

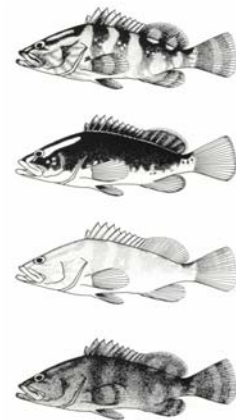
# Information Circular No 7: The Belize Spawning Aggregation Working Group

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Shown at right: Four color-phase changes of the Nassau Grouper,  
*Epinephelus striatus*.



## New Legislation for Nassau Grouper Protection Passed!

In early April 2009 the Minister of Fisheries signed into law additional measures to help manage and protect the Nassau grouper. These include minimum and maximum size limits of 20" and 30", respectively, and a ban on spear fishing within all marine reserves. Furthermore, as a large proportion of fin fish catches are landed as fillets, the new regulations require that all Nassau grouper be landed whole, and all other fish landed as fillets must have a 1" by 2" skin patch.

These are several of the measures recommended to the Minister by the Spawning Aggregation Working Group. We commend the Minister of Fisheries, Hon. Rene Montero, for taking this bold step towards protecting the endangered Nassau grouper, our spawning aggregations and the integrity of Belize's coral reef system!

## Update for the 2009 Nassau Grouper Spawning Season

We have reported on the maximum counts of Nassau groupers for seven consecutive years at five sites. A couple additional sites have been monitored in the past, but our resources have not permitted consistent monitoring during all years. The numbers at Glover's Reef and Gladden Spit have remained more or less the same, and those at Nicholas Caye have dipped to a low of only 25. However, the numbers at Sandbore have increased, and very encouragingly the maximum count at Emily was 3,000 groupers, the highest number recorded over the seven-year period. We caution readers, however, that these numbers are still much lower than those recorded historically, and cannot be viewed yet as a sign of success, as such low populations tend to show fluctuations from year to year. The Nassau grouper is a long-lived species that does not mature until it is about 7 years old, so it will take time for the spawning sites to recover. In addition, signs of illegal fishing are still evident at some of the sites, and this persistent illegal catch will slow down the anticipated recovery even further.

**Maximum Nassau Grouper Counts for 2003 – 2009**

Site	2003	2004	2005	2006	2007	2008	2009
Rocky Point	0	200	200	0 <sup>1</sup>	N/A	0	N/A
Dog Flea Caye, Turneffe	1,500	100 <sup>3</sup>	-	2 <sup>2</sup>	N/A	N/A	N/A
Sandbore, Lighthouse	1,800	2,500	1,800	1,205 <sup>4</sup>	1,495	1,250	2,050
Caye Glory	1,000	1,000	350	7 <sup>5</sup>	69	405	3,000
NE Pt., Glover's	2,400	1,700	2,240	3,000	800	1190	1,100
Gladden Spit	250	450	360	239 <sup>6</sup>	255 <sup>6</sup>	350	260
Nicholas Caye	52	~50	80	48	80	100	25

(<sup>1</sup> Only one dive; <sup>2</sup> Site only monitored in February; <sup>3</sup> Site only monitored in January; <sup>4</sup> Probably missed peak spawning due to bad weather; <sup>5</sup> Different dive team used and precise location in question; <sup>6</sup> One dive, after the last quarter moon)

## Enforcement Success at Gladden Spit

On February 11<sup>th</sup> the Southern Environmental Association's Special Enforcement Team arrested four Honduran fishermen from Puerto Cortez who were actively night fishing at the closed Nassau grouper site in Gladden Spit and Silk Cayes Marine Reserve (GSSCMR). This routine patrol led by Team Coordinator, Shayne Pech, spotted the vessel at the spawning aggregation site. After a brief chase the Team was able to board the boat and encountered the four Honduran nationals. None of the occupants of the vessel had a Belizean fishing license nor was the vessel licensed in Belize. It was apparent by the amount of fish on board that they had been fishing for a number of hours. They were in possession of a quantity of Nassau grouper, rock hind and yellow fin grouper.

The four persons and their boat were escorted to Placencia Village where they were charged and their product inventoried. The product included 19 Nassau groupers, 27 yellow fin groupers, 32 rock hinds, 23 dog snappers, 26 mutton snappers and other assorted fishes. From December 1<sup>st</sup> to March 31<sup>st</sup> it is illegal to take, buy or sell Nassau grouper except from two sites in Belize. These fishermen were apprehended not only in possession of Nassau grouper, but they were encountered directly over the known spawning site at GSSCMR. Once their catch was inventoried the four men were charged with a variety of offences under the Fisheries, Port Authority, and Immigration laws. The Port Authority charges amounted to \$12,900, the Immigration charges were \$4,000, and the Fisheries charges totaled \$2,380. Two of the men were able to pay their fines while two were remanded to jail.

## Cross-shelf Connectivity Project

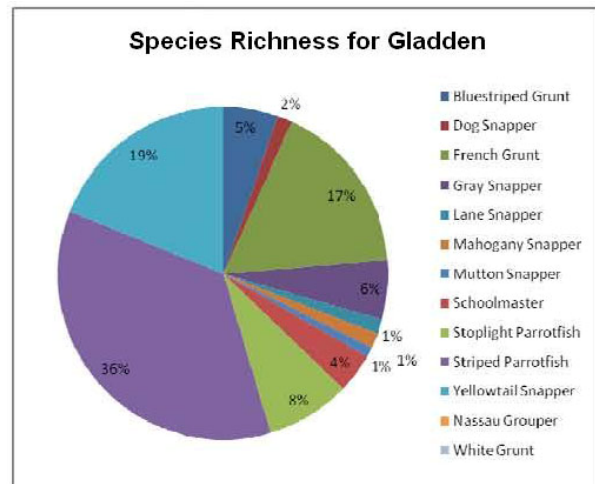
This project, supported by Conservation International and implemented by the University of Belize, is sampling coastal habitats to identify larval settlement and juvenile nursery areas for select fish species,

including snappers and groupers. It will use stable isotope analysis to determine primary migration corridors across the continental shelf for these early life stages, thus informing actions to manage the habitats that are most critical to sustaining population health and economic production.

The project has completed its first quarter of transect sampling at Laughing Bird Caye, Gladden Spit and Glover's Reef. The sampling results for Gladden Spit are shown in the pie chart below. In general, the mutton, dog and gray snappers and the Nassau grouper were present in very low numbers or completely absent from many of the survey sites.

The quarterly sampling will continue over the rest of the year, along with the isotope and otolith sample collections.

(For further information contact the UB Field Coordinator, Eli Romero at [adliro22@yahoo.com](mailto:adliro22@yahoo.com).)



*Species of interest richness within all sites at Gladden Spit*

If you would like more information about the Nassau Grouper, the Belize Spawning Aggregation Working Group, or anything mentioned in this newsletter, please contact Jocelyn Finch, Chairperson, Spawning Aggregation Working Group at Southern Environmental Association (SEA), Tel: (501) 523-3377 Fax: (501) 523-3395 E-mail: [science@seabelize.org](mailto:science@seabelize.org). Web site: <http://collaborations/wcs.org/spag>

