

## 20.—THE FISHERIES OF NEW ZEALAND.

By JAMES HECTOR, M. D.

[From Handbook of New Zealand, 1883.]

New Zealand is the chief center of the southern whale fisheries, and at certain seasons the less frequented harbors are visited by whalers for the purpose of refitting and carrying on shore fishing and barreling their oil. These are generally American ships, but Otago and Auckland whaling ships are also equipped by New Zealand owners. The sperm whale abounds in the region of the ocean lying to the northeast of New Zealand, but stragglers are found all round the coast. In the open sea and to the south the most prized whale next to the sperm is the black whale or tohoro (*Eubalana australis*), which is like the right whale of the North Sea, but with baleen of less value. Along the shores the chief whales captured are the hump-back (*Megaptera*) and rorqual (*Sibbaldius*), which become very abundant when not disturbed for a few years.

## VALUE OF WHALE OIL.

In 1875, 20,845 gallons of black oil were exported, valued at £4,100, and 7,775 gallons of sperm, valued at £2,894. In 1877, 15,047 gallons of sperm-whale oil were exported, valued at £4,032. In 1881, 20,686 gallons of sperm-whale oil were exported, valued at £5,059.

## SEAL FUR.

The sea-bear or fur seal (*Arctocephalus cinereus*) is found on the remote parts of the coasts, about a thousand skins being taken every year by boating parties. In 1875 there were exported 2,767 seal-skins, valued at £4,050; and in 1877 there were exported 1,503 seal-skins, valued at £1,652. In 1881, 1,259 seal-skins were exported, valued at £1,717.

The fishes which we find in the New Zealand seas on the whole represent the characteristic forms of the southern or Lusitanian provinces of European coasts. In other words, our New Zealand fishes resemble those which are found on the coast between Madeira and the Bay of Biscay more than they do those which are caught about the north of Scotland. Of 33 sea fishes that are used as food in New Zealand, we have among the constant residents of all parts of our coast the Hapuku, Tarakihi, Trevally, Moki, Aua, Rock Cod, Wrasse, and Patiki; and while the Snapper, Mullet, and Gurnet are only met with in the north, the Trumpeter, Butterfish, and Red Cod are confined to the south. But, with the exception of Patiki, or Flounder, and the Red Cod, none of these are representatives of fishes that are common even in the south of Britain, while from the more northern seas similar fishes are altogether absent.

In addition to those which remain throughout the year, a very large number of the fishes of the New Zealand coast, owing to its geographical position, are pelagic in their habits, and roam over a wide range of ocean, visiting our shores only irregularly in pursuit of food. Of the edible fishes of this class, by far the largest number are visitors from warmer latitudes, such as the Frostfish, Barracouta, Horse-mackerel, King-fish, Dory, Warehou, Mackerel, and Gar-fish, while only the Ling, Hake, Haddock, and a few other fishes, which are rare, and worthless as food, are among those of more southern types which reach the New Zealand coast in their migrations.

There is, however, no reason to complain of any want of useful variety in the New Zealand fishes as compared with Britain, for we find that out of 208 species of fishes enumerated as occurring in the British seas, including many which are extremely rare or only occasional visitors, only 40 are considered to have a marketable value. In New Zealand, notwithstanding our very imperfect knowledge (especially with regard to the gregarious tribes, which there is reason to believe inhabit shoals at some distance from land), out of 192 sea fishes, some of which are only known from single specimens, we have nearly as many varieties used for food as are brought to market in the British Islands.

Of 140 species of fish enumerated as found in New Zealand, 67 species are, so far as we know, peculiar to New Zealand; 75 are common to the coasts of Australia or Tasmania; while 10 species are found in New Zealand and other places, but not in the Australian seas. New Zealand ichthyology thus presents a very distinct character, the thorough deciphering of which affords a wide field for future observation and scientific investigation.

The following is a list of the fishes which are chiefly met with in the market:

Hapuku .....	<i>Oligorus gigas.</i>
Kahawai .....	<i>Arripis salar.</i>
Red Snapper .....	<i>Anthias richardsoni.</i>
Snapper .....	<i>Pagrus unicolor.</i>
Tarakihi .....	<i>Chilodaetylus macropterus.</i>
Trumpeter .....	<i>Latris hecateia.</i>
Moki .....	<i>Latris ciliaris.</i>
Frostfish .....	<i>Lepidopus caudatus.</i>
Barracouta .....	<i>Thyrsites atun.</i>
Horse-mackerel .....	<i>Trachurus trachurus.</i>
Trevally .....	<i>Caranx georgianus.</i>
King-fish .....	<i>Seriola lalandii.</i>
John Dory .....	<i>Zeus faber.</i>
Boar-fish .....	<i>Cyttus australis.</i>
Warehou .....	<i>Neptomenus brama.</i>
Mackerel .....	<i>Scomber australasicus.</i>
Rock Cod .....	<i>Percis colias.</i>

Gurnard.....	Trigla kumu.
Mullet.....	Mugil perusii.
Sea-mullet.....	Agonostoma forsteri.
Spotty.....	Labrichtlys bothryocosmus.
Butter-fish.....	Coridodax pullus.
Haddock.....	Gadus australis.
Red Cod.....	Lotella bacchus.
Whiting.....	Pseudophycis breviusculus.
Ling.....	Genypterus blacodes.
Tr'bot.....	Ammotretis guntheri.
Brill.....	Pseudorhombus seaphus.
Flounder or Patiki.....	Rhombosolea monopus.
Sole.....	Peltorhamphus novaezealandia.
Gar-fish.....	Hemirhamphus intermedius.
Grayling.....	Prototroctes oxyrhynchus.
Smelt.....	Retropinna richardsoni.
Kokopu.....	Galaxias fasciatus.
Minnow.....	Galaxias attenuatus.
Sand-eel.....	Gonorhynchus greyi.
Anchovy.....	Engraulis encrasicolus.
Pilchard or Sardine.....	Clupea sagax.
Sprat.....	Clupea sprattus.
Eel (tuna).....	Anguilla aucklandii.
Black Eel.....	Anguilla australis.
Conger Eel.....	Conger vulgaris.
Silver Eel.....	Congromuræna habenata.
Leatherjacket.....	Monacanthus convexirostris.
Smooth-hound.....	Mustelus antarcticus.
Sting-ray.....	Trygon thalassia.
Skate.....	Raja nasuta.

## 21.—A MARINE MONSTER.

By RICHARD A. PROCTOR.

[From the Newcastle Weekly Chronicle.]

The discovery of a strange sea creature near St. Elmo illustrates the truth of what I had remarked a few days earlier as to the smallness of our knowledge of the denizens of the mighty deep. The case is interesting not only in its bearing on the accounts of sea monsters of species as yet unknown, but also because it seems as though in the present case evidence of the existence of a tolerably numerous race of creatures had been obtained.

To begin with, the account is not characterized by any evidence of an attempt to excite wonder by untruths. The animal seen, though