

Ophionyssus saurarum (Acari, Mesostigmata) infecting *Lacerta agilis* (Reptilia, Lacertidae)

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ABSTRACT. Thirty specimens of sand lizard, *Lacerta agilis*, were analyzed and *Ophionyssus saurarum* was found on three of them. These parasitic mites were located in the ear opening of the host. The only lizard specimens which were infested were those that inhabit areas degraded by human activity.

Key words: mites, Acari, Mesostigmata, *Ophionyssus*, *Lacerta agilis*

Introduction

Given the difficulties in conducting direct observations of lizards and specific difficulties concerning their capture, the information on external parasites found on these reptiles is sporadic. Thus far, species such as *Dermacentor* (*Dermacentor*) *reticulatus* (Fabricius, 1794), *Haemaphysalis* (*Haemaphysalis*) *concinna* Koch, 1844, *Ixodes* (*Exopalpiger*) *trianguliceps* Birula, 1895, *Ixodes* (*Ixodes*) *ricinus* (L., 1758) and *Ophionyssus saurarum* (Oudemans, 1901) were most frequently reported [1–7].

Most parasitic mites found on lizards belong to the order Ixodida and only *Ophionyssus saurarum* belongs to the order Mesostigmata in terms of taxonomy. Due to its small size, as females reach approximately the length of 650 µm and the fact that it parasitizes in ear and nose openings this species is relatively rarely reported.

Ophionyssus saurarum is one of the mites which are connected with a host in the way that can be defined as strictly absolute. This means that they parasitize on the group of hosts which are taxonomically related, in this case only on lizards [6]. *Ophionyssus saurarum* is the vector of diseases of the lizards' alimentary canal epithelium and blood cells, which is caused, among others, by coccidia *Schellackia bolivari* Reichenow, 1919 [5]. Owing to this each investigation of this species

is also practical, as *Lacerta agilis* is the species protected by law in the majority of European countries.

Material and methods

The aim of this study was to determine the degree to which the *Lacerta agilis* lizard is infected with the parasitic mite *Ophionyssus saurarum*, depending on the host's habitat. Moreover, attention was drawn to the place where the parasite was located on the host (nose and ear openings, eyes and the cloaca).

The material was collected between 2 May and 10 September 2007. Mites were collected by means of small cotton pads and then they were kept in 70% ethyl alcohol. The next stage of the laboratory investigation was to make microscopic preparations in the Hoyer fluid.

The investigation works were conducted in four research areas located in the vicinity of Poznań (52°26'N 16°51'E), in the vicinity of Chełmiec (50°47'N 16°13'E), in Stare Bogaczowice (50°50'N 16°11'E) and in Izery Mountain (50°53'N 15°18'E). The areas were selected in such a way as to represent habitats of the natural character and habitats largely transformed due to the anthropogenic pressure.

Results

Thirty specimens of the sand lizard *Lacerta agilis* were captured and analyzed and *Ophionyssus saurorum* was found on three of them. The mites were found in ear openings of two males and one female of *Lacerta agilis*. One mite was reported in two sand lizards in each ear and in one sand lizard there was one specimen in one ear. All *Ophionyssus saurorum* specimens were females and they were reported on sand lizards captured on degraded areas, which were greatly influenced by human activity.

According to Bregatova [2] adults of *Ophionyssus saurorum* are found in ear openings of Lacertidae, whereas protonymphs and deutonymphs are found in the area around the eye or the cloaca. Regrettably, it was impossible to confirm it definitely as the nymph forms were not reported, despite the analysis of both the eye and cloaca areas.

The low percentage of the *Ophionyssus saurorum* parasites in sand lizards, which was 10% in the present study, may indicate that this parasite poses little threat to these lizards.

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