NOTES ON XIPHYDRIIDAE OF JAPAN

(Hymenoptera, Symphyta)

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In 1912 and 1927 Professor S. MATSUMURA described seven species belonging to the family Xiphydriidae. Then, these species have been revised by A. SEMENOV-TIAN-SHANSKIJ et V. V. GUSSAKOVSKIJ (1935), V. V. GUSSAKOVSKIJ (1935), and K. TAKEUCHI (1936 & 1938) without examining the MATSUMURA's type specimens, and yet there exist some problems to be inquired closely. Recently, as I have had the opportunity to examine these types and other specimens, I will give notes on these species herein after.

On this occasion I wish to express my sincere thanks to Dr. K. TAKEUCHI for his kind advice.

MATSUMURA'S TYPE SPECIMENS

The type specimens of the Xiphydriid species described by MATSUMURA are deposited in the collection of the Entomological Institute, Hokkaido University. In each case, however, where the species was described from two or more specimens, the one bearing a determination label in MATSUMURA's own handwriting is accepted as lectotype or allolectotype, and the others without determination labels are regarded as paralectotypes.

1. *Xiphydria ruficeps* MATSUMURA

Thous Ins. Jap., Suppl. 4 : 210, ♀, 1912.

Holotype: 1♀ (Sapporo, 21, VI, 1910, MATSUMURA leg.) labelled "*X. ruficeps* n. sp."

2. *Xiphydria kawakamii* MATSUMURA

Ins. Mats., 1 : 203, ♀ ♂, 1927.

Lectotype: 1♀ labelled "*X. kawakamii* n. sp." (Oshamambe, no date, JÛRO KAWAKAMI leg.).

Allolectotype: 1♂ without a determination label (Sapporo, 15, VI, ?).

Paralectotypes: 1♀ & 3♂♂ (Sapporo, 10, VI, ?), 1♂ (Sapporo, 5, VI, ?), 1♂ (Sapporo, 15, VI, ?) and 2♀♀ & 1♂ (Kuccharo, Kushiro, 14, VIII, 1917).

3. *Xiphydria kuccharonis* MATSUMURA

Ins. Mats., 1 : 204, ♀, 1927.

Lectotype: 1♀ labelled "*X. kuccharonis* n. sp." (Kuccharo, Kushiro, 14, VIII, 1917).

Paralectotypes: 3♀♀ (Kuccharo, Kushiro, 14, VIII, 1917).

4. *Xiphydria jozana* MATSUMURA

Ins. Mats., 1 : 204, ♂, 1927.

Holotype: 1♂ labelled "*X. jozana* n. sp." (Jôzankei, 16, VII, 1926, MATSUMURA leg.).

5. *Xiphydria jezoensis* MATSUMURA

Ins. Mats., 1 : 205, ♀, 1927.

Lectotype: 1♀ labelled "*X. jezoensis* n. sp." (Sapporo, 15, VI, ?).

Paralectotypes: 1♀ (Sapporo, 10, VI, ?), 1♀ (Sapporo, 12, VI, ?), 6♀♀ (Sapporo, 15, VI, ?) and 7♀♀ (Moiwa, 11, VI, 1904).

6. *Xiphydria ogasawarai* MATSUMURA

Ins. Mats., 1 : 205, ♀, 1927.

Holotype: 1♀ labelled "*X. ogasawarai* n. sp." (Iwate, 16, VI, 1911, OGASAWARA leg.).

In the original description MATSUMURA stated the body-length of the male and gave Hokkaido as a locality of this species, but this species was, in reality, described from only one female taken from Iwate, Honshu.

7. *Xiphydria alnivora* MATSUMURA

Ins. Mats., 1 : 206, ♀♂, 1927.

Lectotype: 1♀ labelled "*X. alnivora* n. sp." (Sapporo, 15, VI, ?).

Allolectotype: 1♂ labelled "*X. alnivora* n. sp." (Sapporo, 12, VI, ?).

SYNONYMY AND OTHER NOTES

Euxiphydria potanini (JAKOVLEV, 1892)

Xiphydria potanini JAKOVLEV, 1892, ♀.

This species was originally described by JAKOVLEV (1892) from only one female[1] taken from Kan-su, China, and after no other specimen has been recorded from any locality. In this paper, however, I will give Hokkaido as a locality of this species on the basis of the specimen (1♀, Sapporo, 3, VII, 1933, C. WATANABE leg.) which agrees closely with the redescriptions of *potanini* stated by SEMENOV. et GUSSAKOVSKIJ (1935) and GUSSAKOVSKIJ (1935).

Distribution: China (Kan-su) and Japan (Hokkaido).

Euxiphydria ruficeps (MOCSARY, 1909)

Xiphydria ruficeps MOCSARY, 1909, ♀.

Xihpydria ruficeps MATSUMURA, 1912, ♀ (nec MOCSARY, 1909).

Xiphydria akazui MATSUMURA, 1932, ♀.

Xiphydria maidli ZIRNGIEBL, 1937, ♀.

1) According to SEMENOV. et GUSSAKOVSKIJ (1935) this specimen is located in the collection of the "Institut Zoologique de l'Académie des Sciences de l'URSS", Leningrad.

In 1921 SEMENOV. sank this species into a synonym of *Xiphydria potanini*, and TAKEUCHI (1936 & 1937, a, b) followed him. On the other hand SEMENOV. et GUSSAKOVSKIJ (1935) elected the genus *Euxiphydria* for reception of *X. potanini* and *X. ruficeps*. In this paper I will follow the second definition offered by GUSSAKOVSKIJ (1935) and TAKEUCHI (1938), but it needs undoubtedly further revisions in regard to the taxonomy of these species as well as that of this genus as TAKEUCHI (1938) pointed out. It should be noted that among all specimens examined (11 ♀♀) belonging to this species, the antennae of five ones are 15-jointed, those of the other five 14-jointed and those of the last one 13-jointed.

Distribution: Japan (Hokkaido, Honshu and Shikoku), Saghalien, Manchuria and East Siberia.

Xiphydria camelus (LINNÉ, 1758)

Ichneumon camelus LINNÉ, 1758, ♀.
Xiphydria eborata KONOW, 1899, ♀.
Xiphydria kawakamii MATSUMURA, 1927, ♀ ♂.
Xiphydria kuccharonis MATSUMURA, 1927, ♀.
Xiphydria jozana MATSUMURA, 1927, ♂.

Having examined the types of *kawakamii*, *kuccharonis* and *jozana* and many other specimens taken from Japan, Saghalien, the Kuriles and Poland, I have arrived at the conclusion that the above listed synonymy, which has been already stated by TAKEUCHI (1937), should be admitted: because I could find no specific difference among these species. Furthermore, this species may be divided into two types: one is the reddish brown type in which the legs except the coxae are entirely reddish brown and the clypeus is wholly black without a median yellow spot, and into which *camelus* (s. str.) falls, while the other is the black type in which the legs are black, with the tibiae and tarsi being brown and the clypeus is black with a median yellow spot, and to which *eborata*, *kawakamii*, *kuccharonis* and *jozana* belong. In the series of the specimens examined (35 ♀♀ & 20 ♂♂) only two specimens (1 ♀, Sapporo, 11, VII, 1948, C. WATANABE leg., and 1 ♀, Poland, VI, 1935, T. UCHIDA leg.) fall into the reddish brown type.

Distribution: Japan (Hokkaido, Honshu and Shikoku), Saghalien, the Kuriles, Siberia and Europe.

Xiphydria palaeanarctica SEMENOV., 1921

Xiphydria jezoensis MATSUMURA, 1927, ♀.
Xiphydria ogasawarai MATSUMURA, 1927, ♀ (syn. nov.).
Xiphydria alnivora MATSUMURA, 1927, ♀ ♂ (syn. nov.).

X. jezoensis has been already sunken as a synonym of *X. palaeanarctica* by SEMENOV. et GUSSAKOVSKIJ (1935). Moreover, having examined many specimens including the types of *jezoensis*, *ogasawarai* and *alnivora*, I have arrived at the conclusion that all these species should be combined into a single species: because there is, I believe, no specific difference among them. The newly combined species may be divided into two types by the colouration of leg as in the case of *X. camelus*: one is the reddish brown type in which the legs are reddish brown,

and to which *palaeanarctica* (s. str.) and *jezoensis* belong, while the other is the black type in which the legs are dark brown or black, with the tibiae and tarsi being reddish brown, and into which *ogasawarai* and *alnivora* fall. Furthermore, the specimens (37 ♀ ♀ & 9 ♂ ♂) collected by Y. SUGIHARA from half-dead maple-trees (*Acer mono*) at Sapporo during June and July in 1938 all belong to the black type. These males are very small, being 8–13 mm. in length and their antennae are entirely dark brown lacking white markings and are 13–15 jointed.

Distribution: Japan (Hokkaido and Honshu), Korea and East Siberia.

Xiphydria annulitibia TAKEUCHI, 1936

This species has been recorded from Saghalien and Japan (Honshu). In this paper I will give Hokkaido for the first time as a locality of this species on the basis of two specimens (1 ♀, Apoi, Hidaka, 2–4, VII, 1933, C. WATANABE leg., and 1 ♀, Jôzankei, 19, VII, 1946, S. F. SAKAGAMI leg.).

Distribution: Japan (Honshu and Hokkaido) and Saghalien.

KEY TO THE JAPANESE SPECIES OF *XIPHYDRIA*

In so far as I am aware, there are four species of *Xiphydria* occurring in Japan, which may be immediately distinguishable by the following key:—

♀ ♀

1. Antennae partly pale yellow or white; 2nd joint of antennae as long as or longer than 4th. 2
- Antennae entirely dark brown or black; 2nd joint of antennae apparently shorter than 4th. 3
2. Legs entirely yellow; 2nd abdominal segment with a yellow band; scutellum and metascutellum yellow. . . . . *X. buyssoni* KONOW, 1903.
- Legs reddish brown or black; 2nd abdominal segment black, without a yellow band; scutellum and metascutellum black. . . . . *X. palaeanarctica* SEMENOV., 1921.
3. Head without yellow markings; legs black; tibiae with a white ring at base. . . . . *X. annulitibia* TAKEUCHI, 1936.
- Head with yellow markings; legs reddish brown or black; tibiae without a white ring at base. . . . . *X. camelus* (LINNÉ, 1758).

♂ ♂

1. Second joint of antennae as long as or longer than 4th. . . . . *X. palaeanarctica* SEMENOV., 1921.
- Second joint of antennae apparently shorter than 4th. . . . . *X. camelus* (LINNÉ, 1758).

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