



13 Years of Monitoring Serranidae Species in Kas-Kekova Specially Protected Area

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Abstract

In the framework of Kas-Kekova Project (WWF-Turkey), populations of eight Serranid species, *Epinephelus aeneus*, *Epinephelus caninus*, *Epinephelus costae*, *Epinephelus marginatus*, *Hyporthodus haifensis*, *Mycteroperca rubra*, *Serranus cabrilla* and *Serranus scriba* were monitored by visual census method in Kas-Kekova Specially Protected Area (SPA) between 2002-2014. Surveys were performed each year in mid-July. A total of 115 stations, located in and outside the border of the SPA, were investigated by skin and SCUBA diving between 0-30 m depths. The divers continuously swam along a 500m coast contour and noted the number of individuals they have seen. Except the *Serranus* spp., the approximate size of the individuals were also recorded in five size categories, as 0-15cm, 15-20cm, 20-40cm, 40-80 cm and >80cm. Between 2002-2011 a continuous steep decline was observed in the number of individuals seen per dive for *Epinephelus caninus*, *Epinephelus marginatus*, *Hyporthodus haifensis* and *Mycteroperca rubra* individuals, however, fluctuations were observed in *Epinephelus aeneus* and *Epinephelus costae* populations. In September 2012, seven no-take zones were declared in the SPA. In July 2014 the last monitoring survey was performed. When 2011 and 2014 data were compared, slight increases in the number of sightings for *Epinephelus aeneus*, *Epinephelus marginatus* and *Mycteroperca rubra* was found, but surprisingly, almost fivefold increase was observed in *Epinephelus costae*. In contrast to large Serranids, the number of *Serranus* spp. sightings gradually increased between 2002-2011 and showed a rapid drop in 2014. *Epinephelus caninus* and *Hyporthodus haifensis* are suggested to be extinct in the SPA.

Keywords:

Serranidae, monitoring, Kaş-Kekova SPA, Turkey
