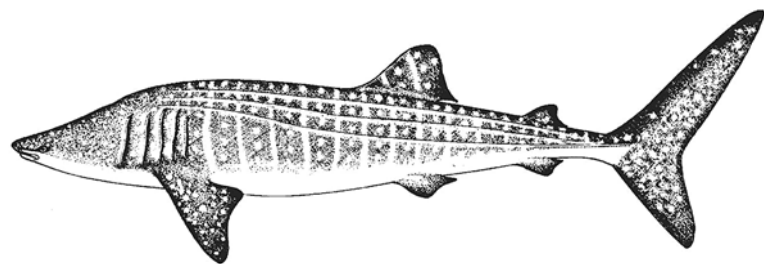


Threatened fishes of the world: *Rhincodon typus* (Smith 1828) (Rhincodontidae)

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Common name: Whale shark (E), requin-baleine (Fr), tiburòn ballena (Sp), squalo balena (I), butanding (Philippines), ebisuzame (Japan), tofu shark (Taiwan). **Conservation status:** IUCN Red List VU A1b,d, A2d. CITES Appendix II since November 2002. United Nations Convention on the Law of the Sea and the United Nations Agreement on straddling fish stocks and highly migratory fish stocks. Hunting prohibited by domestic legislation or decree in Western Australia, Tasmania, Philippines, Thailand, India,



Maldives, Honduras, U.S. Atlantic waters and Gulf of Mexico (territorial seas), Florida state waters, Honduras, regional waters of Belize. **Identification:** The largest fish on planet earth. TL to 10–12 m, rarely to 18 m, and up to 21,000 kg body mass. Dorso-ventrally flattened and very broad head with body quickly tapering from robust shoulder girth to narrow caudal peduncle. Large, transverse and near-terminal mouth. Very large gill slits. Teeth numerous and minute. Gill slits large. Eyes lateral; spiracles behind eyes. First dorsal fin considerably larger than second and inserted ca. 2/3 posterior to snout. Three prominent, dorso-lateral ridges from shoulder to tail and terminating laterally at caudal peduncle. Caudal fin semi-lunate with no prominent sub-terminal notch. Body markings unique, consisting of checkerboard pattern of light spots, horizontal stripes and vertical bars against a dark background. **Distribution:** Wide range in tropical and temperate waters, with seasonal aggregated abundance in tropical to subtropical waters (except Mediterranean Sea). **Abundance:** Unknown, but evidence of declines in several areas where hunted as evidenced by rapid, recent declines in catch per unit effort and reduced sightings in neighboring areas.. Seasonally common (several dozen or more) at several near-shore continental and island locations (e.g. Atlantic Ocean: Belize and the Gulf of Mexico. Pacific Ocean: Sea of Cortez, Galapagos Islands, Bohol Sea and Coral Sea. Indian Ocean: the Seychelles, the Maldives, Andaman Sea, Christmas Island and Western Australia [Ningaloo Reef]). **Habitat and ecology:** Coastal in some seasons, pelagic in others and perhaps for much of life cycle. Evidence for long-distance migrations by some sharks. Movements may be related to ocean currents, water temperature and local, seasonal biological productivity. Some evidence for trans-ocean basin movements and shorter seasonal migrations. Dives to more than 1000 m, may remain at depth for hours to weeks and tolerate ambient temperatures of 5–30°C. Make regular excursions between the surface and depth in search of prey. Feed primarily on dense aggregations of crustaceans (e.g. euphausiids, copepods) and baitfishes (e.g. sardines, anchovy). Suction filter-feeders, often assuming a head-up, tail-down posture when feeding. Young whale sharks have been found in the stomachs of a blue shark and a blue marlin. Virtually no free-ranging sharks observed at body lengths of 1–3 m. Adults have few natural predators, except perhaps for killer whales and white sharks. **Reproduction:** Ovoviviparous. Egg cases retained until embryos hatch. One shark captured off Taiwan had 300 embryos in utero in various developmental stages. Young ca. 55–60 cm long and 1 kg at birth and grow to 1.4 m long and 20 kg by 4 months later. Gestation duration unknown. May reproduce at 2 year intervals or more. Sexual maturity proposed at ca. 6 m and 10–30 years. Courtship and mating have never been observed. Differential distribution of sexes at among some sites suggests sexual segregation at times. **Threats:** Killed in coastal harpoon and net fisheries in Taiwan, the Philippines (banned in 1998), Indonesia, the Maldives (banned in 1995), India (banned in 2001) and Pakistan. Despite bans on hunting in several areas, functional enforcement is effectively minimal in most. Trade is largely driven by demand for meat for local consumption and fins for trade in shark fin soup market in Asia. Collisions with ships may also cause significant mortality. Greatest threats perhaps from unregulated killing and poaching in areas that may be seasonal residences for sharks that return at other seasons to distant home ranges and deterioration and destruction of important seasonal coral reef habitat feeding areas by direct exploitation of biotic and abiotic resources, coral bleaching events, and rapid climate change. **Conservation recommendations:** Conservation and management efforts should be coordinated at a regional and international scale with provisions for development of robust local enforcement regimes and illegal trade sanctions. Continued limits and bans on local and regional harvests and redirection to non-consumptive uses (e.g., managed ecotourism). **Remarks:** Several factors may make whale sharks particularly vulnerable to

over-harvest: (1) slow growth, delayed and infrequent reproduction; (2) widespread distribution in small populations, and great mobility; (3) slow swimming and docility when near the sea-surface.

Figure Credits: Compagno, L.J.V. 2002 *Sharks of the World. An annotated and illustrated catalogue of Shark species known to date. Vol. 2. Bullhead, mackerel and carpet sharks (Heterodontiformes, Lamniformes and Orectolobiformes)*. FAO Species Catalogue for Fishery Purposes. No. 1, Vol. 2. FAO, Rome.

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