

Preliminary Evaluation of Goliath Grouper (Lichtenstein, 1822) Populations in the Cuban Archipelago

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EXTENDED ABSTRACT

Goliath grouper (*Epinephelus itajara* Lichtenstein, 1822) is listed as Critically Endangered by IUCN. Overfishing of large adults on spawning aggregation sites is the main cause of its populations reduction. An increase in information on this species has been generated in the past decade, yet only one published study focusing on the movement of adult fish exists for Cuba. The aim of this study was to use traditional ecological knowledge to assess Goliath grouper distribution and status throughout Cuba. To accomplish this objective structured interviews were applied. The sample was set as at least five interviews per fishing ports and diving centers throughout Cuba. Years of experience were the selection criterion for fishermen and dive masters interviewed. Cartographic schemes of each particular region were used as a support material, just to assist the localization of the sites. ArGis 9.3 software was used for the cartographic representations. Results from 128 interviews with traditional fishers and divers, conducted in nine of Cuba's 15 provinces revealed that Goliath grouper are more frequent along the southern coast with the highest abundance recorded in the Jardines de la Reina archipelago (Figure 1). Response rate was 90 %. Goliath grouper are targeted primarily by spearfishermen and commercial hook and line fishers operating close to identified spawning corridors and spawning aggregation sites target the species during spawning season (July-September). Interviewees related that abundance and size of Goliath grouper has decreased in the last few decades with overfishing of large adults in spawning aggregation sites as a cause of population decline. Currently, largest specimens average is around 300-pound. Fishers suggest that there are at least 10 spawning aggregation sites for Goliath grouper in Cuba. Nursery habitat supporting a relatively high abundance of juveniles remains poorly known; Jardines de la Reina and Canarreos archipelagos were cited as possible recruitment and nursery sites. Currently, tourism focusing on Goliath grouper encounters on takes place in the Jardines de la Reina archipelago. Expansion of questionnaire-based data collection to other provinces in Cuba is proposed to provide a country-wide baseline for the species and to underpin the development of a national management plan for Goliath grouper.

KEY WORDS: Goliath grouper, Critically Endangered species, interviews, traditional ecological knowledge.

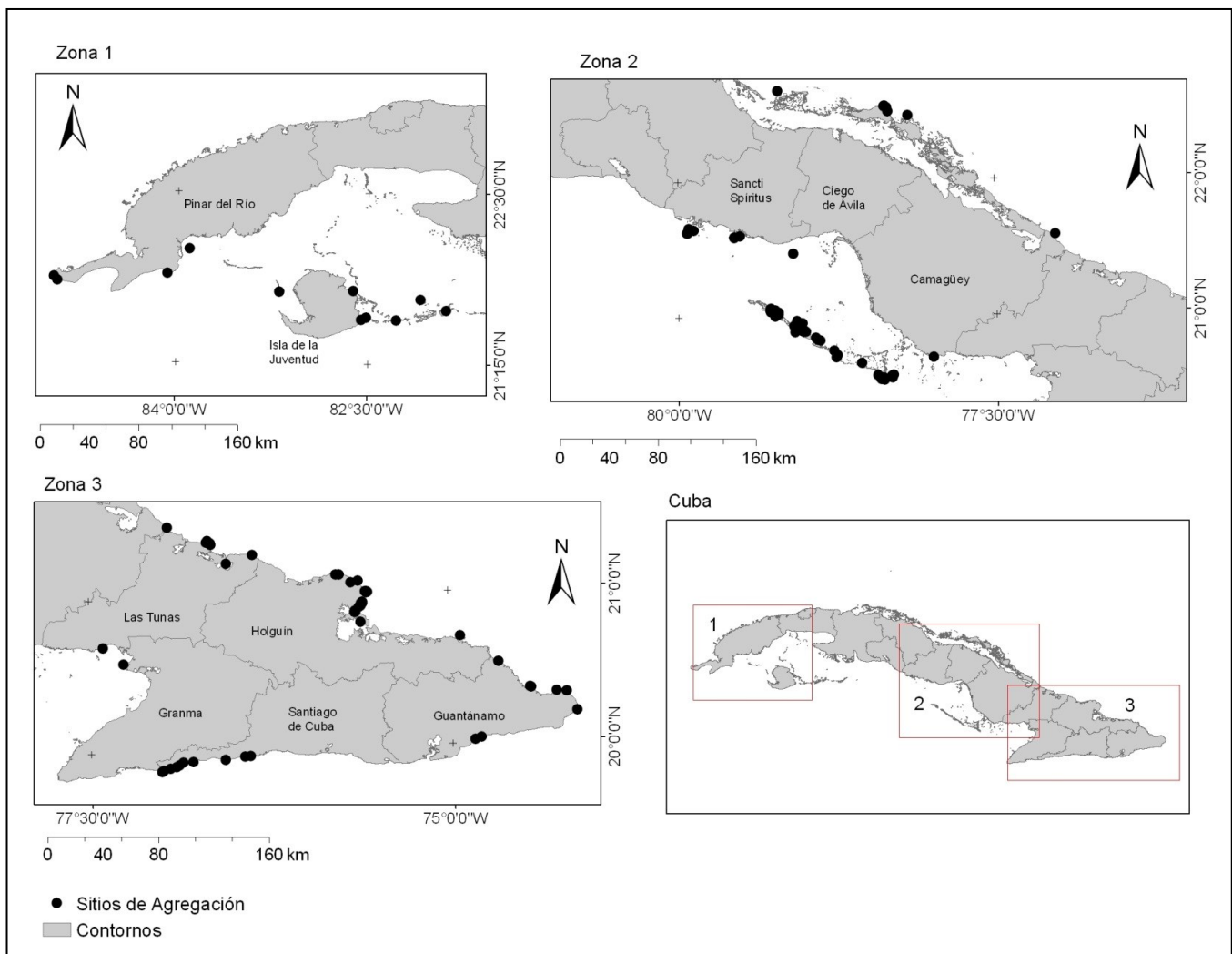


Figure 1. Sightings records of goliath groupers in the Cuban archipelago.