

Lizards as prey of arthropods:
Praying Mantis *Mantis religiosa* (LINNAEUS, 1758) feeds
on juvenile Sand Lizard *Lacerta agilis* LINNAEUS, 1758
(Squamata: Sauria: Lacertidae)

Eidechsen als Beute von Arthropoden: Gottesanbeterin, *Mantis religiosa* (LINNAEUS, 1758)
erbeutet juvenile Zauneidechse, *Lacerta agilis* LINNAEUS, 1758
(Squamata: Sauria: Lacertidae)

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ABSTRACT

A Praying Mantis (*Mantis religiosa*) was observed to feed on a juvenile Sand Lizard (*Lacerta agilis*).

KURZFASSUNG

Eine Gottesanbeterin (*Mantis religiosa*) wurde beim Verzehr einer juvenilen Zauneidechse (*Lacerta agilis*) beobachtet.

KEY WORDS

Lacerta agilis predated by *Mantis religiosa*; biology, natural history observation

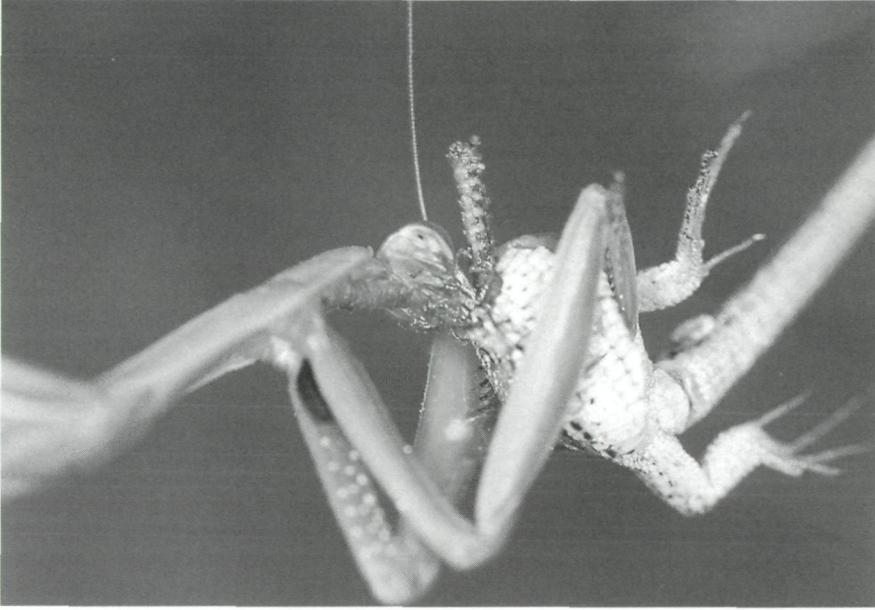
Arthropods predate on vertebrates in many occasions (for a review see MCCORMICK & POLIS 1982). Reports are abundant for aquatic habitats, where many water insects and water spiders feed on small fish and amphibian larvae while observations on terrestrial arthropods preying upon reptiles and amphibians are rare. A most thorough review was conducted by BAUER (1990) for geckonid lizards. He lists 21 geckoes which have been preyed upon by arthropods, four of which were insects. BLONDHEIM & WERNER (1989) report on the lacertid lizard *Mesalina guttulata* (LICHTENSTEIN, 1823), which is occasionally predated by Widow Spiders (*Latrodectus pallidus*, *L. revivensis*) in Israel. From the island of Krk (Croatia), the lizard *Podarcis melisellensis* (BRAUN, 1877) is reported to be the prey of the spider *Latrodectus mactans* (SCHWAMMER & BAURECHT 1988).

Concerning the genus *Lacerta*, STRIJBOSCH (1981) published a list of predator species in the wild and under experimental

conditions which encompasses a set of 98 species (including a plant - *Drosera rotundifolia*). However, only one insect taxon is included, *Carabus* sp. which fed on juvenile Sand Lizards in an artificial enclosure. According to our knowledge, there are almost no observations available on Central European insects preying upon lizards in the wild (except TOMALA 1903).

In this paper, we report on a Praying Mantis - *Mantis religiosa* (LINNAEUS, 1758) feeding on a juvenile Sand Lizard - *Lacerta agilis* LINNAEUS, 1758.

The observation was made in October 1995, south of lake Neusiedlersee, between Fertöboz and Hidegseg, West Hungary. At the outer edge of the reed belt of the lake, one of the authors (H. S.) detected a Praying Mantis, sitting on a plant with the Sand Lizard in its pincers (fig. 1). The insect was eating from the anterior part of the lizard's body while the head and the forelegs of the reptile were already missing. Within half an hour, the Praying Mantis had eaten up most of the trunk, leaving nothing but the



Figs. 1 & 2: Praying Mantis (*Mantis religiosa*) feeding on a juvenile Sand Lizard (*Lacerta agilis*).
Abb. 1 & 2: Gottesanbeterin (*Mantis religiosa*) beim Verzehr einer juvenilen Zauneidechse (*Lacerta agilis*).

vertebrate column (fig. 2). After having eaten its fill, the mantis finally dropped the remainders.

Some anecdotal information exists on the fact that Central European mantids feed on small vertebrates, but thorough reports are rare. The only published observation of *M. religiosa* feeding on a lizard seems to be that by TOMALA (1903). He describes the case of a Green Lizard - *L. viridis* (LAURENTI, 1768) of about 80 mm length which was captured alive and eaten by this insect. The author emphasizes the fact that the opposite case - *L. viridis* feeding on *M. religiosa* - was much more frequently observed.

For tropical regions, we found a few published observations on feeding of mantids on reptiles and amphibians (e. g., LA RIVERS 1948; RIDPATH 1977). In Queensland (Australia), a Praying Mantis was observed to eat on a tree frog *Litoria caerulea* (WHITE, 1790) with a snout-vent length of about 70 mm (RJCK SPEARE, unpubl. pers. comm.). WRIGHT (1982) documented a mantid feeding on the gecko *Hemidactylus*

frenatus DUMÉRIL & BIBRON, 1836 in Australia; BUTTENHOFF (1995) observed an attack of the mantid *Choeradodis strumaria* on the adult salamander *Bolitoglossa rufescens* (COPE, 1869) in Mexico. The reports have in common that predation was observed only once, despite of frequently observed co-occurrence and interaction between potential prey and predator, respectively. This indicates that such observations are rather exceptional even in tropical regions.

The stimulus of moving prey is essential to induce prey catching behaviour in Mantids. Hence, we assume as certain that the lizard was alive when it was captured although we did not observe the procedure itself.

Our observation was done on the northern edge of the distribution area of *M. religiosa* which is more abundant and reaches a bigger size in the Mediterranean area. This should increase the probability of small vertebrates being captured by this insect in the southern part of its range.

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