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KEY INFORMATION

Areas of Concern

Newfoundland, Canada to Massachusetts, and seasonally to New Jersey.

Year Identified as “Species of Concern”
2006

Factors for Decline

- Fishing (longline mostly)

Conservation Designations

IUCN: Critically Endangered- Northeast Atlantic and Mediterranean, Endangered – Northwest Atlantic, Vulnerable globally

Current Status:

Demographic and Genetic Diversity Concerns:

Despite the lack of data regarding many aspects of this species' life history, the porbeagle population in the Northwest Atlantic has often been cited as a clear example of **stock** collapse in an elasmobranch. The Northwest Atlantic population has declined by about 90% since the 1961 start of commercial exploitation (COSEWIC 2004). This species is slow growing and has a relatively late age at maturity (eight years for males and 13 for females) and thus low productivity. They mature considerably after the age at which they first appear in the fishery (Campana et al. 2002). Due to the species' life history characteristics, the intrinsic rate of increase (r) of the porbeagle is low.

Existing Protections and Conservation Actions:

The CITES Shark Working Group recommended: data be gathered on catches and discards of porbeagle by International Commission for the Conservation of Atlantic Tunas members; the U.S. and Canada should enhance bilateral management and research for the shared stock; and the World Customs Organization should establish a harmonized code. In late 2006, the European Union agreed to support Germany's proposal to list the species under CITES but listing failed in 2007. In the U.S., this species is in the Highly Migratory Species Fishery Management Plan (NMFS 2006). There are restrictions on the commercial and/or recreational shark fisheries including no finning, limited access, trip limits, gear restrictions, a weight quota, and a minimum size. Additionally, there are hook and bait Restrictions and time/area closures for pelagic longliners. Only the quota is porbeagle specific.



Species of Concern

NOAA National Marine Fisheries Service

Factors for Decline:

They are primarily caught on pelagic longlines; also pelagic and bottom trawls, handlines and gillnets (COSEWIC 2004). There is concern that porbeagle could be affected by declining groundfish stocks as they are forage for porbeagle (COSEWIC 2004). Japanese catch outside of Canada's EEZ may comprise a significant portion of total catch from the Northwestern Atlantic population (DFO 2005). The fishery supported annual catches of up to 9,000 metric tons (mt). Apparently sustainable catch rates of about 350 mt in the 1970s and 1980s allowed the population to partially rebuild before the new fishery arose in the 1990s (Campana et al. 2002) and led to a new decline (Figure 1). Based on the most recent Canadian stock assessment, NMFS determined in 2006 that the porbeagle stock is **overfished**, the rebuilding period is 100 years, but **overfishing** is not occurring.

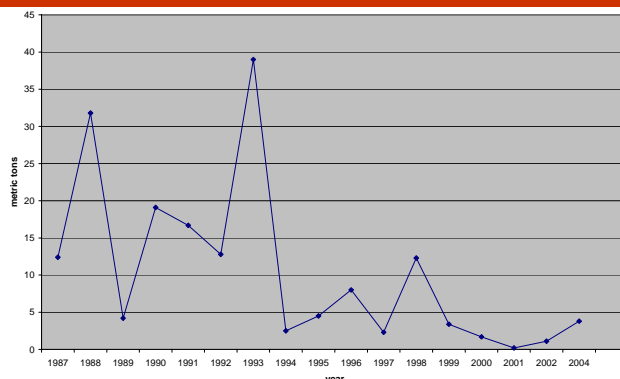


Figure 1. Commercial landings for porbeagle sharks in the U.S. from 1987-2004. NMFS.

Brief Species Description:

This is a large, **pelagic**, cold-temperate coastal and oceanic species distributed across the North Atlantic and in a circumglobal band in the southern Atlantic, southern Indian, southern Pacific, and Antarctic Oceans. They are found from the surface to depths of up to 300 meters and move to deeper water in the winter to avoid low water temperatures. They have a heavy spindle-shaped body. Porbeagles are distinguished from white sharks by their spikelike smooth-edged teeth and by the position of the second dorsal fin, which is directly over the anal fin. The presence of tooth cusplets and secondary caudal fin keels distinguish them from shortfin mako sharks. There are distinct populations in the Northeast and Northwest Atlantic (COSEWIC 2004), and the Northwest Atlantic stock undertakes extensive annual migrations between Canada and the northeastern United States. The northern and southern hemisphere populations are genetically distinct and isolated. Porbeagle sharks in the Gulf of Maine feed mostly on mackerel and herring and other small fishes, other shark species, and squids (Collette and Klein-MacPhee 2002). They reach a maximum size of 11.6 feet (355 cm) TL. Males mature at about 8 years and 5.5 feet (170 cm) TL while females mature at 13 years and 6.4 feet (195 cm) TL (Fowler et al. 2005). They are ovoviviparous (give birth to live young that are nourished *in utero* with egg yolk) and oophagous (egg eating) with females producing on average four young per year. Gestation is 8 to 9 months.

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