Smart phones and GPS give us many possible routes to navigate our daily commute, warn us of traffic and delays, and tell us where to find a cup of coffee. But what if there were sea serpents and giant man-eating lobsters waiting just off course if we were to lose our way? Would there be an app for that? In the sixteenth century, these and other monsters were thought to swim the northern waters, threatening seafarers who ventured too far from shore. Thankfully, Scandinavian mariners had Olaus Magnus, who in 1539 charted these fantastic marine animals in his influential map of the Nordic countries, the Carta Marina. In Sea Monsters, well-known expert on magical beasts Joseph Nigg brings readers face-to-face with these creatures, alongside the other magnificent components of Magnus’s map.

Nearly two meters wide in total, the map’s nine wood-block panels comprise the largest and first realistic portrayal of Northern Europe. But in addition to these important geographic elements, Magnus’s map goes beyond cartography to scenes both domestic and mystic. Close to shore, Magnus shows humans interacting with common sea life—boats struggling to stay afloat, merchants trading, children swimming, and fisherman pulling lines. But from the offshore deeps rise some of the most magical and terrifying sea creatures imaginable at the time or thereafter—like sea swine, whales as large as islands, and the Kraken. In this book, Nigg provides a thorough tour of the map’s cartographic details, as well as a colorful look at its unusual pictorial and imaginative elements. He draws on Magnus’s own text to further describe and illuminate the inventive scenes and to flesh out the stories of the monsters.

Sea Monsters is a stunning tour of a world that still holds many secrets for us land dwellers, who will forever be fascinated by reports of giant squid and the real-life creatures of the deep that have proven to be as bizarre and otherworldly as we have imagined for centuries. It is a gorgeous guide for enthusiasts of maps, monsters, and the mythic.

JOSEPH NIGG is one of the world’s leading experts on fantastical animals, and his exploration of the rich cultural lives of mythical creatures has garnered multiple awards and been translated into more than twenty languages. He is also the author of The Book of Gryphons, The Book of Fabulous Beasts: A Treasury of Writings from Ancient Times to the Present, and How to Raise and Keep a Dragon, among others.
Decorative marine animals on modern maps attract the eye and stir the imagination. Whales dotting ocean spaces are part of a long cartographic tradition. Their ancestry can be traced back to the best-known and most influential chart depicting monstrous creatures of the sea: Olaus Magnus’s 1539 \textit{Carta Marina}.

To us, the quaint figures we see in the northern waters of Olaus’s map of Scandinavia could be illustrations in a children’s book. Given that maps chart human knowledge, providing glimpses of our understanding of the world at any point in time, Olaus’s sixteenth-century contemporaries would have regarded the \textit{Carta Marina} differently than we do. When the chart was made, in the early years of the Age of Exploration, there was still a lingering medieval belief in the existence of griffins, unicorns, dragons, the phoenix, and a host of other unnatural creatures. The chart’s giant lobster gripping a swimmer in its claws, sea beasts menacing ships, and a mast-high serpent devouring sailors would have represented real fears of the unknown deep.

Olaus’s beasts were so iconic that they were copied and varied in natural history engravings. They inspired Sebastian Münster’s \textit{Monstra Marina \& Territoria} and Abraham Ortelius’s \textit{Islandia}, the other two most famous charts of fantastic sea creatures. Through his map and related chapters in his voluminous history of the Northern peoples, Olaus became the ultimate chronicler of “merdevils and midnight marvels,” the major source of Renaissance sea monster lore and iconography.

\underline{Olaus Magnus’s Carta Marina}

Olaus Magnus (1490-1557) and a brother, John, were Catholic priests who sought voluntary exile, primarily in Italy, following their native Sweden’s conversion to Lutheranism. Both brothers had traveled widely throughout Europe and both produced nationalistic works extolling the virtues of formerly Catholic Scandinavia. John’s earlier appointment as Archbishop of Uppsala passed on to Olaus after the elder brother’s death, but it was not activated.

Dissatisfied with Ptolemaic mapping of his native Scandinavia, Olaus labored for years to produce a more accurate map of the northern regions. The original wood-block chart, far larger than most, comprised nine folio sheets, the total wall map measuring about four feet high by five feet wide. Each panel—from left to right in rows across the top, center, and bottom of the map—is labeled with a large letter, A through I. Figures within each section are marked with smaller letters and identified in the key in the map’s lower left corner. Printed in Venice prior to the first surveys of Scandinavia, Olaus’s chart was the largest, most detailed, and accurate map of the region at that time. While the \textit{Carta Marina} is both a land and sea map, its name, compasses with directional rhumb lines, and a distance scale with dividers indicate its

Sea monsters graphically dominate the plethora of figures on the \textit{Carta Marina} (left). Most of the sea beasts are not mere decorations, but were born of tradition and tales of sailors and fishermen. The indebtedness to Olaus of Sebastian Münster (1488-1552) and his \textit{Monstra Marina \& Territoria} (above) is immediately evident. The third famous keyed chart of marine beasts of the northern seas is \textit{Islandia} (above), published by another great cartographer of the century, Abraham Ortelius (1527-1598).
We travel eastward through whale waters, beyond a ship whose crew attempts to drive off menacing whales. Between a chart compass and floating spermaceti is an anchored ship and sailors around a cooking fire on the great monster's back.

“I have shown that a Superficies, like the gravel that is by the Sea-side, so that oft-times, when he raiseth his back above the waters, Sailors take it to be nothing else but an Island and sayl unto it, and go down upon it, and they strike into piles unto it, and fasten them to their ships: they kindle fires to boil their meat; until at length the Whale feeling the fire, dives down to the bottom; and such as are upon his back, unless they can save themselves by ropes thrown forth of the ship, are drown’d. This Whale, as I said before of the Whirlpool and Pristes, sometimes so belcheth out the waves he hath taken in, that with a Cloud of Water, oft-times, he will drown the ship: and when a Tempest arises at Sea, he will rise above waters, that he will sink the ships, during these Comotions and Tempests.”

Olaus emphasizes anchors in this chapter of his history and compares the spouting of the whale to that of the Norwegian maelstrom and the Pristes. All this makes his matter-of-fact commentary seem like a treatise on whaling. Actually, his cautionary tale localizes one of the oldest and most widespread legends of the sea. Also, being a Catholic priest and a scholiast author indebted to traditional writings, Olaus's account paraphrases the standard Christian version of the story.

Sometimes he brings up Sand on his back, upon which, when a Tempest comes, the Mariners are glad that they have found Land, cast anchor, and are secure on a false ground; and when as they kindle their fires, the Whale, so soon as he perceives it, he sinks down suddenly into the depth, and draws both men and ships after him, unless the Anchors break.”

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Olaus's Island Whale has a longer and more widespread cultural lineage than any other marine figure on his chart. Sea monsters as big as mountains have lived in stories worldwide since ancient times. Among them is Leviathan in the Book of Job, the Apocryphal Book of Enoch, and other Judeo-Christian writings. That immense creature is variously regarded as a cosmic serpent, the sea itself, the king of all swimming creatures, the whale, and Satan. Given its distinction as the largest of all animals, the whale is definitely worthy of the leviathan name and of being the legendary fish of such great size that sailors mistake it for an island.

Scholars generally trace the spread of the island-beast fable from India to the Middle East, Greece, and Rome, and medieval Western Europe. At the beginning of his letter to Aristotle on the wonders of India, Alexander reports that natives told him of an island where a king was buried with much treasure. Alexander’s close companion Pheidon undertakes the voyage to the island. After Pheidon’s crew lands, the supposed island proves to be a monster. It sinks, drowning all on the expedition. The tale takes on its stand-ard form in the Babylonian Talmud, when the hero Rabba and his men build a cooking fire on an apparent beach of sand and grass. As Rabba tells it, “When the back of the fish grew hot, it turned over, and had not the ship been so near we would have drowned.”

The Whale

A century after Milton, Bishop Erik Ludvigsen Pontoppidan of Bergen disputes Olaus’s description of the whale. The bishop’s own 1755 ‘Natural History of Norway’ is well known among sea-monster enthusiasts due to his accounts of the sea serpent and what he calls the Kraken. The bishop declares that it is the Kraken, not Olaus’s whale, that is “incostantly the largest Sea-monster in the world.” Its upper body is a male and a half in circumference, and its arms are so long they appear to be a series of islands. The monster can engulf the largest ships. Pontoppidan’s Kraken is now thought to be a giant cuttlefish.

Pontoppidan notwithstanding, Olaus’s Island Whale is a notable part of the great island-beast tradition, which lives on in our own time, widespread in picture and story.

The Whale & The Kraken

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St. Brendan and his monks celebrate Easter mass on the back of the giant whale, Jasconius. St. Brendan’s Island, the Promised Land of the Saints, is located to the north on this 1621 map by Hieronymus Bockius.

Carta Marina Legacy

While Olaus’s Island Beast derives from centuries of traditional lore, it nonetheless has its own small legacy.

Conrad Gesner includes in his Historiae Animalium a woodcut copied from the Carta Marina figure. Also, even though the charts of neither Münster nor Ortelius depict an Island Beast with sailors cooking on its back, the keys to both charts reveal their indebtedness to Olaus. The first sentence of Münster’s key echoes Olaus’s key and commentary, and Ortelius acknowledges that the largest kind of whale resembles an island more than it does a fish. Ortelius writes:

“The largest kind of Whale, which does not show itself often, more resembling an Island than a fish. It has difficulties, because of its weight and size, to chase smaller fish, but catches them all the same by means of a special trick.”

The most notable influence of Olaus’s Island Whale is seen in John Milton’s allusion to it in Paradise Lost. In Book I of the venerated English epic, Lucifer and his angels lie in the burning lake of Hell after their fall from Heaven. Satan lay “Prone on the flood, extended long and large,” as great in size as:

“...that sea-beast
Leviathan, which God of all his works
Created largest that swim the ocean stream:
Him happily numbering on the Nöyme foam,
The pilot of some small night-founded skiff,
Demand what island, off, as sea-men tell,
With fixed anchor in his scaly rind
Mows by his side under the lie, while night
Invests the sea, and wished morn delays:
So stretched out large in length the Arch-Fiend lay
Chained on the burning lake.”

Milton’s references to both Norway and the “fixed anchor in his scaly rind” echo Olaus’s Norwegian whale. Like Physiologus and the bestiaries, Milton equates Satan with Leviathan. Milton again refers to the whale as a fish in Book VII, on the Creation. Unlike Olaus, he describes the whale as a fish, not a mammal, but like Olaus and others of his time, inaccurately presents the spout of the animal as water, not condensed moisture:

“... There leviathan
Hugest of living creatures, on the deep
Strideth like a promontory, deeps or swarms,
And seems a moving land, and at his gills
Davies in, and at his trunk spouts out a sea.

Histo-
The dangers of the voyage intensify with the rising of the Norway Serpent. East of the monster is a perilous passage between it and the maelstrom whose “Caribdis” legend evokes Odysseus’ threading between hideous Scylla and the great vortex.

“They who in Works of Navigation, on the Coasts of Norway, employ themselves in fishing or Merchandize, do all agree in this strange story, that there is a Serpent there which is of a vast magnitude, namely 200 foot long, and more—over 20 feet thick, and is wont to live in Rocks and Caves toward the Seacoast about Berge: which will go alone from his holes in a clear night, in Summer, and devour Calves, Lambs, and Hogs, or else he goes into the Sea to feed on Polypos, Lesotus, and all sorts of Sea-Crabs.

He hath commonly hair hanging from his neck a Cubit long, and sharp Scales, and is black, and he hath flaming shining eyes. This Snake disquiets the Shippers, and he puts up his head on high like a pillar, and catcheth away men, and he devours them; and this hapneth not, but it signifies some wonderful change of the Kingdom near at hand; namely that the Princes shall die, or be banished; or some tumultuous Wars shall presently follow.

There is also another Serpent of an incredible magnitude in a Town, called Moor, or the Diocese of Hamor; which, as a Comet portends a change in all the World, so, that portends a change in the Kingdom of Norway, as it was seen, Anno 1522. That lifts himself high above the Waters, and turns himself round like a sphere.

This Serpent was thought to be fifty Cubits long by conjecture, by sight afar off: there followed this the banishment of King Christopher, and a great persecution of the Bishops; and it shew’d also the destruction of the Country.”

The most famous of all Olaus’s marine monsters is the Great Norway Serpent, or Sea Orm. Born of mariners’ tales, the terrifying creature enters natural history and breeds centuries of sightings. Olaus’s commentary has the distinction of being the first written account of the great Sea Orm. Gleaned from tales of Norwegian seamen, this monster has mystical and classical ancestors and a legion of descendants that have been pictured, analyzed, and debated.
Sea Serpent
Carta Marina
In the misty reaches of the human myth pool is a mother goddess, Tiamat, who might have been both the sea and a serpent or dragon. The Babylonian epic of creation relates that she was the salt water of the primordial abyss, and Apis the fresh water. The unheld progeny of the two kill their father, and Marduk, the king of the younger gods, vanquishes her in a cave. He then splits her in two, creating earth and sky.

Closer to Olaus’s Sweden in time and place, a later cosmic serpent was one with which Olaus and other Scandinavians would have been familiar: Ægir, the Midgard Serpent from Norse mythology. After Odin cast the monster out of the home of the gods, it grew in the depths of the sea until it encircled the earth. Thor fished for it, and when it grew so large that the god’s giant companion was so afraid the serpent would sink their boat that he cut the rope, it was hauled aboard. The serpent battled to the death of both gods, and Apsu the fresh water, the unruly water of the primordial abyss, relates that she was the salt serpent or dragon. The myth pool is a mother goddess, Tiamat, who might have been both the sea and a serpent or dragon. The two most widely reproduced illustrations of a sea serpent (above) are Conrad Gesner’s sixteenth-century woodcut and Pomeroy Bing’s eighteenth-century drawing based on the original account of Bishop plano Eckes. Ulisse Aldrovandi’s “realistic” sea serpent (below) is a copy of Gesner’s without ship and sailmen.

The importance of Olaus’s Sea Serpent as an influence in early marine zoology is evident in the number of natural histories that actually reproduced the image from the Carta Marina. The most dramatic of all the chart’s figures, it has been the one most frequently copied or adapted.

The famous Conrad Gesner woodcut was originally accompanied by depiction of the smaller, harmless sea snake that is harassed by a giant crab in the lower half of the Carta Marina (E/m). In his Historie of Serpents, Edward Topsell copied both engravings along with commentary that was derived from Gesner. Topsell, though, erroneously describes the monster as being 120 feet long rather than the 100 to 200 feet that specified by Gesner.

The sea serpent in Ulisse Aldrovandi’s posthumous book of fishes was also obviously from Gesner, even though it is presented more realistically, without ship or sailors. The engraving appeared in editions of his Historie of Serpents in the eighteenth century. In that influential work Aldrovandi’s serpent (labeled Serpe Maribus Mani Nemegio jamnarii Ahli) is included in sections of both snakes and fish, facing different directions in each case.

Most sea monster studies from the nineteenth century—and now in studies on Internet websites—accompany discussion of the sea serpent with either the Gesner/Topsell engraving or the vignette from Olaus’s Historie.

Olaus and his artist intended to depict a gigantic calamari. Oudemans believes that the creature could have snatched a sailor along the coast of Bergen. He also doubts that the creature could have snatched a sailor from the ship, because he knew of no such reported attack by a sea serpent. In spite of those objections, he accepts the beast as an actual animal and illustrates it.