



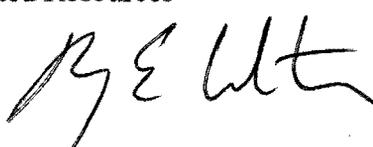
UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

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JUL 22 2010

F/SER31:CH

MEMORANDUM FOR: Jim Lecky
Director, Office of Protected Resources

FROM: Roy E. Crabtree, Ph.D.
Regional Administrator 

SUBJECT: Removal of Night Shark (*Carcharhinus signatus*) from the Species of Concern List – DECISION MEMORANDUM

This memorandum transmits my recommendation that NOAA's National Marine Fisheries Service (NMFS) remove the night shark (*Carcharhinus signatus*) from the Species of Concern (SOC) list. Attached is a status assessment that provides substantial evidence, in accordance with the guidance for removing a species from the SOC list, that the night shark does not currently meet the SOC criteria. I request that you concur with this recommendation to remove the night shark from the SOC list.

BACKGROUND

The night shark is listed as a prohibited species under the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks (NMFS 1999). NMFS identified the night shark as a candidate species in 1997 (62 FR 37560) and subsequently transferred it and 24 other candidate species to the SOC list in 2004 (69 FR 19975). At that time, the information used by reviewers to assess the relevance for SOC status was largely based on reported declines in catch rates by various fisheries. However, it was uncertain whether the declines in catch rates were due to changes in fishing tactics, market, species identification, or actual declines in the species. Furthermore, no studies estimating the night shark's productivity and demography had been completed. Your office allocated funds to the Southeast Fisheries Science Center (SEFSC) for a multiyear (2003 through 2008) project to investigate the alleged declines in night shark abundance and to develop a stock assessment. The SEFSC compiled and analyzed historical and current data (up to fiscal year 2005) on catches and catch rates. Annual catch rates were derived from databases using generalized linear modeling approaches and trends in night shark abundance. Average size was analyzed using statistical techniques. In 2008, SEFSC published their findings (attached) in the Marine Fisheries Review. The stock assessment findings in relation to the SOC criteria are discussed in detail below.



ANALYSIS OF FINDINGS

NMFS considers the following factors relating to demography and genetic diversity concerns when retaining, adding, or removing species from the SOC list: 1) abundance and productivity, or magnitude of decline; 2) natural rarity and endemism; 3) distribution; and 4) life history characteristics. SEFSC evaluated the SOC listing factors relevant to the night shark's listing as a SOC when completing the stock assessment.

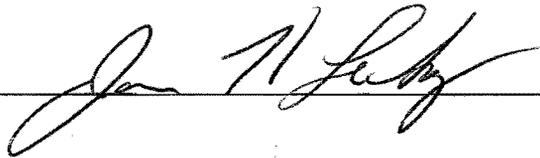
- 1) Species abundance and productivity were determined for the night shark using four data sources that contained adequate information for the calculation of standardized catch rates: Northeast Fisheries Science Center Longline Surveys, SEFSC Pelagic Data Program Longline Logbook, SEFSC Pelagic Data Program Longline Observer Program, and SEFSC Bottom Longline Shark Observer Program. SEFSC determined, through information from the pelagic longline observer program that "night sharks are not rare and are currently the third most abundant shark species captured in the pelagic longline fishery off the southeast United States." Analysis of the data indicated that trends in night shark abundance are relatively stable with increases in the pelagic observer program data. Since the 1980s, the average size of the species has remained relatively stable which also suggests that growth overfishing has not been occurring. The abundance analysis indicates that night sharks have not suffered large magnitudes of decline as originally thought.
- 2) Night sharks do not appear to be endemic or naturally rare in any distinct area within U.S. waters. The best available data indicates that this species occurs along the outer continental shelf and the upper slope areas throughout the Gulf of Mexico, in the northwest Atlantic Ocean, and in the Caribbean Sea.
- 3) The existing distribution pattern of the night shark corresponds with historical studies. It does not appear that the night shark's range or distribution has been restricted.
- 4) Night sharks are among those shark species that are on the upper-half along the "fast-slow" continuum of life history traits and population parameters for sharks as identified by Cortés (2002). An analysis of this species' life history traits relative to other pelagic sharks determined that the night shark has a moderate rebound potential and an intermediate generation time. The probabilistic elasticity analysis also indicated that night sharks are less sensitive to fecundity and more sensitive to juvenile and adult survival rates. This is in contrast to other SOC-listed shark species that exhibit lower levels of productivity. The analysis of the night shark's life history data indicates that this species is fairly productive and should be capable of withstanding reasonable levels of fishing effort.

RECOMMENDATION

Based on the information presented in the SEFSC status assessment, NMFS Southeast Region believes that the night shark does not meet the established criteria of the SOC Program and recommends that the species be removed from the SOC list. The night shark can be affected by

fishing pressure similar to other pelagic shark species; therefore, I concur with the reviewers' recommendation that the night shark be retained as a prohibited species by the Consolidated Atlantic Highly Migratory Species Fishery Management Plan.

I request that you approve the recommendation to remove the night shark from the SOC list.

1. I concur.  _____ **AUG 02 2010**
2. I do not concur. _____

Attachment: Carlson, J. K., E. Cortes, J.A. Neer, A.T. Mccandless, and L.R. Beerkircher. 2008. The Status of the United States Population of Night Shark, *Carcharhinus signatus*. Marine Fisheries Review. 70(1):1-13.

cc: F/SEC – Ponwith
F/SF1 – Schulze-Haugen
F/PR3 – Somma