

Reproductive characteristics of doublespotted queenfish, *Scomberoides lysan* (Actinopterygii: Perciformes: Carangidae), from Sri Lankan waters: Implications for fisheries management

Thulasitha, W.S. and Sivashanthini, K.

Department of Zoology, University of Jaffna, Sri Lanka

Abstract

Background. The doublespotted queenfish, *Scomberoides lysan* (Forsskål, 1775), is one of the most important and highly priced food fishes popular for dry fish production in Sri Lanka. Knowledge of spawning pattern and season are important for the management of *S. lysan*. The biology of *S. lysan* is poorly known, however, and no specific management regime is available for this species in Sri Lanka. The presently reported study is the first attempt to understand the reproductive characteristics of *S. lysan* with implications for its management. **Materials and methods.** Weekly samples, totalling 1429 specimens, were collected from Sri Lankan marine waters from January 2010 to December 2011, analyzed macroscopically, and their maturity stages identified. Sex ratio, size at maturity, length-class distribution, monthly distribution of maturity stages, fecundity, and the indices related to reproduction were examined. Statistical analyses were performed to determine relations between gonad weight, total length, fork length, and fecundity. **Results.** Females were categorized macroscopically into five maturity stages, males into four (males mature slightly earlier than females). Spawning and spent stages of females were only available during June and September and significant peaks in the gonadosomatic index of males and females were also noted from these two months. **Conclusion.** The spawning period of *Scomberoides lysan* in Sri Lankan waters shows two peaks, one in June and another in September. The present knowledge could be used in the formulation of management strategies intended to maintain the *S. lysan* stock at sustainable level. Such management measures could limit the catches of *S. lysan* during spawning season, allowing limited number of boats, closure of spawning area during spawning months, and harvesting small fish under 55 cm of low consumer demand should be discouraged.

Author keywords

Fecundity; Gonadosomatic index; *Scomberoides lysan*; Size at maturity; Spawning season

Indexed keywords

Species Index: Actinopterygii; Carangidae; Perciformes; Pisces; *Scomberoides lysan*