

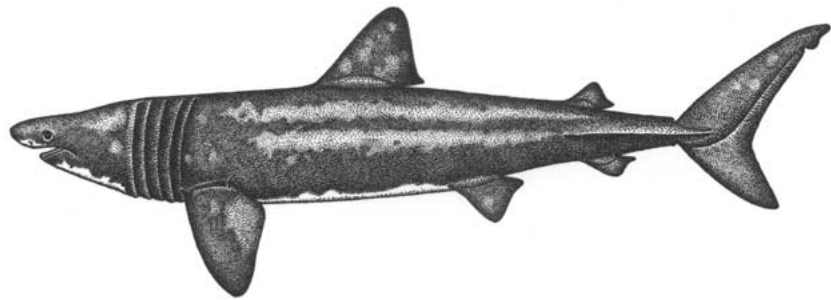
Threatened fishes of the world: *Cetorhinus maximus* (Gunnerus 1765) (Cetorhinidae)

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Common names: Basking shark (E), pélerin (Fr), peregrino (Sp), squalo elefante (It).
Conservation status: IUCN Red List VU A1ad + 2d. In April 2000, proposed listing on CITES Appendix II failed to receive 2/3 vote required to pass. Protected in western North Atlantic under NMFS 50 CFR, Pt. 678; off Florida under State Administrative Code; in U.K. waters to the 12-mile territorial limit under Wildlife and Countryside Act, off Isle of Guernsey by fisheries legislation, and off Isle of Man under Wildlife Act, Section 5; in Mediterranean under Barcelona Convention, Annex II (protocol signed but not ratified),



Bern Convention, Appendix II (reservation lodged by EU); off Malta, under Legal Notice 161; and off New Zealand by federal fishery legislation. **Identification:** A very large (9+ m TL), elongate, spindle-shaped shark with enormous gill slits that virtually encircle head, bristle-like gill rakers, narrow caudal peduncle supported by strong lateral keels, and lunate caudal fin. Snout flattened (sinusoidal in neonates), mouth subterminal, teeth minute, hook-like, and numerous. **Distribution:** Amphitemperate in coastal regions, occasionally venturing into subtropical waters. **Abundance:** Seasonally abundant in cool temperate coastal waters at moderate to high latitudes during summer plankton blooms. **Habitat and ecology:** Coastal to pelagic in boreal to warm temperate waters of continental and insular shelves, from surface to 570 m. Temperature range 6–14°C, but prefers 8–12°C. Highly migratory, moving to surface waters at higher latitudes in summer and autumn and disappearing in winter. May exhibit subtropical submergence, remaining in deep water at low latitudes. Usually encountered near surface, but may be primarily mesopelagic, appearing in surface waters when conditions are favourable. Preys on zooplankton, especially *Calanus* copepods, teleost eggs, chaetognaths, and larval crustaceans. Gill rakers filter planktonic organisms as the animal swims slowly near the surface with mouth agape and gill slits expanded. Often feeds along current and/or thermal fronts which concentrate prey, changing course to remain in patches of richest feeding. Sometimes 3+ individuals swim in tandem, nose-to-tail, in straight lines or circles. In eastern North Atlantic, gill rakers are shed Oct.–Nov. and replaced in Feb. **Reproduction:** Males mature at 4.6–6.1 m and 12–16 years; females at 8.1–9.8 m and 20 years. Ovoviviparous, probably with intrauterine oophagy. Gestation possibly 14 months. Pups probably 150–170 cm at birth. Six pups reported born (spontaneously aborted?) from a harpooned individual in Norwegian waters. Off British Isles, courtship and mating may occur late spring to summer. In late June 1988, possible mating behaviour was filmed off Nova Scotia, Canada. Strong sex biases (18–40 females/male) in commercial catches off British Isles suggest segregation by sex. **Threats:** Heavily fished off China and Japan by harpoon; also taken in nets and trawls. Off California and Canada's east coast, finning occurs opportunistically in net-entrapped bycatch. In the western North Atlantic and eastern North Pacific, sometimes a nuisance to commercial fishermen due to fouling in gear, occasionally resulting in governmental intervention. Protective legislation and local enforcement are inadequate, allowing harvest of sharks and encouraging an underground sales network for highly lucrative fins. Harassment by sport divers and ecotourists may disrupt social or mating activities vital to survival, but remains common and unrestricted in many areas. Lack of knowledge on many crucial aspects of basking shark biology hinders development of sound management and conservation strategies. **Conservation action:** Local protective laws are strict, with bans on trade and molestation, but loopholes – such as lack of enforcement of trade in basking shark fins and other products – may neutralise existing protective measures. **Conservation recommendations:** (1) CITES listing to support world-wide ban of trade in basking shark parts to supplement and strengthen local protection and discourage targeted catches. (2) Development of protocols (similar to whale watch industry) for interaction with basking sharks by boaters and divers. (3) Development of educational efforts to promote adoption of said protocols by government and industry. (4) A major international effort to fund and co-ordinate basking shark research, particularly population dynamics, reproduction, and behavioural ecology, towards development of sound management and conservation strategies. **Remarks:** Extremely protracted life-cycle and low fecundity may render this species particularly susceptible to even modest population reductions.

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