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A History of California Shore Whaling

BY
EDWIN C. STARKS
Stanford University
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1. A History of California Shore Whaling

By EDWIN C. STARKS, Stanford University.

It was once suggested to me that as there were still living a few of the men who took part in the old shore whaling operations on our coast it would be a desirable piece of work to get, by personal interview, a history of whaling at Monterey Bay. This I started to do, but with an accumulation of whaling data my interest led me to write a history of the shore whaling of the whole California coast, with an account of whales and whaling operations past and present.

Though what material I have obtained from old whalemen has been of great value, I have found it impossible to get reliable dates from them. Hence this account, rather than an original contribution, may better be looked upon as a compilation of records found in old newspapers, books of travel, fish commission reports, notes and clippings in the Bancroft Library, and in such-like sources of information.[1]

Although we have known a certain amount about the whales of the north Pacific for a great many years, there is no group of animals of which we really know less, particularly as regards kinds or species.

This is easily understandable when we consider the fact that we can not collect whales, as we do other animals, take them into the laboratory and placing them side by side make direct comparisons. We have to depend upon comparing a description of one whale with another. There are not many accurate descriptions, and there are not many opportunities for making them. When a whale is brought to the whaling station one can scarcely expect the dozen or so men, who are ready to go to work, to wait until the investigator takes a half-hour to make measurements. To study the whales one would have to live close to the whaling station and be prepared to pass many idle days, and many more days when all the whales that are taken are humpback whales, one of the best known kinds, which at the Moss Landing whaling station, Monterey Bay, forms about 90 per cent of the possible four or five species. The writer learned the futility of trying to study the whales by any other method than living at the station during the summer of 1921, when he made repeated trips to Moss Landing and saw no whales but humpbacks; often arriving only in time to see the last of the meat being carved from the skeleton. He had been especially fortunate, however, a couple of years before in opportunely arriving at a time when two great sulphur-bottom whales had been taken.

As an example, showing how little we know of north Pacific whales, Rudolphi's rorqual or the Sei whale, which is not uncommon in the Atlantic, was unknown in the north Pacific until ten years ago. It is now known to be very common in Japan, and Dr. Evermann has

[1] I here wish to thank all of those who have helped me to obtain this information. The helpers have been many and always willing—so willing that I am given to wonder at the amount of trouble and time perfect strangers as well as friends have devoted to my interests.

records showing it to be not uncommon about Vancouver Island. Another whale, the sharp-headed finner, that was described just fifty years ago as being fairly common on our coast, has scarcely been reported since. These are more fully discussed under their respective species at the end of this paper.

2. Early Accounts of Whales on Our Coast

Perhaps whales were first mentioned on our coast by Sebastian Vizcaino in the year 1602, though this is of purely literary interest, for we do not need to be told that whales were on the coast as long as there have been such things as whales. The following translation of Vizcaino's voyage is given by Venegas in his history of California in 1758:

"This bay also had been already surveyed by the *Almirante* [one of Vizcaino's ships] who gave it the name of Bahia de Belenas or Whale Bay, on account of the multitudes of that large fish they saw there, being drawn thither by the abundance of several kinds of fish."[1] This was in Lower California, but farther on in the same account in writing of the Bay of "Monte-rey" he includes among the animals of the bay "huge sea wolves [or sea lions] and whales."

Venegas himself says: "But the most distinguished fish of both seas are the whales; which induced the ancient cosmographers to call California, Punta de Belenas, or Cape Whale; and these fish being found in multitudes along both coasts give name to a channel in the gulf, and a bay in the south sea." "Cape Whale" refers to Lower California, "both seas" to the Pacific Ocean and the Gulf of California.

3. Classification of Whaling

Whaling may be classified under three heads: First.—The nearly obsolete whaling from ships, in which the ships leaving the home port stayed away until a full cargo of oil and whalebone had been obtained. The whales were taken from small boats, stripped of their blubber (flensed) while 'alongside' of the ship, and the body cast adrift. The oil was tried out and barreled on the ship.

Second.—The completely obsolete California shore whaling, in which a whaling station and try works was established on shore, and the whales taken from small boats as in ship whaling. This was the most ancient form of whaling from which ship whaling developed. It differed from ship whaling only in having headquarters in a fixed locality, and the whale boats cruising within a radius of about ten miles. No use was made of the whale's body after it had been flensed on the beach.

Third.—For want of a better term we may call the third form modern shore whaling. The whales are not taken from small boats, but from a seaworthy steam whaler, large enough for cruising and housing its crew. The whaler stays out until it has secured one or more whales, which it tows to a whaling station on shore, where the whales are drawn up onto a platform, and use is made of the entire body. But this form of whaling differs particularly from others in its efficiency, in the deadliness of its gun and bomb harpoons, in its equipment for raising and floating sunken whales, and especially in the diversity of its manufactured products.

[1] This being the first part of August, the whales could scarcely have been the California gray whale that resorted in such great numbers in midwinter to the lagoons of Lower California, spending the summer in the Arctic Ocean.

4. Whales in Decreasing Numbers

People whose interest is in the profit of whaling often speak of the whale supply as being inexhaustible, but to appreciate that the whales are becoming scarce on our coast one has to remember back only ten or fifteen years, when standing on the shore of the open ocean and looking seaward one could nearly always see a whale or two spouting. Nowadays it is only at long intervals that a whale is seen.

Going further back, one who knew the coast forty or fifty years ago, or who has read the old books, knows that it was no uncommon sight to see a dozen or more whales at one time. In "Sketches of Life in the Golden State," Col. A. S. Evens, 1873, writing of the coast between Halfmoon Bay and Pescadero, says: "From one height I counted not less than fifteen whales spouting at intervals." In "The Golden State," R. Guy McClellan, 1876, in speaking of whales, says: "hundreds of them can be seen spouting and blowing along the entire coast." Mr. C. H. Townsend (Bulletin of the United States Fish Commission, 1886, p. 348) says: "At the San Simeon station in December, 1885, I could see whales blowing almost every hour during the day."

Smythe's History of San Diego states that in the early forties San Diego Bay was a favorite place for the female whales in the calving season, and at such times on any bright day, scores of them could be seen spouting. As late as 1872 fifteen whales at one time are reported to have been seen in the bay.

In the old shore whaling days the boats cruised within ten miles or so of the station. If the modern whale boat kept within this limit it is doubtful whether it would get more than a whale of two in a year. Now a considerable number of the whales are towed into the station from a distance of a hundred miles or more.

5. Improving Methods with Shrinking Supply

At various times in the history of whaling the industry has been given up, or has declined to negligible importance, because it has become unprofitable. Whales have become too scarce to take enough of them to pay by the whaling methods at that time in use, or the price of oil and 'bone' has reached too low a level, or more usually both of these conditions have come together, for oil never has reached such a low price that whaling would not pay if enough whales could be had. But always whaling has been resumed, for methods of capture have improved so much that in spite of depleted schools or lowered prices it has been possible to secure enough whales to make it profitable.

Captain Scammon, writing on shore whaling in California in 1874 (Marine Mammals of the Northwestern Coast), says: "The cetaceous animals frequenting the coast, having been so long and constantly pursued, are exceedingly wild and difficult to approach; and were it not for the utility of Greener's gun, the coast fisheries would be abandoned, it being now next to impossible to 'strike' with the hand harpoon."

At first whaling was pursued in the old way with hand thrown harpoons by which the boat was 'made fast' to the whale by the connection of a long line. The whale was tired and weakened until

the boat could get near enough to lance it with a long slender blade. This could be possible only with the whales very abundant and not shy from much hunting. This method soon gave way to the harpoon shot from a gun; either a light gun held at the shoulder, or a heavier swivel-gun mounted in the bow of a boat. This too, as with the hand thrown harpoon, was only to 'make fast' to the whale, which was later killed with a bomb lance shot from a gun.

Both the bomb lance gun and harpoon gun, as well as the bombs and harpoons, were variously modified. One ingenious sort was a combined harpoon and bomb gun mounted together on a pole. It was thrown, as was the ordinary harpoon. When the harpoon had entered the whale a certain distance it engaged a trigger that fired the bomb gun. The early forms of bomb lances were not efficient, and a whale after being shot with nonfatal results was naturally difficult to again approach, and hence the whales became shy. It was very common to take a whale with one or more bomb lance, or harpoon scars on its body. In "Hayes' Emigration Notes," 1860–61 (MS. in Bancroft Library) Captain Clark of San Diego states that about two-thirds of the whales that were shot were lost on account of failure of bomb.

In the "History of San Luis Obispo County" (Thompson and West, 1883) is an account of how Captain Clark at the San Simeon station with his two boat's crews unsuccessfully attempted to take a huge right whale, which Captain Clark estimated would have been worth $4,000 in oil and whalebone at that time. Twenty-five bomb lances were fired into the whale, besides several harpoons. At last the whale smashed one of the boats, and the other boat, after picking up the men, was now overloaded and was forced to give up the chase. The attempt cost the loss of the whale boat, several harpoons and lines, and at least $100 worth of bomb lances.

6. Methods of the Old Shore Stations

Captain C. M. Scammon, in his book on the Marine Mammals of the Northwestern Coast, gives a very good picture of California shore whaling as practiced in the old days: "The whales were pursued in boats from the shore, and when captured were towed to the beach and flensed, much in the same manner, doubtless, as it had been done by our New England whalers more than 150 years ago. At the point where the enormous carcass was stripped of its fat, arose the whaling station, where try-pots were set in rude furnaces, formed of rocks and clay, and capacious vats were made of planks to receive the blubber. * * * A light shanty with four compartments served the purpose of washroom, dryingroom, storeroom, and cooper's shop; and a sort of capstan, termed the 'crabs,' were used in lieu of the ship's windlass, whereby the falls to the heavy cutting tackles were hove-in, when fastened to the blanket piece, which served to roll the massive form of the captured animal on the beach during the process of flensing. * * *

"A whaling company, as it is termed, consists of one captain, one mate, a cooper, two boatsteerers, and eleven men; from these two whale boats are provided with crews of six men each, leaving four hands on shore, who take their turn at the lookout station, to watch

for whales and attend to boiling out the blubber, when a whale is caught."

Usually the company worked on shares or 'lays' as is done in ship whaling, but in one instance the captain owned all of the property and employed the men, and in another the men owned the property and employed the captain.

For the following account I am indebted to Mr. Michael Noon, an old whaleman at Monterey, who for years had had experience with various whaling stations of the coast. The whale boats always hunted in pairs for safety, in case one boat was stove in or swamped by an enraged whale; a not uncommon occurrence. The men would refuse to go out unless accompanied by another boat.[1] If no whale was in sight the boats would cruise about offshore under sail. Usually there was a signal station on shore with a flag and flagpole, as shown in the old picture reproduced of the Carmel station (p. 23). Sometimes a whale would be sighted from the height of the shore station before it was from the boat, in which case the lookout man would dip the flag. Then one of the boats would slowly turn about and when it was headed in the right direction the lookout man would so signal with the flag. If the boat was in doubt as to whether it was going towards the place where the whale was last seen, it would ask the lookout man for the direction by dipping the peak of the sail.

A Monterey guide book of 1875 gives a very good picture of bay whaling at that time: "At the first streak of dawn the whalers man their boat, six to a boat, and proceed to the whaling ground near Point Pinos. Here they lay on their oars and carefully scan the water for a spout. Suddenly one sees the wished-for column of mist, and cries out, 'there she blows!' Then all is activity and the boat is headed for the whale and the guns are made ready to fire. When within a short distance of the animal the oars are peaked and the boat is propelled by paddles so as not to disturb the wary whale. Having arrived within shooting distance, which is about forty yards, the harpoon, connected with a long line, is fired into whatever part of the animal is visible. Down goes the whale, the line, with a turn around the loggerhead of the boat, being allowed to run out for several hundred yards, when it is held fast. The whale generally makes a direct course for the open ocean, dragging the boat with almost lightning rapidity. Soon, however, it becomes weary and comes to the surface to breathe; now is the golden opportunity; the boat approaches as near as possible and a bomb lance is fired. In case this enters a vital part, the animal dies instantly, but oftener it does not, and the same maneuvering as before is repeated until two or three bombs have been shot before the animal is killed. It is then towed to the try works, where the blubber is rendered into oil. Sometimes the whale will sink as soon as killed; should such be the case, a buoy is attached to the line, and the animal is left until the generation of gases in its body causes it to rise, which usually occurs in from three to nine days."

[1] In spite of this fact, Mr. Noon, doubtless with the desire to experience again the old thrills of whale hunting, started out a few years ago with a few adventurous spirits in a single boat, and equipped with the old whale gun captured a sperm whale. He related this in a matter-of-fact way, as if it were part of a day's work, as in fact it often had been, but as related by one of the amateur whalemen it was a hair raising experience with grim death reasonably certain for the entire party. I have found only one record of the taking of a sperm whale by a shore station.

7. Loss of Whales Killed

A considerable number of whales that were killed at the whaling stations were lost, usually by sinking. Col. A. S. Evens, in "Sketches of the Golden State," 1873, in speaking of the station at Pigeon Point, says: "They had killed twelve whales already that season and had killed and lost ten more." This was a much greater proportion of whales lost than usual.

Some of the whales that sank were recovered, as related above. Captain Scammon calculates that at least a fifth of the number that were killed either escaped after being mortally wounded or sank in deep water and were not recovered.

As practiced by the modern steam whalers practically no whales are lost that are killed. The harpoon has three barbs, from fourteen to sixteen inches in length, that are held close to the shaft when the harpoon enters the whale, but are then released so that there is no chance of the harpoon pulling out. Attached to it is a large rope strong enough to support the whale, and should the whale sink a powerful hoist easily draws it to the surface.

8. Ship and Shore Whaling

On the California coast the conventional ship whaling was of course carried on at the same time as the shore whaling, but the ships whaled mostly on our coast in passing to or from the more productive Arctic whaling ground. They would take a so-called finner, or rorqual, when occasion offered, but they confined their operations more especially to the less troublesome and more valuable right and sperm whales, and in the north the bowhead, all whales that did not count much in the shore whalers' catch. Some ships were equipped especially for sperm whaling, and took no other kind, unless, of course, they could not get sperm whales. But that contingency at the beginning of sperm whaling did not occur. It was only when the sperm whales were thinned out that the sperm whaler had to mix his catch. The sperm whale was practically never taken by the shore stations, and the right whale only very occasionally, not often enough to be counted upon. The ships paid little attention to humpback whales, though occasionally one would fill up on humpback oil or might even sail with the intention of humpback whaling, but, of course, as the other kinds failed such whales as the humpback, finback and gray were not overlooked as they were in earlier times.

At the shore stations the catch was practically all made up of gray and humpback whales. The occasional other kinds that were taken were not relied upon to fill the kettles, and the taking of one, especially a right whale, was regarded as rare good fortune. Probably as many gray whales were taken as humpbacks. At any rate at some stations, certainly, the gray whale made up the greater part of the catch.

Thus the ships and the shore stations scarcely conflicted.

Showing that ship whaling has not been entirely given up, I have before me the results of the whaling cruise last year (1921) of the Carolyn Francis along the coasts of Mexico, California, and Alaska. This boat with a crew of 42 men secured 158 whales, which yielded 145,000 gallons of oil. of these there were 170 humpback, 32 gray, 2 finback, 1 sperm and 1 sulphur-bottom whale. Records were lost as to 15 whales. Successful as this voyage may appear it probably was not profitable, for the Pacific Fisherman of March, 1922, prints this

as to the Carolyn Francis: "No decision has been reached about this year's activities. It seems certain, however, that the vessel will not go after whales this season."

9. Development and Destruction of the Gray Whale Fishing Industry

G. Brown Goode, in "Fishery Industries," quotes from an old number of the Monterey Californian as to gray whales, as follows: "Formerly these marine monsters were so numerous in Monterey Bay that whalers could fill up lying at anchor." Contrast that with the present catch of gray whales taken by the station at Moss Landing, Monterey Bay. During 1919–20–21 734 whales were taken, of which only three were gray whales.

In G. Ross Brown's "Resources of the Pacific Slope," 1869, there is a report by J. A. Veatch, in which, speaking of the California gray whale, he says they "formerly resorted to Scammon's Lagoon in immense numbers to bring forth their young." Scammon disclosed this hiding place in 1855, and "the havoc made among them for the next few years was terrific, and their numbers rapidly reduced. They still frequent the lagoon but no longer in such astonishing numbers."

According to Hayes' Emigration Notes, 1860–61 (MS. Bancroft Library) Captain Clark estimates that there were at that time about sixty whalers along the Lower California coast whaling for gray whales. In a book on Lower California, called "The Mother of California," by A. W. North, considering conditions of 1856, the statement is made that "from whale and seal oil the New Bedford whalers alone gathered in during the '50s full quarter of a million dollars annually" on the Lower California coast.

It is little wonder that this whale was nearly exterminated for it is rather local, being confined to the north Pacific. Though at certain seasons in certain localities it was very numerous, its total number was, perhaps, small when compared with that of such whales as have a cosmopolitan distribution.

The gray whale resorted to the lagoons of Lower California to breed. Here the lagoon whalers hunted them, and as the females entered the lagoons while the males stayed out in the open ocean the former were the more easily taken. Scammon says they "collected at the most remote extremities of the lagoons, and huddled so thickly together that it was difficult for a boat to cross the waters without coming in contact with them." Again he says: "It is rare that the dam will forsake her young one when molested." Thus the sex most important to breeding was the most easily taken, and her death meant the death of her calf whether or not it was born. As long as the gray whale stayed in its summer home, the Arctic Ocean, it was comparatively safe, for the Arctic whalemen were after the more valuable right and bowhead whales. But both coming and going to its breeding grounds it had to run the gauntlet of the whale stations and at its breeding grounds its habits made it an easy victim to the whale ships.

It is little wonder that within a comparatively short time after lagoon whaling started it became unprofitable owing to a scarcity of whales. Had the gray whale been protected until it brought forth its young, and afterwards until its young could shift for itself, it might still be a commercially abundant whale. Those are doubtless the

reasons why the present catch is made up of from 85 to 95 per cent of humpback whales. The gray whales have nearly all been killed or driven to the other side of the Pacific where the Japanese are now doing their share of exterminating them.

Scammon estimates that up to his time (1874) over three-fourths of the oil taken by the shore stations was from the gray whale.

10. Results of Destructive Methods

Scammon in summing up results of California shore whaling for twenty-two years shows that about 4000 whales had been killed, or about 181 annually. In this estimation he considers a certain proportion of unborn young, and a certain proportion of whales killed but lost. He adds: "This peculiar branch of whaling is rapidly dying out, owing to the scarcity of the animals which now visit the coast; and even these have become exceedingly difficult to approach."

The single station that is now operating on the coast is taking nearly twice as many whales as all of the old stations put together. So if the whales became scarce under the old conditions they can not be expected to last long under the new.

Dr. Roy Chapman Andrews, in "Shore Whaling, a World Industry," (National Geographic Magazine, May, 1911) says: "In a few years stations had sprung up on the coast of Norway in every available place, and later reached across the Atlantic to the American shores. New foundland became the first hunting ground for the whalers here, and only a few years ago as many as eighteen stations were in operation on that island and the immediate vicinity." He lists the many countries engaged in this sort of whaling, and adds the following prediction: "And what is to be the result of this wholesale slaughter? Inevitably the commercial extinction of the large whales, and that within a very few decades. In some localities this has already taken place and all of the whales have been killed or driven from their feeding grounds."

Before many years whaling must cease for lack of material. Probably some species of whales will become entirely extinct, and others will be so reduced in numbers that they can never recover.

The opinion is often expressed in regard to any animal that is being heavily drawn upon for economic reasons, that it will soon become so rare that it can not be profitably pursued, and then it will have a chance to recover. In theory its recovery would appear certain to occur if only a very few pairs were left, but it does not always do so in practice. When some animals have reached a certain low level in numbers they have been unable to compete and hold their own, and have entirely disappeared.

11. Modern Stations and Modern Methods

At the present time oil and whalebone would scarcely support whaling under any but the most destructive methods.[1] Whaling, however, is profitable for two reasons. First: Whaling is so destructive and certain by the present methods that when the gunner of a steam whaler has a fair chance at a whale it is as good as secured.

[1] Whalebone never counted much in California shore whaling. The right whale was the only one of the region that had whalebone of much value, and it was seldom taken. When it was, its whalebone very materially increased the income of the fortunate station that secured it. Right whales are now never taken on the coast, and whalebone is of little value as compared with the large prices it once commanded.

Second: Every part of the whale is used, and the demand for the various products of fertilizer and chicken feed is so good that the part of the whale that was once cast adrift as worthless is now about as valuable as the oil.

Whales are now pursued by large steam whalers that cruise within a hundred miles of the station until they get from one to several whales each. Instead of the harpoon being shot from a swivel gun mounted in a small boat, or a gun small enough to be held at the shoulder, it is now shot from a big brass gun, that might well be described as a cannon, mounted in the bow of a steam whaler. Instead of having to make fast to a whale with a harpoon and later killing it

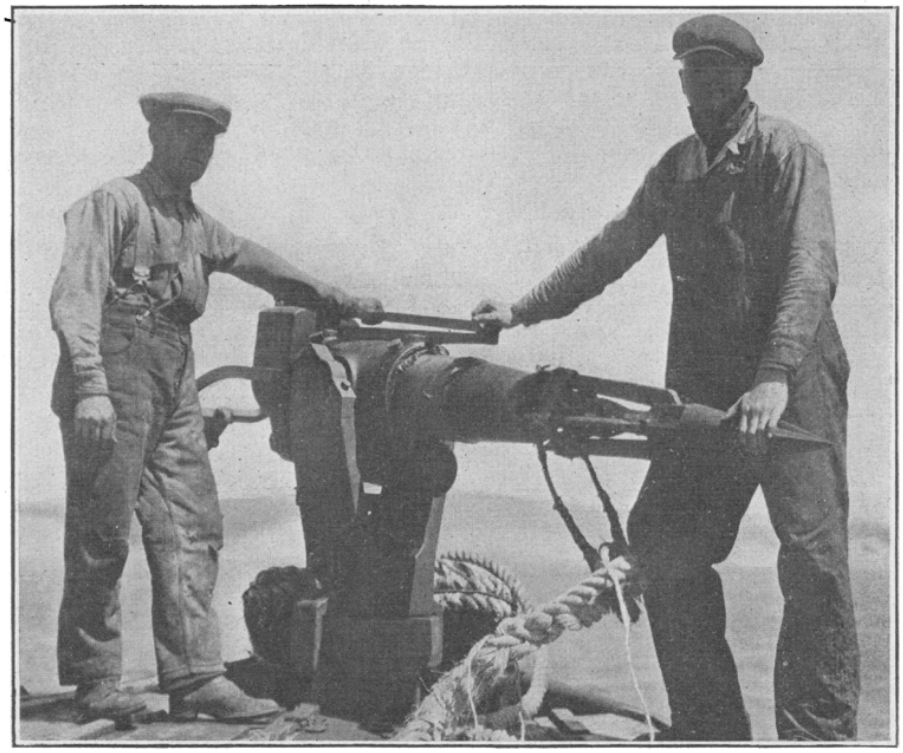

FIG. 1. Whale gun with harpoon loaded. Photograph by O. H. Stolberg.

FIG. 1. Whale gun with harpoon loaded. Photograph by O. H. Stolberg

with bomb lances, only to have it sink perhaps, now the harpoon is itself a bomb so powerful that if shot within any reasonable distance of a vital spot a second shot is not necessary.

Instead of the whale being perhaps lost when it sinks, now its sinking makes no difference whatever, for fastened to the harpoon is a two-inch rope which leads to a powerful winch on the deck of the steamer by which it is quickly brought to the surface. An air hose is now thrust into the whale and an air compressor inflates it so that it will float. It is towed to the station or else marked with a flag and cast adrift, while the steamer proceeds to collect other whales.

Instead of the whale being stripped of its blubber with considerable difficulty and the expense of much time as it floats nearly submerged

along side of a ship, it is now hauled up on a great platform and the blubber stripped from it in surprisingly short time by the aid of steel cables and power winches.

Instead of the oil only being saved and the carcass cast adrift after the blubber is removed, now every part is saved. In Japan and some other countries the flesh is sent to market, or is canned, and makes a food product that is said to be enjoyed. We have not found it very palatable as food. When the flesh is not eaten, the whole body—flesh, entrails, blood and bone—is manufactured into fertilizer, poultry food and bone meal. The tails are pickled and shipped to Japan where they find a market as a desirable food.

The oil is manufactured into three or four grades, and used in soap making, painting, leather dressing and various other industries.

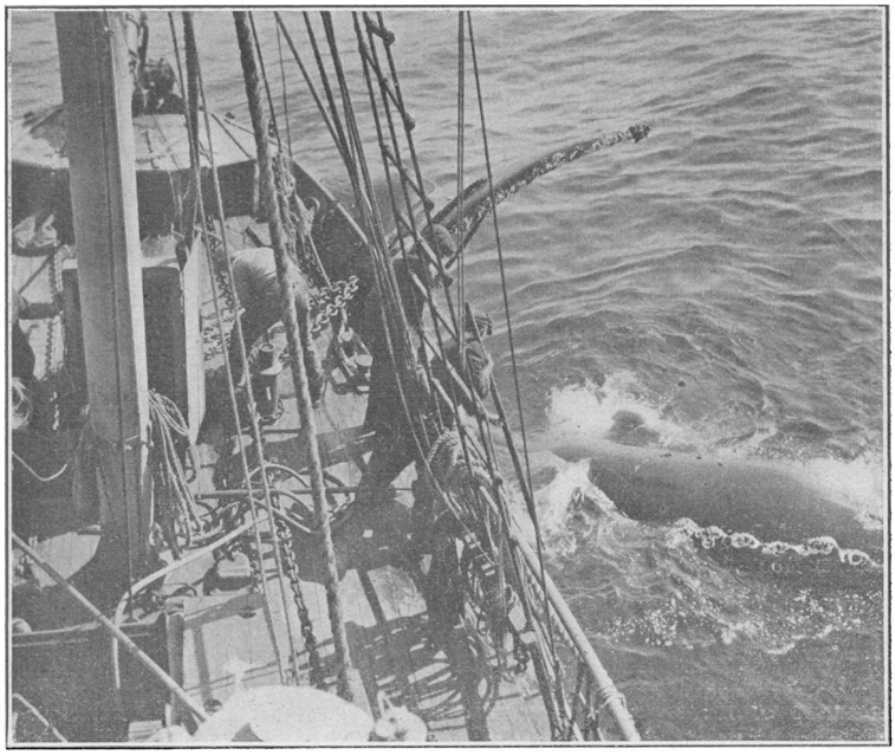

FIG. 2. Whale secured by modern whaling vessel. Photograph by O. H. Stolberg.

FIG. 2. Whale secured by modern whaling vessel. Photograph by O. H. Stolberg

Doubtless the great tendons that run into the powerful tail and other parts could be made into glue.

The old time whale ship used to strip the blubber from the whale in a long piece (blanket piece) that ran diagonally and spirally around the whale. The whale rolled over and over as the blanket piece was hoisted aloft and lowered to the deck of the whaler. In shore whaling, unless the whale could be flensed at a floating dock (in which case it was handled as at sea), the blubber was stripped in convenient pieces as shown in the picture here reproduced of the flensing process at

San Simeon station. At the modern whaling station the blubber is removed in three or four great pieces running lengthwise of the whale.

Whaling under modern conditions is carried on in many parts of the world—Alaska, British Columbia, California, Newfoundland, Norway, South America, Africa, Australia, and New Zealand.

The station at Moss Landing consists of a large platform big enough for two or three whales at once, covered with a roof, and with an inclined plane leading up to it from the beach. Along each side of it are eighteen large wooden cooking vats heated with steam pipes. In these the various parts of the whale are placed, the flesh, skeleton, and entrails, and cooked in the process of manufacture.

The whales are drawn up onto the platform tail first and belly up.

FIG. 3. Whale being flensed at Moss Landing Whaling Station.
Photograph by O. H. Stolberg.

FIG. 3. Whale being flensed at Moss Landing Whaling Station. Photograph by O. H. Stolberg

Longitudinal cuts through the blubber are made with long knives mounted on poles—the modern 'blubber spade.' To the forward end of the blubber thus outlined by these cuts is fastened a steel cable, and by the aid of a winch it is stripped off in long sheets the length of the whale. It is drawn away from the whale very rapidly, aided by an occasional cut below, and as it is pulled off it makes a loud cracking noise. A couple of pieces will include the blubber of one side, and the animal is rolled over. The flukes and fins and lower jaw are removed while the blubber is being stripped. The whale is opened by cutting through the ribs and the entrails are dragged out in one mass. As the blubber is removed it is dragged to the other end

of the platform and there cut into pieces a foot or so across, after which it is minced and tryed out. The men work in groups of two or three, each group having its own special duty to perform, so that a whale is completely cut up and disappears into the cooking vats in a surprisingly short time.

As the stomachs are opened great masses of sardines and anchovies roll out. These are often found spewed up into the esophagus, which is packed solidly with fish bones.

The following data of the number and kinds of whales taken at Moss Landing, Monterey Bay, I obtained from some manuscript of an unfinished article by Dr. B. W. Evermann, which he kindly sent to me. He got it directly from the officers of the California Sea Products Company, the owners of the station. This company has another station at Trinidad, California, that was opened in 1920, but only operated two months.

In 1919 234 whales were taken, all but eight of which were humpback whales. The latter were: 4 sulphur-bottom, 1 finback, and three sperm whales. In 1920 the number taken was practically one a day, or 364. of these, 343 were humpback, 15 finback, 2 California gray, 1 sulphur-bottom, 1 sperm, 1 sei, and 1 bottle-nose grampus. The station apparently did little the first half of the year 1921. Starting about the middle of June, 136 whales were taken. of these, 122 were humpback, 1 California gray, 1 sperm, and 12 finback whales.

12. The Blame for Scarcity of Whales

All of the blame for the comparative scarcity of whales can by no means be ascribed to the results of modern whaling. The hundreds of whaling ships that operated in all parts of the world were primarily culpable. The annals of whaling are filled with warnings that the whales were growing more and more scarce and with statistics showing how the current year's catch was half that of some previous year. It is left for the modern whaler to finish what the whale ship began, and if he continues there can be no doubt of the successful accomplishment of that end. Not only is the end more clearly in sight on account of fewer whales, but where the whales used to have a good fighting chance, now they have none whatever.

The "California Register" for 1857 prints a letter from Governor Bigler to the state legislature, dated 1855, in which it appears that in the year before there was shipped from Honolulu (the Pacific whaling center at that time) 1,306,567 gallons of whale oil; that 650 ships and 15,000 men were engaged in Pacific whaling, at a capital invested by United States citizens of not less than $20,000,000.

This statement is made by the Sacramento Daily Union for March 14, 1855: "An old pioneer tells us that he saw as many as forty sail of whaling craft in the harbor of Monterey in one season before the raising of the flag."

An old log describing a whaling voyage of the bark *Java* in 1857–60, which was kindly loaned me by Mr. A. N. Buel, its writer, describes how thirty-one whalers were in sight at one time in the Pacific Arctic, and in another place twenty-eight whalers were in sight "two cutting in and three trying out."

The discovery of mineral oils put off for a time the complete extermination of the whales. About 1860 petroleum oil for illuminating and lubricating were beginning to be used, but not in any great quantity. From this time the price of whale oil gradually decreased, and with the whales more scarce and shy, whaling dropped to the operations of a few vessels and a few stations. The old records show how every year more of the whale ships were laid up or diverted to other uses. Had mineral oils not been introduced the whales would all have been gone long ago, and probably, the porpoises, grampuses, seals, and every other oil producing animal with them.

13. The Monterey Whaling Stations and Beginning of Shore Whaling

Shore whaling in California started at Monterey Bay, and it is about the only place on the coast where whaling is still continued. After the beginning it proved to be so profitable that whaling stations were established at various points along the coast, as well as some on the lower California coast. There is some discrepancy as to the year of the beginning. Scammon says the first station was established in 1851 by Captain Davenport. G. B. Goode's "Fishery Industries" gives the same date, but the start is accredited to Captain Joseph Clark. This is the only record of Captain Clark as the originator of California shore whaling, and doubtless is a mistake. Later on in Goode's report a contradictory statement is made: "Captain Clark (née Machado) began whale fishing at Monterey where an American, Captain Davenport, the first California shore whale fisher, was engaged before him."

One of these accounts was written over twenty years after the supposed beginning; the other over thirty years. There can be little doubt but that the date of 1851 is a mistake. There were many accounts published at the time the start was made, some of which are here printed. Probably the date given in Goode's "Fishery Industries" was copied from Scammon's statement.

The Sacramento Daily Union for March 14, 1855, says: "During the year a number of Portuguese whalers have established themselves at Monterey for the purpose of capturing such whales as are indigenous to the coast." They had captured five California gray whales, nine humpback, and four killers; six other whales were killed but lost. This was for the summer months between April and September, and it paid the men $438 each.

The Pacific Sentinel for November, 1856, (clipping in Hayes Collection, Bancroft Library) states that during the last twelve months a number of Portuguese sailors have established themselves at Monterey for whaling.

The San Francisco Daily Bulletin for November 12, 1855, says: "A number of Portuguese fishermen have caught twenty-four whales of all kinds in the bay of Monterey since April last."

C. H. Townsend wrote in 1886 (Bulletin of the U. S. Fish Commission, p. 347): "The charter of the Monterey Whaling Company which I saw framed in the ancient stone building used as headquarters at that place, bore the date 1854."

The California Register for 1859 states that a whale fishery at Monterey has been carried on for the past four years.

The Monterey Weekly Herald, August 1, 1874, says the Monterey Whaling Company was organized in the year 1854 by Captain J. P. Davenport, who formed a company of twelve men, among whom were three or four regular whalemen. They had two boats and worked with hand harpoons and lances. Captain Davenport had brought from the east a number of bombs, but they were defective and worthless. The price of oil falling to twenty-five cents a gallon the company disbanded.

The next year, 1855, a company of Portuguese, who afterwards became know as "the old company," was organized with seventeen men. This was probably the company referred to by the California Register cited above. Though they used no guns they took about 800 barrels of oil annually for three years.

The catch up to this time had been humpback whales. About 1858 the whalers learned the haunts and habits of the California gray whale, and Captain Davenport again started, and was equipped with bomb and harpoon guns. Each company got from 600 to 1000 barrels of oil annually for several years.

Captain Davenport now withdrew, and his company, though the first to start, became known as the "New Company of Portuguese Whalers." "During the season 1862–63 each company secured 1700 barrels of oil. This was one of their most successful years."

In 1873 the new company, commanded by Captain Pray, captured a right whale, 70 feet long that yielded 175 barrels of oil and 1500 pounds of bone that sold for over $2,000. At the close of that season the two companies consolidated into one company of twenty-three men, several of the men leaving. Another statement, quoted below, gave the date of this consolidation as 1865. It is possible that the company separated and again combined.

From "Memorial and Biographical History of Coast Counties of Central California," by H. D. Barrows, 1893, I get the following information that was obtained directly from Captain Lambert. The two stock companies kept in successful operation until 1865 when the two companies consolidated under Captain Lambert, from Martha's Vineyard. "Within the first four months the company landed $31,000 worth of oil and bone on the beach at Monterey." Whaling became unprofitable about 1888 and was abandoned.

The Surveyor General in his report for 1859 (Append. III, Jour. Cal. Assem.) gives the entire catch for the year ending with November as 1800 barrels of oil, 600 of which was from gray whales, the balance from humpback and one right whale.

The California Register for 1857 supplies this information: "The Portuguese company at Monterey have taken from whales captured by them since March, 1856, 16,000 gallons of oil, which sold for $12,000. The Register for 1859 says that in 1857 they secured twenty-three whales that yielded 32,000 gallons of oil at a value of $22,500. This company appears to have engaged in other ventures besides whaling, for in this same year it "sent to market from their own products" 2000 cords of wood, 10,000 pounds of wool, 800 hides, 1200 sacks of barley, and 3000 sacks of potatoes.

The same source of information says that in 1858 there were three companies, each having twelve men and two boats. "In addition to these there are ten men engaged at the try works on shore, and in attending to the different businesses of the different companies." The third company can not refer to the Carmel company, for it was not started until three years later than this date. The third company ceased to exist about 1863 or 1864, for the transactions of the California State Agricultural Society for 1864–65, after mentioning one company at Carmel and two at Monterey, says: "another company formerly existed at Monterey, but left about a year ago."

Mr. Tony Silveria, one of the old whalemen of Monterey, told me that at one time there were four companies in the bay, one of which had its try works on a beach that is now in front of "Chinatown," New Monterey, and was a few years ago known as Macabee's Beach.

Captain Lambert apparently did not stay with the company till the end, for in "Fishery Industries of the United States" (Sec. II, p. 58) it is stated that Mr. Verissimo is in charge of all of the business and the company is without a captain. This was between 1880 and 1884. He was secretary, and had been with the company since 1867. The United States Fish Commission Report for 1888 says that the station was abandoned in 1881. If so, it was started again, for Mr. Townsend in 1886 (Bull. United States Fish Commission) gives the catch for the current year.

The end of shore whaling was anticipated long before it came. The whales could not stand the continual drain upon their numbers, and the demand for oil was decreasing. The Surveyor General in his report to cover the years from 1865 to 1867 (Append. III, Jour. Cal. Assem.) writes that the whale fishery is gradually diminishing, and the Monterey Weekly Herald, August 1, 1874, states that whaling in Monterey Bay is likely to become a thing of the past as whales are becoming scarce.

After some time in the eighties shore whaling at Monterey was sporadic. About 1895 Captain H. Schaufele revived shore whaling and his company operated for two or three years. The United States Fish Commission Report for 1901 contains this statement, rather indefinite as to time, but possibly referring to the past year: "The whale fishery was followed by eight Portuguese and eight Japanese, who use whale boats to pursue passing whales, which on being killed are towed to shore stations."

The shore stations of both the old company and the Davenport company were near the present oil wharf. Twenty years ago a considerable part of the try works still remained, and even now traces of the masonry that surrounded the kettles can be found.

Mr. Noon of Monterey, who was long connected with whaling, gave me this information. The house in Monterey known as "the first brick house in California," built in 1847, and incorrectly known to tourists as a whaling station, was the residence of Captain Devenport. His company "whaled from" (kept their gear and supplies in) the Jenny Lind theater. The old adobe house on the corner next to Captain Davenport's residence was used by the old company in the same way.

14. History of the Shore Whaling Station

Whaling stations existed at the following points on the California coast. Others were on the Lower California coast, most of which, if not all, marketed their products in San Francisco: Crescent City, Bolinas Bay, Halfmoon Bay, Pigeon Point, Santa Cruz, Monterey Bay (2. stations), Carmel Bay, Point Sur, San Simeon, Port Harford (or San Luis Obispo), Cojo Viego (Point Conception), Goleta, Portuguese Bend (San Pedro), Dead Man's Island (San Pedro), San Diego Bay (2 stations).

Mr. C. H. Townsend wrote in 1886 (Bull. United States Fish Commission): "of the eleven whaling stations mentioned by Scammon as established along the coast ten or twelve years ago, only five remain; those at Monterey, San Simeon, San Luis Obispo, Point Conception, and San Diego."

There is considerable discrepancy as to when the different stations were started and abandoned, arising no doubt from loose organization. A station might be abandoned and so reported, but might start again either as the same company or another, or possibly a few fishermen with scarcely any organization would get together to try their fortunes at whaling. Some of the companies were composed of men who were fishermen or farmers a part of the year and whalemen the rest. Some organization, however, was necessary, for the property of a whaling company amounted to a thousand dollars or so, and shares had to be arranged.

The dates given must not be too seriously relied upon. Many of them were obtained from old men who based their recollections on relative incidents and personal experiences. For instance, at Pescadero the oldest inhabitants agreed on the years from 1862 to 1865 as the time of the beginning of whaling at Pigeon Point, until one old gentleman recalled very positively, and related in highly embellished English, how he had sold a yoke of oxen to Captain Bennett in 1865 "and the station had at that time been running exactly three years."

15. Monterey Station

More thoroughly treated elsewhere. Started in 1854. Usually there were two stations, sometimes more. Continued with gradually decreasing success until about 1880, and more or less sporadically for several years more. Now continued by modern shore whaling.

16. Crescent City Station

The station at Crescent City is mentioned neither by Scammon nor Goode, though a whaling station was started there almost as early as at Monterey. In Hayes' collection of notes in the Bancroft Library is a clipping from the Star (which appears to have been a San Pedro paper), dated August 11, 1855, in which whaling stations are mentioned as having been established at Monterey and Crescent City. In fact in 1856 two stations appear to have existed there, for the Sacramento Daily Union for October 2, of that year, prints the following note: "The Crescent Whaling Company on Wednesday, September 17th took two whales, and on the following Friday Captain McCoy's company killed one, the largest of the season at Crescent City."

17. Bolinas Bay Station

This was not included in the list of stations of either Scammon or Goode, though in some respects it was more important than any other. Probably the industry did not warrant such an ambitious scale as this company operated on and it did not last long. The company, according to the Daily Alta California, San Francisco, November 13, 1857, was capitalized at $100,000, and was known as the Bolinas Bomb-lance Whaling Association. It had a commodious dock and try works, and a steam engine for hoisting and oil refining purposes. In some respects the operations of this company resembled those of the more modern whaling stations than they did those of the stations of its own time. It had a fleet of small vessels that cruised about taking whales and flensing them alongside the ships. About biweekly the ships would land their cargo of blubber at the dock, where the oil was tryed out and refined. The account stated that the company contemplated the purchase of a steamer to tow their vessels over the bar.

18. San Diego Stations

In G. B. Goode's "Fishery Industries," Captain Clark, formerly of Monterey station, is said to have had a station in 1858 at San Diego. But in Hayes' Emigration Notes (Bancroft Library) I find a manuscript on whaling at San Diego in 1860–61, in which is described the taking of a whale by Captain Clark, who appears to have been more or less permanently established there, but he was connected with a whale ship anchored in the bay and not with a shore station. Two shore stations are described; one on Ballast Point in which Captain Packard and his brother were jointly interested, and it is stated that this was their fourth season. That would put the beginning of the station at 1856 or 1857. The other station was said to be near the Packards. One would infer from this that it was also on Ballast Point, though it might have been across at Whaleman's Bight and still be "near the Packards." It was commanded by Captain Johnson, who was also interested in a company at Dead Man's Island at San Pedro.

The United States Government in 1869 took Ballast Point for military, lighthouse and quarantine purposes. Goode's report says the company then went to Santo Tomas, Lower California, intimating that in that year whaling at San Diego came to an end. Captain Clark had left some time previously, for in 1865 he founded the San Simeon company.

But whaling did not cease at that time, for C. H. Townsend in 1886 (U. S. Fish Commission Bulletin) says the San Diego station has been in operation for many years, and gives the number of whales taken there in the three years from 1883 to 1886. It is probable that one company moved to Santo Tomas, and the other company, if it was also situated on Ballast Point, moved to some other part of the bay and continued whaling. Or it is possible that Captain Johnson's station was at Whaleman's Bight and did not have to move. Dr. Fred Baker, of San Diego, tells me that in 1888 there were the ruins of an abandoned try works in Whaleman's Bight, "the shallow bay which shows in all the charts just opposite Ballast Point." He says further that

he feels sure there was no whaling done after he arrived at San Diego in 1888, and is surprised to learn that any was done as late as 1886. "For I had the impression," he writes, "that the works were abandoned a good deal more than two years before my arrival."

Mr. Townsend writes, in reply to my inquiry in regard to this station: "I think the San Diego whaling station was opposite Ballast Point, but I am not positive." He is very naturally not positive, for his observations were made more than thirty-five years before my inquiry. But no matter where the station was located, whaling was carried on at San Diego for a considerable number of years after the Ballast Point station was given up.

Dr. Baker has kindly sent me some quotations from Wm. E. Smythe's "History of San Diego," in which it is stated the business of whaling assumed importance in 1853.[1] This may have been the whaling carried on from ships anchored in the bay, as was apparently done by Captain Clark. All other records agree on the fact that the first shore station was at Monterey, established in 1854. Smythe's history mentions the operations of the whalemen at La Playa in 1858. This was farther in the bay than Ballast Point, and was not unlikely the site of one of the whaling stations mentioned below.

I quote from Dr. Baker's letter, which may not be verbatim with Smythe's history: "In 1868 the business had grown so that there were two companies with twenty men at work in the boats and a dozen rendering the oil, and it had become a favorite diversion of San Diegans to go out to the lighthouse and watch the chase."

"In the season 1870–71 the yield of oil was 21,888 gallons, and in the season 1871–72 it was estimated at 55,000 gallons. In the eighties the business was declining, however, and soon became unprofitable and was abandoned."

According to a manuscript note in Hayes' "Emigration Notes," 1860–61 (Bancroft Library), the gray whale season marked the length of the whaling season at San Diego. The gray whales were taken in the winter and early spring as they went to and from their breeding grounds on the Lower California coast, keeping along the line of kelp just outside of the harbor mouth.

19. Carmel Bay Station

This station was started, according to the "Handbook of Monterey Bay and Vicinity, 1875," in the year 1861. "At first they whaled in Monterey Bay, but in the spring of 1862 they moved to their present station." It was located in a little bay on Point Lobos where the present abalone cannery is. Apparently it was abandoned about 1884.

Scammon thus describes this station: "Scattered around the foothills which come to the water's edge, are the neatly whitewashed cabins of the whalers, nearly all of whom are Portuguese from the Azores or Western Islands of the Atlantic. They have their families with them and keep a pig, sheep, goat, or cow prowling around the premises; these, with a small garden patch, yielding principally corn and pumpkins, make up the general picture of the hamlet, which is a paradise to the thrifty clan in comparison with the homes of their childhood.

[1] The data in Smythe's history was gathered in 1905–06 from some of the old whalers. As 40 or 50 years have elapsed it may be that the dates can not be relied upon.

It is a pleasant retreat from the rough voyages experienced on board the whale ship. The surrounding natural scenery is broken into majestic spurs and peaks, like their own native isles, with the valley of the Rio Carmel a little beyond, expanded into landscape loveliness.

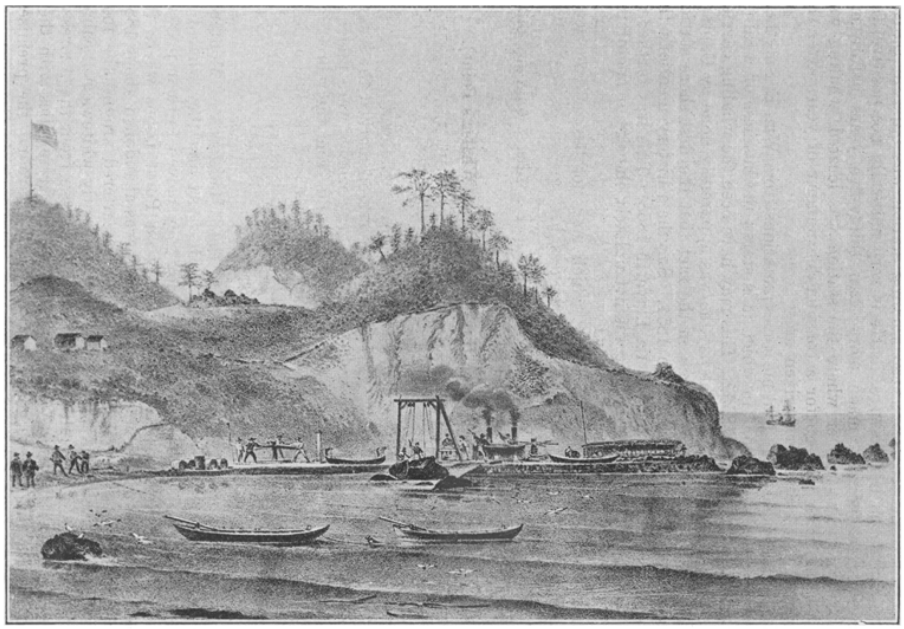

FIG. 4. Carmel Whaling Station. (From Scammon's Marine Mammals of the Northwestern Coast.)

FIG. 4. Carmel Whaling Station. (From Scammon's Marine Mammals of the Northwestern Coast.)

"Under a precipitous bluff, close to the water's edge, is the station, where, upon a stone-laid quay, is erected the whole establishment for cutting in and trying out the blubber of the whales. Instead of rolling them upon the beach, as is usually done, the cutting tackles are suspended

from an elevated beam, whereby the carcass is rolled over in the water—when undergoing the process of flensing—in a manner similar to that alongside a ship. Nearby are the try works, sending forth volumes of thick black smoke from the scrap-fire under the steaming caldrons of boiling oil. A little to one side is the primitive storehouse, covered with cypress boughs. Boats are hanging from davits, some resting on the quay, while others, fully equipped, swing at their moorings in the bay. Seaward on the crest of a cone-shaped hill, stands the signal pole of the lookout station. Add to this the cutting of the shapeless mass of mutilated whale, together with the men shouting and heaving at the capstans, the screaming of gulls and other sea fowl, mingled with the noise of the surf about the shores, and we have a picture of the general life at a California coast whaling station."

20. Santa Cruz Station

I have found no printed account of the existence of a whaling station at this point, but the son of Captain Bennett assured me that whaling was carried on here for some time, and Mr. Noon, of Monterey Bay, told me that Captain Davenport of the New Company of Monterey whaled here for a season or two. I was unable to get even approximate dates.

21. Point Sur Station

This station was maintained by the Carmel company only a couple of years from 1877 to 1879.

22. Port Harford Station (Whaler's Point)

Sometimes this station is mentioned as the San Luis Obispo station. It was established by Captain Marshal in 1868 or 1869. He remained with the company at least until 1880, and perhaps until the end. It was abandoned in 1887 because the whales had become so scarce it was no longer profitable.

23. San Simeon Station

This station was started in 1865 by Captain Clark, who came here from San Diego. Captain Clark was sole owner and hired his men instead of working on shares. In 1886, Mr. C. H. Townsend (Bulletin U. S. Fish Commission), reports the station still in existence and still under Captain Clark. I am told by Mr. Silveria of Monterey that Captain Clark stayed at this station as long as he lived. The United States Fish Commission Bulletin for 1893 states that whaling at San Simeon was restricted to a few fishermen, and gives the results of the last four years. The old company at this date was apparently no longer in existence.

We have a fairly complete account of the whales taken at this station.

From Goode's "Fishery Industries" (Section II, p. 601):

1865—25 whales.
1866—23 whales.
1867—24 whales.
1868—25 whales.
1869—20 whales.
1870—23 whales.
1871—22 whales.
1872—21 whales.
1873—22 whales.
1874—16 whales.
1875—12 whales.
1876—7 whales.
1877—13 whales.
1878—3 whales.
1879—14 whales.
1880—13 whales.

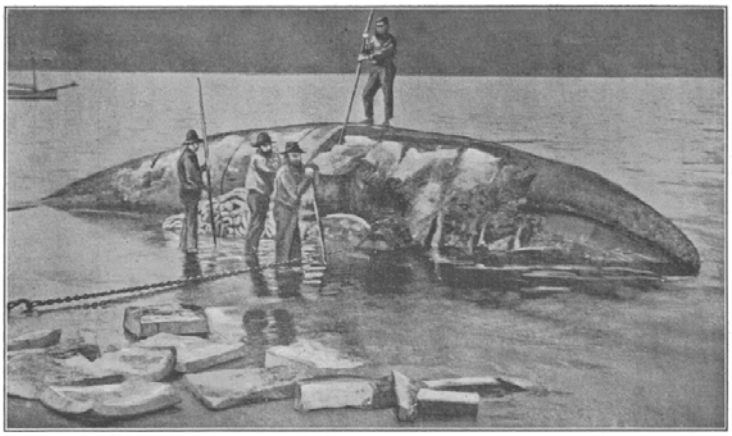

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FIG. 5. Flensing a whale at San Simeon Station. (From Report of U. S. Fish Commission for 1888.)

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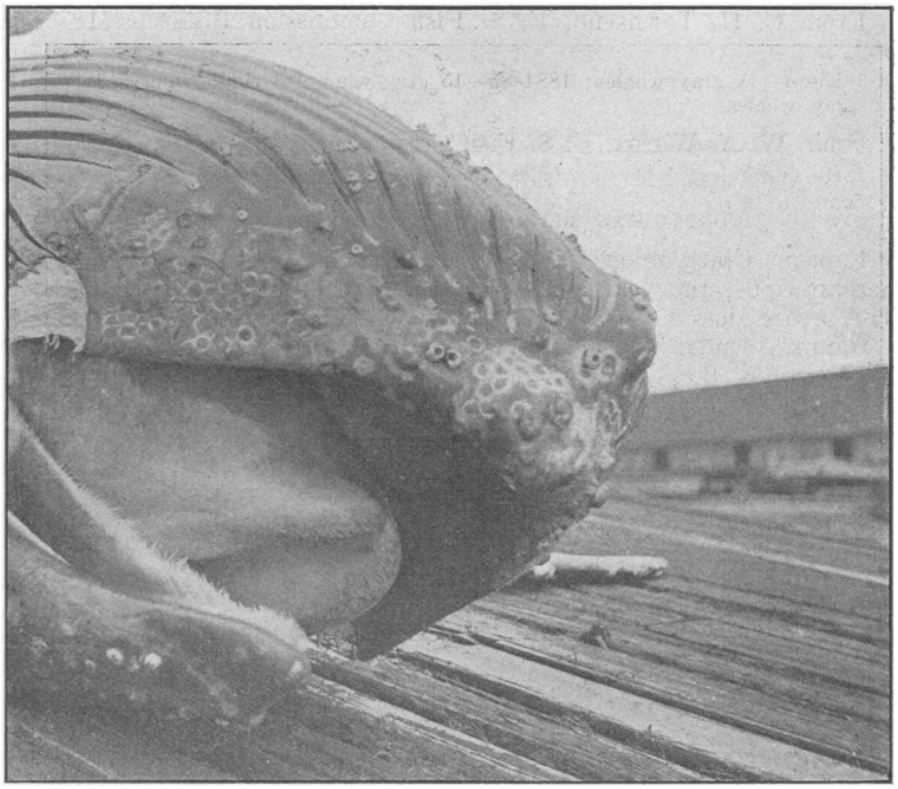

FIG. 6. Calf humpback whale, lying lower side up, showing tongue and barnacles.

FIG. 6. Calf humpback whale, lying lower side up, showing tongue and barnacles

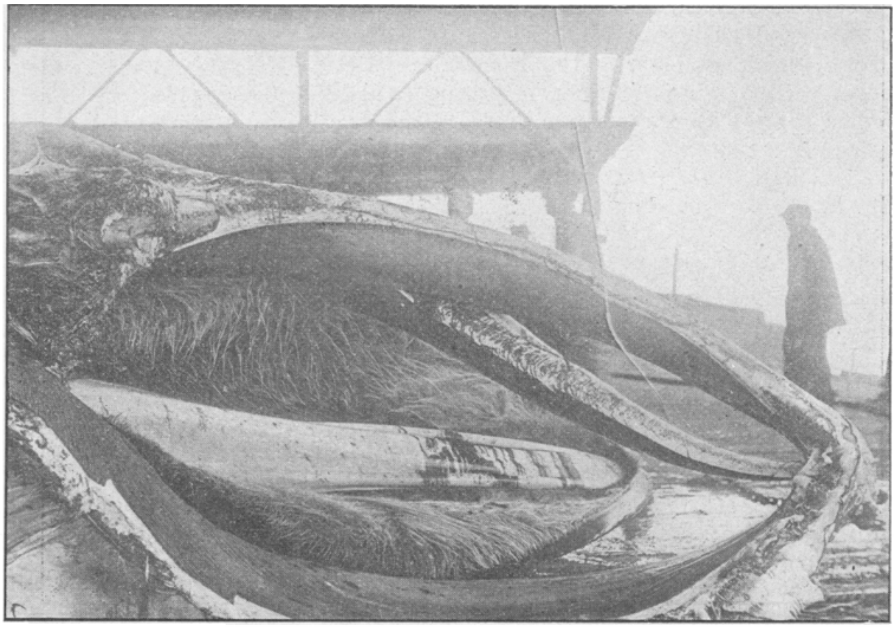

FIG. 7. Humpback whale. Flesh cut from lower jaw, showing inside of mouth with whalebone.

FIG. 7. Humpback whale. Flesh cut from lower jaw, showing inside of mouth with whalebone

From C. H. Townsend, U. S. Fish Commission Bulletin (1886, p. 350):
1883–84—11 gray whales; 1884–85—15 gray whales, 3 right whales; 1885–86—14 gray whales.
From W. A. Wilcox, U. S. Fish Commission Report (1893, p. 194):
1889—5 whales; 1890—7 whales; 1891—7 whales; 1892—5 whales.

24. Portuguese Bend Station (Near San Pedro)

Captain Clark upon leaving San Diego is reported to have come here in 1864, the year before he started the station at San Simeon. The record does not state whether he actually did any whaling here.

Captain Anderson operated a whaling station here from 1874 to 1877, and in these three years obtained 2166 barrels of oil Apparently it was abandoned at this time. Captain Anderson went to Pigeon Point station. The United States Fish Commission Report for 1888 states that no whales had been taken here since 1884, thus intimating that there may have been some up to that time.

25. Halfmoon Bay Station

This station was started about 1860 or 1861, and in a couple of years moved to Pigeon Point, after which another company was organized here. Scammon lists it as existing in 1874, and it was abandoned some time in the eighties. The station was situated on the point known as Pillar Point.

26. Pigeon Point Station

The station at Halfmoon Bay moved to Pigeon Point about 1862. It was situated on the point near the lighthouse. Captain J. F. Bennett, landing from a whaling voyage, took command and retained it for many years.

Goode's "Fishery Industries" supplies the information that Captain Anderson, upon leaving the Portuguese Bend station, came to Pigeon Point in 1877, but whether he brought his company with him or took over Captain Bennett's company is not stated. He only stayed two years, and then moved with the entire company to Cojo Viejo, near Point Conception.

After this Captain Perry commanded a station here until about 1895 when it was abandoned.[1]

Col. A. S. Evens, in "Sketches of the Golden State," 1873, describes Pigeon Point station, giving the results of the current year and the one before.

Mr. Noon, of Monterey, stated that the company that had its station at Macabees Beach, on Monterey Bay, later moved to Pigeon Point.

27. Cojo Viejo Station (near Point Conception)

Captain Anderson and company started this station April 25, 1879, coming here from Pigeon Point. The men owned the property and employed Captain Anderson for cash and commission. Just how long this station operated I have not been able to learn, but it was included

[1] The information not otherwise accredited of the Pigeon Point and Halfmoon Bay stations was supplied by Captain Bennett's son and other old inhabitants of Pescadero.

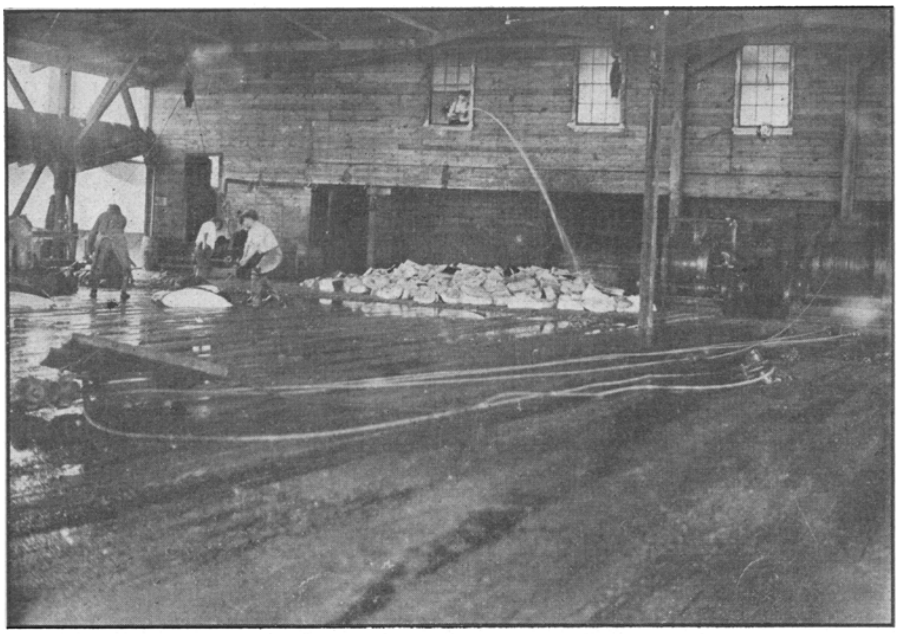

FIG. 8. Moss Landing Whaling Station, showing blubber cut into large pieces ready for mincing machine.

FIG. 8. Moss Landing Whaling Station, showing blubber cut into large pieces ready for mincing machine

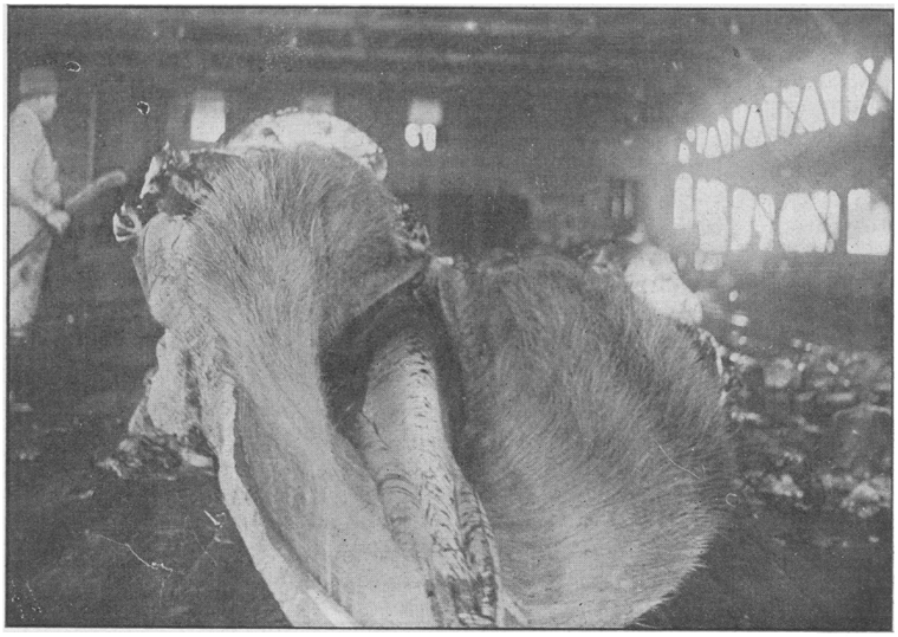

FIG. 9. Humpback whale. Lower jaw removed, showing whalebone in place.

FIG. 9. Humpback whale. Lower jaw removed, showing whalebone in place

in 1886 among the five stations listed by Townsend as the only ones remaining.

28. Goleta Station

This station was established about 1870 and suspended about 1880. During this time there were three different companies here, the first being composed of Jamaica negroes.

29. Dead Man's Island, San Pedro Bay

G. B. Goode's "Fishery Industries" states that "in 1866 a station existed for a short time on Dead Man's Island." A station existed here at least as early as 1861, for in Hayes' collection of manuscript notes and clippings (Los Angeles, Vol. V, Bancroft Library) a clipping from "News," December 20, 1861, says Captain Hart commanded a whaling station at Dead Man's Island at this date. The same volume of notes dated March 28, 1862, again mentions this station, and in Hayes' "Emigration Notes," in a manuscript note on whaling in San Diego Bay, 1860–61, Captain Johnson of one of the Ballast Point stations is mentioned as being "also interested in the company at Dead Man's Island." In the "History of Los Angeles County" (Thompson and West, 1880), it is stated that the company at Dead Man's Island took twenty-five whales for the season of 1862. The station probably existed until at least 1866, as listed by Goode.

30. Kinds of Whales Taken on the California Coast

The following whales are, or have been, taken by the shore whaling stations:

Sulphur-bottom or Blue-back Whale (Balaenoptera sulfureus).	1.
Finback Whale (Balaenoptera velifera).	2.
Sardine or Sei Whale (Balaenoptera borealis).	3.
Sharp-head Finner Whale (Balaenoptera davidsoni).	4.
Humpback Whale (Megaptera versabilis).	5.
California Gray Whale (Rachianectes glaucus).	6.
Right Whale (Balaena sieboldi).	7.
Sperm Whale (Physeter macrocephalus).	8.

In addition to the whales are large porpoises that sometimes go by the name of whales, which have been occasionally taken, but they are of too little importance to be considered in the whale fisheries. Among them are the killers, the bottle-nose, and the blackfish.

31. Sulphur-Bottom or Blue-Back Whale

This whale has been, and still is, occasionally taken on the coast. It is not only the largest animal in existence, but is probably the largest that ever has existed. It reaches a length of 95 to 100 feet. It has a longer head than the finback and its dorsal is smaller and placed farther back. It is bluish dark slate color above and yellowish white below. The color is peculiarly opaque giving the animal an artificial appearance. These bluish and yellowish colors are the cause for the common names, but it is said these colors are not always evident.

32. Finback Whale

This whale is black, or brownish black above, and white below without a tinge of yellow. Its dorsal fin is larger than in the sulphur-bottom,

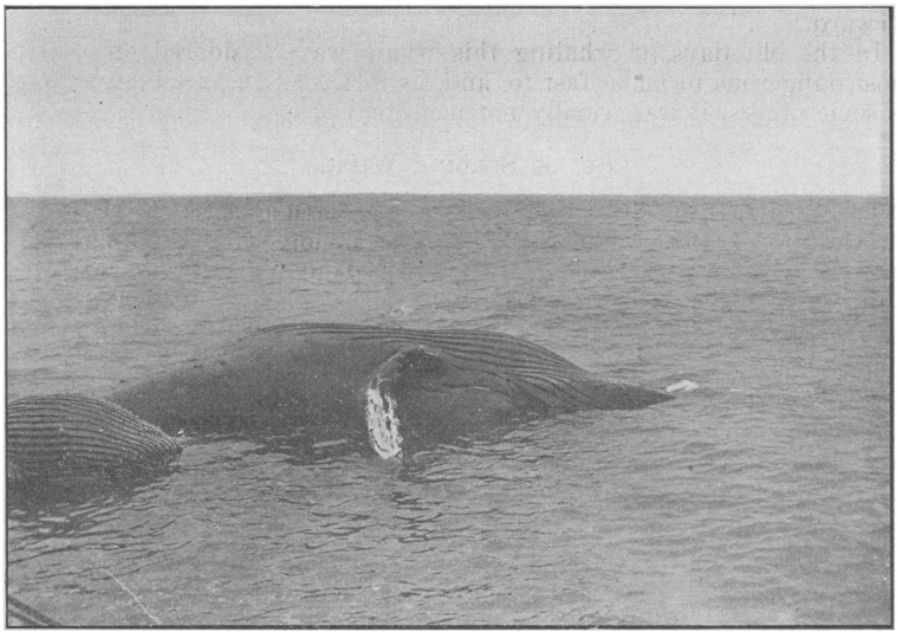

FIG. 10. Humpback cow and calf at wharf.

FIG. 10. Humpback cow and calf at wharf

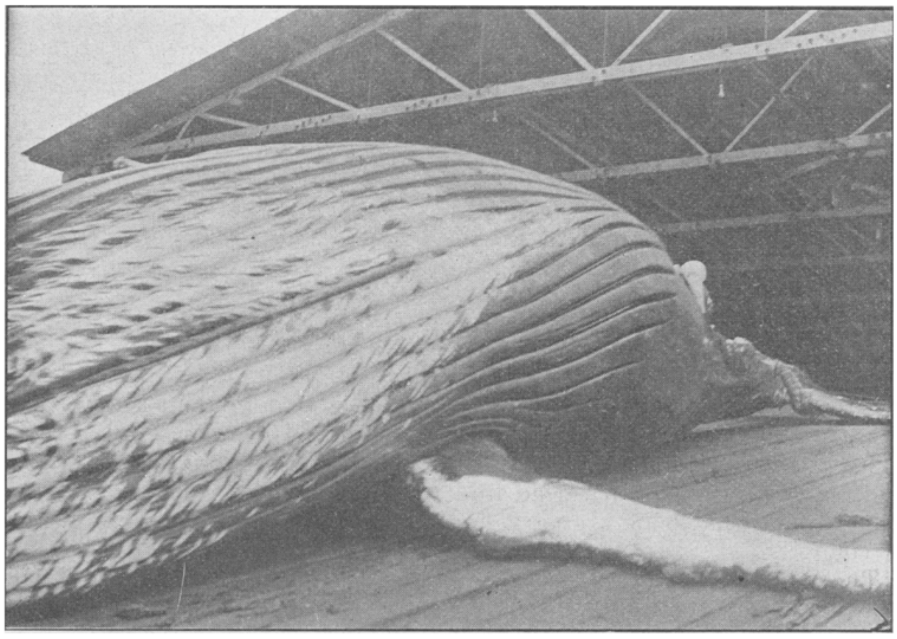

FIG. 11. Thirty-foot humpback whale, showing ridges on lower side, with characteristic white mottling.

FIG. 11. Thirty-foot humpback whale, showing ridges on lower side, with characteristic white mottling

and not so near the tail. It has a larger pectoral fin than in the sei whale or sharp-head finner and the dorsal fin is not so far forward.

In the old days of whaling this whale was considered one of the most dangerous to make fast to, and, as it was not so productive of oil as some others, it was usually not molested.

33. Sei or Sardine Whale

The sardine whale was unknown in the north Pacific until Dr. Roy C. Andrews in 1912 found it to be very common in Japan. The same author mentions its probable occurrence about Vancouver, and adds, "but up to the present time I have no entirely trustworthy records of their appearance there." Dr. Evermann in his unpublished manuscript

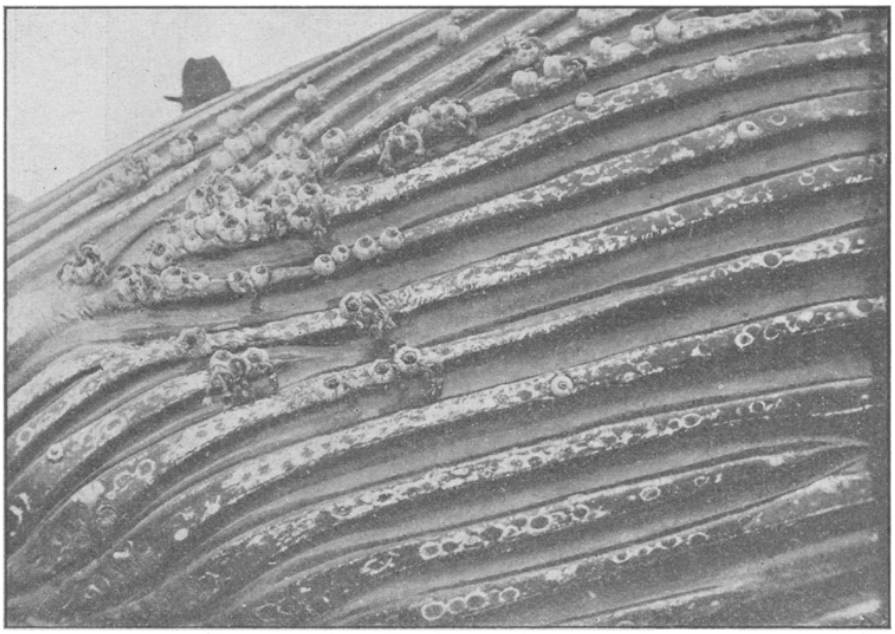

FIG. 12. Lower surface of humpback whale, showing barnacles. A cup-shaped barnacle, to many of which a goose-neck barnacle is attached.

FIG. 12. Lower surface of humpback whale, showing barnacles. A cup-shaped barnacle, to many of which a goose-neck barnacle is attached

has evidence that the sei whale has been taken in considerable abundance about Vancouver Island and once at the Moss Landing station at Monterey Bay. It is said to be less slender than the finback. Its pectoral fins are smaller and more pointed than in any related whale, and the dorsal fin is far forward, being in front of the anus, and resembling the sharp-head finner in this respect. The bristle-like ends of the whalebone are very fine "resembling silky wool and white in color."

The sardine whale reaches a length of about fifty feet, though Dr. Andrews has a record of a female that was pregnant when it was only twenty-five feet in length.

(Upper) FIG. 13. Inside of the flensing shed at Moss Landing. FIG. 14. The blubber as it is stripped from the whale.
(Lower) FIG. 15. Cutting up blubber. One man with a hook by which it is handled. The others with long knives on poles—the modern form of blubber spades. FIG. 16. Cutting up the flesh with blubber knife and hook.

(Upper) FIG. 13. Inside of the flensing shed at Moss Landing. FIG. 14. The blubber as it is stripped from the whale. (Lower) FIG. 15. Cutting up blubber. One man with a hook by which it is handled. The others with long knives on poles—the modern form of blubber spades. FIG. 16. Cutting up the flesh with blubber knife and hook

34. The Sharp-Head Finner Whale

A small whale described fifty years ago by Scammon. Though it was at that time apparently rather common, it has scarcely been noticed since, more than to be included by name in lists of Pacific whales. Scammon says, "In the Straits of San Juan de Fuca these whales were met with in numbers together, or singly, throughout the year." He also says that during twelve years observation he has traced them from the coast of Mexico to the Bering Sea. It has probably gone into whaling records as a small finback, or perhaps some of the Vancouver Island records of the sei whale should refer to Scammon's species. The sharp-head finner and the sei whale resemble each other in having the pectorals smaller and more pointed than in any other related species, and the dorsal fin much farther forward, or in front of the anus. Scammon's type was a gravid female only

FIG. 17. Pile of whale bones at the Moss Landing Station.

FIG. 17. Pile of whale bones at the Moss Landing Station

twenty-seven feet long. The sei whale is usually much the larger, though Dr. Andrews (Second Monograph of Pacific Cetacea) mentions a gravid sei female that was even smaller than this. Dr. Andrews did not see it and it was possibly this species.

Its head is sharp, its pectoral fins are small and slender ("inordinately small, pointed pectorals"—Scammon), and its dorsal fin is well forward as compared with other whales, except the sei, or placed in front of the anus. In Scammon's picture and descriptions a conspicuous white bar is across the base of the pectoral. If this is always present it should be an easy mark of identification.

In the above remarks I do not mean to imply that the sharp-head finner and the sei whale are the same, but to suggest the possibility

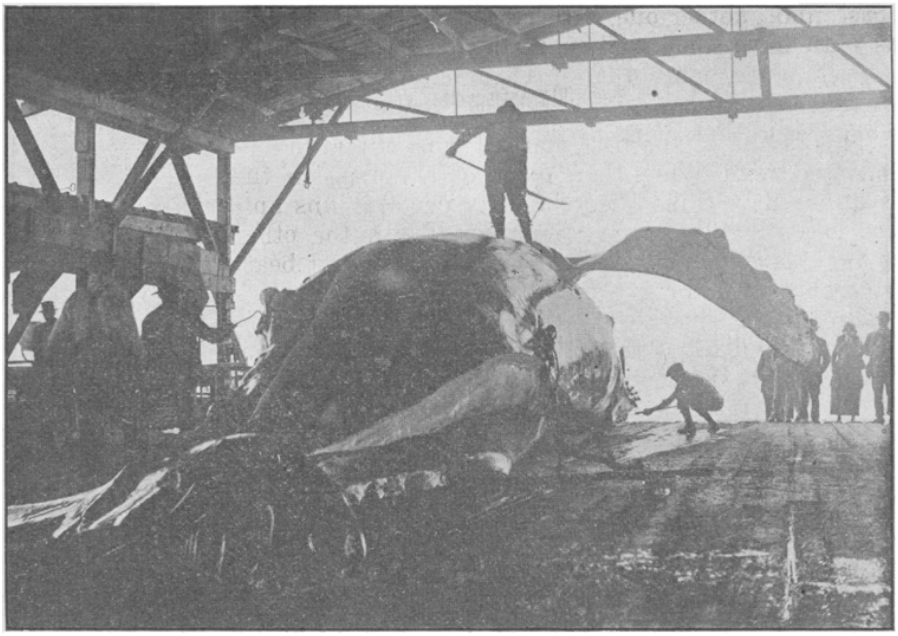

FIG. 18. "Cutting in" a humpback. Note the very large "flukes" and "flippers."

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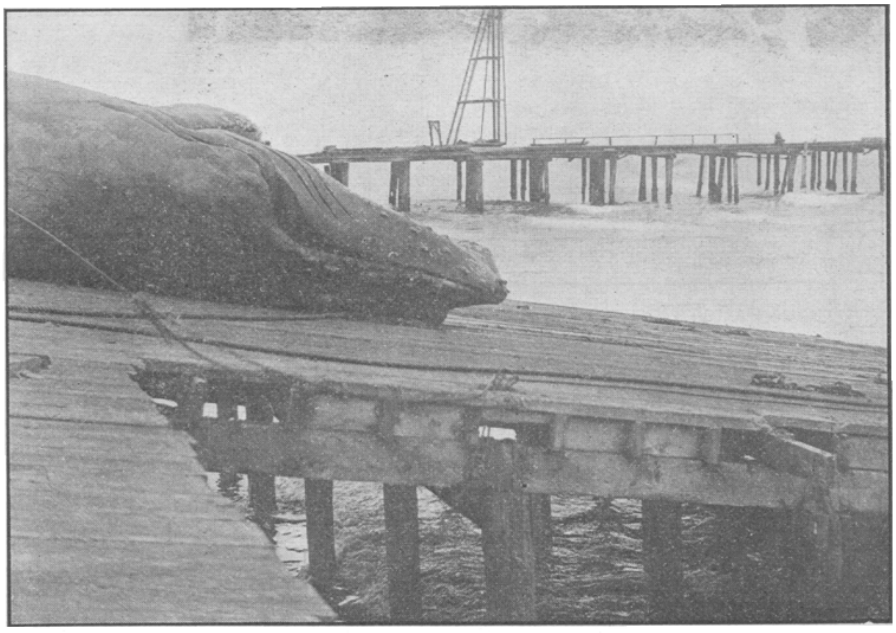

FIG. 19. Head of humpback whale on wharf. Showing the peculiar protuberances on the head of this species.

FIG. 19. Head of humpback whale on wharf. Showing the peculiar protuberances on the head of this species

that whalemen have confused them in their reports, for it is significant that one apparently fairly common whale should disappear from our coast, and another one, hitherto unknown should be reported, especially as both have some well marked characters in common.

35. Humpback Whale

This is one of the best marked whales and once seen it is not easily confused with others. In place of a dorsal fin there is a hump that is apparently a modified fin. Its pectoral fins and flukes, or tail fin, are exceptionally large. Compared with the other finback whales it is very short and thick. The top of its head bears low rounded protuberances four or five inches across. It is nearly always more or less covered with barnacles.

The humpback is the only whale on our coast that can still be called common, but it is not nearly so common as it was at one time.

36. California Gray Whale

This whale may be known from others on our coast by the few folds, or lengthwise grooves, on the lower side of the head. Instead of having many it has only two or sometimes three. No dorsal fin is present. It reaches a length of forty to forty-eight feet. At one time it was one of the commonest whales but it is now seldom taken. It is more common on the western side of the Pacific than on the eastern. Scammon estimated that up to the time of his writing (about 1874) not less than 95,600 barrels of oil had been taken by the shore stations, and of this 75,600 were obtained from the gray whale.

37. Right Whale

This is an easily known whale. It has no dorsal fin; no grooves below the throat; the body very short and thick, and the head making about a third of the entire length. In the modern whaling operations on the California coast this whale has not been taken, though it was occasionally taken by the old whaling stations. Formerly it was common in northern regions, and fairly so as far south as Oregon. Captain Clark stated (History of San Luis Obispo County) that during the seventeen years he had been connected with the San Simeon station he had seen nine right whales. It was the only whale taken on the California coast whose whalebone had much value.

38. Sperm Whale

The sperm whale is the best marked, or most easily known, of all of the whales. The front of the head ends bluntly, as if squarely cut off: the lower jaw is very slender with its two sides parallel along the front of it, and it is studded with teeth. All of the other whales (except the porpoises and grampuses) have no teeth in the adult state, and all of the others have whalebone suspended from the upper jaw.

The sperm whale was almost never taken by the old shore stations. One is reported by Townsend to have been taken at Carmel station in 1875 (Bulletin of U. S. Fish Commission, 1886). There was one taken by Mr. Michael Noon and party in Monterey. Bay, as recorded elsewhere,

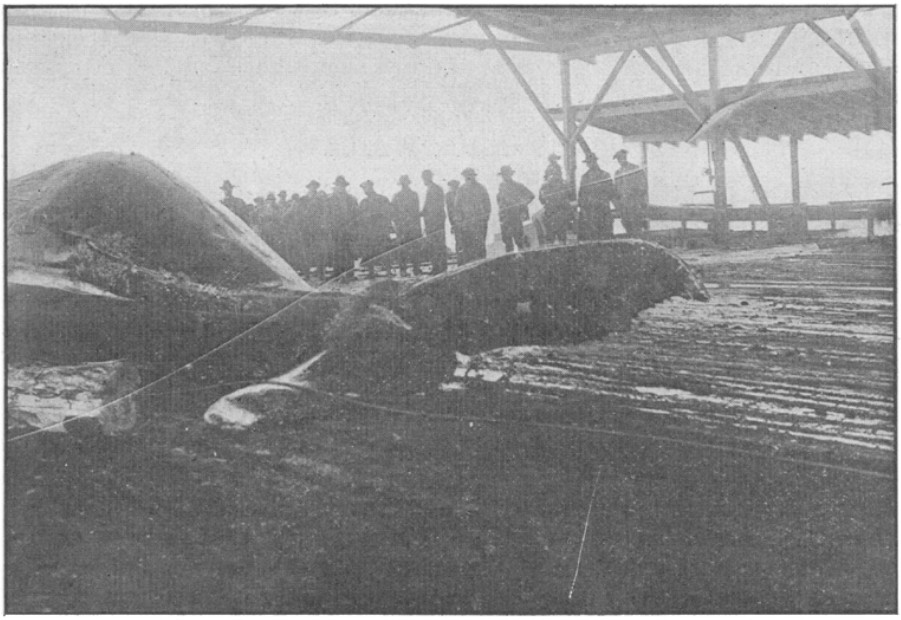

FIG. 20. A 40-foot male humpback whale in flensing shed, showing the very large flukes or tail fin of this form.

FIG. 20. A 40-foot male humpback whale in flensing shed, showing the very large flukes or tail fin of this form

and there have been four or five taken by the Moss Landing station.

39. Conservation of Whales

It is very obvious that the whales should be protected, and protection to be adequate can only be by international agreement. But before that is possible protection should be had on our own coast, and that soon. As the whales are nearly all taken on the high seas the form of protection will be somewhat complicated, but it can be arrived at by a

FIG. 21. A humpback (40-foot male) being drawn up the inclined plane into the flensing shed.

FIG. 21. A humpback (40-foot male) being drawn up the inclined plane into the flensing shed

consideration of bringing the whales to land, or of marketing the product.

The form of international protection would doubtless have to differ in detail in each country, depending upon abundance of each species of whale. For instance, gray whales on this coast should without question be completely protected for a number of years, while in Japan, where they are more abundant, partial protection might be sufficient for a time.

On our north Pacific coast every whale, but possibly the humpback, should have complete protection. As the humpback forms from 85 to 95 per cent of the catch such protection would entail little loss to the whaling companies. The humpback, whether or not it had partial protection, should be carefully watched and protection governed according to the stability of its abundance. The humpback, being one

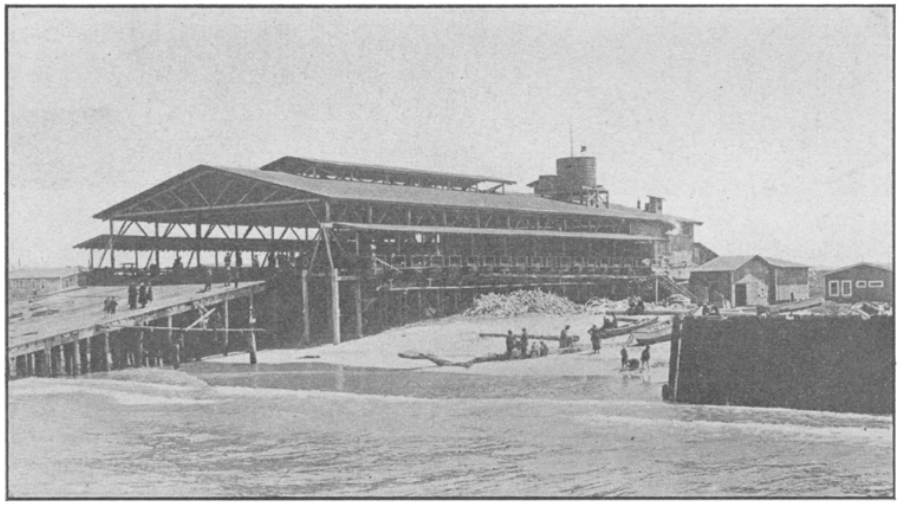

FIG. 22. The whaling station at Moss Landing. Note pile of bones at the side.

FIG. 22. The whaling station at Moss Landing. Note pile of bones at the side

of the best marked whales, is easily recognized by the whalemen, and there is no danger of others being mistaken for it. The young of all whales should be protected, together with the mother when the young is nursing. It should be made a serious offense for whalemen to bring in whales under a certain predetermined size, and female whales with their milk glands functioning.

An exception to protection should be the orca, or so-called killer whale—an animal that scarcely pays the whaling companies to consider. Dr. Hanna has recently written a paper (Science; May 12, 1922), showing that the fur seal industries suffer an estimated annual loss of a million dollars through the disappearance of about 50 per cent of the fur seal herd at sea, and that this loss is very probably due to the orca. The stomachs of two orcas were examined, and it was found that each of them contained fur seals valued at $2,000.

That, however, is not the only count against the orca, for it is a great enemy of the salmon, and it may be seen in numbers at the

mouths of salmon rivers during the salmon season destroying what doubtless amounts to tons of this most valuable food fish.

Dr. Roy C. Andrews, in his first Monograph of the Pacific Cetacea (Memoirs of American Museum, New Series, Vol. 1, Part V) has shown that next to man the greatest enemy of the gray whale is the orea.

Therefore, rather than protecting the orca, "a bounty," as suggested by Dr. Hanna, "might be offered, to make them commercially profitable for whalers to handle."

40.