

A

## NATURAL HISTORY

Or<br>FISHES.

FORTY ENGRAVINGS ON WOOD.


## ALNWICK:

RRINTED AND SOLD WHOLESALE AND RETAIL BY W, DAVISON.

## MISIMS.



## THE WHALE.

Or the whale, properly so called, there are no fewer than seven different kinds ; all distinguished from each other by their external figure, or internal conformation. They are of the cetaceous order of fishes, and produce their young alive. The ancients have described them as being six hundred feet in length. At present they are only found in the northern seas ninety feet in length, and twenty in breadth; but formerly they were taken of a much greater size, when the captures were less frequent, and they had time to grow. Such is their bulk within the arctic circle; but in
the torrid zone, many are seen one hundred ar sisty feet long. There are many turnings ar windings in this fish's nostrils, and it has no on the back. The head is very much dispropo tioned to the size of the body, being one-third t size of the fish; and the under lip is much broad than the upper. The tongue is composed of soft spungy fat, capable of yielding five or s barrels of oil. The gullet is very small for wast a fish, not exceeding four inches in width.

This fish varies in colour; the back of sor being red, the belly generally white. Others a black, some mottled, others quite white. Th colours in the water are extremely beautiful, a their skin is very smooth and slippery. Eve species of the whale propagates only with those its kind, and does not at all mingle with the res however, they are generally seen in shoals different kinds together, and make their migratio in large companies from one ocean to another.

Whales are chiefly taken in the northern se The English send out with every ship six or sev boats; each of these has one harpooner, one m at the rudder, one manager of the line, and fo seamen to row it. In each boat there are al two or three harpoons, several lances, and s lines, each one hundred and twenty fathoms lon fastened together.

As soon as the whiale is struck with the ha poon, it darts into the deep, carrying the instrume off in its body; and so rapid is its motion, that
he line should entangle, it would either snap like thread, or overset the boat: one man therefore s stationed to attend only to the line, that it may go regularly out, and another is also employed in ontinually wetting the place it runs against, that he wood may not take fire from the friction. On he whale's return to breathe, the harpooner inflicts fresh wound, till at length, fainting from loss of lood, the men venture the boat quite up to it, and a long steeled lance is thrust into its breast and ther parts, which soon puts an end to its existence.
A whale, the longest blade of whose mouth neasures nine or ten feet, will yield about thirty outs of blubber; but some of the largest will field upwards of seventy. One of the latter is renerally worth about one thousand pounds stering; and a full ship of about three hundred tons ourden will produce more than five thousand sounds from one voyage.
The whale fishery begins in May, and continues hrough the months of June and July: but wheher the ships have had good or bad success, they must get clear of the ice by the end of August.

The whale goes with young nine or ten months, and generally produces one at a time. When she suckles her young, she throws herself on one side, and the young one attaches itself to the teat. Whales feed on a black insect of the size of a small bean, which is seen floating in those seas. They pursue no other animal, and are harmless in proportion to their strength to do mischief.

## THE NARWHALE.

This fish is smaller than the whale, not bei above sixty feet long. Its body is more slend and its fat not in so great abundance. But $t$ great animal is sufficiently distinguished from others of the deep by its tooth or teeth, wh stand pointing directly forward from the upp jaw, and are from nine to fourteen feet lon The extreme length of these instruments has duced some to consider them rather as horns th teeth; but they in every respect resemble tusks of the boar and the elephant. Notwit standing all its appointments for combat, its lon and pointed tusks, amazing strength, and us matchable celerity, the narwhale is one of t most harmless and peaceable inhabitants of ocean. The Greenlanders call the narwhale tif forerunner of the whale; for wherever it is see the whale is shortly after sure to follow. Ti may arise as well from the natural passion society in these animals, as from both living unv the same food. They are always seen in herds several at a time; and whenever they are attaca ed, they crowd together, and are often entangl by their tusks till they are taken.


## THE CACHALOT.

The cachalot, which is generally known by the name of the spermaceti whale, has several teeth in the under jaw, but none in the upper. This tribe is not of such enormous size as the whale, properly so called, not being above sixty feet long, and sisteen feet high. In consequence of their being more slender, they are much more active than the common whale; they remain a longer time at the bottom; and afford a smaller puantity of oil. The tongue of this animal is imall, but the throat is very extensive ; and with rreat ease it could swallow an ox. The cachaot is, therefore, as destructive among the smaller ry as the whale is harmless; and can at one ;ulp swallow a shoal of fishes down its enormous ;ullet. But how formidable soever this fish may e to its fellows of the deep, it is by far the most aluable, and the most sought after by man, as contains two very precious drugs, spermaceti and mbergris. The use of these, either for the urposes of luxury or medicine, is universally nown.

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## THE RAY.

All those of the ray kind are broad, cartilaginou swimming flat on the water, and having spines different parts of their body, or at the tail. The all have their eyes and mouth placed quite und the body, with apertures for breathing, eith about or near them. They all have teeth, or rough bone, which answers the same purpos But they are chiefly distinguished by their spin or prickles, which the several species have on di ferent parts of their body. These prickles in som are comparatively soft and feeble; those of other strong and piercing. Of all the larger fishes of th sea, these are the most numerous; and they ow their numbers to their size. They have bee found in England to weigh above two hundre pounds; but that is nothing to their enormo bulk in other parts. They are found in such par of the sea as have a black muddy bottom.


## THE LAMPREY.

This animal resembles the eel; but is of a lighter olour, and a clumsier shape. The mouth is ound, and placed rather obliquely below the end $f$ the nose. It has an aperture at the top of the read, through which it spouts water like the cetaeous fishes. On each side are seven apertures for espiration; and the fins are rather formed by a rolongation of the skin than by any peculiar ones or spines. It possesses the singular prom ,erty of adhering by suction to any substance to vhich it is applied. It sticks to stones so closely, hat it is with difficulty removed. This power is upposed to arise from the animal's exhausting the ir within its body, while the mouth is so entirely ittached to the object as to exclude any from enering. It usually quits the sea about the beginling of spring, for the purpose of spawning; and, ifter an absence of a few months, returns to its riginal abode. Its flesh is esteemed according o the season in which it is caught. In April or May it is thought to be in the greatest perfection.


## THE TORPEDO.

The body of this fish is almost circular, and er than others of the ray kind ; the skin is smooth, and of a yellowish colour, marked, the kind, with large annular spots; the are very small; the tail tapering to a and weighs from a quarter to fifteen pa To all outward appearance, it has no $m$ formed for particularly great exertions; yet is that unaccountable power it possesses, tha instant it is touched, it numbs not only the and arm, but sometimes also the whole The nerves are so affected, that the person s imagines all the bones of his body, and partic those of the limb that received the blow, ar wen out of joint. Probably the shock pro from an animal electricity, which this fist some hidden power of storing up, and prod on its most urgent occasions. It is fou great numbers on the coasts of France: there in common request as an article of foo

## THE STURGEON.

HOUGH this large and fine-tasted fish is of a rm terrible to view, it is perfectly harmless. he body, which is from six to eighteen feet in gith, is pentagonal, armed from head to tail ith five rows of large bony tubercles, each of aich ends in a strong recurved tip. The snout long, and obtuse at the end, and has the tendrils ar the tip. The mouth, which is beneath the ad , is somewhat like the opening of a purse. he upper part of the body is of a dirty olive lour, and the under part silvery. Sturgeons bsist principally on insects and marine plants, nich they find at the bottom of the water, where ey mostly resort. They are very timorous, and ide in flocks. They are found in every country Europe at different seasons. They annually cend the largest rivers in winter, in order to awn, and produce their young in prodigious mbers. They are also found in North America. re flesh of the sturgeon is highly esteemed, pare ularly in England, where it is often pickled, and then accounted a delicacy.

## THE HUSO, OR ISINGLASS FIS

This fish is caught in great quantities Danube, from October to January. It dom under fifty pounds weight, and often four hundred. Its flesh is soft, glutinous flabby; but it is sometimes salted, which it better tasted, and then it becomes red salmon. It is for the commodity it furnishe it is chiefly taken. Isinglass is of a whitish stance, inclining to yellow, done up into rolls so exported for use. It is very well kno serviceable, not only in medicine, but in arts ; and very great sums are yearly exp on this single article of commerce. It is pared in the following manner:-The skin entrails, the fins, and tail, are cut into pieces, and, after being macerated for some in a sufficient quantity of warm water, are over a slow fire till they are dissolved and rei to a jelly. This jelly is spread on plates mai purpose; and when dry it is rolled up into form in which it appears in the shops. This modity is principally furnished from Russia, ${ }^{\pi}$ they prepare great quantities surprisingly che

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## THE SUN-FISH.

he body of this fish is broad and short; and its nder extremity is terminated by a circular fin, hich supplies the place of a tail. The whole imal appears like the head of a large fish sepated from its body. It is destitute of scales, but vered with a hard rough skin. The back is ack, the belly is white, and the sides are of an termediate colour. The mouth is very small in oportion to the size, and the head has no proction from the rest of the body. The weight metimes amounts to two hundred pounds. The esh of this animal is very soft, and all its bones e gristly and tender. It is caught in the Medirranean, and sometimes in the British seas. here are several species of this fish.

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## THE FISHING-FROG.

The fishing-frog in shape very much resernb tadpole or young frog. It grows to above feet long, and its mouth is sometimes a yard Nothing can exceed its deformity. The he much larger than the whole body; the under projects beyond the upper, and both are an with rows of slender, sharp teeth: the palate the tongue are furnished with teeth in like n ner; the eyes are placed on the top of the h and are encompassed with prickles: immedia above the nose are two long beards or filame and on the back three others, which seem lines hung out to attract fishes. The fishen entertain a sort of veneration for this ugly conceiving it to be hostile to the dog-fish, the body of that fierce and voracious crea being frequently found in its stomach; on account, when they take the fishing-frog, generally restore it alive to its native element

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## THE LUMP-FISH.

Ho lump-fish is sixteen inches in length, and its eight about four pounds. The shape of the ody is deep Jike that of the bream, and it swims Hgeways; the back is sharp and elevated, and the elly is flat; the whole skin is rough, with bony nobs ; the largest row is along the ridge of the ack ; the belly is of a bright crimson colour. But what makes the chief singularity in this fish, an oval aperture in the belly, surrounded with fleshy soft substance, that seems bearded all ound ; by means of this part it adheres with vast orce to any thing it pleases. They are caught a many parts of the British seas, and sometimes aten, but the flesh is flabby and insipid. During pring, they are very common on the northern oasts of Scotland, where they afford subsistence - seals and other predaceous inhabitants of the leep. In the Greenland seas they resort to the hores in vast numbers for spawning, about April and May. The roe is very large, and furnishes delicious dish to the people of that country.

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## THE PIPE-FISH.

The body of the pipe-fish, in the thickest par not thicker than the quill of a swan, while above sixteen inches long. Its general co is an olive brown, marked with numbers of bl lines, pointing from the back to the belly. species is viviparous, and is found in the sea the East and West Indies.


## THE HIPPOCAMPUS.

The hippocampus, which, from the form of head, some call the sea horse, never exceeds inches in length. It as about as thick as a ma thumb, and the body is said, while alive, to h hair on the fore part, which falls off when dead. The whole body seems to be compose cartilaginous rings, on the intermediate membra of which several small prickles are placed. 1 found in the Mediterranean ; and more resem a great caterpillar than a fish. se the porcupine, it is covered with prickles, ich point on every side, whence it is sometimes led the sea porcupine ; and when it is enraged, can blow up its body as round as a bladder. is absolutely poisonous if eaten.


## THE SWORD.FISH.

HE sword-fish is about fifteen feet in length. he body is of a conical form, black on the back
and white under the belly; the upper jaw is longed into a weapon resembling the blade sword ; the mouth is large, but without and the tail is forked. It generally weighs a one hundred pounds, and is often laken of coast of Italy, in the bay of Naples, and all a Sicily ; and sometimes in other European It is the whale's most formidable enemy. A sight of this animal, the whale seems agitat an extraordinary manner, leaping from the as if with affright, and flies from it in the o site direction.


## THE WEEVER.

This fish grows to the length of twelve int The back is straight, the sides are flat, and belly is prominent. The covers of the gills armed with a very strong spine. It buries in the sand, leaving only its nose exposed; if trodden upon, it immediately strikes with spines that form its dorsal fins, which are vel ous and dangerous. Notwithstanding its no: qualities, the flesh is excellent food.

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## THE DRAGONET.

HE dragonet is sometimes found a foot long. the body is slender, round, and smooth; the ead is large, and depressed at the top; and in he hind part are two orifices through which it reathes, and ejects the water in the manner of etaceous fishes. It is found in different latitudes, s far north as Spitzbergen, and as far south as he Mediterranean.


## THE GUDGEON.

Tue gudgeon is between five and six inches in ength. The back is brown, the belly is white, the sides are tinged with red, and the tail is forked. They spawn three or four times during the summer, and feed upon flies which approach too neas the surface of the water.


THE DACE.
This fish has a lengthened body, small head, forked tail. It is of a silver colour, except back, which is brownish, and rounded. This is found in the south of Germany, as well a France, Italy, and England.


## THE MACKAREL.

The mackarel regularly visits our shores in " numerous shoals during summer. They are delicate fish, but, owing to their tenderness, unfit for long carriage. They are capable, hi ever, of being preserved. They are easily ta with bait: a piece of scarlet cloth being oftens ficient for the purpose. They are well known Europe, and were always a favourite dish.


## THE BREAM.

His fish is found in lakes, and the deepest parts ftill rivers. The body is deep, and thin in proortion to its length; the back is much elevated. The back and fins are of a dusky hue, the sides ellowish, and the tail represents a crescent. It reighs about five pounds, and its flesh is not valued.


## THE PERCH.

He body of the perch is deep, the scales are erremely rough, and the back is much arched. The
colours are exquisitely beautiful ; the bach part of the sides are of a deep green, marked five broad black bars, pointing downwards belly is white, tinged with red. It seldom ex three pounds in weight; but the flesh is firn delicate, and is greatly esteemed. It is a g rious fish, and is caught in several rivers o island.


## THE SURMULET.

This fish was higlfly valued by the Ro: epicures. The body is slender, and the is almost four-cornered. The fins are yellowi slightly tinged with red; the scales are lai broad, thick, and very firmly united to flesh; and three or four yellow lines run do the sides, parallel to each other. It is caught the Mediterranean ; and in the British seas, ${ }^{2}$ cially on the Cornish coast ; and is univers esteemed a great delicacy.


## THE GURNARD.

Turs fish is frequent in the British seas, and its flesh is much valued. It eagerly bites at a red rag , and is usually taken by a hook. Its figure is long and slender, frequently measuring thirty inches. The back is of a dusky green colour, marked with black, yellow, and white spots; the belly is white; the nose is pretty long and sloping, with the end divided; and each side is armed with three short spines. There are several species of gurnards.


THE STICKLEBACK.
Thrs fish is distinguished by having three spines in its back. It grows to about the length of two C
inches, and is very common, particularly in made ditches; where its origin cannot eas traced. The colour of the back and sides olive green, and the belly is white; but in the lower jaw and belly are of a bright crim They are very numerous in the fens of Lin shire, and some of the rivers that issue from


## THE SILURUS, OR SHEAT-FIS

The silurus, or sheat-fish, grows to a large nitude, some of them weighing sometimes pounds, and measuring about sixteen feet in le In colour it resembles the eel, and has no s. It has only one small fin on the back, and a tail. Its flesh is esteemed next to that of th and has a similar flavour. This fish is a depredator, and makes considerable havoc a the smaller inhabitants of the rivers and Which it inhabits. They are found in the D and several other rivers of Germany.

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## THE WOLF-FISH.

THE wolf-fish has a smooth body without scales. The colour is a brownish grey ; the fore teeth are harp and conical. With these it not only breaks he hardest shells, but gnaws even the anchor of a lhip, so as to leave an impression on it. They feed chiefly on shell-fish, and are numerous in the seas of Iceland, Greenland, and Norway.


## THE REMORA, OR SUCKING-FISH.

The remora, or sucking-fish, is about a foot long. The head is thick, naked, depressed, and marked on the upper side with transverse rough lines, by means of which it attaches itself to any animal or body whatever. The shark has not a greater enemy than the remora; for, by virtue of its adhesive power, it sticks closely to it, and drains away its moisture. They are frequently eaten, and much admired. In taste they resemble fried artichokes.

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## THE SALMON.

Tue body of the salmon is longish, and coreme with small thin scales; the head is small in pro portion to the size, the snout is sharp, and the tai is forked. The back is of a bluish colour; ant the other parts are generally white, intermixe with blackish or reddish spots very beautifully arranged. The female is distinguished from the male by having a large and more hooked snow duskier scales, and by being more speckled al over with dark brown spots. The flesh of the salmon, when fresh killed, is not so red as when boiled or salted: it is tender, luscious, and flakel and is generally preferred to that of any other fist The salmon inhabits salt and fresh water alike; quits the sea at certain seasons, in order to depaill its spawn with security in the gravelly beds rivers, at a distance from their mouths. It
 far north as Greenland. There are stationay fisheries of salmon in Iceland, Norway, and the Baltic ; at Coleraine, in Ireland ; at Berwid upon-Tweed; and various other places.

## THE PIKE.

This is a well-known fish, and in some places is called the jack. The head is flat, the upper jaw is broad, and shorter than the lower, and the teeth are sharp. It has been sometimes caught of the weight of thirty pounds: but this is very rare, its general size being only about six pounds; and the flesh of such as are of the latter description is most esteemed. The pike has been poetically styled the tyrant of the watery plain; and, in fact, in proportion to its strength and celerity, it is the most active and voracious of fresh water fishes. It will attack every fish less than itself, and is sometimes choked by attempting to swallow such as are too large a morsel. Nor does the pike confine itself to feed on fish and frogs, it will draw down the water-rats and the young ducks as they are swimming about. They are common in most of the European lakes and rivers, but the finest are found in Lapland. In that country they are taken in great abundance; and, when dried, form an article of commerce. Pikes spawn in March or April, according to the mildness of the season.


## THE FLYING-FISH.

His fish is generally about nine inches lo The head is scaly; the belly is angular, and pectoral fins, the instruments of flight, are large. When pursued by any other marinea mal, it raises itself from the water by means these long fins, and can support itself in the till they become dry, when it again drops into native element. It seems to lead a wretchedl being constantly pursued by fishes of prey; when it has recourse to flight, it frequently me its fate from the gull or the albatross, or perh drops down again into the mouth of its orig. pursuer. Between the tropics they are comm and there their enemies are the most numer In those climates they are seen springing oul the deep by hundreds; and sometimes thr themselves on board of ships, in order to eso their various assailants. They are of a whi colour, and their flesh is reported to be palat触d nourishing.


## THE LOACH, OR GROUNDLING.

 The loach is found in several English rivulets, particularly near Amesbury, in Wiltshire. It keeps close to the bottom, and seldom exceeds four inches in length. Sportsmen sometimes swallow it, for a whim, in a glass of white wine. The body is smooth and slippery; the colour of the head, back, and sides, is either white or a dirty yellow, elegantly marked with large spots.

## THE COD.

This fish is short in proportion to its bulk, and the belly is very large and prominent. The back and sides are cinereous, spotted with yellow, and the belly is white. But the cod varies considerably not only in colour but also in shape; though
all are distinguished by having a small beard the extremity of the lower jaw, and an unfurea tail. On the banks of Newfoundland, the cos of Cape Breton, Nova Scotia, and New Engla they abound in an extraordinary degree; be lured thither by the quantities of worms: small fish which the bottom supplies; and vicinity to the polar seas, whither they resort spawn. They are found also in abundance on coasts of Norway, in the Baltic, and in most pa of the British seas ; but never farther south ti the straits of Gibraltar. The cod-i)anks of $\mathrm{Ne}_{\mathrm{e}}$ foundland are a sort of submarine mountain and of more real and beneficial value to $G \pi$ Britain than the gold-mines of Potosi to Spi The fishing season generally commences in bruary, and ends in May ; the fish being then the highest perfection, and, from the state of atmosphere, most capable of being properly cui The cargoes are chiefly disposed of in the cathe countries of Europe during Lent ; but, from decline of papal influence, the trade is somew falling off.

Providence has bountifully ordained that fish, so beneficial to mankind, should, by its a: nishing fecundity, keep pace with the annual predations that are made among its race. By help of a microscope, nine millions three hund and eighty-four thousand eggs have been coun in a cod of only a middling size. They genera weigh from fourteen to forty pounds.


## THE HERRING.

Herrings differ greatly in size, but the usual length is from nine to twelve inches. The back and sides are varied with green and blue, and the belly is silvery. They are found in the greatest abundance through all the high northern latitudes. In those inaccessible seas, which are covered with ice the greatest part of the year, they find a quiet and secure retreat from all their numerous enemies. Insects on which they subsist are also extremely plentiful there; from which favourable circumstance their increase is beyord conception, which obliges them to migrate in quest of new settlements. The great colony of herrings sets out from the polar seas about the middle of winter, but soon separates into two shoals: one body of which mores westward, and pours along the coasts of America as far as Carolina; while the other directs its course to Europe, and first appears off the Shetland islands in the month of April. From these islands this great army again divides; one squadron taking the western coasts of Britain toward Ireland, and another the eastern toward the Land's End. During their progress, they are
pursued by numerous enemies of all description and among others by man; their approach bein carefully watched by the fishermen, who cath them in numbers beyond calculation.

The Dutch are most expert in pickling the fishes; but the British fisheries have of late yea been well conducted, and meet with considerad national encouragement; which indeed they we deserve, both in an economical and political poir of view.


## THE ANCHOVY.

THE anchovy is a fish about four or five inclu long. It has a long slender body with sma scales; the whole is nearly transparent; the bai is of a mixture of green and ash colour ; the bell of a silvery white, the nose sharp, the eyes larg. and the tail forked. They are taken on the coasts of Italy and in the Mediterranean, saltee preserved in barrels, and so brought to Gre Britain, and to all parts of the Continent ; whe: they are esteemed a very agreeable relish in sauca and sallads.


## THE LOBSTER.

The lobster is an animal of so extraordinary a form, that those who first see it are apt to mistake the head for the tail; but it is soon discovered that the animal moves with its claws foremost; and that the part which plays within itself by joints, like a coat of armour, is the tail. The two great claws are the lobster's instruments of provision and defence; these, by opening like a pair of nippers, have great strength, and take a firm hold. It has eight legs, four on each side, and these, with the tail, serve to give the animal its progressive and sidelong motion. The lobster is a hermaphrodite, and is supposed to be self-impregnated. Loisters cast their shells once a year. This operation is so violent and painful, that many of them die under it; those which survive are feeble, and their naked muscles soft to the touch, being covered with a thin membrane; but in less than two days this membrane hardens in a surprising manner, and a new shell, as impenetrable as the former,
supplies the place of that laid aside. Of animal there are many varieties, with some dil ence in the claws, but little in the habits or formation. These all live in the water, and bear its absence but a few hours. The is black when taken out of the water, but red by boiling.


## THE CRAB.

The crab is an animal found equally in fresh salt water. In shape it differs very much the lobster, but entirely resembles it in habits conformation. It resembles the lobster in number of its claws, which are two ; and its which are eight, four on each side. Like the ster, it is a bold voracious animal, and resen it in every thing but the amazing bulk of its compared to the size of its head, and the lengt its intestines, which have many convolutions

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