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PART XVII.

THE PACIFIC WALRUS FISHERY.

By A. HOWARD CLARK.

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## PART XVII.

### THE PACIFIC WALRUS FISHERY.

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#### 1. GEOGRAPHICAL DISTRIBUTION AND HABITS OF THE PACIFIC WALRUS.

The Pacific walrus is found principally in the Bering Sea and the Arctic Ocean. In the latter part of May and the first of June the ice in the sea commences to break up and, borne northward by the current, carries the walrus with it. In the latter part of June they are very abundant in Bering Strait and soon after in the Arctic Ocean. It is while the whaling vessels are waiting in the Arctic near the Asiatic shore for the ice to break up sufficiently to allow a passage across to Point Barrow that they capture the walrus. During this period of waiting, which occupies nearly all of July and part of August, the walrus is found on the ice near the mainland north of the strait and drifting about the open parts of the ocean with the current.

In August they begin to return through the strait to Bering Sea, and are soon seen in great numbers on St. Matthew's Island and in Bristol Bay. Before October they have all left the Arctic and entered Bering Sea, where they pass their winters waiting until the warm currents of the next summer shall scatter the ice and again bear them northward into the cooler waters of the Arctic.

One of their chief resorts while in the Arctic is in the vicinity of Cape Serdze-kamen, on the Asiatic shore, where within a range of 130 miles they congregate in great numbers, the ice being black with them for miles. They are always found near the outer edges of the ice, never in the pack, so that they may better watch and observe the movements of one of their principal enemies, the polar bear. These groups of walrus on the ice are by the whalers called "pods."

They cannot endure great fatigue, and sleep is very necessary to them. In years past it was common for whale-boats to pursue them along the ice pack till the animals would drop asleep in the water and fall an easy prey to their pursuers. They sleep in different positions in the water, often with the head under water and raised only at intervals to breathe, which is done without waking. They often sleep in an upright position and it is an amusing sight to find them with their heads above the ice that has congealed around them while taking their repose.

They apparently have the power of inflating themselves with air so as to float more easily while sleeping, and if suddenly disturbed they cannot go down without expelling the air. They are extremely affectionate toward their young and courageous in defending them. The mother will never leave her calf but will rather perish than forsake it. In making their passage it is common to see the mother carrying her young, the little one clinging with its flippers to its dam.

Some of the whalers say that only the mothers care for the young and that the bulls never defend the little ones from danger; when the mother is shot the young walrus will immediately go to another female.

Captain Scammon states, on the authority of an experienced whaling master, that on one occasion a female walrus "was captured 2 miles from the ship, and the young cub kept close to the boats that were towing its dead mother to the vessel, and when arrived made every effort to follow her as she was being hoisted on board. A rope with a bowline was easily thrown over it, and the bereaved creature taken on deck, when it instantly mounted its mother's back and there clung with mournful solicitude until forced by the sailors to again return to the sea; but even then it remained in the vicinity of the ship, bemoaning the loss of its parent by uttering distressful cries.

"A male and a female with her cub are often seen together; yet herds of old and young of both sexes are met with, both in the water and upon the ice. When undisturbed they are quite inoffensive, but if hotly pursued they make a fierce resistance. Their mode of attack is by hooking their tusks over the gunwales of the boat, which may overturn it, or they strike a blow through the planking, which has repeatedly been the means of staving and sinking it."\*

## 2. DEVELOPMENT OF THE FISHERY.

It was not until twenty years after the whalers first entered the Arctic that they thought of capturing the walrus, partly because whales were so plenty that they needed nothing else to help make up a cargo and partly through a dread of these animals, of whose ferocity the men had read exaggerated accounts. For some years it was considered a bold thing for a vessel to capture half a dozen walrus; but as whales became scarce and men became better acquainted with the walrus, it was a common thing to hear of vessels taking fifty, seventy, and even a hundred barrels of oil. Although small quantities of oil were secured by various vessels, no great quantity was taken until the year 1860 or 1861, when the bark *Carib*, of San Francisco, took 100 barrels. In 1869 and 1870 some vessels took 500 barrels each, and according to Captain Scammon 50,000 barrels were taken from that time to 1874. It has been common since then for one vessel to take from 1,000 to 1,500 barrels in a season. Large numbers of walrus have been taken during the last few years, and they are rapidly decreasing; a few years hence they will not be worth seeking.

## 3. METHODS OF CAPTURE.

In the first few years of the walrus fishery the harpoon and lance were the instruments used in capturing them, but for ten years it has been customary for the whalers, and even the natives, to use a rifle.† Great numbers have been shot at one time, which is easily done, since they always congregate in large numbers; and often the number killed is only limited by the power to take care of them, for a ship's company cannot manage more than two or three hundred at one time.

An outfit for walrusing consists of a dingey, or small ship's boat, with a crew of three men, the gunner and two seamen, and includes a rifle, a box containing ammunition, and a boat which follows to assist in skinning the walrus, having as its equipment a small watch tackle, six gaffs, six pikes, six sheath knives, three rippers, two steels, a file, a whetstone, ice hooks, spade, hand-

\* *Marine Mammalia*, p. 178.

† Capt. L. C. Owen thinks Everett Smith was the first whaler to shoot walrus; this was in the season of 1869. About forty were thus killed that year.

lance, six hand-hooks to hold the blubber while skinning, an ax, four pieces of rope or short warps and several boat waifs. The dingey is used in the actual capture. Sometimes two rifles are carried, since the rapid firing soon overheats them.

If the whalers, after shooting a few walrus, can get on the same piece of ice with the dead ones he may be sure of the whole lot, or as many as he chooses to kill. Great care must be taken when approaching the ice to be as quiet as possible, for if the walrus, which is very timid, detects your approach, the whole company will immediately tumble off into the water and disappear.

Capt. Wm. M. Barnes, of New Bedford, thinks that if this method of capturing the walrus is pursued for any length of time it will surely result in their extermination, for the greater part of the animals thus killed are females, accompanied by their offspring, nearly all too young to live without their mothers. When the earlier method of catching them with harpoons was employed, only a few could be caught out of a large herd, and the calves of those captured would follow the walrus that escaped. Often two or three calves were seen with a single cow, and the whalers used to hope that the little orphans would be adopted into these families, and receive more charity from their kind than the human race had extended to them. But under the present method of shooting, the whole herd of grown animals is slaughtered, and the little ones remain on the ice hovering around the carcasses of their mothers until death from starvation silences their moanings. These animals are very useful to the inhabitants of the Arctic shores, furnishing them with food, dwellings, and boats. Therefore to reduce the numbers of the walrus in a great degree, or to drive them to other regions, would be a sad calamity to those people.

The most common mode of capture among whalers is as follows: The captain of the vessel with one or two men, quietly approach the herd in a dingey, or small boat, and when within 20 to 50 yards the captain shoots one of the animals in the temple between the eye and the ear, using for the purpose a Sharps' or Henry rifle. If successful in the first shot, he hastens on the ice and slays as many as can be cared for by the vessel's crew. If the animal is not killed it will immediately scramble for the water, followed by the whole herd, and none can be captured. Once among the herd the hunter shoots right and left as rapidly as possible, using a second rifle as soon as the first becomes heated. Walrus go by scent rather than sound, so that if the hunter approaches from leeward it is comparatively easy to get within a few yards before they are aware of danger. They seem to care little for sound, for they take scarcely any notice of the constant report of the rifle. Some of those caught by whalers are very large; one taken near Point Mulgrave, in the Arctic, weighed 1,854 pounds.

Capt. John Heppingstone, of East Wareham, Mass., an old whaler and walrus hunter, has kindly furnished the following account of the walrus and its capture.

"Some of the difficulties encountered in the capture of walrus are as follows: Often a pod of walrus will be found on cakes of old and rotten ice, and after shooting a goodly number of them the large quantity of warm blood will melt the ice, causing it to break, with the loss of a part, and many times, the whole of the pod. Another difficulty we have to contend with, and to avoid, if possible, is the wounding of a walrus, as his bellowing will frighten and drive others off. Many times walrus will haul up on cakes of ice, where there is no shelter for the gunner, and in such cases they are shot from the dingey. A school of walrus in the water, bellowing, will keep the pod on the ice restless and make it difficult to shoot them. There is not much danger attending the capture of the walrus. Sometimes the ice breaks from their weight and results in the loss of the dead animals, and perhaps the rifle also, with a cold bath to the men who may chance to be upon the cake. In working through a school of walrus there is some danger of their coming up under the boat and rolling it over. Such cases have occurred. I have been pulling along in my boat

and had them come up and put their tusks into a plank and tear it down two streaks before clearing themselves. They frequently approach and throw their tusks over the gunwale of a boat. I have known of two cases where men were hurt in this way, one where the walrus put his tusk through the foot of one man, and in the other case he hooked his tusk into the clothes of the other man and took him down. Where two or more are shooting, great caution should be exercised, as serious results may happen. Sometimes a ball may strike a tusk and glance off. Such a case has occurred, and it resulted in the death of the man. The walrus shooting is exciting, and to the sportsman would be considered fine game.

"When walrus are raised from the mast-head, the ship is worked up to within about three miles of them, always keeping to leeward, as their scent is very keen. After placing the ship in position, the gunner with his two men takes his dingey and starts for the ice where the walrus are hauled up. We generally send a boat with the dingey to tow her, or to render assistance if needed. When within about a half mile of the ice the boat lets go and the dingey works carefully up towards the ice, as walrus are very easily galled, and it is sometimes two or three hours before they can be approached near enough to be killed. The gunner gets out, and, crawling on hands and knees, seeks shelter behind a piece of ice to get a shot at them, care being exercised to keep to the leeward, for if the animals get scent of man they are apt to leave in haste. After getting a good position, and the gunner finding that the walrus are not aware of his presence, he picks his chance, as it is of importance that the first walrus he shoots should be killed at once, for if he were to wound one it might gally the rest and they would leave the ice. But after he has shot some of them, he may get on their carcasses and continue shooting; for at times the walrus do not seem to mind the presence of a man or a report of a gun, and at other times they take fright very easily. The gunner usually wears a white suit, to keep as near the color of the ice as possible. One of the best times for shooting walrus is a bright sunny day, as they are then stupid and sleepy; but as stupid as they seem, they can show fight. A captain in our fleet was one day shooting on the ice. He encountered one that showed pretty good play, and the captain had quite a tussle with him to see which should have the rifle. The captain, however, won the battle and a dead walrus to boot. I think he must have been a king walrus, as I have not heard of any more such battles; but as a rule the walrus is a harmless animal."

#### 4. STRIPPING AND PREPARING THE BLUBBER.

When a sufficient number\* of walrus have been killed, the men strip off the hide and blubber. For this purpose a sharp knife is used, often a razor fastened in a wooden handle. Cuts are made through the hide and blubber, making strips about 7 by 12 inches called "horse pieces." The end of a piece is held in one hand, while, with a knife in the other, the hunter separates the blubber from the flesh, and throws the pieces aside to be taken to the vessels. The head is cut off with an ax, and the tongue is saved to be pickled for food. Whalers frequently save the heart and liver, which are fried and eaten as in the case of bullocks; these dishes are said to be very palatable. The flesh is often cooked in the style of sausage meat, though it is sometimes roasted, and has been called by some whalers "marine beef." When made into sausage, as is also the meat of the whale, it is called "forced-meat balls." The galls are sometimes saved and sold to Chinamen at San Francisco, who are said to use them in the manufacture of silk. Whalers seldom save the hides on account of their little commercial value and the trouble of stripping them off. They are saved, however, by the natives and by foreign walrus hunters, and sell for quite a sum in Russia

\* Capt. L. C. Owen states that his crew took 1,600 walrus from June 10 to July 4, 1877, and that they secured 700 of them in forty-eight hours.

and Sweden, where they are made into harness and sole leather; sometimes they are boiled into glue. But whalers care nothing for the hides, their purpose being to get as much oil and ivory as possible. Having prepared the blubber, heads, and tusks for transportation to the vessel, they are loaded in the whale-boats, which are capable of carrying the products of eight or ten walrus.

Arrived on board the vessel, the blubber is prepared for the try-pot. The horse pieces are spread on a cutting table, and with an ordinary skinning knife, having a blade 8 inches in length, the hide is separated from the blubber. The cutting table is usually of triangular shape, made of two boards nailed together at the edges, the ends generally resting on the top of casks, and the pieces of blubber are thrown over the upright edge of the table.

The next operation is to set the table up on one edge, and to cut the strips of blubber into small pieces, an inch or two in width, ready to be thrown into the try-pot. A few years ago the general custom was to put the skinned blubber in a shallow tub and mince it with a spade, but now the cutting table is almost universally used.

#### 5. WALRUS IVORY.

The tusks of the walrus vary much, both in quality and weight, in the different animals. The tusks of the male sometimes weigh 16 or 18 pounds each, though often not more than one-quarter of a pound.

In the season of 1869, 3,000 pounds of ivory were secured from 700 walrus, averaging about 4½ pounds to each animal. The tusks of the male are large and of a much coarser texture than those of the female, which are generally fine and free from cracks. The male tusks are less valuable than those of the female, the proportion of pith to sound exterior ivory being far greater in a large than in a small tusk. This ivory is better in some respects than elephant ivory, and is used for nearly the same purposes; but the pith spoils it for many uses, since it is slightly discolored and as the ivory becomes yellow by exposure it is not so valuable as that of the elephant. Among the articles made from it are knife handles, small brushes, umbrella handles, tally balls, dice, dog whistles, and small ornaments. Globular cane handles and parasol handles have been made from the pith alone, which presents a mottled appearance and is very pleasing. The Innuits near the Arctic sometimes dig out the tusks for drinking vessels, and also use them as implements of chase.

A large part of the walrus ivory received in the markets of the world during the past ten years has been supplied by the Arctic whaling fleet. It is received at San Francisco and transshipped by rail or vessel to New York, China, Japan, and London, where it is manufactured into various articles by the ivory workers. Walrus ivory is no harder to manipulate than elephant ivory, and is worked by the same methods.

The value of this ivory varies according to the quantity received in the market; in the year 1880 it was worth \$1 to \$1.25 per pound, while in 1879, when the supply was greater, it sold at 45 and 50 cents per pound. Nordenskiöld, in his "Voyage of the Vega," says the largest walrus tusks he ever saw were two of a male purchased at Saint Lawrence Island in 1879. They were 830 and 825 millimeters in length, 227 and 230 millimeters in circumference, and weighed together 6,680 grams.\* The tusks of a female were seen of nearly the same length, but much more slender. "The surface is always full of cracks, but under it there is a layer of ivory free of cracks, which again incloses a grained kernel of bone which at some places is semi-transparent, as if drenched with oil."

Walrus ivory often serves as the spare change of the whalers. Whenever the vessels touch at the Sandwich Islands or other ports it is used to buy provisions or pay for repairs.

\* A little more than 36 pounds.

## 6. WALRUS OIL.

Walrus blubber is easily tried out, and the oil is whiter and more expansive than whale oil. The quantity of oil to a single walrus varies very much in different animals and from year to year, for in some years they are much fatter than in others. The female yields more oil than the male. The whale ship *Onward*, in the season of 1874, took 1,000 walrus that stowed down 600 barrels of oil, which was considered an unusual yield, and in 1869 the *Progress* got 700 walrus that yielded 565 barrels of oil. The *Mercury* in 1877 killed 2,000 walrus that stowed down 1,100 barrels of oil. Captain Barnes, of the *Sea Breeze*, states that up to July 23, 1880, he had that season taken in the Arctic 400 walrus, yielding 300 barrels of oil.

## 7. STATISTICS OF OIL AND IVORY, 1870 TO 1880.

The Arctic whaling fleet from 1870 to 1880, inclusive, is estimated to have captured 100,000 walrus, producing 1,996,000 gallons of oil and 398,868 pounds of ivory, of a total value of \$1,260,000.

Year.	Oil.	Ivory.	Total value oil and ivory.
	Gallons.	Pounds.	
1870.....	315,000	69,800	
1871.....	189,000	37,800	
1872.....	160,000	32,000	
1873.....	229,000	44,000	
1874.....	165,000	28,000	
1875.....	120,000	25,400	
1876.....	157,500	31,500	
1877.....	221,000	44,600	
1878.....	125,000	24,000	
1879.....	190,000	38,818	\$11,896
1880.....	127,000	24,650	[8,735]
Total.....	1,996,000	398,868	1,260,000