

Photo credit: NOAA.

#### KEY INFORMATION

##### Areas of Concern

Western Atlantic.

##### Year Identified as “Species of Concern”

1997

##### Factors for Decline

- Recreational fishing
- Bycatch (especially from long-line gear)

##### Conservation Designations\*

IUCN: Near Threatened – Globally except the U.S. population in the Northwestern Atlantic and Gulf of Mexico was ranked as Vulnerable.

American Fisheries Society: Vulnerable

*\* While category names may be similar, it is important to note that scientific and conservation organizations use different criteria to classify species conservation status. We have not generally adopted any of the rankings used by these organizations, however we do review the information they present as part of our proactive approach to species conservation.*

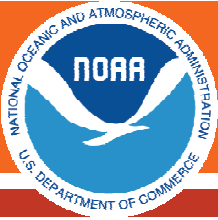
#### Current Status:

##### **Demographic and Genetic Diversity Concerns:**

Reviews of catch and landings data for the large coastal shark assemblage in the western Atlantic (including dusky and other requiem sharks) found that by 1986 the abundance of many of the large coastal species had probably declined by 50 to 75% from 1970s levels even prior to the expansion of the commercial shark fishery in 1986. Today the dusky shark population in the northwestern Atlantic and Gulf of Mexico is probably at 15 to 20% of its mid-1970s abundance (Cortés et al. 2006). Estimates of the intrinsic rate of population increase ( $r$ ) for dusky sharks to range from 1.7% per year to 5.6% per year, depending on assumed fishing mortality rates, the length of reproduction cycle, and assumptions about the rate of natural mortality (Sminkey 1996; Cortés 1998; Smith et al. 1998; Simpfendorfer 1999; McAuley et al. 2007; Romine et al. 2009). Current studies indicate that the reproductive cycle is three years (Castro 2009).

##### **Existing Protections and Conservation Actions:**

Dusky sharks have been prohibited in both commercial and recreational fisheries since 2000. The mid Atlantic closure to bottom longline gear was implemented in 2005 to protect juvenile sandbar during the months of January to July and it also



## Species of Concern

NOAA National Marine Fisheries Service

prohibited the harvest of dusky sharks. However, dusky sharks are still at risk from longline fisheries outside this area and at other times of the year. Additionally dusky sharks are prohibited from harvest in state waters from all Atlantic states under the Atlantic States Marine Fisheries Commission's Interstate Coastal Shark Plan, which was implanted in January 2010.

### Factors for Decline:

Currently the principal threat to dusky sharks is from bycatch and illegal landings in commercial and recreational shark fisheries. Commercial and recreational possession was prohibited in 2000. However, despite being prohibited and the reduction in U.S. longline fisheries targeting sharks, dusky sharks are regularly caught in commercial longlines targeting sharks and incidentally caught on a variety of other gears such as surface pelagic longline gear targeting tunas and tuna-like species and bottom longline gear targeting groupers and snappers (Cortés 1996, Hale et al. 2007). With life history traits such as slow growth, late maturity, and reproduction every three years, the dusky shark is susceptible to overfishing.

### Brief Species Description:

The dusky shark is also known as the bronze whaler or black whaler. It is a large, fairly slender shark with a low ridge between the dorsal fins. The rounded snout is shorter or equal to the width of the mouth. The first dorsal fin originates over or near the free rear tips of the pectoral fins. The color is bronzy gray to blue gray above with white ventrally. The dusky shark occurs in both inshore (surf zone) and offshore waters at depths as low as 1300 feet (Compagno 1984). The dusky shark is not commonly found in **estuaries** due to its avoidance of low salinity (Musick *et al.* 1993). The average size is about 11.8 feet (360 cm) TL and about 400 pounds (180 kg). Males attain sexual maturity at 9.15 feet (279 cm) TL (about 19 years); females mature at 9.3 feet (284 cm) TL (about 21 years). This long lived shark (maximum age about 40 years) is viviparous (placental live bearer) with litter sizes ranging from 6 to 14. Young are born at 33 to 39 inches (85-100cm). They reproduce every 3 years, either between June and July or December and January. Their diet includes bony fishes, cartilaginous fishes, and squid. In the western Atlantic, where it is a Species of Concern, it occurs from southern Massachusetts and Georges Bank to Florida, Bahamas, and Cuba. It also occurs in the Northern Gulf of Mexico, and Nicaragua; Southern Brazil, Eastern Atlantic; Southern California to Gulf of California (Compagno 1984).

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