

Redescription of the First Japanese Halacarid Mite, *Halacarus spongiphilus* (Arachnida: Acari: Halacaridae)

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The first halacarid mite described from Japan, *Halacarus spongiphilus* Kishida, 1927, is redescribed on the basis of newly collected specimens. Several newly discernible characteristics of this species separating it from congeners are reported. In addition, the original description by Kishida is translated into English. A female specimen collected at the type locality is designated the neotype of this species to replace the lost holotype, the unique specimen on which the original publication by Kishida was based.

Key Words: Acari, Halacaridae, *Halacarus spongiphilus*, redescription, neotype, Japan, Dictyonina, sponge symbiont.

Introduction

Halacarus spongiphilus is the first halacarid mite described from Japan (Kishida 1927; Abé 1990, 2005). Kishida (1927) proposed the Japanese name “Ushiodani”, i.e. “marine-mites”, for halacarid mites at the same time. The mite was recovered from a sponge of the order Dictyonina collected from the deep-sea floor of Sagami Sea on the Pacific side of central Honshu, Japan. The description was published in an illustrated encyclopedia of Japanese animals. In this publication, the body size and general morphology of this species were briefly introduced, but several important taxonomic characters were not noted in detail. The number, shape, and arrangement of the idiosomal plates, the idiosomal chaetotaxy, and the leg chaetotaxy are important characters for the classification of halacarid mites, but these characters are not clearly mentioned or depicted in the original description and figure. A pronounced frontal projection of the anterodorsal plate, which is one of the important discriminating characters for *Halacarus* species, is noted in the original description, but this feature is shared with a good number of congeners.

Recently, I had the opportunity to join a faunal survey of deep-sea benthic organisms in Sagami Sea, the type locality of *H. spongiphilus*. During this survey, two specimens of *Halacarus*, one female and one male, were obtained from a deep-sea dictyonine sponge. The morphology of the female specimen accords well with what can be discerned from the original description and illustration of *H. spongiphilus* by Kishida (1927). The male specimen collected simultaneously with the female is identified as conspecific with it because the number, shape, and arrangement of the dorsal plates agree; in both, the anterodorsal plate has a pronounced frontal projection, and two small ocular plates are present. Inasmuch as these features are consistent with those of *H. spongiphilus* according to Kishida