

# Royal Ontario Museum – Department of Museum Volunteers Gallery Interpreters

## Information Sheet

### Scrimshaw

#### 1. What is It?

The Gallery Interpreters have two modern pieces of scrimshaw.

These can be used in conjunction with The Blue Whale Project special exhibition.

#### Handling Instructions

Caution Level:	Durable
GI Handling:	Naked hand
Visitor Handling:	Naked hand
Packaging:	Plastic Case
Transporting:	Carry bag or in pockets
Real or Reproduction:	Reproduction (as far as we know)



Sperm Whale Tooth (left) and Walrus Tusk (right)  
Inscribed "Commodore Thomas Macdonough"  
Dated and signed "©1991 PM"



Reverse of Sperm Whale Tooth  
Inscribed "Battle of Lake Champlain"

#### 2. What is Scrimshaw?

Scrimshaw is the name given to scrollwork, engravings, and carvings done in bone or ivory.

Typically, it refers to the handiwork created by whalers made from the byproducts from harvesting them from marine mammals.

It is most commonly made out of the bones and teeth of sperm whales, the baleen of other whales such as blue whales and others, and the tusks of walrus.

It takes the form of elaborate engravings in the form of pictures and lettering on the surface of the bone or tooth, with the engraving highlighted using a pigment, or, less often, small sculptures made from the same material. However the latter really fall into the categories of ivory carving, for all carved teeth and tusks, or bone carving.

The making of scrimshaw began on whaling ships between 1745 and 1759 on the Pacific Ocean, and survived until the ban on commercial whaling.

The practice survives as a hobby and as a trade for commercial artisans.

A maker of scrimshaw is known as a *scrimshander*. The word first appeared in print in the early 19<sup>th</sup> century, but the etymology is uncertain.

### History and Materials

Scrimshaw is derived from the practice of sailors on whaling ships creating common tools, where the byproducts of whales were readily available. The term originally referred to the making of these tools, only later referring to works of art created by whalers in their spare time. Whale bone was ideally suited for the task, as it is easy to work and was plentiful.

The development of scrimshaw took off after the market for whale teeth, which was sought by Chinese traders for use in the Pacific Islands (for example the Fijian market for tabua), was flooded with teeth after a narrative by an American sailor, Captain David Porter, revealed both the market and the source of the teeth. Around this time is the earliest authenticated pictorial piece of scrimshaw (1817). The tooth was inscribed with the following...

*This is the tooth of a sperm whale that was caught near the Galapagos islands by the crew of the ship Adam [of London], and made 100 barrels of oil in the year 1817.*

Other sea animal ivories were also used as alternatives for rarer whale teeth. Walrus tusks, for example, may have been acquired in trade from indigenous walrus hunters.

Scrimshaw essentially was a leisure activity for whalers. Because the work of whaling was very dangerous at the best of times, whalers were unable to work at night. This gave them a great deal more free time than other sailors. A lot of scrimshaw was never signed and a great many of the pieces are anonymous. Early scrimshaw was done with crude sailing needles, and the movement of the ship, as well as the skill of the artist, produced drawings of varying levels of detail and artistry. Originally, candle black, soot or tobacco juice would have been used to bring the etched design into view. Today's artists use finer tools in various sizes, mostly borrowed from the dental industry. Some scrimshanders ink their work with more than one color, and restrained polychromed examples of this art are now popular.

Originating in an era when sperm whales were initially plentiful only to be hunted to near collapse, scrimshaw no longer is an artform utilizing an easily renewable animal resource, but one that is susceptible to contraband. Now, international conventions restrict the harvest and sale of ivory to try to reverse the scarcity of ivory-bearing animals.

- Though there are sources of ivory that are sanctioned and legal, poachers in Africa and other continents where elephants are an endangered species still kill for their ivory, Elephant ivory has been regulated since 1976 by the Convention on International Trade in Endangered Species (CITES) and selling African ivory has been prohibited since 1989.
- 19<sup>th</sup> and 20<sup>th</sup> century scrimshaw, scrimshaw crafted before 1989 (elephant) or before 1973 (sperm whale ivory, walrus ivory, etc.) is legal. It is prohibited after that year for commercial import in the US, for example, under the Marine Mammal Protection Act.
- Additionally, walrus tusks bearing the Alaska State walrus ivory registration tag, and post-law walrus ivory *that has been carved or scrimshawed by a native Alaskan*, is legally available.

- Finally, any ivory considered ancient, such as 10,000 to 40,000 year old mammoth ivory, is completely unrestricted in its sale or possession.

Scrimshanders and collectors acquire legal whale teeth and marine tusks through estate sales, auctions and antique dealers. To avoid illegal ivory, collectors and artists check provenance and deal only with other established and reputable dealers. Scrimshaw that is found to have been illegally sourced may be seized by customs officials worldwide, dramatically loses value and is very hard to re-sell, as the limited channels through which collectible scrimshaw passes serves as a check on unscrupulous persons. As with any other fine art form, it is usually possible for experienced museums, auction houses or other experts to perceive a fake.

### 3. **Real versus Reproduction?**

Modern scrimshaw carved from whale teeth or bone is rare as the legal supply of such material is quite limited.

The ROM does not support the hunting of whales – please be sure that visitors understand this. The GI scrimshaw is believed to be made from a modern synthetic material called Micarta.

Micarta is a brand name for composites of linen, canvas, paper, fiberglass, carbon fiber or other fabric in a thermosetting plastic. It was originally used in electrical and decorative applications. Micarta was developed by George Westinghouse at least as early as 1910 using phenolic resins invented by Leo Baekeland. These resins were used to impregnate paper and cotton fabric which were cured under pressure and high temperature to produce laminates. In later years this manufacturing method included the use of fiberglass fabric and other resin types were also used. Today Micarta high pressure industrial laminates are produced with a wide variety of resins and fibers. The term has been used generically for most resin impregnated fibre compounds. The most common uses of modern high pressure laminates are as electrical insulators, printed circuit board substrates, and knife handles.

The Micarta trademark is a registered trademark of Industrial Laminates / Norplex, Inc. (dba Norplex-Micarta).

### 4. **Where to Use It?**

Near any whale material.

In the permanent collection, in a case outside the Gallery of First Peoples, there is a carved narwhal tooth or tusk. The narwhal, a type of whale, has one large external tooth that grows to a great length. See the separate document on the narwhal tusk. The carved narwhal tusk is a form of scrimshaw.

In 2017, the ROM has a special exhibition called “Out of the Depths: The Blue Whale Story”. The scrimshaw can be used in the exhibition.

### 5. **Who was Thomas Macdonough?**

Thomas Macdonough, Jr. (December 31, 1783 – November 10, 1825) was an early 19<sup>th</sup> century American naval officer noted for his roles in the first Barbary War and the War of 1812.

He was the son of a revolutionary officer, Thomas Macdonough, Sr. who lived near Middletown, Delaware. He was the sixth child from a family of ten siblings and was raised in the countryside.

He entered naval life at an early age, receiving a midshipman's commission at the age of sixteen. Serving with Stephen Decatur at Tripoli, he was a member of "Preble's Boys", a select group of US naval officers who served under the command of Commodore Preble during the First Barbary War.

Macdonough achieved fame during the War of 1812, commanding the American naval forces that defeated the British navy at the Battle of Lake Champlain, part of the larger Battle of Plattsburgh, which helped lead to an end to that war.

## 6. Whales in General?

There are two types of whales.

- Baleen whales
  - Mouth contains baleen – long hair-like strands growing from overlapping plates, composed of keratin, which act as a filter-feeder system to eat krill (small crustaceans).
  - The blue whale is a baleen whale.
- Toothed whales
  - Mouth contains teeth, used in feeding in some species, but used for aggression and showmanship in others.
  - Includes dolphins and porpoises, as well as toothed whales like the sperm and beaked whales.
  - Typically smaller than baleen whales.
  - The sperm whale is the largest toothed whale.

## 7. Sperm Whales

The sperm whale lives in pods. It has a huge brain that weighs about 20 pounds (9 kg); it is the largest brain of any animal. The sperm whale has a single blowhole that is s-shaped and about 20 inches (51 cm) long. The blowhole is located on the left side of the front of its huge head. The sperm whale has a 4-12 inch (10-30 cm) thick layer of blubber.

Sperm whales produce ambergris, a dark, waxy substance (related to cholesterol) that is produced in the lower intestines, and is sometimes found containing squid beaks. Ambergris may help protect the sperm whale from the stingers on the giant squid, its major food. Large lumps of ambergris may be vomited up by the sperm whale.

Freshly-produced ambergris has a marine, fecal odour. However, as it ages, it acquires a sweet, earthy scent, commonly likened to the fragrance of rubbing alcohol, without the vaporous chemical astringency. Although ambergris used to be very highly valued by perfumers as a fixative (allowing the scent to last much longer), it has now largely been replaced by synthetic ambroxan.

Sperm whales also produce spermaceti, a waxy, oily substance found in the head cavities of the sperm whale (and, in smaller quantities, in the oils of other whales). Spermaceti is created in the spermaceti organ inside the whale's head.

The sperm whale is named for the spermaceti that it produces.

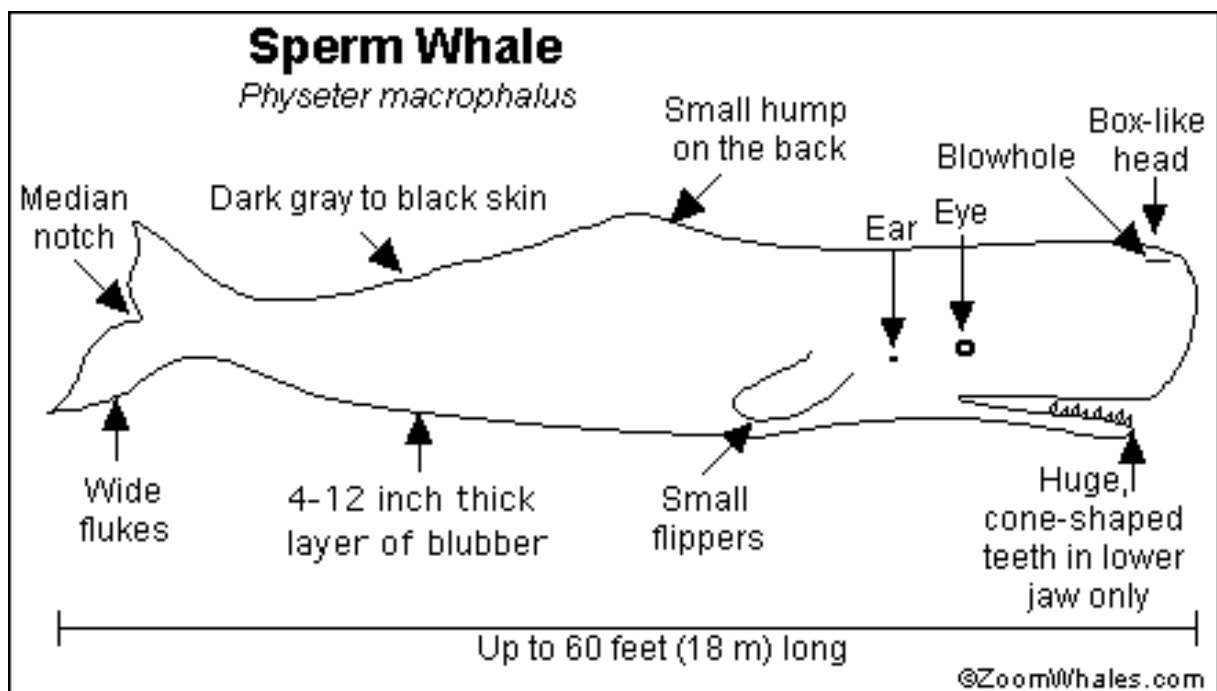
Two theories for the spermaceti organ's biological function suggest it either controls buoyancy, or acts as a focusing apparatus for the whale's sense of echolocation. There has been concrete evidence to support both theories. The buoyancy theory holds that the sperm whale is capable of heating the spermaceti, lowering its density and thus allowing the whale to float; in order for the whale to sink again, it must take water into its blowhole which cools the spermaceti into a denser solid. This claim has been called into question by recent research which indicates a lack of biological structures to support this heat exchange, as well as the fact that the change in density is too small to be meaningful until the organ grows to huge size.

Both a wax and an oil were produced from spermaceti.

The oil burns brightly and efficiently, and was used for lighting with whale oil lamps. This was largely replaced by kerosene once petroleum products became more commonly available.

When treated at 6 °C (43 °F) with a chemical solution of caustic alkali under pressure, spermaceti forms brilliant white crystals that are hard but oily to the touch, and are devoid of taste or smell, making it very useful as an ingredient in cosmetics, leatherworking, and lubricants. The substance was also used in making candles, in the dressing of fabrics, and as an ingredient in pharmaceutical ointments.

The fictional Moby Dick was a sperm whale.



Sperm whales are carnivores that mostly eat giant squid that live on the ocean bottom at great depths. They also eat fish, octopus, and skate. In 1998, off the coast of Indonesia, 3 sperm whales were observed attacking a rare, filter feeding megamouth shark. An adult Sperm Whale can eat about a ton of food each day.

Sperm whale teeth are uniform. The teeth in the upper jaw never erupt. The teeth in the long, thin lower jaw are conical and huge, about 7 inches (18 cm) long. These teeth weigh about 2 pounds (900 g) each. The lower jaw is about 16 feet (5 m) long and has about 50-60 teeth in it. When the whale's mouth is closed, the teeth fit into sockets in the upper jaw.

Sperm whales are found in many open oceans, both in tropical and cool waters. The range of the sperm whale is all oceans except the polar seas. Sperm whales live at the surface of the ocean but dive very deeply to catch the giant squid.

It is estimated that there are about 200,000 sperm whales world-wide. Sperm whales are considered an endangered species. These whales (and many other large whales) were over-hunted for many years, since their meat, oil, and other body parts are very valuable. Since whale hunting has decreased in the last few decades, their populations are starting to recover.

## 8. Walrus

The walrus (*Odobenus rosmarus*) is a large flippers marine mammal with a discontinuous distribution about the North Pole in the Arctic Ocean and subarctic seas of the Northern Hemisphere.

Adult walruses are easily recognized by their prominent tusks, whiskers, and bulkiness.

Walruses live mostly in shallow waters above the continental shelves, spending significant amounts of their lives on the sea ice looking for bivalve mollusks to eat.

Walruses are relatively long-lived, social animals, and they are considered to be a "keystone species" in the Arctic marine regions.

The walrus has played a prominent role in the cultures of many indigenous Arctic peoples, who have hunted the walrus for its meat, fat, skin, tusks, and bone. During the 19<sup>th</sup> century and the early 20<sup>th</sup> century, walruses were widely hunted and killed for their blubber, walrus ivory, and meat. The population of

walrus population dropped rapidly all around the Arctic region. Their population has rebounded somewhat since then.

The most prominent feature of the walrus is its long tusks. These are elongated canines, which are present in both male and female walrus and can reach a length of 1 m (3 ft 3 in) and weigh up to 5.4 kg (12 lb).

Tusks are slightly longer and thicker among males, which use them for fighting, dominance and display; the strongest males with the largest tusks typically dominate social groups. Tusks are also used to form and maintain holes in the ice and aid the walrus in climbing out of water onto ice. Tusks were once thought to be used to dig out prey from the seabed, but analyses of abrasion patterns on the tusks indicate they are dragged through the sediment while the upper edge of the snout is used for digging. While the dentition of walrus is highly variable, they generally have relatively few teeth other than the tusks.

# Royal Ontario Museum Department of Museum Volunteers

## Gallery of First Peoples – Narwhal Tusk

### **Narwhal Tusk Sculpture (Nunatsiarmiut)**

Artist Pudloo Kilabuk

Pangnirtung, Nunavut; ivory narwhal tusk, crayon; 2005; Accession # 2005.42.1

A carved Narwhal tusk is displayed outside the entrance to the First Peoples Gallery.

The relief images carved on the tusk depict a microcosm of the Inuit world. They relate the mutual relationship between humans and animals and the acts, such as drum dancing, that were undertaken to help maintain the relationship. The narrative showing drum dancers, animals, hunting scene, and Nuliajuk (Mother of the sea animals) is one that expresses the balance between the spiritual and physical, between the human and animal, that is necessary for survival.

### **A Narwhal Tusk is a Type of Ivory**

The narwhal tusk is a tooth – one of a pair in the animal's upper jaw. Teeth of the female remain embedded in the gum, but in the male the *left* tooth protrudes and reaches a length of 2-3 m (7-10 feet). As the tusk grows, it twists, which compensates any imbalance of growth rate around the tusk base; the result is a straight tusk with a spiral structure. It is still uncertain how the male narwhal uses his tusk; perhaps it is used as a formidable jousting weapon in courtship and dominance rivalry, in obtaining food, and/or for channeling and amplifying sonar pulses (which they emit). The tusk is not used in hunting.

Both sexes of the narwhal have rudimentary tusks that remain embedded in the gum. Very occasionally, both tusks in the male will protrude. Sometimes the female will grow a short tusk.

Narwhals eat fish, squid, shrimp, and other marine animals.

Narwhals are a very vocal species of whale, making clicks, squeals, and whistles to communicate and/or navigate.

Narwhal means “corpse whale” in Old Norse. This is perhaps a description of their skin, which is bluish-gray with white blotches (young narwhals are brown). Narwhals have a cylindrical body (with no dorsal fin) and a round head with a small mouth on their blunt snout. This compact body shape plus a thick layer of blubber retains heat in the icy Arctic waters in which they live.

Long ago, narwhal sightings reinforced (and may have even started) the unicorn legends.

Exclusive of the tusk, the narwhal grows to sixteen feet in length. In the eastern Canadian Arctic, the narwhal winters in the open Waters of Davis Strait and Baffin Bay. In spring they move westward through Lancaster Sound



and Hudson Strait; they also enter Cumberland Sound in southeastern Baffin Island. The eastward fall migration is underway by late August.

The duration of a narwhal dive is from 7-20 minutes.

Narwhals can grow to be about 16 feet (4.9 m) long (not counting the tooth), and weigh about 1.8 tons (1.6 tonnes). Females are slightly smaller, averaging about 13 feet (4 m) long, and weighing 1 ton (0.9 tonnes). At birth, narwhals are about 5 feet (1.5 m) long and 175 pounds (80 kg).

Narwhal maximum life span is about 50 years.

Pods (social groups of whales) of 4-20 narwhals have been observed; some groups consist of just one sex and others contain both sexes. Many pods may travel together, forming very large groups.

It is estimated that there are roughly 10,000 to 45,000 narwhals. Narwhals are preyed upon by man (Inuit hunters legally hunt narwhals), polar bears, orcas, sharks, and walruses.

The Narwhal's gestation period is 10-16 months. Calves are brown and have no spots (unlike adults who are blue-gray with whitish spots). Calves are nursed for about 4 months after birth.

### **Carving Tusks**

For more than 2,000 years, the peoples of the Arctic have carved ivory. Wood was very scarce, only available in small quantities as driftwood, and people thus depended on the bone and ivory that came from the animals they hunted.

Ivory was carved into fittings, implements, tools, and figures. Many of these pieces were skillfully incised with complex designs and iconography representing the world.

- In the treeless Arctic the Inuit fashioned their tools, fittings, implements and amulets from ivory, bone and antler.
- **Tuugaaq** is the Inuktitut word for ivory, but it pertains only to the ivory from the tusks belonging to the narwhal and the walrus – so important were the tusks to the Inuit, each has its own origin story in the Inuit narratives.

Before the arrival of the Europeans, the Inuit began to carve miniatures of their animals, tools, etc. and to exchange them for food, metal tools, coal oil, etc.

### **Tools for Working Ivory and Bone**

- Bow drill
  - Most important for working ivory and bone
  - In 3 parts: mouthpiece, bow with string, drill
  - Also used for making fire
- Knives of ivory or metal. Piece then shaped by chipping
- Finishing done using a file or whetstone
- Iron points used for engraving

Ivory is fine grained dentine of exceptional hardness.