

A new species of *Heterothrips* HOOD, 1908, from French Guyana (Thysanoptera: Heterothripidae)

● MANFRED R. ULITZKA

Abstract. This study presents a new species of the thysanopteran genus *Heterothrips* HOOD, 1908: namely *H. nouraguensis*. The genus *Heterothrips* is one of the four recent genera of the entirely New World family Heterothripidae. Almost nothing is known concerning the biology of these fringewings. Most species seem to be flower-living, possibly with a certain degree of host specificity (MOUND & MARULLO 1996, DEL CLARO et al. 1997). Often they have been collected on plants of the family Malpighiaceae. This applies also to the new species. It was caught together with different Heterothripidae on inflorescences of the liana *Heteropterys multiflora* (Malpighiaceae) in the canopy of a primary rain forest in French Guyana.

Key words. Thysanoptera, Heterothripidae, *Heterothrips*.

Zusammenfassung. In der vorliegenden Arbeit wird eine neue Art der Fransenflüglergattung *Heterothrips* HOOD, 1908, vorgestellt: *H. nouraguensis*. Die Gattung *Heterothrips* ist eine der vier rezenten Gattungen der ausschließlich in der neuen Welt verbreiteten Familie Heterothripidae. Über die Biologie dieser Fransenflügler ist nur wenig bekannt. Die meisten Arten scheinen, möglicherweise mit einer gewissen Wirtsspezifität, in Blüten vorzukommen (MOUND & MARULLO 1996, DEL CLARO et al. 1997). Oft wurden sie an Malpighiaceen nachgewiesen. Dies gilt auch für die hier beschriebene Art. Sie wurde zusammen mit weiteren Vertretern der Familie Heterothripidae in den Blütenständen einer Liane der Art *Heteropterys multiflora* (Malpighiaceae) im Kronenraum eines Primärwaldes in Französisch Guayana erfasst.

Heterothrips nouraguensis sp. nov.

(Figs 1–4)

Holotype. ♀; French Guyana, primary forest at Les Nouragues, close to the biological field station 'Inselberg', caught on inflorescences of *Heteropterys multiflora* (DC.) (Malpighiaceae) in the canopy, 14.II.1998, leg. M. R. ULITZKA; coll. ULITZKA (GFN 20 / MU 1307).

Paratypes. 4 ♂, 2 ♀; French Guyana, primary forest at Les Nouragues, close to the biological field station 'Inselberg', caught on inflorescences of *Heteropterys multiflora* (DC.) (Malpighiaceae) in the canopy, 14.II.1998, leg. M. R. ULITZKA; coll. ULITZKA (GFN 20 / MU 1309, 1310, 1311, 1312, 1314, 1315). Further specimens of the series GFN 20: coll. SENCKENBERGISCHE NATURFORSCHENDE GESELLSCHAFT (SNG), Frankfurt am Main, Germany.

Derivatio nominis. The species name '*nouraguensis*' was chosen according to the site 'Les Nouragues' where the specimens have been caught.

Measurements are indicated in parentheses when the range of female paratypes differs from that of

the holotype; and respectively for males from that of the middle-sized paratype GFN 20 / MU 1315. L. = length, W. = width; all measurements are in microns.

Description. Female (macropterous). Total L. 1498 (1202–).

Coloration. Body uniformly dark brown; head, prothorax and sides of pterothorax are most intensively coloured. Dorsal plates of the pterothorax and of the abdominal segments are slightly paler. Internal pigmentation orange in prothorax and pterothorax, yellowish in abdomen. Antennal segment I greyish brown in basal half, yellowish brown apically. Segment II uniformly yellowish brown. Segment III yellowish brown, most intensively coloured in pedicel and apex. Segment IV light greyish brown in basal half with dark shadings apically, sensory area with yellowish pigmentation. Segments V–IX dark greyish brown, V and VI less intensi-

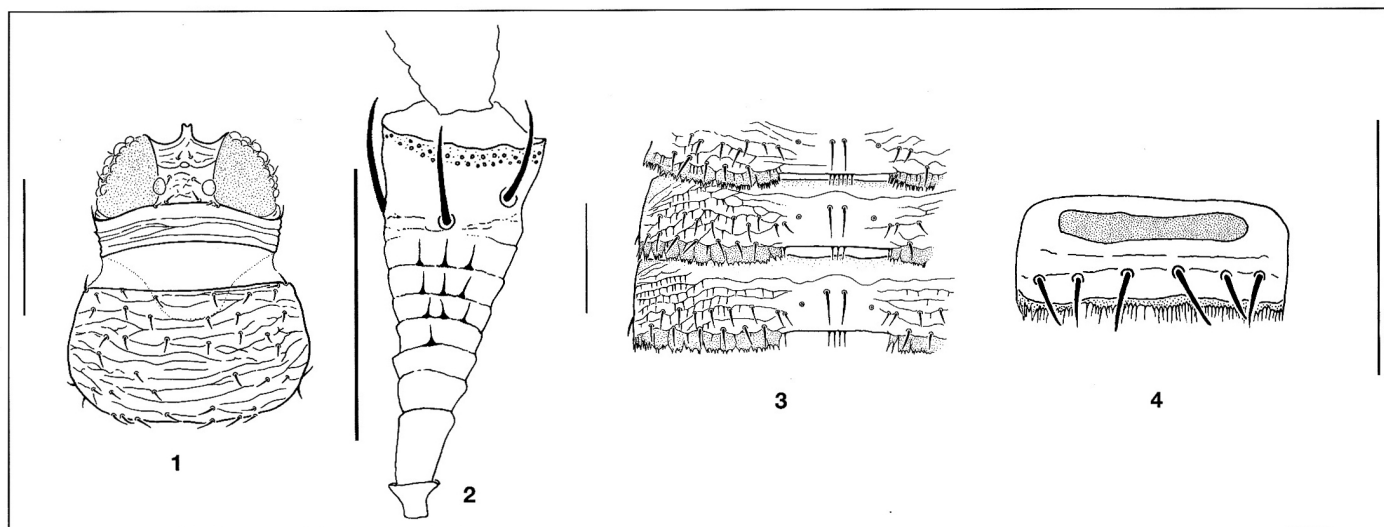
vely coloured than distal segments. All femora dark brown. Fore tibiae light brown in basal and yellowish brown in apical half. Middle tibiae dark brown in basal three quarters, yellow in apical quarter. Hind tibiae dark brown in middle third, yellowish brown in basal third, and yellow in apical third. All tarsi yellow. Fore wings shaded with grey, sub-basal with a hyaline band. Hind wings unshaded, with a dark line along the vein. All major body bristles dark brown.

Head (Fig. 1). Broader than long, L. 102 (94–), greatest W. direct behind the eyes at a distinct occipital ridge 164 (142–). Cheeks slightly rounded, W. at base of head 148 (129–). Eyes large, L. 76 (65–), largest W. 54 (48–). Diameter of fore ocellus smaller (8) than diameter of hind ocelli (13). Antecellar setae L. 4, interocellar setae not close together, located on the lines of the ocellar triangle, L. 5, postocellar setae L. 10. Cheeks with two (one) small bristles close to the eyes. Vertex flattened without any bristles. Basal part of the head sculptured with transverse lines. Mouth cone blunt, broadly rounded; L. behind dorsal margin of the head 48 (–62). Antennae L. 280 (267–); measurements of single segments:

Segment	L.	W.
I	28 (27–)	30
II	32 (30–)	27
III	73 (70–)	28 (–29)
IV	45 (41–)	24 (–25)
V	24 (21–)	14
VI	24 (21–)	13
VII	16 (15–)	10
VIII	16 (15–)	9
IX	19 (17–)	6 (5–)

Antennal segment III tripartite (Fig. 2). Pedicel parallel sided above disc and more than twice as long as wide, L. 14, W. 6. Apical sensory areas on segments III and IV with a double row of pores.

Prothorax (Fig. 1). L. 135 (109–). Fore margin slightly concave, W. 181 (153–). Sides in the distal half narrowing each



Figs 1–4: *Heterothrips nouraguensis* sp. nov. ♀. **1:** head and pronotum; **2:** antennal segment III; **3:** abdominal tergites II–IV. **Fig. 4:** *H. nouraguensis* sp. nov. ♂: glandular area on abdominal sternite IV. Scales: 100µm for figs. 1, 3, and 4; 50 µm for fig. 2.

other in a straight line to the fore margin; broadened and strongly rounded to the hind margin. Hind margin also broadly rounded. Largest W. 218 (183–229). Pronotum with transversely reticulate lines of sculpture; about 13 lines medially. Marginal and discal setae similar in L. (8) and diameter. Number of discal setae: 24 (–26).

Pterothorax. Mesonotum L. 78 (67–), largest W. 176 (140–), sculptured with transverse lines. Metanotum (metascutum) L. 73 (54–), largest W. 138 (120–145), sculptured with concentric lines bearing microtrichia. These lines are angular in the anterior third, whereas they form an ellipse with longitudinal orientation in the centre. Scutellum sculptured with longitudinal lines, which arise in the anterior median third and spread root-like to the posterior median $\frac{3}{5}$. Fore wing L. 700 (679–), hind wing L. 630 (606–).

Abdomen (Fig. 3). L. 854 (710–), Largest W. 385 (300–). Tergite I–VII with craspedal lobes laterally. Posterior margins of craspedal lobes finely dentate, without long microtrichia. Tergite I with discal microtrichia medially, but none on posterior margin between the lateral craspeda. Tergite II–V with a group of long microtrichia medially, but with a gap between these and the craspedal lobes laterally. Marginal comb of microtrichia complete between the craspedal lobes on tergite VI and VII; comb complete on VIII. Tergite IX with long discal microtrichia medially. Lateral thirds of median tergites with about six lines of subreticulate sculpture bearing

microtrichia. Sternites I and II without discal setae. Sternites III–VI bearing about seven discal setae, and sternite VII about 12 in a double-row. Craspedal lobes with a fringe of microtrichia present on sternites II–VI. Sternite VII with a comb of small microtrichia present only on the lateral quarters.

Male (macropterous). Total L. 908 (863–953).

Coloration. Similar to female. Body uniformly brown with most intensive coloration in head, prothorax and sides of pterothorax. Dorsal plates of pterothorax and abdominal segments are slightly paler. Internal pigmentation less intensive than in female; orange in prothorax and pterothorax, yellowish in abdomen. Antennal segment I greyish brown in basal half, yellowish brown apically. Segment II uniformly yellowish brown. Segment III yellowish brown, most intensively coloured in pedicel and apex. Segment IV light greyish brown in basal half with dark shadings apically, sensory area with yellowish pigmentation. Segments V to IX uniformly dark greyish brown. Fore femora dark brown with apical tip yellow. Middle femora uniformly dark brown. Hind femora dark brown with a yellow marking at extreme base. Fore tibiae light brown in basal and yellowish brown in apical half. Mid tibiae dark brown in basal three quarters, yellow in apical quarter. Hind tibiae dark brown in middle third, yellowish brown in basal third, and yellow in apical third. All tarsi uniformly dark brown. Wings and major body bristles coloured as in female.

Head. Broader than long, L. 86 (83–89), greatest W. direct behind the eyes at occipital ridge 143 (–156). Cheeks less rounded than in female, W. at base of head 132 (129–137). Eyes L. 65 (62–), largest W. 46 (–52). Diameter of fore ocellus smaller (8) than diameter of hind ocelli (12). Antecellar setae L. 3, interocellar L. 8, postocellar setae L. 10. Cheeks with two small bristles close to the eyes. Basal part of head sculptured with transverse lines. Mouth cone blunt, broadly rounded; L. behind the dorsal margin of head 54 (–73). Antennae L. 243 (–270); measurements of single segments:

Segment	L.	W.
I	19 (–22)	27 (–29)
II	26 (–27)	22 (–27)
III	62 (–70)	22
IV	40 (–43)	19 (–21)
V	22	14
VI	22 (–23)	10
VII	16 (–18)	10
VIII	14	8
IX	17 (–18)	5

Antennal segment III as in female. Pedicel above disc more than twice as long as wide, L. 13 (–18), W. 6 (–8). Apical sensory areas on segments III and IV with a double row of pores.

Prothorax. L. 113 (–132), W. at fore margin 143 (–149). Distal part of sides more rounded than in female. Largest W. 180 (–205). Pronotum with transversely reticulate lines of sculpture; about 15 lines medially. Marginal and discal setae similar in L. (8) and diameter. Number of discal setae: 22 (–26).

Pterothorax. Sculptured as in female. Mesonotum L. 67 (56–), largest W. 113 (–129). Metanotum (metascutum) L. 54 (–62), largest W. 92 (89–94). Fore wings L. 546 (–574), hind wings L. 441 (–472).

Abdomen. L. 490 (–593), largest W. 154 (147–). Lateral craspeda on tergites I–VII much smaller than in female but their posterior margins with long microtrichia. Tergites I without a marginal comb, but with discal microtrichia medially. Marginal combs of microtrichia on tergites II–VIII like in female. Tergite IX with three rows of discal microtrichia between the setae I. Tergite X with many long discal microtrichia. Sternites without discal setae. Sternites III–VIII with transverse glandular areas in the anterior third (Fig. 4).

Differential diagnosis

Having the pedicel on antennal segment III prolonged *Heterothrips nouraguesis* sp. nov. is similar to *H. pubescens* HOOD,

1934, and *H. prosopidis* CRAWFORD, 1943. From the latter, it differs with the presence of an occipital apodeme and the uniformly yellowish brown coloration of antennal segment II. The pronotum of *H. nouraguesis* is less setose. Further, its metanotal sculpture shows an ellipse with longitudinal orientation; this structure is transversal in *H. prosopidis*, and less defined and circular in *H. pubescens*. Finally, the three species differ in the appearance of the microtrichial fringes on their craspeda as well as in the structure of their abdominal tergites. Latter is especially in *H. pubescens* more reticulate.

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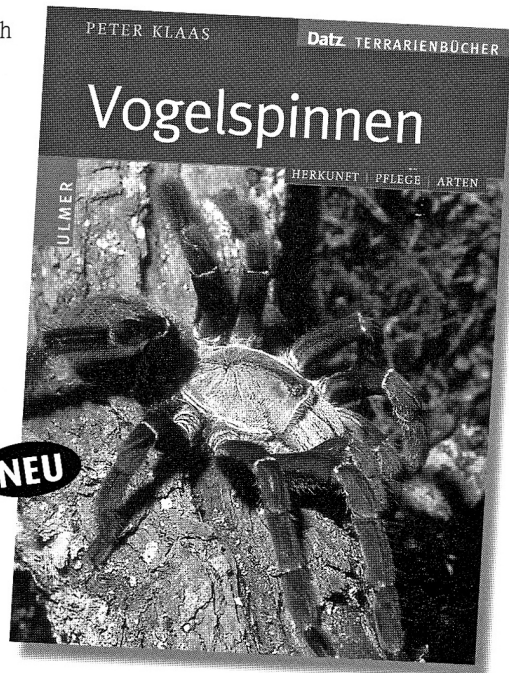
● Dr. MANFRED R. ULITZKA,
Dept. of Experimental Ecology,
University of Ulm, 89069 Ulm,
Germany;
E-Mail: manfred.ulitzka@web.de

Höchst aktuelle, umfassende Darstellung der Vogelspinnen!

Vogelspinnen – haarig, schön und schauerlich – sind weit weniger gefährlich als ihr Ruf, sie sind als Terrarientiere begehrt. Ihre auffallende Erscheinung zeigt aber vor allem, wie phantasievoll sich in der Natur die Anpassung an spezifische Lebensräume zeigen kann. Viele Vogelspinnenarten wurden in den letzten Jahren neu entdeckt und beschrieben, manche von spektakulärer Schönheit. Das Buch geht neben den bekannten auch auf die in den letzten Jahren neu entdeckten Arten ein und präsentiert die aktuelle Systematik der Vogelspinnen. Durch das erweiterte Wissen über die Biotope und Lebensweisen können Haltungs- und Zuchtbedingungen detaillierter gestaltet werden. So lassen sich auch bisher als selten und schwierig geltende Arten im Terrarium pflegen. Die interessanten Verhaltensmuster der Spinnen bei Revier-, Paarungs- und Fortpflanzungsvorgängen sind ein weiteres wichtiges Thema dieses Buches. Über hundert Arten werden mit farbigen Fotos porträtiert.

Inhalt: Lebensweise, Verbreitung und Verhalten. Artgerechte Haltung im Terrarium. Systematik der Vogelspinnen. Krankheiten und natürliche Feinde. Die Zucht der Spinnen. Über hundert Arten im Porträt.

Der Autor: Peter Klaas ist für das Insektarium im Kölner Zoo verantwortlich und arbeitet mit Biologen nationaler und internationaler Institutionen zusammen.



Vogelspinnen. P. Klaas. 2., völlig neu bearb. Auflage 2003. 142 Seiten, 211 Farbfotos, 7 Zeichnungen. € 39,90 [D]. ISBN 3-8001-3696-1.



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