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IBALINAE OF NIPPON (HYM., CYNIPIDAE)

By

KEIZŌ YASUMATSU

Through the courtesy of Dr. CHIHISA WATANABE I was able to examine the material of the Subfamily Ibalinae ( Förster, 1869) of Japan and Sakhalien in the collection of the Entomological Institute of the Hokkaidō Imperial University. The collection contained three species of which one is new to the fauna of Sakhalien. On the other hand, while working at the Hikosan Biological Laboratory of the Kyūshū Imperial University, I have found in several occasions the occurrence of an Ibalia which may be regarded as new to science.

In the present paper, I give a list of the species of the Genus Ibalia (Latreille, 1802) of Nippon, a key to the species, and descriptions of the new species and of the male of Ibalia japonica Matsumura as well as some comparisons among the species.

I express hereby my sincere gratitude to Dr. CHIHISA WATANABE of the Hokkaidō Imperial University for the loan of the specimens, to Professor TÉISO ESÁKI of the Kyūshū Imperial University for his kindness rendered in the course of the present study and to Mr. HARUO FURUKAWA of the Tōkyō Imperial University for his assistance in obtaining the literature.

I. LIST OF THE SPECIES

1. Ibalia japonica Matsumura

   Thous. Ins. Japan, Suppl., iv, p. 161, 9, pl. 52, fig. 9, 1912.

   Habitat: Hokkaidō and Honshū.

   Specimens examined: 1 ♀, 13. vi. 1911, Mt. Moiwa near Sapporo, Hokkaidō, S. MATSUMURA leg.; 1 ♀, 5 ♂♀, 20. vi. 1912, Mt. Moiwa, S. MATSUMURA leg.; 1 ♀, Tōkyō, Honshū, S. HIRAYAMA leg., all of which are preserved in the collection of the Hokkaidō Imperial University. These are the type series of the species.

2. Ibalia takachihoi YASUMATSU (sp. nov.)

   Habitat: Kyūshū.

   Specimens examined: 1 ♀, 1. v. 1937, Mt. Hikosan, Buzen, Kyūshū, K. [Ins. Mats., Vol. XII, No. 1, November, 1937]
INSECTA MATSUMURANA

YASUMATSU leg.; 1♂, 6. v. 1937; 1♀, 19. v. 1937; 1♂, 20. v. 1937, the same locality.

3. Ibalia picea MATSUMURA

Thous. Ins. Japan, Suppl., iv, p. 163, 9, pl. 52, fig. 11, 1912.

Habitat: Saghalien.

Specimens examined: 1♀, 9, viii, Maoka, Saghalien, K. OGUMA leg.; 1♀, Saghalien, S. MATSUMURA leg. (MATSUMURA'S type); 1♀, 25-27. vii. 1934, Tarandomari, Saghalien, C. WATANABE et T. INOUE leg., all of which are preserved in the collection of the Hokkaido Imperial University.

4. Ibalia drewseni BORRIES

Ent. Meddl., iii, p. 57, 9, 1891.

Habitat: Europe (Denmark, South Europe) and Saghalien.

Specimens examined: 1♀, 1. vii. 1932, Kashiho, Saghalien, H. KÔNO leg., preserved in the collection of the Hokkaido Imperial University; 1♀, 13. v. 1926, Budapest, Hungary, Europe, T. ESAKI leg., preserved in the collection of the Kyûshû Imperial University.

This species is new to the fauna of Nippon (Saghalien).

II. KEY TO THE SPECIES

1. Temples, inner orbits of eyes, the sides of pronotum, scutellum (except a median, longitudinal, black line) as well as abdominal bands yellow or pale orange-yellow (Length of body: ♀ ca. 16 mm., ♂ ca. 18 mm.)

   - Head and thorax almost entirely black, abdomen black or for the most part black

   Ibalia japonica MATSUMURA

2. Body almost entirely black. Apical spur or tubercles of second tarsal segment of hind legs extending slightly beyond the apex of third segment (Length of body: ca. 12 mm.)

   - Antennae (except the base and apex), tegulae, apex of femora of all legs, fore and mid-tibiae, tarsi of all legs as well as some oblique markings on the sides of abdomen somewhat orange-yellow. Outer margin of wings prominently darkened. Third antennal segment about twice as long as malar space. Apical spur of second tarsal segment of hind legs very long, extending to the middle portion of fourth segment (Length of body: ♀ ca. 15 mm., ♂ ca. 16 mm.)

   Ibalia takachihoi YASUMATSU

3. Body entirely black. Malar space as long as third antennal segment...

Ibalia picea MATSUMURA
Fore and mid-legs (except coxae), hind femora and the base of abdomen red. The sides of fifth and sixth abdominal tergites as well as entire sternites amber-coloured. Malar space slightly shorter than third antennal segment

**III. DESCRIPTION OF **IBALIA TAKACHIHOI

*Ibalia takachihoi* sp. nov.

§. Black, with the following portions orange-yellow or pale brownish-yellow: apical one-third of the third antennal segment, fourth to tenth antennal segments, apex of fore and mid-femora, anterior margin of mid-femora, fore and mid-tibiae, base of hind tibiae, and tarsi of all legs. Eleventh to fourteenth antennal segments brownish or brownish-black, basal two-thirds of third antennal segment brownish-black. Apical spurs of hind tibiae black. Base of mid- and hind femora pale yellowish. Tegulae ferruginous-black. Wings transparent, tinted with pale yellowish-orange colour, with nervures brownish-black except the basal paler portion. Wings with the outer margin somewhat darkened or tinted with pale black, fore wings also with a dark marking at the central portion.

Head, seen in front, very much wider than long and vertex almost straight. Inner margins of eyes distinctly diverging upwardly. Front almost flat or very slightly excavated between the insertions of antennae and fore ocellus. Head slightly wider than thorax. Head, seen in profile, with eyes narrower than temples which are very much developed, swollen out in postero-lateral directions and narrowed upwardly. Malar space wider than long. Third antennal segment about twice as long as malar space. Head, seen from above, transverse, with posterior margin very much incised. Postocellar line distinctly shorter than oculo-ocellar line. Ocelli put in a flattened triangle. Distance between anterior and posterior ocelli strikingly shorter than the distance between posterior ocelli and posterior margin of vertex. Relative length of the segments of antenna — I : II : III : IV : V : VI : VII : VIII : IX : X : XI : XII : XIII : XIV = 18 : 5 : 20 : 17 : 16 : 15.5 : 15 : 14 : 12 : 11 : 10 : 9 : 7 : 9. Basal segment stout, broadened apically, second about as wide as long, a quarter the length of the third, about four times as long as broad at the apex and with a distinct excavation on the outer side near the apex. Fore wing: basal nervure receiving discoidal nervure at the middle. Pronotum basally elevated. Scutellum about as wide as long, somewhat parallel-sided, with postero-lateral protuberances. Metapleura without any triangular tubercles. Propodeum with three, distinct, longitudinal carinae. Abdomen strikingly compressed laterally.
INSECTA MATSUMURANA

Measurements

Length: Head + thorax ca. 7.5 mm. Antenna ca. 8.0 mm. Abdomen ca. 9.0 mm. Fore wing 12.0 mm. Hind wing 8.0 mm. Hind femur 3.0 mm. Hind tibia 6.1 mm. Hind basitarsus 3.5 mm.

Width: Head ca. 3.3 mm. Thorax ca. 3.1 mm.

♀. Very similar to the male. Abdominal sternites as well as markings on the sides of fourth, fifth and sixth tergites pale orange-yellow and somewhat transparent. Third antennal segment normal.

Measurements

Length: Head + thorax ca. 6.6 mm. Antenna ca. 7.6 mm. Abdomen ca. 9.0 mm. Fore wing 11.4 mm. Hind wing 7.0 mm. Hind femur 3.0 mm. Hind tibia 6.1 mm. Hind basitarsus 3.5 mm. Ovipositor ca. 12.0 mm.

Habitat: Kyūshū (Mt. Hikosan).

Host: Larva of Tremex longicolis Konow.

Holotype: 1 ♂, 1 v. 1937, Mt. Hikosan, Buzen, Kyūshū, K. Yasumatsu leg., on the trunk of Celtis japonica at 650 m. in altitude.

Allotype: 1 ♀, 20. v. 1937, the same as above.

Paratypes: 1 ♂, 6. v. 1937; 1 ♂, 19. v. 1937, the same as above.

Holotype- and allotypes are preserved in the Entomological Laboratory of the Kyūshū Imperial University, Fukuoka. Paratypes are preserved in the Hikosan Biological Laboratory of the same University, Hikosan.

The specific name of this beautiful Cynipid is respectfully dedicated to Baron Nobumaro Takachiho of the Hikosan Biological Laboratory.

Ibalia takachihoi Yasumatsu may be distinguished from Ibalia picea, I. japonica and I. dreussenii by the following morphological characters:

1. In takachihoi, japonica and picea the vertex between the ocelli and the inner orbits is slightly depressed and distinctly obliquely striated (in takachihoi the sculpture is very irregular, while in japonica it is very distinctly and regularly pronounced). In dreussenii the vertex is almost flat, minutely punctured and very shining.

2. In takachihoi the inner margins of the eyes are distinctly converging below. In japonica and dreussenii they are very slightly converging below, and in picea they are almost parallel to each other.

3. In takachihoi and japonica the malar space is broader than long and about half as long as the third antennal segment. In dreussenii the malar space is longer than broad and slightly shorter than the third antennal segment, while in picea the former is longer than broad and about as long as the latter.
4. In *takachihoi* the sides of the pronotum are not shining and distinctly rugoso-striate with many fine longitudinal striae and punctures. In *japonica* they are almost transversely striated above and have no striation below where they are very shining and adorned with a few minute punctures. In *drewseni* they are shining and have very dense, small punctures. In *picea* they are very much shining and have small punctures.

5. In *takachihoi* and *japonica* the upper half of mesopleura has many, very fine, longitudinal striae and punctures, while it is almost smooth, impunctate and shining in *drewseni*. In *picea* it has some longitudinal striae and comparatively coarse punctures.

6. In *takachihoi* and *japonica* the scutellum is largely reticulate, while it is distinctly transversely striate in *drewseni* and *picea*.

7. In *takachihoi* the basal nervure of the fore wings is receiving the discoidal nervure at the middle, while it is receiving the latter near the anterior margin of the fore wings in *japonica*, *drewseni* and *picea*.

8. In *takachihoi* and *japonica* the apical spur of the second tarsal segment of the hind legs is very long, extending to the middle portion of the fourth tarsal segment, while it is extending slightly beyond the apex of the third segment in *drewseni* and *picea*.

9. In *takachihoi* and *japonica* the median longitudinal line of the sixth abdominal tergite is almost straight seen in profile, while it is very much curved in *drewseni* and *picea*.

IV. DESCRIPTION OF THE MALE OF *IBALIA JAPONICA*

*Ibalia japonica* Matsumura

Third segment about three times as long as broad at the apex and with a
distinct excavation on the outer side near the apex.

Measurements

Length: Head + thorax ca. 8.0 mm. Antenna ca. 9.2 mm. Abdomen ca.
9.5 mm. Fore wing 14.0 mm. Hind wing 9.0 mm. Hind femur
3.8 mm. Hind tibia 6.2 mm. Hind basitarsus 4.0 mm.

Width: Head ca. 4.0 mm. Thorax ca. 3.6 mm.

Allotype: 1 ♂, 20. vi. 1912, Mt. Moiwa near Sapporo, Hokkaido, S.
MATSUMURA leg., preserved in the Entomological Institute of the
Hokkaido Imperial University, Sapporo.

Explanation of Plate I.

Fig. 1. *Ibalia takachihoi* YASUMATSU (sp. nov.) (♂).
Fig. 2. Head of *takachihoi* (♂), seen in profile.
Fig. 3. Third antennal segment (right side) of *takachihoi* (♂), seen from
above.
Fig. 4. Abdomen of *takachihoi* (♀), seen in profile.
Fig. 5. Abdomen of *takachihoi* (♂), seen in profile.
Fig. 6. Right hind tarsus of *takachihoi* (♂), seen from above.
Fig. 7. Abdomen of *japonica* (♀), seen in profile.
Fig. 8. Fore wing of *japonica* (♂).
Fig. 9. Apex of abdomen of *drewseni* (♀), seen in profile.
Fig. 10. Right hind tarsus of *drewseni* (♀), seen from above.
Fig. 11. Apex of abdomen of *picea* (♀), seen in profile.
Fig. 12. Fore wing of *picea* (♀).

摘 要

日本のヒラタフシバチ亜科

(英彦山昆虫誌記—XIII)

私は渡邉千兩博士の御好意により、北海道帝大植物動物学教室所蔵の ヒラタフシバチ類 (*Ibalia*)
の標本を研究する機会を得た。本邦よりこの属のものは従来2種知られて居たのみであるが、上記教室
には更に1未記録種の標本が保存されて居た。一方私は九州帝大附属彦山生物学研究所構内に
て明らかに新種と認めべき1種を発見した。これらの種名、和名及び産地を示せば次の如くである。

1. *Ibalia japonica* MATSUMURA ヒラフシバチ（松材） 北海道、本州
2. *Ibalia takachihoi* YASUMATSU (sp. nov.) タカチホヒラフシバチ（新種） 九州
3. *Ibalia picea* MATSUMURA クロヒラフシバチ（松材） 雄太
4. *Ibalia drewseni* BORRIES アカヒラフシバチ（新種） 雄太、欧羅