

FOCAL PHOTOGRAPH SURVEYS: FORAGING RESIDENT MALE INTERACTIONS AND FEMALE INTERACTIONS AT FISH-CLEANING STATIONS

KOSTAS PAPAITSOROS AND GAIL SCHOFIELD

ABSTRACT. Following the loggerhead sea turtle mating period from March to May, the marine area of Laganas Bay (Zakynthos, Greece, Mediterranean) supports nesting females (until around mid-August), in addition to foraging by resident males and possibly immature turtles. Here, through regular daily photo-id surveys during 2015, we gained insights into interesting behaviours exhibited by these two groups in two different parts of the bay. At one site, with submerged rocky reefs (Agios Sostis), several unique individuals ($n = 13$, of which 5 were confirmed males, 1 was a confirmed female and the remainder could not be determined) were regularly encountered ($n = 10$ surveys), and were observed to forage, with regular aggressive interactions (4 incidents of biting-like behaviours out of 7 paired encounters). We hypothesise that, at least, the males are residents competing over limited forage resources. Interestingly, even though some females forage during the nesting period, few were detected during surveys at this site, although they were present in the shallow sandbanks 0.4 km shoreward of the survey site. In contrast, at one of potentially several fish-cleaning stations (a small collection of rocks in the shallow submerged sandbanks), several unique females ($n = 13$ individuals over 19 surveys) but not males, were detected. At least 3 species belonging to the Mullidae and Sparidae families were observed conducting cleaning activity. Some females ($n = 6$) were observed at the cleaning station on more than 1 day. One female used the station as a resting site for at least 6 consecutive days, but was not approached by fish, possibly because they had consumed all forage items of interest on her. Some individuals ($n = 4$) also exhibited self-cleaning behaviour by scratching on rocks at the station. Unlike the interactions at Agios Sostis, 2-3 females sometimes gathered at once without antagonistic interactions, although individuals displaced one another on occasion. The number of turtles frequenting the station declined over July, possibly because females were departing the bay following the completion of nesting, whereas the numbers of individuals observed at Agios Sostis remained constant. It is possible that cleaning activities are important to prevent the settling and growth of barnacles; for instance, we documented the same females without barnacles in June, but with small barnacles in July. Thus, barnacle larvae may be heavily recruiting onto females that rest in the shallow warm waters to develop their eggs between nesting events. The growth of too many barnacles during female residence at the breeding grounds could potentially slow subsequent migration speeds to foraging grounds, which would be detrimental if energetic reserves are already low due to the females in this population generally not foraging during breeding. In conclusion, our observations provide new insights about both foraging behaviour by males and important inter-nesting behaviours by females at this important breeding site in the Mediterranean. The presentation will be supported with high quality video material.

HUMBOLDT UNIVERSITY OF BERLIN, GERMANY

E-mail address: papafitsoros@hu-berlin.de, kostaspf@yahoo.gr

DEAKIN UNIVERSITY, GEELONG, AUSTRALIA. SCHOOL OF LIFE AND ENVIRONMENTAL SCIENCES, CENTRE FOR INTEGRATIVE ECOLOGY, (WARRNAMBOOL CAMPUS), PRINCES HWY, SHERWOOD PARK, PO BOX 423, WARRNAMBOOL, VIC 3280, AUSTRALIA

E-mail address: g.schof@gmail.com