Oil and Bone: Whale Consumption in the Lives of Plymouth Colonists

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Whales have always been big in New England. They were big and plentiful off of Cape Cod when the *Mayflower* arrived; they were big money in the nineteenth century when New Bedford lit the world with whale oil; and they are big tourist attractions today, drawing thousands of whale watchers out to Stellwagen Bank every summer, where the world's largest mammals can be seen grazing on tiny sea foods, throwing their flukes skyward, and breaching into the sunset. Though now fully committed to whale saving, New Englanders are eerily proud of their whaling past. From Nantucket to Provincetown, sperm-whale weathervanes and sea captains' houses turned bed-and-breakfasts crowd the landscape, and the tools used in the chase and the slaughter stand boldly on display at Connecticut's Mystic Seaport Museum, the New Bedford Whaling Museum in Massachusetts, the Nantucket Historical Association's newly renovated whaling museum, and countless other small, local historical societies, public libraries, and historic houses. Local newspapers do their part to keep this history alive by periodically publishing articles, such as "A Century Ago, Cape Codders Hunted Whales," that marvel at the region's transformation from a land of prosperous whale killers to a land of prosperous whale watchers.

The tedium of our daily lives makes it easy for us to watch whales for pleasure. Standing in the oil aisle of the grocery store trying to decide between extra-virgin olive oil, pure golden olive oil, corn oil, peanut oil, or canola oil; carting home jugs of laundry detergent; turning bright electric lights on with a twitch of a finger; squeezing into and out of spandex in fitting rooms and then paying for our purchases with a small slice of plastic—we forget that there is more one could do with a whale besides

capturing it with our cameras.

No one in seventeenth-century New England watched whales for pleasure. Even in 1620, two centuries before New Bedford began sending out fifty whaleships a year, the religious Separatists who founded Plymouth Colony knew that whales meant big money. As the first permanent English settlement in New England, the Plymouth colonists garnered a privileged place in American history as the "Pilgrims." To historians of the American whaling industry, they appear as founding fathers of a very different sort, important for being the first among the English to advertise the bounty of whales off the coast of southern New England. In the anonymous memoir of their first year in New England, known as *Mourt's Relation* (1622), they reported that while lying at anchor in what is now Provincetown Harbor, they saw large whales, "the best kind for oil and bone," swim about the *Mayflower* every day and that the *Mayflower*'s "master and his mate, and others experienced in fishing, professed we might have made three or four thousands pounds' worth of oil. They preferred it before Greenland whale-fishing, and purpose the next winter to fish for whale here." But without the "instruments and means to take them," the Separatists had to forsake a "very rich return."

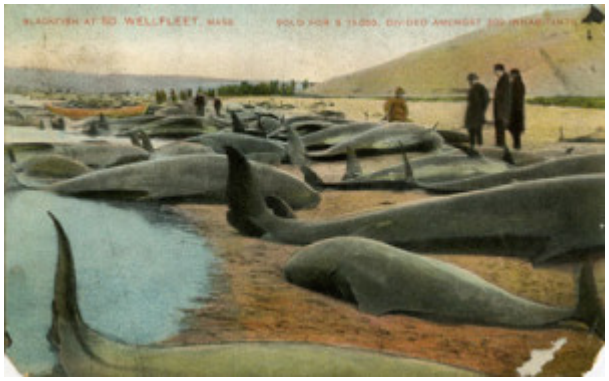
Cape Cod's shallow bays and shifting sands are partly to blame for the region's frequent whale strandings. Samuel de Champlain's map of Malle Barre (Nauset Harbor), based on soundings taken during his 1605 voyage around Cape Cod, graphically portrays the dangers Cape Cod's shoreline posed to ships and whales alike. From H. H. Langton and W. F. Ganong, trans., The Works of Samuel de Champlain . . . (Vol. 1) Reprinted, Translated and Annotated by Six Canadian Scholars under the General Editorship of H. P. Biggar (1922). Courtesy of the American Antiquarian Society. Click image for enlargement

The Separatists later saw more whales while searching Cape Cod for the perfect settlement site, and with *Mourt's Relation* they became the first to describe in print what a typical New England whale stranding looked like. A small scouting party sent to investigate Cape Cod Bay came across "a great fish, called a grampus, dead on the sands" and then two more lying dead in the shallows. They

next saw from a distance a group of Indians on the beach “very busy about a black thing.” The Indians ran off when they saw the Separatists but took something away with them. When the English arrived at that spot, they discovered that the black thing was also “a grampus,” or what would be called a blackfish in subsequent centuries and a long-finned pilot whale in today’s nomenclature. Small whales, technically large dolphins, measuring only fifteen to twenty feet, pilot whales are notorious mass stranders, rushing crazily toward land in certain predictable hotspots around the world, from New Zealand to the inside elbow of Cape Cod. The dead grampuses saddened the Separatists, not for sentimental reasons, not from wonder at this brutal surprise wrought by God or Nature, but because this was another lost profit opportunity. The grampuses were “some five or six paces long, and about two inches thick of fat, and fleshed like a swine” and “would have yielded a great deal of oil if there had been time and means to have taken it.”

The Indians no doubt regretted the Separatists’ inopportune appearance for much the same reason. They would have been accustomed to the sea sporadically throwing up whales onto the beach—not just pilot whales but also behemoth right whales, fin whales, humpbacks, and maybe even an occasional sperm whale—and they would have learned to watch the shore in anticipation whenever the seasons changed or right after a nor’easter storm.

The Separatists described how the Indians had butchered the “black thing” into long strips, which is what the Separatists had seen the Indians carrying away as they fled. These strips were no doubt the blubber, the several-inch-thick layer of fat that helps marine mammals withstand cold ocean temperatures and which could be rendered into oil over a hot fire. Back then and still today, oil is a miracle elixir. Indians probably used whale oil like any other animal fat. They could cook with it, rub it into the body to keep the bugs from biting, or tan deer hides with it. If the pilot whale was still fresh, the Indians would likely have consumed its flesh. Once they had stripped the carcass of meat and blubber, the Indians then would have made fish hooks, scrapers, and other tools from the bones.



Pilot whales (the Separatists’ grampuses, later called blackfish) strand frequently on the inside elbow of Cape Cod. By the eighteenth century, the Separatists’ descendants had also learned how to drive pilot whales to shore,

where they were slaughtered and sold for their oil. This 1910 postcard appears to depict a natural stranding, much larger in scale than that witnessed by the Separatists in 1620. From the Postcard Collection at the American Antiquarian Society. Courtesy of the American Antiquarian Society.

The Separatists wanted those grampuses for themselves but for a different purpose. They wanted to sell them in the global marketplace. Each of their whale sightings prompted visions of the entire industrial whaling process, from the gathering of the raw material, to the manufacturing of it into “oil and bone” (bone referred not to the skeleton but to “whalebone,” now called baleen), and finally to the sale of these commodities at market for great profit. The Separatists’ readiness to see living, swimming whales as cash, as four thousand pounds worth of oil and baleen, tells us that they were already familiar with the existing whaling industry in Europe and that they knew exactly which parts of whales European consumers desired and were most likely to purchase.

The Separatists dropped clues as to where their knowledge about whales came from. The captain, mate, and others of the crew “experienced in fishing” said they “preferred it before Greenland whale-fishing.” In 1620, the English whaling industry at Spitsbergen, or “Greenland,” was only nine years old. The Muscovy Company sent the first English whaleship, the *Mary-Margaret*, to Spitsbergen in 1611, fully stocked with harpoons, shallops, winches, cutting knives, large copper kettles for boiling blubber into oil, and most importantly half-a-dozen Basque whalemen from the town of St. Jean de Luz, France. Up until that point, French and Spanish Basques had dominated Europe’s whaling industry. Basques had hunted right whales in the Bay of Biscay for several centuries and then sometime in the mid-sixteenth century expanded their whaling operations across the Atlantic Ocean to Newfoundland. Before the English took up whaling for themselves, they envied and poached on Basque whaling. Whenever English ships explored the northeastern coast of North America or fished for cod around Newfoundland, they kept a lookout for wounded whales along the beaches, pillaged Basque shore-whaling stations, and occasionally sacked Basque whaling vessels, taking the whale oil and baleen as booty.

Finback whales have also stranded on Cape Cod, but usually only one at a time.

Postcard in the Postcard Collection at the American Antiquarian Society. Courtesy of the American Antiquarian Society.

The odds are against any of the *Mayflower*‘s crew having served on the *Mary-Margaret*, but very likely one or more of them had been to Spitsbergen. In the nine years between the start of the English whaling industry and the *Mayflower*‘s sailing for New England, the Muscovy Company sent ever-larger whaling expeditions to Spitsbergen every summer. Other English whalers, mainly from Hull, left for Spitsbergen, too, despite James I’s royal patent of 1613, which awarded the Muscovy Company exclusive rights to Spitsbergen’s whales. There is even some speculation that the *Mayflower* itself went whaling in Spitsbergen sometime between 1616 and 1619, when its whereabouts are unknown. Previous to 1616, the *Mayflower* had carried wine, prunes, herring, tar, and other trade between Britain and continental Europe. Since master and part-owner of the *Mayflower* Christopher Jones had among his Harwich and London connections some family and acquaintances known to have invested in whaling, he may have been tempted to try his hand at it himself. If the *Mayflower* had been whaling in Spitsbergen in the years immediately before its transatlantic crossing, its violation of the Muscovy Company’s monopoly helps explain why it briefly disappears from the documentary record.

A voyage or two to Spitsbergen did not automatically transform English sailors and fishermen into whalemen, however. During the nine years after the opening up of the Spitsbergen whaling grounds, the English whale fishery remained wholly dependent on Basque expertise. Whoever it was among the *Mayflower*‘s crew who turned to the Separatists and said of the right whales off of Cape Cod, these are “the best kind for oil and bone,” owed that piece of wisdom to the Basques at Spitsbergen who less than a decade before had pointed to the right whales’ near relative, the bowhead, and said to their English employers, these are “the best kind of Whales.”

Whales and walruses (“Seamorses”) drew the English to Spitsbergen, depicted on

this map as “Greneland,” in the early 1600s. The drawings around the edges of this map probably were derived from Robert Fotherby’s watercolors. Map by Edward Pellam, from Adam White, Esq., ed., A Collection of Documents on Spitzbergen & Greenland . . . God’s Power and Providence; Shewed, in the Miracvlous Preservation and Deliverance of Eight Englishmen, Left by Mischance in Green-land, Anno 1630, Nine Moneths and Twelve Dayes (London, 1855). Courtesy of the American Antiquarian Society. Click image for enlargement

If there were veterans of Spitsbergen aboard the *Mayflower*, we can reconstruct some of what they saw and experienced from the detailed reports produced by the Muscovy Company. Determined to acquire Basque expertise as quickly as possible, one of the company’s officers, Robert Fotherby, made a particularly close study of Basque practices in 1613. With twenty-four Basques along, this expedition gave Fotherby plenty of opportunities to see them in action. In “The Manner of Killing the Whale, and of the whole Proceedings for performeing of the Voyage,” he put together an instruction manual of sorts, which illustrated in words and watercolors each step of the whaling process, from the initial chase to the final stowing of bundled whalebone and casks of oil for transport back to England. His manual depicts three Basque shallops each holding five men, four at oars and one man standing at the bow with harpoon in hand, bearing down on a ferocious looking whale. The “whale-striker” throws his harpoon, to which “is made fast a rope.” Pinioned like a fish on a fishhook, the whale swims off “wth an uncontrowled force and swiftnes; hurrying the shallop after him.” After a mile or more, when the whale comes spouting up to the surface to breathe, the men row their shallop in close to “strike him wth long launces, wch are made purposelie for that vse,” aiming deeply into the whale near its “swimming finne” to tear at its vital organs. Upon the whale’s death, the three shallops tow it to the ship, where workmen begin cutting off large chunks of blubber. Sent to shore to be chopped into smaller pieces, the blubber then goes to the coppers to be boiled into oil and eventually casked. Meanwhile, the head of the whale is towed to shore, where a group of workmen take hatchets to it, cutting out strips of baleen from the whale’s mouth. Laying each strip of baleen on a board at waist level, one man scrapes away its hairy, fibrous fringe. They then rub each piece of baleen with sand to rid it of any lingering oil, sort the strips into five different grades, and bundle them together, writing on each bundle a number and the company’s mark. Fully processed, the whale has now been turned into products ready for sale to consumers.

Given the ruthless competition between the English and Dutch for Spitsbergen’s whales, those Separatists who emigrated directly from England and those who had just left Leyden, Holland, would have been equals in their ability to recognize that whaling could be an immensely profitable business. Surprisingly, however, they seemed oblivious to whaling’s risks. The *Mayflower* crew fed the Separatists’ fantasy of easy money. They did not mention all they knew of Spitsbergen whaling, neither the fierce international competition nor the vagaries of the market. Even with its monopoly privileges, the Muscovy Company’s whaling experiences made for a sorry history. In its first year of operation, 1611, the company sent two ships, both of which wrecked at

Spitsbergen. Both ships' crews had to beg for passage home on a vessel from Hull. In 1612, they met "with much difficultie; as not being experimented in the businesse." Company employees then spent the entire summer of 1613 wrangling with the Spanish, French, and Dutch, resulting in a colossal three- to four-thousand-pound loss. In 1614 and 1615 they had to return "halfe laden" with oil before the ice set in for the winter. Finally, in 1616 and 1617, the company had two profitable years, and its ships returned home fully loaded with whale oil, baleen, and walrus teeth, only to face their two worst years yet, 1618 and 1619. Outgunned by the Dutch and Danes, the company's whaling convoy suffered an "exceeding great losse" in both years, made worse by the success of the Dutch who flooded the market with their whale oil. Burdened by such weighty losses, the Muscovy Company got out of the whaling business in 1619.

These are some of the watercolors attributed to Muscovy Company operative Robert Fotherby on his 1613 voyage to Spitsbergen. These three paintings show whalemen harpooning a whale and cutting off the blubber to process it into oil. From A Voyage to Greenland, 1613—A Journal 1613. A Journal taken from the Manuscript/Folio Materials at the American Antiquarian Society. Courtesy of the American Antiquarian Society. Fig. 5: Whale being harpooned.

Fig. 6: Whale being caught and cut.

Fig.7: Whale blubber in sections for processing.

That the Separatists thought they might be able to do what the Muscovy Company could not was optimism born of desperation. Successful whaling required special

tools and expertise, which the *Mayflower* on its 1620 voyage lacked. The ship had aboard only a big and clumsy shallop, no harpoons, no lances, and no Basques. There is no evidence that the *Mayflower*, Master Christopher Jones, or any of the rest of the crew returned to Cape Cod Bay in later years to catch the whales they had remarked upon in 1620. Nor did the Separatists themselves turn to whaling immediately. They tried their hand at fishing only to encounter setbacks. So, they then directed their energies to the one activity primed to turn an immediate profit, the Indian fur trade.

Although the *Mayflower* crew and the Separatists fell short as producers of manufactured whale products, they would have been savvy whale consumers, probably having grown up around whale oil and baleen purchased from Basque manufacturers. As the first Europeans to develop large-scale industrial whaling, the Basques were also the first to market their whale products throughout Western Europe. By the time the Basque whale fishery in North America reached its peak, in the mid- to late sixteenth century, whale oil and baleen had become the most valued by-products of whales among European consumers. The Basques sold oil and baleen in Spain, France, Britain, the Netherlands, and Belgium. Basque whale oil lit churches and municipal buildings and was, along with vegetable and fish oils, used in soapmaking, candle making, leather tanning, and the production of woolen textiles. As simply another kind of oil, whale oil's utility was immediately obvious in contrast to baleen, a distinctive material for which new applications had to be invented. A cartilage-like substance often compared to human fingernails or modern-day plastic, baleen's firmness made it a good substitute for animal horn or wood, but it was also more pliable. When heated, baleen could be molded into various shapes, and in the seventeenth century it was increasingly to be found in a multitude of handy objects from riding whips to fishing rods.

In its most common use, baleen gave structure to women's underclothes. The Basques were probably the first to insert baleen into clothes. Words for some of these undergarments, "busk" and "basque," hint at Basque origins. The "busk" was a thin, decorative plate made of baleen, horn, wood, or metal, which women wore at the front of the chest to keep their torsos straight and rigid. The "basque," or "farthingale" in England, anticipated the hoop skirt and pushed skirts out at the hips. Legend has it that Catherine of Aragon imported the fashionable cone-shaped torso and big hips look to England in the mid-sixteenth century when she married King Henry VIII. If so, then we know where her underclothes came from. They began with a Newfoundland whale, which Spanish Basques had captured, butchered, reduced to whale oil and baleen, and stored in the hold of a ship as it crossed the Atlantic to a Basque port. There the baleen would have been sold to a whalebone merchant, sold again to a dressmaker or tailor, eventually ending up in the Queen of England's undergarments.

By 1620, what had once been elite, foreign fashions had trickled down to become standard women's wear among Europe's middling classes, including English Puritans, whose bodice—or as the Separatist women would have said, "pair of bodies"—consisted of two pieces of linen laced together and, if they could

afford it, stiffened with whalebone stays stitched into the garment. Some of the *Mayflower* women may have been wearing a pair of bodies with whalebone stays as the ship crossed the Atlantic. Perhaps Dorothy Bradford, wife of Plymouth Colony governor William Bradford, did not commit suicide by jumping off the *Mayflower* when anchored in Provincetown Harbor as some have speculated but, made dizzy and breathless by whalebone bodies bound too tight, lost her balance to fall among the whales swimming in the water below.

It was not just the *Mayflower* women who had an intimate connection to whales. The Separatists' boots, shoes, gloves, and other leather apparel might well have been tanned in whale oil. The woolen cloth of their pantaloons, skirts, coats, and blankets may have been dressed with whale oil when on the loom or washed in soap made from whale oil. And the many weavers, cloth makers, tailors, leather tanners, and glove makers among the Separatist men residing in Leyden, Holland, probably used whale oil in the course of their work. Like other ordinary English or Dutch people in the early seventeenth century, the Separatists knew that whales meant money because the tedium of their daily lives tied them to the consumption of whale products in the same humdrum sorts of ways that we are connected to the animal, vegetable, and petroleum oils that, in some manufactured form, we use to enrich our food, keep ourselves clean, and decorate our bodies.

Whalebone stiffened women's undergarments through the nineteenth century. The rigid, cone-shaped torso of this eighteenth-century New England woman suggests that she is likely wearing a corset with whalebone stays. Portrait of Hannah Ackley Bush, by M'Kay, 1791. From the Portrait Collections at the American Antiquarian Society. Courtesy of the American Antiquarian Society.

In the first few decades after their 1620 arrival, the Plymouth colonists probably suffered from a shortage of whale products. Initially ill-equipped to catch New England's whales, they had to depend on the occasional whale

stranding. In the 1650s, Southampton and East Hampton, English towns on the eastern end of Long Island, initiated the first successful shore-whaling operations in the northeast. Cape Cod followed a decade or two later and then the island of Nantucket shortly after that. In the nineteenth century, New Englanders dominated the global whaling industry and could be found trolling for whales in all the world's oceans from the Indian Ocean to the Pacific to the Arctic. Americans would continue to consume whale products well into the twentieth century, right up until 1972, when the Marine Mammal Protection Act outlawed whaling and the importation of whale products to the United States.

Further Reading:

For whaling history, see Eric Jay Dolin, *Leviathan: The History of Whaling in America* (New York, 2007) and Richard Ellis, *Men and Whales* (New York, 1991). For the history of Plymouth Colony, I recommend the Separatists' own story as told in Dwight B. Heath, ed., *Mourt's Relation: A Journal of the Pilgrims at Plymouth* (1622; Bedford, Mass., 1963) along with James F. Deetz, *In Small Things Forgotten: The Archaeology of Early American Life* (New York, 1977) and James Deetz and Patricia Scott Deetz, *The Times of Their Lives: Life, Love, and Death in Plymouth Colony* (New York, 2001).

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