

ORIGINAL ARTICLE

Key to the fungus-feeder Phlaeothripinae species from China (Thysanoptera: Phlaeothripidae)

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Abstract In China, 31 genera and 95 species of fungivorous Phlaeothripinae are recorded here, of which 7 species are newly recorded and illustrated. An illustrated identification key to the 94 species is also provided, together with the information of specimens examined, and distribution of each species.

Key words Key, Phlaeothripinae, fungus-feeder, China.

1 Introduction

In the subfamily Phlaeothripinae, three groups, *Haplothrips*-lineage, *Liothrips*-lineage and *Phlaeothrips*-lineage, are recognized (Mound & Marullo, 1996). Among them, the first group was treated as the tribe Haplothripini subsequently by Mound and Minaei (2007) that includes all of the flower-living Phlaeothripinae; the second group, *Liothrips*-lineage was defined as the leaf-feeding Phlaeothripinae. Almost half of Thysanoptera species are fungivorous (Morse & Hoddle, 2006), in which about 1 500 species are from Phlaeothripinae (ThirpsWiki, 2014). In contrast to about 700 species of Idolothripinae ingesting fungal spores with broad maxillary stylets, fungivorous Phlaeothripinae are feeding on fungal hyphae (Mound & Palmer, 1983; Tree *et al.*, 2010; Mound, 2004). All fungivorous Phlaeothripinae belong to the third group, *Phlaeothrips*-lineage, which is usually collected from dead branches, leaves, wood or leaf-litter. Mound (2004) indicated that at least 1 300 described thrips are included in the group *Phlaeothrips*-lineage. Six major lineages of this comprises are recognized by Okajima (2006): *Docessissophothrips*, *Glyptothrips*, *Hydiorhrips*, *Phlaeothrips*, *Plectrothrips* and *Urothrips*. It is a complex group for the polymorphic species and variation in male size and structures of many species with male/male competitive mating behaviour (Crespi, 1988), and all those genera that does not belong to the two well defined groups, Haplothripini and *Liothrips*-lineage. Therefore, the Thysanoptera publications on Phlaeothripinae gave little information of the wide structural and biological diversity within *Phlaeothrips*-lineage and its systematic study. Many literatures scattered with simple records and description. For studying *Phlaeothrips*-lineage, fortunately, some comprehensive publications provide keys to the genera of North America (Stannard, 1957), to the Philippines genera and species (Reyes, 1994), to the genera of the Neotropic (Mound & Marullo, 1996), and to the Japanese Phlaeothripidae (Okajima, 2006). And the latest paper just focused on the fungus-feeding Phlaeothripinae gave an illustrated identification key to 39 genera from Australia, together with a diagnosis for each genus (Mound *et al.*, 2013).

In China, the major book on the Thysanoptera of China provided a key to 26 genera of Phlaeothripinae with 9 fungivorous genera and 17 species (Han, 1997), and a checklist of Chinese fungivorous Phlaeothripinae with 46 species in 18 genera (Tong & Zhang, 1989). Dang *et al.* (2014) reviewed the Phlaeothripinae genera from China and Southeast Asia

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with an illustrated key to 100 genera including 48 genera in *Phlaeothrips*-lineage. This paper firstly attempted to provide an introduction and guide to identify fungivorous Phlaeothripinae species in China. Incidentally, the paper titled 'Key to the fungus-feeder Phlaeothripinae species from China', excludes three genera, *Bamboosiella*, *Cephalothrips* and *Veerabahuthrips*, despite they belong to the *Phlaeothrips*-lineage. *Bamboosiella* and *Veerabahuthrips* are well known as Bamboo-living species. Two species of *Cephalothrips* recorded from China, *C. brachychaitus* Han described from Sichuan and *C. monilicornis* (Reuter) from Inner Mongolia, were both collected from fresh plants (Han *et al.*, 1991; Cao & Feng, 2011). As part of ongoing studies on the Phlaeothripidae from China, the present work aims at providing an illustrated identification key to the 31 genera and 94 species of the 95 fungivorous Phlaeothripinae species recorded from China, together with specimen information and distribution of each species. One genus, *Streptothrips*, and two species, *Plectrothrips crassiceps* (Priesner) and *Streptothrips tibialis* Priesner, mentioned as newly records from China by Dang *et al.* (2014), are illustrated here. Additionally, 7 species are recorded here from China for the first time with illustrations, *Apelaunothrips moutanus* Okajima, *Holothrips flavus* Okajima, *H. hagai* Okajima, *H. hasegawai* Okajima, *Hoplandrothrips coloratus* Okajima, *H. ochraceus* Okajima & Urushihara, and *Psephenothrips leptoceras* Okajima.

2 Materials and methods

The drawings provided here were produced from slide-mounted specimens by a Leica DM 4000B and Nikon Eclipse 80i with their drawing tubes.

Abbreviations for body setae are as follows.

Pronotum: am — anteromarginal setae; aa — anteroangular setae; ml — midlateral setae; epimerals — epimeral setae; pa — posteroangular setae.

Posteromarginal setae on tergite IX: S1 — dorsal median pair; S2 — lateral pair next to S1.

Species with the specimens which were not examined here are citing by original descriptions and other literatures. Most of specimens are deposited in the National Zoological Museum of China (NZMC), Institute of Zoology, Chinese Academy of Sciences, Beijing, China. And some Chinese type specimens examined here are from South China Agricultural University (SCAU), Guangzhou and Baotou Landscape Research Institute (BLRI), Inner Mongolia. Furthermore, many slide-mounted specimens are studied in the Australian National Insect Collection (ANIC), Canberra, Australia. Some slides have been on loan from the Tokyo University of Agriculture (TUA), Japan and Taiwan Agriculture Research Institute (TARI), China. The depositories of each specimen examined in this study have been shown with their abbreviations.

3 Taxonomy

3.1 Key to fungus-feeder Phlaeothripinae species from China

(Excluding *Hoplandrothrips orientalis* (Moulton); " * " indicates no specimen examined)

1. Tube parallel-sided, long and slender with elongate anal setae, usually 2–4 times as long as tube (Fig. 101); abdominal segment IX usually much longer than wide (Fig. 101); body with reticulate and tubercles on dorsal surface (Fig. 101) (usually apterous)..... 2
 Tube various, but anal setae usually as long as tube (Figs 91–95); abdominal segment IX wider than long (Figs 91–95); body surface various..... 11
2. Antenna 5- or 6-segmented, morphological segments III–V united, VII–VIII sometimes fused without sutures (Fig. 74) (head with 1–3 pairs of setae on anterior margin)..... 3 (*Stephanothrips*)
 Antenna 7- or 8-segmented, segments III–V completely separated, VII–VIII sometimes fused without sutures (Fig. 56) 6
3. Head with one pair of setae on anterior margin (Fig. 44) *S. japonicus* Saikawa
 Head with two or three pairs of setae on anterior margin (Figs 43, 45)..... 4

4. Head with two pairs of setae on anterior margin (Fig. 45) (head reticulated medially (Fig. 45); pronotal epimeral setae reduced (Fig. 45)).....*S. kentingensis* Okajima
 Head with three pairs of setae on anterior margin (Fig. 46)..... 5
5. Fore tarsus without tooth; tube longer than 1.5 length of head *S. occidentalis* Hood & Williams
 Fore tarsus with tooth (Fig. 43); tube shorter than 1.5 length of head *S. formosanus* Okajima
6. Anterior margin of head with 1–3 pairs of prominent setae (Figs 12, 106) 7
 Anterior margin of head with no prominent setae (Figs 13–14, 19) 9
7. Anterior margin of head with one pair of prominent setae (Fig. 106)..... *Bradythrips zhangii* Wang & Tong
 Anterior margin of head with three pairs of prominent setae (Fig. 12)..... 8 (*Baenothrips*)
8. Abdomen segments II–VII with one pair of curved wing-retaining setae..... *B. murphyi* (Stannard)*
 Abdomen segments II–VII with one pair of straight setae (Fig. 90)..... *B. ryukyuensis* Okajima
9. Head projecting in front of eyes (Fig. 19)..... *Habrothrips curiosus* Ananthakrishnan
 Head not projecting in front of eyes, but sometimes produced as a hump (Figs 13–14) 10 (*Urothrips*)
10. Frons strongly produced in front of eyes (Fig. 13); epimeral and meta-epimeral setae blunt at tip (Fig. 13).....
 *U. gibberosa* (Kudô)
 Frons rounded forward (Fig. 14); epimeral and meta-epimeral setae enlarged at tip (Fig. 14)..... *U. tarai* (Stannard)
11. Antennal segment III much smaller than IV (Fig. 69), these segments either broadly joined or fused..... 12
 Antennal segments III and IV normal, distinctly separated from each other 17
12. Pronotal setae blunt to expanded at apex (Figs 37–38); antenna 8-segmented, segment III about 0.5 as long as IV, and widely joined to IV (Fig. 69)..... 13 (*Preeriella*)
 At least pronotal posteroangular setae sickle-shaped at apex (Figs 32, 105); antenna usually 7-segmented, morphological segments III–IV fused with or without sutures (Figs 66, 105)..... 15 (*Hydiiothrips*)
13. Antennal segment I brown, distinctly darker than II (Head brown)..... *P. armigera* Okajima
 Antennal segments I yellow, as pale as segment II 14
14. Antennal segments I–III uniformly yellow, IV–VIII brown; foremost setae of cheeks well developed, about half length of postocular setae..... *P. parvula* Okajima*
 Antennal segments I–II uniformly yellow, III–VIII brown; cheeks setae small, much smaller than postocular setae (Fig. 38) *P. formosana* Okajima
15. Posterior part of metanotum sculptured with reticulation or striation..... *H. brunneus* Okajima
 Posterior part of metanotum smooth 16
16. Pronotum longer than head; antennal segment I brown, darker than II (Fig. 105).....
 *H. guangdongensis* Wang, Tong & Zhang
 Pronotum distinctly shorter than head; antennal segments I–II uniformly brownish yellow *H. japonicus* Okajima*
17. Antennal segment II with campaniform sensorium on median or basal half of segment (Figs 68, 76) 18
 Antennal segment II with campaniform sensorium on apical half of segment 21
18. Antennal segment IV broad apically, with more than 4 prominent sensoria (Fig. 76); female abdominal sternite VIII with row of stout posteromarginal setae (Fig. 95)..... *Streptothrips tibialis* Priesner
 Antennal segment IV narrowed at apex, with 3 (or 2) prominent sensoria (Fig. 68); female abdominal sternite VIII without stout setae..... 19 (*Plectrothrips*)
19. Mid tibia with one apical spur-like seta on inner margin *P. corticinus* Priesner*
 Mid tibia with two apical spur-like setae on inner margin (Fig. 83) 19
20. Antennal segment III with two sensoria (Fig. 68)..... *P. crassiceps* (Priesner)
 Antennal segment III with three sensoria..... *P. hiromasai* Okajima*
21. Maxillary stylets short and V-shaped, usually scarcely retracted into head capsule (Figs 41–42)..... 22 (*Sophiothrips*)
 Maxillary stylets various, at least clearly visible in head anterior to postoccipital ridge 23
22. Tube yellow, the rest of body brown; basantra absent; body setae acute (Fig. 41) *S. nigrus* Ananthakrishnan
 Head and abdomen segments IX–X yellow at least; basantra present; body setae blunt or expanded (Fig. 42).....
 *S. typicus* (Ananthakrishnan)
23. Abdominal tergite VIII with two pairs of curved wing-retaining setae (Fig. 94)..... 24 (*Phylladothrips*)
 Abdominal tergite VIII with no wing-retaining setae 25

24. Head yellow; postocellar setae developed, much longer than diameter of ocelli, expanded at apex (Fig. 33)
 *P. pallidus* Okajima
 Head brown; postocellar setae minute, slightly longer than diameter of ocelli, pointed at apex (Fig. 34)
 *P. pictus* Okajima
25. Antennae 7-segmented (Fig. 75) (body surface strongly reticulated (Fig. 48))
 *Strepterothrips orientalis* Ananthakrishnan
 Antennae 8-segmented, but sometimes VII–VIII closely joined, with complete or incomplete suture 26
26. Antennal segment III usually with more than 6 stout sensoria (Fig. 57), if with 4, fore femur with a median tubercle in both sexes 27 (*Ecacanthothrips*)
 Antennal segment III with no more than 4 sensoria 29
27. Antennal segment III with 4 stout sensoria *E. kolibaci* Pelikán*
 Antennal segment III with more than 6 stout sensoria (Fig. 57) 28
28. Fore femur with an interior median tubercle or tooth (Fig. 18) *E. tibialis* (Ashmead)
 Fore femur without a median tooth (Fig. 17) *E. inarmatus* Kurosawa
29. Maxillary stylets retracted to compound eyes and close together medially in head (Fig. 36) 30
 Maxillary stylets not reaching compound eyes, about one third of head width apart medially 32
30. Metanotum strongly reticulate; pronotum clearly narrower than prothorax width; female with a large fore tarsal tooth.
 *Horistothrips palidispinosus* Steinweden & Moulton*
 Metanotum weakly reticulate (Fig. 79); pronotum occupying full width of prothorax; female without a fore tarsal tooth (Fig. 36) 31 (*Psephenothrips*)
31. Antennal segment VIII slender, about as long as VII (Fig. 72); head about as long as width across eyes (Fig. 36)
 *P. leptoceras* Okajima
 Antennal segment VIII much shorter than VII; head distinctly longer than width across eyes *P. machili* (Moulton)*
32. Mesopresternum fused to mesoeusternum medially (Fig. 82) *Asianthrips orientalis* Okajima
 Mesopresternum transverse, or reduced to two lateral triangles, never fused to mesoeusternum (Fig. 80) 33
33. Body surface strongly reticulate, many short sculpture lines inside each reticle (Figs 9–11); maxillary stylets long, retracted to eyes, close together medially (Fig. 10); pronotal major setae and postocular setae short, broadly expanded at apex (Figs 9–11); postocular setae close together (Figs 9–11); metathoracic sternopleural sutures present; fore wing, if developed, weakly constricted medially, with duplicated cilia 34 (*Azaleothrips*)
 Not above combination of characters 36
34. Antennal segment III with 3 sensoria *A. siamensis* Okajima
 Antennal segment III with 2 sensoria (Fig. 55) 35
35. Head longer than wide (Fig. 10) *A. mounidi* Okajima
 Head wider than long (Fig. 11) *A. magnus* Chen
36. Head strongly reticulate and with cheeks distinctly in-cut just behind eyes (Fig. 20) 37
 Head not strongly reticulate and with cheeks not in-cut behind eyes 39
37. Pronotum with only epimeral setae developed (Fig. 20); postocular setae minute (Fig. 20)
 *Heliothripoides reticulatus* Okajima
 Pronotum with 5 pairs of major setae with broadly expanded apices (Fig. 107); postocular setae long and capitate (Fig. 107) 38 (*Mystrothrips*)
38. Antennal segment III with 2 sensoria *M. flavidus* Okajima
 Antennal segment III with 3 sensoria *M. longantennus* Wang, Tong & Zhang
39. Maxillary stylets long, retracted to eyes, close together medially for full length of head (Fig. 47) 40
 Maxillary stylets never close together medially for full length of head 54
40. Antennal segments III and IV each with 3 sensoria (Fig. 73) *Pygmaeothrips angusticeps* (Hood)
 Antennal segment IV with 4 sensoria (Fig. 67) 41
41. Antennal segment III with 4 sensoria (Fig. 67) 42 (*Oidanothrips*)
 Antennal segment III with 2 or 3 sensoria 44
42. Fore tibiae yellow, distinctly paler than brown femora *O. frontalis* (Bagnall)
 Fore tibiae as brown as femora 43

43. Median part of head between eyes and postocular setae smooth; sternal reticulated areas weakly developed in male
 *O. taiwanus* Okajima*
 Median part of head between eyes and postocular setae strongly striate; sternal reticulated areas absent in male.....
 *O. takasago* Okajima*
44. Fore tarsal tooth absent in both sexes (Fig. 1)..... *Ablemothrips maxillatus* Ananthakrishnan
 Fore tarsal tooth present in both sexes (Figs 21–22, 24)..... 45 (*Holothrips*)
45. Mouth-cone long and pointed (Fig. 21) 46
 Mouth-cone short and rounded (Fig. 22) 50
46. Pelta with pair of campaniform sensilla (Fig. 87) *H. porifer* Okajima
 Pelta without campaniform sensilla (Figs 84–86)..... 47
47. Antennal segments IV–VI uniform brown..... 48
 Antennal segments IV–VI brown with yellow at base..... 49
48. Mid-dorsal setae of head minute (Fig. 24); tube distinctly constricted at base, surface with polygonal reticulation; S1 on tergite IX about as long as tube..... *H. hagai* Okajima
 Mid-dorsal setae of head developed, distinctly longer than other cheek setae (Fig. 21); tube not constricted at base, straight-sided, surface almost smooth; S1 on tergite IX less than 0.8 times as long as tube *H. attenuatus* Okajima
49. Fore wing with about 40 duplicated cilia *H. formosanus* Okajima
 Fore wing with about 25 duplicated cilia *H. hasegawai* Okajima
50. Tube as long as head or longer (Fig. 93); antennal segment VII slender, more than 4 times as long as wide (Fig. 58)....
 *H. flavus* Okajima
 Tube much shorter than head; antennal segment VII shorter than 4 times as its width..... 51
51. Postocular setae well developed, about half as long as head, pointed at apex; pronotal am minute
 *H. ryukyensis* Okajima*
 Postocular setae no more longer than 1/3 the length of head, blunt at apex; pronotal am well developed 52
52. Body largely yellow *H. typicus* (Ananthakrishnan)*
 Body uniformly dark brown..... 53
53. Pronotal aa as long as am; fore tarsal tooth absent in female at least..... *H. hunanensis* Han & Li
 Pronotal aa distinctly longer than am; fore tarsal tooth present in both sexes *H. latidentis* Okajima*
54. Female sternite VIII with pair of stout or leaf-like posteromarginal setae (Fig. 96); major setae strongly expanded at apex (Figs 49–50) 56 (*Terthrothrips*)
 Female sternite VIII without pair of stout posteromarginal setae 57
55. Pronotum with 3 pairs of major setae, am and aa reduced (Fig. 49)..... *T. apterus* Kudô
 Pronotum with 4 pairs of major setae, am or aa reduced (Fig. 50) 56
56. Pronotum with am reduced (Fig. 50) *T. parvus* Okajima
 Pronotum with am well developed, aa reduced (Fig. 109)..... *T. palmatus* Wang & Tong
57. Apex of fore femora at inner margin with tooth in both sexes; head without pair of stout setae on cheeks
 *Acanthothrips nodicornis* (Reuter)
 Fore femora of female without tooth, male sometimes with tooth; head with paired stout setae on basal third of cheeks
 58
58. Maxillary stylets short, wide apart, usually V- or U-shaped (Figs 15–16)..... 59
 Maxillary stylets long, close together medially 69
59. Pronotum with 4 or 5 pairs of major setae, sometimes am minute (Figs 15–16)..... 61 (*Deplorothrips*)
 Pronotum with 3 pairs of major setae, am and aa minute (Figs 39–40)..... 62 (*Psalidothrips*)
60. Postocular setae and pronotal setae acute apically (Fig. 15)..... *D. acutus* Okajima
 Postocular setae and pronotal setae expanded apically (Fig. 16) *D. medius* Okajima
61. Antennal segment III with 2 sensoria..... 62
 Antennal segment III with 3 sensoria..... 64
62. Antennal segment IV with 3 sensoria (Fig. 112)..... *P. elegatus* Wang Tong & Zhang
 Antennal segment IV with 2 sensoria 63

63. Postocellar setae minute, usually wingless or micropterous..... *P. simplex* Haga*
 Postocellar setae longer than diameter of posterior ocellus, usually macropterous (Fig. 108).....
 *P. chebalingicus* Zhang & Tong
64. Antennal segment IV with 4 sensoria 65
 Antennal segment IV with 3 sensoria 66
65. Postocellar setae minute, shorter than diameter of posterior ocellus *P. ascitus* (Ananthakrishnan)
 Postocellar setae developed, much longer than diameter of posterior ocellus (Fig. 40) *P. lewisi* (Bagnall)
66. Fore tarsal tooth absent in female (Fig. 39) 67
 Fore tarsal tooth present in female 68
67. Postocular setae and pronotal setae expanded apically (Fig. 39); cheeks incut just behind eyes (Fig. 39).....
 *P. amens* Priesner
 Postocular setae and pronotal setae acute apically; cheeks not incut just behind eyes
 *P. bicoloratus* Wang Tong & Zhang
68. Pelta with pair of campaniform sensilla *P. armatus* Okajima*
 Pelta without campaniform sensilla *P. longidens* Wang Tong & Zhang
69. Maxillary stylets relatively broad, usually 4–6 microns wide (Figs 5–7); pronotal aa and ml setae relatively close together (Figs 5–7)..... 70 (*Apelaunothrips*)
 Maxillary stylets slender, usually 2–3 microns in diameter; pronotal aa and ml setae well separated..... 78
70. Antennal segment IV with 4 sensoria (Figs 54, 110) 71
 Antennal segment IV with 2 or 3 sensoria 75
71. Body bicolored yellow and brown 72
 Body uniformly brown..... 73
72. Pelta without campaniform sensilla *A. bicolor* Okajima*
 Pelta with pair of campaniform sensilla..... *A. longidens* Zhang & Tong
73. Fore wing sub-basal setae S3 expanded apically (Fig. 89) *A. moutanus* Okajima
 Fore wing sub-basal setae S3 pointed apically..... 74
74. Tergite IX setae S1 as long as S2 in female (Fig. 92) *A. nigripennis* Okajima
 Tergite IX setae S1 distinctly longer than S2 in female (Fig. 91) *A. consimilis* Ananthakrishnan
75. Antennal segment IV with 2 sensoria (Fig. 52)..... *A. lienii* Okajima
 Antennal segment IV with 3 sensoria (Figs 51, 53) 76
76. Abdominal segments III–IV brown (Fig. 100)..... *A. hainanensis* Zhang & Tong
 Abdominal segments III–IV yellow 77
77. Abdominal segments I–VII yellow, III–VI with small brown anterior marking *A. luridus* Okajima*
 Abdominal segments I–V yellow, sometimes II brown *A. medioflavus* (Karny)
78. Postocular setae behind inner margin of eyes (Figs 2–4); metathoracic sternopleural sutures absent
 79 (*Adraneothrips*)
 Postocular setae wider apart; metathoracic sternopleural sutures usually present 82
79. Fore wing with duplicated cilia..... 80
 Fore wing without duplicated cilia..... 81
80. Body uniformly brown (Fig. 97)..... *A. chinensis* Zhang & Tong
 Body bicolored yellow and brown (Fig. 98) *A. hani* Dang, Mound & Qiao
81. Abdominal segments VII–IX brown *A. yunnanensis* Dang, Mound & Qiao
 Abdominal segments VII–IX yellow, or at least VIII yellow (Fig. 99)..... *A. russatus* Haga
82. Major setae usually acute at apex (Figs 29–31); fore wings, if developed, parallel-sided 83 (*Hoplothrips*)
 Major setae usually expanded at apex (Figs 25–28); fore wings usually weakly constricted medially
 88 (*Hoplandrothrips*)
83. Body bicolored yellow and brown *H. fungosus* Moulton
 Body uniformly brown..... 84
84. Pronotum with 5 pairs of major setae, am well developed, about as long as aa (Fig. 60)..... *H. flavipes* (Bagnall)
 Pronotum with 3 or 4 pairs of major setae, am minute 85

85. Pronotum with 3 pairs of major setae, am and aa minute *H. corticis* (Karny)
 Pronotum with 4 pairs of major setae, am minute (Figs 29, 31) 86
86. Antennal segments IV–VI uniform brown *H. orientalis* (Ananthakrishnan)
 Antennal segments IV–VI brown with yellow at base 87
87. Fore tibiae yellow *H. japonicus* (Karny)
 Fore tibiae brown with yellow apically *H. mainlingensis* Han
88. Antennal segment III with 4 sensoria, sometimes with 5 (Fig. 61) *H. flavipes* Bagnall
 Antennal segment III with 2 or 3 sensoria (Figs 59–60, 62–65) 89
89. Body bicolored yellow and brown 90
 Body uniformly brown 92
90. Head yellow (thorax and abdomen yellow with tube brown) *H. truncatoapicus* Guo, Feng & Duan
 Head brown 91
91. Pronotum and tube brown, the rest of body yellow *H. coloratus* Okajima
 Pronotum and abdominal segments I–VI yellow, meso- and metanotum and abdominal segments VII–X brown
 *H. nobilis* Priesner
92. Antennal sensoria long, sensoria on segment III as long as or longer than 1/2 length of this segment (Fig. 63)
 *H. obesametae* Chen
 Antennal sensoria short, sensoria on segment III much shorter than 1/2 length of this segment (Figs 59, 64) 93
93. Fore tibiae yellowish brown, mid and hind tibiae brown *H. bidens* (Bagnall)
 All tibiae yellow *H. ochraceus* Okajima & Urushihara

3.2 List of Chinese Phlaeothripinae

3.2.1 *Ablemothrips maxillatus* Ananthakrishnan (Fig. 1)

Ablemothrips maxillatus Ananthakrishnan, 1969: 289; Okajima, 1999: 261; Okajima, 2006: 155.

Specimens examined. Taiwan (Pingtung-hsien, Kenting National Park), 1 female from dead palmar fronds, 7 September 1993, T. Nonaka & S. Okajima (ANIC); Taiwan (Chiai-hsien, Kuantzulin), 1 male from dead leaves and branches, 23 August 1993, T. Nonaka & S. Okajima (ANIC).

Distribution. China (Taiwan), India.

3.2.2 *Acanthothrips nodicornis* (Reuter) (Fig. 77)

Phloeothrips nodicornis Reuter, 1880: 7.

Acanthothrips nodicornis (Reuter): Uzel, 1895: 41; Mound *et al.*, 1976: 6; Han, 1997: 392.

Specimens examined. Henan, 16 females and 10 males, 10 June 1957, 2 females, 20 May 1957 (NZMC); Ningxia, 4 females and 1 male, 18–29 July 1992, Yun-Fa Han (NZMC); Shandong, 2 females, 29 May 1963, Xiang-Ling Meng (NZMC).

Distribution. China (Henan, Shandong, Ningxia), Mongolia, Tajikistan, Georgia, Turkey, Russia, Hungary, Poland, Czechoslovakia, Bulgaria, Albania, Romania, Italy, Germany, Austria, Holland, Sweden, France, Switzerland, Denmark, Spain, Britain, Finland, USA.

3.2.3 *Adraneothrips chinensis* (Zhang & Tong) (Figs 2, 97)

Stigmothrips chinensis Zhang & Tong, 1990a: 193.

Adraneothrips chinensis (Zhang & Tong): Dang, Mound & Qiao, 2013: 10.

Specimens examined. Yunnan (Jinghong County), paratypes 1 female and 1 male on leaf-litter, 5 April 1987, Xiao-Li Tong (SMF); Yunnan (Mengla County, the type locality), 16 females, 9 males on *Mosla chinensis*, *Houttuynia cordata*, *Phalaenopsis* sp., bamboo and an unknown grass, 14–29 April 1997 and 27 March 1997, Yun-Fa Han (NZMC).

Distribution. China (Yunnan, Guangdong), Malaysia.

3.2.4 *Adraneothrips hani* Dang, Mound & Qiao (Fig. 98)

Adraneothrips hani Dang, Mound & Qiao, 2013: 12.

Specimens examined. Taiwan (Pingdong County, Nanjen Mt.), holotype female, paratypes 1 female and 2 males on dead leaves, 11 March 2003, N-T Zhang (NZMC).

Distribution. China (Taiwan).

3.2.5 *Adraneothrips russatus* (Haga) (Figs 3, 99)

Stigmothrips russatus Haga, 1973: 74.

Adraneothrips russatus (Haga): Dang, Mound & Qiao, 2013: 17.

Specimens examined. Yunnan (Mengla County), 2 females and 1 male on unknown grasses and withered tree leaves, 17–22 April 1997, Yun-Fa Han (NZMC); Taiwan (Pingtung-hsien), 17 females on withered tree leaves, 3 September 2001, 19 January –21 September 2002, 16 February –11 March 2003, N-T Zhang (NZMC).

Distribution. China (Yunnan, Guangdong, Taiwan), Japan.

3.2.6 *Adraneothrips yunnanensis* Dang, Mound & Qiao (Fig. 4)

Adraneothrips yunnanensis Dang, Mound & Qiao, 2013: 19.

Specimens examined. Yunnan (Jinghong County), holotype female, paratype 1 female on dead branches and leaves, 12 April 1997, Yun-Fa Han (NZMC).

Distribution. China (Yunnan), Indonesia.

3.2.7 *Apelaunothrips bicolor* Okajima

Apelaunothrips bicolor Okajima, 1979a: 44.

Specimens examined. None.

Distribution. China (Hainan, Yunnan), Thailand.

Remarks. This species was described from Thailand by Okajima (1979a), and firstly recorded from Hainan, China by Tong and Zhang (1989). Unfortunately, no specimen is checked here. *A. bicolor* Okajima is placed in the key based on the detailed original description.

3.2.8 *Apelaunothrips consimilis* (Ananthakrishnan) (Figs 5, 91)

Stigmothrips consimilis Ananthakrishnan, 1969a: 173.

Specimens examined. Singapore, 2 females and 2 males from dead twigs, 20 April 2006, L. A. Mound (ANIC).

Distribution. China (Yunnan, Taiwan), Japan, Singapore, Malaysia, Indonesia, India.

3.2.9 *Apelaunothrips hainanensis* Zhang & Tong (Figs 51, 100)

Apelaunothrips hainanensis Zhang & Tong, 1990b: 101.

Specimens examined. Hainan (Danzhou City), paratypes 1 female and 1 male from leaf-litter, 28 October 1986, Jun Zhang & Xiao-Li Tong (SCAU); Henan, 1 male from dead leaves, 23 December 1990, Xiao-Xi Zhang (NZMC).

Distribution. China (Henan, Yunnan, Hainan).

3.2.10 *Apelaunothrips lieni* Okajima (Fig. 52)

Apelaunothrips lieni Okajima, 1979: 50; Tong & Zhang, 1989: 59; Zhang & Tong, 1993: 10.

Specimens examined. Taiwan (Pingtung-hsien), 4 females and 8 males from dead leaves and branches, 3 November 2001 – 10 November 2002 (NZMC).

Distribution. China (Yunnan, Taiwan).

3.2.11 *Apelaunothrips longidens* Zhang & Tong (Fig. 110)

Apelaunothrips longidens Zhang & Tong, 1990b: 102.

Specimens examined. Guangdong (Fengkai County), paratypes 2 females and 1 male from leaf-litter, 3–4 July 1987, Xiao-Li Tong (SCAU).

Distribution. China (Guangdong).

3.2.12 *Apelaunothrips luridus* Okajima

Apelaunothrips luridus Okajima, 1979: 52.

Specimens examined. None.

Distribution. China (Guangdong, Yunnan, Hainan), Malaysia.

Remarks. This species was described from Southeast Asian country, Malaysia, and firstly reported from Guangdong, Yunnan and Hainan Provinces by Tong & Zhang (1989). No specimen is checked here. It is placed in the key based on the original description.

3.2.13 *Apelaunothrips medioflavus* (Karny) (Figs 6, 53)

Ophidothrips medioflavus Karny, 1925c: 50.

Apelaunothrips medioflavus (Karny): Karny, 1925b: 82; Okajima, 1979a: 56; Okajima, 2006: 174.

Specimens examined. Taiwan, 1 female and 1 male from dead leaves, 11 March 2003 (NZMC); Yunnan (Mengla County), 5 females from dead branches and leaves, 27 March – 4 April 1997, Yun-Fa Han (NZMC); Sichuan (Changshou County), 1 female, 6 September 1994, Jian Yao (NZMC); Guangxi (Fangcheng District), 1 female and 1 male from dead leaves and branches, 26 May 2000, Xin Ke (NZMC).

Distribution. China (Sichuan, Yunnan, Guangxi, Taiwan), Japan, Indonesia, the Philippines, Singapore, Thailand.

3.2.14 *Apelaunothrips moutanus* Okajima New record to China (Figs 7, 89)

Apelaunothrips moutanus Okajima, 1979a: 57; Okajima, 2006: 177.

Specimens examined. Yunnan (Jinghong County), 1 female from dead leaves, 29 January 1997, Yun-Fa Han (NZMC).

Distribution. China (Yunnan), Japan.

Remarks. Okajima (1979) described this species from Nagano, Japan based on three females and four males, and additional two females and three males recorded from Yamanashi (Okajima, 2006). In this study, one female of *A. moutanus* Okajima, identified according to the original description, was found from Yunnan, China for the first time.

3.2.15 *Apelaunothrips nigripennis* Okajima (Figs 54, 92)

Apelaunothrips nigripennis Okajima, 1979a: 59; Zhang, 1984a: 19; Tong & Zhang, 1989: 59.

Specimens examined. Henan (Funiu Mt.), 1 female from unknown grass, 12 July 1996, Ban-Suo Duan (BLRI).

Distribution. China (Henan, Guangdong, Hainan, Taiwan), Japan.

3.2.16 *Asianthrips orientalis* Okajima (Figs 8, 82)

Asianthrips orientalis Okajima, 2006: 187.

Specimens examined. Japan (Okinawa-ken, Ishigaki-jima Island), paratypes 2 females and 1 male from dead branches, 11 January 1991, S. Okajima (TUA).

Distribution. China (Taiwan), Japan.

3.2.17 *Azaleothrips magnus* Chen (Fig. 11)

Azaleothrips magnus Chen, 1980: 176.

Specimens examined. Taiwan (Taipei-hsien, Kuangyinshan Mt.), paratypes 1 female and 1 male from dead twig of *Morus australis*, 12 August 1978, Lain-Sheng Chen (TARI).

Distribution. China (Taiwan).

3.2.18 *Azaleothrips moundsi* Okajima (Figs 10, 55)

Azaleothrips moundsi Okajima, 1976a: 19; Han, 1997: 371; Okajima, 2006: 193.

Specimens examined. Sichuan (Sichuan University), 1 female from dead hanging leaves, 14 August 2012, L. X. Eow.
Distribution. China (Sichuan, Taiwan), Japan.

3.2.19 *Azaleothrips siamensis* Okajima (Fig. 9)

Azaleothrips siamensis Okajima, 1978: 386; Han, 1992: 248; Han, 1997: 373.

Specimens examined. Yunnan (Mengla County), 4 females and 1 male from dead leaves and dry vine, 10–17 April 1997, Yun-Fa Han (NZMC); Chongqing, 1 female from dead branches, 1 August 1999, Yun-Fa Han (NZMC).

Distribution. China (Guizhou, Yunnan, Chongqing), Thailand.

3.2.20 *Baenothrips murphyi* (Stannard)

Transithrips murphyi Stannard, 1970: 122.

Baenothrips murphyi (Stannard): Wang & Tong, 2007: 297.

Specimens examined. None.

Distribution. China (Fujian, Guangdong), Malaysia, Thailand.

Remarks. This species was recorded from Fujian by Zhang *et al.* (1999) with simple description and figures. No specimen is checked here.

3.2.21 *Baenothrips ryukyuensis* Okajima (Figs 12, 56, 90)

Baenothrips ryukyuensis Okajima, 1994: 517; Okajima, 2006: 197.

Specimens examined. Fujian, 1 female from unknown grass, 21 April 1991, Yun-Fa Han (NZMC).

Distribution. China (Fujian, Taiwan), Japan.

Remarks. One female on unknown grass from Fujian, China was identified as *B. murphyi* by Yun-Fa Han. It is rechecked here. According to the original description, it should be *B. ryukyuensis* without wing-retaining setae on abdominal tergites rather than with one pair on *B. murphyi* indicated by Wang and Tong (2007).

3.2.22 *Bradythrips zhangi* Wang & Tong (Figs 101, 106)

Bradythrips zhangi Wang & Tong, 2007: 298.

Specimens examined. Guangdong (Longmen County), paratype 1 female from leaf-litter, 11 November 2001, Zhi-Wei Li (SCAU); Guangdong (Zhaoqing City), paratype 1 male from leaf-litter, 15 December 2002, Zhi-Wei Li (SCAU).

Distribution. China (Guangdong).

3.2.23 *Deplorothisrips acutus* Okajima (Fig. 15)

Deplorothisrips acutus Okajima, 1989b: 243.

Specimens examined. Taiwan (Taipei, Tatung Mountain), paratypes 1 female and 1 male from dead branches, 4 April 1984, S. Okajima (TUA).

Distribution. China (Taiwan).

Remarks. The species is described from Taiwan, China based on apterous forms of two females and one male by Okajima (1989b). It was shown in antennal segments III–IV having three and four sensoria respectively. Two paratypes (1 female and 1 male) were checked in this paper. They all have two sensoria on antennal segments III–IV. Unfortunately, the holotype was not examined, so the number of sensoria on these segments need to be examined in future work.

3.2.24 *Deplorothisrips medius* Okajima (Fig. 16)

Deplorothisrips medius Okajima, 1989b: 250; Okajima, 2006: 228.

Specimens examined. Taiwan (Nantou-hsien, Nanshanchi), paratypes 1 female and 1 male from dead branches, 24–25 March 1984, S. Okajima (TUA).

Distribution. China (Taiwan), Japan.

3.2.25 *Ecacanthothrips kolibaci* Pelikán

Ecacanthothrips kolibaci Pelikán, 2000: 297.

Specimens examined. None.

Distribution. China (Sichuan).

Remarks. The species is described from Sichuan, China by Pelikán (2000). The information used here is from the original description (Pelikán, 2000) as lacking specimen in our collection.

3.2.26 *Ecacanthothrips inarmatus* Kurosawa (Fig. 17)

Ecacanthothrips inarmatus Kurosawa, 1932: 238.

Ecacanthothrips inarmatus Kurosawa: Palmer & Mound, 1978: 154; Han, 1997: 386; Okajima, 2006: 242.

Specimens examined. Guangdong, 2 females from dry bark of *Chaenomeles sinensis*, 9 April 1958, Xiang-Ling Meng (NZMC).

Distribution. China (Guangdong), Japan.

3.2.27 *Ecacanthothrips tibialis* (Ashmead) (Figs 18, 57)

Idolothrips tibialis Ashmead, 1905: 20.

Ecacanthothrips tibialis (Ashmead): Palmer & Mound, 1978: 154; Zhang, 1984a: 19; Han, 1997: 388; Okajima, 2006: 248.

Specimens examined. Guangdong, 29 females and 13 males from dead branches and dry bark of *Chaenomeles sinensis*, 27 March–9 April 1958, Xiang-Ling Meng & Lin-Yao Wang (NZMC); Yunnan, 9 females and 7 males from dry vine, 10–17 April 1997, Yun-Fa Han (NZMC); Gansu, 1 female, 20 July 1998, Jian Yao (NZMC); Hainan, 2 females and 1 male, 29 June 1963, Bao-Lin Zhang, 1 male, 25 April 1960, Xue-Zhong Zhang, 1 female, 22 April 1984, Chun-Lin Wang, 1 female, 21 March 1963, Bao-Lin Zhang (NZMC); Guangxi, 1 female, 10 April 1963, Xi-Guang Wang; Taiwan, 1 female, 9 March 2011, Dai-Wang Ma (NZMC).

Distribution. China (Yunnan, Guangdong, Guangxi, Hainan, Gansu, Taiwan), Japan, Vietnam, Singapore, India, Malaysia, the Philippines, Indonesia, New Guinea, Sri Lanka, Australia, New Zealand, Mauritius, Tansania, Rodriguez.

3.2.28 *Habrothrips curiosus* Ananthakrishnan (Fig. 19)

Habrothrips curiosus Ananthakrishnan, 1968: 138; Chen, 1980: 177.

Specimens examined. Taiwan, 1 female from unknown grass, 29 January 1988 (NZMC).

Distribution. China (Taiwan), India.

Remarks. The species is described from India and collected on dead branches of *Morus alba* by Ananthakrishnan (1968). Chen (1980) recorded *H. curiosus* Ananthakrishnan from Taiwan, China for the first time.

3.2.29 *Heliothripoides reticulatus* Okajima (Fig. 20)

Heliothripoides reticulatus Okajima, 1987a: 296; Tong & Zhang, 1989: 61.

Specimens examined. Indonesia (Kalimantan), paratype 1 female from leaf-litter, 17 December 1980, J. Aoki & H. Harada (TUA).

Distribution. China (Hainan), Indonesia.

Remarks. Okajima (1987) erected the genus *Heliothripoides* with *H. reticulatus* Okajima as the type species from Indonesia. Tong and Zhang (1989) recorded this species from Hainan, China.

3.2.30 *Holothrips attenuatus* Okajima (Figs 21, 84)

Holothrips attenuatus Okajima, 1987d: 15; Tong & Zhang, 1989: 60.

Specimens examined. Taiwan (Nantou-hsien, foot of Mt. Nonkao), paratype 1 female, 1 April 1984, S. Okajima (ANIC).

Distribution. China (Fujian, Taiwan).

3.2.31 *Holothrips flavus* Okajima New record to China (Figs 22, 58, 93)

Holothrips flavus Okajima, 1987d: 27; Okajima, 2006: 282.

Specimens examined. Taiwan, 9 females and 8 males from dead leaves, 19 January 2002–16 March 2003 (NZMC).

Distribution. China (Taiwan), Japan.

Remarks. Seventeen specimens collected from Taiwan, China are identified as *flavus* Okajima here. It is recorded from China for the first time in this study with illustrations.

3.2.32 *Holothrips formosanus* Okajima (Fig. 25)

Holothrips formosanus Okajima, 1987d: 27; Tong & Zhang, 1989: 60; Zhang *et al.*, 1999: 381.

Specimens examined. Taiwan, paratype 1 male, 1 May 1983, M. Hasegawa (ANIC).

Distribution. China (Fujian, Hainan, Taiwan).

3.2.33 *Holothrips hagai* Okajima New record to China (Figs 24, 85)

Holothrips hagai Okajima, 1987d: 29; Okajima, 2006: 286.

Specimens examined. Taiwan, 1 female and 1 male from dead leaves, 3 April 2002, 1 male from dead leaves, 8 December 2001 (NZMC).

Distribution. China (Taiwan), Japan.

Remarks. Based on one female and one male from Taiwan, China, this species is here newly recorded from China.

3.2.34 *Holothrips hasegawai* Okajima New record to China (Fig. 86)

Holothrips hasegawai Okajima, 1987d: 30; Okajima, 2006: 288.

Specimens examined. Guizhou, 1 male, 28 June 1988, Long-You Yang (NZMC).

Distribution. China (Guizhou), Japan.

Remarks. One male, collected from Guizhou, China, is identified as *H. hasegawai* Okajima based on the original description. And this species is recorded from China for the first time here.

3.2.35 *Holothrips hunanensis* Han & Li (Fig. 88)

Holothrips hunanensis Han & Li, 1999: 1.

Specimens examined. Hunan (Xinning County, Shuiyuancao Village), holotype female from the flowers of *Chloranthus* sp., 20 April 1997, Yi-Bo Luo (NZMC).

Distribution. China (Hunan).

3.2.36 *Holothrips latidentis* Okajima

Holothrips latidentis Okajima, 1987d: 32.

Holothrips okinawanus Okajima, 1987d: 38. Synonymised by Okajima, 2006: 292.

Specimens examined. None.

Distribution. China (Fujian, Henan, Taiwan), Japan.

Remarks. *H. okinawanus* Okajima was described from Ryukyu Islands, Japan from dead fallen branches, and found in Fujian, Henan and Taiwan, China by Tong and Zhang (1989) and Han and Li (1999). However, Okajima (2006) synonymised it as *H. latidentis* Okajima because of weak different characters and some intermediate forms.

3.2.37 *Holothrips porifer* Okajima (Fig. 87)

Holothrips porifer Okajima, 1987d: 42; Okajima, 2006: 298.

Specimens examined. Taiwan, 1 female and 1 male from dead leaves, 10 November 2002 and 11 March 2003 (NZMC).

Distribution. China (Taiwan), Japan.

3.2.38 *Holothrips ryukyuensis* Okajima

Holothrips ryukyuensis Okajima, 1987d: 44; Okajima, 2006: 300.

Specimens examined. None.

Distribution. China (Fujian), Japan.

Remarks. Tong & Zhang (1989) recorded this species from Fujian, China, which is placed in the key here from the original description.

3.2.39 *Holothrips typicus* (Ananthakrishnan)

Ischnothrips typicus Ananthakrishnan, 1967: 235.

Holothrips typicus (Ananthakrishnan): Tong & Zhang, 1989: 60

Specimens examined. None.

Distribution. China (Taiwan), India.

Remarks. This species information in this key is based on its original description.

3.2.40 *Hoplandrothrips bidens* (Bagnall) (Fig. 25)

Acanthothrips bidens Bagnall, 1910b: 374.

Hoplandrothrips bidens (Bagnall): Mound, 1968: 119; Han, 1997: 395.

Specimens examined. Beijing, 1 female from leaf of *Glycine max*, 31 July 1980, Xiao-Gang Hu (NZMC).

Distribution. China (Beijing), Iran, Hungary, France, England, New Zealand.

3.2.41 *Hoplandrothrips coloratus* Okajima New record to China (Fig. 60)

Hoplandrothrips coloratus Okajima, 2006: 311.

Specimens examined. Taiwan, 3 females and 2 males from dead branches and leaves, 10 November 2002 (NZMC).

Distribution. China (Taiwan), Japan.

Remarks. According to the original description, 3 females and 2 males from Taiwan, China are identified as *H. coloratus* Okajima. This species is recorded in China for the first time here.

3.2.42 *Hoplandrothrips flavipes* Bagnall (Figs 26, 61)

Hoplandrothrips flavipes Bagnall, 1923: 628; Zhang & Tong, 1993: 429; Zhang *et al.*, 1999: 382.

Specimens examined. Timor (Buikaren Village), 2 females and 1 male from *Cocos nucifera*, 8–9 February 2005, M. Ritchie (ANIC); Malaysia (Sarawak), 1 female and 1 male from dried slump, 7 November 2002 (ANIC).

Distribution. China (Fujian, Jiangsu, Taiwan), Philippines, Malaysia, Timor, India, Hawaii, Australia, Solomon Islands.

Remarks. There are no slides of this species in our collection. 2 females and 1 male from Timor, 1 female and 1 male from Malaysia are examined in ANIC instead.

3.2.43 *Hoplandrothrips nobilis* Priesner (Figs 27, 62)

Hoplandrothrips nobilis Priesner, 1939c: 174.

Hoplandrothrips graminis Ananthakrishnan, 1964a: 105.

Specimens examined. Cape Verde (Insel São Tiago, São Jorge), 1 female and 1 male, August/September 1983, A. van Harten (SMF).

Distribution. China (Guangdong), India, Cape Verde.

Remarks. Tong and Zhang (1989) recorded the species from Guangdong, China for the first time as *H. graminis* Ananthakrishnan just with simple information of distribution. Unfortunately, there are no slides of this species in our collection. One female and one male from Cape Verde on loan from SMF are examined instead.

3.2.44 *Hoplandrothrips obesametae* Chen (Fig. 63)

Hoplandrothrips obesametae Chen, 1980: 177; Zhang *et al.*, 1999: 382.

Specimens examined. Taiwan (Taipei-hsien; Taitung-hsien), holotype female from *Morus australis*, 7 October 1978, Lain-Sheng Chen, paratypes 1 female and 1 male from *Morus Australis*, 3 October 1978 & 12 August 1978, Lain-Sheng Chen (TARI); 1 female from dead leaves, 3 April 2002 (NZMC).

Distribution. China (Fujian, Hainan, Taiwan).

3.2.45 *Hoplandrothrips ochraceus* Okajima & Urushihara New record to China (Figs 28, 64)

Hoplandrothrips ochraceus Okajima & Urushihara, 1992: 164; Okajima, 2006: 328.

Specimens examined. Yunnan, 14 females and 10 males from dead branches and leaves, 27 March –17 April 1997, Yun-Fa Han. Japan (Kanagawa-ken, Miura-hantou, Zushi-shi, Jinmuji forest), paratypes 1 female and 1 male from leaf-litter, 17 November 1990, H. Urushihara & T. Nonaka (ANIC).

Distribution. China (Yunnan), Japan.

Remarks. Comparing with two paratypes (1 female and 1 male), 14 females and 10 males collected from Yunnan are identified as *H. ochraceus* Okajima & Urushihara. This species is newly recorded from China in this study with illustrations.

3.2.46 *Hoplandrothrips orientalis* (Moulton)

Phloeothrips orientalis Moulton, 1927: 195.

Specimens examined. None.

Distribution. China (Hong Kong).

Remarks. Described from Hong Kong, China, it is the only Chinese species that is not included in the key in this study as its simple original description and no specimens. No samples of this species were found in China, since the holotype male was deposited in California Academy of Sciences, San Francisco (ThripsWiki, 2014).

3.2.47 *Hoplandrothrips truncatoapicus* Guo, Feng & Duan

Hoplandrothrips truncatoapicus Guo, Feng & Duan, 2004: 733.

Specimens examined. Henan (Baiyun Mt.; Funiu Mt.), holotype female, paratype 1 male from unknown grass, 13–16 July 1996, Ban-Suo Duan (BLRI); Inner Mongolia (Bailingmiao Town), paratype 1 female, 11 August 1992, Ban-Suo Duan (BLRI).

Distribution. China (Henan, Inner Mongolia).

3.2.48 *Hoplothrips corticis* De Geer (Fig. 29)

Hoplothrips corticis De Geer, 1773: 11.

Trichothrips aceris Karny, 1913b: 125. Synonymised by Okajima (2006).

Hoplothrips corticis (Karny): Han, 1997: 402; Zhang *et al.*, 1999: 382.

Specimens examined. Fujian, 3 females and 2 males, 7 November 2008, Hui-Hong Zhang & Fu-Qiang Chen (NZMC).

Distribution. China (Fujian, Guangdong, Hainan), Japan, England.

3.2.49 *Hoplothrips flavipes* (Bagnall) (Fig. 30)

Dolerothrips flavipes Bagnall, 1910a: 685.

Hoplothrips flavipes (Bagnall): Zhang, 1984b: 18; Tong & Zhang, 1989: 61; Han, 1997: 403; Zhang *et al.*, 1999: 382.

Specimens examined. Hainan (Xinglong County), 1 female from dead wood, 9 April 1958 (NZMC).

Distribution. China (Fujian, Jiangsu, Guangdong, Hainan), Japan.

3.2.50 *Hoplothrips fungosus* Moulton (Fig. 81)

Hoplothrips fungosus Moulton, 1928: 305.

Hoplothrips fungosus Moulton: Zhang, 1982: 61; Han, 1993: 217; Han, 1997: 405; Zhang *et al.*, 1999: 382; Okajima, 2006: 348.

Specimens examined. Fujian, 3 females and 2 males, 7 November 2008, Hui-Hong Zhang & Fu-Qiang Chen; Beijing, 4 females and 2 males from fungus, 9–24 August 1983, Yun-Fa Han; Guangdong, 8 females and 5 males from fungi, 25 March–17 April 1958, Yun-Fa Han (NZMC).

Distribution. China (Beijing, Fujian, Guangdong, Hainan, Taiwan), Japan, India.

3.2.51 *Hoplothrips japonicus* (Karny)

Dolerothrips japonicus Karny, 1913b: 126.

Hoplothrips japonicus (Karny): Okajima, 2006: 355.

Specimens examined. Hubei, 1 female, 23 July 1998, Tian-Hong Luo (NZMC); Jiangxi, 1 female, 22 June 1975, Hui-Ying Wang (NZMC).

Distribution. China (Hubei, Jiangxi, Taiwan), Japan, USA.

3.2.52 *Hoplothrips mainlingensis* Han (Figs 78, 80)

Hoplothrips mainlingensis Han, 1988: 185.

Hoplothrips mainlingensis Han: Han, 1992: 248; Han, 1997: 407.

Specimens examined. Tibet, holotype female, paratypes 2 males, 31 July 1983, Yin-Heng Han (NZMC); Gansu, 1 female, 7 July 1999, Jian Yao (NZMC); Guizhou, 4 females and 2 males, 1 July 1988, Long-You Yang, 4 females and 1 male, 19 July 1980 (NZMC).

Distribution. China (Guizhou, Gansu, Tibet).

3.2.53 *Hoplothrips orientalis* (Ananthakrishnan) (Figs 31, 65)

Carathrips orientalis Ananthakrishnan, 1969c: 179.

Hoplothrips orientalis (Ananthakrishnan): Okajima, 2006: 357.

Specimens examined. Australia (Canberra, Black Mountain), 11 females and 8 males from Acacia dead branches & lichen, 30 April 2011, L.A. Mound (ANIC).

Distribution. China (Taiwan), India, Australia.

Remarks. There are no specimens available from China. But 11 females and 8 males identified by L.A. Mound were examined in Canberra, Australia.

3.2.54 *Horistothrips palidispinosus* Steinweden & Moulton

Horistothrips palidispinosus Steinweden & Moulton, 1930: 28.

Specimens examined. None.

Distribution. China (Zhejiang).

Remarks. This species was described by Steinweden & Moulton (1930) based on the only holotype male collected under bark of elm trees from Zhejiang Province, China. It was inaccurate to state that this species is also distributed in Jiangxi Province by Zhang and Tong (1993). According to the original description, *H. palidispinosus* Steinweden & Moulton is placed in the key.

3.2.55 *Hyidlothrips brunneus* Okajima (Figs 32, 66)

Hyidlothrips brunneus Okajima, 1995c: 169.

Specimens examined. Japan (Iriomote-jima Island, Nakamagawa-rindou), paratypes 2 females from dead branches, 7 September 1988, S. Okajima (ANIC).

Distribution. China (Taiwan), Japan.

Remarks. There is no specimens studied from China, but 2 paratypes were checked from Japan in ANIC.

3.2.56 *Hyidlothrips guangdongensis* Wang, Tong & Zhang (Fig. 105)

Hyidlothrips guangdongensis Wang, Tong & Zhang, 2006: 52.

Specimens examined. Guangdong (Guangzhou City), paratypes 1 female and 1 male from dead branches and leaves, 14–29 September 2004, Jun Wang (SCAU).

Distribution. China (Guangdong).

3.2.57 *Hyidlothrips japonicus* Okajima

Hyidlothrips japonicus Okajima, 1977: 214; Tong & Zhang, 1989: 61.

Specimens examined. None.

Distribution. China (Guangdong), Japan.

Remarks. Okajima (1977) described this species from Miura Peninsula, Japan based on a few specimens. Tong & Zhang (1989) recorded *H. japonicus* Okajima from Guangdong, China, without detail description. The information of this species is from the original description from Okajima (1977).

3.2.58 *Mystrothrips flavidus* Okajima

Mystrothrips flavidus Okajima, 2006: 485; Wang *et al.*, 2008: 1.

Specimens examined. Guangxi, 6 females and 2 males from dead branches and leaves, 26 May 2000, Xin Ke; Taiwan, 1 female, 19 February 2002.

Distribution. China (Guangdong, Guangxi, Taiwan), Japan.

3.2.59 *Mystrothrips longantennus* Wang, Tong and Zhang (Figs 107, 113)

Mystrothrips longantennus Wang *et al.*, 2008: 367.

Specimens examined. Yunnan (Xishuangbanna), paratypes 1 female and 1 male from leaf-litter, 9 September 1993 (SCAU).

Distribution. China (Yunnan, Guangdong).

3.2.60 *Oidanothrips frontalis* (Bagnall) (Fig. 67)

Docessissophothrips frontalis Bagnall, 1914d: 26.

Oidanothrips notabilis Feng, Guo & Duan, 2006: 165. Synonymised by Dang *et al.*, 2014: 62.

Oidanothrips frontalis (Bagnall): Mound & Palmer, 1983: 96; Okajima, 1999: 268; Okajima, 2006: 491.

Specimens examined. Henan (Baiyun Mt.), holotype female of *Oidanothrips notabilis* Feng, Guo & Duan from *Juglans L.*, 19 July 1996, Zhong-Qi Yang; paratypes 2 females, same data as holotype; paratype 1 male from unknown grasses, 16 July 1996, Ban-Suo Duan (BLRI); Guangxi, 1 female, 18 June 2000, Wen-Zhu Li (NZMC); Gansu, 1 male, 20 June 2000, Hong-Jian Wang (NZMC).

Distribution. China (Henan, Guangxi, Gansu), Japan, Malaysia.

3.2.61 *Oidanothrips taiwanus* Okajima

Oidanothrips taiwanus Okajima, 1999: 275.

Specimens examined. None.

Distribution. China (Taiwan).

Remarks. This species is described from Taiwan, China and related to another species from Taiwan, *O. takasago* (Okajima, 1999). Both of them have the antennal segment III bicoloured, with basal half yellow; dorsal pair of setae between postocular setae much shorter than half the length of postocular ones; fore tibiae as brown as femora; S1 on tergite IX much shorter than tube. However, *O. taiwanus* Okajima is distinguished from *O. takasago* Okajima in head dorsal surface smooth, cheeks not swollen, maxillary stylets reaching behind postocular setae, and sternal reticulated areas weakly developed in males.

3.2.62 *Oidanothrips takasago* Okajima

Oidanothrips takasago Okajima, 1999: 277.

Specimens examined. None.

Distribution. China (Taiwan).

Remarks. This species was described together with *O. taiwanus* from Taiwan, China by Okajima (1999). We added them in the key following the original descriptions. The two species are closely related but having distinct differences as above comments under *O. taiwanus*.

3.2.63 *Phylladothrips pallidus* Okajima (Figs 33, 94)

Phylladothrips pallidus Okajima, 1988: 716; Tong & Zhang, 1989: 61.

Specimens examined. Taiwan (Pintung-hsien, Kenting National Park), paratypes 1 female and 1 male from dead leaves, 19 March 1984, S. Okajima (TUA).

Distribution. China (Taiwan).

3.2.64 *Phylladothrips pictus* Okajima (Fig. 34)

Phylladothrips pictus Okajima, 1988: 717; Tong & Zhang, 1989: 61.

Specimens examined. Taiwan (Pintung-hsien, Kenting National Park), paratypes 1 female and 1 male from dead leaves, 19 March 1984, S. Okajima (TUA).

Distribution. China (Taiwan).

3.2.65 *Plectrothrips corticinus* Priesner

Plectrothrips corticinus Priesner, 1935a: 371.

Specimens examined. Yunnan (Mengla County), 1 female and 1 male from dead tree bark, 10 April 1997, Yun-Fa Han.

Distribution. China (Yunnan, Taiwan).

3.2.66 *Plectrothrips crassiceps* (Priesner) (Figs 35, 68, 83)

Hammatothrips crassiceps Priesner, 1932b: 52.

Plectrothrips crassiceps (Priesner): Okajima, 1981: 318.

Specimens examined. Beijing, 4 females and 2 males from *Platanus orientalis* L., 4 June 1982, Yun-Fa Han (NZMC).

Distribution. China (Beijing), Indonesia.

Remarks. Dang *et al.* (2014) indicated this species was newly recorded from China. Four females and two males were studied from Beijing, which were misidentified as *P. corticinus* by Yun-Fa Han. In this paper, *P. crassiceps* (Priesner) is illustrated.

3.2.67 *Plectrothrips hiromasai* Okajima

Plectrothrips hiromasai Okajima, 1981: 321; Okajima, 2006: 515.

Specimens examined. None.

Distribution. China (Taiwan), Japan.

Remarks. No specimen is studied here, and this species is used in the key based on the original text and redescription by Okajima (2006).

3.2.68 *Preeriella armigera* Okajima (Figs 37, 69)

Preeriella armigera Okajima, 1998: 304; Okajima, 2006: 533.

Specimens examined. Japan (Nagano-ken, Ueda-shi, Sanada-machi), paratypes 2 females and 1 male from leaf-litter, 29 November 1995, T. Tsutsumi (ANIC).

Distribution. China (Taiwan), Japan.

3.2.69 *Preeriella formosana* Okajima (Fig. 38)

Preeriella formosana Okajima, 1998: 310.

Specimens examined. Taiwan (Nantou-hsien, Nanshanchi), paratypes 2 females from leaf-litter, 29 August 1993, H. Urushihara (ANIC).

Distribution. China (Taiwan).

3.2.70 *Preeriella parvula* Okajima

Preeriella parvula Okajima, 1978: 543.

Specimens examined. None.

Distribution. China (Guangdong, Yunnan), Thailand, Indonesia.

Remarks. The species is recorded from China by Tong and Zhang (1989), but just with distribution information. The information in this key is based on the original description.

3.2.71 *Psalidothrips amens* Priesner (Figs 39, 70)

Psalidothrips amens Priesner, 1932: 62.

Specimens examined. Indonesia (Sumatra, Babahrot), 1 female, 19 July 1983, J. Klapperich (ANIC).

Distribution. China (Guangdong, Hainan), Thailand, Indonesia.

3.2.72 *Psalidothrips armatus* Okajima

Psalidothrips armatus Okajima, 1983: 6.

Specimens examined. None.

Distribution. China (Hainan), Thailand.

Remarks. This species was recorded from China with *P. lewisi* (Bagnall) and *P. simplus* Haga by Tong and Zhang (1989), without detailed information. Wang *et al.* (2007) indicated two females and one male of this species from Hainan. *P. armatus* Okajima in this key is based on the original description.

3.2.73 *Psalidothrips ascitus* (Ananthakrishnan)

Callothrips ascitus Ananthakrishnan, 1969d: 176.

Specimens examined. None.

Distribution. China (Guizhou, Yunnan, Guangdong, Hainan, Taiwan), Malaysia, India, Japan.

Remarks. Wang *et al.* (2007) identified the specimens of *P. ascitus* (Ananthakrishnan) from China following the original description. The information used in this paper is cited without specimen examination.

3.2.74 *Psalidothrips bicoloratus* Wang, Tong & Zhang

Psalidothrips bicoloratus Wang, Tong & Zhang, 2007: 28.

Specimens examined. Guangdong (Guangzhou), holotype female from leaf-litter, 1 December 2004, Jun Wang, paratypes 1 female and 1 male, same data as holotype (SCAU).

Distribution. China (Guangdong).

3.2.75 *Psalidothrips chebalingicus* Zhang & Tong (Figs 102, 108)

Psalidothrips chebalingicus Zhang & Tong, 1997: 87.

Specimens examined. Guangdong (Shaoguan, Shixing), paratypes 1 female and 1 male from leaf-litter, 6 November 1989, Xiao-Li Tong (SCAU).

Distribution. China (Guangdong).

3.2.76 *Psalidothrips elegatus* Wang, Tong & Zhang (Fig. 112)

Psalidothrips elegatus Wang, Tong & Zhang, 2007: 26.

Specimens examined. Guangdong (Guangzhou, Conghua), paratypes 1 female and 1 male from leaf-litter, 19 September 2004, Jun Wang (SCAU).

Distribution. China (Guangdong).

3.2.77 *Psalidothrips lewisi* (Bagnall) (Figs 40, 71)

Trichothrips lewisi Bagnall, 1914d: 30.

Psalidothrips alaris Haga, 1973: 67.

Specimens examined. Japan (Osaka, Ryuanji-rin), 1 female and 1 male from *Quercus glauca*, 12 August 1970, K. Haga (ANIC).

Distribution. China (Guangdong, Hainan), Japan.

Remarks. This species was recorded from China by Tong and Zhang (1989) as *P. alaris* Haga. Okajima and Urushihara (1992) synonymised it with *P. lewisi*. Wang *et al.* (2007) indicated two females and six males from Guangdong and Hainan. Here, one female and one male from Japan were examined in ANIC.

3.2.78 *Psalidothrips longidens* Wang, Tong & Zhang (Figs 103, 111)

Psalidothrips longidens Wang, Tong & Zhang, 2007: 30.

Specimens examined. Guangdong (Guangzhou, Longdong), paratypes 1 female and 1 male from leaf-litter, 1 December 2004, Jun Wang (SCAU).

Distribution. China (Guangdong).

3.2.79 *Psalidothrips simplus* Haga

Psalidothrips simplus Haga, 1973: 77.

Specimens examined. None.

Distribution. China (Guangdong, Hainan, Guizhou), Korea, Japan.

Remarks. This species was originally described from Japan (Haga, 1973), and recorded from China by Tong and Zhang (1989) just with distribution information. Wang *et al.* (2007) indicated the specimens of *P. simplus* Haga from China were identified according to Japanese specimens by Okajima.

3.2.80 *Psephenothrips leptoceras* Okajima New record to China (Figs 36, 72, 79)

Psephenothrips leptoceras Okajima, 2006: 554.

Specimens examined. Yunnan, 5 females and 1 male from *Mangifera indica*, 10 March–5 May 1990 (NZMC).

Distribution. China (Yunnan), Japan.

Remarks. Five females and one male, collected from Yunnan, are recognized as *P. leptoceras* Okajima according to the original description, which represent the newly record species.

3.2.81 *Psephenothrips machili* (Moulton)

Rhynchothrips machili Moulton, 1928: 313.

Psephenothrips machili (Moulton): Okajima, 2006: 556.

Specimens examined. None.

Distribution. China (Taiwan), Japan.

Remarks. This species is described from Taiwan (Moulton, 1928), and combined to the genus *Psephenothrips* by Okajima (2006) based on a large number of specimens from Japan and Taiwan, China. There is no specimen checked here, but the data used in this paper is from the detailed redescription by Okajima (2006).

3.2.82 *Pygmaethrips angusticeps* (Hood) (Figs 47, 73)*Trichothrips angusticeps* Hood, 1908: 367.*Pygmaethrips columniceps* Karny, 1920: 40. Synonymised by Mound & Marullo, 1996: 353.

Specimens examined. Singapore (MacRitchie Reservoir), 1 female from dead twigs, 20 April 2006, L.A. Mound (ANIC).

Distribution. China (Taiwan), India, Singapore, Hawaii, Indonesia, USA, Argentina, Australia.

Remarks. The species, *P. columniceps* Karny, which was recorded from Taiwan, China based on one macropterous female by Kudô (1974), was synonymised as *P. angusticeps* Hood by Mound and Marullo (1996). No Chinese specimen of this species is checked here. We illustrated here based on one female from Singapore identified by L.A. Mound.

3.2.83 *Sophiothrips nigrus* Ananthkrishnan (Fig. 41)*Sophiothrips nigrus* Ananthkrishnan, 1971b: 197; Tong & Zhang, 1989: 62.

Specimens examined. Taiwan (Taipei-hsien, Tatung Mt.), 1 female from dead branches, 4 April 1984, S. Okajima (ANIC).

Distribution. China (Taiwan), Japan, India, Singapore, Indonesia, Malaysia.

3.2.84 *Sophiothrips typicus* (Ananthkrishnan) (Fig. 42)*Nanothrips typicus* Ananthkrishnan, 1964a: 120.*Sophiothrips typicus* (Ananthkrishnan): Tong & Zhang, 1989: 62.

Specimens examined. India (Kodaikanal), 1 female and 1 male from dead wood, October 2005 (ANIC).

Distribution. China (Taiwan), India, Indonesia.

3.2.85 *Stephanothrips formosanus* Okajima (Fig. 43)*Stephanothrips formosanus* Okajima, 1976c: 404; Han, 1997: 363; Wang & Tong, 2007: 297.

Specimens examined. Taiwan, 1 female from unknown grass, 29 March 1988 (NZMC).

Distribution. China (Taiwan).

3.2.86 *Stephanothrips japonicus* Saikawa (Fig. 44)*Stephanothrips japonicus* Saikawa, 1974: 7; Okajima, 1976c: 406; Zhang & Tong, 1993: 433; Han, 1993: 216; Han, 1997: 364; Zhang *et al.*, 1999: 386; Wang & Tong, 2007: 297.

Specimens examined. Taiwan (Pingtung-hsien), 11 females and 7 males from dead leaves and branches, 3 April 2002–16 March 2003 (NZMC); Fujian (Jiangle County), 1 female from unknown grass, 11 April 1991, Yun-Fa Han (NZMC).

Distribution. China (Fujian, Hunan, Guizhou, Guangdong, Taiwan), Japan.

3.2.87 *Stephanothrips kentingensis* Okajima (Figs 45, 74)*Stephanothrips kentingensis* Okajima, 1976c: 407; Han, 1997: 365; Zhang & Tong, 1993: 433; Wang & Tong, 2007: 298.

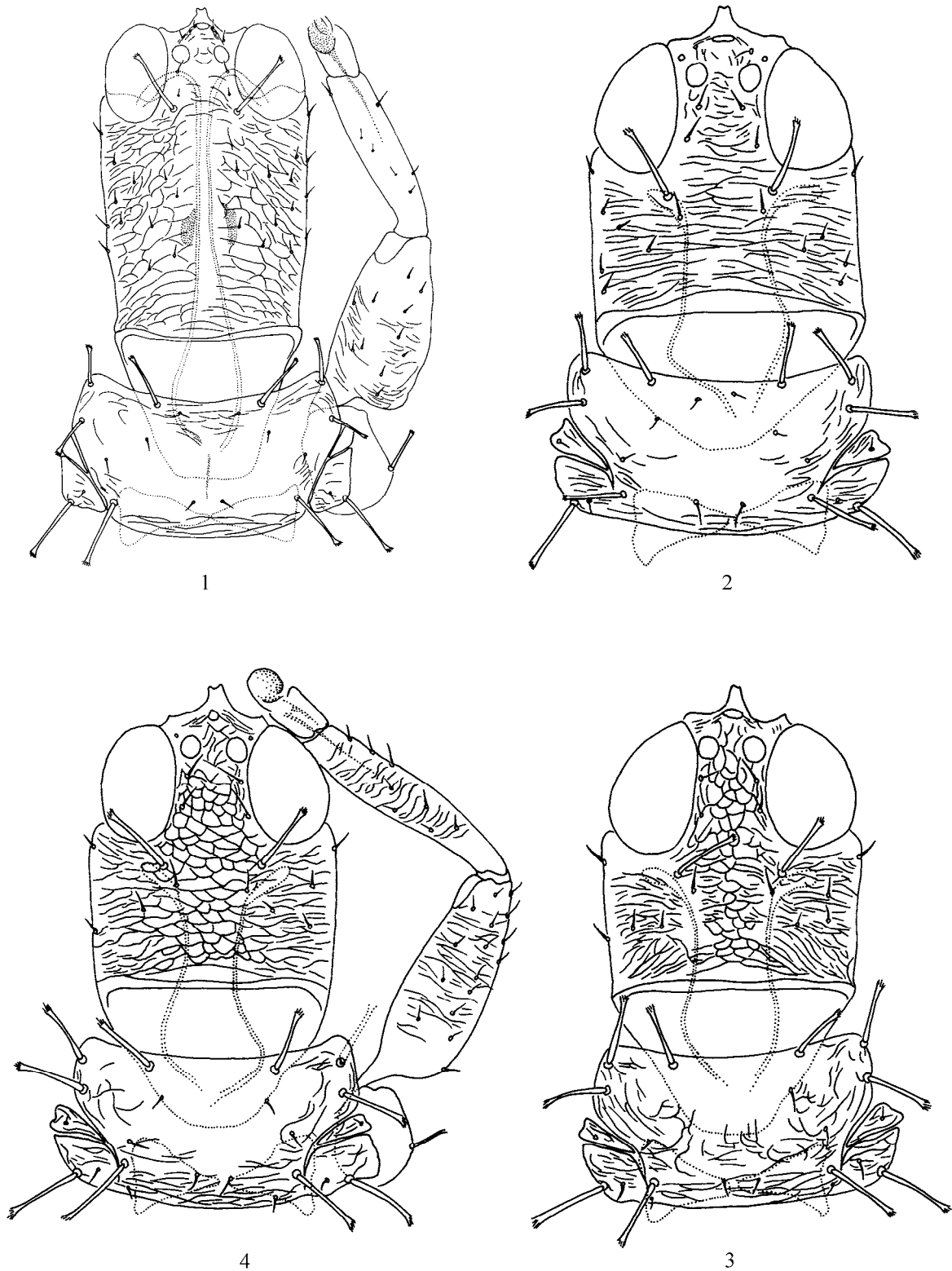
Specimens examined. Taiwan (Pingtung-hsien, Kenting National Park), 1 female from leaf-litter, 14 March 1977, T. Senoh (ANIC).

Distribution. China (Guangdong, Taiwan), Japan.

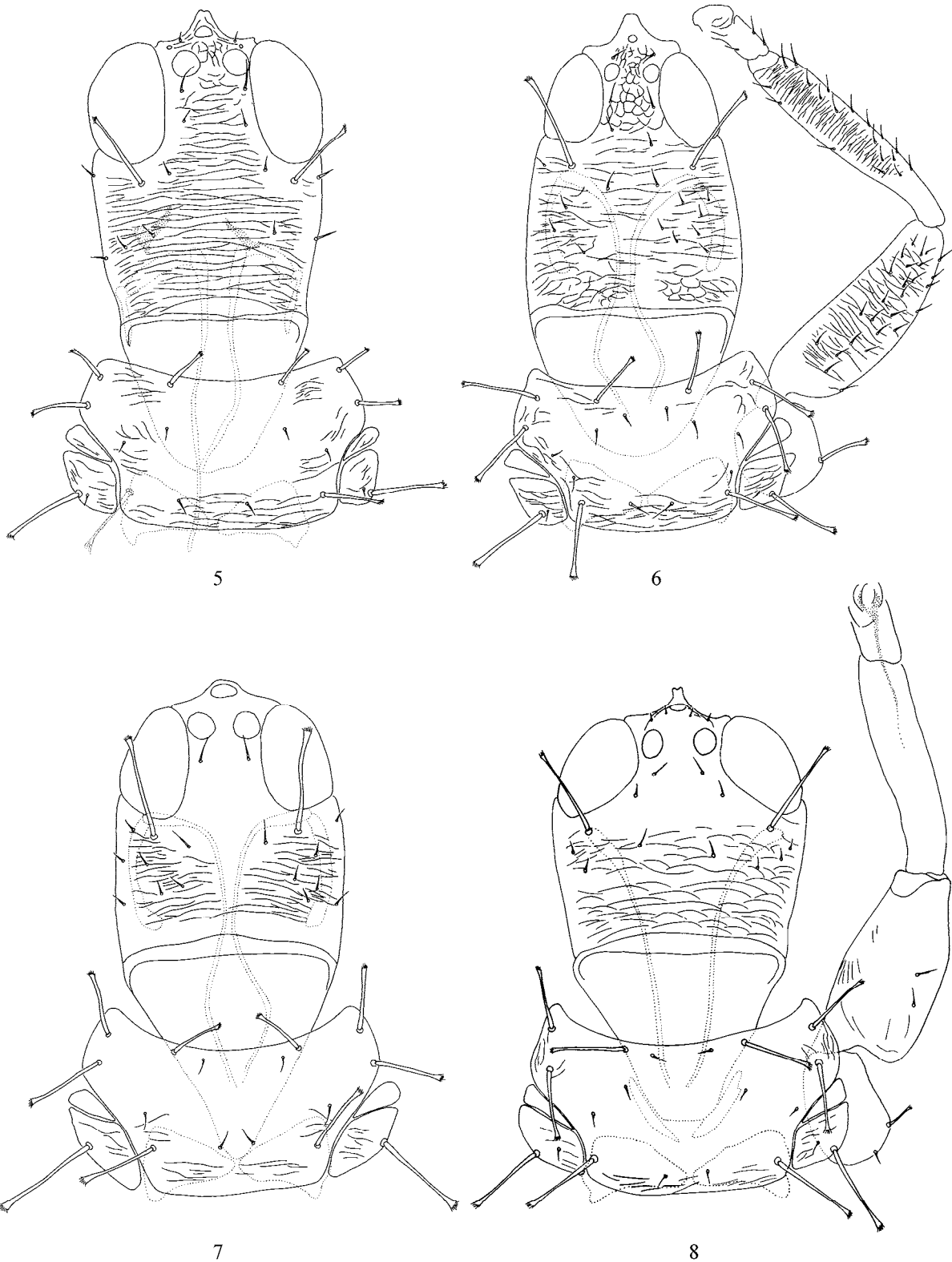
3.2.88 *Stephanothrips occidentalis* Hood & Williams (Fig. 46)*Stephanothrips occidentalis* Hood and Williams, 1925: 69; Zhang & Tong, 1993: 433; Han, 1997: 367; Wang & Tong, 2007: 298.

Specimens examined. Hainan (Wenchang City), 1 female from unknown grass, 11 April 1958, Xiang-Ling Meng (NZMC).

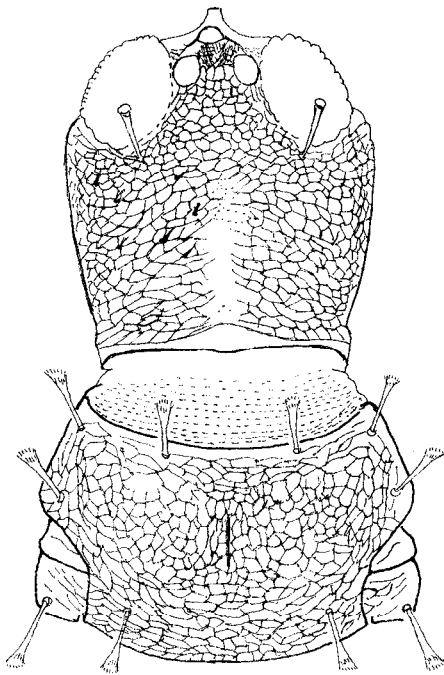
Distribution. China (Guangdong, Yunnan, Hainan, Taiwan), Japan, Thailand, Malaysia, the Philippines, Jamaica, Mexico, USA, Australia, Angola, South Africa, Trinidad.



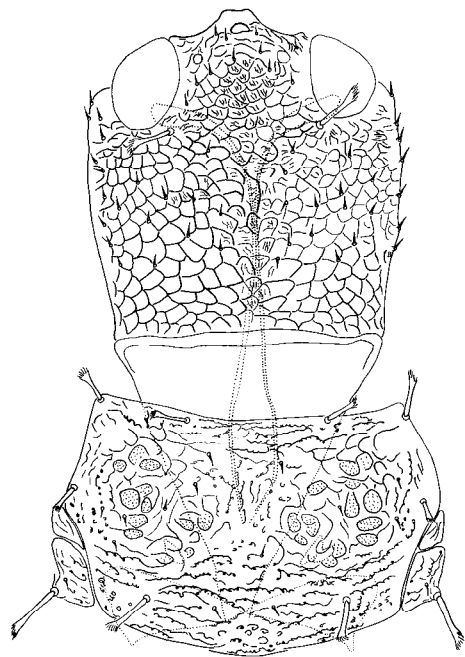
Figs 1–4. Head and pronotum. 1. *Ablemothrips maxillatus*. 2. *Adraneothrips chinensis*. 3. *Adraneothrips russatus*. 4. *Adraneothrips yunnanensis*.



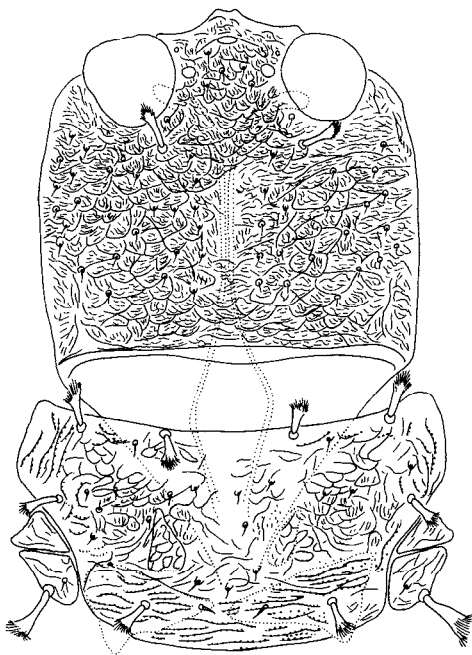
Figs 5–8. Head and pronotum. 5. *Apelaunothrips consimilis*. 6. *Apelaunothrips medioflavus*. 7. *Apelaunothrips moutanus*. 8. *Asianthrips orientalis*.



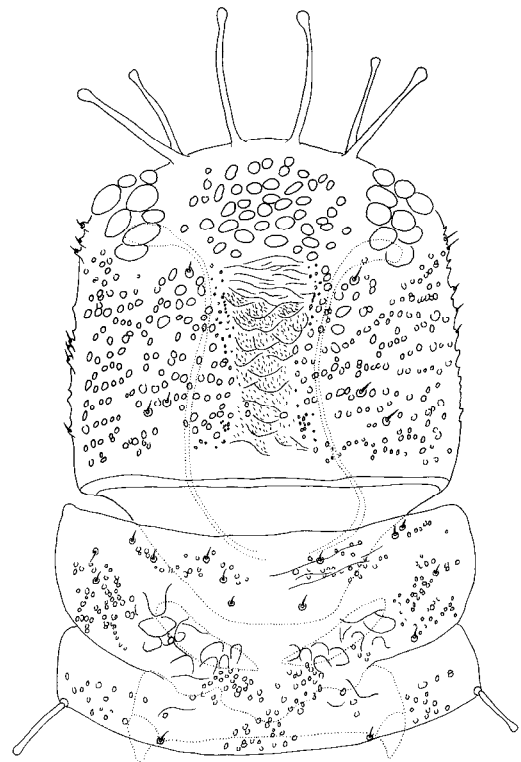
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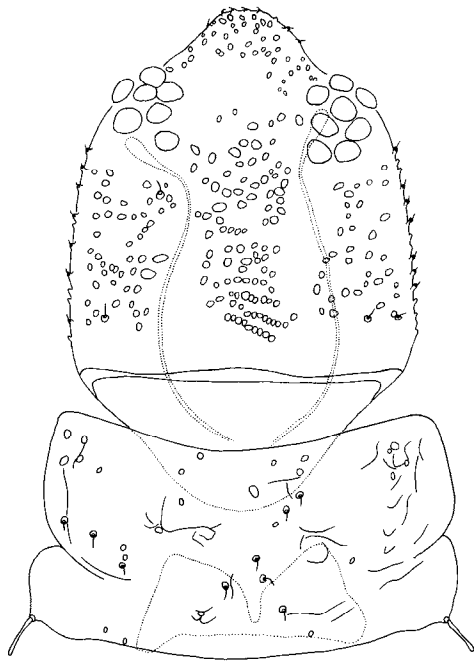


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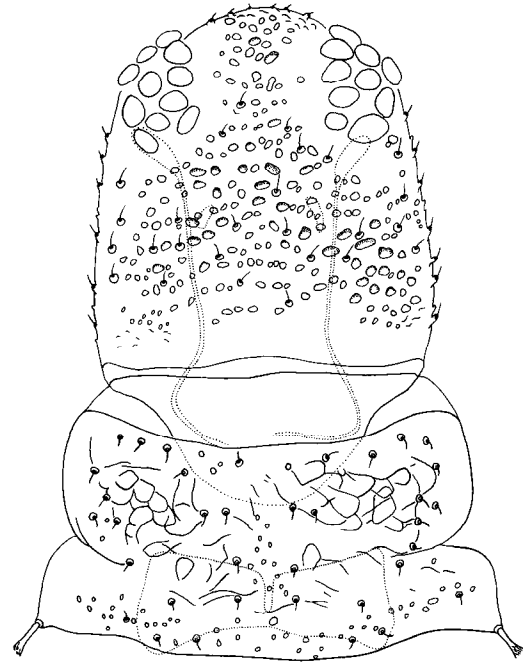


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Figs 9–12. Head and pronotum. 9. *Azaleothrips siamensis*. 10. *Azaleothrips moundi*. 11. *Azaleothrips magnus*. 12. *Baenothrips ryukyuensis*.



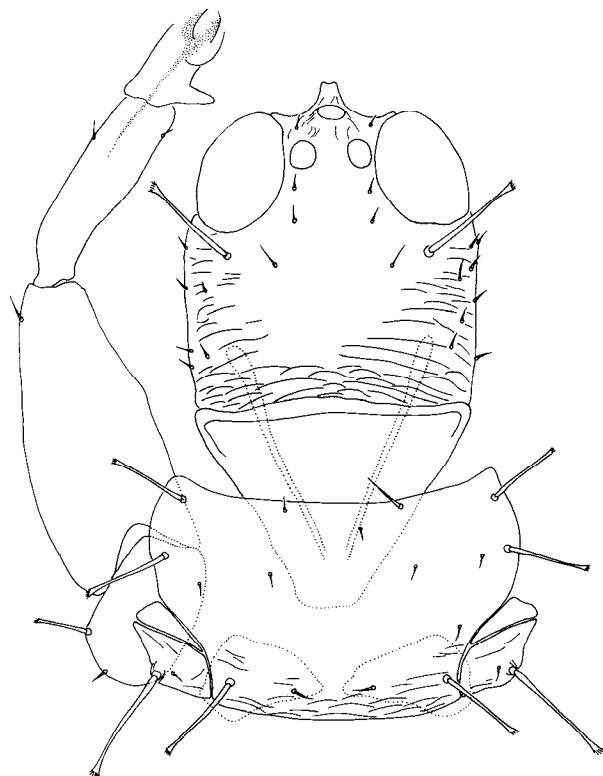
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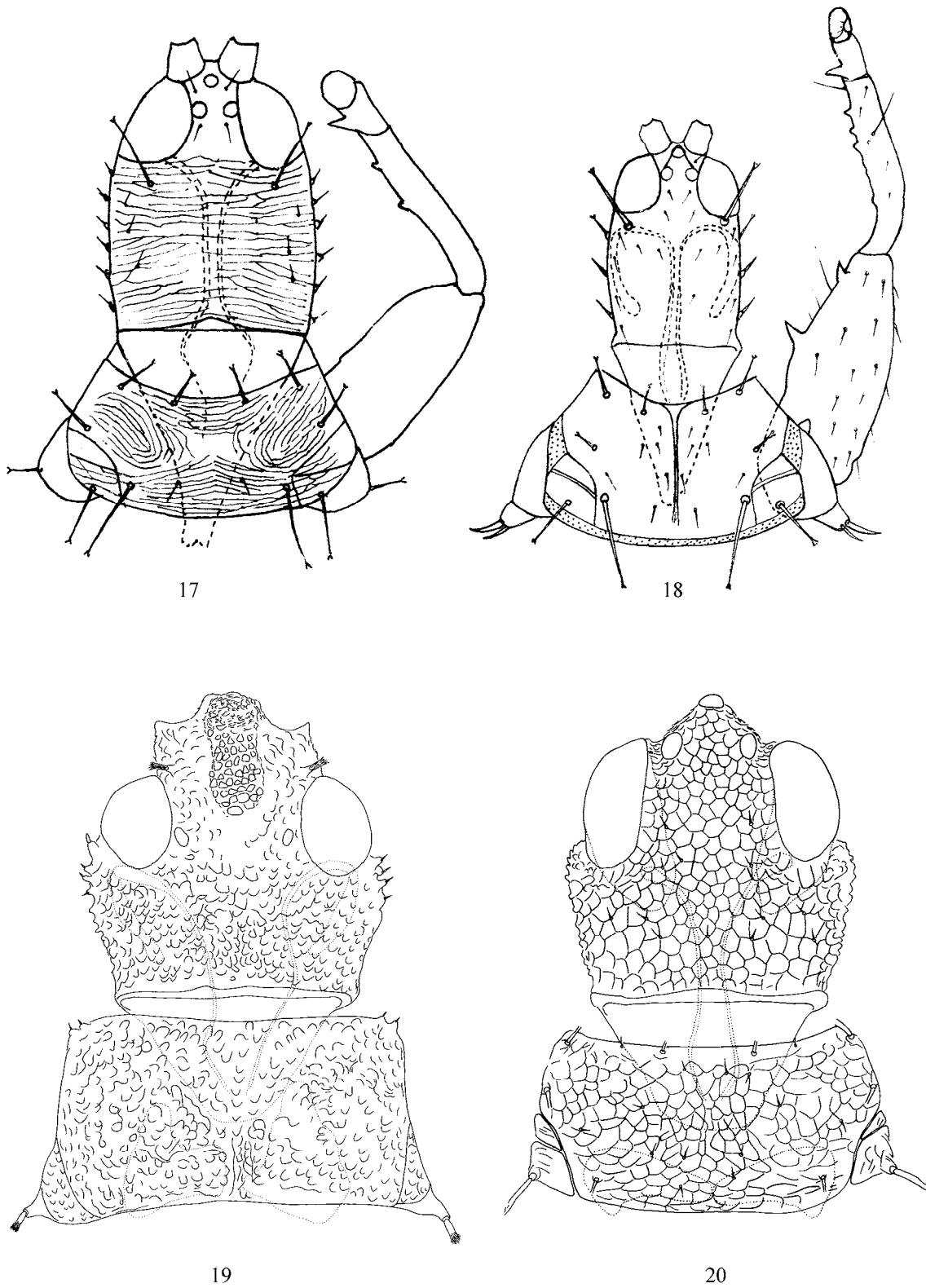


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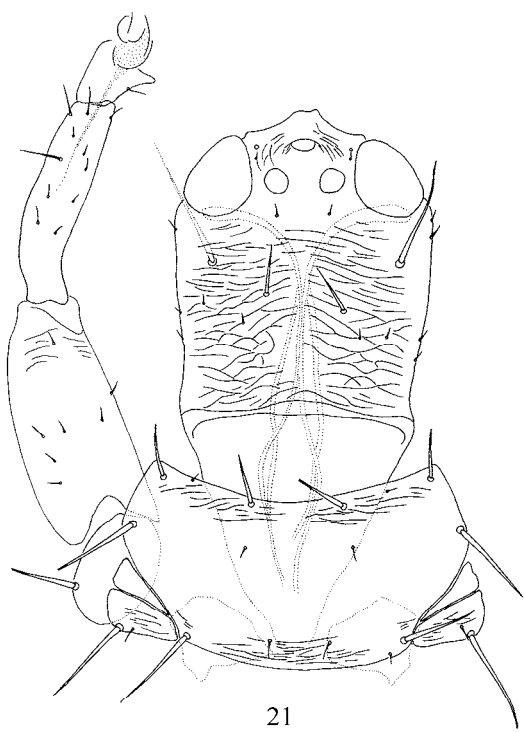


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Figs 13–16. Head and pronotum. 13. *Urothrips gibberosa*. 14. *Urothrips tarai*. 15. *Deplorothrips acutus*. 16. *Deplorothrips medius*.



Figs 17–20. Head and pronotum. 17. *Ecacanthothrips inarmatus*. 18. *Ecacanthothrips tibialis*. 19. *Habrothrips curiosus*. 20. *Heliiothripoides reticulates*.



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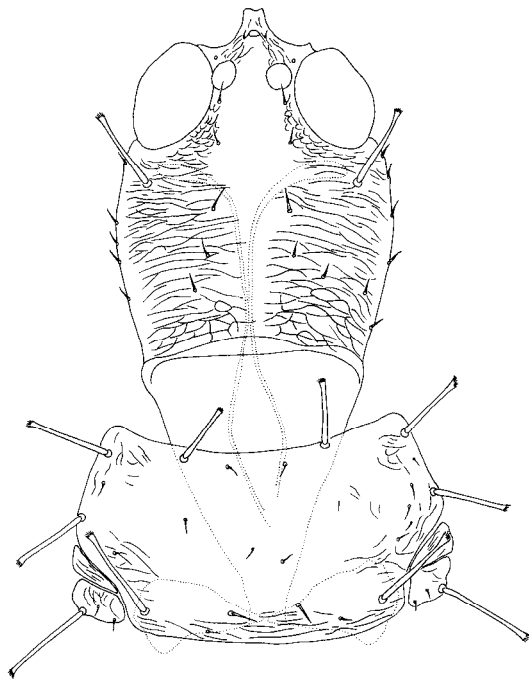


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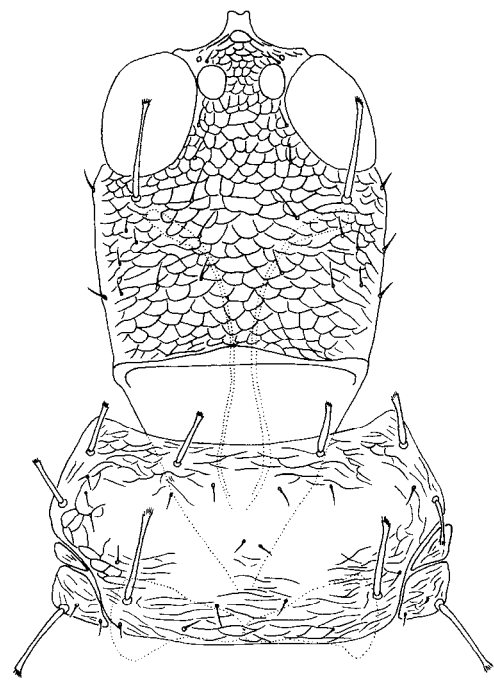


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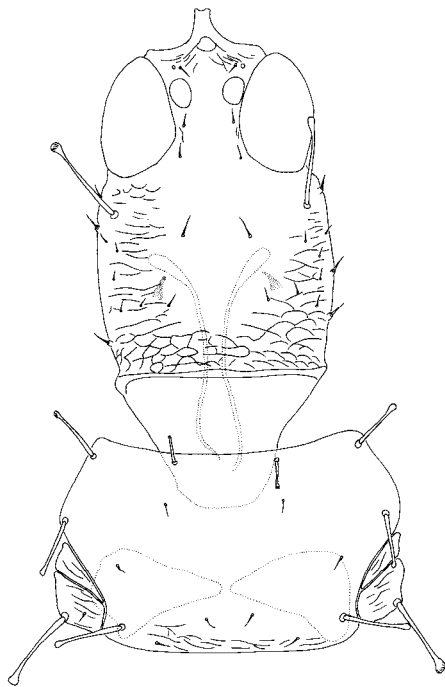
Figs 21–24. Head and pronotum. 21. *Holothrips attenuatus*. 22. *Holothrips flavus*. 23. *Holothrips formosanus*. 24. *Holothrips hagai*.



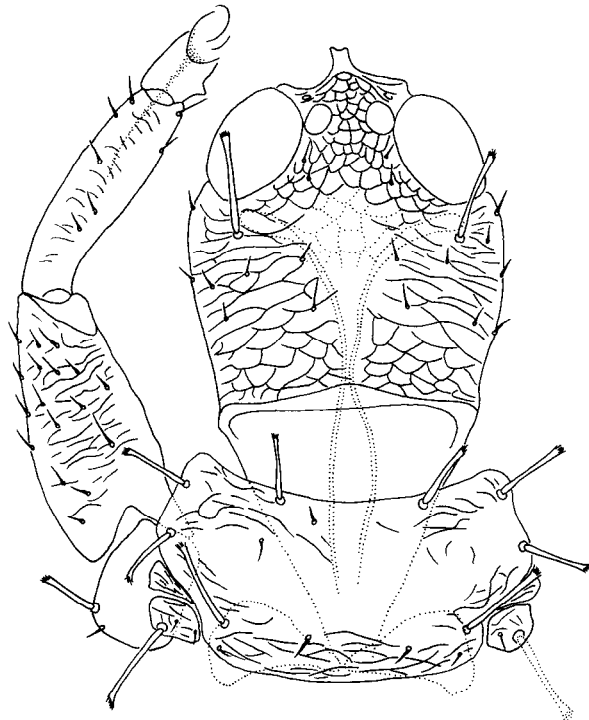
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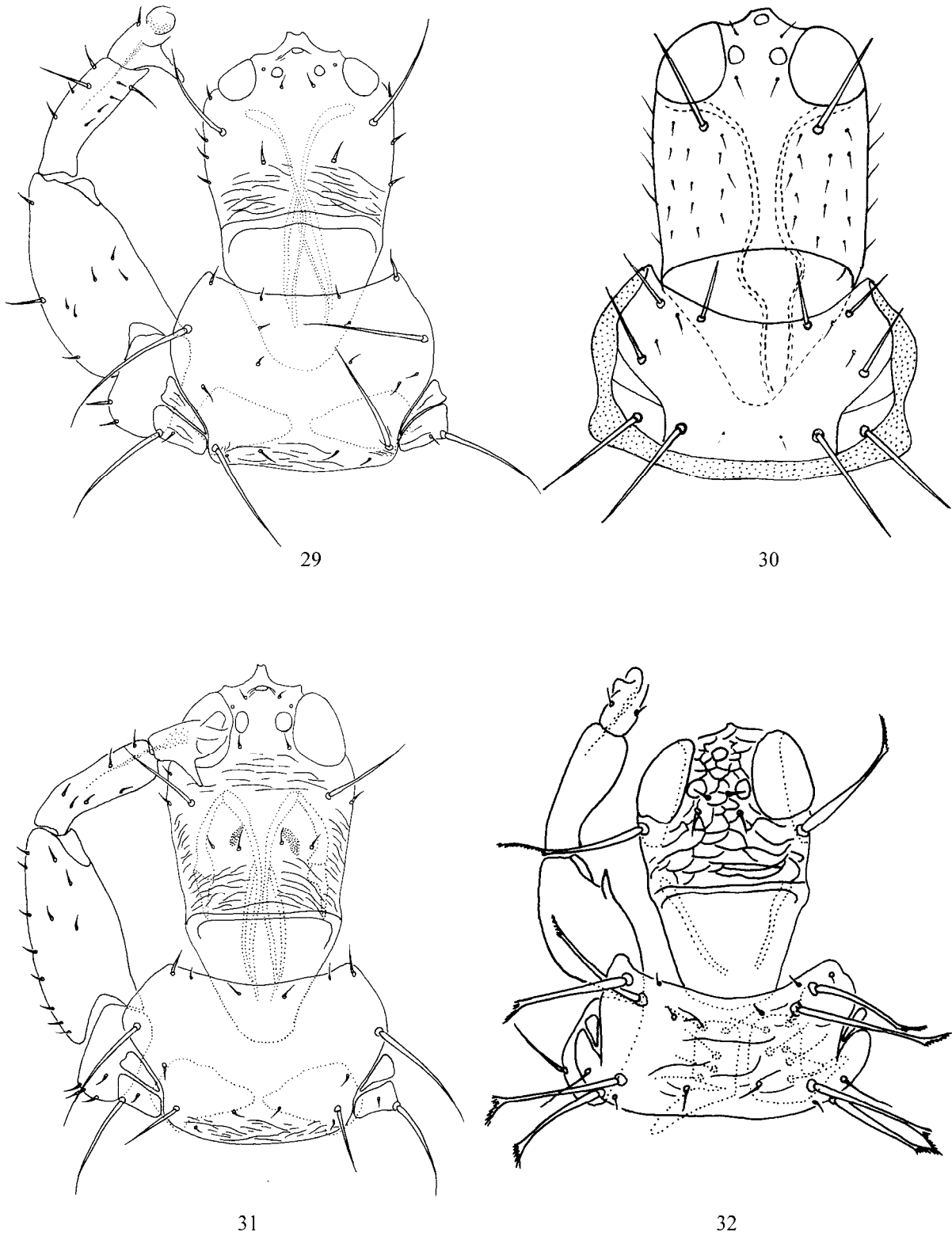


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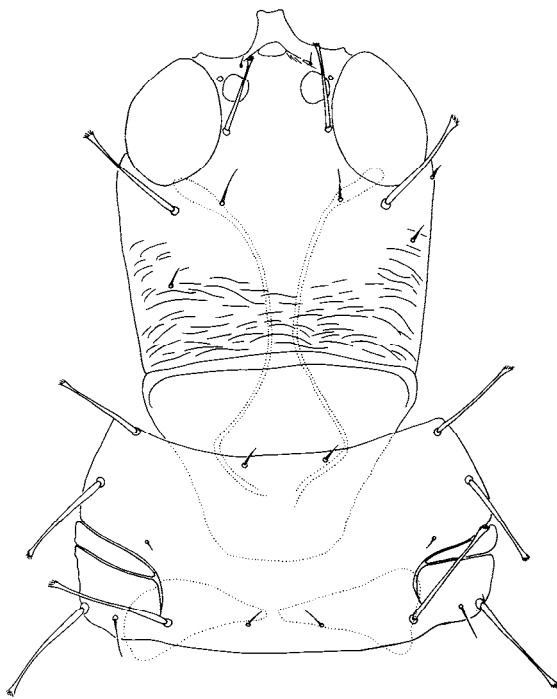


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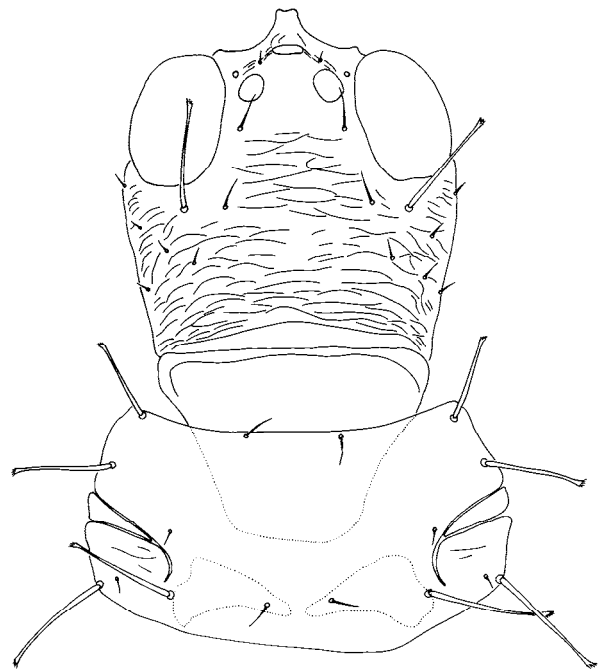
Figs 25–28. Head and pronotum. 25. *Hoplandrothrips bidens*. 26. *Hoplandrothrips flavipes*. 27. *Hoplandrothrips nobilis*. 28. *Hoplandrothrips ochraceus*.



Figs 29–32. Head and pronotum. 29. *Hoplothrips corticis*. 30. *Hoplothrips flavipes*. 31. *Hoplothrips orientalis*. 32. *Hydiotrips brunneus*.



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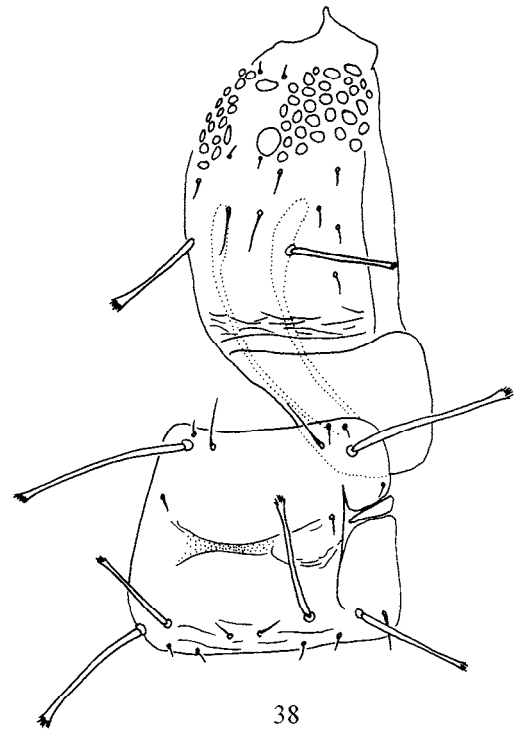
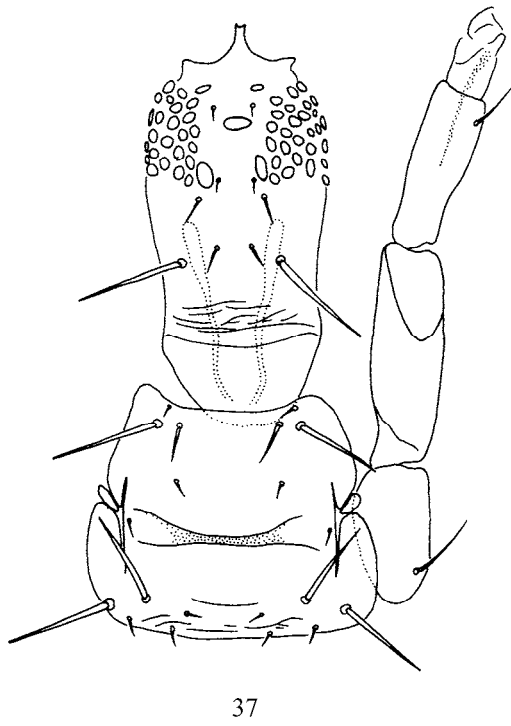


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Figs 33–36. Head and pronotum. 33. *Phylladothrips pallidus*. 34. *Phylladothrips pictus*. 35. *Plectrothrips crassiceps*. 36. *Psephenothrips leptoceras*.



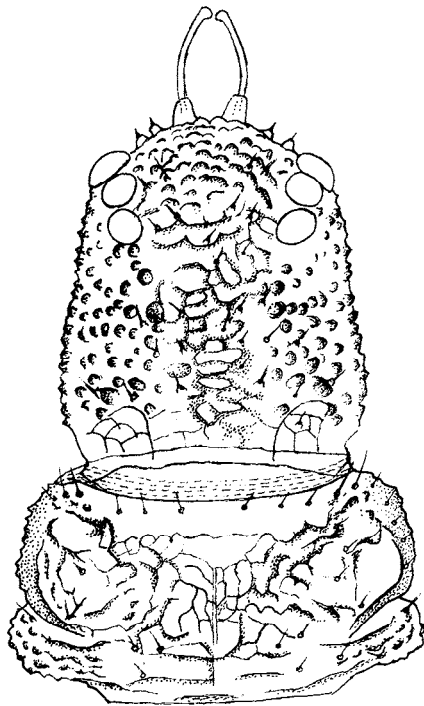
Figs 37–40. Head and pronotum. 37. *Preeriella armigera*. 38. *Preeriella formosana*. 39. *Psalidothrips amens*. 40. *Psalidothrips lewisi*.



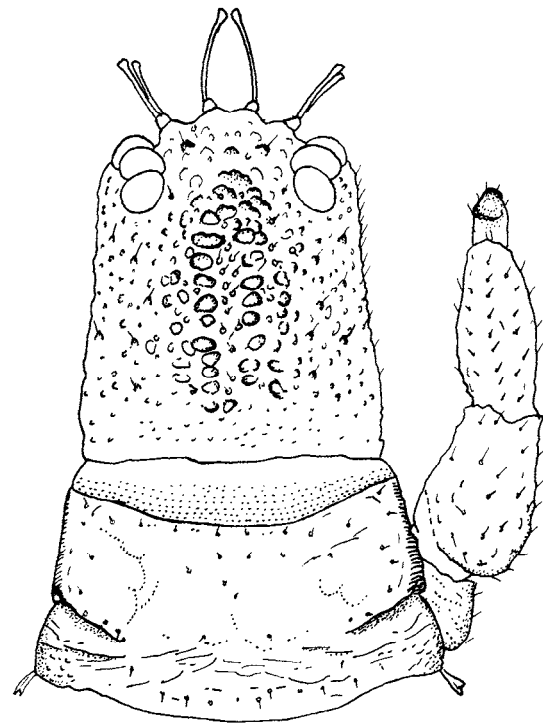
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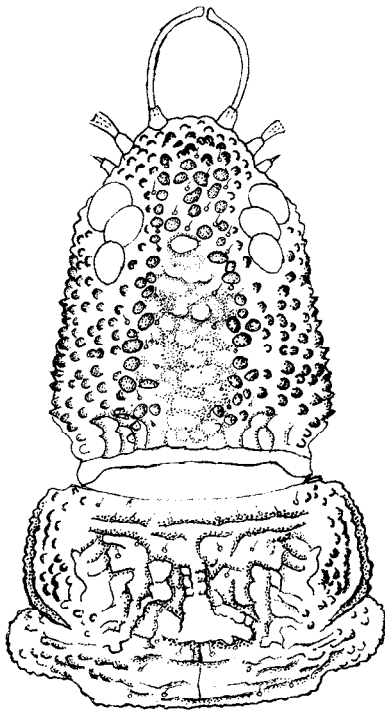


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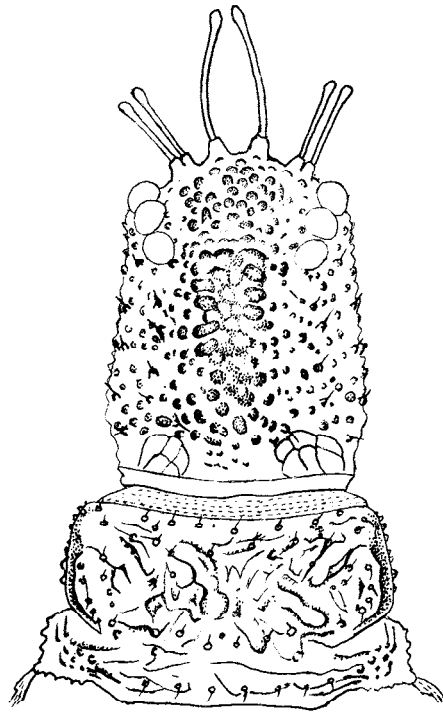


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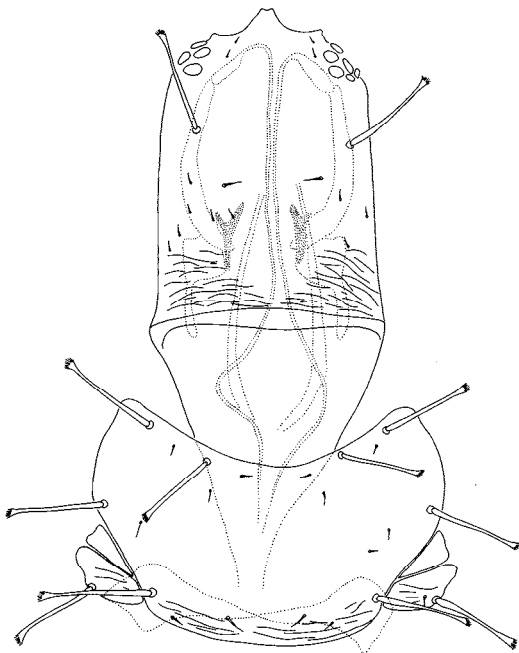
Figs 41–44. Head and pronotum. 41. *Sophiothrips nigrus*. 42. *Sophiothrips typicus*. 43. *Stephanothrips formosanus*. 44. *Stephanothrips japonicus*.



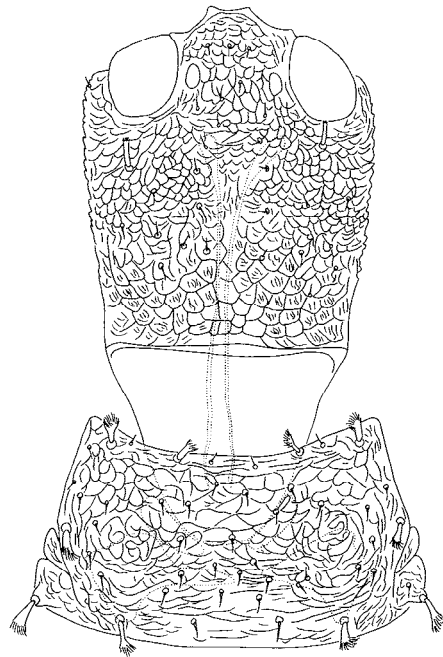
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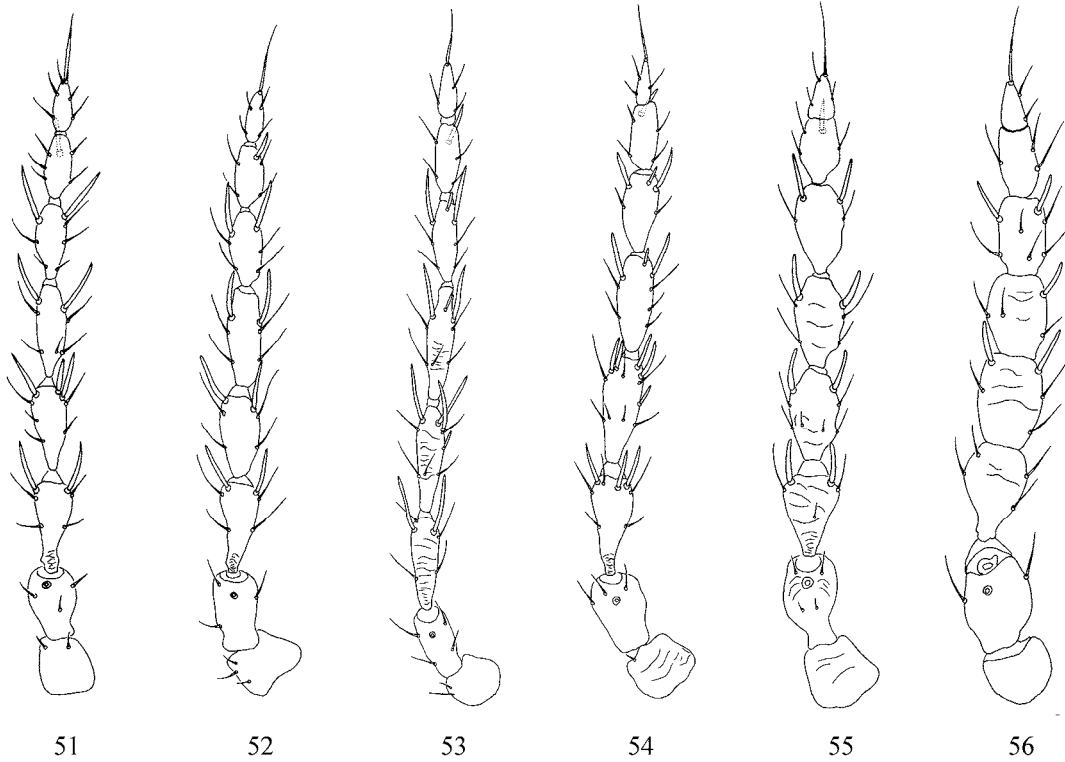
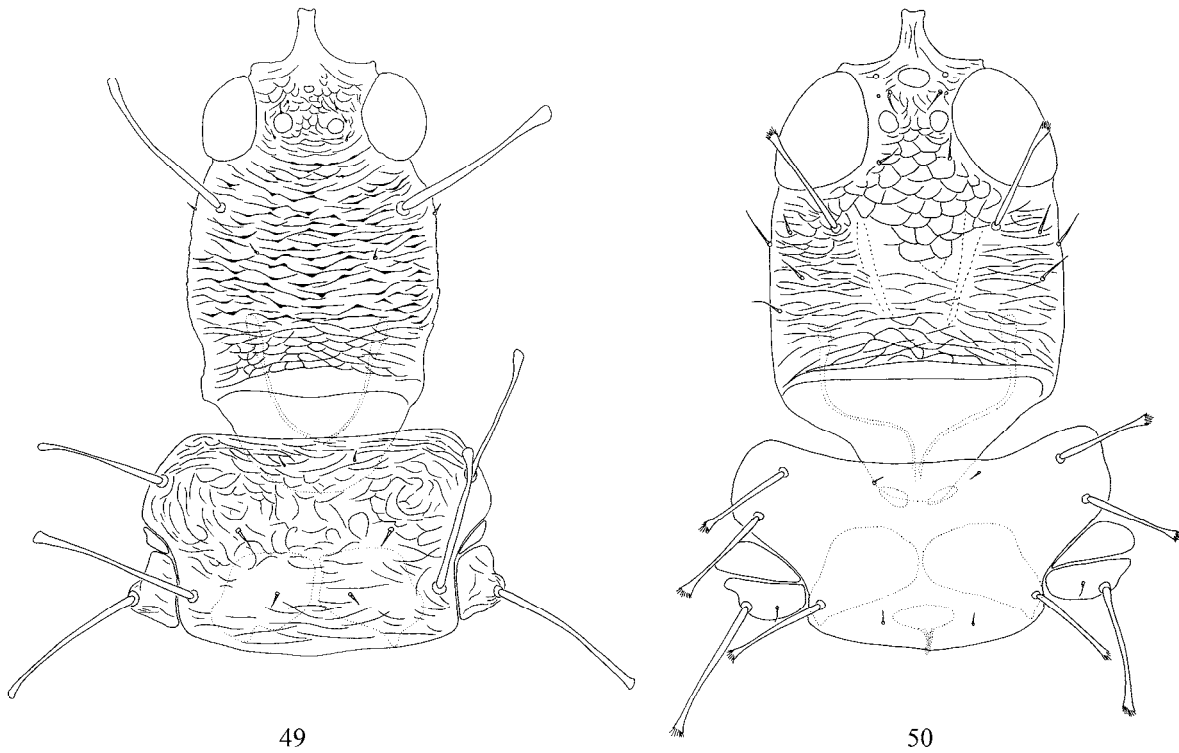


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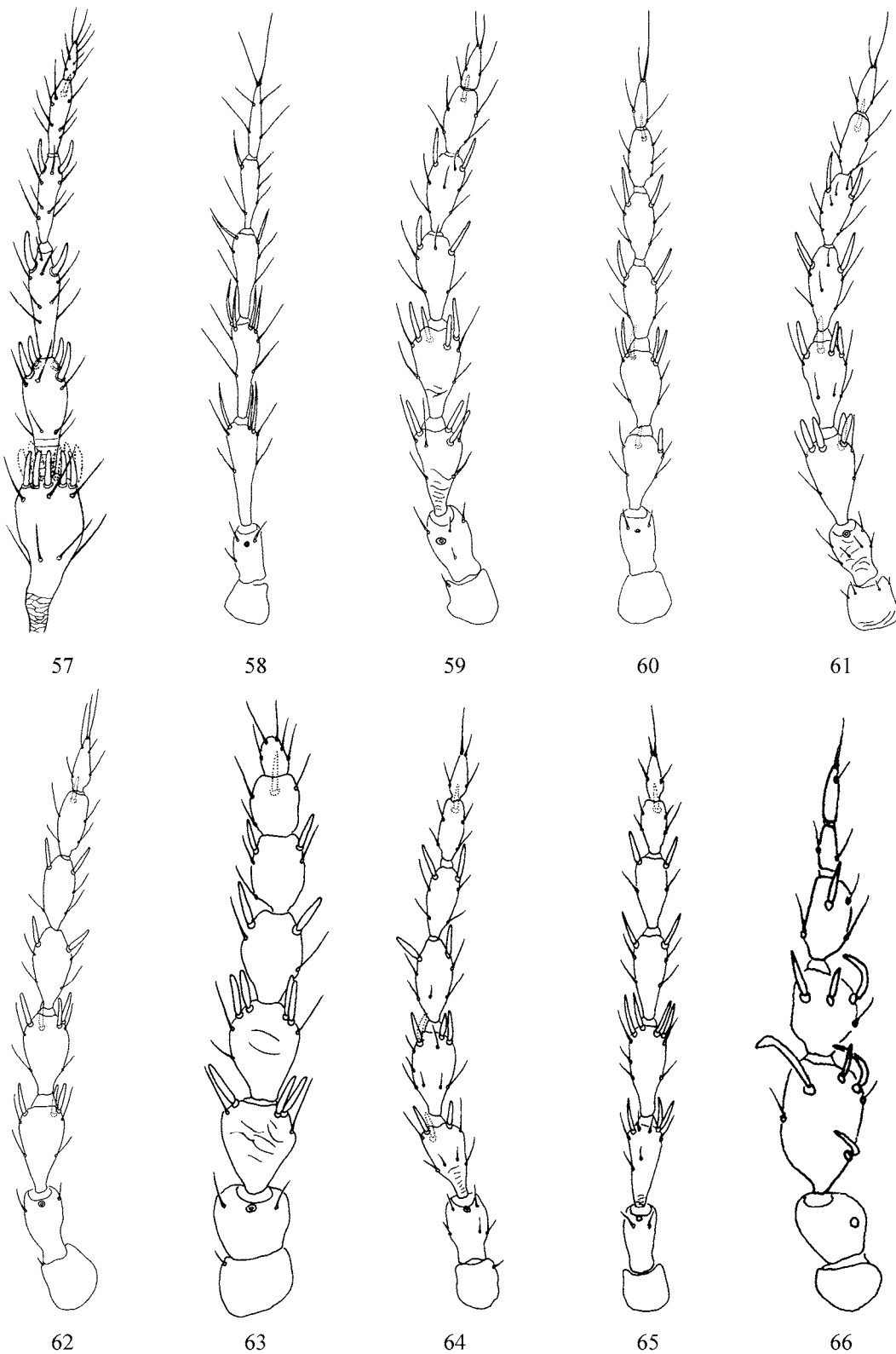


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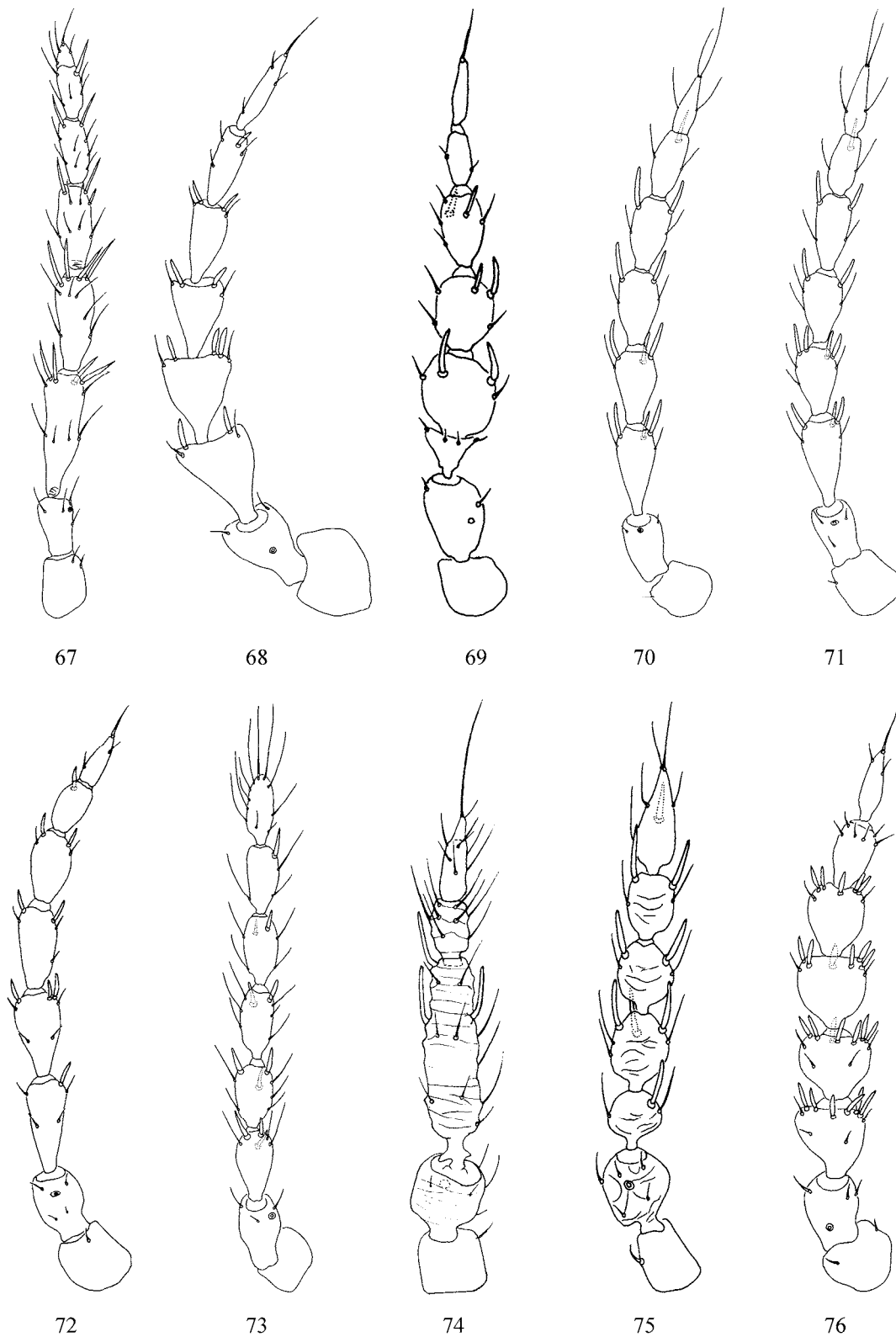
Figs 45–48. Head and pronotum. 45. *Stephanothrips kentingensis*. 46. *Stephanothrips occidentalis*. 47. *Pygmaethrips angusticeps*. 48. *Strepterothrips orientalis*.



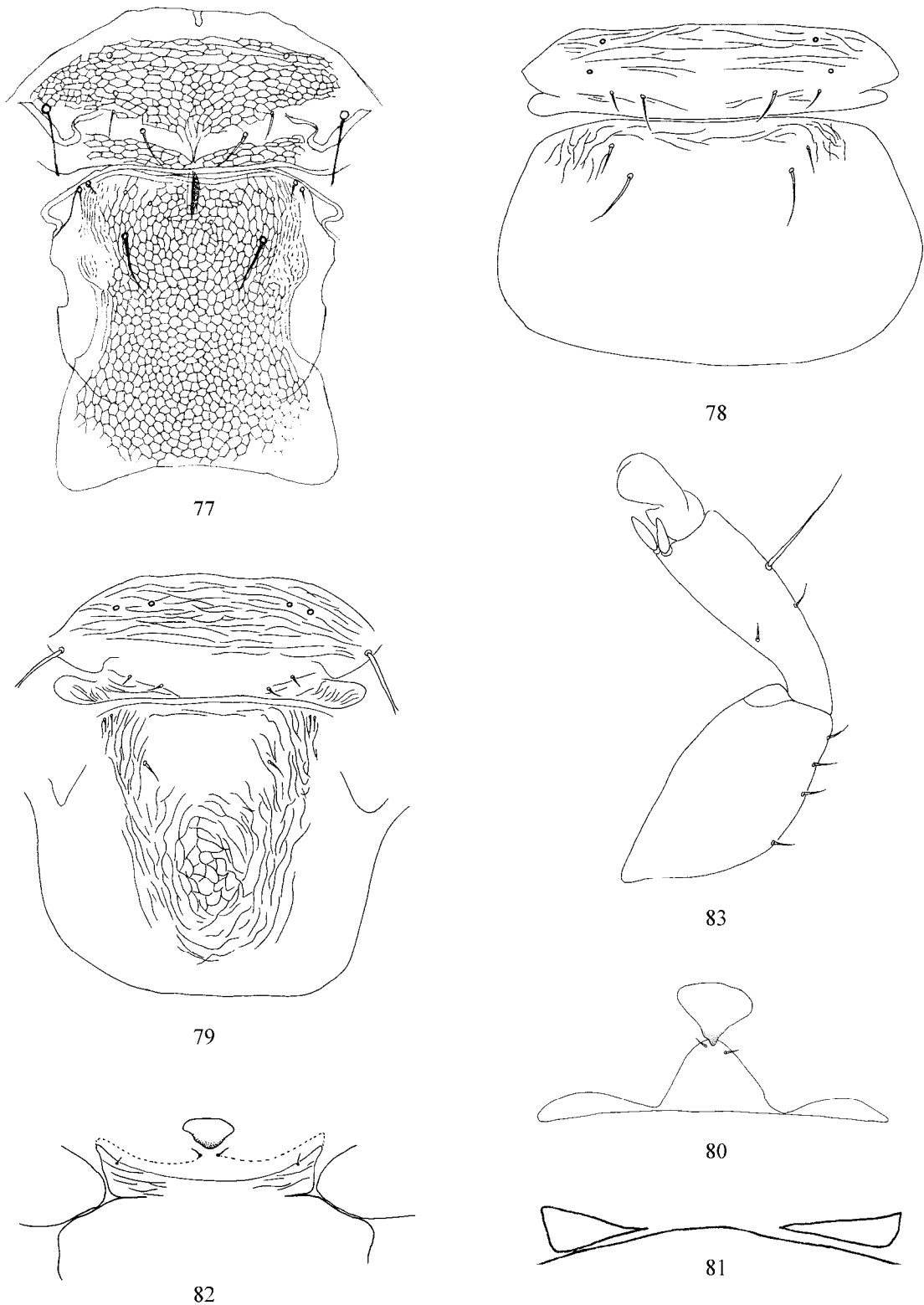
Figs 49–56. Head, pronotum and antenna. 49–50. Head and pronotum. 49. *Terthrothrips apterus*. 50. *Terthrothrips parvus*. 51–56. Antenna. 51. *Apelaunothrips hainanensis*. 52. *Apelaunothrips lienii*. 53. *Apelaunothrips medioflavus*. 54. *Apelaunothrips nigripennis*. 55. *Azaleothrips moundi*. 56. *Baenothrips ryukyuensis*.



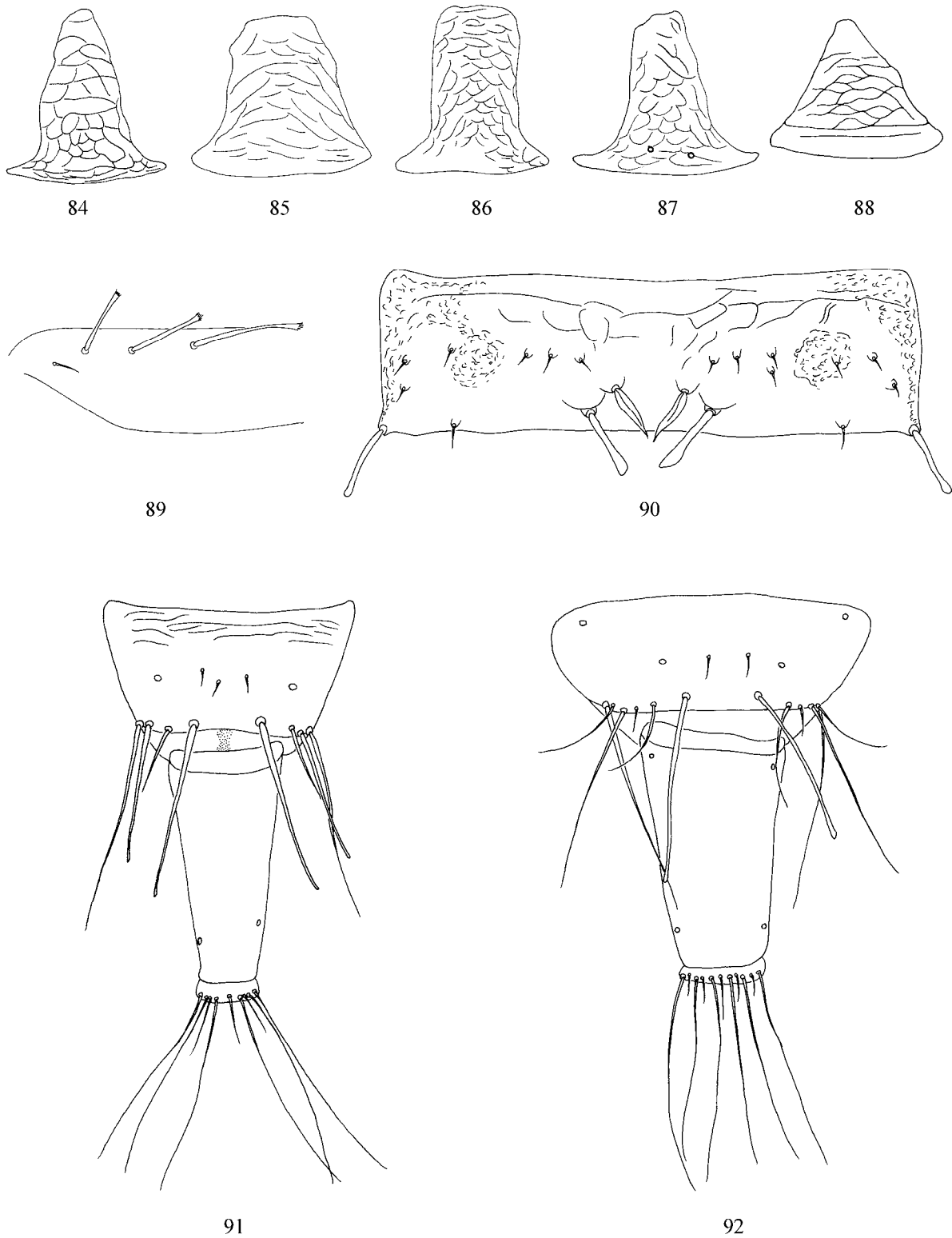
Figs 57–66. Antenna. 57. *Ecacanthothrips tibialis*. 58. *Holothrips flavus*. 59. *Hoplandrothrips bidens*. 60. *Hoplandrothrips coloratus*. 61. *Hoplandrothrips flavipes*. 62. *Hoplandrothrips nobilis*. 63. *Hoplandrothrips obesametae*. 64. *Hoplandrothrips ochraceus*. 65. *Hoplothrips orientalis*. 66. *Hydiotrips brunneus*.



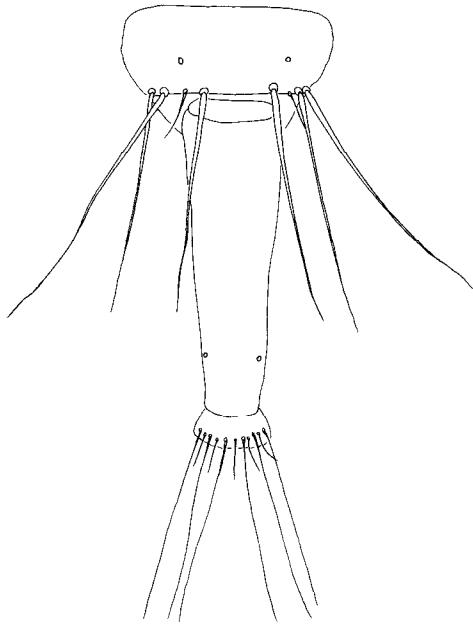
Figs 67–76. Antenna. 67. *Oidanothrips frontalis*. 68. *Plectrothrips crassiceps*. 69. *Preeriella armigera*. 70. *Psalidothrips amens*. 71. *Psalidothrips lewisi*. 72. *Psephenothrips leptoceras*. 73. *Pygmaeothrips angusticeps*. 74. *Stephanothrips kentingensis*. 75. *Streptothrips orientalis*. 76. *Streptothrips tibialis*.



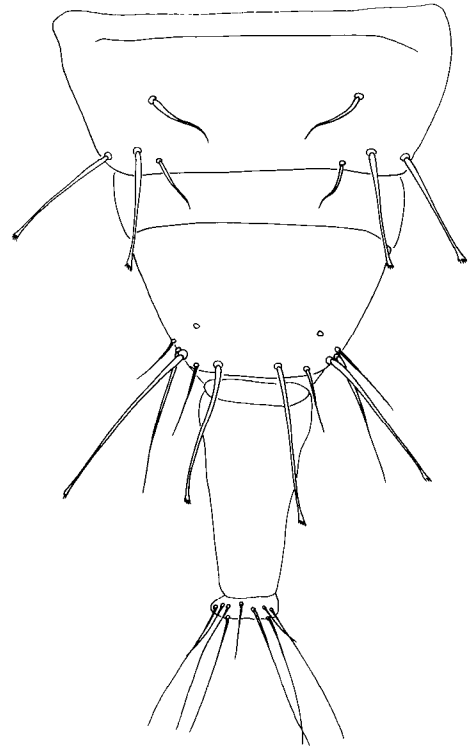
Figs 77–83. Mesonotum, metanotum, mesopresternum and mid leg. 77–79. Mesonotum and metanotum. 77. *Acanthothrips nodicornis*. 78. *Hoplothrips mainlingensis*. 79. *Psephenothrips leptoceras*. 80–82. Mesopresternum. 80. *Hoplothrips mainlingensis*. 81. *Hoplothrips fungosus*. 82. *Asianthrips orientalis*. 83. *Plectrothrips crassiceps*, mid leg.



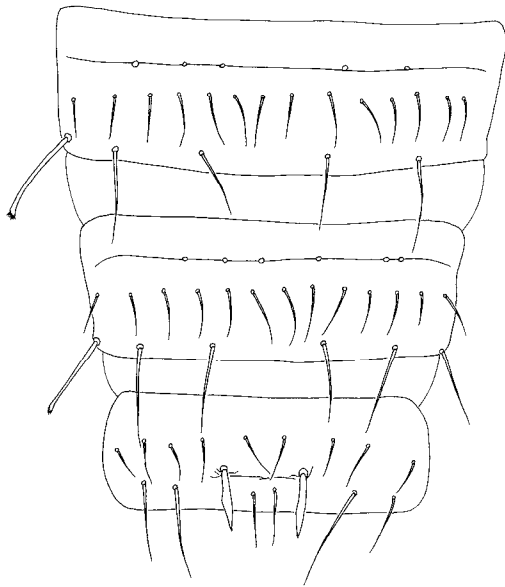
Figs 84–92. Pleta, fore wing and abdominal tergite. 84–88. Pleta. 84. *Holothrips attenuatus*. 85. *Holothrips hagai*. 86. *Holothrips hasegawai*. 87. *Holothrips porifer*. 88. *Holothrips hunanensis*. 89. *Apelaunothrips moutanus*, base of fore wing. 90. *Baenothrips ryukyuensis*, abdominal tergite V. 91. *Apelaunothrips consimilis*, abdominal tergites IX–X. 92. *Apelaunothrips nigripennis*, abdominal tergites IX–X.



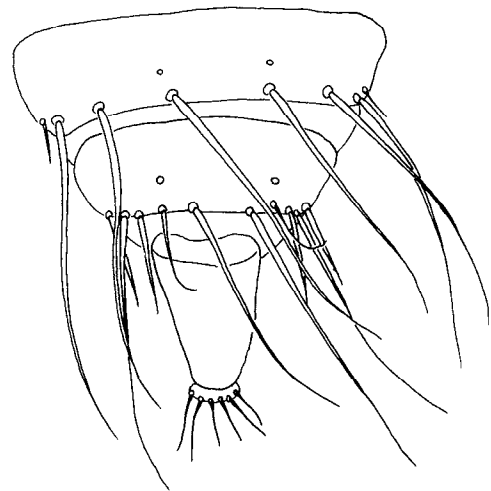
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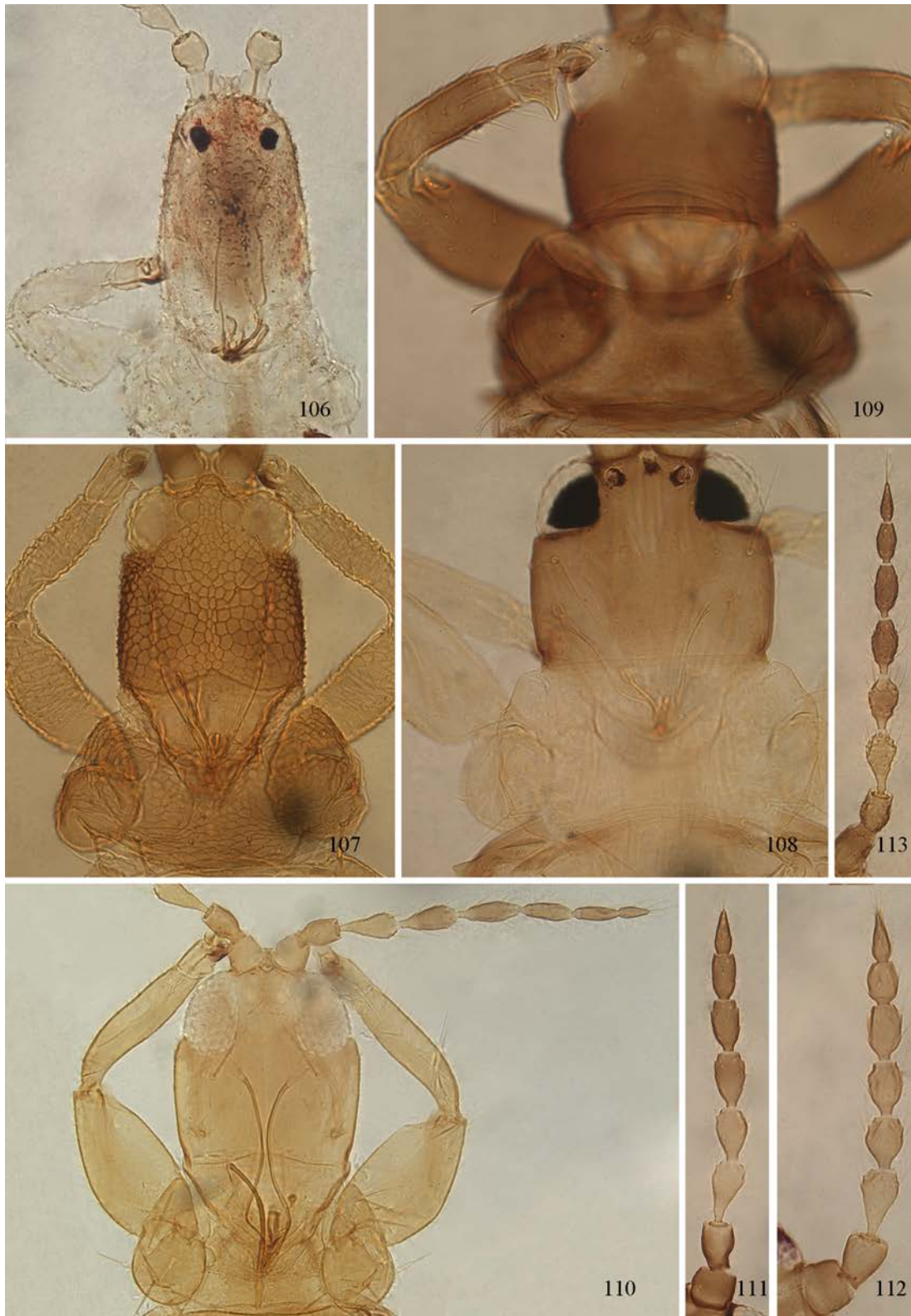
Figs. 93–96. Abdominal tergites. 93. *Holothrips flavus*, abdominal tergites IX–X. 94. *Phylladothrips pallidus*, abdominal tergites VIII–X. 95. *Streptothesis tibialis*, abdominal tergites VIII–X. 96. *Terthrothrips parvus*, abdominal sternites VI–VIII.



Figs 97–100. Dorsal view of body. 97. *Adraneothrips chinensis*. 98. *Adraneothrips hani*. 99. *Adraneothrips russatus*. 100. *Apelaunothrips hainanensis*.



Figs 101–105. Dorsal view of body. 101. *Bradythrips zhangi*. 102. *Psalidothrips chebalingicus*. 103. *Psalidothrips longidens*. 104. *Terthrothrips palmatus*. 105. *Hyidiothrips guangdongensis*.



Figs 106–113. Head, pronotum and antenna. 106–110. Head and pronotum. 106. *Bradythrips zhangi*. 107. *Mystrothrips longantennus*. 108. *Psalidothrips chebalingicus*. 109. *Terthrothrips palmatus*. 110. *Apelaunothrips longidens*. 111–113. Antenna. 111. *Psalidothrips longidens*. 112. *Psalidothrips elegatus*. 113. *Mystrothrips longantennus*.

3.2.89 *Streptothrips orientalis* Ananthakrishnan (Figs 48, 75)

Streptothrips orientalis Ananthakrishnan, 1964a: 118; Chen, 1980: 178.

Specimens examined. Australia (Queensland), 7 females and 1 male from dead wood, 16 November 2009, L.A. Mound (ANIC).

Distribution. China (Taiwan), India, Australia.

Remarks. This species was described by Ananthakrishnan (1964) from India, and recorded from Taiwan, China based on one female (Chen, 1980). In this study, seven females and one male from Australia identified by L.A. Mound are examined in ANIC, but no specimen is found in NZMC.

3.2.90 *Streptothrips tibialis* Priesner (Figs 76, 95)

Streptothrips tibialis Priesner, 1932b: 60; Okajima, 1981: 334.

Specimens examined. Guangxi, 1 female, 16 June 2000, Jian Yao (NZMC).

Distribution. China (Guangxi), Indonesia.

Remarks. This species was recorded from Guangxi, China by Dang *et al.* (2014). Illustrated was provided here.

3.2.91 *Terthrothrips apterus* Kudô (Fig. 49)

Terthrothrips apterus Kudô, 1978: 11; Wang & Tong, 2011: 64.

Specimens examined. Japan (Chiba-ken & Kagashima-ken), 2 females from leaf-litter, 21 January 1993 and 19 June 1994, T. Nonaka & S. Kawanabe (ANIC).

Distribution. China (Hunan, Guizhou, Guangdong), Japan.

3.2.92 *Terthrothrips palmatus* Wang & Tong (Figs 104, 109)

Terthrothrips palmatus Wang & Tong, 2011: 64.

Specimens examined. Hainan (Diaoluoshan Mt. & Wuzhishan Mt.), paratypes 2 females from leaf-litter, 5–7 December 2008, Jun Wang (SCAU).

Distribution. China (Yunnan, Hainan).

3.2.93 *Terthrothrips parvus* Okajima (Figs 50, 96)

Terthrothrips parvus Okajima, 2006: 616; Wang & Tong, 2011: 64.

Specimens examined. Taiwan (Pingtung-hsien, Nanjenshan Mt.), 4 females and 4 males from dead leaves, 19 January 2002–10 November 2002 (NZMC); Japan (Okinawa-ken, Okinawa-hontou Island), paratypes 1 female and 1 male from leaf-litter, 7 April 1990 (TUA).

Distribution. China (Guangdong, Hainan, Taiwan), Japan.

Remarks. This species is described by Okajima (2006) from Japan, and have two sensoria on antennal segment III in the original text. However, two paratypes (1 female and 1 male) examined in this study show three sensoria on the antennal segment III. Furthermore, four females and four males from Taiwan, China studied here also show three sensoria. It is not easy to see the one ventral sensorium.

3.2.94 *Urothrips gibberosa* (Kudô) (Fig. 13)

Ananthakrishnaniella gibberosa Kudô, 1989: 84.

Coxothrips gibberosa (Kudô): Bhatti, 1998a: 178; Dang & Qiao, 2012c: 890.

Urothrips gibberosa (Kudô): Ulitzka & Mound, 2014: 595.

Specimens examined. Tibet (Bomi County), 1 female from dry leaves, 22 August 2001, Jun Chen (NZMC).

Distribution. China (Tibet), Nepal.

Remarks. This species was recorded from China by Dang and Qiao (2012) as *Coxothrips gibberosa* (Kudô) with a detailed illustrated description. In this study, *Urothrips gibberosa* (Kudô) is used following the nomenclature change by Ulitzka and Mound (2014).

3.2.95 *Urothrips tarai* (Stannard) (Fig. 14)

Ananthakrishnaniella tarai Stannard, 1970: 119.

Coxothrips tarai (Stannard): Bhatti, 1998a: 178; Dang & Qiao, 2012: 891.

Urothrips tarai (Stannard): Ulitzka & Mound, 2014: 595.

Specimens examined. Yunnan (Jinghong City), 5 females and 1 male from dead leaves and branches, 12 April 1997, Yun-Fa Han (NZMC).

Distribution. China (Yunnan), India.

Remarks. The species was recorded from China by Dang and Qiao (2012) as *Coxothrips tarai* (Stannard), together with another newly recorded species *C. gibberosa* (Kudô). But similarly, *Urothrips tarai* (Stannard) is used here following the nomenclature change by Ulitzka and Mound (2014).

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