



Drawing courtesy: C.S. Mannoich.

KEY INFORMATION

Areas of Concern

Western Atlantic: south Atlantic and Gulf of Mexico.

Year Identified as “Species of Concern”
1997

Factors for Decline

- Fishing
- Bycatch

Conservation Designations

IUCN: Critically Endangered
American Fisheries Society: Endangered

Brief Species Description:

Warsaw grouper are classified as deep-water groupers since they inhabit reefs on the continental shelf break in waters 180 to 1700 feet (55 to 525 m) deep (Figure 1). They are characterized by an elongated second spine in the dorsal fin, the rear margin of the caudal fin is convex or truncate with rounded corners, and their pelvic fins are longer than the pectoral fins. They are the only grouper with 10 dorsal spines. They are dark reddish brown or brownish grey to almost black in color dorsally, dull reddish grey below. Juveniles have a yellow caudal fin and a few randomly scattered whitish spots on body. Adults are usually found on rough, rocky bottoms and juveniles are occasionally seen on jetties and shallow-water reefs. Very little information is available about the reproduction of the warsaw grouper; eggs and larvae are presumed to be **pelagic**. *E. nigritus* is a protogynous hermaphrodite (changes sex from female to male); age of maturity occurs at 9 years (Parker and Mays 1998). They spawn during August through September in the Gulf of Mexico (SAFMC 2005). The warsaw grouper is long-lived (up to 41 years) and has a slow growth rate (Mannoich and Mason 1987). Maximum size is about 7.7 feet (235 cm) TL and about 440 pounds (200 kg). Their large mouth enables them to engulf prey whole after capturing it in ambush or after a short chase. Diet items include crabs, shrimps, and fishes.

Rationale for “Species of Concern” Listing:

Demographic and Genetic Diversity Concerns:

Population size is believed to have declined sharply in the late 1980s since there was a decline in landings in the absence of any regulations or decreasing fishing effort (Figure 1) as well as decreases in the mean weight and length. They aggregate for spawning at specific habitat sites that could be negatively impacted.

Factors for Decline:

The major threat to the warsaw grouper is mortality from fishing or **bycatch** release mortality (due to barotraumas – pressure change). Fishing is primarily by hook and line and the species is caught incidentally in the deepwater snapper/grouper commercial fishery. Almost all of the catch is in the Gulf of Mexico. Most landings are from the Gulf of Mexico. Landings of warsaw grouper declined 70 percent by weight and numbers from 1988 to 1990 in the South Atlantic (Parker and Mays 1998). In



Species of Concern

NOAA National Marine Fisheries Service

addition, the mean weight of warsaw grouper being landed during 1988 to 1990 (15 pounds) was below the minimum weight of an adult warsaw grouper (Timi Jordan, NMFS, personal communication). Despite the regulations put in place in the 1990s, there is concern that mortality of warsaw grouper has remained high and overfishing is still occurring due incidental catch of warsaw grouper when fishermen target co-occurring snapper grouper species.

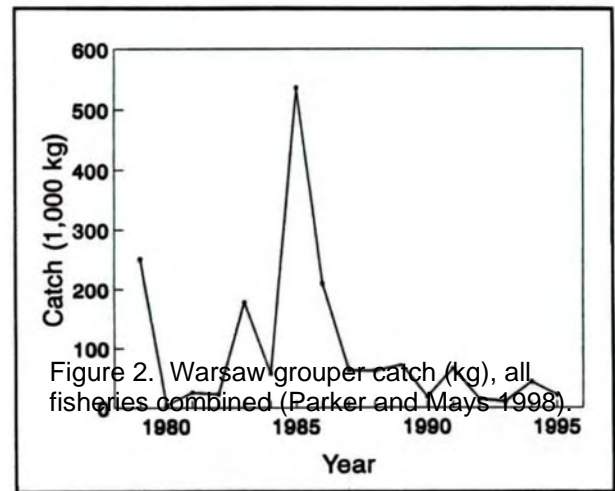
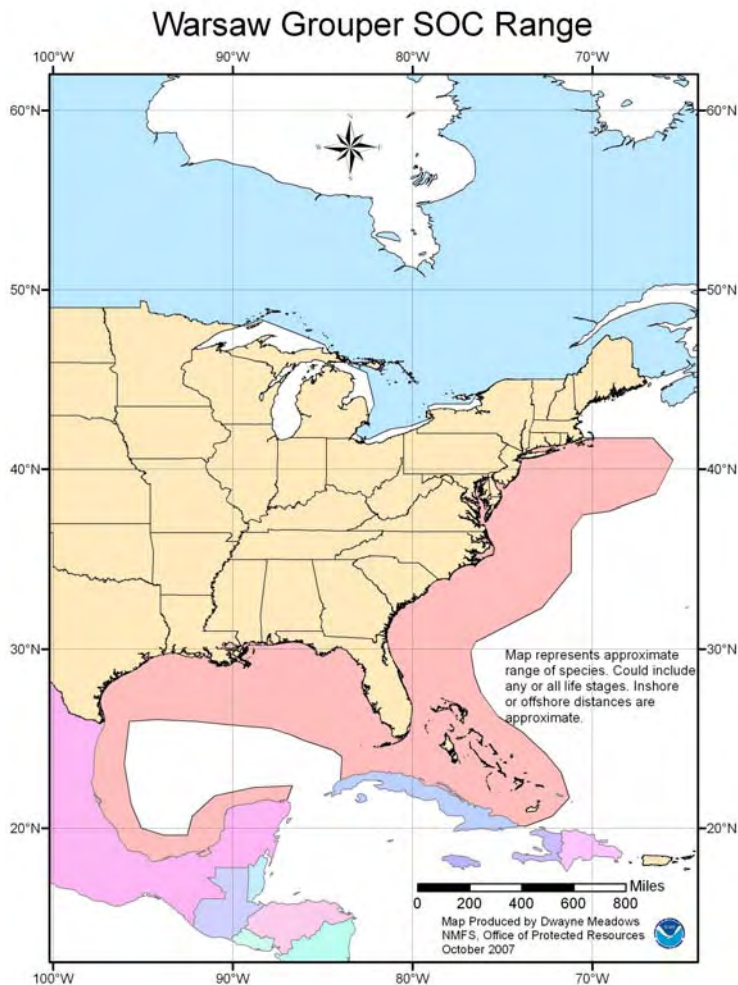


Figure 1. Range of the Warsaw grouper species of concern.

Status Reviews/Research Underway: None.

Data Deficiencies: None identified.

Existing Protections and Conservation Actions:

Both recreational and commercial fisheries for warsaw grouper are currently regulated in the south Atlantic with a one fish per vessel trip limit. For the South Atlantic, the National Marine Fisheries Service indicates warsaw grouper is undergoing **overfishing** but the **overfished** status is unknown. In the Gulf of Mexico, there is a one fish per vessel trip limit for the recreational sector and possession limits for the species for federally permitted commercial reef fish vessels are managed under the Deep-water grouper commercial trip limit and quota. For the Gulf of Mexico Fishery the overfishing status of warsaw grouper as “unknown” and overfished status as “undefined”.



Species of Concern

NOAA National Marine Fisheries Service

References:

- FAO Species Identification Guide for Fishery Purposes. 2002. p. 1346 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.
- 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.
- Manooch, C.S., III and D.L. Mason. 1987. Age and growth of the warsaw grouper and black grouper from the Southeastern region of the United States. Northeast Gulf Science 9:65-75.
- 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.
- SAFMC (South Atlantic Fishery Management Council). 2005. Stock Assessment and Fishery Evaluation report for the snapper grouper fishery of the south Atlantic.



Photo credit: US Geological Survey

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, soc.list@noaa.gov; or <http://www.nmfs.noaa.gov/pr/species/concern/>, Dr. Stephania Bolden, NMFS, Southeast Region, Protected Resources Division, 9721 Executive Center Drive N., St. Petersburg, FL 33702, (727)570-5312, Stephania.Bolden@noaa.gov.