

Reproductive Biology of Invasive Knifefish (*Chitala ornata*) in Laguna de Bay, Philippines and its Implication for Control and Management

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ABSTRACT

A full understanding of life history characteristics of invasive species is a fundamental prerequisite for the development of management strategies. *Chitala ornata* (knifefish) have established highly abundant and destructive populations in Laguna de Bay (Philippines). In the present study, we examined the reproductive biology of *C. ornata* with the aim of improving the efficiency of management strategy. Gonado-somatic indexes and gonadal analysis showed that knifefish spawned from February and August. They spawned fewer and larger eggs than native fish species in the lake and provides parental care. The adult sex ratio was male skewed while sexual size dimorphism was female skewed. The different reproductive traits appear as a crucial biologic aspect for developing control programs. Specifically, control measures should be implemented and/or intensified prior to spawning season of *C. ornata* from December to March. Removal strategies should also consider habitat segregation of *C. ornata* sexes during spawning season. The body size of the smaller males is the determinant for minimal mesh size of the nets used in physical removals of *C. ornata*.

Key words: *Chitala ornata*, Reproductive Biology, Invasive Species Management