



Photo credit: US Geological Survey

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

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.

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 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.

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



Species of Concern

NOAA National Marine Fisheries Service

caught incidentally in the deepwater snapper/grouper commercial fishery. Most landings are from the Gulf of Mexico. Landings of warsaw grouper declined 72 percent by weight from 1988 to 1990 in the South Atlantic (Parker and Mays 1998). In addition, the mean weight of warsaw grouper 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 targeting co-occurring snapper grouper species.

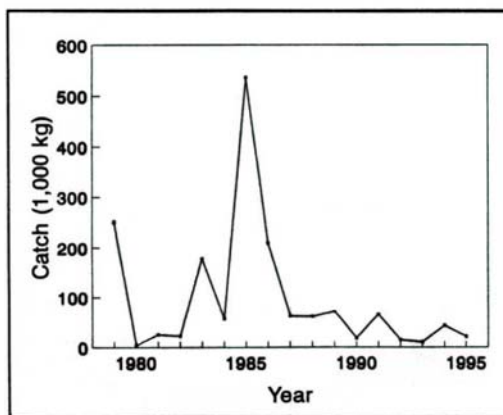


Figure 1. Warsaw grouper catch (kg), all fisheries combined (Parker and Mays 1998).

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. 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; 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. nigrilus* 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 (Mannoch 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.

Contact Information

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References:

- Manooch, C.S., III and D.L. Mason. 1987. Northeast Gulf Science 9:65-75.
- Parker, R.O., Jr. and R.W. Mays. 1998. 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.