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THE DISTRIBUTION OF CERTAIN WHALES AS SHOWN BY LOGBOOK RECORDS OF AMERICAN WHALESHIPS

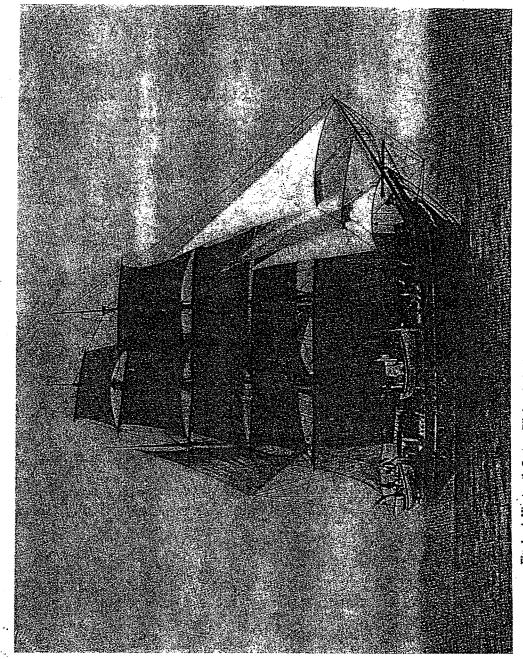
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of New Bedford, A Sperm Whaler of 805 1912, Taking 1,180 Whales. Photograph by Fig. 1. A Mineteenth Century Whaler, the Bark Morning Star, Tons, Built in 1858. She Made 10 Yoyages Between 1887 and 1 Tripp, New Bedford.

THE DISTRIBUTION OF CERTAIN WHALES AS SHOWN BY LOGBOOK RECORDS OF AMERICAN WHALESHIPS

By CHARLES HASKINS TOWNSEND, Sc.D.

Director of the New York Aquarium

(Figs. 1-2; Plates I-IV incl.)

While examining logbooks of old-time whaling vessels in the New Bedford Public Library a few years ago, it became apparent to the writer that they represented a supply of hitherto unused records available for much additional information on the distribution of whales.¹ The logbooks, hundreds in number, show clearly where the Nineteenth Century whaler made his catches of sperm, bowhead, right and humpback whales. It appeared that by platting on charts the positions where large numbers of whales had been taken, much could be learned of their distribution and something of their migrations.

Other collections of Nineteenth Century logbooks were found in the Whaling Museum of Old Dartmouth Historical Society in New Bedford and also at Nantucket, Salem, Stonington and other New England ports celebrated in the history of the whaling industry. Many privately-owned logbooks were also accessible. The compilation of records found in these logbooks was undertaken on behalf of the New York Zoological Society. Posi-

¹In the present document the writer has included parts of his earlier paper on the same subject, "Where the Nineteenth Century Whaler Made His Catch." (Bull N. Y. Zool. Soc., Vol. XXXIV, No. 6, Nov.-Dec., 1931).

²The collections of logbooks found in the libraries and other institutions of old whaling towns had been acquired both by gift and purchase. Those in the possession of individuals towns had been acquired both by gift and purchase. Those in the possession of individuals towns had been acquired as family heirlooms. A few logs were found in the collections of individuals interested in the history of American whaling.

Little difficulty was encountered in getting permission to copy records from logbooks privately owned. The simple explanation that the records showing where whales had actually been killed were for the making of new charts, was usually sufficient, and the whalerancestor's log would be laid before us. The present generation has apparently not lost interest in that now extinct phase of American life.

tions where 53,877 whales were taken are platted by latitude, longitude and month on the four charts presented herewith. Each month's captures being distinctively colored, the charts present evidence of considerable movement of whales according to season. They also show the positions and extent of "whaling grounds" and the seasons when they were visited.

A study of the two sperm whale charts shows that the catch of sperm whales by the Nineteenth Century whaler was made chiefly between the north and south latitudes of 40°. The known distribution of this species both northward and southward is somewhat wider.' It is in general an inhabitant of tropical and temperate seas, ranging into cold waters only in very limited numbers. A few stragglers are now being taken in Antarctic waters. The sperm whaler made voyages lasting from two to four years. He sailed all tropical and temperate seas and operated at all seasons, being continuously at sea except when driven to port for supplies or repairs. The "whaling grounds" as shown on the four accompanying charts are naturally very widely scattered, whales being found in cold, temperate and tropical seas both north and south. Some species are of limited distribution, while others migrate extensively according to season, breeding range or food supply.

We are here dealing with whaling operations as conducted when sailing vessels were employed and whales were killed with harpoons thrown by hand from open boats. The whales taken were the slower species that could be captured by such methods and that did not sink, or seldom sank, when killed. The Nineteenth Century whaler did not take the great blue whale, the finback and other kinds now being captured in great numbers by more effective equipment, and his logbooks contain little about them except that they were frequently seen. Such whales were too speedy for his small boats and usually sank when killed—a difficulty he could not surmount. Most of the species he was able to capture are now greatly reduced in numbers as a result of his long-continued activities. The bowhead whale is considered a rarity and does not figure in the annual catch today.

Twentieth Century whaling at present involves the killing of many thousands of whalebone whales a year, largely in Ant-

arctic waters. It is vastly more destructive, 42,874 whales having been taken during the season of 1930-31. The catch is made by large steam-powered hunting boats carrying small cannon and whales are towed to a limited number of stations on shore, or to large cruising factory steamers equipped to haul whales on board. Forty factory steamers and a smaller number of shore stations are sufficient for the enormous annual catch of today, whereas the old-time sailing fleet numbered hundreds of vessels. In 1846 there were 735 whaling vessels sailing under the flag of the United States. Not one of them remains afloat today. The sole survivor has been hauled ashore and is now a whaling museum. At its best period that great fleet probably captured less than 10,000 whales a year.

The plattings on the two sperm whale charts are divided—one for the April-September season, the other for the rest of the year. They show where 36,909 sperm whales were killed.

The charts also show a seasonal oscillation of most of the sperm whales between north and south latitudes, or at least toward or away from the Equator.

The sperm whale is an inhabitant of tropical and temperate seas—a straggler elsewhere. The north Atlantic, for instance, above latitude 35° N. would not be classed as "temperate" during the northern winter season by either navigators or meteorologists. There is much evidence that there is an extensive southward movement of sperm whales as the northern winter season comes on. A reverse movement is indicated for the winter season south of the Equator.

According to the many thousands of plattings on the charts, the April to September sperm whaling above latitude 25° N. in both Atlantic and Pacific waters was largely discontinued after that season. Whaling operations in this region of the Atlantic were continued to a limited extent during October and November and to a lesser degree in the north Pacific. While some whaling continued in January and February north of the Equator in both oceans, the most of it was conducted "along the line" or far to the south of it.

Our examinations of the records of more than 1,600 voyages indicate that regardless of all but the most adverse weather con-



Fig. 2. The positions of whaling grounds as affected by ocean currents were discussed at considerable length by Wilkes (1845) and Maury (1855). The present writer, after much study of recent oceanographic literature, abandons his attempt to set forth what is known of their relationship. A chart of ocean current is presented here in the hope that the task may be undertaken by someone more competent.

ditions, the hardy whalemen of the period visited "whaling grounds" in various latitudes according to season, as experience and whaling traditions had taught them. Where and when to hunt for whales was the vital topic in their conversation.

A whaling ground is occupied by whales so long as it is a feeding ground. It continues to be a feeding ground during the season when the animal life on which whales subsist is most abundant. Whalers of today are better informed on this point as a result of modern scientific investigations.

The sperm whale feeds chiefly on cephalopods and at greater depths than other whales. The bulk of the food of whalebone whales consists of small crustaceans and other plankton. Certain of the smaller fishes, when schooling, are taken by some of the whalebone whales.

The migrations of whales from one region to another are influenced by the search for food and the needs of reproduction. Some of the whalebone whales, feeding extensively in cold seas, seek temperate waters to bring forth their young. Their seasonal movements are also influenced by ocean currents to a degree not yet well understood.

The seasonal movements of sperm whales in the broad Pacific do not correspond very closely with those of the much narrower Atlantic. The great currents of the two oceans differ in direction and force and there are great climatic differences. The movements of sperm whales in the Indian Ocean are geographically limited at the north. Most of the catch there was made south of the Equator. They were seldom taken north of it except in the Autumn months.

It will be seen that in the north Atlantic (Sperm Whale Chart A) the platted areas above latitude 25° are with a few exceptions for the April-September period. The massed plattings in the Sargasso region are almost entirely those pertaining to the summer season of the northern hemisphere. Between north latitude 25° and the Equator, sperm whales were taken chiefly during the October-March season. Along the east coast of South America (Sperm Whale Chart B) the catches were largely made during the same season, or summer-time in the southern hemisphere. Along latitude 35° S., toward the Cape

of Good Hope, whaling data are also for the October-March season.

Off Japan and along latitude 30° N., the plattings are those of the April-September season. In the Pacific equatorial belt, catches for all months of the year are represented. Off the west coast of South America south of the Equator, the plattings pertain mostly to the summer season of the southern hemisphere. There was much whaling off Peru at this season. Off the west coast of South Africa, the extensive whaling during all months of the year probably may be attributed to the effect of the cool, northward-flowing Benguela Current. The massed areas off the west coast of northern South America, where whaling was also carried on at all seasons, may be similarly explained by the cool This current, deflected northward-flowing Humboldt Current. westward at the Equator, is responsible for the uniformly cool sea temperatures about the Galápagos Archipelago, where large numbers of sperm whales were taken during more than half a century at all seasons of the year.

NORTHERN RIGHT WHALE (Balaena sieboldii). CHART C.

In the Pacific, the area of distribution of the northern right whale lies almost entirely to the northward of 40° N. latitude. It narrowly overlaps sperm whale territory in the Sea of Japan. Other points of contact are negligible. Whaling for this species, off the Asiatic coast, extended from the Sea of Japan into the head of Okhotsk Sea, and along the east side of the Kamchatka peninsula, with considerable offshore hunting to the eastward of the Kurile Islands as far as longitude 170° East.

On the American side, right whaling was practised from southeastern Bering Sea to and throughout the Gulf of Alaska. Other right whale plattings in Bering Sea are few and do not extend above Bering Strait. There are only a few scattered offshore positions just below latitude 40° North. Practically all north Pacific right whaling was carried on during the summer season of the northern hemisphere. According to the logbook records at hand, 2,118 right whales were taken in the regions above described.

SOUTHERN RIGHT WHALE (Balaena australis). CHART C.

Comparison of the right whale chart with the two sperm whale charts shows that the narrow belt of distribution of the southern right whale in the Atlantic overlaps the very broad sperm whale belt only as far north as 30° south latitude, except for two small areas off South Africa. Its southern border of distribution extends, at a few points only, beyond that of the sperm whale.

In the Pacific Ocean, the chart devoted to positions where northern and southern right whales were taken, shows no plattings between latitudes 30° N. and 30° S. except for a few stragglers. The same may be said of the Atlantic, except for a restricted area adjacent to Woolwich Bay, South Africa, and eight mid-ocean stragglers. In the Indian Ocean, right whales were not taken north of 30° South latitude, except at Delagoa Bay about 25° South.

Therefore, so far as right whales are concerned, the limits described above (within 30° N. and 30° S.) represent a vacant tropical belt. There are no records in the logs of the 1,670 voyages examined, to indicate any mingling of northern and southern right whales.

In the south Pacific, right whaling was carried on between latitudes 30° and 53° South. An area of intensive right whaling lay to the eastward of northern New Zealand, its center being in latitude 35° South and longitude 172° East. To the southward of this area there was a rather wide belt of right whaling ground extending from southeastern New Zealand to about 142° west longitude. Below latitude 30° South there are, with few exceptions, no records showing the capture of whales of any species in the South Pacific between 140° West longitude and the sperm and right-whaling ground known as "Coast of Chile." The name "Middle Ground," as used by whalers, seems to apply to all of the area between New Zealand and eastern Australia, where both right and sperm whales were taken, the latter predominating. "Coast of New Holland" is a logbook term applied to all right and sperm whaling areas west and south of Australia.

In the south Atlantic, the right whale was taken along nearly the same lines of latitude as in the Pacific, with an addi-

tional coastwise strip extending as far as Cape Horn, including the Falkland Islands. Numerous captures of right whales were made in the vicinity of Woolwich Bay, Africa, between latitudes 20° and 24° South. In the Indian Ocean, right whales were taken within the same latitudinal limits as in the Atlantic and Pacific, but not north of Delagoa Bay or south of the "Desolation Ground" around Kerguelen Island. Thus the distribution of the southern right whale extends—within the above latitudes—from the meridian of 100° East, practically around the world, with a break only between longitudes 90° and 140° West. The chart shows where 6,262 southern right whales were taken.

As for the North Atlantic Right Whale (Eubalaena glacialis) and the Bowhead (Balaena mysticetus) in the Atlantic Arctic, the chart remains a blank. Only a few of the 1,670 whaling voyages considered here, extended above the sperm whale limit in the north Atlantic. Their records for bowhead and right whale are so few that they add nothing to what is already known of the distribution of these two species in this region. The positions recorded for bowhead were all in the vicinity of Southampton Island, Hudson Bay, and in Cumberland Sound, Baffin Island. These localities are lettered BOWHEAD on Chart C. The records are chiefly those of New Bedford and New London whalers. The bowhead fishery, beginning about 1860, was an important one. Were the records of British whaleships available for platting on charts, they would doubtless supply the information lacking.

Of the 53,879 positions on the charts showing where whales were taken, 36,910 relate to the sperm whale, which was the chief object of capture of American whalemen during the period covered by our records. While the few records for right whale and bowhead in the north Atlantic have been omitted from the chart, they have been included in the general tabulation of voyages and catches. Similarly, while the few records showing where gray whales were taken, were not platted on charts, they have been included in the tabulation of voyages.

In the section of this document devoted to records of captures, the list of whaleships is arranged alphabetically. The catch for each voyage is recorded by species. This yields information, hitherto lacking, on the average catch per voyage during the Nineteenth Century.

BOWHEAD WHALE (Balaena mysticetus). CHART D.

The whaling grounds for the bowhead in Bering Sea and adjacent waters, as indicated by the 5,114 plattings on chart D, are included within latitudes 53° to 73° North, and longitude 120° West to 135° East. In the Arctic, they extended from Wrangel Island, Siberia, to Point Barrow, Alaska, with a scattered distribution as far eastward as Amundsen Gulf, British America. In Arctic waters the catch was made chiefly during the months of August and September. In Bering Sea—mostly its western part—whaling continued from April to July, while in the Okhotsk Sea it was carried on throughout the northern summer season, but largely in August and September.

Scammon (1872) states that "no bowheads of the Okhotsk Sea have ever been seen passing out of the passages of the Kurile Islands, or from the Okhotsk to Bering Sea, or Arctic whales passing to the Okhotsk." It should be noted, however, that in these latitudes, whaling, both for the bowhead and the northern right whale, was carried on during the summer season. The whalers were not there in winter when ice conditions, both in the Bering and Okhotsk seas, should have forced the bowhead somewhat farther south. Although the logbook records at hand—covering a period of more than half a century of summer whaling—show no winter whaling, it is probable that the bowhead passed freely around the end of the peninsula of Kamchatka during the winter season.

HUMPBACK (Megaptera nodosa). CHART D.

It is of interest to note that the 2,883 humpbacks taken by the ships whose records are at hand were captured chiefly in five principal regions where sperm whales were taken in great numbers. These are the west coast of Africa (Equator to 12° S.), coasts of Colombia and Ecuador, around the Tonga Islands, in the Coral Sea northwest of New Caledonia and off northwest Australia. All of these areas are south of the Equator except in the case of those taken between the Equator and Panama Bay. Elsewhere the records of catches of humpbacks are few and widely scattered, except off Lower California, the West Indies and around Madagascar.

WHALING GROUNDS—NORTH ATLANTIC

There is frequent mention in the logs of sperm whaling "grounds," nine of which were in the North Atlantic. "Western Ground" (31° N. 50° W.) is in the great mid-ocean Sargasso region, its center being in the latitude of Bermuda, and nearer Bermuda than Madeira. Whaling was carried on here almost entirely during the season from April to September, inclusive. Extending northeastward, it nearly merges with the Western Islands Ground around the Azores. Parts of the Western Ground were known to some whalemen as "The Two Forties" and "The Two Thirty-sixes." "Southern Ground" (33°-40° N. 60°-75° W.) northwest of Bermuda, and "Charleston Ground" (28°-33° N. 67°-78° W.) southeast of Cape Hatteras, were, like the Western Ground, influenced by the Gulf Stream. Another name, "Hatteras Ground." was sometimes applied to the region off the Cape. In the "Southern Ground" whaling was seldom practised later than September, while on the "Charleston Ground" it often continued until January. The southwesterly part of this area was sometimes called "The Bahamas."

The "Commodore Morris Ground" (47°-51° N. 20°-25° W.), farthest north of the sperm whaling areas, and the southwest of the British Isles, was a summer field. Its moderate sea temperature was influenced by the North Atlantic Drift of the Gulf Stream. There are but few records of sperm whaling by American vessels on the Newfoundland Banks, an area usually referred to as "The Shoals." Sea temperatures here are lower than elsewhere in the same latitude because of the southward flowing Labrador Current. These grounds were fished mainly toward the end of the Eighteenth Century.

The name "Steen Ground" was occasionally applied to whaling carried on in summer west of Madeira. Between the Canary Islands and the coast of Africa, considerable whaling was done

in autumn. The whaling area about Cape Verde islands was known as the "San Antonio Ground," but sometimes called "The Twenty-Twenties." The name "Cornell Ground" (4° N. 22° W.) was applied to a winter sperm whaling area near the Equator, between the coast of Africa and the mid-ocean island of St. Paul. A mid-ocean whaling ground known as "The Twelve-Forty" (12° N. 40° W.), between the West Indies and Cape Verde islands, was visited from February to May, inclusive. This area is frequently mentioned in the logs.

Sperm whaling in the Gulf of Mexico and West Indies regions was practised to a very limited extent during the season from February to May only.

WHALING GROUNDS—SOUTH ATLANTIC

There was an important sperm whaling ground in the western south Atlantic called "Coast of Brazil" (unfortunately not lettered on our charts). It extended from the Equator to Uruguay and was occupied from October to March, with a little whaling during April.

South of it, off the mouth of the La Plata River, was the "Platte Ground" where sperm whales were taken. To the southward and near this ground were the so-called "Brazil Banks," chiefly a right whale area. "False Banks" lay to the eastward of Brazil Banks. No name appears for the sperm whaling ground between the latter and the Falkland Islands.

The Atlantic sperm whaling ground off the African coast from 3° to 23° S. was called "Coast of Africa," where hunting was done at all seasons. Our records show comparatively little whaling about St. Helena. "Pigeon Ground" (31°-39° S. 16°-28° W.) was chiefly a right whaling area. On "Tristan Ground" (Chart C) around Tristan da Cunha, both sperm and right whales were taken. From here, eastward to the Cape of Good Hope, there was long-continued hunting for both sperm and right whales, the latter greatly predominating in the catch. The whaling season for this south Atlantic region was chiefly.

³The plattings of this area were extended a little too far to the west and numerous records were omitted for lack of space.

during the months from October to January inclusive. At the "Woolwich Bay Ground" (20°-24° S.), sperm and right whales were taken from December to March inclusive.

WHALING GROUNDS-PACIFIC

Japan Ground (28°-35° N. 150°-179° E.), discovered about 1820, was a summer ground and fished to a limited extent in autumn. The "Coast of Japan" ground (34°-40° N. 142°-149° E.), east of northern Japan, afforded sperm whaling from May to July inclusive. During the same months and in about the same latitude there was much hunting for right whales to the westward in the Inland Sea of Japan. (See Chart C.)

The "Northwest Coast," mostly above 49° N. and extending from 130° to 170° W. (Chart C), was a right whaling ground from April to July inclusive. Our records do not show that sperm whales were taken there except as stragglers. Southeast of southern Japan there was a sperm whaling area about the Bonin Islands, where considerable hunting was done from May to

August.

North of the Hawaiian Islands sperm whaling was continued to a limited extent until January. This is also true of the region of Lower California down to the latitude of Central Mexico. On the grounds known as "Panama," "Galápagos," "Off Shore," "On the Line" and almost across the equatorial Pacific, sperm whales were taken in great numbers during all seasons of the year. The same is true of the grounds known as "Sulu Sea," "Celebes Sea," "Molucca Passage" and "Coast of New Holland" (western and southwestern Australia). On "Middle Ground," between Australia and New Zealand, sperm whaling was done chiefly during the season from December to March inclusive. Whaling on the "Vasquez" and "French Rock" grounds, north of New Zealand, was continued from December to May inclusive. Sperm whalers operated on the "Callao Ground" off Peru and on the "Coast of Chile Ground" from December to March, but there was some hunting during other months.

On all of the Pacific whaling grounds below latitude 30° S., the whalers took both sperm and right whales in about equal numbers, pursuing the latter in January as far as 50° S. The

hunting of whales was by no means limited to grounds supposed to be most favorable, as both sperm and southern right whales were frequently taken at points remote from them.

INDIAN OCEAN

Sperm whaling in the Indian Ocean was practiced at all seasons, extending from 18° N. to about 40° S., with occasional voyages as far south as Crozet and Kerguelen islands. The principal grounds were known as "Coast of Arabia," "Zanzibar," "Mahe Banks" and "Delagoa Bay." There was also sperm whaling in Mozambique Channel, east of Madagascar, south of Ceylon and from the Andaman Islands to Sumatra. Most of the sperm whaling in the Indian Ocean, however, was in its western half. Right whales as well as sperm whales were taken in the Indian Ocean between 30° and 40° S., the former greatly predominating. There was also much hunting of right whales on "Crozet" and "Kerguelen" (or "Desolation") grounds (42°-50° S.).

As the work of platting the positions where whales were killed proceeded, the areas called whaling grounds steadily expanded. Had the search for logbook records been continued far beyond the total of 1,665 voyages considered here, it is probable that in some regions the local "grounds" would have practically merged. The positions of captures fell so thickly upon the favorite grounds that they could not all be platted. Consequently from 10 to 20 per cent. of the available records were omitted from each densely platted area of the charts.

None of the whales in the records were caught by "modern methods," strictly speaking. The New Bedford tradition, into the Twentieth Century, was against anything like the Norwegian methods or those now used at shore stations. Some shoulder guns for shooting harpoons were tried out by the New Bedford whalemen in the 1850s and 1860s, but did not gain much popularity. The swivel gun, mounted on the bow of the oared whaleboat, was used occasionally, but that was in the earlier days of American whaling, rather than in the more recent.

The only improvements that originated early and remained permanent fixtures were the bomb-lance shoulder gun (which came in around 1850) and the darting-gun (combination handthrown harpoon with bomb attached, which came in in the 1870s). The introduction of these devices was not strictly revolutionary, as some ship-owners were too conservative to supply them. Even ships which had them would use them only for the larger whales, particularly the bowheads. Even in recent times the darting-gun was not used on small whales.

There are occasional records in the logbooks of exceptionally large catches, such as the Bark *Bertha*, 1905-1907, 138 whales, 3,100 bbl. sperm; Bark *Greyhound*, 1903-1906, 155 whales, 4,625 bbl. sperm.

These would show that the average sperm whale taken by the *Bertha* yielded 22½ barrels of oil, and by the *Greyhound*, 30 barrels. The figures showing the numbers of whales include not only the whales turned into oil, but also those killed and brought alongside but subsequently lost. At times a whale would be shared with another vessel. This would tend to increase the average number of barrels, if taken into consideration.

Acknowledgments: The work of compiling records from logbooks of whaleships was begun by the author and later entrusted to Mr. Arthur C. Watson, formerly connected with the Whaling Museum of New Bedford, and now with the Massachusetts Institute of Technology. While the great mass of the records should be credited to the energy of Mr. Watson, many were copied by the writer from logbooks found in New York and Washington.

The work of platting on charts the positions where whales were taken was done by Mr. R. W. Richmond of New York, a draughtsman, under the direction of the writer.

The tabulation showing names of vessels and catch of whales was arranged alphabetically by Mrs. Eleanor Roddan of the Aquarium staff.

Following are lists of institutions and individuals whose logbooks were kindly made available for examination.

LIST OF INSTITUTIONS WHOSE LOGBOOKS HAVE BEEN EXAMINED

Congressional Library, Washington, D. C. D. A. R., Edgartown, Mass.
Dukes County Historical Society, Edgartown, Mass.

Essex Institute, Salem, Mass. Harvard Business School, Boston, Mass. Mariners Savings Bank, New London, Conn. Massachusetts Institute of Technology, Cambridge, Mass.

Nantucket Historical Society, Nantucket, Mass.

New London County Historical Society, New London, Conn. Old Dartmouth Historical Society, New Bed-

ford, Mass. Peabody Museum, Salem, Mass. Public Library, Easthampton, L. L. Public Library, New Bedford, Mass. Public Library, New London, Conn. Public Library, Westerly, R. I. Provincetown Historical Society, Provincetown, Mass. Rhode Island Historical Society, Providence, Stonington Historical Society, Stonington, Conn

The Atheneum, Nantucket, Mass.
The Oldest House, Nantucket, Mass.
U. S. National Museum, Washington, D. C.

O. D. National Museum, Washington, D. C. Vineyard Haven, Mass.
Whalemen's Club, New Bedford, Mass.
Widener Library at Harvard University,
Cambridge, Mass.

LIST OF INDIVIDUALS WHOSE LOGBOOKS HAVE BEEN EXAMINED

Mr. Charles Baker, New Bedford, Mass. Mrs. Joshua Baker, South Dartmouth, Mass. Mr. Everett Barns, Westerly, R. I. Mr. W. W. Bennett, New Bedford, Mass. Captain H. H. Bodfish, Vineyard Haven, Mass.

Mr. Edward S. Brown, New Bedford, Mass. Miss Elizabeth Cannon, Vineyard Haven, Mass.

Mass.
Mr. G. L. Carlisle, Jr., Norfolk, Conn.
Mr. James E. Chadwick, Edgartown, Mass.
Mrs. W. O. Clark, New Bedford, Mass.
Mr. Orville Coffin, Nantucket, Mass.
Captain Geo. Comer, East Haddam, Conn.
Dr. Charles E. Congdon, Nantucket, Mass.
Mrs. Benjamin Cromwell, Vineyard Haven, Mass.

Mr. M. J. Curran, New Bedford, Mass. Mrs. R. W. deForest, Cold Spring Harbor, Mrs. R. L. I.

Mr. Austin Dunham, Provincetown, Mass. Mr. Charles Q. Eldredge, Old Mystic, Conn. Mrs. Tappan Fairchild, Cold Spring Harbor,

Colonel E. H. R. Green, South Dartmouth, Mass.
Mrs. M. H. Green, Southampton, I. I.
Mr. Wm. D. Halsey, Bridgehampton, L. L.
Mrs. James Hammond, Mattapoisett, Mass.
Mr. Francis R. Hart, Boston, Mass.
Mr. J. A. Herrick, Southampton, L. I.
Mr. Chester Howland, New Bedford, Mass.
Mr. Lawrence W. Jenkins, Salem, Mass.
Mrs. Charles Jones, New Bedford, Mass.
Miss Sylvia Knowles, New Bedford, Mass.
Miss C. Kranzler, New Bedford, Mass.
Mr. R. M. Kuechler, New Bedford, Mass.
Mr. R. M. Kuechler, New Bedford, Mass.
Mr. H. G. Leavitt, Lynn, Mass.

Mrs. Julius Mallory, Mystic, Conn.
Miss Catherine W. Mason, Stonington. Conn.
Mr. Paul C. Nicholson, Providence, R. I.
Mr. Frank Norton, Edgartown, Mass.
Miss Lucretia Norton. Edgartown Mass.
Mr. Francis Olejink, Sag Harbor, L. I.
Mrs. E. I. Omey, New Bedford, Mass.
Miss Christine Pease, Edgartown, Mass.
Misses Clara and Alice Perkins, Riverhead,

L. I.
Mr. William C. Philips, New Bedford, Mass.
Miss Carrie Potter, N. Dartmouth, Mass.
Mr. William H. Potter. New Bedford, Mass.
Mr. Fred Riesdorph, Riverhead, L. I.
Mr. Harold L. Rogers, Watermill, L. I.
Miss Mary H. Rogers, Southampton, L. I.
Misses Mary and Helen Seabury, New Bedford, Mass.
Mr. Marshall Shenard Edvartown Mass.
Mr. Marshall Shenard Edvartown Mass.

nord, Mass. Mr. Marshall Shepard, Edgartown. Mass. Mr. Arthur B. Sherman, New Bedford, Mass. Mr. Wilbur Sherman, New Bedford, Mass. Ship Model House, Provincetown, Mass. Captain William I. Shockley, New Bedford,

Mass.
Mr. Austin Strong, Nantucket, Mass.
Mr. Frank Swift, Jr., New Bedford, Mass.
Mr. Frederick H. Taber, New Bedford, Mass.
Mr. Charles H. Taylor, Boston, Mass.
Mr. W. H. Tripp, New Bedford, Mass.
Mr. F. C. Turner. New York, N. Y.
Mr. Alexander Vietor, Edgartown, Mass.
Dr. James Weeks, Stonington, Conn.
Mrs. Johnson Whiting, West Tisbury, Mass.
Dr. Charles Mallory Williams, Stonington,
Conn.

Mr. William Williams New York, N. Y. Mr. Herbert Wing, South Dartmouth, Mass.

SUMMARY OF LOGBOOK RECORDS PERTAINING TO CATCH OF WHALES

•	Number	of	Vessels	***************************************	744
	Number	of	Voyages		1,665

WHALES TAKEN

Sperm	36,908		
Bowhead	5,114		
Northern Right Whale, Pacific Ocean	2,118		
Southern Right Whale, Pacific Ocean	1,685		
Northern Right Whale, Atlantic Ocean	35		
Southern Right Whale, Atlantic Ocean			
Southern Right Whale, Indian Ocean	1,596		
Humpback	2,883		
California Gray	557		
Total Number of Whales	53 877		