



Photo credit: Virginia Institute of Marine Science.

#### KEY INFORMATION

##### Areas of Concern

Western Atlantic - Gulf of Mexico, south Atlantic and Caribbean.

**Year Identified as "Species of Concern"**  
1997

##### Factors for Decline

- Fishing
- Bycatch (tuna longline)

##### Conservation Designations

IUCN: Vulnerable

American Fisheries Society: Vulnerable

#### Current Status:

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

Historically, night sharks comprised a significant proportion of the artisanal Cuban shark fishery, making up to 60 to 75% of the catch from 1937 to 1941 (Martinez, 1947). However, beginning in the 1970's, with the development of the swordfish fishery, evidence suggests a substantial decline in the abundance of this species. Photographic evidence from marlin tournaments in south Florida in the 1970's show that large night sharks were caught daily but today are rarely captured (J.I. Castro, personal observation). NOAA surveys found only 2 out of a total 439 sharks caught in the commercial swordfish and tuna longline catches were night sharks in 1991. Likewise, only 1 individual out of 362 in 1993 and 10 of 295 in 1994 were night sharks (Dennis Lee, Southeast Fishery Science Center, pers. comm.).

Guitart-Manday (1975) documented a decline in the mean weight per unit of effort for night sharks from 118 pounds (53.4 kg) in 1971 to 47 pounds (21.1 kg) in 1973. Night sharks comprised 26.1% of the shark catch in the **pelagic** longline fishery from 1981-1983 (Berkeley and Campos, 1988) but this declined to 0.3% and 3.3% of the shark catch in 1993 and 1994, based on observer data (L. Beerkircher, unpublished data). Further, quantitative biological information (e.g., age, growth, longevity, age-at-maturity) for **stocks** off the U.S. east coast and Gulf of Mexico are lacking, hindering effective management.

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

In 1993, a Fishery Management Plan for Sharks (NMFS 1993) was developed for the management of shark populations in waters of the U.S. Atlantic and Gulf of Mexico. Because species-specific catch



## Species of Concern

NOAA National Marine Fisheries Service

and life history information was limited, sharks were grouped and managed under three categories: large coastal, small coastal, and pelagic. This was done based on known life history, habitat, market, and fishery characteristics (NMFS 1993). Under the revised Fishery Management Plan of the Atlantic tunas, swordfish and sharks (NMFS 1999), NMFS further prohibited the retention of 19 species of sharks (Prohibited Species category) based on a precautionary approach for species with little or no biological information and thought to be highly susceptible to overexploitation. Because of the current lack of biological data and its rarity in surveys, the night shark, *Carcharhinus signatus*, is listed as a Prohibited Species. It was originally added to the Candidate Species List under the Endangered Species Act in 1997. The December 24, 2003, Amendment 1 to the FMP for Atlantic tunas, swordfish and sharks also prohibits retention of night sharks.

### Brief Species Description:

The night shark is a deep water species found at 900 to 1200 feet (275 - 365 m) during the day that migrates up in the water column at night to depths around 610 feet (185 m). They are characterized by a rather stout streamlined body with large eyes and an elongated snout. Their dorsal fins are both low, with the origin of the anterior fin over, or slightly behind, the free rear tips of the pectoral fins. The second dorsal is very low and much smaller than the first, with an origin opposite the anal fin. Eyes of living sharks are green in color. Body color is gray-blue and grayish brown above, with a white to grayish white underbelly; sometimes with black spots. Maximum size is 9.2 feet (280 cm) and maximum weight is 169 pounds (76.7 kg). They live up to 17 years. Sexual maturity of a female is at 6.7 feet (200 cm); males are mature at about 6.2 feet (190 cm). Little is known about the reproductive biology of this species: breeding is believed to occur in the summer, and they are viviparous (placental live birth). Litter size ranges from 12-18 pups of 4 to 24 inches (10-60 cm) length. Night sharks forage primarily on squids, small fishes, and shrimp.

### Factors for Decline:

The night shark is caught mainly on longlines in about 100 fathoms, usually at night as [bycatch](#) from pelagic longline fisheries targeting tunas and swordfish. Direct targeting of the shark for its fins and meat value has occurred recently off the northeast coast of Brazil. The night shark has a low rate of population increase which makes it highly susceptible to overfishing. Although information from various fisheries has reported a significant decline in night sharks, it is unclear whether this decline is due to changes in fishing tactics, market, etc.

**Data deficiencies:** Life history information is needed for the NW Atlantic Ocean population.

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