

## Goliath Grouper – Common Perceptions, Questions and Answers

*From DEMA*

### Are Goliath Grouper Decimating the Lobster, Snapper and Grouper Populations in Florida?

No. If this were true, during the time when populations of Goliath Grouper were too low to allow a continued harvest (a commercial “extinction” between 1970 and 1990), the aggregate take of lobster, snapper and grouper would have been on the rise. In fact, the commercial take of these other fisheries was also lower during this time.

There is no scientific evidence that Goliath Grouper are top predators of lobsters, snappers or groupers. Removing the current moratorium on Goliath Grouper in order to “cull” the Goliath population will not substantially affect these other populations at this time. In addition the rationale for culling the recovering Goliath Grouper population as the solution to depleted or decreasing fisheries is questionable because of documented over fishing in Florida of these other species and the unpredictable consequences of culling a species that is slow to recover.

### What Do Goliath Grouper Eat?

Goliath Grouper eat invertebrates such as crabs, shrimp, worms, lobsters, and snails, as well as slow poisonous fish such as catfish, cowfish, puffer fish, stingrays and burr fish (sometimes called porcupine fish).

It also appears that Goliath Grouper are potential predators for the invasive Indo-Pacific Red Lionfish. Lionfish are known to consume juvenile snapper, grouper and other species in large numbers, impacting commercial fisheries.

### Which is Most Sustainable – Harvest of the Goliath or Diving Tourism to See Goliath?

Diving Tourism is more sustainable. Goliath Grouper are seen as a substantial draw for diving tourists.

The Goliath Groupers’ size, slow movement and visibility have helped generate sustainable business for diver operators wherever the Goliath can be found. Divers are particularly attracted to diving near Goliaths during the spawning season when the fish gather together in groups. Without the need of harvesting the Goliath, thousands of divers visit dive sites along Florida’s coasts to see these large animals in their native habitat.

In one Florida dive operator’s case (Jupiter area), the Goliath is said to have generated more than \$600,000 in revenue and \$39,000 in tax revenue – that’s a single operator in a single spawning period of four months; July to October. Critically, this visitor-related attraction happens at a “low” point in the Florida tourist season, generating much needed tax revenue for the state and direct revenue for dive operators supporting their families during a time when fewer visitors come to Florida.

#### **Example of Direct Revenue Generated Per Diver Due to Presence of Goliath Grouper\***

##### Assumptions:

Charter Boat Cost and Tank Rental: \$100/diver

Boat Capacity: 20 divers/trip

Number of Boats: 2

Number of Trips/Day: 2

Total diver capacity: 20 divers x 2 boats x 2 trips/day = 80 divers/day

Spawning Period: 4 months (July – October – as the Florida tourist and dive season winds down).

Dive Days used for calculation: 75 (allowing for bad weather, boats not running at full capacity, etc)

Revenue: 80 divers/day x \$100/diver x 75 days = **\$600,000**

Tax revenue to State of Florida: **\$39,000**

More Dive Related Businesses Favor Goliath Moratorium – Fewer Believe Harvest Helps Their Business  
FWC's 2011 survey of Florida Businesses indicates that 49% of dive centers favor continuing protection of Goliath Grouper. Only 25% of dive centers indicate that allowing the harvest of Goliath Grouper would help their business.

As shown in the example, viewing – especially during spawning season – is beneficial to dive operators bringing their customers to see the Goliath.

#### Stock Assessment is Difficult

Even as recently as February 2011 the FWC acknowledged that it is difficult to assess the actual number of Goliath Grouper. Assessment remains difficult, and given the animal's vulnerability to over-harvesting due to its biology and behavior, it seems logical to continue the moratorium until an adequate assessment can be made.

#### Gulf of Mexico Fishery Management Council Recommendation

At their January 18-21, 2011 meeting, the Scientific and Statistical Committee (SSC) for the Gulf of Mexico Fishery Management Council recommended maintaining the status quo (keeping the moratorium on harvest) through 2011-2015. January of 2014 is too early to consider lifting this moratorium.

#### Should Harvesting Quotas Be Allowed?

Traditional quota setting for commercial fishing/extraction of the Goliath Grouper is not possible because data does not exist to determine maximum sustainable harvest levels. Even the maximum life span of these fish is not known. Given these factors the economic viability of a commercial market for Goliath Grouper is not known at this time.

#### Is Goliath Grouper Safe to Eat?

If Goliath Grouper are allowed on the market, concerns exist due to potentially high mercury levels. A 2009 study in Belize indicated that mercury concentrations in larger Goliath grouper regularly exceed human health criteria for safe consumption.

**Your public comments and input are needed at this meeting; public comments opposed to lifting the moratorium could help maintain the current status, thereby preventing harvesting of this animal. Without your public comments, the status of the current moratorium could change, allowing harvesting of the Goliath Grouper for the first time since the 1990's. If you dive in Florida or live there, such a change in the moratorium status could impact your ability (and your customers' ability) to see these animals.**

#### References

- Frias-Torres S. (2012). Should the Critically Endangered Goliath Grouper *Epinephelus itajara* be Culled in Florida? *Fauna & Flora International, Oryx*, 47(1), 88–95.
- Evers DC et al. (2009) Mercury Concentrations in the Goliath Grouper of Belize: An Anthropogenic Stressor of Concern. *Endangered Species Research* 7: 249-256.
- Florida Fish and Wildlife Commission (2011). Goliath Grouper Review and Discussion presentation, February 23, 2011.