



Presence of the Four Groupers (*Epinephelus aeneus*, *E. costae*, *E. marginatus* and *Mycteroperca rubra*) in the No-Fishing Zones of the Southern Part of Datca-Bozburun Special Environmental Protection Area, Turkey

Halit Filiz*, Nail Sevingel

Muğla Sıtkı Koçman University, Faculty of Fisheries, 48000, Kötekli, Muğla, TURKEY Email: halit.filiz@mu.edu.tr; Phone: +90 252 211 18 95

Abstract

A project was conducted on to collect data regarding four groupers [*Epinephelus aeneus* (Geoffroy Saint-Hilaire, 1817), *E. costae* (Steindachner, 1878), *E. marginatus* (Lowe, 1834), and *Mycteroperca rubra* (Bloch, 1793)] abundance in the six No-Fishing Zones (NFZs) in the Datca-Bozburun Special Environmental Protection Area (SEPA). Surveyed sites included natural habitat distributed across a range of depths from 6 (A-2) to 12 (A-3) meters. *E. aeneus*, *E. costae*, and *E. marginatus* were observed during all seasons of the year and were present during 50.0, 91.7, and 62.5% of all surveys (24), respectively. The maximum number of *E. aeneus* observed during a single survey ranged from 0 to 11. The mean number observed per site was ranged from 0.0 (A-1) to 4.3 (A-2). There was no significant seasonal effect on presence ($p>0.05$); however, the highest numbers of individuals were observed during the summer months ($n= 13$). The maximum number of *E. costae* observed during a single survey ranged from 0 to 21. The mean number observed per site was ranged from 3.3 (A-1) to 16.5 (A-2). There was no significant seasonal effect on presence ($p>0.05$); however, the highest numbers of individuals were observed during the spring months ($n= 60$). The maximum number of *E. marginatus* observed during a single survey ranged from 0 to 11. The mean number observed per site was ranged from 0.0 (A-4) to 8.3 (A-2). There was no significant seasonal effect on presence ($p>0.05$); however, the highest numbers of individuals were observed during the summer months ($n= 22$). *M. rubra* was observed only in autumn and spring seasons of the year and were present during 12.5% of all surveys (3/24). The maximum number of *M. rubra* observed during a single survey ranged from 0 to 3. The mean number observed per site was ranged from 0.0 (A-1, A-3, A-4, and A-6) to 1.3 (A-2). There was no significant seasonal effect on presence ($p>0.05$); however, the highest numbers of individuals were observed during the autumn ($n= 3$) and spring months ($n= 3$). The information collected during the course of this project should provide insight regarding the ecology of those groupers within the study area and can potentially assist with future management efforts involving these protected species.

Keywords:

Marine Protected Area, Groupers, Underwater Visual Census
