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Monitoring and Conservation Studies on Nile Soft-Shelled Turtle (*Trionyx triunguis*) During 2016 Nesting Season on Dalaman and Dalyan Nesting Beaches, Turkey

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Aim of the study: Mediterranean Subpopulation of Nile Soft-Shelled Turtle (*Trionyx triunguis*) is a Critically Endangered species. Despite it was identified from Africa, it is believed that main populations are found in Turkey. Dalaman and Dalyan host two of the most important populations of the species and nesting occurs on both regions. Nesting activities have been monitored since 2002 on Dalaman and on Dalyan since 2006 regularly. In this study, we aimed to present the status of nesting populations in two nesting area during 2016 breeding season with a trend analysis.

Material and Methods: Field studies were carried out on Dalaman, around Kükürtlü Lake which has one of the largest populations of Nile soft-shelled turtle, and Dalyan, Iztuzu Beach. Data collection was carried out by daily monitoring of the nesting areas by at least 2 people. Nesting and non-nesting emergences, predation and hatchling emergence were noted. GPS locations and distance from the water were also noted. All non-predated nests were protected by using 1X1 m cages. Predated eggs were counted on the predation day. Nests were excavated after hatchling emergence and number of eggs, dead and alive hatchlings in the nests were noted. All data were tabulated and statistical analyses were made by MS Office Excel 2013.

Results: A total of 29 and 23 nests were recorded on Dalaman and Dalyan Beaches during 2016 breeding season, respectively. Of these nests, 11 (37.9%) and 14 (60.8%) nests were predated by foxes on Dalaman and Dalyan respectively. A total of 298 hatchlings were produced from 601 eggs during 2016 in Dalaman with a hatching success rate of 49.6%. A total of 368 hatchlings were produced from 805 eggs during 2016 in Dalyan with a hatching success rate of 45.7%. Highest numbers of nests were observed in 2002 in Dalaman (71) and in 2015 in Dalyan (92). The mean numbers of nests were calculated as 30.1 nests per season in Dalaman and 36.4 nests per season in Dalyan. No statistically significant differences were seen in the number of nests in the two nesting areas (Dalaman: r^2 0.04; Dalyan r^2 : 0.1) among the years but yearly fluctuations were observed in the number of nests. Also, high predation rate is appeared to be the most important problem for conservation of the species in these two important nesting area.

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Keywords: Dalaman, Dalyan, Nile Soft-shelled turtle, conservation, nest.