Insects and mites infestation on eggs and hatchlings of the Nile Soft-shelled Turtle, *Trionyx triunguis*, in Kükürtlü Lake (Turkey)

by Yusuf Katılmış and Raşit Urhan

Abstract. The damage caused by insect and mites to eggs and hatchlings of Nile Soft-shelled Turtles, *Trionyx triunguis*, was investigated during the 2002 and 2003 nesting seasons in Kükürtlü Lake (Dalaman, Turkey). The greatest impact on turtle nests was recorded by Muscidae and Tenebrionidae. Tenebrionids affected 33%, and Muscidae 52%, of the 58 intact Nile Soft-shelled Turtles nests studied. The number of Tenebrionidae found in turtle nests decreased with their distance from vegetation. Hatchling success of nests without insect infestation was found to be statistically higher than of uninfested nests.

Kurzfassung. Während der Nestsaison 2002 und 2003 wurde am Kükürtlü-See bei Dalaman in der Südwesttürkei der Schaden untersucht, den Insekten und Milben an Eiern und Schlüpflingen der Nil-Weichschildkröte, *Trionyx triunguis*, anrichten. Fliegen der Familie Muscidae und Schwarzkäfer (Tenebrionidae) hatten den größten Einfluss auf die Nester. 33% der 58 intakten Nester waren von Tenebrioniden befallen, 52% von Musciden. Die Zahl der Tenebrioniden pro Nest ist umso geringer, je weiter sich die Nester von der Vegetation entfernt befinden. Weichschildkröten-Nester, die nicht von Insekten und Milben befallen waren, hatten einen signifikant höheren Schlüpferfolg als Nester, die befallen waren.

Key words. Infestation, Muscidae, nest, Tenebrionidae, *Trionyx triunguis*.

Introduction

Many dipteran and coleopteran larvae have been found in turtle nests. However, it still remains uncertain as to whether they are likely to have a detrimental effect on turtle populations. Our aim was to determine the impact and level of infestation of Nile Soft-shelled Turtle (*Trionyx triunguis*) nests in southwest Turkey by invertebrates, especially by insects, and to investigate the effect on hatchling success. Nile Soft-shelled Turtles live in brackish water and the infestation of their nests with invertebrates has so far not been studied.

Material and methods

This study was carried out during the 2002 and 2003 hatching seasons (July-September) at Kükürtlü Lake, which has the densest population of Nile Soft-shelled Turtles in the Mediterranean. Kükürtlü Lake belongs to the Dalaman wetland complex. Therma Maris Hotel and Eska Houses are situated in the northeast of the lake and a channel connects it in the south to the Mediterranean. *Juncus acutus* marshes are found in the east, and marshes covered with a mixture of

Zoology in the Middle East 40, 2007: 39–44.
ISSN 0939-7140 © Kasparek Verlag, Heidelberg