

A second collection of Pseudoscorpionidea from Malaya¹

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MY THANKS are due to Mr. M. W. F. Tweedie, Director of the Raffles Museum at Singapore, for submitting to me for study a small collection of Pseudoscorpionidea made by him in the Malay Peninsula in 1934 and 1935. An account of the eight species represented follows; three of them are new, and the types will be deposited in the Natural History Museum, Vienna.

Ditha pahangica sp. n. (Fig. 1)

Carapace a little longer than broad, densely and very distinctly reticulated, the oral border of the sculpture-cells squamiform and somewhat projecting; the disc with 88 short, stout bristles, of which 10 stand on the front and 8 on the hind border, those on the anterior border longer than the others; a shallow transverse depression just in front of the hind border; the front border medially depressed and deeply notched, in this incision a broad, denticulated epistome, which does not surpass the front margin. All four eyes well developed, the posterior pair somewhat smaller than the anterior. Chaetotaxy of the abdominal tergites: $12 - \frac{2}{12} - \frac{6}{12} - \frac{6}{12}$ etc., the bristles of the anterior row small. The palm of the chelicerae with 6 bristles, of which the lateral accessory seta is very small. Both cheliceral fingers with a robust, blunt subapical tooth, proximally with a row of smaller teeth. The pedipalps smooth. Hand relatively narrow, 1.9 times, the chela 4.2 times, as long as broad. Fingers 1.35 times longer than the hand, both with about 50 minute, blunt, contiguous marginal teeth. The tactile setae disposed typically for the genus, *st* of the movable finger situated almost in the middle of the finger, removed equally from *sb* and *t* by the distance of about three areolar diameters; *t* removed from the tip of the finger as far as *sb* from the base. The coxae of the first and second legs each with a row of 5 nearly simple coxal spines; a bristle-bearing intercoxal tubercle is absent. The second joint of the hind tarsus nearly twice as long as the first.

¹ A previous report on Malayan Pseudoscorpions by Dr. Beier is in the Bulletin of the Raffles Museum, 24 (1952): 96-108.

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Length of body (δ), 1.1 mm.; palpal hand, length 0.27 mm., breadth 0.15 mm., fingers, length 0.38 mm.

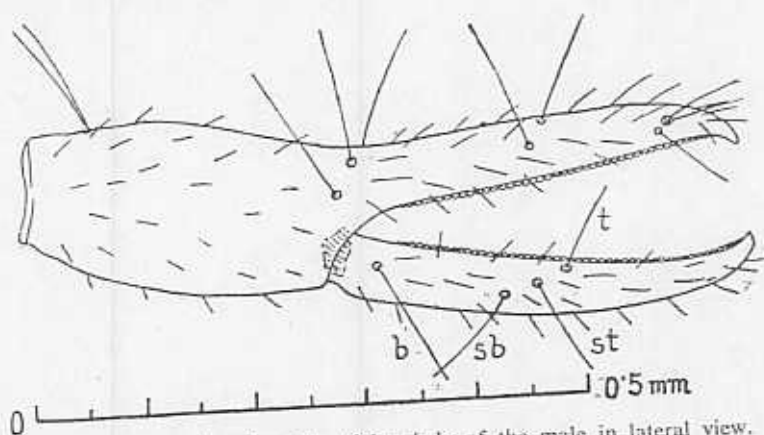


Fig. 1. *Ditha pahangica* n.sp., right chela of the male in lateral view.

Type: A male from the Telom Valley, near Gunong Siku, Cameron Highlands, Pahang, 3.1935. 4,500 feet.

Closely related to *D. sumatraensis* (Chamb.), but the carapace more distinctly reticulated and with a considerably greater number of bristles, and the palpal fingers shorter in relation to the hand.

The species *sumatraensis* must be removed from the genus *Heterolophus*, which has the carapace perfectly smooth and the abdominal tergites uniseriate, to *Ditha* (= *Paraditha*), which has the carapace reticulate and the abdominal tergites biseriate. The presence or absence of the intercoxal tubercle in the genus *Ditha* is not a criterion of generic value, and this is also true of the number of the accessory setae of the palm of the chelicerae. These two characters distinguish at most different subgenera. *Ditha* s. str. (palm of chelicera with 10 to 12 accessory bristles, intercoxal tubercle always present; Philippine Islands and Molucca Archipelago) includes, therefore, the species *elegans* Chamb. and *philippinensis* Chamb. The subgenus *Paraditha* Beier (palm of chelicera with only one accessory bristle, intercoxal tubercle often indistinct or absent; Africa and South-East Asia) contains the species *sinuata* (Tullgr.), *latimana* (Beier), *tonkinensis* Beier, *laosana* Beier, *sumatraensis* (Chamb.) and *pahangica* sp. n.

Tyrannochthonius (Lagynochthonius) paucedentatus sp. n. (Fig. 2)

Carapace somewhat longer than broad, slightly but distinctly narrowed towards the base, without any epistome, with 14 stout but not very long bristles, of which two stand before the deeply arched

hind margin; only the region of the posterior corners perceptibly sculptured. Both pairs of eyes well developed and large, with the lens vaulted. The two first abdominal tergites each with two, the following with four, stiff marginal bristles. The fixed finger of the chelicerae with a robust and acute tooth near the middle, proximal to which are six smaller teeth; the movable finger also with a robust tooth in the middle, with smaller teeth on each side of it, six distally and five proximally. The pedipalps slender, the femur medially with three to four small bristle-bearing tubercles. The hand distally constricted all round and bottle-shaped, 2.6 times, the chela 5 times, as long as broad. The fingers relatively short, not longer than the hand, the fixed one with 12 marginal teeth, well separated from each other and growing smaller towards the base, the spaces without secondary teeth; the movable finger distally with six marginal teeth in addition to a completely toothless lamina. The disposition of the tactile setae regular. The coxae of the second legs with a row of about ten coxal spines; intercoxal tubercle wanting. Length of body (♀), 2 mm.; palpal hand, length 0.58 mm., breadth 0.22 mm., fingers, length 0.56 mm.

Type: A female from Kuala Terla, Telom Valley, Cameron Highlands, Pahang, 4,000 to 4,500 feet, 3.1935.

The new species differs from *T. johni* (Red.) from Sumatra and Java and from *T. tonkinensis* Beier from Tonkin by the following characters: the absence of a projecting epistome, the well developed eyes, the less numerous bristles of the carapace and abdominal tergites, the presence of a robust tooth on the middle of the movable finger of the chelicerae, the relatively short palpal fingers, the smaller number of teeth on the fixed finger, and the absence of intercalary or accessory teeth on the fingers.

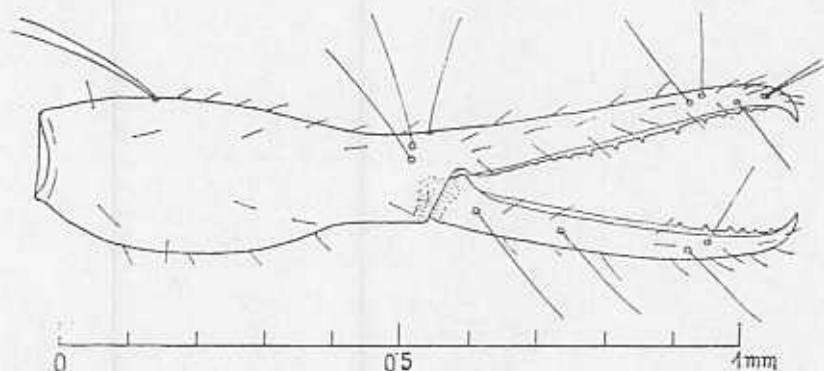


Fig. 2. *Tyrannochthonius* (*Lagynochthonius*) *paucedentatus* n.sp., right chela of the female in lateral view.

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Pseudochiridium clavigerum (Thor.). (Fig. 3, 4)

76 males and 86 females from bat guano in a cave at Bukit Chintamani, near Bentong, Pahang, 8.1935.

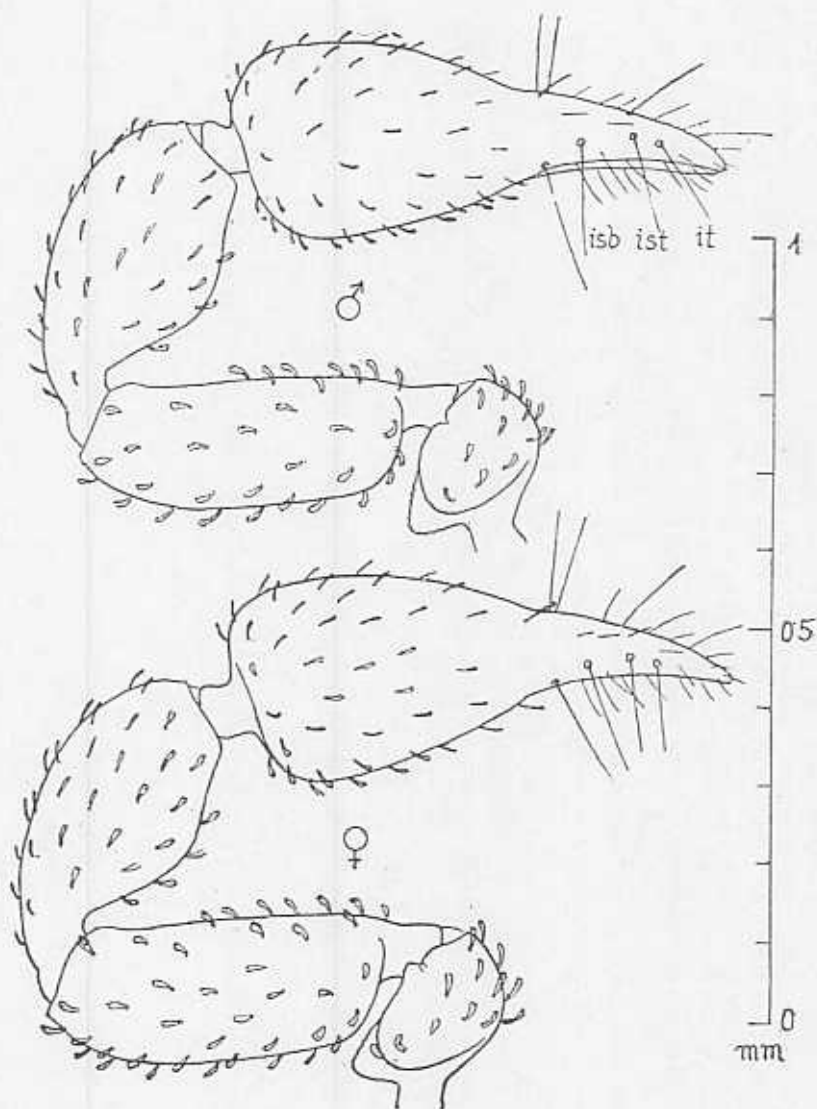


Fig. 3. *Pseudochiridium clavigerum* (Thor.). left pedipalp of male and female.

This species is often mentioned but has never been described in detail, and the male has remained hitherto unknown. This copious series of both sexes enables me now to give an exact description.

Carapace as long as broad at the hind margin, strongly and conically constricted and suborally slightly sinuate, irregularly beset with sharp, coarse granules, the granulation considerably finer orally; both transverse furrows very deep and sharply incised, the front one straight and granulated inside, the hind one smooth and distant nearly three times as far from the front furrow as from the hind margin, which is obtusely angled. Eye spots small and indistinct. The abdomen keeled, with the tergites divided and obtusely angled, coarsely and irregularly granulated, with the hind margin slightly sinuate towards the middle; each half tergite with a row of 8 to 11 thick and strongly clavate bristles. The sternites finely granulated, with the bristles dentate and on the hinder segments even slightly clavate. The anus situated ventrally. The palm of the chelicerae with 5 bristles. Galca divided from the base into two branches, which are spike-shaped in the male, but stout and subdivided, one into 3, the other into 4, branches in the female. The palps, including the hand and the base of the fingers, densely and coarsely granulate. The ventral trochantral tubercle rounded and conical. Femur 2.8 to 3 times, tibia 2 to 2.1 times, hand 1.6 to 1.7 times, chela, with the peduncle, 2.7 to 2.8 times, without the stalk, 2.4 to 2.5 times as long as broad. The fixed finger with 12 tactile setae, *ist* distinctly nearer to *it* than to *isb*, *it* situated some distance distally of the middle of the finger. All the coxae densely and rather finely granulate; the posterior coxae of the male enlarged caudally in the shape of a flap, but somewhat longer than broad, with the medial borders divergent and slightly sinuate, and including the densely hirsute genital area; those of the

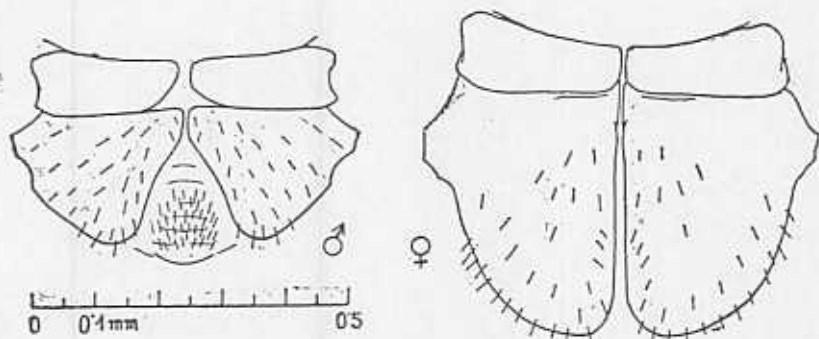


Fig. 4. *Pseudochiridium clavigerum* (Thor.), coxae of the 4th pair of legs of male and female.

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female widely expanded, much broader than long, almost touching each other in the median line throughout their length, and covering the genital area. The egg-packet is covered for the most part by the hinder coxae, only its caudal margin projecting.

Paratemnus plebejus (With)

10 ♂, 24 ♀, Bukit Chintamani near Bentong, Pahang, from bat guano in a cave, 8.1935; 18 ♂, 63 ♀, 30 juv. (deutero- and tritonymphs), Kaki Bukit, Perlis, from a limestone cave, probably in bat guano, 12.1935; 3 ♂, 18 ♀, 25 juv. (deutero- and tritonymphs), Penang Hill, under bark of dead trees, 4.1935.

Anatemnus angustus Redikorzev

One male, Telom Valley, near Gunong Siku, Cameron Highlands, Pahang, about 4,500 feet, 3.1935; one female, Gunong Pulau, Johore, under bark, 4.1934.

Hitherto this species was known only from the higher mountains of southern Annam.

Metawithius (Metawithius) spiniventer Redikorzev

One male, Kuala Terla, Telom Valley, Cameron Highlands, Pahang, 4,000 to 4,500 feet, 3.1935.

A typical specimen with the measurements of the palps as follows: femur, length 0.92 mm., breadth 0.28 mm., tibia, length 0.98 mm., breadth 0.30 mm., hand, length 0.90 mm., breadth 0.40 mm., fingers, length 0.56 mm.

Metawithius (Microwithius) tweediei sp.n. (Fig. 5)

The carapace densely and rather finely granulated, very distinctly constricted from the middle towards the base, appearing tumiform a little before the middle; the transverse furrows flat, granulated within, shallow and rather indistinct, especially the hinder one, which lies a little nearer to the base than to the anterior furrow, which is strongly arched forwards at the sides; the mesozona lighter in colour with a dark median longitudinal stripe. Eye spots large and distinct. The abdominal tergites transversely granulated, the male with the first and the last two, the female with only the last, undivided; the three anterior segments with five marginal bristles on each half tergite, the fourth with five marginal and one lateral border bristles, the following half tergites each with four marginal bristles, one lateral border, one medial border and one discal bristle; all the bristles short and distinctly clavate, those of the anterior segments even rather strongly so. The last tergite with four

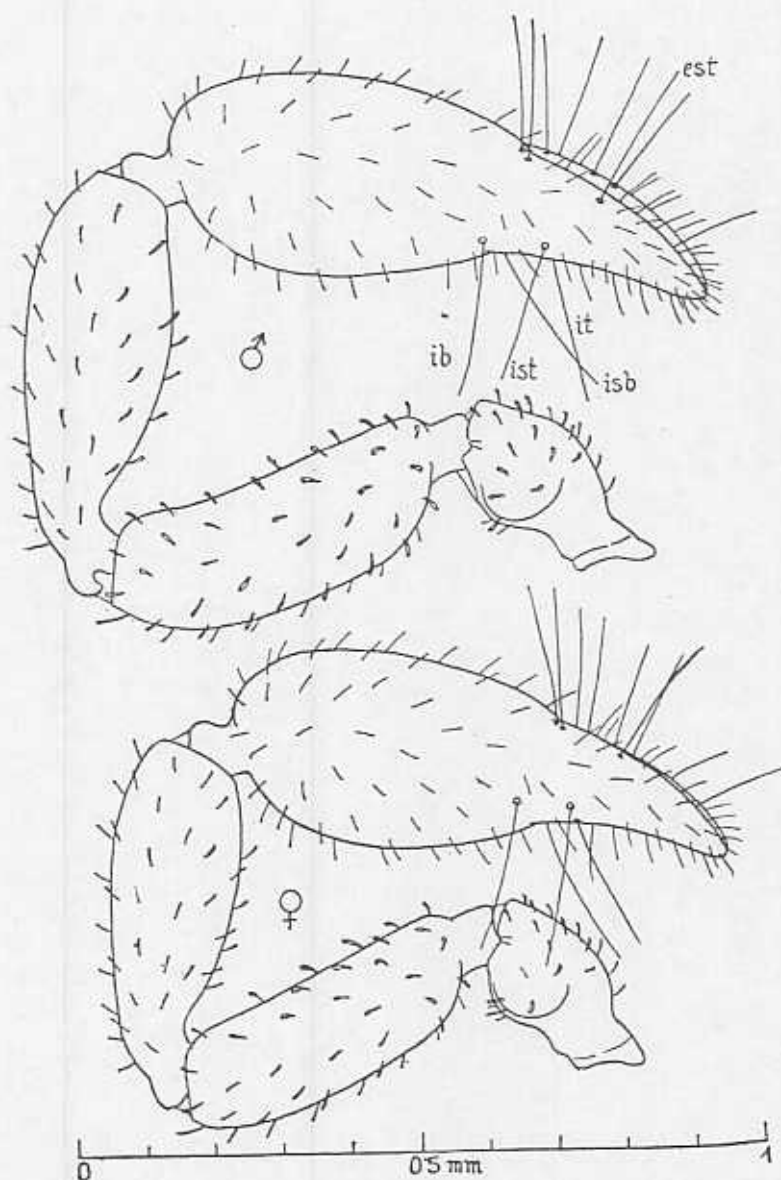


Fig. 5. *Metawithius (Microwithius) tweediei* n.sp., left pedipalp of male and female.

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tactile bristles. The bristles of the sternites simple. The sternites 5 to 9 of the male with paired, roundish areas near the median line, each with 20 to 25 closely approximated, rather long and acute conical sensory spines. Galea slender, with very short terminal branches in both sexes. Serrula with 18 blades. The fourth bristle of the flagellum only sporadically toothed. Palps densely granulated except on the hands, the bristles of the trochanter and femur, and to a lesser degree also those of the medial side of the tibia, very distinctly clavate. The dorsal tubercle of the trochanter small, the ventral one almost completely flattened. Femur 3 to 3.1 times, tibia 2.8 to 3 times, hand 1.9 to 2 times, chela, with the peduncle, 2.9 to 3 times, without the peduncle, 2.6 to 2.7 times as long as broad. The fingers short and clumsy, considerably shorter than the hand without the stalk, and only a little longer than their own breadth. The tactile setae *ib*, *isb*, *ist* and *it* of the fixed finger close together forming a cluster near its base the two last opposite each other; the tactile seta *st* of the movable finger nearer to *t* than to *sb*. The legs robust, femur of the fourth pair 2.6 times, tibia 4 times, tarsus 5.5 times as long as broad, the tactile bristle of the last situated distinctly distad of the middle of the joint. Length of the body (δ φ) 1.8 to 2.2 mm.; pedipalps: (δ) femur, length 0.58 mm., breadth 0.19 mm., tibia, length 0.62 mm., breadth 0.21 mm., hand, length 0.60 mm., breadth 0.30 mm., fingers, length 0.35 mm.; (φ) femur, length 0.52 mm., breadth 0.17 mm., tibia, length 0.54 mm., breadth 0.19 mm., hand, length 0.54 mm., breadth 0.28 mm., fingers, length 0.31 mm.

Types: a male and a female from the Telom Valley, near Gunong Siku, Cameron Highlands, Pahang, about 4,500 feet, 3.1935.

Paratype: A male from Kuala Terla, also in the Telom Valley and at about the same altitude, 3.1935 (Vienna Museum).

The new species is referred to *Microwithius* Redikorzev because the tactile bristle is situated a little distad of the middle of the tarsus of the fourth leg, and the areas of the male abdominal sternites with sensory spines are small and rounded. It forms, however, a transition to *Metawithius* Chamberlin because the sensory areas are on the sternites 5 to 9 of the male. It follows that *Microwithius* is evidently so closely related to *Metawithius* that it is best regarded as a subgenus of the latter. From *M. yurii* (Red.) the new species differs by the more slender palps, by the greater number of the abdominal tergal bristles and of the blades of the serrula, and by the occurrence of sensory areas on sternites 5 to 9 of the male. From the true *Metawithius*-species it is easily distinguished by the tactile bristle of the tarsus of the fourth pair of legs being situated distally of the middle of the joint, and by the absence of sensory areas on the fourth sternite of the male.

Sundowithius sumatranus (Thorell)

A female from Telom Valley, near Gunong Siku, Cameron Highlands, Pahang, about 4,500 feet. 3.1935.

Measurements of the palps are: Femur, length 1.32 mm., breadth 0.35 mm., tibia, length 1.48 mm., breadth 0.35 mm., hand, length 1.55 mm., breadth 0.62 mm., fingers, length 0.85 mm. These measurements agree almost perfectly with those of specimens from Sumatra, which is the type locality.