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## The Species of Hydatothrips and Neohydatothrips (Thysanoptera : Thripidae) of Taiwan **【Research report】**

### 臺灣之板背薊馬屬與新板背薊馬屬(纓翅目：薊馬科) **【研究報告】**

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Received:    Accepted: 1994/01/26    Available online: 1994/06/01

#### Abstract

This paper reports two species of genus Hydatothrips and one species of genus Neohydatothrips. Neohydatothrips medius is a new species. Hydatothrips ekasi is a new record from Taiwan.

#### 摘要

本文記述臺灣板背薊馬 (Hydatothrips) 2種及新板背薊馬 (Neohydatothrips) 1種，其中Neohydatothrips medius 為新種，Hydatothrips ekasi Kudo 則為首次發現於臺灣。

**Key words:** Hydatothrips, Neohydatothrips, taxonomy, Taiwan.

**關鍵詞:** 板背薊馬、新板背薊馬、分類、臺灣。

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# The Species of *Hydatothrips* and *Neohydatothrips* (Thysanoptera: Thripidae) of Taiwan

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## ABSTRACT

This paper reports two species of genus *Hydatothrips* and one species of genus *Neohydatothrips*. *Neohydatothrips medius* is a new species. *Hydatothrips ekasi* is a new record from Taiwan.

**Key words:** *Hydatothrips*, *Neohydatothrips*, taxonomy, Taiwan

## 臺灣之板背薊馬屬與新板背薊馬屬(纓翅目：薊馬科)

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## 摘 要

本文記述臺灣板背薊馬(*Hydatothrips*)2種及新板背薊馬(*Neohydatothrips*)1種，其中 *Neohydatothrips medius* 為新種，*Hydatothrips ekasi* Kudo 則為首次發現於臺灣。

**關鍵詞：**板背薊馬、新板背薊馬、分類、臺灣。

## Introduction

Genus *Neohydatothrips* and genus *Hydatothrips* belong to tribe Sericothripini redefined by Bhatti in 1973. The characteristics of Sericothripini are head transverse, two pairs of antecellar setae; antenna 7- or 8-segmented, segments III and IV with forked sense cones, segments II-VI with microtrichia; cervical sclerite present; pronotum reticulated, with a chitinized plate; mesosternum with spinula; tarsus 2-segmented; upper vein of fore wing with a row of continuous setae, lower vein with few distal setae or no setae, posterior fringe wavy; abdominal segments with dense rows of microtrichia on sides, and sublateral callosities on antecostal lines of abdominal tergites II-VII. Thrips associated with *Scirtothrips* were not included in this tribe. This paper reports the only two genera of this tribe found in Taiwan.

**Genus *Hydatothrips* Karny, 1913: 281.**

Type species: *Hydatothrips adolfifrideric* Karny

Head much wider than long; pronotum with a well defined blotch area; metasternum separated into two lateral plates with a strong Y-shaped apodeme; sides of abdominal tergites I-VII with dense microtrichia and posterior comb, comb shorter or missing in middle; median pair of setae on tergites V-VII longer and further apart from each other than on tergites II-IV; tergite VIII with complete comb.

***Hydatothrips liquidambara* Chen, 1977: 145-147.**

**Female (macropterous):** Body length 1250-1350  $\mu\text{m}$ . Head and thorax brown; abdominal segments V yellowish and a little darker in median part, the other segments brown; antennal segments

I-III yellow, IV-VIII brown with base of IV paler. Pronotal reticles filled with numerous dots; pronotal blotch, meso- and metascutum with dense striae filled with dotted wrinkles; lower vein of fore wing with 0-2 distal setae; abdominal tergites I-VII with dense microtrichia especially on sides; posterior comb on tergites II-VII complete but very short in middle.

**Male (macropterous):** Body length 900-1050  $\mu\text{m}$ . Similar to female in color; abdominal sternites VI-VIII with transverse glandular areas.

**Specimens examined:** 1 ♀, Meifeng, Nantou, on *Morus australis*, 24-X-1978, col. L. S. Chen; 1 ♀, Pingtung, on *Arachis hypogaea*, 21-IV-1992; 1 ♀, Tainan, on *Firmiana simplex*, 1-VI-1993; 1 ♀, Nantou, on bamboo, 25-VI-1992; 1 ♂, Nantou, on *Cunninghamia lanceolata*, 10-I-1991; 2 ♀, Tainan, on *Areca catechu*, 1-IV-1993; 2 ♂, TARI, grass, 9-VII-1992; 2 ♀ 4 ♂, Nantou, grass, in I, V, VII, X-1992.

**Remarks:** Number of lower vein setae on fore wing of *H. liquidambara* is variable. In the above specimens, the number of lower vein setae of the same individual are: 2 and 2 (1 ♀), 2 and 1 (2 ♂), 1 and 1 (3 ♀ 2 ♂), 1 and 0 (4 ♀ 3 ♂). *Hydatothrips abdominalis* (Kurosawa) is a closely related species that was not found in Taiwan. Chen (1977) and Kudo (1991) mentioned that these two species can be distinguished by: (1) *Liquidambara* has at least one seta on lower vein of one of fore wings, whereas *abdominalis* lacks such seta, (2) the combs on median posterior margin of tergites II-VI in *liquidambara* are clear and longer than those of *abdominalis*.

This is the first time males recorded.

***Hydatothrips ekasi* Kudo, 1991: 520-523.**

**Female (macropterous):** Body length 1200-1300  $\mu\text{m}$ . Head and thorax dark brown; abdominal segments I-III, VI and X brown, IV and V yellow, VII-IX

dark brown; antennal segments I-III yellow, IV yellow basally and brown apically, V-VIII brown. Pronotal reticles with inconspicuous inner dots; pronotal blotch, meso- and metascutum with dense striae filled with dotted wrinkles; lower vein of fore wing with no distal setae; abdominal tergites I-VII with dense microtrichia especially on sides; posterior comb on middle of tergites I-VI incomplete, missing in middle.

**Male (macropterous):** Body length 850  $\mu\text{m}$ . Similar to female in color; abdominal sternites V-VII with transverse glandular areas.

**Specimens examined:** 3♀ 1♂ (paratypes), Shizuoka, Japan, 12-VIII-1979, *Kummerovia striata*, col. I. Kudo; 3♀, Taichung, on *Dioscorea benthamii*, 1-XI-1990; 2♀ 1♂, Taichung, on *Macaranga tanarius*, 8-X-1991.

**Remarks:** I compared those specimens collected in Taiwan with paratypes from Japan (supplied by Kudo). The dots in pronotal reticles are clearer in Japanese specimens than in Taiwanese ones. This is the first record of this species from Taiwan.

**Genus *Neohydatothrips* John, 1929: 33-34.**

Type species: *Neohydatothrips laterotriatus* John

This genus is similar to *Hydatothrips* but its metasternum is fused in the middle, not separated into two lateral plates with an apodeme. Iwao Kudo (1991) suggested it to be a subgenus of *Hydatothrips*.

In Takahashi's thrips collection deposited in TARI, there is a slide with 3♀ 1♂ labeled as *Sericothrips tabulifer* Priesner, collected by S. Minowa at Iriomote, VII-20-1932, on *Glochidion*. The collection data and characteristics of these thrips are the same as in Priesner's original description published in 1935.

They are certainly the same species. The specimens have fused metasternum, abdominal tergites I-V without microtrichia in the middle, and complete posterior comb on tergites II-VII, which are distinctly reduced in the middle. This species has a closer relationship to genus *Neohydatothrips* than genus *Sericothrips*.

Priesner appears not to notice that Iriomote is an island belonging to Japan. As the specimen was supplied by Takahashi from Taiwan, he wrote "Formosa, Iriomote" as the collection site in the original report in 1935. This species has never been found in Taiwan.

***Neohydatothrips medius* sp. nov.**

**Fig. 1**

**Female (macropterous):** Color dark brown, abdominal segments V and VI yellow; all femora dark brown, tibiae and tarsi yellow; fore wing brown, with a subbasal transparent band; antennal segments I and II pale yellow, III and IV yellowish grey, V-VIII dark grey with base of V paler; major setae dark brown.

Head much wider than long, eyes somewhat protruding, occupying more than half the length of head, occiput apodeme close to posterior margins of eyes; head and occiput covered with dense and transverse striae, bearing inner wrinkles; one pair of interocellar setae in front of posterior ocelli; two pairs of ocular setae behind posterior ocelli, the inner pair longer. Mouth cone reach anterior margin of mesosternum, maxillary palpus 3-segmented. Antenna slender, 8-segmented, III and IV with forked sense cones, VI and VII with longitudinal sense areas, II-VI with rowed microtrichia.

Pronotal reticles strongly transverse, with inner wrinkles; pronotal blotch rectangle, covered with dense, transverse striae, four pairs of setae on anterior margin, one long seta at posterolateral angle, one pair of setae on posterior margin; pronotum and blotch covered

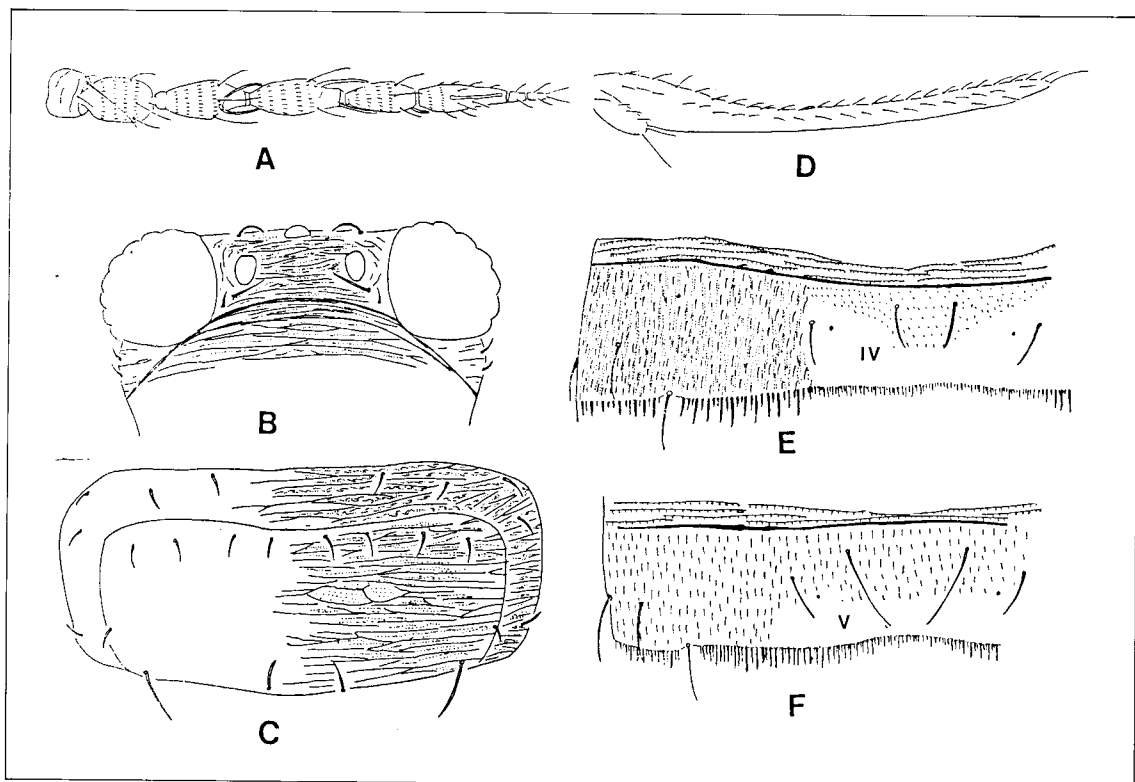


Fig. 1. *Neohydatothrips medius* sp. nov. (♀): A. dorsal view of right antenna; B. dorsum of head; C. pronotum; D. fore wing; E. abdominal tergite IV; F. abdominal tergite V.

with small wrinkles. Meso- and metascutum with dense striae bearing inner wrinkles; metasternum complete, not divided into two lateral plates. Fore wing with 3+18 setae on upper vein, two distal setae on lower vein.

Abdominal tergites I with dense rows of microtrichia and posterior comb on sides; II-IV with stout microtrichia and wrinkles on areas lateral of submedian setae, weak microtrichia on anterior portion between submedian setae; tergites V-VIII covered with microtrichia except posterior portion between submedian setae on V and VI; posterior margin of tergite II-VII with complete comb, much shorter in middle; tergite VIII with long and complete comb; median pair setae on tergites I-IV close to each other, separated further on tergites V-VIII; tergite

X with microtrichia on posterior portion, split posteriorly.

**Male (macropterous):** Color similar to female; abdomen without glandular areas; four pairs of major setae on tergite IX, tergite X with microtrichia.

**Measurements ( $\mu\text{m}$ ) of holotype:** Body L 1160, head L 37, W 190; pronotum L 110, W 230; blotch L 90, W 190; fore wing L 820; median setae on tergite IV 25, on tergite V 45. Antennal segments (L/W): I (15/28), II (40/28), III (60/21), IV (64/20), V (48/17), VI (56/15), VII (11/6), VIII (15/5).

**Type data.** Holotype: 1♀, Pingdung, on *Cinnamomum camphora*, 21-IV-1992; paratypes: 12♀ 2♂, same data as holotype; 3♀, same data as above but on *Acacia confusa*. Allotype: 1♂, same data as holotype.

**Remarks:** *Neohydatothrips ponyaunpe* Kudo is the species most similar to *N. medius*. Both species have characteristic small dotted wrinkles on pronotum, metascutum, and abdominal tergites II-IV. *Neohydatothrips ponyaunpe* can be distinguished from *N. medius* by its having (1) dark brown tibiae and brown antennal segment I, (2) wider transverse striae on pronotum, (3) one (rarely two) lower vein setae on fore wing.

### Acknowledgments

I thank L. S. Chen, Bureau of Commodity Inspection and Quarantine, Taiwan; L. A. Mound, Natural History Museum, London, England; I. Kudo, Shizuoka, Japan for lending specimens.

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*Received for publication October 14, 1993; revised manuscript accepted January 26, 1994.*