

Redescription of *Hypsibius microps* Thulin, 1928 and *H. pallidus* Thulin, 1911 (Eutardigrada: Hypsibiidae) based on the type material from the Thulin collection

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Abstract

Two species of the genus *Hypsibius*, *H. microps* and *H. pallidus*, are redescribed based on the type material from the Thulin collection. Those two species are very similar to each other and in the past their identification was based mostly on external claw morphology (identifications were very often doubtful and subjective). In this study we describe further differences between these two species. Apart from the claw morphology, *H. pallidus* differs from *H. microps* by: a larger body size, a wider buccal tube, longer placoids and placoid row and a longer pharynx. These two species differ also from other species attributed to the *dujardini* group by having granular rather than rod-shaped macroplacoids and by the absence of a constriction in the first macroplacoid.

Key words: Tardigrada, *Hypsibius microps* Thulin, 1928, *H. pallidus* Thulin, 1911, *dujardini* group, redescription

Introduction

Hypsibius microps and *H. pallidus* were described from two Swedish locations by Thulin in 1928 and 1911, respectively. After Thulin's descriptions these two species were reported from many localities not only in Europe but also throughout the world (McInnes 1994). As suggested by Ramazzotti & Maucci (1983) some of the reports, especially outside Europe, are likely to be misidentifications and should be confirmed by comparisons with Thulin's type material. Cuénot (1932) suggested that *H. microps*, *H. pallidus* and *H. convergens* Urbanowicz, 1925 are a single species (*i.e.*, *H. pallidus*) since many of the characters are common for the three taxa: the presence of smooth cuticle, eyes, two granular placoids (without constrictions), the absence of microplacoid and septulum, and no cuticular bars/thickenings on legs.

In this paper we re-describe *H. microps* and *H. pallidus* and evaluate their taxonomic statuses. We also provide differential diagnosis between these species and the most similar to them species of the *dujardini* group, including *H. convergens*.

Material and methods

Holotypes, paratypes and other type material of *H. microps* and *H. pallidus* from the Thulin collection were examined. The Thulin collection is preserved in the Zoological Museum of the University of Copenhagen, Denmark. We examined type specimens mounted on microscopic slides in Glycerine Gelatin and designated as types (Figs. 1–6). The slides are original, however they were relabelled in 1949 (hence the discrepancy between the dates of descriptions and years on labels). Moreover, some of the information is not correct (e.g.