***Monachus schauinslandi*** (Matschie, 1905) **PHOC Mona 3** **SMH**

**FAO Names: En** - Hawaiian monk seal; **Fr** - Phoque moine de Hawai; **Sp** - Foca monje del Hawaii.

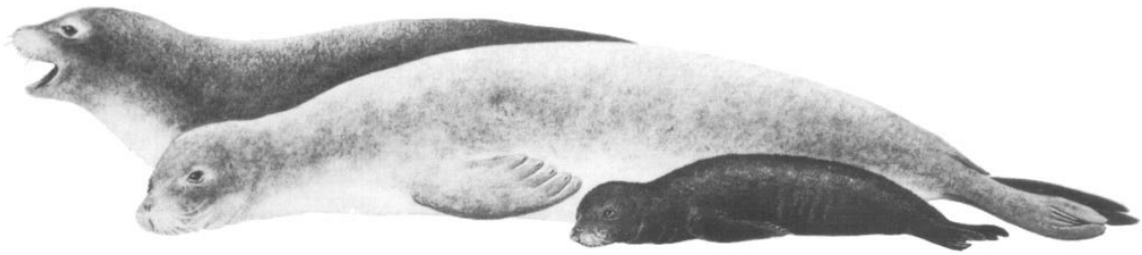
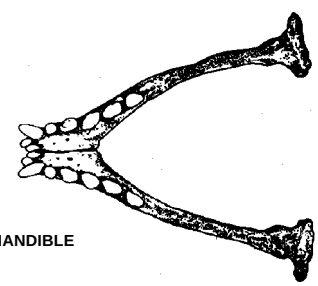


**Fig. 556** ***Monachus schauinslandi***

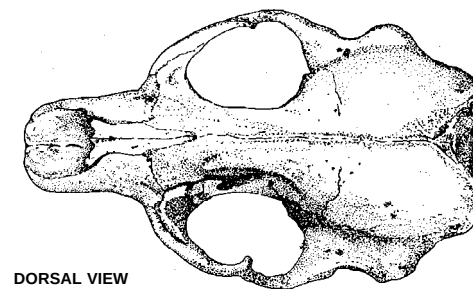
**Distinctive Characteristics:** In Hawaiian monk seals, females grow slightly longer, and often heavier, than males. The long, fusifon body is robust, with short flippers. The relatively small head is wide and somewhat flat, with the eyes spaced fairly widely apart. The muzzle is wide and compressed from top to bottom. The mystacial pads are large and fleshy, extending beyond the nostrils. The nostrils are situated on the top of the muzzle, unlike any other North Pacific phocid species. The vibrissae are smooth, not beaded as in most phocids. They vary from short to moderately long, and are black at the base, often with lighter yellowish white tips. There can be a scattering of all light vibrissae throughout. There are 4 retractable mammary teats.

Just following the moult, most females and subadults are silvery to slate grey above, fading to cream or light silver-grey below. Over the years, the coat usually becomes brownish above and yellowish below. Males and some females become completely brownish to blackish as they age. There can be a variable amount of light highlighting on the mystacial area and on both the upper and lower lips. Adults and juveniles can have a greenish or reddish cast from algal growth. Also, Hawaiian monk seals can have irregular light blotches or patches anywhere on the body and flippers, associated nails may also be pale instead of blackish. Pups are born in a black woolly coat, which is moulted completely by about the sixth week. The first moult is a shedding of individual hairs, but each successive annual moult is a more dramatic epidermal moult of hair and skin, which detaches in patches. Most older animals of both sexes, but especially males, have some to many scars on their back, sides, and head.

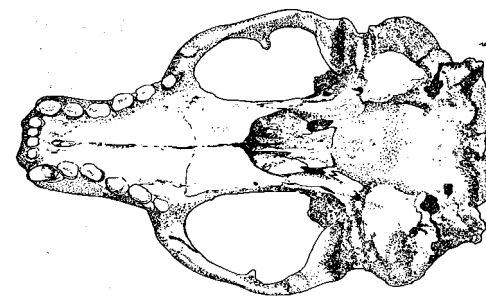
The dental formula is I 2/2, C 1/1, PC 5/5.



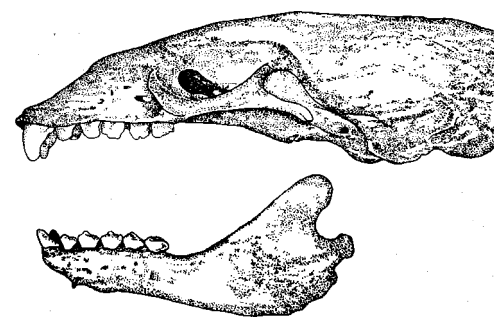
DORSAL VIEW OF MANDIBLE



DORSAL VIEW



VENTRAL VIEW



LATERAL VIEW WITH MANDIBLE

**Fig. 557 Skull**

**Can be confused with:** No other pinnipeds regularly occur within the tropical habitat of this seal. However, in recent years northern elephant seals (p. 284) have been recorded at Midway Island. Northern elephant seals are much larger and the size and shape of the head, muzzle, and orientation of the nostrils are diagnostic. Also, female northern elephant seals have only 2 teats.

**Size:** Adult male Hawaiian monk seals reach lengths of about 2.1 m, females 2.4 m. Males weigh an average of 200 kg, females up to 272 kg. Pups are about 1 m and 16 to 18 kg at birth.

**Geographical Distribution:** Hawaiian monk seals are distributed throughout the northwestern chain of Hawaiian Leeward Islands and are occasionally seen around the main Hawaiian Islands and at Johnston Atoll. Their habitat and movements at sea are not known; they have been seen up to 140 km from the nearest land. On land they haul-out and breed on beaches of sand and coral rubble, and on rocky terraces. They sometimes leave the beach if vegetation is available for shade.

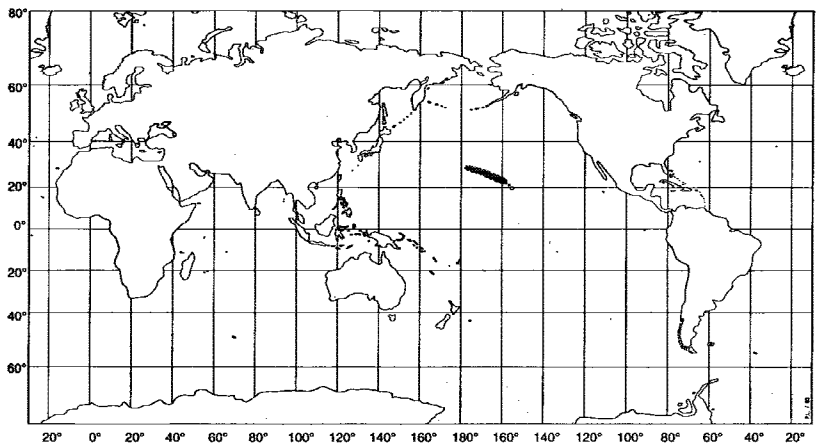



**Fig. 558**

**Biology and Behaviour:** Hawaiian monk seals are considered nonmigratory. The long breeding season lasts from late December to mid-August, although most pups are born between March and June. Males in this polygynous species patrol the water adjacent to the rookeries, or haul-out beside non-nursing females. There have been up to 3 times more breeding-age males than females at some colonies; this contributes to mobbing of estrus females, which are often injured and occasionally killed.

When approached by another seal or human on land, Hawaiian monk seals often roll to present the underside to the intruder, arch the back, raise a flipper in the air, and open the mouth. They are generally solitary, both on land and at sea. Even when seals gather together on land, they are not generally gregarious, and only mothers and pups regularly make physical contact.

Hawaiian monk seals feed on reef fishes, eels, cephalopods, and lobsters.

**Exploitation:** Hawaiian monk seals were seriously overexploited by sealers and other people in the Hawaiian leeward islands in the early 19th Century. Human disturbance has been nearly continuous since then with guano and bird collectors, lighthouse keepers, military bases and the second world war creating havoc and mortality to varying degrees at the different islands inhabited by these seals. These factors, in combination with shark predation and dinoflagellate toxins passed along to the seals through their fish prey species are suspected to have led to the massive decline in numbers. In recent years entanglement of Hawaiian monk seals in lost and discarded fishing gear and packing bands has also contributed to their decline. With hard work and luck the future for this species may be promising. Estimates of the total population increased in the 1980s to approximately 1 500 animals. This has come about through aggressive protection measures including: placing nearly all of this seal's island habitat under protection of the U. S. Fish and Wildlife Service as a wildlife refuge, and initiating a research and recovery program by the National Marine Fisheries Service.

**IUCN Status:** Endangered.

***Mirounga angustirostris*** (Gill, 1866)

**PHOC Mir 2** **SNP**

**FAO Names: En** - Northern elephant seal; **Fr** - Elephant de mer boréal; **Sp** - Foca elephante del norte.

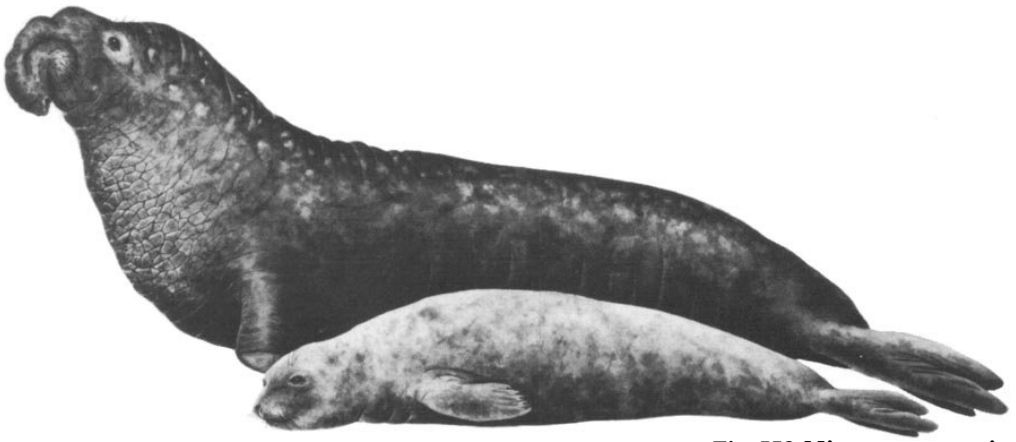


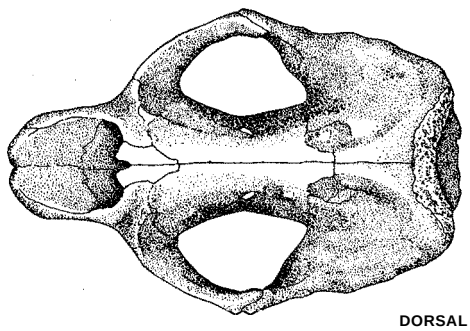
**Fig. 559** ***Mirounga angustirostris***

**Distinctive Characteristics:** Northern elephant seals are huge and imposing. Significant sexual dimorphism exists in size and shape. In both sexes, the body is long and robust, and the neck very thick. The head, muzzle, and lower jaw are broad. The mystacial area and nose are fleshy and rather pointed on females and young subadult males. The eyes are very large, a feature that is noticeable in females and subadult males. The mystacial vibrissae are beaded, short, and black; they are accompanied by 1 or 2 nose or "rhinal" whiskers, as well as several prominent vibrissae above each eye.

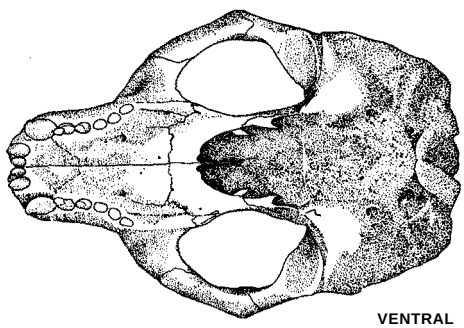
Adult males are unmistakable, because of their great size and large, fleshy nose, called a proboscis. This proboscis is inflatable and, when relaxed, hangs down in front of the mouth. When inflated, it resembles the trunk of an elephant, thus the species' common name. Another feature of bulls is the chest shield, a thickened area of heavily scarred, creased and cornified skin, which on old bulls, completely rings the neck. Each foreflipper digit bears a large blackish brown nail.

Northern elephant seals are uniformly grey, tan, or brown; colour generally fades after the annual moult. Many bulls become pale in the face, proboscis, and head with increasing age; the chest shield and areas of the face and proboscis are often pink. Adults and subadults undergo an epidermal moult that usually starts in the axillary region and progresses around the body. Pups are born in a long woolly black lanugo that is shed at about 3 weeks of age to reveal a silver-grey coat, similar to that of adults.

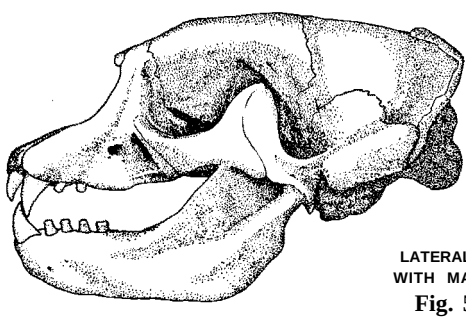
The dental formula is I 2/1, Cl/l, PC 5/5.



DORSAL VIEW



VENTRAL VIEW



LATERAL VIEW WITH MANDIBLE

**Fig. 560 Skull**

**Can be confused with:** The great size and massive head and large fleshy proboscis of northern elephant seal bulls makes them virtually unmistakable. Only 1 other phocid, the harbour seal (p. 258), regularly shares the range of the northern elephant seal, and is much smaller with a spotted coat. Even female and subadult male elephant seals can be distinguished from-other vagrant seals within their range by body size, size and proportions of the head, pelage coloration, prominence and colour of vibrissae, and relative size of the eyes.

**Size:** Adult males reach almost 5 m in length and an estimated 1 800 to 2 200 kg; however, few have been weighed. Adult females are up to 3 m in length and 400 to 800 kg in weight. Newborn pups are about 1.2 m and 30 to 40 kg.

**Geographical Distribution:** The eastern and central North Pacific forms the range of the northern elephant seal. Breeding takes place on offshore islands and a few mainland localities from central Baja California to northern California. Nearly all seals migrate to and from their rookeries twice a year, once to breed (December to March) and later to moult (different times for each age/sex class). Post-breeding and post-moult migrations take most seals north and west to oceanic areas of the North Pacific and Gulf of Alaska. Wanderers have been found as far away as Japan and Midway Island.

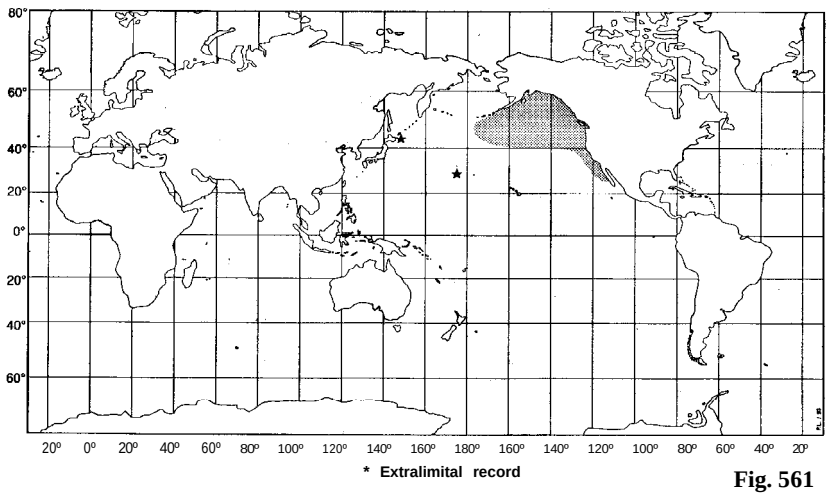



**Fig. 561**

**Biology and Behaviour:** Northern elephant seals are highly polygynous, but not territorial. Males compete for access to females by ranking themselves in a hierarchy. There is much male-to-male fighting, vocalizing, and displaying during the breeding season, when bulls may be ashore for months at a time. One of the most impressive displays occurs when a male rears up on his hindquarters, thrusts some two-thirds of his body upward, and produces a distinctive threat voalization as a challenge to other bulls.Females give birth within a few days of coming ashore, from late December to March.

Northern elephant seals hold the record as the deepest-diving pinniped. Time-depth recording devices have recorded dives of an amazing 1 580 m and 80 minutes. Rest intervals at the surface are very short, usually only a few minutes. After leaving the rookeries, most of these seals spend 80 to 90% of their time underwater, accounting for the fact that they are infrequently seen at sea.Prey consists mostly of squids, small sharks, and deep water fishes.

**Exploitation:** Intensive commercial sealing in the 19th Century greatly reduced the population and these seals have recovered in this century. Sealers were after the great volume of high quality oil that could be obtained from these seals, especially from the bulls. They were thought to be extinct by the turn of the century, but a small number survived the carnage and gave rise to the present burgeoning population.

**IUCN Status:** Insufficiently known.

***Mirounga Leonina*** (Linnaeus, 1758)

**PHOC Mir 1** **SES**

**FAO Names: En** - Southern elephant seal; **Fr** - Elephant de mer austral; **Sp** - Foca elephante del sur.

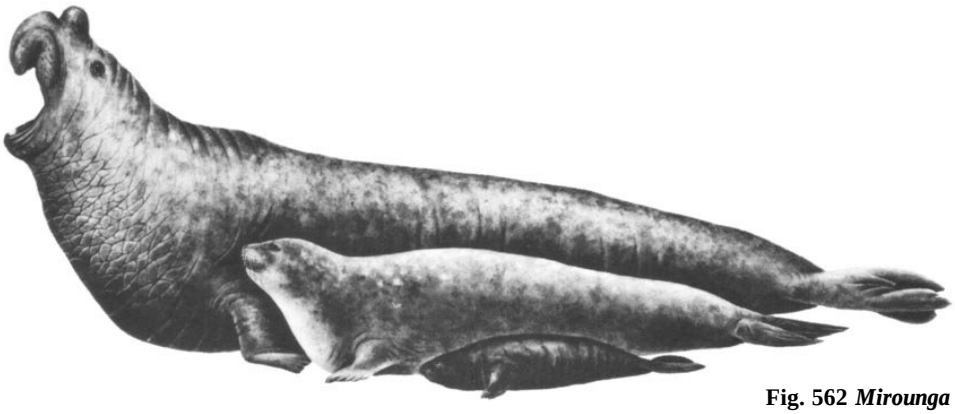


**Fig. 562** ***Mirounga leonina***

**Distinctive Characteristics:** Southern elephant seals are the largest pinnipeds. They are massive and impressively built in every respect, exhibiting significant sexual dimorphism in size and secondary sexual characteristics. In both sexes, the body is robust and the neck is very thick. The head, muzzle, and lower jaw are broad. The mystacial area and nose are fleshy and very blunt on females and young subadult males. The eyes are large, a feature that is particularly noticeable in females and subadults. The mystacial vibrissae are beaded, short, and black, with 1 or 2 nose, or "rhinal" whiskers off to each side of the muzzle, and up to 7 vibrissae above each eye. Each foreflipper digit bears a large blackish brown nail.

Adult males are unmistakable. The proboscis is erectile. When relaxed, it hangs down in front of the mouth. Curiously, the proboscis is shorter in the southern than in the northern elephant seal, even though the former has a larger body. The proboscis is said to enlarge somewhat during the breeding season. Bulls also develop a chest shield, a thickened area of heavily scarred and creased skin, which also is not as pronounced as in the northern elephant seal. There are various amounts of scarring on the rest of the body, and the proboscis is often heavily scarred or torn. Adult females, and subadults do not have a proboscis, but rather a short nose and muzzle, which with their very wide head gives them a somewhat "pug" appearance.

Elephant seals have an unspotted pelage of light to dark silver-grey, with no difference between top and underside. Some seals are cream grey to brown late in the year. Many bulls become pale in the face, proboscis, and head with increasing age.

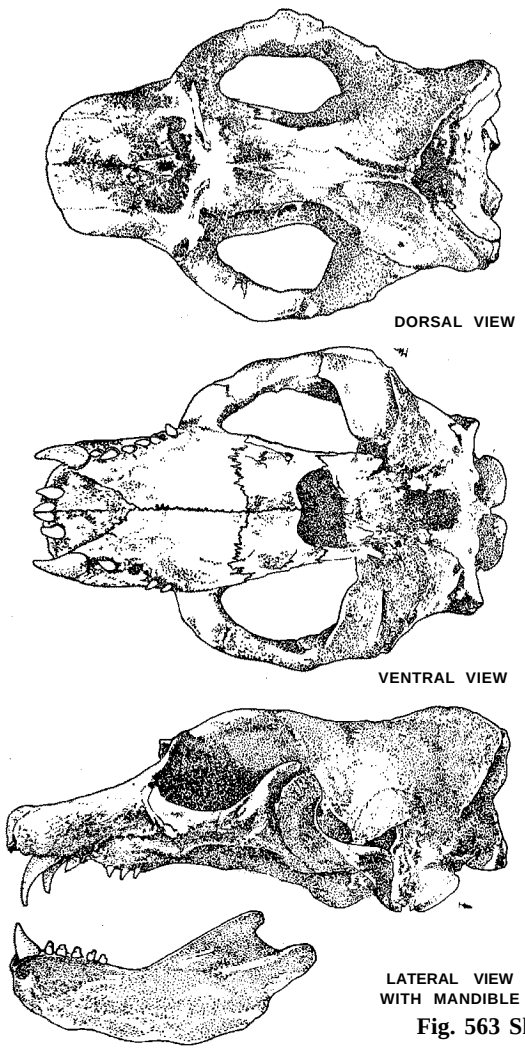



**Fig. 563 Skull**

Adults and subadults undergo an epidermal moult. Pups are born in a long woolly black lanugo that is shed at about 3 weeks of age, to reveal a silver-grey coat.

The dental formula is I 2/1, Cl/I, PC 5/5.

**Can be confused with:** The massive head and the large fleshy proboscis make southern elephant seal bulls virtually unmistakable. All 4 other phocids that occur within the southern elephant seal's range (Weddell [p. 294], Ross[p. 290], crabeater [p. 288], and leopard [p. 292] seals) can be separated from any age southern elephant seal by size and relative proportions of the flippers and head, presence of spotting and streaking (absent on southern elephant seals), and prominence and colour of vibrissae.

**Size:** Adult males reach 5.8 m and 3 000 to 5 000 kg, although few have ever been weighed. Adult females are up to 3 m and 400 to 800 kg, Newborn pups are about 1.3 m and 40 to 50 kg.

**Geographical Distribution:** Southern elephant seals have a nearly circumpolar distribution in the Southern Hemisphere. Although they show up almost anywhere around the Antarctic continent, they are most common north of the seasonally shifting pack ice, especially on subantarctic islands, where most rookeries and haul-outs for moulting are located. Sandy and cobble beaches are prefered, but will haul out on ice, snow, or rocky terraces. They will venture inland into tussock grass and other vegetation, and frequently lie in mud wallows. At sea, females and males may disperse to different feeding grounds.

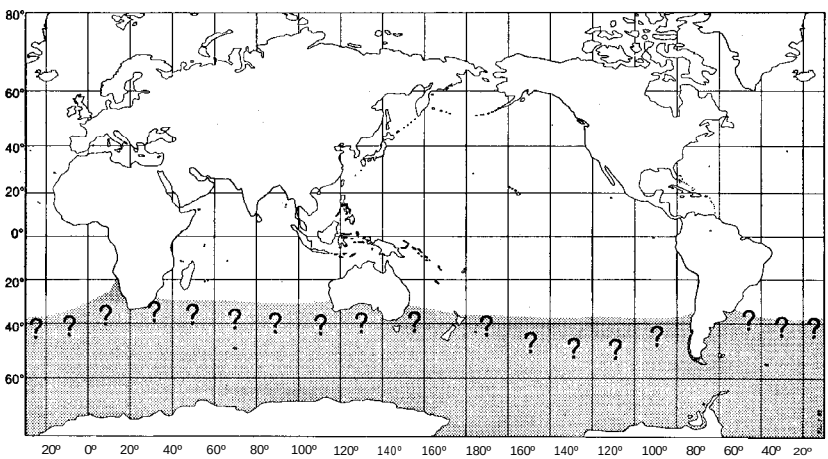



**Fig. 564**

**Biology and Behaviour:** Elephant seals are highly polygynous and males compete for access to females by roughly sorting themselves in a hierarchy. There is much fighting, vocalizing, and displaying during the breeding season. One of the male's most impressive displays is achieved by rearing up on his hindquarters, lifting some two-thirds of his bulk, and vocalizing as a challenge to other bulls.

Southern elephant seals are remarkable breath-holders; instrumented adult females have remained under-water for 120 minutes and have reached depths of 1 255 m. Both sexes dive nearly continuously while at sea, spending only a small fraction of time at the surface. Prey consists of approximately 75% cephalopods and 25% fish.

**Exploitation:** Intensive commercial sealing greatly reduced the populations of southern elephant seals and eliminated them from some rookeries, which they have yet to recolonize. The industry was based on the great volume of high quality oil that could be obtained from these seals, especially the bulls. "Elephanting" was in its heyday throughout the 19th Century, with little or no control, and continued until 1964 at South Georgia under a management scheme. Colonies on subantarctic islands in the Indian Ocean area are generally declining for unknown reasons. As with all pinnipeds inhabiting Antarctic regions, southern elephant seals are protected by the Convention for the Conservation of Antarctic Seals.

**IUCN Status:** Insufficiently known.

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