

NANTUCKET SLEIGHRIDE

Catalog of an exhibition by Sally Haines
2nd edition, revised, enlarged and improved
December 2012




INTRODUCTION

In a curious preamble to his novel *Moby-Dick*, Herman Melville gives us *Extracts* “supplied by a Sub-Sub Librarian”, starting with: “And God created great whales—GENESIS”, and ending some eighty extracts later with “WHALE SONG”, and he tells the reader, “It will be seen that this mere painstaking burrower and grub-worm of a poor devil of a Sub-Sub appears to have gone through the long Vaticans and street-stalls of the earth, picking up whatever random allusions to whales he could always find in any book whatsoever, sacred or profane ... ; These extracts are solely valuable or entertaining, as affording a bird’s eye view of what has been promiscuously said, thought, fancied, and sung of Leviathan, by many nations and generations, including our own”.

In 1985 this latter-day sub-sub librarian was carrying on that grub-worm tradition after going through that street-stall off Jayhawk Boulevard known as the Kenneth Spencer Research Library’s Department of Special Collections, in the process of preparing an exhibition on whales, arranged to complement the Humanities Lecture

by Elizabeth (Beth) Schultz, "Moby Dick and Eye", to be given in Woodruff Auditorium, Kansas Union, on Tuesday, September 17, 1985:

*You are cordially invited
to the opening of*

 **Nantucket
Sleighride**

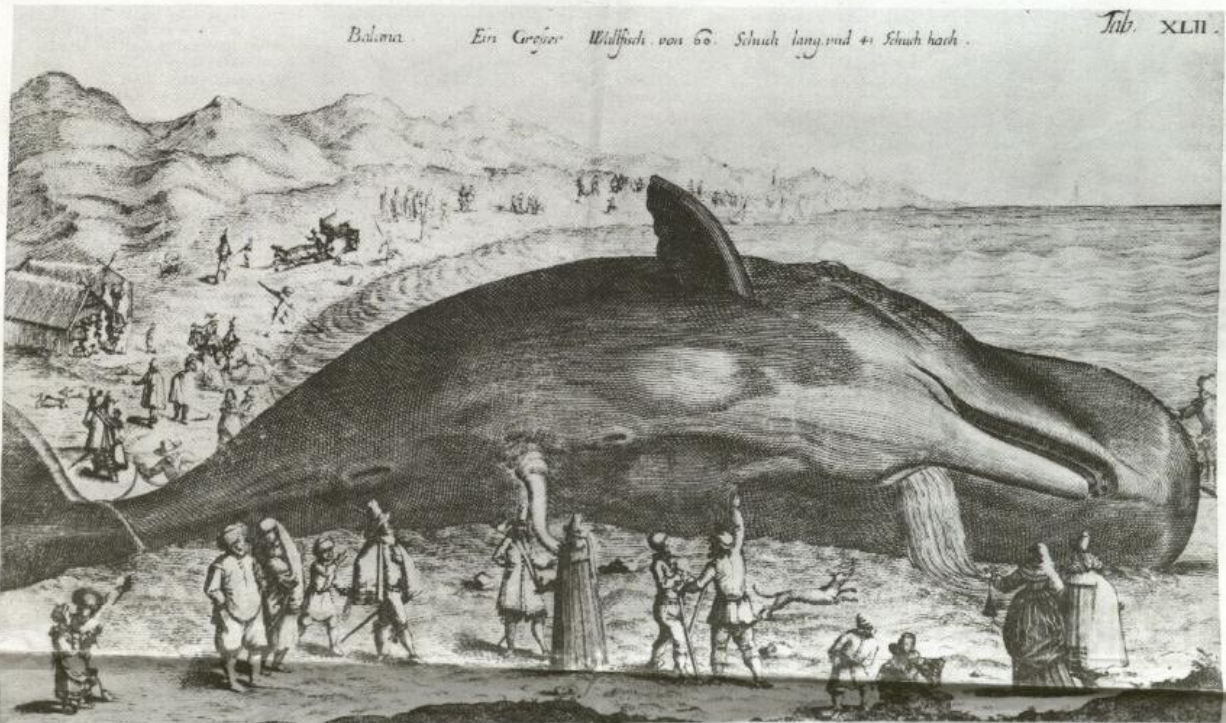
*An exhibit on Whales and Whaling,
at 3pm
on Tuesday, September 17, 1985*

Department of Special Collections
KENNETH SPENCER RESEARCH LIBRARY

*This exhibit has been arranged to complement
the Humanities Lecture
ELIZABETH SCHULTZ: "Moby Dick and Eye"
to be given at 8pm
in Woodruff Auditorium, Kansas Union*

Sponsored by the Center for Humanistic Studies & the University Libraries

Spencer Library exhibit based on whaling lore



This copper engraving of sightseers gathering around a beached sperm whale is part of the exhibition "Nantucket Sleighride," opening Sept. 17 at Spencer Research Library. The engraving appears in John Johnstone's *Historiae Naturalis de Piscibus et Cetis* (1767) and probably is based on a painting of a whale that became stranded near Scheveningen, the Netherlands, in 1598.

A new exhibition, "Nantucket Sleighride," opens Tuesday, Sept. 17, in the main gallery of Spencer Research Library.

The exhibit of books on whales and whaling, drawn from holdings of the Department of Special Collections in the research library, will continue through December.

The exhibit illustrates the history of cetology, the biology of whales and their commercial exploitation, whaling in literature, and death at sea — the deaths of both whales and whalers.

A special guest at the opening reception at 3:30 p.m. Sept. 17 will be Elizabeth Schultz, Chancellors Club teaching professor, who will deliver the opening lecture of the Humanities Lecture Series that evening. (See story on page 1.)

Sally Hocker, associate special collections librarian, who specializes in the biological sciences collections of the department, created the exhibit.

Hocker said the exhibit title is a whaler's term.

One case in the exhibit has books on cetology to 1840, starting with a

1576 edition of Aristotle's *Historium Animalium*. Most are natural history books. One astronomy book has an illustration showing the Cetus, or whale, constellation.

Another portion of the exhibit shows "Death at Sea," both for whales and whalers. Whalers died from storms, icy seas that held ships captive, scurvy and even from whale meat contaminated by poisoned harpoon tips. A rare color illustration shows a whale bleeding profusely from wounds inflicted by harpoons.

Another section is on whale biol-

ogy and the food whales eat. There are two suborders of whales, the toothed whales — including sperm whales, porpoises and dolphins — and the baleen whales — such as the humpback and gray whales.

Baleen whales are named for the whalebone fringes that winnow food from seawater in their mouths. Baleen was particularly useful in commerce from the 17th to the 19th centuries. The exhibit shows whalebone in a variety of uses, from corset stays to brooms for chimney sweeps.

The Oread, v. 10, no. 4, September 13, 1985

The sub-sub admits it: she loves Moby Dick. Fell in love in the process of reading the novel for the first time in 1984-1985 in prep for this exhibition, although before that she felt indifferent about ever tackling this hefty tome that was said to ramble off on side-tracks about first-hand whalers' accounts and whaling lore in books. She was not an English major and most of the negative comments she'd heard had come from English majors who had been led by the nose to this bibliographic behemoth. They were not interested in the natural history parts of it *at all*.

Had you walked into the Spencer Library's exhibit area on that day of the opening of *Nantucket Sleighride* you might have thought you'd wandered by mistake into an aquarium. In the shadows behind this aquarium's glass, absent the salt water (bad for books), were huge paper cetacea, whale and dolphin species in silhouette, created by Spencer's then Curator in Graphics, James (Jim) Helyar. Floating in the foreground were most of the whaling books described by Melville. The illusion of water was preternatural.

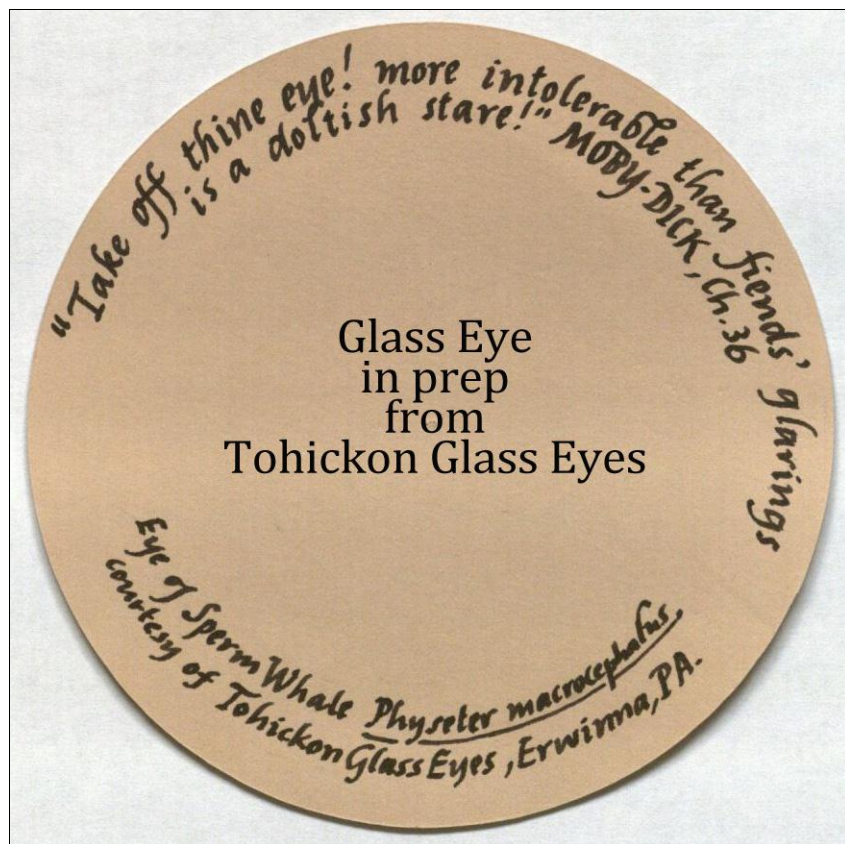
A sperm whale (not a white one like Moby Dick, but a reasonable facsimile, minus the wounds), was spread across the two glass cases surrounding the entrance to Special Collections so that people passed into the Department through the whale's belly. (No library patrons or staff members were harmed).

Lost immediately in a ratty paper-back copy of Moby-Dick that she could – in good conscience – mark up with red pen, this sub-sub walked with Ishmael, right there on the New England coast on that dark and stormy night to check out the port where floated the *Pequod*, and was hooked: she felt all the excitement of being about to go on what she knew was going to be an adventure, with no fear, only anticipation of bibliographic side-tracks; in fact her heart raced with each discovery that the Spencer had listed (in the then card catalog) not only the volumes Melville had read, but a lot more on whales and whaling.

Only space limitations dictated the number of volumes she could fit into her exhibition, and indeed only a few volumes would fit into each of the named cases in the main exhibit area: **Cetology to 1800; Death at Sea; Whale biology; Undersea treasure; Cetacean diversity; and Whaling for landlubbers**, showing a mix of “leftovers” in our reception room and in the North Gallery.

Indeed, our whales and whaling holdings have been substantially increased by both manuscripts and printed books in the twenty-seven years since this show was mounted.

Whales science has changed and advanced in the meantime. This sub-sub has made an attempt to rectify the most glaring misconceptions and to report on new best practices in whale conservation, but there may yet be corrections to be made in our text. Because this was an exhibition and not at the time a scholarly publication, for the most part we did not document our sources for the text except where it was a natural part of the conversation.



Original glass eye was presented to Beth Schulz, post exhibit and lecture, and now resides in a maritime museum in Mystic Seaport, Connecticut.



“Consider the subtleness of the sea; how its most dreaded creatures glide under water, unapparent for the most part, and treacherously hidden beneath the loveliest tints of azure. Consider also the devilish brilliance and beauty of many of its most remorseless tribes, as the dainty embellished shape of many species of sharks. Consider once more, the universal cannibalism of the sea; all whose creatures prey upon each other, carrying on eternal war since the world began.”

{Moby-Dick chapter 58 (Brit)}

Johann Zahn (1641-1707): *Specula physico-mathematico-historica notabilium ac mirabilium scientorum*. Norimbergae: sumptibus Joannis Christophori Lochner bibliopolae; literis Knorzianis, 1696. 3 volumes in 1. Vol. 2. [Summerfield G211]

This illustration of a whale surrounded by other sea animals is from one of the most comprehensive early surveys of natural history and the physical sciences, the *Specula physico-mathematica-historica*, by Johann Zahn, published in Nürnberg in 1696.

The study of whales, and the preparation of an exhibition about whales, involves just about all the subjects to which Zahn's encyclopedia is devoted: zoology, botany, geology, meteorology, geophysics, geography, medicine, astronomy, history, and even man's psychology and achievements.

Although this work is not cited in the whale literature, it is an appropriate symbol of the richness of the collections housed here and from which this exhibition is drawn.

Like the sea creatures in the quotation from Herman Melville's *Moby-Dick* above, the collections here may seem to be unapparent for the most part, and treacherously hidden; but in this exhibit space we attempt to show you at least some of their 'devilish brilliance and beauty'.

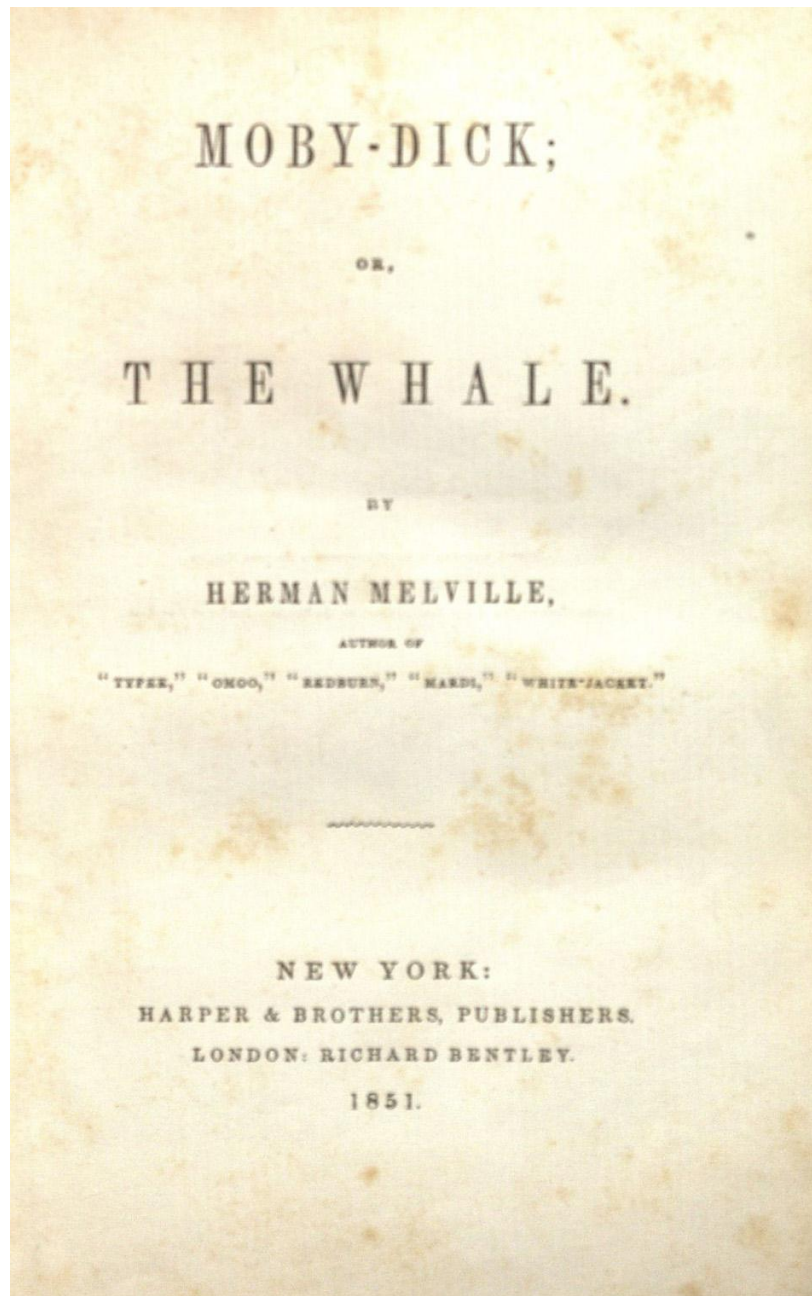
Of course, one can see in an exhibit of books only as much of the collections as a whaler can see of the whale by his spout viewed from the bow of a ship.

Nevertheless we intend to take you on a 'Nantucket Sleighride', that exciting, never-dry ride to which the old-time whaler was treated whenever he harpooned not the right whale, that is, a bowhead or nordcaper, but the altogether wrong whale, a fast-moving rorqual or a slow but grumpy sperm like Moby-Dick. The whaler who went on such a ride always came away from the experience knowing a lot more about whales than when he lowered the boat.

But enough spouting off: we invite you to turn on your computer, read on, and look at the images; or some into the 'street-stall' itself, to get 'wood to blackskin' with the collections, which, like the whales, are to be carefully preserved, but also to be enjoyed.

Sally Haines
Sub-Sub Librarian
Kenneth Spencer Research Library
University of Kansas

Many thanks to Kathy Lafferty who supervised turning images into JPEGs and to Sarah Goodwin Thiel who inserted images into the text.



“So ignorant are most landsmen of some of the plainest and most palpable wonders of the world, that without some hints touching the plain facts, historical and otherwise, of the fishery, they, might scout at Moby Dick as a monstrous fable, or still worse and more detestable, a hideous and intolerable allegory.”

{Moby-Dick chapter 45 (The Affidavit)}

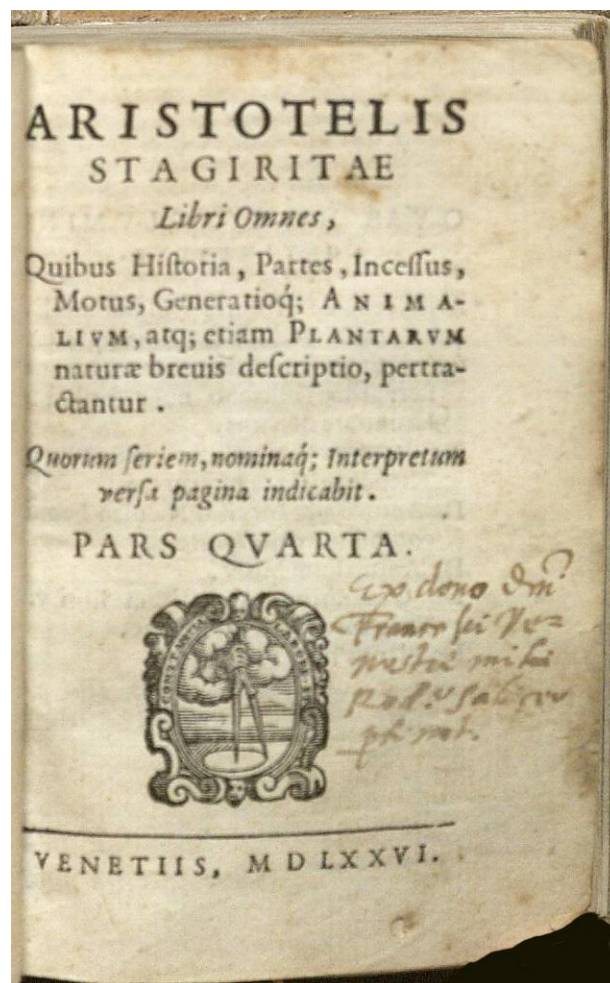
Herman Melville (1819-1891): *Moby-Dick; or, The whale*. New York: Harper & Brothers; London: Richard Bentley, 1851. [B2047]

Herman Melville's *The whale* was published in England in October, 1851, in an edition of 500 copies; it was republished in America later in the year as *Moby-Dick*. The real-life model for Melville's white whale was the legendary Mocha Dick, a rogue sperm whale, whose exploits had been detailed by J.N. Reynolds in "The Knickerbocker Magazine" for 1839.

During the 40s and 50s of the 19th century Mocha Dick was said to have stove three whaling ships and fourteen boats, sunk two other ships and caused thirty men to die; he was last seen with at least nineteen harpoons stuck in his flesh, and was growing ornerier by the year.

Melville described his tale of Moby-Dick as "a romance of adventure founded upon certain wild legends in the Southern Sperm Whale Fisheries, and illustrated with the author's own personal experiences, of two years or more, as a harpooner."

Cetology to 1840



“Tierce after tierce, too, of water, and bread, and beef, and shooks of staves, and iron bundles of hoop, were hoisted out, till at last the piled decks were hard to get about ... ; Top heavy was the ship as a dinnerless student with all Aristotle in his head. Well was it that the Typhoons did not visit them then.”

{Moby-Dick chapter 110 (Queequeg in His Coffin)}

EARLIEST WRITER ON ANIMALS

Aristotle (384-322 B.C.): *Historia ... animalium*. Pars quarta. Venice, 1576. [Summerfield A821]

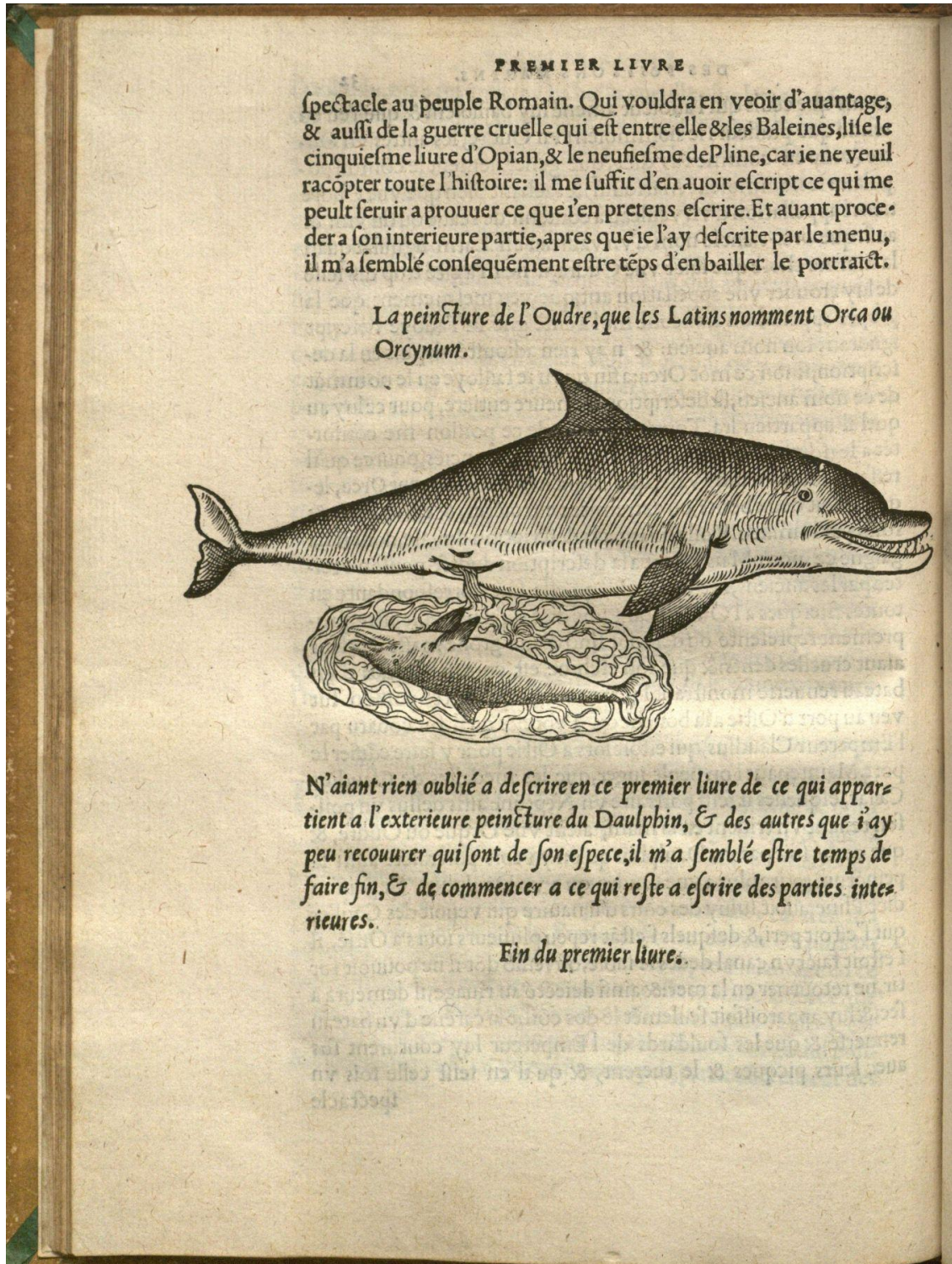
Greek philosopher Aristotle is the earliest writer on animals of which we have any record. His writings are a curious mix of absurd tales from the likes of travellers and fishermen, and his own close and careful observations, made, quite apparently in many cases, from his own dissections. It is probably safe to assume that some of the silliness we ascribe to him was inserted by the scribes who copied and recopied his works throughout the Middle Ages.

Aristotle knew that whales and dolphins had mammalian characteristics: lungs, hair, horizontal flukes rather than the fish's vertical tail, and that they suckled their young. He classed them with the fish even though he considered them to be intermediate between fish and land animals, because it was their water life that was his criterion for classification.

We use such artificial classifications today for convenience: for instance, Craig C. Freeman and Eileen K. Schofield's *Roadside wildflowers of the southern Great Plains*, 1991, is arranged for the lazy botanist by flower color – and one could class bats with birds as flying animals. Not until the re-flowering of science in the 16th and 17th centuries did firsthand observation and dissection raise the question of the mammal-ness of whales, and it wasn't until the 18th century that dolphins were distinguished from fishes.

When one is doing research on whales in early printed books, it's essential to hit the library catalog under the term FISHES. Even the best cataloger may not

realize that there are disguised mammals in these works on ichthyology.



“... as human infants while suckling will calmly and fixedly gaze away from the breast, as if leading two different lives at the time; and while yet drawing mortal nourishment, be spiritually feasting upon some unearthly reminiscence; -- even so did the young of these whales seem looking up towards us, but not at us, as if we were but a bit of Gulf-weed in their new-born sight.” {Moby-Dick chapter 87 (The Grand Armada)}

ANOTHER KETTLE OF FISH

Pierre Belon (1517-1564): *L’histoire naturelle des estranges poisons marins*. A Paris: de l’Imprimerie de Regnaud Chaudiere, 1551.

[Summerfield C1207]

It was not until the 18th century that dolphins were really distinguished from the fishes, even though Aristotle had noted the differences in the 4th century B.C. French physician Pierre Belon was the first naturalist to attempt a scientific description of dolphins; he had apparently dissected a porpoise (although the first record of a porpoise dissection was of Bartholin’s in 1654), and two species of dolphin, describing their anatomy including mammalian characteristics. Then, contrary to all his own evidence (and hedging his bets?) he threw them in with the fish; this is not really so strange considering that he also regarded the hippopotamus, otter, and beaver as fish.

Pictured here is what Belon called the killer whale, common name for the dolphin *Orcinus orca*, with its stillborn calf inside the placenta, still attached by umbilical cord.

gen Thier/ sondern auch aller andern gewechs gewisse vnzweiffliche gleichnis/ als nēlich Fische/ die nit allein aller ding sehen vñ berde/ wie die Trauben/ schwerder vñ Segen/ sondern die sich auch mit den Delonen beide an gestalt vñ geruch vergleichen/ so wol als man auch in den kleinen vnachtsamen Schnecke ein außgetrückte scheinbare gleichnis eines ganzen wol kentlichen Kopfes spüren vñ finden kan.

Gen. 1. Gott sprach: Es erzeuge sich das Wasser/ mit bibenden vñ lebendigen Thieren/ vñ er schuff grosse Walfische/ vñ allerley Thier/ das da lebt vñ webt/ vñ vom Wasser erzeget wirt/ ein iegliches nach seiner art/ vñ Gott sahe/ das es gut war/ vñ segnet sie vñ sprach: Seit fruchtz bar vñ mehret euch vñnd erfüllet das Wasser im Meer/ da ward auß as bend vñ morgen der fünfte Tag.

Psal. 74. HERR du zütrennest das Meer durch deine krefft/ vñnd zübruchst die Köpffe der Drachen im Wasser/ Du züschlegst die Köpff der Walfische/ vñ gibst sie zur speise dem Volck in der einöden.

Psal. 104. Das Meer/ das so groß vñ weit ist/ das wimmelt on zal/ bei de groß vñ kleine Thier/ daselbs gehen die Schiffe/ da sind Walfische/ die du HERR gemacht hast/ das sie drinnen scherzen.

Syrach 43. Der HERR wehret dem Meer durch sein Wort/ das es nicht außreisset/ vñd hat Insulen drein gesetzt. Die auff dem Meer fahren/ die sagen von seiner sehligkeit/ vñ die wirs hören verwundern vñs/ daselbs sind seltsame wunder/ mancherley Thier vñd Walfische/ durch die selbigen schiffet man hin.

Von den grossen vngeheuwren Thieren des Indianischen Meers.

Das III. Capitel.



Braunfische.
Sprüzwelle.
Meerskrebs.



Item dem Indianischen Meer gibt es die allermeiste gröste Thier/ vñter welchen die Wall oder Braunfische vier äcker lēge/ vñnd die Sprüzwelle zweyhundert Ellenbogen lang sind.

Die Krebs daselbs sind gerne vier Ellenbogen groß/ so findet man auch Ael in dem fluss Ganges/ von dreissig Schühen.

Iber

“ ... Pliny tells us of Whales that embraced acres of living bulk, and Aldrovandus of others which measured eight hundred feet in length – Rope Walks and Thames Tunnels of Whales! ... ; But will any whaleman believe these stories? No. The whale of to-day is as big as his ancestors in Pliny’s time. And if ever I go where Pliny is, I, a whaleman (more than he was) will make bold to tell him so.”

{Moby-Dick chapter 105 (Does the Whale’s Magnitude Diminish?-Will He Perish?)}

MONSTER MASH

Pliny the Elder (23-79 AD): *Bücher und Schriften von der Natur*.

Getruckt zü Franckfurt am Main, 1565.

[Summerfield E1059]

Although the earliest extant writings on animal life are those of the Greek, Aristotle, the most famous and trustworthy of the ancient naturalists was the elder Pliny, a Roman. His great monument, the *Historia naturalis*, in 37 books (no other work of his survives), was first published in 1469; forty two printings in several languages appeared before 1536.

Although Pliny mentions the right whale and the sperm whale, his only personal observation was of the killer whale, a member of the dolphin family.

As Melville has noted, Pliny exaggerates the size of whales; and although he agrees with Aristotle that whales have lungs, he argues that *fish also breathe air*. After Pliny, with the exception of the *Kongs-skugg-sio*, of the 13th century A.D., nothing of importance would be added to the literature of whales or of biology in general in the West, for another 1400 years. The Alexandrian libraries might have yielded something up had they not been burnt to supply fuel for six months of warm water for the human whales using the public baths.

This first edition of a German version of Pliny contains Books 7-10 and part of Book 11; it is illustrated by Jost Amman and Virgil Solis. The whale is sinking the ship and drowning its passengers with water pumped from its blow-holes; it is a

monster mash of sperm and right whale: it has the sperm's teeth and the right's two blow-holes with the baleen shown as a fringe around its neck.



“In the old times, there seem to have prevailed the most curious fancies concerning these blinds [baleen plates]. One voyager in Purchas calls them the wondrous “whiskers” inside of the whale’s mouth. ... This reminds us that the Right Whale really has a sort of whisker, or rather a moustache, consisting of a few scattered white hairs on the upper part of the outer end of the lower jaw. Sometimes these tufts impart a rather brigandish expression to his otherwise solemn countenance.”

{Moby-Dick Chapter 75 (The Right Whale’s Head-Contrasted View)}

RONDIBILIS ON GARGANTUA

Guillaume Rondelet (1506-1566): *Libri de piscibus marinis*. Lugduni: apud Matthiam Bonhomme, excudebat Matthias Bonhomme, 1554-1555. 2 volumes. Vol. 1. [Ellis Omnia E66]

The two most eminent ichthyologists after Aristotle, Pierre Belon and Guillaume Rondelet, both included whales in their compendia of sea animals. Rondelet, whom readers of Rabelais will recognize as the physician Rondibilis in *Gargantua and Pantagruel*, is called the Grandfather of Modern Ichthyology. Both Belon and Rondelet were physicians, both known for their dissections. Rondelet was the first scientist to find and describe the external ear-hole in the dolphin. He goes further than Belon in separating the whales from the fishes and calls them ‘aquatic quadrupeds’, but like Belon, Rondelet throws seals in with the fish. Although Rondelet’s original intention was to verify the assumptions of Aristotle, his dissections led him to contradict many of those assumptions; for this reason and for the high quality of the illustrations, this is considered to be the best of the best of the early compendia. The whale on the left appears to be one of Melville’s mustached ‘brigandish’ whales, but not a right whale: more likely the gibbar mentioned in the text, ‘gibbar’ being another common name for the finback whale. To the right is Orca, the killer whale, without his spots.

KONGS-SKUGG-SIO

UTLÖGD A
DAUNSKU OG LATINU.

Det

Kongelige Speil

med Dansk og Latinsk Oversættelse,
samt nogle

Anmærkninger, Register og Forberedelser.

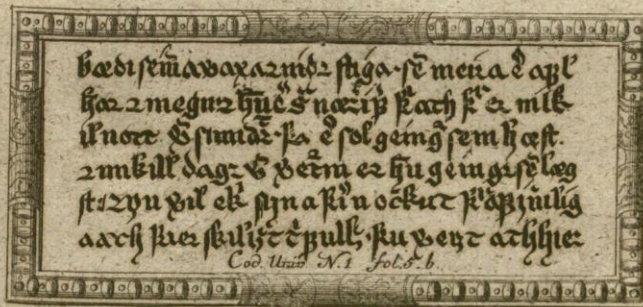
SPECULUM REGALE

CUM INTERPRETATIONE DANICA ET LATINA,
VARIIS LECTIONIBUS, NOTIS &c.

Udgivet af

HALFDAN EINERSEN.

PHIL. MAG. ET RECT. SCHOL. CATHEDR. HOLENS.



Copie, 1768.

Trykt hos Jonas Lindgren, det Kgl. Akademiets Bogtrykker.

"The whale no famous author and whaling no famous chronicler? Who wrote the first account of our Leviathan? Who but mighty Job! And who composed the first narrative of a whaling-voyage? Who, but no less a prince than Alfred the Great, who, with his own royal pen, took down the words from Other, the Norwegian whale-hunter of those times!"

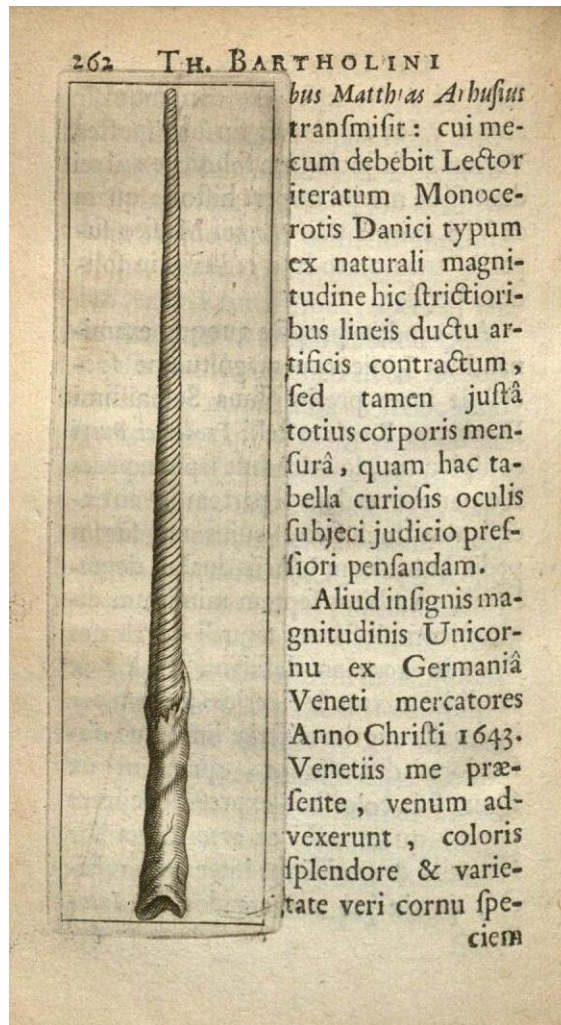
{Moby-Dick chapter 24 (The Advocate)}

MIRROR MIRROR ON THE WALL WHO WAS THE EARLIEST WHALER OF ALL?

Kongs-Skugg-Sio ... Speculum Regale. Utlögd a daunsku og latinu. Det kongelige speil med dansk og latinsk oversættelse ... ; Udgivet af Halfdan Einersen. Sorøe: Trykt hos Jonas Lindgren, 1768. [Howey D284]

The earliest whale hunters were Norwegians; it was in 890 A.D. that Ottar (Melville's 'Other') reported his Arctic voyage to Alfred the Great of England and mentioned that he had encountered whalers near Tromsø. In this first printed edition of the 13th century Norwegian *Konungs Skuggsjá*, or King's mirror, is to be found the first writing after Aristotle, and the only one of the Middle Ages, in which cetaceans have been described from personal observation. In it are recognized the differences between the Greenland right whale *Balaena mysticetus* and the northern right whale *Eubalaena glacialis*, thereafter still confused by everyone except whalers until the 18th century.

Quite aside from its importance as a landmark in the history of cetology, the *Konungs Skuggsjá* is, according to Don Watkins, Professor emeritus of Kansas University's Departments of Germanic Languages & Literatures, and Linguistics, "the most important Scandinavian contribution to didactic literature of the Middle Ages ... ; In addition to the wealth of information on social and ethical ideas, the anonymous author provides reliable, often firsthand observations on scientific subjects." Furthermore, "Its description of twenty one species of whales ... is the earliest objective inventory of cetaceans in Northern European waters."



“The Narwhale I have heard called the Tusked whale, the Horned whale, and the Unicorn whale. He is certainly a curious example of the Unicornism to be found in almost every kingdom of animated nature. From certain cloistered old authors I have gathered that this same sea-unicorn’s horn was in ancient days regarded as the great antidote against poison, and as such, preparations of it brought immense prices. It was also distilled to a volatile salts for fainting ladies ...”

{Moby-Dick chapter 32 (Cetology)}

RARA AVIS

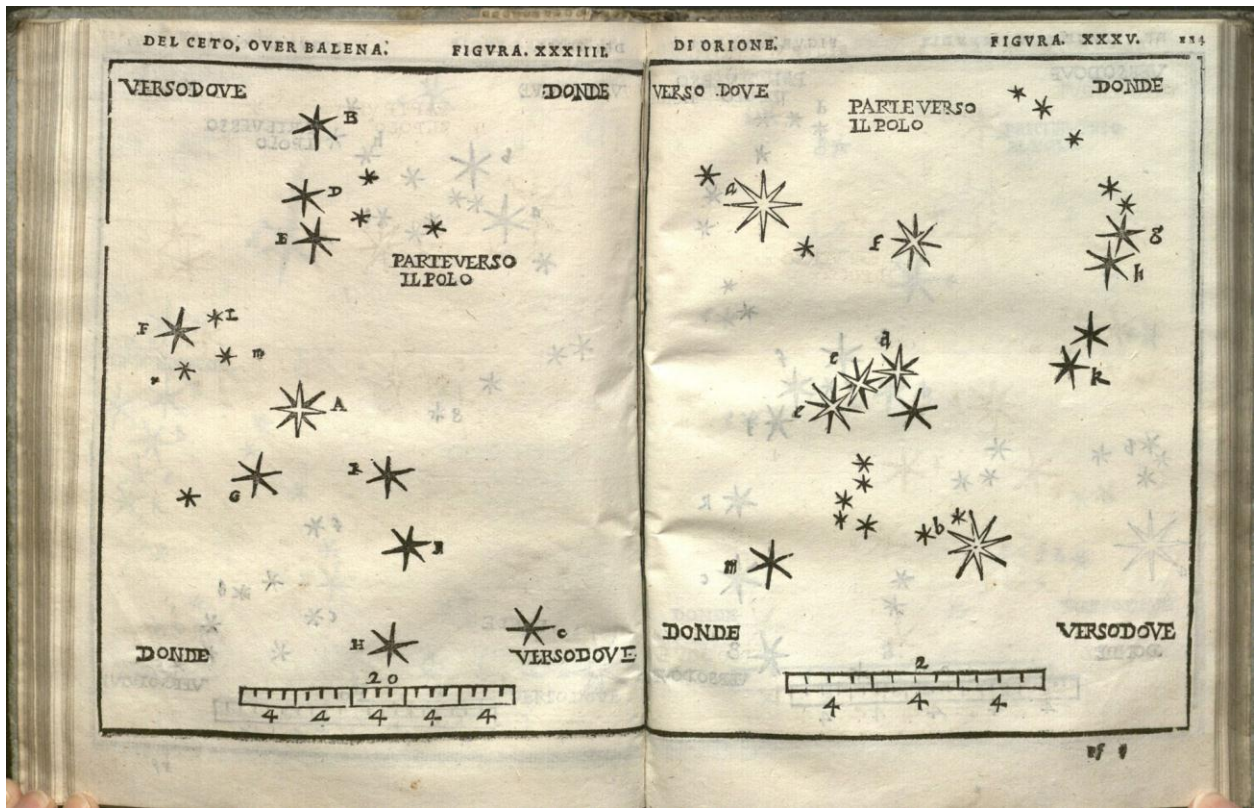
Thomas Bartholin (1616-1680): *De unicornu observtiones novae*. 2^a ed. Amstelaedami: apud J. Henr. Wetstenium , 1678.

[Summerfield A452]

The Narwhal is the source of the unicorn in European legend. Some early woodcuts by artists who had never seen a narwhal represent it with tusk growing from the forehead instead of from the mouth, so that it becomes a sea-unicorn. Other land animals had their sometimes real, sometimes imaginary oceanic counterparts: the sea-lion, sea-cow, sea-horse, sea-mouse, and even mermaids and mermen.

In this work, in a second edition edited by his son Caspar, Thomas Bartholin discusses all kinds of one-horned animals from the mythical unicorn to the rhino. He had seen the skull of a narwhal in a collection of objects of natural history and correctly concluded that the tusk was a tooth. It must have been somewhat unusual to find one intact inasmuch as they were said to be endowed with miraculous aphrodisiac and medicinal qualities.

Bartholin was a Danish mathematician, anatomist and physician who was the first to describe the human lymphatic system.



"No dignity in whaling? The dignity of our calling the very heavens attest. Cetus is a constellation in the South! ...

{Moby-Dick chapter 24 (The advocate)}

Thus at the North have I chased Leviathan round and round the Pole with the revolutions of the bright points that first defined him to me. And beneath the effulgent Antarctic skies I have boarded the Argo-Navis, and joined the chase against the starry Cetus far beyond the utmost stretch of Hydrus and the Flying Fish.

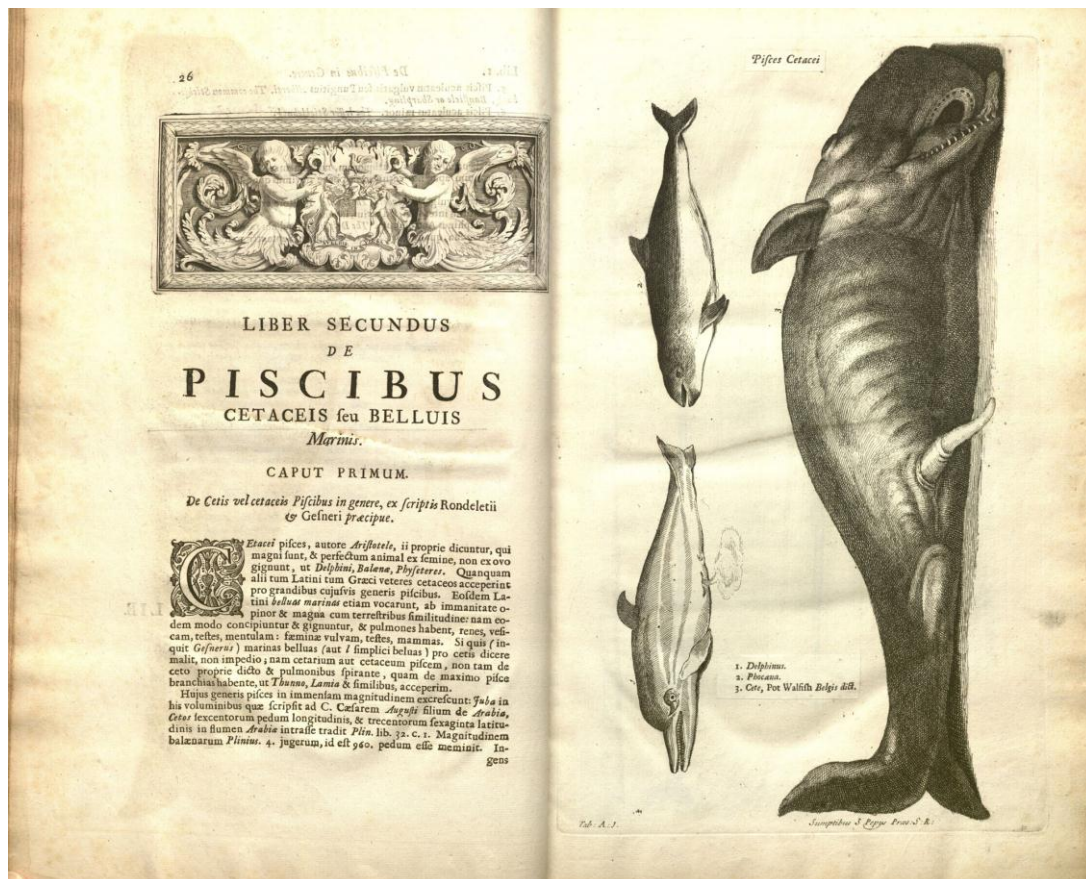
{Moby-Dick chapter 57 (Of whales in Paint; in Woods; in Sheet Iron; in stone; in mountains; in stars)}

TO THE MOON, ALESS

Alessandro Piccolomini (1508-1578): *De la sphere del mondo*. In Venetia: per Giovanni Varisco, 1561.

[Summerfeld C418]

Alessandro Piccolomini was descended from an ancient Roman family and studied ancient languages and science at the University of Padua where eventually he became an ancient professor. His astronomical treatise is the first star atlas to be published in the western world, the first edition of which appeared in 1540; ours is a revised and amplified edition of a work that saw many re-printings and translations. Piccolomini numbered the stars in a given constellation and used Latin letters to indicate the first four magnitudes, a system apparently copied by the makers of celestial globes in France in the 16th and 17th centuries. To the left is Cetus the Whale.



“Can you catch the expression of the sperm whale’s there? It is the same he died with, only some of the longer wrinkles in the forehead seem now faded away. I think his broad brow to be full of a prairie-like placidity, born of a speculative indifference as to death. ... Right Whale I take to have been a Stoic; the Sperm Whale a Platonian, who might have taken up Spinoza in his latter years.”

{Moby-Dick chapter 75 (The Right Whale’s Head – Contrasted view)}

POST MORTEM

Francis Willughby (1635-1672): *De historia piscium*, libri quator. Oxford: e Theatro Sheldoniano, 1685-1686 [i.e. Londini: prostant venales apud Carolum Davis & Thomam Woodward; Regalis Societatis Typographos, 1743, colophon: 1740]. 2 volumes in 1. Vol. 1. [G42]

Willughby’s natural history of fish, including whales, is a most important work of 17th century zoology. It was published in 1686, preceded in 1685, by a companion volume of plates entitled *Ichthyographia*. A second issue was authorized in 1740 and published in 1743 with a cancel title-page. Although Spencer Library’s Special Collections has a copy of the first edition, this is a 1743 re-issue, with original title-page, and with text and plates in one volume. New, corrected captions are pasted in throughout: no. 3 of the original reads “Balaena”.

Willughby was pupil and close friend of the famous English botanist and naturalist John Ray, the most celebrated name in pre-Linnaean systematic zoology. It was Ray who first defined the term ‘species’, and who with Carl Linnaeus took the decisive step of classifying the whales among the mammals. When Willughby died at age 37, Ray added to, edited, and had published this as well as other unfinished works of his comrade Willughby. This Department has a large collection of the botanical and other works of John Ray, and a number of Willughby’s ornithological works.

This figure of a sperm whale is just one of many in this exhibition that appear to be derived from a painting depicting a whale stranded at Scheveningen, Holland,

in 1598 (for the full story see Jonston. At the upper left is a common porpoise; at bottom is a dolphin fetus with umbilical cord and placenta, still attached.



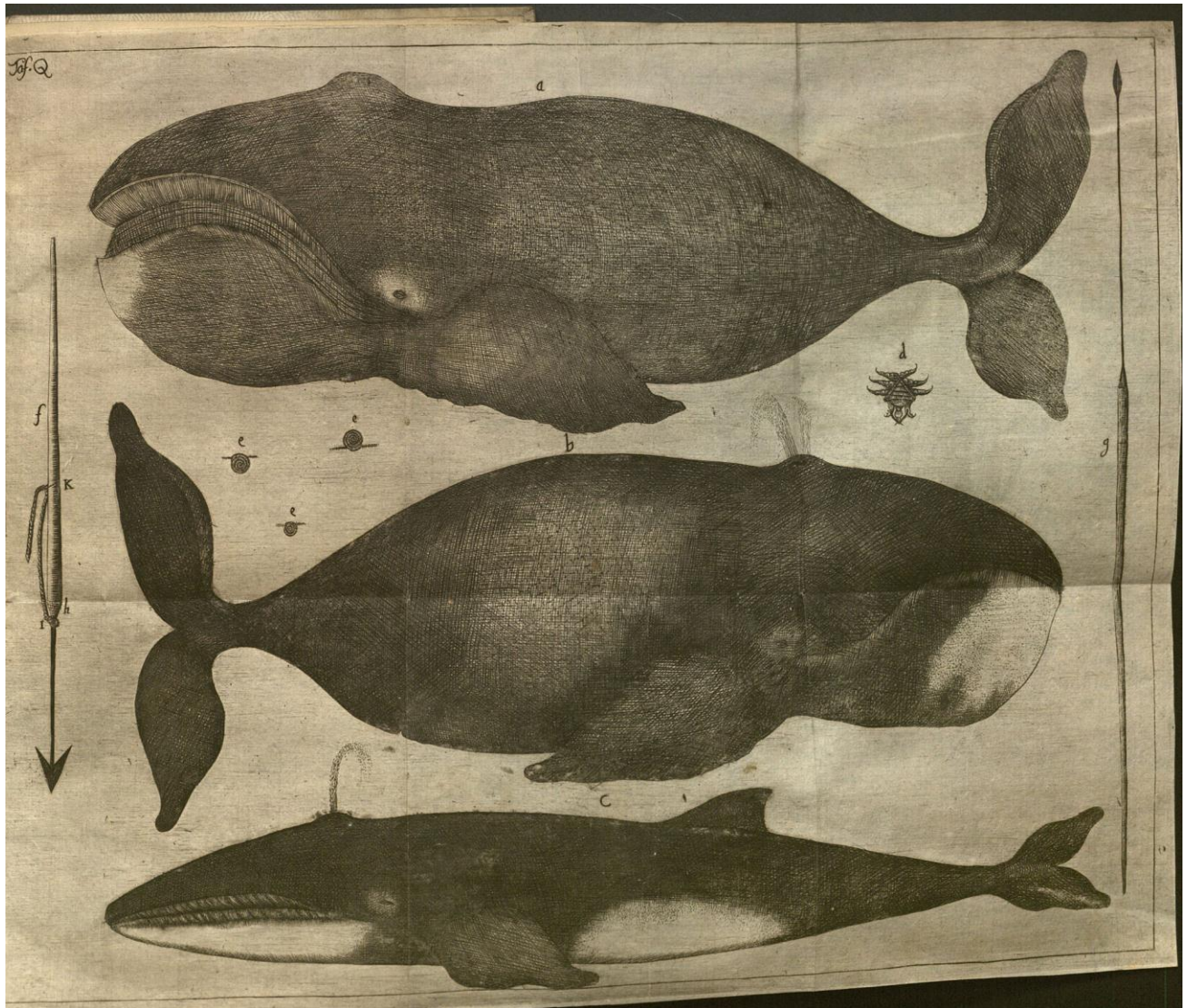
“The English were preceded in the whale fishery by the Hollanders, Zealanders, and Danes; from whom they derived many terms still extant in the fishery; and what is yet more, their fat old fashions, touching plenty to eat and drink.” {Moby-Dick chapter 101 (The Decanter)}

SWIM WID DA FISHES

Cornelius Gijsbertsz Zorgdrager (born ca. 1650): *Bloyende opkomst der aloude en hedendaagsche Groenlandsche visscherey*. T'Amsterdam: by Joannes Oosterwyk, 1720. [Ellis Omnia C1034]

The import of Friedrich Martens' *Spitzbergische Reise* was equaled only by this volume of Zorgdrager's, of which Melville apparently had not seen a copy. Bibliographer J.A. Allen says of this book, "... by far the most important of the early authorities on the Northern Whale fishery, and must always be one of the chief sources of information for the early history of the subject. It also gives one of the best figures of the Greenland Right Whale ... published prior to the present [19th] century, and also one of the best early figures of the cachalot."

16th century expeditions to the far north to search for a north-east or north-west passage through the Arctic brought back news of large numbers of Greenland right whales. The Dutch take credit for discovering the land of spikey mountains they called Spitzbergen on one of these expeditions in 1596, although it had probably been sighted earlier by Basque whalers. The Dutch founded the Noordse Compagnie in 1614, one of many such companies founded to fish and trade. They remained in the business for almost three centuries, outlasting the American sperm whalers; the Dutch hunted only the Greenland right and used Basque harpoons and flensers (blubber strippers). They ran an efficient operation and introduced improvements in technique still used into the 20th century.



“I freely assert, that the cosmopolitan philosopher cannot, for his life, point out one single peaceful influence, which within the last sixty years has operated more potentially upon the whole broad world, taken in one aggregate, than the high and mighty business of whaling. One way and another, it has begotten events so remarkable in themselves, and so continuously momentous in their sequential issues, that whaling may well be regarded as that Egyptian mother, who bore off-spring themselves pregnant from her womb.”

{Moby-Dick chapter 24 (The Advocate)}

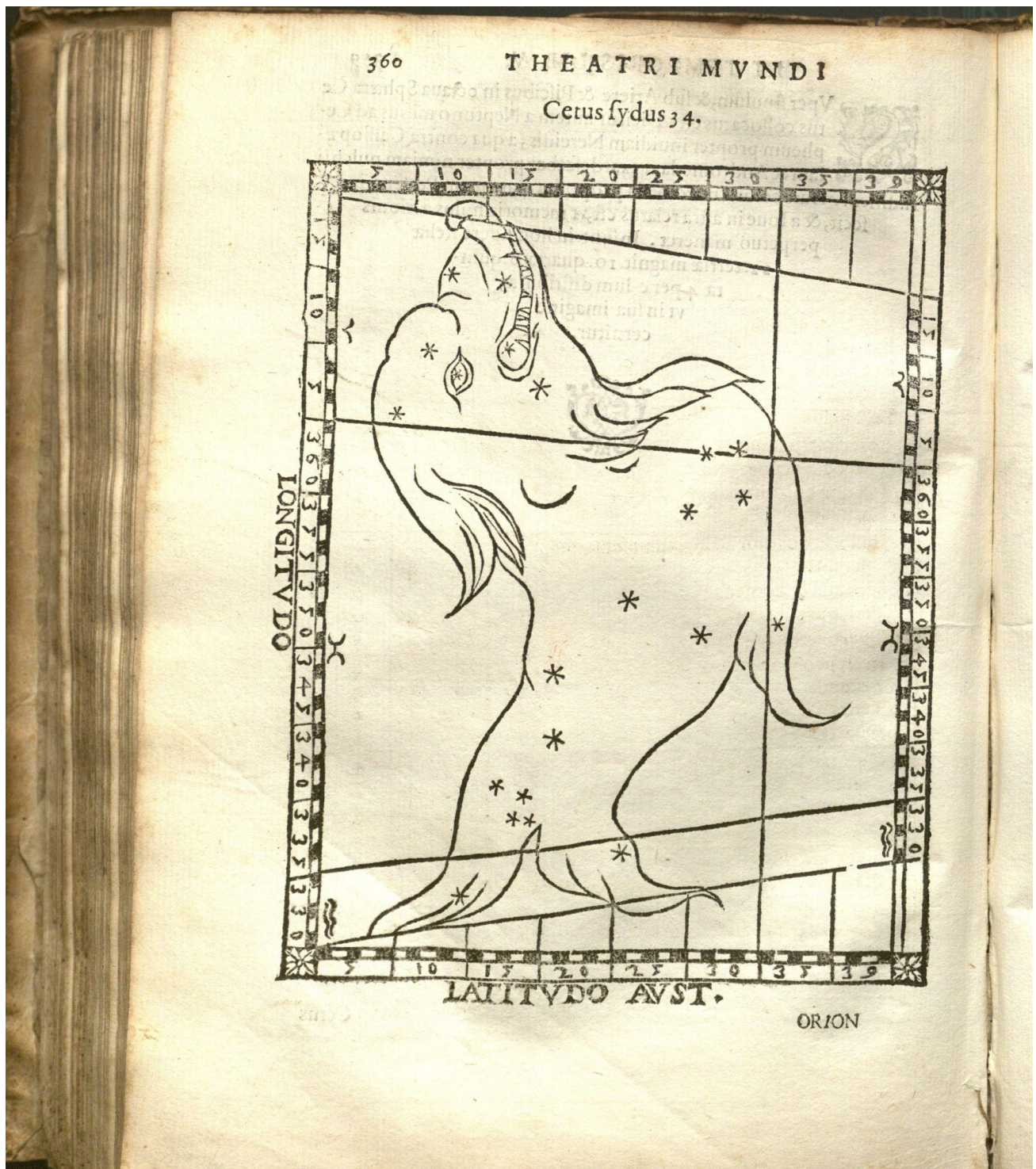
FAT CITY

Friedrich Martens (1635-1699): *Spitzbergische oder Groenlandische Reise Beschreibung gethan im Jahre 1671*. Hamburg: auff Gottfried Schultzens Kosten gedruckt, 1675.

[Ellis Aves B523]

Greenland whaling, so important to England, Holland, and Germany, was carried on for almost a century before the first book about it was written. It's important to realize that Greenland in this context almost always means Spitzbergen, often called East Greenland; the industry was centered in the little settlement called Smeerenburg, literally Fat City. Marten's book was an original; his observations of the whale fishery were excellent and they were his own. It was one of those early sources that was quoted and copied – both his descriptions and his illustrations – during the next two centuries. Martens' depiction of the Greenland right whale *Balaena mysticetus*, and of the rorquals *Balaenoptera* spp., are said to be the first half-way decent figures of these species.

Kansas University Professor emeritus of German, Don Watkins, said it all in the captions for an exhibition prepared in conjunction with a meeting of the Society for the Advancement of Scandinavian Study: "... Martens was a ship's surgeon from Hamburg with remarkable powers of observation. In contrast to the scholars of his time, who were often content to remain in their studies and speculate, usually in Latin, on the nature of things, Martens carefully recorded his 'fieldwork' ... The printed outcome ... was unique for the firsthand information it contained, and a century later the book was still being used by natural scientists such as Linnaeus as they sought reliable data concerning Greenland and Iceland. In general it can be said that early travelogues provided a significant amount of raw material for scholars who attempted to prepare comprehensive studies of the fauna and flora of northern Europe."



“Now some Nantucketers rather distrust this historical story of Jonah and the whale. But then there were some skeptical Greeks and Romans, who, standing out from the orthodox pagans of their times, equally doubted the story of Hercules and the whale, and Arion and

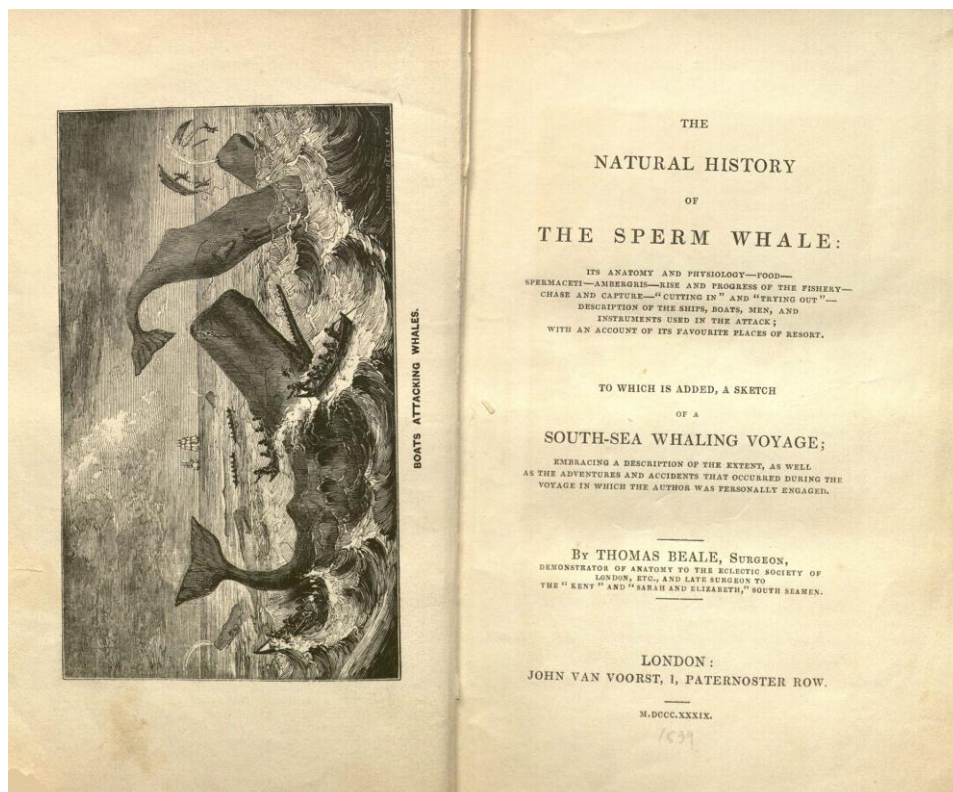
the dolphin; and yet their doubting those traditions did not make those traditions one whit less facts, for all that.”

{Moby-Dick chapter 83 (Jonah Historically Regarded)}

STAR TREACHERY

Giovanni Paolo Galluci (1538-1621?): *Theatrum mundi, et temporis*.
Venetiis: apud Ioannem Baptistam Somasculum, 1588. [Summerfield C341]

The dolphin is just one of forty-eight constellations including Cetus the Whale, pictured in this lavishly illustrated astronomical work. Galluci was a renowned Italian astronomer with a passion for astrology -- as well as a talent for double-talk. In an effort to keep both his metaphorical “asses” covered, he discusses the influence of the planets on man, stressing the great usefulness of astronomical diagrams in medical practice, but then turns around and warns doctors not to put faith in astrology. How to sell your book and not at the same time be sued for malpractice.

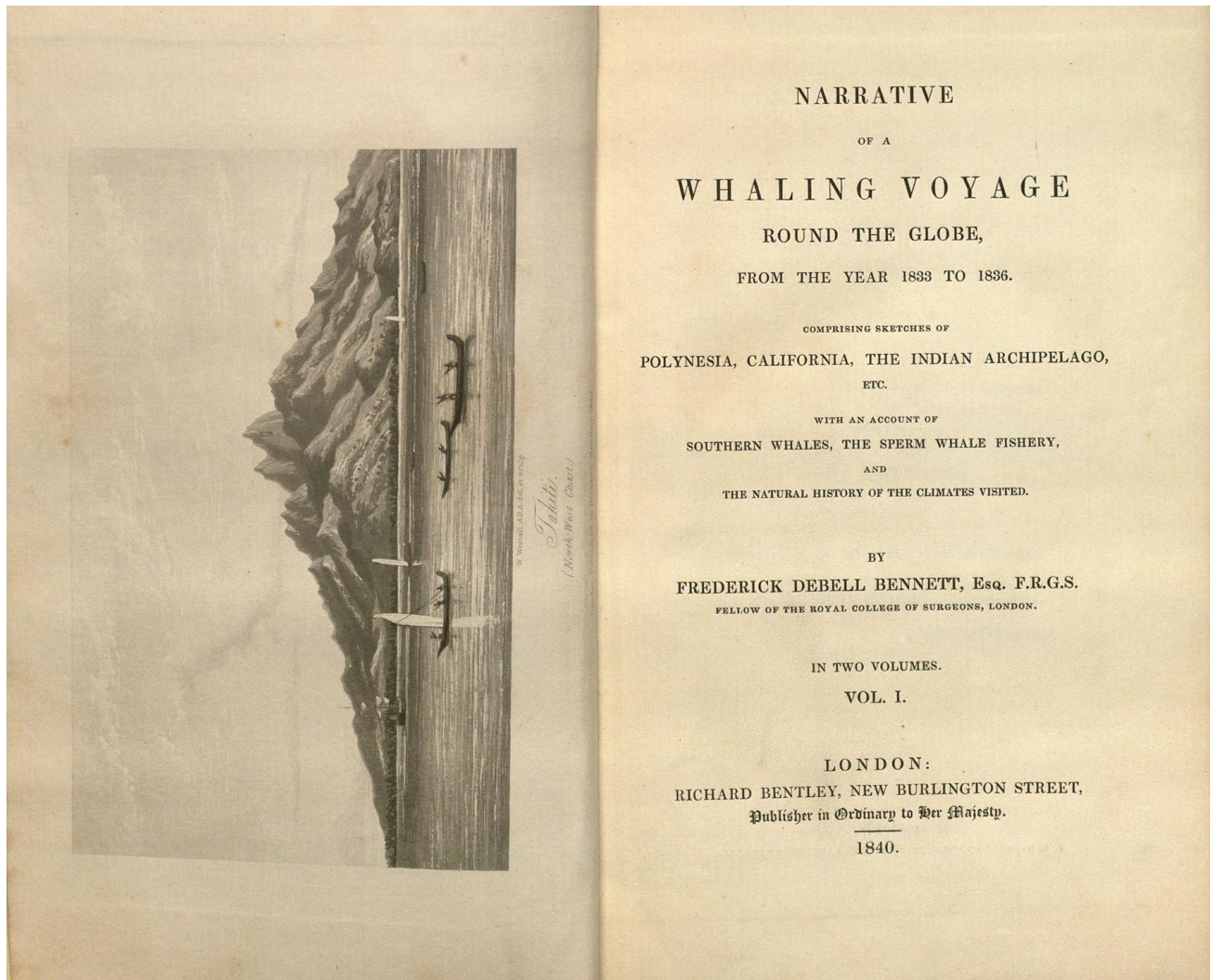


“I know of only four published outlines of the great Sperm Whale ... Beale’s is the best. All Beale’s drawings of this whale are good, excepting the middle figure in the picture of three whales in various attitudes, capping his second chapter. His frontispiece, boats attacking sperm whales, though no doubt calculated to excite the civil skepticism of some parlor men, is admirably correct and life-like in its general effect.”
{Moby-Dick chapter 32 (Cetology)}

ELVILLE’S FAVORITE

Thomas Beale (1807-1849): *The natural history of the sperm whale*.
2nd ed. London: John Van Voorst, 1839. [Ellis Omnia C1123]

Beale’s whaling classic was originally published in 1835 as a fifty-eight page memoir. This expanded version is the form in which it is best known. Beale sailed in 1830 as surgeon on the whaler *Kent*, down the Atlantic coast, ‘round the Horn, and eventually up into the North Pacific. He landed back in England in 1833 after 50,000 miles under sail. Although he had firsthand knowledge of his subject and his treatise was praised by naturalists, most of his observations of natural history consisted of quotations from others. To this edition he added his account of a whaling voyage to the South Pacific. The book sold widely in 1839 and is still enjoyed for the intimate detail of experiences that cannot be had on the modern, noisy whaler.



“There are only two books in being which at all pretend to put the living sperm whale before you, and at the same time, in the remotest degree succeed in the attempt. Those books are Beale’s and Bennett’s; both in their time surgeons to English South-Sea whale-ships, and both exact and reliable men. The original matter touching the sperm whale to be found in their volumes is necessarily small; but so far as it goes, it is of excellent quality, though mostly confined to scientific description.”

{Moby-Dick chapter 32 (Cetology)}

SOUTH-SEA SURGEON

Frederick Debell Bennett (1806-1859): *Narrative of a whaling voyage round the globe, from the year 1833-1836*. London: Richard Bentley, 1840. 2 volumes. Vol. 2. [Ellis Aves C105]

Bennett's observations on the sperm whale were made on a voyage from 1833-1836, immediately following Thomas Beale's voyage. They were published in the *Proceedings* of the Zoological Society of London. A surgeon like Beale, Bennett went to sea on board the *Tuscan* "to investigate the anatomy and habits of Southern Whales, and the mode of conducting the Sperm Whale Fishery, a subject ... untouched by the literature of any country."

The voyage was a considerable success: the *Tuscan* crew captured seventy-eight sperm whales, and Bennett's narrative was an original and estimable contribution to cetology.

Death at sea

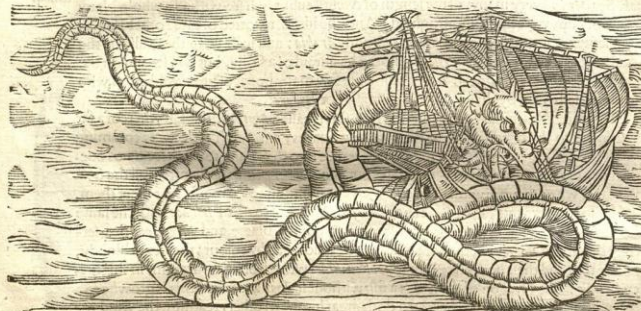
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The History of Serpents.

there is no man of any vnderstanding, (as writeth *Rondeletius*) but at the very first sight, will iudge the same to be a Serpent, although the flesh thereof be no more harmefull then the Conger or Lamprey; yet for similitude with other Serpents, I could not chuse but expresse the same in this place.



There be also in the *Suenian*-Ocean or *Balticke*-Sea, Serpents of thirty or forty foote in length, whose picture is thus described, as it was taken by *Olaus Magnus*, and hee further writeth, that these doe neuer harme any man vntill they be prouoked.



The same Authour also expresseth likewise the figure of another Serpent, of a hundred and twenty foote long, appearing now and then vpon the coasts of Norway, very dangerous and hurtfull to the Sea-men in calmes and still weather, for they lift vp themselves aboue the hatches, and suddainly catch a man in their mouthes, and so draw him into the Sea out of the Shippe: and many times they ouer-throw in the waters, a laden vessell of great quantitie, with all the wares therein contained. And sometimes also they sette vp such a Spire aboue the water, that a boate or little Barke without sayles may passe thorow the same. And thus much for the Sea-Serpents.

OF THE SEPS OR SEPEDON.



Although I am not ignorant that there be some which make two kindes of these Serpents, because of the two names rehearsed in the title, yet when they haue laboured to describe them severally, they can bring nothing or very little wherein their story doth not agree, so as to make twaine of them, or to handle them asunder, were but to take occasion to tautologize, or to speake one thing twice. Wherefore *Gesner* wisely pondering both parts, and after him *Carronius*, deliuer their opinions, that both these names doe shew but one Serpent, yet according to theyr manner, they expresse them as if they were two. For all their writings doe but minister occasion to the Readers to collect the truth out of their labours, wherefore I will follow their opinion, and not their example. Sepedon and Seps, commeth of *Sepein*, because it rotteeth the body that it byteth: in colour it neerely resembleth the Hamorrhoe, yet it usually goeth by spyres and halfe-hoopes, or

“Though not one of the oarmen was then facing the life and death peril so close to them ahead ... they knew that the imminent instant had come; they heard, too, an enormous wallowing sound as of fifty elephants stirring in their litter. Meanwhile the boat was still booming through the mist, the waves curling and hissing around us like the erected crests of enraged serpents”.

{Moby-Dick Chapter 48 (The First Lowering)}

NESSIE AND FRIENDS

Edward Topsell (1572-1625): *The historie of serpents*. London:
Printed by William Jaggard, 1607.

[Ellis Omnia E24]

Throughout history, water-beasts of all sorts, mostly whales and their ilk, have regularly and readily been translated into frightening sea-monsters. Today we're still awaiting word on just what sort of beastie Scotland's Loch Ness monster really is. Pliny's monsters, no matter how horrendous, are clearly whales, as are those of Ptolemy in the Mediterranean. The famous Norwegian Kraken may well have been a giant squid. But who can guess what the real-life counterpart of Topsell's serpent might have been? Topsell says it was Pliny's *Dragon of the Sea* which was a fish without scales (a dolphin or porpoise?); winds and clouds could suddenly take him into the air (again, a dolphin leaping?); and his tongue was like a horse's tail (the baleen of a whalebone whale?)

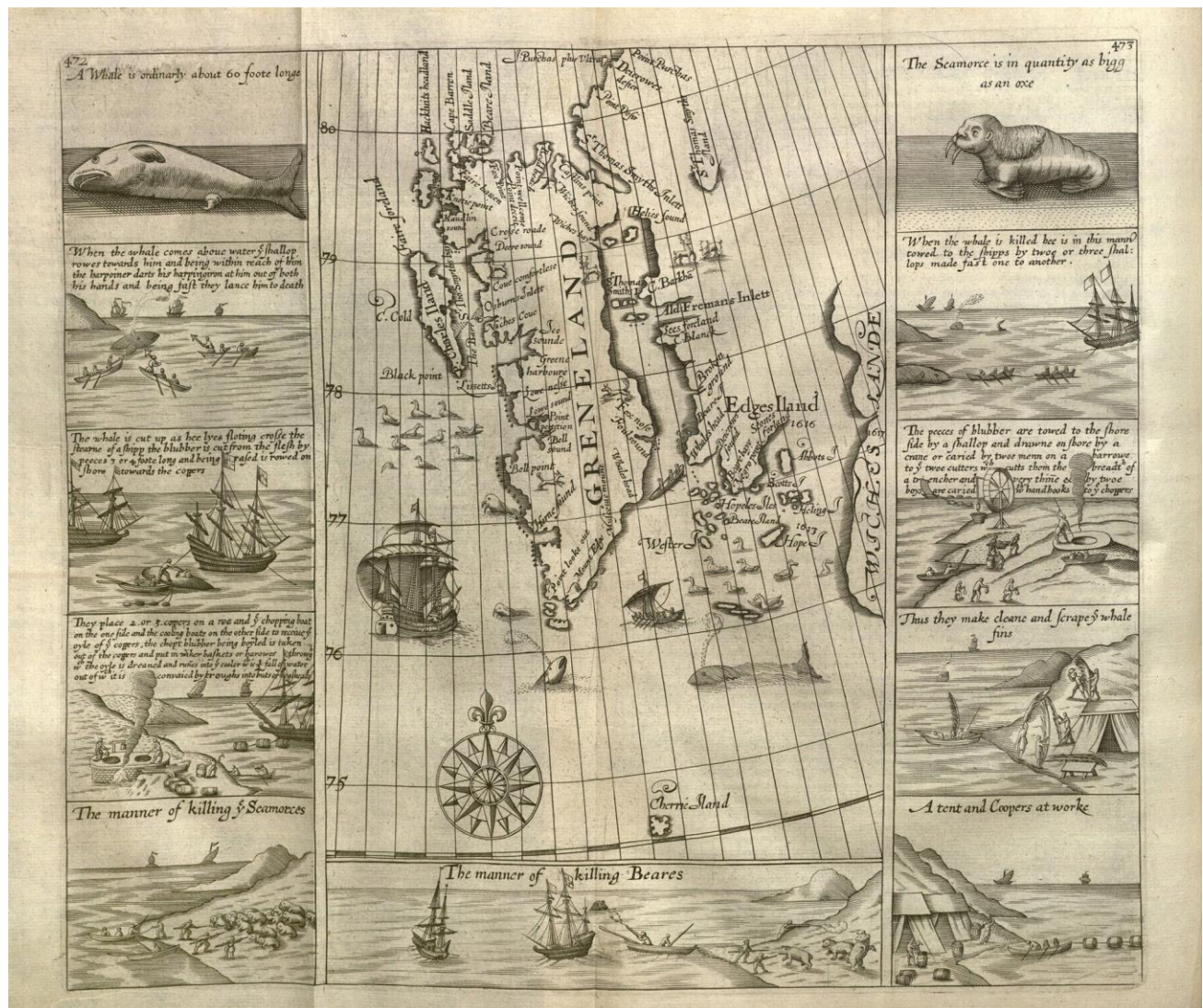
Topsell's *Historie of serpents*, like his *Historie of foure-footed beastes* with which it is usually bound, was drawn mainly from Konrad Gessner's *Historia animalium*, regarded as the book that marks the beginning of modern zoology. Casey Wood has noted that as one of the great coffee-table books of the 17th century, it “is consequently nearly always tattered, dog-eared, and imperfect.”

Our copy seems to have fared rather well, monsters or no.

A biologist at the University of Colorado some decades ago went through a computer produced concordance of *Moby-Dick* and with a colleague published a paper on the herpetology of the novel; of all of the herpetological terms, serpents

are mentioned more frequently than any other herp, usually in symbolic imagery: "Their symbolism was, to him, largely of evil, repulsiveness, fearfulness, dread ..."

So Topsell's serpent really wasn't so different from Ahab's after all.



"In connection with the monstrous pictures of whales, I am strongly tempted here to enter upon those still more monstrous stories of them which are to be found in certain books, both ancient and modern, especially in Pliny, Purchas, Hackluyt, Harris, Cuvier, &c. But I pass that matter by."

EDGE OF THE ARCTIC

Samuel Purchas (1577?-1626): *Purchas his pilgrims*. In five books. London: printed by William Stansby for Henrie Fetherstone, 1625-1626. Containing: **Thomas Edge** (1587 or 88-1624), *A brief discoverie of the northern discoveries of seas, coasts, and countries ... as they were ... begunne ... by the ... Muscovia merchants of London*. Book 3, chapter 3: Towards the Streights of Magellan, the South Seas, the vast tracts of land beyond Hollandia Nova &c. [Ellis Omnia E245]

It was a good century after the writings of Belon and Rondelet before original research about whales again began to be written up and published, although bits and pieces about whales appeared in many kinds of writings from the 16th century on. Some of the obvious sources of whale lore were the records of incidental sightings as well as observations of the whaling industry by sailors during the period of the great voyages of discovery. These contributed little to the study of the natural history of whales, but were interesting nevertheless and important for showing whale distribution.

Purchas's celebrated collection brings together 1300 of the early voyages. The one illustrated here is Captain Edge's account of an expedition – the first whaling trip to Spitzbergen – in 1611, financed by the Muscovy Company. Although the map is labeled 'Greenland', the area is in fact Spitzbergen, the archipelago sometimes called East Greenland. Around the edges of the map are depicted the kill, the cutting-in, and trying-out of the blubber, that is the flensing or stripping of blubber from the dead whale and the dismembering of what is left; the blubber is then separated out by boiling.

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Citrus Medica

Published by W. Phillips, Feb. 1. 1809.

“... oh weariness! heaviness! ... when I think of all this ... and how for forty years I have fed upon dry salted fare – fit emblem of the dry nourishment of my soul! – when the poorest landsman has had fresh fruit to his daily hand, and broken the world’s fresh bread to my mouldy crusts ...”
{Moby-Dick chapter 132 (The symphony)}

“A most mouldy and over-salted death, though; ... Cherries! Cherries! cherries! Oh flask, for one red cherry ere we die! ...

“Cherries? I only wish that we were where they grow.”
{Moby-Dick chapter 135 (The chase – Third Day)}

MOBY SICK

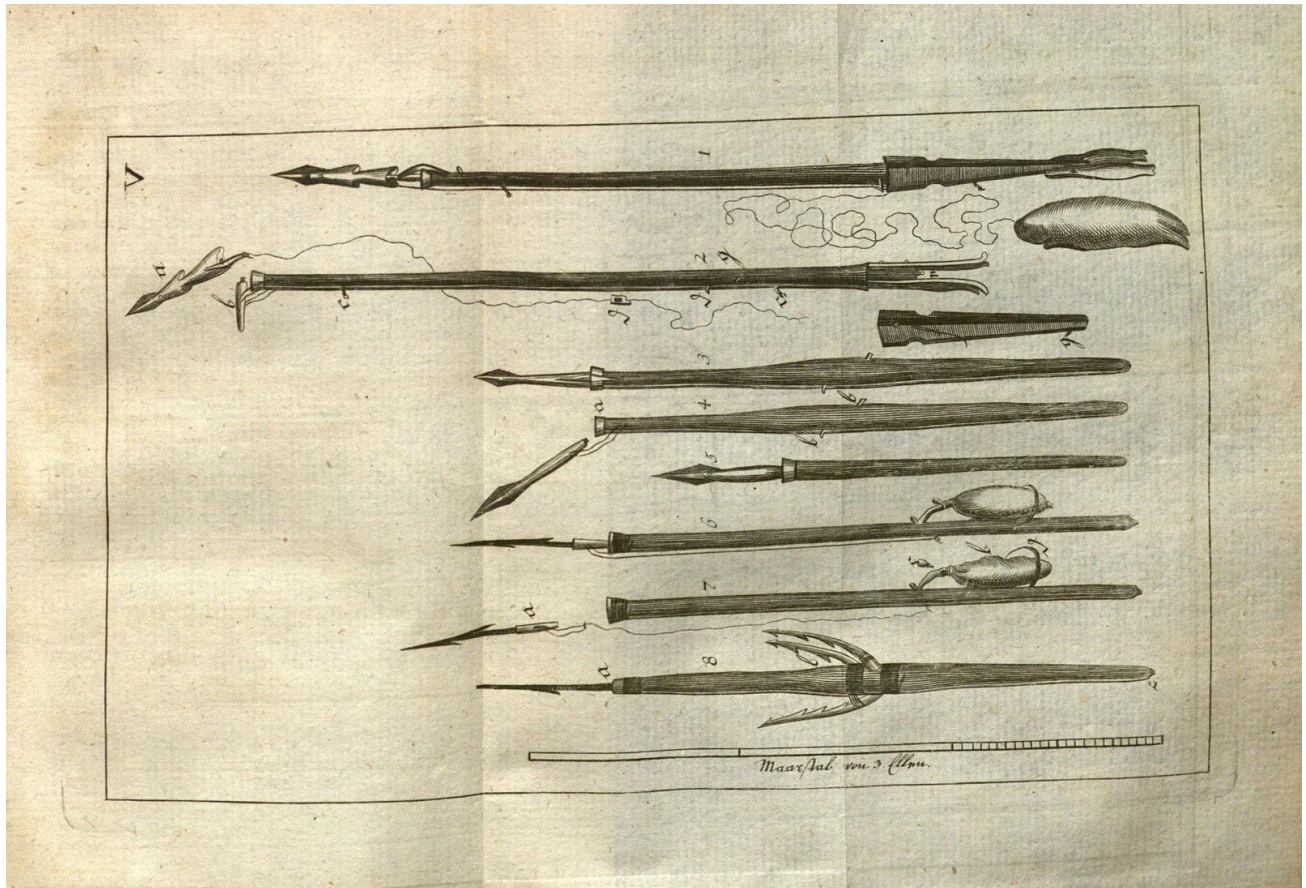
William Woodville (1752-1805): *Medical botany*. 2nd ed. London: printed and sold by William Phillips, 1810. 4 volumes. Vol. 3.
[Linnaeana D92]

More than half of the crew of Vasco Da Gama’s voyage around the Cape of Good Hope, 1479-1499, died of scurvy. It may be the first disease of be associated with a food deficiency, in this case a lack of vitamin C, which humans cannot manufacture internally. An 18th century doctor discovered that the juice of limes prevented (or ‘cured’, as they then thought), the symptoms. Lime or lemon juice began to be taken as an antiscorbutic on all long voyages beginning in 1795. Thus British sailors began to be called “limeys” or lime-juicers”.

Eskimos in the Arctic hunt for narwhals, not for their meat or oil, but for the skin which contains high concentrations of vitamin C. In the usual absence of kitchen gardens in the Arctic, narwhal skin eaten raw is an essential part of the Eskimo diet. The skin of the Greenland right whale is valued for the same reason by the inhabitants of eastern Siberia.

Chief sources of Vitamin C in the Lower 48 are vegetables such as members of the cabbage family; fresh fruit, especially the citrus fruits; and certain animal organs such as liver. The *Citrus medica* or *Citrus lemon*, accepted binomial today for the lemon, is shown here in the second edition of a work first published in 1790-

1795 by the medical doctor William Woodville. Until the publication of Bentley and Triemen's *Medicinal plants*, 1875-1880, this was the standard work illustrating the plants of the British pharmacopoeia. The drawings and engravings were made by preeminent English artist and engraver James Sowerby.



"I, too, want a harpoon made; one that a thousand yoke of fiends could not part ... something that will stick in a whale like his own fin-bone."
{Moby-Dick chapter 113 (The Forge)}

A ONE-WAY TICKET TO BELUGAVILLE

David Cranz (1723-1777): *Historie von Groenland*. 2d ed. Barby: bei Heinrich Detlef Ebers und in Leipzig in Commission bey Weidmanns Erben und Reich, 1770. 2 volumes. Vol. 1. [Ellis Aves B105]

David Cranz was a Moravian clergyman and keen observer of the natural history of southwestern Greenland, where he spent the years 1761-1762. The whaling gear of the inhabitants seems to have been pretty much the same as that of the Indians of the northwestern coast of America as Scammon would report it 200 years later: harpoons, lines, lances and skin buoys. This, with local variations, seems to be the combination used by primitive whalers everywhere since organized whaling began.

The first Europeans to carry on an organized whaling industry were the Basques, who learned their craft from Norse whalers as early as the 10th century and kept the monopoly until the 16th century. Basque whalers may have been among the first Europeans to reach the northern parts of the New World. The Basque industry, founded on the Biscayan or northern right whale *Eubalaena glacialis*, was fully developed by the 12th century and Basque methods were to be used up until the end of the 19th, when the invention by Norwegian Svend Foyn of the explosive harpoon, would supersede them.

Many whaling terms in use today are of Basque origin, although etymologist John Ciardi might go off in a whales flurry about some of them such as 'harpoon': it might be derived from the Basque *arpoi*, the root *ar* meaning 'to take quickly'. The harpoon was not meant to kill the whale but was only a means of attaching a line by which boat and whale were brought closer together. The lethal blows were delivered by lances. For yet another primitive method of killing whales that sometimes backfired, take a look at Kniphof, p. 29.



“Be careful in the hunt, ye mates. Don’t stave the boats needlessly, ye harpooners; good white cedar plank is raised full three per Cent. within the year. Don’t forget your prayers, either.

{Moby-Dick, chapter 22 (Merry Christmas)}

FISH ‘N’ CHIPS

Robert Hamilton (17??-18??): *The natural history of the ordinary Cetacea or whales*. Edinburgh, London, 1837. In: *The naturalist’s library*. Conducted by **William Jardine**. *Mammalia*, vol. 6.

[Ellis Omnia B194]

The ship’s carpenter – nicknamed ‘Chips’ – was constantly at work repairing damage and stove boats; the cry, ‘a dead whale or a stove boat’, almost a motto amongst harpooners and lancers, was heard in frequency second only to the lookout’s ‘thar she blows!’ No wonder that more artists didn’t try to record their whaling scenes firsthand.

Hamilton's *Natural history of the ordinary cetacea or whales* is but one volume from William Jardine's *Naturalist's library*, published in forty volumes between 1830 and 1845. It is a semi-popular work, a veritable encyclopedia of faunal natural history containing hundreds of hand-colored pictures of the world's vertebrates, as well as biographies of the most revered naturalists. The figures are mostly copied from earlier authors, but with the addition of the appropriate background scenery - and Hamilton - unlike many authors including this one - almost always indicates his sources.

THE SHIPWRECK

A Favorite SONG Written Composed and SONG by M^r. DIBDIN in his Entertainment called THE WALK
DUBLIN Published by H. K. M^r. Muller, Seller (40) College Green

ANDANTE

tem-pet grows Our vessel flattered so and borne that down the
years to light thus at last in flight of home by the
Kiss as the flood Howland the lot for Salvator! They should roam
gracious Heaven The ve-ly could By the winds re-lye-lye
A-vent you O-men

The Tempest comes while meteors red,
Portentous fly;
And now we touch old Ocean's bed,
Now reach the Skys
On fable wings, in gloomy flight,
Friends seem to wait:

To snatch us in this dreadful night,
Dark as our fate,
Unless some kind some pitying power,
Should interpose,
She labours on, with in this hour,
Down she goes.

THIRD VERSE.

But see on rocky pinnions borne O'er the mad deep Re-lu-gent beams the glowing moon With us to

deep de-cessful sorrow, cheerful light Dreadful to think, The morn is nigh in endless night Our
hopes to sink: She faith, the vast through furies darts the water Flows a dire yet fragrant
mer-cy Heaven have mercy Heaven's down the grass.

FOR THE GEAR FLUTE

tem-pet grows Our vessel flattered so and borne that down the
years to light thus at last in flight of home by the
Kiss as the flood Howland the lot for Salvator! They should roam
gracious Heaven The ve-ly could By the winds re-lye-lye
A-vent you O-men

“... however baby man may brag of his science and skill, and however much, in a flattering future, that science and skill may augment; yet for ever and for ever to the crack of doom, the sea will insult and murder him, and pulverize the stateliest, stiffest frigate he can make; nevertheless, by the continual repetition of these very impressions, man has lost that sense of the full awfulness of the sea which aboriginally belongs to it.”

{Moby-Dick chapter 58 (Brit)}

THE WHALER'S BENNY HILL

Dibdin, Charles (1745-1814): *The shipwreck*. A favorite song written, composed and sung by Mr. Dibdin in his entertainment called *The wags*. Dublin: published by Hime music seller, 1790? [G74]

Melville's prediction was borne out, of course, perhaps most dramatically with the sinking in 1912 of that 'stateliest' of frigates, the *Titanic*, memorialized in its centenary this past April. And Charles Dibdin himself could have made the movie or at least played music on the top deck as the great ship went down. One can imagine him singing, 'Husbands and wives, Little children lost their lives', in a line from "The Great Titanic", a ditty we all learned, at least those of us unfortunate enough to go to Camp Matollionequay in the 20th century. I learned an off-color rendition Dibdin himself would have envied.

Dibdin was a prolific and talented musical genius of 18th century England. Composer, dramatist, writer and actor-singer, he devoted most of his life to composing and supervising musical entertainments for countless London theaters. His output amounted to sixty works for the stage consisting of playhouse operas, pantomimes, dialogues, and hundreds of songs, many of which he would sing himself on his one-man touring shows called Table Entertainments. He performed "The shipwreck" on 18 October 1790, and his sea-songs were especially popular.

Unfortunately Dibdin had a way of antagonizing as well as entertaining and there were periods when no theater manager would hire him, when amorous difficulties with wives and mistresses, legitimate theater and illegitimate children, were just too much for him. He spent his final years in poverty (just like

Mozart), friendless, separated from his only love, the theater. As his 20th century theatrical reincarnation Benny Hill would say, “I couldn’t leave her behind alone” – but leave her behind he did and died in failure and bankruptcy.

A number of modern musical pieces have been written about the whale, such as Oscar Morawetz’s “The sorrow of the orphan whale calf”, and Leonard Bernstein’s “Moby Dyptich”. Several species of toothed whales make their own music: humpbacks have a siren wail; dolphins whistle, cry and click; the beluga’s chirping sounds have earned it the name “Sea Canary”, but unlike a canary it also growls, roars, squeals, whines, belches and smacks its lips - just like Benny Hill.



“To the native Indian of Peru, the continual sight of the snow-howdahed Andes conveys naught of dread ... Not so the sailor, beholding the scenery of the Antarctic seas; where at times, by some infernal trick of legerdemain in the powers of frost and air, he, shivering and half shipwrecked, instead of rainbows speaking hope and solace to his misery, views what seems a boundless churchyard grinning upon him with its lean ice monuments and splintered crosses.”
{Moby-Dick chapter 42 (The Whiteness of the Whale)}

THAR SHE FROZE

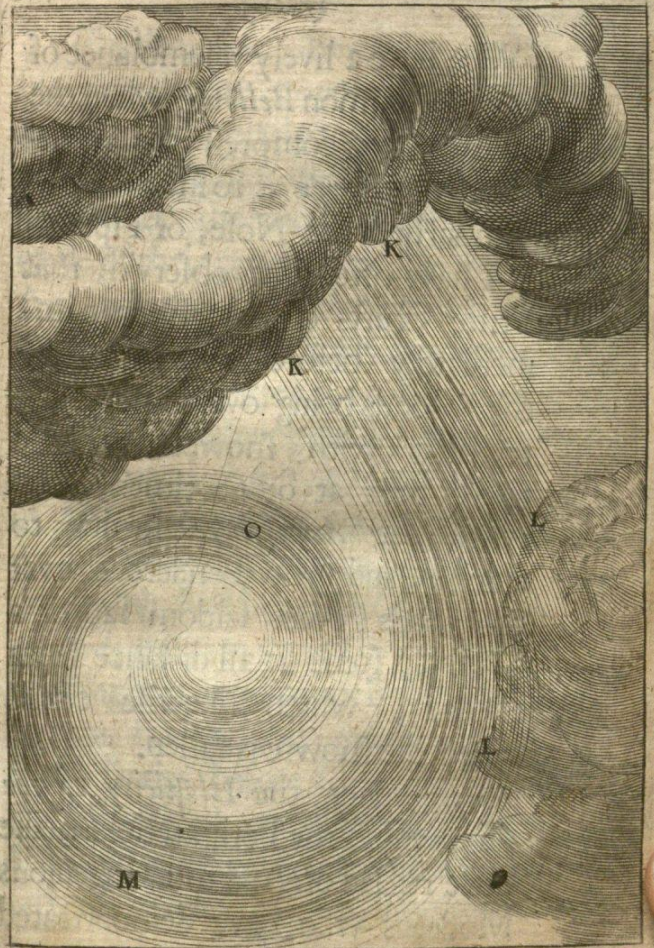
Tancred Robinson (died 1748): editor, *An account of several late voyages to the south and north*. The first part of the voyage into Spitzbergen and Greenland: ... together with some account of the weather, from the 15th of April to the 21st of August, an. 1671. London: Printed for Sam. Smith and Benj. Walford, 1694. [C2279]

Whaling in the northern seas has always been hazardous: storms, fogs, and cold alone destroyed many a ship and her crew, but the whalers' deadliest enemy was ice. After the American Civil War, an oil shortage revived the flagging whale industry, but bowheads were scarce due to overkill so ships risked going deeper into Arctic waters and lingered later in the season than was safe. Some lost their greedy gamble when the waters froze around them. An 18th century Greenland whaler once came upon a ghostly, ice-covered ship complete with dead man below decks, seated at a table, pen in hand: dying he had written, "November 11, 1762. We have been enclosed in the ice seventeen days. The fire went out yesterday, and our master has been trying ever since to kindle it without success ... There is no relief."

This work is a collection of accounts of several voyages including Martens' expedition to Spitzbergen. It contains a full description of the flora and fauna as well as the whaling industry of the Arctic.

(18)

some crosse winds, or denser Part of the *Atmosphere* : it often reverts to M, or O, and so generates *Whirlwinds* and *Tornados*. Sometimes you shall have a suddain Puffe of wind, driven from between two *Clouds*, with a violent *Displosion* of the Air ; that descends almost *Perpendicularly* to the Earth.



“Warmest Climes but nurse the cruelest fangs: the tiger of Bengal crouches in spaced groves of ceaseless verdure. Skies the most effulgent but basket the deadliest thunders: gorgeous Cuba knows tornadoes that never swept tame northern lands. So, too, it is that in these resplendent Japanese seas the mariner encounters the direst of all storms, the Typhoon. It will sometimes burst from out that cloudless sky, like an exploding bomb upon a dazed and sleepy town.”
{Moby-Dick chapter 119 (The Candles)}

THAR SHE BLOWS

Ralph Bohun (died 1716): *A discourse concerning the origine and properties of wind*. Oxford: Printed by W. Hall for Tho. Bowman, 1671.
[B698]

Like fire and water, wind was not only necessary companion to the whaler, but could be his deadly enemy. Bohun's *Discourse* was apparently the first scientific attempt to explain meteorological phenomena. Bohun was situated at a seaport where he gathered weather information by questioning sea captains, whalemens, and other voyagers as well as by culling meteorological observations from printed accounts, including those of Aristotle and Descartes. He was aided in his numerous experiments by Robert Boyle, but failed to make the connection between the occurrence of winds and Earth's rotation.

ACONITVM foliorum laciniis li-
nearibus tuperne latioribus
linea exaratis. *Linn. S. P. 532.*
Ludw. D. G. P. 653.

Napellus.



“... if your apothecary by mistake sends you poison in your pills, you die. True, you may say that, by exceeding caution, you may possibly escape these and the multitudinous other evil chances of life.”

{Moby-Dick chapter 72 (The Monkey Rope)}

ONE MAN'S MEAT IS ANOTHER MAN'S POISON

Johann Hieronymus Kniphof (1704-1763): *Botanica in originali seu Herbarium vivum*. Halle, 1757-1764. 12 parts. [Vol. 3] Centur. V, 1759.
[Linnaeana E15]

One of the more unusual of the primitive methods of catching whales was that used by Aleutian Islanders, as well as by natives of Kamchatka and the Kurile Islands, and by the Japanese off Hokkaido. The more usual method was to harpoon the whale in order to bring boat and animal close enough together that the whale could be killed with lances; the Aleuts simply threw the lances and then quickly left the scene – the lance heads were loaded with poison made from aconite, the dried tuberous roots of monkshood, *Aconitum napellus*. The whale would die and drift to shore usually within a few days, but within whose territory was anyone's guess. Often the loss of a whale killed in this manner was a blessing in disguise for the hunter, but meant death for those who found the carcass: healthy young people complained of burning throats and had all the symptoms of aconite poisoning, followed by sudden death, after they consumed the meat of a drift whale.

Some North Pacific coastal peoples would have nothing to do with drift whales. Because *Aconitum* loses toxicity the farther north it grows and therefore is not used as a poison beyond a certain latitude, many of these people may not have realized what was killing them, so the taboo has remained long after the method ceased to be used. But used it was, by those who were savvy, so toxicity must have been quite variable. There have been numerous modern experiments for whale poisoning with cyanide, strychnine, and even curare, but none of them appears to have been accepted and utilized to commercial advantage.

Kniphof's botanical work is one of the earliest of any extent (there are a total of 1200 plates) to employ the process of nature printing to illustrate plants. In the

earliest examples of the method, from around 1650, dried plants were held over smoke from a candle or oil lamp (filled with whale oil, perhaps?) until blackened all over; they were then pressed between leaves of paper onto which the impression of veins and plant fibers was transferred. Lamp black or printer's ink later served the same purpose. Hand coloring of the flowers has obliterated the finer details in this instance and others, but even Carl Linnaeus, whose system of classification was based on numbers of floral parts, felt that these prints sufficiently represented the differences between species.

Each plant was good for about six impressions, but even so, each copy of such a work was unique. The method seemed to work best with very delicate plants such as the grasses, ferns, and algae. This copy represents one of Kniphof's later editions, the most advanced in development of the technique. Copies vary so much, even within the same edition, that the bibliography of the *Botanica* is extremely complicated.



97. CANNABIS sativa. Lam.

“Thus the whale folds the whole boat in its complicated coils, twisting and writhing around it in almost every direction. All the oarsmen are involved in its perilous contortions.

“All men live enveloped in whale lines. All are born with halters round their necks; but it is only when caught in the swift, sudden turn of death, that mortals realize the silent, subtle, ever-present perils of life.”
{Moby-Dick chapter 60 (The Line)}

“The harpoon was darted; the stricken whale flew forward; with igniting velocity the line ran through the grooves; - ran foul. Ahab stopped to clear it; he did clear it; but the flying turn caught him around the neck ... he was shot out of the boat, ere the crew knew he was gone. Next instant, the heavy eye-splice in the rope’s final end flew out of the dark-empty tub, knocked down an oarsman, and smiting the sea, disappeared in its depths.”

{Moby-Dick chapter 135 (The Chase – Third Day)}

GIVE A SEA-DOG ENOUGH ROPE

Schinz, Salomon (1734-1784): *Anleitung zu der Pflanzenkenntniss und derselben nützlichsten Anwendung*. Mit hundert Pflanzen-Tafeln.

Zürich: in Verlag des Waysenhauses, 1774.

[Linnaeana G16]

Delta 9, the task force that set out during August of 1985 to eradicate the marijuana crop across the US of A may very well have been accompanied by the ghost of Captain Ahab cackling, “and only hemp can kill me! Ha! Ha!”

Rope making was just one the many trades associated with the 19th century whaling industry, and was of great economic importance to New England. Although Melville notes that Manila rope (the fiber of a species of banana, *Musa textilis*) had largely superseded hemp (*Cannabis sativa*) in the American fishery, he does not make it clear which species was being used aboard the *Pequod*. At

any rate 'hemp' may have become a generic term for all rope by that time, in which case it wouldn't have done Ahab any good to lay in a supply of Manila in place of the old stand-by *Cannabis* in order to put the kibosh on Fedallah's prophecy that only hemp could kill him.

Even with the knowledge that the ship's ropes could cause havoc, the whale-obsessed Ahab seems not to have taken the warning seriously.



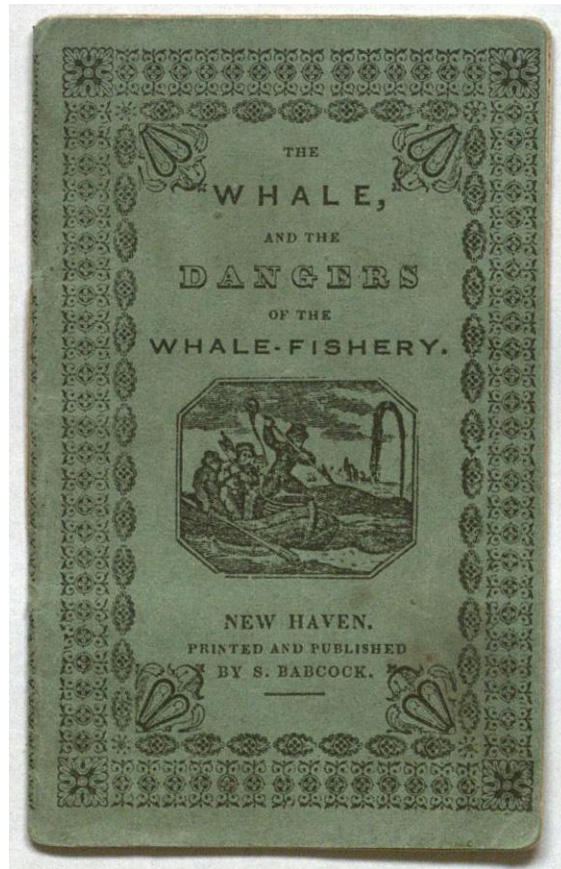
“And now abating in his flurry, the whale once more rolled out into view; surging from side to side; spasmodically dilating and contracting his spout-hole, with sharp cracking, agonized respirations. At last, gush after gush of clotted red gore, as if it had been the purple lees of red wine, shot into the frightened air; and falling back again, ran dripping down his motionless flanks into the sea. His heart had burst!”
{Moby-Dick chapter 72 (The Monkey Rope)}

COMMITTING SPERMICIDE

Carl Linnaeus (1707-1778): *A genuine and universal system of natural history*. Improved, corrected, and enlarged by J. Frid. Gmelin. Cetaceous fishes. London: printed for the proprietor by Lewis and Co., 1794-1810. 14 volumes. Vol. 9. [Linnaeana C18]

This rendition (no pun intended) of the sperm whale appears to be yet another derivative (there are several in this exhibition) of the engraving depicting the whale stranded at Scheveningen, Holland, in 1598.

Under the influence of The Enlightenment there was a move during the latter part of the 18th century to use the vernacular in the sciences for the purpose of spreading knowledge among wider groups of people. Linnaeus's *Systema naturae*, appearing first in 1735, was translated, enlarged, and reprinted in sixteen editions subsequent to the first, twelve of them under Linnaeus's supervision. After his death, the twelfth spawned its own versions, so that some were wholly independent affairs, sometimes only loosely based on the Real McCoy, and frequently with the addition of the writings of other naturalists. This Gmelin edition provides a good example of this vulgarization of scientific writing so typical of the Enlightenment. Gmelin was a professor of medicine at Tübingen, Germany.



“They are mostly young, of stalwart frames; fellows who have felled forests, and now seek to drop the axe and snatch the whale-lance. Many are as green as the Green Mountains whence they came. In some things you would think them but a few hours old.”

{Moby Dick chapter 6 (The Street)}

THE DEVIL AND THE DEEP BLUE SEA

The whale and the perils [cover: dangers] of the whale-fishery. New Haven, Conn.: Printed and published by S. Babcock, 19th century.

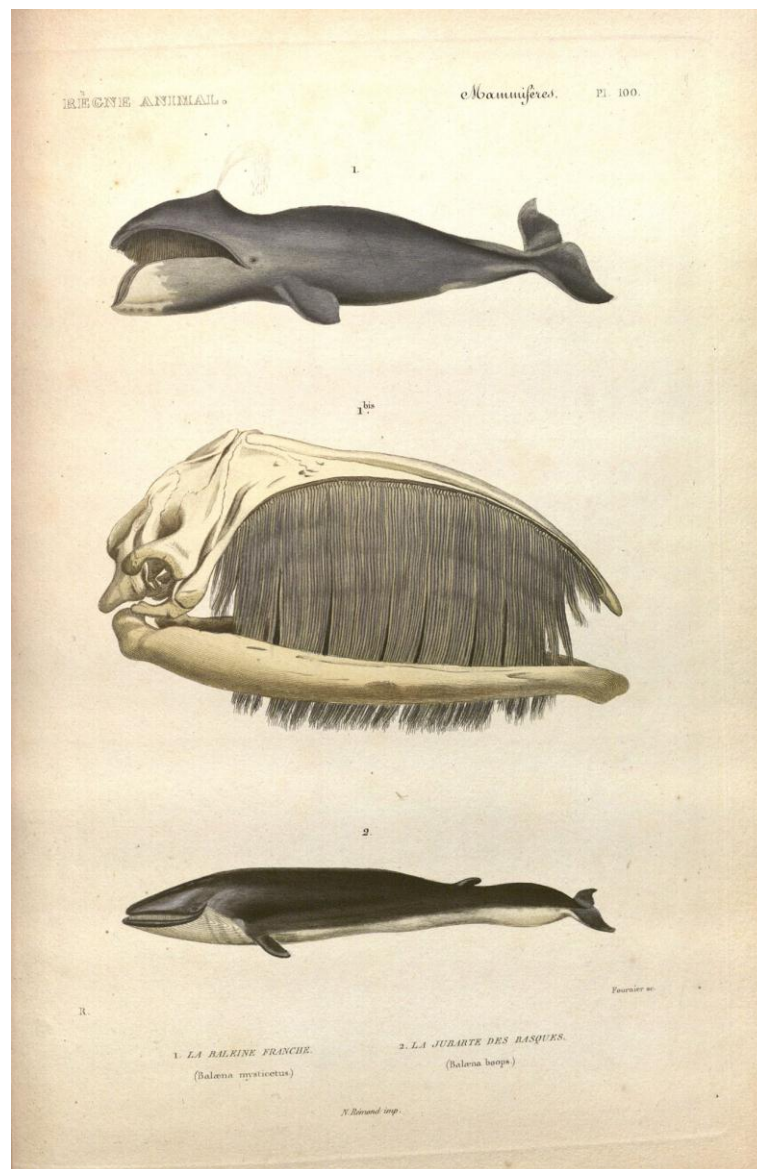
[Children A141]

This little book from our Children’s Collection was made for the smallest of hands. Printed in New Haven during the heyday of American whaling, it makes

life on a whaler seem to be full of terrors and at the same time terribly exciting. A book like this one amongst all the pious and preachy tracts exhorting youngsters to lead the sinless life must have looked like a forbidden lollipop to a land-locked rug-rat. Whaling as science fiction.

Melville was eighteen years of age when he took to the sea, but that most famous of 19th century whaling captains, William Scoresby, was but seven.

Whale biology



“Over this lip, as over a slippery threshold, we now slide into the mouth. Upon my word were I at Mackinaw, I should take this to be the inside of an Indian wigwam. Good Lord! Is this the road that Jonah went? The roof is about twelve feet high ... while these ribbed, arched hairy sides, present us with those wondrous, half vertical scimeter-shaped slats of whalebone, say three hundred on a side ... ; The edges of these bones are fringed with hairy fibers, through which the right whale strains the water, and in whose intricacies he retains the small fish, when open-mouthed he goes through the seas of brit in feeding time.”

{Moby-Dick chapter 75 (The Right Whale's Head – Contrasted View)}

TRUE BRIT

George Cuvier (1769-1832): *Le règne animal*. Paris: Fortin, Masson; imprimé chez Paul Renouard, 1836-1849. 20 volumes. Vol. 2: Les mammifères. Atlas.

[Ellis Aves D113]

The *Règne animal* shown here in the famous ‘Disciples’ edition, is the most celebrated work of Baron George Cuvier, one of the most influential scientists of the 19th century. Unlike Lacépède whose work was based solely on searches of the available literature, Cuvier did original work on the comparative anatomy of animals, including fossils. First published in 1817, this work was followed by numerous editions and translations.

Cuvier rejected many of the nominal species of earlier writers and suspected a single species of sperm whale, but he also rejected the several species of rorqual of which biologists now recognize five.

This plate shows the bowhead or Greenland right whale (top); with its long baleen (center); and the fetus of a fin whale *Balaenoptera physalis*, a rorqual.

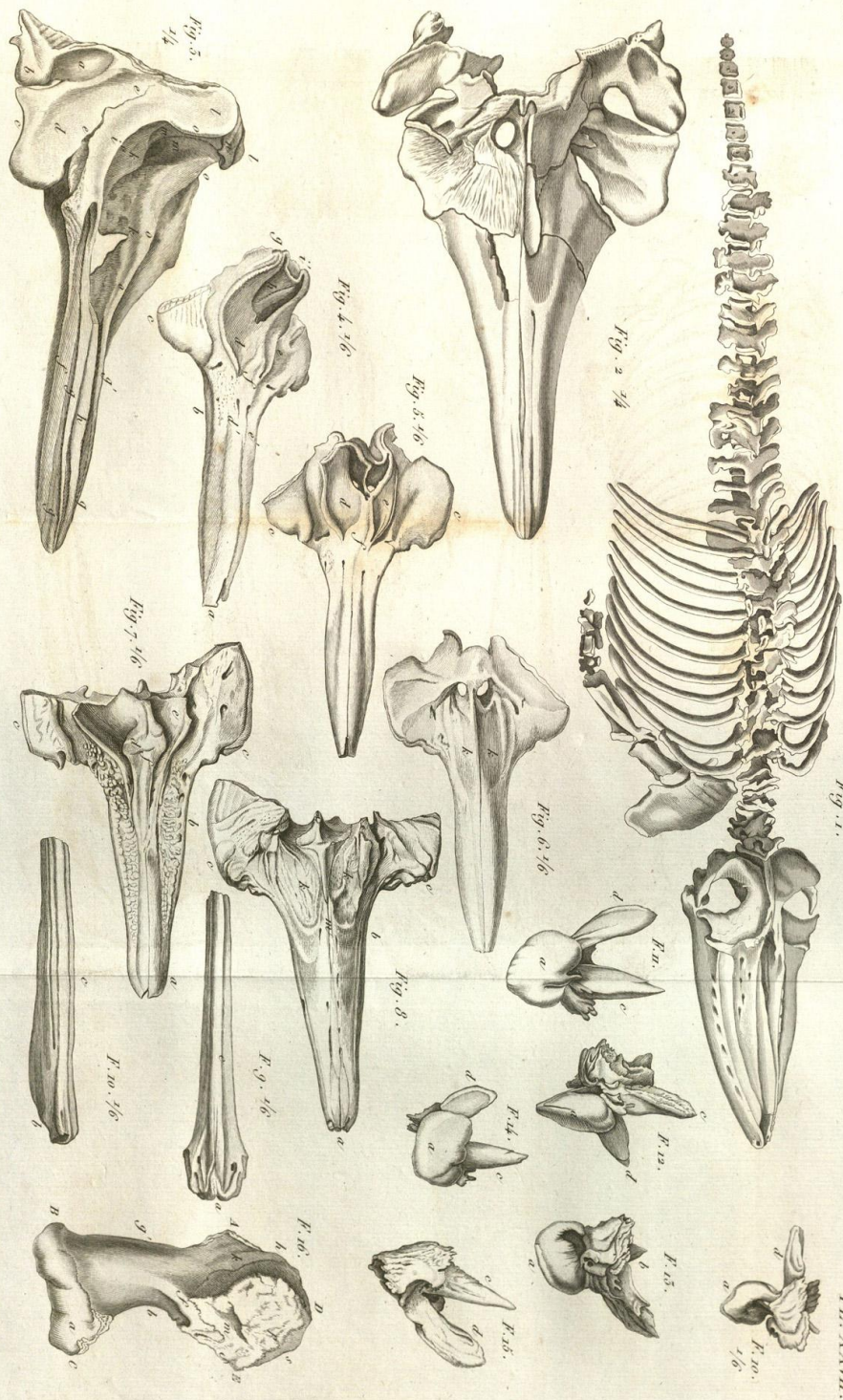
The whalebone or baleen whales are grazers and feed on plankton and small sea animals, crustaceans collectively called krill – or brit – to use the whaler’s term.

The baleen whales are toothless: instead of teeth, in the upper jaw will be found several hundred flat plates set at right angles to the length of the body, overlapping like venetian blinds; they are flexible and fringed with long bristles. With open mouth the whale scoops up the krill, raises his tongue to force out the water, and entraps his meal with his bristly welcome mat. The rorquals have grooves on the underside of the throat that are thought to increase the capacity of their mouths. Capacity in the right whales is increased in the upper part of the mouth instead, by an arched upper jaw and very long baleen plates. The rorquals have short baleen by comparison.

The sole representative of the third family of baleen whales, the grey whale, is half-way between the rights and the rorquals in this characteristic. Although the largest animal in the whale's krill soup is usually the shrimp-like *Euphrasia superba*, occasionally a penguin or other sea-bird feasting on the broth of brit is swallowed with the rest.

Tom. V.

Handb. del.



CETACEA FOSSILES.

Contant. sculpt.

Pl. XVIII.

“Ere entering upon the subject of Fossil Whales, I present my credentials as a geologist, by stating that in my miscellaneous time I have been a stonemason, and also a great digger of ditches, canals and wells, wine-vaults, cellars and cisterns of all sorts.”

{Moby-Dick chapter 104 (The Fossil Whales)}

DEM BONES DEM BONES ONCE WALKED ROUND

George Cuvier (1769-1832): *Recherches sur les ossemens fossils*.

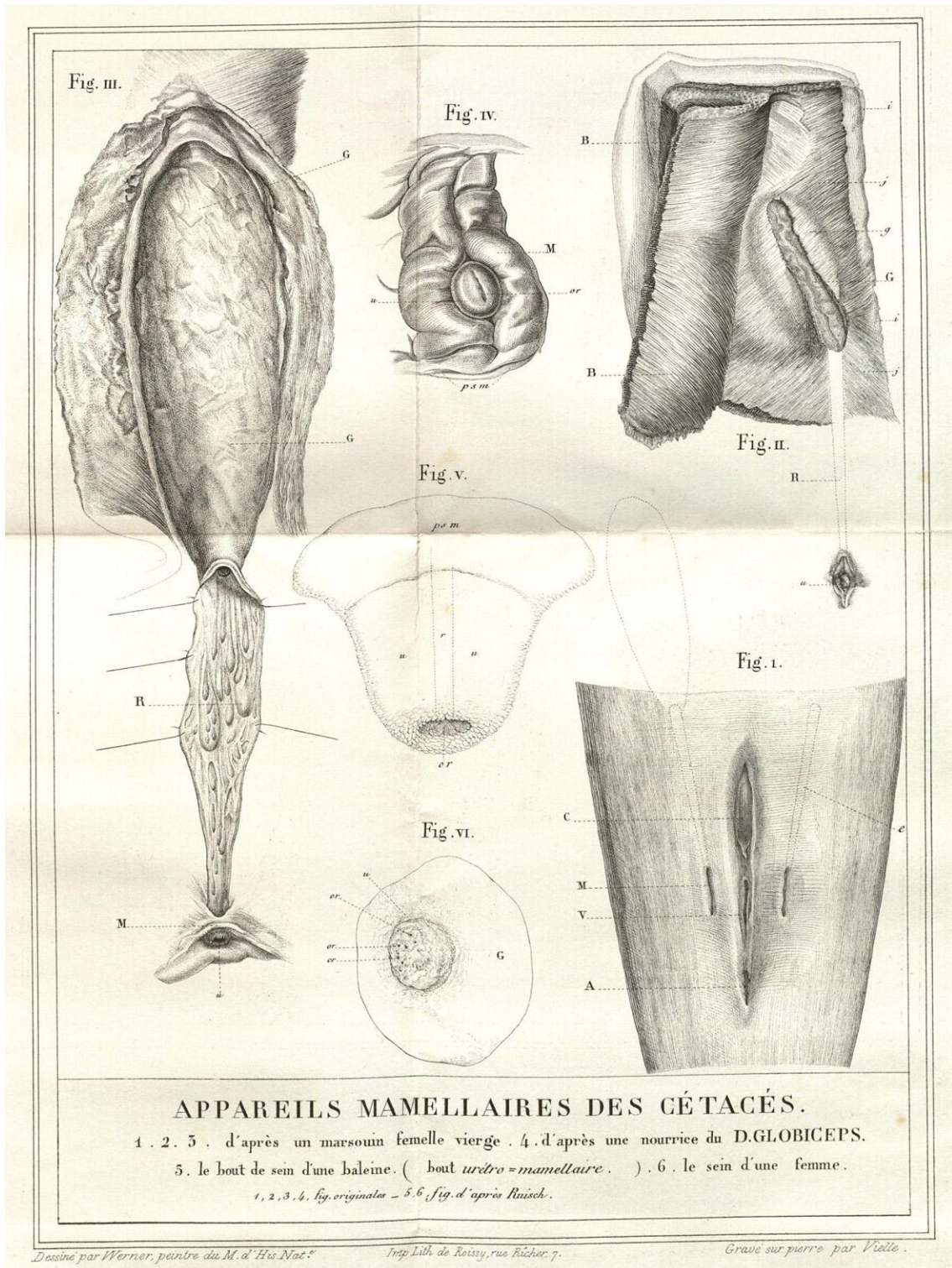
Nouvelle édition. Paris: chez G. Dufour et E. D’Ocagne; et à Amsterdam chez les mêmes, 1821-1824. 5 volumes in 4. Plates for chapter 5.

[E1060]

George Cuvier is represented twice in this exhibition. Although the *Règne animal* is his most famous work, Cuvier played a leading role in the development of paleontology as well as in comparative anatomy overall. His *Ossemens* treats of the bones of both recent and fossil cetaceans; this plate shows remains of baleen or whalebone whales: figure 1 is the skeleton of one of the species of still extant rorquals, exhumed in Lombardy; figures 10-16 are ear bones and part of the skull of another rorqual. The remaining bones are of the skulls and jawbones from several extinct species of whales in the genus *Ziphius* found in Provence and Anvers.

The earliest fossil whales flourished between sixteen and twenty million years ago and appear to have been a group of eel-like animals that gave rise to the cloven-hoofed mammals such as sheep, cattle, and deer.

J.A. Allen says of this important work, “Cuvier, in his classic memoir of the recent and fossil Cetacea, thoroughly sifted the literature of the subject, critically separating, for the first time, the few grains of wheat from the vast amount of chaff that had already accumulated, placing the subject on a solid basis, besides adding, in both his plates and text, a large amount of new and well-considered information respecting the osteology of the species”.



“When by chance these precious parts in a nursing whale are cut by the hunter’s lance, the mother’s pouring milk and blood rivallingly discolor the sea for rods. The milk is very sweet and rich; it has been tasted by man; it might do well with strawberries. When overflowing with mutual esteem, the whales salute *more hominum*.”
{Moby-Dick chapter 87 (The Grand Armada)}

THAR SHE FLOWS

Etienne Geoffroy Saint-Hilaire (1772-1844): *Fragmens sur la st[r]ucture et les usages des glandes mammaires des Cétacés*. Paris: chez l’éditeur; Deville-Cavellin; et au secrétariat de la Société d’histoire naturelle, 1834. 4 volumes. Vol. 4. [C4173]

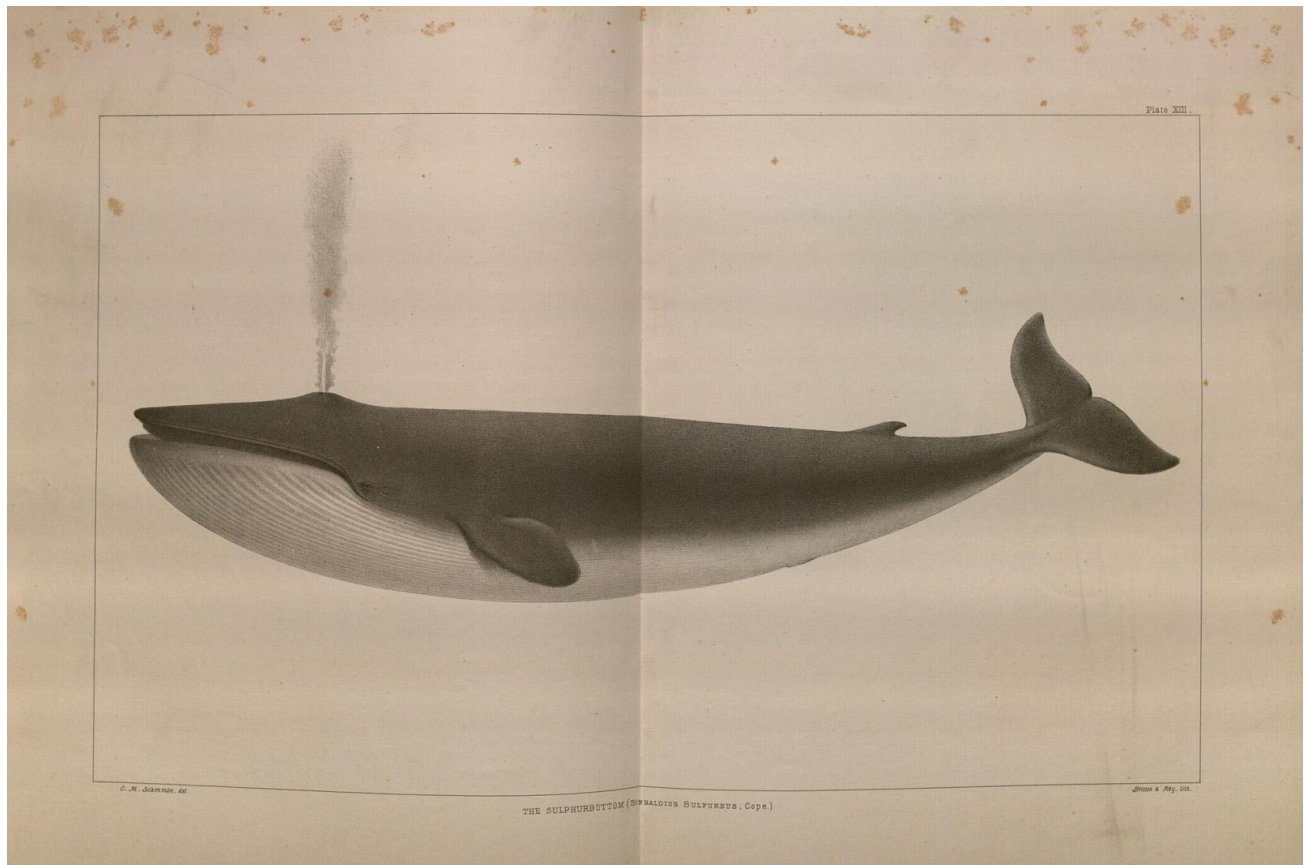
Although at first glance the French title of this plate would suggest that this is a catalog of mammary apparatus, a *Victoria’s Secret* for whales, this volume is more about feeding than fashion. The mammary glands in cetaceans are recessed and not normally visible unless strongly distended. The calves are suckled under water and Mother Whale squirts her milk into the calf’s mouth, unlike terrestrial mammals who pump their milk by means of a sucking reflex, or the massaging action of lips.

Hippos feed either way, on land or under water. Newborn bottlenose dolphins studied in captivity have reportedly taken anywhere from a little over an hour to up to four hours to figure out what’s what and what’s where in order to get their first breakfast.

Although Melville may think whale’s milk is suitable to pour over one’s Captain Crunch, yaaarg, at least one cetologist who keeps abreast of these things reports that its taste suggests a mixture of fish, liver, milk of magnesia, and oil. Incidentally, like his human and other mammalian male counterparts, Father Whale is also outfitted with both the internal and external accoutrements of milking equipment.

Geoffroy Saint-Hilaire was a brilliant French naturalist and anatomist who as a student at the height of the French Revolution heroically saved a number of teachers and students from execution. He later worked with Georges Cuvier, and

was a member of the scientific expedition that accompanied Napoleon's armies to Egypt. In later years he split with Cuvier entirely on the question of evolutionary concepts; Cuvier denied such ideas, whereas Geoffrey Saint-Hilaire helped create a scientific audience receptive to the biological revolution led by Charles Darwin.



(Sulphur Bottom)-Another retiring gentleman, with a brimstone belly, doubtless got by scraping along the Tartarian tiles in some of his profounder divings. He is seldom seen; at least I have never seen him except in the remoter southern seas, and then always at too great a distance to study his countenance. He is never chased; he would run away with rope-walks of line. Prodigies are told of him. Adieu Sulphur Bottom! I can say nothing more that is true of ye, nor can the oldest Nantucketer.

{Moby-Dick chapter 32 (Cetology)}

MELVILLE WAS HIS MIDDLE NAME

Charles Melville Scammon (1825-1911): *The marine animals of the northwestern coast of North America, described and illustrated: together with an account of the American whale fishery.* San Francisco: John H. Carmany; New York: G.P. Putnam, 1874. [Ellis Omnia E205]

Although Scammon's Lagoon in California is now a tourist trap, it bears the name of the most famous of latter 19th century American whaling captains and writers about whales, Charles Melville Scammon. This book has become a classic; unfortunately all unsold copies were lost in the San Francisco earthquake and fire of 1906.

Scammon describes not only the whale fishery, but gives an account of the natural history of whales from a scientific standpoint. His descriptions of the gray whale *Eschrichtius robustus* were, until recently, almost the sole authority on that species. Nevertheless because as Melville notes above "he is never seen", 'he' meaning Old Sulphur Bottom or the blue whale *Balaenoptera musculus*, and it was certainly seldom seen by this exhibit maker, we decided to feature the blue rather than the gray, for no whale exhibit would be complete without at least one representation of this largest of all animals EVER to inhabit the earth, dinosaurs included.

The blue is the equivalent in weight to twenty five elephants (one hundred and fifty tons), grows to be more than ninety feet long, has a heart the size of a VW Beetle and requires two tons of food (krill) a day. Because it moves so quickly and sinks when dead, it was definitely NOT the right whale to catch previous to the 20th century and would have been a prime escort to take you on a 'Nantucket sleighride'!

With the invention of the explosive harpoon gun (at about the time that Scammon wrote this book), as well as a way to pump air into a carcass to keep it afloat, the blue whale became the preferred article during the first half of the 20th century. Ironically, it was the severe reduction of the blue and the great threat to the moneyed interests as well as the biological ones, that inspired the upsurge in cetological research beginning with the second quarter of the 20th century. The

blue whale is still an endangered species but small herds are to be found in all the oceans of the world.



“When you see him ‘quid’ said the savage, honing his harpoon in the bow of his hoisted boat, ‘then you quick see him ‘parm whale’.”

{Moby-Dick chapter 61 (Stubb Kills a Whale)}

BITE ME

Francois Boussuet (1520-1572): *De natura aquatiliu carmen*.

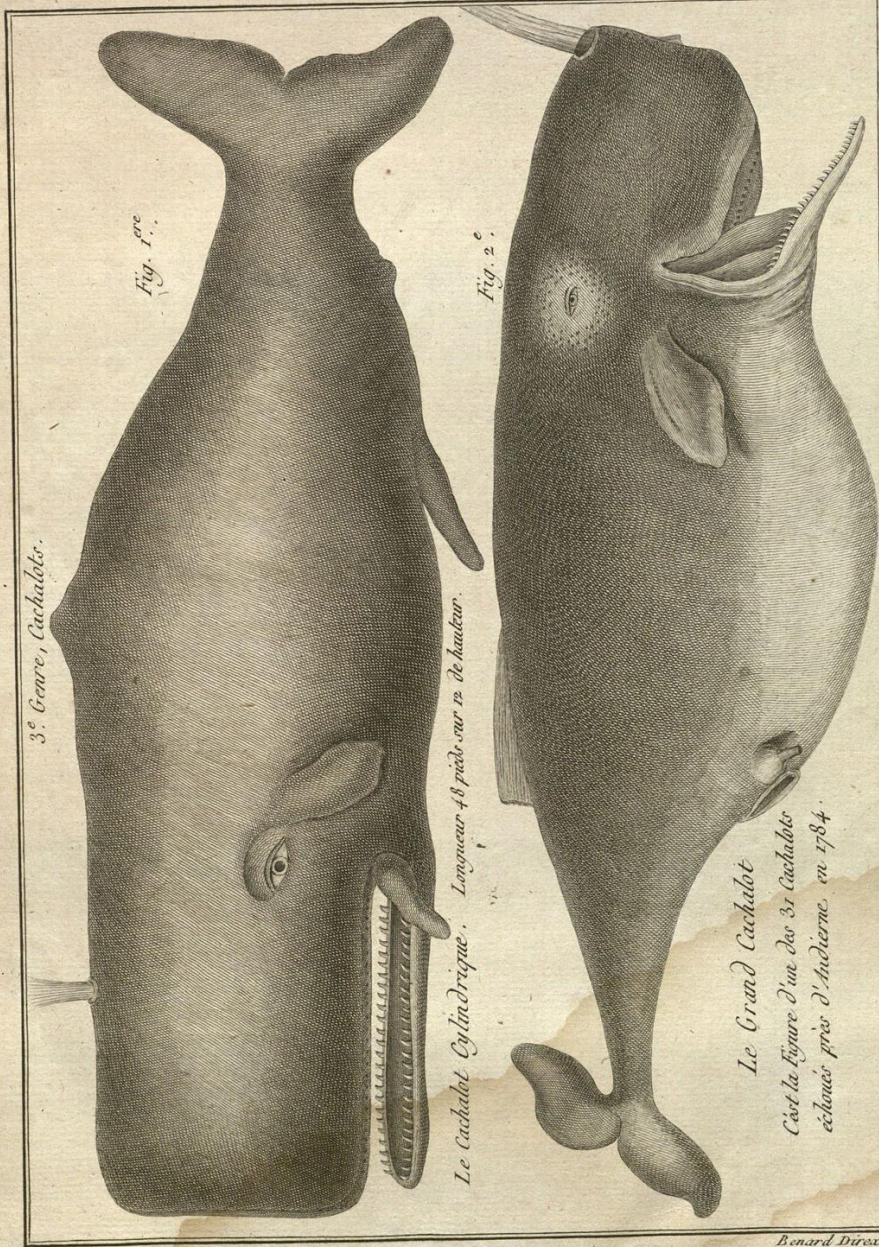
Lugduni: apud Matthiam Bonhome, 1558.

[Summerfield C1407]

The toothed whale's diet is altogether different from that of the baleen whales who feed on krill and plankton. The Odontocetes from sperm whale on down to porpoise, eat fish and squid, mostly squid (not to be confused with their close relatives the octopuses and cuttlefish). Even the killer whale, in whose stomach are sometimes found penguins and seals, prefers squid. Fresh-water dolphins such as the susu eat mostly shrimp and catfish; they use their sharp teeth to grub up worms and crayfish from the river mud. Sperm whales like Moby Dick prefer the giant squid but will eat the smaller species they can bolt down whole.

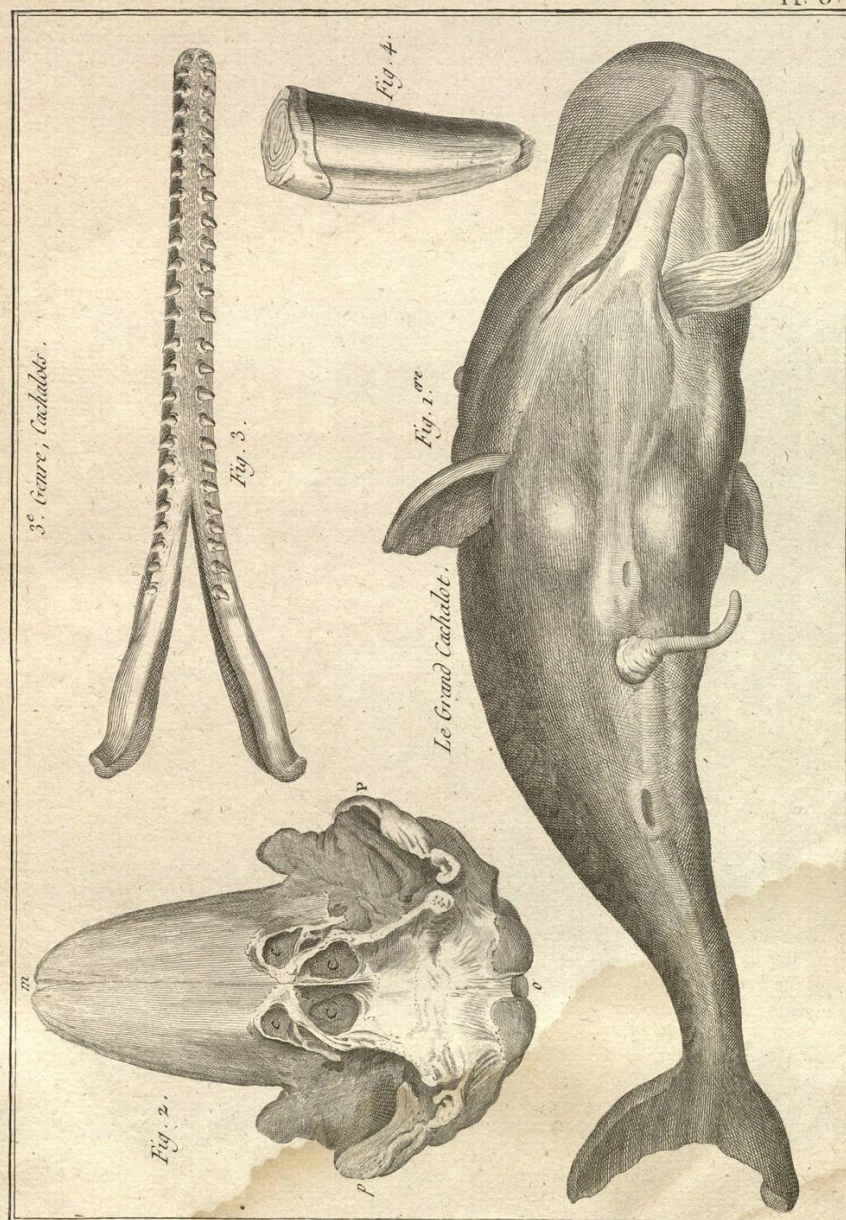
The sperm's catches are never a quid to be chewed; his conical teeth are not for chewing but rather for grasping, although on occasion he does use them to bite a giant squid into pieces small enough to swallow. Squid of all sizes are so difficult for the naturalist to capture that most of what we know of them is from study of the contents of whales' stomachs. No one has yet come up with a better way of obtaining squid specimens than hunting the sperm whale.

Boussuet's *De natura aquatiliu carmen* is a verse commentary on Rondelet's *De piscibus marinis*, published four years earlier. The squid, genus *Loligo* in this instance, is pictured to the left; the octopus, to the right, is only rarely found in a whale's stomach.



HISTOIRE NATURELLE, Cétacés.

Bonard Duvet.



HISTOIRE NATURELLE, Cétacés.

Bonard Delant.

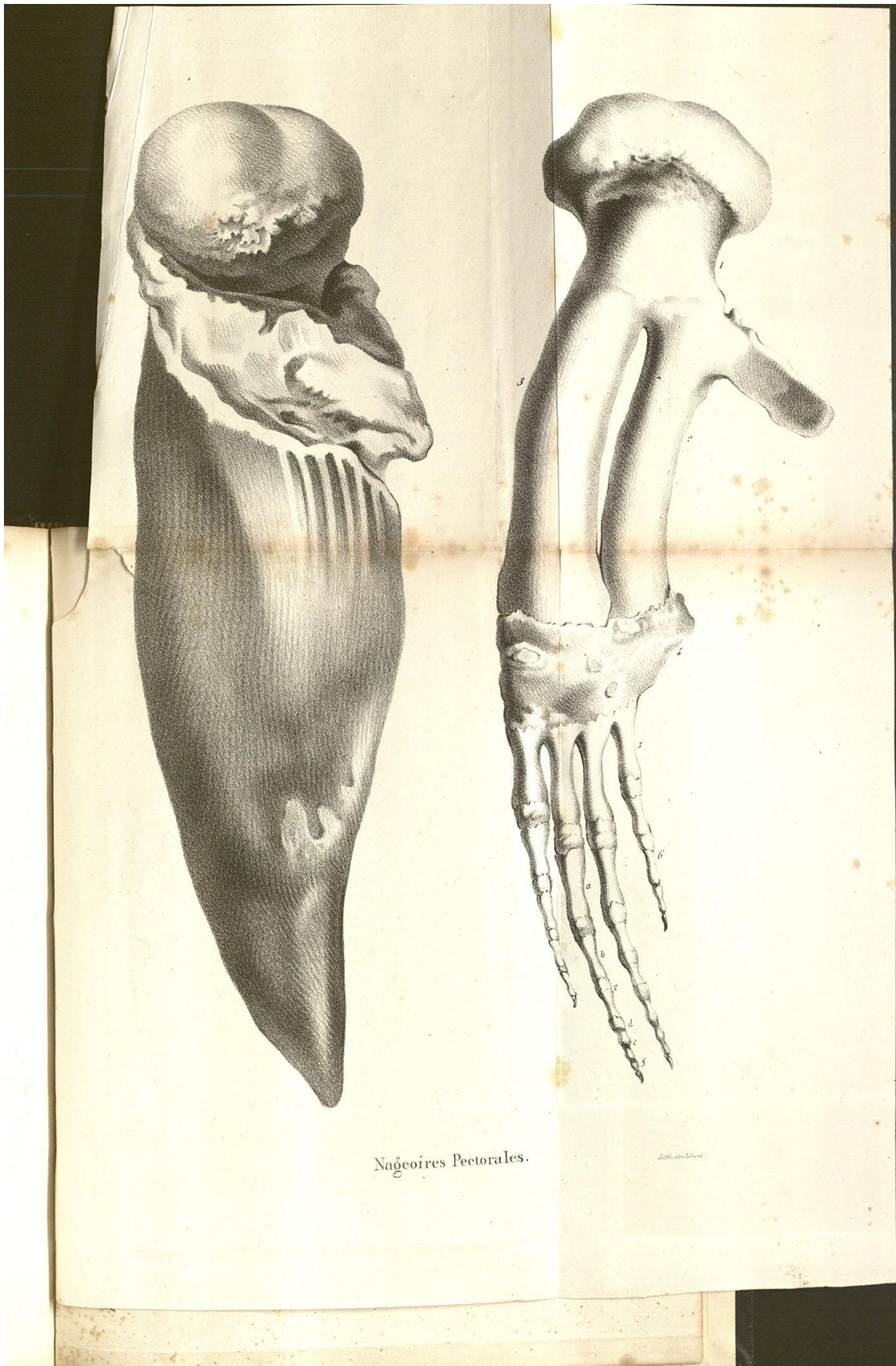
“But come out now, and look at this portentous lower jaw, which seems like the long narrow lid of an immense snuff box, with the hinge at one end, instead of one side. ...

In most cases this lower jaw - being easily unhinged by a practiced artist - is disengaged and hoisted on deck for the purpose of extracting the ivory teeth, and furnishing a supply of that hard white whalebone with which the fishermen fashion all sorts of curious articles including canes, umbrella sticks, and handles to riding-whips.”
{Moby-Dick chapter 74 (The Sperm Whale’s Head – Contrasted View)}

PRINTS OF WHALES

Pierre Joseph Bonnaterre (1752?-1804): *Tableau Encyclopédique et méthodique des trois règnes de la nature*. Paris: chez Panckoucke, 1789.
Vol. 4: *Cétologie*. [Ellis Omnia E288]

Bonnaterre’s *Tableau*, published as a supplement to the *Encyclopédie méthodique*, though essentially a compilation, had some success in straightening out the existing confusion in cetology and became the authority for fifteen years until Lacépède’s work appeared in 1804; but with the exception of his Grand Cachalot (plate 7, figure 2) all his figures were copied from previous authors. The Cachalot cylindrique was copied from Johann Anderson; in fact both of these are *Physeter macrocephalus*, the sperm whale: in this case Bonnaterre was perpetuating the old Sibbaldian myth that there was more than one species of *Physeter*. Plate 6 shows the bottom jaw of the sperm whale; in the living sperm the jaw is often found bent at an odd angle, for it is so fragile that it is easily broken, but heals again and doesn’t necessarily interfere with the whale’s ability to grasp food. One only wonders how many sperms have died from starvation after a jaw-endangering battle with beast or boat.



“But it may be fancied, that from the naked skeleton of the stranded whale, accurate hints may be derived touching his true form. Not at all. For it is one of the more curious things about this Leviathan, that his skeleton gives very little idea of his general shape ... This peculiarity is strikingly evinced in the head ... It is also very curiously displayed in the side fin, the bones of which almost exactly answer to the bones of the human hand, minus only the thumb. This fin has four regular bone-fingers, the index, middle, ring and little finger. But all these are permanently lodged in their fleshly covering ... ‘However recklessly the whale may sometimes serve us’, said humorous Stubb one day, ‘he can never be truly said to handle us without mittens. {Moby-Dick chapter 55 (Of the Monstrous Pictures of Whales)}

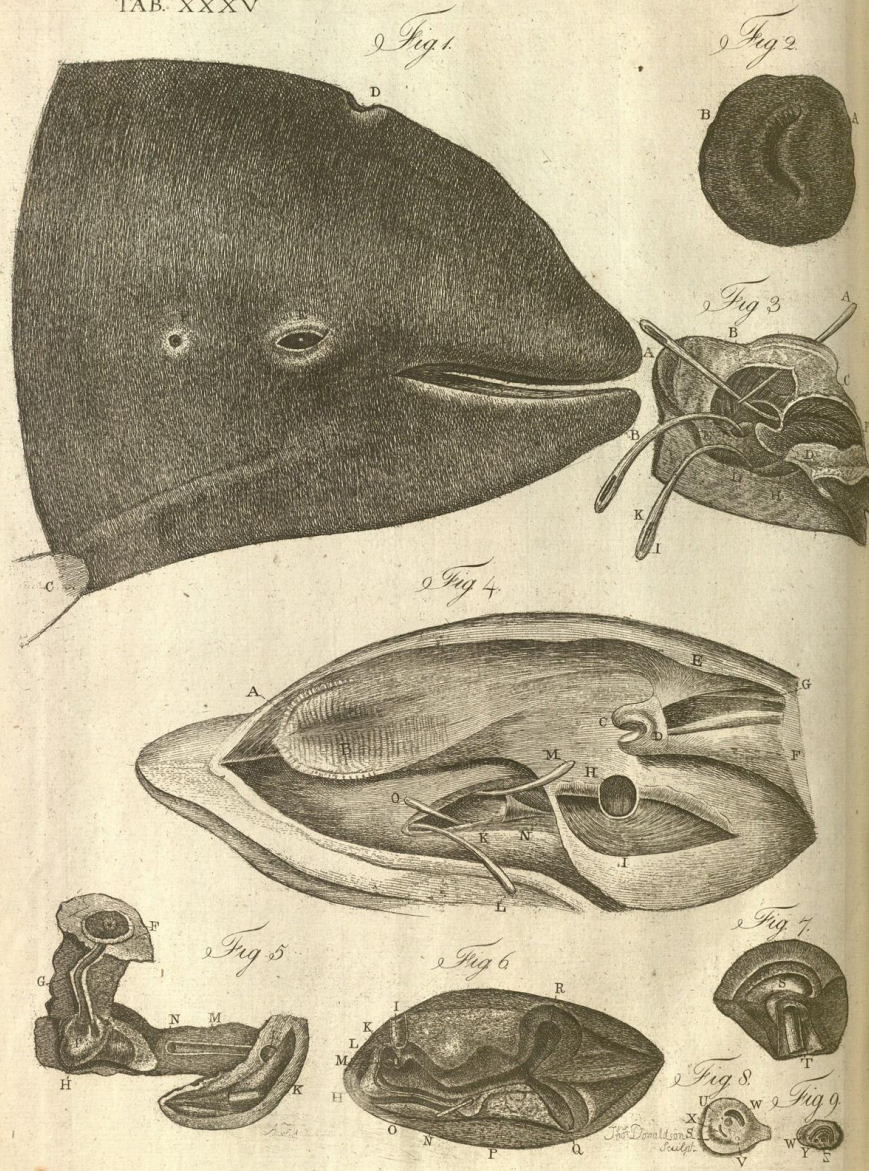
GOTT MIT UNS: WE GOT MITTENS TOO

J. B. J. Dubar: *Ostéographie de la baleine*. Bruxelles: Laurent, frères, 1828. [Ellis Omnia D153]

Melville notes that the whale’s skeleton gives one very little idea of his general shape; it could also be said that his shape gives very little idea of his skeleton, which offers clues of his proper place in the evolutionary picture. When biologists study body structure and compare it with that of other animals, they can see the changes that have taken place to change the whale from land-to-water animal.

In the evolution of whales, modification rather than replacement has been the general rule; one exception is the replacement of legs by the fluked tail. The whale is streamlined and ideally adapted for life in the sea, and although rudimentary hind-limbs appear in the embryo, all that is left when the whale is born are two bones buried in muscle, unattached to the backbone; vestiges of former hind-legs have sometimes shown up as pelvic fins or even stumps. His land ancestor’s front legs have shortened in the whale, and flattened into the flipper that articulates only at the shoulder, but is flexible under water. What we don’t see from the outside are all the bones of the basic vertebrate arm and hand: the humerus, radius and ulna with all five fingers, are still present inside a big whaleskin mitten.

TAB. XXXV



“(Huzza Porpoise) ... Their appearance is generally hailed with delight by the mariner. Full of fine spirits, they invariable come from the breezy billows to windward. ... They are accounted a lucky omen. If you yourself can withstand three cheers at beholding these vivacious fish, then heaven help ye; the spirit of godly gamesomeness is not in ye. ... But the next time you have a chance, watch him; and you will then see the great sperm whale himself in miniature.”

{Moby-Dick chapter 32 (Cetology)}

SOUNDINGS

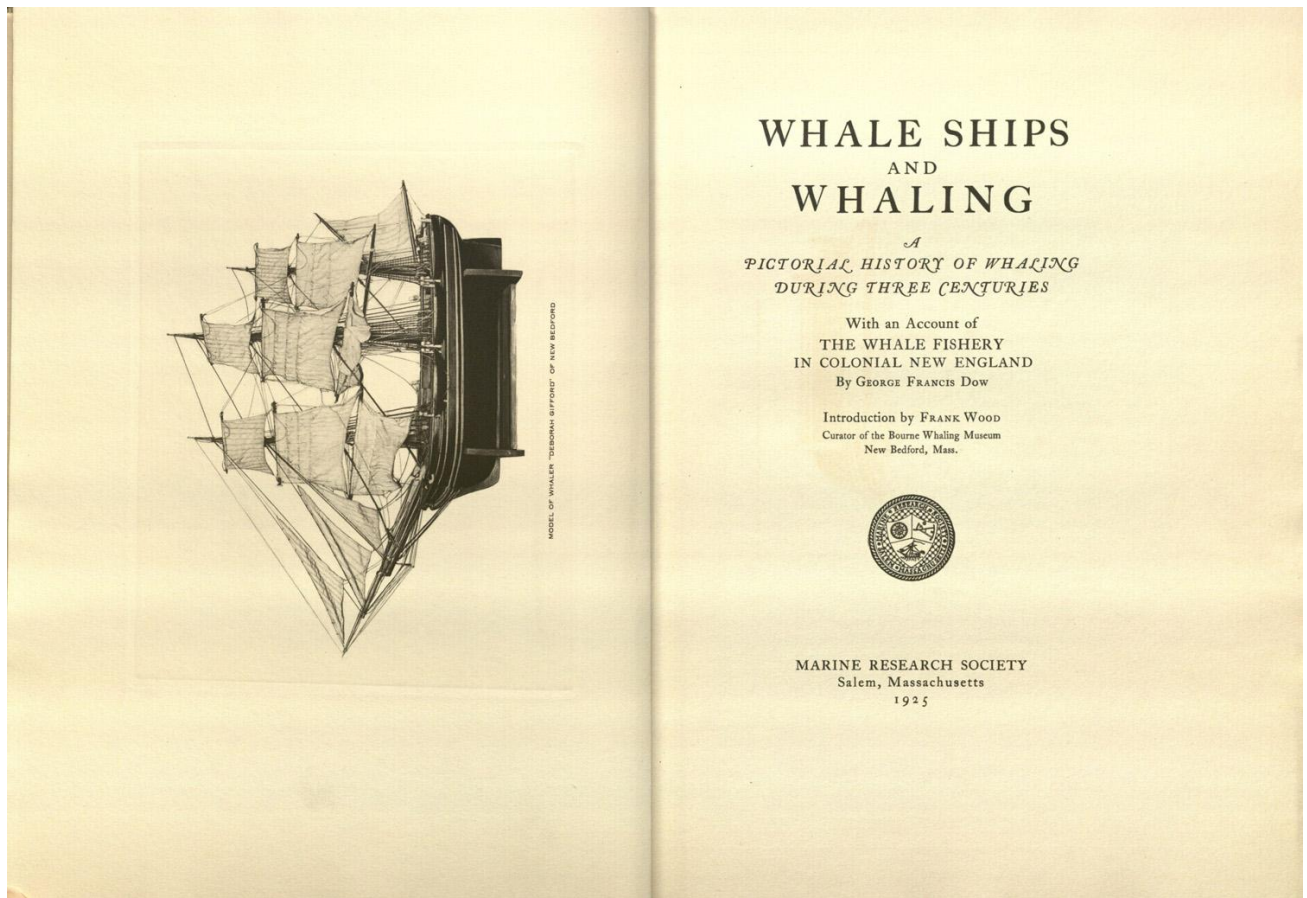
Alexander Monro (1733-1817): *The structure and physiology of fishes explained*. Edinburgh: printed for Charles Elliot, 1785. [Ellis Omnia H58]

Up until the middle of the 20th century many zoologists held, against evidence to the contrary, that whales had a poor sense of hearing. Cetologists had been doing anatomical studies on the hearing apparatus of cetaceans since the 18th century, and in 1868 Richard Owen noted that the auditory nerve is both large and elaborate; why wouldn't it be used? Whalers have always known that loud clattering noises on deck would scare a whale away.

In fact cetaceans have a middle ear, an internal ear and an external though invisible ear, whereas fish have only an internal ear and cannot locate the origin of a sound that they hear. The cetacean internal ear has well developed sensory cells like those of bats, mice, and cats – all animals that hear ultrasonic noises. Today's whalers use this characteristic of the whale against him by broadcasting ultrasounds under water to keep him running until exhaustion brings him to the surface.

Alexander Monro was an anatomist at Edinburgh University (as were his father and son, all of the same name); it was only in the latter years of the 18th century that truly original work began to be done again with cetaceans after almost a century, chiefly by anatomists such as Monro and Hunter. The 18th century was the great age of the compiled natural histories such as those by Pierre Joseph Bonnaterre and Henri Louis Duhamel du Monceau, but the whale sections of these works were largely culled from others. Monro's work was his own.

Undersea treasure



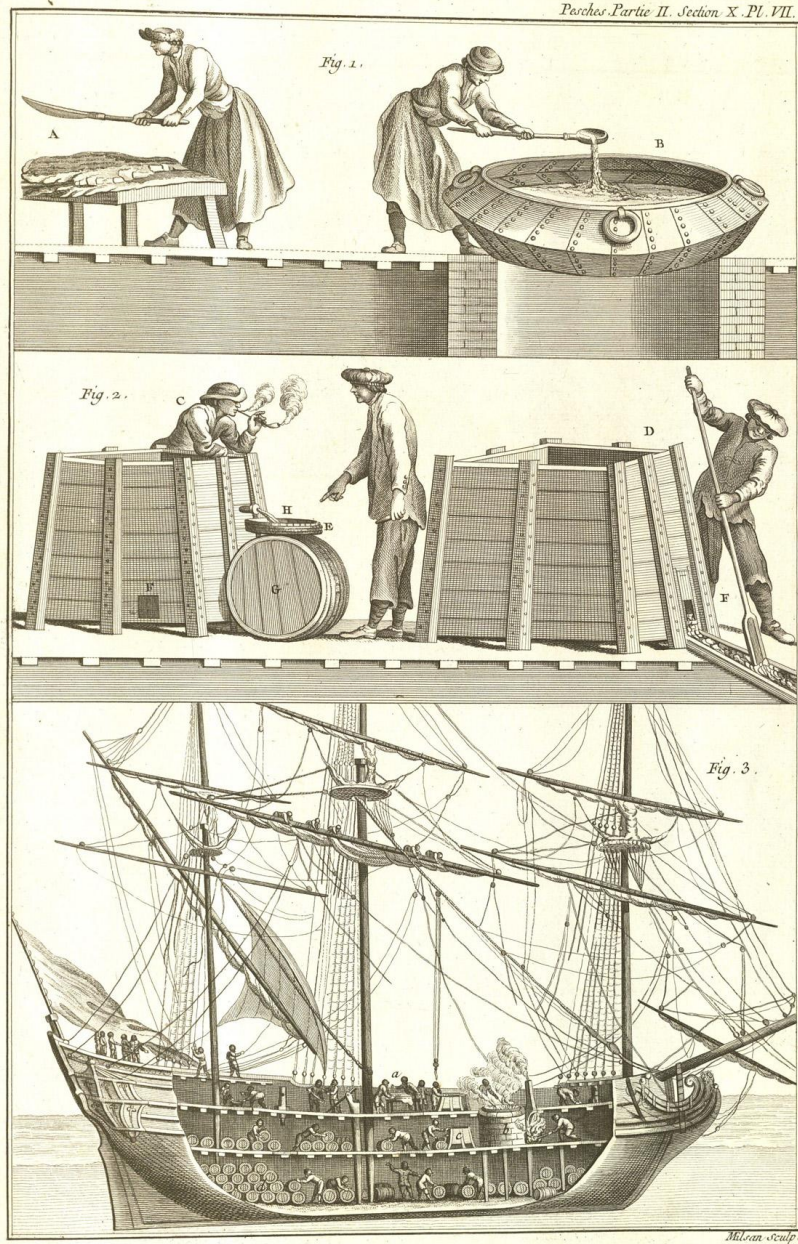
“For many years past the whaleship has been the pioneer in ferreting out the remotest and least known parts of the earth. She has explored seas and archipelagoes which had no chart, where no Cook or Vancouver had ever sailed. If American and European men-of-war now peacefully ride in once savage harbors, let them fire salutes to the honor and the glory of the whale-ship, which originally showed them the way ...”
[Moby-Dick chapter 24 (The Advocate)]

TINKER, SAILOR, COOPER, WHALER

George Francis Dow (1868-1936): *Whale ships and whaling*, a pictorial history of whaling during three centuries, with an account of the whale fishery in colonial New England. Introduction by Frank Wood. Salem, Mass.: Marine Research Society, 1925. [Ellis Omnia D94]

The traditions of the American sperm whale fishery during its heyday are so romantic and interesting a part of our history that much energy has been devoted to preserving everything associated with the industry, from whaling songs to scrimshaw. Today there are numerous museums and historical societies devoted to whaling history, particularly in Massachusetts: at New Bedford; Salem; Sharon; and at Mystic where one can see a full-rigged whaling ship. Economic history of New England in the 19th century *was* whaling history : the shipbuilding, coopering, blacksmithing, and rope-making trades were all fostered by and dependent upon whaling.

In addition to the novels and personal accounts associated with whaling, numerous scholarly histories have been written and are still being written. Alexander Starbuck's 1878 *History of the American whaling fishery* is a government publication detailing the particulars of the voyages of every American whale boat from 1784 to 1876. G.F. Dow's book is one of the many publications sponsored by the Salem Marine Research Society. It is packed with interesting illustrations. In spite of all the scholarly work, one noted Dutch cetologist remarks sadly, "that epoch, so rich in profits and adventure, had yet been rather disappointing from the scientific point of view."



“Look at the sailor, called the mincer, who now comes along, and assisted by two allies, heavily backs the grandissimus, as the mariners call it, and ... staggers off with it ... ; The mincer now stands before you invested in the full canonicals of his calling. ...

“Arrayed in decent black; occupying a conspicuous pulpit; intent on Bible leaves; what a candidate for an archbishoprick, what a lad for a Pope were this mincer!”
{Moby-Dick chapter 95 (The Cassock)}

“In a word, after being tried out, the crisp, shriveled blubber, now called scraps or fritters, still contains considerable of its unctuous properties. These fritters feed the flames. Like a plethoric burning martyr, or a self-consuming misanthrope, once ignited, the whale supplies his own fuel and burns by his own body. Would that he consumed his own smoke! For his smoke is horrible to inhale, and inhale it you must, not only that, but you must live in it for the time. It has an unspeakable, wild, Hindoo odor about it, such as may lurk in the vicinity of funeral pyres. It smells like the left wing of the day of Judgment; it is an argument for the pit.
{Moby-Dick chapter 96 (The Try-Works)}

CUTTING IN AND TRYING OUT

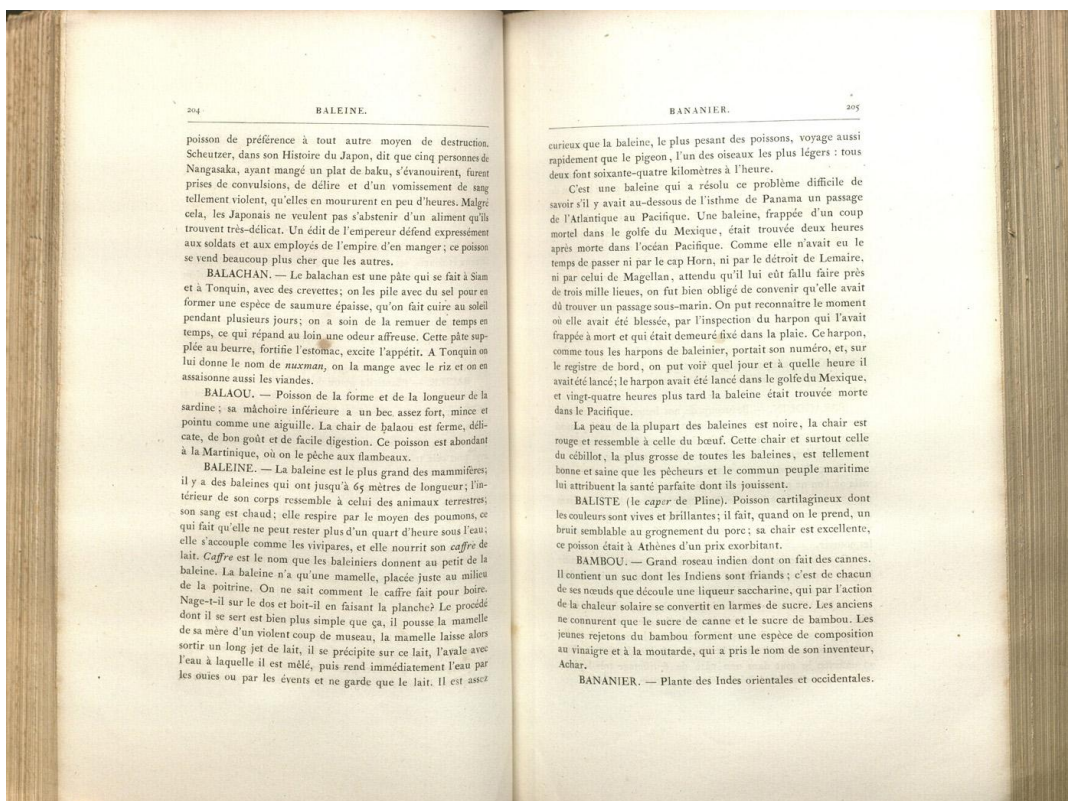
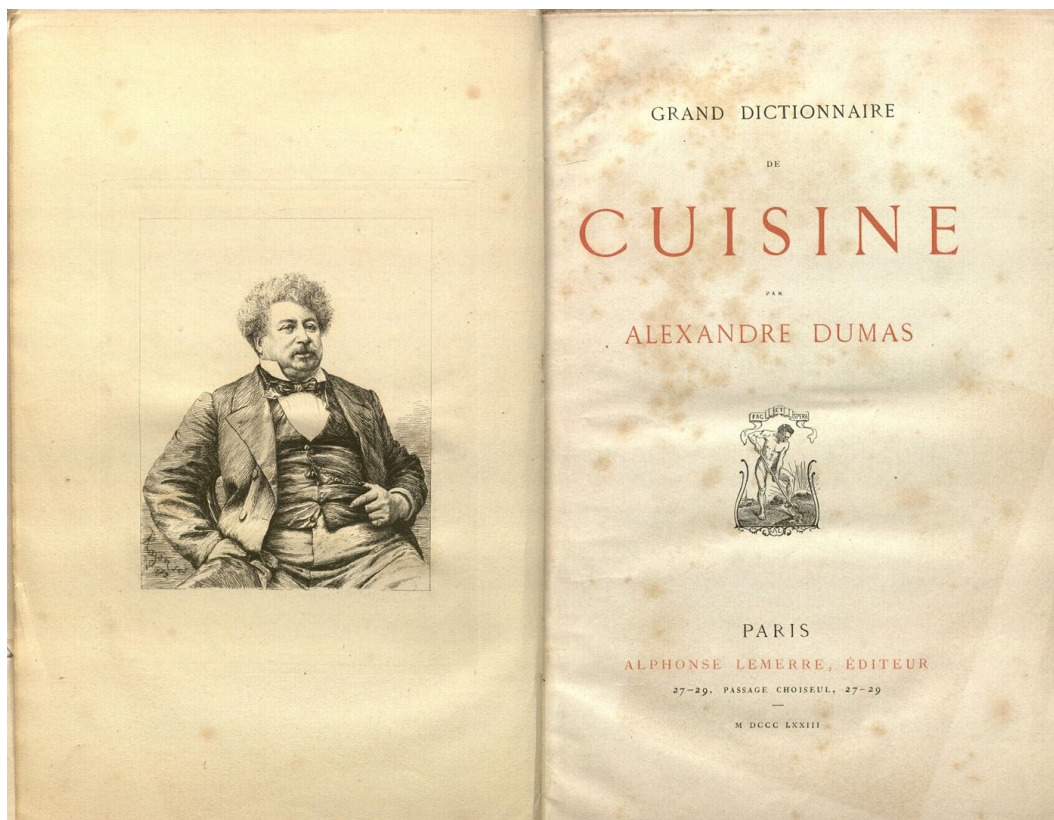
Henri Louis Duhamel du Monceau (1700-1781?): *Traité général des pesches*. A Paris: chez Saillant & Nyon; Desaint, 1769-1782. 4 volumes. Vol. 4, pt. 2: *Traité général des pêches*. A Paris: chez veuve Desaint, 1782.
[Ellis Omnia H17]

Duhamel du Monceau was a French botanist, agriculturist, engineer, and tree expert, He was the first, in 1736, to show the distinction between the alkalis potash and soda.

In this work Monceau discusses fisheries, including the whale fishery; he details the capture and the butchering of the whale and the rendering of its blubber into oil. This illustration shows the 'trying out' part of the 'cutting in' and 'trying out' process, usually taking a day or two with the crew working around the clock. The whale was brought to starboard, head pointing aft, secured to the ship by chains around his flukes: 'flensers' cut into the blubber making strips about 3' by 15' called 'blanket pieces' and hoisted them on board. When the innards were exposed the flensers probed for ambergris in the whale's intestines.

If it was a sperm whale, a bucket was lowered into the 'case', the natural reservoir in his head containing hundreds of gallons of waxy spermaceti, so fine that after a quick scalding it could be poured directly into the casks. At upper left blanket pieces that have already been cut into smaller 'horse pieces' are in turn being spliced into 'Bible leaves' and thrown into the try-pots by the mincer. The mincer usually wore a kind of overalls made from the skin of the whale's penis to protect him from hot oil. Another worker ladled the oil into a colling tank before casking it.

To the right, shriveled and spent Bible leaves or 'fritters' are used to keep the fires going. In the bottom picture the full casks are being put into stowage, where they could sit for as long as four years without spoiling. If the whale was a right whale his whalebone plates and baleen would be salvaged; if a sperm, his teeth would be kept for doing scrimshaw in idle hours.



“That mortal man should feed upon the creature that feeds his lamp, and, like Stubb, eat him by his own light, as you may say; this seems so outlandish a thing ...”
{Moby-Dick chapter 6 (The Street)}

“The fact is, that among his hunters at least, the whale would by all hands be considered a noble dish, were there not so much of him; but when you come to sit down before a meat-pie nearly one hundred feet long, it takes away your appetite. Only the most unprejudiced of men ... nowadays partake of cooked whales; but the Esquimaux are not so fastidious ... and have rare old vintages of prime old train oil.”
{Moby-Dick chapter 65 (The Whales as a Dish)}

MOBY DICTIONNAIRE

Alexandre Dumas (1802-1870): *Grand dictionnaire de cuisine*. Paris: Alphonse Lemerre, 1873. [D2013]

This French author of *The Count of Monte Cristo* and *The three musketeers* also compiled this dictionary of cuisine in which he suggests ‘baleine’ as a substitute for beef. The western palate hasn’t been completely sold on whale meat, however, and when this exhibition was first mounted in 1985 the only country whose primary purpose in whaling was to provide meat for human consumption, was Japan.

Whale meat products are used in more than just the Japanese market however; meat meal, bone meal, and bone powder are constituents of animal food, and bone meal is used in fertilizers, thus contributing indirectly to the human food supply. Whale liver-oil is ranked highest among oils of marine animals in Vitamin A content, even higher than the cod-liver-oil given to this writer as a scrawny child in order to help fatten her up – I loved the stuff and looked forward to my daily teaspoonful. In the Arctic the skin of the narwhal supplies the Eskimo with his MDR of the anti-scorbutic Vitamin C.

Modern folklore has it that in 1893 a certain Norwegian, a whale meat enthusiast, served members of the Press in Brussels an all whale meat dinner. Touted as of great benefit to the working class because it was cheap, providing all the flavor of

beef at one-third the price, the meal attracted much attention: the menu included *fillet de baleine, sauce d'anchois, épigramme de baleine à la Béchamel*, and *chaud-froid de baleine*, with *sauce Gröenlandaise*.

If indeed it was scrumptious, the newsmen don't seem to have spread the word.



“Ahab had purposely sailed upon the present voyage with the one and only and all-engrossing object of hunting the White Whale. Had any of his old acquaintances on shore but half dreamed of what was lurking in him then, how soon would their aghast and righteous souls have wrenched the ship from such a fiendish man! They were bent on profitable cruises, the profit to be counted down in dollars from the mint. He was intent on an audacious, immitigable, and supernatural revenge.”

{Moby-Dick Chapter 41 (Moby Dick)}

ISHMAEL CAN YA SPARE A HA'PENNY?

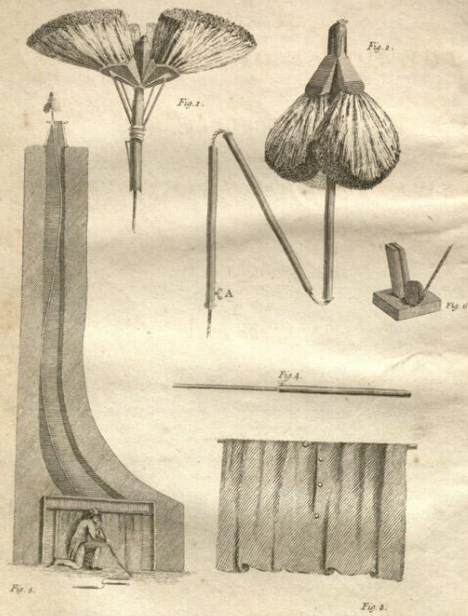
J. Fowler, oil merchant of London: *Half-penny trade token*. London, 1794. [worn condition of our coin has necessitated copying the image of another of the same minting] [Pryce P1:30]

18th and 19th century shopkeepers and tradesmen issued trade tokens in order to fill the need for small change among the poor. The British government had issued gold and silver regal coinage, but copper coins such as had been used in earlier centuries were considered unfit to bear the stamp of the king's head.

For a variety of reasons the body politic was not able to come up with a small-value coin, and various attempts at using base metals resulted in abuses and counterfeit currency. Supply was never able to keep up with growing number of wage earners, and the consequent need for money for small transactions. Employers, for instance, might be forced to pay several men with one note; the places workers went to get change would force them to buy unneeded articles or to take the necessities such as food on credit with a high interest rate.

18th century tokens like this one usually had stamped on them the issuer's promise to pay the value of the coin and listed the places where it was valid. This token was issued by John Fowler, oil merchant and tinplate worker of London. It is so worn that one can barely make out a boatload of whalemens about to harpoon a spouting whale. On the other side of this 1794 half-penny is a bust of Neptune. When trade tokens were made illegal in 1817 by the Act of Suppression and the issuance of regal small change, the poor were again the losers with pockets full of unredeemable tokens.

W. G. Swarts Chimney Cleanser



See Page 232.

REPORT
FROM
THE COMMITTEE
OF THE HONOURABLE
THE HOUSE OF COMMONS
ON
The Employment of Boys
IN
SWEEPING OF CHIMNEYS;
TOGETHER
WITH THE MINUTES OF THE EVIDENCE
Taken before the Committee,
AND
AN APPENDIX.

ORDERED BY THE HOUSE OF COMMONS TO BE PRINTED,
June 23, 1817.

PUBLISHED UNDER THE DIRECTION OF THE SOCIETY FOR SUPERSADING THE
NECESSITY OF CLIMBING BOYS:

WITH
NOTES AND OBSERVATIONS;
A COMPLETE LIST OF PERSONS USING THE MACHINE,
AND
A DESCRIPTIVE ENGRAVING OF IT.

LONDON:
PRINTED FOR BALDWIN, CRADOCK, AND JOY,
47, PATERNOSTER ROW.
1817.

“What of it, if some old hunks of a sea-Captain orders me to get a broom and sweep down the decks? What does that indignity amount to, weighed, I mean, in the scales of the New Testament? Do you think the archangel Gabriel thinks anything the less of me, because I promptly and respectfully obey that old hunks in that particular instance? Who ain’t a slave? Tell me that. ; ... everybody else is one way or other served in much the same way – either in a physical or metaphysical point of view ... so the universal thump is passed round, and all hands should rub each other’s shoulder-blades, and be content.”

{Moby-Dick chapter 1 (Loomings)}

MOBY DICKENS

Society for Superseding the Necessity of Climbing Boys, London.

Report from the Committee of the ...House of Commons on the employment of boys in sweeping of chimneys. London: Printed for Baldwin, Cradock and Joy, 1817.

[O’Hegarty C966]

When a whale’s heart and lungs had been hit and he was spouting a bloody mist, it was said that ‘his chimney was on fire’.

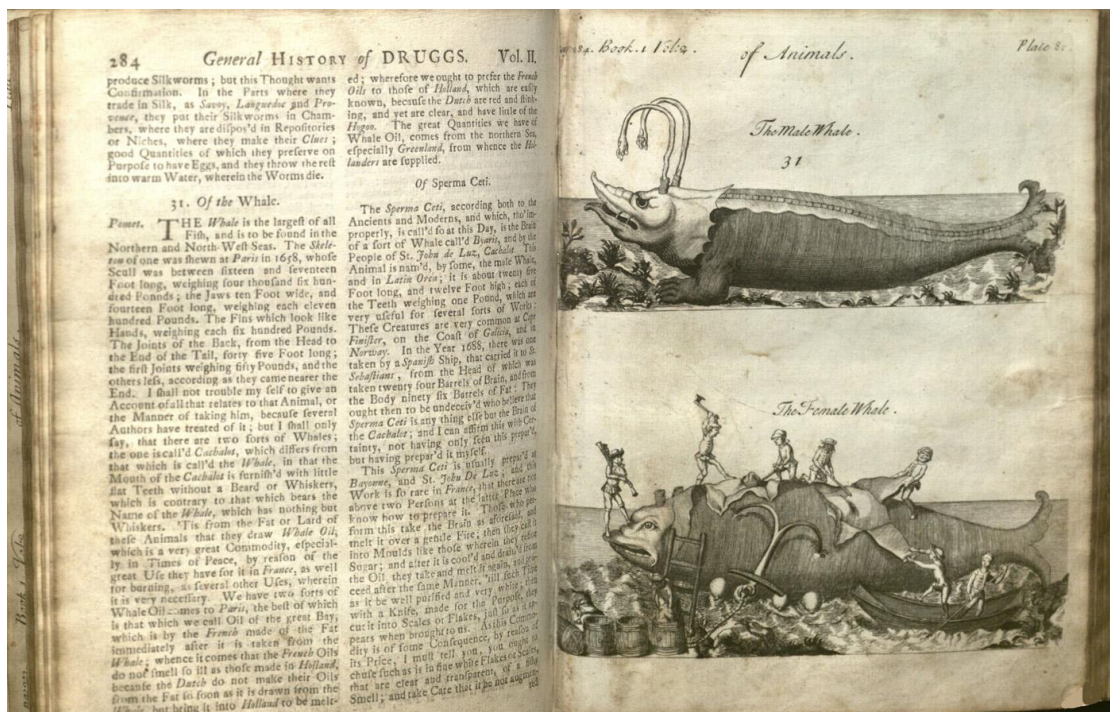
Narrow flues, coal fires, and the peculiar labyrinthine construction of English chimneys created an increasing demand during the 18th century for climbing boys, or chimney sweeps. The result was horrible suffering, often permanent damage or even death inside the chimney for countless boys, and girls as well. There are real horror stories, Charles Dickens’ *Oliver Twist* among them, of the cruel methods used to induce these human brooms into the foul-smelling chimneys from which they emerged more often than not bloody and limp, dead or dying, or in the process of developing the most dreadful diseases. It was a sociological and economic problem that wasn’t solved until near the end of the 19th century.

As early as 1796 the Society for the Encouragement of Arts, Manufactures, and Commerce had offered a reward to the person who could invent a machine to

clean flues and thus alleviate suffering. Nothing came of it but the offer was revived with the founding of the Society for Superseding the Necessity of Climbing Boys in 1803, and in 1805 one George Smart won the prize.

Although this exhibit maker could not find direct evidence that Mr. Smart used baleen in the brooms and brushes of his invention (without getting into a dirty, little used flue of the Chimney of Research), it is known that whale baleen was used for brushes of all sorts, including those that sweepers used. It would have been ideally suited for Smart's contraption because of the differences in baleen among the baleen whales: it could be long or short, very soft or quite stiff, but still flexible, depending on the species, and of course one could make all manner of variation of Smart's design, adapted to each particular chimney.

All of the suffering, for both boys and whales, was probably unnecessary, but today, thanks to laws, whales no longer supply baleen for the Fuller Brush man. Is this why Fuller Brush went belly-up and filed for Chapter 11 bankruptcy in February 2012?



In those times ... spermaceti was exceedingly scarce, not being used for light, but only as an ointment and medicament. It was only to be had from the druggists as you nowadays buy an ounce of rhubarb.
{Moby-Dick chapter 32 (Cetology)}

PLUCKY PIERRE ON DRUGGS

Pierre Pomet (1658-1699): *A compleat history of druggs*. 2nd ed.
London: Printed for R. and J. Bonwicke, and R. Wilkin; John Walthoe
and Tho. Ward, 1725. [C580]

Pomet, well known botanist and chemist, and ‘Chief Druggist to King Louis XIV’, recommends soaps and skin cleansers made from spermaceti to ‘Ladies of Quality’.

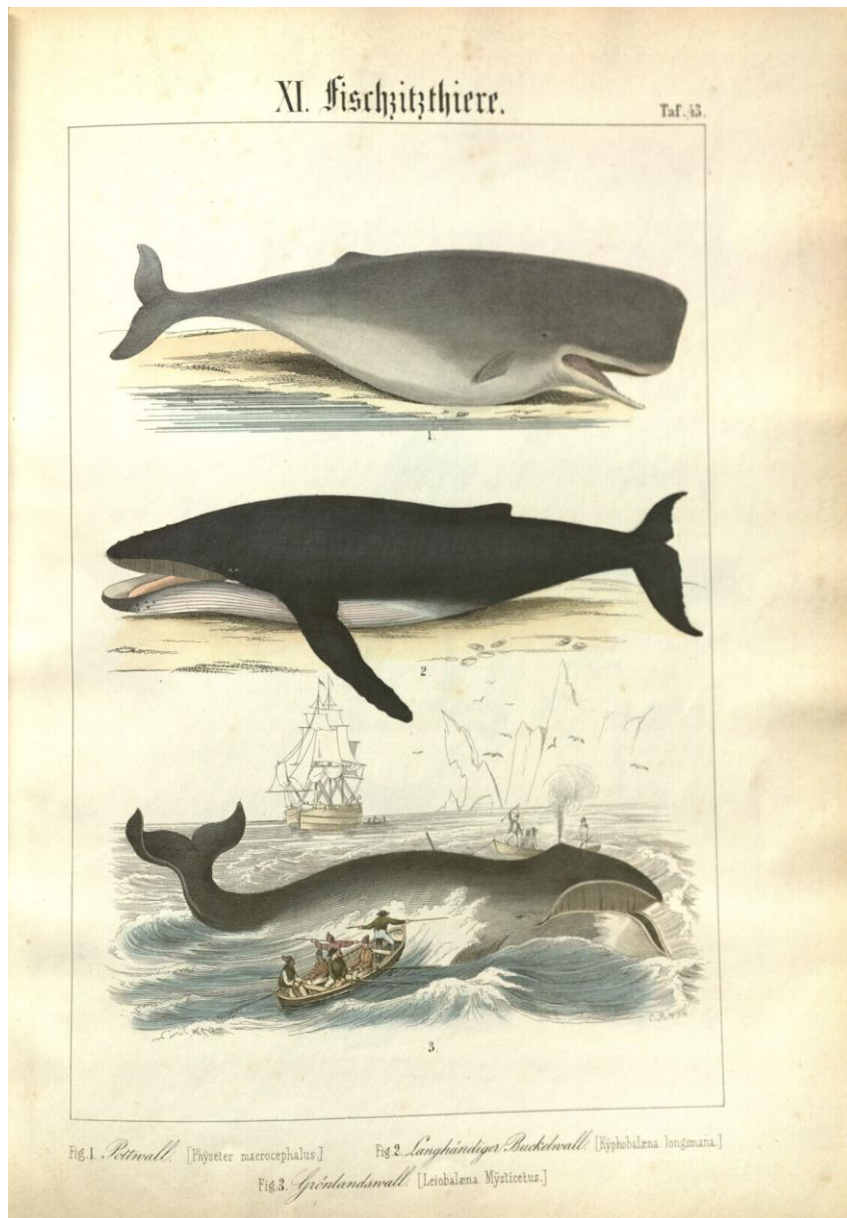
Some of spermaceti’s reputed medicinal uses: a swallowed spoonful removed cramps following childbirth; taken with syrup of violets it was a remedy for bruises, pleurisy, and inflammations. Quoting the chemist Nicolas Lemery (1645-1715), Pomet notes that as an ointment ‘it will dissolve the Hardness of the Breasts ... and it is sometimes given inwardly, to correct the Acrimony of Humours in the Breast or Belly’.

Narwhal horn (thought by some to come from the land-dwelling unicorn) could be taken internally as a sudorific (sweat causing); as a cure for leprosy; as an infection fighter when worn as an amulet around the neck. Ambergris would cure dropsy and a number of other ailments.

This is the second edition of the English translation of the most complete work on the *materia medica* of the time. Pomet had collected the drugs of several countries and his published discoveries immediately hit the best-seller list; the work was translated into several languages.

In the 21st century, the pituitary gland of the whale is a good source of ACTH (Adreno-cortico-tropic hormone) used in the treatment of rheumatoid arthritis; insulin can be extracted from the whale pancreas; and the whale is ranked highest among marine animals in Vitamin A content of its liver-oil.

“Druggs” is a whaling term quite unrelated to medicine: as a variation on the Native American method of attaching floats to slow and exhaust the whale, ‘druggs’ made of crossed planks of wood were fastened to the harpoons so whalers could leave the whale to tire himself out, then come back later and finish him off at their leisure.



“Doubtless one leading reason why the world declines honoring us Whalemen, is this: they think that, at best, our vocation amounts to a butchering sort of business and that when actively engaged therein, we are surrounded by all manner of defilements. Butchers we are, that is true. But butchers also, and butchers of the bloodiest badge have all been Martial Commanders whom the world invariably delights to honor.”
{Moby-Dick chapter 24 (The Advocate)}

QUIT YER BLUBBERING

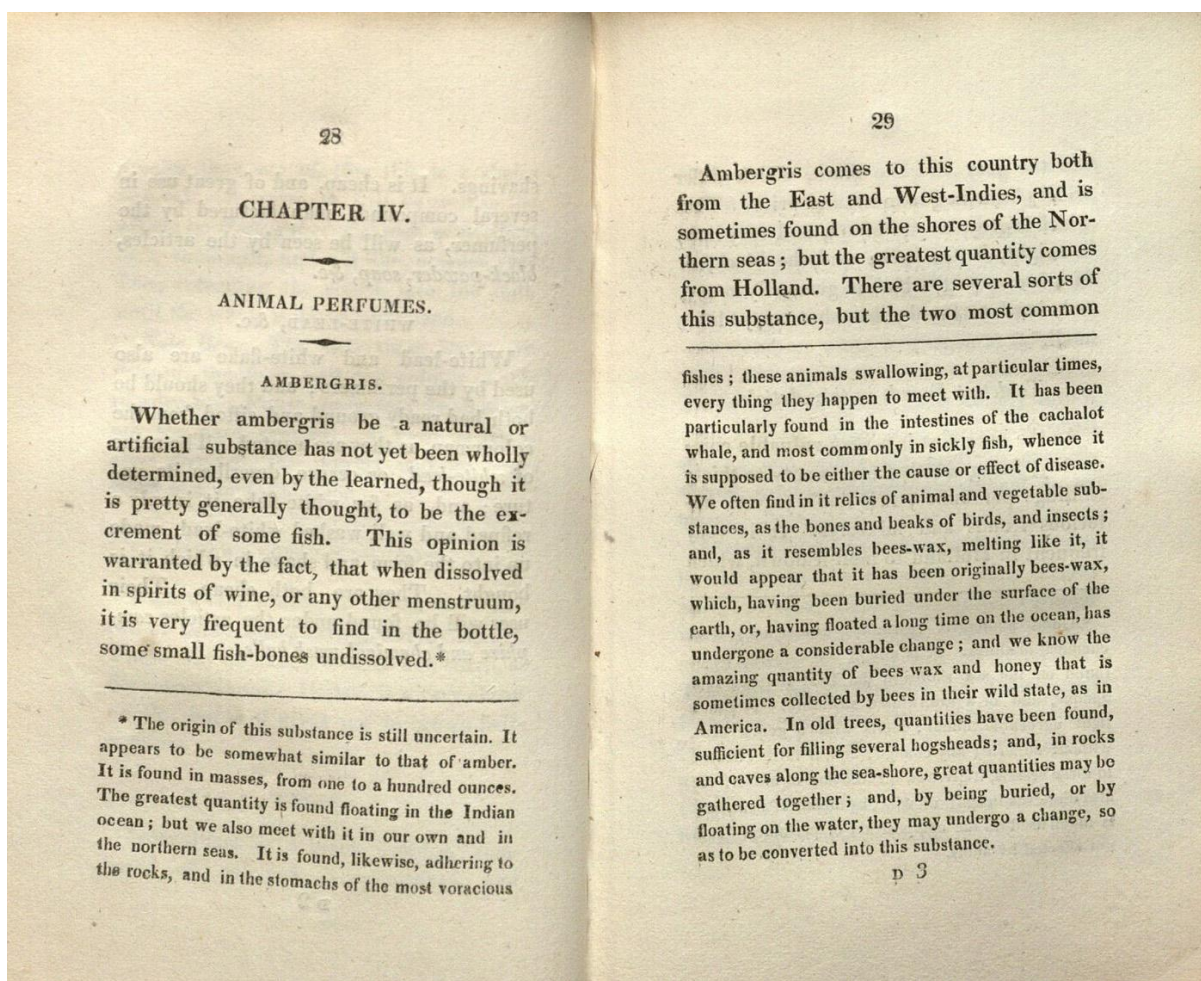
Ferdinand Krauss (1812-1890): *Das Thierreich in Bildern nach Familien und Gattungen*. Stuttgart und Esslingen, Schreiber und Schill, 1851.
[Ellis Omnia E58]

In this UNDERSEA TREASURE section of the exhibition we display just a few of the more interesting uses for the most useful parts of the whale: the oil, including spermaceti; whalebone (from the baleen plates of the suborder Mysticeti, not the bones themselves); ambergris; and meat.

In the west the most important whaling product nowadays as in the past, is the aforementioned oil, although the oil and most whale products are put to different uses than in the past: the bones are used for fertilizer, the tendons for tennis racket strings and surgical stitches.

The carving of the teeth, called scrimshaw, is an ancient skill practiced during idle hours on shipboard: scrimshanders have created chess pieces, dominoes, buttons, and other ‘ivory’ knickknacks. Sperm oil or a mixture of sperm oil and spermaceti, once used in the manufacture of candles, was used primarily for cosmetics in the 20th century: lipstick, skin cream. Whalebone was used in the manufacture of riding crops in Europe, as well as for boots and hats. Before the days of steel, plastic and elastic, it was used in umbrellas and couch springs. Inhabitants of Eastern Siberia still make sled runners as well as clock-springs from whalebone. Dog food, gelatin for photographic film, jellies, and candy all have been made from skeletal tissues. Dolphins to this day bring a pretty penny to the owners of amusement parks.

It was on one of the unsuccessful voyages to find a Northwest Passage for the purpose of reaching the Orient's spices that in 1596 the bays in Novaya Zemlya, Spitzbergen, and Jan Mayen Island were found to be teeming with whales; thus was born Greenland whaling, 'Greenland' in this context being Spitzbergen, sometimes called East Greenland. In those days just one whale more than paid for the cost of the expedition. This illustration shows the three commercially most important whales: from the pre-modern period, the sperm and the right whale; at bottom is a member of the rorquals, the most lucrative catch today.



“Who would think, then, that such fine ladies and gentlemen should regale themselves with an essence found in the inglorious bowels of a sick whale! Yet it is so. By some, ambergris is supposed to be the cause, and by others the effect, of the dyspepsia in the whale. How to cure such a dyspepsia it were hard to say, unless by administering three or four boatloads of Brandreth’s pills, and then running out of harm’s way, as laborers do in blasting rocks.”

{Moby-Dick chapter 92 (Ambergris)}

TOILET WATER

Charles Lillie: *The British perfumer*. 2nd ed. London: Printed for J. Souter; New York: for W. Seaman, 1822.

[Bond B159]

English perfumer Mr. Lillie describes a variety of uses for ambergris: in perfumes, soaps, pomades and hair powders. Today’s synthetics have largely replaced ambergris in the perfume industry as a fixative of volatile essences, although it is still used in the manufacture of high quality perfumes. East Asians had long considered ambergris an aphrodisiac, a fact that became known to westerners during the Middle Ages, at which time it began to be used in love potions and as a cure for dropsy. But the source of this magical substance was a closely guarded secret; even the famous medieval physician and philosopher Avicenna guessed that it was a kind of volcanic rock, and Marco Polo, although he noted that the East Asians hunted whales for their ambergris, assumed it was something they had found in the sea and had eaten along with whatever else they ate.

Early in the 18th century it was shown that this wonderful stuff was formed in the whale’s intestine, but even today it is debatable whether this concretion is normal or pathological. It is a waxy, dark brown or greyish substance, at first malodorous, but becoming inoffensive upon exposure to the air. Although its name means ‘gray amber’ it had nothing to do with amber. Until quite recently it was worth its weight in gold (or amber), and at least one whaling company was saved from bankruptcy at the beginning of the 20th century by the timely discovery of a large lump of ambergris.





“As everyone knows, these same “hog’s bristles”, “fins”, “whiskers”, “blinds” or whatever you please, furnish to the ladies their busks and other stiffening contrivances. But in this particular, the demand has long been on the decline. It was in Queen Anne’s time that the bone was in its glory, the farthingale being then all the fashion. And as those ancient dames moved about gaily, though in the jaws of a whale, as you may say; even so, in a shower, with the like thoughtlessness do we nowadays fly under the same jaws for protection; the umbrella being a tent spread over the same bone.”

{Moby-Dick chapter 75 (The Right Whale’s Head – Contrasted View)}

BUSKS AND MUSKS

Advertising cards. United States, circa 1880-1900.

[P29]

The Department of Special Collections has about 350 of these advertising cards pushing a variety of American products. On the back of each is usually printed product info, occasionally testimonials and ingredients. Sometimes a card is stamped with the name of a local dealer; most of these are from Augusta and Quincy, Illinois. Many of the products represented are things that could have come from a whale, although at the time that the cards were made the American whaling industry had been in decline for about thirty years.

Cards on display are an ad for Hoyt's German cologne, manufactured in Lowell, Massachusetts, a great whaling state: the card itself was once perfumed; the picture of a monkey wedding advertises soaps from the J.D. Larkin Company, Buffalo, New York: whale oil was used in the manufacture of soaps, and ambergris in the perfumes that made them smell good. The photo of a pin-up Tilly Rogers may be from a photographer's studio: here it illustrates the use of corset stays.

My maternal grandfather Frank Everett Beals, of Argonia, Kansas, for years wrote a history column for the local newspaper, the *Argonia Argosy*. I was within earshot one summer when he announced that in his next column he was going to take on the sartorial excesses of women, to wit, the bustle: "all that whalebone gone to waste on the waist, on a contraption that was, in the end, no less than *the butt of many jokes and the joke of many butts*."

Grandma Stella nixed it. *Ad astra per aspera*.



SIMMONDSIA CALIFORNICA.

“But still another inquiry remains; one often agitated by the more recondite Nantucketers. ... ; whether Leviathan can long endure so wide a chase, and so remorseless a havoc; whether he must not at last be exterminated from the waters, and the last whale, like the last man, smoke his last pipe, and then himself evaporate in the final puff.”
{Moby-Dick chapter 105 (Does the Whale’s Magnitude Diminish? – Will he Perish?)}

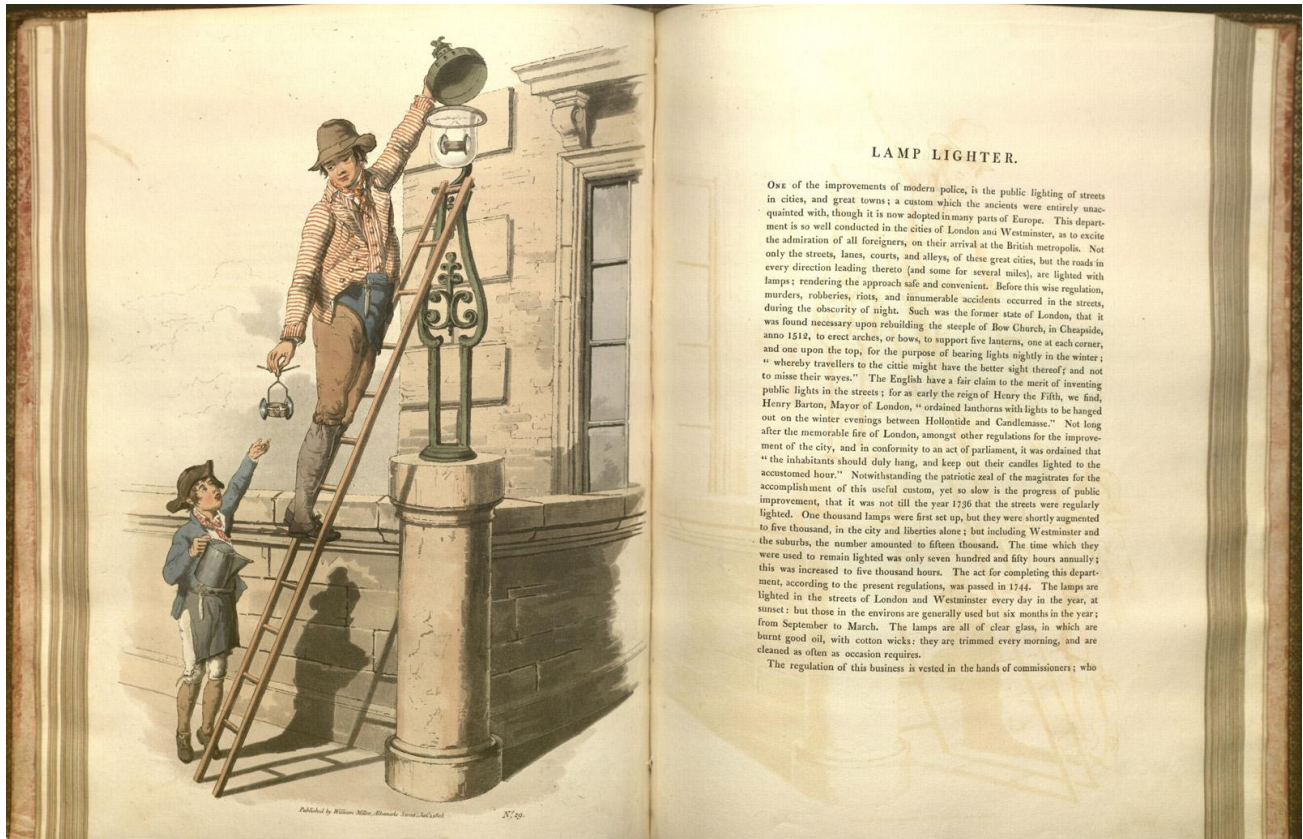
THAR SHE GROWS

United States Department of the Interior. *Report of the U.S. and Mexican Boundary Survey: Volume 2, part 1: Botany of the border*, by John Torrey. Washington, 1859. [Ellis Aves D761]

Jojoba, *Simondsia chinensis*, a wax producing shrub indigenous to the Sonora Desert region of North America – Mexico, California, and Arizona – may be the salvation of the sperm whale, and an economic boon to the Native Americans of the Southwest. Jojoba seeds contain an oil that is almost identical, in chemical and physical properties, to the sperm oil found in the sperm whale’s head, an oil for which no substitute has been found until now: it is absolutely essential to the high-speed, high temperature operation of pressurized moving parts of machinery. Although there are substitutes for almost all the products for which whales have been slaughtered, the unique properties of sperm oil are the reason why the hunting of this whale once accounted for fifty percent of the whaling industry’s catch.

Jojoba has countless advantages over whale oil: it is easily obtained; requires almost no refining; is slow to become rancid; has viscosity; high flash-point and fire-point; is non-toxic; lacks the fishy smell of sperm oil; and has a number of economic advantages. Native Americans have had many uses for jojoba for centuries. Francisco Saverio Clavijero (1731-1787), was the first to publish on the utility of jojoba in his *Storia della California*, 1789.

This illustration of the jojoba plant is from the *Report of the U.S. and Mexican boundary survey*, begun in 1848. The description is by John Torrey, an important figure in the history of American botany, and one of the naturalists assigned to the survey.



“But, though the world scouts at us whale hunters, yet does it unwittingly pay us the profoundest homage; yea, an all-abounding adoration! For almost all the tapers, lamps, and candles that burn round the globe, burn, as before so many shrines, to our glory!”
{Moby-Dick chapter 24 (The Advocate)}

“In New Bedford, fathers, they say, give whales for dowers to their daughters, and portion off their nieces with a few porpoises a-piece. You must go to New Bedford to see a brilliant wedding; for, they say, they have reservoirs of oil in every house, and every night recklessly burn their lengths in spermaceti Candles.”
{Moby-Dick chapter 6 (The Street)}

THE LIGHT ON THE WIDOW'S WALK

William Henry Pyne (1769-1843): *The costume of Great Britain.*

London: Published by William Miller, 1808.

[E306]

Whale oil is a general term applied to the oil taken from baleen whales, as opposed to sperm oil, taken from the sperm whale's blubber, and spermaceti, from its head.

Prior to the modern period whale oil was used mainly for lighting lamps, but also as a lubricant and in the processing of jute. The objects of the hunt in the European industry of those days were the black right whale or norcaper *Eubalaena glacialis* and the Greenland right whale or bowhead *Balaena mysticetus*; Americans hunted the black right whale and the sperm whale, using the sperm oil for illumination and for the lubrication of machinery.

American sperm whaling declined after the Civil War: the cotton industry was attracting money and manpower, and the Gold Rush promised adventure and riches equal to that of whaling. The in 1859 mineral oil was discovered in Pennsylvania, marking the beginning of the end for sperm whale oil in the fuel market. The revival of the market in the 20th century with the discovery of the hydrogenization process is another story not within the scope of this exhibit. Spermaceti, used in the 19th century for making candles, was considered absolutely essential in the 20th century in certain industries and applications, until discovery of the chemical and physical properties of the seeds of the shrub jojoba.



Cetacean diversity



“Now in this history of his, Procopius mentions that, during the term of his prefecture at Constantinople, a great sea-monster was captured in the neighboring Propontis ... after having destroyed vessels at intervals in those waters for a period of more than fifty years. ... ; Of what precise species this sea-monster was, is not mentioned. But as he destroyed ships, as well as for other reasons, he must have been a whale. ... ; For a long time I fancied that the sperm whale had been always unknown in the Mediterranean ... ; But further investigations have recently proved to me, that in modern times there have been isolated instances of the presence of sperm whale in the Mediterranean.”

{Moby-Dick chapter 45 (The Affadaviti)}

IF IT LOOKS LIKE A FISH, IT MUST *BE* A FISH

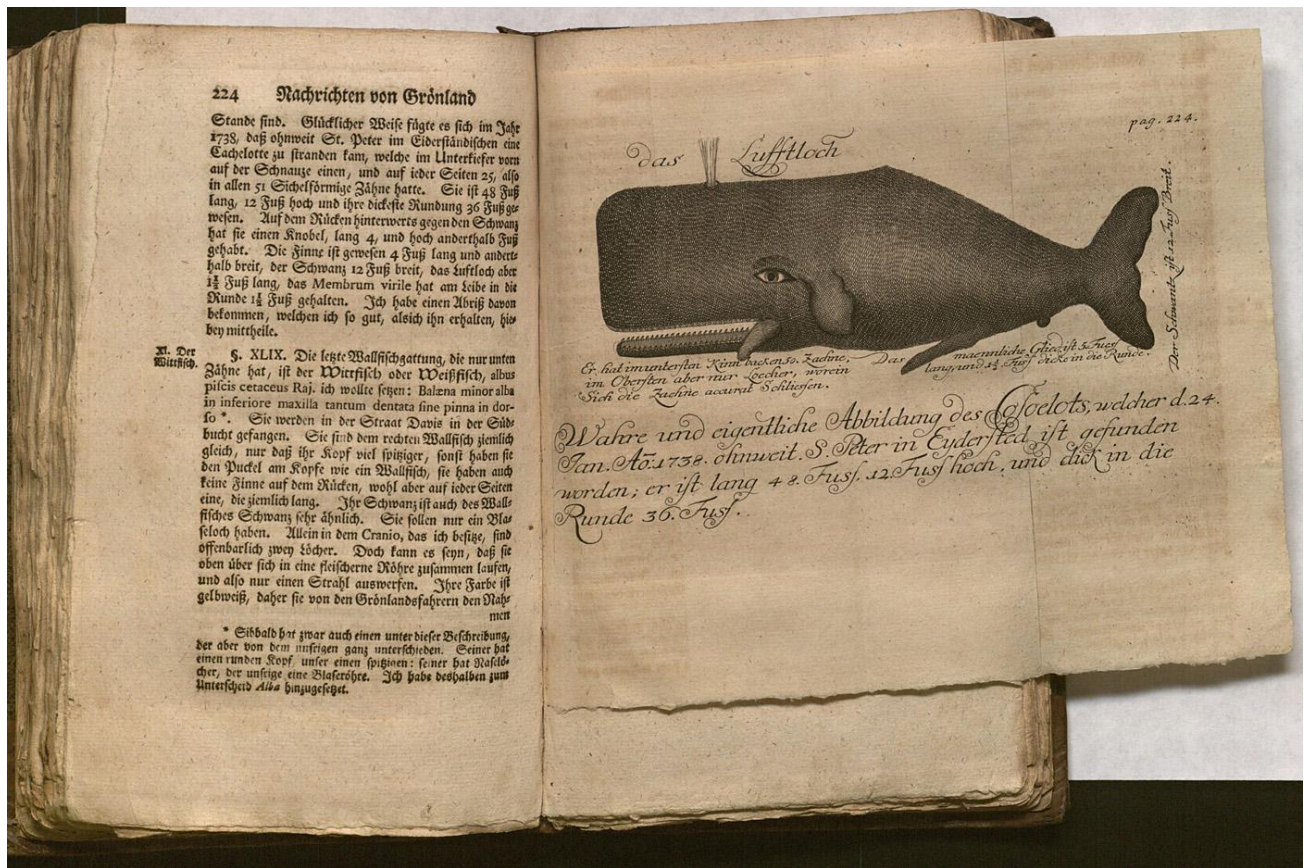
Claudius Ptolemy (2nd century A.D.): *Tabulae geographicae, restitutae & emendatae per Gerardum Mercatorum*. Coloniae Agrippinae: Typis Godefridi Kempensis, 1578. [Summerfield G183]

Whales, dolphins, and porpoises, shaped like fish and living in the water, have been thought since time memorial to *be* fish. Aristotle knew in the 4th century B.C. that cetaceans were mammals, but his knowledge had little effect on the world and whale-lore became more and more distorted until the scientific renaissance of the 16th and 17th centuries when the true nature of these animals began to be understood.

Most of the works in this exhibit show the whale in a more or less scientific light, but in many instances, especially in illustration, whales are still fabulous and unknown creatures more sea-monster than whale, with the exaggerated features of a combination of whale, fish, serpent, and land animal.

The common dolphin *Delphinus delphis* still rides the bows of ships in the Mediterranean. The striped and bottlenose dolphin as well as an occasional Risso's can be seen in Mediterranean waters, but among the great whales, the only species to be found is the fin whale, a rorqual. It feeds in summer in the offshore waters between Nice and Corsica.

This atlas is the first edition of Mercator's maps for Ptolemy's *Geography*, the finest ever made for this work of the 2nd century Greek geographer, mathematician and astronomer. Dolphins, whales and their monster counterparts were depicted by cartographers from the 15th century on, partly as warning to the unwary mariner, but also to fill in the Boring Places on their maps. Mediterranean folk were among the earliest to appreciate the cetaceans and they figure in many of their myths and fables.



“First: the uncertain, unsettled condition of this science of Cetology is in the very vestibule attested by the fact, that in some quarters it still remains a moot point whether a whale be a fish. In his *System of Nature*, A.D. 1776, Linnaeus declares, ‘I hereby separate the whales from the fish.’ But of my own knowledge, I know that down to the year 1850, sharks and shad, alewives and herring, against Linnaeus’s express edict, were still found dividing the possession of the same seas with the Leviathan.”

{Moby-Dick chapter 32 (Cetology)}

ODONTOCETI: THE TOOTHED WHALES

Johann Anderson (1675-1743): *Nachrichten von Island, Gronland und der Strasse Davis*. Hamburg: verlegt George Christian Grund, Buchdr., 1746.

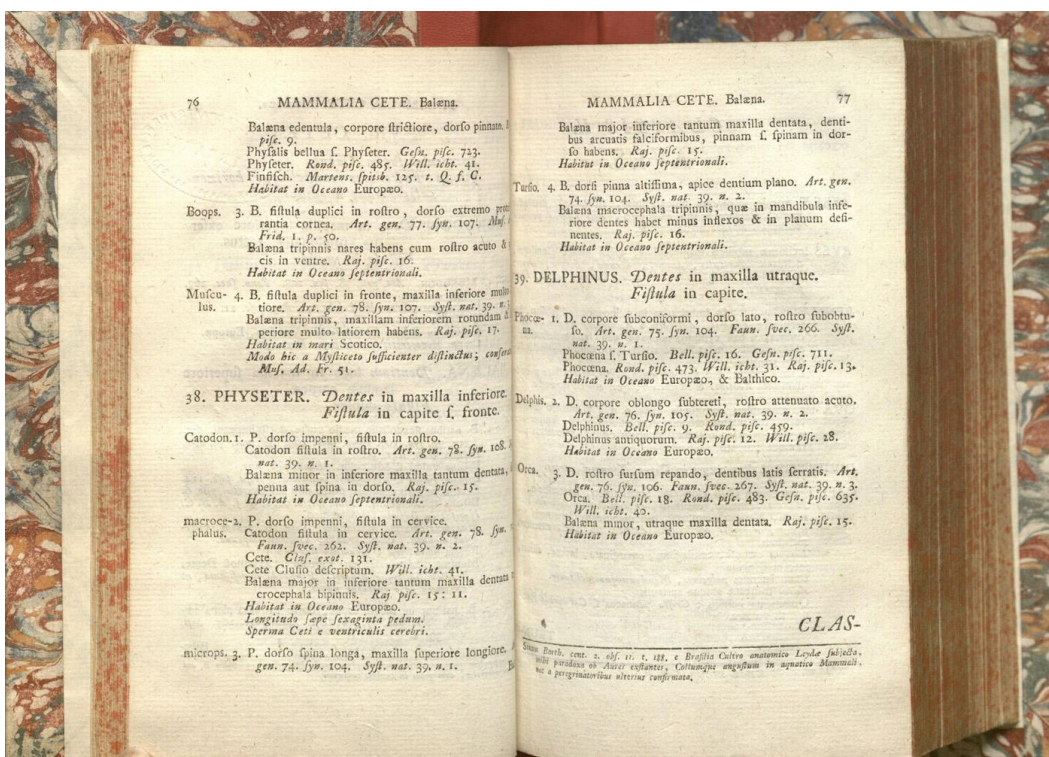
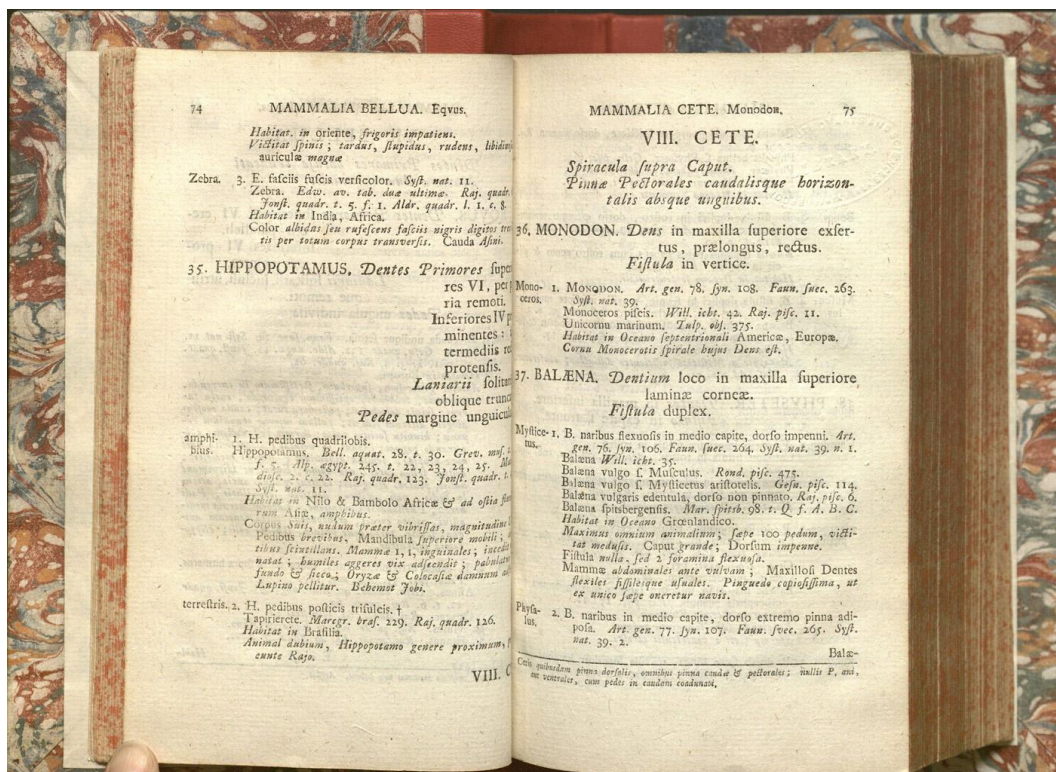
[Ellis Aves C27]

Three groups of cetaceans evolved from their land ancestor or ancestors. The Archaeoceti are extinct; two groups survive. One, the Odontoceti (from Greek *odontos* = tooth, and *ketos* = whale) comprises sixty-six recognized species in six families and includes the sperm whales of which Moby Dick is the most celebrated, as well as the dolphins (thirty-three species); porpoises (six species); and the family that includes only two species, the narwhal and the beluga.

The toothed whales use their teeth to grasp their prey, mostly fish and squid, usually swallowed whole. They have a single blowhole; their skulls are unusual in that they are asymmetrical with the result that sometimes the blowhole is on the left side of the head, but this asymmetry is most marked in the narwhal where the male tusk protrudes from the left side of the jaw. The toothed whales are generally grouped along lines of geographical distribution and prey selection. All use a sonar-like echolocation to explore their surroundings and locate food.

Of the three species of sperm whale, two are of relatively small size and comprise the genus *Kogia*. Pictured here is the great sperm whale *Physeter macrocephalus*, a loner in his genus, and in the case of the great rogue whale Moby Dick, a loner in his herd. Incidentally, the binomial *Physeter catodon* is often used for the sperm, although *P. macrocephalus* now takes precedence.

John Anderson, Burgermeister of Hamburg, was a scholar and naturalist. This is the first edition of a fundamental work on Greenland and Iceland with great importance for the study of whales of northern waters. Although Anderson did not acquire his knowledge of whales from direct observation, he studied museum specimens and went to great pains to check the accuracy of reports received from others.



“Not the raw recruit, marching from the bosom of his wife into the fever heat of his first battle; not the dead man’s ghost encountering the first unknown phantom in the other world; -- neither of these can feel stranger and stronger emotions than that man does, who for the first time finds himself pulling into the charmed, churned circle of the hunted sperm whale.”
{Moby-Dick chapter 48 (The First Lowering)}

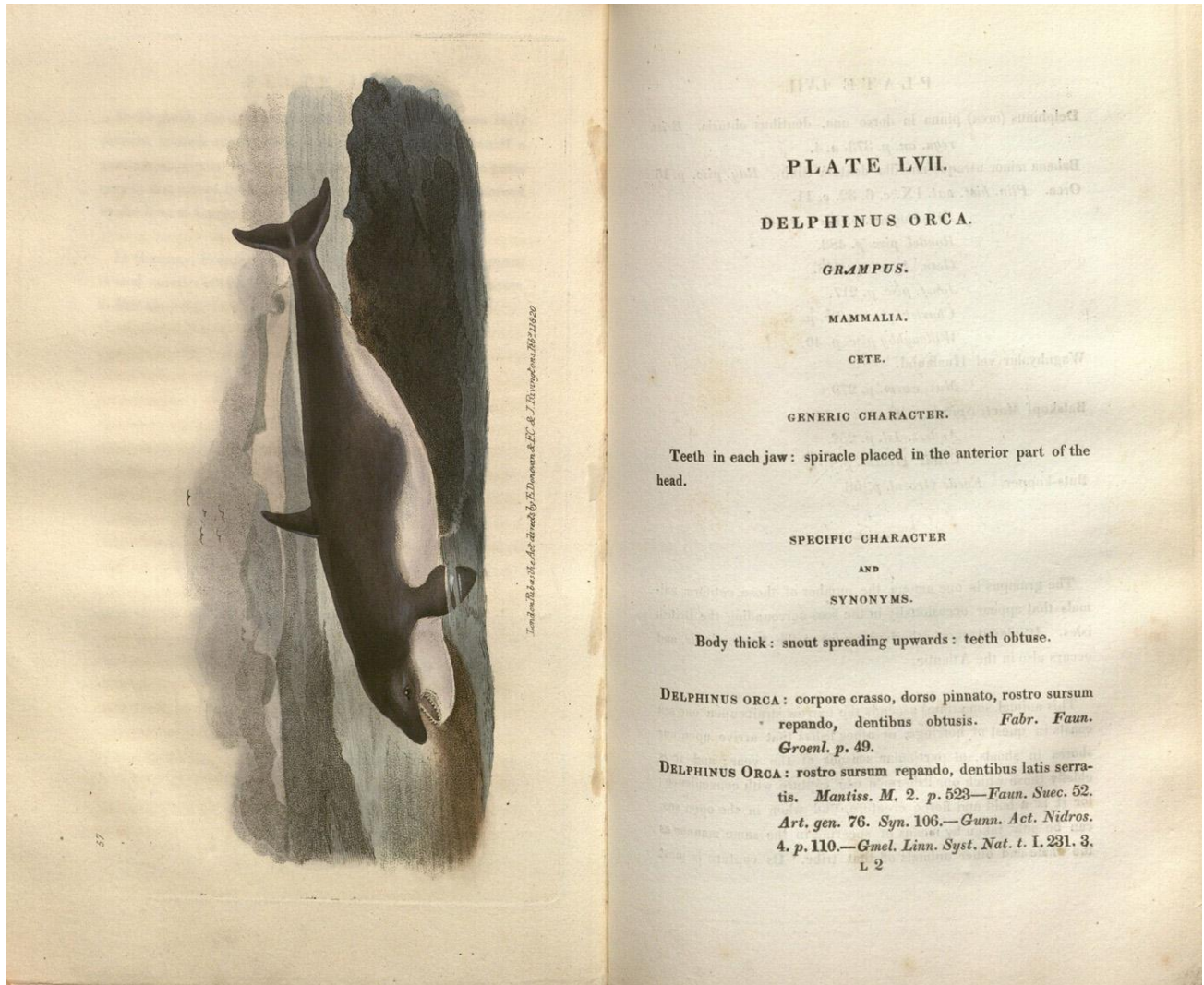
WHALE TAXONOMY

Carl Linnaeus (1707-1778): *Systema naturae*. 10th edition.
Stockholm: impensis L. Salvii, 1758-1759. 2 volumes. Vol 1: Mammalia.
[Linnaeana C173]

Sometime between seventy and fifty million years ago, one or more groups of land animals wandered back into the water, adapted quickly to their new environment, and became a new branch on the tree of evolution, the Cetacea, comprising whales, dolphins, and porpoises.

In the 18th century the Swedish naturalist Carl Linnaeus invented a practical system for the classification of plants and animals; his hierarchical classification used kingdom, class, order, genus, and species, to which the categories phylum and family were added later. Within the animal kingdom cetaceans belong to the phylum Chordata, subphylum Vertebrata, class Mammalia, and order Cetacea, those mammals that are aquatic and carnivorous. Within that order are two clearly defined suborders: the Odontoceti, or toothed whales, and the Mysticeti, or baleen whales.

Linnaeus established a uniform method of referring to species by two Latin names, a reform that led to binomial nomenclature: today the correct name for any species is the oldest validly proposed name. For purposes of priority, zoological naming dates from this 10th edition of the *Systema naturae*, one of the most important books in the history of science, for it marks the beginnings of modern zoological nomenclature and systematics. In it Linnaeus first applied binomial nomenclature consistently to the whole animal kingdom, just as he had applied it to the plant kingdom five years earlier in the *Species plantarum* of 1753.



“He is very savage ... ; He sometimes takes the great Folio whales by the lip, and hangs there like a leech, till the mighty brute is worried to death. The killer is never hunted. I never heard what kind of oil he has. Exception might be taken to the name bestowed upon this whale, on the ground of its indistinctness. For we are all killers, on land and on sea; Bonapartes and sharks included.”
{Moby-Dick chapter 32 (Cetology)}

MORE TOOTHED WHALES: DOLPHINS AND PORPOISES

Edward Donovan (1768-1837): *The natural history of British quadrupeds*. London: Printed for the author; and for F.C. and J. Rivington, 1820. 3 volumes. Vol. 3.

[Ellis Aves C326]

The largest family in the suborder Odontoceti, or toothed whales, is the Delphinidae, the dolphins, comprising thirty three species in sixteen genera, ten of them monotypic, that is, represented by only one species. Although Linnaeus grouped whales, porpoises, and dolphins all in the Cetacea and the whole group is often called 'whales' for convenience, 'whale' in the common lingo usually refers only to the larger species. The so-called killer whale *Orcinus orca* is in fact in the dolphin family. Porpoises are also toothed whales, and many of us ask what the difference is between dolphins and porpoises. They are different families, mainly because of characters that only dissection will reveal, but there are visible external differences as well: dolphins have cone-shaped teeth, porpoises have spade-shaped teeth; there are differences in the shape of the skull bones, in the beak and the bulbous forehead called the melon. Unfortunately the two common names have been used interchangeably by scientists as well as non-scientists since the words were first used.

This illustration of what is supposed to be the killer whale (the Latin name, even though later changed, and the description of killer habits on following pages make it clear) is a good example of cetological confusion; we show this picture nevertheless, as a kind of generic dolphin (for everything generic is wrapped in black and white these days), and because it is typical: evidently Donovan had never seen a killer whale.

The killer whale has very distinctive pigmentation, with clearly delineated snow-white areas (no shading) with white eye patches. This illustration manages only to depict a dolphin of some sort, or even a porpoise; it looks more like the grampus given as the common name here, the common name as well as the genus name today for Risso's dolphin.

Naturalist and author Donovan was known as a tireless worker, but his color plates for the animal kingdom are criticized as being gaudy and unnatural for the

most part; in this case the image is unnatural enough, perched on the shore like that, and not gaudy enough to be a killer whale. *Caveat* viewer.



... at a broad view, the Right Whale's head bears a rather inelegant resemblance to a gigantic galliot-toed shoe. Two hundred years ago an old Dutch voyager likened its shape to that of a shoemaker's last. And in that same last or shoe, that old woman of the nursery tale with the swarming brood, might very comfortably be lodged, she and all her progeny. {Moby-Dick chapter 75 (The Right Whale's Head – Contrasted View)}

MYSTICETI: THE BALEEN OR WHALEBONE WHALES

Richard Lydekker, editor (1849-1915): *The new natural history*. With introductions by Ernest Seton-Thompson and Joel A. Allen. New York: Merrill & Baker, 189-. 6 volumes. Vol. 3. [Ellis Aves D386]

The second major group of living cetaceans, the baleen whales or Mysticeti (from Greek mystax = moustache, and ketos = whale) have adapted just as successfully as the toothed whales. The Mysticeti comprise three families: the right whales; the grey whale; and the rorquals and humpback. The right whales are so-called because in the old days they were the right whales to catch: they swam slowly, floated when dead (unlike the rorquals, fast swimmers who sink when dead) and they yielded massive quantities of whalebone.

Instead of biting into one big animal as the toothed whales do, the Mysticeti feed by skimming and lunging after large numbers of small prey with each mouthful. For this they have evolved a sieve-like structure in the place of teeth, consisting of rows of between two and three hundred flat plates attached to the gum of the upper jaws, from which hangs a fringe of baleen bristles similar in texture to fingernails and hair. Most of the true whales are in the Mysticeti group, and with the exception of the sperm whale (an Odontocete) have been the hunter's choice. Due to overkill the right whales are now rare.

The most sought-after for commercial purposes are the rorquals: the blue whale, the largest animal that has ever lived, was preferred commercially during the first half of the 20th century. After the great reduction in number of blues, the common rorqual or fin whale has headed the list.

Richard Lydekker was a British paleontologist and geologist known also for his interest in the nature and habits of both wild and domesticated animals. This

plate shows the Greenland right whale *Balaena mysticetus* surrounded and attacked by killer whales *Orcinus orca*, technically dolphins.

Whaling for landlubbers



“They asked him, then, whether to live or die was a matter of his own sovereign will and pleasure. He answered, certainly. In a word, it was Queequeg’s conceit, that if a man made up his mind to live, mere sickness could not kill him: nothing but a whale, or a gale, or some violent, ungovernable, unintelligent destroyer of that sort.

“Now there is this noteworthy difference between savage and civilized; that while a sick, civilized man may be sick months convalescing, generally speaking, a sick savage is almost half-well again in a day.”
{Moby-Dick chapter 110 (Queequeg in His Coffin)}

LIFE IN BROBDINGNAG

Thomas Hobbes (1588-1679): *Leviathan*. London: Printed for Andrew Crooke, 1651.

[D520]

The basis of Hobbes’s political philosophy is that man is a selfish animal, directed in all his actions and appetites to self-preservation. It follows then, that his natural state is one of war rather than of sharing for the good of all. Since life is essentially destructive, certain laws need to be adopted and enforced – by an external sovereign power, in the person of a man or an assembly of men. The Great Unwashed, duly united under one sovereign power, constitute a Commonwealth. This power, the LEVIATHAN, is indivisible and cannot be divided between king and parliament nor between Church and State. Needless to say, *Leviathan* met with disfavor from both political and religious quarters.*

There are three 1651 editions of *Leviathan*, each with the same imprint. They are called the ‘head’, the ‘bear’, and the ‘ornaments’ editions, from the ornaments on the title-page of each. The order of the three editions is as above and is easy to nail down by evidence of corrections in the errata (printers and dates of the *bear* and *ornaments* editions were once in doubt). The Spencer Library copy is the first, the *head* edition.

*This caption contains not one original thought of the exhibit maker, who has never dissected a *Leviathan*, and who cribbed the first paragraph *in toto* from others, mostly the authors of the *Oxford Companion to English Literature*, edition unremarked.



A T A L E OF A T U B.

Written for the Universal Improvement of Mankind.

Diu multumque desideratum.

— / To which is added, —
An ACCOUNT of a
B A T T L E
BETWEEN THE
Antient and Modern BOOKS
in St. James's Library.

*Balima eacabasa eanaa irrautista, diarba da caeoraba
fobor camelanthi. Iren. Lib. 1. C. 18.*

*Juvaque novos decerpere flores,
Insignemque meo capiti petere inde coronam,
Unde prius nulli velarunt tempora Muses. Lucret.*

The Fifth EDITION: With the Author's Apology and Explanatory Notes.
By W. W--t--n, B. D. and others.

LONDON: Printed for John Nutt, near
Stationers-Hall. M DCC X.

“... every whale ship must carry its cooper.”
{Moby Dick chapter 101 (The Decanter)}

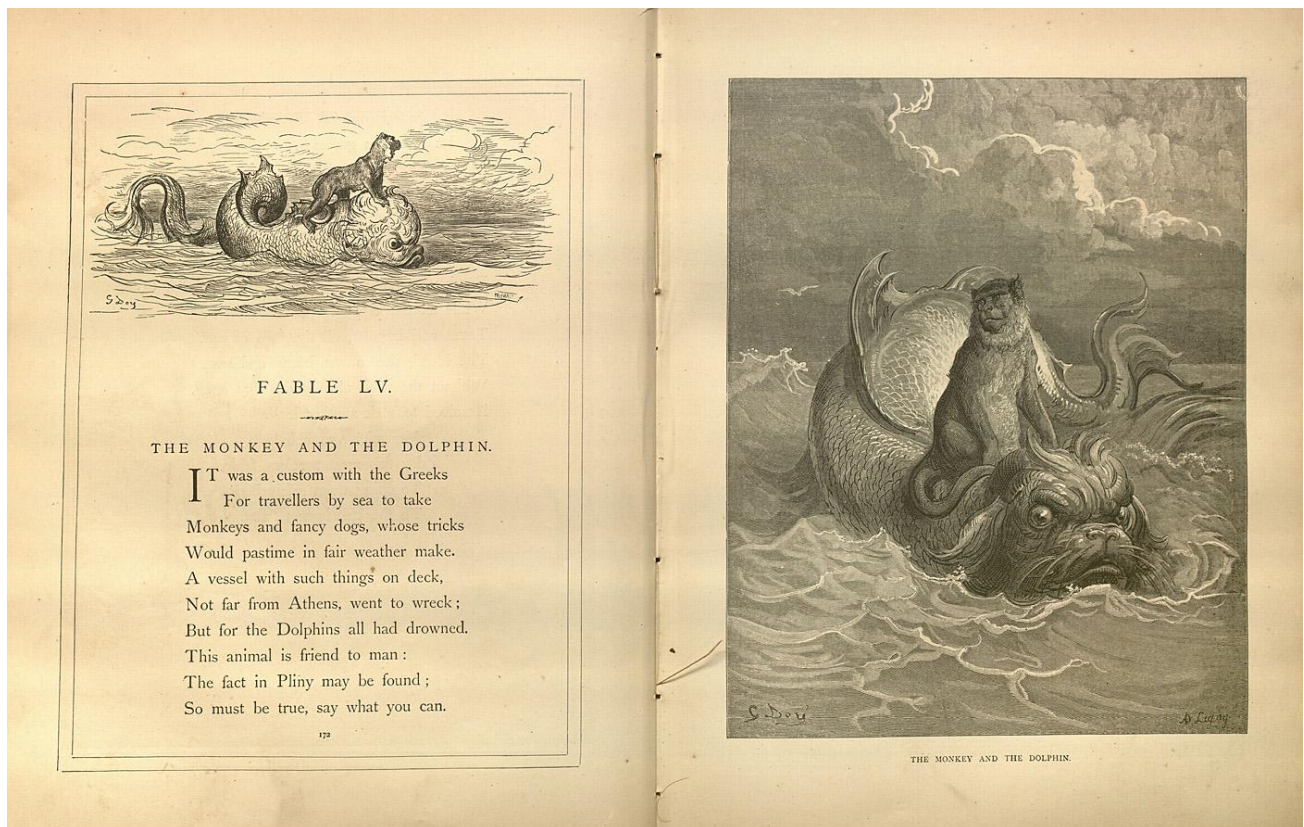
AND AS FOR THE BUCKET ...

Jonathan Swift (1667-1745): *A tale of a tub*. 5th edition. London:
Printed for John Nutt, 1710.

[C115]

Swift explains in the preface to *A tale of a tub*, a satire in prose first published in 1704, that whalers, in order to keep a whale from attacking a ship, will divert its attention by heaving a barrel (the tub) into the sea. The ship in this case is the Ship of State, the government; the whale to be diverted is Hobbes's *Leviathan*, lest it find the weak spots in the ship's hull and tear it to bits.

This work is said to be yet another example of Swift's contempt for his fellow man, and of his love of paradox.



“... Ever since those inventive but unscrupulous times when on the marble panellings of temples, the pedestals of statues, and on the shields, medallions, cups, and coins, the dolphin was drawn in scales of chain-armor like Saladin’s, and a helmeted head like St. George’s; ever since then has something of the same sort of license prevailed not only in the most popular pictures of the whale ...”

{Moby Dick chapter 55 (Of the Monstrous Pictures of Whales)}

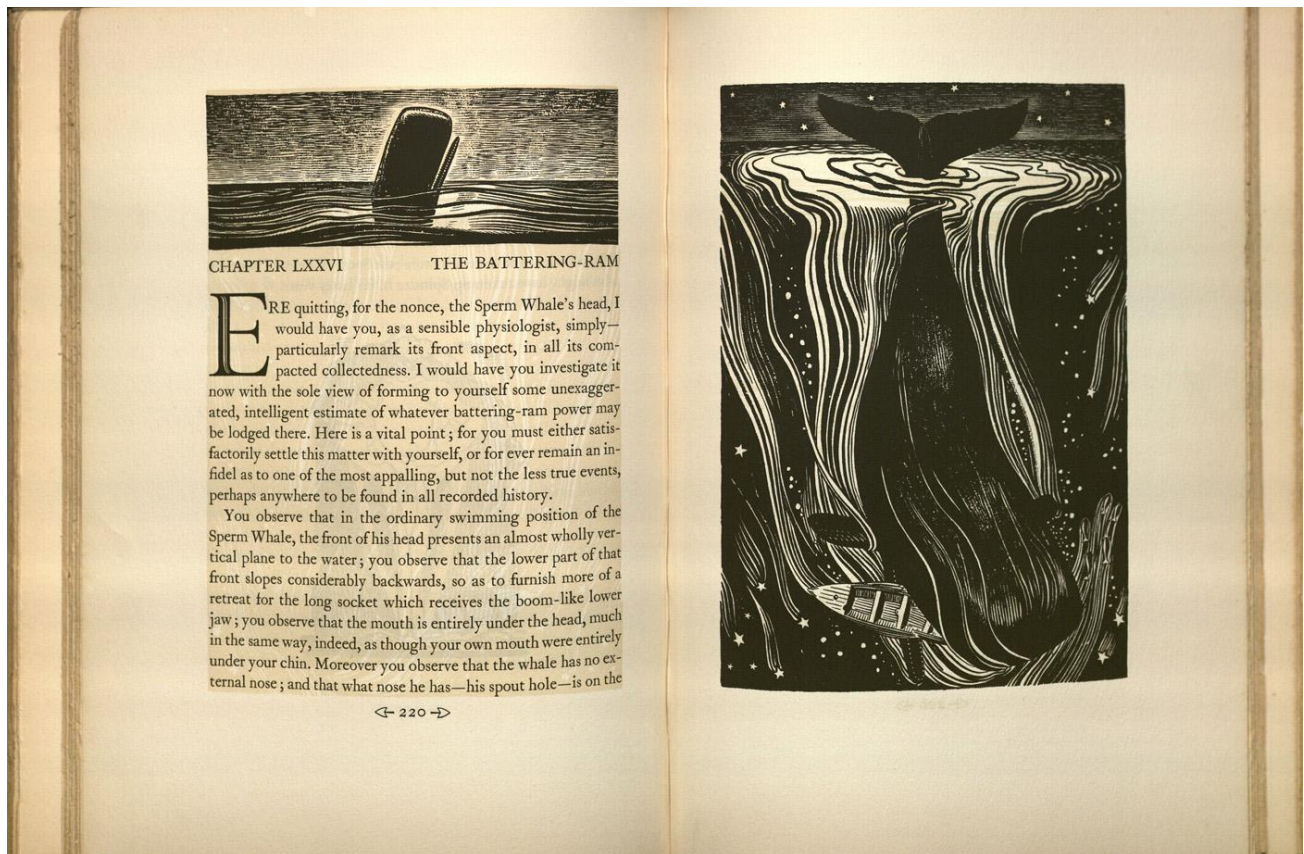
A WHALE OF A TALE

Jean de la Fontaine (1621-1695: *The fables*. Translated into English verse by Walter Thornburg. With illustrations by Gustav Doré. London and New York: Cassell, Petter, and Galpin, 1867. 7 parts. Pt. 7.

[Children E71]

The fables of 17th century French poet La Fontaine are among the most beloved bits of French literature; they are said to be so rich and full of understatement that for their full appreciation one needs a thorough understanding of (whew!) 17th century French. Taken chiefly from the tradition of Aesop and the original animal tales, they are not at all the merely didactic stories such as those of the *Physiologus*. Although occasionally they reflect contemporary political and intellectual issues, they still use the themes of the traditional fable: the everyday moral experience of mankind and the variety of human character.

This version of *The monkey and the dolphin* is from a 19th century English translation by Walter Thornbury, with illustrations by Gustave Doré. It is from our Children’s Collection.



“Go visit the prairies in June, when for scores on scores of miles you wade knee-deep among Tiger-lilies – what is the one Charm wanting? – Water – there is not a drop of water there!”
{Moby Dick chapter 1 (Loomings)}

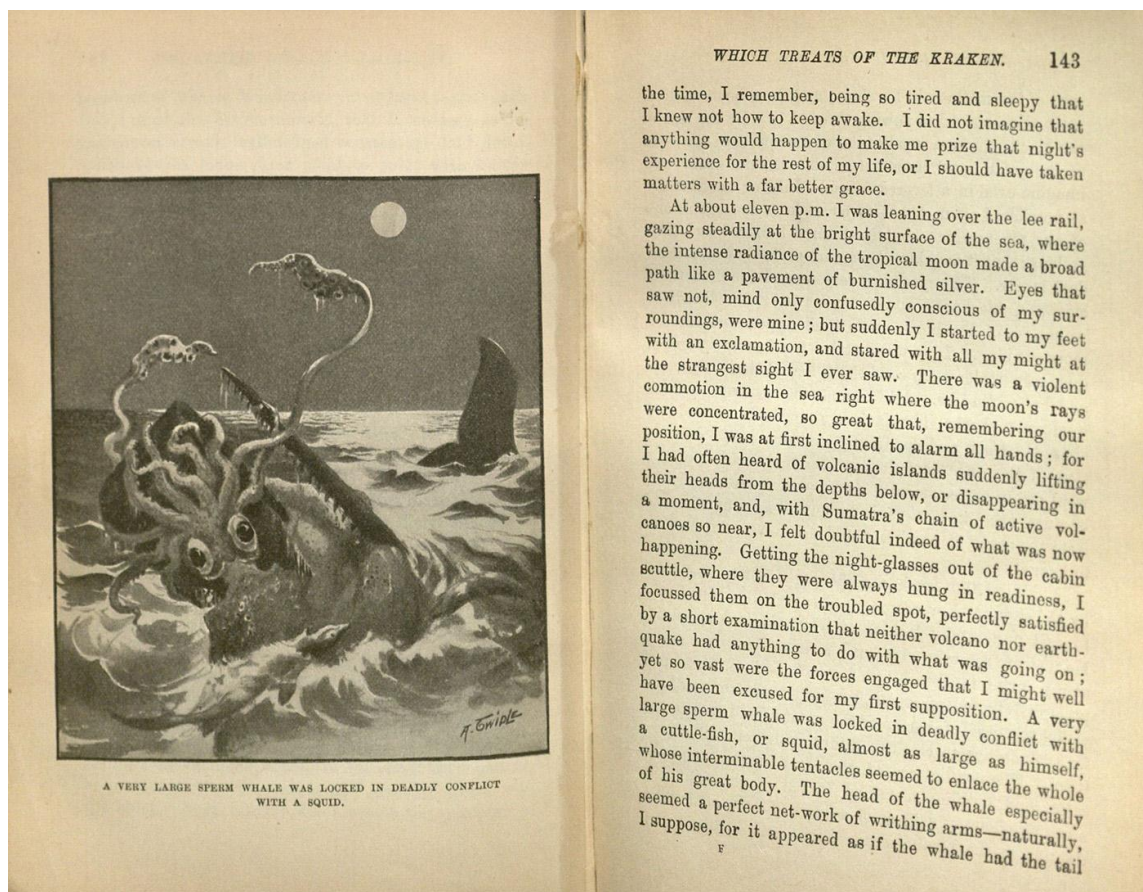
MOBY DICK IN KANSAS

Herman Melville (1819-1891): *Moby Dick or The whale*. Illustrated by Rockwell Kent. Chicago: Lakeside Press, 1930. [D3146]

In addition to the first American edition of *Moby Dick*, 1851, and several 20th century illustrated editions, the Department of Special Collections has ten of Melville's other works in editions published during his lifetime, including *Omoo*, London, 1847 and the first American edition of the same year published in New York; *Mardi*, New York, 1849; *Typee*, first American edition, New York, 1846; *Whitejacket*, New York, 1850; and *Piazza Tales*, New York, 1856.

In 1995 the Department of Special Collections in the Kenneth Spencer Research Library mounted an exhibition, "Images of Moby Dick" to celebrate publication of Elizabeth Schultz's *Unpainted to the Last: Moby-Dick and twentieth-century American Art*, Lawrence, University Press of Kansas, 1995, and the donation of her collection of illustrated editions of Moby Dick to the Department.

Simultaneously, the University's Helen Foresman Spencer Museum of Art presented a major exhibition of other visual interpretations of Moby-Dick in "Unpainted to the Last, Moby-Dick and American Art, 1930-1990". The openings of these companion exhibitions began a series of events culminating in a "Moby-Dick and American Culture" symposium on September 30th, 1995.



“This whale, among the English of old vaguely known as the Trumpha whale, and the Physeter whale, and the Anvil Headed whale, is the present Cachalot of the French, and the Pottfisch of the Germans, and the Macrocephalus of the Long Words.”

{Moby Dick chapter 32 (Cetology)}

GALLIVATING* AROUND THE WORLD

Frank Thomas Bullen (1857-1915): *The cruise of the Cachalot*, round the world after sperm whales. With illustrations. New York: D. Appleton, 1899. [Children B2452]

*the Gallivat was an East Indian pirate vessel

Frank Bullen's *Cruise of the Cachalot* is usually found, if it is still found at all, on bookstore shelves with other so-called boys' books, and indeed this copy lives in our Children's Collection.

Bullen was an English immigrant to the United States who at age 18 took to the sea on the whaler *Cachalot* out of New Bedford, Massachusetts; before the end of the cruise he had been promoted to first mate. Although the voyage apparently began in 1875, Bullen's account of it was not to see print until a quarter of a century later. Today it is considered one of the best sea stories in the English language.

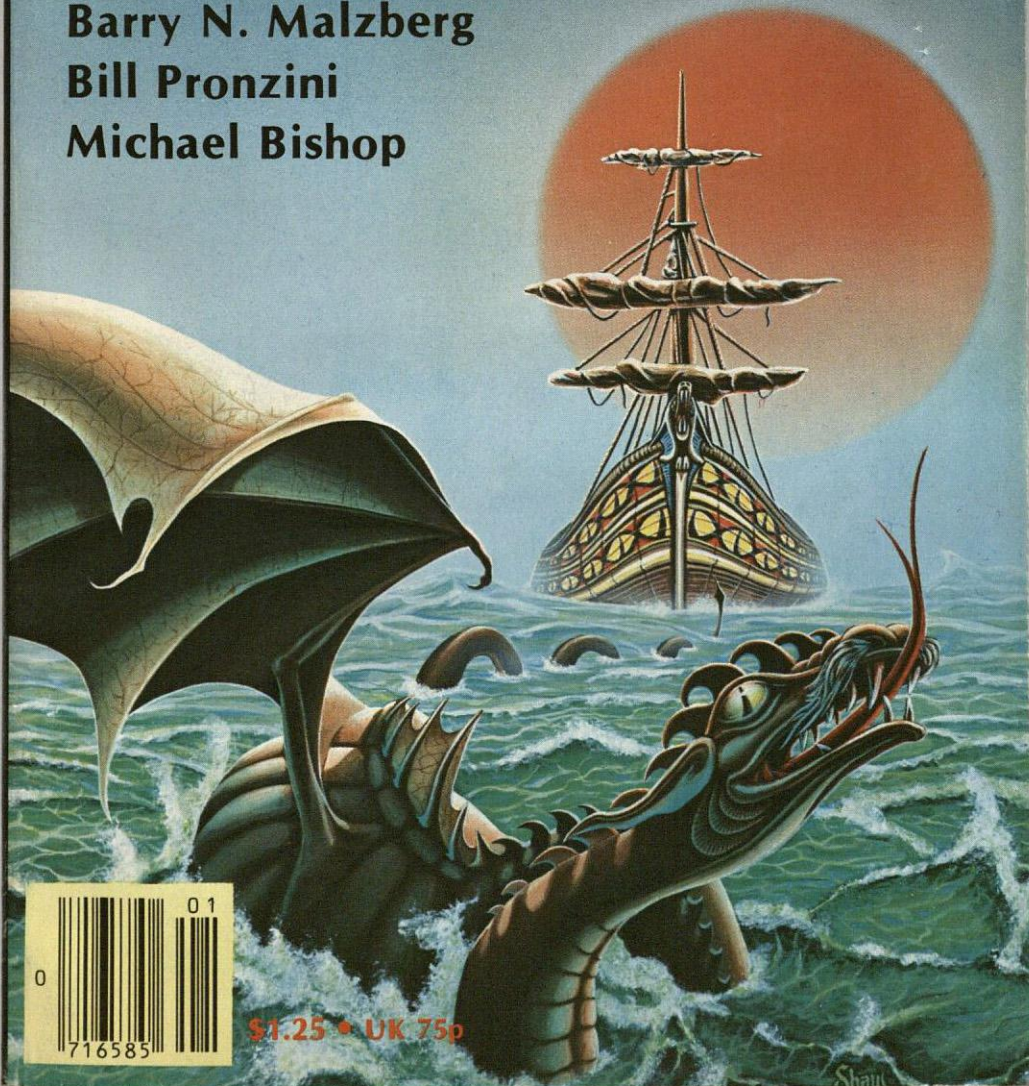
Isaac Asimov

NEUTRALITY!

THE MAGAZINE OF
Fantasy & Science Fiction
JANUARY

PPC 58370-9

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Michael Bishop



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“Tell me, why this strong colt, foaled in some peaceful valley of Vermont, far from all beasts of prey – why is it that ... if you but shake a fresh buffalo robe behind him, so that he cannot even see it, but only smells its wild animal muskiness – why will he start, snort, and with bursting eyes paw the ground in phrensies of affright? ...

“Though neither knows where lie the nameless things of which the mystic sign gives forth such hints; yet with me as with the colt, somewhere those things must exist. Though in many of its aspects this visible world seems formed in love, the invisible spheres were formed in fright.”
{Moby Dick chapter 42 (The Whiteness of the Whale)}

HA HA HERMAN

John Kessel (b. 1950): *Herman Melville: space opera virtuoso*. Cornwall, Connecticut, 1980. In: *Fantasy and Science Fiction*, volume 58:1, January 1980. [ASF CURR B20]

The editors of the *Magazine of Fantasy and Science Fiction* published John Kessel's first piece of fiction in January of 1979. The biographical blurb contained a quote from a letter in which Kessel wrote that he 'started out wanting to be an astrophysicist, but got waylaid by tensor calculus and, simultaneously, seduced by Herman Melville.'

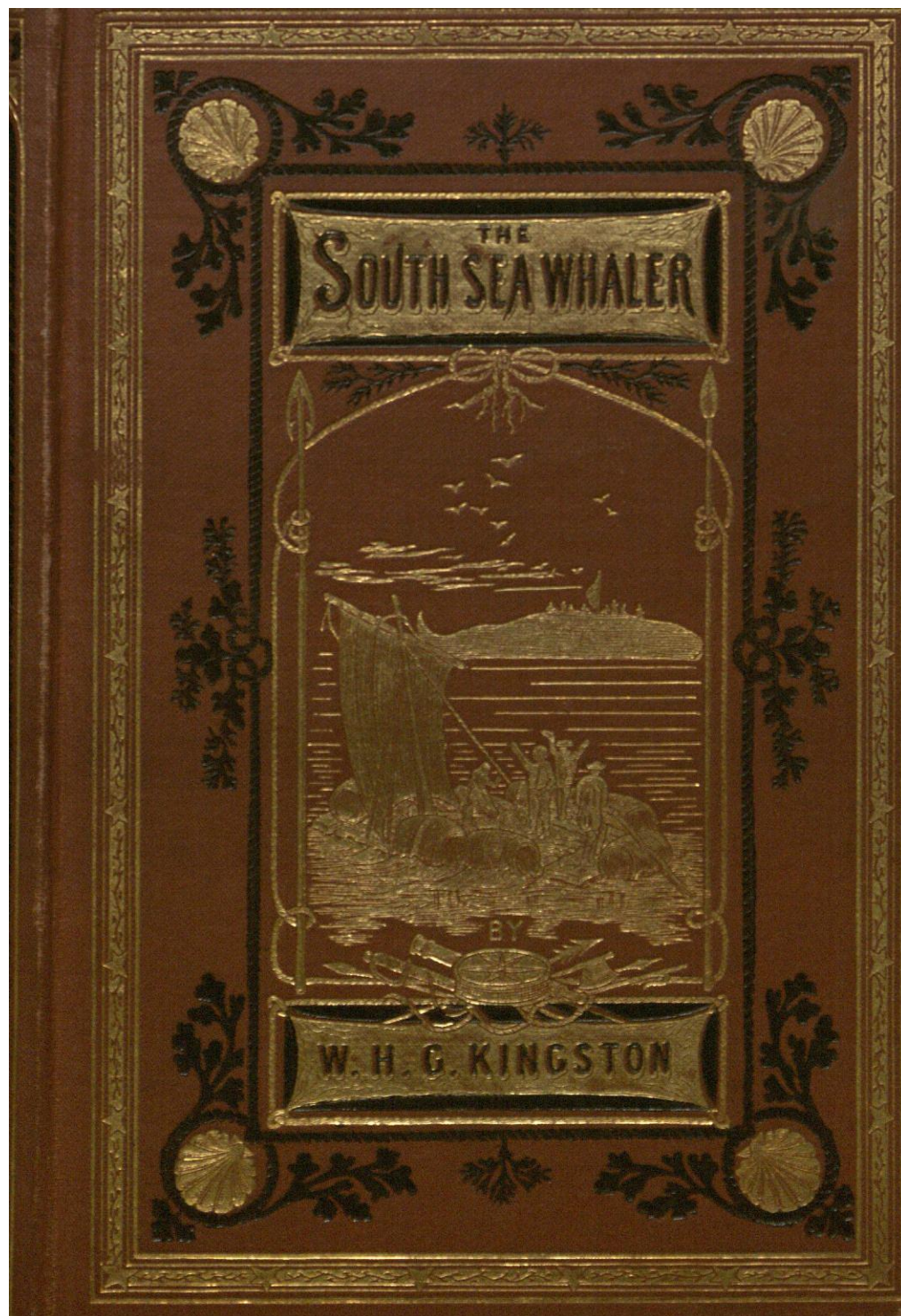
Kessel has an M.A. in English from the University of Kansas. Since his first effort, he has written several humorous pieces for F&SF. In that first piece a young Chicago broker wakes up to find himself on board *The Pequod* as a member of the crew.

Of *Herman Melville: space opera virtuoso* in the issue here displayed, Kessel's editor makes this observation: "With all the millions of words written about science fiction in recent years, we have not seen one mention of Herman Melville, who is, of course one of the great old-timers of sf. Mr. Kessel fills the lamentable gap with this insightful essay."

Spencer's Department of Special Collections is the primary source for science fiction at KU. We are often asked why – both why at KU? and why as a 'special collection'? It is because our forward looking former Spencer Librarian and science fiction devotee the late Alexandra Mason was concerned that future scholars be able to study this aspect of 20th century literature; because science fiction has become a respectable academic subject and is taught at KU by our own James Gunn, Professor Emeritus of the English Department (and still actively writing); and because a former student, the then poor-as-a-church-mouse Larry Friesen, now teaching Astronomy and Physics at the University of Houston-Clear Lake, helped give the collection a start back in the 60's and continued to support it for many years.

Largely through Jim Gunn's PR efforts during past decades we have been able to add substantially to the growing body of hardbacks, paperbacks, magazines and manuscripts, the common stuff as well as the ephemeral and the unique, from around the world.

And we haven't had to wait for the future: the collection gets a great deal of use right now.



“... this here harpooner I have been tellin’ you of has just arrived from the south seas, where he bought up a lot of ‘balmed New Zealand heads (great curios you know), and he’s sold all of ‘em but one, and that one he’s trying to sell tonight, ‘Cause tomorrow’s Sunday, and it would not do to be sellin’ human heads about the streets when folks is goin’ to churches.
{Moby Dick chapter 3 (The Spouter-Inn)}

A LIME-JUICER WRITES FOR LITTLE SQUIRTS

William Henry Giles Kingston (1814-1880): *The South Sea whaler*. London, Edinburgh, and New York, 1875. [O’Hegarty B1027]

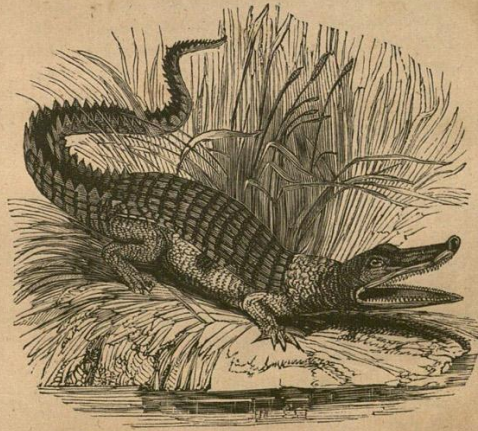
Kingston spent his boyhood in Portugal where his father was a businessman. From there he made frequent voyages to England and thus acquired a life-long love of the sea. He became interested in the emigration movement, wrote a number of books on the subject and worked actively for the improvement of the condition of seamen. He wrote novels and travel books, but is best known for his one hundred and fifty or so boys’ books of which he wrote an average of five a year for the last thirty years of his life. The first was *Peter the whaler*, 1851; there are two editions in the Children’s Collection.

This copy of *The South Sea whaler* is from the P.S. O’Hegarty Collection of Anglo-Irish history and literature. O’Hegarty had a particular interest in the British boys’ books. Supplemented by like items in the Children’s Collection and in the rest of our collections, the Department has sizeable holdings in this genre.

these animals are no longer held sacred in Egypt, but they are still treated with great care and kindness.

THE CROCODILE ("LEVIATHAN").

COMMENTATORS are now very generally agreed that this is the animal mentioned by Job under the name of "leviathan." The older writers supposed that the whale was the animal referred to; but the learning and industry of Bochart has accumulated such a mass of evidence in favour of the crocodile, as almost to defy opposition. Dr. Mason Good thus sums up the argument: "It is a sufficient objection to the whale tribes that they do not inhabit the Mediterranean, much less the rivers that empty themselves into it; some of the species have occasionally been found in this quarter, but the great whale perhaps never. This family of marine monsters, moreover, have neither proper snout nor nostrils, nor proper teeth. Instead of a snout, they have a mere spiracle or blowing hole, with a double opening at the top of the head, which has not hitherto been proved to be an organ of smell; and for teeth, a hard expanse of horny



THE CROCODILE.

"... had the great *Sperm Whale* been known to the young *Orient World*, he would have been deified by their child-magian thoughts. They deified the crocodile of the Nile, because the crocodile is tongueless; and the sperm whale has no tongue, or at least it is so exceedingly small as to be incapable of protrusion. If hereafter any highly cultured, poetical nation shall lure back to their birth-right, the merry May-day gods of old; and living enthrone them again in the now egotistical sky; in the now unhaunted hill; then, be sure, exalted to Jove's high seat, the great *Sperm Whale* shall lord it." {*Moby-Dick* chapter 79 (The Prairie)}

IT'S A CROC

Bible quadrupeds; the natural history of the animals mentioned in scripture. With sixteen engravings. Baltimore: Printed and published by John Murphy; Pittsburg: George Quigley, 1846.

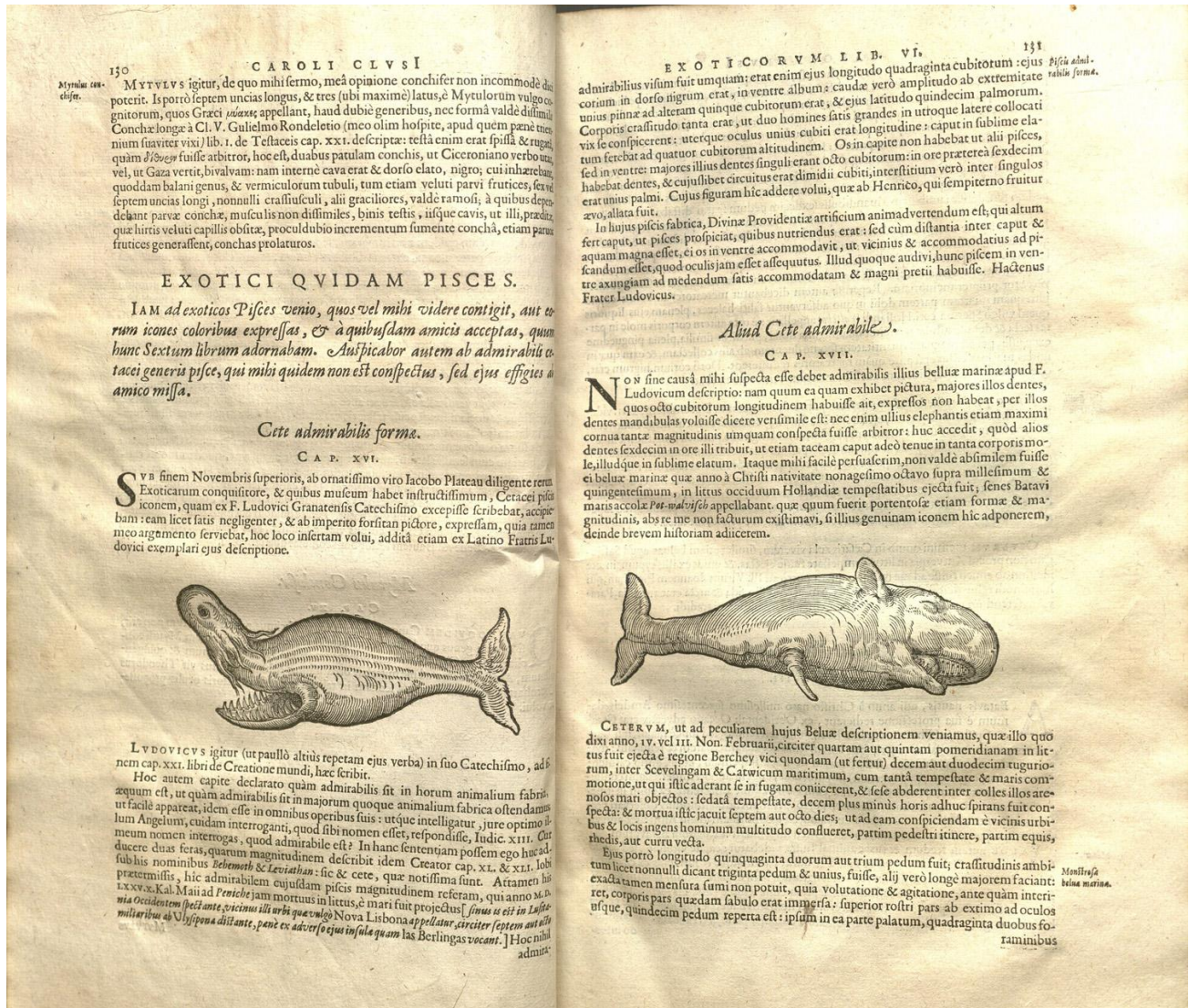
[Children A144]

What is a leviathan anyway?? Flying in the mouth of tradition this children's book makes a good case for the crocodile, and indeed the *Oxford English dictionary* states that it is "the name of some aquatic animal (real or imaginary) of enormous size, frequently mentioned in Hebrew poetry."

The author of *Bible quadrupeds* states a number of reasons why it could not be the whale, among which are that the whale doesn't usually swim in the Mediterranean and most certainly does not inhabit the rivers of Egypt and the Middle East; that the croc has proportionately the largest mouth of all the so-called monsters and that compared with him in fierceness and destructive strength the whale is a pussy-cat.

Among other definitions of Leviathan in the Oxford English Dictionary are the figurative ones derived from the older one: Leviathan as Satan, Enemy of God, in line with Ahab's view of Moby Dick; and Hobbes's Commonwealth, *q.v.* At any rate Leviathan was so big that His name has been applied poetically to anything of large size.

FLOTSAM AND JETSAM



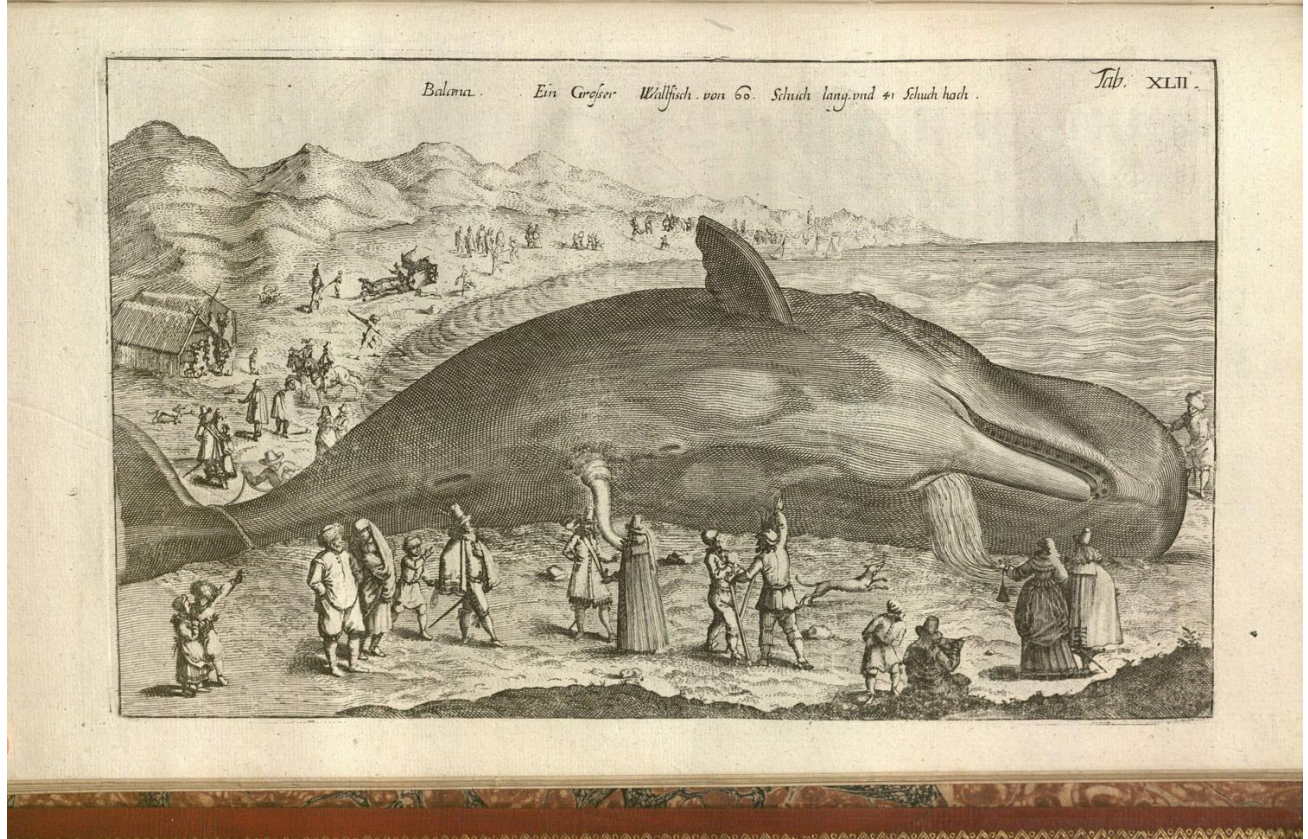
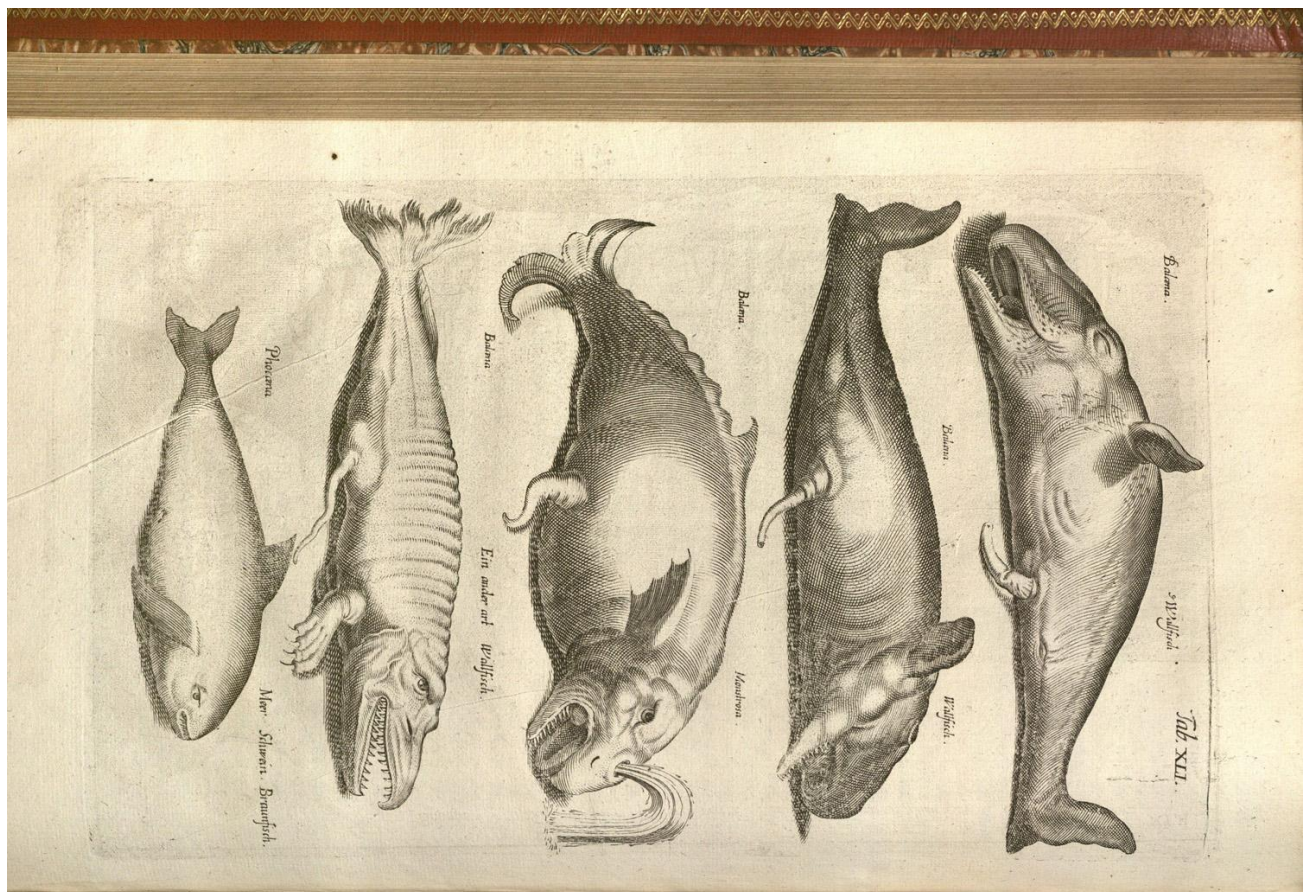
“Most of the scientific drawings have been taken from the stranded fish; and these are about as correct as a drawing of a wrecked ship, with broken back, would correctly represent the noble animal itself in all its undashed pride of hull and spars.”
{Moby-Dick chapter 55 (Of the Monstrous Pictures of Whales)}

DUTCH TREAT

Charles de L'Ecluse (1526-1609): *Exoticorum ... quibus animalium, plantarum aromatum, aliorumque peregrinorum fructuum historiae describuntur*. Antverpiae: ex Officinâ Plantinianâ Raphaelengii, 1605.
[Summerfield E779]

L'Ecluse's "Cete admirabilis formae" is a monster toothed whale, looking more like a squid with a nose covered in baleen. His "Alidu cete admirabile" is one of the earliest depictions of the sperm whale, derived from the painting of the specimen stranded at Scheveningen in 1598. L'Ecluse's description and figure of the manatee, an aquatic animal of the order Sirenia are said to be the first for that animal based on the examination of real specimens.

L'Ecluse, considered by many to be the best of the botanical writers of the 16th and early 17th centuries, lived in Montpellier, France, at the home of Guillaume Rondelet, who as mentor and friend encouraged him in the study of botany and zoology.



Wherefore, for all these things we account the whale immortal in his species, however imperishable in his individuality. He swam the seas before the continents broke water; he once swam over the site of the Tuileries, and Windsor Castle, and the Kremlin. In Noah's flood he despised Noah's Ark; and if ever the world is to be again flooded, like the Netherlands, to kill off its rats, then the eternal whale will still survive, and rearing upon the topmost crest of the equatorial flood, spout his frothed defiance to the skies."

{Moby-Dick chapter 105 (Does the Whale's Magnitude Diminish? – Will He Perish?)}

A WELL HUNG PAINTING

Joannes Jonstonus (1603-1654): *Historiae naturalis de piscibus et cetis*. Heilbrun: Franciscus Iosephus Eckebrecht, 1657. [Ellis Aves E280]

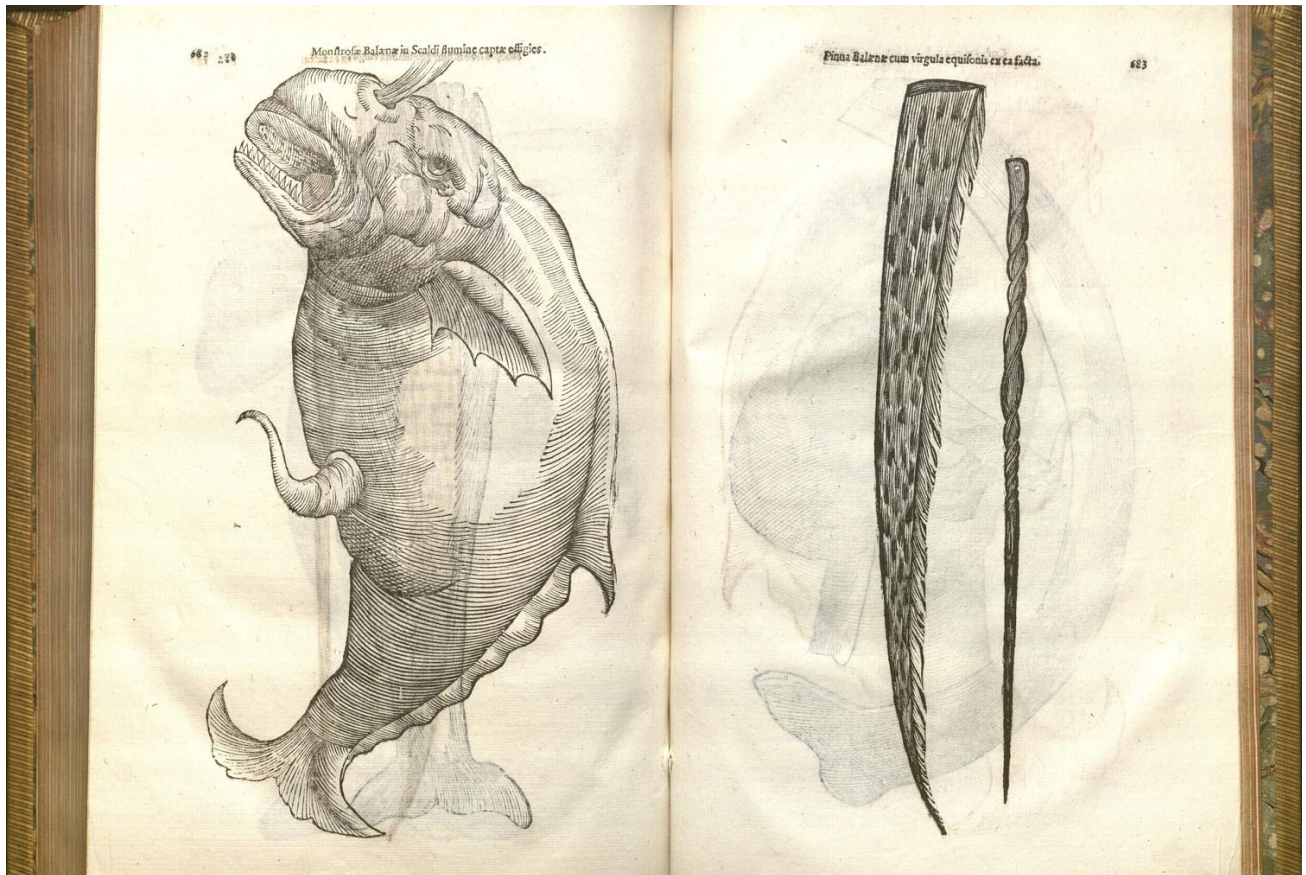
In 1598 at Scheveningen in the Netherlands, a sperm whale was washed up on the beach where it appears to have made quite a stink among the locals. An artist preserved it in a painting that hangs today in the Rijksmuseum at Leiden. An engraving was made from the painting and variations on the original image have appeared ever since, as in this engraving and in several depictions of the sperm whale in this exhibit.

One cetologist has noted that although the painting is not accurate in the details, the whale's glorious masculinity is no exaggeration but that "someone has prudishly 'painted out' this magnificent member in the Rijksmuseum picture."

On the left top to bottom appear to be two renditions of the sperm whale, followed by a caricature of same; the third animal is probably the killer whale, but with claws on his pectoral fins; at bottom is a porpoise.

Jonstonus, or John Johnstone, was a naturalist of Scottish descent born in Poland. After studying botany and medicine at Cambridge he settled in Leiden in order to indulge in independent natural history studies. His works are criticized as interesting but laborious compilations, with copper-plate figures that are mostly copies from Belon, Rondelet, Gesner, etc. all in all exhibiting more learning than

judgment (ouch!) The first edition of his natural history of fishes and whales appeared in 1649; it was frequently re-edited and translated.



“From his mighty bulk the whale affords a most congenial theme whereon to enlarge, amplify, and generally expiate. Would you, you could not compress him. By good rights he should only be treated of in imperial folio.”
{Moby-Dick chapter 104 (The Fossil Whale)}

TRITON AMONG THE MINNOWS

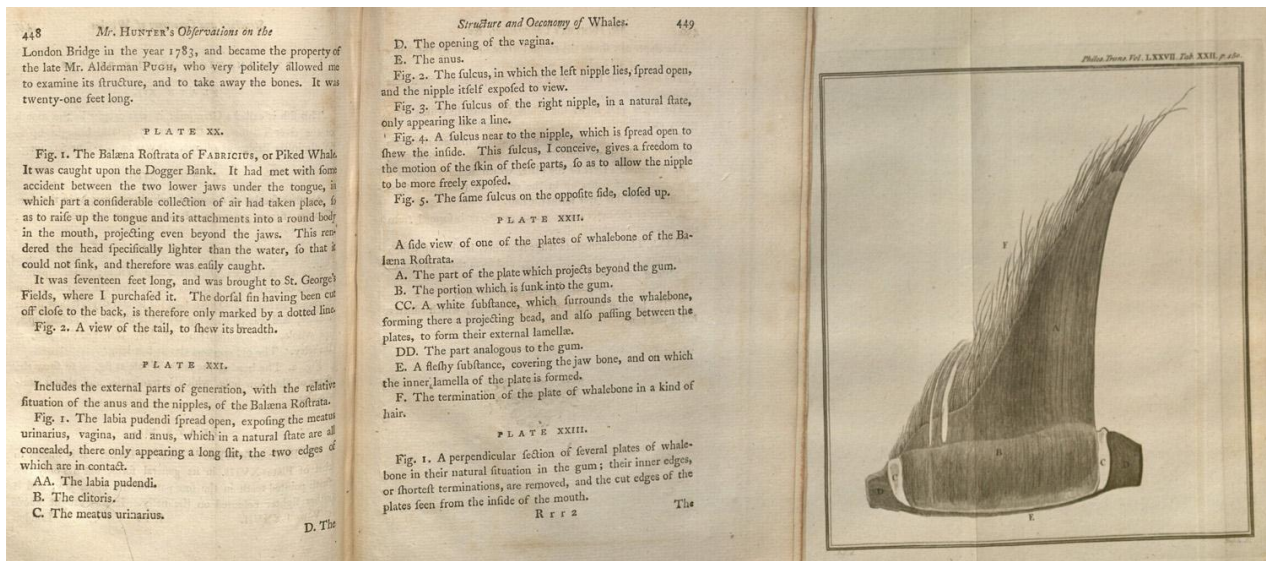
Ulisse Aldrovandi (1522-1605?): *De piscibus ... et de cetis*. Bononiae: apud Bellagambam, 1613.

[Ellis Aves E69, vol. 6 of The works]

One preeminent Renaissance naturalist not represented in our exhibit is Konrad Gessner (1516-1560). Gesner was one of the great encyclopaedists, the prototype for all who followed, but in quantity and perhaps in quality, at least of illustration and classification, he was surpassed by Italian naturalist and physician Aldrovandi.

Shown here is one of the toothed whales, perhaps another representation of the celebrated Scheveningen whale. To the right is a baleen plate and a narwhal tooth. Unfortunately, a few pages on, Aldrovandi gives us another example of the oft depicted monster cross of toothed whale with baleen whale, complete with the two stove-pipe blowholes.

Aldrovandi founded a botanical garden at Bologna, and his museum of natural history objects and biological specimens contributed greatly to the later development of animal taxonomy.



“Unfitness to pursue our research in the unfathomable waters.’
‘Impenetrable veil covering our knowledge of the cetacea.’ ‘A field strewn with thorns.’ ‘All these incomplete indications but serve to torture us naturalists.’

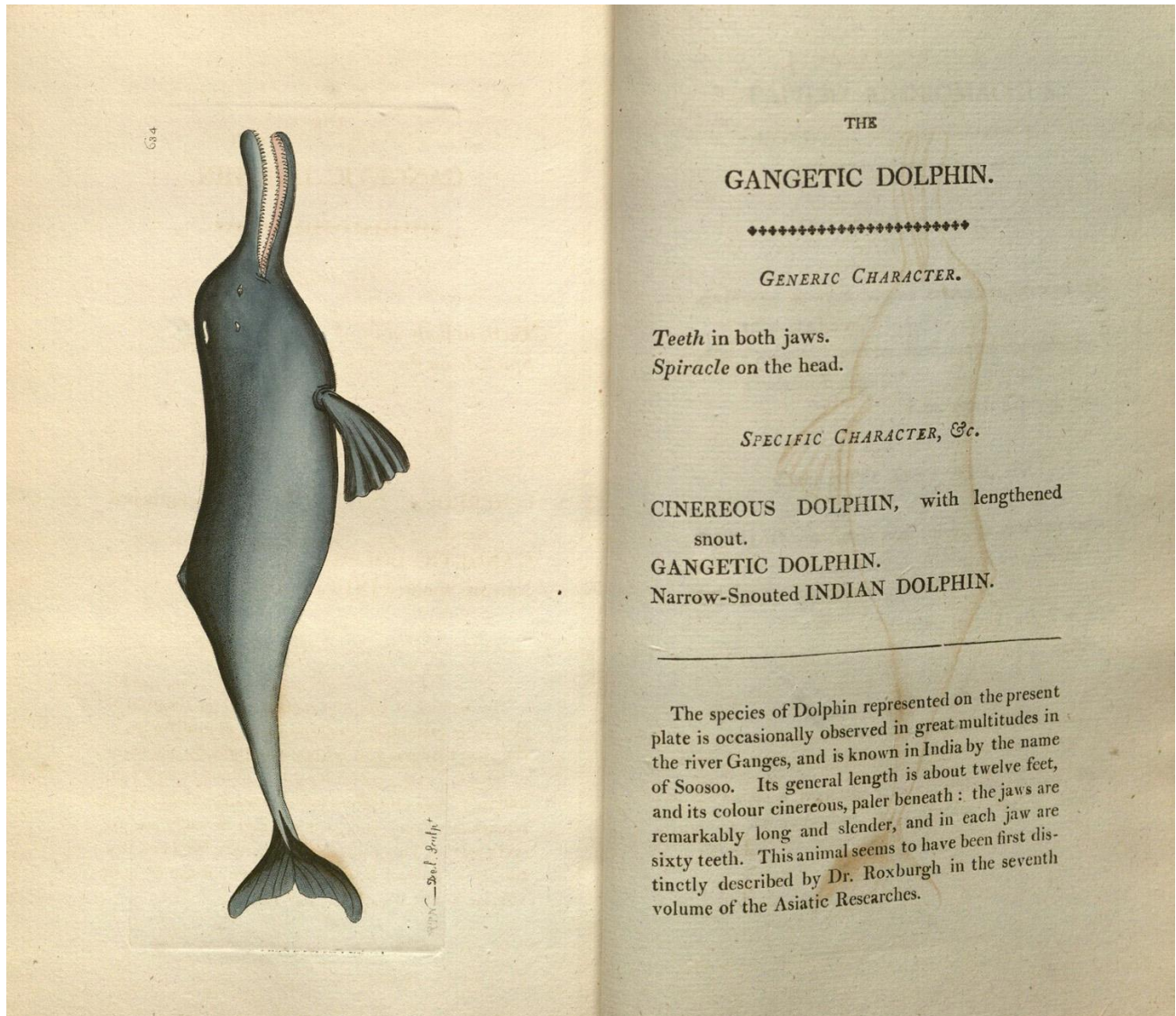
“Thus speak of the whale the great Cuvier, and John Hunter, and Lesson, those lights of zoology and anatomy.”
{Moby-Dick chapter 32 (Cetology)}

FATHER OF MODERN COMPARATIVE ANATOMY

John Hunter (1728-1793): *Observations on the structure and oeconomy of whales*. London: sold by Lockyer Davis, and Peter Elmsly, printers to the Royal Society, 1787. In: *The philosophical transactions of the Royal Society of London*, volume 77, 1787, p. 371-450. With plates XVI-XXIII. [D1474]

For the history of medicine, the 16th and 17th centuries were the age of the study of human anatomy. It was to be expected that this study would extend to other animals as well. The first recorded dissection of a cetacean took place in 1654 when Bartholin dissected a porpoise, although it was evident that such anatomizing was carried on in the previous century, by Belon, etc.

But it was left to surgeon John Hunter in the 18th century to first describe accurately the internal structure of the big whales. He is considered to be the founder of modern comparative anatomy. His collected observations on cetaceans were published in this paper in the Philosophical transactions; included are the first recorded specimens of the bottlenose dolphin, sent to him by a former student, Dr. Edward Jenner, who would soon publish his findings that the cow-pox vaccination was a protection against small-pox. At Hunter's death (of a heart attack, after a heated argument about students' fees!), his unscrupulous brother-in-law Edward Home stole his unpublished manuscript and himself published much of Hunter's material on whales and other matters as his own, and then burned the evidence. Fortunately Hunter's secretary had made copies of the manuscripts and Home's treachery was uncovered.



"But there are a rabble of uncertain, fugitive, half-fabulous whales, which as an American Whaleman, I know by reputation, but not personally."

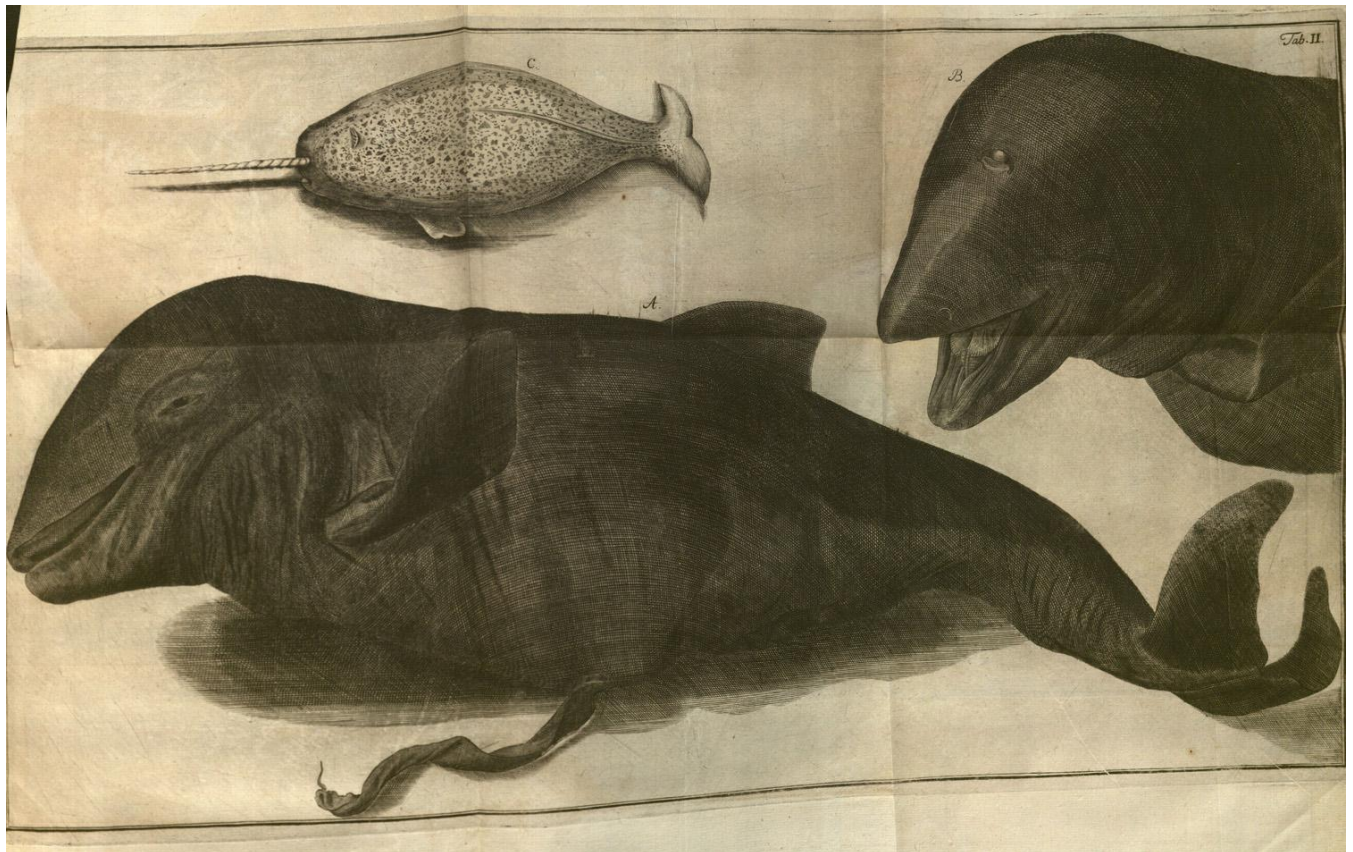
{Moby-Dick chapter 32 (Cetology)}

FUNNY, YOU DON'T LOOK SUSU-ISH

George Shaw (1751-1813) and **Frederick Polydore Nodder** (died 1800?): *The naturalist's miscellany; or, Coloured figures of natural objects; drawn and described immediately from nature.* London: printed for Nodder, 1789-1813. 24 volumes. Vol. 15. [Ellis Aves C1485]

The Gangetic dolphin or susu, *Platanista gangetica* (here *Delphinus gangeticus*) is a fresh-water dolphin limited to the rivers Ganges, Indus, and Bramaputra. He is caught with nets, his meat is eaten, and his oil is used for lighting (ironic, inasmuch as he is blind), and for medicinal purposes. Mr. Nodder might have been a trifle color-blind when he painted this dolphin, for in all the sources the susu is said to be brownish gray, darkening with maturity to lead-black.

The naturalist's miscellany was issued originally in 267 numbers with text in Latin and English, pages unnumbered. Shaw, editor of the text, although trained as a churchman, abandoned that profession for natural history. He studied medicine, was appointed botanical lecturer at Oxford, and set up a medical practice. He was one of the founders of the Linnean Society of London, a Fellow of the Royal Society, and eventually was appointed keeper of the natural history section of the British Museum. Frederick Nodder, the artist, is known primarily as a botanical painter and engraver.



“... his body seemed scarce yet recovered from that irksome position it had so lately occupied in the maternal reticule; where, tail to head, and all ready for the final spring, the unborn whale lies bent like a Tartar’s bow. The delicate side-fins, the palms of his flukes, still freshly retained the plaited crumpled appearance of a baby’s ears newly arrived from foreign parts.”

{Moby-Dick chapter 87 (The Grand Armada)}

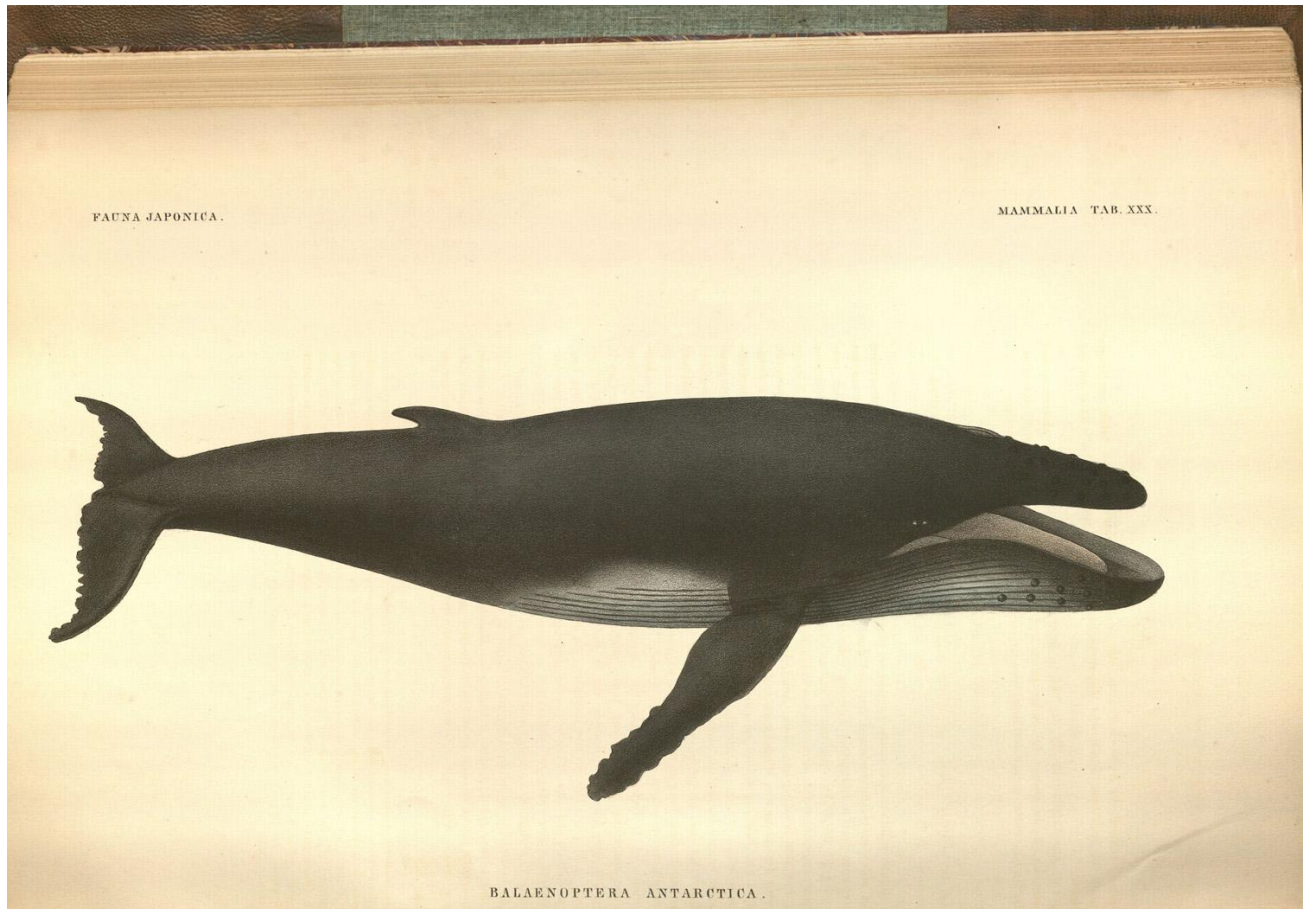
AND HE’S TREADING ON MY TAIL

Jacob Theodor Kline (1685-1759): *Historiae piscium naturalis, prouendae missus I-V. Cum figuris. Gedani: Litteris Schreiberianis, 1640-1649. Missus secundus de piscibus per pulmones spirantibus; ... De dentibus balaenarum, 1641.* [E617]

Klein’s interest in natural history went at first in a botanical direction; in his thirties he established a botanical garden. Then, with the help of friends he created a collection of natural history objects from which flourished an interest in paleontology and zoological classification. He was interested in a natural system based on the internal characteristics brought to light by the anatomical knife, rather than the practical but deliberately artificial schemes such as Carl Linnaeus’s classification by outward, easily identifiable and countable parts, a system that nevertheless served the purpose of bringing order out of the chaos created by the discovery of masses of new plant and animal species during the previous two centuries of exploration.

The 17th century practice of amassing miscellaneous objects and rarities became the hobby of the aristocracy during the 18th century. The preparation of descriptive catalogs based on collections such as Klein’s demanded a great deal of study; but from such systematic collection, organization, and description so typical of the age of the encyclopedia, ultimately arose the museums and libraries and their computers that function to this day as the indispensable instruments of research. Klein’s beautifully illustrated books were said to be on the shelves of every 18th century library.

This plate showing the narwhal and fetuses of the common porpoise are from a chapter *De piscibus per pulmones spirantibus*, or, 'On Fish that breathe with lungs'.



“(Hump Back).-This whale is often seen on the northern American coast. He has been frequently captured there, and towed into harbor. He has a great pack on him like a peddler ... ; At any rate, the popular name for him does not sufficiently distinguish him, since the sperm whale also has a hump, though a smaller one. His oil is not very valuable. He has baleen. He is the most gamesome and light hearted of all the whales, making more gay foam and white water generally than any other of them.”

{Moby-Dick chapter 32 (Cetology)}

WHEN DID YOU HAVE YOUR FIRST FRIENDLY?

Philipp Franz von Siebold (1796-1866): *Fauna japonica*. Lugduni Batavorum: apud auctorum, 1833-1850. 6 volumes. Vol. 2, sect. 2: Les mammifères marins, 1842. [Ellis Aves G45]

Of the early works treating the vertebrate zoology of Japan, the best is Siebold's *Fauna japonica*. It is difficult to find complete copies of this extensive work because it was issued over a period of seventeen years. Siebold was assisted by C.J. Temminck and H. Schlegel in preparing some volumes but the whales appear to be the work of Siebold himself.

Siebold was a German physician, naturalist, and scientific explorer who in spite of the intrigues that got him kicked out of Japan on more than one occasion, made known through his numerous books and papers an area of the world then relatively unknown and unknowable to most westerners.

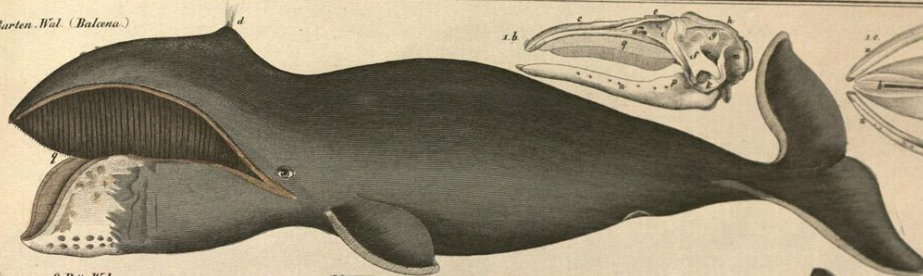
The humpback whale *Megaptera novaengela*, illustrated in this plate, has several distinguishing features: first is his serrated flukes; no other whale has such a scalloped tail. More obvious are his long knobby edged flippers, the longest amongst all whales; and the melodic sounds of the male humpback are the most complex songs in the animal kingdom.

Although humpbacks have the reputation of being gentle giants because they show no hostility toward humans, the males engage in violent battles that leave them scratched, bleeding, and scarred. Gentle encounters with humpbacks and other species, in which they come close enough to a boat to be patted, are called 'friendlies'.

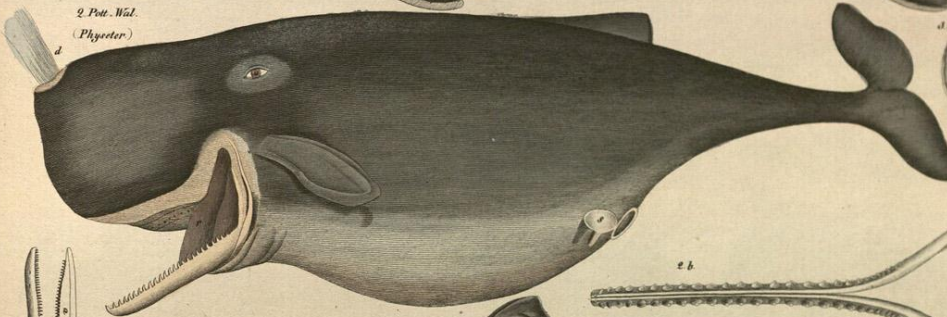
X. ZUNFT. WALE.

Tab. 80

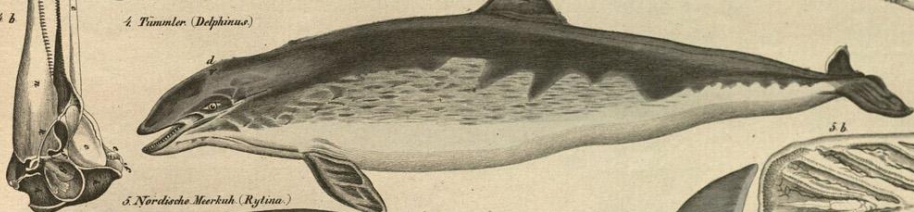
1. Barten-Wal. (Balæna)



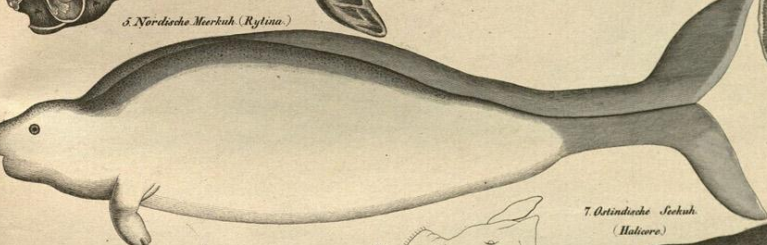
2. Pott-Wal. (Phæcetor)



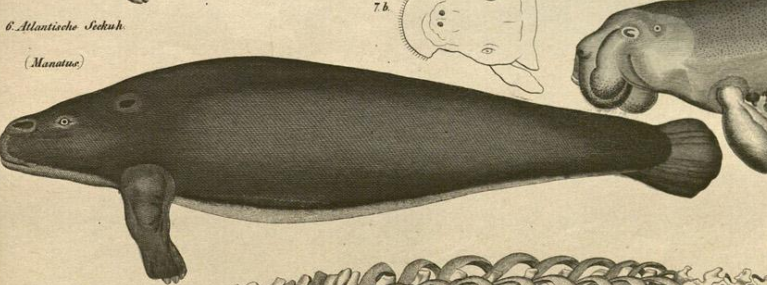
3. Tümmler (Delphinus)



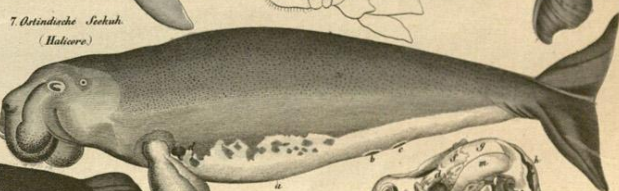
4. Nordische Meerkuh (Rytina)



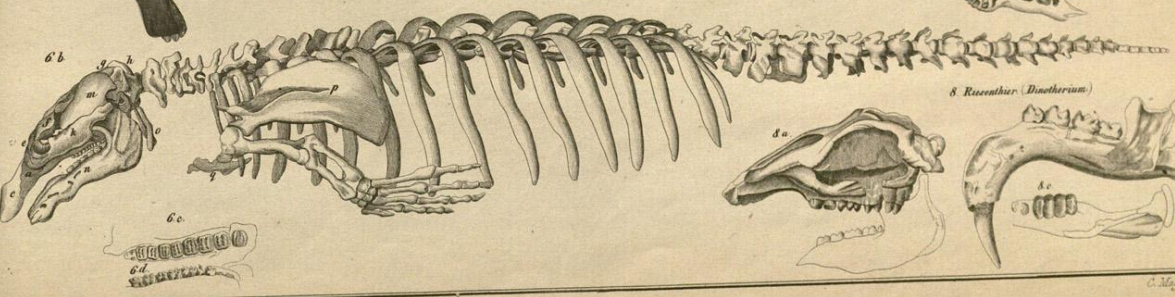
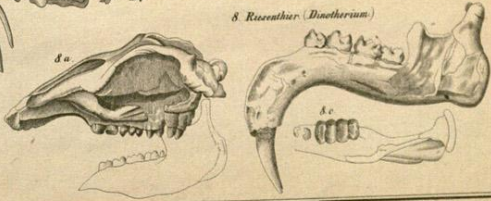
5. Atlantische Seekuh (Manatus)



6. Ostindische Seekuh (Halicore)



7. Rucenbur. (Dianotherium)



“I am aware that down to the present time, the fish styled Lamantins and Dugongs (Pig-fish and Sow-fish of the Coffins of Nantucket) are included by many naturalists among the whales. But as these pig-fish are a nosy, contemptible set, mostly lurking in the mouths of rivers, and feeding on wet hay, and especially as they do not spout, I deny their Credentials as whales; and have presented them with their passports to quit the Kingdom of Cetology.”

{MobyDick chapter 32 (Cetology)}

THE FLEISCH- UND PFLANZENFREßENDEN OKENFÜßENDEN OPHTHALMOZOANS

Lorenz Oken (1779-1851): *Abbildungen zu Oken's allgemeiner Naturgeschichte*. Stuttgart: Hoffmann'sche Verlags-Buchhandlung, 1843.

[Ellis Aves E129]

Lorenz Okenfuss, later Oken, was German naturalist and leader of the German school of Natur-Philosophie. First formulated and applied by Fichte and Schelling respectively, Natur-Philosophie held, among other ideas, that animal classes are nothing other than a representation of the sense-organs, and that they must be arranged in accordance with them: the *Glossozoa*, or fishes, are those animals in which the tongue makes its first appearance; the *Otozoa*, birds, are those in which the ear first opens externally. Mammals, *Opthalmozoa*, have all organs of sense present and complete, and movable eyes covered with lids.

Bibliographer Casey Wood (1856-1942) has called the *Allgemeine Naturgeschichte* “a rare and important serial.” The Atlas exhibited here was published separately as a supplement. The whales depicted are from top down: the bowhead or Greenland right whale; the sperm whale; a species of dolphin; and to the right, the narwhal. Beneath the *Cetacea* are some members of the mammalian order *Sirenia*, aquatic and herbivorous mammals including the manatee, dugong, and sea-cow.

In the text Oken calls this whole page of animals whales, sub-arranging them according to their sense of taste: the cetaceans he calls the Fleischfressenden

Wale or meat-eaters; the manatee *et al* are the Pflanzenfressenden Wale or plant-eating whales.

SMITHSONIAN CONTRIBUTIONS TO KNOWLEDGE, VOL. XXXIII.

PLATE 49.

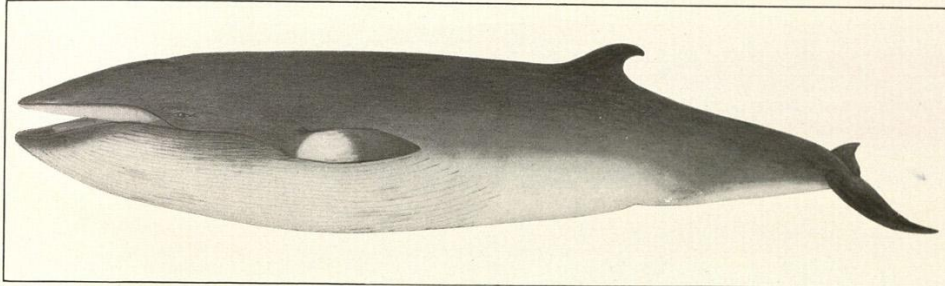


FIG. 1.

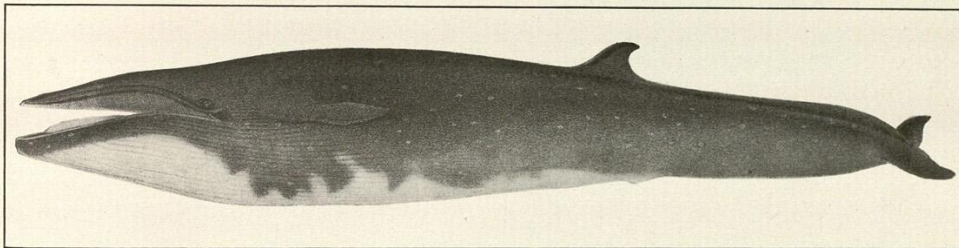


FIG. 2.

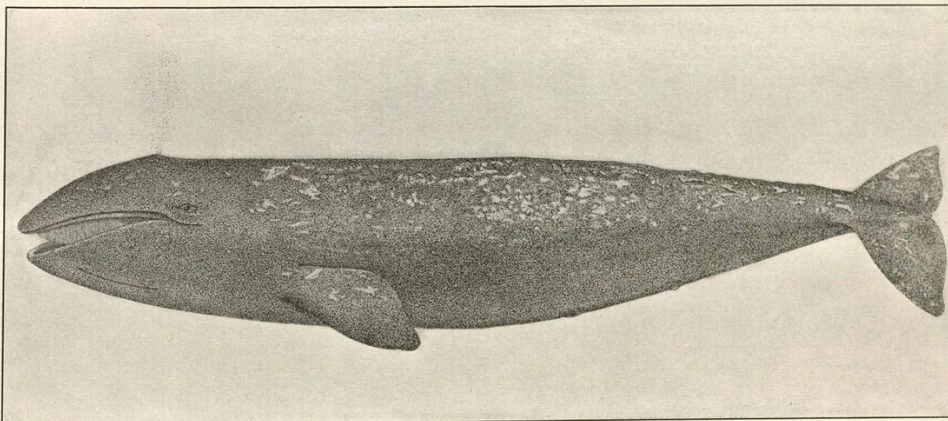


FIG. 3.

FIG. 1.—LITTLE PIKED WHALE, *BALÆNOPTERA ACUTO-ROSTRATA* LACÉPÈDE.
FIG. 2.—POLLACK WHALE, *BALÆNOPTERA BOREALIS* (LESSON).
FIG. 3.—CALIFORNIA GRAY WHALE, *RHACHIANECTES GLAUCUS* COPE.

“(Right Whale).-In one respect this is the most venerable of the leviathans, being the one first regularly hunted by man. It yields the article commonly known as whalebone or baleen; and the oil specially known as “whale oil”, an inferior article in commerce.”

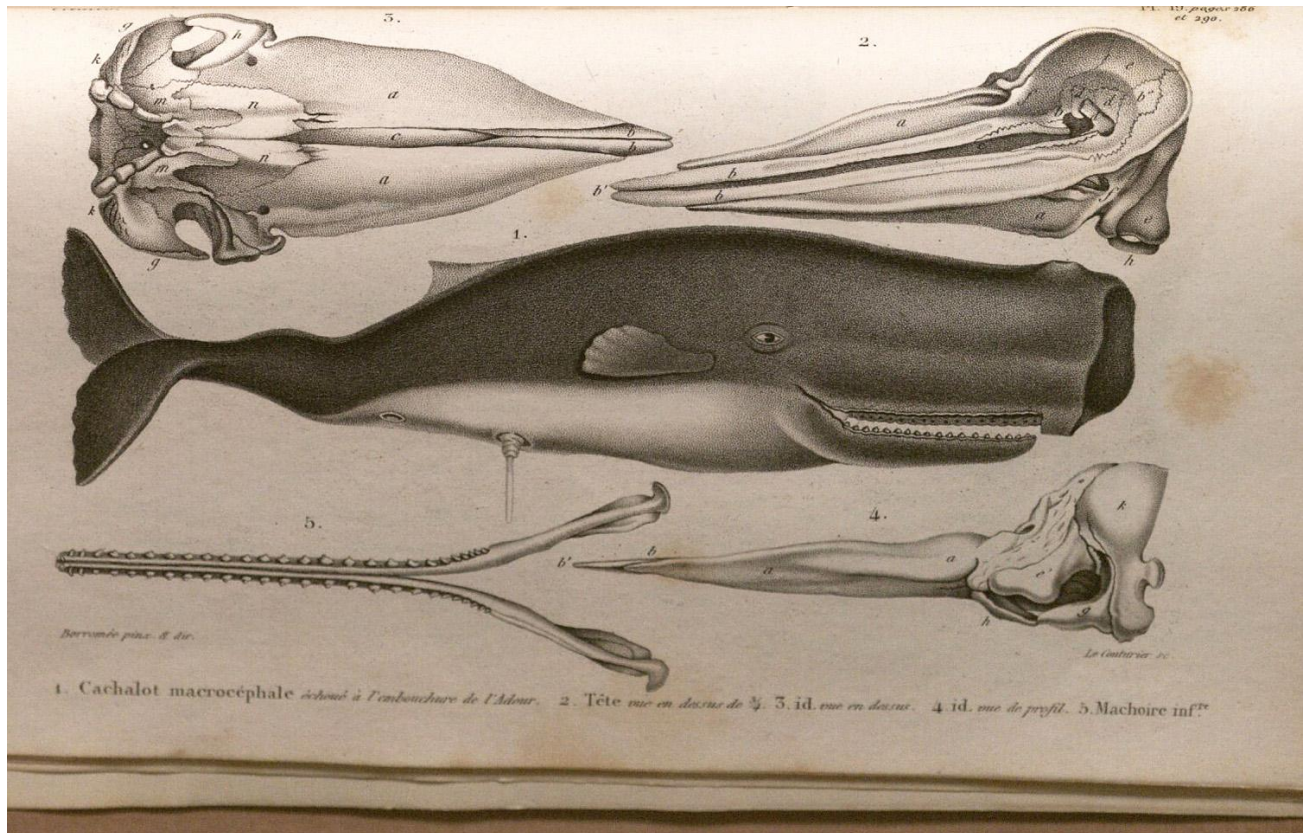
{Moby-Dick chapter 32 (Cetology)}

TRIED AND TRUE

Frederik William True (1858-1914): *The whalebone whales of the western North Atlantic*. Washington, D.C.: Smithsonian Institution, 1904.

[Ellis Omnia E110]

Following thirty years after Scammon’s classic work on the marine mammals off the Pacific coast of North America, an equally weighty tome about the whalebone whales off the Atlantic coast was produced by American zoologist Frederick True, Head Curator of the Department of Biology in the United States National Museum. Taking full advantage of a shore whaling station in Newfoundland, True examined several species of baleen whales firsthand, before they went into the try-pots; he consolidated all previously written information, combined it with his own observations and brought order out of chaos of synonymy for the various species of the suborder Mysticeti. The order is comprised of three families: the right whales (four species), the grey whale (one species) and the rorquals plus the humpback (six species).



“But the placing of the capsheaf to all this blundering business was reserved for the scientific Frederick Cuvier, brother to the famous Baron. In 1836, he published a Natural History of Whales, in which he gives what he calls a picture of the Sperm Whale. Before showing that picture to any Nantucketer, you had best provide for your summary retreat from Nantucket. In a word, Frederick Cuvier’s Sperm Whale is not a Sperm Whale, but a squash. Of course, he never had the benefit of whaling voyage (such men seldom have), but whence he derived that picture, who can tell.”

{Moby Dick chapter 55 (Of the Monstrous Pictures of Whales)}

HE SHOULD HAVE LET GEORGE DO IT

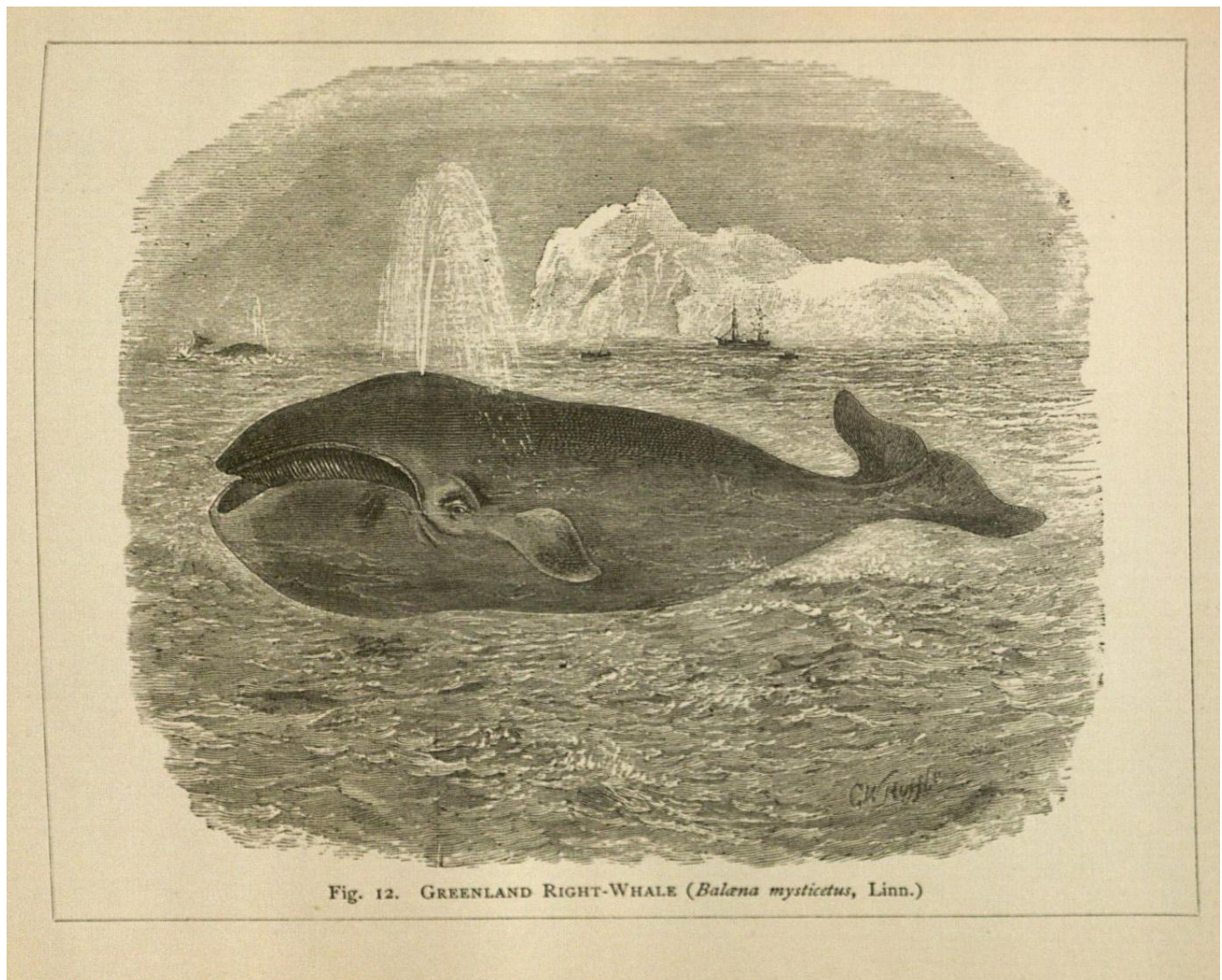
Frederic George Cuvier (1773-1838): *De l'Histoire naturelle des cétacés*. Paris: Roret, 1836.

[Ellis Omnia C713]

Fortunately naturalists in general have not been as harsh as Melville where the Baron George Cuvier's bother Fred was concerned. Although there was nothing original in Frederic's work, it was, nevertheless, a valuable compendium and critical digest of the extant literature on the Cetacea.

Whale bibliographer J.A. Allen has noted, "the large number of species considered as of doubtful existence indicates a judicious conservatism on the part of the author rarely exhibited by his predecessors."

Nevertheless we exhibit here the object of Melville's scorn, the *Cucurbita melvillii*, known in whale circles as *Physeter macrocephalus*, the sperm whale.



“At last, when the ship drew near to the outskirts, as it were, of the Equatorial fishing ground ... the watch ... was startled by a cry so plaintively wild and unearthly – like half articulated wailings of the ghosts of all of Herod’s murdered Innocents - that one and all, they started from their reveries ... ; The Christian or civilized part of the crew said it was mermaids, and shuddered ... ;

“These rocky islands the ship had passed were the resort of great numbers of seals ... Crying and sobbing with their human sort of wail. But this only the more affected some of them, because most mariners cherish a very superstitious feeling about seals, arising not only from their peculiar tones when in distress, but also from the human look of their round heads and semi-intelligent faces, seen uprising from the water alongside. In the sea, under certain circumstances, seals have more than once been mistaken for men.”

{Moby Dick chapter 126 (The Life-Buoy)}

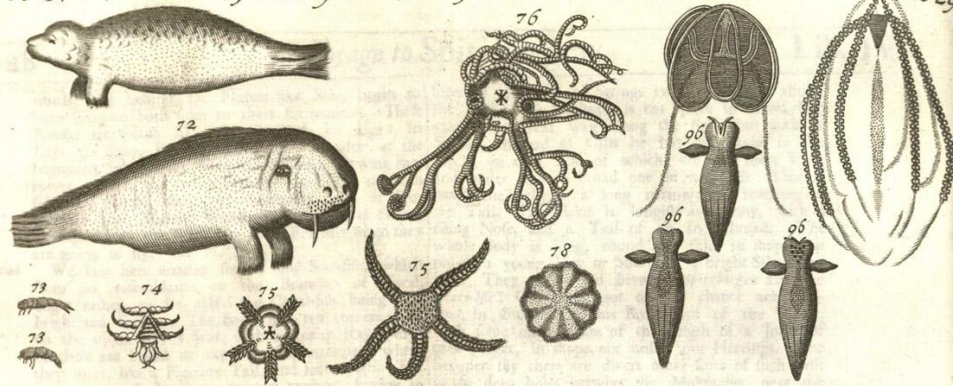
GREENBACKS AND HUMPBACKS

Thomas Southwell (1831-1909): *The seals and whales of the British seas*. London: Jarrold and Sons, 1881.

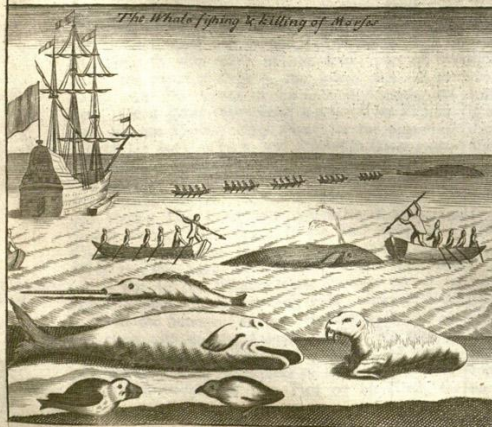
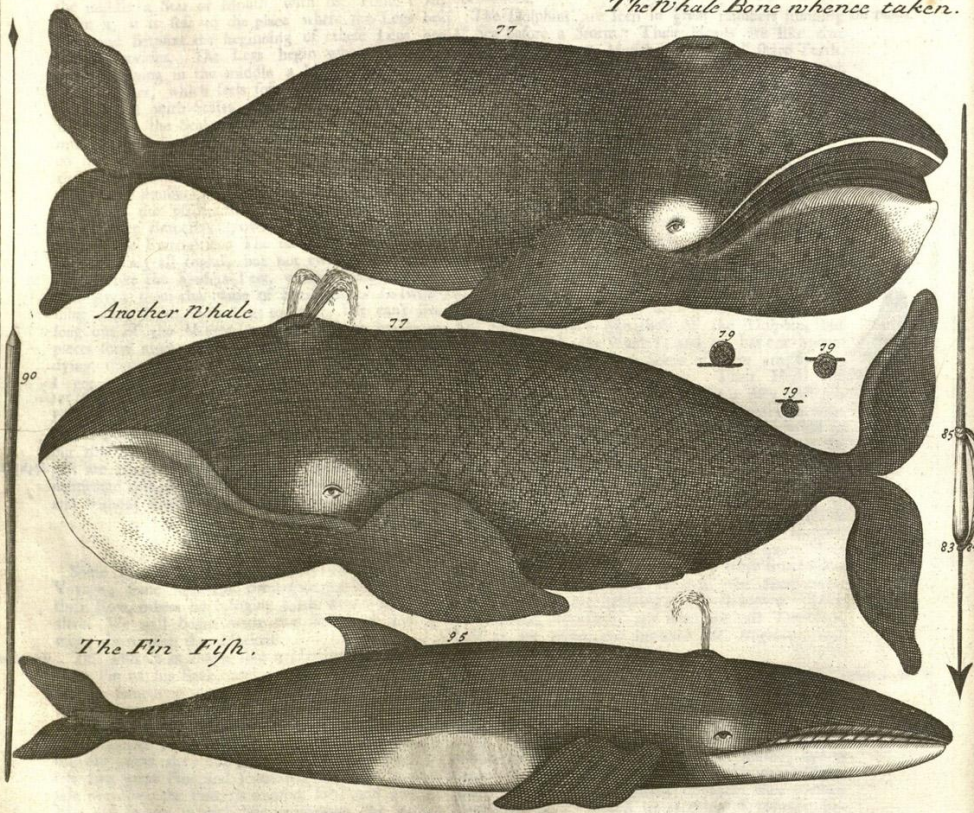
[Ellis Omnia C814]

Thomas Southwell earned his bread as a banker but devoted all his leisure time to studying and writing about the natural history of the county of Norfolk, England. His *Seals and whales* was a popular and accurate compilation of papers originally published in the journal *Science gossip*. Among his many contributions was his annual report to *The zoologist* of statistics on the seal and whale fisheries.

His favorite subject, however, was ornithology; he worked for the protection of bird life and is best remembered for his completion and publication of Henry Stevenson’s *Birds of Norfolk*, a model of county ornithology.



The Whale Bone whence taken.



The Whale fighting & killing of Manse



The Habits of the Greenlanders

“... let us glance at those pictures of leviathan purporting to be sober scientific delineations, by those who know. In Harris’s collection of voyages there are some plates of whales extracted from a Dutch book of voyages, A.D. 1671, entitled *A Whaling Voyage to Spitzbergen in the ship Jonas in the Whale ...* ; In one of those plates the whales, like great rafts of logs, are represented lying among ice-isles, with white bears running over their living backs. In another plate, the prodigious blunder is made of representing the whale with perpendicular flukes.”
{Moby-Dick chapter 55 (Of the Monstrous Pictures of Whales)}

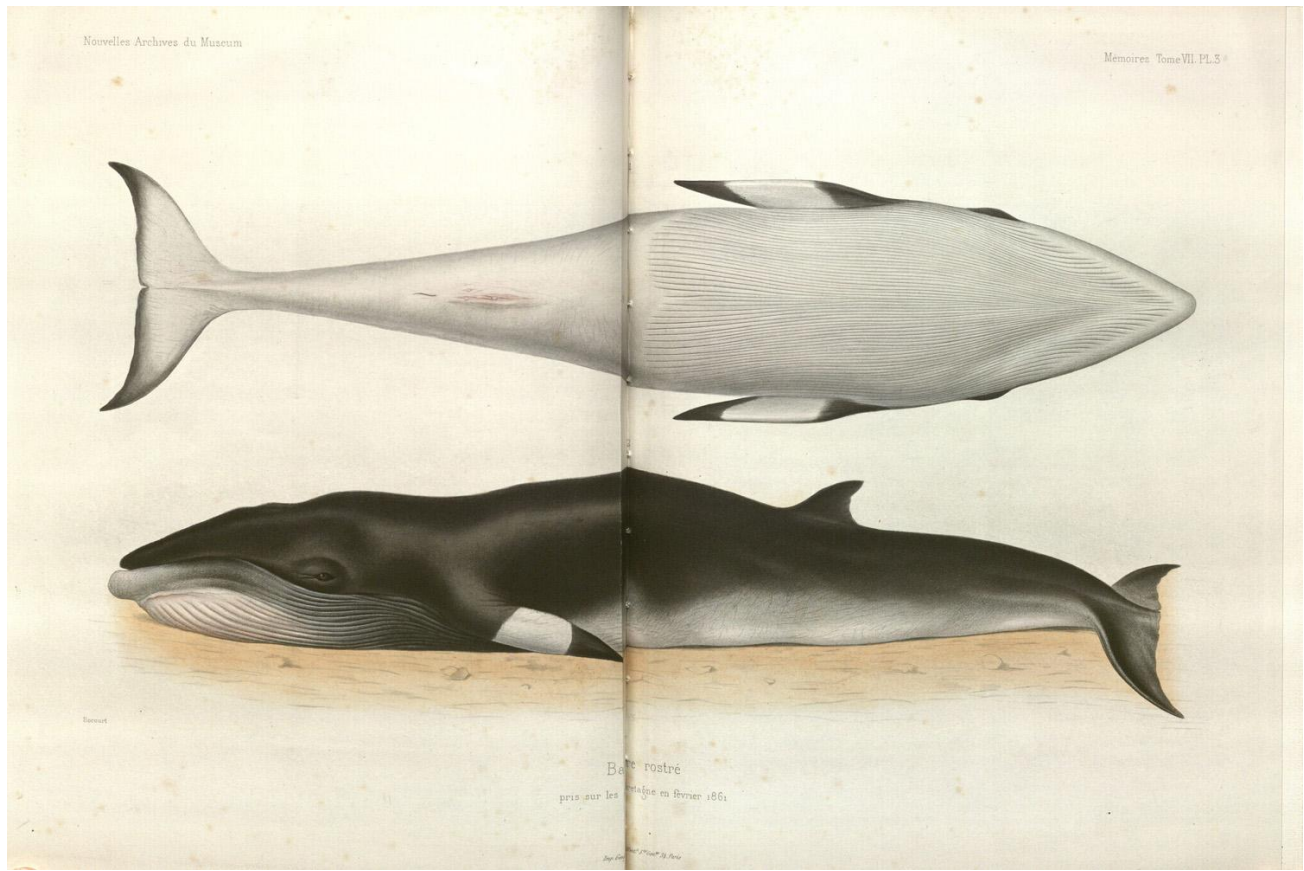
TAKE A FLYING FLUKE

John Harris (1667?-1719): *Navigantium atque itinerarium bibliotheca*: or, A compleat collection of voyages and travels. London: Printed for Thomas Bennet; John Nicholson; and Daniel Midwinter, 1705. 2 volumes. Vol. 1. [G382]

A reading of Harris’s collection of voyages and travels will reveal that he had no better words to say of his rival voyages-collectors than Melville has to say of Harris in the quotation above. This is the plate that so scandalized Melville, depicting a whale with perpendicular flukes, like a fish’s tail, although the text reads, “His tail lies horizontal.”

The original version of the voyage in the ship *Jonas in the Whale*, of which we have here digested and spat out the English version, is Friedrich Marten’s *Spitzbergische ... Reise*. Harris’s work claimed to be a history of all known voyages and travels and indeed a number of its maps, especially of the New World, are important ones for the history of cartography, one of our strong collecting interests in the Department of Special Collections.

This and the works of Harris’s competitors such as Churchill (who has a lot to say about whales) are an important part of our holdings in the literature of scientific voyages and travels.



“I boarded her once at midnight somewhere off the Patagonian coast, and drank good flip down in the fore-castle.”
 {Moby-Dick chapter 101 (The Dacanter)}

MYSTERY MYSTICETE

Paul Gervais (1816-1879): *Remarques sur l'anatomie des cétacés de la division des balaénidés*. Paris, 1871. In: *Nouvelles archives of the Museum nationale d'histoire naturelle*, Vol. 7. [Ellis Omnia E148]

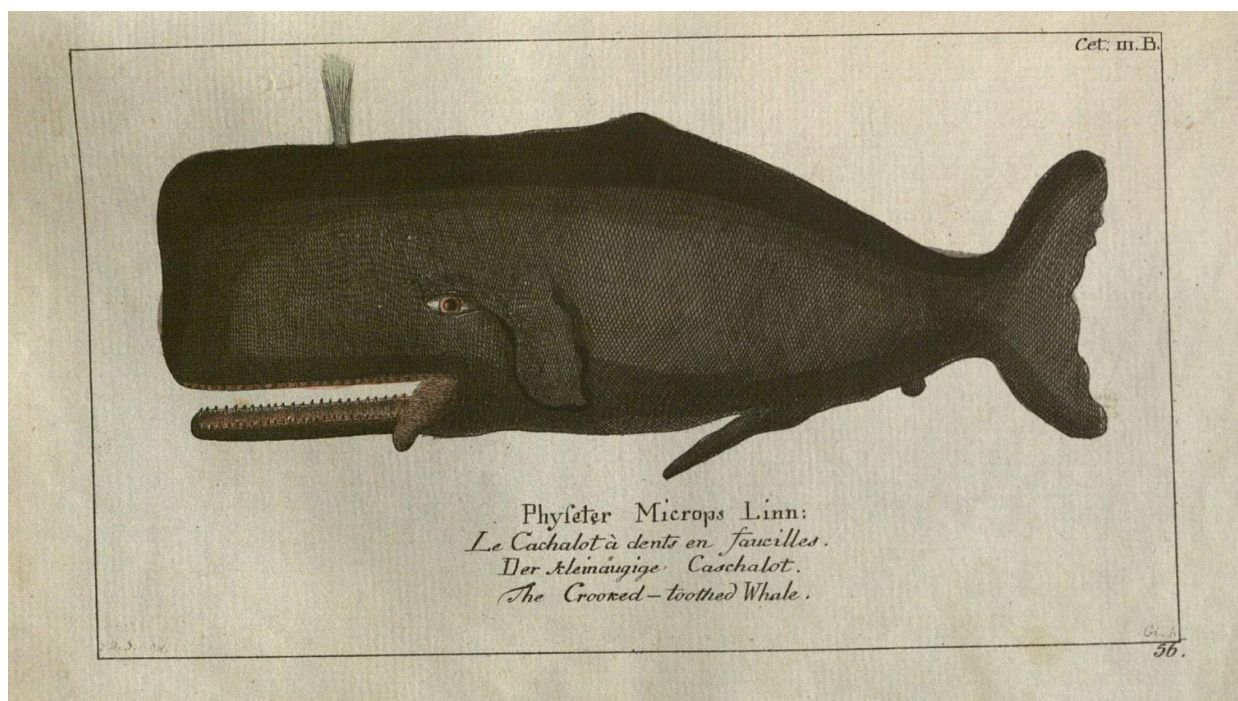
The confusion over names is something the cetologist still has to contend with in doing research with any but the most recently published materials. It was sometimes enough to drive this exhibit-maker, a non-cetologist, to the Big Drink.

In this case the illustration was at least a help; it isn't always. So a glass of flip to whomever can prove me wrong in guessing that the whale pictured is the

Mincke whale *Balaenopera acutostrata*. Here's the problem: the rostre of the species name given it by Gervais is still evident in the species name used today, but ordinarily means (as it did to me), rostrated, i.e. beaked. But the whale pictured is not one of the beaked whales, by virtue of its throat grooves, which place it in the family Balaenopteridae; the beaked whales are the Ziphiidae. But because the common name for one of the beaked whales is "Gervais's beaked whale", a body could get confused initially.

Gervais tells us that the whale pictured above was washed ashore in 1861; the binomial *Mesoplodon europaeus* was assigned by Gervais himself to his beaked whale in 1855. But the real giveaway is an external feature any fool could see: the band of white on the flippers I discovered to be unique to the Mincke among baleen whales. Mystery solved.

The French physician and zoologist Gervais is known primarily as a vertebrate paleontologist. He wrote a number of papers and books on insects, mammals, medical zoology, etc., and at the time that this paper appeared in the *Nouvelles archives*, he held the chair of comparative anatomy at the Museum National d'Histoire naturelle in Paris, where he set upon the task of classifying much of George Cuvier's collections.



“Physiognomically regarded, the Sperm Whale is an anomalous creature. He has no proper nose. And since the nose is the central and most conspicuous of the features; and since it perhaps most modifies and finally controls their combined expression; hence it would seem that its entire absence, as an external appendage, must very largely affect the countenance of the whale.”

{Moby-Dick chapter 79 (The Prairie)}

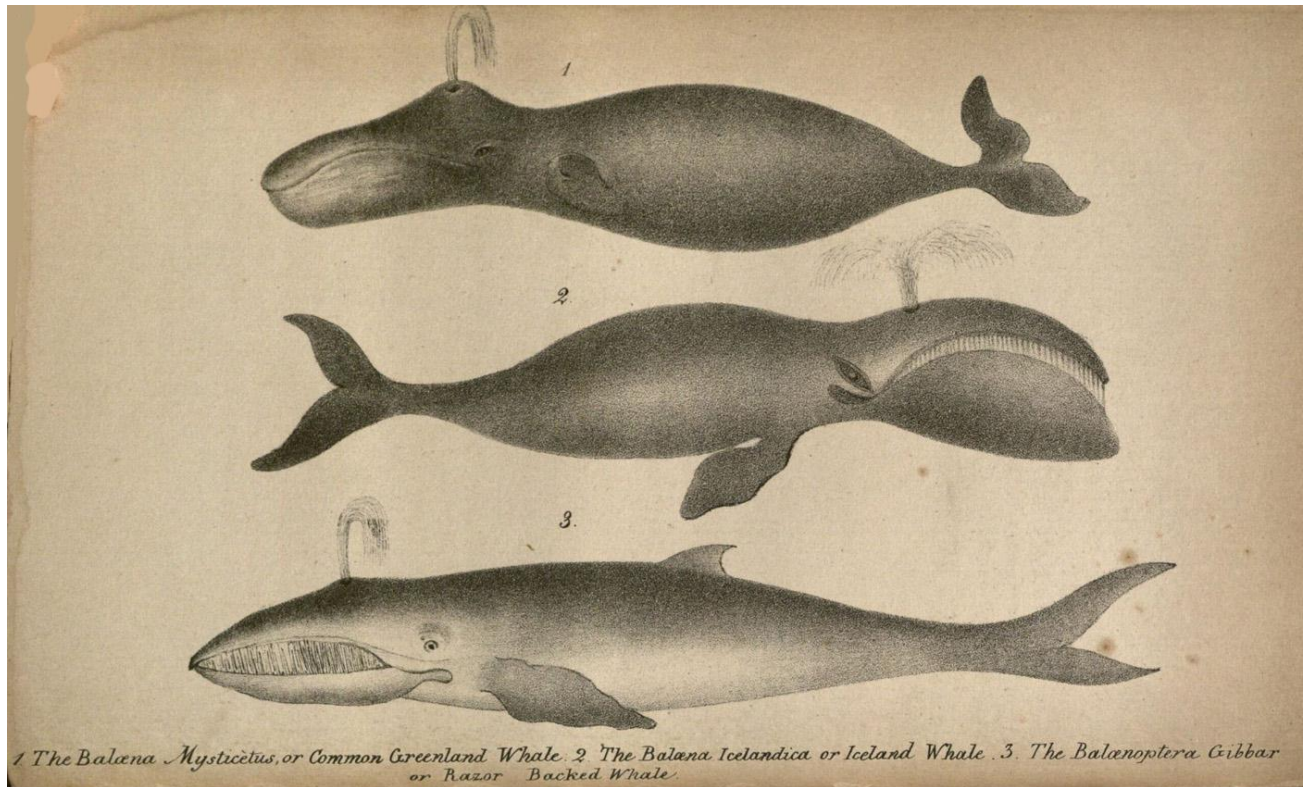
WHERE THE SUN DON'T SHINE

George Heinrich Borowsky (1746-1801): Gemeinnützige Naturgeschichte des Thierreichs. Berlin, Stralsund: G.A. Lange, 1780-1789. 10 volumes. Vol. 2: Wallfisch und Vögel. 1781. [Ellis Aves C857]

Borowsky was a professor of natural history in Germany and a well-known European zoologist. The first five volumes of this work are by Borowski, with 228 colored copperplates, mostly of vertebrates; the last five volumes are by J. Fr. W. Herbst and deal with insects and worms.

This illustration of the sperm whale comes close to the fanciful renderings in children's books, but it's no wonder considering the difficulties in getting a whale to pose for his picture. Sperms are the only cetaceans to venture a mile or so below the ocean surface to feed; we see them mainly and only briefly when they come up for air, so an 18th century naturalist like Borowski was at a great disadvantage.

One cetologist notes that they are so difficult to study in the depths of the sea that sperm whales might live on some other planet and be no less known then they are now.



“For the most part, the English and American whale draughtsmen seem entirely content with presenting the mechanical outline of things ... which, so far as picturesqueness of effect is concerned, is about tantamount to sketching the profile of a pyramid.”

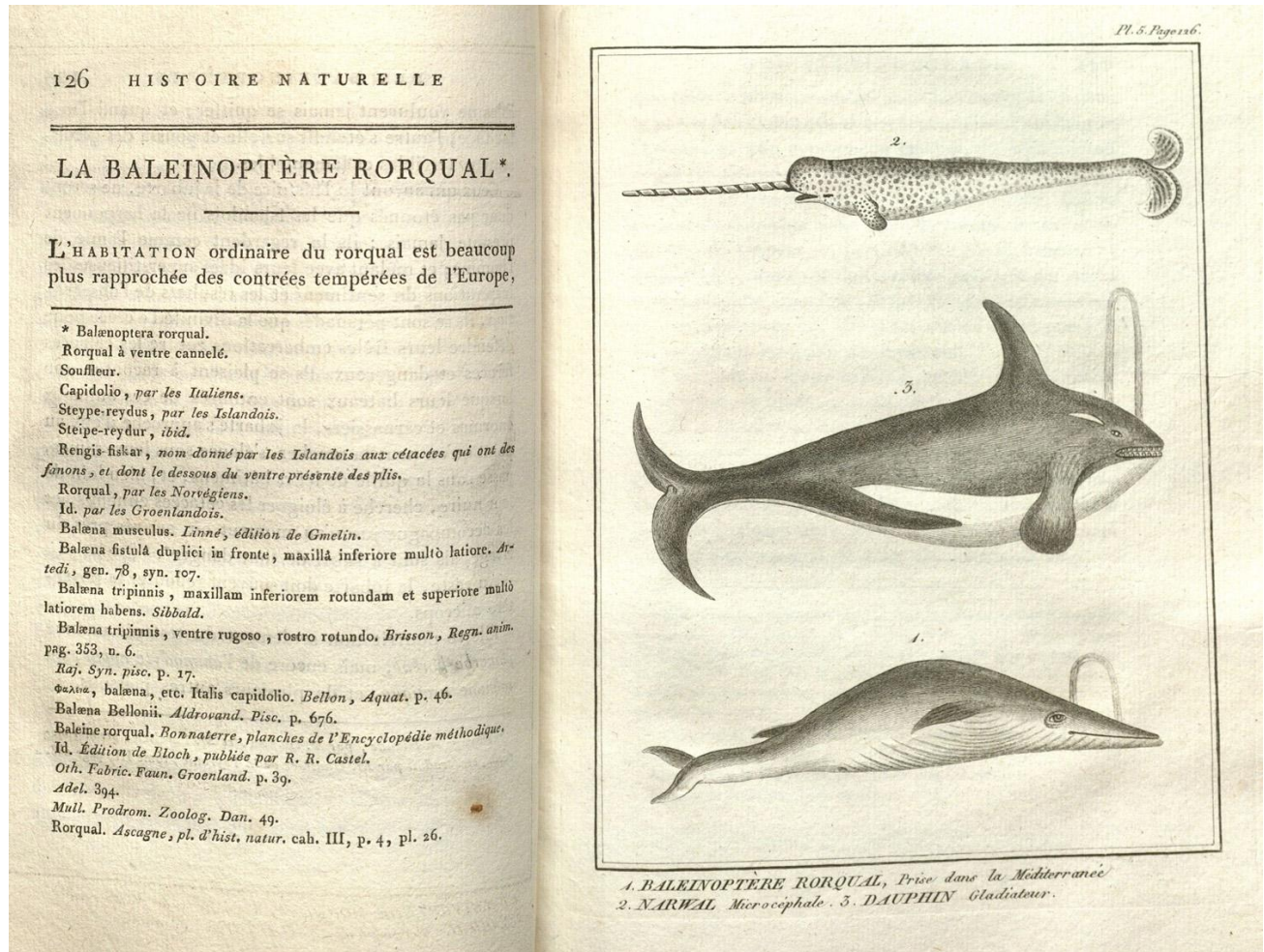
{Moby-Dick chapter 56 (Of the Less Erroneous Pictures of Whales and the True Pictures of Whaling Scenes)}

FAIR WEATHER SAILOR

William Henry Dewhurst (DATES??): *The natural history of the order Cetacea*. London: Published by the author, 1834. [Ellis Omnia C791]

Although Dewhurst's *Natural history* contains some original observations made when he served as ship's surgeon on the whaler *Neptune* in 1824, it is in general a compilation in imitation of Scoresby Jr. Cetologist Harrison Matthews called Dewhurst a self-advertising medical quack, shown by the unintentionally hilarious testimonials he gives himself in an appendix to the book. J.A. Allen has

remarked, "From the standpoint of systematic zoology, the present work merits little consideration.



"Count de Lacepede, a great naturalist, published a scientific systematized whale book, wherein are several pictures of the different species of the Leviathan. All these are not only incorrect, but the picture of the Mysticetus or Greenland whale, (that is to say the Right whale, even Scoresby, a long experienced man as touching that species, declares not to have its counterpart in nature."
{Moby-Dick chapter 55 (Of the Monstrous Pictures of Whales)}

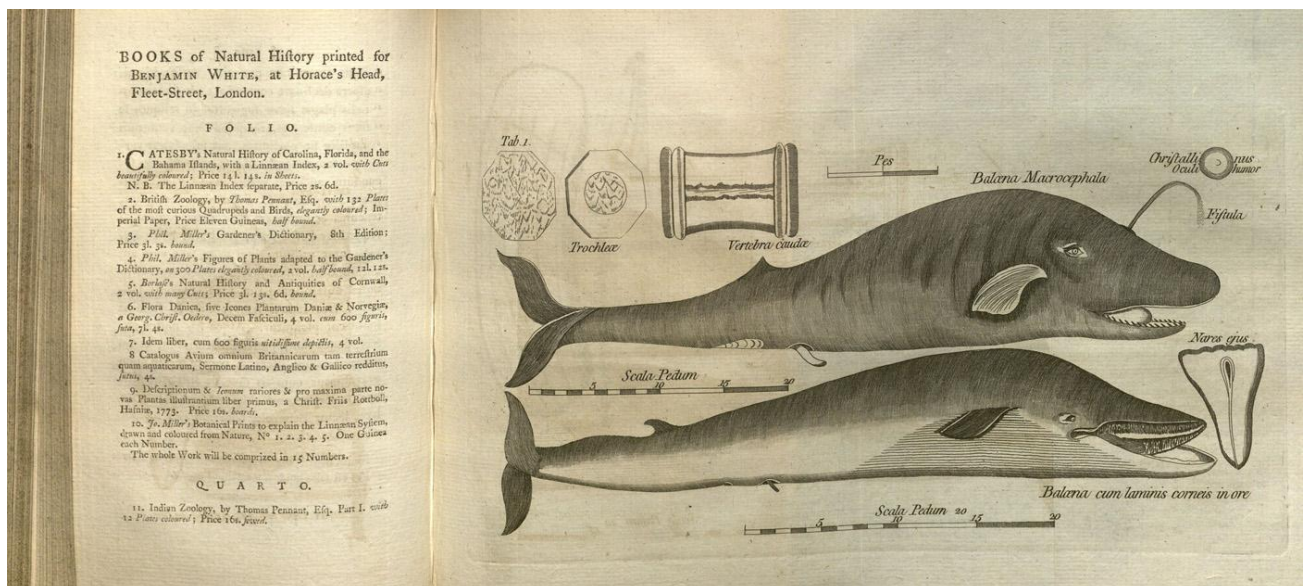
SPECIOUS SPECIES

Bernard Germain Étienne de la Ville sur Illion Lacépède (1756-1825): *Histoire naturelle des cétacées*. A Paris: chez Plassan, 1804.

[D1425]

Scoresby as well as Melville did indeed criticize Count Lacépède's work on whales, but upon meeting the man, Scoresby conceded that he was very friendly and willing to acknowledge that he'd not seen any whales in the flesh. His Natural history of cetaceans was published as part of a continuation by Lacépède of George Buffon's great *Histoire naturelle, general et particulière*, 1749-1804, in 44 volumes, actually the work of several naturalists. Many volumes in this encyclopedic natural history were subsequently republished in variant forms by their respective authors, including Lacépède.

J.A. Allen notes of Lacépède's contribution, "its weakness lies in the recognition of a large number of species now known to be nominal or fictitious, but which, supported by Lacépède's endorsement, figured prominently for many years in the work of later compilers."



“It may be worth while ... to advert to those curious imaginary portraits of him which even down to the present day confidently challenge the faith of the landsman. It is time to set the world right in this matter, by proving such pictures of the whale all wrong.

“Then there are the Prodrumus whales of old Scotch Sibbald ... ;
What shall be said of these?”

{Moby-Dick chapter 55 (Of the Monstrous Pictures of Whales)}

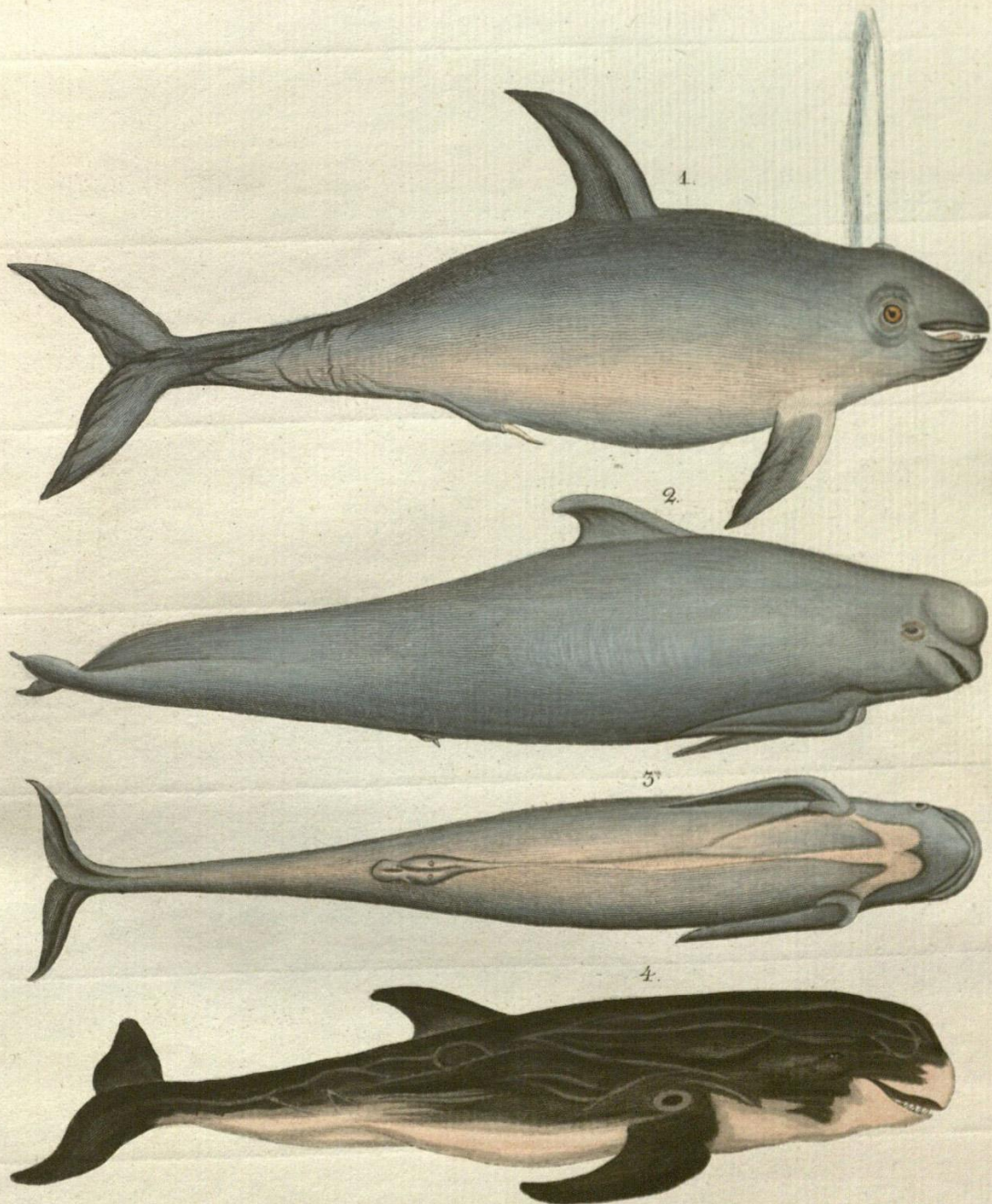
OLD SIBBALD'S GHOST, SCOTCHED ON THE ROCKS

Robert Sibbald (1641-1722): *Phalainologia nova*, sive Observationes de rarioribus quibusdam balaenis in Scotiae littus. Londini: apud Benj. White; typis Joannis Redi, 1773. [Brodie 21:5]

As a student Sibbald was such a grind that from his fellow students he earned the name Diogenes in Dolo, the 17th century equivalent of Nerd. He may have had his revenge when later became an Edinburgh physician and was instrumental in founding the Royal College of Physicians. He is best known as the author of numerous works of a geographical and antiquarian interest and for his descriptions of the natural history of Scotland.

In this work he describes a school of killer whales that had become stranded on the Firth of Forth in 1691, and gives not a bad description considering he had not seen them himself. His infamy as a cetologist results from his description of several 'species' of sperm whale; the confusion resulting from the introduction of Sibbald's, like Lacépède's nominal species, was not straightened out until the 19th century.

It seems that old Sibbald's 17th and 18th century sins were still visiting themselves upon unwary 19th century naturalists.



1. *Delphinus griseus*. 2. *D. globiceps*. 3. *D. globiceps* fom. 4. *D. Aries* ?

Nat. Hist. 20.

“(Grampus). -- Though this fish, whose loud sonorous breathing, or rather blowing, has furnished a proverb to landsmen, is so well known a denizen of the deep, yet he is not properly classed among whales. But possessing all the grand distinctive features of the leviathan, most naturalists have recognized him for one.”

{Moby-Dick chapter 32 (Cetology)}

“(Black fish). -- ... His voracity is well known, and from the circumstance that the inner angles of his lips are curved upwards, he carries an everlasting Mephistophelean grin on his face.”

{Moby-Dick chapter 32 (Cetology)}

SEASNORE

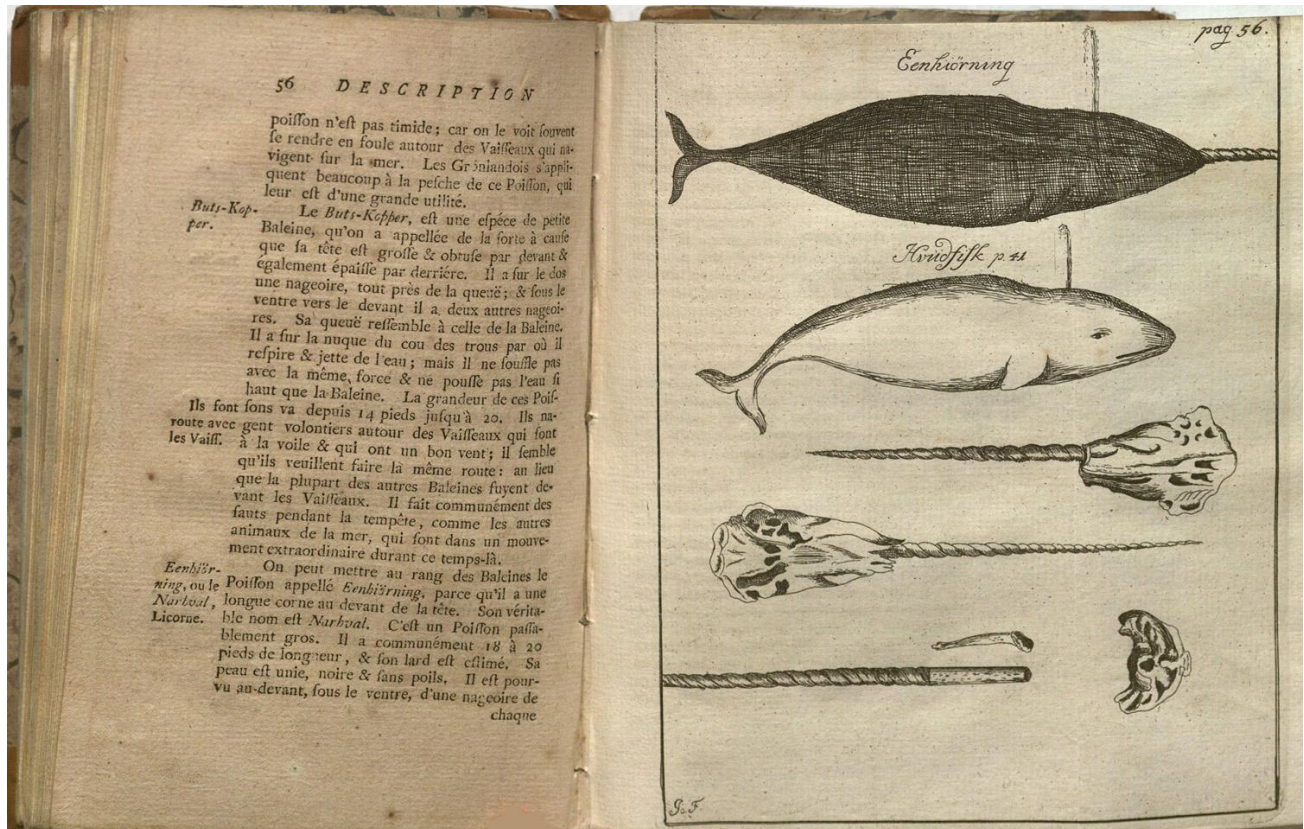
Johann Christian Schreber (1739-1810): *Die Säugetheire in Abbildungen nach der Natur*. Erlangen, 1774-1846. 16 volumes. Plates Vol. 5. [Ellis Omnia D284]

Although the dolphin at top is labeled by Schreber *Delphinus griseus*, the *D. aries*(?) at bottom looks more like the *griseus*, i.e. Risso's dolphin *Grampus griseus*. Perhaps both are: although juveniles are very light gray, they turn almost black before lightening up to a dark gray again.

Risso's can be a very aggressive and territorial animal and older males are sometimes so scarred with age that they are almost as white as Moby Dick. They often show the oval scars from squid attacks. Perhaps Schreber's *aries* is a young adult with battle scars just beginning to show. The *D. Globiceps* at center is probably the pilot whale or blackfish, genus *Globicephala*.

Die Säugethiere was produced in collaboration with D.A. Goldfuss and J.A. Wapner; the volume exhibited is from the second edition. Casey Wood calls this work, "... a truly admirable treatise on world mammalogy ... ; The whole forms a reliable, systematic history of animals for three quarters of a century."

German naturalist Schreber was one of the more successful students of Swedish naturalist Carl Linnaeus.



“(Narwhale) -- Strictly speaking, this horn is but a lengthened tusk, growing out from the jaw in a line a little depressed from the horizontal. But it is only found on the sinister side which has an ill effect, giving its owner something analagous to the aspect of a clumsy left-handed man.”
 {Moby-Dick chapter 32 (Cetology)}

NAKED LUNCH

Hans Poulson Egede (1686-1785): *Description et histoire naturelle du Groenland*. Traduite an François par Mr. D.R.D.P. Copenhagen, Genève: C. & A. Philipbert, 1763.
 [Ellis Aves B127]

Egede's description and natural history of Greenland first appeared in 1741, in Danish. A missionary by profession, the first appointed to Greenland, he was instrumental in coaxing Danes to establish settlements there in the 18th century. Although he must have had ample opportunity to study whales during his twenty five years there he doesn't give them much space in this work. He does give a disproportionate amount of room to a discussion of whale genitalia: fascinated him, apparently.

The narwhal and beluga are the only two members of the family Monodontidae. They are not at all the cosmopolitan creatures most other whales are, and are totally adapted to life in the Arctic. Neither has a dorsal fin, a handy adaptation to their freeze-over environment.

The beluga has long fascinated the whaler with his chirpings and whistles, for it had to be an eerie sound in the lonely Arctic, but a comfort to know another creature mammal is there just out of sight.

The beluga's thick layer of blubber is such a good heat regulator that his body temperature is very close to human. Life expectancy is thirty-five to fifty years; unfortunately belugas are slow swimmers and provide many a naked lunch for polar bears and killer whales.

"Like a savage tigress that tossing in the jungle overlays her own cubs, so the sea dashes even the mightiest whales against the rocks, and leaves them there side by side with the split wrecks of ships."
{Moby-Dick chapter 58 (Brit)}

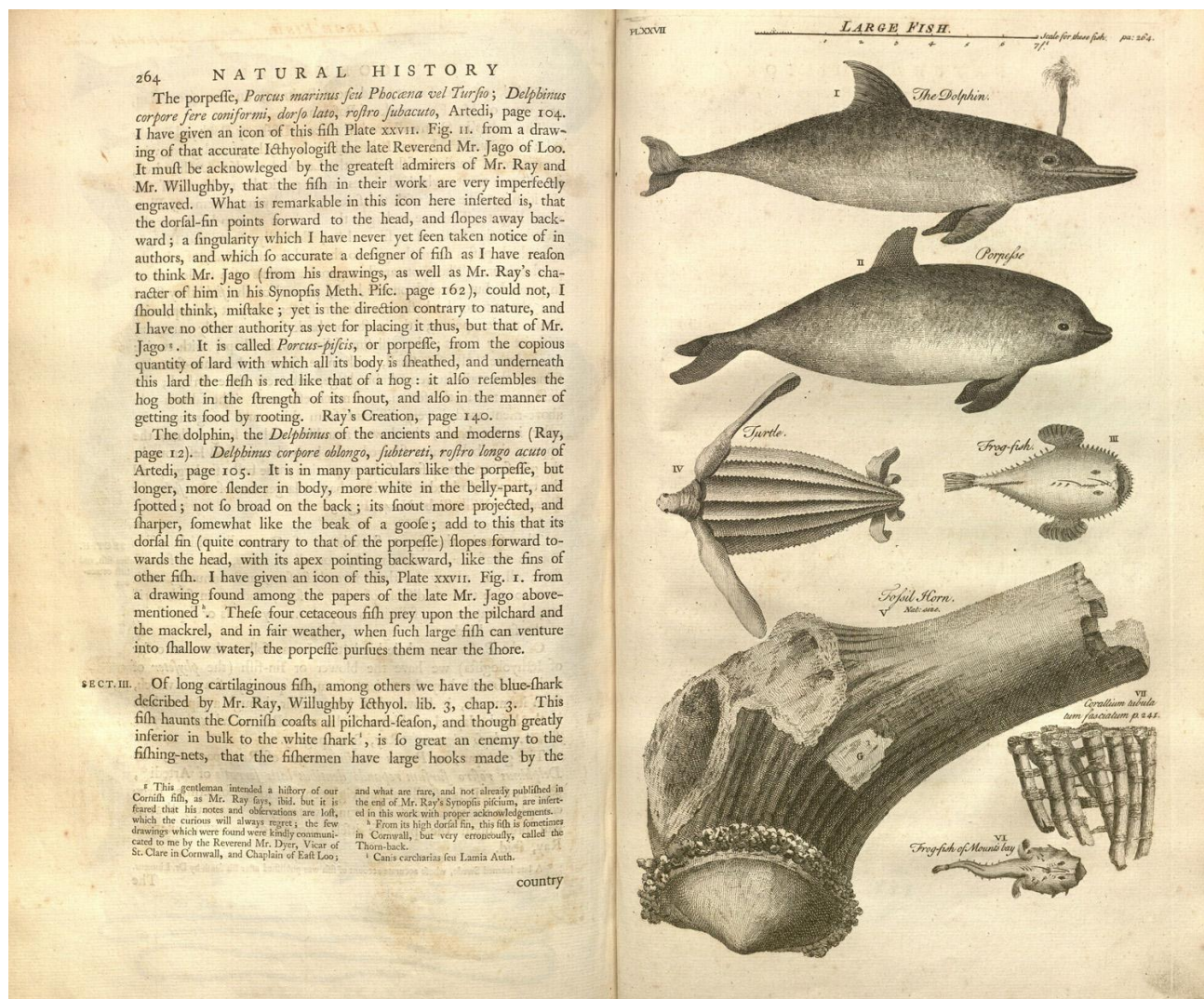
BEACHED WHALES

British Museum (Natural History): Sidney Frederic Harmer (1862-1950): *Report on cetacea stranded on British coasts from 1913-1926.*
Report no. 10, map no. 7. London, 1927. [Ellis Omnia Exx]

It was probably a stranded whale rather than a lanced one that first provided early man with a carcass fit for cutting up and rendering down. Such chance strandings were a welcome source of fuel and food and it couldn't have been long before there was an organized attempt to drive whales ashore, by whatever means could be devised.

Mass strandings are another matter and constitute a mystery, although even before research for this exhibition was begun in the 1980s, a theory had been advanced by a graduate student at Boston University: she noted a correlation of stranding sites with spots where the Earth's magnetic field increases abruptly; since some cetaceans have pockets of ferrous oxide in their heads, thought to have something to do with how these migratory animals navigate, she suggested that these magnetic anomalies may have been causing the fatal strandings. Causes may vary from one species to another as well as from region to region.

The cetological literature of the 20th century had been greatly augmented by the scheme begun in 1912 by Sir Sidney Harmer, then Director of the British Museum (Natural History), by which all cetacea stranded on British shores are to be reported to the Museum. The result has been the accumulation of much knowledge and museum material, especially for species that are not otherwise readily accessible to biologists because they have no commercial value. These reports were still being published in the '70s and perhaps later.



“(Duodecimoes). ~ These include the smaller whales ...

“To those who have not chanced specially to study the subject, it may possibly seem strange, that fishes not commonly exceeding four or five feet should be marshaled among WHALES – a word, which, in the popular sense, always conveys an idea of hugeness. But the creatures set down as duodecimoe are infallibly whales, by the terms of my definition of what a whale is – i.e. a spouting fish, with a horizontal tail.”

{Moby-Dick chapter 32 (Cetology)}

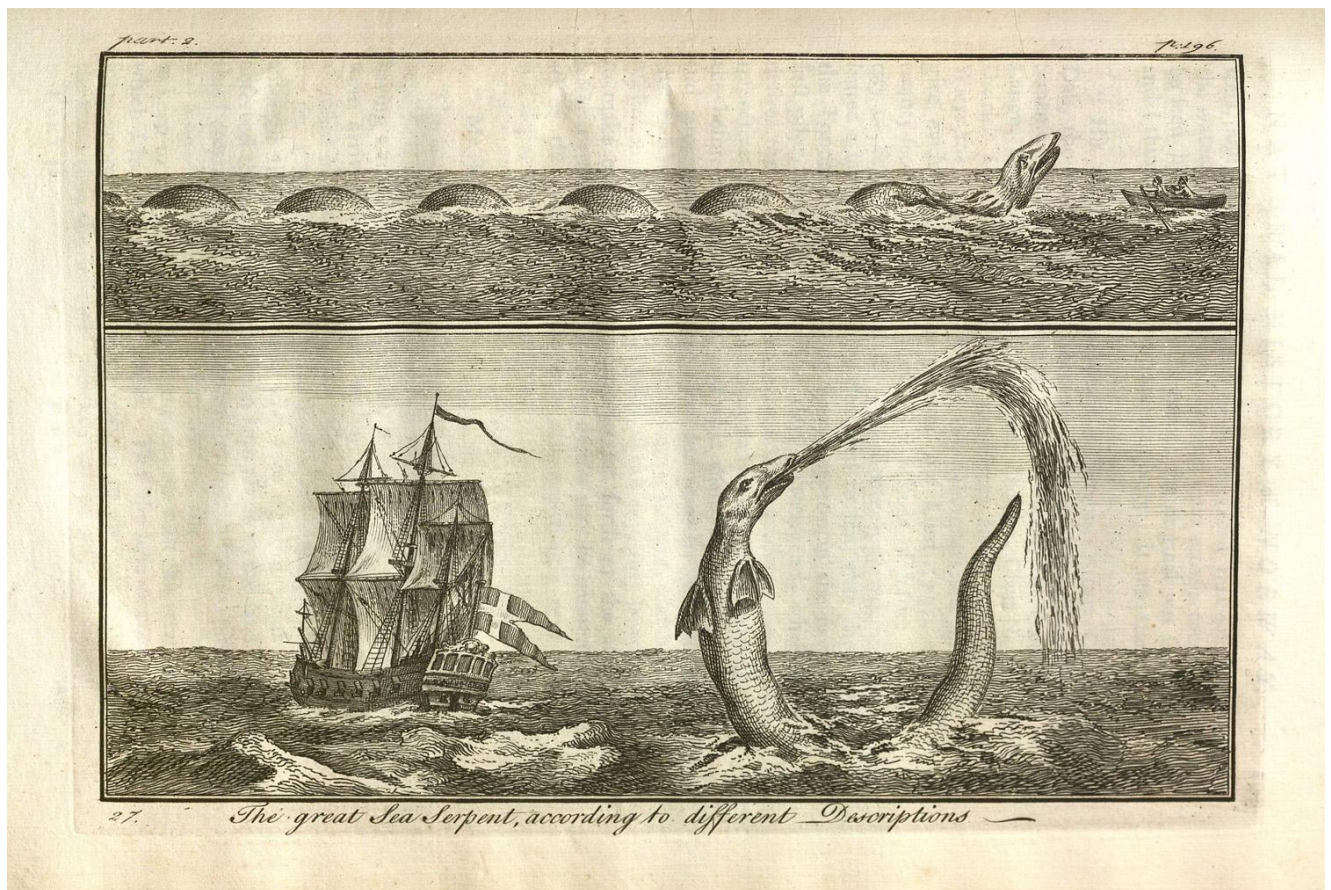
SKIP TO MR. LOO

William Borlase (1695-1772): *The natural history of Cornwall.*

Oxford: printed for the author; by W. Jackson: sold by W. Sandby; and the booksellers of Oxford, 1758.

[Ellis Aves E23]

A certain 'accurate ichthyologist the late Reverend Mr. Jago of Loo' made the original drawings for Borlase's account of the natural history of Cornwall, an inclusive early description of the area. A little over a page is devoted to cetaceans with observations taken entirely from other writers, but the engravings from Mr. Loo's drawings are quite true to life.



“There seems some ground to imagine that the great Kraken of Bishop Pontoppidan may ultimately resolve itself into Squid. The manner in which the Bishop describes it, as alternately rising and sinking, with some other particulars he narrates, in all this the two correspond. But much abatement is necessary with respect to the incredible bulk he assigns it.”
{Moby-Dick chapter 59 (Squid)}

THE INCREDIBLE BULK

Erik Pontoppidan (1698-1764): *The natural history of Norway*.

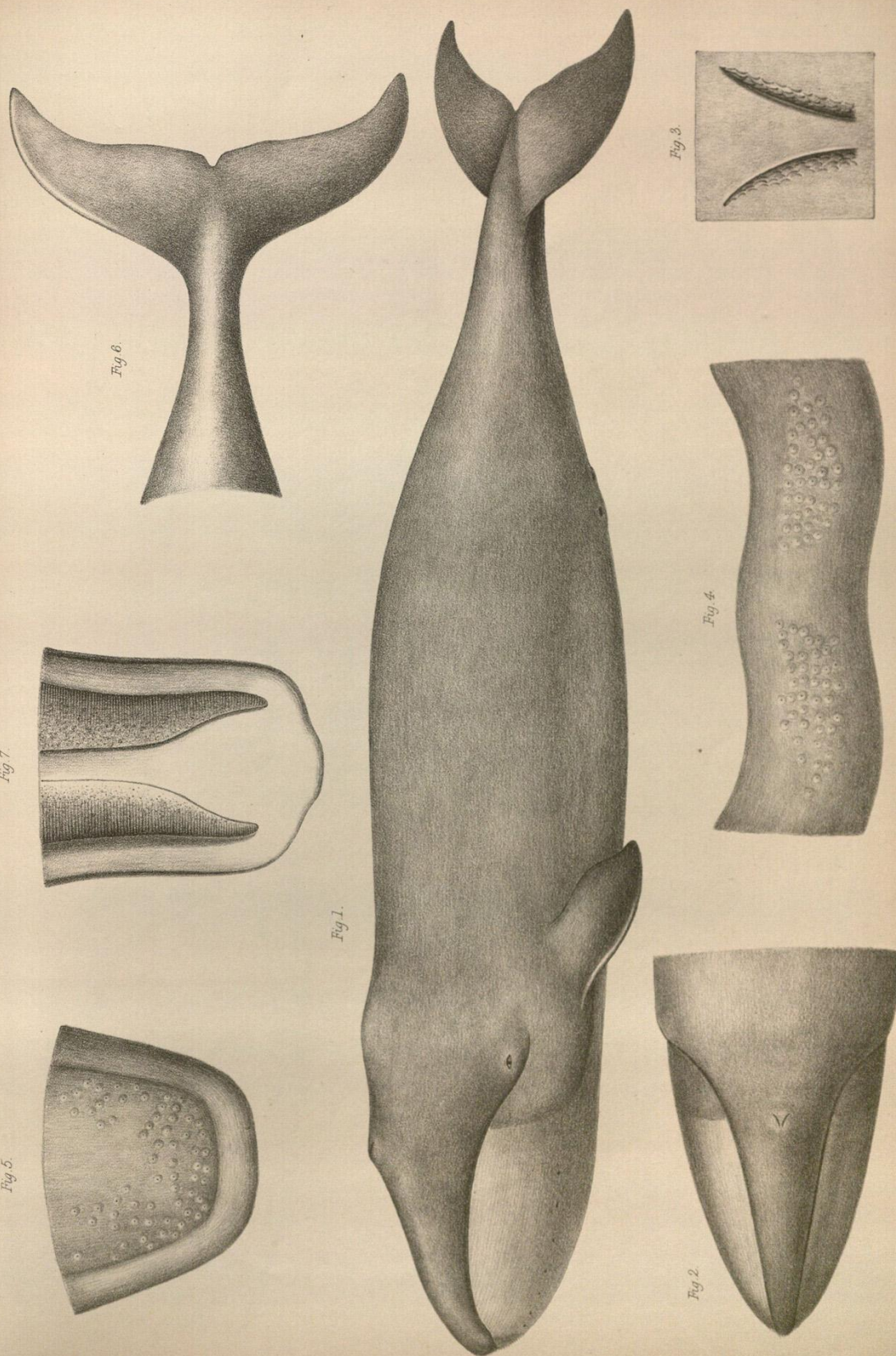
London: printed for A. Linde, 1755.

[Ellis Aves E333]

Pontoppidan's accounts, like so many others displayed here, are mostly derived from other authors or from reports of whalers and other fishermen, and indeed, he admits that he had only once seen a whale. This Danish theologian and teacher wrote a number of works on the natural history, geography, and antiquities of Denmark.

The Danish original of this natural history was published in Copenhagen in 1752-1754, and is of interest chiefly for its accounts of the myths connected with whales, and other natural curiosities such as the famed Scandinavian sea monster, the kraken. Marine biologists such as Jacques-Yves Cousteau agree with Melville that the giant squid, the sperm whale's supper, may be the basis in fact for many of the legends concerning sea monsters.

We plan to use this image soon again, in our up-coming squid exhibit!



W. West. imp.

Edwin M. Williams F.L.S. Lith.

“Ere this, you must have plainly seen the truth of what I started with – that the Sperm Whale and the Right Whale have almost entirely different heads. To sum up, then: in the Right whales there is no great well of sperm; no ivory teeth at all; no longer slender mandible of a lower jaw ... ; Again, the Right whale has two external spout-holes, the Sperm Whale only one.”

{Moby-Dick chapter 75 (The Right Whale's Head – Contrasted View)}

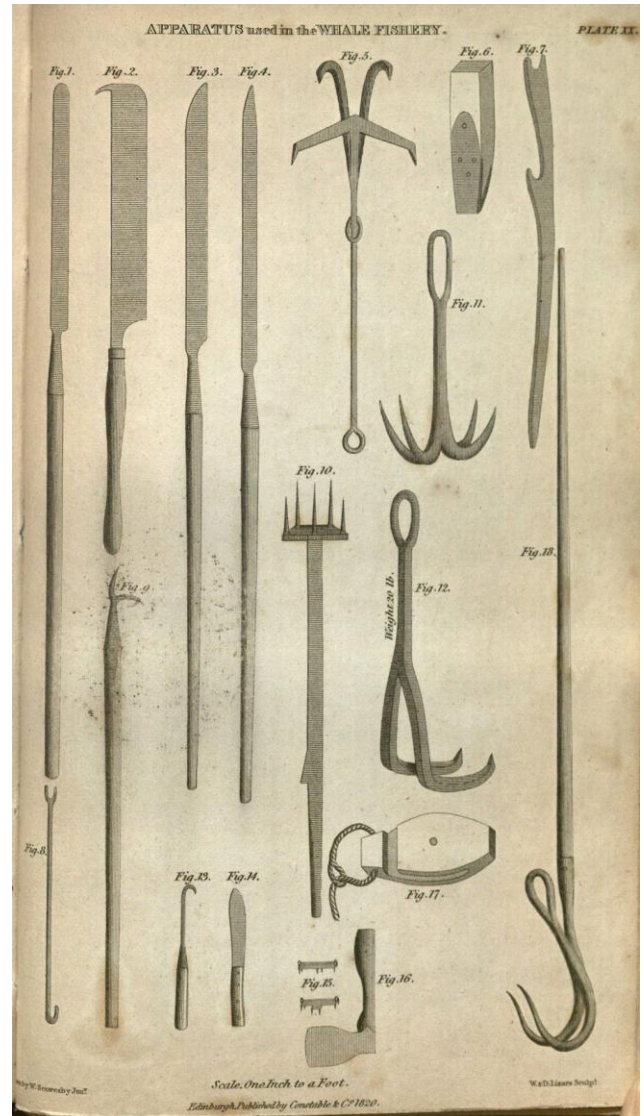
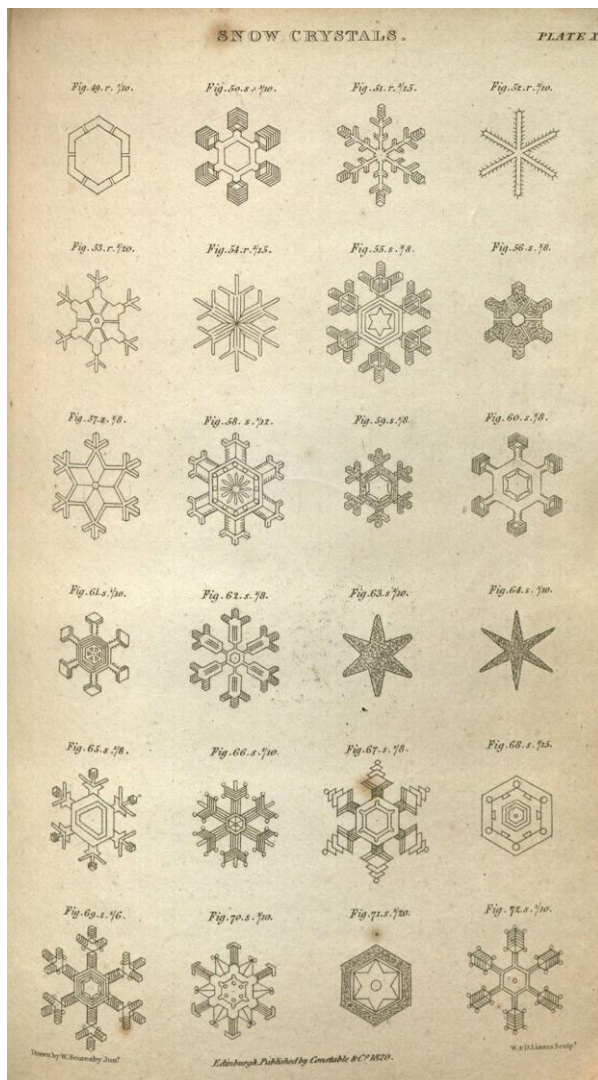
FLOWER OF SCANDINAVIAN CETOLOGY

William Henry Flower (1831-1899), editor: *Recent memoirs on the Cetacea by Professor Eschricht, Reinhardt and Lilljeborg*. London: published for the Ray Society by Robert Hardwicke, 1866.

[Ellis Omnia E103]

Sir William Henry Flower, Conservator of the Museum of the Royal College of Surgeons, and later Director of the British Museum (Natural History), wrote many papers on the cetaceans, and compiled catalogs of whale material housed in the British Museum. Although books devoted solely to whales and dolphins were few in the 19th century, zoologists and anatomists were contributing numerous papers to scientific societies.

Flower considered these papers by the Danish naturalist D.F. Eschricht and J. Reinhardt and the Swede W. Liljeborg important enough that he translated them into English for publication by the Ray Society. This plate shows a newborn Greenland right whale *Balaena mysticetus*: 2, the head seen from above; 3, blowholes; 4, part of the underlip with hair-knobs; 5, muzzle; 6, flukes; 7, anterior part of the mouth cavity.



“Of the names in this list of whale authors ... one of them was a real professional harpooner and whaleman. I mean Captain Scoresby. On the separate subject of the Greenland or right-whale, he is the best existing authority. But Scoresby knew nothing and says nothing of the great sperm whale, compared with which the Greenland whale is almost unworthy mentioning.” {Moby-Dick chapter 32 (Cetology)}

MAKING FIRE WITH ICE

William Scoresby (1789-1857): *An account of the Arctic regions*, with a history and description of the northern whale-fishery. By William Scoresby, Jun. Edinburgh: Printed for Archibald Constable; London: Hurst, Robinson, 1820. 2 volumes. Plates, v. 2. [C2784]

One of the great non-fictional accounts of whaling voyages in the 19th century is that of William Scoresby, Sr. (1760-1829). This Department has his seven log-books, reproduced in a facsimile by the Explorer's Club of New York. But Scoresby Jr.'s *Account of the Arctic regions* and his *Journal of a voyage to the northern whale-fishery*, Edinburgh, 1823 are also landmarks in whale studies. With his explorations the foundation was laid for the great progress cetology would make during the 19th century. The junior Scoresby was only seven years old when he made his first whaling voyage to the Arctic with his father.

Can you imagine a greater adventure and learning experience for a wee laddie of seven? A true sabbatical!

Thirteen years later, at twenty, he was captain of the whaler “Resolution”. He was the first scientist to study the larger whales, especially the Greenland right whale, as living animals. He made his last voyage at age thirty-three after which he retired to become a parson.

The properties of snow and ice fascinated him and his first book contains our plates depicting snow crystals. As a kid on shipboard he liked to impress the older sailors by lighting their pipes by focusing the sun's rays, its heat, through a lens of ice.

Scoresby's life with whales was not fully appreciated until the 20th century; Melville faulted him only for knowing nothing of the sperm whale.

We discovered the two Scoresbys lacking from our whaling holdings during the creation of this exhibition and in the intervening years had been on the lookout for these works. What a find!

Research for an exhibition makes the author aware of such *lacunae* in an already excellent collection, in this case the literature of scientific voyages and travels, and whaling in particular, but holds true for the subject of any exhibit. Since we try to build to strength (any subject area is ultimately more than the sum of its parts) we can discover where we might benefit by additions (this is especially true for the Ellis Collection of natural history from which much of the whales resources come, almost 50% in this exhibition alone) to try to build to strength: with additions research value goes up exponentially, and often an exhibition helps us decide to realign collecting priorities.



“But these manifold mistakes in depicting the whale are not so surprising after all. Consider! ... ; Though elephants have stood for their full lengths, the living Leviathan has never yet fairly floated himself for his portrait. The living whale, in his full majesty and significance, is only to be seen at sea in unfathomable waters ...”
{Moby-Dick chapter 55 (Of the Monstrous Pictures of Whales)}

BEASTY BOYS

Theobaldus Episcopus. *Physiologus ... de naturis duodecim animalium.*
The Latin text. An English translation by Willis Barnstone.
With woodcuts and lithographs by Rudi Pozzatti. Bloomington,
Indiana, 1964. [H58]

The *Physiologus* is the best known of the early medieval bestiaries, or treatises on birds and beasts blessed with certain moral, physical, and mental, attributes. Largely the creation of early Christian teachers, they were a mix of natural history and Gospel truth with snippets of folklore, travellers' tales and dimly understood science thrown in, served up with all the authority of the Church behind them. They have continued to be popular long after they ceased to be used for religious instruction.

Among the many versions of the *Physiologus* was the 12th century metrical codex of 12 chapters, the handiwork of Bishop Theobald and possibly two other ecclesiastics. It was the source for much of the architectural ornamentation such as gargoyles, and has furnished artists with material for centuries. As for the place of these bestiaries in the history of science, Casey Wood remarks, “However ridiculous their writings now seem, early observers and writers were the founders of zoological science, so that all through the succeeding centuries – including our own times – the naturalist-explorer and the author worked hand-in-hand and played an important role in the progress of zoology.”



“... any way you may look at it, you must needs conclude that the great Leviathan is that one creature in the world which must remain unpainted to the last. True, one portrait may hit the mark nearer than another, but none can hit it with any very considerable degree of exactness. So there is no earthly way of finding out exactly what the whale really looks like. And the only mode in which you can derive even a tolerable idea of his living contour, is by going whaling yourself; but by so doing, you run no small risk of being eternally stove and sunk by him. Wherefore, it seems to me you had best not be too fastidious in your curiosity touching this Leviathan.”

{Moby-Dick chapter 55 (Of the Monstrous Pictures of Whales)}

RAISING THE TITANIC

John Guille Millais (1865-1931): *The mammals of Great Britain and Ireland*. London, New York, Bombay: Longmans, Green, 1905-1906. 3 volumes. Vol. 3.

[Ellis Omnia E39]

Sperm whales, humpbacks, and a number of dolphin species, have a habit of jumping out of the water; humpbacks and dolphins sometimes clear the surface completely. In the sperm whale this is called “breaching”. Scientists have several explanations for this behavior; some think it may be a form of communication, others that the whale is trying to rid itself of parasites such as barnacles or whale lice. Old loner sperms such as Moby Dick had no other whales around with which to communicate, but he had parasites galore in the form of many years’ accumulation of harpoons. Another theory has it that this leaping and breaching is a kind of whale *joie de vivre*; after watching a school of dolphins it is not difficult (from the *anthro* point of view) to buy that explanation.

John Millais was naturalist, botanical artist, gardener, and one of the best known animal painters and illustrators of books about game animals. The work shown here is considered one of his finest, with what Casey Wood calls “truly beautiful reproductions of the artist’s best work.”

Millais travelled in Africa, Canada, America, and the Arctic as a big game hunter and wrote numerous books on the subject, usually illustrated from his own drawings. He was the son of the famous English painter and illustrator Sir John Everett Millais.

Sally Haines
Sub-sub librarian
December 28, 2012