

***Pseudomarthana*, a new genus of opilionids
from Malaysia (Opiliones: Phalangodidae)**

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Summary

Pseudomarthana conspicua n. gen., n. sp., is described from Pulau Tioman, Malaysia, as a member of the family Phalangodidae, sub-family Phalangodinae.

Introduction

Through the kindness of Dr H. W. Levi of the Museum of Comparative Zoology, Harvard, the author had an opportunity to examine a collection of opilionids made on the island of Tioman, West Malaysia, by W. C. Sedgwick in 1981. This collection was found to contain six specimens of an opilionid with a striking appearance; it belongs to the sub-order Laniatores and is new to science.

South East Asian laniatorids usually have a modest, cryptic appearance but this animal is almost black with a conspicuous white tubercle on the dorsum. Together with relatively long legs it resembles certain opilionids of the sub-order Palpatores. This may be significant considering the scarcity of palpatoids on Tioman where, as far as it is known, only one species has been found (*Gagrella insulana* Rwr.). By contrast, palpatoids are abundant on the Malaysian mainland.

Pulau Tioman is an island of approximately 100 sq km which lies about 33 km from the east coast of peninsular Malaysia. The terrain is mostly steeply sloping and is predominantly covered in virgin forest. The climate is humid but somewhat seasonal with most of the rainfall occurring during the NE monsoon (October to February). The island's geological history includes a period during the Pleistocene when it was connected to both the peninsula and the island of Borneo (Lee *et al.*, 1977).

*In *Vima insignis* Hirst (subfam. Tricommatinae) of Guyana, a smaller but similar tubercle arises from areas II and III.

Family PHALANGODIDAE Simon 1879

Sub-family Phalangodinae Roewer 1912

***Pseudomarthana*, new genus**

Type species: *Pseudomarthana conspicua* n. sp.

Diagnosis of genus

Distinguished from known genera of the sub-family Phalangodinae by the presence of a single, broad tubercle arising uniquely* from tergal areas III and IV. Additionally distinct from other West Malaysian Phalangodinae by a single, elongate tubercle on the ocular mound and 9 (or 10) segments on tarsus IV.

Description of genus

Medium sized opilionid. Ocular mound with single, elongate tubercle. Abdominal portion of scute with five areas, first area without median line. Third and fourth areas together surmounted by single, large tubercle. Remainder of dorsum, and sternites, without prominent spination or tuberculations. Chelicerae normal, not enlarged in either sex; proximal segment with dorsal elevation. Pedipalp typical of the sub-family and not, by itself, distinguishable from *Tithaeus* Thorell. Pedipalp femur with one medial-distal and three ventral spine-tipped tubercles. Legs relatively long; distitarsus I and II each with two segments. Tarsal segmentation: 6-7, 16-19, 7-8, 9-10.

***Pseudomarthana conspicua* n. sp. (Figs. 1-11)**

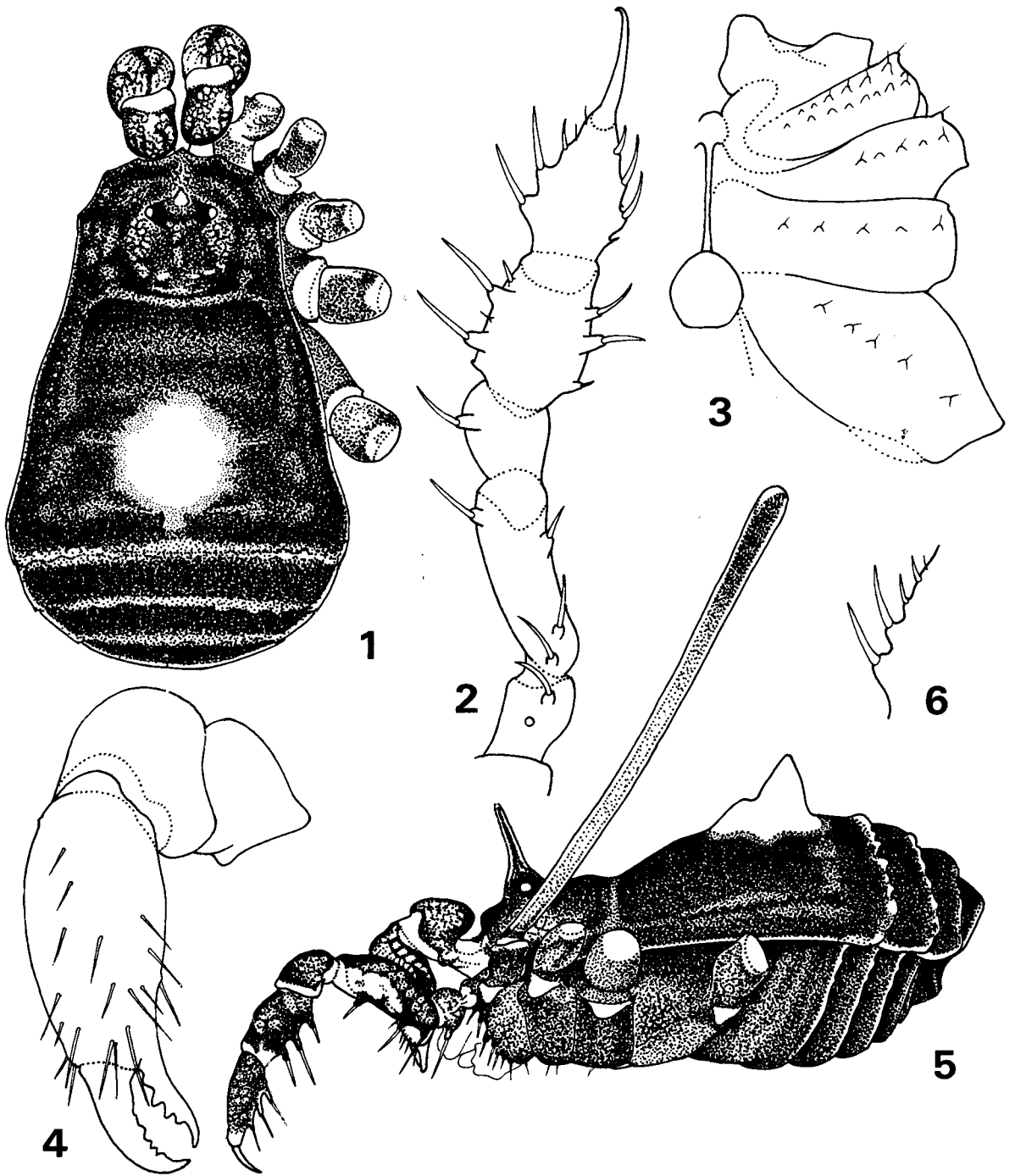
Material: West Malaysia, Pahang, Pulau Tioman, lowland forest near Kampong Tekek (2°48'N, 104°12'E).

Female holotype, three female paratypes and one male paratype collected 25 June 1981 by W. C. Sedgwick, deposited in the Museum of Comparative Zoology, Harvard University, Cambridge, MA 02138, USA. Also one female paratype, same collection, deposited in the British Museum (Natural History), registered number BMNH 1984.10.30.1.

Etymology: The name of the genus signifies a superficial similarity with *Marthana* (Palpatores: Gagrellidae). The specific epithet refers to its striking appearance. The gender is feminine.

Female holotype: Total length 4.8 mm, scute length 3.2 mm, greatest width 3.0 mm.

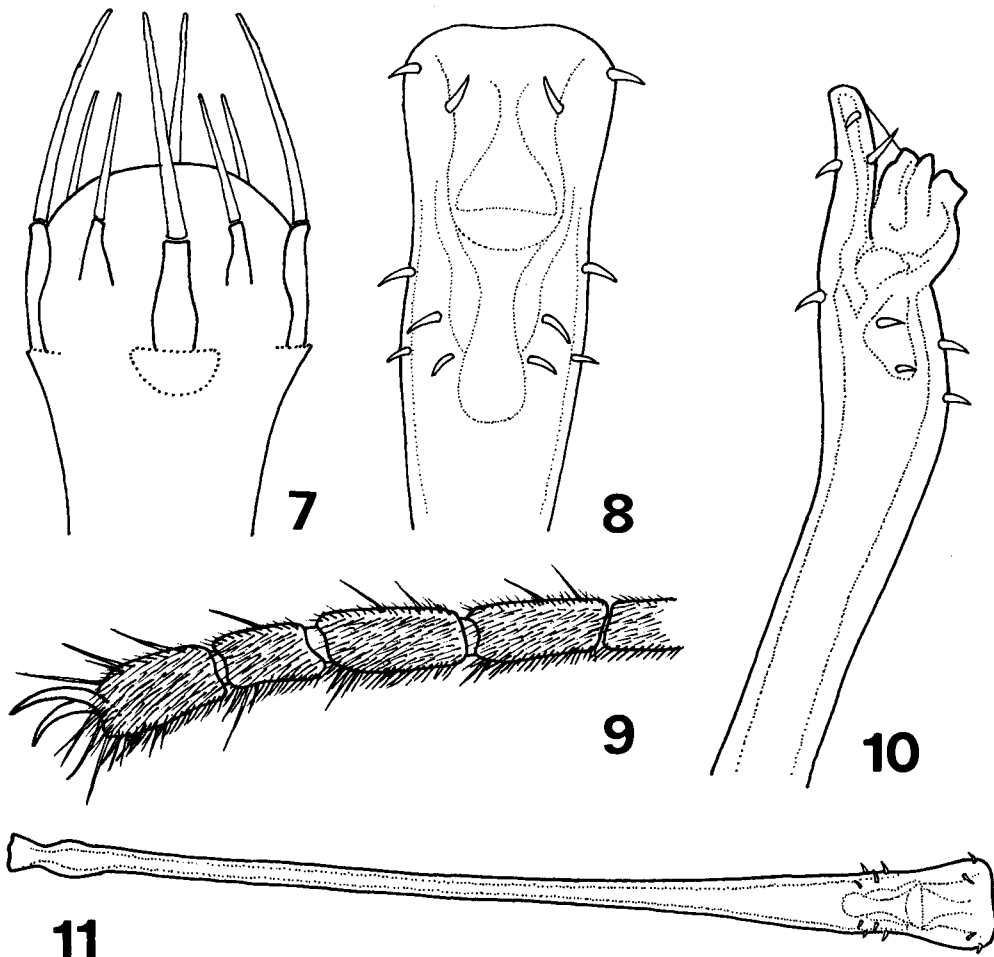
Body somewhat pyriform in shape, abdomen



Figs. 1-6: *Pseudomarthana conspicua* n. gen., n. sp. 1-5 Female holotype. 1 Dorsal view; 2 Left pedipalp, ventral view; 3 Sternocoxal region; 4 Right chelicera, dorsal view; 5 Lateral view including femur I; 6 Male paratype, prolateral margin of left pedipalp tarsus.

broadly rounded behind (Figs. 1, 5). Surface of dorsum smooth except for line of low, blunt tubercles close to lateral margin. Ocular mound wider than long and surmounted by single tubercle of twice its height. Eyes separated by a distance similar to that from eyes to anterior margin of carapace. Scutal groove well marked. Abdominal portion of scute with five tergal areas, weakly delineated. Areas I, II and V unarmed but areas III and IV together surmounted by single, large white tubercle contrasting strongly with the dark brown, almost black opisthosoma. Carapace rather less dark and patterned with intricate reticulation. Free tergites very dark but posterior margins

whitish (also post. margin of scute). Anal plate smooth and almost black. Each sternite brown with black median stripe and whitish post. margin. Stigma clearly visible. Coxae I-IV (Fig. 3) brown, reticulated with black and armed with rows of small, hair-tipped tubercles. Coxa I has three or four slightly enlarged tubercles distally on anterior margin. Coxa II lacks a spine on the maxillary lobe. Chelicerae (Fig. 4) of modest proportions, yellow, strongly reticulated and smooth except for scattered setae. Pedipalp (Fig. 2) length 3.2 mm; each segment short, thick and armed with spine-tipped tubercles as follows: trochanter, 1 ventral; femur, 1 medial-distal and 3 ventral;



Figs. 7-11: *Pseudomarthana conspicua* n. gen., n. sp. 7 Ovipositor; 8 Distal end of penis (unexpanded), ventral view; 9 Distal portion of leg IV tarsus; 10 Distal end of penis (unexpanded), lateral view; 11 Entire penis, ventral view.

patella, 1 medial-distal; tibia, flattened ventrally, retrolateral margin 1 small and 2 large, prolateral margin 3 minute to small and 2 large; tarsus, flattened ventrally, retro- and prolateral margins each with 1 small and 2 large.

Legs long and smooth, orange smeared with black particularly on distal femora, patellae, metatarsi and tarsi. Tarsal segmentation (with variation among paratypes in parentheses): 7 (6-7), L 19 R 18 (16-19), 7 (7-9), 9 (9-10). Distitarsus I and II each with 2 segments. Double claws of tarsi III & IV simple, untoothed, no scopulae (Fig. 9). Length of legs in mm (variation among paratypes in parentheses):

	I	II	III	IV
Total:	17.4 (16.9-17.5)	38.0 (36.7-38.3)	20.1 (20.0-20.2)	27.5 (27.4-27.6)
Femur:	4.9 (4.5-4.9)	9.1 (8.9-9.2)	5.9 (5.9-6.0)	7.2 (7.2-7.3)

Ovipositor (Fig. 7): The apical portion is furnished with four long and four moderately long, articulated setae.

Male paratype: Not easily distinguishable from the female on somatic characters alone. The male differs only in the following respects:

Total length 3.8 mm, scute length 3.0 mm, greatest width 2.6 mm. Pedipalp exhibits minor dimorphism in the possession of an extra (distal) spine-

tipped tubercle on the prolateral margin of the tarsus (Fig. 6). Length of legs (mm):

	I	II	III	IV
Total:	19.1	42.2	22.9	30.2
Femur:	5.2	10.1	6.1	7.9

Penis (Figs. 8, 10, 11): Shaft widened distally where ventral surface is provided with four superior setae and eight inferior setae.

Discussion

Because of its five tergal areas, presence of an ocular mound, unarmed femur I, lack of tarsal scopulae and distitarsus I of two segments, this opilionid is undoubtedly a member of the sub-family Phalangodinae. However, it exhibits somatic characters (see diagnosis) which are not found elsewhere in existing genera. Indeed, the animal's morphology differs to a degree that cannot be accommodated in any known genus; it has thus required the creation of a new genus. For an indication of the morphological distances see Table 1.

The creation of another monotypic genus in the manner of Roewer is unfortunate but difficult to avoid in the absence of revisionary works at generic and sub-family levels. Relationships will become clearer in the event of wide-scale revisions which

	Segments on ta IV	Ocular mound and armature	Tergal area I	Tubercles on tergal areas 1-5
<i>Tithaeus</i> Thorell <i>Heterobabrius</i> Rwr.*	6	smooth or with minor granules	undivided	none
<i>Beloniscus</i> Thor.	7 or 8	pair of pointed tubercles	divided	two on A2, and occas. A3 also
<i>Tweedellus</i> Rwr.*	6	mound elevated, smooth	undivided	none
<i>Biconibunus</i> Rwr.* <i>Johorella</i> Rwr.*	6 or 7	pair of tubercles	undivided	two or four on A2, A3 and A4
<i>Bupares</i> Thorell	6 or 7	mound low, a short tubercle over each eye	undivided	A1-5 finely toothed
<i>Pseudomarthana</i> n. gen.	9 or 10	single elongate tubercle	undivided	single, broad tubercle A3-4

Table 1: Key features of West Malaysian Phalangodinae (*data from literature, Roewer, 1923, 1949).

recognise the importance of genital characters. As yet, only in the relatively large genus *Tithaeus* have figures of male genitalia enabled comparisons to be made within S.E. Asian Phalangodinae (Suzuki, 1969, 1972; Hillyard, unpubl.). In the species of *Tithaeus* examined, with one exception, the possession of six setae (2 superior, 4 inferior), on the ventral surface of the distal end of the penis, appears to be a reasonably consistent character. In *Pseudomarthana conspicua* there are twice that number; how the organs of the other genera compare remains to be seen.

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