

ABSTRACT

The Mullet Fishery in the Gulf of Paria, Trinidad.

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The proposed ban on the use and importation of monofilament gillnets, and intended increase in the mesh size of multifilament gillnets in the fisheries of Trinidad and Tobago for management and conservation purposes have been met with strong disapproval by mullet fishermen. These fishermen claim that while these measures may be appropriate for other fisheries in the Gulf of Paria, they are unsuitable for mullet and would impact negatively on their livelihood. A general investigation of the mullet fishery in the Gulf of Paria, Trinidad, and a study of the reproductive biology of *Mugil curema*, the main mullet species caught, was conducted from November 1998 to December 1999 in order to obtain physical and biological information necessary to implement alternative regulatory measures in the form of mesh size regulations and closed seasons for the existing fishery. Results of the study indicate that the mullet fishery provides a reliable source of income and has invaluable social and cultural values to the fishermen involved. Studies of the reproductive biology indicate that *M. curema* in the Gulf of Paria, Trinidad, is a multiple batch spawner with a protracted spawning season from November to July. Peak spawning occurs in June/July and appears to coincide with the peak of the rainy season. It is recommended that (1) although the ban on monofilament gillnets should be maintained fishermen should be compensated for their functional gillnets; (2) multifilament gillnets of a similar

mesh size (3" to 3.5" in diagonal stretch) to those currently in use be allowed in the fishery, and (3) a closed season of two months during the period of peak spawning be implemented.

Keywords: mullet fishery; Mugilidae; *Mugil curema*; reproductive biology; fecundity; spawning season; fisheries management.