

NEWS-BREEF

Nassau grouper Edition



Happy Holidays

December 2007

Points to note:

The closed season gives Nassau grouper a chance to reproduce.

The more fish that spawn successfully, the more there will be for us to catch later.

Support our Fishermen by purchasing other fish during the closed season

Do not catch, buy or sell Nassau grouper during the closed season

Support the establishment of National Parks and Marine Reserves. These are replenishment zones for our important marine species because they protect habitat critical to their survival at all life cycle stages.

Nassau grouper closed season Dec 15, 2007—Feb 28, 2008

This November, the Minister of Agriculture and Marine Resources, the Honourable Lawrence S. Cartwright, announced the dates for the closed season. During this time he advises *'the general public, and in particular fishermen, seafood buyers, processors and those in food service related activities, that there will be a restriction on the harvesting, possession and selling of Nassau Grouper.'*

BREEF applauds this move as it continues to



Photo: Stuart Cove's Fin Photo

build on the initiative that are now mature and can reproduce, contributing to grouper stocks.

Nassau grouper take between We have therefore come full four and seven years to circle. We look to the day when become sexually mature. the closed season is legislated, Thus, grouper larvae as is the case with crawfish. spawned in the 1998 closure

How can I tell if it's a Nassau grouper?

Several species of grouper are caught in Bahamian waters, including Yellowfin, Black, Tiger and Nassau grouper. However, during the closed season, ONLY the harvest of Nassau grouper is prohibited. Although

grouper are similar in appearance, Nassau grouper can be easily distinguished by:

1. Five irregular olive to brown vertical markings (bars) on the body.
2. A black saddle shaped spot on the base of the tail.

If you purchase fish during the closed season make sure that its skin is intact so that you can tell whether it's Nassau grouper.

Groupers are tricky, they change color, going from pale to dark for camouflage and during breeding, but it's easy to identify them if you know the key features.

Nassau grouper discussed at GCFI conference

BREEF's Executive Director, Casuarina McKinney, was honored to accept an invitation to speak at the 60th annual Gulf and Caribbean Fisheries Institute conference held from November 5-9, 2007 in the Dominican Republic.

She was one of the speakers for the Special Session on Nassau grouper, which looked at its biology, management and conservation providing a background for a panel discussion to develop a pan-

Caribbean strategy for the management of the species.

This arose from the need to address the decline of Nassau grouper stocks despite the implementation of a variety of management strategies throughout the region.

Casuarina's participation was sponsored by the Caribbean Fisheries Management Council and the Society for the Conservation of Reef Fish Aggregations.

Nassau grouper: Sitting ducks?

The reproductive behaviour of Nassau grouper makes them particularly vulnerable to overfishing. During the winter months around the full moon, normally solitary adult fish migrate long distances from their home range to well known spawning aggregation (SPAG) sites to breed. This predictability makes them very vulnerable because these sites are well known to fishers.

Catching Nassau grouper at spawning sites threatens the survival of the species and the

Allowing fish to reproduce will ensure a plentiful supply for the future

long-term livelihood of fishermen. It limits their ability to reproduce and replenish fish populations near and far.

BREEF is working with Dr. Craig Layman of Florida International University to study juvenile Nassau grouper in mangrove creeks. This grouper is tagged and ready for release. The fish and crabs to the right were regurgitated from its stomach. Ouch!

BREEF and the NGM Major High School received the 'Roller' Award at GCFI for films about mangrove conservation and grouper education.

These can be viewed on YouTube - follow the links on the 'Latest NEWS' page of our website, www.breef.org



Goodwill in Action!

Long Island students lead the charge:

NGM Major students under the direction of Beverly Mattis, a former participant of our summer teacher workshop, made a most impressive showing at the National Coastal Awareness Science Competition.

In response to growing concern for Nassau grouper stocks, they conducted an investigation



to determine the attitude of Long Islanders to the closed season and the role that education would have on their attitudes.

After conducting surveys, and holding an educational seminar they found that in general Long Islanders were both aware and supportive of the closed season. They did find however, that the level of support improved with education. In support of this they produced a short play entitled 'And a Child Shall Lead Them' which will be aired on local TV stations in the coming months.

Nassau Grouper Tagging Project

Preliminary Results are in!

BREEF has been working with Dr. Craig Dahlgren on a Nassau grouper tagging project to understand fish movement as related to the design of marine protected areas.

In November 2004, 11 Nassau grouper were tagged in the Exuma Cays Land and Sea Park (ECLSP). In Oct 2005, 15 more fish were tagged. Tracking technology allowed us to follow fish movement.

Preliminary Conclusions

1. Fish within the protection of the ECLSP migrate long distances to spawning sites located outside of the park boundary, highlighting the

need for the closed season and for SPAG sites to be included within marine reserves.

2. Nassau grouper occupy a small home range for most of the year. Mature fish (7+yrs, 50+cm) leave their home range, swimming long distances, during the spawning period only.

3. The closed season was effective with only one probable incident of poaching.

4. Fish in the Exuma Sound migrate south along the shelf towards Long Island to spawn.

5. Nassau grouper in the study area migrate once per season, to spawn. This occurred primarily in December. This project is ongoing and will help develop management strategies.

Fishy Facts

Many grouper species are found in our waters: these include Nassau, Yellowfin, Black, Tiger and Goliath. Red and Rock hinds are also species of grouper.



Grouper are carnivorous fish that lie patiently waiting for their unfortunate prey (fish and crustaceans), which they ambush and swallow whole. A grouper can swallow a fish half its length.



This snapper was removed whole from this grouper's stomach

Some grouper species can change sex. This is called 'sequential hermaphroditism'. However, this has never been observed in Nassau grouper.

Dear Readers,

In an effort to reduce paper waste, this will be our last print issue of NEWS-BREEF. Instead you will receive regular updates via our e-Newsletter hosted by Constant Contact. Some of you may have received these e-mails in the past months, if you have not received these newsletters, and wish to be included on our mailing list please contact us at breef@breef.org under the subject—Subscribe to e-newsletter. If you do not receive e-mail and would like to receive printed newsletters, please call us at 242-327-9000.

Thank you for your continued support.

Puzzle Mania

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What's the current status of the fishery?

In 1996, Nassau grouper (*Epinephelus striatus*) was placed on the World Conservation Union (IUCN) Red List of Threatened Species and was assessed as endangered because it has been estimated that its population has declined by about 60% over a 30 year period.

Traditionally Nassau grouper is found in Bermuda, the Caribbean Sea and the Gulf of Mexico. Today, it is estimated that over a third of spawning aggregations have disappeared. In Florida and Bermuda (1981), Puerto Rico and US Virgin Islands (1986), the fishery was described as commercially extinct because many of the aggregations did not form at all. Past experiences suggest that when a fishery collapses, it does so dramatically. In Bermuda, grouper landings declined 15-fold in 6 years, and in Cuba, of the 21 aggregations identified in 1884, only 1 exists today.

In the Bahamas, Nassau grouper stocks are considered to be in 'relatively' good condition, however, declines have been reported. Aggregations now have far fewer fish than in the past while others do not form at all. **We must act NOW before it's too late.**

Here's how YOU can help

Obey Fisheries Laws—Do not catch, buy or sell Nassau grouper during the closed season. This closed season runs from December 15th 2007 to February 28th 2008. Violators will be subject to prosecution, fines, boat confiscation and jail time.

Eat other types of fish during the closed season. Boil fish is excellent with red snapper.

Support the establishment of National Parks and No-take Marine Reserves. These reserves are replenishment zones for our important marine species. They must include the habitats required for all stages of the Nassau grouper's life: mangrove creeks, shallow reefs, deep reefs and spawning aggregation sites.

Comply with regulations within existing marine reserves

Learn from the mistakes of other countries — Recovery of an extinct site has never been recorded—We must comply with fisheries regulations if we are to benefit from this resource in the future.

Conserving Our Marine Resources for the Future

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Tel:327-9000, Fax:327-9002

BREEF Receives NFWF Grant

BREEF was recently awarded a grant of \$40,000 from the National Fish and Wildlife Foundation (NFWF) for our Nassau Grouper Research and Education programme. This grant is being matched by other generous donors.

Please contact BREEF if you are able to help support our work

Remember to renew your membership for 2008. We depend on your support!