

# Type materials of Dryinidae described by Teiso Esaki & Shiro Hashimoto (Hymenoptera: Chrysidoidea)

Toshiharu MITA, Naomichi OHARA & Sadahisa YAGI

Entomological Laboratory, Faculty of Agriculture, Kyushu University  
Motooka 744, Nishi-ku, Fukuoka 819-0395 JAPAN

**Abstract:** Type specimens of Dryinidae described by Teiso Esaki & Shiro Hashimoto are examined including recently rediscovered slide samples. Lectotypes of *Apterodryinus tambinia* Esaki & Hashimoto, 1935, *Echthrodelphax bicolor* Esaki & Hashimoto, 1931, *Pachygonatopus andoi* Esaki & Hashimoto, 1935, *Pseudogonatopus flavifemur* Esaki & Hashimoto, 1932 are designated. Redescriptions are provided based on rediscovered types. *Tetrodontochelys lucens* Olmi, 1984 (= *Gonatopus lucens*) is regarded as a junior synonym of *P. andoi*.

**Key Word:** parasitoid wasp; synonymy; type designation

## Introduction

In the 1930's, Dr. Teiso Esaki and Mr. Shiro Hashimoto described nine species of Dryinidae (Hymenoptera: Chrysidoidea) as natural enemies of rice planthoppers and leafhoppers (Esaki & Hashimoto, 1931, 1932, 1933, 1935). Their dryinid types recognized in the 1980's were studied and some name-bearing types were considered to be lost (Olmi, 1984). Because the original description by Esaki & Hashimoto is insufficient to identify the species, the taxonomic status of the species without type specimens has been uncertain (Olmi, 1984; Xu et al., 2013; Olmi & Xu, 2015; Mita & Olmi, 2013; Mita et al., 2017). Only one species from uncertain taxa, *Apterodryinus tambinia* Esaki & Hashimoto, 1935 (= *Gonatopus tambinia*), was confirmed after the world revision of Dryinidae (Olmi, 1984; Mita et al., 2017).

Recently, "types" of Dryinidae were found from old slid samples in the collection of Entomological Laboratory, Faculty of Agriculture, Kyushu University, Japan. After examination of specimens and label data, we confirmed that they should be part of the type series of Dryinidae described by Esaki & Hashimoto which have not been recognized by subsequent studies. In this paper, we compare information of the types based on the original description with existing type series to confirm name-bearing types. Also, we redescribe *Apterodryinus tambinia* Esaki & Hashimoto, 1935 (= *Gonatopus tambinia*), *Pachygonatopus andoi* Esaki & Hashimoto, 1935 and *Pseudogonatopus flavifemur* Esaki & Hashimoto, 1932 (= *Gonatopus flavifemur*) based on rediscovered name-bearing types.

## Materials and Methods

Specimens are all deposited in the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Japan. Morphological terms follow those of Olmi & Xu (2015). In the descriptions POL is the distance between the inner edges of the lateral ocelli; OL is the distance between the inner edges of a lateral ocellus and the median ocellus; OOL is the distance from the outer edge of a lateral

ocellus to the compound eye. The colors of slide-mounted specimens are relative; it may look different from the color of dry specimens.

In the specimens examined part, the type series section is the information of all type materials mentioned in the original description; the slide-mounted type section and the pinned type section are the materials examined in this study. The transcription of label data is surrounded by “ ”. Slash indicates a line break. Translation of the original writing (in Japanese) and authors' comments are added in “[ ]”. The information of the type series is retrieved from the original description. Specimens may have a label written as “holotype” or “paratype” even the type was not fixed in the original publication. In such a case, those types are considered as syntypes (ICZN Art. 73.1.3). In some nominal species, the presence of the holotype was implied (written in Japanese like as “タイプを含む材料” [materials including the type]) but no label information of the type was provided in the original publication. Only when the single specimen from type series is clearly marked or bearing the “holotype” or the “type” label provided by the authors, is it regarded the holotype fixed in the original publication. When two specimens are marked or bearing a “type” label, they are regarded as all syntypes.

## Taxonomic accounts

### *Agonatopus gracilis* Esaki & Hashimoto, 1932

*Agonatopus gracilis* Esaki & Hashimoto, 1932: 30. Holotype by monotypy.

*Type series.* Holotype ♀, Fukuoka Pref., Mt. Wakasugi-yama, 8-VIII-1931, T. Esaki leg.

*Slide-mounted type.* Not found.

*Pinned type.* Not found.

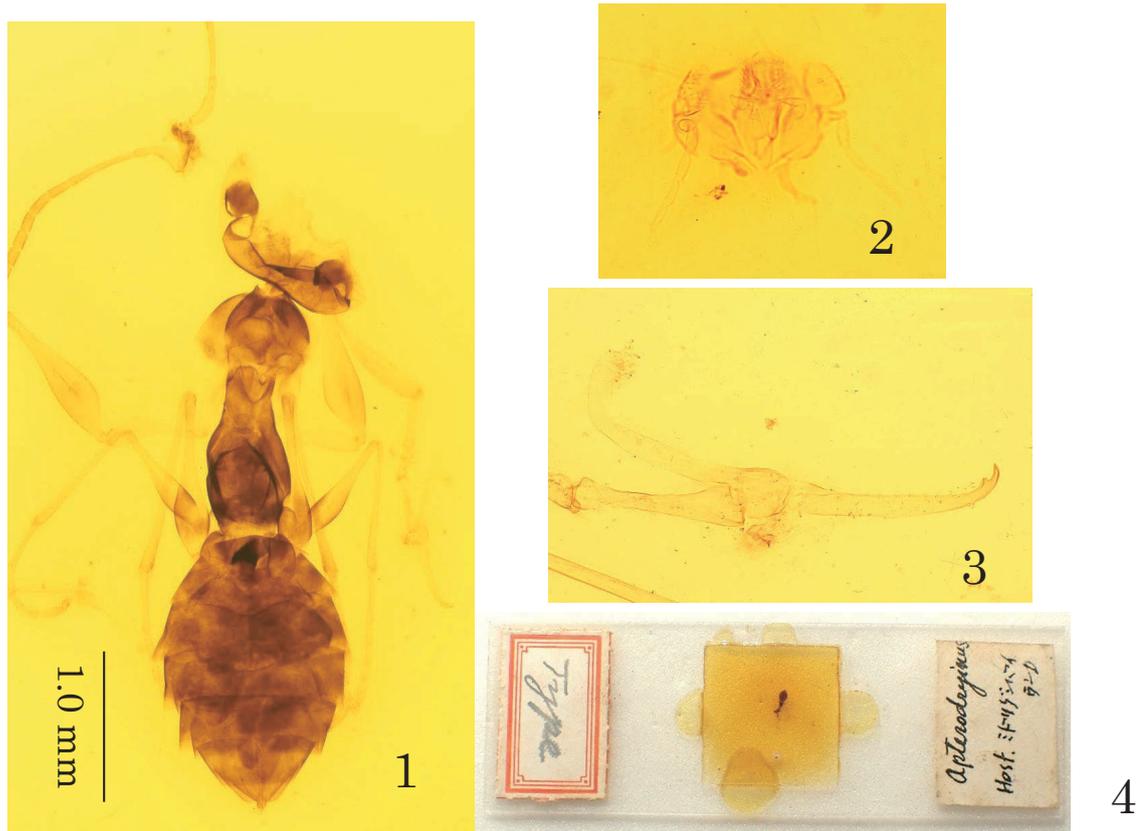
*Notes.* *Agonatopus gracilis* is a species incertae sedis (Olm, 1984; Olm & Xu, 2015). The holotype is considered to be lost (Olm, 1984).

### *Apterodryinus tambinia* Esaki & Hashimoto, 1935 (Figs. 1-4)

*Apterodryinus tambinia* Esaki & Hashimoto, 1935: 20. Syntype.

*Description of lectotype female.* Apterous; body length excluding head 3.2 mm. Head dark brown, but face and clypeus invisible, broken; mandible testaceous; antenna brown, except segments 1-2 testaceous; mesosoma and metasoma dark brown; legs apparently testaceous to brown-testaceous except club of femora brown. Antenna clavate; antennal segments in following proportions: 16:11:22:15:13:13:11:10:10:15. Head excavated, smooth. Frons and ocellar region apparently invisible, broken. Palpal formula 6/3 (Fig. 2). Pronotum smooth except anterior part of collar faintly granulated, crossed by strong transverse impression. Scutum sculptured by longitudinal keels, without lateral pointed apophyses. Metanotum smooth, weakly hollow behind scutellum, with sides protruding; lateral protrusions rounded. Metathorax + propodeum (Fig. 1) with anterior surface smooth; posterior surface transversely striate. Mesopleuron and metapleuron smooth. Meso- metapleural suture distinct and complete. Protarsal segments and enlarged claw in following proportions: 30:6:10:31:42:37. Enlarged claw (Fig. 3) with one large subdistal tooth and one row of 8 lamellae + one bristle. Segment 5 of protarsus with two rows of 12–14 lamellae; distal apex with approximately 15 lamellae. Tibial spurs 1/0/1.

*Type series.* Syntypes 2♀♀ “タイプ材料は2頭の♀” [type materials are 2 ♀]: 1♀ Kagoshima Pref., Amami-Oshima Isl., Naze, larvae on nymph of *Tambinia debilis* Stål collected 13-VII-1933, adult emerged 12-XI-1933, T. Esaki leg.; 1♀, same as above, but adult female dead in cocoon VI-1934.



Figs. 1-4. *Apterodryinus tambinae* Esaki & Hashimoto, 1935, lectotype female. 1, Habitus; 2, maxillary and labial palps; 3, chela; 4, slide.

*Slide-mounted type.* Lectotype designated herein ♀ (Fig. 4), “Type”, “*Apterodryinus*/ Host: ミドリグンバイウンカ [*Tambinia debilis* in Esaki & Hashimoto (1935)]”.

*Pinned type.* Not found.

*Other material related to type materials.* 1 empty cocoon, “cocoon of *Apterodryinus tambinae* Esaki et Hashimoto”.

*Note.* Now this species is known as *Gonatopus tambinae* (Esaki & Hashimoto) (Mita et al., 2017). *Gonatopus hagoromo* Terayama & Ohbayashi, 2003 is a junior synonym (Mita et al., 2017). Types have been considered to be lost (Olm, 1984; Mita & Olmi, 2013), however, the slide-mounted type is found. For more detail, see Xu et al. (2013); Mita et al. (2017).

#### ***Gonatopus tenuipes* Esaki & Hashimoto, 1931 (Figs. 5-8)**

*Gonatopus tenuipes* Esaki & Hashimoto, 1931: 27. Holotype by original designation.

*Type series.* Holotype ♀ and paratypes 2 ♀♀ “記載ハタイプヲ含ム3 ♀♀ニヨリ作製セル” [the description is based on 3 ♀♀ including the type]: holotype ♀, Fukuoka Pref., Fukuoka-shi, Hakozaki, collected from grass field, 1-X-1930, S. Hashimoto leg.; paratypes 2 ♀♀ same as above but collected 17-IX-1930.

*Slide-mounted type.* Paratype 1 ♀, “*Gonatopus* ♀/ ENTOMOLOGICAL LABORATORY KYUSHU IMPERIAL UNIVERSITY”, “PARATYPE/ *Gonatopus tenuipes* Esaki et Hashimoto”.

*Pinned type.* Holotype ♀ (Figs. 5-8), “[Kyūshū]/ Fukuoka/ 1. X. 1930/ S. Hashimoto”, “HOLOTYPE/ *Gonatopus tenuipes*/ Esaki et Hashimoto”, small slide glass on paperboard, “*Gonatopus schenklingi* Strand ♀/ M. OLM det. 81”. Paratype 1 ♀, same locality as above, but “17. X. '30” and bearing a paratype label.



Figs. 5-8. *Gonatopus tenuipes* Esaki & Hashimoto, 1931, holotype female. 5, Habitus; 6, labels; 7, maxillary and labial palps; 8, chela.

*Notes.* Now *Gonatopus tenuipes* Esaki & Hashimoto is known as a junior synonym of *Gonatopus schenklingi* Strand, 1913 (Oلمي, 1984). Because no male is included in the type series and only one female bearing the holotype label (Fig. 6), the female is apparently the holotype fixed by original designation. The holotype was examined and confirmed by Olmi (1984). For more detail, see Xu et al. (2013) and Olmi & Xu (2015).

***Echthrodelphax bicolor* Esaki & Hashimoto, 1931 (Figs. 9-12)**

*Echthrodelphax bicolor* Esaki & Hashimoto, 1931: 29. Syntype.

*Type series.* Syntypes 8♀♀10♂♂ “上記ノ記載ハ昨年度（1929）ニ於テ得タル福岡産ノモノ2♂♂, 3♀♀, 大分産ノモノ8♂♂, 5♀♀ヲ用キテ作りタルモノナリ” [Note: Apparently syntypes. No type information mentioned in the specimens examined area]: 3♀♀2♂♂, Fukuoka, cocoon collected 12-IX-1930, adults emerged 22-IX-1930; 5♀♀8♂♂, Oita.

*Slide-mounted types.* Paralectotypes 1♀, “Mouth part of *Echthrodelphax* ♀/ ENTOMOLOGICAL LABORATORY KYUSHU IMPERIAL UNIVERSITY”, “PARATYPE/ *Echthrodelphax bicolor* Esaki et Hashimoto”; 2♀♀, “*Echthrodelphax* ♀”, PARATYPE/ *Echthrodelphax bicolor* Esaki et Hashimoto”; 1♂, “*Echthrodelphax* ♂ ?/ ENTOMOLOGICAL LABORATORY KYUSHU IMPERIAL UNIVERSITY”, “PARATYPE/ *Echthrodelphax bicolor* Esaki et Hashimoto”.

*Pinned types.* Lectotype designated herein ♀ (Figs. 9-10), “[Kyūshū]/ Ôita/ vi-vii. 1929/ S. Shinkai”, “HOLOTYPE/ *Echthrodelphax bicolor*/ Esaki et Hashimoto”, “*Echthrodelphax fairchildii* Perkins ♀/ M. OLMi det. 81”. Paralectotype 1♂ (Figs. 11-12), same as above other than sex and the allotype label.

*Notes.* Now *Echthrodelphax bicolor* Esaki & Hashimoto is known as a junior synonym of *E. fairchildii* Perkins, 1903 (Oلمي, 1984). Because Esaki & Hashimoto (1931) did not designate the holotype, the type status should be syntype even there are the holotype (Fig. 9) and allotype (Fig. 11) labels. The “Holotype” female and the “Allotype” male were examined by Olmi (1984). The female bearing the “Holotype” label is designated as the lectotype herein. For other information, see Xu et al. (2013) and Olmi & Xu



Figs. 9-12. *Echthrodelphax bicolor* Esaki & Hashimoto, 1931. 9, Lectotype female, labels; 10, ditto, habitus; 11, paralectotype male, labels; 12, ditto, habitus.

(2015).

***Epigonatopus sakaii* Esaki & Hashimoto, 1933**

*Epigonatopus sakaii* Esaki & Hashimoto, 1933: 20. Syntype.

*Type series.* Syntypes 2 ♀♀ “タイプ材料は2♀♀にして” [Type materials are 2 females]: 1 ♀, Oita Pref., Oita Prefectural Agricultural Research Center, larva on *Nephotettix bipunctatus cincticeps* Uhler, adult wasp emerged 10. V. 1932, K. Ando leg.; 1 ♀, same as above, but cocoon 2. IX. 1932, adult wasp emerged 18. IX. 1932.

*Slide-mounted type.* Not found.

*Pinned type.* Not found.

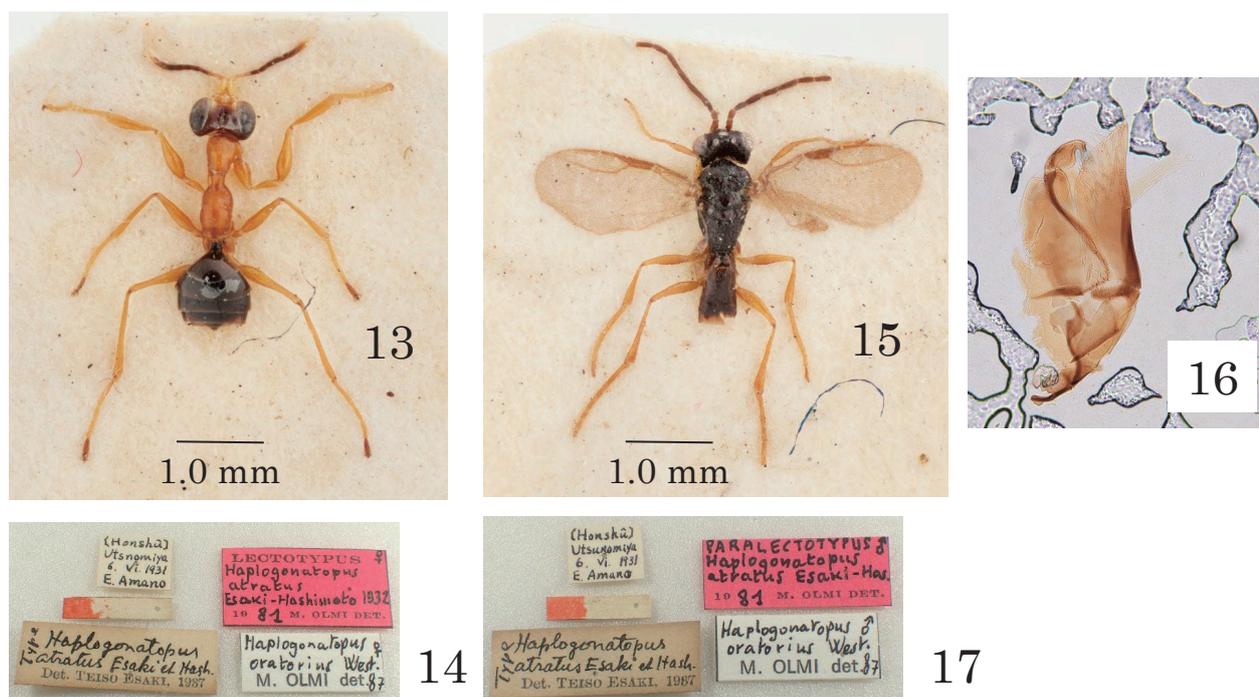
*Notes.* Now *Epigonatopus sakaii* Esaki & Hashimoto is known as a junior synonym of *Gonatopus pedestris* (Dalman, 1818) (Xu et al., 2013). The original types are considered to be lost. The neotype (♀: JAPAN: Kyushu, Fukuoka Pref., Chikujou-gun, Shiidacho) was designated by Olmi (1984) and the type is deposited in the American Museum of Natural History, New York, USA (Xu et al., 2013). For more detail, see Olmi (1984), Xu et al. (2013) and Olmi & Xu (2015).

***Haplogonatopus atratus* Esaki & Hashimoto, 1932 (Figs. 13-17)**

*Haplogonatopus atratus* Esaki & Hashimoto, 1932: 25. Syntype.

*Type series.* Syntypes 8 ♀♀5 ♂♂ “タイプを含む材料” [Materials including the type]: 4 ♀♀2 ♂♂, Utsunomiya, Tochigi Prefectural Agricultural Experiment Station, V-1931, E. Amano leg.; 1 ♂, same as above, but adult wasp emerged 21-V-1931; 1 ♀1 ♂, same as above, but 28-V-1931; 1 ♀, Fukuoka, cocoon 10-VI-1931, adult wasp emerged 26-VI-1931; 1 ♀1 ♂, same as above, but emerged 27-VI-1931; 1 ♀, Amakusa Isl., Tomioka, larva on *Laodelphax striatella* collected in rice paddy 16-VI-1931, adult wasp emerged 28-VI-1931, T. Esaki leg.

*Slide-mounted type.* No type found.



Figs. 13-17. *Haplogonatopus atratus* Esaki & Hashimoto, 1932. 13, Lectotype female, habitus; 14, ditto, labels; 15, paralectotype male, habitus; 16, ditto, dorsal process of paramere; 17, ditto, labels.

*Pinned types.* Lectotype ♀ (Fig. 13-14), “[Honshū]/ Utsunomiya/ 6. vi. 1931/ E. Amano”, blank label with red marking, “Type/ *Haplogonatopus atratus* Esaki et Hash./ Det. TEISO ESAKI, 1937”, “LECTOTYPUS ♀/ *Haplogonatopus atratus*/ Esaki – Hashimoto 1932/ 1981 M. OLMÍ DET.”, “*Haplogonatopus oratorius* West. ♀/ M. OLMÍ det. 87”.

Paralectotype 1 ♂ (Figs. 15-17), same data as above except for sex and bearing paralectotype label.

*Notes.* There are one female (Fig. 14) and one male (Fig. 17) with red marking in the type series examined. They should be the types mentioned in the original publication. However, no information is available on the designation of the holotype. Therefore, the type status should be syntype. Types (1 ♀ 1 ♂, Utsunomiya) were examined and the lectotype was designated by Olmi (1984). For more detail, see Xu et al. (2013) and Olmi & Xu (2015).

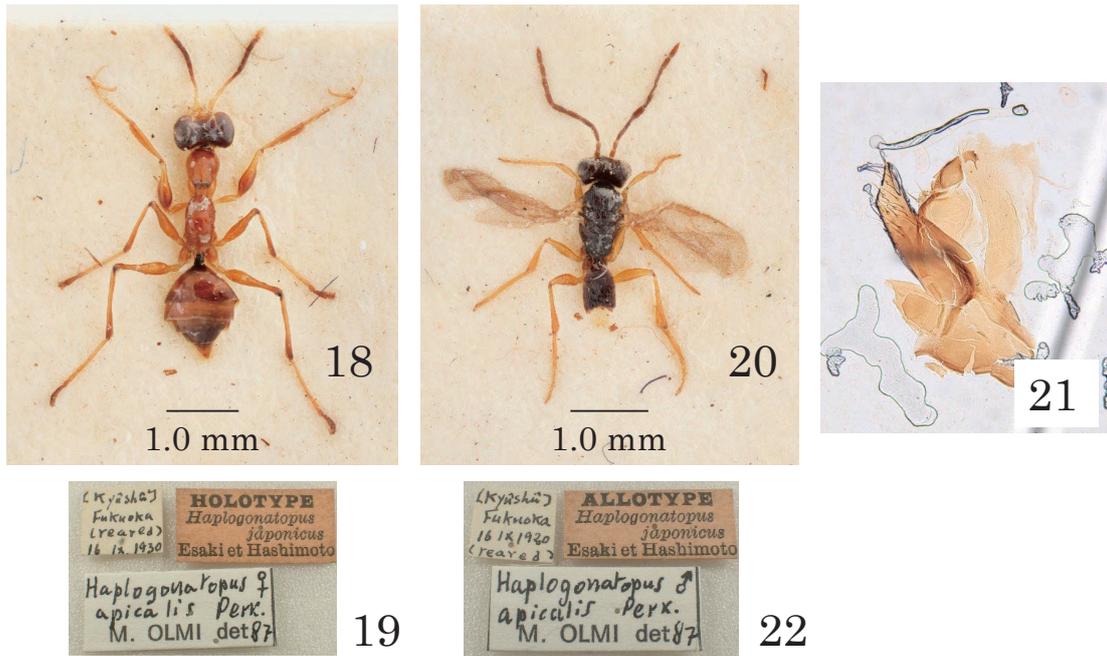
#### *Haplogonatopus japonicus* Esaki & Hashimoto, 1931 (Figs. 18-22)

*Haplogonatopus japonicus* Esaki & Hashimoto, 1931: 25. Holotype by original designation.

*Type series.* Holotype ♀ and paratypes 36 ♀ ♀ 31 ♂ ♂ “タイプを含む材料” [Materials including the type]: holotype ♀, Fukuoka Pref., nr. Fukuoka-shi, reared from cocoon, adult wasp emerged 16-IX-1930; paratypes 36 ♀ ♀ 31 ♂ ♂, same as above, but adult wasps emerged during 15-IX to 5-X-1930.

*Non-type specimens examined in the original description.* 4 ♀ ♀ 7 ♂ ♂, Fukuoka Pref., collected from the field or reared from host during 21 to 23-VII, 2–24-IX-1930; 2 ♀ ♀ 5 ♂ ♂, Oita Pref., collected from the field or reared from host during VI to VII-1930.

*Slide-mounted types.* Paratypes 7 ♀ ♀ 3 ♂ ♂: 1 ♂, “*Haplogonatopus* ♂/ ENTOMOLOGICAL LABORATORY KYUSHU IMPERIAL UNIVERSITY”, “PARATYPE/ *Haplogonatopus japonicus* Esaki et Hashimoto”; 1 ♂, “*Haplogonatopus*/ ??? [no readable letters] ♂/ ENTOMOLOGICAL LABORATORY KYUSHU IMPERIAL UNIVERSITY”, “PARATYPE/ *Haplogonatopus japonicus* Esaki et Hashimoto”; 1 ♂, “*Haplogonatopus*/ l.p. ♂/ ENTOMOLOGICAL LABORATORY KYUSHU IMPERIAL UNIVERSITY”, “PARATYPE/ *Haplogonatopus japonicus* Esaki et Hashimoto”; 1 ♀, “*Haplogonatopus*”, “PARATYPE/



Figs. 18-22. *Haplogonatopus japonicus* Esaki & Hashimoto, 1931. 18, Holotype female, habitus; 19, ditto, labels; 20, allotype male, habitus; 21, ditto, dorsal process of paramere; 22, ditto, labels.

*Haplogonatopus japonicus* Esaki et Hashimoto”; 1 ♀, “*Haplogonatopus japonicus*/ Esaki et Hashimoto/ IX. 1930 Fukuoka/ ENTOMOLOGICAL LABORATORY KYUSHU IMPERIAL UNIVERSITY”, “PARATYPE/ *Haplogonatopus japonicus* Esaki et Hashimoto”; 1 ♀, (handwriting on the slide) “*Haplogonatopus*/ セシロ [Sogatella furcifera]”, “PARATYPE/ *Haplogonatopus japonicus* Esaki et Hashimoto”; 1 ♀, “*Haplogonatopus* ♀”, “PARATYPE/ *Haplogonatopus japonicus* Esaki et Hashimoto”; 1 ♀, “*Haplogonatopus japonicus* ♀/ ENTOMOLOGICAL LABORATORY KYUSHU IMPERIAL UNIVERSITY”, “PARATYPE/ *Haplogonatopus japonicus* Esaki et Hashimoto”; 1 ♀, “*Haplogonatopus* ♀/ Host: セシロ [Sogatella furcifera]”, “PARATYPE/ *Haplogonatopus japonicus* Esaki et Hashimoto”; 1 ♀, “*Haplogonatopus* ♀/ ENTOMOLOGICAL LABORATORY KYUSHU IMPERIAL UNIVERSITY”, “PARATYPE/ *Haplogonatopus japonicus* Esaki et Hashimoto”.

*Pinned types.* Holotype ♀ (Figs. 18-19), “[Kyūshū]/ Fukuoka/ (reared)/ 16. IX. 1930”, “HOLOTYPE/ *Haplogonatopus japonicus*/ Esaki et Hashimoto”, “*Haplogonatopus apicalis* (Perk.) ♀/ M. OLMÍ det. 87”. Paratypes 4 ♀♀2 ♂♂: 1 ♂ (Figs. 20-22), “[Kyūshū]/ Fukuoka/ 16 IX 1930/ (reared)”, “ALLOTYPE/ *Haplogonatopus japonicus*/ Esaki et Hashimoto”, 2 small slide glasses on paperboards, “*Haplogonatopus apicalis* Perk. ♀/ M. OLMÍ det. 87”; 1 ♂ “[Kyūshū]/ Fukuoka/ (reared)/ 12. IX. 1930”, “PARATYPE/ *Haplogonatopus japonicus*/ Esaki et Hashimoto”; 2 ♀♀, “[Kyūshū]/ Fukuoka/ (reared)/ 15. IX. 1930”, “PARATYPE/ *Haplogonatopus japonicus*/ Esaki et Hashimoto”, cocoon on grass; 2 ♀♀, “[Kyūshū]/ Fukuoka/ (reared)/ 16. IX. 1930”, “PARATYPE/ *Haplogonatopus japonicus*/ Esaki et Hashimoto”.

*Notes.* Now *Haplogonatopus japonicus* Esaki & Hashimoto is known as a junior synonym of *H. apicalis* Perkins 1905 (Olmí, 1984). The holotype female and paratypes 3 ♀♀1 ♂ were examined by Olmí (1984). For more detail, see Xu et al. (2013) and Olmí & Xu (2015).

***Pachygonatopus andoi* Esaki & Hashimoto, 1935 (Figs. 23-25)**

*Pachygonatopus andoi* Esaki & Hashimoto, 1935. Syntype.

*Description of lectotype female.* Apterous; length 2.7 mm. Body light brown, with basal half of antennae and legs paler, petiole



Figs. 23-25. *Pachygonatopus andoi* Esaki & Hashimoto, 1935, lectotype female. 23, Habitus; 24, mouth parts and chela; 25, slide.

black. Antenna clavate; antennal segments in following proportions: 12:11:14:8:8:9:7:7:11. Head excavated, smooth; occipital carina only shortly present on sides of posterior ocelli; POL = 5; OL = 3; OOL = 14. Palpal formula 3/2 (Fig. 24). Pronotum smooth, not crossed by transverse impression. Scutum sculptured by some longitudinal keels, without lateral pointed apophyses. Metanotum not hollow behind scutellum, smooth, with sides rounded. Metathorax + propodeum (Fig. 23) with anterior surface smooth, posterior surface transversely striate. Mesopleuron and metapleuron not transversely striate. Meso-metapleural suture invisible from the slide. Protarsal segments and enlarged claw in following proportions: 19:4:6:19:31:28. Enlarged claw (Fig. 24) with one small subapical tooth and five peg-like hairs. Segment 5 of protarsus with short inner proximal serrate margin, with one row of 14 or 15 lamellae and one basal lamella; distal apex with approximately eight lamellae. Tibial spurs 1/0/1.

*Type series.* Syntypes 2♀♀ “本種は昭和9年9月30日及び10年1月22日に、大分縣農事試験場安藤信弘氏がイナヅマヨコバヒ幼蟲に寄生せるものを飼育して成蟲を得られたるものにして” [This species is based on adult wasps obtained by rearing larvae on nymphs of *Deltocephalus dorsalis* Motschulsky collected at 30 September 1934 and 22 January 1935 by Mr. Nobuhiro Ando, Oita Prefectural Agricultural Research Center]: 1♀, Oita Pref., Oita Prefectural Agricultural Research Center, larva on nymph of *Deltocephalus dorsalis* Motschulsky collected 30-IX-1934, N. Ando leg; 1♀, same as above, but larva collected 22-I-1935.

*Slide-mounted type.* Lectotype designated herein ♀ (Fig. 25), “Type”, “*Pseudogonatopus* sp./ Host: イナヅマ [*Deltocephalus dorsalis* in Esaki & Hashimoto (1935)]/ Oita”.

*Pinned type.* Not found.

*Notes.* *Pachygonatopus andoi* has been listed as a species incertae sedis (Olm, 1984; Olmi & Xu, 2015). Although types have been considered to be lost (Olm, 1984), the slide-mounted type was found and designated as the lectotype herein. The lectotype was reared from *Maiestas dorsalis* (Motschulsky). Based on the morphology of the lectotype of *P. andoi*, *Tetrodontochelys lucens* Olmi, 1984 (= *Gonatopus lucens* (Olm)) is considered as a junior synonym of *P. andoi* (**new synonymy**). This species is included in the member of *Gonatopus* group 6 (Xu et al., 2013) (= *Gonatopus andoi* (Esaki & Hashimoto), **new combination**). For more detail on *Gonatopus lucens*, see Xu et al. (2013) and Olmi & Xu (2015).

*Pseudogonatopus flavifemur* Esaki & Hashimoto, 1932 (Figs. 26–29)

*Pseudogonatopus flavifemur* Esaki & Hashimoto, 1932: 28. Syntype.

*Description of lectotype female.* Apterous; length 4.2 mm. Head dark brown, except mandible, clypeus and face whitish; antenna pale brown, except segment 1 and distal apex of segment 10 testaceous; mesosoma and metasoma blackish; legs apparently brown-testaceous to brown, except coxae, trochanters, clubs of mid- and hindfemora and tarsi testaceous. Antenna clavate; antennal segments in following proportions: 18:11:27:17:14:14:13:12:11:19. Head excavated, granulated, longitudinally costate in front of anterior ocellus; frontal line incomplete, absent in anterior half of face; occipital carina absent; POL = 5; OL = 4; OOL = 19. Maxillary palp with 4 segments (Fig. 27); labial palp missing. Pronotum weakly granulated, crossed by shallow transverse impression. Scutum with longitudinal rugae. Scutellum smooth. Metanotum transversely striate, not hollow behind scutellum, apparently about as long as scutellum, with sides rounded. Metathorax + propodeum (Fig. 26) dull, granulated, transversely striate entirely. Mesopleuron and metapleuron transversely striate. Meso-metapleural suture absent. Protarsal segments and enlarged claw in following proportions: 33:6:7:28:39:35. Enlarged claw (Fig. 28) with one large subdistal tooth and one row of six lamellae. Segment 5 of protarsus with two rows of 16 lamellae; distal apex with approximately 10 lamellae. Tibial spurs 1/0/1.

*Type series.* Syntypes 2 ♀♀ “タイプ材料は2♀♀にして” [Type materials are 2 females]: 1 ♀, Fukuoka Pref., Kasuya-gun, Hakozaki-cho, cocoon collected 12-IX-1929, adult emerged 13-IX-1929; 1 ♀, same as above, but 18-VIII-1931.

*Slide-mounted type.* Lectotype designated herein ♀ (Fig. 29), “Type”, “*Pseudogonatopus*/ 1930”.

*Pinned types.* Not found.

*Notes.* Now this species is known as *Gonatopus flavifemur* (Esaki & Hashimoto) (Olm, 1993; He & Xu, 2002). The type of *Pseudogonatopus flavifemur* has been considered to be lost (Olm, 1984). At first *G. flavifemur* was recorded as *Pseudogonatopus* sp. (Esaki & Hashimoto, 1930) as in the label of the lectotype.



Figs. 26–29. *Pseudogonatopus flavifemur* Esaki & Hashimoto, 1932, lectotype female. 26, Habitus; 27, maxillary palps; 28, chela; 29, slide.

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## References

- Esaki, T. and Hashimoto, S., 1930. Report on the leaf-hoppers injurious to the rice plant and their natural enemies. No 1. *Publication No. 1, Entomological Laboratory, Department of Agriculture, Kyushu Imperial University*, 1-30.
- Esaki, T. and Hashimoto, S., 1931. Report on the leaf-hoppers injurious to the rice plant and their natural enemies. No 2. *Publication No. 2, Entomological Laboratory, Department of Agriculture, Kyushu Imperial University*, 1-59.
- Esaki, T. and Hashimoto, S., 1932. Report on the leaf-hoppers injurious to the rice plant and their natural enemies. No 3. *Publication No. 3, Entomological Laboratory, Department of Agriculture, Kyushu Imperial University*, 1-42.
- Esaki, T. and Hashimoto, S., 1933. Report on the leaf-hoppers injurious to the rice plant and their natural enemies. No 4. *Publication No. 4, Entomological Laboratory, Department of Agriculture, Kyushu Imperial University*, 1-32.
- Esaki, T. and Hashimoto, S., 1935. Report on the leaf-hoppers injurious to the rice plant and their natural enemies. No 6. *Publication No. 6, Entomological Laboratory, Department of Agriculture, Kyushu Imperial University*, 1-41.
- He, J.H. and Xu, Z.F., 2002. *Fauna Sinica, Insecta vol. 29 Hymenoptera: Dryinidae*. 464 pp. Science Press, Beijing, China.
- Olmi, M., 1984. A revision of the Dryinidae (Hymenoptera). *Memoirs of the American Entomological Institute*, (37): I-XII +1-1913.
- Olmi, M., 1993. A new generic classification for Thaumatomyzinae, Dryininae and Gonatopodinae, with descriptions of new species (Hymenoptera, Dryinidae). *Bollettino di Zoologia agraria e di Bachicoltura, Ser. II*, **25**: 57-89.
- Olmi, M. and Xu, Z.F., 2015. Dryinidae of the Eastern Palaearctic region (Hymenoptera: Chrysidoidea). *Zootaxa*, **3996**: 1-253.
- Mita, T. and Olmi, M., 2013. Taxonomic study of the genus *Gonatopus* Ljungh (Hymenoptera, Dryinidae, Gonatopodinae) of Japan, with description of the male of *G. yasumatsui* Olmi. *Japanese Journal of Systematic Entomology*, **19**: 65-76.
- Mita, T., Nagano, H. and Olmi, M., 2017. Dryinidae and Embolemyzidae (Hymenoptera, Chrysidoidea) from Anijima, Ogasawara Islands, Japan. *Zootaxa*, **4323**: 239-249.
- Terayama, M. and Ohbayashi, T., 2003. Description of a new species of dryinid wasp (Hymenoptera, Dryinidae) from the Ogasawara Islands, Japan. *Japanese Journal of Systematic Entomology*, **9**: 237-239.
- Xu, Z.F., Olmi, M. and He, J.H., 2013. Dryinidae of the Oriental region (Hymenoptera: Chrysidoidea). *Zootaxa*, **3614**: 1-460.

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## 江崎悌三と橋本土郎によって記載されたカマバチ科タイプ (ハチ目：セイボウ上科)

三田 敏治・大原 直通・屋宜 禎央

九州大学大学院農学研究院：福岡県福岡市西区元岡744

**要旨：**近年見つかったプレパラート標本を含め、江崎悌三と橋本土郎によって記載されたカマバチ科のタイプ標本の検討を行った。*Apterodryinus tambinia* Esaki & Hashimoto, 1935, *Echthrodelphax bicolor* Esaki & Hashimoto, 1931, *Pachygonatopus andoi* Esaki & Hashimoto, 1935, *Pseudogonatopus flavifemur* Esaki & Hashimoto, 1932 のレクトタイプを指定した。再発見されたタイプに基づき再記載を行った。また、*Tetrodontochelys lucens* (= *Gonatopus lucens*) を *P. andoi* の新参異名とみなした。