

Impact of some invertebrates on eggs and hatchlings of the Loggerhead Turtle, *Caretta caretta*, in Turkey

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Abstract. The damage caused by some invertebrates to the eggs and hatchlings of Loggerhead Turtles, *Caretta caretta*, was investigated during 1999 and 2000 on Fethiye beach, Turkey. Nematoda, Acarina, Myrmeleonidae, Elateridae, Scarabeidae, Muscidae and Tenebrionidae were recorded as infesting nests of Loggerhead Turtles. Tenebrionidae (Coleoptera) larvae were found to have the heaviest impact on Loggerhead Turtle eggs and hatchlings. A total of 185 randomly selected nests was examined. Of the nests examined in 2000, almost 50% contained tenebrionid larvae. Tenebrionid larval damage was recorded in 8.1% of the eggs that were counted in the nests containing larvae and in 0.6% of the hatchlings. However, it could not be determined whether the larvae destroy viable eggs and hatchlings. In comparison to previous years, a remarkable increase in tenebrionid larval damage was recorded.

Kurzfassung. Am Strand von Fethiye, Türkei, wurde 1999 und 2000 der Schaden, den einige Wirbellose an den Eiern und frisch geschlüpften Jungen der Unechten Karettschildkröte, *Caretta caretta*, anrichten, untersucht. Es wurde ein Befall mit Nematoda, Acarina, Myrmeleonidae, Elateridae, Scarabeidae, Muscidae und Tenebrionidae festgestellt. Den größten Einfluss auf die Eier und Schlüpflinge der Schildkröten hatten Schwarzkäfer der Familie Tenebrionidae. Insgesamt wurden 185 nach dem Zufallsprinzip ausgewählte Schildkrötenester überprüft. Von den Nestern, die in 2000 überprüft wurden, enthielten fast 50% Tenebrionidenlarven und die dadurch hervorgerufenen Schädigungen betragen bei den Eiern 8,1% und bei den Schlüpflingen 0,6%. Es konnte jedoch nicht festgestellt werden, ob die Larven lebensfähige Eier und Schlüpflinge zerstören. Im Vergleich zu vorhergehenden Jahren wurde eine bemerkenswerte Zunahme der Schädigung durch Tenebrioniden bemerkt.

Key words. Tenebrionidae, Loggerhead Turtle, nest infestation, egg, hatchling, Turkey, Mediterranean

Introduction

There are numerous non-human predators of the nests of marine turtles, including foxes, crabs, birds and insects. Of these negative effects, insect infestation is the least known since relatively few studies have been conducted. Worldwide, there have been several studies reporting the presence of larvae from two dipteran families (Phoridae and Sarcophagidae) in marine turtle nests. The larvae of the dipteran family Phoridae, specifically *Megaselia scalaris*, have been documented in nests of Green (FOWLER 1979) and Hawksbill Turtles (BJORNDALE et al. 1985) in Costa Rica. FOWLER (1979) suggested that the larvae feed on weakened or already dead hatchlings and therefore pose no real threat to the reproductive success of turtles. *Eumacronychia sternalis* (Diptera: Sarcophagidae) was reported to infest Green Turtle eggs on the Pacific coast of Mexico (LOPES 1982), and these data indicated that