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## 【Research report】

### 臺灣之水姬蜂亞科 (膜翅目：姬蜂科) 【研究報告】

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Received:    Accepted:    Available online: 1986/03/01

## Abstract

### 摘要

本文記載膜翅目姬蜂科 (Hymenoptera, Ichneumonidae) 水姬蜂亞科 (Agriotypinae) 1 新種。定名為亨利水姬蜂 (*Agriotypus townesi* Chiu) 是該亞科全球性記錄之第七新種。該亞科乃1小亞科，前此，全球祇記錄 *Agriotypus* 1屬，6種，即歐洲之 *Agriotypus armatus* Curtis，日本之 *A. gracilis* Waterson，我國大陸之 *A. chungbaishanus* Chao 與 *A. jiliensis* Chao，印度之 *A. himalensis* Mason 以及緬甸之 *A. kambaifensis* Gupta et Chandra。蘇聯亦有發現此蜂，但未記述。本文記述之新種，亨利水姬蜂 (*A. townesi* Chiu) 與同屬6個已知種之區別，可依下列之綜合特徵而予辨認。唇基片 (clypeus) 具粗刻點及條紋，中央部高度隆起，臉 (face)、額 (frons)、頭頂 (vertex) 和顛如 (temple) 均具中度粗之密刻點，但額部中央有些細皺。險中線無縱脊。額部在觸角窩之後方凹陷，複眼大。顛如背面觀在複眼後方呈弧狀，但並不強度溢入。雄性觸角鞭節30環節。前胸緣脊 (epomia) 處僅上方一段顯現粗條紋，其餘部分不存在。中胸側板有密集之中度刻點，中段之中部與後半部分具明顯之條紋及刻點。小楯片 (scutellum) 末端刺直而斜向上彎。前翅小翅室 (areolet) 不存在，盤肘脈 (discocubitus) 有1短小殘脈 (ramulus)，前伸腹節 (propodeum) 之兩條中縱脊 (median longitudinal carina) 彼此不平行，後段略為靠近。後腿節之長為其中點厚度之6.5倍。腹部第一節長為其末端寬之4.25倍，其背中脊 (median dorsal carina) 粗而完整，長達該節之末端。第二腹節之基部中間有4-5條短條紋，第二節之腹板幾乎全面具粗條紋。

### Key words:

### 關鍵詞:

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THE AGRIOTYPINAE OF TAIWAN<sup>1</sup>  
(HYMENOPTERA: ICHNEUMONIDAE)

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ABSTRACT

This paper reports a new species, *Agriotypus townesi* Chiu, of the subfamily Agriotypinae (Ichneumonidae: Hymenoptera) from Taiwan. It is the seventh recorded species of this subfamily in the world.

Agriotypinae is a small subfamily of Ichneumonidae. It has been represented by only 6 species, viz. *A. himalensis* Mason from India (Mason, 1971), *A. armatus* Curtis from Europe, *A. gracilis* Waterson from Japan and *A. kambaiensis* Gupta et Chandra from Burma (Gupta et Chandra, 1975), *A. changbaishanus* Chao and *A. jilinensis* Chao from Mainland China (Chao et Zhang, 1981). It was also found in Russia (Townes, 1969).

This subfamily can be easily recognized by its body densely covered with silver-colored pubescences, 2-toothed mandible with its upper tooth shorter than the lower tooth. Male flagellum without tyloids. Notaulus deep and long. Scutellum produced backward as a long spine. Legs slender, tarsal claws simple and weakly curved apically. Areolet lacking (Taiwanese species). Propodeum simply carinated. Tergite 1 long and narrow, tergite 2 of male partly fused with tergite 3, sternites 2 to 6 entirely sclerotized. Abdominal segment 2 and its following ones slightly depressed and oblong in shape.

GENUS AGRIOTYPUS CURTIS

*Agriotypus* Curtis, 1832, British Entomology, 3: 389.

Type-species: *Agriotypus armatus* Curtis. Original designation.

*Crotopus* Holmgren, 1958, Öfvers. Svenska Vetensk. Akad. Forth., 15: 353.

Type-species: (*Crotopus abnormis* Holmgren) = *armatus* Curtis. Monobasic.

*Agriotypus* is the only genus described under the subfamily Agriotypinae. It can be easily recognized by a long spine on the apex of scutellum. Tergite 1 slender. Dorsal view of tergite 2 and its following ones oval or fusiform, tergites 2 and 3 fused. Sternites 2 to 6 completely sclerotized. Body generally black, covered with dense silvery pubescences. Ovipositor short.

The species of *Agriotypus* are parasitoids of prepupa and pupa of caddis-flies. Females deposit eggs to caddis-fly case by entering into the water and walking down the surface of stone or plants to parasitize their hosts. Thus, they are known as aquatic Ichneumonidae (Cushman, 1933).

*AGRIOTYPUS TOWNESI* CHIU, NEW SPECIES

♂: Fore wing about 4.8 mm. long. Head about 0.9 x as high as wide. Clypeus about 0.9 x as long as wide, strongly and coarsely punctato-striate, not separated from face by a definite suture, apical margin strongly protruded. Face, frons and temple densely finely punctate. Mandible coarsely striato-punctate, upper tooth much shorter than lower tooth. Malar space rugoso-punctate, about 1.2 x as long as basal width of mandible. Temple in dorsal view not much convergent behind eyes. Occipital carina strong, weakly angularly arched medially. Antenna densely haired, flagellum 30-segmented, each segment with longer hairs on its apex, without tyloids. Pronotum densely striato-punctate, epomia with upper part strong and lower part indiscernible. Mesoscutum evenly densely punctate, notaulus deep and long, extending beyond baso-transverse line of tegula, and then connected to each other. Scutellum densely rugoso-punctate, strongly edged on both sides, apically produced backward forming a long spine that is pointed obliquely upward. Postscutellum weakly convex. Mesopleurum densely and moderately coarsely punctate, centrally distinctly punctato-striate, prepectal carina strongly present except the upper part, sternaulus short and shallow. Fore wing with transverse brace about 1: 2: 4.7 in ratio, 2nd recurrent vein and basal abscissa of subdiscoideus forming nearly a right angle, discocubitus with a short ramulus, nervulus nearly opposite basal vein, nervellus broken below middle. Propodeum with evenly dense rugosities, propodeal carinae moderately strong, convergent posteriorly, spiracle very small, circular-shaped. Abdominal tergite 1 about 4.2 x as long as apical width, evenly densely punctate, somewhat rugose, with a pair of distinct median dorsal carinae which parallel each other, almost reaching its apex, spiracle located about basal 0.3 of the tergite, tergite 2 and its following tergites finely punctate, tergite 2 fused with tergite 3, the former with 4-5 short striae on medio-base. Sternites 2-6 entirely sclerotized, sternite 2 almost evenly coarsely rugoso-striate. Legs slender, densely haired, hind femur 6.25 x as long as its median depth, tarsal claws simple, slender and weakly curved apically.

Black. Mandibular teeth reddish brown. Wing hyaline, partly tinged with fuscous, pterostigma blackish. Palpi, wing venation, tarsal segments and tarsal claws, blackish brown.

Holotype ♂. Alishan, Chiayi Hsien, 2400m, 5-9. VIII. 1981, L. Y. Chou & S. C. Lin.

This species can be separated from the six recorded species by the following characters in combination.

Clypeus strongly raised and coarsely punctato-striate. Face, frons, vertex and temple with dense, moderately coarse punctures except for frons centrally with a few wrinkles. Face without median longitudinal carina. Frons rather concave behind antennal socket. Eye large. Temple in dorsal view, roundly curved but not much convergent behind eyes. Flagellum 30-segmented in male. Epomia with upper part strongly present and lower part indiscernible. Mesopleurum densely punctate to punctato-striate. Spine of scutellum not sinuated, pointed obliquely upward. Areolet lacking, discocubitus with ramulus. Propodeal longitudinal carinae not parallel. Hind femur 6.5 x as long as its median depth. Tergite 1 about 5.25 x as long as its apical width, with median dorsal carinae strong and complete, tergite 2 with 4 to 5 short striae on medio-base, sternite 2 almost evenly coarsely striate, the sternite not fused with sternite 3 in male.

The name "*townesi*" is in honor of Dr. Henry K. Townes.

## ACKNOWLEDGEMENTS

The authors wish to express their gratitude to Dr. Henry K. Townes for providing refer-

ences and giving advice.

This research was supported in part by a grant (No. NSC 74-0202-B055-01) from the National Science Council, R. O. C.

#### REFERENCES

- Chao, H. F. & Y. Zhang 1981. Two new species of *Agriotypus* from Jilin province (Hymenoptera: Ichneumonoidea, Agriotypidae). *Entomotaxonomia* 3 (2): 79-86 (in Chinese).
- Cushman, R. A. 1933. Aquatic Ichneumon-flies. *Canad. Ent.* 65: 24.
- Gupta, V. K. & G. Chandra 1975. A new *Agriotypus* from Burma and redescription of *A. gracilis* Waterson (Hymenoptera: Agriotypidae). *J. nat. Hist.* 9: 351-355.
- Mason, W. R. N. 1971. An Indian *Agriotypus* (Hymenoptera: Agriotypidae). *Canad. Ent.* 103: 1521-1524.
- Townes, H. 1969. The Genera of Ichneumonidae, I. *Mem. Amer. Ent. Inst.* (11): 215.

## 臺灣之水姬蜂亞科（膜翅目：姬蜂科）

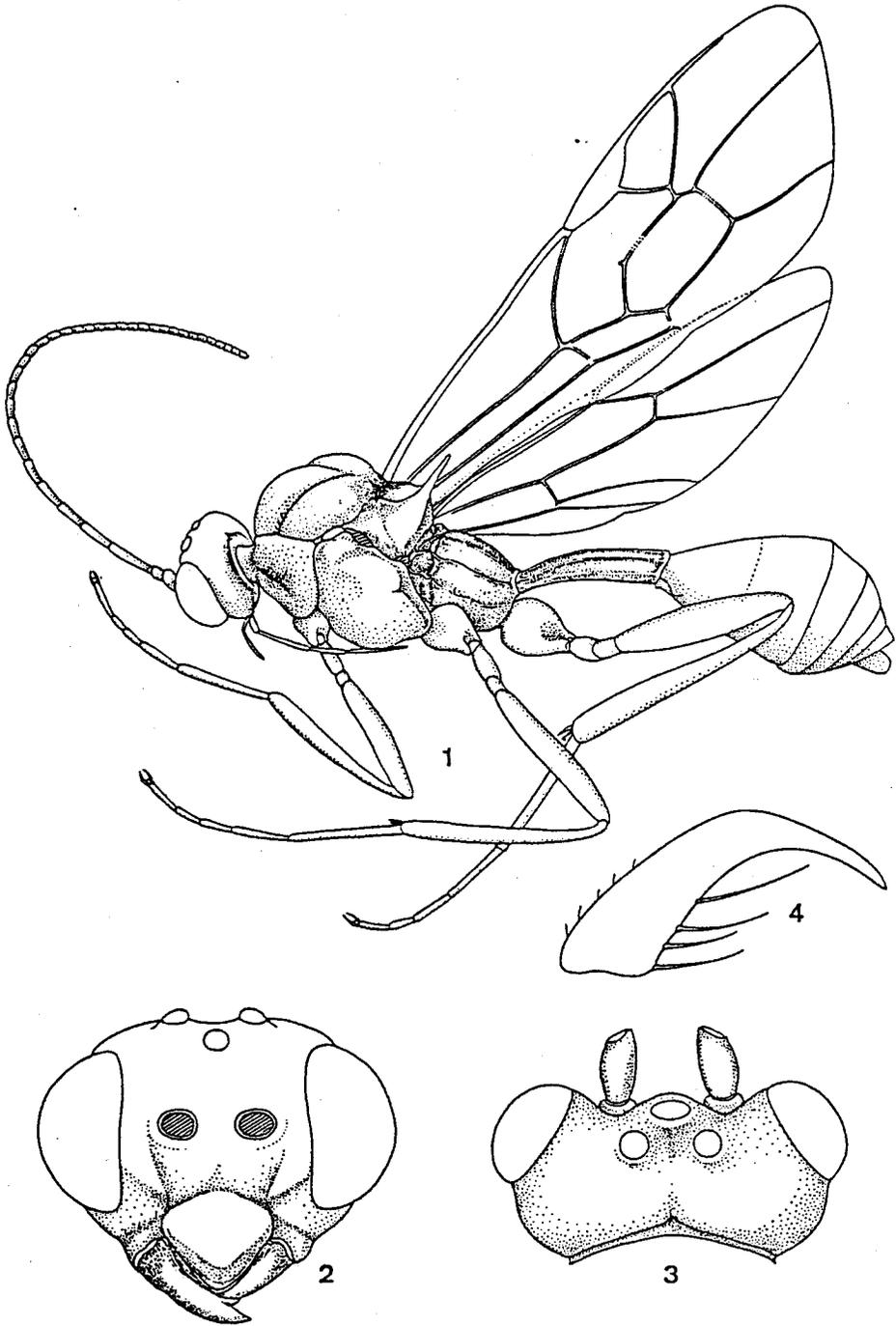
· 邱瑞珍 翁振宇

臺灣省農業試驗所應用動物系

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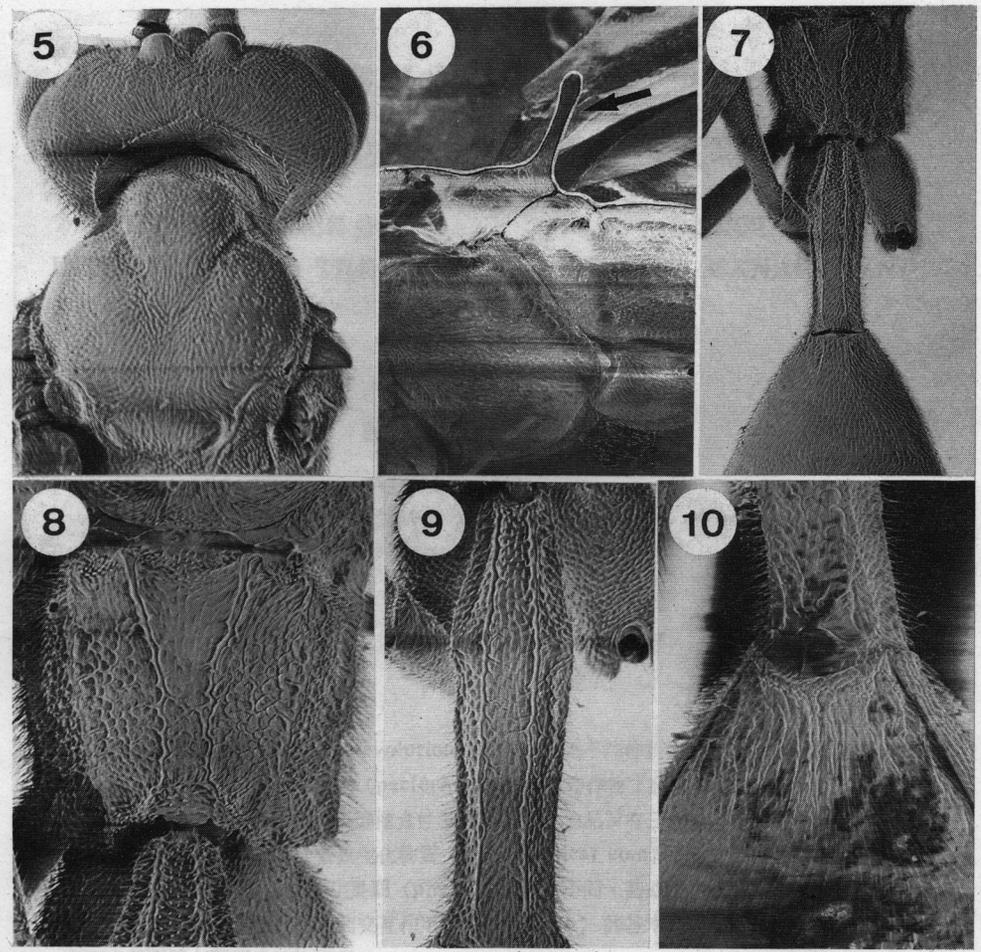
本文記述之新種，亨利水姬蜂 (*A. townesi* Chiu) 與同屬 6 個已知種之區別，可依下列之綜合特徵而予辨認。

唇基片 (clypeus) 具粗刻點及條紋，中央部高度隆起，臉 (face)、額 (frons)、頭頂 (vertex) 和顛顛 (temple) 均具中度粗之密刻點，但額部中央有一些細皺。臉中線無縱脊。額部在觸角窩之後方凹陷，複眼大。顛顛背面觀在複眼後方呈弧狀，但並不強度縊入。雌性觸角鞭節 30 環節。前胸緣脊 (epomia) 處僅上方一段顯現粗條紋，其餘部分不存在。中胸側板有密集之中度刻點，中段之中部與後半部分具明顯之條紋及刻點。小楯片 (scutellum) 末端刺直而斜向上彎。前翅小翅室 (areolet) 不存在，盤肘脈 (discocubitus) 有 1 短小殘脈 (ramulus)，前伸腹節 (propodeum) 之兩條中縱脊 (median longitudinal carina) 彼此不平行，後段略為靠近。後腿節之長為其中點厚度之 6.5 倍。腹部第一節長為其末端寬之 4.25 倍，其背中脊 (median dorsal carina) 粗而完整，長達該節之末端。第二腹節之基部中間有 4-5 條短條紋，第二節之腹板幾乎全面具粗條紋。



Figs. 1-4. *Agriotypus townesi* Chiu, n. sp., holotype male:  
1. Body, lateral view. 2. Face, frontal view. 3. Face, dorsal view.  
4. Hind claw.

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Figs. 5-10. SEM micrographs of *Agriotypus townesi* Chiu, n. sp., holotype male:  
 5. Occipital carina and mesoscutum. 6. Scutellar spine, lateral view.  
 7. Propodeum, tergite 1, tergites 2 and 3. 8. Propodeum.  
 9. Tergite 1. 10. Sternite 2.

前言

昆蟲管理 (insect pest management) 發展至今，基本理論架構已趨完成，並獲得多數學者  
 專家的肯定。對於害蟲族群的抑制，最簡單決定防治或不防治之模式，邏輯上 (logical process)