

# Species of Concern

NOAA National Marine Fisheries Service



Photo credit: US Geological Survey.

# **KEY INFORMATION**

## Area of Concern

Western Atlantic: South Atlantic and the Gulf of Mexico.

Year Identified as "Species of Concern" 1997

# Factors for Decline

- Recreational fishing
- Bycatch

# **Conservation Designations**

IUCN: Critically Endangered American Fisheries Society: Endangered

# **Brief Species Description:**

Speckled hind derive their name from the multitude of tiny white spots that cover their reddish-brown head, body and fins. Juvenile specimens tend to have vellow body color with white spots (Ross 1988). Speckled hinds are deep-water groupers: adults inhabit offshore rocky bottoms in depths of 80 to 1300 feet (25 to 400 m) but are most common between 200 and 400 feet (60 and 120 m) in many areas of the Western Atlantic (Figure 1). Preferred habitats include high- and low-profile hard bottoms. Juveniles occur in shallower water (SAFMC 2005). Speckled hind are protogynous hermaphrodites (change sex from female to male); females mature at 4 or 5 years of age and 18 to 24 inches (45-60 cm) TL. Spawning occurs from July to September in spawning aggregations (SAFMC 2005). Maximum size is about 43 inches (110 cm) TL and maximum weight is 66 pounds (30 kg). Maximum age is at least 25 years (Matheson and Huntsman 1984). Prey items, which can be engulfed whole, include fishes, crabs, shrimps, lobsters, and mollusks, including squids.

# Rationale for "Species of Concern" Listing:

# Demographic and Genetic Diversity Concerns:

There is a paucity of data for this species: the **stock** structure is not characterized, population size is unknown and much of their life history has not been thoroughly investigated. However, it is believed that there has been a population decline and catch has declined (Figure 2).

### Factors for Decline:

Speckled hind are caught as bycatch from the deepwater snapper/grouper fisheries off the coast of North Carolina through Texas and directly in recreational fisheries by hook and line mostly (SAFMC 2005). The major threat to the speckled hind is direct mortality as a result of fishing or <u>bycatch</u> release mortality (due to barotraumas - pressure change injury).

Status Reviews/Research Underway: None.

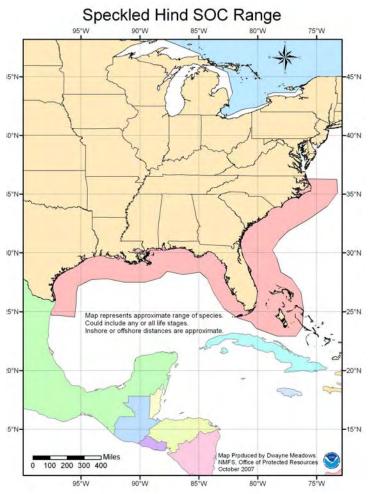
Data Deficiencies: None identified.

# **Existing Protections and Conservation Actions:**

Both recreational and commercial fisheries for speckled hind are currently regulated in the south Atlantic; the South Atlantic Fisheries Management Council considers the species as <u>overfished</u> and



undergoing <u>overfishing</u>. In the Gulf of Mexico commercial fishery, there are no possession limits for the species for federally permitted reef fish vessels, and it is managed under the Deep-water grouper commercial quota. The Gulf of Mexico Fishery Management Council classifies the status of speckled hind as "unknown."



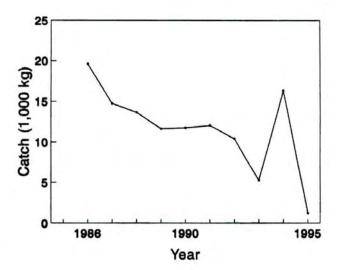


Figure 2. Speckled hind catch (kg), all fisheries combined (Parker and Mays 1998).

Figure 1. Range of the speckled hind species of concern.

### **References:**

- Brulé, T.T. Colar-Marruto, A. Tuz-Sulub and C. Deniel. 2000. Evidence for protogynous hermaphroditism in the Serranid fish *Epinephelus drummondhayi* (Perciformes: Serranidae) from the Campeche Bank in the Southern Gulf of Mexico. Bulletin of Marine Science 66:513-521.
- FAO Species Identification Guide for Fishery Purposes. 2002. p. 1340 In: K.E. Carpenter (ed). Vol. 2: Bony fishes part 1. FAO, Rome.
- Heemstra, P.C. and J.E. Randall. 1993. FAO Species Catalogue. Groupers of the world (Family Serranidae, Subfamily Epinephelinae). An annotated and illustrated catalogue of the grouper, rockcod, hind, coral grouper and lyretail species known to date. FAO Fisheries Synopsis 16 (125), 382 p.



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- Huntsman, G.R., J. Potts, R.W. Mays and D. Vaughan. 1997. Groupers (Serranidae, Epinephelinae): Endangered Apex Predators of Reef Communities. American Fisheries Society Symposium 23:217-231.
- Manooch, C.S., III. 1984. Fisherman's Guide: Fishes of the Southeastern United States.
- Matheson, R.H. III and G.R. Huntsman. 1984. Growth mortality and yield-per-recruit models for speckled hind (*Epinephelus drummondhayi*) and snowy grouper (*Epienphelus niveatus*) from the USA South Atlantic Bight. Transactions of the American Fisheries Society 113:607-616.
- Parker, R.O., Jr. and R.W. Mays. 1998. Southeastern United States deepwater reef fish assemblages, habitat characteristics, catches, and life history summaries. NOAA Technical Report NMFS 138.
- Potts, J.C. 2002. Summary of fishery data and population status of warsaw grouper and speckled hind landed in the U.S. South Atlantic. NOAA.
- Ross, S.W. 1988. Xanthic coloration as the normal color pattern of juvenile speckled hind, *Epinephelus drummondhayi* (Pisces:Serranidae). Copeia 1988:780-784.
- SAFMC (South Atlantic Fishery Amanagement Council). 2005. Stock Assessment and Fishery Evaluation report for the snapper grouper fishery of the south Atlantic.

#### Point(s) of contact for questions or further information:

For further information on this Species of Concern, or on the Species of Concern Program in general, please contact NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910, (301) 713-1401, <u>soc.list@noaa.gov</u>; or <u>http://www.nmfs.noaa.gov/pr/species/concern/</u>, Dr. Stephania Bolden, NMFS, Southeast Region, Protected Resources Division, 9721 Executive Center Drive N., St. Petersburg, FL 33702, (727)570-5312, <u>Stephania.Bolden@noaa.gov</u>.