[SHORT COMMUNICATION]

Record of Heteromorphic Males of *Hypoaspis (Cosmolaelaps) vacua* (Michael, 1891) (Acari, Mesostigmata, Laelapidae) from Poland

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INTRODUCTION

Although male polymorphism (andropolymorphism) of mites is not a general phenomenon, many cases have been reported in the literature (Walter and Proctor, 1999). Andropolymorphism is mainly characterised by the occurrence of major morphological differences between males of a given species. Morphological differences can be determined genetically or they can be a result of environmental changes. Male polymorphism is most evident in external characters, but differences may also occur in ecology, physiology, and ethology (Evans, 1992).

Evans (1992) referred to the occurrence of andropolymorphism in grain mites and feather mites (Astigmata) as well as in the prostigmatic families Anystidae and Cheyletidae. Walter and Proctor (1999) referred to the occurrence of this phenomenon in the mesostigmatic families Dermanyssidae and Macrochelidae. Vitzthum (1943) noted that some species of the genera *Parasitus* (Parasitidae), *Dendrolaelaps* (Digamasellidae) and *Haemolaelaps* (Laelapidae) also have heteromorphic males. Wiśniewski (1979) also recorded heteromorphic males in *Dendrolaelaps*.

Information regarding males of *Hypoaspis (Cosmolaelaps) vacua* (Michael) is scanty (Evans and Till, 1966). Hirschmann et al. (1969) described and illustrated the female and male of *Hypoaspis serratosimilis* Hirschmann, which was considered by Karg (1971) as junior synonym of *H. vacua*.

During a recent survey conducted in national parks in Poland, three male specimens of *H. (C.) vacua* were collected, which distinctly differed from its ordinary males. In this paper the heteromorphic male of this species is described.

DESCRIPTION OF HETEROMORPHIC MALE OF *HYPOASPIS (COSMOLAELAPS) VACUA*

Idiosoma oval; 480–490 µm long and 300–330 µm wide; 39 pairs of cuneiform setae on

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Fig. 1. Heteromorphic male of *Hypoaspis* (*Cosmolaelaps*) *vacua*—ventral side.

dorsal shield, as in females and ordinary males of the species. Holoventral shield (Fig. 1) 370 μm long, with 23 simple setae. Genital orifice located at level of coxae II. Minute punctation present between coxae III. Ventrianal region of holoventral shield covered with distinct reticulated and with strongly sclerotized median outgrowth (70 μm) projecting forward.

DIFFERENTIAL DIAGNOSIS

A comparison is made between ordinary males studied by Hirschmann et al. (1969) and specimens collected by the author. Ordinary males (dorsal shield 380–430 μm long) are slightly shorter than heteromorphic males (dorsal shield 480–490 long). Chaetotaxy of idiosoma, legs and pedipalps are similar in both forms. Except for the outgrowth of the ventrianal region, the holoventral shields of ordinary and heteromorphic males are very similar (Fig.

Fig. 2. Ordinary male of *Hypoaspis* (*Cosmolaelaps*) *vacua*—ventral side.

2—it is not clear whether this drawing was based on a specimen collected by the author, because in the beginning of the paragraph the author says that the comparison is made in relation to the male studied by Hirschmann et al.). The most distinctive difference between both male forms refer to the strong outgrowth on the ventrianal region of holioventral shield of heteromorphic males.

MATERIAL EXAMINED

Two heteromorphic males and 3 ordinary males collected from soil, Bory Tucholskie National Park (53°43'–53°52'N; 17°25'–17°41'E), K. Matysiak leg., 3 July 2002; 1 heteromorphic male and 7 ordinary males collected from soil, Biebrza National Park (53°13'–53°44'N; 22°26'–23°29'E), J. Klemt leg., 26 August 2002.

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