

A new species of *Holothrips* Karny from China (Thysanoptera: Phlaeothripidae)

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韓運發、李振宇 中國全管薊馬屬 *Holothrips* Karny 之一新種 (纓翅目：管薊馬科) 臺灣省立博館半年刊 52(1)：1-6

摘要

本文提供了中國大陸及臺灣產全管薊馬屬 *Holothrips* Karny 的 7 個種的檢索表並描述了一新種，即湖南全管薊馬 *Holothrips hunanensis*, sp. nov., (模式標本保存在中國科學院動物研究所，北京)，其餘 6 個種是：琉球全管薊馬 *H. ryukyuensis* Okajima, 1987 (分布福建、日本)；沖繩全管薊馬 *H. okinawanus* Okajima, 1987 (分布臺灣、日本)；瘤腿全管薊馬 *H. typicus* (Ananthakrishnan, 1967) (分布臺灣、印度)；孔全管薊馬 *H. porifer* Okajima, 1987 (分布臺灣、日本)；口錐全管薊馬 *H. attenuatus* Okajima, 1987 (分布臺灣)；臺灣全管薊馬 *H. formosanus* Okajima, 1987 (分布福建、臺灣)。

關鍵詞：纓翅目、管薊馬科、全管薊馬屬、檢索表、新種、中國。

Abstract

Holothrips hunanensis is described and illustrated as new from Hunan Province, China. Seven species of *Holothrips* are currently recognized from mainland China and Taiwan. A key to these species is provided. Distribution of each species is summarized and a map is provided.

Key words: Thysanoptera, Phlaeothripidae, *Holothrips* Karny, key to species, new species, China.

Introduction

The genus *Holothrips* Karny, consisting of more than 120 species, belongs to the tribe Docessiphothripini of the subfamily Phlaeothripinae (Thysanoptera, Phlaeothripidae). Mem-

bers of the genus are fungus-feeders and are usually found on dead leaves and branches. Sometimes they are also found in grasses. However, one species of the genus has been found in the flowers of *Chloranthus* spp.. This species is here described as new.

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Currently, seven species of *Holothrips* are recognized from mainland China and Taiwan (Fig. 1).

H. attenuatus Okajima is endemic to Taiwan (Nantou County); *H. typicus* (Ananthakrishnan) is found in Taiwan (Pingtung County), also distributed in India (Tamil Nadu); *H. porifer* Okajima is found in Taiwan (Pingtung County), also distributed in the Ryukyu Islands (Iriomote Island) of Japan; *H. okinawanus* Okajima is found in Taiwan (Nantou County), also distributed in the Ryukyu Island (Okinawa Island) (Okajima, 1987); *H. ryukyuensis* Okajima and *H. formosanus* Okajima are discovered from Wuyi Mountain of Fujian (Zhang and Tong, 1993), the former also recorded from the Ryukyu Islands (Okinawa Island and Iriomote Island), the latter also found in Taiwan (Nantou County); *H. hunanensis* Han from Xinning County of

Hunan is herein described as new.

Diagnosis of *Holothrips* Karny

Colour yellow to dark brown, usually with red hypodermal pigments. Head usually longer than broad, sometimes elevated dorsally, dorsal surface partly or generally sculptured. Antennae 7-segmented; morphological antennal segment VII and VIII completely fused, but usually with a complete, incomplete or reduced suture between them; antennae segment III with 3 sense-cones, IV with 4 sense-cones. Mouth-cone variable in shape, short or long, rounded or pointed; maxillary stylets more or less broad, long, usually reaching eyes, usually parallel and touching together in the middle of head, but sometimes not reaching eyes and more or less apart from each other; maxillary bridge usually ab-

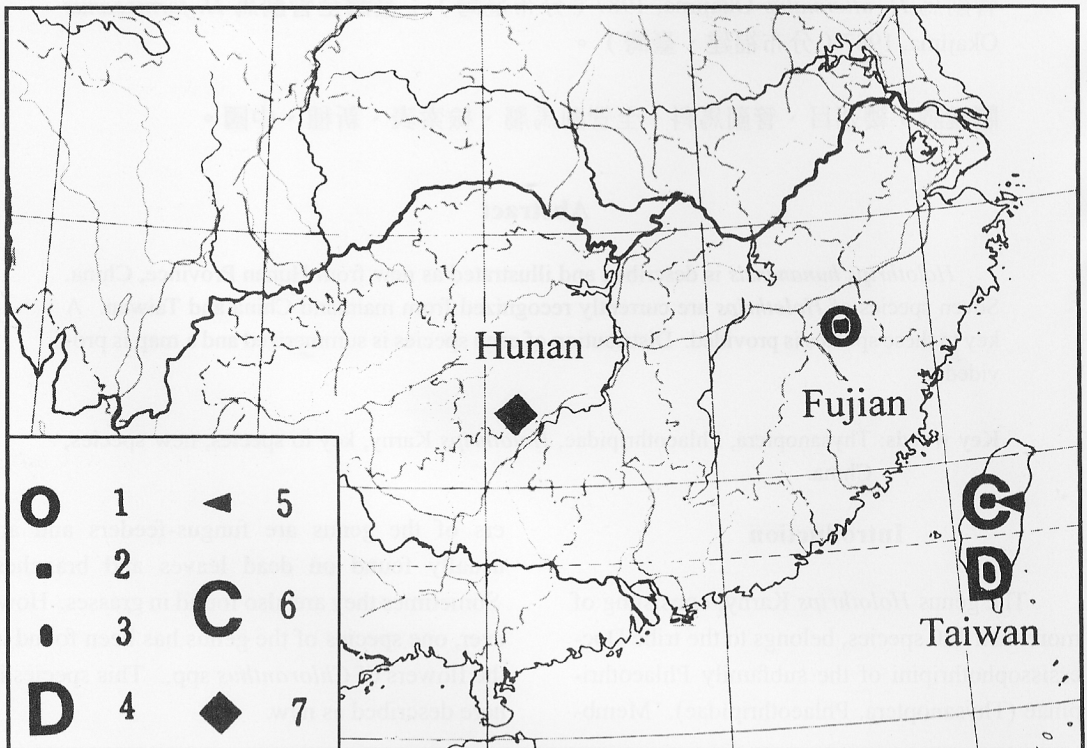


Fig. 1. Distribution of *Holothrips* in China. 1. *H. ryukyuensis*; 2. *H. formosanus*; 3. *H. porifer*; 4. *H. typicus*; 5. *H. okinawanus*; 6. *H. attenuatus*; 7. *H. hunanensis*.

sent, sometimes present but weak and narrow. Praepectus absent. Epimeral suture usually complete. Foretarsi each with a tooth in both sexes. Metathoracic sternopleural sutures present. Metanotal median pair of setae usually weak. Forewings not constricted medially; with duplicated cilia on forewings. Pelta bell-shaped or triangular, a pair of micro-pores present or absent. Abdominal sternite segments IV to VII of male usually with transverse reticulated areas. Tube usually shorter than head, sometimes longer, variable in shape.

More than 120 species widely distributed in the world, of which 52 reported from the New World (Mound and Marullo, 1996) and 73 confined to the Old World (Okajima, 1987; Han, in the present paper); seven species occur in mainland China and Taiwan.

Key to Chinese species of *Holothrips* Karny

1. Mouth-cone long and pointed 5
- 1'. Mouth-cone short and rounded..... 2
2. Cheeks with strong corrugate..... 3
- 2'. Cheeks without strong corrugate..... 4
3. Postocular setae longer and slender; almost half length of head or longer, sharply pointed at apex. Pronotum well developed sculptured laterally; major setae sharply pointed at apex*H. ryukyuensis* Okajima, 1987
- 3'. Postocular setae shorter and stouter, 0.35 times as long as head, weakly blunt at apex. Pronotum comparatively small, weakly sculptured posteriorly; major setae obliquely cutting pointed at apex.....*H. hunanensis* Han, sp. nov.
4. Colour uniformly dark brown. Forewings shaded with pale brown, each with 20 duplicated cilia. Male without a well-developed tubercle on forefemora
.....*H. okinawanus* Okajima, 1987
- 4'. Colour yellow, but pterothorax more or less

- darker, yellowish brown; Forewings hyaline, each with 11-13 duplicated cilia. Male with a well-developed tubercle just before middle of interior margin of foremora
.....*H. typicus* (Ananthakrishnan, 1967)
5. Pelta without micro-pores..... 6
 - 5'. Pelta with a pair of micro-pores. Colour brown; all tibiae and tarsi yellow. Postocular setae and major setae on pronotum expanded at apex. Forewings each with 12-14 duplicated cilia *H. porifer* Okajima, 1987
 6. Head 1.04-1.06 times as long as broad. Forewings each with 17-20 duplicated cilia. Tube 0.78 times as long as head, about 2.2 times as long as basal width
.....*H. attenuatus* Okajima, 1987
 - 6'. Head 1.17 times as long as broad. Forewings each with 35-36 duplicated cilia. Tube about 0.9 times as long as head
.....*H. formosanus* Okajima, 1987

Description of new species

Holothrips hunanensis Han, sp. nov. (Fig. 2)

Female (Macroptera): Colour uniformly dark brown, include antennae and legs, but all tarsi paler, yellowish; Forewings not hyalined, each with a pale brown longitudinal band; major setae brownish yellow. Total body length about 2952 μm (distended) (all measurements in μm).

Head 382 long, 362 broad; dorsal surface elevated; sculptured laterally; cheeks almost straight, with strongly corrugated and with seta-bearing warts. Eyes 102 long, 87 broad. Postocular setae a little pointed at apex, 132 long. Antennae 1.94 times as long as head; length (width): I 64(64), II 82(49), III 128(54), IV 134(54), V 116(47), VI 102(45), VII 115(37); total length 741, segment VII 3.1 times as long as broad, with a complete suture on dorsal surface between morphological antennal segments VII and VIII. With sense cone 3 on segments III and

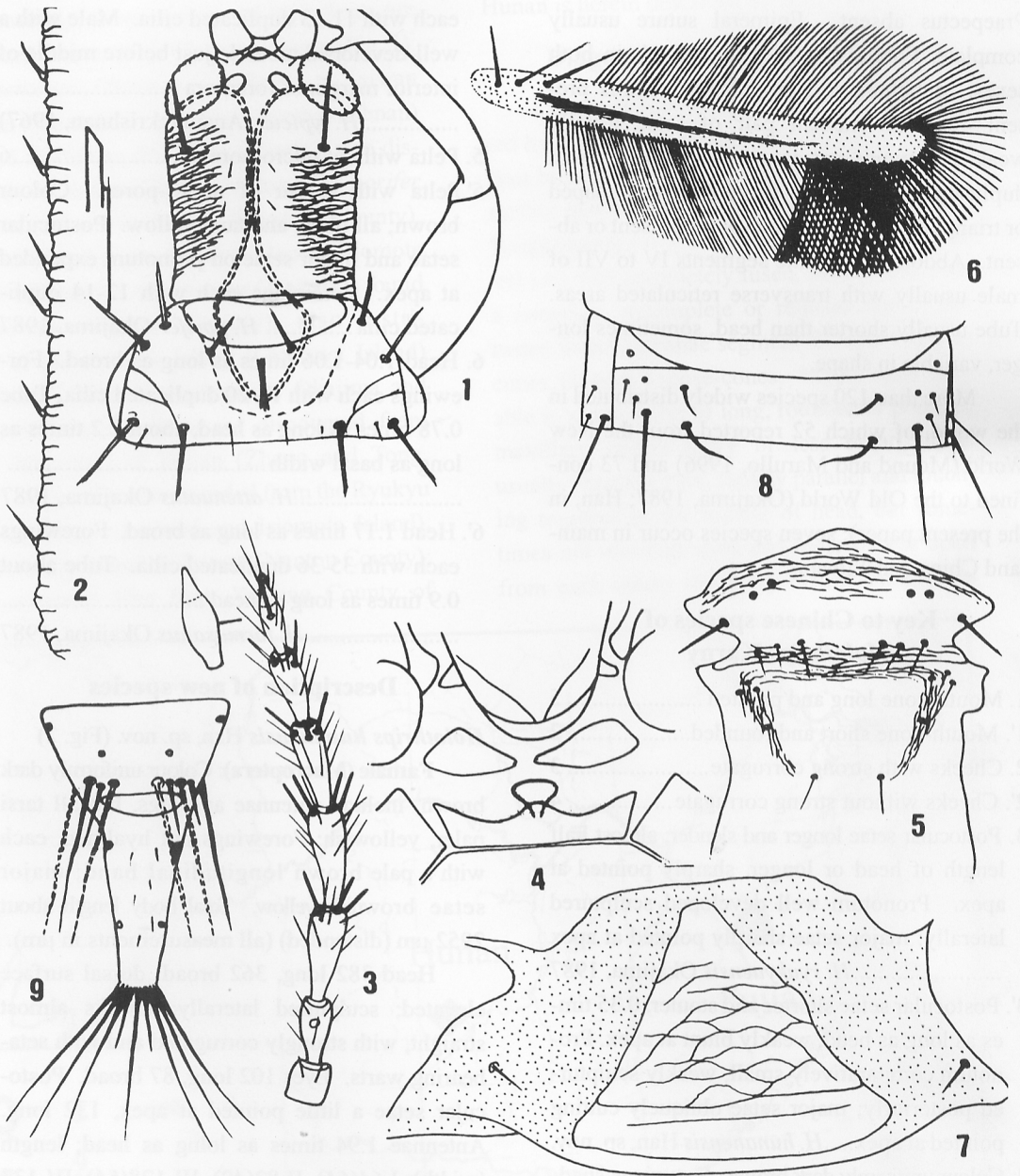


Fig. 2. *Holothrips hunanensis*, sp. nov. 1. head and pronotum; 2. cheek (pleural margin); 3. antenna; 4. prothoracic sclerite of sternite and mesoprasternum; 5. meso and metathoracic scutum; 6. forewing; 7. pelta; 8. abdominal tergite segment V; 9. abdominal tergites segments IX and X.

4 on IV. Mouth-cone short and rounded. Pronotum 168 long, weakly sculptured posteriorly, with a median line; all major setae obliquely cutting pointed at apex; setae length: anteromarginal setae 69, anteroangular setae 69, midlaterally setae 113, epimeral setae 128, postroangular 128. Inner side of probasisternum irregularly rounded. Mesoprasternum well developed. Meso and metathoracic scutum with few sculptures. Forewings 1096 long, each with 20 duplicated cilia; subbasal wing setae on forewings (numbered from basal one) I and II weakly blunt at apex, III pointed at apex, length: I 90, II and III 134. Pelta rather triangular, micro-pores absent, with sculpture. Abdominal tergites II to VII each bears two pairs of segmoid wing retaining setae; II to VIII each bears one pairs of major setae (S1) and sterna II-VIII each bears one pair of major setae (S2), both setae with pointed apex which situated near the lateral angles. Major setae at or near posterior margin on tergite IX, sharply pointed at apex, about 237 long. Tube straight-sided, surface smooth, 242 long, basal broad 122, apical broad 56. Anal setae sharply pointed, about 218 long.

Male: unknown.

Holotype (mac.): in the flowers of *Chloranthus* spp., alt. 500m, Shuiyuancao Village, Xinning County (110° 8'E, 26° 4'N), Hunan Province, China, April 20, 1997, leg. Luo Yi-bo (NO. 1.) (preserved in Institute of Zoology, the Chinese Academy of Sciences, Beijing)

Holothrips hunanensis appears to be most closely related to *H. ryukyensis* Okajima, 1987, but can be distinguished from the latter by the following features: (1) forewings not hyalined, with pale brown longitudinal band (vs. forewings generally shaded with pale grey); (2) postocular setae shorter and stouter, 0.35 times as long as head, weakly blunt at apex (vs. longer and slender, almost half length of head or longer,

sharply pointed at apex); (3) pronotum comparatively small, weakly sculptured posteriorly; major setae obliquely cutting pointed at apex; anteromarginal setae and anteroangular setae 69 long (vs. pronotum well developed, sculptured laterally; major setae sharply pointed at apex; anteromarginal setae minute, 10-15 long, anteroangular setae 123-133 long); (4) subbasal wing setae on forewings (numbered from basal one) s1 and s2 weakly blunt at apex, s3 pointed at apex, length: s1 90, s2 and s3 134 (vs. s1 s2 and s3 sharply pointed at apex, length: s1 61-69, s2 71-76, s3 158-188); (5) tube 0.63 times as long as head (vs. tube 0.70 -0.74 times as long as head).

This new species is also similar to *H. ruidus* (Ananthakrishnan, 1969) (India) and *H. semiflavus* (Moulton, 1947) (New Guinea) in the cheeks with some warts, but *H. ruidus* is both brown and yellow; head, pro- and mesothorax brown; metathorax and abdomen yellow, shaded with brown; postocular setae expanded at apex. *H. semiflavus* foretibiae yellowish, mid and hindtibiae clear yellow; foretibiae each with an apical tubercle; postocular setae blunt or knobbed at apex; prothoracic major setae blunt or knobbed at apex.

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