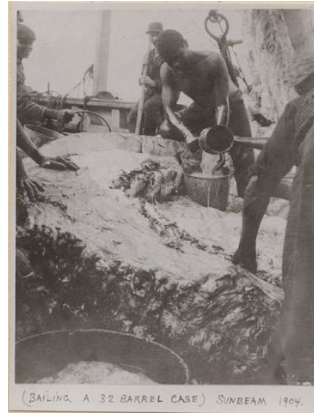


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By 1904, when this photo was taken aboard a bark called *Sunbeam*, not much had changed in the method by which whalers removed spermaceti (high-quality whale oil) from the head of a sperm whale (cachalot). Spermaceti is located in the part of the whale's head known as the "case." Photo, by C. W. Ashley, circa 1904. Online via Mystic Seaport.

Towing a huge whale back to the main ship was slow-going. Rowers could travel about one mile per hour. Sometimes it was dark when the crew returned.

With a whale to butcher, the *Essex*—like other similar whaleships—became a factory at sea. The first job, to extract a whale's oil, was to remove its blubber in twenty-foot strips. Those strips were lowered to the vessel's blubber room where they were cut into smaller pieces.

Once the whale was completely stripped of its blubber, it had to be decapitated.

The head of a sperm whale (cachalot)—whose scientific name is *Physeter macrocephalus*—is around a third of its total length. The upper part of its head contains what is known as a case. This cavity is filled with a substance called spermaceti (literally translated, the seed of a cetacean).

Spermaceti is a clear, high-quality oil which partially solidifies when it's exposed to air. In the 17th and 18th centuries, oil from a sperm whale was highly desirable. Among other things, people valued the way it burned without producing lots of smoke.

To get the head of a sperm whale on the ship's deck, the crew had to use blocks and tackles. After cutting a hole into the top of the case, the men harvested the oil with buckets.



If whalers were lucky—really lucky—they would find something else in the body of the whale which was worth at least its weight in gold: a substance called ambergris.

Experts believe that ambergris develops in the intestines of whales as protection against undigested materials—like the beaks of giant squids—which can (and sometimes do) harm a whale's digestive system.



A primarily ash-colored substance, ambergris—which means "gray amber" in French—was a key component of expensive perfume at the time the *Essex* sailed. It was also highly prized and, to whalers, extremely important as an enhanced source of income.

How did whalers breakdown a whale's blubber, transforming it into oil which could be transported in barrels? They used "try pots" in a process called "trying out."

See Alignments to State and Common Core standards for this story online at:

<http://www.awesomestories.com/asset/AcademicAlignment/OIL-from-a-WHALE-In-the-Heart-of-the-Sea-The-Tragedy-of-the-Waleship-Essex>

See Learning Tasks for this story online at:

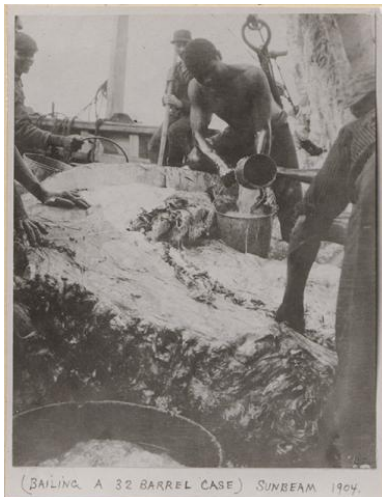
<http://www.awesomestories.com/asset/AcademicActivities/OIL-from-a-WHALE-In-the-Heart-of-the-Sea-The-Tragedy-of-the-Waleship-Essex>

Media Stream

Harvesting Oil from a Sperm Whale's Case

Sperm whales have high-quality oil—referred to as spermaceti—in their massive heads. This oil is located in the whale's case.

To remove the oil from a sperm whale's case, members of a whaling crew used buckets. This image depicts that process which is taking place, circa 1904, aboard a bark called *Sunbeam*.



This photo was taken long after American whaling had reached its peak. The spermaceti removal process, however, had not really changed from the time when the men of the *Essex* whaleship retrieved spermaceti from the sperm whales which they had captured.

The information, at the bottom of the picture, tells us that the *Sunbeam's* crew retrieved 32 barrels of oil from this sperm whale's case. Each barrel typically held between 30-35 gallons of oil.

The photograph—by C. W. Ashley—is maintained by curators at Mystic Seaport who provide this [description of the picture](#):

Small black and white copy photograph, detail of cutting in aboard bark Sunbeam. Black man either in or on whale's head, bailing spermacetti into a bucket with a smaller bucket; larger tub full in foreground.

Written below photograph: "(BAILING A 32 BARREL CASE) Sunbeam 1904". C. W. Ashley photograph 217-221 #221.

[Click on the image for a better view.](#)

Mystic Seaport; C. W. Ashley [photograph 217-221 #221](#).

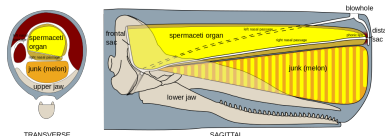
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<http://www.awesomestories.com/asset/view/Harvesting-Oil-from-a-Sperm-Whale-s-Case>

Sperm Whale Head Drawing

The head of a Sperm whale is positively huge, stretching to roughly a third of its total body length. Inside its head, a Sperm whale has a large brain (believed to be the [largest in the animal kingdom](#)) and special organs which help to produce high-quality oil.

The "case" is the largest of those special organs. A very large container, the case is filled with an oily wax known as spermaceti (or case oil).



Just below the case, in a Sperm whale's head, is another chamber containing more high-grade spermaceti oil. The oil and tissue in that chamber are often referred to as "junk."

This cutaway drawing helps us to better understand where the "case" is located inside a sperm whale's head.

[Click on the image for a better view.](#)

Image drawing, by Kurzon, depicting the [sagittal](#) and [transverse](#) cross-section of a Sperm whale's head, showing the location of the animal's major oil-producing organs.

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