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COMMENTS ON THE TYPE SPECIES OF
THE GENUS TRIGONUROPODA TRÄGÅRDH 1952
(ACARINA : UROPODIDAE)

BY R. B. HALLIDAY *

ABSTRACT : The genus Trigonuropoda was described by Trägårdh 1952, with type species Urodinychus polyphemus Vitzthum 1935. Trägårdh and Vitzthum based their taxa on two different series of specimens. Hirschmann later considered that Trägårdh and Vitzthum had been examining two different species, and created the new name T. tragardhi Hirschmann 1975 for T. polyphemus sensu Trägårdh. This action led to confusion as to the identity of the type species of the genus. However, the characters that Hirschmann used to separate the two species are not valid. T. tragardhi Hirschmann 1975 is a synonym of T. polyphemus (Vitzthum 1935), and the latter is the type species of the genus.


INTRODUCTION

Vitzthum (1935) described Urodinychus polyphemus (Acarina : Uropodidae) from an unspecified number of male specimens from Tahiti. Trägårdh (1952) later recorded male and female specimens of U. polyphemus from southeastern Polynesia. Trägårdh (1952) also designated U. polyphemus as the type species of his new genus Trigonuropoda, with his concept of the species based on the latter

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collection of specimens. TRÄGÅRDH noted that "there are quite a few differences between my specimens and VITZTHUM’s description and figures ", but dismissed these differences as artefacts. However, HIRSCHMANN (1975a, 1975b, 1975c) considered that TRÄGÅRDH’s specimens were not conspecific with VITZTHUM’s, and used the former as the types of a new species, *T. tragardhi* Hirschmann 1975a. If HIRSCHMANN’s decision was correct, the type species of *Trigonuropoda*, *T. polyphemus*, must be considered as being based on misidentified specimens. The problem of a genus with a misidentified type species must be formally presented to the International Commission for Zoological Nomenclature for resolution. The purpose of this paper is to draw attention to this problem, and to present the relevant taxonomic and nomenclatural information required for its resolution.

**Abbreviations** — ZMUH : Zoologisches Institut und Zoologisches Museum, Universität Hamburg, Martin-Luther-King Platz 3, D-20146 Hamburg, Germany; ZSM : Zoologische Staatssammlung, Münchhausenstrasse 21, D-81247 München, Germany.

**Trigonuropoda Trägårdh**
(Figs. 1-3)

*Trigonuropoda Trägårdh* 1952 : 77.

**Type species — Trigonuropoda polyphemus** (Vitzthum 1935), by original designation.

**Trigonuropoda polyphemus** (Vitzthum)
(Figs. 1, 2A, 2C, 2E, 3A)

*Urodinychus polyphemus* Vitzthum 1935 : 154, fig. 3. HIRSCHMANN and ZIRNGIEBL-NICOL 1962 : 59, 72, pl. 22, figs. 17HM, 17TRM, 17CHM (twice), pl. 25, figs. 3VW, 3TM, 3RM, 3VM.

*Trigonuropoda polyphemus* : HIRSCHMANN and Hutu 1974 : 35. HIRSCHMANN 1975b : 62; HIRSCHMANN 1975c : 81, figs. 73RM, 73VM.


**NOTE:** Dr Egon Popp (personal communication, 1993) has kindly informed me that this single slide carries the only specimen of *T. polyphemus* in the Zoologische Staatssammlung, München.

**Trigonuropoda tragardhi** Hirschmann
(Figs. 1B, 1C, 2B, 2D, 2F, 3B)


*Trigonuropoda polyphemus* : TRÄGÅRDH 1952 : 77, figs. 57-59.


**Notes:** The specimens listed are syntypes, but are not labelled *T. tragardhi*. They should have been deposited in the Bernice P. Bishop Museum, Honolulu, but were eventually located in ZMUH.

The name *T. tragardhi* in the catalogue of HIRSCHMANN and Hutu (1974) was not accompanied by any description or illustration and is a
Fig. 1: Trigonocephala spp., males, pre-dorsal pit.
nomen nudum. It was first made available by its appearance in the identification key on page 59 of HIRSCHMANN (1975a). The name tragardhi appeared in HIRSCHMANN (1975b : 62) and HIRSCHMANN (1975c : 81) incorrectly accompanied by the designation "nov. spec.". It was consistently presented in these works as trāgardhi until emended to traegardhi by HIRSCHMANN and WISNIEWSKI (1993). However, since the name TrāGĀRDH is Swedish and not German, the correct spelling is tragardhi (International Code of Zoological Nomenclature, Articles 27, 32(e)(vi), 32(d)(i)(2)). HIRSCHMANN (1979) and HIRSCHMANN and WISNIEWSKI (1993) recorded this species from Australia as well as Polynesia.
This record of *tragardhi* from Australia is incorrect, apparently based on Trägårdh’s use of the name Austral Islands (= Tubuai Islands, 23°23' S 149°27' W).

**DISCUSSION**

Hirschmann (1975a : 59, 1975c : 81) pointed to a series of taxonomic differences between the two species, as detailed in Table 1. It appears as if Hirschmann made these interpretations on the basis of published descriptions and illustrations, without personally examining the relevant specimens. The identification key that distinguishes these species in Hirschmann (1975a) refers to the male of *T. polyphemus* (his Figure 72, taken from Vitzthum) and the female of *T. tragardhi* (his Figure 73, taken from Trägårdh). However, Trägårdh (1952) examined both sexes of *T. polyphemus* sensu Trägårdh, and found the shape and structure of the dorsal shields to be the same in the two sexes, except for the genital opening, in the intercoxal region of the ventral surface.

It is now possible to re-interpret these characters on the basis of a direct comparison of the specimens concerned: (1) I have been unable to detect any difference between the shape of the pre-dorsal pit in the male of *T. polyphemus* and either the male or female of *T. tragardhi* (Figs. 1A-C). (2) The ridge that forms the posterior edge of the pre-dorsal pit of *T. tragardhi* is slightly uneven, but does not form 3 distinct arches (Figs. 1B, 1C). (2) The pits that ornament the dorsal shield of *T. tragardhi* are circular, not oval (Fig 2B), and are the same size as those in *T. polyphemus* (Fig 2A). (4) The posterior area of the dorsal surface is ornamented with pits in

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**FIG. 3 : Trigonuropoda spp., males, postero-marginal dorsal shield setae.**


<table>
<thead>
<tr>
<th>Character</th>
<th><em>T. polyphemus</em></th>
<th><em>T. tragardhi</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Shape of predorsal pit</td>
<td>narrower</td>
<td>wider</td>
</tr>
<tr>
<td>2. Posterior edge of predorsal pit</td>
<td>1 arch</td>
<td>3 arches</td>
</tr>
<tr>
<td>3. Dorsal shield ornamentation pits</td>
<td>smaller, circular</td>
<td>larger, oval shaped</td>
</tr>
<tr>
<td>4. Post-dorsal strip</td>
<td>narrower, smooth</td>
<td>wider, pitted</td>
</tr>
<tr>
<td>5. Ventral idiosoma ornamentation pits</td>
<td>smaller, circular</td>
<td>larger, oval shaped</td>
</tr>
<tr>
<td>6. Dorsal and marginal body setae</td>
<td>shorter, narrow basally</td>
<td>longer, wider basally</td>
</tr>
<tr>
<td>7. Ventral idiosoma setae</td>
<td>shorter, narrow basally</td>
<td>longer, wider basally</td>
</tr>
</tbody>
</table>

**Table 1 : Differences between Trigonuropoda polyphemus and T. tragardhi, according to Hirschmann (1975a, 1975c).**
both species (Figs. 2C, 2D). (5) The pits that ornament the ventral idiosoma of the male are the same shape and size in the two species (Figs. 2E, 2F). (6) The marginal dorsal shield setae are of similar length and shape in the two species (Figs. 3A, 3B). The setae in the central area of the dorsal shield of the single available specimen of *T. polyphemus* are all missing or broken. Those on the marginal shield have a mean length of 22.7 μm (range 20.0-25.0, n = 9, 3.4% of shield length). The corresponding setae in *T. tragardhi* have a mean length of 20.0 μm (range 18.3-21.7, n = 7, 3.2% of shield length). These setae in both species are uniform in thickness for most of their length, and narrow towards the tip. (7) The ventral idiosomal setae are similar in length and morphology in the two species. The only discernible ventral idiosomal setae in *T. polyphemus* are those lateral of the anus. These have a mean length of 19.2 μm (range 13.3-25.0, n = 6). The same setae in *T. tragardhi* have a mean length of 18.6 μm (range 16.7-21.7, n = 6).

The fact that *T. polyphemus* is known only from a single broken male specimen limits the number of characters that are available for study. However, on the basis of the characters detailed above, and further comparison of the specimens, I am unable to distinguish *T. tragardhi* Hirschmann 1975a from *T. polyphemus* (Vitzthum). The apparent differences noted by HIRSCHMANN are due only to differences between the illustrations of VITZTHUM and TRAGARDH (TRAGARDH’s illustrations were actually prepared by Dr M. SELNICK), and are not apparent in the specimens themselves. For example, TRAGARDH drew attention to the fact that the dorsal shield has a central “almost hexagonal” median area of ornamentation, flanked by smoother lateral strips. This pattern is also present in *T. polyphemus*, although it is not clearly visible in the illustration of VITZTHUM (1935).

In view of this evidence I consider *Trigonuropoda tragardhi* Hirschmann, 1975 to be a junior subjective synonym of *Trigonuropoda polyphemus* (Vitzthum, 1935). The type species of the genus *Trigonuropoda* Trägårdh 1952 remains undisturbed as *T. polyphemus* (Vitzthum 1935).

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