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Panchaetothripinae in Japan (Thysanoptera, Thripidae)

2. Panchaetothripini, the Genus *Helionothrips*

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Abstract Six *Helionothrips* species are recognized in Japan: *H. aino*, *H. cephalicus*, *H. errans*, *H. linderae* n. sp., *H. mube* n. sp., and *H. ponkikiri* n. sp. A key to the Japanese species is presented.

Key words: Thysanoptera; Thripidae; *Helionothrips*; new species; Japan.

Helionothrips, represented by 22 species, is the largest genus of the Panchaetothripinae. *Helionothrips* species are leaf-feeding, and mostly distributed in Africa and southern Asia, though some extend to Australia and South America. The present paper is the second part of the revisional study of Japanese Panchaetothripinae, adding three new species to the Japanese fauna.

Helionothrips BAGNALL

Helionothrips BAGNALL, 1932, 506.

Head much wider than long, polygonally reticulate, with strong transverse carina along occiput forming into a wide concave collar; eye large, more than half the length of head; ocelli large; ocellar region faintly elevated; all setae long; POS in 5 pairs, inner 3 pairs along occipital carina; occipital collar reticulate; mouth cone moderately long, rounded apically. Antenna 8-segmented; A_3 and A_4 vasiform, with long forked sense cone; A_3–A_6 each with 5, 4, 5, 4 setae; A_4–A_6 with microtrichia.

Pronotum polygonally reticulate, with 10 or more pairs of long setae; furcasternum divided; postprocess of prospinasternum with apex unforked. Meso- and metanotum polygonally reticulate; mesoscutum entire, median setae in front of posterior margin; metascutum with median triangle of sculpture, with a pair of CPS; metafurca large. Fore wing blunt apically; fore vein with a basal group of about 6 setae and 2 apical setae; anterior FH long, posterior FH wavy; scale with 4 anal setae. Tarsi with 1 segment.

Abdominal terga with a heavy antecostal line, with median scallop-like area, bearing wrinkles in lateral reticles; 6 pairs of tergal setae in front of posterior margin, B_1 small; T_8 with comb of long microtrichia narrowly interrupted medially, except for almost entire in *errans*; T_{10} with complete split. Sterna reticulate; S_2 with heavy Y-shaped carina; S_3–S_7 with 3 pairs of long setae in front of posterior margin.

Males with 2 pairs of thorn-like setae and usually with some wart-like tubercles caudad of posterior pair on T_9; sterna usually with glandular areas.

Helionothrips is similar to *Caliothrips*, but it differs in having a strong occipital carina on the head, a raised inverted triangle of sculpture on the metanotum, and median scallop-like areas on the abdominal terga. *Caliothrips* has no conspicuous occipital carina, no metascutal triangle of sculpture and no scallop-like areas on the abdomen. FAURE (1961) and WILSON (1975) gave keys to the known species of *Helionothrips*.

Helionothrips aino (ISHIDA)

Heliothrips aino ISHIDA, 1931, 34–36.
Helionothrips aino: JACOT-GUILLARMOD, 1971, Ann. Cape prov. Mus. (nat. Hist.), 7: 260; WILSON, 1975, 122–123.

♀. Dark to blackish brown; head entirely blackish; fore femur brown, yellowish apically; fore tibia brownish yellow; mid and hind legs dark to blackish brown, trochanters and base and apex of tibiae yellowish; all tarsi yellow. Fore wing dark brown basally and apically, with subbasal pale band, dark at fork and gradually fading apicad; occasionally nearly pale in apical half. Antenna yellow; A_6 and A_7 brown, A_6 yellowish basally; A_8 pale brown.

Head (Fig. 1.1) W/L 1.41–1.56, without wrinkles in reticles; posterior half of occipital collar with numerous granules in reticles; IOD/HOW 1.70–4.00; OOD/IOD 1.62–2.71. Antenna (Fig. 1.2) 2.2–2.4 as long as head; A_3 L/W 1.89–2.23, 1.43–1.73 as long as A_5, forked sense cone 0.74–1.10 as long as A_3 and reaching middle of A_4; A_4 L/W 1.89–2.23, 1.18–1.43 as long as A_5, constricted apex shorter and narrower than apex of A_3, simple sense cone shorter than forked cone, forked sense cone 1.17–1.73 as long as A_4 and reaching apex of A_5; combined length of A_3 and A_4 2.68–3.10 as long as A_5; A_5 L/W 1.64–2.16; A_6 L/W 1.41–1.70, inner sense cone 1.78–2.83 as long as A_6 and reaching apex of A_8; A_7 L/W 0.8–1.1; A_8 L/W 6.0–7.6, 2.82–3.88 as long as A_7.

Pronotum (Fig. 1.1) W/L 1.45–1.60, without wrinkles in reticles; reticles along anterior margin, around foveae and along posterior margin smaller. Meso- and metascutal reticles without wrinkles; metascutellum 3.07–4.06 as wide as long. Fore wing (Fig. 1.3) L/W 17.2–20.3, 5.55–6.54 as long as pronotum; with 25–39 anterior and 60–75 posterior FH; microtrichia uniform in size, veinal setae normally thin and pointed; costa with 22–33 setae, fore vein with 8–12, hind vein with 5–9. Hind wing with 69–96 FH.

Abdominal terga with wrinkles in lateral reticles; antecostal lines on T_3–T_8 often divided into broad arches connected by fine lines, but not issuing caudad into scalloped areas; T_1 (Fig. 1.4) completely reticulate or smooth on submedian areas; T_8 (Fig. 1.5) with comb narrowly interrupted medially; $T_9L/T_{10}L$ 1.17–1.64; B_1–B_3 on T_9 each 0.65–1.03, 0.80–1.14 and 0.62–0.80 as long as T_9, B_2 longest;

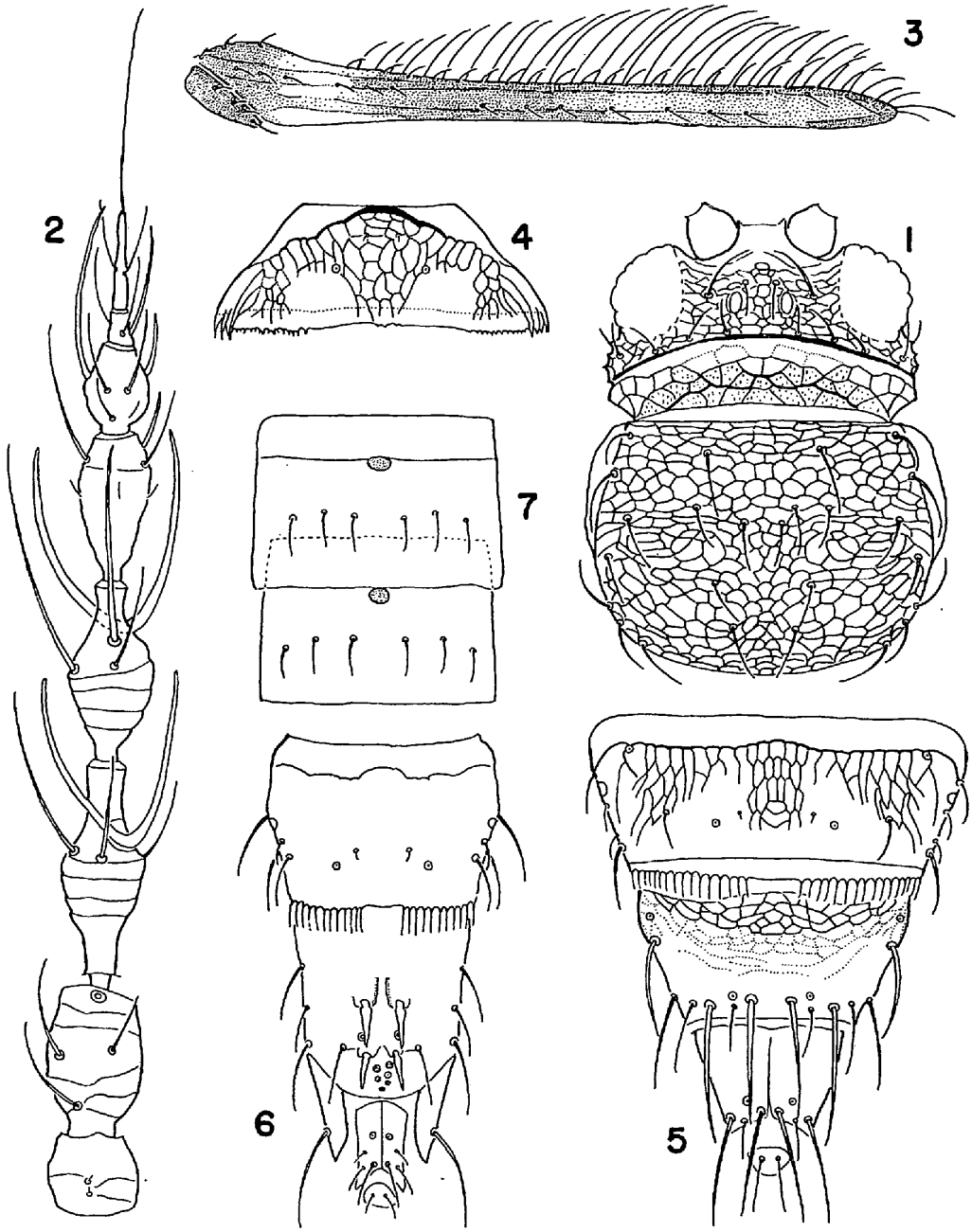

Fig. 1. *Helionothrips aino*.——1, ♀, Head and pronotum; 2, ♀, antenna; 3, ♀, fore wing; 4, ♀, T_1; 5, ♀, T_8–T_{10}; 6, ♂, T_8–T_{10}; 7, ♂, S_7–S_8.

B_1–B_2 on T_{10} each 0.72–1.24 and 0.72–1.16 as long as T_{10}; ovipositor 1.53–1.96 as long as pronotum.

Measurements (μm). Body L 1.4–1.7 mm. Head L 125–142, W 187–207; pronotum L 146–175, W 220–270; fore wing L 882–1080, W 45–58; T_9L 87–111; T_{10}L 60–75; B_1–B_3 on T_9 each 70–95, 85–108, 58–80; B_1–B_2 on T_{10} each 65–82,

58–80; ovipositor L 252–300. Antenna 293–332 in total L; L(W) of antennal segments as follows: A_1 23–27 (25–29); A_2 40–47 (30–34); A_3 64–76 (25–28); A_4 52–62 (25–30); A_5 40–47 (22–25); A_6 30–34 (18–22); A_7 8–11 (9–10); A_8 30–38 (5).

♂. Colored as in females. T_9 (Fig. 1.6) with 2 pairs of thorn-like setae, their bases nearly contiguous, with 6–7 chitinous wartlets on posteromedian area. S_7 and S_8 (Fig. 1.7) with small oval glandular area; all setae on S_8 placed in about transverse row. Body L 1.3 mm.

Specimens examined. Hokkaido: 20 ♀ (*Actinidia arguta*), Shari, VIII. 8. 1976; 2 ♀ (*A. arguta*), Kamikawa, Sounkyo (1,000 m), VIII. 13. 1976; 3 ♀ (*A. arguta*), Biratori, Furenai, VIII. 15. 1976; 3 ♀ (*A. arguta*), Sapporo, Moiwa, VIII. 19. 1976; 2 ♀ (*Celastrus orbiculatus*), Eniwa, Shimamatsu, VIII. 14. 1976; 9 ♀ (*A. arguta*), Mori, Himekawa, VIII. 21. 1977. Miyagi: 8 ♀ (*A. arguta*), Akiu, Futakuchi (600 m), IX. 18. 1978. Fukushima: 2 ♀ (*Staphylea bumalda*), Tajima, VIII. 27. 1977. Chiba: 1 ♀ (*Pueraria lobata*), Amatsukominato, Kiyosumi, VIII. 31. 1977. Kanagawa: 6 ♀ (*Akebia quinata*), Hatano, Koboyama, VIII. 13. 1978. Niigata: 1 ♀ (*P. lobata*), Yahiko, VIII. 25. 1977. Toyama: 2 ♀ (*A. arguta*), Tateyama, Bijodaira (1,400 m), IX. 18. 1976. Fukui: 1 ♀ (*A. quinata*), Eiheiji, IX. 16. 1976. Yamanashi: 4 ♀ (*Cocculus trilobus*), Sutama, Masutomi (1,400 m), VII. 27. 1980; 1 ♀ (grass), Mt. Kinpu (2,590 m, lower alpine zone), VIII. 2. 1971. Shizuoka: 5 ♀ 1 ♂ (*Aristolochia kaempferi*), Shizuoka, Umegashima (600 m), X. 10. 1985; 6 ♀ (*A. quinata*), Shizuoka, Nihondaira, X. 2. 1977. Nagano: 3 ♀ (*A. arguta*), Togakushi, Okusha (1,300 m), VIII. 25. 1978; 5 ♀ (*A. quinata*), Komagane, Suganodai (1,000 m), VII. 28. 1977. Shiga: 12 ♀ (*A. quinata*), Omihachiman, Okushima, X. 22. 1976. Nara: 15 ♀ (*A. quinata*), Nara, Narakoen, X. 23. 1976. Tottori: 5 ♀ (*A. quinata*), Daisen, Daisenji (800 m), VIII. 27. 1978. Okayama: 2 ♀ (*A. quinata*), Takahashi, Gagyusan, VIII. 29. 1978. Ehime: 2 ♀ (*A. quinata*), Omogo, Omogokei (500 m), VIII. 31. 1978. Miyazaki: 4 ♀ (*A. arguta*), Takachiho, Mitai (500 m), X. 24. 1977.

Host plants. Actinidiaceae: *Actinidia arguta* (SIEB. et ZUCC.) PLANCH. Aristolochiaceae: *Aristolochia kaempferi* WILLD. Celastraceae: *Celastrus orbiculatus* THUNB. Lardizabalaceae: *Akebia quinata* (THUNB.) DECNE. Leguminosae: *Pueraria lobata* (WILLD.) OHWI. Menispermaceae: *Cocculus trilobus* (THUNB.) DC. Staphyleaceae: *Staphylea bumalda* (THUNB.) DC.

Distribution. Hokkaido: Abashiri, Kamikawa, Hidaka, Ishikari, Iburi, Oshima. Honshu: Miyagi, Fukushima, Chiba, Niigata, Toyama, Fukui, Yamanashi, Nagano, Kanagawa, Shizuoka, Shiga, Nara, Tottori, Okayama. Shikoku: Ehime. Kyushu: Miyazaki. Palearctic: Korea, Saghalien. Oriental: Taiwan.

Remarks. This species is similar to *H. ananthakrishnani* from New Guinea, but it differs in the constricted apex of A_4 shorter and smaller than the apex of A_3 and the longer forked sense cone on A_4 (1.2–1.7 as long as A_4). In *H. ananthakrishnani* the constricted apex of A_4 is subequal in size and similar in shape to the apex of A_3, and the sense cone on A_4 is 1.0–1.2 as long as A_4.

Table 1. Mean and S. D. of quantitative characters in females of *H. aino*.

Characters	Hokkaido		Honshu, Shikoku and Kyushu		Total	
	Mean±S. D.	n	Mean±S. D.	n	Mean±S. D.	n
1. Head W/L	1.47±0.02	7	1.46±0.05	10	1.46±0.04	17
2. IOD/HOW	3.15±0.43	13	2.51±0.55	28	2.71±0.59	41
3. OOD/IOD	2.14±0.08	11	2.09±0.32	25	2.10±0.27	36
4. A_3L/W	2.66±0.14	13	2.68±0.15	23	2.67±0.14	36
5. A_4L/W	2.12±0.06	13	2.08±0.08	23	2.10±0.08	36
6. A_5L/W	1.82±0.09	13	1.94±0.11	23	1.90±0.12	36
7. A_6L/W	1.53±0.09	13	1.60±0.07	23	1.58±0.09	36
8. A_3L/A_5L	1.61±0.07	13	1.56±0.07	23	1.58±0.07	36
9. A_4L/A_5L	1.35±0.06	13	1.27±0.05	23	1.30±0.07	36
10. A_3L+A_4L/A_5L	2.96±0.11	13	2.83±0.10	23	2.88±0.12	36
11. A_8L/A_7L	3.28±0.26	13	3.39±0.23	23	3.35±0.25	36
12. Forked sense cone on A_3/A_3L	0.79±0.04	12	0.97±0.10	20	0.90±0.12	32
13. Forked sense cone on A_4/A_4L	1.24±0.10	13	1.48±0.10	20	1.39±0.16	33
14. Inner sense cone on A_6/A_6L	1.95±0.10	11	2.25±0.24	18	2.13±0.26	29
15. Pronotum W/L	1.52±0.03	11	1.52±0.04	23	1.52±0.04	34
16. Metascutellum W/L	3.36±0.13	13	3.60±0.22	26	3.52±0.23	39
17. Fore wing L/W	18.23±0.42	4	18.77±0.89	12	18.64±0.82	16
18. Fore wing L/Pronotum L	5.95±0.30	8	6.18±0.23	17	6.11±0.27	25
19. No. of costal setae on fore wing	27.4 ±1.9	27	27.5 ±3.2	48	27.5 ±2.7	75
20. No. of fore veinal setae on fore wing	9.1 ±0.5	21	8.9 ±0.6	45	9.0 ±0.6	66
21. No. of hind veinal setae on fore wing	6.8 ±0.9	22	6.5 ±1.0	44	6.6 ±0.9	66
22. No. of anterior FH on fore wing	32.4 ±2.4	26	30.6 ±2.1	47	31.3 ±2.3	73
23. No. of posterior FH on fore wing	69.1 ±3.6	19	65.2 ±3.7	25	66.8 ±4.1	44
24. No. of FH on hind wing	83.0 ±6.4	22	80.0 ±5.7	33	81.2 ±6.1	55
25. $T_9L/T_{10}L$	1.33±0.08	15	1.53±0.09	28	1.46±0.13	43
26. T_9B_1/T_9L	0.94±0.07	17	0.78±0.08	27	0.84±0.11	43
27. T_9B_2/T_9L	1.03±0.07	17	0.91±0.05	30	0.95±0.09	47
28. T_9B_3/T_9L	0.74±0.05	14	0.68±0.05	28	0.70±0.06	42
29. $T_{10}B_1/T_{10}L$	1.08±0.06	14	1.13±0.09	28	1.11±0.09	42
30. $T_{10}B_2/T_{10}L$	0.97±0.07	14	1.06±0.08	29	1.03±0.09	43
31. Ovipositor L/Pronotum L	1.63±0.06	13	1.75±0.08	27	1.71±0.09	40

Some differences in quantitative characters can be recognized between the population in Hokkaido and that in Honshu, Shikoku and Kyushu; of the 31 characters compared between the two populations (Table 1), 7 (nos. 12–14, 25–27, 31) are highly significantly different by *t*-test ($p<0.01$).

Helionothrips mube n. sp.

♀. Dark to blackish brown; head entirely dark; legs dark brown; fore femur paler, fore tibia brown interiorly and yellowish exteriorly; tarsi, apices of tibiae and

trochanters yellow. Fore wing dark brown basally and apically, with subbasal pale band, dark at fork and gradually fading apicad. Antenna yellow; A_6 and A_7 brown, A_8 pale brown.

Head (Fig. 2.1) W/L 1.40–1.55, without wrinkles in reticles; occipital carina arched medially, close to eye; posterior half of occipital collar with granules in reticles; IOD/HOW 1.83–3.33; OOD/IOD 1.60–2.25. Antenna (Fig. 2.2) 2.2–2.3 as long as head; A_3 L/W 2.41–2.85, 1.55–1.80 as long as A_5, forked sense cone 1.11–1.29 as long as A_3 and nearly reaching apex of A_4; A_4 L/W 2.03–2.33, 1.33–1.55 as long as A_5, constricted apex shorter and narrower than the apex of A_3, forked cone 1.60–2.00 as long as A_4, longer than simple cone, surpassing apex of A_6 and occasionally reaching middle of A_8; combined length of A_3 and A_4 2.95–3.35 as long as A_5; A_5 L/W 1.64–2.00; A_6 L/W 1.39–1.75, inner sense cone 2.00–2.77 as long as A_6 and surpassing A_8; A_7 L/W 0.9–1.1; A_8 L/W 6.0–9.0, 3.10–4.11 as long as A_7.

Pronotum (Fig. 2.1) W/L 1.50–1.67, without wrinkles in reticles; 2–3 transverse rows of reticles between anterior setae and median setae larger than anteromarginal and median reticles; porterior submedian reticles also larger. Meso- and metanotal reticles without wrinkles; metascutellum 2.98–3.45 as wide as long. Fore wing L/W 15.8–18.7, 5.82–6.64 as long as pronotum; with 29–38 anterior and 62–79 posterior FH; costa with 25–35 setae, fore vein with 8–10, hind vein with 6–9. Hind wing with 73–91 FH.

Abdominal terga with wrinkles in lateral reticles; T_3–T_8 with antecostal line divided into broad arches connected by fine line, but without heavy lines issuing caudad from their ends; T_1 smooth submedially; T_2 almost completely reticulate; T_8 with comb interrupted medially by the distance of combined intervals of 8–9 microtrichia; $T_9L/T_{10}L$ 1.61–1.98; B_1–B_3 on T_9 each 0.55–0.91, 0.74–1.06 and 0.56–0.69 as long as T_9; B_1–B_2 on T_{10} each 1.11–1.55 and 1.00–1.36 as long as T_{10}; ovipositor 1.63–1.91 as long as pronotum.

Measurements (μm). Body L 1.4–1.7 mm. Head L 137–150, W 198–212; pronotum L 150–173, W 237–277; fore wing L 885–1150, W 50–63; T_9 L 100–115; T_{10} L 55–70; B_1–B_3 on T_9 each 65–103, 82–117, 62–75; B_1–B_2 on T_{10} each 77–87, 65–80; ovipositor L 254–315. Antenna 310–344 in total L; L(W) of antennal segments as follows: A_1 24–27 (28–30); A_2 42–45 (33–36); A_3 65–78 (25–30); A_4 58–68 (27–30); A_5 40–46 (23–25); A_6 29–35 (20–23); A_7 9–11 (10); A_8 40–45 (5).

♂. Colored and generally built-up as in females. Head W/L 1.53–1.65; IOD/HOW 2.00–3.00; OOD/IOD 1.91–2.10. Antenna 2.5–2.7 as long as head; A_3 L/W 2.64–2.92, forked sense cone 1.09–1.21 as long as A_3; A_4 L/W 2.04–2.31, forked cone 1.67–2.03 as long as A_4; A_5 L/W 1.78–1.95; A_6 L/W 1.25–1.58, inner sense cone 2.43–2.92 as long as A_5; A_8 3.00–3.89 as long as A_7. Pronotum W/L 1.49–1.60; metascutellum W/L 2.98–3.33. Fore wing L/W 18.6–20.4, 5.72–6.23 as long as pronotum; with 28–31 anterior and 61–63 posterior FH; costa with 24–30 setae, fore vein with 8–9, hind vein with 6–8. Hind wing with 69–73 FH. T_9

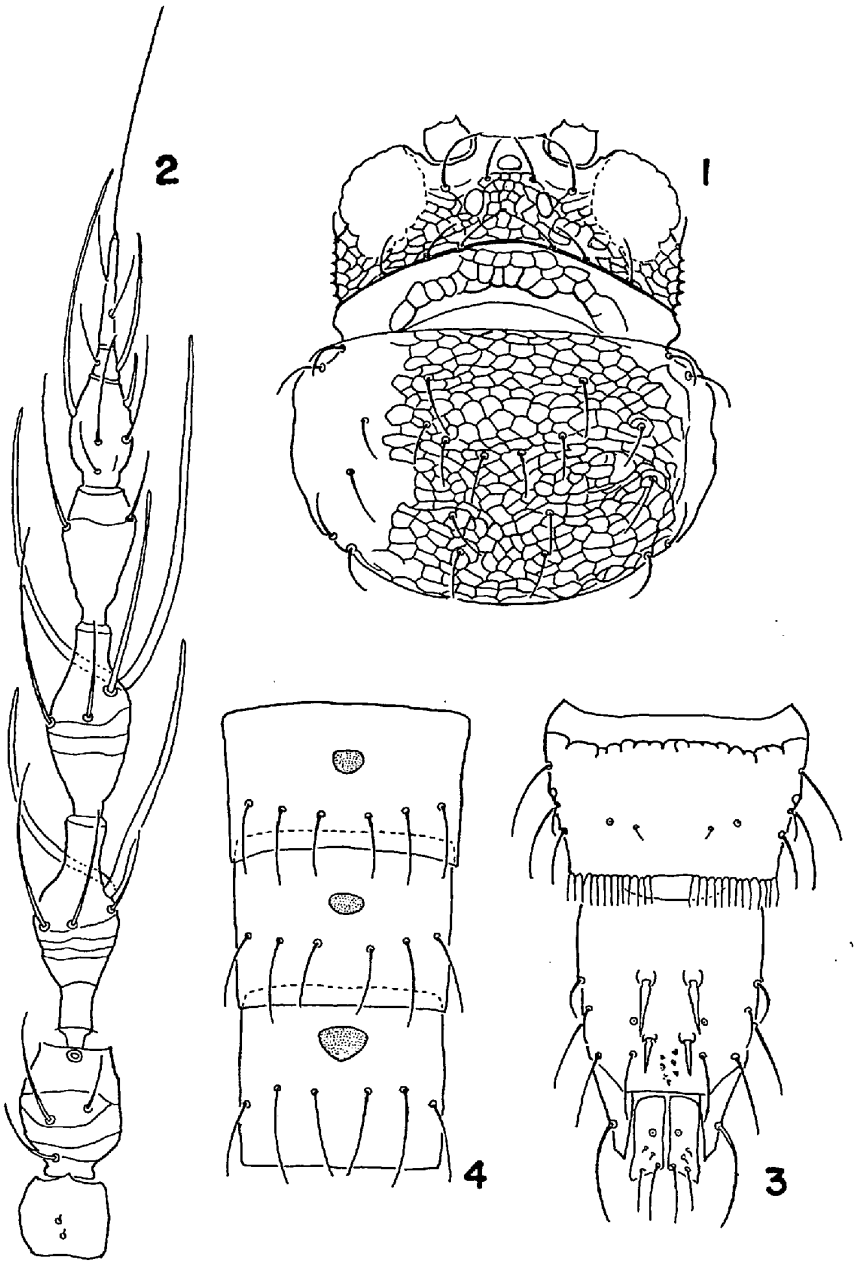

Fig. 2. *Helionothrips nubе*.——1, ♀, Head and pronotum; 2, ♀, antenna; 3, ♂, T_8–T_{10}; 4, ♂, S_6–S_8.

L/T_{10} L 2.51–2.83; T_9 (Fig. 2.3) with 2 pairs of stout setae widely separated at base, anterior pair 0.20–0.27 and posterior pair 0.17–0.20 as long as T_9; T_9 with 6–8 wartlets on posteromedian area. S_6–S_8 (Fig. 2.4) with glandular area, that on S_6 small circular (diameter ca. 14 μm), occasionally vestigial, those on S_7 and S_8 larger and oval (L and W ca. 20 and 28 μm). Body L 1.4/1.7 mm.

Specimens examined. Holotype ♀ (*Stauntonia hexaphylla*), Nagasaki, Inasa-

Table 2. Mean and S. D. of quantitative characters in females of four *Helionothrips* species (characters as in Table 1).

Characters	*H. mube*	*H. linderae*	*H. cephalicus*	*H. ponkikiri*
	Mean±S. D. n	Mean±S. D. n	Mean±S. D. n	Mean±S. D. n
1.	1.46±0.05 12	1.67±0.09 17	1.30±0.06 21	1.46±0.07 14
2.	2.61±0.37 28	1.77±0.16 18	2.06±0.22 25	2.30±0.24 16
3.	2.01±0.16 21	2.54±0.15 17	2.66±0.10 20	2.70±0.16 15
4.	2.65±0.14 23	2.75±0.13 18	2.28±0.07 18	2.44±0.10 15
5.	2.21±0.06 23	2.13±0.04 18	1.82±0.06 19	2.05±0.10 15
6.	1.79±0.09 23	2.05±0.12 18	1.68±0.09 19	1.98±0.07 15
7.	1.56±0.09 23	1.59±0.07 18	1.50±0.10 19	1.59±0.08 15
8.	1.69±0.07 23	1.56±0.09 18	1.40±0.06 18	1.32±0.06 15
9.	1.44±0.06 23	1.23±0.04 18	1.20±0.04 19	1.12±0.04 15
10.	3.13±0.11 23	2.79±0.12 18	2.61±0.09 18	2.44±0.10 15
11.	3.65±0.27 23	3.53±0.21 18	3.26±0.38 19	3.71±0.32 15
12.	1.21±0.05 18	0.70±0.05 18	0.66±0.04 13	0.79±0.02 9
13.	1.85±0.09 21	1.10±0.08 18	0.99±0.06 15	1.31±0.09 11
14.	2.45±0.23 15	1.99±0.11 18	1.91±0.22 8	2.13±0.14 14
15.	1.55±0.05 19	1.48±0.02 18	1.40±0.04 22	1.41±0.04 16
16.	3.18±0.14 25	3.28±0.17 18	2.78±0.11 22	2.83±0.12 16
17.	17.40±0.83 17	19.11±0.58 13	18.61±0.72 15	18.79±0.62 12
18.	6.23±0.22 18	6.11±0.15 17	5.82±0.17 21	6.22±0.15 13
19.	29.2 ±2.1 49	29.6 ±1.5 33	27.2 ±1.3 41	25.6 ±1.4 25
20.	8.9 ±0.5 44	9.0 ±0.2 28	9.5 ±0.9 22	9.0 ±0.0 23
21.	7.6 ±0.8 42	6.8 ±0.7 30	7.0 ±0.7 42	4.0 ±0.6 25
22.	32.7 ±2.0 49	31.7 ±1.4 32	26.4 ±1.4 42	26.4 ±1.7 25
23.	69.1 ±3.9 38	67.6 ±2.4 25	59.1 ±2.1 40	56.4 ±2.3 22
24.	81.8 ±4.9 36	83.5 ±3.8 25	72.6 ±4.0 30	71.6 ±4.3 22
25.	1.79±0.10 25	1.73±0.05 18	2.28±0.10 22	1.52±0.08 16
26.	0.73±0.09 28	0.63±0.05 19	0.62±0.05 22	0.83±0.06 16
27.	0.83±0.07 26	0.83±0.03 18	0.68±0.05 22	0.82±0.05 16
28.	0.62±0.04 26	0.56±0.03 18	0.49±0.04 22	0.57±0.03 16
29.	1.34±0.09 26	1.12±0.05 18	1.41±0.07 22	1.10±0.06 16
30.	1.22±0.08 26	0.94±0.05 18	1.25±0.07 22	1.04±0.06 15
31.	1.73±0.07 25	1.82±0.08 18	2.03±0.11 22	2.00±0.08 16

yama, X. 21. 1977. Paratypes. Nagasaki: 19 ♀ collected with the holotype. Kagoshima: 13 ♀ (*S. hexaphylla*), Yamakawa, Takegashima, III. 27. 1975. Okinawa: 9 ♀ 5 ♂ (*S. hexaphylla*), Okinawa Is., Higashi, V. 4. 1983.

Host plant. Lardizabalaceae: *Stauntonia hexaphylla* (THUNB.) DECNE.

Distribution. Kyushu: Nagasaki, Kagoshima. Nansei Islands: Okinawa Is.

Remarks. This species is similar to *H. aino* in both color and structure. *H. mube* is usually distinguished by the longer sense cones on A_3, A_4 and A_6, and the only extreme apex of mid and hind tibiae yellow. Distinct morphological difference between the two species is shown only in males. In *H. mube* the two pairs of stout setae on T_9 are widely separated basally (Fig. 2.3) and a glandular area

on S_6 is present even though vestigial (Fig. 2.4), while in *H. aino* the median setae on T_9 are closely spaced (Fig. 1.6) and the glandular area on S_6 is absent. In females the two species can be distinguished only statistically; of the 31 quantitative characters (Tables 1, 2), 16 (Nos. 8–14, 16, 19, 21, 25–30) are significantly different by *t*-test ($p<0.01$). Besides, *H. mube* is at present found only on *Stauntonia hexaphylla*, while *H. aino* is found on *Actinidia*, *Akebia*, *Aristolochia*, etc. The specific name derives from the Japanese word for *Stauntonia hexaphylla*.

Helionothrips linderae n. sp.

♀. Dark to blackish brown, head palest, abdominal segemets II–VII darkest; head anterior of fore ocellus yellow. Fore leg yellowish brown, inner margin of tibia darker; mid and hind legs dark brown, base of mid femur, base and apex of mid tibia, and extreme base and apical fourth of hind tibia yellow; tarsi yellow. Fore wing dark brown basally and apically, with pale subbasal band, brown at fork and gradually fading apicad. A_1 and A_2 golden yellow, always deeper than in A_3–A_5 but never as dark as A_6; A_3–A_5 pale yellow; A_6 and A_7 brown, A_6 usually yellowish basally; A_8 pale brown.

Head (Fig. 3.1) W/L 1.45–1.79, without wrinkles in reticles; occipital carina arched medially and close to eye; occipital collar with numerous granules in posteromedian reticles; IOD/HOW 1.50–2.13; OOD/IOD 2.35–2.88. Antenna (Fig. 3.2) 2.3–2.7 as long as head; A_3 L/W 2.58–3.13, 1.38–1.71 as long as A_5, forked sense cone 0.63–0.81 as long as A_3; A_4 L/W 2.06–2.20, 1.14–1.33 as long as A_5, constricted apex similar in shape to the apex of A_3, slightly thinner but not shorter, forked sense cone 0.95–1.24 as long as A_4 and not surpassing apex of A_5, simple cone usually surpassing apex of forked cone; combined length of A_3 and A_4 2.55–3.00 as long as A_5; A_5 L/W 1.82–2.25; A_6 L/W 1.46–1.67, inner sense cone 1.77–2.22 as long as A_6 and surpassing apex of A_8; A_7 L/W 0.9–1.0; A_8 L/W 5.4–7.0, 3.11–3.75 as long as A_7.

Pronotum (Fig. 3.1) W/L 1.45–1.52, mostly without wrinkles in reticles, occasionally with some weak ones in several median reticles; 2–3 transverse rows of reticles between anterior setae and median setae larger than anteromarginal and median reticles, posterior submedian reticles also larger. Mesoscutum with weak wrinkles in median reticles; metascutum without wrinkles in reticles; metascutellum 3.06–3.82 as wide as long. Fore wing (Fig. 3.3) L/W 17.7–19.9, 5.80–6.34 as long as pronotum; with 29–34 anterior and 63–71 posterior FH; costa with 27–33 setae, fore vein with 8–9, hind vein with 6–8. Hind wing with 77–89 FH.

Abdominal terga (Fig. 3.5) with wrinkles in reticles posterior of B_2 and laterad of B_3; T_1 (Fig. 3.4) posterior of antecostal line completely reticulate; antecostal lines on T_3–T_8 divided into broad arches connected by fine line, not issuing cauded into scalloped areas; T_8 with comb interrupted medially by the distance of combined intervals of 6–10 microtrichia; T_9 L/T_{10} L 1.62–1.81; B_1–B_3 on T_9 each 0.55–0.72,

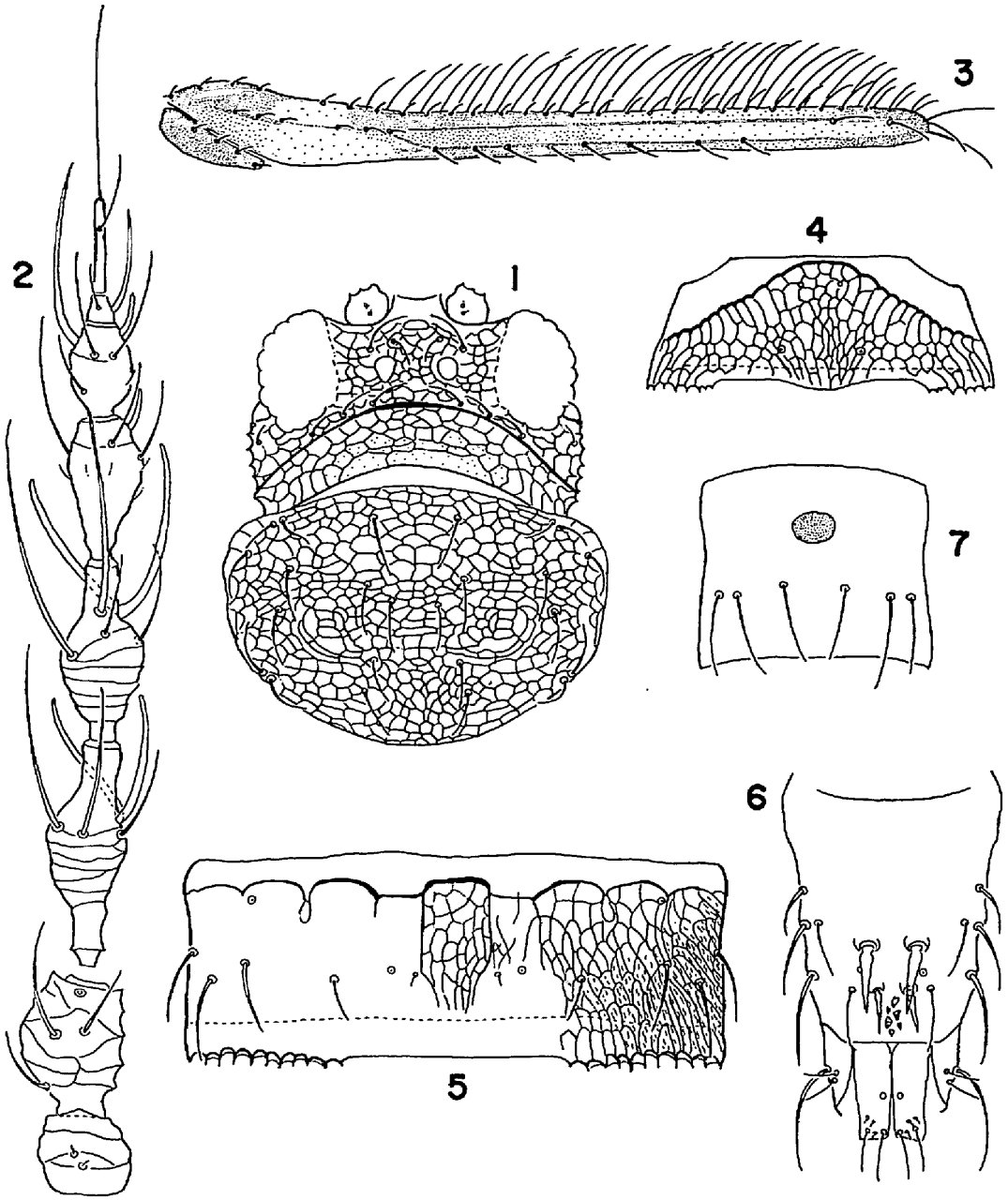

Fig. 3. *Helionothrips linderae*.——1, ♀, Head and pronotum; 2, ♀, antenna; 3, ♀, fore wing; 4, ♀, T_1; 5, ♀, T_5; 6, ♂, T_9–T_{10}; 7, ♂, S_8.

0.76–0.88 and 0.51–0.61 as long as T_9; B_1–B_2 on T_{10} each 1.03–1.21 and 0.85–1.03 as long T_{10}; ovipositor 1.67–1.95 as long as pronotum.

Measurements (μm). Body L 1.5–1.6 mm. Head L 105–130, W 181–198; pronotum L 145–160, W 213–235; fore wing L 870–985; W 48–52; T_9 L 100–110; T_{10} L 57–65; B_1–B_8 on T_9 each 57–78, 83–93, 55–63; B_1–B_2 on T_{10} each 65–72, 53–60; ovipositor L 252–295. Antenna 252–295 in total L; L(W) of antennal

segments as follows: A_1 24–25 (25–27); A_2 38–42 (29–32); A_3 62–72 (23–25); A_4 53–56 (25–26); A_5 40–46 (20–22); A_6 27–30 (17–18); A_7 8–9 (8–9); A_8 27–30 (4–5).

♂. Colored as in females. T_9 (Fig. 3.6) with 2 pairs of thorn-like setae widely separated basally, with 6 wartlets on posteromedian area; S_8 (Fig. 3.7) alone with oval glandular area (L 15, W 22 μm). Body L 1.2 mm.

Specimens examined. Holotype ♀ (*Lindera* sp.), Shizuoka, Umegashima (800 m), IX. 14. 1978. Paratypes. Tokyo: 7 ♀ (*Parabenzoin praecox*), Hachioji, Takaosan, VIII. 13. 1978. Shizuoka: 25 ♀ 1 ♂ collected with the holotype; 1 ♀ (*Actinidia arguta*), same locality as the holotype, X. 1. 1977.

Host plants. Lauraceae: *Lindera* sp., *Parabenzoin praecox* (SIEB. et ZUCC.) NAKAI.

Distribution. Honshu: Tokyo, Shizuoka.

Remarks. This species differs from *H. anathakrishnani* in the head anterior to fore ocellus yellow (vs. uniformly blackish brown in the latter). It is distinguished from *H. kadaliphilus* by T_1 posterior to antecostal line completely reticulate, the simple sense cone on A_4 reaching the apex of A_5, and the tarsi and the apex of tibiae yellow, never as pale as a subbasal pale area on the fore wing.

Helionothrips cephalicus HOOD

Helionothrips cephalicus HOOD, 1954, 191–192; WILSON, 1975, 126–127.
Caliothrips fasciapennis: KUDÔ, 1973 (*nec* HINDS, 1902), 463–465.

♀. Dark to blackish brown; fore leg yellowish brown, femur darker basally and exteriorly; mid leg brown, base of femur and base and apex of tibia yellowish; hind leg dark brown, tibia yellowish apically; tarsi yellowish brown. Fore wing dark brown apically and basally, with a narrow subbasal pale band, dark brown at fork and fading apicad. A_1 and A_2 brown; A_3–A_5 yellow; A_6–A_8 brown, A_6 paler basally.

Head (Fig. 4.1) W/L 1.18–1.38, with many prominent wrinkles in reticles; occipital collar reticulate but weakly along carina with granules in posteromedian reticles; IOD/HOW 1.70–2.50; OOD/IOD 2.50–2.89. Antenna (Fig. 4.2) 1.9–2.2 as long as head; A_3 L/W 2.13–2.39, 1.28–1.49 as long as A_5, forked sense cone 0.60–0.73 as long as A_3; A_4 L/W 1.72–1.92, 1.15–1.29 as long as A_5, constricted apex subequal in size and similar in shape to the apex of A_3, forked sense cone 0.89–1.12 as long as A_4 and not reaching apex of A_5, simple cone surpassing apex of forked cone and of A_5; combined length of A_3 and A_4 2.45–2.74 as long as A_5; A_5 L/W 1.52–1.82; A_6 L/W 1.29–1.68, inner sense cone 1.59–2.23 as long as A_6 and surpassing apex of A_8; A_7 L/W 0.9–1.1; A_8 L/W 5.0–7.0, 2.50–3.98 as long as A_7.

Pronotum W/L 1.34–1.49, with numerous wrinkles in reticles; reticles nearly same in size throughout disc. Mesoscutum (Fig. 4.3) reticulate anteromedially with internal wrinkles, the rest heavily striate without internal wrinkles; metascutel-

lum 2.54–2.97 as wide as long. Fore wing (Fig. 4.5) L/W 17.5–20.6, 5.50–6.09 as long as pronotum, with 23–29 anterior and 55–64 posterior FH; costa with 25–30 setae, fore vein with 8–12, hind vein with 6–8. Hind wing with 65–81 FH.

Abdominal terga with numerous wrinkles in reticles laterad of B_2; T_1 (Fig. 4.6) strongly reticulate medially, smooth submedially; antecostal lines on T_3–T_8 transverse, not issuing cauded into scalloped areas; T_8 (Fig. 4.7) with comb interrupted medially by the distance of combined intervals of 4–6 microtrichia; T_9L/T_{10} L 2.07–2.44; segment IX enlarged in contrast with segment X; B_1–B_3 on T_9 each 0.47–0.68, 0.56–0.76 and 0.42–0.57 as long as T_9; B_1–B_2 on T_{10} each 1.29–1.55 and 1.12–1.42 as long as T_{10}; ovipositor 1.90–2.27 as long as pronotum.

Measurements (μm). Body L 1.2–1.5 mm. Head L 123–148, W 164–177; pronotum L 138–152, W 187–217; fore wing L 775–925, W 42–48; T_9 L 113–128; T_{10} L 50–58; B_1–B_3 on T_9 each 58–85, 75–97, 50–68; B_1–B_2 on T_{10} 70–82, 63–75; ovipositor L 268–320. Antenna 249–281 in total L; L(W) of antennal segments as follows; A_1 20–23 (23–27); A_2 37–40 (30–33); A_3 49–58 (22–25); A_4 43–48 (22–27); A_5 35–41 (22–24); A_6 26–33 (17–21); A_7 8–10 (8–10); A_8 25–36 (5).

♂. Colored as in females. T_9 (Fig. 4.9) with 2 pairs of thorn-like setae widely separated basally, with 5 wartlets on posteromedian area; sterna without glandular areas. Body L 1.1 mm.

Specimens examined. Ibaraki: 6 ♀ (grass), Mito, Kairakuen, X. 1. 1976. Shizuoka: 15 ♀ (*Miscanthus sinensis*), Shizuoka, Umegashima (600 m), VII. 30. 1971; 8 ♀ (*M. sinensis*), Shizuoka, Nihondaira, XII. 10. 1980. Hyogo: 20 ♀ 1 ♂ (*Oplismenus* sp.), Himeji, Shoshasan, X. 10. 1975. Tokushima: 9 ♀ (grass), Anan, Tsunomine, XI. 5. 1977. Kochi: 15 ♀ (*M. sinensis*), Toyo, Kannoura, IV. 1. 1976; 1 ♀ (*Lophatherum gracile*), Kochi, Godaisan, IX. 25. 1975; 3 ♀ (*M. sinensis*), Tosashimizu, Ashizurimisaki, IV. 4. 1976. Oita: 2 ♀ (*M. sinensis*), Ota, Futagoji, IV. 30. 1976. Nagasaki: 2 ♀ (grass), Nomozaki, Wakisaki, X. 22. 1977. Miyazaki: 4 ♀ (grass), Nichinan, Udo, X. 26. 1977. Kagoshima: 2 ♀ (grass), Kirishima (1,000 m), X. 6. 1978; 1 ♀ (*Stachyurus praecox*), Yamakawa, Takegashima, III. 27. 1975; 2 ♀ (grass), Kaimon, III. 26. 1975. Hongkong: 14 ♀ (grass), Hongkong Is., V. 18. 1973.

Host plants. Gramineae: *Lophatherum gracile* BRONGN., *Miscanthus sinensis* ANDERSS., *Oplismenus* sp., unidentified species.

Distribution. Honshu: Ibaraki, Shizuoka, Hyogo. Shikoku: Tokushima, Kochi. Kyushu: Oita, Nagasaki, Miyazaki, Kagoshima. Oriental: Taiwan, Hongkong (new record).

Remarks. This species is unique in having the large abdominal segment IX, and the head and thoracic notum with numerous wrinkles in reticles. *H. cephalicus* is related to *H. parvus* by the head relatively long and uniformly black, but it differs in the apical half of the fore wing dark (pale in *parvus*) and males without abdominal glandular areas (S_7 and S_8 each with a large circular glandular area).

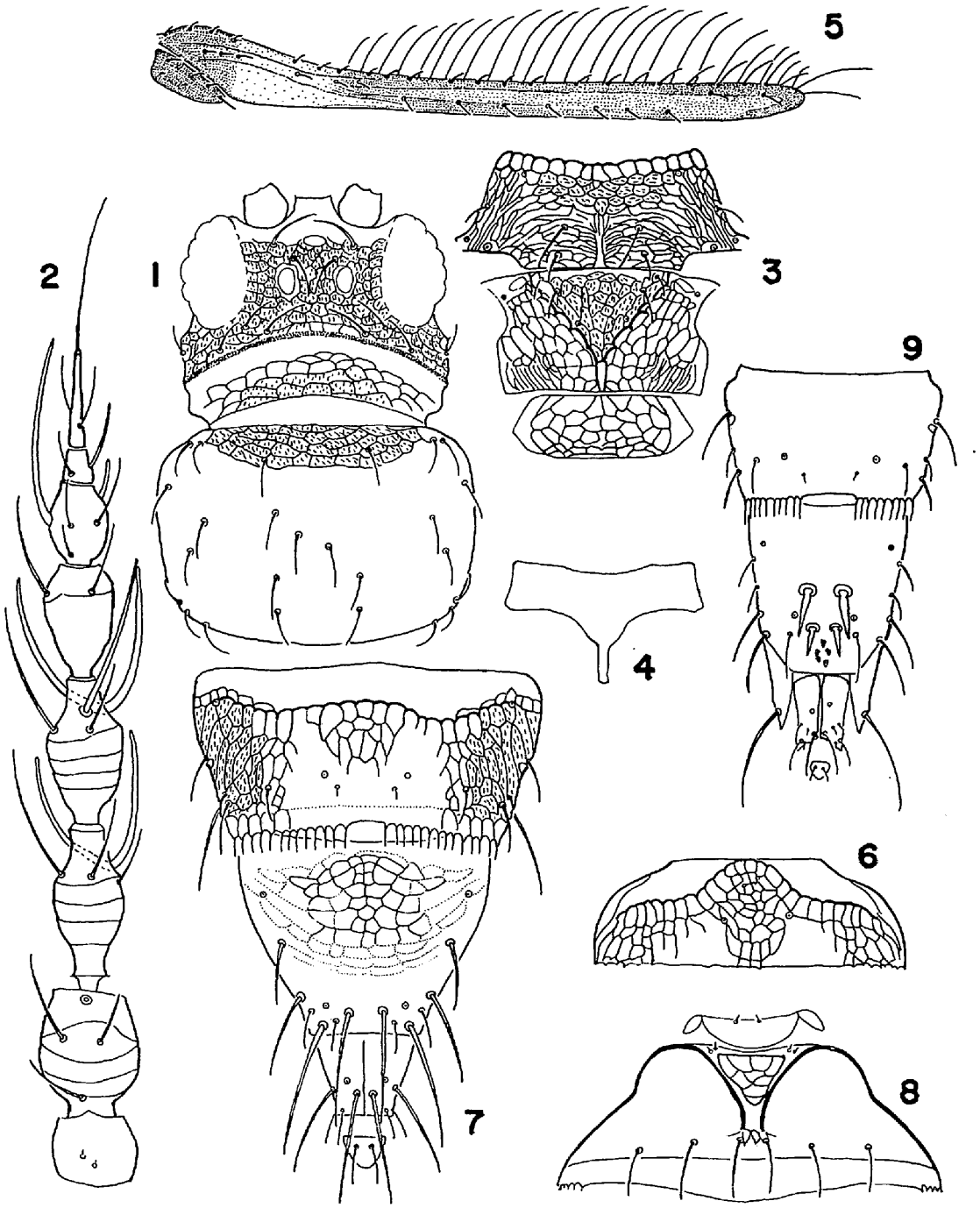

Fig. 4. *Helionothrips cephalicus*.——1, ♀, Head and pronotum; 2, ♀, antenna; 3, ♀, meso- and metanota; 4, ♀, prospinasternum; 5, ♀, fore wing; 6, ♀, T_1; 7, ♀, T_8–T_{10}; 8, ♀, S_1 and S_2; 9, ♂, T_8–T_{10}.

Helionothrips ponkikiri n. sp.

♀. Dark brown; head entirely dark; fore femur brown, fore tibia yellowish brown; mid and hind legs dark brown, but tibiae yellow in apical third; tarsi and trochanters yellow. Fore wing dark brown basally and apically, with a subbasal pale band; dark at fork and gradually fading apicad. A_1, A_2, A_6 and A_7 brown to dark brown, A_6 occasionally paler at pedicel; A_3–A_5 yellow, A_8 pale brown.

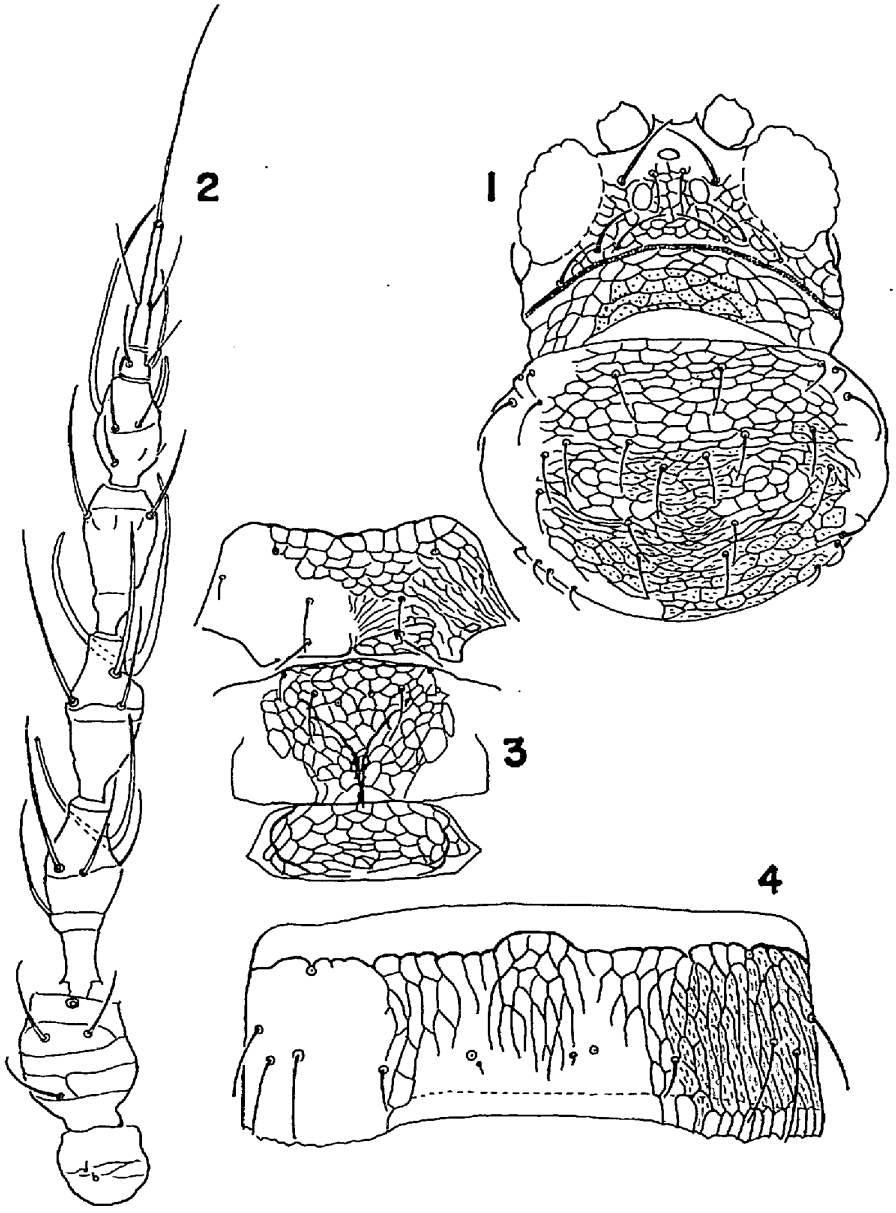

Fig. 5. *Helionothrips ponkikiri* ♀.——1, Head and pronotum; 2, antenna; 3, meso- and metanota; 4, T_5.

Head (Fig. 5.1) W/L 1.34–1.55, without wrinkles in reticles; occipital carina arched medially and close to eye; occipital collar with weak granules in postero-median reticles; IOD/HOW 1.67–2.57; OOD/IOD 2.44–2.94. Antenna (Fig. 5.2) 2.3–2.6 as long as head; A_3 L/W 2.24–2.65, 1.22–1.45 as long as A_5, forked sense cone 0.74–0.82 as long as A_3 and reaching middle of A_4; A_4 L/W 1.92–2.22, 1.07–1.22 as long as A_5, constricted apex subequal in size and similar in shape to the apex of A_8, forked sense cone 1.12–1.46 as long as A_4 and at least reaching apex of A_5, simple cone reaching middle of A_5; combined length of A_3 and A_4 2.29–2.62 as long as A_5; A_5 pedicellate, L/W 1.86–2.15, with a subbasal enlargement; A_6 L/W 1.47–1.73, inner sense cone 1.94–2.33 as long as A_6 and surpassing apex of A_8; A_7 L/W 0.86–1.11; A_8 L/W 5.50–7.20, 3.30–4.50 as long as A_7; A_4 with 2–3 ventral rows of microtrichia, A_5 with 1–2 dorsal and 2–3 ventral rows, A_6 with 0–1 dorsal and 2 ventral rows.

Pronotum (Fig. 5.1) W/L 1.36–1.49; polygonally reticulate anteriorly, transversely reticulate posteriorly; median posterior reticles with weak vermiform wrinkles; 2–3 rows of reticles between anterior and median setae larger than antero-marginal reticles. Meso- and metanotal reticles (Fig. 5.3) without internal wrinkles; metascutellum W/L 2.61–3.08. Fore wing L/W 17.80–19.67, 5.91–6.55 as long as pronotum; with 23–30 anterior and 53–61 posterior FH; costa with 23–28 setae, fore vein with 9, hind vein with 3–5. Hind wing with 65–81 FH.

Abdominal terga (Fig. 5.4) with weak vermiform wrinkles in reticles on lateral fourth; antecostal line on terga thin and transverse, not issuing caudad to form large median saccules; T_1 unsculptured submedially; T_2 almost completely reticulate; T_8 with comb of microtrichia medially interrupted by the distance of combined intervals of 7–8 microtrichia; T_9 L/T_{10} L 1.38–1.67; B_1–B_3 on T_9 each 0.72–0.93, 0.70–0.90 and 0.48–0.65 as long as T_9; B_1–B_2 on T_{10} each 0.96–1.21 and 0.93–1.12 as long T_{10}; ovipositor 1.86–2.15 as long as pronotum.

Measurements (μm). Body L 1.3–1.5 mm. Head L 108–120, W 160–175; pronotum L 140–150, W 195–220; metascutellum L 37–45, W 107–123; fore wing L 828–970, W 43–50; T_9 L 100–107; T_{10} L 62–75; B_1–B_3 on T_9 each 72–95, 75–91, 50–68; B_1–B_2 on T_{10} each 68–77, 65–75; ovipositor L 275–315. Antenna 269–295 in total L; L(W) of antennal segments as follows: A_1 20–23 (24–26); A_2 35–39 (30–33); A_3 53–61 (22–24); A_4 45–52 (22–24); A_5 41–46 (20–22); A_6 28–32 (18–20); A_7 8–10 (9–10); A_8 32–37 (5–6).

♂. Unknown.

Specimens examined. Holotype ♀ (grass), Daisen, Daisenji (800 m), VIII. 27. 1978. Paratypes. Tottori: 4 ♀ collected with the holotype. Kagawa: 2 ♀ (grass), Takamatsu, Goshikidai, X. 16. 1977. Ehime: 9 ♀ (grass), Omogo, Omogo-kei (600 m), VIII. 31. 1978. Kagoshima: 2 ♀ (grass), Kirishima (1,000 m), X. 5. 1978.

Host plants. Gramineae: unidentified species.

Distribution. Honshu: Tottori. Shikoku; Kagawa, Ehime. Kyushu: Kago-

shima.

Remarks. This species is distinguished from the Indian species *H. parvus* by the apical half of the fore wing brownish, the posterior half of the pronotum with weak vermiform wrinkles in reticles, and the slenderer A_5 (L/W 1.86–2.15) with a subbasal enlargement. *H. parvus* has the apical half of the fore wing pale, no wrinkles in the pronotal reticles, and the stouter A_5 (L/W 1.65–1.79) without a subbasal enlargement. The specific name means a "small insect" in the Ainu language.

Helionothrips errans (WILLIAMS)

Heliothrips errans WILLIAMS, 1916, 243–245.
Helionthrips errans: PRIESNER, 1936, Proc. r. ent. Soc. Lond., (B) **5**, 208; WILSON, 1975, 128–129.

♀. Dark brown; head yellow anterior of fore ocellus between antennal bases; fore femur brown, mid and hind femora dark brown; fore tibia brownish yellow, mid and hind tibiae brown basally and yellow apically; tarsi yellow. Fore wing brown basally, with a subbasal white band, brown at fork and at apex, pale brown in apical half. A_1, A_2 and A_6 brown, A_3–A_5 yellow, A_7 and A_8 dark gray.

Head (Fig. 6.1) W/L 1.57–1.60; without wrinkles in reticles; occipital collar completely reticulate, with granules in posteromedian reticles, with about 20 reticles along carina. Antenna (Fig. 6.2) 2.1–2.3 as long as head; A_3 L/W 2.50–2.68, forked sense cone reaching bulged part of A_4; A_4 L/W 2.08–2.12, constricted apex similar in size to the apex of A_3, forked and simple sense cones reaching base of A_6; A_5 elongate, L/W 2.09–2.14, with subbasal enlargement; A_6 L/W 1.40–1.60, inner sense cone 2.3–2.7 as long as A_6 and surpassing apex of A_8; A_8 4.9–5.3 as long as A_7; A_3 with 3 ventral rows of microtrichia, A_4 with 2 ventral rows, A_5 with 1 ventral row.

Pronotum (Fig. 6.1) W/L 1.76–1.89; without wrinkles in reticles. Meso- and metanotal reticles without wrinkles. Fore wing (Fig. 6.3) L/W 17.6–18.4; microtrichia uniform in size; veinal setae normally thin and pointed; costa with 23–26 setae, fore vein with 10, hind vein with 6–7.

Abdominal T_1 and T_2 completely reticulate; antecostal line on T_3–T_8 (Fig. 6.4) transverse, not issuing cauded into scalloped areas; T_9 (Fig. 6.5) with complete comb but weaker medially; B_1 and B_3 on T_9 subequal, B_2 longest; B_1 and B_2 on T_{10} subequal in length.

Measurements (μm). Body L 1.4–1.5 mm. Head L 133–138, W 213–217; pronotum L 142–143, W 250–270; fore wing L 830–860, W 45–49; B_1–B_3 on T_9 each 60–62, 80–83, 62–67; B_1–B_2 on T_{10} each 55–70, 63–70. Antenna 290–305 in total L; L(W) of antennal segments as follows: A_1 20(25); A_2 37–40(35); A_3 60–67 (24); A_4 52–53 (24); A_5 45–48 (21); A_6 28–32 (20); A_7 7–8 (8–9); A_8 37–40 (5).

♂. Colored as in females. Antenna longer than in females, 2.4 as long as head; L/W of A_3–A_6 each 3.3, 2.6, 2.4, 1.9; T_9 (Fig. 6.6) with 2 pairs of thorn-like

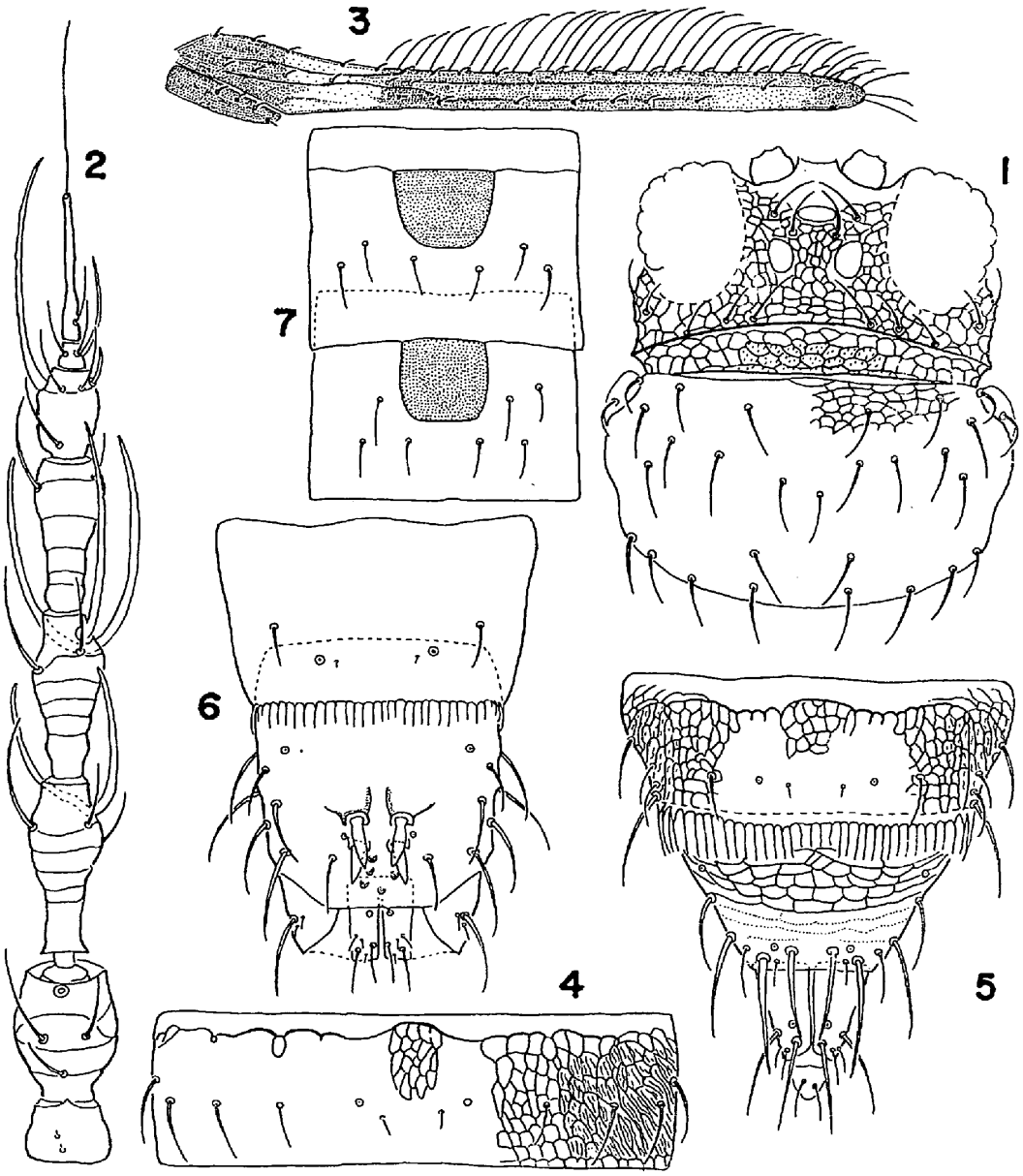

Fig. 6. *Helionothrips errans*.——1, ♀, Head and pronotum; 2, ♀, antenna; 3, ♀, fore wing; 4, ♀, T_5; 5, ♀, T_8–T_{10}; 6, ♂, S_7–S_8; 7, ♂, T_8–T_{10}.

setae arising from bases separated from each other, with 5 wartlets; S_7 and A_8 (Fig. 6.7) with large glandular area occupying about third of sternal W; S_8 with B_2 placed far ahead of B_1 and B_3. Body L 1.4 mm.

Specimens examined. Kanagawa: 2 ♀ (*Dendrobium nobile*), in greenhouse, Yokohama, VII. 29. 1940. Saitama: 1 ♂ (*D. nobile*), in greenhouse, Hatogaya, II. 6. 1937. All in KUROSAWA collection.

Host plant. Orchidaceae: *Dendrobium nobile* LINDL.

Distribution. In Japan found only in greenhouses. Honshu: Saitama, Tokyo, Kanagawa, Hyogo (all after KUROSAWA, 1968). Palearctic: England. Oriental: Taiwan (?). Ethiopian: Kenya.

Remarks. This species is distinguished from the other congeners by T_8 with a complete comb, and from *H. brunneipennis* by the forked sense cone on A_4 not reaching apex of A_6. The male specimen examined differs from the PRIESNER's description (1935) based on a specimen collected by TAKAHASHI outdoor in Taiwan. The most distinct difference is the size of the glandular area, i. e. the specimen examined has a large one, about 60 μm wide, while the specimen examined by PRIESNER has a small one, about 20 μm wide. Direct comparison of these specimens is required.

Key to Japanese Species

1. A_1 and A_2 yellow, never as dark as A_6 2
— A_1 and A_2 brown, never yellow 4
2. Head yellow anterior to fore ocellus and between antennal bases. Males with glandular area on S_8 ..... *linderae*
— Head entirely dark brown. Males with glandular area on S_7 and S_8 3
3. Mid and hind tibiae yellowish at extreme apex and base. Anterior stout setae on T_9 of males closely situated at base (Fig. 1.6) ..... *aino*
— Mid and hind tibiae yellowish only at extreme apex. Anterior stout setae on T_9 of males widely separated at base (Fig. 2.3) ..... *mube*
4. Head yellow anterior to fore ocellus and between antennal bases; T_8 with almost complete comb (Fig. 6.5). Males with large glandular area on S_7 and S_8 ..... *errans*
— Head entirely dark brown; T_8 with comb interrupted medially (Fig. 4.7). Males, if known, without glandular areas 5
5. T_9 2.1–2.4 as long as T_{10}; head and pronotum with wrinkles in reticles (Fig. 4.1) ..... *cephalicus*
— T_9 1.4–1.7 as long as T_{10}; head and anterior half of pronotum without wrinkles in reticles ..... *ponkikiri*

References

BAGNALL, R. S., 1932. Brief descriptions of new Thysanoptera XVII. *Ann. Mag. nat. Hist.*, (10) **10**: 505–520.

FAURE, J. C., 1961. Thysanoptera of Africa—5. *J. ent. Soc. sth. Afr.*, **24**: 133–153.

HOOD, J. D., 1954. Three new heliothripine Thysanoptera from Formosa. *Proc. ent. Soc. Wash.*, **56**: 188–193.

ISHIDA, M., 1931. Fauna of the Thysanoptera in Japan 2. *Insecta matsum.*, (6): 32–42.

KUDÔ, I., 1973. Some unrecorded heliothripine Thysanoptera from Japan. *Kontyû, Tokyo*, **41**: 461–469.

KUROSAWA, M., 1968. Thysanoptera of Japan. *Insecta matsum.* (Suppl.), (4): 1–94, 9 pls.
PRIESNER, H., 1935. New or little-known Oriental Thysanoptera. *Philipp. J. Sci.*, **57**: 351–375.
WILLIAMS, C. B., 1916. Biological and systematic notes on British Thysanoptera. *Entomologist*, **49**: 221–227, 243–245, 275–284.
WILSON, T. H., 1975. A monograph of the subfamily Panchaetothripinae (Thysanoptera: Thripidae). *Mem. Am. ent. Inst.*, (23): i–iv+1–354.

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支部活動報告

九州支部 第 49 回例会が日本応用動物昆虫学会九州支部との合同例会として 1991 年 6 月 22 日，九州農業試験場会議室で開催され，次の講演があった．出席者は 31 名．

1) シロアリの階級分化研究の現状：竹松葉子(九大農・昆虫)．2) ユキヤナギアブラムシの種内分化：駒崎進吉(果樹試口之津・虫害)．3) 中国雲南省の自然：鳥 洪(九大教養・生物)．

第 39 回支部大会が日本鱗翅学会九州支部との共催で 1991 年 12 月 8 日，別府市二豊会館にて開催され，次の講演があった．出席者は 40 名．

一般講演 1) 日本産モンシデムシ属 3 種の養育行動に関する知見：神毛 恵 (九大農・昆虫)．2) 日本とハワイ産のウリミバエ雄交尾信号の時間軸波形の比較：上宮健吉 (久留米大医・生物)．3) ヤノネカイガラムシの寄生蜂ヤノネキイロコバチとヤノネツヤコバチの種間競争：杉浦直幸(九大農・昆虫)．4) 多変量解析によるクリタマバチの導入天敵チュウゴクオナガコバチと土着天敵クリマモリオナガコバチの識別：青砥 勇 (九大農・昆虫)．5) 日本産 *Arbolygus* 属の分類学的研究：安永智秀 (野菜試久留米・虫害研)．6) 1991 年 5 月に飛来したマダラチョウ類：福田晴夫 (鹿児島県立博物館)・尾形之善(西之表市)．7) シロオビノメイガの梅雨期における飛来 1，1990 年：宮原義雄 (延岡市)．8) 福岡市平尾周辺の蝶相の衰亡：坂井 誠 (九大理)・桝永一宏 (九大農)・川上太朗(福岡市)・矢田 脩(九大教養)．

特別講演 1) 化石昆虫について：上田恭一郎(北九州市立自然史博)．2) トンボの繁殖戦略：東和敬(佐賀大教養・生物)．