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Halacarus socius (Acari: Halacaridae), description of the male and diagnoses of species of the *Halacarus actenos* group

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Abstract

Amongst the about a dozen halacarid species from a shore of Mauritius, the genus *Halacarus* was represented by a single species, *Halacarus socius* Bartsch, 1992. The species was once described on the basis of females collected on Moorea, Society Islands, Pacific Ocean, now a description of the male is added and that of the female supplemented. *Halacarus socius* seems to be wide-spread in the Indo-Pacific region. *Halacarus tritoni* Otto is a synonym.

Halacarus socius is a member of the *H. actenos* group, a group characterized by the combination: posterior dorsal plate absent in both females and males, ocular plates small or lacking, with or without a cornea, apodemes of anterior and posterior epimeral plates long, female genitoanal plate with rather uniform cerotegumental cover and two pairs of perigenital setae adjacent to the genital opening, one pair (rarely two pairs) of perigenital setae anterior to the genitoanal plate, one or two bipectinate setae on tibia II, no tines on shaft of claws but paired claws often with tines on the accessory process. Species attributed to this group are diagnosed.

Key words: Halacaroidea, re-description, *Halacarus actenos* group, species diagnoses, biogeography

Introduction

The generic name *Halacarus* was introduced by Gosse (1855) and became the genotype of the family Halacaridae Murray, 1877. The genus *Halacarus,* as characterized by Bartsch (2006), can be discriminated from other halacarid genera on the basis of an unique combination of characters, viz, (1) length of the genua—on all legs almost as long as (or even slightly longer than) the adjacent telofemora and tibiae; (2) striated, reticulated or maze-like sculptured epicuticula on the plates, legs and gnathosoma; (3) ds-6 near the level of the posterior pair of gland pores; (4) gnathosoma with a sub-quadrangular base (ventral aspect), mostly parallel-sided rostrum, lobiform rostral setae, and two setae on P-2, in general both situated in the apical two-third of the segment, none near the basis; (5) leg I with spiniform, almost smooth ventral setae on telofemur, genu, tibia and tarsus; (6) presence of at least three pairs of eupathidia (one pair of doublets, one pair of singlets) and two (rarely four) bristle-like ventral setae on tarsus I, and (7) similar-sized solenidion and famulus. Many *Halacarus* species lack a posterior dorsal plate, often also the pair of ocular plates, and several species demonstrate a sexual dimorphismus in size or absence *versus* presence of the posterior dorsal plate.

The length of the idiosoma of *Halacarus* species is between about 250 µm (*H. parvulus* Bartsch, 1993) and almost 1500 µm (*H. excellens* Lohmann, 1907, *H. profundus* Newell, 1984); most species have a length distinctly exceeding 400 µm. The genus is spread worldwide, in polar, temperate and tropical areas. *Halacarus* inhabits depths from the low water edge to deep-sea basins. More species have been taken in the southern than in the northern oceans. Bartsch (2009a) listed 75 valid species, accordingly the genus holds about 7 % of all halacarid species.

Halacarus socius Bartsch, 1992 is one of the species that lacks the posterior dorsal plate in both the female and male. The male, hitherto not known, is described. *Halacarus socius* is a member of the *H. actenos* group. Diagnoses are presented of species which demonstrate a character combination typical of this group.

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