First Description of the Hypopial Stage of
Thyreophagus entomophagus (LABOULBÈNE, 1852) (Acari: Acaridae)

by A. FAİN¹, W. KNÜLLE² & E. WURST³

¹ Institut royal des Sciences naturelles de Belgique, rue Vautier 29, B-1000 Bruxelles, Belgique.
² Institut für Angewandte Zoologie, Freie Universität Berlin, Haderslebener Strasse 9, D-1000 Berlin 41, Germany.
³ Institut für Zoologie, Fachgebiet Parasitologie, Universität Hohenheim, Emil-Wolff-Strasse 34, 70599 Stuttgart, Germany.

Summary

The heteromorphic deutonymph of Thyreophagus entomophagus (LABOULBÈNE) (Acari: Acaridae) is described and depicted for the first time.

Keywords: Taxonomy. First description deutonymphs Thyreophagus entomophagus (LABOULBÈNE) Acari: Acaridae.

Résumé

La deutonymphe hétéromorphe de Thyreophagus entomophagus (LABOULBÈNE) (Acari: Acaridae) est décrite pour la première fois.

Introduction

FAİN (1982), reviewed the genera Thyreophagus RONDANI, 1874 and Michaelopus FAİN & JOHNSTON, 1974 (= Moniezella BERLESE, 1897) (Acari: Acaridae) and described 9 new species. Two other new species were described later in the genus Michaelopus (FAİN & LUKOSCHUS, 1986 and FAİN & RACK, 1987).

The genus Thyreophagus includes now three species which are known either from females and males, i.e. the type species T. entomophagus (LABOULBÈNE) and T. odyneri FAİN, 1982, or from only the female (T. coorememi FAİN, 1982).

Among the 14 species included in the genus Michaelopus, only the type species M. corticalis (MICHAEL, 1885) is known from all its developmental stages, i.e. egg larva, protonymph, heteromorphic deutonymph, tritonymph and adults, male and female. All the other species are only represented either by females and/or males (eight species) or only by heteromorphic deutonymphs (five species).

Until now, all the species represented only by their hypopial stages were assignated to the genus Michaelopus rather than to the genus Thyreophagus, owing to the great resemblance existing between all these hypopi. The discovery of the hypopus of Thyreophagus entomophagus by W.K. leads us to reconsider our opinion about the generic status of these deutonymphs and we think now that some of them could actually belong to the genus Thyreophagus rather than to the genus Michaelopus.

The deutonymphs of T. entomophagus that we describe here, had been reared in the laboratory by W.K. from adult mites that had been collected in a sparrow nest in the suburban district of Berlin (Berlin Dahlem). The mites were bred at a temperature of 20°C and a relative humidity of 85%. The food used by the mites consisted of dried baker’s yeast.

All the measurement are in micrometers (μm). We follow, here, the setal nomenclature of the idiosoma proposed by A. FAİN (1963).
Genus *Thyreophagus* RONDANI, 1874

*Thyreophagus entomophagus* (LABOULBÈNE, 1852)

The male and female of this species have been redescribed and redepicted by FAI N (1982). The deutonymph was still unknown and we describe it here for the first time.

**DEUTONYMPH (= hypopus)** (Figs 1-9) : Body distinctly widened at the level of the sejugal furrow. Maximum length (L) and width (W) in 5 specimens : 243 x 180, ratio L : W = 1.39; 242 x 172 (1.40); 234 x 168 (1.39); 232 x 169 (1.37); 225 x 159 (1.41). The ratio L : W varies between 1.35 and 1.41. **Dorsum** finely punctate except at the level of the sejugal furrow where the cuticule bears numerous very short and very thin transverse striations. The area situated between the two eye-lenses is densely mamillated. Eye-lenses with a distinct basal retina, 11 wide and separated by a distance of 79 to 84. Dorsal setae very thin, from 6 to 12 long, except d5 15 to 18. Setae sce situated on or close to the eye lenses. **Venter** : Epimera II curved outside, longer than the sternum. Epimera III not reaching the midline. Setae ga situated on epimera III. Oil glands apertures situated ventrally, behind setae h. Genital region with a pair of conoides (setae gp) and a pair of thin setae (setae gm). Setae j5 25 long. **Suctorial plate** as long (38-40) as wide. Anterior suckers circular, diameter 7.6 to 8.5, posterior suckers slightly ellipsoidal and longer (10 - 11) than wide (9.3 to 9.6). **Palposoma** 12 to 14 long, 12 to 13

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Fig. 1. *Thyreophagus entomophagus* (LABOULBÈNE). Hypopus in ventral view. Scale line 100 μm.
Figs 2-4. Thyreaphagus entomophagus (LABOULBÈNE). Hypopus in dorsal view (2), suctorial plate (3), pal-posoma (4). Scale lines 50 μm (fig. 2), 25 μm (fig. 3) and 10 μm (fig. 4).

Figs 2-4. Thyreaphagus entomophagus (LABOULBÈNE). Hypopus in dorsal view (2), suctorial plate (3), pal-posoma (4). Scale lines 50 μm (fig. 2), 25 μm (fig. 3) and 10 μm (fig. 4).

The deutonymphs that we describe here, as well as their corresponding adults received from W.K. are deposited in the Institut royal des Sciences naturelles de Belgique.

Remarks:

The deutonymph of *T. entomophagus* that we describe here, is characterized mainly by the shape of the body which is abruptly widened at the level of the sejugal furrow. The ratio length : width of the body is 1.35 to 1.41. A second character, correlated with the widening of the body, is the great distance between the eyes (79 to 84). In all the other species where the deutonymph is known, except one (*M. leclercqi*), the body is more elliptical and much longer than wide (ratio length : width 1.79 to 2.1) and the distance between the eyes does not exceed 60. In *M. leclercqi* this ratio varies from 1.38 to 1.49 and the distance eye-eye is 75.

A reexamination of the typical series of deutonymphs of *M. leclercqi* has confirmed that both species are very close to each other and could be synonymous. This study has revealed that seta *ba* is also present on tarsus II of this species. More-
Fig. 5-9. *Thyreophagus entomophagus* (LABOULBÈNE). Hypopus: Apical segments of legs: Leg I dorsally (5) and ventrally (6). Leg II dorsally (7). Leg III (8) and leg IV (9) laterally. Scale ligne 25 μm.

Over, the measurements of the setae of tibiae and genua in this species confirm this close relationship. In this species the tibia I bears thin setae hT and gT 10 and 17 long respectively. Tibia II with hT slightly to distinctly spinous and short (10); gT thin 12-14 long. Genu I with mG thin 12, cG thin 17. Genu II with mG thin 16 and cG thin 12. These lengths and widths do not differ markedly from those of *T. entomophagus*. In spite of these important similarities we prefer not to synonymize these two species at the present time and wait that new material becomes available.

**References**


