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A new Mongolian species of the genus *Apterygothrips* (Thysanoptera: Phlaeothripidae)

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Taxonomy, Phlaeothripidae, *Apterygothrips jenseri* sp. n., Mongolia

Abstract. *Apterygothrips jenseri* sp. n. from Mongolia is described with illustrations. The new species is distinguished by its dark, chitinized subapical rings on antennal segment III and IV. Similar rings are not developed in other species of this genus.

INTRODUCTION

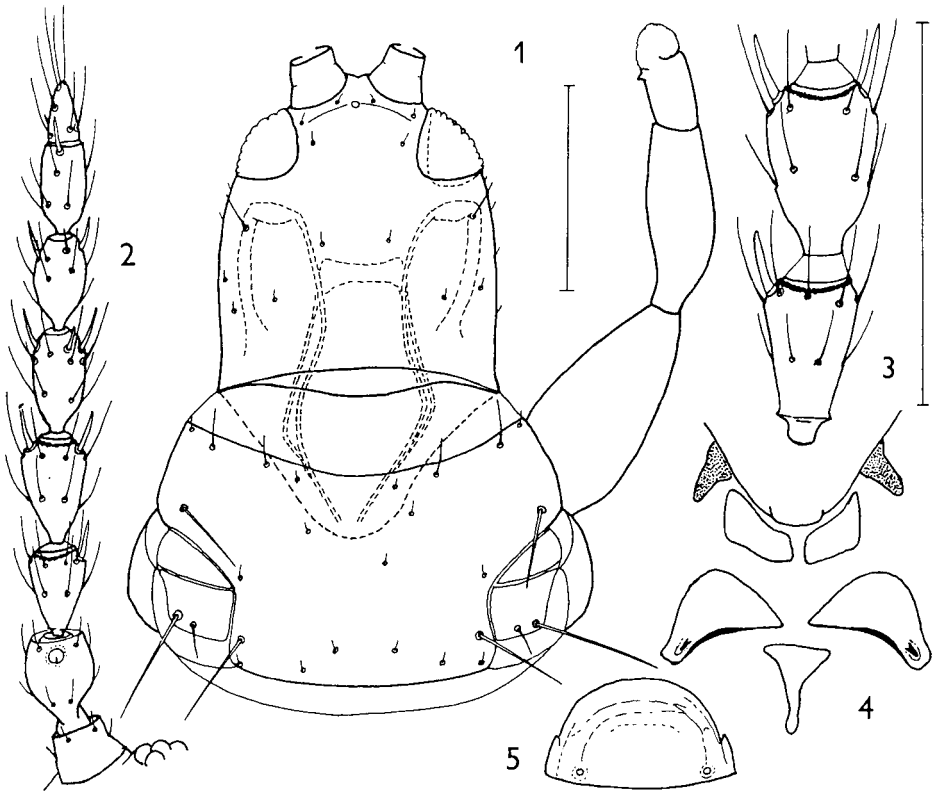
In the material from Mongolia, collected by me and my colleagues several years ago, I recognized an interesting species of the genus *Apterygothrips* Priesner, 1933, which has, amongst other characters, remarkable dark subapical rings on antenal segments III and IV. There is no other species among the 34 members of this genus with similar features on their antennal segments. Comparison was made with other material and with descriptions of *Apterygothrips* species by various authors. In the description, all measurements are in micrometres; L. or l. = length, W. or w. = width.

Apterygothrips jenseri sp. n.

Female, f. microptera (holotype). L. of the body 1310. Body and legs uniformly brown. Antennae brown to grey-brown, segment I dark, concolorous with head, II lighter with dark basal petiole and lateral margins, III–VIII uniformly greybrown, III at base lighter, III and IV with very narrow, dark brown subapical ring, encircling the segment as a strongly sclerotized line. Segments VII and VIII not darker than the intermediate ones. All tibiae lighter at tip, tarsi yellowish. Body setae yellowish.

Head quadrate, l. 145, w. 145, total l. with mouth cone 225, surface smooth (Fig. 1). Eyes small, lateral l. 40–44, not protruding from silhouette of the head laterally, l. of cheeks 112. Fore ocellus vestigial, hind ocelli undeveloped, three pairs of minute ocellar setae. Postocular setae pointed (in paratype 35–38 long), distant 19–22 from posterior margin of eyes. Vertex with one pair of minute dorsal setulae, 35 apart from each other. Mouth cone rounded, not extending to the middle of prosternum. Maxillary bridge developed, stylets relatively long, bent and retracted into the head, nearly to the posterior margin of eyes. Maxillary lever strong as well as base of stylets.

Antennae 294–316 long, l. (w.) of segments: I 25–30 (30), II 40–46 (30), III 38–41 (24), IV 44 (27), V 43–46 (25), VI 41 (20), VII 41 (20), VIII 22–27 (14). Shape of segments (Figs 2, 3): I narrowed to apex, II cup shaped with sclerotized petiole, strongly rounded sides and areola just at the apical margin, III symmetrical with straight sides, IV largest of segments, with straight sides, V and VI petiolate with rounded sides, narrowed to tip, VI



Figs 1–5. *Apterygothrips jenseri* sp. n., female (holotype). 1 – head and prothorax; 2 – right antenna; 3 – antennal segment III and IV; 4 – prosternal sclerites; 5 – pelta. Scale bars: 100 micrometres (bar 1 to all Figs except for 3).

separate from VII which is distinctly petiolate, with slightly bent sides and broad apex, forming a unit with VIII. Segment III and IV with a unique subapical ring, formed by a strongly sclerotized dark brown line. Sensory cones on segments (inner + outer): III 0+1, IV 1+1, V 1+11, VI 1+11, VII 1 dorsal.

Prothorax l. 110, w. 200, all pronotal setae developed, pointed or indistinctly cut at tip, l. as follows: anteroangulars 20–27, anteromarginals 14–20, midlaterals 35–38, posteroangulars 30–36, epimerals 46–52. Mouth cone not extending to the middle of prosternum, tip rounded. Praepectus developed (Fig. 4), cervical sclerites strongly sclerotized, dark brown. Pterothorax l. 205, w. 230, mesofurca with spinula, metafurca broadly divided, without spinula, mesonotum with lateral seta 25–30 long, cut at tip. Metanotum with two dorsal setae 19–25 long, pointed, situated in apical third of the sclerite length, 57 apart. Wings scale like, l. 54–60, w. 30, bearing three setae 27, 35 and 41 long, pointed at tip. Legs moderately long, fore tarsal tooth developed but very minute (Fig. 1), fore femora incrassate, hind femora less so. L. (w.) of tibiae on outer margin: I 87–95 (35), II 93 (33), III 120–128 (33).

Abdomen. Sum of segment lengths 845, greatest w. across middle 265, pelta semicircular (Fig. 5), rather high, l. 55, w. 98, distance between both campaniform sensilla 65. Tergite II with concave lateral margins diverging caudally, irregularly serrate. All abdominal setae relatively long and hair like, pointed. Tergites without wing-retaining setae and with only one long semilateral seta, just before hind margin of tergite; on tergite II and VII 60 and 85 long, respectively. On segment VIII, semilateral seta is only 54–60 long, lateral seta longer, 76–87. Segment IX 70 long (w. across base 170), l. of setae (including measurements of paratype) S1 133–140, S2 155–163, S3 114–120, all hair like, pointed and longer than tube. Tube of holotype l. 104, w. 56, terminal setae S1 134–142, S2 155–162 and S3 116–130 long, all hair like, pointed. Tube consequently 1.86 times longer than wide, 1.48 times longer than tergite IX and 0.72 as long as head.

Male unknown.

TYPE MATERIAL: Holotype, ♀ f. microptera, Northern Mongolia, at the Sharlan River, 19.v.1985, on green twigs of *Pinus* sp. Paratype, 1 ♀ f. microptera, Northern Mongolia, 3.vi.1985, swept on low steppe herbage, all leg. M. Peňáz. Types to be deposited in the Moravian Museum, Brno.

DISTRIBUTION. Mongolia.

NAME DERIVATION. The new species is dedicated to the Hungarian thysanopterist and my esteemed friend Gábor Jenser for his valuable contribution to the research in and organisation of thysanopterology.

DISCUSSION. The most important character of *A. jenseri* sp. n. is the dark subapical ring on antennal segments III and IV, which is absent in all 34 known species of the genus *Apterygothrips* Priesner. With the exception of this unique character, *A. jenseri* sp. n. may be compared with species with the following characters: Body, legs and antennae uniformly dark brown, head quadrate, as long as wide, all body setae pointed apically, antennal segments III and IV with 0+1 and 1+1 sensory cones and posteromarginal setae on tergite IX longer than tube. It is important to compare the new Mongolian species with *A. brunneicornus* Han from Tibet (Han et al., 1991). Both species differ in the following characters:

		A. brunneicornus Han	*A. jenseri* sp. n.
Head length, width, length/width ratio		179, 128, 1.4	145, 145, 1.0
Antennal length/head length ratio		1.8	2.0–2.2
Sensory cones on III and IV segment		0+1, 2+1	0+1, 1+1
Length of pronotal setae: midlaterals, epimerals		23, 36–38	35–38, 46–52
Fore margin of pelta		straight, cut	broadly rounded
Length of posteromarginal setae of abdominal tergite IX		113–115 (setae shorter than tube)	133–163 (S1, S2) (setae longer than tube)
Tube	total length	128	104
	length of terminal setae	128–134	130, 162

The remaining ten species from Palaearctic region (Bagnall, 1916; Priesner, 1933; zur Strassen, 1966, 1977, 1981, 1992; Pelikán & Schliephake, 1994) have, either, their body setae dilated apically, or other sensory cone formula on antennal segments III and IV; few are partly yellow. Only the distinctly smaller *A. haloxyli* Priesner from Egypt (Priesner, 1933) has some characters in common with *A. jenseri* sp. n. Both species differ as follows:

		A. haloxyli Priesner	*A. jenseri* sp. n.
Head length, length/width ratio		120, 1.3–1.4	145, 1.0 (quadrate)
Antennal segment	III	yellow	brown
	IV	yellow-brown	brown
Pronotal width/length ratio		1.4–1.6	1.8
Length of epimeral setae		34–42	46–52
All tibiae		distal half lighter	extreme tips lighter
Length of tibiae III		115	120–130
Tooth of fore tarsi		larger, curved	minute, indistinct
Length of setae on abdominal tergite IX		S1, S2 74–89	S1 133–140, S2 155–163, S3 114–120
Tube length, width at base, length/width ratio		65, 51, 1.27	104, 56, 1.86
Tube length/head length ratio		0.41–0.47	0.72
Anal setae length/tube length ratio		1.2–1.3	1.5–1.6

The seven Oriental species from India (Ananthakrishnan, 1960, 1967; Ananthakrishnan & Jagadish, 1969, 1971; Pitkin, 1973, 1976; Bhatti & Ananthakrishnan, 1978; Bhatti & Upinder, 1993) are yellow, partly yellow, or at least tube is bicoloured. Brown species have four sensory cones on antennal segment IV. The single South African species, *A. flavus* Faure, 1940, is uniformly yellow (Faure, 1940). Eight species have been described from Mexico (Johansen, 1982, 1983; Johansen & Montes de Oca, 1989). *A. bicolor* Johansen, 1982 is partly yellow, the remaining seven brown species have, either, dilated body setae, or other number of sensory cones on segments III and IV. Only *A. pitkini* Johansen, 1983 is similar, but has an elongate head (1.6 times longer than wide), pronotal setae midlateral vestigial, anteroangular and anteromarginal small and short, pelta is transverse and rectangular.

Among the five species from Australia and New Zealand, only *A. australis* Pitkin, 1973 and *A. kohai* Mound & Walker, 1986 have 0+1 and 1+1 sensory cones on segments III and IV. Of them, *australis* has pronotal and major abdominal setae expanded apically and *kohai* has intermediate antennal segments partly yellow, pronotal setae minute and posteromarginal setae on tergite IX only 0.6 as long as tube (Pitkin, 1973; Mound & Walker, 1986; Mound & Houston, 1987). *A. fuscus* (Moulton, 1939), from the Society Islands, and *A. remotus* (Bianchi, 1947), from Hawaii, have other sensory cones formula (Moulton 1939; Bianchi, 1947; Ritchie, 1974). *A. remotus* has no sensory cones on segment III and neither has *pinicolus* from Europe, *zempoalensis* from Mexico and *jogensis* from India.

As is stated in Mound & Walker (1986), the presence of the sternopleural suture on metasternum is a good character for differentiation of species. It must be emphasized here, that in *A. pinicolus* Pelikán & Schliephake, 1994 this suture is incomplete, developed only in anterior half of the plate.

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