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***Ancystrocerus spatulatus*, a new tmesiphorine species from Tham Sai Yok Noi,  
western Thailand (Coleoptera: Staphylinidae: Pselaphinae)**

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**Abstract:** *Ancystrocerus spatulatus* **sp. nov.** (Pselaphinae: Tmesiphorini) is described and illustrated from Tham Sai Yok Noi, representing the first *Ancystrocerus* species in Thailand.

**Keywords:** Ant-loving beetles - Asia - taxonomy - Tmesiphorini.

## INTRODUCTION

The Oriental genus *Ancystrocerus* Raffray, 1893 of the ant-loving beetle tribe Tmesiphorini is represented by 12 species distributed in the Philippines (1), Indonesia (4), Singapore (3), Malaysia (2), China (2), and India (1) (Raffray, 1911, 1912; Yin *et al.*, 2015; Yin, 2020). Members of this group usually bear elongate maxillary palpi, as well as heavily modified male antennal clubs. The males are easily recognizable by their characteristic modifications of antennomeres 9 and 10 (or the lack of such modification), combined with the structures of the aedeagi and distributions. Other than a single female reported from Kaeng Krachan National Park (Nomura *et al.*, 2010), no species of the genus has been formally described from Thailand. In this paper, *Ancystrocerus spatulatus* **sp. nov.** from Tham Sai Yok Noi in Kanchanaburi Province, western Thailand is diagnosed, described, and separated from its congeners.

## MATERIAL AND METHODS

The type material of the new species described in this paper is deposited in the Muséum d'histoire naturelle, Geneva, Switzerland (MHNG). The label data of the material is quoted verbatim, and a slash (/) is used to separate different labels. The habitus image was taken using a Canon 5D Mark III camera in conjunction with

a Mitutoyo M Plan Apo 7.5x Objective, and two Godox V860III-C TTL Li-Ion flashes were used as the light source. Images of morphological details were produced using a Canon G9 camera mounted to an Olympus CX31 microscope under reflected or transmitted light. Helicon Focus v. 8.2.0 Pro was used for image stacking. All images were modified and grouped into plates using Adobe Photoshop CS5 Extended.

Measurements were taken as follows: total body length was measured from the anterior margin of the clypeus to the apex of the abdomen; head length was measured from the anterior margin of the clypeus to the head base, excluding the cervical constriction; head width was measured across the eyes; the length of the pronotum was measured along the midline, the width of the pronotum equals the maximum width; the length of the elytra was measured along the suture; the width of the elytra was measured as the maximum width across both elytra; the length of the abdomen is the length of the dorsally exposed part of the abdomen along its midline, the width is the maximum width.

The terminology follows Chandler (2001) and Yin (2022). Abdominal tergites and sternites are numbered in Arabic (starting from the first visible segment) and Roman (reflecting true morphological position) numerals, e.g., tergite 1 (IV), or sternite 1 (III). Paired appendages in the description are treated as singular.

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## TAXONOMY

### *Ancystrocerus spatulatus* sp. nov.

Fig. 1

**Type material:** HOLOTYPE; ♂; THAILAND (three labels in handwritten): ‘Thaïlande, distr. Kanchanaburi, Nam Tok, 17.VI.86, Tham Soi Yok Noi / Expédition Thai 86, P. Leclerc / Endogé près de Tham Soi Yok Noi, NAM TOK, KANCHANABURI, P. Leclerc Thai 86, 17.6.86’ (MHNG).

**Diagnosis:** Body length approximately 2.6 mm; dorsal surface of body segments covered with spatulate setae; head with indistinct, punctiform vertexal foveae; maxillary palpus extremely elongate; antennomere 9 and 10 greatly oblique on mesal margins, each with one markedly long and curved tuft of setae, antennomere 11 short, roundly triangular; pronotum only with punctiform median antebasal pit, roughly punctate at base; profemur with stiff setae along ventral margin, protibia distinctly curved and expanded to middle; aedeagus with endophallus composed of single curved sclerite, each paramere with two long apical setae.

**Description:** Body (Fig. 1A) length 2.61 mm; color reddish-brown, tarsi and mouthparts lighter. Surface of basal antennomeres, head, pronotum, elytra and abdomen covered with spatulate setae.

Head (Fig. 1B) lengthily sub-oval, slightly longer than wide, length 0.61 mm, width across eyes 0.53 mm, genal area roundly protruding laterally; vertex flat, barely convex, with tiny, indistinct vertexal foveae (dorsal tentorial pits); antennal insertions barely raised dorsally; frons broadly impressed medially, forming distinct rostrum, confluent with clypeus at middle through median keel; clypeus sharply descending, surface rough, anterior margin rounded and prominent; lacking ocular-mandibular carina. Venter with two tiny gular foveae (posterior tentorial pits) widely separated, lacking median carina or sulcus, anterior part of gular region strongly projecting ventrally. Maxillary palpus with palpomere 1 small, 2 lengthily pedunculate at base and enlarged apically, 3 pedunculate at base for short distance, widened apically, 4 fusiform, markedly elongate, slightly longer than 2. Compound eyes prominent laterally, each composed of approximately 48 ommatidia. Antenna elongate, length 1.81 mm, club (Fig. 1C) formed by enlarged apical three antennomeres; antennomere 1 thick and elongate, subcylindrical, 2-8 each moniliform, 2-5 successively shorter, 5-7 subequal in length, 8 shortest, 9 strongly oblique on lateral margin, broadest and with one long tuft of setae at base, 10 with broad and oblique lateral surface slightly impressed, with markedly long, curved tuft of setae at apicolateral margin, 11 roundly triangular, enlarged, shorter than 9 and 10 combined.

Pronotum (Fig. 1B) longer than wide, length 0.71 mm, width 0.60 mm, widest at middle; sides roundly expanded at widest point and smoothly convergent anteriorly and

posteriorly; disc forming small, acute, tubercle just posterior mid-length, lacking carina or sulcus; with tiny, indistinct median antebasal pit; lacking lateral antebasal or basolateral foveae; roughly punctate at base. Prosternum with anterior part shorter than coxal part at middle, with small lateral procoxal foveae; hypomera fused with sternum, lacking ridge or pit; margin of coxal cavity not carinate.

Elytra much wider than long, length 0.86 mm, width 1.11 mm; each elytron with two large, asetose basal foveae; lacking discal striae; humeri weakly prominent, lacking subhumeral foveae or marginal striae; posterolateral margin with broad notch. Metathoracic wings fully developed.

Mesoventrite almost impunctate, median mesoventral fovea replaced by large, transversely oval opening, with large, setose lateral mesoventral foveae; inter-coxal process short, blunt at apex. Metaventrite confluent with mesoventrite, impunctate, slightly convex admesally; lacking fovea; posterior margin (metaventral process) roundly and narrowly emarginate at middle.

Legs elongate; all femora roughly punctate; protibia widened to middle, strongly arcuate, ventral margin of profemur with row of stiff setae.

Abdomen elongate, widest at posterolateral margins of tergite 1 (IV), length 0.77 mm, width 1.06 mm. Tergite 1 (IV) longest, with broad, deep and setose basal impression, with pair of lateral sockets and basolateral foveae, 2 (V) to 4 (VII) successively shorter, each lacking basal sulcus or fovea, 5 (VIII) transverse, with posterior margin shallowly and broadly emarginate at middle. Sternite 2 (IV) broadly and deeply sulcate at base, with large basolateral sockets, 3 (V) to 5 (VII) each short at middle, subequal in length, lacking fovea, 6 (VIII) strongly transverse, slightly convex at middle of posterior margin.

Aedeagus (Fig. 1D, E) short, length 0.17 mm, stout, dorso-ventrally symmetric; dorsal diaphragm large and oval, median lobe curved at apical portion and narrowing toward apex; parameres short, broad in lateral view, each with two long apical setae; endophallus armature composed of single sclerite strongly curved at middle, apical 1/4 much more strongly sclerotized than rest part. *Female*. Unknown.

**Comparative notes:** Within the genus, *A. spatulatus* sp. nov. has the most greatly modified antennomeres 9 and 10 in the male that each of them bears a markedly long, curved tuft of setae. In addition, the short, subtriangular terminal antennomeres, the spatulate setae of the body segments, and the unique form of the aedeagus readily separates this species from all known congeners.

**Distribution:** Thailand: Kanchanaburi Province.

**Biological and collection information:** The single male was collected from an endogean environment near Tham Soi Yok Noi, as indicated by the label data.

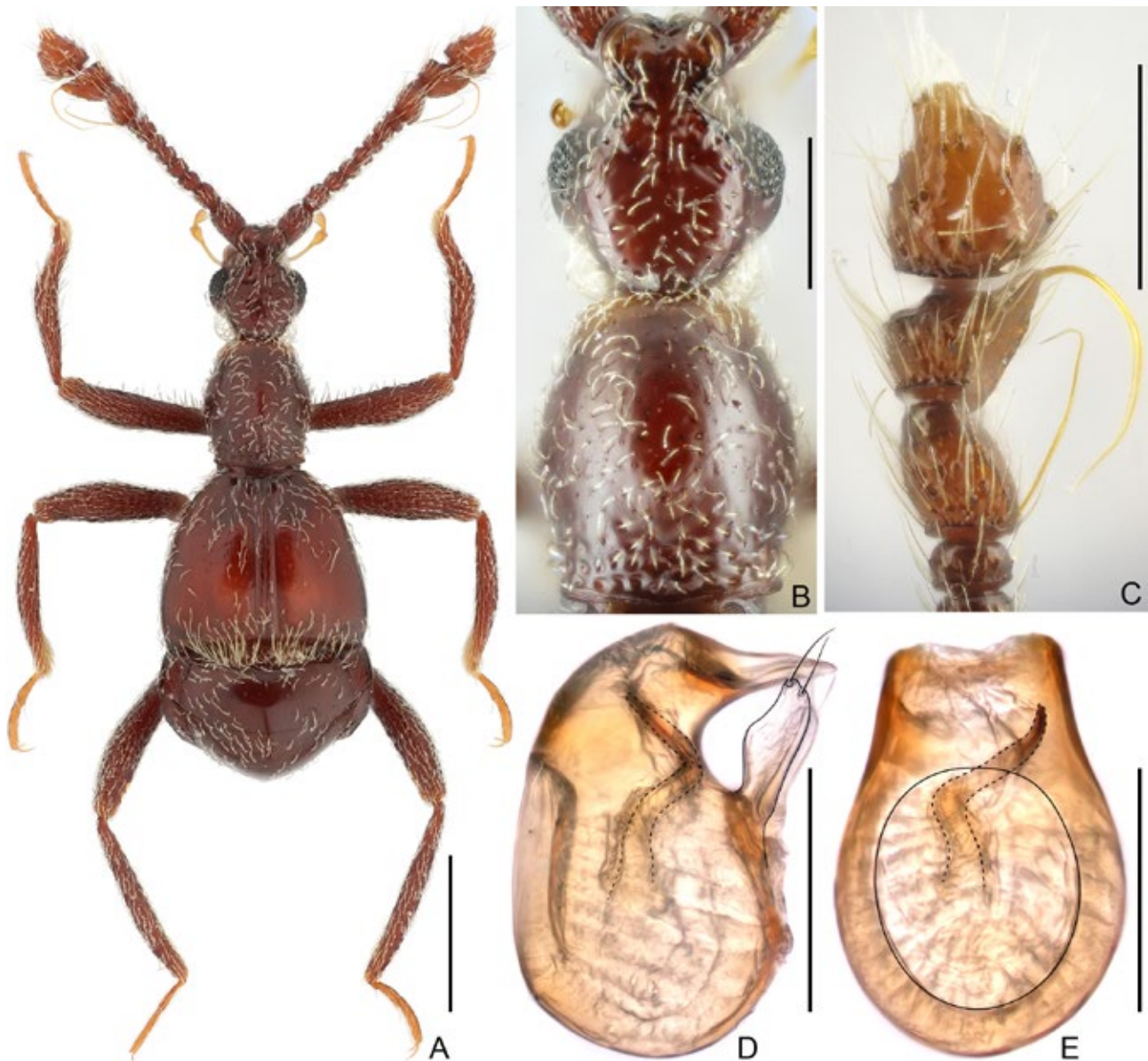


Fig. 1. *Ancyrocerus spatulatus* sp. nov., male: (A) Dorsal habitus. (B) Head and pronotum. (C) Antennal club. (D, E) Aedeagus, lateral (D) and dorsal (E). Scale bars: 0.5 mm in A; 0.2 mm in B, C, 0.1 mm in D, E.

However, the lack of any specialized morphological trait as well as the large eyes suggest this species is more likely epigean.

**Etymology:** The specific epithet *spatulatus* (-ta, -um) is a Latin adjective, meaning, “spatulate, spatula-like”, referring to the spatulate setae that cover the body surface.

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