

Drift Whales at Nantucket: The Kindness of Moshup.

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DRIFT WHALES AT NANTUCKET: THE KINDNESS OF MOSHUP

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Abstract

From before 1668 until at least 1728, Nantucket Indians engaged in a structured whaling industry, centered about drift or stranded whales. Deeds and regulations governing the ownership of drift whales show that the Indians owned rights to all the drift whales at Nantucket, and retained these rights as they sold land to the English. The records of stranded whales at Nantucket today suggest the importance of drift whales as a prehistoric resource. Indian drift whaling customs, deeds, or regulations, also existed at eastern Long Island, Rhode Island, Martha's Vineyard and Cape Cod Bay. Described by Crèvecoeur (1971: 107) as "fond of the sea and expert mariners," Indians of Nantucket and these nearby shores contributed to the growth of the along-shore and pelagic whaling industry of the United States. These ethnohistoric records support the hypothesis that right whales, both along-shore and stranded, in the winter and spring, were particularly abundant along the shores of southeastern New England and eastern Long Island during the colonial period.

Histories of the whale fishery usually start with a brief and inconclusive paragraph about whether or not Indians contributed to the beginnings of American whaling (Spence 1980:35; Stackpole 1953:16; Scammon 1968:204; Browne 1968:522). County records and historical reports of Nantucket and nearby shores provide details of the whaling activities of historic Indians. Supported by data on modern whale strandings at Nantucket, we find in the 17th century not just Indian use of an occasional stranded whale on an undefined coast, but specific shores of the east coast where the Indians owned rights to what were called drift whales, and enthusiastically took part in the subsequent colonial along-shore and pelagic whaling.

Historical Background

The settlement of New England coincided with the rise of the Dutch and English whale fishery in the North Atlantic, a fishery which had been dominated since the 13th century by the Biscayans or Basques (Browne 1968; Spence 1980). In 1609 Lescarbot reported along-shore whaling by Biscayans in the Gulf of St. Lawrence (True 1904:17), and in 1610 Champlain described Biscayans catching whales off the coast of New

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France by harpooning and lancing them from small boats (True 1904:17, 18).

John Smith in 1614 tried whaling near Monhegan Island, but found only the non-commercial finback (True 1904:21). However, the Pilgrims in 1620 off Provincetown saw what were probably right whales. "Great whales of the best kind for oil and bone, came close aboard our ship, and in fair weather swim and play about us" (Mourt's *Relation* 1802:204; 1832:36). The Dutch made several attempts to whale off New York and Delaware (True 1904:24-26). According to an English report of 1667, "The sea was rich in whales near Delaware Bay, but...they were to be found in greater numbers about the end of Long Island..." (Dow 1925:12). Whaling histories do not report whales before 1750 south of Delaware (True 1904; Starbuck 1964; Dow 1925).

Even with this abundance of whales close to shore, when the English colonists finally attempted to go whaling, no one was available who knew how to kill whales at sea efficiently. For example, Macy reported the tradition that a whale stayed in Nantucket harbor for three days, while the islanders "invented" and manufactured a harpoon with which to kill it (Macy 1835:28). In spite of many sporadic beginnings, the whaling industry of the east coast did not successfully get under way until after 1667 off eastern Long Island (Edwards and Rattray 1932:197).

Although Rosier in 1605 reported that some New England Indians hunted whales from canoes with harpoons and arrows (Rosier 1843:156), and a report of 1590 exists describing Florida Indians killing whales at sea (True 1904:27), any such Indian along-shore whaling appears to have ceased after 1605.

The propensity of whales to strand themselves (Leatherwood et al. 1976) was reinforced by Indians in canoes, especially in shallow embayments which provide natural traps. There are reports of trapping small whales by driving them ashore at Long Island (Ann Hartung, personal communication), at Great Point and the north shore of Nantucket, and in Cape Cod Bay (Crèvecoeur 1971:100; Drake 1876:343-345; Kittredge 1968). However, to summarize the historical records, although Indians made use of whales, we have no evidence that Indians harpooned whales at sea off the east coast of colonial America after 1605, until they became involved with English along-shore whaling.

Drift Whales

Drift Whales, the Gift of Moshup

Rather than harpooning whales at sea, historic Indians of the east coast were making use of the blubber, meat, and baleen of drift whales. By drift whales we mean dead whales which have stranded, drifted ashore, or washed up on shore, as well as live whales which have stranded themselves. As the Indians of Martha's Vineyard put it, Moshup, their legendary whaleman, "was kind to them, by sending whales &c. ashore to them to eat" (Basset 1792:140).

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We propose that at certain coasts, drift whales were so numerous that no need had arisen to go to sea to kill them. Dead or dying whales come ashore today on the beaches of Nantucket. Andrews has recorded stranded cetaceans on Nantucket for the past 33 years, and from his records we have constructed the table of Appendix 1 and Figure 1. In some cases, because of decomposition, the exact identification may be equivocal. However, the data show a substantial rate of cetacean stranding, about one whale a year.

Some whales, needless to say, are large, and their weight is difficult to obtain experimentally. However, given that a 30 meter whale may weigh 90 metric tons (Leatherwood et al. (1975) state that 136 metric tons has been reported), and that a 6 meter whale may weigh 2.6 metric tons (Katona et al. 1975), we can construct a rough curve for the relation between length and weight. We assume that the weight varies with the cube of the length below about 11 meters, and linearly with length above 18 meters at a slope of three metric tons per meter (one ton per foot). If we now assign lengths to the unmeasured cetaceans of Appendix 1 from average species lengths given by Katona et al. (1975), then we find a conservative estimate of the amount of blubber, bone and meat coming ashore at Nantucket per year is about 13 metric tons. That 13 metric tons of whale annually come ashore today, when many species of whales are less abundant than formerly, suggests that before the Nantucketers began to hunt whales at sea, stranded whales could have been a significant resource for the Indians. We are, however, unwilling to extrapolate modern data on species and dates of strandings to 300 years ago, without an understanding of whale strandings on a species by species basis.

Drift Whaling Recorded in Nantucket County Documents

Certain details of Nantucket Indian whaling can be obtained from the county records of the island between 1668 and 1728 (Appendix 2 and Figure 2). Although Worth (1902) reported many of these excerpts, Little has confirmed, corrected, and made additions to his transcriptions, from the original documents, where possible.

Nantucket's acknowledgement in 1673 that "all the whal fish or other drift fish belong to the Indian Sachims" (Appendix 2) was not unique to Nantucket. Indian ownership of drift whales at Martha's Vineyard and Long Island was also recognized, since the deeds for English purchase of land from the Indians at those islands often specifically included drift whale rights (see below).

However, there were no sales of drift whale rights to the English on Nantucket. The Indian deed of 1684 summarizing the lands sold to the English since their arrival in 1659, reserved the right to "what dead whales shall be cast on a shore that to belong to the Indians according to former custom" (Appendix 2). Two other Indian to English land deeds reserved drift whales to the Indians. Indian retention of all drift whale rights was unique to Nantucket.

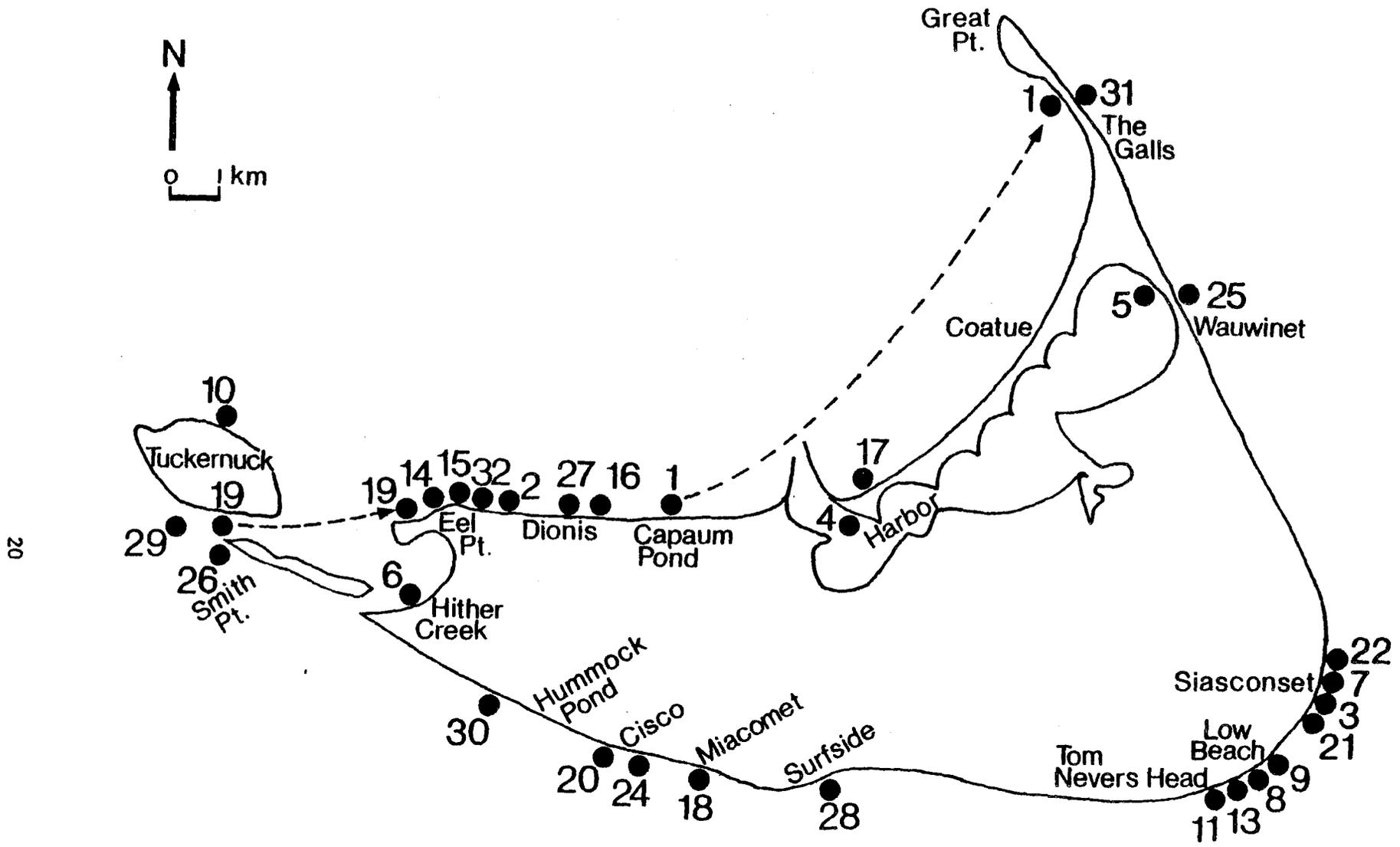


Fig. 1. Locations of whale strandings at Nantucket, 1947-1980. Each numbered dot identifies a stranded whale of Appendix 1, which gives the species, date and location. Base map after Chisholm et al. (1974).

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Now, this is all quite interesting, because, for the English, whales are royal fish and belong to the King of England, or his grantee (Edwards and Rattray 1932; Spence 1980). Indeed, between 1684 and 1687, the governor of New York tried to claim Nantucket's whales for the king (Starbuck 1924:74). Since nothing came of this claim, we doubt that the Nantucket Indians were ever made aware of it. Quietly, as far as the records show, but firmly, the Nantucket sachems retained sovereignty over drift whales, with a possessiveness which was in marked contrast to their lack of possessiveness of land.

Although the Nantucket English were involved at the time as owners of part of the land, as arbitrators of disputes, and possibly as purchasers of oil and baleen, they not only disclaimed rights in drift whales, but even awarded an Indian a judgment against an Englishman in a dispute over a whale.

A spermaceti whale, according to tradition (Macy 1835:32), was once found dead on the southwest shore of the island, and caused considerable excitement. Since ownership was disputed between the Indians, the proprietors and the crown, possibly the event took place in 1668 or before, and may have occasioned the 1668 agreement with the Indians about whales (Appendix 2).

Indian ownership of drift whales pre-empted the crown's rights, i.e., royal taxes, on drift whales at eastern Long Island (Edwards and Rattray 1932). Thus, whale oil from Indian drift whales may have been exported tax-free from eastern Long Island, and Nantucket, which belonged to New York until 1692. This consideration may have played a role in the agreement with the Indians about whales on Nantucket, and, if drift whales were adequate to sustain an industry, could account for the relatively late beginning of English along-shore whaling on Nantucket.

The importance of drift whales in the Nantucket economy resulted in documents which record the Indian political structure governing ownership of drift whale rights. Each of the four major sachems chose ten men for a committee to assign drift whale rights on Indian lands. In addition, whale rights on land sold to the English were assigned to sachems and other important Indians from all over the island. These rights were later inherited or transferred to appropriate successors by gift. In a rare measure of the reach of the sovereignty of Ussamequin (Massasoit), we find that the sachem at Mount Hope had once had some control over whale assignments on Nantucket (Appendix 2).

Geography of Drift Whaling

Several mechanisms seem to bring whales ashore. Right and sperm whales usually float when dead, whereas others, such as finbacks, will sink first and then refloat only if the water is sufficiently warm and shallow (W.E. Schevill, personal communication). Dead whales are carried ashore by currents. A shallow and sandy character of the coast appears related to live strandings. Whales come so close to shore in

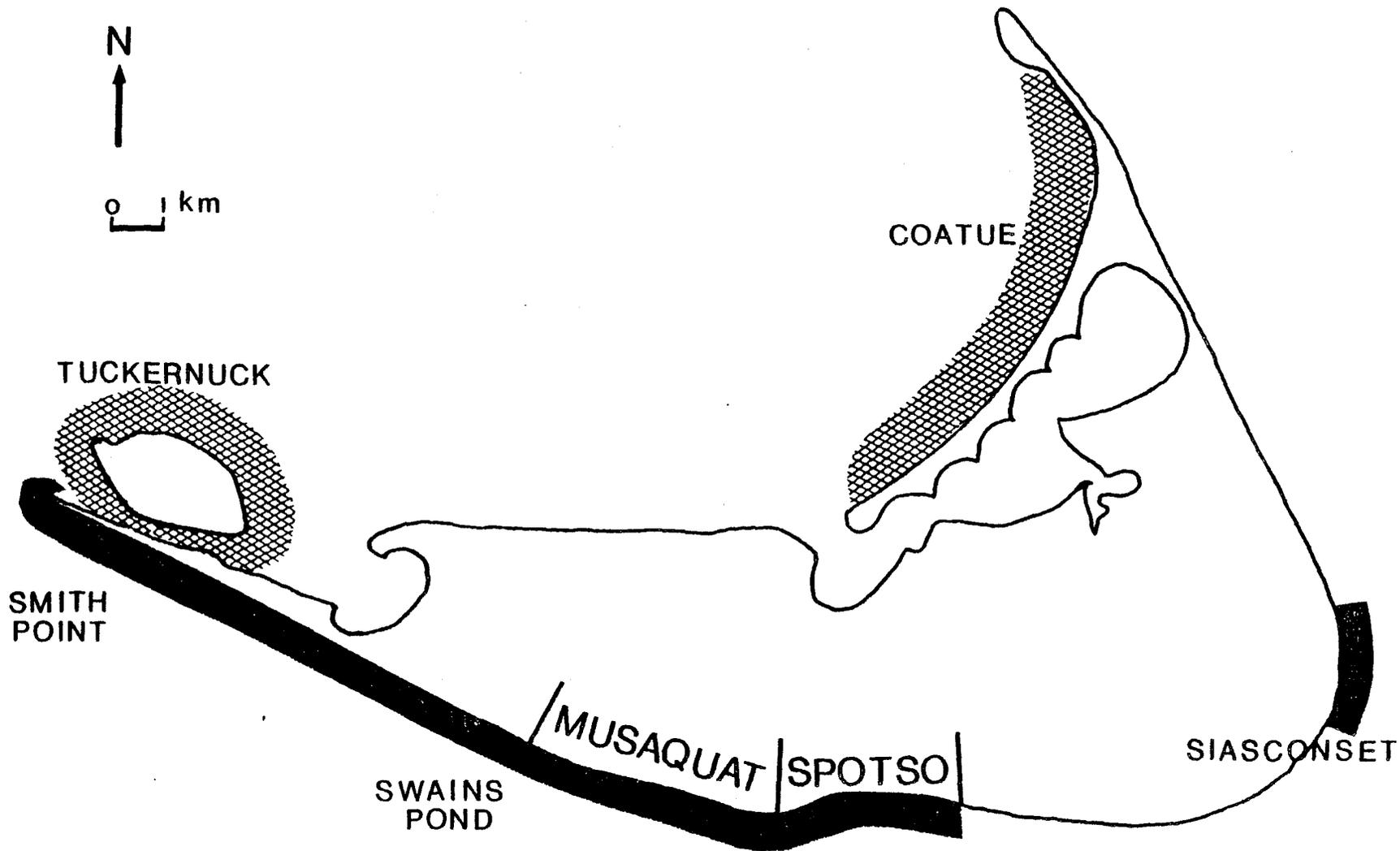


Fig. 2. Location of drift whale rights at Nantucket, 1668-1728, from Nantucket county records (Appendix 2). Drift whale right locations known precisely are shown by solid shading, and those not known precisely are shown by hatching. Base map, after Chisholm et al. (1974) and Holland (1794), shows seventeenth and eighteenth century extension of the southwest shore of Nantucket to the west of Tuckernuck.

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some places that both of the above as well as trapping can occur. None of these mechanisms is well understood.

Nantucket beaches with documented whale rights 300 years ago are shown in Figure 2. The geographic emphasis of drift whaling was on the southwest shore, with a small focus at Siasconset. Some Coatee whales may have been trapped blackfish. The differences between Figures 1 and 2, 300 years apart, are remarkably minor and reflect changes in shorelines and currents, especially the erosional changes at the west end of the island.

Both Figure 1 and Figure 2 suggest that drift whales are more likely to come ashore at certain beaches than at others. Although occasional drift whales come ashore all along the east coast (National Marine Fisheries Service, Gloucester), we would expect to find drift whaling customs, deeds and regulations only where whales stranded frequently. Where do we find such records?

In 1620, the Pilgrims saw Indians near Billingsgate cutting up a beached grampus 5 or 6 paces long. "They cut it into long rands or pieces, about an ell long and two handfull broad" (Mourt's *Relation* 1832:38). According to Bradford, small whales were commonly washed ashore in Cape Cod Bay after storms, a phenomenon which he attributed to the great flats of sand found there (Bradford 1898:102). In Rhode Island, Roger Williams saw whales "which in some places are often cast up; I have seene some of them, but not above sixtie feet long: the Natives cut them out in severall parcellis, and give and send farre and neere for an acceptable present, or dish" (Williams 1973:181). In Delaware, Indians used "whale fins" and "whale bone" for decorations (Goddard 1978:217) (both phrases meant baleen (Starbuck 1964:18,40)).

Indians often deeded drift whale rights to the English along with land at Martha's Vineyard (Banks 1911:432) and at Long Island (Schmitt 1972). More significant than deeded rights, however, are the whale rights reserved by Indians for their own use. Nantucket Indians reserved all their drift whale rights, and Martha's Vineyard Indians reserved a few (Banks 1911:432). Nauset Indians reserved "a part of the blubber of whales that should be driven ashore" (Pratt 1844:11), and Easthampton Indians reserved "the fynnes and tayles of all whales as shall be cast upp, and desire that they may be friendly dealt with in the other parte" (Edwards and Rattray 1932:195). Whale fins and tails were also reserved by an Indian at Woods Hole (Freeman 1869 2:427).

Drift whaling regulations, including deeded ownership, first appear in town records in 1644 at eastern Long Island (Edwards and Rattray 1932:204), and at Nauset (Pratt 1844:11), after 1653 at West Tisbury, Chilmark and Edgartown (Banks 1911, 1925), in 1654 at Plymouth (Starbuck 1924:350), in 1652 and 1661 at Sandwich, Barnstable, Yarmouth and Eastham on Cape Cod Bay (Freeman 1869 1:243; Allen 1916:148) and in 1668 at Nantucket (NCD 1:8).

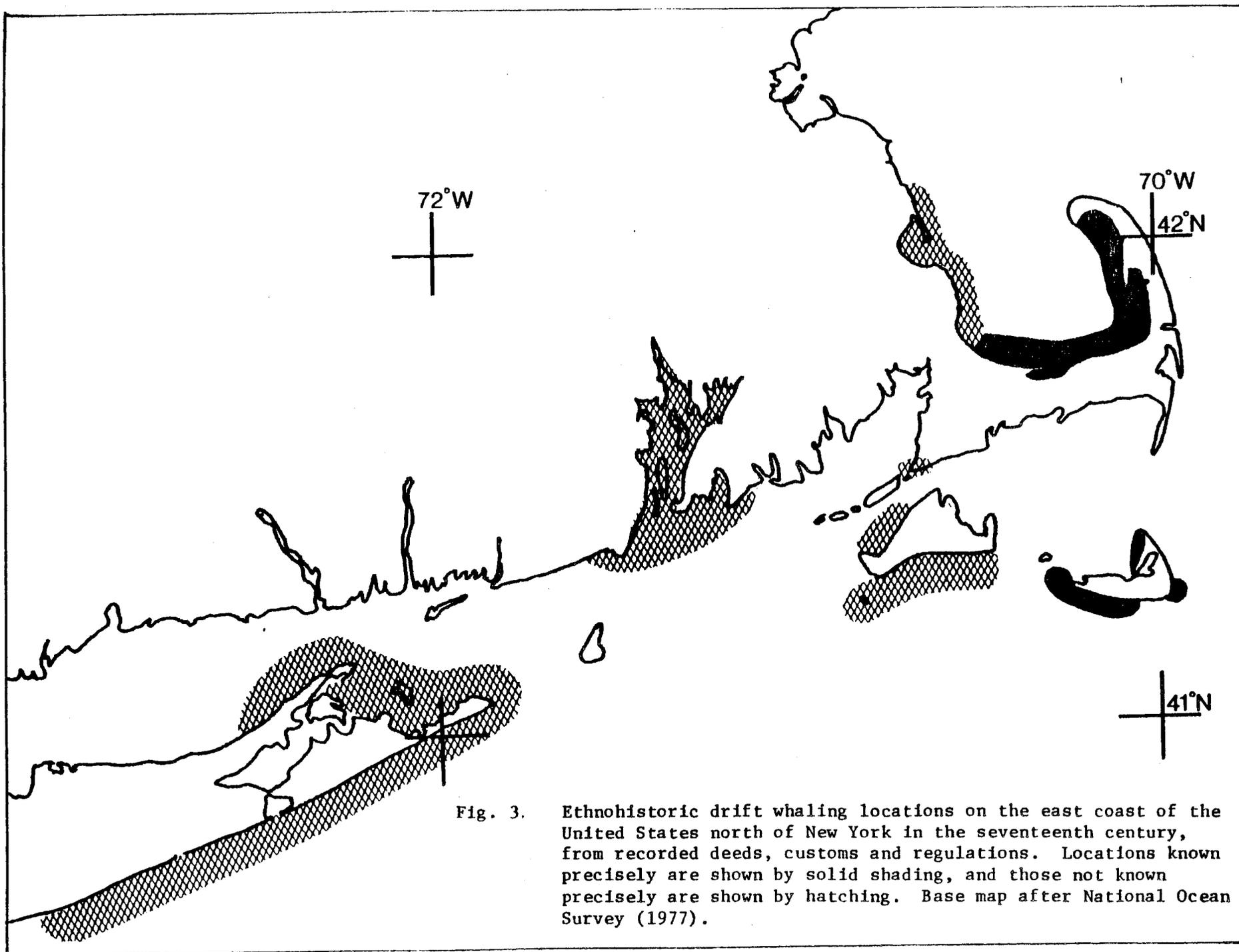


Fig. 3. Ethnohistoric drift whaling locations on the east coast of the United States north of New York in the seventeenth century, from recorded deeds, customs and regulations. Locations known precisely are shown by solid shading, and those not known precisely are shown by hatching. Base map after National Ocean Survey (1977).

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Certainly drift whaling regulations may still be buried in county courthouses. A search of county records along Delaware Bay or in Rhode Island might bear fruit. However, Indian drift whaling records have not been reported in the histories of whaling at Salem (Robotti 1950) or at Maine (Martin 1975), nor have any yet been found for eastern New Jersey or the coast south of Delaware (True 1904).

We show the geographical distribution of our documented ethnohistoric drift whaling sites in Figures 3 and 4A, and observe that these sites must have represented both unusually rich and reliable sources of stranded whales, and Indians who were unusually interested in whales.

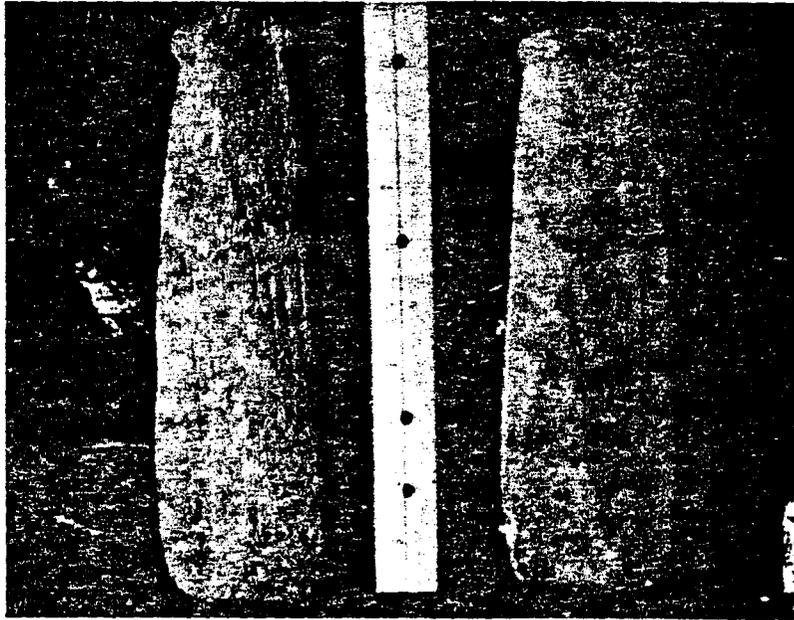
Prehistory of Whales at Nantucket

Near the drift whaling beaches of Figure 3, we could expect to find evidence of the interaction of men and whales for quite some time in the past.

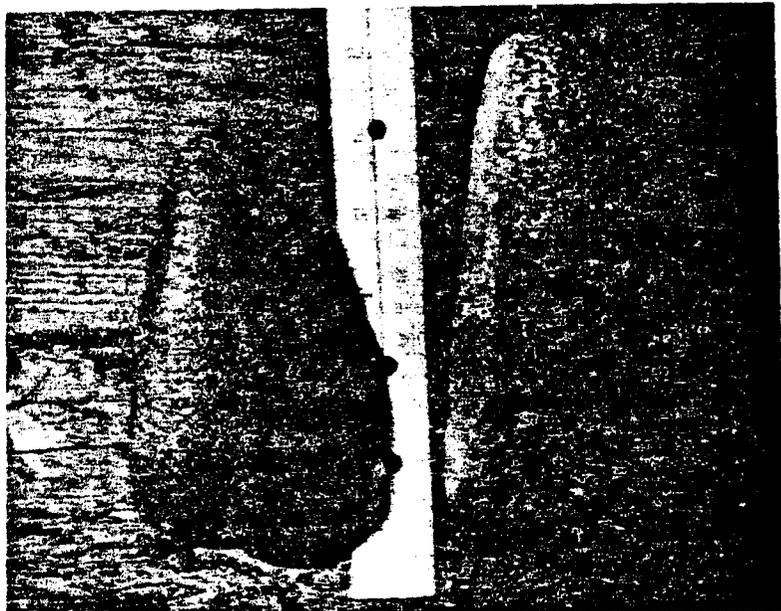
Brereton reported in 1602 the north side of an island, somewhere south of Cape Cod, with "many huge bones and ribbes of Whales" (Brereton 1602:6), and Shaler noted bones on Stone Horse Shoal (Shaler 1897). Although we may not subscribe to the mechanisms by which Indians explained their environment, they were good observers. Therefore, the bones of prehistoric (or fossil? (Allen 1916; Macy 1792b)) drift whales may have inspired the origin myth in which Moshup waded across Nantucket Sound and discovered Nantucket with a pile of bones on it (Alden 1797: 57). For that matter, place names which refer to bones or whale bones, such as Siasconset ("great bones place") and Wasque ("whalebone") (Huden 1962:232, 272), may, if we can trust the translations, also contribute to our knowledge of the stranding pattern of whales.

The archeological record on Nantucket shows remains of blackfish at the Squam Pond site, and humpback whale, identified by Glover M. Allen, at the Herrecator Swamp site (Bullen and Brooks 1947, 1949). The Ram Pasture I site, with a carbon-14 date on a piece of charcoal of 940 A.D. (M-1502), had blackfish remains and a gorget made from the vertebra of a small whale (Waters 1965; Stockley 1964, 1965). Kenneth Coffin, while digging a trench for a new house between Hither Creek and Eel Point, discovered two whalebone spades or adzes (Plate I), lying immediately above two stone celts (Plate II) (Fowler 1973), which may have been a flensing tool kit (Clark 1974:69, 71). Loosely associated with these finds were six triangular stone tools, a grooved hammerstone, and a copper knife, attributed to the Woodland Period (Paul C. Morris, personal communication). Four additional pieces of whale bone have been found on Nantucket during excavations (Nantucket Historical Association files).

These archeological finds show only the use of whales, not the means of hunting them. No prehistoric harpoon has been unambiguously identified on Nantucket (Little 1979). Elsewhere in New England, a small number of bone toggle harpoons have been found (Fowler 1972;



PL. I. Two whalebone adzes, or spades, found at Nantucket (Fowler 1973; collection of Paul C. Morris, Nantucket).



PL. II. Two stone celts (left: an axe; right: an adze) found at Nantucket with bone adzes (Plate I) (Fowler 1973; collection of Paul C. Morris, Nantucket).

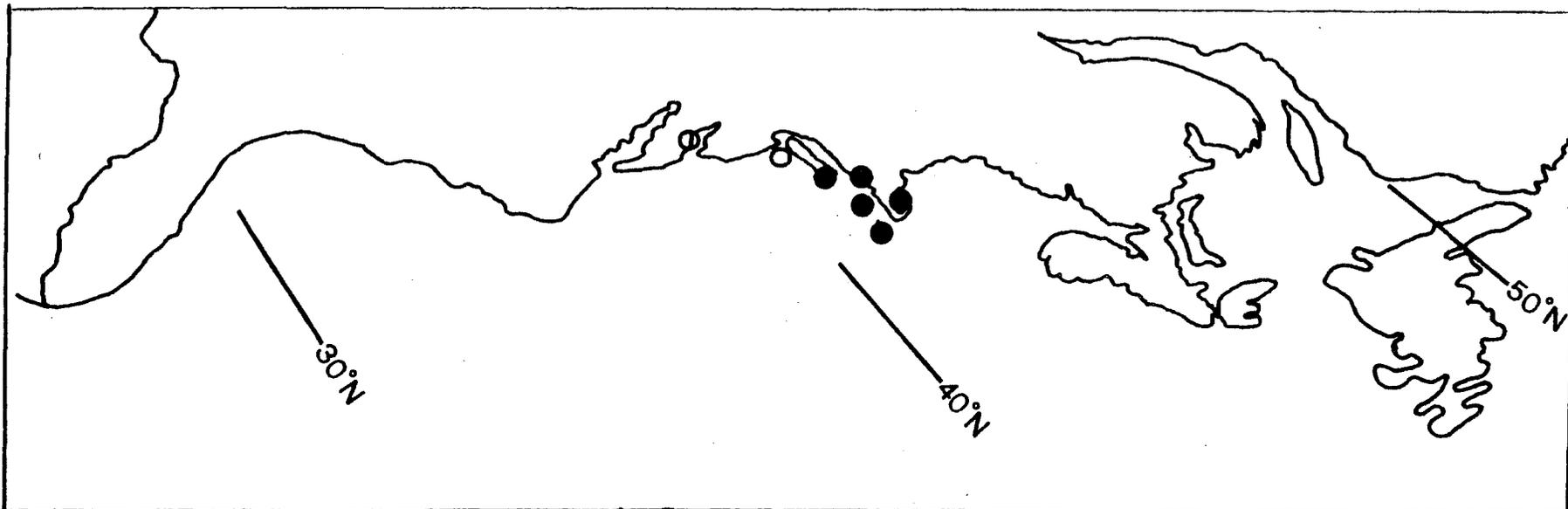


Fig. 4A. Ethnohistoric drift whaling locations on the east coast of the United States in the seventeenth century, based on recorded deeds, customs and regulations. Solid circles indicate locations which are well documented, and open circles indicate locations which are poorly documented. Base map after National Geographic Society (1960).

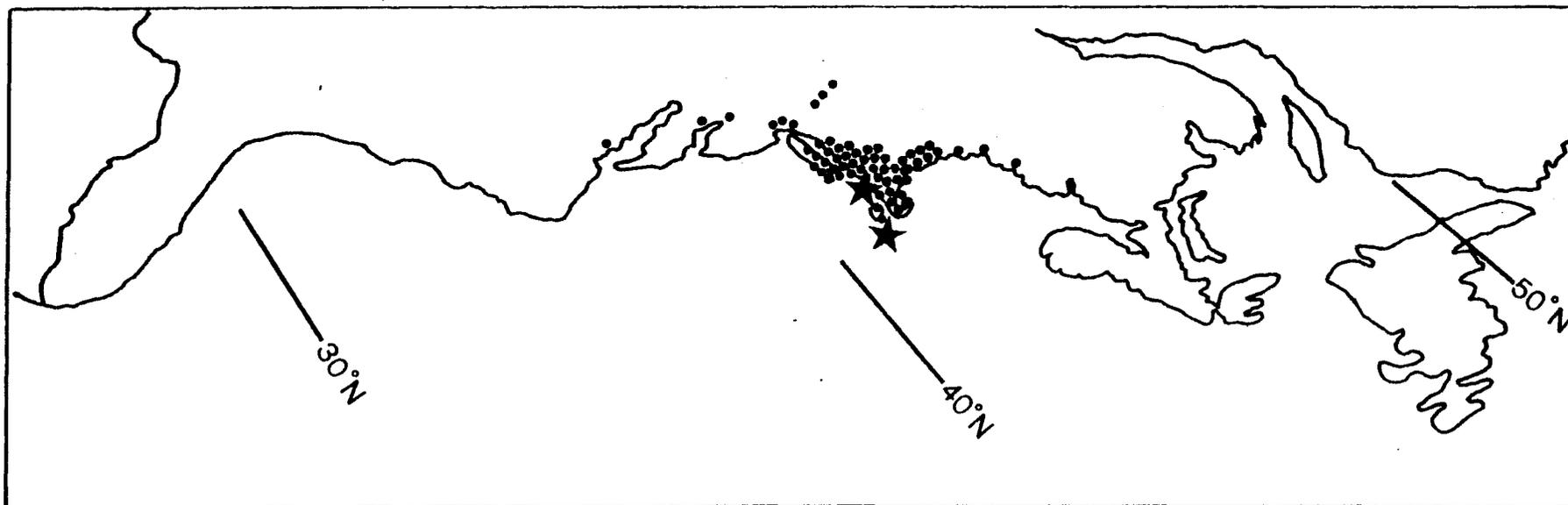


Fig. 4B. Along-shore and pelagic whaling ports of the United States, 1715 to 1839 (Starbuck 1964). The major ports, Nantucket and New Bedford, are shown by stars, and minor ports are shown by solid dots. Hudson River ports were established by pelagic whalers of Nan-

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Moffett 1959, 1969; Scothorne 1970). Without enough data to evaluate the meaning of these finds, we will simply note that historically in southern New England the Indians hunted sturgeon with harpoons (Williams 1973; Wood 1865), but whales were the gift of Moshup.

The Relationship of Drift Whaling to Along-shore and Pelagic Whaling

Recorded Indian drift whaling appears to have been a precursor of successful along-shore and pelagic whaling on the east coast of the United States. We propose that the basis for the distribution of all three historic whaling activities was the distribution of right whales near the east coast in colonial times.

Right whales, formerly more abundant than they are today, frequent temperate shores. In addition, the right whale has a placid disposition, is slow, rich in oil, and does not sink when killed. Because of these attributes, the right whale was the chief lure which drew whale fishermen to sea in boats. At Nantucket, "The whales hitherto caught near the shores were of the Right Species" (Macy 1835:31).

Along-shore whaling by the colonists began in 1667 off the south shore of eastern Long Island with James Loper, a Dutchman, as teacher (Edwards and Rattray 1932:197), after 1688 in Cape Cod Bay (Spence 1980:36) and after 1690 off the south shores of Nantucket and Martha's Vineyard (Macy 1792a; Banks 1911:433; Crèvecoeur 1971; Stackpole 1953; Allen 1916:168). Ichabod Paddock is credited as Nantucket's teacher (Macy 1792a). Attempts at along-shore whaling also occurred before 1730 at Rhode Island (Starbuck 1964:35), possibly at Connecticut (Allen 1916:170), at the Isles of Shoals, New Hampshire (Josselyn 1833:323), and at Delaware Bay (True 1904:76; Weiss et al. 1974).

Successful American whalers, like the Basques before them, had to go further and further to sea in sloops and subsequently in ships to find whales, because, by 1760, "the whales appeared generally to have deserted the coast" (Macy 1792a). By 1791 (Starbuck 1964:90), Nantucket whaleships had reached the Pacific Ocean in pursuit of whales. In spite of their late start compared to the Dutch and English, Nantucket and New Bedford in the early 19th century had become the world leaders in pelagic whaling.

The geographic distribution of all U.S. ports which took part in along-shore and pelagic whaling up to 1839, shown in Figure 4B, bears a remarkable similarity to the geographic distribution of recorded Indian drift whaling shown in Figure 4A. Furthermore, leading whaling ports of the 19th century were not the chief mercantile or fishing ports of Philadelphia, New York, Boston or Salem, but ports close to recorded Indian drift whaling, such as Nantucket, New Bedford and Sag Harbor (Starbuck 1964).

A close relationship between Indian drift whalers and leading east coast whaling ports is supported and clarified by historian claims that Indians of Long Island, Martha's Vineyard, Nantucket and Cape Cod

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played a key role in the growth of American whaling (Edwards and Rattray 1932; Macy 1835; Dow 1925:23; Allen 1916:158; Crèvecoeur 1971; see also Scammon 1968:204). For example:

[The Indians of Nantucket] are fond of the sea and expert mariners. They have learned from the Quakers the art of catching...the whale...and five of them always make part of the complement of men requisite to fit out a whaleboat (Crèvecoeur 1971:107).

The [Nantucket] Indians, ever manifesting a disposition for fishing of every kind, readily joined with the whites in this new pursuit....By their assistance, the whites were enabled to fit out and man a far greater number of boats than they could have done of themselves. Nearly every boat was manned in part, many almost entirely by natives; some of the most active of them were made steersmen, and some... head[ed] the boats;...they soon became experienced whalers, and capable of conducting any part of the business (Macy 1835:30).

Given a supply of right whales close to shore, and a labor pool of Indians with a maritime aptitude as well as an interest in drift whales, we can readily understand the successful European introduction of along-shore whaling to southeastern New England and eastern Long Island. The success of the pelagic whale fishery, according to Crèvecoeur (1971: 116), grew out of the success of the along-shore whale fishery.

Distribution of Right Whales

Moreover, we advance the hypotheses that before 1760 the in-shore waters of southeastern New England, eastern Long Island and possibly Delaware Bay, where along-shore and Indian drift whaling were recorded (Figure 4A), experienced more right whales than any other east coast area south of the Gulf of St. Lawrence, and that dead right whales may have contributed to the number of drift whales as well as to the Indian and English interest in drift whales on the same shores.

We support these hypotheses with the following arguments. First, right whales close to shore were fundamental to along-shore whaling, and, because of the commercial value of right whales, along-shore whaling would have been expected at any shore to which right whales resorted. Secondly, recorded Indian drift whaling very nearly coincided geographically with along-shore whaling. A possible explanation for this coincidence is that right whales would have tended to die and strand more often on shores which they frequented than on shores which they did not frequent. In addition, drift right whales, large and rich in oil and baleen, would have had a greater value to Indians and to the English than most other stranded whales. Therefore, the English would have been more likely to purchase Indian drift whales which included right whales than drift whales comprising chiefly, say, bottlenose dolphins or harbor porpoises. As supporting evidence for these arguments, Allen (1916:140)

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reported as "curious" the fact that he found no historical records of right whales from the coast of Maine, where no colonial along-shore whale fishery was established, in spite of attempts to do so (Martin 1975; True 1904:21), and where no recorded Indian drift whaling has been reported.

In modern times, even with the reduced number of right whales, and the possibility that their seasonal distribution has changed over the past 300 years, one right whale has stranded at the south shore of eastern Long Island in the spring of 1979 (Richard Whitaker, National Marine Fisheries Service, personal communication), one has stranded at the southwest shore of Nantucket in the spring of 1961 (Table 1), and one has stranded at Narragansett Bay (Leatherwood et al. 1976:56).

Although we know remarkably little about the habits of right whales (Scammon 1968; W.E. Schevill, personal communication), from historical records we do know that in the 17th century on the east coast of North America, along-shore whaling took place between 39° and 43° North in the winter and early spring (Allen 1916:130-142). According to Paul Dudley in 1725, right whales of New England "in the fall...go westward, and in the spring eastward" (Dudley 1809:80). Furthermore, right whale cows, calves, and yearlings were known and hunted off New England (Dudley 1809:78) and Long Island (Ross 1902:873). These facts are consistent with our knowledge of right whales from other parts of the world (Browne 1968:551-572). Right whales of the southern hemisphere are known to calve in bays at 40°-45° South in the winter (Scammon 1968:67; Payne 1976:329; Browne 1968:560), and right whales are known to have frequented the Bay of Biscay, at 43°-45° North, in the winter with calves (Clark 1974:65).

In summary, we conclude from the historic and ethnohistoric evidence that there may have been a good number of live right whales and their calves, as well as drift right whales, in the winter and early spring, on the coasts of southeastern New England, eastern Long Island, and possibly off Delaware Bay, in the 17th and early 18th centuries. These concentrations of right whales near specific shores would have accounted for the local Indian and English interest in drift whales, as well as for their success as along-shore whale hunters, and subsequently as pelagic whalers.

Conclusions

From the documentary records of Nantucket, as well as the histories of Long Island, Martha's Vineyard, Narragansett Bay, and Cape Cod Bay, the earliest historic Indian whaling on these shores focused on drift whales--a splendid example of men living in balance with their resources.

Modern records of whale strandings at Nantucket provide evidence that drift whales could have been a more substantial resource than historians and archeologists have heretofore considered.

Based on the similar geographic patterns of ethnohistoric drift

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whaling, and of the along-shore and pelagic whaling ports of the eastern United States, we have identified specific shores on the east coast along which, during the colonial period, the Indians were whalers, and right whales, both along-shore and stranded, must have been particularly abundant.

One of the outcomes of this study has been the recognition that local ethnohistoric data may illuminate the prehistoric distribution of right whales. In turn, knowledge of the seasonal distribution of right whales would surely contribute to an understanding of coastal archeology (Clark 1974:62).

Acknowledgements

We thank William E. Schevill for guidance to the literature of whalebone whales of New England, and Richard Whitaker, National Marine Fisheries Service, Gloucester, for access to recent records of whale strandings from Maine to North Carolina. We also thank Mrs. Louise Hussey of the Peter Foulger Museum, Nantucket, Mrs. Marcia Moss of the Concord Public Library, and the personnel of the Registry of Deeds, Nantucket, for their gracious assistance. Paul C. Morris kindly allowed photographs of the flensing tool kit in his collection. We thank Dena F. Dincauze, Barbara Luedtke and William E. Schevill for comments on an early version of this study, which was presented at the San Francisco meeting of the American Society for Ethnohistory, October 24, 1980.

APPENDIX 1

SPECIES, DATE, AND LOCATION OF WHALES STRANDED AT NANTUCKET SINCE 1947, WITH CITATIONS TO ANDREWS' RECORDS (JCA), THE NANTUCKET *INQUIRER* AND *MIRROR* (I & M), AND LAW ENFORCEMENT BRANCH, NATIONAL MARINE FISHERIES SERVICE, GLOUCESTER (NMFS).

1. *Physeter catodon* (Sperm Whale): September 1961; drifted from Capaum Pond to strand at Galls; length: 9.1 meters (JCA; I & M, 15 September 1961).
2. *Tursiops truncatus* (Bottlenose Dolphin): 23 May 1964; North Shore near Eel Point (JCA).
3. *Tursiops truncatus*: 1 July 1968; Siasconset Beach; length: 1.7 meters (I & M, 4 July 1968).
4. *Tursiops truncatus*: 19 July 1970; west Coatue Beach (JCA; I & M, 23 July 1970).
5. *Delphinus delphis* (Saddleback Dolphin): 9 October 1948; Head of Harbor (JCA).
6. *Delphinus delphis*: June 1970; Hither Creek (JCA).
7. *Delphinus delphis*: 12 March 1972; Siasconset Beach (JCA).

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8. *Delphinus delphis*: March 1972; Low Beach (JCA).
9. *Delphinus delphis*: February 1974; Low Beach (JCA).
10. *Delphinus delphis*: 16 October 1974; north shore of Tuckernuck; old male (JCA).
11. *Delphinus delphis*: 15 February 1976; Tom Nevers Head (JCA).
12. *Delphinus delphis*: 22 February 1978; Coatue Beach (NMFS).
13. *Orcinus orca* (Killer Whale): 21 March 1955; Tom Nevers Head (JCA).
14. *Globicephala melaena* (Blackfish): 22 May 1954; Eel Point; female (JCA; Starrett and Starrett 1955).
15. *Globicephala melaena*: 22 May 1954; Eel Point; calf (JCA; Starrett and Starrett 1955).
16. *Globicephala melaena*: September 1964; North Shore near Dionis (JCA).
17. *Globicephala melaena*: 20 June 1972; Coatue Point, outside harbor (JCA).
18. *Globicephala melaena*: 10 February 1973; Miacomet Beach (JCA).
19. *Grampus griseus* (Gray Grampus): June 1975; drifted from shoal south of Tuckernuck to strand at Eel Point (JCA).
20. *Phocoena phocoena* (Atlantic Harbor Porpoise): 22 April 1967; Cisco Beach; male (JCA).
21. *Phocoena phocoena*: January 1972; Siasconset Beach (JCA).
22. *Phocoena phocoena*: 4 February 1972; Siasconset Beach (JCA).
23. *Phocoena phocoena*: 13 March 1978; Nantucket (NMFS).
24. *Balaenoptera physalus* (Finback Whale): 12 July 1948; East Cisco; length: 19.8 meters (JCA; I & M, 14 July 1948).
25. *Balaenoptera physalus*: September 1949; Wauwinet (JCA).
26. *Balaenoptera physalus*: May 1954; Smith Point (JCA).
27. *Balaenoptera physalus*(?): 20 October 1967; Dionis Beach; length: 13.0 meters (exhibit with skeleton at Nantucket Whaling Museum), or 13.4 meters (I & M, 26 October 1967, 2 November 1967).
28. *Balaenoptera physalus*: August 1971; Surfside (JCA; I & M, 26 August 1971).

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29. *Balaenoptera physalus*: June 1975; shoal south of Tuckernuck (JCA; I & M, 5 June 1975, 17 June 1975).
30. *Eubalaena glacialis* (Right Whale): June 1961; west of Hummock Pond (JCA; I & M, 9 June 1961).
31. Unknown species: 5 June 1969; the Galls; length: 18.3 meters (I & M, 5 June 1969). Possibly the same whale off Tuckernuck (I & M, 22 May 1969).
32. "Dolphin": 4 September 1978; Eel Point (NMFS).

APPENDIX 2

- "July:13:1668" - "Edward Starbuck and Peter Foulger were empowered to make a bargain with the Indians concerning all whales that shall come on shore on the Island, on the Town's behalf" (NCD 1:8).
- "June 20, 1672" - "Ahkeiman laying claim to part of Tuckernuck his claim thereto is found no other but as he was a duke or principal man upon Nantucket; the Nantucket Sachems, together with his father, having sold Tuckernuck it is ordered that he shall have such a part or portion of land for his use at Nantucket of the present Sachems as will become one of such quality, and a portion of the whales" (Worth 1902:137).
- "5:4:1672" - Grants of land and privileges to James Loper and John Savage if they will "ingage to carrey on a design of whale catching," and "follow his trade of a cooper," respectively (NCD 1:30). (Loper did not come to Nantucket (Edwards and Rattray 1932)).
- "July.19.1673" - "The Court do order that the Rack or drift whales in that bounds of the bech upon the playnes from the Pond of Richard Swayn to Smyth Poynt shal be Divided into Eight shares - Washaman, Womhommin, Masaaquat, Wapskowit, Wanaquin, Kanpakanit, Wequakesoo, Obadiah" (NCD 2(b):2).
- "July:21:73" - "...all the whal fish or other Drift fish belong to the Indian sachims" (NCD 2(b):4).
- "March 29th 1676" - "At a Court held at Sherbourn it was Concluded that Washaman is to have the head of the Drift whale for his share, and Desyer is to have halfe, along with him, -And when Washaman is heer at this Yland, then he is to go master of the share, but when he is absent then Desyer is to go master of the share" (NCD 2(b):2).
- "June 27th, 1676" - "Mr Harry complayns against Spotsoo and Masaaqua for taking away or Disposing of his share of whale without his order" (NCD 2(b):8).
- "June 27th-1676" - "It is ordered that no Rack whale that com ashore in

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any Sachims bounds, shal be Cut up until al the Masters of the shares that belong to that whale Do Com together, upon the penalty of Twenty shillings fine, to any that shal cut up and despose of any part Contrary to the order aforesayd, and also if any master be of the Yland and leave no man to Act for him, he is to loose his share of whale for that time" (NCD 2(b):8).

"June 5 1677" - Nickanoose gave land rights to his two brothers, "and if the whale shall happen to come shore, that whale to be theirs also..." (MVD 1:38).

"June 5, 1677" - "Wakieaman is ordered to have such a part of whale out of Moosoquits whale as he can make appear that he used take by Ussamequi(a)s order while sd whale was in the possession of Waquakesoo ...Wequash shall have such a part of whale on the Nantucket land as did belong to his ancestors in so much that it appeareth that he obtained right thereof from the Sachems. Ordered that George Nanahumoo, Mahtakegin and Obadiah with their Companies shall have the whale from Goodman Swains pond to Smiths point according to their former custom and so to be divided" (Copy) (Mass. Sup. Ct. Jud. #92741).

"June 5, 1677" - In a division of land between Spotso and Moosoquet, "...the beach and what whales come ashore shall belong to him on whose right it falleth" (Worth 1902:138).

"24:4:78" - "At a court of Sessions held in the Town of Sherburne the 24:4:78 it was ordered by the Court that Waquakeso, Nicanoose, Spotso and Musaquat shall have full power to choose each sachem ten men as a comit(ee) for the finding out the partickcular Rights in whalle of all men and having so don then this Comitty to give and account to oe Court and from thence it shall transmitted to the Generall Court for Confirmation and If in cause any partickcular men should be wrounged by this Comitee the have thare liberty by petition to the General Court where the may be herd if it be done before Confirmation" (NCD 2(b):13).

"29th-12th-79" - In Musaquat's complaint against Eleazer Folger for "(?) or taking away his whale," the verdict of the court was a fine for the defendant and cost of court for the plaintiff. The plaintiff appealed to the General Court (NCD 2(b):24).

"March 6, 1681" - The Coffins "desclaim any rights or interest in any whale by virtue of the land on Tuckernuck but do make over any Right that may belong unto them unto Ackeamoug and Jacob, sons of Pattocohnet...including liberty of saveing of their whale that may come on shore on that island..." (NCD 2:38).

"16th of Agust 1681" - "Jepta complayneth that Nickanoose and Wawinet did hinder him of his share of whale at Coatue that he formerly enjoyed. The Court orders that Jepta shall have and Injoy his share thare" (NCD 2(b):29).

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- 1684 - Summary of Indian lands sold to the English, "except what dead whales shall be cast on a shore that to belong to the Indians according to former custom" (NCD 3:73).
- 1691 - English purchase of Siasconset from sachem Jeptha, "except drift whales" (NCD 3:51).
- 1701 - English purchase of land previously belonging to Musaquat (Figure 2) from sachem Henry Brittain; "memorandum, the drift whale is not hearby sold" (NCD 3:23).
- 1712 - Cachahuman and Mooney to Sowacha, "all the head of Drift whales that may be stranded" or "come ashore any where nigh Tuckanucket," which Cachahuman's father, Scotsbonnet, had possessed in partnership with Pattacohonet. Upon the death of Pattacohonet, his half right had passed "successively" to "Jacob pattacohonets son," and upon his death to "Mooney now Called Pattacohonet" (NCD 3:62).
- 1712 - Paunes gave half "the head of all drift whales that from time to time and at all times should come ashore or be Stranded within the Sachemship or Jurisdiction of Musacut, late Sachem...", to the sons-in-law of his late partner, Johnboy (NCD 3:68).
- 1728 - Matakekin sold to Koskuhtukquaeinin his rights in "whale" ("pootop") (NCD 4:62).

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