so pay for it, which proves that it ought to be the best. No great quantities are caught, but of such as are, they make klip-fish as well as of cod, and that in perfection; so that this fish is not peculiarly better in any other country*. This sort of fish, or rather the way of curing the cod or ling, derives its name from the stones taken off the cliffs when they lie upon the fish to press them; for klip signifies a cliff, and some authors derive the name of klip-fish, or cliff-fish, from being laid out upon the cliffs to dry.

* Mr. Anderson says, that the klip-fish which the Icelanders make of ling, is not so good as that of cod, for which reason it is only used by the natives for their own consumption. He says also that they are not very successful in their klip-fish, which for the better part is indifferent, spoils very soon, and therefore is not exported. To this he adds, that the different ways of curing fish are peculiar to different countries, and he gives Norway the preference for round-fish, Hitland for klip-fish, and Iceland for dried fish.

C H A P. LVIII.

Concerning the haddock.

THE haddock is called in the Iceland language *ise*, and is not one of the most contemptible fish about the island*. There is a great plenty of them, and at certain seasons nothing else is caught. When they are fat, they are a well tasted fish. I know many at Copenhagen who prefer them to cod, but the reason is perhaps, because they there are scarcer. The Danish merchants and the Icelanders make klip-fish of them, and I must confess, when cured in that manner, they are as good as cod. The merchants will not buy them of the Icelanders either cured this way or dried, but they buy them fresh, computing three haddocks worth two cods, which is a sign that klip-fish is made of them, and that they are not much less than the cod †. Generally speaking, they are as large as most of the cod. A vast many of them are dried, and when the company's ships are gone, I am certain, much more dried haddock remain in the island than cod; because the latter are usually bought up by the merchants, in a far greater proportion than the former. The inhabitants among themselves esteem haddock equal to cod, and commonly mix and sell them together. The haddock is distinguished by its scales, which are generally scraped off when klip-fish is intended to be made of it. It is also well known by two remarkable thick bones on the top of the head.

C H A P. LIX.

Concerning the whiting.

THE whiting, called in the Iceland language *ise*, is here larger and fatter than I any where observed it. The flesh is very delicate, and more like that of the haddock than the cod, because white; and from thence deriving its name.

* Mr. Anderson says, that skiel-fish or *ise*, the same as the haddock, is a species of cod. When boiled it flakes off from the bone in pretty thick, round flakes, and has remarkable scales, by which it is distinguished from the rest of the species.

† He also says, that this fish is not fit to dry.

Not many being caught, they are mostly eaten fresh, and thus but few are dried, not being easily so preserved, and therefore not so fit for market.

C H A P. LX.

Concerning the sort of cod which the Icelanders call tislung.

THIS fish is called by the Icelanders tislung, which signifies a diminutive cod*. It is called by the Danes titlung, and by that name is very well known at Copenhagen, to signify a small cod, and therefore nothing different from the young cod, as I before observed. There is a middle sort between this and the large, which they call stutting, and in Denmark, middle cod; but in the main, it is one and the same fish, and only different in size. This fish is variegated with grey, gold and black spots. In the summer it is lighter coloured than in winter, and those that have lain sometime near the shore in the weeds, have a brighter gold colour under the belly than the rest. The Icelanders generally make flat-fish of them, and when they deliver to the merchants great stacks of them, have as good a price as for the other dried fish †. They are also almost as common.

C H A P. LXI.

Concerning the cole-fish.

THE cole-fish, called by the Icelanders ypre, is, I believe, a species of cod, which it resembles, and is almost as large. It is a well tasted fish, and eaten by the Icelanders. When dried it is well known to be very good, though not quite equal to cod ‡. No large quantities being taken, not much is dried for use.

* Mr. Anderson says the tislung has small scales, which are hardly felt or discerned in the eating of it when boiled.

† The same Author says, that the Danish merchants make flat-fish of this small cod, and call them titlinger. They are in his opinion, a very delicate fish, and only made use of for presents to people of rank and fortune at Copenhagen, and consequently are seldom sent any where else.

‡ He also says the cole-fish is very lean, and such indifferent eating, that the Icelanders do not use it, unless in a scarcity of better.

C H A P. LXII.

Concerning flounders.

THE flounders here are very fat and fine, and are fit to dry, to be laid up for winter provision. This I have experienced myself, and have likewise seen them exported in ships, whose crew on throwing out five or six nets, have caught great quantities, which they salted, dried, and carried away with them*. The inhabitants in general eat them fresh, salt being too precious. They never catch them otherwise than when they throw out their line for cod, and if then a flounder should bite, they catch it against their will. It is true, in a few places they fish for them with a net, and get vast quantities, but all are for present use. To dry them, they must be first salted, and for want of salt, they cannot proceed to this operation.

C H A P. LXIII.

Concerning the turbot.

A GREAT many very large turbot are caught about Iceland, some six foot long, and broad in proportion †. The inhabitants prepare a dish of them, which they call Riklingur, consisting of long slices cut lengthways, first dried, and afterwards dressed.

C H A P. LXIV.

Concerning mackarel.

MACKAREL is a fish quite unknown to the Icelanders, either by that or any other name. As they come from the north, and take their peregrination through the ocean, and pass by Hetland, Scotland, England, and still farther south, it

* Mr. Anderson says, the flounders are so very fat, that when dried, they will not keep, but presently turn red near the bones, therefore as spoiled, they are not fit for exportation.

† The same Author says, that some turbot taken on the coast of Iceland, have weighed 400 lb.

is possible they may mix with other fish about Iceland, though they never stay, or ever are caught so as to be known: this several of the natives have assured me. They catch a fish here in several places, chiefly westward, which they call steenbidder. It is not the same with that of this name in Denmark. In size it is nearly as large as a cod, of a dark colour, no scales, short head, small mouth, with a great many sharp teeth, and in aspect very fierce. The fishermen take a great deal of care when they catch this fish, that it does them no mischief. It is without doubt the *lupus marinus*, and may be called the sea-pike, as resembling very much the fresh water pike. Its flesh very good is eaten both fresh and dried by the Icelanders. At certain seasons this fish is more frequently caught than at others, and in general is of great use and benefit to the inhabitants. There is another fish much like this, and called by the Icelanders Klir, which is very good eating, and is caught in several places, but not in such abundance. Rödmaven, or red-belly is a fish I before mentioned, in discoursing of the sea-gull, and therefore will not repeat what I said. It is caught in great abundance with hooks, nets, and with spears, much after the manner of the eel-spear. It affords a delicate dish, being dressed several ways, and is very good when salted a little, dried, and then smoked. Of the same form and shape as the rödmaven, is a fish frequently caught, which the Icelanders call graae-maven, or grey-belly. It is somewhat larger, and very good eating. Both are reckoned to be the same species, the rödmave being called the male, and the graaemave the female; because in the former they never find a hard-row, nor in the latter a soft. The thornback, which the Icelanders call skata, is in great plenty, and is a very fine fish, especially when cured in the manner of klip-fish. The tax price demonstrates it to be a good and desirable fish, being rated at double the price of a large cod. Karve is a well tasted fish, and is sometimes caught with the hook, but not in any plenty. By shape and taste it seems to me to be the perch. These are the principal fish of the smaller kind about the coast, which are of great use and benefit to the inhabitants; I shall now give an account of the larger sort in the ocean.

C H A P. LXV.

Concerning the whale.

WHALES of all kinds are in abundance about Iceland. They have particular names, and to enumerate them all would make a treatise. The great Greenland whale often appears on this coast, and because he has a smooth back without fins, the Icelanders call him *fletbakar*, that is, smooth-back*. The sand whale is of a quite different kind. Several other sorts of large whales appear about the coast, and in the creeks and large bays, as in Hvalfiorden, which from thence derives its name, and in many more on the west coast. I have seen ten or twelve at a time in Hvalfiorden, which stopped up the entrance. They generally arrive there about the latter end of July, or beginning of August, and are not a small sort, the Icelanders having caught some 200 and 240 feet long †. In order to catch them, a boat goes out and endeavours to get as near the fish as possible. An expert person being at hand to strike him with an iron harpoon, as soon as the blow is given, the boat immediately makes off as quick as possible. The harpoon is stamped with the mark of him that struck it in the fish. The whale not being able to survive the wound, if hit well, dies, and floats to some part of the coast; but if the wind sets from

* Mr. Anderson says, the great Greenland whale, not caring to venture close to Iceland, for fear of shallows, keeps out in the fathomless ocean about Spitsberg, and under the north pole.

† The same Author says, that as soon as the Icelanders observe the whale in pursuit of the herrings towards the coast, they without delay get into their boats, and taking their harpoons, spears and knives with them, row away, and endeavour to get behind him, and as close to his body as possible. When the wind sets to the shore they throw into the sea a quantity of all sorts of blood, which they provide themselves with on purpose. The wind blowing it about the flying fish, they row gently after, and the fish perceiving himself pursued, is for turning about, but finding the sea all bloody, which he detests, and rather than swim back through it, he turns again, and driving towards the shore, runs a-ground, or into narrow creeks, where he is caught. The wind happening to be unfavourable, they have recourse to another method, and this is, by throwing large stones into the sea at the whale, and setting up a hideous noise to frighten him; whereupon finding himself pursued, he darts off with precipitation, runs a-ground, and cannot stir. So soon as they have frightened him a-ground, they all surround and give him stab upon stab, till by the violent effusion of blood he expires. Then they cut off all the blubber they can, and as they are not very dainty, take some of the flesh also, and carry it home.

the shore, is sometimes carried out to sea and lost. If the fish comes ashore, by the laws of Iceland, a certain share belongs to him that owns the harpoon, and the proprietor of the land where he stops has the rest. This is all the art they make use of to catch whales, and is the full extent of their ingenuity. But as they are now provided with fishing tackle, harpoons, and other implements, and a person that understands the business to teach them, I presume whales will not for the future easily escape them*. The fins are sold to the Danish merchants, and are not small, as may be concluded from the above-mentioned sizes of the whales. The blubber of the whale they melt down in large pots, in which they first have put some water. The train that swims on the top they continue the skimming off as long as there is any†. The flesh that remains in the pot has no trainy taste in their opinion. They take and put it in their fyre, which is as sour as vinegar, and when macerated for some time in this liquor, it becomes very good eating. This is the way many of the Icelanders prepare this flesh for use. I have been told by those who have eat of it, that it is very good; but it will not be amiss to observe, that as the flesh of all whales is not fit for eating, the following general rule to know which is, may be easily attended to. The flesh of those whales that have teeth are not fit to eat; but those without teeth may be proper food.

C H A P. LXVI.

Concerning the porpus.

THE porpus, which the Icelander calls nise, is from five to eight foot long. They roll themselves about in the sea, and move but slowly. Their flesh is very good. The Icelanders kill a great many with their harpoons. Sometimes they

* Mr. Anderson says, that the fins being but small, the Danish merchants do not much regard them, and that the Icelanders have such miserable tools, that they cannot cut them off; for which reason they are left on. They are shaped like a sabre-blade, are of a horny substance, and adhere on each side of the upper jaw-bone, in a hanging manner. This is what is commonly called whale-bone. Its uses are various.

† The same Author says, they throw the fat into a vessel or hoghead, and letting it lie a quarter of a year, it melts by degrees, and leaks through; that which leaks through in that time, is the finest and best, and must not be poured off, or boiled up.

chase them ashore, being easily frightened, and they kill them in June as well as in other months. None here suppose them to be blinder at one time of the year than another. They swim not quicker, but that two men in a boat may keep up with, manage and take them, and this both before and after the month of June; for their fight is the same all the year round. There is a whale called the spring-whale, and very often eighteen foot long, which will jump surprisngly in the water, and take great delight in pursuing boats; but when they jump out of the water to throw themselves on a boat, their eyelids fall over their eyes and blind them*.

C H A P. LVII.

Concerning the sea-calf †.

THE sea-calf is called by the Icelanders haakal. They catch a great many by a sort of machine which they sink to the bottom of the ocean, with a buoy fastened to it, that floats on the surface. The hooks are rivetted to iron chains to prevent their biting them off. When the people go out to see what success they have had with their machine, they find sometimes twelve or sixteen fast to the hooks, which by tying the chains to the boat-stern they drag ashore. This turns out a very profitable fishery. Though the flesh of this fish is good eating, it has notwithstanding been observed, that those that have eat much of it fresh, or often, were afflicted with severe fits of illness, or died suddenly. It is therefore now not eaten, till it has hung up for a twelvemonth, and all the fat is melted away; then it tastes like smoaked or dried salmon. Once at an entertainment, a Danish merchant eat of it, and believed it such, till he was undeceived. No train is extracted from the flesh of this fish, but the liver is so large, that it often yields thirty gallons of

* Mr. Anderson says, the porpus is a species of whale from five to eight foot long. They swim so very fast, and are so quick in the water, that they are with difficulty got at. The Icelanders would be unsuccessful in their quest after them, were it not for the extraordinary circumstance of their becoming blind in the month of June. Our author says that Mr. Anderson confounds the spring-whale with the porpus.

† Martin in his description of the west isles of Scotland, calls this fish the white shark.

very fine oil. In sea-calves eighteen foot long, livers have been found of so prodigious a size, as frequently to produce the quantity of two thirty-six gallon casks of oil.

C H A P. LXVIII.

Concerning the sword-fish or saw-fish.

THERE are sword-fish, or saw-fish, as well as other large fish about Iceland; but as nothing peculiar is observable in them, I will omit further speaking of them*.

C H A P. LXIX.

Concerning sea-bulls, and sea-cows.

IT is commonly reported, that the noise and bellowing of these animals make the cows ashore run mad; but none here ever saw any of these supposed animals, or noticed the bad effects of their bellowing.

C H A P. LXX.

Concerning the seal.

AVAST many seals are seen about this island, which the inhabitants distinguish by the names of land-seals, island-seals, and Greenland seals. The first the smallest, and most common, are always near the land, and run up the creeks and rivers to hunt the salmon, salmon-trout, trout, and such nice fish. Island-seals are the largest, and so called, because they harbour in the little islands about the coast, and prefer those that are uninhabited and desolate, in order to be quiet and at rest. The Greenland are as large as the island-seals, but yet are thought to be of a different species. They arrive annually in the month of December, especially about the northern parts of the country, and generally stay till May, at which time those that escape

* Mr. Anderson says, that the saw-fish is so eager in pursuit of the seals, that they will often jump ashore to escape them, and that he has been told, that the sea-bull's head is like that of an ox, and body and legs like those of a seal, and that their bellowing makes the land cows mad, or to run staring after the sound.

the Icelanders depart. They come in great numbers, and are caught in nets in some of the bays and creeks where they harbour. Twenty or thirty nets, each full twenty fathom long, are so ranged like a wilderness or decoy, that they cannot well escape, but must be caught in some of them. When the people draw their nets, they sometimes find two hundred of them, and seldom under sixty, each of which they value at two rixdollars, they yield a deal of train-oil, and their skins are very fine. In the district of Oefjord, the inhabitants seldom use nets, but kill them with a harpoon, at which they are very dextrous, and get a great many. They can take their aim at forty or fifty yards distance, and throw a harpoon fastened to a line, and hit their mark. The Greenland seals are ten foot long, and few under four. I don't find that they appear in any other part of the island, perhaps they may westward; but what I have related is certainly true. The island seals are caught in abundance about the uninhabited islands, where they think themselves secure. Several men go together for this purpose to these islands, where they watch them when they come ashore to bask themselves in the sun. As soon as they perceive them laid out, they fall upon them with clubs, and knock them down, often to the amount of a hundred at a time. In the same manner they kill the land seals, which are not near so plenty as the Greenland, though met with all round the island. Such as are taken southward are generally shot with a gun that carries a great way. This is an article that ought not to be omitted in a genuine description of this island, the seals that are caught about it, being of great benefit and advantage to the inhabitants.

C H A P. LXXI.

Concerning fresh water fish.

I SHOULD be tedious, were I to enumerate the many rivers that abound with salmon in this island. In the northern Oefjord, Skagefjord, Hunnevatns, Borgefjord, Guldbringe, and Arnes districts, vast quantities of salmon are taken, as also in other places, but not in such abundance. It is a general remark, that where rivers run from the fresh water lakes in the

country frequented by trout, there salmon usually go up from the sea *. It is well known, that the salmon always go against the stream, and against any water-fall, and will jump to an incredible height over the falling current. Their way of catching salmon, is by a kind of machine, which they call salmon-chests, with covers, locks and keys. These are put in the middle of each arm of the rivers that run to the sea. The river is stopped up on each side of the chest, to prevent the salmon getting by, and on the side of the chest that turns to the sea, there is an aperture big enough for the largest salmon to pass through. Pieces of hoops are nailed close to each other on the inside, and about the edges of the aperture. They are sharp-pointed within the chest, and are made pliable, that the salmon may easily bend them open, to make their way in. By their elasticity, they spring together again when the salmon enter, and it is impossible for them to get back, the points of the hoops turning against them, and keeping them confined, till those that are on the watch come and open the cover, and take them out alive †. In the river Heller, and in other small rivers, they use nets for catching them, which they do in great plenty, by reason of the shoals of them that are met with in various parts of the island. Besides salmon, are vast quantities of trout, and of three or four different sorts in the lakes of Myvatne and Tingvalle, which are thirty or forty miles in circumference. Of this delicate fish they have such abundance, especially in Myvatne, that they dry and make flat-fish of them. They are exceeding good this way. Some salt them, and in some places there is such plenty, that the people live upon them all the year round, dressing and making them palatable several different ways. I have eat very fine eels here, but the Icelanders in general, having an aversion to them, never trouble themselves about them. It is not therefore known whether there be any great quantity. I do not think there are

* Mr. Anderson says, that near Holm in Ellera by Kleppee, as well as in other deep rivers, and where the water falls from the rocks, there are always salmon. Our author calls this river Heller, and says it may be always forded, and that there is no strong current or water-fall in it.

† He also says, they catch salmon in what they call chests, which are laid across the rivers. These chests are made of lathes nailed together, through which the salmon can make shift to pass, but cannot return.

other sorts of fresh water fish in Iceland; but as these are the nicest and most delicate we have in Denmark, I thought them worth notice, and of great consequence to Iceland.

C H A P. LXXII.

Concerning snakes.

NO snakes of any kind are to be met with throughout the whole island*.

C H A P. LXXIII.

Concerning insects and vermin.

NO country on the globe is less troubled with insects and such sort of vermin. Spiders there are a few, but beetles and horse-flies are scarce known. The only troublesome thing of the kind are gnats, which are pretty large, and in great numbers in the northern district, and coldest part of the country, especially about the lake Myvatne, which from thence derives its name †. They torment the people as well as the cattle, and travellers are obliged to hang a piece of gauze over their face to keep them off; for their sting smarts to a great degree. This proves that the cold is not too severe for such small insects to breed and live in. The northern district abounding more in wood, gnats are more frequent there, chiefly by the side of rivers where bushes grow. I before observed, that where fish is cured, a great many flies will gather about them, when they lie out to dry. No other sorts of insects are met with. When much dry weather has happened, and it afterwards rains, worms will appear in abundance, crawling about the ground, as in other countries. Another sort of worm appears in very rainy weather, which as the inhabitants imagine, falls with the rain ‡. It is

* Mr. Anderson says, it is owing to the excessive cold that no snakes are found in Iceland.

† The same Author says, that this country breeds but few insects on account of the long and excessive cold, and for want of trees and bushes; such as it does, are chiefly horse-flies, which he tells us lay their eggs in the nostrils, and the innermost edge of the *Foramen ani* of cattle, where they are hatched by the natural heat of the animal.

‡ He also says, that when it rains, so many rain-worms, *Lumbrici Terrestres*, appear, that people think they come down with the rain.

green,

green, and in shape and size like a silk-worm. When about half grown, they hurt the grass very much wherever they fall. However, they are not common, and it is but a little spot of ground they occupy.

C H A P. LXXIV.

Concerning mice.

THERE are a great many mice in this island; for as all are obliged to lay up a stock of provision in their houses, the mice find sufficient store. The merchants, who leave the factories in the winter, lock up their houses during that time, and at their return in the spring, find by their provisions, that they have had many guests, their tubs of flour being partly emptied, and their dried fish gnawed and eaten by them. Undoubtedly, they can endure the cold; for no fire is kept all the time in these houses*.

C H A P. LXXV.

Concerning the sun when above and below the horizon.

IN the northern part of the island, taking in the divisions of Hunnevatns, Skagefiord, and Oefiord, the sun is not seen constantly above the horizon at any time. This is only perceived

* Mr. Anderson says, very few mice can live in Iceland, upon account of the piercing cold and scarcity of nourishment in the ground, where they presently dig into sulphur, or come against a rock. He relates a story told him by a person who averred that he had several times made the experiment, and found it matter of fact. This was in the church-yard of the ancient cloyster or abbey of Widöe, which has this peculiar property, that as soon as a mouse is let go upon the ground, it instantly expires. His opinion in the case is, that the sulphureous vapours, by exhaling stronger here than any where else, must be the chief cause of the death of the animal, and so much the more, as the ground all over the island is nothing but sulphur, with a lay of mould over it, and this church-yard impregnated perhaps therewith in a stronger degree than any where else, which may easily be discovered on the spot, either with a candle, if not too dangerous, or by digging in the ground and smelling to it. Our author turns this story into ridicule, and assures us, there is no sulphur in the ground at Widöe; but that it is one of the finest and most fertile islands about Iceland, and that if there was sulphur, it could not possibly bear such fine grass as it does. He says, that by smelling to the ground, he could not discover the least odour of sulphur in it. Besides, it was formerly the residence of some dainty monks, who, as experienced in the art of indulging themselves, would have made choice of a wholsomer and more pleasant spot to reside in, if this did not serve their purpose.

in the extreme northern points at cape de Nord, and at Lange-
ness, where the sun is seen, some time before the summer sol-
stice, and some time after, perpetually above the horizon, and
in appearance about the height of a man*. In the south part
of the island we reckon the sun's altitude at the winter solstice,
about two degrees above the horizon, including refraction. I
was not at the northern part of the island, but some learned and
ingenious men, who lived there many years, informed me, that
in the shortest day in winter, they see the sun one hour above
the horizon, and have four hours day-light, besides twilight.
This is the actual case to the northward; but not in the most
extreme northern points. In the divisions of Strand and Ise-
fjords, the days are shorter, but not so short as to be destitute of
refractionis beneficio. An hour and a half, or three quarters twi-
light, continue during two entire months; but no such place is
known southward, the sun at the winters solstice being seen three
hours above the horizon, and the days full six hours long; for
crepusculum matutinum & *vespertinum*, or the break of day in
the morning, and twilight in the evening, continue much longer
in Iceland than in Denmark; because the sun is a great while
before it rises and sets, going a long way, as it were, close un-
der the horizon before it entirely disappears, that is, the circle it
describes under the horizon, being more oblique than in Den-
mark, or more southern parts, where it rises and sets more per-
pendicularly, and therefore makes the *crepusculum* of a shorter
duration †. Consequently, the sun's drawing near to the hori-
zon,

* Mr. Anderson says, that on the north side of the island from the middle of June, to the latter end of July, the sun is perpetually above the horizon, and to appearance the outer ring is upwards of a man's height from the surface of the sea above the horizon.

Our author argues against this assertion, and says, that even illiterate people know that the sun's altitude is the same at an equal distance from the tropic on either side; and as the sun enters the tropic the 21st of June, there are at most but six days from the middle of that month; but from the time the sun enters the tropic to the latter end of July are forty-one days, consequently there must be a great mistake in this account.

† Mr. Anderson says, that in December and January, the sun is entirely invisible, except on the high rocks that turn to the sun, where a little light may appear, and this undoubtedly only in consequence of *refractionis beneficii*, or a twilight of one hour and a half; or three quarters. Our author observes, that here is a like mistake in regard to the time of the sun's being invisible, as was before about the time of his being constantly above the horizon. The sun cannot be so many days invisible under the

zon, and leaving it much quicker than where the circle is more oblique, must be the reason why the days or day-light in Iceland, is much longer in proportion to the time of the sun's being above the horizon than in more southern parts. Although I knew it to be so, I could not imagine it had so great an effect as I experienced, being surpris'd to find the days almost as long here at the winter solstice as in Copenhagen, though the sun was not so long above the horizon. Hence it may also be accounted for, why the days increase faster in Iceland, and particularly after the days and nights are equal. In the beginning of May, hardly any night passes but one may travel and do business as in the day-time, and in the middle of May, one may see to read all night, and that even in the south part of the island. Northward it begins sooner, and is much lighter.

C H A P. LXXVI.

Concerning the aurora borealis, or north light.

THE north light appears in every respect, after the same manner it does in Denmark, except that it is more frequent, and happens without any rule or order, not depending of the days lengthening or shortening*. Neither does it appear just upon the sun's setting; for I have often not observed it till eight, nine or ten o'clock at night. Sometimes it has lasted only an hour, sometimes longer, and sometimes it has appeared by intervals all night; but not always so. It appears as bright as in Denmark, and is very serviceable to travellers, but not sufficient light to do any labour or work by †. Nothing invariable is ob-

horizon as he is visibly above; for the refraction makes the sun appear longer above the horizon in the summer than he actually is, and *vice versa* to appear fewer days under the horizon in winter than he ought. Notwithstanding Mr. Anderson makes the sun remain half a month longer below the horizon in winter than above it in summer, which is quite against the nature of the thing; for there may be places where the sun is above the horizon eight days constantly at the summer solstice, but never quite invisible at the winter solstice, and both from the refraction which we know is very strong at the horizon.

* Mr. Anderson says, as the days decrease in Iceland, the north light begins to appear, and increases in duration and brightness as the days decrease, lightening all night long in the winter, and gradually disappearing as the days begin to increase.

† The same Author says, when the sky is clear of snow, rain, and clouds, or when a bright star-light sky appears, the sun being set, and only twilight, then the north light is seen, which lasts all night, flashing and dancing so bright, that it does not only resemble the light and brightness of a full moon, but even surpasses it.

serviceable

servable in the shooting forth of its rays. I have as often seen it shoot forth from the south as from the north, and it often appears in a bright broad bow from east to west, and will remain so a good while. Sometimes it plays all over the sky, shooting all its rays to the zenith, and seldom fixes in clear and distinct bows to the south and north, as it frequently does in Denmark*. The Icelanders have no notion of its foretelling what weather will happen, farther, than if coloured and playing about, they then think it will be windy; if still and bright, they expect fine weather; and if the bow remains the whole evening in the south, and afterwards in the north, they imagine either rain or snow will fall; but these conjectures are liable to great mistakes, neither do they depend upon them. I cannot say, that the Icelanders think the north lights more frequent now than formerly, though it is thought so in Denmark †. The learned Mayran has published an excellent treatise on the *aurora borealis*, or north light.

C H A P. LXXVII.

Concerning thunder and meteors.

IT thunders very seldom in Iceland. In the north thunder sometimes happens in summer; but in the other parts of the island, not till about Michaelmas, and very rarely in winter. During the whole time I continued in Iceland, I heard it thunder but once, and this only three or four claps about noon, in the middle of June. I allow it may have thundered in other parts of the island that year; for Iceland is so large, that the thunder cannot be heard every where; so that upon the whole,

* Mr. Anderson says, the north light always shoots from the north or north-west, to the south, and sometimes fills the whole sky.

† He also asserts, that as far as he can see, it is plain and demonstrable, the north light can have no other origin than the strong sulphureous vapours, which readily take fire, and must be very high in the air, because seen at such a great distance. In warm climates, such vapours take fire and vanish in lightening before they get to any great height; but here near the north pole, on account of the great coldness of the earth, they ascend to the uppermost part of the atmosphere, where being collected, condensed, and compressed, at last by frequent collisions take fire, and then like a fine piece of fire-work, dart their rays about. Our author says, that the learned Mayran does not derive the cause from the bowels of the earth, but traces it much higher.

it is plain, that not much thunder happens in this island, and that when it does, it is neither peculiar to summer nor winter*. The thunder at Copenhagen is by far stronger, as I am credibly informed by those that have heard it several times in both places. *Ignis fatuus*, *ignes lambentes*, and such like meteors, are seldom seen in Iceland, the air being in general too clear for collecting them †. It is true, I have seen stars shoot, but not so frequently as at Copenhagen.

C H A P. LXXVIII.

Concerning parhelions, or mock suns.

I NEVER saw but two parhelions in Iceland, both which happened in the month of April, and were succeeded by fine weather ‡. The first was in April 1750, at which time two coloured suns appeared about the sun, and were attended with mild thawing weather. The second I observed in April 1751. Both were bright in the forenoon, and one having passed before the sun in the ring, vanished in the afternoon. The other was afterwards seen only behind the sun. This parhelion was succeeded by fine mild and calm weather, as it had been before for some time. I never saw any other in Iceland. I have been told by some, that they appear but seldom, and when they do, it is most commonly in the spring of the year, and the people as well as in Denmark, think they bode bad weather which does not always follow more in one place than in the other.

* Mr. Anderson assigns the same reason for there being but little thunder in Iceland in the summer, as he does for the *aurora borealis*; but adds, that it is by far more violent in winter.

† The same author says when it snows, there appears in particular a number of *ignes lambentes*, &c. Undoubtedly in a country where they deal so much in train and fish, there cannot want matter to produce these appearances. Such flames and lights as they appear to be in the dark, adhere to all their clubs and sticks, masts, sails, and oars, hats and caps, or any thing else. The poor people, simple and stupid as in most countries, are frightened by this fire, though they cannot light any thing by it, or ever saw an instance of the kind. As soon as they take notice of it, they run into their houses, shut the doors, and are sorely afraid lest it should get to their hearths, and incorporate with the other fire, and so set the whole building in flames.

‡ He also says, that about the latter end of summer, parhelions often appear, which are succeeded by stormy and bad weather, as the people usually prognosticate.

C H A P. LXXIX.

Concerning the seasons of the year.

THE meteorological tables hereto annexed, plainly shew when the seasons change, and from them it may appear, that in the year 1750 and 1751, the spring-season was very favourable*. Grass with other plants began to shoot both these years in the middle of April. The autumn was also very favourable, and as fine and as mild as ever I saw in Denmark, which I was very much surpris'd at. The same happened in 1749. The first nights frost was then not till the 29th of October. The day following there was some snow, which only fell that day, the weather afterwards becoming for some time rainy. In 1750, the 9th of October, was the first of frost and snow in the night; but the same ceased in a few days, and the weather was very mild again for a considerable time. In regard to the spring, my observations shew, that on the 15th of April 1750, it began to be clear and calm, and fine spring weather ensued, just as in Denmark. In 1751, it began about the middle of April, and continued fine and mild, the grass springing up in many places the beginning of the month; and indeed, finer weather could not be wish'd for. The thermometer all the year round will confirm how good the seasons are, which I could not have imagin'd, had I not known it by experience. My observations will also sufficiently demonstrate, that the transition from summer to winter is not so sudden, but that there is an intervening spring and autumn. The Icelanders reckon their summer from the Thursday that falls between the 18th and 24th of April, and their winter from the Friday between the 18th and 24th of October. They may compute so; but nature will not hold to that standard; heat and cold scarce ever admitting so sudden a transition; and thus it is their spring and autumn must happen when the days and nights are equal, which time they themselves often call by the name of spring and autumn. Though the Ice-

* Mr. Anderson says, the Icelanders have but the two seasons of summer and winter, which suddenly change from one to the other, without any intermediate milder weather, as spring or autumn.

landers reckon their seasons in this manner, which makes summer and winter, except one day, of equal length; yet it must be allowed, that the winter is much longer. It is so even in Denmark, and of consequence should be of greater continuance here. It snows and hails sometimes in the summer, which it equally does in Denmark. How great the heat is in summer, may be determined by the meteorological observations. It is certainly very warm sometimes in the summer, but I cannot say that it ever is so sultry, that there is a necessity of throwing off all cloaths. When the days were hot, I found the nights so in proportion, which at that time cannot be very cold, the sun being but three hours below the horizon *. A little snow or hail may happen to fall in the summer, but it does not come of a sudden, and may be perceived some days before, by the coldness of the air, which is also observable in Norway and Denmark. A like quantity of snow does not fall every year, some years being very snowy, and others not: neither does it snow all over the island with one and the same wind, each place having a particular wind that brings snow and rain †. The two winters I was there, especially the last, but little snow fell in the south part of the island, and not so much as commonly at Copenhagen. It hardly snowed above two days together, and in frosty weather perhaps not for a fortnight or three weeks. When it thaws, the snow is presently gone, and the cattle are turned out to feed, and even find some nourishment on the ground, during the whole winter. In the north the snow is in much greater abundance, and sometimes falls very thick and heavy, burying the houses, especially where they are situated among rocks, (from which the snow tumbles down) and making all the lower parts level. Though this sometimes happens in some few places, it cannot from thence be inferred, that the whole island is in this condition, it being evident, that to the southward, and

* Mr. Anderson says, it is so hot in the day time in summer, that the people are obliged to throw off all their cloaths; and in the night so excessively cold, that they cannot cover themselves sufficiently; and in the morning, he adds, all the country round is seen covered with snow.

† The same Author says, that vast quantities of snow fall in the winter; that it snows most commonly with easterly winds, and that the houses and fields, &c. are all covered with heaps of snow.

other parts, the like seldom, or ever happens. In the north, a north wind generally brings snow along with it, as does also the Ice that comes floating from Greenland, which besides occasions a sharp nipping cold, and often very sensibly felt in the south. As the north wind brings snow to the northward, so in the same manner other parts of the island have their particular winds, which blow from the sea. Hence it cannot be properly said, that such a wind occasions such weather all over the island; because every part of this great island having something peculiar to it, it is not so easy to give a genuine and faithful description, which requires a very strict enquiry, and thorough examination. In the months of February and March, very severe weather sometimes happens, and often to the north in April*. But generally speaking, the month of April is very mild, and though the preceding were very severe, which may be seen in the meteorological observations, sharp frosts having existed from time to time in the winter months of 1751, that is, in January, February, and March, yet April was very mild and fine. It may also be seen, that in the year 1750 and 1751, south and east winds blew chiefly in April, but very little north wind, especially the last year; and what is most to be wondered at is, that of the few north winds that blew, scarce any were attended with frosts, except in the night time, and these but inconsiderable.

C H A P. LXXX.

Concerning the weather.

MANY days, and sometimes weeks, pass without any perceptible brisk gale of wind, the weather being quite calm and serene, as the meteorological tables may shew †. The wind is changeable here as in other countries, but not generally so high; though I will allow, that the weather is frequently

* Mr. Anderson says he has been informed, that they have most excessive cold weather, particularly in April, as then north winds constantly blow, and bring with them more and more sensibly piercing and cutting icy particles from the more remote icy mountains under the north pole.

† He also says, that the wind in this island is never settled, but continually changing and veering about.

more stormy than in Denmark, which is partly owing to the situation of the mountains. It may be calm in one place, and perhaps ten or twelve English miles farther, exceeding tempestuous *. During my stay in the island, two very great storms happened. When the weather is fine in summer, the night is frequently ushered in with a land-wind all over the island, and between nine and eleven in the forenoon, generally comes a sea breeze, which lasts till five in the afternoon. These land-winds and sea breezes, are in no respect tempestuous, neither are they attended with heavy rains, or other inclemencies of the air. During the land-winds, the weather sets generally fair; but the sea breezes often bring with them rain or snow, according to the time of the year. Thus a south-east, or south-west wind usually brings rain or snow to the southward, whilst to the northward there is fine, clear, frosty, or dry weather; and *vice versa*, a north wind causes snow or rain to the northward, whilst the south parts enjoy fine dry weather. At Besssted some high winds have happened as well with north and north-east winds, as with south-east.

C H A P. LXXXI.

Concerning the ebb and flood, or the tides.

THE ebbing and flowing of the tide, is the same as in other countries, that is, twice in twenty-four hours, and changing every six. The tides are always highest about the new and full moon, and particularly when the days and nights are of equal length. The ebb and flood are called by the Icelanders *flood* and *fiöre*. It seems as if it were a rule in Iceland, that the wind, rain, and snow, should, each at times, increase with the flood in this manner, that if the wind rises a little at ebb-tide, it grows stronger and stronger with the flood; and though it may seem to be allayed when the tide is out, yet it generally rises again on the return of the flood, and gradually increases as the water swells: but if it be still, when the tide is coming in, it

* Mr. Anderson says, that a north-west wind brings fine weather, at least to the southward, and on the contrary, a south-west bad weather; but a south-east, very great storms.

most commonly continues so. With regard to the height of the tide-water, I have observed, that at the highest spring tides it rises to sixteen feet, and at other times to about twelve.

C H A P. LXXXII.

Concerning the sea water.

THE sea-water round this island, at least in some places, is much saltier than in other countries, and there is good reason to think so, by its leaving in summer the rocks incrustated with salt, when the tide is down, and the moisture evaporated. The country people scrape it off with knives, and in holes in the cliffs at low water, find it sometimes in great abundance. It appears by ancient deeds of donations in catholic times, to the clergy of estates and privileges, that among other things, the emoluments arising from salt-works were assigned them: even certain tracts of land, as Langenefs and other places, destined for the same purpose, have been annexed to the bishopric in the north, and still belong to it. To this may be added, the experiments made to refine salt to greater advantage than in Denmark, which sufficiently demonstrates, that the sea water here, contains more salt than is usual in other places. It never freezes to such a degree in Iceland, so as to cover the sea about the shores with ice: the reason is, because the sea runs almost every where quite up to the land, which, together with a considerable ebb and flow, so keeps the water in agitation, that it cannot admit of being frozen, even by the most intense cold. It is true, notwithstanding that in small creeks and bays with a narrow entrance, the sea water is often quite frozen up, chiefly upon account of its being sheltered by the land from the boisterous waves of the ocean. Hence it is, that greater quantities of sea water are frozen in the south than in the north; because abounding more in creeks and bays; but it has not been known in the memory of man, that the sea was ever covered with ice, so as to hinder the islanders from going out to fish. The only ice that incommodes them in the north, and hinders them from putting out to sea, is that which comes floating from Greenland; sometimes

spreading itself many miles about the north coast, and in appearance, like another country joined thereto, and sometimes filling the eye with the resemblance of mountains and dales, with live animals, flying and clambering up and down, as falcons, bears, foxes, &c*. This ice occasions excessive cold, and thick fogs, in the northern parts, which also in some measure extend to the southern; for when a cold spring happens, the inhabitants immediately conclude, that great quantities of Greenland ice lie to the northward; and hence it is, that those who have been only in those parts, may imagine it is so all round the island.

C H A P. LXXXIII.

Concerning the climate of Iceland, and the constitution of the inhabitants.

FROM my meteorological observations, and what I remarked relating to the weather, it is plain, that Iceland is a healthy country to live in. I can partly avouch by my own experience, that the air and weather of this country will agree better with a stranger, than the air and weather in Denmark would with an Icelander †. The summer's heat in Denmark would be rather too much for him, though not much hotter there than here; whereas the summer in Iceland would be quite agreeable to any foreigner, the air being neither thick nor sultry, nor the winters in general colder than in Denmark. The only difference I find between Denmark and Iceland is, that in the latter, stormy and windy weather is more frequent. But it cannot from thence be concluded that the country is unhealthy; rather the reverse should take place, as by these winds and storms the air is purified, and rendered more wholesome ‡. The Ice-

* Mr. Anderson says, the sea is saltier than elsewhere about Iceland, which he attributes to the excessive cold that freezes so much of the sea-water without the salt into vast flakes. The high winds by carrying away the better part of these flakes, whatever is left behind must of consequence abound with much salt; therefore the sea-water about Iceland may be deemed saltier than in other countries.

† The same Author is of opinion, that Iceland is a healthy country for the natives, and those that from their early youth have been accustomed to the air and weather.

‡ He also says, they live to a great age, and many of them to a hundred and upwards, enjoying life cheerful and undisturbed, and being very little acquainted with the weaknesses and ailments that attend old age in other countries.

landers are endowed with good bodily strength, by being inured to hard labour from their youth, but not from childhood; for whilst children, they are kept as tender, and are taken as much care of as the children in Denmark: but when the lads are big and strong enough to row a boat, and to go a fishing, they must then enter upon a scene of toil and labour, which is very hard, especially in the fishing seasons. Till they attain the sufficient degree of age and strength for being capable to go out a fishing, they are kept within doors, as are also the women, and therefore cannot bear much cold or hardship. Hence it may be a subject of surprize, how the men afterwards are able to suffer so much, not being brought up thereto from their infancy. The Icelanders, as I said, are endowed with good bodily strength; but this strength continues only from the age of twenty to fifty, at which period it is usual with them to fall into a decay, by reason of the various disorders that come upon them, and at last put an end to their lives. Consumptions and asthmas, the reigning disorders among them, are occasioned chiefly by the many hardships they endure at sea in fishing, and their carelessness of preserving their health. In the latter respect, they do not mind jumping into the sea to save their boat from running aground, or receiving damage against the rocks, and frequently keep on their wet cloaths, even in frost and snow, without changing any thing. It is very rare to see any one in this island live to a hundred years, or even to eighty. Some may live to that age and enjoy health, but the generality are weak and sickly in their old age, and very few turned of fifty, can boast of much health. Coughs and consumptions so afflict them, that none hardly ever wear as well, or have such florid complexions as the people of Denmark. In the fishing seasons, they are obliged to toil very hard; and at other times they can do nothing, being several months in the winter quite idle. Thus by not being constantly in exercise, the return of labour becomes too heavy and too fatiguing*. Moderate exercise contributes to health, but too hard labour weakens, wastes and shortens life. As high living

* Mr. Anderson says, they lead their lives in ignorance and simplicity, without any great care, living on a simple, mean diet, and always employed in bodily exercise.

breeds diseases, and makes people old before their time, so likewise does a too poor and mean food, which cannot yield sufficient nourishment to recruit wasted spirits and strength. Plain and substantial food moderately used, strengthens the body, and is productive of long life; but these people cannot even well afford that, being mostly poor, and some of them having many children, and a wife to provide for. The women are not used to any heavy exercise, or hard labour; for excepting the hay-harvest, their other work is chiefly done by them sitting; such as the cleaning and combing of their wool, spinning and knitting of gloves, stockings, &c. weaving a kind of coarse cloth, and making their cloaths, shoes, and such work, as requires no great bodily strength. As it commonly happens in most countries, that peasants and labouring people have the best teeth, so also this is remarkable among the poorer sort of Icelanders, who cannot spoil them with high seasoned things, and other dainties, being obliged to content themselves with a coarse loaf of rye, which scowers their teeth, and leaves them in no want of brushes or powders for this purpose*. The same effect they experience in their dried and well beaten stock-fish. The women are delicate and chilly, and though their work requires no strength, excepting the hay-harvest, I do not think, that they properly can be called strong and healthy. In many cases they stand in need of a physician. They have sometimes hard labours, and many of them die in child-bed for want of the assistance of sensible and experienced midwives †. In their best times, they generally keep their bed unmoved eight days, and many must even keep it longer, and suffer a great deal by the ignorance of their midwives; and it is not uncommon at those times, for a poor woman to be deprived of her health for ever after.

* Mr. Anderson says the Icelanders in general have fine white and sound teeth.

† The same Author says, the women are as sturdy and as strong as the men, and that they have generally easy labours, and bathe themselves as soon as it is over, and go about their usual business.

C H A P. LXXXIV.

Concerning the prevailing diseases in Iceland.

FROM what has been observed in the foregoing chapter of the men, when turned of fifty, being troubled with hectic disorders, and the women subject to very hard labours, which are attended with many accidents; it may appear, that the Icelanders, as well as the rest of mankind, are liable to various diseases. They call most of their diseases *landfarfot*, which answers what the common people in Denmark call by the general name of *fevers*; the *landfarfot* being properly not very different from a fever in its symptoms. *Spedalskbed*, or the leprosy, another disease, which many are infected with, is for the most part hereditary, but not commonly infectious*. This is not the disease which goes by that name in Denmark, but rather a scurvy, of which several have been cured by a medicine discovered by a learned Icelander. Cholics, consumptions, and hypochondriac disorders, are more epidemical among them, and would make good work for a number of physicians, if the poor people could afford to employ them. The leprosy is the most prevailing disease, which continues, as it were, rivetted in them, till they are otherwise worn out with hard labour and age. As it is hereditary, I don't apprehend that their diet and manner of living, is the cause of it; for they are not so uncleanly a people as they have been represented by some travellers; and though they are afflicted with various disorders, it cannot be denied, but that they are sound in body and constitution, which are not impaired, but by their many hardships and great labour, which at last expose them to those complicated disorders †. When the Icelanders are

* Mr. Anderson says, that fevers and other diseases are seldom heard of in Iceland, and that there is hardly such a thing known as a physician or surgeon, their deficiency being abundantly compensated by the many excellent herbs and wholesome mineral waters, which the Icelanders continually drink without thinking of their salubrious qualities. To these may be added, the constant winds that cleanse and purify the air; the clear, dry and long cold weather, and the innate robustness of the inhabitants, together with (as it has been before observed) their excellent digestion.

† The same Author says, that their common diseases are the cholic and leprosy, which are easily accounted for by their coarse and filthy food, and their nasty way of living.

taken ill, they submit themselves to God, and leave nature to help itself, few among them having any medicines, or knowing how to apply them. However, when they feel sickness, they always take some boiled milk made into whey, and set aside the use of tobacco and spirituous liquors, except the patient be so habituated to the same, that he cannot do without them*. The reasons for their not having physicians, may also take place with regard to surgeons, though they frequently stand in need of such, upon account of the misfortunes that sometimes befall them from broken limbs or the like. Their case in these circumstances must be very deplorable, so much the more, as scarce one knows how to apply a proper remedy, for want of which they often perish, or after enduring a deal of pain are miserably cured †. They are not so robust and hardy that nothing can hurt them; for they are human beings, and experience the sensations common to all mankind; and the severe cold and sharp air, are of no service to any of the external hurts and sores they may receive.

C H A P. LXXXV.

How they bring up their children.

WHEN children are put to the breast, they are let to suck as long as is usual in other countries; but the far greater part are brought up by hand. The Icelanders are as tender and as careful of their children, as I ever saw any parents. They have cradles for them, as in other countries, and these of two sorts, some that rock, and others that swing. They give the children the best milk, not skimmed, and never when turned into whey ‡. The milk they are taught to suck out of a horn, in the manner they do in Denmark, to bring them up by hand.

* Mr. Anderson says, if any of them are taken ill, milk only warm from the cow is administered to refresh them, besides a little tobacco to chew, and a large dram of brandy to put their stomach in order.

† The same Author says, they are so hardy and robust, that they do not regard a little hurt; because the greater part of their external hurts soon heal of themselves, probably by reason of the cold and clear air.

‡ He also says, they set their children on the ground, and by them a little vessel with whey, into which they stick a pipe, tied round with thread, or a thick quill, and a bit of bread, if they have it, to strengthen the child: thus when the child wakes, or shews signs of hunger, they turn it about to the vessel, and put the pipe in its mouth, and let it suck as long as it has occasion.

When they carry the children to church to be baptized, which is sometimes very remote from their habitations, they generally take such a horn or a phial filled with milk, with a rag tied round for the child to suck through*. In this manner they bring up the children with milk till they are turned of a year old, except there is such a scarcity, that it cannot be had, which happens in some seasons of the year, especially among the poor. Besides the use of cradles, as I before observed, they likewise dress them up in swaddling cloaths, as they do in Denmark, and seldom coat them till they are nine or ten weeks old †. The women carefully tend and nurse them, and carry them about in arms, and in all respects, act the part of tender and fond nurses. The children are all straight and well limbed, hardly any such thing being seen as a cripple among them, and I myself never remarked any hunch-backed, lame, or with other defects, from carelessness in bringing them up.

C H A P. LXXXVI.

Concerning their manner of dressing victuals.

THEY generally boil their fish more than is customary in Denmark, and also boil it in sea-water taken along the coast, which is consistent with reason, and as far as I know better. All their victuals they eat without salt, as before observed, and this too by choice; for though many can afford it, they do not use it for this purpose. Their chief sauce is butter, of which they consume great quantities ‡. They also over boil their meat,
of

* Mr. Anderson says, when they carry their children to be baptized, or to any distance in the country, they dip a rag in whey, and put it in the child's mouth to feed on; but when the children are three quarters of a year old, they make them eat the same food as they do themselves.

† The same Author says, that cradles and swaddling cloaths are things not known to the Icelanders: for as soon as the children are a fortnight old, they put them in a jacket and trowsers, and let them lie crawling on the ground, till they grow big enough to get up and walk. In this miserable manner they are brought up, and hardened from the womb, though no such thing as a cripple is seen among them, or at least very rarely. Hence we may plainly see, how friendly nature alone will operate where a true confidence is reposed, and she is left at liberty; but our Author says, that if there was not proper care taken of them, accidents and hurts would be attended with the same ill consequences as in any other countries.

‡ He here again alledges, that their food is very coarse and mean, their vessels very nasty, and their manner of dressing still worse, and not fit for human creatures.

of which they have plenty, and eat more by far than the Danish farmers, or others of the like sort in many countries. In the parts that do not abound much in cattle, they exchange fish for flesh. Undoubtedly here may be found several very poor, as in all countries, that cannot afford to stock themselves against the winter, according to wish; but the generality of the farmers kill ten or twenty sheep for their winter's provision, besides some neat cattle. All their other victuals are consumed fresh, but these they preserve in the manner as has been described in the foregoing part of this treatise. I before observed, that in some places they have good turf, in others a deal of timber, which comes floating on the sea to them, and in others little thickets; but almost every where bushes, furz and heath; so that but few places are destitute of some sort of fuel, and these particularly are such tracts of land as project into the sea, or are situate on the extreme part of the sea coast. Here the inhabitants may be under some difficulty for want of firing, and the poor must make shift with sea-weeds, and dried fish-bones*. However these cases are extraordinary, and do not seem as if they deserved to be mentioned. When they kill many sheep together, they most commonly pickle the heads in their fyre, a liquor already described, and as tart as vinegar. These heads are nicely scraped, and boiled before they pickle them down, which is done in the same manner as in Denmark †. Afterwards for use, they fry them in a pan. I do not doubt but they may taste tolerably well. The Icelanders are very fond of any thing that is fat, and some of the poorer people will eat the melted tallow or fat of their young

The ordinary food among the greater part is a bit of meat, boiled with the heads of cods, and other fish, which they cut off; though sometimes they afford themselves a couple of whole cod, which they throw into a pot, pour some sea water on them, and when boiled a little, take and gobble up without any salt or spice for a relish.

* Mr. Anderson says, they eat neither flesh nor fish while it is fresh caught or killed, but let it lie by till it begins to stink, otherwise it will not quicken their unpalatable tongues. The fuel with which they dress their victuals, makes the taste still more nauseous, few having turf, and fewer wood; so that in general they burn fish, and other bones, over which they pour the sediment of their oil to make them burn the better.

† He also says, their most delicate dish is a sheep's head, which they only singe the wool off, and then put in the hot ashes to bake. When done enough, they eat it skin and all to the very bones. Our author says, nothing is wanting to this relation, but their eating bones and all, to make downright dogs of them. Mr. Anderson adds, that they are such vast lovers of butter and grease, that they will eat the very blubber of the whale, and the oil boiled out of the liver.

heifers

heifers or sheep. These poor people having been represented by some travellers and authors, as living in a very bestial manner; I shall here briefly give an exact account of their way of living, and ordinary food.

A great quantity of fresh fish is eaten all over the country, except in the parts that lie too remote from the sea, and the fresh lakes, of which there are but very few, as I before hinted. The quantity of fish dried or cured for keeping, is little in proportion to the great variety of different sorts they get, and must eat fresh. The fish they dry and cure different ways, is chiefly for exportation, and the residue laid up for home consumption, consists mostly of such fish as have changed colour, do not look so clear and white, and are touched by the frost, though in the main, full as well tasted, and as fit for use. They boil their fish generally too much, and use a great deal of butter. The dried or stock-fish, which they eat chiefly in winter, when they cannot get fresh, is well beaten before boiled, and cooked up with a good store of melted butter. They also much use for food the milk of cows and sheep, both raw and boiled, and they prepare of their cows milk their common drink called *fyre*, and in the summer make great quantities to serve them all the year. The curds and sweet milk they feed their servants with, as well as with fish, and also allow them butter. They thicken up their milk with barley, or other grain, and with flour make hasty pudding. They put barley, or other grain, in their broth, for want of herbs and spices. In some places they have cabbage, which they boil in their broth. They use barley in almost all their victuals, and particularly for making a sort of hasty pudding. Their fresh meat they roast or fry, but always first par-boil it. Some make use of peas, and rye-meal, to make a dish for the servants. Whatever they boil or fry in their stew-pan, is always quite fresh, and they rather over boil all their fish and flesh-meat, because it goes very much against them to eat any thing that is not thoroughly done. Their kitchen utensils they generally have from Copenhagen. Their pots and kettles are of iron, brass or copper, which they keep neat and sweet. All of them dress their victuals very clean, except some few, who, no doubt, are as nasty as elsewhere, but a whole country should

not be vilified, much less involved in the same scandal on their account. Those that have been abroad, and at Copenhagen, dress their victuals in the Danish manner, and live as nice as folks do there; others learn from them, and in all other respects, every one lives according to his inclinations and circumstances.

C H A P. LXXXVII.

Concerning the scarcity of bread.

AS no husbandry is followed at present in Iceland, bread must be scarce, and of consequence not so universally the food of the meaner sort as in Denmark. However, it is not so very scarce, but that they may have it, and lay up a provision, each according to his abilities*. I before mentioned the quantity of bread and meal imported into each harbour, which is from 400 to 1000 tun † of flour, one third whereof is baked into bread, and though not sufficient for their daily subsistence, yet they cannot be said to be entirely without it. For celebrating feasts, weddings, and publick meetings, they are always provided with bread; and those that have lived at Copenhagen, not doing well without it, take care to have it all the year round. It is no saving to them, in not having a sufficiency of bread for their families: their housekeeping is the dearer for it, and their manner of feeding their servants, &c. is so expensive, that it would not answer even in Denmark. Each servant man is allowed to the amount of ten pounds of dried fish, and three pounds and a half of butter per week: but none are thus portioned except those that are sent on journies, or to the southward to fish. Such as continue at home, have a portion of fish and butter every day, or have fresh fish, and sometimes flesh-meat, broth, peas, and the like. The Icelanders by not having a sufficiency of bread, are obliged to use a deal of dried fish, but not to eat it as bread with other food. This fish is first well beaten, and eaten without boiling, with butter like a piece of bread. Spread over

* Mr. Anderson says, that the greater part of them, not being in circumstances to buy the meal which the Danish merchants import, are obliged to live without bread.

† A tun is eight skiepp, or bushels.

in this manner with butter, it has a very good relish, especially dried trout, whittings, &c. * Some of our Danish civil officers liked it so well, that they used it on their journies, and eat it with pleasure. The wild corn that grows in some places, especially in the district of Skaftefield, though not in any great quantity, makes very good flour and bread. It is very nourishing, and the Icelanders will not exchange a tun of it for a tun of Danish †. It shoots up in deep sand, where no grass will grow. In some places it stands very thin, in others pretty thick, and runs up two foot and a half high. The ears are long, and it grows much like the wheat in Denmark. As the Icelanders have no good mills to grind their corn, they dry it too much before the fire, even burn it a little, which makes the bread blacker than the rye bread is in Denmark.

C H A P. LXXXVIII.

Concerning their drink.

THE Icelanders are fond of clear water; but the water is not good every where, neither are every where mineral waters found ‡. The water that runs from Jokells none drink of, being very thick, black and stinking, as I elsewhere have observed. But though they love water, their chief liquor is fyre, of which in summer they fill up many barrels to last all the winter. Those that keep a good stock of cattle, make it for sale. It is drank at first without any adulteration; but when it grows old, it becomes too sour, and they then mix water with it. This liquor agrees very well with them. As no corn is cultivated in the country, beer consequently must be very scarce, yet it may be had, and those that go to the trading towns or factories about business, are always sure to find some, of which they buy a certain quantity to indulge themselves

* Mr. Anderson says, that instead of bread, they eat dried stock-fish, and such as is not saleable. They only beat it a little, and eat it with butter; but when they have no butter, they take blubber, train or tallow, and spread it thereon.

† The same Author says, there is a wild corn that shoots up spontaneously among the grass, which they make bread of, but foreigners cannot eat it.

‡ He also says, they praise the water that runs from the top of the mountains, which is nothing but the ice and snow melted by the sun.

with

with at home. Some of them lay in several barrels at a time, and make use of it sparingly all the year round. Those that have been at Copenhagen, cannot do without it. They import malt and hops, which they brew themselves, and they may have beer very well all the year round; but for this purpose they must brew every third or fourth week*. Though they have no cellar, yet the beer does not freeze more than it would at Copenhagen, where they have them very good and convenient. The hardest frosts scarce freeze more than the cock, which is rendered pliable, by holding hot coals under it before the beer will run, and sometimes only by setting a pan of coals in the room. Some of the people keep French wine, both red and white, particularly the ministers, who use it for the sacrament. Generally speaking, there is not a more sober people than the Icelanders. I knew some, and even of the more common sort, that do not chuse to drink brandy, and several that drink it very moderately. There may be a few, as in other countries, who are very fond of it. When they come to the factories about business, they then indulge themselves with brandy, and other liquors†. A merchant or stranger, on first coming to these places, may be induced to deem them a drunken, beastly people; and I myself was almost of that opinion, till I came into the country to be better acquainted with their manner of living. It is certain, that at the factories which they resort to but once a year, they drink brandy to excess; for it comes but seldom in their way, and is as great a treat to them, as a bottle of Hungary or Cape wine to a merchant. But as this happens only occasionally, they cannot be called drunkards, much less compared with those that are continually craving brandy, and drink themselves drunk whenever they can lay hold of it. When one considers the small quantity of brandy that is imported for 80,000 people, it is plain there cannot be many drunkards among them. In each factory

* Mr. Anderson says, that by not having cellars, they cannot keep their ale for any time, on account of the severe cold.

† The same Author says, that some of the substantial people among them lay up French wine at the factories for their own use; but as they put it in dirty vessels, and sometimes in those that have had sour whey, and even train oil, without first cleaning them, the wine turns foul and stinking. He adds, that in general, brandy is the liquor they are fond of, and that by it, young and old, men and women, shamefully get drunk.

there

there may be a score of drunken, idle fellows, always begging of brandy, or expending all they get on it; but what are so few to the rest, who are very abstemious, and on their account, should not receive the character of drunkards. I never saw, nor heard of the women getting drunk. When they come to the factories, I have seen them refuse brandy, and instead of it take a glass of mass wine, which is the name they give French wine. Sometimes on taking their children with them to the factory, a father will give his son a drop of brandy, that he may taste something good, as he calls it, in the world; for it is the next precious liquor to wine they know of, and the poor children have no other opportunity ever to taste it*. The generality cannot lay out much on this commodity at the factories, having many other things to purchase, as meal, timber, fishing-lines, iron, cloth, and a variety of other necessaries. The better sort lay in a little stock of brandy, which serves them all the year; but those that are drunkards, cannot afford to stock themselves with it, and if they do, they cannot let it alone till all is gone.

C H A P. LXXXIX.

Concerning their drefs.

THE Icelanders are contented in procuring the implements of dress out of their own manufactures, which shews wisdom and prudence in them, and it were to be wished, that other nations did the same. Their outside apparel is generally a coarse bays, which they call *vadmel*. The women for the greater part have petticoats and aprons of coloured cloth, of which some thousand ells are sold every year. This cloth is not superfine; but they have it of different goodnes, all of Danish manufacture. The better sort, both men and women, wear cloth jackets. As for the lawyers, and those in civil employments, they dress in the modern fashion, with full suits lined

* Mr. Anderson says, that in all their dangers both by sea and land, brandy is their principal comfort, and the main point they have in view. It encourages them to labour, that they may get something to purchase so precious a liquor. When they have attained their wish, and provided themselves with brandy, on the arrival of the Danish ships, they never leave off drinking till all is gone; for while any is left, they can do no business.

with filk, and in every respect as genteel as at Copenhagen. The cloaths of the common people are made like those of seafaring men, namely, jackets and wide breeches, or trowfes, though sometimes they wear a coat made in the Danish fashion. They have besides a great coat, which they call *hempe*, and wear in the winter to go to church in, or on a journey. The women wear petticoats, jackets and aprons of woollen cloth or bays, which they call *vadmel*, and over which they wear a kind of wide coat, with narrow sleeves, that reaches down to their wrists. These coats or gowns, are a hands breadth shorter than the petticoats; they are always black, and are called by the name of *hempe*, which is the same the mens great coats go by. Sometimes they are faced with black velvet, and sometimes the work on them resembles *point de la reine*, which is very neat, and looks well. Those that are rich, have wrought silver and gilt buckles, or clasps, which are only fastened on for show or ornament. The petticoats and aprons which are coloured, are bordered round and down the edges with slips of coloured velvet, or coloured filk ribbands, or a filk braid at the tie of their apron. Three great silver philligre worked buttons, and generally gilt, are fixed before. The poorer women have them of brass. The apron is fastened to a belt, set all round with silver buttons, or of brass, according to their circumstances, and clasped before with a clasp of the same metal and workmanship. Their jackets are always made to fit neat and close to the waist, with narrow sleeves down to their wrists, and are laced in all the seams with coloured velvet or ribbands, and faced down before with filk. On each sleeve near the wrist, are four or six buttons of silver or brass; and round the neck a stiff cape is worn about three fingers breadth, which stands erect, and under it the wide coat is made to go. This cape is covered with handsome filk or black velvet, and a gold or silver braid round it. About their head they tie a coarse white linen handkerchief, and over that another finer, formed like a tuft on the top of the head, and a foot and a half high. Over this they place a filk handkerchief, or the poorer sort a cotton one, which is tied under the chin. This kind of head-dress is worn by all women, whether single or married, and round their necks they have usually another filk

or

or cotton handkerchief*. In short, their dress much resembles what is met with in old pictures, and monuments in churches, except the head-dress, of which I have not remarked any thing similar in any other country. The young girls wear caps, but when grown up, they change them for those high heads. The richer sort have a deal of finery about them, consisting of silver and gilt philligree work, which they most admire. Some large buttons of that sort of work, with coloured stones set in them, and fastened to their fillet, are worn a little above their forehead. A bride on her wedding-day, wears a crown of silver under the white linnen tuft that stands up so high on their heads, and on this occasion is used instead of the silk handkerchief worn at other times. They wear also two silver chains, the one hanging down behind, and the other in the same manner on the breast. The *hempe* or great coat, is never worn during these solemnities. To the bottom of another chain, which hangs down before, a box of perfumes is fastened, with several partitions, and open on both sides. It is very often shaped like a heart or a cross. I have seen some of them of gold. Several of the Iceland ladies have trinkets to the amount of three or four hundred rixdollars; and indeed their dress is vastly neat and pretty. The men and womens shoes, which most commonly are all made by the women, are of their ox's hides, or for want of them, of sheepskins, which they dress themselves, by only scraping the hair off, and afterwards drying them. To set about making the shoes, they first soak the leather in water, and when duly prepared, they go through all the different operations, and seldom fail to fit them exactly to the feet, but scarce ever trouble themselves about fixing heels to them. Their shirts and shifts are usually made of thin bays or flannel, though a great many have them of coarse linen †. Their fishing garb is made of sheep-skin, which they put over their other cloaths to keep off the wet, and which

* Mr. Anderson says, that their dress and habitations are all of a piece with their eating and drinking; but that the unmarried women wear handkerchiefs round their chins, to distinguish them from the married.

† The same Author says, that the men and women wear linen shirts and shifts, or properly stockings and breeches of one piece, which reach on the men above the navel, but not up to the navel on the women, over which they have other breeches and a jacket of *vadmel*, or coarse bays, or else of sheep-skin.

they

they daub with fish liver to soften them ; but they pull them off as soon as they come ashore.

C H A P. XC.

Concerning their habitations.

AT the entrance of their houses, a long narrow passage is formed about six foot wide, with cross beams, a covering, and some holes on the side of the door to admit light sufficient for the passage. In these holes are sometimes panes of glass, but most commonly a thin skin or bladder stretched upon a frame, which affords a tolerable light. There are shutters for these and other windows, in rainy or snowy weather. At the end of this passage is the entrance into their common room, which is generally twenty-four or twenty-eight feet long, and about twelve or sixteen broad. Here the women sit and dress their wool, spin, and do other necessaries for the family. At the further end of this room is generally a bed-chamber for the master and mistress of the house, and in the loft over it, the children and maid-servants generally lie. On each side of the aforesaid passage, are two rooms, with doors in the passage. The one is used for a dining-room, the other a dairy, the third for the kitchen, and the fourth, which is just by the outer door, for the men servants to lie in, or strangers of that sex, who are a travelling. This whole building consists of six rooms, and but one street or outer door. Holes are made in the several rooms to transmit the light, and as in the passage, are covered with panes of glass, or with a skin or bladder. In the large common room, most people have a couple of small windows, in order to see to work the better. They have also frequently a room built on one side, close to that appropriated for the men servants, which they call their state-room, where they receive visits. A bed is fixed therein, and a door that leads directly in or out without passing through the house, and another door into the servants bed-chamber, through which the people of the house pass and repass, without being obliged to go about. They have warehouses detached from the dwelling-house, to keep their fish, and winter provision in ; their horse furniture, their imple-

ments

ments for hay-making, &c. near this they have another little building, which is their smith's-shop. Here they make all their tools and tackle of iron and wood*. At a little distance stand their barns and stables, and one, two, three or four sheep-folds. In one of these they keep the lambs by themselves. Their hay is stacked up about six foot square, and a passage left between each stack, and covered with turf, in a shelving manner, for the rain to run off, by which means their hay is well preserved. Their common room, bed-chamber and visiting room, are generally wainscotted, and have a loft over them, where their chests, wearing apparel, &c. are kept. These upper apartments have also windows, two or three panes high; but the other buildings without either lofts or windows, have only holes for the light, as I before observed, with a pane, or the thin skin † taken out of the stomach of animals, and stretched on a frame whilst warm, after which it becomes very transparent, and admits the light. Their furniture is not any way costly, and consists chiefly of beds, and their vadmél or bays, which serves them for making pillows and bedding of. They have plenty of feathers, but some of their common servants lie very wretchedly, as often the poor and mean people in Denmark do. They have tables, stools, benches, chests, and other necessary utensils for a house. Those of better rank and fortune, have their habitations well furnished with looking-glasses, and every thing that is requisite in a genteel way. As there is a great scarcity of timber in the island, and as building materials must be bought of the company, which consequently prove very expensive, the inhabitants are obliged to proceed to work in the most frugal manner they can. They therefore lay a foundation of large stones, upon which they

* Mr. Anderson says, their houses for the sake of strength as well as warmth, are sunk into the ground, and are seldom above seven foot high, in length about twenty-four or twenty-eight feet, and in breadth not more than when a tall man standing in the middle and stretching out his arms, may reach the side walls, which makes them about six foot wide. Along the side of the wall, they build a loose slight covering, high enough for the cattle to be sheltered in during the winter. The same also serves for the servants to lie in; for they only lay a little straw on the ground, on which they lie quite naked and cover themselves with a piece of bays, which is sometimes lined with a sheep-skin. In this manner they lie, the one's head against the other's feet, or perhaps a board put between, to separate those that do not belong to each other.

† *Tunicas allantoidas.*

erect the frame-work of their building. The cross beams and joists they fasten the best way they can. Between the timber work, they make a wall of clay and stones, and afterwards lay the rafters for the top, which are but small. The best houses are covered with boards, which are nailed an inch or two over one another, for the rain to run off without running through. Meaner houses have furze and twigs a top instead of boards, and are covered with turf. The walls are of stones, and earth, or clay, with grass or turf between, which besides is laid over all the posts and beams, and thus renders the walls very firm, strong, and well bound at the foundation. They are usually made four foot thick, and run up slanting, that at top they may be about three foot in thickness. This sort of walls makes warm habitations, and keeps out equally the heat in summer, and the cold in winter; so that in this last season, they have no occasion to keep great fires, though some in several parts are provided with stoves. The foundation of the houses built after this manner, is even with the ground, or raised a little higher. When the walls are all green, they appear like so many hillocks. All farmers have not such large habitations as described, nor are they furnished with so many separate buildings, though many have much larger and finer: but in such a general description as this, it is much the better way to keep between extremes, by exhibiting that which is more universal, as has been represented in the description of a good farm-house, the proper model, for conveying the justest idea of the place, whereas by delineating a miserable hut, this idea, or any thing resulting from it, could be no more answered, than it would by displaying the magnificence of his Majesty's seat at Besssted, or of some of the bishops and lawyers houses, or those of the civil magistrates, and some of the inferior clergy. These houses are built of brick, like those in Denmark, and the bishop's seat at Holum, consists of fifty separate buildings, besides twelve stables, or houses for cattle; but such are far from being a rule for the buildings in general throughout the island. I have been at several other farms, which are like villages, with many separate buildings, but all such buildings belong to one and the same farm.

C H A P. XCI.

Concerning their genius, and natural disposition of mind.

THE annals of this country shew, that in ancient times they were a warlike people, having in their intestine broils made great slaughter among themselves. They are far from being a dastardly race, as some authors have represented them; for it is well known that they made some figure in a military life, and have been raised to the command of fortresses. However, as this country cannot spare many of its inhabitants, and as fortunately for them, it is too remote for officers to come and muster up a body of recruits, few of them for these reasons have been employed in the military way. In the sea service some of them have been promoted to the command of Dutch vessels; and indeed, they seem best adapted to a seafaring life, being trained up to it almost from their infancy. The many ingenious Icelanders so eminent in the literary world, is a strong instance of their genius and good natural parts, and that they are not of a slavish abject disposition. Every year some of their select youth are sent to the university at Copenhagen, where they have constant opportunities of exhibiting their genius and capacity, which are discovered to be very remote from betraying an abject spirit, the reverse rather appearing in them, together with such a spirit of emulation for excelling others, that seldom or ever a dull person is remarked among them: and even in general, the common people have keen cunning heads, and a deal of mother wit. As most other nations, they have a strong propensity to their native place, though one might think they would find more pleasure in other countries. Perhaps in this respect, the hankering after home prevails more among the northern people than any others. However, many establish themselves at Copenhagen, and in other foreign countries, when they have settled in any certain business; and among these may be seen professors, rectors, seafaring people, goldsmiths, and masters in a variety of handicraft occupations. The Icelanders complain that their countrymen who go abroad, and learn many things, whereby they might be of vast service to them, scarce

ever return *. I shall not undertake to examine, whether this complaint be well founded: some few undoubtedly do, and at the bishop's seat of Holum, there is now an Icelander, that understands the art of printing to perfection. He learnt it at Copenhagen, and since travelled about in foreign parts, and was sent for from Dantzick to come home. The Icelanders are also as industrious as most people in their several occupations, never neglecting, or omitting any thing that ought to be done. I have seen them row out to sea fifty or sixty times, and perhaps they did not bring home in all above sixteen or twenty fish. The general failing of the common people in most countries, proceeds from their being wedded to old customs, which they will not retract, unless upon the prospect of very considerable advantage †. This is the case of the Icelanders, though I presume, they are rather more cautious than obstinate, in rejecting their old customs; for I must confess, that I found them fond of seeing curiosities, and of improving themselves, as also very ready to imitate, very handy at making any thing, and very expert in turning things to advantage.

C H A P. XCII.

Whether they delight in learning any thing.

ICELAND has produced Thormodus Thorfæus, and Arnas Magnæus, besides several other illustrious men. Some Iceland students are now at the university, and far from being reputed inferior to any, on the contrary, generally excel, few being ever bad, or even middling among them. It is not at Copenhagen alone that they are thus found ingenious, the people in the country are conspicuous for like abilities; they presently learn any thing they are put to, and not simply what they have

* Mr. Anderson says, that their poor diet and fatiguing life, which only exercises their body, cannot elevate their mental faculties, or serve to make any improvements in them, and that being naturally of a dastardly disposition, they are very unfit for soldiers.

† The same Author says, that they are a very licentious people, which is owing to the too great liberty they enjoy, whereby they become stupid and perverse, and are so bigotted to their own customs, that though they are shewed shorter and better methods, yet they reject all, and pursue their own old and obstinate ways.

been

been brought up to from their early youth *. It is not the few only that have been abroad, who learned to be penmen and accomptants, and to work ingeniously in gold, silver, brass, and the like ; but even the greater part of the inhabitants, who never were out of the island, write very well. Among the learned are some excellent writers, and among the clergy and the people in general, more write well than in Denmark. Those that go to Copenhagen, carry all those good qualifications along with them. There are not, it is true, so many good accomptants as writers, yet several may be found, who never were out of the country. The Icelanders that apply themselves to any particular science in Denmark, generally become masters of it. Copenhagen can afford several instances in this respect : even in Iceland, many very ingenious men having taught themselves without the instructions of a master, work in silver and brass, and make philligre buttons and buckles for the women. They are also ingenious carpenters, joiners, and smiths. In short, they exercise themselves in all manner of trades, and some, by applying themselves entirely to one particular branch, become at last perfect masters in it. They are very fond of taking notice of for imitation, or contriving themselves such new tools and instruments as are handy and convenient for their work ; and indeed this may appear from the great improvements they have made therein, and at the same time, may be a convincing proof of the delight and pleasure they take in edification †. They calculate time by the sun, or stars, when visible, but if not, they then adjust this point by the tide, which is always regular. Thus not counting time by the clock or hour, as one, two, three, or four o'clock, which they know nothing of, they have particular names for every hour and half in the day in their own language, as for instance, noon, midnight, midevening, broad day, &c.

* Mr. Anderson says, that a propensity to arts and sciences is not in the least observable among them, yet he does not suppose, that they are naturally quite stupid, and not able to comprehend any thing. Some learned men have appeared in their country, and such of them as have travelled, distinguished themselves as very ingenious artificers.

† The same Author allows them to have some ingenuity ; for with very awkward and bad tools, he says, they notwithstanding complete the various things they have occasion for. He also says, they have no calculation of time, and only regulate themselves herein by the ebb and flood, or the sun, when they can see it.

C H A P. XCIII.

Concerning their occupations.

HAVING before often observed, that the chief occupation of the Icelanders is fishing, or breeding of cattle, and having also described their manner of fishing, and curing fish, I shall here only add, an account of their manner of building boats *. In the district of Guldbringe, they build their boats of oak, but in other parts most commonly of fir, which by experience they find to be full as strong and as durable as oak, and attended with much less expence. In some places they are made small, and only for two men to row in, though even these will carry a cargo of 120 fine large cod; but for the generality, they are built in most parts big enough to be rowed by four, six, eight, and sometimes twenty men; and the small ones are hardly seen any where but at Guldbringe, and about Hvalfiorden. In the districts of Rangervalle and Skaftefield, where the coast is open and sandy, they are obliged to drag their boats a great way up the shore, that they may lie secure and safe from the waves of the sea †. Here also they have the largest boats. In other parts of the island, they have but a short way to drag their boats, in order to save them from receiving any damage; for the coast is no where so flat as in the former districts. The sort of anchor they there use, consists of a couple of sticks run cross-ways through a heavy stone. I have seen the same in other places, and was assured, that they hold very fast to the ground, and that the fishermen are not afraid of their holding, even out at sea, if they have good strong ropes or cables, which generally break before the stone gives way. Whenever they make a short voyage with their boats, and have got their cargo in, if a contrary wind happens, they will lie several days at anchor, rather than drag their boats ashore.

* Mr. Anderfon says, that their boats usually built of thin oak boards, are so light, that two men can carry them on their shoulders with ease.

† The same Author says, that having neither ropes nor anchors to fasten their boats with, they drag them very far up the shore, to keep them from the waves, and to prevent their being carried away, or dashed to pieces.

C H A P. XCIV.

Concerning their cattle-trade.

IN the former part, where a description was given of the manner of breeding cattle, the trade carried on with them, and the fisheries, I shewed that in some places, breeding of cattle and grazing, was the chief business of the inhabitants, who generally send their cattle up the country, and keep people to look after them. The greatest part of the island is well stocked with cattle, especially northward and eastward, where many farmers have from two hundred to five hundred sheep, which they turn out at certain seasons, and at others keep within folds. The sheep, which give milk are suffered to run about near the houses, and are separated from the rest. Two or three times a year they are all driven together, (which the Icelanders call Soyde-retter) to be sent to the factories, and there fold*. Each of these particulars I have already set forth at large.

C H A P. XCV.

Concerning the Icelanders tannery.

TANNING is performed in a very indifferent, or imperfect manner in Iceland, the inhabitants being in want of bark, and other necessaries for this purpose. However, as obliged to make the best shift they can, they scrape the wool or hair off with a sharp knife on their knees, which they do very expeditiously, and afterwards wash, clean, and dry the skins, or hides. To make the leather tough, and of some consistence, they tread it for a considerable time with their feet in whey or salt water. When ashore or at home, they wear no sort of leather but in their shoes; but when they go to sea to fish, they have a jacket, breeches and stockings, made of leather, which keep off the rain and sea water, and prevent their being wet

* Mr. Anderson says, that the trade with their cattle in general, does not give them much trouble, and that in particular, the inhabitants of Westmanöe turn out their sheep on the small neighbouring islands, where there is good store of grass, and from whence, as they cannot get away, they are easily caught.

through,

through, which must happen, if they had not on such a covering*. This outside leather dress they lubricate with fish-liver, and train-oil, that the water may neither adhere, nor be soaked in; but the smell preceding therefrom is so disagreeable, that they never appear before the factors, or any of their betters in this garb, and usually take care to strip it off, as soon as they come ashore. They have a way of giving a blackish colour to the ox hide which they use for saddles, and horse furniture; and though there is nothing of art in it, but meer labour, it is notwithstanding more durable than the Danish: but the saddles and horse furniture they make up themselves, are not so tough and pliable as the Danish, though they grease them with train-oil, which daubs the cloaths, and is otherwise very disagreeable*.

C H A P. XCVI.

Concerning some other of their employments.

WHEN they have nothing else to do, the men, women and children, especially in winter, work at the cleaning, combing, twining and spinning of wool. Their manner of weaving is much out of character; for instead of having their weaving benches or frames in an horizontal position, as we have them in Denmark, theirs are perpendicular, or upright, and so inconvenient, that they cannot weave above half a yard a day of their coarse bays, or as they call it vadmél, whereby it may appear how inconsiderable the earnings are *per diem*, of those who in this respect are obliged to get a livelihood by journey-work. Of late some Danish weavers came among them, and the Icelanders begin to imitate them so well, that it is probable this manufacture will in time gain considerable improvements, so much the more, as his Danish majesty has also set up several weaving frames, and ordered ingenious masters from Denmark

* Mr. Anderson says, that their way of dressing leather is only by laying the hide on their naked knee, and scraping the hair off with a knife, after which, it is fit for any purpose they want it. He adds, that all the leather and skins they use are greased every fourth or fifth day with fish-liver, which makes them tough, but at the same time of so offensive a smell, that no merchant or factor can speak to them, or endure to have them come near them.

† He also says, that the Icelanders live amidst perpetual ill smells, and a kind of hoggish filthiness.

to go over, by whom the natives being instructed in the proper methods of weaving, cannot fail of succeeding with regularity and good order, in this useful branch of business. As hitherto they have had no fulling-mills, it must be imagined that they have a deal of trouble in fulling and milling all the woollen goods made in the country, such as jackets, breeches, stockings, mittins, &c. and indeed it is so; for when they set about fulling, they have no other instrument for this purpose than a cask, or a barrel, with both bottoms struck out, into which, having put the woollen goods to be milled, two persons place themselves on the ground over-against each other, and with their feet, go through the operation in the cask or barrel. Small things they full upon a table against their breast, but both ways are very toilsome, and attended with great trouble. As for gloves and mittins, they put them on when they are going to sea, and after dipping them in the sea-water, they mill them as they row upon their hands, without any farther trouble. Those near the hot wells, mill their things therein, and besides a quick dispatch, make them much whiter. In fulling breeches and stockings, they are often put on, and the parties rock themselves about with them, by which means they have contracted a habit of perpetually rocking and moving their limbs, though they have nothing on or under them that wants milling. The women wash their things generally in urine, using neither soap nor lye, which are too expensive, and must be imported. However, they wash their things tolerably well, though I must suppose, not to the liking of all persons. Those that have been in Copenhagen, import soap, and wash as they do there. In point of dying, which many of them understand, they extract verdigrease with urine, from copper vessels, whereby they dye their woollen yarn, and weave pretty striped woollen stuffs of various colours.

C H A P. XCVII.

Concerning their manner of merchandizing.

WHEN the Icelander brings his goods for sale to the factory, the merchant does not take them of him *bond fide*, till every thing is separately examined, and passes through his hands, so that whatever is found unmerchantable is set aside. Sometimes, in such great quantities, some indifferent things may slip in, but the Icelander does not deserve to be blamed; it is the merchant's fault, if he does not pay attention to what he buys*. The new map published with this treatise, points out all the harbours in the island. The fish-harbours lie south and west, and the flesh-harbour north and east; but in some of the harbours, as Oreback and Stikkefsholm, both flesh and fish are delivered †. These harbours were farmed out to merchants at Copenhagen, and the merchant, who took a fish-harbour, was also obliged to have a flesh one: but in 1733, a company being erected, and a charter granted, to trade to all the harbours in the island, the merchants keep their factors and factories at every harbour, and send their ships with super-cargoes, though sometimes one ship will touch at two different harbours, according as the company may think necessary. Besides these, there are factors or merchants at each harbour, that go with the ships, and it is they that purchase from the natives their commodities, on the company's account, and give them other merchandize in return, or pay them in ready money, all according to a printed tax-price, by which they must regulate themselves on both sides, this regulation having taken place ever since the year 1733. The whole island with Westmanöerne, is all farmed out to this company, and the factors at the flesh-harbours, fix the days for the

* Mr. Anderson expresses great surprize, with regard to the deceit and cunning of these people, who put in practice so much artifice, that one must take the greatest care and caution imaginable to deal with them.

† The same Author, in order to give a perfect description of their trade, says, that it is necessary to understand, that the island has fourteen fishing harbours, and eight flesh, the former lying north and east, and the latter south and west, and that these harbours being farmed out to merchants at Copenhagen, those that take a fish-harbour, must also take a flesh one. Our author says the harbours are now otherwise disposed of.

farmers to deliver their sheep from each district, and contrive to dispatch the ships as quick as possible. The cattle are slaughtered for the factors about the latter end of August, or beginning of September; but the Icelanders kill none for their own use till the middle of October, at which time the cattle are fattest and finest, and have sensibly more tallow than when they are killed in August*. The Icelanders slaughter all the cattle for the factors, and have the head and offals for their trouble. The meat is salted down by the company's people, and is cut as at Copenhagen, chiefly in large pieces. The skins of the sheep are sprinkled on the flesh-side with salt, and being laid together two by two, are rolled up, and tied very tight together, and thus are pretty well preserved. The tallow is melted and poured into firkins or barrels. The factors take all the good dried fish, consisting of large, small, and middling cod and ling, according to the tax as before observed, though of the latter but few are caught or brought to market. At the fishing harbours, the factors also buy up the train-oil. Woollen goods are chiefly brought to the flesh-harbours, though some are delivered indiscriminately at all.

C H A P. XCVIII.

Concerning accompts and payments.

IN Iceland, no other money is current than specie † and Danish crowns, and all accounts are adjusted according to the number of fish. Two pounds of fish, are worth two skillings specie, and forty-eight fish make one rixdollar specie. A Danish crown, according to the tax, is computed to be the value of thirty fish, a half-crown of fifteen, an half specie of twenty-four, and a quarter of twelve, which is the smallest money current in Iceland. In this manner all payments are regulated by fish, and whatever comes to less than the value of twelve fish, can-

* Mr. Anderson says, the merchants buy the cattle the latter end of August, or beginning of September, at which time the cold coming in, and the grass changing, and therefore not so nourishing, the cattle of consequence begin to fall off.

† Specie is bank money, and consists of all pieces of a whole, half, quarter or eighth rixdollar. A rixdollar specie is about 3 s. 6 d. sterling

not be paid in money, but must either in fish, or roll tobacco, an ell of which is equal to a fish; so that fish and tobacco serve there instead of small coin. The largest weight, called vette, is forty fish, or eighty pounds, equal to five lispond in Denmark; the next to this, called föring, is five fish, or ten pounds, and the smallest, or single pound, is computed equal to half a fish; for one fish is generally of two pounds weight.

C H A P. XCIX.

Concerning the goods they export.

THE commodities they export are dried fish, salted lambs flesh, some beef, butter, train-oil, a great quantity of tallow, woollen goods, as coarse and fine bays, or vadmél jackets, stockings and gloves, raw wool, sheep-skins, young lamb-skins, foxes skins of various colours, edder-down and feathers, and formerly sulphur, but now not taken any more from them: these are the chief commodities of this country.

C H A P. C.

Concerning the goods they import.

THE goods imported to Iceland are timber, fishing-lines, tobacco, bread, horse-shoes, brandy, wine, salt, coarse linen, a small quantity of silk, and a few other things people in good circumstances may have occasion for in their families. All these commodities are to be imported only by the Danes, who for this purpose erected a company, and have a charter from their sovereign for the exclusive privilege; so that no other nation is allowed to trade there. Whatever the Icelander takes, he makes a return for in his own goods, which if not sufficient, the balance is paid in the above-mentioned money.

C H A P. CI.

Concerning their weights and measures.

THE weights of the Icelanders agree with the Danish, pound and pound alike, except that they have no lispound and ship-pound, theirs being confined to pounds, förings and vette. Ten pound is a föring, and eighteen förings make a vette, equal to five lispounds in Denmark. Their ell is something shorter than the Danish, and agrees with that of Hamburg*. But as this ell is the only measure they use that agrees with the Hamburg, it cannot with any just foundation from thence be inferred, when weights and other measures are different, that the Hamburgers were the first that established trade among them. Certain it is, that they once traded to this island, and instituted a society or company, sometimes called by the name of the society or company of Iceland traders, and sometimes by the title of *lutendreyers*: but the present company established at Copenhagen, will now neither suffer the Hamburgers, nor any other nation to trade there. They pay an annual acknowledgment to the king, and having by a charter granted them, the sole privilege of this trade, they cannot allow interlopers to intercept their profits. The Dutch a few years ago, had two of their ships confiscated, which they sent to the northward in the district of Skagefiord, with contraband goods; and some time before, had five ships taken from them by a Danish man of war, which were condemned at Copenhagen as lawful prizes †. Ever since, foreigners have not attempted to trade to this place, though I suppose the Dutch, notwithstanding these rebuffs, still now and then touch at Iceland; for a coast of 1800 miles is not easily guarded, even if an armed vessel was kept on purpose, especially as the people are the best part of the summer

* Mr. Anderson says, their weights and measures are in general according to the standard of Hamburg, and that the Hamburgers were the first that established trade among them.

† The same Author says, the cunning Dutch know how to catch at an opportunity of sneaking in, the lord of the manor having no armed vessels to defend the trade, and merchant ships, no time to lie out and watch them.

twenty or thirty miles out at sea a fishing. No doubt, if the company's ships had a commission given them, they would be the best guards of the coasts, as they sail all about the island.

C H A P. CII.

Concerning their religion.

WHEN the roman catholic religion took place throughout Europe, it was likewise the established religion of this island, and was not extirpated without some effusion of blood, occasioned chiefly by the obstinacy of a powerful and bigotted roman catholic bishop and his party, which however cost him his head*. Since the reformation, the evangelic lutheran religion, is the only tolerated here; notwithstanding, some superstitious notions are still rooted in the illiterate people, as in almost all other countries, though these superstitions are not properly the result of religious principles.

C H A P. CIII.

Concerning the ecclesiastical state of this island.

ICELAND is divided into two bishopricks, the east, south, and west quarters being allotted to one, namely, the see of Skalholt, and the north quarter alone, constituting the see of Hoolum. Each of these bishopricks has a latin school, with a rector and other assistants under him, who teach theology, and other branches of literature, and fit out those, who exhibit proofs of their capacity, for the ministry, and have them ordained priests without going out of the island, or to the university at Copenhagen. Some notwithstanding repair every year to Denmark, in order to pursue their studies in law or divinity, at the university of Copenhagen, and they generally have the preference of those that have not been abroad, and get the best livings, and most lucrative civil employments. The print-

* Mr. Anderson says, the lutheran religion is the only adhered to there, except by some few who descend from catholic ancestors, and still persist in, and secretly practise some superstitions. Our author tells us, that all are descended from catholic ancestors, and were as strict catholics before the reformation, as now they are lutherans.

ing-office at Hoolum, once removed to Skalholt, was brought back, and is now in a very good condition. It was the legacy of one of the bishops of Hoolum, and in it are printed religious books, and all the king's public orders, in the language of the country. In the time of the reformation, a great part of the church revenues were secularised, and now belong to the king. The income of each bishoprick may amount to two thousand rixdollars, out of which the incumbent must keep the rector and corrector, the minister of the cathedral church, who is the bishop's curate to preach for him, and a certain number of scholars, who have lodging, board, and cloathing allowed them; the cathedral and palace are likewise to be kept in repair; so that the balance, after these deductions, reverting to the bishop, cannot well amount to more than twelve hundred rixdollars per annum*. Each man pays the king a certain annual tax, called Gieftold, which amounts to about ten fish a year. Part of this tax has been graciously granted by his majesty to the bishoprick; but it is neither a bishop's-toll, nor does the bishop receive it of every farmer in the country; for in many places the king keeps it entire, and in others, it is farmed out to the fyffelmen, or lords of the manor. The clergy's revenues are not easily ascertained, because they do not consist in ready money, but rather in lands belonging to the respective livings. Certain dues however, accrue to them from each farm, besides some fees for performing certain offices. Some livings are tolerably good, some middling, and some very poor. To make them better for the poorer clergy, the king has given up some of his estates in the bishoprick of Skalholt, and in the bishoprick of Hoolum, allows a hundred rixdollars *per annum*, to be divided among them †. Some livings are worth two hundred rixdollars *per annum*, and the very poorest of the clergy enjoy at least of the king's bounty, four

* Mr. Anderson says, there is a printing-house at each bishop's seat, where they print religious books in the native language. He also says, that the neat revenues of each bishoprick, are only about 1200 rixdollars *per ann.*

† According to the same Author, there is a bishop's toll (as he calls it) which obliges every man to deliver ten fish *per ann.* to the bishop, and the best livings, pursuant to his calculation, are not worth upwards of a hundred rixdollars *per ann.* and some are so very poor, that they do not bring in even four rixdollars a year; yet, adds he, the incumbents are not to be pitied, because they behave themselves no better than the meanest farmer or boor.

rixdollars paid them every year. The clergy have neither the tenths of fish, nor of any thing else, yet some small dues must be paid them either in goods or money. In the Westman islands it is customary to give the clergy a kind of tithe of each boat, when they return from fishing; but this is peculiar to these islands*. Undoubtedly, there are many poor livings in the island, whereof the revenues are so small, that they cannot support their respective ministers, some of whom are obliged to have recourse to manual labour for maintaining their families, or to go a fishing like the common people. However, their congregations are far from being neglected, and they herein follow the example of the apostle Paul, who, though he earned his bread by the labour of his hands, was a great and edifying preacher.

C H A P. CIV.

Concerning their churches.

MOST of the churches have lands and revenues annexed to them, as in ancient times, and some of later date, a sufficiency to support them. The churches are built in the same manner as their houses, though something larger, the foundations being laid even with the ground, or a little higher, and the roof covered with turf, and the inside wainscotted †. These churches are built proportionable to the congregations; for the houses and farms, as before related, being scattered about, there are sometimes only seven, eight or ten farms to a parish, though some contain from ten to thirty: add to which, that as all persons cannot appear together at church, the congregation must of consequence be in some churches very small. The building of their houses and churches low, is chiefly occasioned by the scarcity of timber and bricks, of which last, though there is a sufficiency of materials to make them, yet the process cannot be executed

* Mr. Anderson says, that some of the clergy have part of the tithes the farmer is obliged to pay, and some two thirds thereof. In other parts they have two lots out of each boat, which are equal to two fishermens portion.

† The same Author says, the churches are like the farmers huts, sunk down in the ground, the walls of broken stones fastened with twigs, clay, mortar, &c. and covered with turf, and not larger than a common room, and so low, that any one may touch the ceiling.

for want of fuel *. The cathedral church at Hoolum is built of frame-work, ninety-eight foot long, thirty wide, and about thirty-six or forty high. It stands a little higher than the ground, has a wooden spire, and round the choir is a fine stone wall, which was built upwards of four hundred years ago by a bishop, who intended to finish the whole cathedral in that manner, but died before it was completed. The frame-work of the bishop's palace at Hoolum is of oak, and walled between. The roof is covered with boards, and no part, either top or sides, with earth, or mould. The frame-work of this house was made at Copenhagen, and put up and walled by bishop Gudbrander, in 1576, as appears by the date of the year carved on the timber; so that it now has stood unmoved almost two hundred years, though the foundation begins to want repair. The cathedral at Skalholt, is much the same as that at Hoolum, except that the wall round the choir is something less. The spire is also of wood, and has a bell. This church, which was built time out of mind, stands on an eminence, and being viewed at a distance, makes a fine appearance. The church at the king's palace of Besssted, also framed and walled, and the sides and top boarded over, is about fifty foot long, twenty-five foot wide, and pretty high. The mansion-house is built in the same manner, and the apartments are full nine foot high, and the walls boarded over, except the south-west side, where I observed, that though more rain beats on that side, than other parts, and though it had not been repaired for a great while, yet the cementing or junctures of the bricks were very close and tight. An old house two stories high, where the king's steward formerly lived, and where he still has his compting-house on the upper floor, has stood since the year 1680, though now very much decayed, and fit to be pulled down. It withstood a very great storm, one of the winters I was there, and I was greatly surprized that it did not then tumble down. Several other churches may be met with, which are high, and wainscotted both within and without, and

* Mr. Anderson says, they are under a necessity of building low on account of the heavy storms and winds that continually rage in this island. He also says, that the Danes attempted to build a church of the usual height in Denmark, but that the following winter, being blown down in a storm, they were obliged to build themselves a low one in its stead.

have been built for some years. A handsome building in the Danish stile, the dwelling-place of a worthy and very considerable man, now stands at Thingöre cloyster, in the parish of Hunnevatn. In most of the churches are altar-pieces, and some very handsome, imported from Copenhagen. The altar is generally placed as in Denmark and most places at the east end of the church, and under the altar are locked up the various ornaments, utensils and instruments belonging to the church. Every church has a font, which in many places is handsomely railed in like the choir: there is also a pew for the confession, in which the minister sits till he mounts the pulpit. This pulpit usually so placed, that it may be seen all over the church, is constructed and contrived after the manner of most country places in Denmark, and in some parts it is handsomely painted and carved. Most churches have pews, at least on the women's side, and some have a metal sconce, or a ship, or some other ornament hanging up. In short, all the churches are exactly as I have here described them, and such is their appearance within at all times, whether in the time of divine service or not. As to the ornaments, vessels and utensils, which are only used during divine service, they are as neat and as handsome as in the country churches in Denmark. The vestments used by the minister in some churches, are made of velvet, or of rich silk, and ornamented with a cross of gold or silver. Some have two suits of vestments, a common, and a very elegant one for festivals. Most churches are in possession of a cup or chalice of silver, and in some they are gilt; but such congregations as are very poor, are obliged to content themselves with chalices of pewter. The surplices and altar cloths are of fine linen, laced or worked round, and some churches have silk altar cloths, laced with gold and silver. A pair of large metal candlesticks generally stand on all the altars, and a handsome piece of painting is placed over the altar, and frequently some paintings grace the choir. In the cathedral are several curious pieces of antiquity, and a great many vessels and ornaments preserved since the catholic times. The churches most commonly belong to some private persons, and make part of their estates, and as they generally reside near them, they sometimes lay up some of their chests

chests and goods in the church, or in the loft over the place of worship, for greater security; but they never put any thing in to crowd or fill up the church*. These chests and such things, may also serve the people to sit on, wherever benches are wanting.

C H A P. CV.

Concerning the clergy.

THOUGH several clergymen of this country have taken their degrees at the university of Copenhagen, and have gone through their examinations with honour and great encomiums on their merit, I will not alledge them as a proof or argument, that there are good and learned divines in Iceland, being willing to restrain the matter to those only who were never out of the country, and who received their entire education at the king's schools. Among these, is that learned and eminent divine the present bishop of Skalholt, whom his Majesty thought worthy of that high employment in the church, though he did not study at Copenhagen. Besides being profoundly versed in theology, he has gone through all the latin poets and authors, at which I was greatly surprized; but it is not to be supposed, that all of them are so learned; for the old latin proverb, *ex quolibet ligno non fit mercurius*, may hold good among them, as it also does among us, and all other nations †. The generality of the clergy understand latin and theology very well, and I myself have seen some exercises very ingeniously executed by those designed for clergymen. I am told, they are obliged to this duty every year, before the vicar and two other ministers, or the bishop, if they live not at too great a distance. It is some theological theme which they are to make a dissertation upon in latin, and which generally they perform admirably well. This serves to shew how

* Mr. Anderson says, that those who have the care of churches, are allowed for their trouble to fill them with all sorts of lumber, upon which the people sit during divine service, there being no pews, nor any thing to shew the appearance of a church.

† The same Author says, that the clergy in general are of little worth; that the greater part of them have learnt nothing; that they seldom have been any farther than the bishop's schools; that they can hardly read latin, and that besides, they are sad debauched wretches, addicted to the drinking of brandy, and getting drunk without any shame or regard to their profession.

the clergy must be qualified, such being even required of the young ecclesiastics, who must thereby be thought to have made no slender progress at the schools in Iceland. The clergy's conduct is very narrowly inspected into, as well as that of the people in general, in regard to religious matters, and the least fault is not suffered to go unpunished. If a minister on a Sunday or holyday, sets out only on a small journey, he is immediately summoned to appear before a court held on purpose to examine into such matters. I only mention this, that a judgment may be formed of the consequences of any greater misdemeanour, for which they are either presently suspended, or severely reprimanded. For the crime of drunkenness, or any other indecency, they lose their livings, and have their gowns stripped off*.

C H A P. CVI.

Concerning the education of their children.

THERE are no schools for young children, neither can any well be, the houses, as I before observed, being scattered at such a distance from one another, that it is impossible to bring them together in one school †. The parents, and such of the family as are qualified, instruct the young children in reading the articles of their religion: the ministers also in visiting their parishioners, frequently examine and prepare them with due care, against the time they are to be presented to the bishop for confirmation. They are kept always at home while they are young, and see no other examples than their parents set them, which are not vicious. Their dispositions are mild and tender, and though not generally so brisk, yet they shew a decent kind of vivacity, especially those that are sent to Copenhagen. The same regulations and orders that obtain in Denmark for the in-

* Mr. Anderson says, that the clergyman often gets into the pulpit so drunk, that not able to stand, he is obliged to go down again, and have his place supplied by the clerk, who reads a sermon to the congregation. It often happens, he adds, that the parson, clerk and congregation, being in the same condition, they all leave the church without hearing or performing any worship at all; for such bad examples must be attended with as bad consequences.

† The same Author says, the youth are kept but a short time at school; for the parents rather choose to keep them at home, to be employed in household business and other work, where to their great misfortune, they are seduced to all wickedness, by the wild and profligate examples they have before their eyes.

structing children in religion, and giving them the means of salvation, by confirming them, and bringing them to the sacrament, are also adopted in Iceland. The excellent catechism of that eminent divine, bishop Pontoppidan, is translated into the Iceland language, and is used both in churches and private houses. The ministers instruct and examine the children, and none are admitted to the sacrament of the Lord's-supper, till they thoroughly understand what they are going to do; consequently, none are admitted very young, and not till their understandings ripen with their age, as it happens to young people in other countries. I before observed, that as they are not put very young to labour, many of them must be strong enough and able to go a fishing some years before their understanding has been ripe enough to fit them for the Lord's-table: from whence it may be concluded, that they are not suffered to go very young, and that great care is taken to have them duly prepared*.

C H A P. CVII.

Concerning the vices of the Icelanders.

THESSE people have been represented by some travellers as profligate, debauched, and wicked, and in no respect better than savages †. In the course of this treatise, I have given

* Mr. Anderson says, that on account of the danger they are exposed to at sea, they take their children to the sacrament of the Lord's-supper at eight or nine years of age, whence how well they are instructed and prepared, may be easily imagined.

† The same Author says, that this people know very little of God, or his will; that they are addicted to superstitious practices; that for the value of two marks, or sixteen pence, they will perjure themselves even to the prejudice of their nearest relations, and that they are quarrelsome, full of wrath and revenge, extremely lascivious and vicious, and errant thieves and cheats. What then, says he, can be expected from a people that have no inward awe or check, and live in an unbridled licentiousness, without any restraint ashore and at sea, frequent opportunities unobserved, and consequently unpunishable, and continually indulging themselves in the filthy sin of drunkenness? I shall not assign, adds he, any political reason why the magistrates wink at these enormities; and as it is not my business to criticise thereon, shall now only mention what happened not many years ago, when this people was visited by a fatal and infectious small-pox, which almost depopulated the island. In order to recruit again, (for the people of the rest of his Danish Majesty's dominions, had no great inclination to go there) all the young women were suffered to have six bastards, without any disparagement to their character as maidens; but as these good natured creatures were too lavish of their favours, the government was obliged to lay a restraint upon their fury, and if I may believe it, laid a punishment upon the crime of the

given a very faithful and particular account of every thing relating to them, as I really found the matter, and I hope that I have convinced the world, that they are not guilty of the vices they indiscriminately stand charged with. The many that go from hence to Denmark, to learn trades, or enter into service, proves them to be a people soberly inclined, and of virtuous and good principles, their conduct being generally such, as gains them both love and esteem. They are brought up in the christian religion, which is early implanted in them: they have a conscience as well as the rest of mankind, and are not without feeling some inward reluctance to vice: they have also magistrates, and a civil power, under whose awe they stand, to restrain and curb them, and they cannot commit an unlawful act with impunity.

C H A P. CVIII.

Concerning their nuptial ceremonies.

MARRIAGES here, as in other countries, are not always agreeable to the inclinations of the parties, but are often contracted for the sake of interest; so that it is not strange if a father or nearest relation, for very trifling reasons, refuses consent to a match; consent being here required with as much formality as in other countries. It is customary for the minister to go and ask the bride in marriage of her parents, or those that stand in their stead; after which, not many ceremonies are used at the weddings, neither have they many guests, their houses being but small*. The bride and bridegroom are attended to church by their nearest relations, and there joined in holy

same nature with it, which I do not choose to explain. Our author says, this disease raged in 1707, and as out of many thousands still living, none could give him an account of any such thing, he hopes that no body will be so uncharitable as to believe it ever was so.

* Mr. Anderson says, they marry according to their inclinations and circumstances, with very few ceremonies, and are attended to the church by their nearest relations on both sides, where they are joined by the parson. Afterwards the bride, bridegroom and parson, placing themselves against one of the walls, with the relations on each side of them, a cup of brandy is given to the bride, who drinks to her next neighbour, and by way of setting a good example, drinks it all up: the bridegroom on his side does the same, and thus the cups of brandy go round, till they can neither hold them, nor stand on their legs.

wedlock

wedlock by the minister, which is generally performed on a Sunday before the minister goes into the pulpit. When the sermon and service are over, they repair to the house where the bride came from, and have an entertainment according to their circumstances, and drink and rejoice with moderation and decency. As it is usual with them on such occasions to regale themselves with a little brandy, it accordingly goes round; but they have neither music nor dancing, and when the feast is over, all retire to their respective habitations.

C H A P. CIX.

Whether the Icelanders are fond of the game of chess.

IT cannot be alledged as matter of fact, that the Icelanders are lovers of gaming. It is true, they divert themselves a little at chess, as also at cards, but in a more particular manner at the former, in which they are very expert, though not such great masters of it, as in all probability their forefathers were*. Their chief leisure time they have is in the fishing seasons, when the weather is so bad that they cannot venture out to sea, and then it is that a great many being mustered together from the north and east, make parties to divert themselves, and pass away the time †. In the winter long evenings, they have employment enough in their families.

C H A P. CX.

Concerning their manner of dancing.

THEY have no idea of dancing, though sometimes the merchants at the factories for their diversion will get a fiddle and make them dance, in which they succeed no better than by hopping and jumping about ‡. When they have been

* Mr. Anderson says, that they apply themselves very much to the game of chess, and are as well as their ancestors, very eminent in, and great masters of it.

† The same Author says, they have a deal of leisure time upon their hands, when the fishing season is over, and during the long nights; and as they do not choose to do more work than they cannot help, they usually go to chess.

‡ He also says, that they are very fond of dancing, which they perform with many antics, the men and women standing facing each other, and so jigging it from one foot to the other.

treated and made merry, they generally fall a finging, and have great variety of heroic songs, which as having no skill in musical modulations, they roar out in a very harsh and uncouth manner.

C H A P. CXI.

Concerning their civil government.

THE Icelanders have a stifts-amptmand or governor, and an amptmand or deputy-governor. The former is generally chosen out of the nobility, as Gldenlove, Gldencrone, and the present count Rantzou, who is also one of the lords of the bed-chamber to his majesty *. Such generally reside in Copenhagen, but the amptmand or deputy-governor, always resides in Iceland, at the king's palace of Besssted, and is sometimes a nobleman. His salary is four hundred rixdollars in crowns *per annum*. Besides the deputy-governor, the king has a receiver or land-steward, who collects throughout the island all taxes and revenues, and sends in his accounts to the king's exchequer. This receiver or steward, had hitherto always lived at Besssted, with the deputy-governor, but has now the liberty to reside at the abbey of Wide. The king allowed him a salary of three hundred and fifty rixdollars *per ann.* in crowns, but lately made an addition thereto of a hundred.

C H A P. CXII.

Concerning the rest of his majesty's servants or officers in the island.

BESIDES the above officers, there are persons called syffelmen over certain districts, who farm the king's taxes, and account with his land-steward for what they have agreed. By this means they acquire a handsome livelihood †. The land-steward is always syffelman or tax-gatherer himself in the district

* Mr. Anderson says, that the amptmand or deputy-governor, is not of the nobility, but generally one who has been a secretary, or a well deserving domestic to some minister of state at court, who has obtained from the king this considerable employment for him, as a reward for his faithful services.

† The same Author says, that the deputy-governor has a salary of four hundred rixdollars specie, besides perquisites or fees, which amount to as much again, and that he is the supreme judge in civil and criminal affairs. The receiver or land-steward has, he says, two hundred rixdollars *per ann.* salary.

of Guldbringe, where he resides, and as he has a standing salary as land-steward, he must account with the rent-chamber or exchequer, for the taxes and other dues in this district. The rest of the king's revenues arise from the company, who pay an annual sum to the king in the rent-chamber or exchequer of this island. The revenues of the secularised abbey-lands, and other lands belonging to the king which are farmed out, are paid to the steward*. The amount of these accounts is not easily ascertained, as not being every year alike. As to judges, there are two, called laugmænd; the one has the south and east department, the other the north and west, and sometimes one or two deputies are allowed them. The island contains eighteen districts or syffeler, and each has a syffelmann or tax-gatherer, but Mule and Skaftefeld to the east have two each: there is also one in the Westman-islands, so that the whole number throughout the country amounts to twenty-one. One of the tax-gatherers or syffelmen in Mule district, who superintends the south and middle division, has fifteen courts to attend at certain times of the year, and in the beginning of the year, when the court is held at Mandtal, has a journey of three hundred English miles to make. This I only mention to shew, what a considerable district some have under them. These syffelmen act as justices of the peace, each in his district, and are like a kind of deputy-stewards, or what they call Herredsfogder in Denmark †. As they have a genteel income, and are generally people of property, they are very much respected in the island.

* Mr. Anderson says, that the harbours are farmed out to the company for twenty thousand specie dollars; that the several estates of the king bring in eight thousand dollars more; that in some districts he has one third of the tithes of the fish, and that each subject who is worth more than twenty dollars, must give him forty fish a year; our author has before observed, that there is no tithe of fish paid here to the clergy.

† The same author says, there are three laugmænd, in Danish, Lands-dommere, that is, judges, who have each a particular district, and twenty-four syffelmen or taxgatherers, each also having a village or small district under him, like the herredsfogder in Denmark.

C H A P. CXIII.

Concerning their laws.

ALL suits in law concerning inheritance and property, and every thing relating to *meum* and *tuum*, are decided by the old Iceland law; but with regard to freehold property, the Norwegian law takes place. The old ecclesiastical law is entirely abolished, and is only referred to in case of tithes, all other spiritual matters being decided by the second book of the Norwegian law, or by royal edicts. In the year 1564, the two laugmænd or judges then living, in conjunction with twenty-four other men elected for that purpose, made a law relating to pawns and forfeitures, which was confirmed and put in force the year following, by order of king Frederic the second, and dated from Lund the 13th of April 1565*. Pursuant to the tenour of that law, all forfeits and pawns are to this day adjudged, and brought to a final determination: it is very concise, the whole being comprised in two pages. Crimes and misdemeanours are canvassed according to the first and sixth book of the Norwegian laws of king Christian V. besides which, several royal edicts and orders must be consulted. His late majesty king Frederic IV. having ordered some of the most able lawyers to compose a new book of laws for Iceland, it was accordingly executed, and now only waits for his present majesty's approbation and royal authority. There is more work for lawyers here than one would imagine, especially in (Odels-fager) or cases relative to freehold and trespasses, the inhabitants suing each other at law upon the least encroachment on their respective grounds, or with regard to things, in which they presume their property is invalidated. So obstinate are they, though they have grounds of some Danish miles extent lying between them, that one will

* Mr. Anderfon says, that all civil matters relating chiefly to inheritance, or hereditary right, are decided by the ancient Iceland law-book, which was made by king Magnus, surnamed Lagabættar, or rectifier of the laws. Spiritual affairs are judged by the christnaret, or *jus ecclesiasticum*, and the great book of judgment established by king Frederic the second; and misdemeanours, by a book of laws made by king Christian the fifth. His late majesty king Frederic the fourth, had ordered some learned persons in the law, to prepare a new code for Iceland, which now has lain some years in Denmark for his majesty's approbation.

not permit the other to enjoy the least spot without his making some return for it, though in the main, of no use to himself*. Sometimes suits of some importance happen; but I have seen actions brought against people, and carried into the upper courts, though the whole contest regarded perhaps not the value of a dollar, and this by the perverse selfishness of the richer sort. Their manner of proceeding at law is as follows. In the first place, after the action is brought, they are to appear at a court within the district where the offence has happened. The *syffel*man of the district presides in this court as justice, and passes sentence. From hence they appeal to the *langret*, which is held at *Oxeraae*, and begins every year the eighth of July, and lasts as long as there is any business to do. Each *laugmænd* or judge, decrees alone in his own department, and has eight *laugrettemænd* or assessors on the bench with him. From this court an appeal may be lodged at the highest in the island, which is held at the same time, and in which the *amptmand* or deputy-governor presides, who has for assessors the judge, whose sentence or decree has not been given in this cause before, and as many *syffel*men, or in default of them, *laugrættemænd*, as make twelve exclusive of the deputy-governor, who is president, or in his absence, the king's land-steward. This court in respect to the forms, is like the (*ober hoff-ret*) or the highest court in Norway, wherein an inferior judge for prevaricating, or declining to do justice may be indicted. From this court there is an appeal to the superior court at Copenhagen, provided the cause is of such consequence as is set forth in the Norwegian law. In spiritual cases, the dean has a court, which consists of himself and two assessors, and from it an appeal may be lodged in the consistorial court, which is held also at *Oxeraae*, for the diocese of *Skalholt*, the same time the other court is sitting. The *amptmand* or deputy-governor presides here, and the bishops, deans and clergy, are assessors. This same court for the diocese of *Hoolum*, is held after Michaelmas, at a place called *Flyge Myre*, about three Danish miles from *Hoolum*, and to it the governor generally deposes

* Mr. Anderson says, that in all probability there cannot be many law-suits in Iceland between the inhabitants, though in former times, disputes frequently arose between the bishops and the king's stewards, which were seldom decided but by an appeal to the king.

some person in his room. From this court there is also an appeal to the superior court at Copenhagen. No proctors are appointed in Iceland, though in each cause the deputy-governor may constitute such as he thinks proper.

C H A P. CXIV.

Concerning executions, or punishments by death.

NO other ways are used to punish by death than beheading with an ax, or hanging. The women are thrust into a sack and drowned. The fysselman does not perform this office, but keeps at his own expence a person for this purpose*.

C H A P. CXV.

Conclusion.

BY living in Iceland upwards of two years, I had an opportunity of seeing a great part of the country, and detecting the groundless assertions, and false aspersions of such travellers as endeavoured to depreciate this island. I have said nothing but what may be deemed a genuine picture of it, represented in true and faithful colours, chiefly for the instruction and amusement of those who may be desirous to conceive a just idea of Iceland.

* Mr. Anderson says, that the inferior judge or fysselman, executes the law both in criminal and civil cases, which our Author denies, and says, they keep executioners on purpose. He adds, that when a malefactor is hanged, they keep him in agony a good while before he can give up the ghost.

METEOROLOGICAL
OBSERVATIONS

MADE AT

BESSESTED in ICELAND,

From August 1, 1749, to July 31, 1751.

1749.

The weather.

August	1	Clear and fine weather.
Saturday	2	Clear and cloudy by turns with some wind.
Sunday	3	Clear and fine weather, with very little wind.
Monday	4	Forenoon clear weather, towards noon a little rain.
Tuesday	5	Cloudy by intervals, and the wind somewhat high.
Wednesday	6	Cloudy with a little wind.
Thursday	7	Calm and fine weather.
Friday	8	Clear and calm weather.
Saturday	9	Calm weather, but somewhat cloudy.
Sunday	10	Clear and calm weather.
Monday	11	Fine weather with a little wind.
Tuesday	12	Clear weather and windy.
Wednesday	13	Calm weather and cloudy.
Thursday	14	Clear and calm weather.
Friday	15	Cloudy with some wind, but towards evening the wind very high.
Saturday	16	Cloudy, with very little wind.
Sunday	17	Clear weather and a little wind.
Monday	18	Cloudy and somewhat windy.
Tuesday	19	Clear weather and pretty windy.
Wednesday	20	Heavy cloudy weather, with a very high wind.
Thursday	21	Stormy weather, which continued during the whole night.
Friday	22	Rainy weather, with a little wind.
Saturday	23	Calm and still.
Sunday	24	Clear weather, with a high wind.
Monday	25	Rainy weather, and somewhat windy.
Tuesday	26	The same, but the wind not so high.
Wednesday	27	Rainy, but calm.
Thursday	28	Calm with clouds in the morning and forenoon, but the wind high in the afternoon.
Friday	29	Clear and calm weather.
Saturday	30	Calm, but dark weather.
Sunday	31	Rainy, with bluftring winds.
September	1	The wind very high, and sometimes accompanied by rain.
Tuesday	2	Clear for the greater part of the day, and pretty windy.

1749.

	Wind.	Barom.	Ther.	
August	1. N. W.	27 11-	11-	supra degel.
Saturday	2. S. E.	28 0	12	
Sunday	3. N. E.	28 0	12-	
Monday	4. S. E. 12 cl. N.	27 9-	13	
Tuesday	5. N.	27 9	13	
Wednesday	6. S. by E.	27 9-	12	
Thursday	7. N. E.	27 10	12-	
Friday	8. N.	27 9-	13	
Saturday	9. N.	27 9 0	12	
Sunday	10. N.	27 11	13	
Monday	11. N.	28 1-	12	
Tuesday	12. N.	27 10	12	
Wednesday	13. W. S. W.	27 10 0	11	
Thursday	14. N.	27 11-	11 0	
Friday	15. N. N. by E.	27 9 27 7	11 11	
Saturday	16. N. by E.	27 7 0	11	
Sunday	17. N.	27 7-	10-	
Monday	18. N. to E.	27 6-	11-	
Tuesday	19. N. E.	27 4-	11-	
Wednesday	20. N. E.	27 4-	9	
Thursday	21. N. E.	27 8	7	
Friday	22. N. W.	27 10	8-	
Saturday	23. E. to N.	27 7	9-	
Sunday	24. N. E.	27 8 0	8	
Monday	25. S.	28 1 0	10-	
Tuesday	26. S. W.	27 10 0	10-	
Wednesday	27. S	27 7-	11-	
Thursday	28. N.	27 5	11-	
Friday	29. N. N. E.	27 7	11	North light.
Saturday	30. S.	27 10 0	10	
Sunday	31. S.	27 9	10-	
September	1. S.	27 8	9-	
Tuesday	2. S.	27 11-	9-	

Wednes.

1749.

The weather.

September	3	The wind very high, with some showers of rain, towards the evening a great storm, which continued very violent all night.
Thursday	4	Very stormy with rain.
Friday	5	Clear and cloudy by intervals, with a little wind, but towards evening the wind very high.
Saturday	6	The weather like that of the preceding day.
Sunday	7	Calm weather, but for the better part cloudy.
Monday	8	Rainy and calm.
Tuesday	9	Very windy and cloudy, a pretty sharp frost in the night.
Wednesday	10	Clear weather, frost and the wind somewhat high.
Thursday	11	Clear and calm weather.
Friday	12	Rainy and calm weather.
Saturday	13	Clear weather, and windy.
Sunday	14	Clear and calm.
Monday	15	Dark weather, and a little windy.
Tuesday	16	Calm and mild weather.
Wednesday	17	Clear calm weather with some frost.
Thursday	18	Stormy weather with some rain.
Friday	19	Rainy and windy.
Saturday	20	Dark weather with a little wind.
Sunday	21	Clear, and by intervals windy.
Monday	22	Cloudy, with a little wind.
Tuesday	23	Clear, and the greater part of the day calm.
Wednesday	24	Rainy, but calm weather.
Thursday	25	The wind very high, with some showers of rain.
Friday	26	Cloudy, and pretty windy.
Saturday	27	Clear, and for the greater part calm.
Sunday	28	Clear and calm till noon, but in the afternoon windy.
Monday	29	Rainy with some wind, the afternoon a pretty great storm.
Tuesday	30	Very windy and cloudy.
October	1	For the better part clear but somewhat windy.
Thursday	2	The wind very high, with some showers of rain.
Friday	3	Rainy and windy.
Saturday	4	Clear the greater part of the day, and somewhat windy.

1749.

METEOROLOGICAL OBSERVATIONS.

	Wind.	Barom.	Ther.	
September	3. S.	28 10	10-	
Thursday	4. S.	27 8	10-	
Friday	5. S.	27 11-	9-	
Saturday	6. S. to W.	27 10	9	
Sunday	7. S. to E.	28 1-	9 0	
Monday	8. E.	27 7	10	Strong north light.
Tuesday	9. N. E.	27 10	8 0	
Wednesday	10. N.	28 3	4	
Thursday	11. E. N. E.	28 2	4-	
Friday	12. E.	27 10 0	6	
Saturday	13. N. E.	27 9 0	7	Strong north light.
Sunday	14. S.	27 6-	5	
Monday	15. E.	27 6-	7	
Tuesday	16. S.	27 9-	7-	
Wednesday	17. S. W.	27 11-	6	
Thursday	18. S. S. E.	27 1-	7	
Friday	19. S. E.	27 2	7	
Saturday	20. S.	26 11	8	
Sunday	21. N. E.	27 6	9	
Monday	22. S. E.	27 10	8	
Tuesday	23. S. E.	27 7	8-	
Wednes.	24. S.	27 7	8-	
Thursday	25. S. E.	27 2-	7	
Friday	26. N. E.	27 5	8 0	
Saturday	27. E.	27 7-	8	
Sunday	28. N. E.	28 0-	7-	
Monday	29. S. S. E.	28 2	6 0	
	S. W.	27 7		
Tuesday	30. W.	27 6 0	7	
October	1. N. E.	27 6 0	5	North light.
Thursday	2. S. E.	27 7 0	5	
Friday	3. W. S. W.	27 9	8	North light.
Saturday	4. S. W.	28 1	6-	

1749.

The weather.

October	5	Some rain with brisk gales of wind.
Monday	6	Gloomy weather with a very high wind.
Tuesday	7	Rainy with a very high wind.
Wednesday	8	Rainy and very windy.
Thursday	9	Rainy and windy.
Friday	10	Clear and calm during almost the whole day.
Saturday	11	Dark weather, pretty windy, and towards noon a great storm.
Sunday	12	Changeable weather with rain and hail, clear, windy and stormy.
Monday	13	Dark weather, and pretty windy.
Tuesday	14	Fine calm weather, but in the night frost and snow.
Wednesday	15	Clear and calm weather during the better part of the day.
Thursday	16	Clear and calm with some frost.
Friday	17	Clear and calm with a slight frost.
Saturday	18	Gloomy weather, but no frost; in the afternoon and evening a great storm.
Sunday	19	Cloudy and pretty windy; a violent storm in the afternoon and night.
Monday	20	Rainy with a very high wind.
Tuesday	21	Rainy and windy.
Wednesday	22	The same.
Thursday	23	Dark weather and pretty windy.
Friday	24	For the greater part clear, with a little wind.
Saturday	25	Dark, but calm weather.
Sunday	26	Rainy and pretty windy.
Monday	27	The same.
Tuesday	28	The same.
Wednesday	29	The same; some frost in the night.
Thursday	30	Thick snow and pretty windy.
Friday	31	The same, with high winds.
November	1	Thick, hazy, cloudy, but calm; at 11 o'clock P. M. rain and snow, with a high wind.
Sunday	2	Rainy and pretty windy.
Monday	3	Clear and calm with some frost.
Tuesday	4	Clear frosty weather, with some wind.

METEOROLOGICAL OBSERVATIONS.

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	Wind.	Barom.	Ther.	
October	5. S.	28 2-	6-	North light.
Monday	6. S. E.	28 3	7	
Tuesday	7. S. to E.	28 3-	8	
Wednesday	8. S.	27 10	9	
Thursday	9. S. W.	28 0 0	7-	
Friday	10. N. W.	27 11	8	North light.
Saturday	11. S. E.	28 1 0	6-	
		27 11		
	S.			
Sunday	12.	27 9	6-	
Monday	13. S.	27 6-	5 0	
Tuesday	14. W.	27 5-	4-	
Wednesday	15. S.	27 5 0	4	Strong north light.
Thursday	16. N.	9	4	
Friday	17. S. E.	10	4	North light.
Saturday	18. E.	9-	5	
		3-		
Sunday	19. S.	8-	5-	
Monday	20. S.	8	8	
Tuesday	21. S.	10	5-	
Wednesday	22. S. E.	28 1	6-	
Thursday	23. W.	27 10-	5	
Friday	24. W.	28 3 0	6	
Saturday	25. S.	3 0	6	
Sunday	26. E. S. E.	28 0	7	
Monday	27. S. W.	27 11	6-	
Tuesday	28. W.	8	6	
Wednesday	29. S. E.	28 1	5	Strong north light.
Thursday	30. S. W.	27 5	4	
Friday	31. W. N. W.	6	3-	
November	1. E.	11	2-	
	S.	3	3	
Sunday	2. S.	3-	2-	
Monday	3. E.	9 0	1	North light.
Tuesday	4. N. E.	9 0	0 0	

November

1749.

The weather.

November	5	Clear frosty weather, with some wind.
Thursday	6	Clear, calm and frosty; after the north light a very high wind in the night.
Friday	7	Rainy, and a very high wind; at 11 o'clock, P.M.
Saturday	8	Dark and calm weather.
Sunday	9	Rainy with a little wind.
Monday	10	Dark and calm weather.
Tuesday	11	The same.
Wednesday	12	Snow, but calm.
Thursday	13	Clear and frosty; some wind in the afternoon, with rain and storm.
Friday	14	Rain and hail, with a very high wind.
Saturday	15	For the greater part clear and calm, with a little frost.
Sunday	16	Thick hazy weather, and somewhat windy.
Monday	17	Clear, and calm weather, with a little frost.
Tuesday	18	Pretty clear and calm weather.
Wednesday	19	Clear frosty weather, and pretty windy.
Thursday	20	Rainy and windy.
Friday	21	Cloudy and very windy.
Saturday	22	Thick, but calm.
Sunday	23	Thick heavy air, and somewhat windy.
Monday	24	Rain, with a little wind.
Tuesday	25	The same.
Wednesday	26	The same, but less wind.
Thursday	27	Thick, hazy and windy.
Friday	28	The same, but somewhat milder.
Saturday	29	Calm and clear during the better part of the day.
Sunday	30	Hazy weather and pretty windy.
December	1	The same, but in the evening a storm.
Tuesday	2	Dark weather, and pretty windy.
Wednesday	3	The same, but the wind higher.
Thursday	4	The same, but less wind.
Friday	5	Thick and hazy, but for the greater part calm.
Saturday	6	Cloudy but calm, with some frost.
Sunday	7	Clear, calm, and frosty weather.
Monday	8	Rain, with some wind.
Tuesday	9	Cloudy, but calm.

METEOROLOGICAL OBSERVATIONS.

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	Wind.	Barom.	Ther.	
November	5. N. E.	11	10	infra degel.
Thursday	6. S. E.	28 30	1	North light.
Friday	7. S. E.	27 8-	2-	fupr. degel.
			3-	
Saturday	8. S.	60	3-	
Sunday	9. S.	27 4	5	
Monday	10. S. E.	6-	3	
Tuesday	11. S.	4-	3-	North light.
Wednesday	12. W.	4-	3	North light.
Thursday	13. S. E.	7	1-	
		0-		
Friday	14. S.	2-	3	North light.
Saturday	15. S.	4	2	North light.
Sunday	16. N. E.	5-	2	North light.
Monday	17. E. S. E.	5	2-	
Tuesday	18. E.	60	30	North light.
Wednesday	19. N. E.	28 1	20	
Thursday	20. S.	27 11-	6	
Friday	21. W.	28 1	4-	
Saturday	22. S.	7	4	
Sunday	23. S. E.	70	4	
Monday	24. S.	2-	5-	
Tuesday	25. S.	2	5-	
Wednesday	26. S. E.	2	5	
Thursday	27. S.	27 11	5-	
Friday	28. S.	28 0	6	
Saturday	29. W.	28 0	6	
Sunday	30. S.	28 2	7	
December	1. S.	28 20	7	
		27 8		
Tuesday	2. S. W.	28 10	5-	
Wednesday	3. S. S. E.	27 11	5-	
Thursday	4. S.	9	6-	
Friday	5. W.	4	6	North light.
Saturday	6. N. E.	27 9	2-	North light.
Sunday	7. E. S. E.	28 5	1-	North light.
Monday	8. E. S. E.	2-	2	North light.
Tuesday	9. E. S. E.	1-	4-	

1749.

The weather.

December	10	Cloudy but calm.
Thursday	11	For the most part clear and calm with some frost.
Friday	12	Foggy, but calm weather and a thaw.
Saturday	13	Thick weather and pretty windy.
Sunday	14	Clouds driving and wafted by some wind.
Monday	15	Clear and calm with frost.
Tuesday	16	The same, but some snow.
Wednesday	17	Cloudy, with some wind and frost.
Thursday	18	Hazy weather and very windy ; in the afternoon and night a storm.
Friday	19	For the better part clear and pretty windy.
Saturday	20	Clear weather, somewhat stormy by gusts, and in the night a considerable storm.
Sunday	21	Cloudy and stormy weather.
Monday	22	Clear and calm frosty weather, but about 2 o'clock, P. M. stormy with hail and snow.
Tuesday	23	Clear and calm weather, during almost the whole day. The same day I observed an eclipse of the moon, which was total, and began almost at 6 o'clock, P. M. and ended 20 minutes after 8. The same time a beautiful north light was seen with two bright bows in the north, and with bright flaming rays at W. N. W. and E. N. E.
Wednesday	24	Foggy weather and pretty windy.
Thursday	25	Clear weather and very windy.
Friday	26	Clear, calm and mild weather.
Saturday	27	The same.
Sunday	28	The same.
Monday	29	Thick weather and pretty windy.
Tuesday	30	Rain and very high winds.
Wednesday	31	Mild and calm weather with clouds.

1750.

January	1	Gloomy but calm weather ; in the night stormy.
Friday	2	Very high winds and cloudy.
Saturday	3	Stormy with rain and hail.
Sunday	4	The same.
Monday	5	Clouds driving, and pretty windy.

1750.

METEOROLOGICAL OBSERVATIONS.

155

	Wind.	Barom.	Ther.	
December	10. S.	10	3-	
Thursday	11. N. E. & S. E.	2	3	North light.
Friday	12. S. E. & S.	2	3-	
Saturday	13. S. & S. W.	27 9-	6-	
Sunday	14. W.	7-	4-	North light.
Monday	15. N.	8-	2-	
Tuesday	16. W. N. W.	8-	2 0	North light.
Wednesday	17. E.	10 0	3	infra degel.
Thursday	18. N. E.	6 0	2	North light.
Friday	19. N. E.	10 0	3-	
Saturday	20. N. E.	10	2-	
Sunday	21. N. E.	28 0	4-	
Monday	22. S. E.	1	3-	North light.
Tuesday	23. S.	27 10	0	
Wednesday	24. N.	27 4 0	2	supr. degel.
Thursday	25. N.	10-	1-	North light.
Friday	26. S.	28 4 0	2	infra degel.
Saturday	27. S.	4	3-	North light.
Sunday	28. S.	4-	4	
Monday	29. S. E.	2-	1-	North light.
Tuesday	30. S. E.	27 8 0	3	supr. degel.
Wednesday	31. S. E.	10	3-	North light.
	1750.			
January	1. E. S. E.	27 10-	3 1/2	supr. degel.
Friday	2. S.	6	5	
Saturday	3. S.	8-	6-	
Sunday	4. S.	11	6-	
Monday	5. S.	28 2 0	5	

January

1750.

The weather.

January	6	Cloudy but mild.
Wednesday	7	Clear and mild weather.
Thursday	8	Cloudy but pretty windy.
Friday	9	Cloudy mild and calm; towards midnight a storm, which ceased by day-break.
Saturday	10	Cloudy and a little windy.
Sunday	11	Very high wind with rain about 1 o'clock, P.M.
Monday	12	By intervals cloudy and pretty windy.
Tuesday	13	Clear weather with some wind.
Wednesday	14	Some snow, and a little wind.
Thursday	15	Very windy between whiles, with hail and snow.
Friday	16	Pretty windy with snow.
Saturday	17	Very high wind and rain.
Sunday	18	Snowy and pretty windy.
Monday	19	Windy and a thick fog with snow.
Tuesday	20	Clear and gentle weather, with a little snow and wind.
Wednesday	21	Calm weather, and by intervals snow.
Thursday	22	Clear and calm.
Friday	23	The same.
Saturday	24	Cloudy and pretty windy; no frost.
Sunday	25	Dark weather, with very high winds.
Monday	26	Cloudy and pretty windy.
Tuesday	27	The same.
Wednesday	28	Clouds driving, with a high wind and snow in the night.
Thursday	29	Between whiles clear, with little wind.
Friday	30	Cloudy and pretty windy.
Saturday	31	Rain and very high wind; in the evening and night a storm.
February	1	The same, ceased at noon, and was succeeded by snow.
Monday	2	A storm, which was allayed in the afternoon by rain.
Tuesday	3	Hazy, with snow and wind.
Wednesday	4	The same.
Thursday	5	High winds, with snow hail and rain.
Friday	6	Clear and calm weather with a gentle frost.

1750.

	Wind.	Barom.	Ther.		
January	6. S.		2-	3-	North light.
Wednesday	7. S. S. E.		0	3	Strong north light.
Thursday	8. S. E.	27	9 0	3	
Friday	9. S. E.		6 0	3	
			3		
Saturday	10. S. S. E.		2	4	Strong north light.
Sunday	11. S. E.	26	7-	3-	
	S.		4-		North light.
Monday	12. S.		9 0	3	
Tuesday	13. S.	27	0	0-	North light.
Wednesday	14. S.		4	0	
Thursday	15. S. W.		3-	0	
Friday	16. N. W.	26	10-	0	
Saturday	17. S. E.	27	7-	1 0	
Sunday	18. S. W.		6	2	
Monday	19. S. W.		5½	0	
Tuesday	20. S. W.		1-	0	
Wednesday	21. S. W.		3	0	
Thursday	22. N.		6	1	infra degel.
Friday	23. E.		11	5 0	North light.
Saturday	24. S. E.	28	0 0	1	in open air.
Sunday	25. S.	27	6-	4	supr. degel.
Monday	26. S. S. W.		5	6	
Tuesday	27. S. W.		1	4	
Wednesday	28. W. S. W.	27	3	3	supr. degel. North light.
Thursday	29. W. S. W.		5-	2	
Friday	30. W.		11	2 0	
Saturday	31. S.		9	6 0	
February	1. S.		4 0	5-	North light.
Monday	2. S.		0	2	
Tuesday	3. S. E.		1	1	North light.
Wednesday	4. S. E.		3	2	North light.
Thursday	5. S. E.	26	10	2	
Friday	6. S.	27	2-	2 0	North light.

1750.

The weather.

February	7	Cloudy, with a little wind and frost.
Sunday	8	Clear and calm with some frost.
Monday	9	Cloudy and windy.
Tuesday	10	Rain with some wind.
Wednesday	11	Clear and calm during the greater part of the day.
Thursday	12	Cloudy with some wind; the afternoon clear and calm.
Friday	13	Clear and calm, with some frost.
Saturday	14	For the most part clear and calm.
Sunday	15	Clear and calm with some frost; but in the evening high winds, which blew into a storm during the night.
Monday	16	Clear weather, but very windy.
Tuesday	17	Clear, with a little wind.
Wednesday	18	Clear and pretty windy.
Thursday	19	Clear and calm.
Friday	20	The same.
Saturday	21	The same; but in the night a little snow.
Sunday	22	Clear, with a little wind.
Monday	23	The same; but in the night snow.
Tuesday	24	Cloudy, with a little wind.
Wednesday	25	Hazy and windy weather with a little frost.
Thursday	26	Clear and calm, with a little frost and high winds in the night.
Friday	27	Rain and storm till 11 o'clock A. M. afterwards some rain and wind, in the night some snow.
Saturday	28	Snow, with a little wind; but in the afternoon clear and calm weather.
March	1	Clear and calm with frost; and in the evening some storms of rain and sleet.
Monday	2	Windy, with storms of sleet and rain.
Tuesday	3	For the most part clear and somewhat windy; but in the night snow.
Wednesday	4	Cloudy with a little wind; in the evening and night very high winds with snow, and a frost.
Thursday	5	Clouds driving, pretty windy, and a little snow.

1750.

METEOROLOGICAL OBSERVATIONS.

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	Wind.	Barom.	Ther.	
February	7. S. W.		2-	1 Strong north night.
Sunday	8. W.		6-	1 Strong north light.
Monday	9. N. E.		4 0	1 North light.
Tuesday	10. E. N. E.	26	8 0	4 North light.
Wednesday	11. E.		5-	4 North light.
Thursday	12. S. W.	27	2-	3 North light.
Friday	13. E. S. E.		5	2 North light.
Saturday	14. E. S. E.		7	1
Sunday	15. E.		5	1 Strong north light.
	N. E.			
Monday	16. N.		7	1 North light.
Tuesday	17. N. E. & S. E.		9	0 North light.
Wednesday	18. S. E.		6	1
Thursday	19. S. W.		1-	2
Friday	20. E.		6 0	2 North light.
Saturday	21. E.		5-	2
Sunday	22. E.		1-	3 North light.
Monday	23. E. S. E.		2-	2
Tuesday	24. S. S. W.		7-	2 Strong north light.
Wednesday	25. N.	27	3-	1- supr. degel.
Thursday	26. E. S. E.		7	0
	S.			
Friday	27. S.		0	3 North light.
Saturday	28. E. S. E.		0	2-
March	1. E.		6	1
		26	11	North light.
Monday	2. S.		9-	3 0
Tuesday	3. W. S. W.	27	4	2-
Wednesday	4. N.		1 0	3 North light.
		26	9 0	0
Thursday	5. E. S. E.	27	2-	0 Strong north light.

March

1750.

The weather.

March	6	Pretty clear, with some wind and frost.
Saturday	7	For the most part clear and mild weather, with some frost.
Sunday	8	Clear weather, with some wind and frost.
Monday	9	Clear weather but stormy and frosty; the afternoon cloudy, stormy and frosty.
Tuesday	10	Clear weather with high winds and frost; in the afternoon cloudy and less wind.
Wednesday	11	Hazy weather, with some wind and a mild rain.
Thursday	12	Rainy and somewhat windy.
Friday	13	Cloudy with a little wind.
Saturday	14	Dark weather, and pretty windy.
Sunday	15	Between whiles clear, cloudy and windy.
Monday	16	Clear and calm weather during almost the whole day.
Tuesday	17	Cloudy and somewhat windy with a little frost; in the evening and night the wind was very high, and accompanied by snow.
Wednesday	18	For the most part clear, the wind pretty high, and a little frost; but in the afternoon a thaw, with sleet and rain.
Thursday	19	Sudden showers of rain and storms; by intervals clear, and in the evening and night calm and mild.
Friday	20	Dark, but calm weather.
Saturday	21	Unsettled weather, wind, hail, snow, and a little frost succeeding each other.
Sunday	22	Some snow and wind, no frost; but between whiles furious and blustering storms.
Monday	23	Thaw, snow and wind.
Tuesday	24	Stormy and some rain.
Wednesday	25	Very high winds with thick snow and hard frost.
Thursday	26	The wind high with showers of snow; but by intervals clear and calm.
Friday	27	Clear weather, with some wind and frost.
Saturday	28	The forenoon clear and calm; but the afternoon snowy and frosty.
Sunday	29	Gloomy weather, with some wind and frost, and showers of snow, sleet and rain.

1750.

METEOROLOGICAL OBSERVATIONS.

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	Wind.	Barom.	Ther.	
March	6. S.	2-	1	Strong north light.
Saturday	7. N. N. W.	4	1	North light.
Sunday	8. E. S. E.	2-	1	infra degel.
Monday	9. N.	1	2	
		9	6-	in the open air.
Tuesday	10. N.	28 4-	7	in the open air.
	S. E.	6		
Wednesday	11. S. W.	1	1	
Thursday	12. S. W.	27 8	4	supr. degel.
Friday	13. S. W.	6	4	
Saturday	14. W. S. W.	8 0	4-	
Sunday	15. W. S. W.	8	2-	
Monday	16. N. & E.	8	2	
Tuesday	17. E.	9	1	
Wednesday	18. E.	6	1 0	
	S. E.	3	3	
Thursday	19. S.	26 10	4	
Friday	20. N. W.	10-	3	
Saturday	21. S. W.	27 1 0	1-	
Sunday	22. S. W.	27 2	2	North light. supra degel.
Monday	23. S. W.	4	2	North light.
Tuesday	24. S. W.	26 5-	4	
Wednesday	25. S. W.	27 4	1	
Thursday	26. S. W.	4	1	
Friday	27. N. E. & N.	8 0	0	
Saturday	28. N. E.	10-	1-	infra degel.
	S. S. E.	9-		
Sunday	29. E.	6	0	

T t

March

1750.

The weather.

March	30	Dark weather, pretty windy, no frost; but towards evening a great fall of snow with a frost, and in the night a storm.
Tuesday	31	The wind very high with a frost; but clear and cloudy between whiles.
April	1	For the most part clear and calm weather, with some frost.
Thursday	2	Tolerably calm with some snow, but the evening windy, and in the night a violent storm.
Friday	3	Stormy, and a sharp frost.
Saturday	4	Clear weather, with some wind and frost.
Sunday	5	Clear, calm and frosty weather.
Monday	6	Clear and calm weather.
Tuesday	7	Clear, very windy, and a frost.
Wednesday	8	The same.
Thursday	9	The same.
Friday	10	Clear weather, with a little wind and frost.
Saturday	11	Cloudy with some wind, but no frost.
Sunday	12	Clear, pretty windy, and a frost.
Monday	13	The same; but in the evening thick and cloudy.
Tuesday	14	Clear, and for the most part calm weather. During the whole day there was a parhelion, with two mock-suns appearing on each side, the colours of the rainbow.
Wednesday	15	Clear and calm weather, the evening hazy with some wind, but no frost.
Thursday	16	Hazy weather with some wind; a thaw.
Friday	17	The same, but less wind.
Saturday	18	Thick hazy weather, the wind pretty high, with some rain.
Sunday	19	The same.
Monday	20	Clear, calm and mild weather.
Tuesday	21	Hazy weather, with some wind.
Wednesday	22	For the greater part clear with some wind.
Thursday	23	Calm weather with mild small rain.
Friday	24	Calm weather, and fine and clear between whiles.
Saturday	25	Clear and calm, but in the night a sharp frost.
Sunday	26	Clear and calm; in the night a frost.

METEOROLOGICAL OBSERVATIONS.

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	Wind.	Barom.	Ther.	
March	30. S. W.	26 10	1	fupr. degel.
	N. N. W.			
Tuesday	31. N. N. W.	27 3	2	infra degel.
April	1. N. & E.	6	1	
Thursday	2. E.	3	1	
	N.	26 11-	3	
Friday	3. N.	11-	3	North light.
Saturday	4. N.	27 4	1	North light.
Sunday	5. E.	6	1	Strong north light.
Monday	6. N.	9	0	
Tuesday	7. N. E.	28 0	0	
Wednesday	8. N. E.	27 7-	1	
Thursday	9. N. E.	9	1	
Friday	10. N. E.	9	1	
Saturday	11. S. E.	5	1	fupr. degel.
Sunday	12. N. N. E.	6	0	
Monday	13. N. N. E.	11-	2	infra degel.
Tuesday	14. N. E.	28 1	1	
Wednesday	15. E.	27 11	1	fupr. degel.
	S. E.			
Thursday	16. S. E.	5-	4	
Friday	17. S. S. E.	5	4	
Saturday	18. S. E.	7	5	
Sunday	19. S. E.	10	5	
Monday	20. S. E.	10	5	
Tuesday	21. S. E.	10-	5	
Wednesday	22. S. E.	10 0	5	
Thursday	23. S. E.	10	5	
Friday	24.	28 1	5	
Saturday	25. E.	3	4	
Sunday	26. N. W.	5 0	3	

May

1750.

The weather.

April	27	Cloudy, with some wind.
Tuesday	28	By intervals clear, with a little wind in the afternoon, and in the night a high wind and frost.
Wednesday	29	Clear weather, with some wind and frost.
Thursday	30	Clear and calm.
May	1	The same.
Saturday	2	Between whiles gentle showers of rain, and a little wind.
Sunday	3	Clear, calm and mild.
Monday	4	Calm, and between whiles mild rain.
Tuesday	5	Small rain and little wind, but towards the evening clear with high wind.
Wednesday	6	Clear and calm.
Thursday	7	Cloudy with some rain, and the wind pretty high; but towards evening clear, and a sharp frost.
Friday	8	Clear, the wind high, and some frost.
Saturday	9	Clear, calm weather with frost; but the afternoon cloudy with wind and rain.
Sunday	10	Cloudy, but for the most part calm.
Monday	11	Between whiles rain and high wind.
Tuesday	12	Cloudy, but calm weather.
Wednesday	13	By intervals gentle showers of rain and a little wind.
Thursday	14	Cloudy and tolerably mild.
Friday	15	Cloudy with a high wind.
Saturday	16	The same, with some rain.
Sunday	17	The same.
Monday	18	Dark weather and pretty windy; towards the evening clear and calm, and in the night a high wind and rain.
Tuesday	19	Cloudy and windy.
Wednesday	20	The same.
Thursday	21	The same.
Friday	22	Cloudy with some wind; towards night the wind very high.
Saturday	23	Clear by intervals, and very high wind.
Sunday	24	The same.

	Wind.	Barom.	Ther.	
April	27. S. W.	3	4	
Tuesday	28. S. W.	10	4	
Wednesday	29. N.		1	
Thursday	30. N.	20	1	
May	1. N.	2	2	
Saturday	2. N. to W.	3	3	
Sunday	3. S. W.	2-	5	
Monday	4. N. W.	3	6	
Tuesday	5. S. W.	40	6	
	S. W.	0	6	
Wednesday	6. N. W.			
Thursday	7. N. W.	3	5	
	S. W.	27 10	5	
	N.			
Friday	8. N.	28 0	-	
Saturday	9. N.	2	1	
	S. W.	1	3	
Sunday	10. S.	00	5	
Monday	11. W.	27 11	4	
Tuesday	12. W.	28 2	5	
Wednesday	13. S. W.	2-	5	supr. degel.
Thursday	14. S. W.	2	5-	
Friday	15. S. S. E.	3	6	
Saturday	16. S.	3	6	
Sunday	17. S. S. E.	2-	6	
Monday	18. S.	1	7	
		2		
Tuesday	19. S.	0	6	
	till after.	2		
Wednesday	20. S.	3-	6	
Thursday	21. S.	30	6	
Friday	22. S. to E.	3	8	
	S. E.			
Saturday	23. S. E.	3	7	
Sunday	24. S. E.	3	7	
		U u		

1750.

The weather.

May	25	Hazy with some rain, but calm.
Tuesday	26	Rain and wind.
Wednesday	27	Clear, calm and warm weather.
Thursday	28	Hazy, but calm weather with small rain.
Friday	29	Clear weather, and pretty windy.
Saturday	30	Clear with some wind.
Sunday	31	The same.
June	1	Driving clouds and a little wind.
Tuesday	2	Clear weather with a little wind.
Wednesday	3	Clear weather with some wind.
Thursday	4	The same.
Friday	5	The same, with very little wind.
Saturday	6	Thick hazy weather with some wind.
Sunday	7	Driving clouds, and between whiles clear, and pretty windy.
Monday	8	Hazy weather, with some rain and wind.
Tuesday	9	Thick hazy weather, with rain and more wind.
Wednesday	10	For the most part clear and pretty windy; but in the night a storm.
Thursday	11	The same; but towards the evening a calm.
Friday	12	The same, with a little wind.
Saturday	13	Clear weather with a little wind.
Sunday	14	Rainy, but calm weather.
Monday	15	Clear weather with some wind.
Tuesday	16	Between whiles clear with some wind.
Wednesday	17	Clear weather and pretty windy.
Thursday	18	The same, with less wind.
Friday	19	Clear, and for the most part calm.
Saturday	20	The same.
Sunday	21	The same.
Monday	22	The same.
Tuesday	23	The same.
Wednesday	24	The same.
Thursday	25	Clear and calm weather.
Friday	26	Cloudy and calm weather.
Saturday	27	Clear and calm weather.
Sunday	28	The same.

1750.

	Wind.	Barom.	Ther.	
May	25.	3-	8	
Tuesday	26. S.	2	8	
Wednesday	27.	4	10	
Thursday	28. N. W.	5	8	
Friday	29. N.	4-	6	
Saturday	30. N. W.	2	6	
Sunday	31. N.	27 11-	60	
June	1. E. to N. & S.	100	60	
Tuesday	2. S. & N.	9-	7	
Wednesday	3. N. W.	9-	8	
Thursday	4. N. W.	10-	8	
Friday	5. N. W.	28 2	8	
Saturday	6. S.	1	8	
Sunday	7. S. to E.	1-	9	
Monday	8. S.	27 10-	8	
Tuesday	9. S. W.	27 5-	7	fupr. degel.
Wednesday	10. N. E.	8	80	
	N. E.	8	5	
Thursday	11. N. E.	8-	5	
	S. E.			
Friday	12. N.	90	6	
Saturday	13. N.	9-	8	
Sunday	14. S. W.	100	9	
Monday	15. S.	110	8	
Tuesday	16. N.	11-	8	
Wednesday	17. N.	11-	8	Holm. ship.
Thursday	18. N.	28 0	8-	
Friday	19. N. W.	10	9	
Saturday	20. N. W.	2	9	
Sunday	21. N. W.	1	9	Hafnef. ship.
Monday	22. N. W.	1	9	
Tuesday	23. W. S. W. & N.	0	10	
Wednesday	24. N. W. & W. t S.	27 10-	10	
Thursday	25. N. E. & S.	11	10	
Friday	26. S. W.	28 0	10	
Saturday	27. N. W.	1	10	
Sunday	28. N. W.	00	11	

1750.

The weather.

June	29	Clear weather, and the wind high.
Tuesday	30	The same.
July	1	The same, but pretty calm.
Thursday	2	The same.
Friday	3	The same.
Sunday	19	Hazy weather with some rain and wind.
Monday	20	Pretty clear and calm.
Tuesday	21	The same.
Wednesday	22	Between whiles clear, with a little wind.
Thursday	23	Some rain and a little wind.
Friday	24	Thick hazy weather, but somewhat calm.
Saturday	25	The same.
Sunday	26	Clear weather with a little wind, and in the afternoon some rain.
Monday	27	Clear, with some wind.
Tuesday	28	Cloudy, with a little wind.
Wednesday	29	Between whiles rain and a high wind.
Thursday	30	Dark weather, with a little wind.
Friday	31	High wind with some rain.
August	1	Pretty clear and calm weather.
Sunday	2	Thick hazy weather, and a little windy.
Monday	3	Pretty clear with some wind.
Tuesday	4	The same.
Wednesday	5	Clear weather with a little wind.
Thursday	6	Much the same.
Friday	7	A little rain, but for the most part calm.
Saturday	8	Clear weather and pretty windy.
Sunday	9	The same, with less wind.
Monday	10	The same.
Tuesday	11	Clear and calm weather.
Wednesday	12	The same.
Thursday	13	Clear weather with a very high wind.
Friday	14	Clear and calm weather during almost the whole day.
Saturday	15	The same.
Sunday	16	For the most part clear weather, with a high wind.
Monday	17	By intervals clear, with some wind.

1750.

	Wind.	Barom.	Ther.
June	29. N. W.		0- 10
Tuesday	30. N. W.		2 10
July	1. N. W.		6- 11
Thursday	2. N. W.		5- 11
Friday	3. N. W.		4- 12
Sunday	19. E.	27	9 13
Monday	20. E. & N.		9 13
Tuesday	21. N. W.		9- 13
Wednesday	22. W.	28	0- 13
Thursday	23. W. to S.	27	8 12
Friday	24. W.		5- 12
Saturday	25. S. W.		5- 12
Sunday	26. E.		5- 11-
	N. E.		
Monday	27. N.		7 9 0
Tuesday	28. N. W.		11 0 9
Wednesday	29. S.	28	0 10 0
Thursday	30. S.	28	1 0 10
Friday	31. S. E.	27	9- 10
August	1. S. & W.		9 10
Sunday	2. W. & N. W.		9 10
Monday	3. N.		10 0 10
Tuesday	4. N. W.		11 0 9
Wednesday	5. N.		11- 9
Thursday	6. N.	28	0 9
Friday	7. S. to E.		1 10
Saturday	8. N.		2 0 10
Sunday	9. E.	27	11- 10-
Monday	10. N.		9- 10-
Tuesday	11. N.		9 10
Wednesday	12. N. W.		9 11
Thursday	13. N.		9- 10
Friday	14.		8- 11
Saturday	15. E.		8 11
Sunday	16. N.		8- 10
Monday	17. S. E.		10- 11

North light.

1750.

The weather.

August	18	For the most part clear and calm weather.
Wednesday	19	The same, but with some wind.
Thursday	20	Clear and calm.
Friday	21	The same.
Saturday	22	The same, but foggy.
Sunday	23	Clear and calm weather, towards the evening hazy, with a little rain and wind.
Monday	24	Clear weather with some wind.
Thursday	27	Pretty clear, with a little wind.
Friday	28	Cloudy, with a high wind and a little rain.
Saturday	29	The same, but no rain.
Sunday	30	The same.
Monday	31	Stormy weather and rain.
September	1	Pretty windy and some rain, but in the afternoon clear, with a little wind.
Wednesday	2	Clear with some wind.
Thursday	3	Cloudy, and a high wind.
Friday	4	The same.
Saturday	5	Stormy weather, with the clouds driving.
Sunday	6	Clear and cold weather, and pretty windy.
Monday	7	Wind and rain, but between whiles clear.
Tuesday	8	For the greater part clear with a little wind, and in the mountains some snow; towards the evening the barometer stood.
Wednesday	9	A continual rain, and pretty high wind.
Thursday	10	Clouds, with a pretty high wind; by intervals clear, and in the night a frost.
Friday	11	Clear and calm, towards evening a little wind.
Saturday	12	Rain and wind; but between whiles clear.
Sunday	13	Rain and a pretty deal of wind.
Monday	14	The same; at noon the rain ceased, and the weather was calm and mild.
Tuesday	15	The wind very high with some rain; afternoon very rainy and windy.
Wednesday	16	Cloudy and pretty windy.
Thursday	17	Cloudy, but for the most part calm; in the afternoon a little small rain, and quite calm; but rain during almost the whole night.

METEOROLOGICAL OBSERVATIONS.

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	Wind.	Barom.	Ther.	
August	18. S. E. & N.E.	11-	11-	
Wednesday	19. N. E.	10-	11	
Thursday	20.	9-	11	North light.
Friday	21. N.	9-	11	
Saturday	22. N. W.	9-	11	
Sunday	23. S. E. S. E.	27 9-	11-	
Monday	24. E.	9-	11-	
Thursday	27. S. W.	11-	11	
Friday	28. S. S. E.	28 00	10-	
Saturday	29. E.	27 7-	10	
Sunday	30. E. to S.	60	10	
Monday	31. S. E. S. to W.	3-	10	
September	1. S. E. N. E. & N.	4 6	10 100	
Wednesday	2. N. & W.	9	9	North light.
Thursday	3. E.	20	9-	
Friday	4. N. E. & N.	2-	80	
Saturday	5. N. E.	7	6	
Sunday	6. N.	9-	6	Strong north light.
Monday	7. S.	10-	8	
Tuesday	8. N. W.	10-	8	
		28 0		
Wednesday	9. S. to W.	27 8	9	
Thursday	10. W. S. W.	7-	6-	
Friday	11. S. to E.	9-	6-	Strong north light.
Saturday	12. S. to W.	9	8	
Sunday	13. S. E. & S.	8-	8	
Monday	14. S. W.	7- 11	9	
Tuesday	15. S. E.	11- 9-	8-	
Wednesday	16. S. to E.	28 0	10	
Thursday	17. S. to E.	1	10	

September

1750.

The weather.

September	18	Cloudy and the wind pretty high ; in the afternoon a little rain.
Saturday	19	Cloudy and pretty windy.
Sunday	20	Showery with some wind ; but in the night a calm and continual rain.
Monday	21	Rain and calm weather ; but the evening windy, and a violent storm in the night.
Tuesday	22	Stormy, showery, and between whiles sun-shine.
Wednesday	23	Showery, windy, and by intervals sun-shine, and the wind pretty still.
Thursday	24	Somewhat windy and showery, but towards the evening clear and windy.
Friday	25	Rainy weather, but somewhat calm.
Saturday	26	Unsettled weather, rain, sun-shine, and very windy.
Sunday	27	Foggy, but calm, in the evening and night a violent storm and rain.
Monday	28	Cloudy and windy ; during the afternoon rain, and snow in the mountains.
Tuesday	29	Clear and windy, with showers of rain and hail.
Wednesday	30	Windy and showery.
October	1	Rainy and windy.
Friday	2	Thick hazy weather and windy ; in the evening a high wind and rain.
Saturday	3	At eight o'clock, A. M. calm and clear, about noon heavy rain and some wind ; in the afternoon some showers of rain, and between whiles sun-shine.
Sunday	4	By intervals clear, showery and windy ; but during the evening and night, continual rain and calm.
Monday	5	Pretty windy and showery ; in the afternoon and evening, an almost constant rain and wind.
Tuesday	6	A continual small rain, but the weather somewhat calm, and the air dark and foggy.
Wednesday	7	Between whiles clear and some wind.
Thursday	8	A continual rain and wind.
Friday	9	Clear and windy, in the night frost and snow.
Saturday	10	A very high wind, accompanied with hail.
Sunday	11	Cloudy and calm, with a little frost.
Monday	12	The same, but clearer and no frost.

1750.

METEOROLOGICAL OBSERVATIONS.

	Wind.	Barom.	Ther. open air.	
September	18. S S. E.	1	100	
		0-		
Saturday	19. E. S. E.	27 11-	100	
Sunday	20. S. W. & S.	9	100	
Monday	21. S. E.	5	9	
	N. E.	1		
Tuesday	22. S. E.	3-	80	
Wednesday	23. E. S. E.	6-	8	Str. north light.
Thursday	24. E. S. E.	5-	7	
	N.	4-	70	
Friday	25. N. E. & W.	2	7	
Saturday	26. S. & S. to E.	7	70	
Sunday	27. S. to E.	9	7	
	N. W.	5	6	
Monday	28. W.	3	6	
	N. W.	4	5-	
Tuesday	29. S. W.	6	5	
Wednesday	30. S.	3	5	
October	1. N. E. & N.	3	5	
Friday	2. E.	5	5	
	E. to N.	26 11		
Saturday	3. S.	27 100		
		10-	60	
		28 0		
Sunday	4. S. W.	3-	70	
		6		
Monday	5. S. W.	7	7	
	W. S. W.	7-	7-	
Tuesday	6. S. W.	8	7-	
Wednesday	7. S. W.	6	70	
Thursday	8. S.	3	70	
Friday	9. W. to S. & N. W.	0	70	North light.
Saturday	10. W.	27 11	4	1 supr. degel.
Sunday	11. N. & N. E.	28 2	3	0 North light.
Monday	12. S. W.	5	3	

Y y

October

1750.

The weather.

October	13	Rainy and windy, and the air thick and hazy.
Wednesday	14	The air thick and hazy, with some showers, but towards the evening clear.
Thursday	15	Cloudy with some wind and showers; in the night it snowed in the mountains.
Friday	16	Clear and calm; but in the night a storm.
Saturday	17	Stormy weather with heavy showers, and about ten o'clock, P. M. a violent storm.
Sunday	18	Stormy weather, between whiles clear, but in the night a most violent storm.
Monday	19	Stormy and showery; at midnight the storm abated.
Tuesday	20	Windy and showery; at noon it began to be calm.
Wednesday	21	By intervals clear, and for the most part calm.
Thursday	22	The same. The glade of the north-light passed from E. N. E. to W. N. W. through the zenith extremely lucid, and many small radii, though not so bright, shot the same way, all from the north, but none from the south. About nine o'clock the sky was covered with clouds, and after hardly any north light appeared in the clouds.
Friday	23	Light clouds, and calm weather.
Saturday	24	Between whiles clear, but for the most part calm.
Sunday	25	For the most part clear and calm, in the night a frost.
Monday	26	Clear and calm. In the evening of this day two luminous arches were seen to the south, about 16 degrees above the horizon, being the point from whence the direction of their rays was towards the zenith between S. E. and S. W. With all the celerity of an instantaneous motion, rays gushed forth on both sides to the East and West, and stood collected about the zenith. From thence they darted towards the other hemisphere, and for some time made a most beautiful appearance, like a glory or circle

METEOROLOGICAL OBSERVATIONS.

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Wind. Barom. Ther. open air.

	Wind.		Barom.		Ther. open air.	
October	13. S.		3		7	
Wednesday	14. S. & W.	27	11		6	
Thursday	15. S. W. & W.		9		4-	
Friday	16. S. to E.	28	0-		3-	
	S. E.	27	10			
Saturday	17. S. E.		9		6	
			8 0			
Sunday	18. S. E.		9-		5	
Monday	19. S. E.		10 0		5	
Tuesday	20. S. to E.		11		6	
	S.					Str. north light.
Wednesday	21. S.	28	1		6	
Thursday	22. S.		2-		5	Str. north light.
			3		4	
Friday	23. S. E.		4 0		5	North light.
Saturday	24. S.		3		5-	North light.
Sunday	25. S. E.		5-		6	North light.
Monday	26. S. E.		5		1	Str. north light.

October

1750.

The weather.

- circle of effulgent beams. Afterwards this north light extended its coruscations farther to the North, and therein formed an arch of about 24 degrees altitude. In the beginning of the evening till past 7 o'clock, no streams of the light appeared in the North, but it after continued the remainder of the evening as usual, with very bright arches intersecting the zenith from East to West. The star-light was very coruscant, and the evening fine and clear.
- October 27 Clear and calm weather, with a little frost. The north-light appeared presently after the sunset as usual, with a strong bright bow or arch, from East to West, which streamed like a river from West to East. It is thus it commonly appears, except when rays dart from the North or South. Towards 7 o'clock, it grew so dark, that the stars could hardly be perceived.
- Wednesday 28 The forenoon was clear; about noon light clouds appeared, with calm weather and a little frost. The night before there was a pretty hard frost.
- Thursday 29 Small rain but calm.
- Friday 30 Some rain and a little wind; in the evening and night a frost.
- Saturday 31 Clear calm weather with a frost.
- November 1 The same, with a little wind.
- Monday 2 The same.
- Tuesday 3 Cloudy but calm, without any frost.
- Wednesday 4 Clear with some wind and frost.
- Thursday 5 Clear with a little wind and frost. A fog in the evening.
- Friday 6 Clear, windy and frosty.
- Saturday 7 Clear and calm, with a little frost.
- Sunday 8 Clear, with a little wind and frost.
- Monday 9 Clear and calm, with a little frost; towards evening hazy, and a little snow.
- Tuesday 10 Clear weather, with a little wind and frost.

1750.

Wind.

Barom.

Ther. open air.

	Wind.	Barom.	Ther. open air.	
October	27. S. E.			
Wednesday	28. S. E.	4	2	
Thursday	29. S.E. & N.W.	4	2-	North light.
Friday	30. N. W. & N.	3-	2 0	North light.
Saturday	31. E.	4-	0	North light.
November	1 N.	5	2-	infra degel.
Monday	2. E.	5	2	North light.
Tuesday	3. N.	4	3	supr. degel.
Wednesday	4. E.	4	0	St. flying nor. light.
Thursday	5. E. & N. E.	28 3	2-	Strong north light. infra degel.
Friday	6. N. E.	2-	2-	North light.
Saturday	7. S. E.	2 0	2 0	North light.
Sunday	8. N.t.W.&N.	1	2	North light.
Monday	9. S. E.	27 11	1-	North light.
Tuesday	10. E.	10	0	

1750.

The weather.

November	11	Hazy weather and pretty windy, but no frost; the evening calm, with some rain and snow.
Thursday	12	Hazy weather with some wind; the afternoon very windy and rainy, at 9 o'clock, P. M. clear and calm.
Friday	13	Clear and calm, in the afternoon rain, and in the night a storm with a little frost.
Saturday	14	Stormy yet clear, with some frost; the storm continued all the evening.
Sunday	15	Stormy, but for the most part clear, with some frost; the afternoon and evening calm, though hazy, and without frost.
Monday	16	Clear and calm weather; the evening the same.
Tuesday	17	Foggy but calm.
Wednesday	18	Hazy, mild and calm weather.
Thursday	19	Foggy, with a little wind.
Friday	20	The same, with some showers of rain.
Saturday	21	The same, but for the most part calm.
Sunday	22	The same, but with a continual small rain.
Monday	23	The same.
Tuesday	24	The same.
Wednesday	25	The same, with a little wind, and in the night some frost.
Thursday	26	By intervals clear, some wind and frost.
Friday	27	For the most part clear, with a little wind and frost; in the night snow.
Saturday	28	Hazy, with some wind and frost; towards evening a high wind and rain, but no frost.
Sunday	29	Clear weather, with some wind and a frost.
Monday	30	Clear and calm with some frost.
December	1	Hazy, a little wind, but no frost.
Wednesday	2	Rainy, and pretty windy.
Thursday	3	Hazy, showery, and a high wind.
Friday	4	Hazy, with some wind but no rain; in the afternoon clear and calm weather, and in the night a little frost.
Saturday	5	Cloudy, some wind, no frost, and in the evening a storm.

1750.

METEOROLOGICAL OBSERVATIONS.

	Wind.	Barom.	Ther. open air.	
November	11. S.	11 0	1	supr. degel.
Thursday	12. E. S. E. & S. S.	9 6- 4-	3	
Friday	13. E. S. E.	4- 4-	2	
Saturday	14. N. E. N. E.	5 8-	1	infra degel.
Sunday	15. N E. E.	28 11 2	1 3	North light. infra degel.
Monday	16. S. S. E.	5- 6	1 0	North light.
Tuesday	17. N.	8	2 0	supr. degel.
Wednesday	18.	9	4	North light.
Thursday	19. W.	7-	4-	North light.
Friday	20. S. W.	4-	5 0	
Saturday	21. W.	4-	4-	North light.
Sunday	22. S. W.	3	4	North light.
Monday	23. S. W.	4	4	North light.
Tuesday	24. S. W.	4	4	North light.
Wednesday	25. W.	1	4	North light.
Thursday	26. E.	4 0	2	infra degel.
Friday	27. S. E.	5 0	2-	North light. North light.
Saturday	28. S. S. E. S.	28 0 0	2-	supr. degel.
Sunday	29. N.	2	0-	infra degel.
Monday	30. E. to S.	5-	3-	Strong north light.
December	1. S. E.	3-	3	supr. degel.
Wednesday	2. S.	27 9-	6	
Thursday	3. S. to W.	8 0	5-	
Friday	4. W. W. to N.	11 28 2 0	2 0	North light.
Saturday	5. S. E.	27 9-	4-	December

1750.

The weather.

Before the storm began, the moon had close round it a halo, or ring of the colours of a rainbow, about a hand's breadth in appearance, and oval according to the shape of the moon, which then was almost in the first quarter. About this halo was another of the same breadth, exceeding luminous and clear. Presently after the appearance of this meteor, it grew very cloudy, and the storm began, and did not cease till towards morning.

December	6	Cloudy, showery, windy, a large halo round the moon, and a great storm in the night about 24 hours after the former was allayed.
Monday	7	A storm with hail and rain; about noon the storm ceasing, it continued a little windy, with a few strong gusts by intervals.
Tuesday	8	In the forenoon rain and wind; but the afternoon clear and calm, and a frost in the night.
Wednesday	9	Clear and calm with a little frost; in the afternoon and evening pretty high wind.
Thursday	10	Clear and calm, with a little frost.
Friday	11	Clear with some wind and a frost; the afternoon and evening pretty windy.
Saturday	12	Cloudy, and a high wind about seven o'clock, A. M.
Sunday	13	Calm clear weather, and a frost; in the evening a great halo round the moon.
Monday	14	Clear and calm with a frost
Tuesday	15	The same.
Wednesday	16	The same.

It is remarkable, that though calm and clear weather had continued now upwards of five days, except a little wind the 11th and 12th, yet the barometer was very low, and at sea there was such ruffling hard north weather, that they could not row five or six miles out at sea to fish, before they met with swelling surges, the noise of which might be heard from the shore.

METEOROLOGICAL OBSERVATIONS.

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Wind. Barom. Ther. open air.

	Wind.	Barom.	Ther.	open air.
December	6. S.	27 9	1-	supr. degel.
Monday	7. E.		0-	4- North light.
Tuesday	8. S. to E.		5-	2 0 North light.
Wednesday	9. E.		5-	infra degel.
	N. E.		3-	0- North light.
Thursday	10. E.		2-	2 0 North light.
Friday	11. N. E.		3 0	
	N.			2-
Saturday	12. N.		3	2 North light.
				4
Sunday	13. S. to E.		3-	3- North light.
Monday	14. S. E.	27 6	4 0	infra degel.
Tuesday	15. S. E.		5 0	4 North light.
Wednesday	16. S. to E.		7-	5 Strong north light.
				North light.

1750.

The weather.

December	17	Clouds driving, pretty windy, and a frost.
Friday	18	Cloudy, windy and frosty; towards evening snow.
Saturday	19	The forenoon cloudy, but the afternoon clear, calm and frosty.
Sunday	20	Snow, with wind and frost; towards the evening rain and wind, but no frost.
Monday	21	Clouds but calm and showery; frost in the night.
Tuesday	22	Hazy, towards the evening rain, but for the most part calm; in the night a frost.
Wednesday	23	Cloudy, between whiles clear, but for the most part calm, with a little frost.
Thursday	24	Very high wind and rain.
Friday	25	Cloudy, with a little wind, and in the evening some frost.
Saturday	26	In the forenoon wind, snow and frost; but in the afternoon calm, towards the evening rain, and in the night a high wind and frost.
Sunday	27	Stormy, but by intervals clear and frosty;

The evening quite calm with a frost.

Monday	28	Hazy, windy and rainy.
Tuesday	29	Cloudy, but for the most part calm and mild weather.
Wednesday	30	Hazy, windy and rainy.
Thursday	31	The same, but less wind.

1751.

January	1	Foggy, but for the most part calm. The evening was pretty clear, and had a strong north light all over the sky, but chiefly in the south and about the zenith. No rays proceeding from the north, except about the zenith. At half an hour past 10, P. M. it grew hazy, as it usually does after the north light.
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1751.

METEOROLOGICAL OBSERVATIONS.

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	Wind.	Barom.	Ther. open air.	
December	17. N.	10 0	5-	North light.
Friday	18. E.	9-	0-	
Saturday	19. E.	9-	4-	North light.
Sunday	20. N. E.	4 0	4 2-	supra degel.
Monday	21. E. to S. N. E.	26 10-	2	
Tuesday	22. N. E.	27 1-	2	
Wednesday	23. S.	27 8	1 0	
Thursday	24. S.	7	2	
Friday	25. N. W. N.	9-	0-	North light.
Saturday	26. N. E. N.	8 5-	1	
Sunday	27. N.	10-	4-	infra degel. Strong north light. At 11 o'clock, P.M. it grew hazy, but no frost.
Monday	28. S.	28 4 0 2	2-	supr. degel.
Tuesday	29. S.	1	3	
Wednesday	30. S.	0	3	
Thursday	31. S. & S. E.	2 0	4	
1751.				
January	1. S.	28 1	1	supr. degel.

January

1751.

The weather.

		Frost in the night.
January	2	No frost, but cloudy, with a little wind. In the evening it was clear, and a strong north light appeared about half an hour past five, as also an arch or bow in the North, which rose gradually to the zenith, and afterwards in a direction to the South, where between whiles three broad arches from East to West were very corruscant, but stood clear and luminous without scintillations.
Sunday	3	Hazy and calm with rain; but in the night a little frost.
Monday	4	Hazy, and for the most part calm with some frost; in the evening a pretty strong north light to the south.
Tuesday	5	The forenoon clear, very windy and a frost; in the afternoon the wind much higher, and the frost sharper; in the evening a north light.
Wednesday	6	Clear weather and a high wind, at six o'clock, P. M. calm, and afterwards a north light.
Thursday	7	Forenoon clear and calm, with a sharp frost; the afternoon hazy with less frost.
Friday	8	For the most part clear, with a little wind and frost; in the evening a very high wind, frost, and north light.
Saturday	9	Clear, stormy and a frost; in the afternoon hazy.
Sunday	10	Somewhat hazy, with a very high wind and frost; in the evening less wind, but clearer and a frost.
Monday	11	Between whiles clear, with a high wind and frost.
Tuesday	12	Hazy, pretty windy, and a frost.
Wednesday	13	Hazy, pretty windy, and no frost; in the evening rain and less wind.
Thursday	14	Rain and hail with some wind; but in the evening pretty clear, a frost and north lights, and in the night snow.
Friday	15	Hazy weather, pretty windy, and no frost; in the afternoon and evening stormy and showery; and in the night exceeding stormy.

1751.

METEOROLOGICAL OBSERVATIONS.

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Wind. Barom. Ther. open air.

	Wind.	Barom.	Ther. open air.	
January	2. S.	27 11	1	
Sunday	3. S. S. W.	8-	3	
Monday	4. S. W.	8-	2	infra degel. North light.
Tuesday	5. N.	8- 11-	9	North light.
Wednesday	6. N.	28 1	9	
Thursday	7. S. E.	2- 2	10 10	North light.
Friday	8. E. S. E. N.	1 0 1 2	5 0 4 0 6	North light.
Saturday	9. N.	27 11	4 0	
Sunday	10. N. N. E.	9 8-	2- 5	
Monday	11. N.	27 5	6	infra degel.
Tuesday	12. E.	3 0	1	
Wednesday	13. S. E. S.	26 11 0	4	supra degel.
Thursday	14. W. N. W.	27 1- 3 0	2 0-	infra degel. North light.
Friday	15. S. E.	3- 0- 26 9-	4-	supr. degel.
		B b b		

January

1751.

The weather.

January	16	Towards noon the storm abated, towards evening quite calm, hazy, and a little snow.
Sunday	17	Between whiles clear, calm, and a little frost.
Monday	18	Hazy, with a little snow, frost and wind; in the evening pretty calm weather and a north light.
Tuesday	19	By intervals clear and hazy, with a high wind, hail, snow, and a little frost.
Wednesday	20	The forenoon hazy and calm, between whiles snow; in the evening a storm and rain, which lasted three or four hours; afterwards a moderate wind.
Thursday	21	By intervals calm, showery and windy; the evening pretty clear, with a little frost and a north light.
Friday	22	Between whiles clear with some snow, no great wind, and a little frost; the evening calm, with a strong north light.
Saturday	23	Hazy, with some wind and frost; in the afternoon high winds and snow; in the evening a storm, afterwards clear, with a sharp frost, and north light.
Sunday	24	Clear, with a high wind and frost; the wind abated in the evening about eight o'clock, at which time there was a strong north light in the north.
Monday	25	Clear and calm weather; with a sharp frost; at noon and in the afternoon, till 4 o'clock; the evening hazy and calm about nine o'clock.
Tuesday	26	Hazy, calm and frosty; in the afternoon snow and a high wind, in the night a storm, and a sharp frost.
Wednesday	27	Clear weather, with a high wind and frost; in the afternoon the wind abated; in the evening clear, calm and a frost, and in the night a high wind.

1751.

METEOROLOGICAL OBSERVATIONS.

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	Wind.		Barom.	Ther. open air.	
January	16. S. E. A. M.		9-		
		27	1-	10	
Sunday	17. S. E. & E.		1	0	
Monday	18. S. to E.		4-	0-	infra degel. North light.
Tuesday	19. S. to W. & E.		5-	0-	
Wednesday	20. S.		7	0	
	S. clock 11 ¹ / ₂		2-	3	supr. degel.
Thursday	21. S.		2	0-	infra degel. North light.
Friday	22. S. W. & S.		0-	1-	
Saturday	23. E.		1-		North light.
	NE.				
	N.		6	7	North light.
Sunday	24. N.		11-	10	North light.
Monday	25. S. E.	28	0		
				11	
				13	
				9-	
Tuesday	26. E.	27	9		
	N. E.			5	infra degel.
				clock	
Wednesday	27. N.		9	12 7-	
		28	0	9-	

January

1751.

The weather.

January	28	Clear with high wind and frost; in the evening a storm, and strong north light, and in the night a very great storm.
Friday	29	Stormy, somewhat hazy, and a frost.
Saturday	30	Hazy, stormy, and a little frost; in the night the wind laid itself.
Sunday	31	Clear and calm weather with a little frost; in the evening a strong north light in the south.
February	1	Hazy, but for the most part calm and mild weather.
Tuesday	2	Hazy, with small rain and some wind.
Wednesday	3	Hazy and calm, with continual rain; in the night a high wind and frost.
Thursday	4	Clear weather, pretty windy, and a frost; the afternoon for the most part calm with a frost, but the evening somewhat hazy and calm.
Friday	5	Hazy and calm, with a little frost; in the evening a large but faint halo round the moon, and in the night a storm and sharp frost.
Saturday	6	Clear but stormy, with a sharp frost.
Sunday	7	The same; in the evening snow and less wind, but in the night a storm.
Monday	8	Clear weather, but stormy and frosty; in the evening the storm abated.
Tuesday	9	Hazy, and for the most part calm, with some snow and rain; towards evening a high wind, and between whiles snow and rain.
Wednesday	10	By intervals clear, calm and hazy, with wind and frost; in the evening less wind, but cloudy.
Thursday	11	Clear and calm weather with a frost; in the evening a north light in the south.
Friday	12	Hazy and calm with a frost; the evening clear, with a faint north light.
Saturday	13	For the most part calm and clear with some frost; towards evening hazy, but a north light in the south.
Sunday	14	Hazy weather, with some wind and a little frost.
Monday	15	Hazy with snow and wind; the evening calm, without snow, but frosty.

1751.

METEOROLOGICAL OBSERVATIONS.

189

	Wind.	Barom.	Ther. open air.	
January	28. N E.	27 11- 10-	8-	North light.
Friday	29. N. E.	7	3	
Saturday	30. N. E.	7	0	
Sunday	31. E.	28 2		
February	1. S. to E.	2-	1 3 0	North light. supr. degel.
Tuesday	2. S. to E.	27 11-	4	
Wednesday	3. S. to E.	11-	4	
	N. N. E.			
Thursday	4. N. N. E. E.	28 3 0 6 0	1 0 1-	infra degel.
Friday	5. E. N.	3-	1-	
Saturday	6. N.	4	9	
Sunday	7. N.	4-	9	
Monday	8. N.	4-	7-	
Tuesday	9. E. & S. N.	5- 4	9-	
Wednesday	10. N. & N. E. E.	1 0 3-	6 1-	
Thursday	11. E.	28 5 0	4	infra degel. North light.
Friday	12. S. E.	4 0	2- 4-	North light.
Saturday	13. N. E. & E.	2-	2	North light.
Sunday	14. E. N. E.	1-	0	
Monday	15. E. N. E.	27 10- C C C	0	

February

1751.

The weather.

February	16	Clear and calm with a frost; in the evening a north light, with strong vibrating rays from the north east.
Wednesday	17	Hazy, with some wind and frost.
Thursday	18	Hazy, and pretty calm, with some snow; the evening clear, with a strong north light, and arches first appearing in the south, and afterwards in the north.
Friday	19	Foggy, calm, and by intervals clear; the evening calm and rainy.
Saturday	20	Hazy, with some wind and showers; in the afternoon a high wind and rain; the evening calm and clear, with a north light.
Sunday	21	Hazy, with a high wind; the afternoon rainy; but in the evening clear, and a north light.
Monday	22	Rain, and fleet, and a high wind; in the night a little frost.
Tuesday	23	Hazy and calm; the afternoon and evening clear, showery, and windy, with a north light to the south.
Wednesday	24	Hazy and calm, but in the night a frost.
Thursday	25	Hazy and quite calm, with a little frost; the evening foggy.
Friday	26	Hazy and calm without a frost; towards evening windy.
Saturday	27	Hazy and somewhat calm, with a little snow; the night windy and frosty.
Sunday	28	Cloudy, high wind, but little frost; the evening calm and clear, with a north light in the south.
March	1	Clear and calm with frost; in the evening north light in the south.
Tuesday	2	Hazy with some wind and a little frost; in the evening a north light N. E. and N. W. towards the zenith.
Wednesday	3	Clear, calm and frosty; in the evening a strong north light, first in the south, afterwards in the north, and then all over the sky.

METEOROLOGICAL OBSERVATIONS.

191

	Wind.	Barom.	Ther. open air.	
February	16. S. E.	9-	4	
			6-	North light.
Wednesday	17. N. E. & E.	10-	2 0	
Thursday	18. N. E.	10-	0	
		8-	1-	North light.
Friday	19. N. E.	8-	2	
	E.	6	1-	supr. degel.
Saturday	20. E. S. E.	6-		
	E.	5	3 0	North light.
Sunday	21. E.	26 9		
	S. to E.	11 0	4 0	North light.
Monday	22. S. & S. W.	27 6-	4	
Tuesday	23. S. & S. W.	7-		
		8-	2	North light.
Wednesday	24. W.	10	2	
Thursday	25.	10-	1 0	supra degel.
Friday	26. S. E.	28 0		
		27 10	2	
Saturday	27. S. & W.	27 7 0	1 0	
	N.			
Sunday	28. N.	4		
		7	2	infra degel.
				North light.
March	1 E.	9	5	North light.
Tuesday	2. E.	7	0	
				North light.
Wednesday	3. S. E. & N.	11 0	5	North light.
			6-	

March

1751.

The weather.

March	4	Clear weather, pretty windy, and a frost; towards the evening the wind ceased, and afterwards a strong north light appeared chiefly in the south.
Friday	5	Hazy weather, very high wind, and a little frost.
Saturday	6	The same, with some showers.
Sunday	7	Hazy, windy and showery; the evening calm, but rainy.
Monday	8	Hazy and windy; in the night a frost.
Tuesday	9	Hazy and calm, but no frost.
Wednesday	10	The same; in the afternoon rain, and in the night a frost.
Thursday	11	Hazy, with a little wind.
Friday	12	Hazy and pretty windy.
Saturday	13	The same; but with showers of rain and snow.
Sunday	14	Hazy and a little windy; towards evening clear and calm, with a little frost.
Monday	15	Hazy and calm; the afternoon and evening windy.
Tuesday	16	Hazy, showery and windy.
Wednesday	17	The forenoon clear and calm, but the afternoon and evening hazy and a little wind.
Thursday	18	Hazy and windy; the evening clear, with less wind and a frost.
Friday	19	Hazy, with a little wind; the evening hazy and a little frost.
Saturday	20	Clear weather, with a little wind and frost; in the evening a strong north light to the south.
Sunday	21	Clear weather with some wind; the evening calm, and a strong north light.
Monday	22	Cloudy, high wind, and a little frost; the evening calm and clear.
Tuesday	23	Hazy, calm and showery.
Wednesday	24	Hazy and windy, with snow and rain.
Thursday	25	Hazy, with some wind; the evening hazy and calm, in the night some snow fell.
Friday	26	By intervals hazy and clear, but for the most part calm; the evening clear, with a north light and little frost.

1751.

METEOROLOGICAL OBSERVATIONS.

193

	Wind.	Barom.	Ther. open air.
March	4. N. S. E.	28 1	8 North light.
Friday	5. E.	27 7	10
Saturday	6. E. & S. E.	0-	40 fupr. degel.
Sunday	7. E. to S.	26 8	9 40
Monday	8. E.	9-	3-
Tuesday	9. E.	27 0-	3-
Wednesday	10. E.	3-	3-
Thursday	11. E.	50	2-
Friday	12. E.	0	2
Saturday	13. N. E. & E.	26 8-	2
Sunday	14. N. to E. S. E.	10 11-	1
Monday	15. E. N.	27 0	2-
Tuesday	16. E.	5-	3
Wednesday	17. E.	8-	2-
Thursday	18. S. E. E.	9-	1
Friday	19. N. E. & E.	27 90	1 fupr. degel.
Saturday	20. E. to N.	7-	1 infra degel. 2 North light.
Sunday	21. E. & N.	5- 3	0 2 North light.
Monday	22. N.	2- 3-	1
Tuesday	23. E. & S.	5-	2- supra degel.
Wednesday	24. E. & E. by S.	3	2 North light.
Thursday	25. E. S.	0- 2-	3
Friday	26.		

1751.

The weather.

March	27	Hazy and calm.
Sunday	28	Between whiles clear and pretty windy ; in the night a frost and north light.
Monday	29	Hazy with some wind ; in the night a frost and a little north light.
Tuesday	30	Clear and calm.
Wednesday	31	Clear, windy and frosty ; in the evening a little frost and north light all over the sky.
April	1	Clouds driving, with a little wind, no frost.
Friday	2	Hazy weather, pretty windy and showery ; the evening clear and calm, and a north light.
Saturday	3	Hazy, some wind and rain ; the evening clear and calm with a north light.
Sunday	4	Between whiles clear, and for the most part calm.
Monday	5	Hazy, showery and calm.
Tuesday	6	Between whiles hazy with snow, but for the most part calm.
Wednesday	7	Hazy with some snow, but calm ; in the night a violent storm.
Thursday	8	Hazy, stormy, and a frost ; in the evening and night the storm greater, and the frost continued.
Friday	9	Hazy, and a violent storm with some frost.
Saturday	10	Between whiles clear, with a high wind and frost ; the evening a little windy.
Sunday	11	Hazy, calm and no frost.
Monday	12	Clear, towards evening windy.
Tuesday	13	Clear, calm and a little frost ; in the evening a strong north light, and in the day a great halo round the sun ; the preceding day in the forenoon there was a mock sun, which in the afternoon appeared behind the real.
Wednesday	14	Between whiles clear and calm weather, in the evening a north light.
Thursday	15	Between whiles clear, with some wind.
Friday	16	Hazy, and pretty windy.
Saturday	17	Hazy, windy and showery ; the wind was very high all the evening and night.

1751.

METEOROLOGICAL OBSERVATIONS.

195

	Wind.		Barom.	Ther. open air.	
March	27. N. E. & E.		5-	0	North light.
Sunday	28. N. E. & E.		5-	1	
Monday	29. N.N.E.&E.		6	2	North light.
Tuesday	30. N. & N. E.		11 0	1	
Wednesday	31. N. & S. E.	28	3	0-	North light.
	N.		3-	0	
				2	infra degel.
April	1 S. E.		1-	2	supr. degel.
Friday	2. S. E. & S.	27	11	2-	North light.
Saturday	3. S.		8 0	2-	North light.
Sunday	4. S. E.		6-	2	
Monday	5. S. W. & W.		6	2	
Tuesday	6. S.		4 0	2 0	
Wednesday	7. N.		1-	2 0	
	N.				
Thursday	8. N.		6	0	
Friday	9. N.	28	0 0	3-	infra degel.
Saturday	10. N.	28	2-	3-	
Sunday	11. S. & S. W.	27	9	3-	supra degel.
Monday	12. S. W. & N. W.		10-	2 0	
Tuesday	13. N.	28	2-	1 0	infra degel.
					North light.
Wednesday	14.		2 0	2-	supr. degel.
					North light.
Thursday	15. S. to E.		3	4-	
Friday	16. S. S. E.		3-	5	
Saturday	17. S. S. E.		3-	6	

April

1751.

The weather.

April	18	The same; in the evening hazy and mild weather with small rain.
Monday	19	Hazy and rainy, but for the most part calm.
Tuesday	20	For the most part hazy and calm.
Wednesday	21	Between whiles clear and calm.
Thursday	22	The same.
Friday	23	Pretty clear, with very little wind; the evening mild and clear.
Saturday	24	Hazy and calm with some showers.
Sunday	25	Hazy with some wind.
Monday	26	Between whiles clear but little wind; evening clear, with a strong north light about the zenith.
Tuesday	27	Hazy and calm.
Wednesday	28	Clear and calm; the evening calm and hazy.
Thursday	29	Clear and a little wind.
Friday	30	The same.
May	1	Delightful summer weather; clear with a little wind; the evening bright and serene.
Sunday	2	The same; but the evening a little hazy.
Monday	3	Clear and calm; in the evening a few clouds and a north light.
Tuesday	4	Clear, calm and mild weather, with little frost in the night.
Wednesday	5	Hazy and warm weather with some wind; but a slight frost in the night.
Thursday	6	The same; but the evening clear, and a little frost in the night.
Friday	7	Clear and mild; in the evening a little wind.
Saturday	8	Hazy and calm, with some showers.
Sunday	9	Clear, with a high wind that ceased towards night, during which there was a pretty sharp frost.
Monday	10	For the most part clear, with a cold wind; in the evening a high chilling wind, and in the night a frost and storm.

METEOROLOGICAL OBSERVATIONS.

197

	Wind.	Barom.	Ther. open air.	
April	18. S. S. E.	2-	6	
Monday	19. N.	3-	3	
Tuesday	20. E.	3	6	
Wednesday	21. E.	2 0	5	
Thursday	22. E.	27 10	3-	
Friday	23. E. & N. E. N. E.	28 0 0	3-	
Saturday	24. S. E.	3	4	
Sunday	25. S. E.	2 0	5	
Monday	26. N. W.	2	3 0	North light.
Tuesday	27. W. & N. W.	5 0	4-	
Wednesday	28. N. by W. & E.	4	3-	
Thursday	29. N. W.	3-	4-	Evening.
Friday	30. N. W.	3	5	Evening.
May	1 N.	3	9-	
Sunday	2. W. S.	5 0	8	Evening.
Monday	3. N. W. S.	28 5-	5 0	
Tuesday	4.	5	4-	Evening.
Wednesday	5. S.	5	0	Evening.
Thursday	6. S. E.	5-	4 0	
Friday	7. S.	6 0	5	
Saturday	8. S. W. & E.	5-	5	
Sunday	9. N.	5-	2	
Monday	10. E. & N. E. N.	4- 4 0	2	

1751.

The weather.

May	11	The same, storm and cold weather; in the evening a high and nipping wind, and in the night a sharp frost. The water froze in the kitchen, and an inch thick in the well.
Wednesday	12	For the most part clear with less wind, but still cold; a great halo was seen round the sun, and the wind was high in the evening, but ceased towards night, during which there was a frost.
Thursday	13	Clear, windy and cold, with a frost in the night.
Friday	14	Clear, with a high wind and cold air; and in the night a pretty sharp frost.
Saturday	15	Between whiles clear, with a high wind and frost; in the night the water froze an inch thick.
Sunday	16	For the most part clear, with a high wind and sharp frost; and in the night a frost.
Monday	17	Clear and windy, with a little frost in the night.
Tuesday	18	Clear and calm, but in the night a frost.
Wednesday	19	Foggy, with a little wind, and in the night a frost.
Thursday	20	Clear, windy and cold weather, with a frost in the night.
Friday	21	The same.
Saturday	22	The same. During these days a little wind in the day time, but calm in the evenings.
Sunday	23	Clear with a little wind; the evening calm, but in the night a frost.
Monday	24	Clear, warm weather, and pretty calm, towards evening quite calm, and in the night a frost.
Tuesday	25	Hazy and calm.
Wednesday	26	The same, but the afternoon windy.
Thursday	27	Hazy and windy.

METEOROLOGICAL OBSERVATIONS.

199

	Wind.	Barom.	Ther. open air.
May	11. N.	2-	0
	N. E.	1-	0
Wednesday	12. N. N. E.	28 0-	2
		27 11-	3
Thursday	13. E. by N.	11-	3
Friday	14. N E.	11-	2 0
Saturday	15. N. N. E.	28 2 0	0
			clock 11 P. M.
Sunday	16. N. N.	3 0	0
			clock 8 P. M.
Monday	17. N. & N. E.	2-	1
			supra degel.
Tuesday	18. N. E. & E.	2-	1-
Wednesday	19. N. E. & E.	2	2-
			clock 11 P. M.
Thursday	20. N. N. E.	4-	2
			clock 10 P. M.
Friday	21. N. & N. E.	4-	2-
Saturday	22. N. & N. E.	4-	3-
			clock 10 P. M.
Sunday	23. N. W.	28 2-	2-
			supra degel. clock 10 P. M.
Monday	24. N.	28 1	
	S. E.	28 0 0	4 0
Tuesday	25. S. E.	27 11-	5-
Wednesday	26. S. E.	11	
		10	6
Thursday	27. S. E.	10-	6
			clock 11 P. M. Midnight.

May

1751.

The weather.

May	28	The same; in the night rain.
Saturday	29	Hazy, showery and windy.
Sunday	30	The same. The evening windy and showery.
Monday	31	Hazy and windy. The evening clear.
June	1	Hazy, windy and showery.
Wednesday	2	Hazy and windy. The evening very windy.
Thursday	3	Hazy and windy: From noon the weather remained calm.
Friday	4	Clear and calm: Towards the evening hazy and a little wind.
Saturday	5	Hazy, with some wind and showers.
Sunday	6	The same, with more wind.
Monday	7	Between whiles clear and somewhat calm.
Tuesday	8	For the most part clear and calm.
Wednesday	9	Between whiles clear and hazy, with a little wind.
Thursday	10	The same.
Friday	11	The forenoon clear and calm; the afternoon and evening hazy, but somewhat calm with rain.
Saturday	12	Hazy, calm and showery.
Sunday	13	The same, but more wind.
Monday	14	Hazy, with a little wind.
Tuesday	15	Rain during the whole day, with a little wind; in the evening and night a very high wind.
Wednesday	16	Hazy and stormy during the whole day and evening.
Thursday	17	Hazy, with a great storm, and by intervals violent showers of rain; towards noon three or four claps of thunder, but not very loud in the S. E. and S. in the afternoon the wind not so high, and no rain.
Friday	18	Hazy, and a high wind; in the afternoon less wind with a little rain.

1751.

METEOROLOGICAL OBSERVATIONS.

	Wind.	Barom.	Ther. open air.
May	28. S. E.	10-	7 0 clock 11 P. M.
Saturday	29. S	8-	6 clock 11 P. M.
Sunday	30. S. & S. W. W. S. W.	28 2	6- clock 10 P. M.
Monday	31. S. S. to E.	4 5-	6- clock 10 P. M.
June	1. S. S. E.	4	8 clock 10 P. M.
Wednesday	2. S. S. E.	3 0	8- clock 10 P. M.
Thursday	3. S.	3 4 4	8- clock 10 P. M. 14 clock 2 P. M.
Friday	4. S. E.		8 0 clock 11 P. M.
Saturday	5. S. S. E.	2	8 clock 10 P. M.
Sunday	6. S. & S. W.	27 9-	6 clock 10 half P. M.
Monday	7. W.	11	5 clock 10 half P. M.
Tuesday	8. S. & S. E.	28 0 0	5- clock 11 P. M.
Wednesday	9. S. E.	27 9	8- clock 10 P. M.
Thursday	10. N. E. & E.	6-	7- clock 10 half P. M.
Friday	11. S. E. N. & S. W.	7 8	13 clock 2 P. M. 8- clock 10 half P. M.
Saturday	12. S.	7-	8 clock 10 half P. M.
Sunday	13. S. E.	7-	8 clock 10 half P. M.
Monday	14. S. S. E.	10	8 clock 11 P. M.
Tuesday	15. S. E. & E. S. E.	27 11-	9- clock 11 half P. M.
Wednesday	16. S. E.	28 0-	10 clock 10 half P. M.
Thursday	17. S. S. E.	3	9 clock 11 P. M.
Friday	18. S. S. E.	5	9 clock 11 P. M.

1751.

The weather.

June	19	Hazy with some wind ; the afternoon and evening calm.
Sunday	20	Hazy, rainy, and for the most part calm ; in the afternoon clear, with a little wind.
Monday	21	Hazy and rainy, with some wind.
Tuesday	22	Hazy, pretty windy, and rainy.
Wednesday	23	The same ; in the evening rain and wind, and in the night storms and snow in the mountains.
Thursday	24	Hazy and cold weather, with a very high wind ; the evening clear, but the wind not so high.
July	22	The forenoon clear, but the afternoon hazy.
	30	The weather for the most part clear and warm.

June

METEOROLOGICAL OBSERVATIONS.

203

	Wind.		Barom.		Ther. open air.
June	19 S.		5	9-	clock 11 P. M.
Sunday	20. S. S. E.		4-	9	clock 11 P. M.
Monday	21. S. & S. W.		3	8	clock 10 half P. M.
Tuesday	22. S. to E. & S. W.		0-	8	clock 10 half P. M.
Wednesday	23. S. W. . N. N.	27	10-	9	6- clock 10 P. M.
Thursday	24. N. N.	28	0-	6-	clock 10 A. M.
			1-	6	clock 10 P. M.
July	22. N. & S. E.	27	9	16	clock 1 P. M.
	30. N. & S. E.		11	17	clock 1 P. M.

REMARKS

R E M A R K S

O N T H E

M E T E O R O L O G I C A L O B S E R V A T I O N S .

THE barometer I made these observations by, was a *barometre ordinaire*, on which the divisions were measured by French inches and lines.

The thermometer was constructed with quick-silver, to prevent its receiving damage, if the cold should be very severe. The divisions were according to Monsieur Reaumur's *thermometre*, that is, with eighty divisions or degrees between *frigus artificiale*, and that point where the spirits or quick-silver rises in boiling hot spirits of wine, and ninety-five degrees between *frigus artificiale*, and that point to which the spirits of wine rise in boiling hot spirits, when the thermometer is sealed.

From the beginning of my observations, down to the first of October 1750, they were made in a room where no warmth or heat could come, and the thermometer was hung out of the reach of the sun, which scarce ever shone in the room. Since that time I hung the thermometer in the open air, but not in the least exposed to the sun, and so noted the greatest heat or cold, as appears by the column of the thermometer. It was this last way that some of the observations were made the first year, which I have taken notice of in their proper place; and my remarks both on the barometer and thermometer, were according to that time of the day, when they were either highest or lowest with the common sign, a half, a quarter, or an ovix.

Having described the instruments, and my manner of making these observations, it will not be amiss to collect in a short compass, or to form a summary of them, with regard to the heat, cold, and density of the air in Iceland, as it may be compared with the same in Denmark.

According to my observations, the thermometer in the winter of 1749, did not sink lower than seven or eight degrees *infra degelationem*.

lationem. This happened on the 10th of March 1750, and was no very great frost, when one considers that there are frosts commonly at Copenhagen, which sink the thermometer three or four degrees still lower. The thermometer was in Iceland 11 degrees *infra dejectionem*.—In the winter of 1750, which was severer than the foregoing, and was even reckoned a severe one by the Icelanders. The mercury in the thermometer sunk 13 degrees the 25th of January 1751, at four o'clock, P. M. which is more than it commonly does at Copenhagen, though it has been still lower; for in 1709, it sunk 16 degrees, and in February 1740, upwards of 18.

Upon the whole, it evidently appears from the observations, that the winters are not immoderately cold in Iceland, no frosts of any long duration having happened, but frost and thaw continually succeeding each other as at Copenhagen; so that the material difference of the winter must consist in the length; because in Iceland it seems to last longer, as may be seen by the observations for both 1750, and 1751, in the former of which the frost lasted till the middle of April, and in the latter, till the middle of May, ice being even found an inch thick in the night of the 15th of May, and the frosts continuing in the nights till the 23d. It is likewise observable, that the month of May was in 1751, very cold in Denmark, but not so cold as in Iceland.

From cold, it will not be improper to animadvert on the heat. In August 1749, the thermometer rose 13 degrees *supra dejectionem*: in July 1750, it likewise rose 13 degrees; and on the 30th of June in 1751, it rose 17, which last is its usual complement of rising at Copenhagen, whereby it may be seen, as one would naturally expect, that the summers are not so hot as in Denmark, though the difference is not so great as many perhaps imagine. It is remarkable, that the summer of 1750, the hottest ever known in Denmark, was very moderate in Iceland; for towards the latter end of July, when the thermometer rose at Copenhagen 25½ degrees, it did not rise higher than 10 or 11 in Iceland. Thus heat and cold cannot be deemed as corresponding to the same degrees in both places.

When it was but moderately hot at Copenhagen in 1751, the thermometer rose higher in Iceland than it did the two preceding summers, and one may also see by these observations, that the air in Iceland is not subject to great changes in respect to heat and cold as in Denmark, and therefore according to the rules or opinions of the learned in physics, the climate must be more healthy, daily experience convincing us, that weak and tender people in other countries are affected by any unusual great degree of heat or cold. As for the climate of Iceland, it agreed extremely well with me, and I found it much more agreeable than I expected, or had any idea of; because at Copenhagen it is generally compared with that of Greenland, whereas it rather should with that of Denmark or Norway.

Though the air is subject to few changes in regard to heat and cold, yet its density or weight is pretty considerable. The weight of the air most commonly at Copenhagen, according to barometrical observations, is computed at twenty-eight inches of quick-silver in the barometer. Sometimes it rises a few lines higher, and sometimes sinks a few lower; but the whole difference, taking one time with another, does not amount to upwards of twelve lines or one inch. The barometer seldom sinks at Copenhagen to twenty-seven inches, and when it does, severe and stormy weather generally ensues, especially if it falls suddenly, and does not last long.

It is quite otherwise in Iceland; for on the 11th of January, 11th of February, and 24th of March, in 1750, the barometer stood at twenty-six inches, and four or five lines: on the 22d and 23d of November in 1749, the 5th and 6th of October, and 17th and 18th of November 1750, it stood at twenty-eight inches, and seven, eight, and nine lines higher; so that the difference between the highest and lowest, amounts to two inches and five lines, which is very considerable. I allow that the difference of the barometer at Copenhagen may exceed, though very rarely, twelve lines or one inch: but it is plain, that this great difference with density or weight of the air is frequent in Iceland, and it is even remarkable, that very often when the barometer has been high in Iceland, the weather was very bad, and *vice versa*, very fine, when the barometer had been very low, which is quite the
reverse

reverse of the rules hitherto established, with regard to the barometers rising and falling. It was not possible for me from these few observations, to fix the specific density or gravity of the air, respectively to Denmark and Iceland, as such must require many more years observations, though it seems to me upon an average, that the air in Denmark and Iceland is of the same density, or equally ponderous.

The wind and weather in Iceland, are also much the same as in Denmark; but it is not to be understood, that the weather is alike at one and the same time, which cannot be expected in two countries so very remote from each other.

The north lights appear oftner in Iceland than in Denmark, and are not for the most part succeeded by bad weather; they make the nights much lighter, and are very convenient to travellers, or those who have any thing to do in the open air.

Fogs seldom happen in Iceland, which is quite the contrary of what Mr. Anderson asserts in his treatise of this country, wherein he has taken a deal of pains without any just reason, to paint it in the blackest colours.

F I N I S.



THE HISTORY OF THE ISLANDS OF THE SOUTH SEAS

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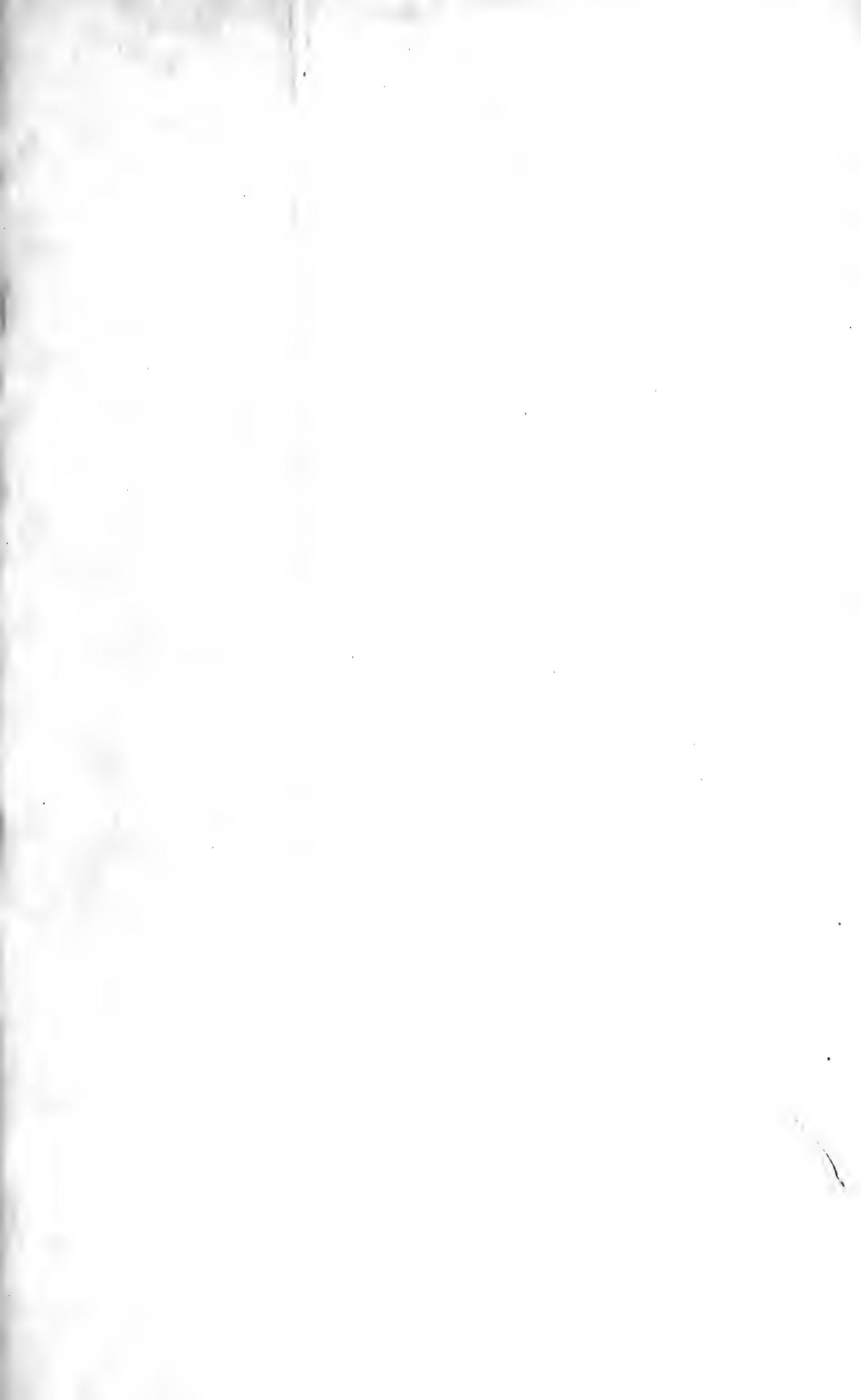
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