

Drawing courtesy: C.S. Mannocho.

### 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 the 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 is 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 (Mannocho and Mason 1987). Maximum size is about 7.7 feet (235 cm) 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). There were also decreases in the mean weight and length. They aggregate for spawning at specific habitat sites that could be negatively impacted and this makes them easy to catch in large numbers.

##### **Factors for Decline:**

The major threat to the warsaw grouper is mortality from directed 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



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and Mays 1998). In 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.

## Warsaw Grouper SOC Range

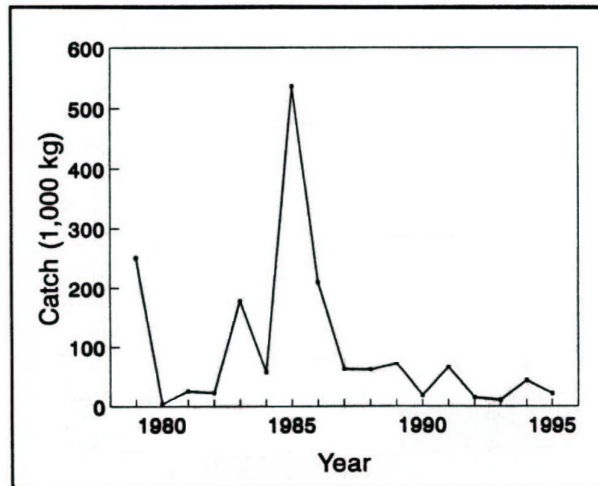
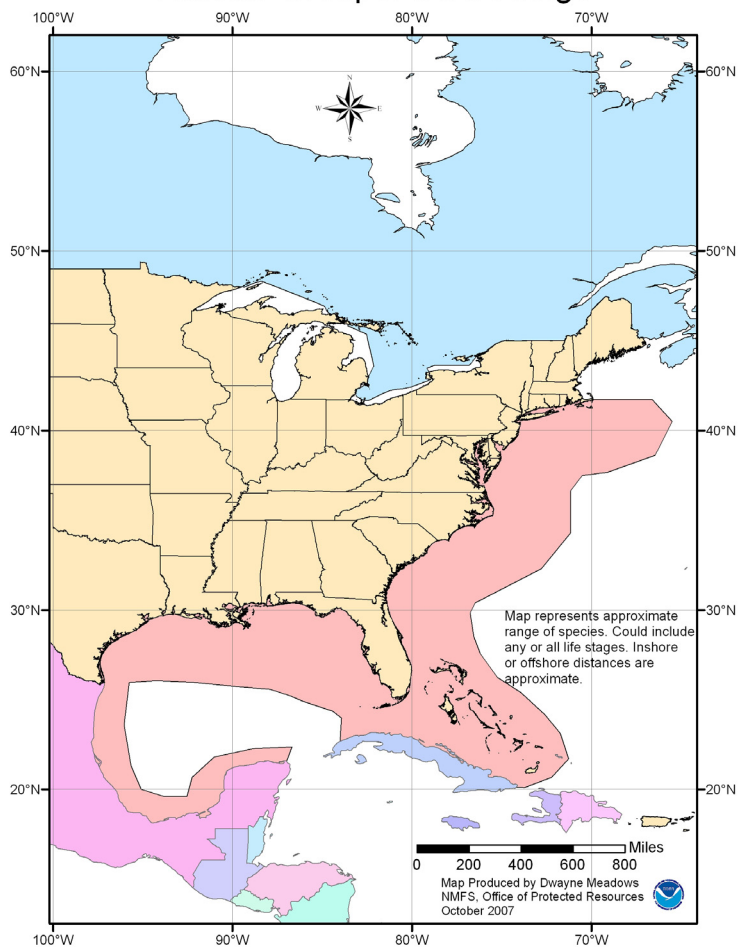


Figure 2. Warsaw grouper catch (kg), all fisheries combined (Parker and Mays 1998).

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

**Status Reviews/Research Underway:** The program recently funded a project to gather basic life history data regarding growth and reproduction that is necessary for conservation of this species.

**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. In the South Atlantic, warsaw grouper is undergoing overfishing but the overfished status is unknown. In the Gulf of Mexico status is unknown, but there is a one fish per vessel trip limit for the recreational sector. Possession limits for the commercial



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fishery exist. In early 2009, the National Marine Fishery Service established 8 marine protected areas to conserve 529 nautical square miles of area for deepwater species including warsaw grouper.

### References:

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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 Amangement 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](mailto:soc.list@noaa.gov); or <http://www.nmfs.noaa.gov/pr/species/concern/>, Dr. Stephania Bolden, NMFS, Southeast Region, Protected Resources Division, 263 13th Avenue South, St. Petersburg, FL 33701, (727) 824-5312, [Stephania.Bolden@noaa.gov](mailto:Stephania.Bolden@noaa.gov).