

## Caddisflies or Trichoptera from Shimane Prefecture in Japan (Insecta)

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### 島根県地方の毛翅目

1964年から1985年まで、門脇久志氏が島根県地方に生息する毛翅目（昆虫）を势力的に採集した多量の標本と、筆者自身が1985年に島根県地方におもむき採集した標本を今回調べる事ができた。そこで未記載種については新しく記載するとともに、すべての種をリストアップすることにした。その結果をここに報告する。（小林峯生）

This paper is a report on a collection of Trichoptera which was made by Mr. Hisashi KADOWAKI and myself in Shimane Prefecture during 1964 to 1985. I am indebted to Mr. H. KADOWAKI for supplying with valuable materials to my study.

Although many species have hitherto been described from Japan, the discovery of new species in this collection indicates that the caddisflies fauna of Shimane Prefecture is still very poorly known. This paper contains twelve new and thirty nine newly recorded species from the district.

### Family STENOPSYCHIDAE

#### Genus *Stenopsyche* McLACHLAN

##### 1. *Stenopsyche marmorata* NAVAS, 1919

*Stenopsyche marmorata* NAVAS, 1919, Riv. Real. Acad. Ci. Exacts, Fis. Nat. de. Madrid, 18: 164, fig. 6; SCHMID, 1949, Eos. 25: 327; SCHMID, 1969, Can. Ent., 101 (2):205, pl. 4, fig. 11, pl. 6, fig. 4; KOBAYASHI, 1973, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (6): 30.

*Stenopsyche griseipennis*: MATSUMURA, 1904, Thous. Ins. Japan 1: pl. 12, fig. 6; KUWAYAMA, 1930, Ins. Matsmurana, 4 (3): 111, figs. 1, 2; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17 (1): 256; KOBAYASHI, 1959, Bull. Nat. Sci. Mus. (Tokyo), (44): 374.

Specimens examined: 3♀♀, Muikaichi (300m), Muikaich-machi, Kanoashi-gun, 22. VI. 1964 (H. KADOWAKI); 1♂10♀♀, Yamada (200m), Daito-machi, Ohara-gun, 30. VI. 1964 (H. KADOWAKI); 1♂10♀♀, Ai (200m), Nita-machi, Nita-gun, 25. IX. 1964 (H. KADOWAKI); 9♂♂4♀♀, Kuri (100m), Ohda-shi, 2. V. 1965 (H. KADOWAKI); 3♀♀, Arashima (20m), Yasugi-shi, 18. V. 1965 (H. KADOWAKI); 1♂ Yamada (200m), Daito-machi, Ohara-gun, 28. VIII. 1965 (H. KADOWAKI); 1♂, Arashima (20 mm), Yasugi-shi, 5. X. 1965 (H. KADOWAKI); 2♂♂ Kososhi (30m), Matsue-shi, 10. X. 1965 (H. KADOWAKI); 1♀, Araki (80m), Saigo-machi, Oki-gun, 26. V. 1970 (H. KADOWAKI); 1♀, Daimonjisan (600m), Saigo-machi, Oki-gun, 7. VI. 1975 (H. KADOWAKI); 13♂♂, Maki River (600 m), Yokota-machi, Nita-gun, 12. IX. 1985 (K. KOBAYASHI & H. KADOWAKI).

2. *Stenopsyche sauteri* ULMER, 1907

*Stenopsyche sauteri* ULMER, 1907, Cat Coll. Zool. E. Selys **6** (1): 78, figs. 18, 19; KUWAYAMA, 1930, Ins. Matsumurana, **4**: 116, fig. 3; KOBAYASHI, 1959, Bull. Nat. Sci. Mus. (Tokyo), (44): 374; SCHMID, 1969, Can. Ent. **101** (2): 4, fig. 19.

Specimens examined: 1 ♂ 3 ♀♀, Yamada (200m), Daito-maehi, Ohara-gun, 30. VI. 1964 (H. KADOWAKI); 2 ♂♂, Kawamoto (200m), Kawamoto-machi, Ouchi-gun, 14. V. 1965 (H. KADOWAKI); 2 ♀♀, Takatsu (50m), Masuda-shi, 18. V. 1965 (H. KADOWAKI); 5 ♂♂, Ai (200m), Nita-machi, Nita-gun, 22. VII. 1965 (H. KADOWAKI); 1 ♀, Kososhi (30m), Matsue-shi, 2. X. 1965 (H. KADOWAKI).

## Family PHILOPOTAMIDAE

Genus *Sortosa* NABAS3. *Sortosa auriculata* (MARTYNOV) 1933

*Dolophiodes auriculata* MARTYNOV, 1933, Annot. Zool. Japon., **17**: 142, figs. 5, 6; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, **17** (1): 255.

*Sortosa auriculata*: ROSS, 1956, Evolution and classification of the mountain caddisflies. Urbana. 59, fig. 60; KOBAYASHI, 1980, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (12): 92.

Specimen examined: 1 ♂, Yamada (200m), Daito-machi, Ohara-gun, 4. X. 1985 (H. KADOWAKI).

4. *Sortosa kisoensis* (TSUDA) 1939

*Dolophilodes kisoensis* TSUDA, 1929, Annot. Zool. Japon., (18): 296, figs. 1, 2; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, **17** (1): 255.

*Sortosa kisoensis*: ROSS 1956, Evolution and classification of the mountain caddisflies. Urbana: 57; KOBAYASHI, 1980, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (12): 89.

Specimens examined: 2 ♂♂ 1 ♀, Seiku (200m), Daito-machi, Ohara-gun, 15. IX. 1985 (H. KADOWAKI).

5. *Sortosa niitakaensis* KOBAYASHI, 1973

*Sortosa niitakaensis* KOBAYASHI, 1973, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (6): 29, pl. 6, figs. E, F, G; KOBAYASHI, 1980, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (12): 90.

Specimens examined: 24 ♂♂ 3 ♀♀, Choshi River (350m), Saigo-machi, Oki-gun, 10. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 13 ♂♂ 9 ♀♀, Dangyo-no-taki (400m), Tsumamura, Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

6. *Sortosa nomugiensis* KOBAYASHI 1980

*Sortosa nomugiensis* KOBAYASHI 1980, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (12): 94, pl. 1, fig. 9: pl. 4, figs. 6, 7, 8.

Specimens examined: 1 ♂ 3 ♀♀, Dangyo-no-taki (400m), Tsumamura, Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

7. *Sortosa commata* KOBAYASHI, 1980

*Sortosa commata* KOBAYASHI, 1980, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (12): 65, pl. 1, fig.

10, pl. 5, figs. 1, 2, 3.

Specimen examined: 1♂, Choshi River (360m), Saigo-machi, Oki-gun, 10. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

Genus *Wormaldia* McLACHLAN

8. *Wormaldia kadowakii* KOBAYASHI, 1980

*Wormaldia kadauakii* KOBAYASHI, 1980, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (12): 101, pl. 1, fig. 17, pl. 8, figs. 1, 2, 3.

Specimens examined: 1♂, Muikaichi (300m), Muikaichi-machi, Kanoashi-gun, 22. VI. 1964 (H. KADOWAKI); 1♂, Yamada (200m), Daito-machi, Ohara-gun, 25. VII. 1964 (H. KADOWAKI).

Genus *Chimarra* STEPHENS

9. *Chimarra tsudai* ROSS, 1956

*Chimarra tsudai* ROSS, 1956, Evolution and classification of the mountain caddisflies. Urbana: 71, figs. 150, 151; KOBAYASHI, 1980, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (12): 88.

Specimens examined: 2♂♂12♀♀, Choshi River (360m), Saigo-machi, Oki-gun, 10. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

Family PSYCHOMYIIDAE

Genus *Psychomiella* ULMER

10. *Psychomiella acutipennis* ULMER, 1908

*Psychomiella acutipennis* URMER, 1908, Deutsch. Ent. Zeitschr. 354, fig. 20; TSUDA, 1940, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B. 17 (1): 274, figs. 34, 35.

Specimens examined: 3♂♂9♀♀, Kawamoto (100m), Kawamoto-machi, Ouchi-gun, 17. VI. 1965 (H. KADOWAKI); 1♀, Takatsu (50m), Masuda-shi, 25. VI. 1965 (H. KADOWAKI).

11. *Psychomiella billnis* sp. nov. (Figs. 1, 2, 3)

Male: Color light brown. Body 3.0 mm in length. Fore wing 4.2 mm long and 1.5 mm wide. Hind wing 3.2 mm long and 1.5 mm wide. General structure typical for the genus. Genitalia as in Figs. 2, 3. Ninth segment narrowed dorsally and widest near middle in lateral view. Tenth segment broadest at base, tapered at the apical portion in lateral view; lower and apical margin with a few bristles; inner surface with a large wart. Clasper elongate and swelled at middle portion in lateral view, with a few long bristles; the apical margin rounded. Aedeagus long and divided into two lobes; the upper lobe curved upwardly, bill-shaped; the lower lobe shorter than upper lobe, acuted at its apex.

Holotype: Male (8261), Takatsu (50m), Masuda-shi, Shimane Pref., 1. VI. 1965 (H. KADOWAKI).

Family ECONOMIDAE

Genus *Economus* McLACHLAN

12. *Economus kososiensis* **sp. nov.** (Figs. 4, 5, 6, 7, 8)

Male: Color light brown. Body 4.2mm in length. Fore wing 5.5mm long and 1.5mm wide. Hind wing 3.5mm long and 1.2mm wide. General structure typical for the genus. Genitalia as in Figs. 5, 6. Eighth segment narrowed dorsally and broadest near middle portion in lateral view. Dorsal margin of ninth segment slightly convex in lateral view; upper part rather shorter than lower part and divided from it by deep narrow excision; lower part swelled at middle, gradually narrowed to the apex. Tenth segment long, nearly triangular, broadened at base; apex rounded, with a few short bristles. Clasper curved upwardly; upper margin with a large wart at middle portion; wart and apex clothed with long soft hairs. Aedeagus stout, rounded at its apex; lower margin prominent, forming a long process.

Female: Color light brown. Body 5.0mm in length. Fore wing 5.3mm long and 1.7 mm wide. Hind wing 4.6mm long and 1.2mm wide. General structure similar to male. Genitalia as in Figs. 7, 8. Eighth segment broad; lower portion narrower than the upper portion. Ninth segment short; apical margin swelled at middle, with a few short bristles.

Holotype: Male (8294), Kososhi (30m), Matsue-shi, Shimane Pref., 15. X. 1965 (H. KADOWAKI). Paratypes: 1♂1♀ (8286), Kososhi (30m), Matsue-shi, Shimane Pref., 24. IX. 1965 (H. KADOWAKI). 3♀♀, Kososhi (30m), Matsue-shi, 20. V. 1965 (H. KADOWAKI). 2♀♀, Kososhi (30m), Matsue-shi, 23. IX. 1956 (H. KADOWAKI).

## Family POLYCENTROPODIDAE

Genus *Plectrocnemia* STEPHENS13. *Plectrocnemia okiensis* **sp. nov.** (Figs. 9, 10, 11)

Male: Color brown. Body 5.5mm in length. Fore wing 5.6mm long and 1.7mm wide. Hind wing 3.5mm long and 1.7mm wide. General structure typical for the genus. Genitalia as in Figs. 10, 11. Basal portion of ninth sternite obscure in eighth sternite; apical margin oblique, with a slight process at middle. Tenth segment divided into two lobes; upper lobe triangular, arising calw-like process; lower lobe swelled at middle portion, leaf-shaped. Clasper broad and short, terminating in bifurcate lobe; lower lobe narrower than the upper one, arising a long process at inner surface near base. Aedeagus stout, membranous; apical margin emarginated.

Holotype; Male (8114), Choshi River (360m), Saigo-machi, Oki-gun, Shimane Pref., 10. IX. 1985 (M. KOBAYASHI & H. KADOWAKI). Paratype: 1♂ (8132). same data as the holotype.

14. *Plectrocnemia kadowakii* **sp. nov.** (Figs. 12, 13, 14).

Male: Color brown. Body 4.5mm in length. Fore wing 4.6mm long and 1.6mm wide. Hind wing 3.3mm in long and 1.6mm in wide. General structure typical for the genus. Genitalia as in Figs. 13, 14. Ninth sternite nearly triangular, with a long process which is gradually narrowed at its apex; lower margin swelled at middle; apex rounded, curved downwards, with a few short bristles; basal portion with short lobe. Tenth tergite

shortly prominent at apical margin. Clasper long, swelled at middle: apex rounded upwardly; basal portion with a triangular wart. Aedeagus stout, with membranous lobe and needle-like rod; apical portion of membranous lobe with a large spot.

Holotype: Male (8372), Seiku (200m), Daito-machi, Ohara-gun, Shimane Pref., 15. IX. 1985 (H. KADOWAKI). Paratypes: 1♂ (8144) 2♀♀ (8136), Dangyo-no-taki (400mm), Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

15. *Plectrocnemia makiensis* sp. nov. (Figs. 15, 16, 17).

Male: Color brown. Body 5.2mm in length. Fore wing 5.8mm long and 2.1mm wide. Hind wing 4.3mm long and 2.1mm wide. General structure typical for the genus. Genitalia as in Figs. 16, 17. Ninth sternite broad, with apical margin rounded. Tenth segment long, triangular; lower surface membranous; apex rounded, with a few hairs; a long process arising near apical margin, curved upwardly. Clasper sickle-shaped, clothed with long hairs. Aedeagus stout, branched two parts at apical portion; apical part shorter than the basal part, transparent and rounded at the tip, basal part membranous.

Holotype: Male (8165), Maki River. (600m), Yokota-machi, Nita-gun, Shimane Pref., 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

Family HYDROPSYCHIDAE

Genus *Macronema* PICTET

16. *Macronema radiatum* McLACHLAN, 1872

*Macronema radiatum* McLACHLAN, 1872, Ann. Soc. Ent. Belg., 15: 67, pl. 2, fig. 5; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, 17 (1): 277.

Specimens examined: 2♀♀, Yamada (200m), Daito-machi, Ohara-gun, 10. VI. 1964 (H. KADOWAKI); 2♂♂5♀♀, Kuri (100m), Ohda-shi, 25. VI. 1965 (H. KADOWAKI); 28♂♂1♀, Ai (200m), Nita-machi, Nita-gun, 22. VIII. 1965 (H. KADOWAKI).

Genus *Hydropsyche* PICTET

17. *Hydropsyche orientalis* MARTYNOV. 1934

*Hydropsyche nevae* KOLENATI, ULMER, 1907, Cat. Cool. Zool. E. Selys, 6 (1): 64.

*Hydropsyche orientalis* MARTYNOV, 1934, Trich. Annulipalipalipia: 276; TANIDA, 1982, Ann. Rep. Hakusan Nat. Cons. Center, 8: 27; TANIDA, 1986, Kontyû, Tokyo, 54 (3): 486, fig. 1.

*Hydropsyche ulmer* TSUDA, 1940, Annot. Zool. Japon., 19: 276; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, 17: 231; KOBAYASHI, 1985, Bull. Kanagawa Pref., Mus. (Nat. Hist.), (16): 12.

Specimens examined: 1♂5♀♀, Yamada (200m), Daito-machi, Ohara-gun, 30. VI. 1964 (H. KADOWAKI); 1♂6♀♀, Ai (200m), Nita-machi, Nita-gun, 25. IX. 1964 (H. KADOWAKI); 1♂1♀ Kuri (100m), Ohda-shi, 24. IV. 1965 (H. KADOWAKI); 1♂6♀♀, Arashima (20m), Yasugi-shi, 15. VI. 1965 (H. KADOWAKI); 4♂♂25♀♀, Ai (200m), Nita-machi, Nita-gun, 22. VII, 1965 (H. KADOWAKI); 3♂♂8♀♀, Araki (80m), Saigo-machi, Oki-gun, 26. V. 1970 (H. KADOWAKI); 1♀10♀♀, Choshi River (360m), Saigo-machi Oki-gun, 10. IX. 1985

(H. KADOWAKI); 3♂♂44♀♀, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 2♂♂; 5♀♀, Yamada (200m), Daito-machi, Ohara-gun, 4. X. 1985 (H. KADOWAKI).

18. *Hydropsyche selysi* ULMER, 1970

*Hydropsyche selysi* ULMER, 1907, Cat. Coll. Zool. E. Selys. 6 (1): 17, figs. 101, 102, 103; ULMER, 1908, Deutsch. Ent. Zeitschr.: 349; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, 17 (1): 279; TANIDA, 1986, Kontyû, Tokyo, 54 (4): 624, fig. 1.

Specimens examined: 3♂♂9♀♀, Kuno (200m), Daito-machi, Ohara-gun, 15. IX. 1985 (H. KADOWAKI).

19. *Hydropsyche gifuana* ULMER, 1907

*Hydropsyche gifuana* ULMER, 1907, Cat. Coll. Zool. E. Selys, 6 (1): 68, figs. 104, 105; ULMER, 1908, Deutsch. Ent. Zeitschr.: 349; TSUDA, 1940, Annot. Zool. Japon., 19: 25; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, 17 (1): 279; KOBAYASHI, 1959, Bull. Nat. Sci. Mus. Tokyo, (44): 349; TANIDA, 1986, Kontyû, Tokyo, 54 (4): 630, fig. 4.

Specimens examined: 9♀♀, Kuri (100m), Ohda-shi, 5. V. 1965 (H. KADOWAKI); 1♀, Takatsu (50m), Masuda-shi, 20. V. 1965 (H. KADOWAKI); 1♂6♀♀, Arashima (20m), Yasugi-shi, 5. X. 1965 (H. KADOWAKI); 1♀ Deaibash (300m), Ishime-machi, Ouchi-gun, 18. VIII. 1965 (H. KADOWAKI); 3♀♀, Maki River. (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

Genus *Hydromanicus* BRAUER

20. *Hydromanicus galloisii* MATSUMURA, 1931

*Hydromanicus galloisii* MATSUMURA, 1931, Nippon Konchu Daizukan: 1132; TSUDA, 1940, Annot. Zool. Japon., (19): 28; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, 17(1): 280.

Specimens examined: 1♀, Takatsu (50m), Masuda-shi, 25. VI. 1965 (H. KADOWAKI); 1♀, Araki (80m), Saigo-machi, Oki-gun, 23. VII. 1968 (H. KADOWAKI); 2♀♀, Choshi River (360m), Saigo-machi, Oki-gun, 10 IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

Genus *Hydropsychodes* ULMER

21. *Hydropsychodes brevilineata* IWATA, 1927

*Hydropsychodes brevilineata* IWATA, 1927, Zool. Mag., (39): 226, (larva); TSUDA, 1940, Annot. Zool. Japon., (19): 28, figs. 5, 6, 7; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, 17 (1): 280; KOBAYASHI, 1973, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (6): 31.

Specimens examined: 1♀, Muikaichi (300), Muikaichi-mach, Kanoashi-gun, 22. VI. 1964 (H. KADOWAKI); 1♂6♀♀, Yamada (200m), Daito-machi, Ohara-gun, 30. VI. 1964 (H. KADOWAKI); 3♂♂, Ai, (200m), Nita-machi, Nita-gun, 25. IX. 1964 (H. KADOWAKI); 6♀♀, Kuri (100m), Ohda-shi, 24. IV. 1965 (H. KADOWAKI); 1♂2♀♀, Kawamoto (100m), Kawamoto-machi, Ouchi-gun, 18. V. 1965 (H. KADOWAKI); 4♂♂1♀, Takatsu (500m), Masuda-shi, 1. V. VI. 1965 (H. KADOWAKI); 1♀, Akana (400m), Akagi-machi, Iishi-gun, 18. VI. 1965 (H. KADOWAKI); 1♂1♀, Takatsu (50m), Masuda-shi, 25. VI. 1965 (H. KADOWAKI); 1♂1♀, Takatsu (50m), Masuda-shi, 27. VI. 1965 (H. KADOWAKI); 4♀♀, Kawamoto (100m), Kawamoto-machi, Ouchi-gun, 5. VII. 1965 (H. KADOWAKI); 2♂♂,

Same, 17. IX. 1965 (H. KADOWAKI); 1♂1♀, Araki (80m), Saigo-machi, Oki-gun, 26. V. 1970 (H. KADOWAKI); 1♂1♀, Deaibashi (300m), Ishimi-machi, Ouchi-gun, 18. VII. 1985 (H. KADOWAKI); 6♂♂36♀♀, Choshi River (360m), Saigo-machi, Oki-gun, 10. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 4♂♂23♀♀, Dangyo-no-taki (400m), Tsuma-mura, Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 10♂♂53♀♀, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 4♂♂4♀♀, Yamada (200m), Daito-machi, Ohara-gun, 15. IX. 1985 (H. KADOWAKI).

#### Genus *Diplectrona* WESTWOOD

##### 22. *Diplectrona aiensis* sp. nov. (Figs. 18, 19, 20)

Male: Color light brown. Body 6.5mm in length. Fore wing 8.0mm long and 3.3mm wide. Hind wing 7.3mm long and 3.3mm wide. General structure typical for the genus. Basal margin of fifth abdominal segment with a long, slender filament. Genitalia as in Figs 19, 20. Ninth tergite produced as a large plate, triangular in the lateral view, with apical margin acute at its apex. Clasper two-jointed; basal joint elongate, longer than terminal one, notched along the upper margin at apical portion; terminal joint short, slender rounded at its apex. Aedeagus stout; upper margin of apical portion with five warts.

Holotype; Male (8232), Ai (200m), Nita-machi, Nita-gun, Shimane Pref., 22. VII. 1965 (H. KADOWAKI). Paratypes: 1♂ (5191), same data as the holotype, 25. IX. 1964 (H. KADOWAKI). 13♀♀ Kuno (300m), Daito-machi, Ohara-gun, 15. IX. 1985 (H. KADOWAKI). 1♂, Kamikuno (300mm), Daito-machi, Ohara-gun, 5. X. 1985 (H. KADOWAKI).

#### Family RHYACOPHILIDAE

#### Genus *Apsilochorema* ULMER

##### 23. *Apsilochorema sutshanum* MARTYNOV, 1934

*Apsilochorema sutshanum* MARTYNOV, 1934, The Trichoptera Annulipalpia of the USSR.

Leningrad: 72, figs. 39, 40; ROSS, 1956, Evolution and classification of the mountain caddisflies. Urbana: 124; KOBAYASHI, 1985, Bull. Kanagawa Pref., Mus. (Nat. Hist.), (16): 13.

*Apsilochorema japonicum* TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, 17 (1): 243, figs 3, 4.

Specimens examined: 7♀♀, Choshi River (360m), Saigo-machi, Oki-gun, 10. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 1♀, Dangyo-no-taki (400m), Tsuma-mura, Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 1♂, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & KADOWAKI); 2♀♀, Seiku (200m), Daito-machi, Ohara-gun, 15. IX. 1985 (H. KADOWAKI).

#### Genus *Rhyacophila* PICTET

##### 24. *Rhyacophila nipponica* NAVAS, 1933

*Rhyacophila nipponica* NAVAS, 1933, Mem. Pont. Aca. Sci. Nuovi Lincei, Rome, (17): 93; ROSS, 1956, Evolution and classification of the mountain caddisflies. Urbana: 123, fig. 267;

KOBAYASHI, 1985, Bull. Kanagawa Pref., Mus. (Nat. Hist.), (16). 15.

Specimens examined; 4♂♂8♀♀, Choshi River. (360m), Saigo-machi, Oki-gun, 10. IX.

1985 (M. KOBAYASHI & H. KADOWAKI); 3♂♂, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

25. *Rhyacophila brevicephala* IWATA, 1927

*Rhyacophila brevicephala* IWATA, 1927, Zool. Mag., **39**: 217; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, **17** (1): 246; ROSS, 1956, Evolution and classification of the mountain caddisflies. Urbana: 122, fig. 211; Schmid, 1970, Mem. Soc. ent. Can., (66): 123, pl. 22, figs. 16, 17, 18.

*Rhyacophila lacrimae* TSUDA, 1940, Annot. Zool. Japon., **19** (2): 125, figs. 9, 10.

Specimens examined: 8♂♂, Choshi River (360m), Saigo-machi, Oki-gun, 10. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 2♂♂, Dangyo-no-taki (400m), Tsuma-mura, Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 6♂♂ 3♀♀, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

26. *Rhyacophila kohnoae* ROSS, 1956

*Rhyacophila kohnoae* ROSS, 1956, Evolution and classification of the mountain caddisflies. Urbana; 119, fig. 211.

Specimens examined: 1♂, Daimonjisan (600m), Tsuma-mura, Oki-gun, 24. VII. 1968 (H. KADOWAKI); 3♂♂, Dangyo-no-taki (400m), Saigo-machi, Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

27. *Rhyacophila yamanakaensis* IWATA, 1927

*Rhyacophila yamanakaensis* IWATA, 1927, Zool. Mag., **39**: 217; SCHMID, 1970, Mem. Soc. ent. Can., (66): 132, pl. 42, figs. 5, 6.

*Rhyacophila quieta* TSUDA, 1940, Annot. Zoo. Japon., **19** (2): 126, figs 11, 12; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, **17** (1): 246; ROSS, 1956, Evolution and classification of the mountain caddisflies. Urbana: 121, fig. 239.

Specimens examined: 2♂♂ 4♀♀, Kuri (100m), Ohda-shi, 15. VI. 1965 (H. KADOWAKI); 2♂♂, Arashima (20m), Yasugi-shi, 25. V. 1965 (H. KADOWAKI); 1♂, Arashima (20m), Yasugi-shi, 15. VI. 1965 (H. KADOWAKI); 2♂♂ 2♀♀, Choshi River (360m), Saigo-machi, Oki-gun, 10., IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

28. *Rhyacophila makiensis* sp. nov. (Figs. 21, 22, 23)

Male: Color brown. Body 8.2mm in length. Fore wing 8.5mm long and 3.2mm wide. Hind wing 7.5mm long and 3.0mm wide. General structure typical for the genus. Genitalia as in Figs 22, 23. Ninth segment with dorsal portion moderately long. Tenth tergite elongate; ventral margin with a flat wart, apical portion slenderly projecting downward with curving. Chaspter with basal at the middle joint constricted in middle, flattened at its apex; terminal joint with deep incision of posterior margin with apex flattened; inner surface of the terminal joint scattered short, blunt, black setae. Aedeagus with basal portion swelled in margin, acute at its apex.

Holotype: Male (8159), Maki River (600m), Yokota-machi, Nita-gun, Shimane Pref., 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI). Paratype: 1♂ (8159a), same data as holotype.

## Family GLOSSOSOMATIDAE

Genus *Glossosoma* CURTIS29. *Glossosoma inops* (TSUDA), 1940

*Mystropora inops* TSUDA, 1940, Annot. Zool. Japon., **19** (3): 193, fig. 4; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, **17** (1): 250.

*Glossosoma inops*: ROSS, 1956, Evolution and classification of the mountain caddisflies: Urbana: 155, fig. 320.

Specimens examined: 1♂, Arashima (20m), Yasugi-shi, 15. VI. 1965 (H. KADOWAKI); 3♂♂2♀♀, Dangyo-no-taki (400m), Tsuma-mura, Oko-gun, 11. IX. 1958 (M. KOBAYASHI & H. KADOWAKI).

Genus *Electragapetus* ULMER30. *Electragapetus kuriensis* sp. nov. (Figs. 24, 25, 26, 27)

Male: Color dark brown. Body 4.5mm in length. Fore wing 6.7mm long and 2.4mm wide. Hind wing 5.3mm long and 2.0mm wide. General structure typical for the genus. Sixth sternite with simple, moderately long and narrow mesial process (Fig. 25). Genitalia as in Figs. 25, 26. Apical margin of ninth tergite produced at ventral portion; dorsal portion narrow, acute at its apex. Tenth segment moderately broad; ventral margin curved downward. Cercus broad, long, finger-shaped. Clasper short, oblong; apex bluntly rounded and bearing a small black spot. Aedeagus long with a spine-like process.

Female: Color dark brown. Body 4.5mm in length. Fore wing 6.7mm long and 2.4mm wide. Hind wing 5.3mm long and 2.0mm. General structure typical similar to male. Ventral plate of eighth sternite short, triangular (Fig. 27). Genitalia structure as in Fig. 27. Terminal segment divided into two lobes; basal lobe triangular, broader than the terminal one; terminal lobe triangular.

Holotype: Male (8362), Kuri (100m), Ohda-shi, Shimane Pref., 5. V. 1965 (H. KADOWAKI). Paratypes: 3♂♂ (8362a-c) 1♀ (8362d). same data as the holotype.

## Family LEPIDOSTOMATIDAE

Genus *Neoseverinia* ULMER31. *Neoseverinia crassicornis* (ULMER), 1907

*Severiinia crassicornis* ULMER, 1907, Cat. Coll. Zool. E. Selys, **6** (1): 36, figs. 54-59.

*Neoseverinia crassicornis*: TSUDA, 1936, Annot. Zool. Japon., **15** (3): 403; TANI, 1971, Bull. Osaka Mus. Nat. Hist., (24): 54, Figs. 6; ITO, 1983, Kontyû, Tokyo, **51** (2): 208, fig. 1.

Specimens examined: 1♂, Kososhi (30m), Matsue-shi, 23. IX. 1965 (H. KADOWAKI); 1♂1♀, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

Genus *Goerodes* ULMER32. *Goerodes japonicus* (TSUDA), 1936

*Atomyiella japonica* TSUDA, 1936, Annot. Zool. Japon., **15** (3): 401, pl. 26, figs. 1-11.

*Dinarthodes japonica*: TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, **17** (1): 329;

KOBAYASHI, 1955, Bull. Nat. Sci. Mus. (Tokyo), **2** (2): 70; TANI, 1971, Bull. Osak Mus. Nat. Hist., (24): 64, fig. 11.

*Goerodes japonicus*: ITO, 1984, Kontyû, Tokyo, **52** (4): 514.

Specimens examined: 1♂1♀, Dangyo-no-taki (400), Tsuma-mura, Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 2♂♂, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & KADOWAKI).

33. *Goerodes bipertita* (KOBAYASHI), 1955

*Dinarthodes bipertita* KOBAYASHI, 1955, Bull. Nat. Sci. (Tokyo), **2** (2): 70, pl. 44, figs. 1-11; TANI, 1971, Bull. Osaka Mus. Nat. Hist., (24): 66, fig. 12; KOBAYASHI, 1984, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (15): 18.

*Goerodes bipertitus*: ITO, 1984, Kontyû, Tokyo, **52** (4): 514.

Specimens examined: 2♂♂, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

34. *Goerodes nukaberaensis* (KOBAYASHI), 1964

*Dinarthodes nukaberaensis* KOBAYASHI, 1964, Bull. Nat. Sci. Mus. (Tokyo), **7** (1): 88, figs. 2, 3; TANI, 1971, Bull. Osaka Mus. Nat. Hist., (24): 69, fig. 14.

*Goerodes nukaberaensis*: ITO, 1984, Kontyû, (Tokyo), **52** (4): 514.

Specimen examined: 1♂, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

## Family LIMNEPHILIDAE

### Genus *Nothopsyche* BANKS

35. *Nothopsyche ulmeri* SCHMID, 1952

*Nothopsyche ulmeri* SCHMID, 1952, Arch. f. Hydorobiol. **47** (1): 152, figs. 172-176.

Specimens examined: 1♂1♀, Kuri (100m), Ohda-shi, 5. IX. 1965 (H. KADOWAKI).

### Genus *Limnephilus* LEACH

36. *Limnephilus correptus* McLACHLAN, 1980

*Limnephilus correptus* McLACHLAN, 1980, Tricho. Enur. Fauna. Supp., (2): 19, pl. 5; MARTYNOV, 1935, Tran. Inst. Zool. Acad. Sci. UOss: 344, figs. 146-151; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, **17** (1): 133; SCHMID, Mitt. Schweiz. Ent. Ges., (28): 134; KOBAYASHI, 1968, Bull. Kanagawa Pref. Mus. (Nat. Hist.), **1** (1): 4.

Specimens examined: 1♂7♀♀, Yamada (200m), Daitot-machi, Ohara-gun, 30. VI. 1964 (H. KADOWAKI); 3♂♂3♀♀, Ai (200m), Nita-machi, Nita-gun, 25. IX. 1964, (H. KADOWAKI); 6♂♂4♀♀, Arashima (20m), Yasugi-shi, 8. V. 1965 (H. KADOWAKI); 1♂ Araki (80m), Saigo-machi, Oki-gun, 30. VIII. 1965 (H. KADOWAKI); 1♂2♀♀, Kososhi (30m), Matsue-shi, 2. X. 1965 (H. KADOWAKI); 1♂7♀♀, Kososhi (30m), Matsue-shi, 13. X. 1965 (H. KADOWAKI); 5♀♀, Araki (80m), Saigo-machi, Oki-gun, 20. IX. 1969 (H. KADOWAKI); 1♂1♀, Araki (80m), Saigo-machi, Oki-gun, 26. V. 1970 (H. KADOWAKI); 2♂♂,

Choshi River (360m), Saigo-machi, Oki-gun, 10. IX. 1985 (M. KOBAYASHI & H. KADOWAKI); 3♂♂1♀, Dangyo-no-taki, (400m), Tsuma-mura, Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

### Genus *Nemotaulius* STEPHENS

#### 37. *Nemotaulius brevilinea* (McLACHLAN), 1871

*Crammotaulius brevilinea* McLACHLAN, 1871, J. Linn. Soc. Zool. (11): 107.

*Glyphoaelius brevilinea*: ULMER, 1906, Notes Leyden Mus. 28: 5, figs. 4, 5, 6.

*Nemotaulius brevilinea*: BANKS, 1906, Proc. Ent. Soc. Wash. (7): 107; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17 (1): 321; SCHMID, 1952, Bull. Soc. Vaud. Sci. Nat. 65: 242, figs. 61-67; SCHMID, 1955, Mitt. Schweiz. Ent. Ges. (28): 148.

Specimens examined: 1♂1♀, Yamada (200m), Daito-machi, Ohara-gun, 6. VI. 1964 (H. KADOWAKI); 1♀, Kuri (100m), Ohda-shi, 2. V. 1965 (H. KADOWAKI); 1♂3♀♀, Yamada (200m), Daito-machi, Ohara-gun, 28. VIII. 1965 (H. KADOWAKI); 1♀, Kuri (100m), Ohda-shi, 5. IX. 1965 (H. KADOWAKI); 2♂♂, Kososhi (30m), Matsue-shi, 23. IX. 1965 (H. KADOWAKI); 2♂♂2♀♀, Araki (80m), Saigo-machi, Oki-gun, 30. IX. 1965 (H. KADOWAKI); 1♂, Arashima (20m), Yasugi-shi, 5. X. 1965 (H. KADOWAKI); 3♂♂, Kososhi (30m), Matsue-shi, 1. X. 1965 (H. KADOWAKI); 1♂ Araki (80m), Saigo-machi, Oki-gun, 23. VII. 1968 (H. KADOWAKI); 2♂♂6♀♀, Araki (80m), Saigo-machi, Oki-gun, 20. IX. 1969 (H. KADOWAKI); 2♂♂, Araki (80m), Saigo-machi, Oki-gun, 26. V. 1970 (H. KADOWAKI); 8♀♀, Yamada (200m), Daito-machi, Ohara-gun, 4. X. 1985 (H. KADOWAKI); 1♂2♀♀, Hishiura (100m), Ama-machi, Oki-gun, 16. X. 1985 (H. KADOWAKI).

#### 38. *Nemotaulius admorsus* (McLACHLAN), 1866

*Glyphotaelius admorsus* McLACHLAN, 1866, Trans. Ent. Soc. London, (5): 250; ULMER, 1907, Cat. Coll. E. Selys, 6 (1): 6, figs. 24, 25; NAKAHARA, 1914, Zool. Mag. (26): 344, figs. 1, 2; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17 (1): 311.

*Nemotaulius admorsus*: SCHMID, 1952, Bull. Soc. Vaud. Sci. Nat. (65): 226, figs. 20-24; SCHMID, 1955, Mitt. Schweiz. Ent. Ges. (28): 149.

Specimens examined: 1♀, Kuri (100m), Ohda-shi, 2. V. 1965 (H. KADOWAKI); 1♀, Arashima (20m), Yasugi-shi, 25. V. 1965 (H. KADOWAKI); 1♀, Akana (400m), Akana-machi, Iishi-gun, 9. VI. 1965 (H. KADOWAKI); 1♂, Takatsu (50m), Masuda-shi, 25. VI. 1965 (H. KADOWAKI); 1♂, Takatsu (50m), Masuda-shi, 27. VI. 1965 (H. KADOWAKI); 1♂, Kuri (100m), Ohda-shi, 21. IX. 1965 (H. KADOWAKI); 1♂, Arashima (20m), Yasugi-shi, 5. X. 1965 (H. KADOWAKI).

### Family GOERIDAE

#### Genus *Goera* LEACH

#### 39. *Goera japonica* BANKS, 1906

*Goera japonica* BANKS, 1906, Tran. Ent. Soc. Wash. 70: 108, fig. 9; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17 (1): 323; KOBAYASHI, 1985, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (16): 19.

Specimens examined: 11♀♀, Yamada (200m), Daito-machi, Ohara-gun, 30. VI. 1964 (H. Kadowaki); 8♀♀, Muikaichi (300m), Muikaichi-machi, Kanoashi-gun, 22. VI. 1964 (H. Kadowaki); 5♀♀, Ai (200m), Nita-machi, Nita-gun, 25. IX. 1964 (H. Kadowaki); 3♀♀, Kuri (100m), Ohda-shi, 5. V. 1965 (H. Kadowaki); 1♀, Arashima (20m), Yasugi-shi, 8. V. 1965 (H. Kadowaki); 1♂, Kawamoto (100m), Kawamoto-machi, Ochi-gun, 14. V. 1965 (H. Kadowaki); 1♂1♀, Takatsu (50m), Masuda-shi, 20. V. 1965 (H. Kadowaki); 1♂. Arashima (20m), Yasugi-shi, 25. V. 1965 (H. Kadowaki); 1♂, Akana (400m), Akagi-machi, Iishi-gun, ♂. VI. 1965 (H. Kadowaki); Arashima (20m), Yasugi-shi, 15. VI. 1965 (H. Kadowaki); 1♂, Takatsu (50m), Matsue-shi, 28. VI. 1965 (H. Kadowaki); 2♀♀, Ai (200m), Nita-machi, Nita-gun, 22. VII. 1965 (H. Kadowaki); 1♀, Kososhi (30m), Matsue-shi, 24. IX. 1965 (H. Kadowaki); 3♀♀, Kososhi (30m), Matsue-shi, I. X. 1965 (H. Kadowaki); 2♂♂2♀♀, Araki (80m), Saigo-machi, Oki-gun, 14. VII. 1968 (H. Kadowaki); 1♀, Araki (80m), Saigo-machi, Oki-gun, 23. VIII. 1968 (H. Kadowaki); 1♂, Araki (80m), Saigo-machi, Oki-gun, 24. VIII. 1969 (H. Kadowaki); 4♂♂, Araki (80m), Saigo-machi, Oki-gun, 26. V. 1970 (H. Kadowaki); 2♂♂, Choshi River (360m), Saigo-machi, Oki-gun, 10. IX. 1985 (M. Kobayashi & H. Kadowaki); 3♀♀, Dangyo-no-taki (400m), Tsuma-mura, Oki-gun, 11. IX. 1985 (M. Kobayashi & H. Kadowaki); 4♂♂13♀♀, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. Kobayashi & H. Kadowaki); 5♂♂2♀♀, Kuno(300m), Daito-machi, Ohara-gun, 15. IX. (H. Kadowaki); 2♀♀, Yamada (200m), Daito-machi, Ohara-gun, 4. X. 1985 (H. Kadowaki); 1♂, Kuno (300m), Daito-machi, Ohara-gun, 5. X. 1985 ((H. Kadowaki).

40. *Coera kawamotonis* sp. nov. (Figs. 28, 29, 30, 31)

Male: Color light brown. Body 6.8mm in length. Fore wing 10.0mm long and 3.7 mm wide. Hind wing 8.2mm long and 3.3mm wide. General structure typical for the genus. Ninth sternite with a long spine (Fig. 29). Genitalia as in Figs. 29, 30, 31. Distal margin of ninth segment produced at middle in lateral view, with a long and finger-like process. Tenth tergite divided into two portions; dorsal margin of basal portion swelled at middle in lateral view, with a long spine. Clasper long; basal portion much broader in lateral view, clothed with long hairs, gradually narrowed to the apex in lateral view, curved downwards at apical portion. Aedeagus stout, distinctly long.

Holotype: Male (8355), Kawamoto (100m), Kawamoto-machi, Ochi-gun, Shimane Pref., 14. V. 1965 (H. Kadowaki). Paratypes: 2♂♂ (8355a-b), same data as the holotype. 1♂, Akana (400m), Akagi-machi, Iishi-gun, Shimane Pref., 10. VI. 1965 ((H. Kadowaki).

Family PHRYGANOPSYCHIDAE

Genus *Phryganopsyche* WIGGINS

41. *Phryganopsyche latipennis* (BANKS), 1906

*Phryganea latipennis* BANKS, 1906, Proc. Ent. Soc. Wash. 7: 107; TSUDA, 1947, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17 (1): 309.

*Phyganopsis latipennis*: MARTYNOV, 1924, Ann. Mag. Nat. Hist. 14 (9): 211.

*Phryganopsis latipennis* subsp.: KIMMINS, 1950, Ann. Mag. Nat. Hist. **3** (12): 698, figs. 1-4.

*Phyganopsyche latipennis*: WIGGINS, 1959, Can. Ent. **91** (12): 753, figs. 18, 19, 20; SCHMID, 1968, Naturaliste Can. (95): 725, figs. 1, 2, 3; WIGGINS, 1969, Bull. Nat. Sci. Mus. (Tokyo), **12** (2): 211.

Specimen examined: 1♂, Maki River (600m), Yokota-machi, Nita-gun, 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

### Family PHRYGANEIDAE

#### Genus *Oligotricha* RAMBUR

#### 42. *Oligotricha fluvipes* (MATSUMURA), 1904

*Neuronia fluvipes* MATSUMURA, 1904, Thous. Ins. Japan, (1): 172, pl. 7, fig. 12; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, **17** (1): 306.

*Oligotricha fluvipes*: FISCHER, 1964, Trichop. Cat. (5): 55; WIGGINS & KUWAYAMA, 1957, Life Sci. Contr. Roy. Ent. Mus. (47): 4, figs. 3, 4; WIGGINS & KUWAYAMA, 1971, Kontyû, Tokyo, **29** (4): 345, figs. 6, 8; KUWAYAMA, 1973, Kontyû, Tokyo, **41** (1): 37.

Specimen examined: 1♂ Akana (400m), Akagi-machi, Iishi-gun, 10. VI. 1965 (H. KADOWAKI).

#### Genus *Eubasilissa* McLACHLAN

#### 43. *Eubasilissa regina* (McLACHLAN), 1871

*Holcstomis maclachlani* var. *regina* McLACHLAN, 1871, Jour. Linn. Soc. Zool **11**: 103.

*Neuronia regina*: ULMER, 1907, Cat. Coll. Zool. E. Selys, **6** (1): 6, figs. 1, 2, 3; ULMER, 1908, Ent. Zeitschr. **229**; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, **17** (1): 305.

*Regina regina*: MARTYNOV, 1924, Ann. Mag. Nat. Hist. **9** (16): 215.

*Eubasilissa regina*: MARTYNOV, 1930, Proc. Zool. Soc. London **87**; KUWAYAMA, 1970, Kontyû, Tokyo, **38** (4): 343; KUWAYAMA, 1973, Kontyû, Tokyo, **41** (1): 40.

Specimen examined: 1♀, Daimanisan (600m), Saigo-machi, Oki-gun, 12. VI. 1976 (H. KADOWAKI).

#### Genus *Colpomera* McLACHLAN

#### 44. *Colpomera japonica* (McLACHLAN), 1866

*Phryganea japonica* McLACHLAN, 1866, Tran. Ent. London, **5**: 248; ULMER, 1907, Cat. Coll. Zool. E. Selys, **6** (1): 10, figs. 11-13; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, **17** (1): 308.

*Colpomera japonica*: KUWAYAMA, 1973, Kontyû Tokyo, **41** (1): 42.

Specimens examined: 1♂, Kososhi (20m), Matsue-shi, 20. V. 1965 (H. KADOWAKI); 1♂, Araki (80m), Saigo-machi, Oki-gun, 8. VIII. 1965 (H. KADOWAKI); 1♂, Arashma (20m), Yasugi-shi, 5. X. 1965 (H. KADOWAKI); 1♂, Kososhi (30m), Matsue-shi, 10. X. 1965 (H. KADOWAKI).

### Family SERICOSTOMITIDAE

#### Genus *Gumaga* TSUDA

45. *Cumaga okinawaensis* TSUDA 1938

*Cumaga okinawaensis* TSUDA, 1938, Trans. Biogeogr. Soc. Japan, 3(1): 101, fig. 1; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17(1): 333; KOBAYASHI, 1959, Bull. Nat. Sci. Mus. (Tokyo), (44): 354.

Specimens examined: 1♀, Muikaichi (300m), Muikaichi-machi, Kanoashi-gun, 22. VI. 1965 (H. KADOWAKI); 1♂, Kawamoto (100m), Kawamoto-machi, Ouchi-gun, 18. V. 1965 (H. KADOWAKI).

## Family MOLANNIDAE

Genus *Molanna* CURTIS46. *Molanna falcata* ULMER, 1908

*Molanna falcata* ULMER, 1908, Deutsche Ent. Zeitschr.: 347, figs. 8-12; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17(1): 286; KOBAYASHI, 1985, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (16): 20.

Specimens examined: 1♀, Takatsu (50m), Masuda-shi, 25. VI. 1965 (H. KADOWAKI); 3 ♀♀, Kososhi (30m), Matsue-shi, 23. IX. 1965 (H. KADOWAKI); 1♂1♀, Maki River (600m), 12. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

## Family LEPTOCERIDAE

Genus *Leptocerus*46. *Leptocerus miyakoensis* TSUDA, 1942

*Leptocerus miyakoensis* TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17(1): 289, fig. 40.

Specimen examined: 1♂, Muikaichi (300m), Muikaichi-machi, Kanoashi-gun, 22. VI. 1964 (H. KADOWAKI).

47. *Leptocerus kamoni* TSUDA, 1942

*Leptocerus kamoni* TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17(1): 290, fig. 41.

Specimens examined: 3♂♂, Choshi River (360m), Saigo-machi, Oki-gun, 10. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

48. *Leptocerus takatsunis* sp. nov. (Figs. 32, 33, 34)

Male: Color yellowish brown. Body 5.5 mm in length. Fore wing 7.5 mm long and 2.0 mm wide. Hind wing 6.0 mm long and 3.0 mm wide. General structure typical for the genus. Genitalia as in Figs. 33, 34. Dorsal margin of ninth segment rounded in lateral view; distal margin rounded at its apex, with a few long bristles. Tenth tergits divided into three lobes in dorsal view; middle lobe slender in lateral view, with a few long bristles; the lobes of each side thick in dorsal view, shorter than middle lobe, with a few bristles at its apex. Clasper long, stout at base, gradually slenderer towards the apex in lateral view; dorsal margin of apical portion notched, with long hairs. Aedeagus stout, rounded in lateral view.

Holotype: Male (8352), Takatsu (50m), Masuda-shi, Shimane Pref., 25. VI. 1965 (H. KADOWAKI).

49. *Leptocerus seikunis* sp. nov. (Figs. 35, 36, 37)

Male: Color yellowish brown. Body 5.5 mm in length. For wing 7.8 mm long and 3.0 mm wide. Hind wing 6.0 mm long and 3.0 mm wide. General structure typical for the genus. Genitalia as in Figs. 36, 37. Ninth segment long, finger-shaped in lateral view; apical portion with a few long bristles; basal portion arised much longer process with long hairs at middle portion in lateral view. Clasper short, stout at basal portion in lateral view, gradually slenderer towards the apex. Aedeagus branched to three lobes in lateral view; dorsal lobe mumbernous, stout and long; middle lobe slender, three-jointed, curved upwardly at apex; ventral one slender, shorter than the middle lobe, with a claw-shaped process at middle portion.

Holotype: Male (8386), Seiku (200m), Daito-machi, Ohara-gun, Shimane Pref., 15. IX. 1985 (H. KADOWAKI). Paratype: 1♂ (8386a), same data as the holotype.

Genus *Mystacides* LINNÉ

50. *Mystacides azurea* LINNÉ, 1761

*Mystacides azurea* LINNÉ, 1761, Fauna Suec., ed. (2): 280; McLAGHLAN, 1865, Trans. Ent. Soc. London, 5: 145, pl. 2, fig. 6, pl. 12, 29, 30; TSUDA, 1942, Mem. Coll. Kyoto Imp. Univ. Ser. B, 17 (1): 295; KOBAYASHI, 1985, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (16): 20.

Specimens examined: 1♂, Kososhi (30m), Matsue-shi, 2. V. 1965 (H. KADOWAKI); 1♂, Takatsu (50m), Matsuda-shi, 20. V. 1965 (H. KADOWAKI); 1♂, Kuri (100m), Ohda-shi, 24. V. 1965 (H. KADOWAKI); 2♂♂1♀, Takatsu (50m), Matsuda-shi, 1. VI. 1965 (H. KADOWAKI); 1♀, Arashima (20m), Yasugi-shi, 15. VI. 1965 (H. KADOWAKI); 1♀, Akana (400m), Akagi-machi, Iishi-gun, 18. VI. 1965 (H. KADOWAKI); 2♂♂, Araki (80m), Saigo-machi, Oki-gun, 10. VII. 1968 (H. KADOWAKI); 1♂, Araki (80m), Saigo-machi, Oki-gun, 26. V. 1970 (H. KADOWAKI); 2♀♀, Choshi River (360m), Saigo-machi, Oki-gun, 10. IX. (M. KOBAYASHI & H. KADOWAKI); 7♂♂1♀, Maki River (600m), Yokota-machi, Nita-gun, 12. IX, (M. KOBAYASHI & H. KADOWAKI).

Genus *Trienodes* McLACHLAN

51. *Trienodes yamamotoi* TSUDA, 1942

*Trienodes yamamotoi* TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17 (1): 296, figs. 46, 47; KOBAYASHI, 1959, Bull. Nat. Sci. Mus. (Tokyo), (44): 349.

Specimen examined: 1♂, Yamada (200m), Daito-machi, Ohara-gun, 28. VIII. 1965 (H. KADOWAKI).

Genus *Oecetis* McLACHLAN

52. *Oecetis nigropunctata* ULMER, 1908

*Oecetis nigropunctata* ULMER, 1908, Deutsch. Ent. Zeitschr.: 345, figs. 4-7; KUWAYAMA, 1934, Tran. Sapporo Nat. Hist. Soc. (13): 270; TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17 (1): 297; KOBAYASHI, 1959, Bull. Nat. Sci. Mus. (Tokyo), (44): 350.

Specimens examined: 3♀♀, Muikaichi (300m), Muikaichi-machi, Kanoashi-gun, 22. VI. 1964 (H. KADOWAKI); 6♀♀, Yamada (200m), Daito-machi, Ohara-gun, 30. VI. 1964 (H. KADOWAKI); 1♂12♀♀, Kososhi (30m), Matsue-shi, 20. V. 1965 (H. KADOWAKI); 3♂♂, Arashima (20m), Yasugi-shi, 25. V. 1965 (H. KADOWAKI); 2♀♀, Takatsu (50m), Masuda-shi, 29. V. 1965 (H. KADOWAKI); 1♀, Takatsu (50m), Masuda-shi, 25. VI. 1965 (H. KADOWAKI); 2♀♀, Takatsu (50m), Masuda-shi, 27. VI. 1965 (H. KADOWAKI); 6♂♂3♀♀, Ai (200m), Nita-machi, Nita-gun, 22. VII. 1965 (H. KADOWAKI); 1♂ Yamada, (20m), Daito-machi, Ohara-gun, 28. VIII. 1965 (H. KADOWAKI); 2♀♀, Kuri (100m), Ohda-shi, 5. IX. 1965 (H. KADOWAKI); 2♀♀, Ai (200m), Nita-machi, Nita-gun, 22. IX. 1965 (H. KADOWAKI); 2♂♂12♀♀, Kososhi (30m), Matsue-shi, 23. IX. 1965 (H. KADOWAKI); 1♂, Kososhi (30m) Matsue-shi, 13. X. 1965 (H. KADOWAKI).

53. *Oecetis orientalis* TSUDA, 1942

*Oecetis orientalis* TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17 (1): 299. fig. 51, 52; KOBAYASHI, 1985, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (16): 20.

Specimens examined: 1♂1♀, Arashima (20m), Yasugi-shi, 25. V. 1965 (H. KADOWAKI); 1♂, Dangyo-no-taki (400m), Tsuma-mura, Oki-gun, 11. IX. 1985 (M. KOBAYASHI & H. KADOWAKI).

54. *Oecetis hamochiensis* KOBAYASHI, 1984

*Oecetis hamochiensis* KOBAYASHI, 1984, Bull. Kanagawa Pref. Mus. (Nat. Hist.), (15): 12, figs. 33-38.

Specimen examined: 1♂, Arashima (20m), Yashugi-shi, 15. VI. 1965 (H. KADOWAKI).

55. *Oecetis odanis* sp. nov. (Figs. 38, 39, 40)

Male: Color yellowish brown. Body 6.0 mm in length. Fore wing 8.8 mm long and 2.2 mm wide. Hind wing 5.9 mm long and 2.0 mm wide. General structure typical for the genus. Hind wing with dense ochraceous and brown pubescence, the brown hairs arranged to form spots over the forks, cross-veins and vein endings (Fig. 38). Genitalia as in Figs. 39, 40. Ninth segment with a excavation of the margin in lateral view. Tenth segment produced in lateral view, triangular, clothed with long hairs, arised a long lobe at basal portion. Clasper with the base dilated in lateral view, and the apex partly stout. Aedeagus stout, long, curved downward.

Holotype: Male (8333), Kuri (100m), Ohda-shi, Shimane Pref., I. VII. 1965 (H. KADOWAKI).

Genus *Trichosetodes*

56. *Trichosetodes japonica* TSUDA, 1982

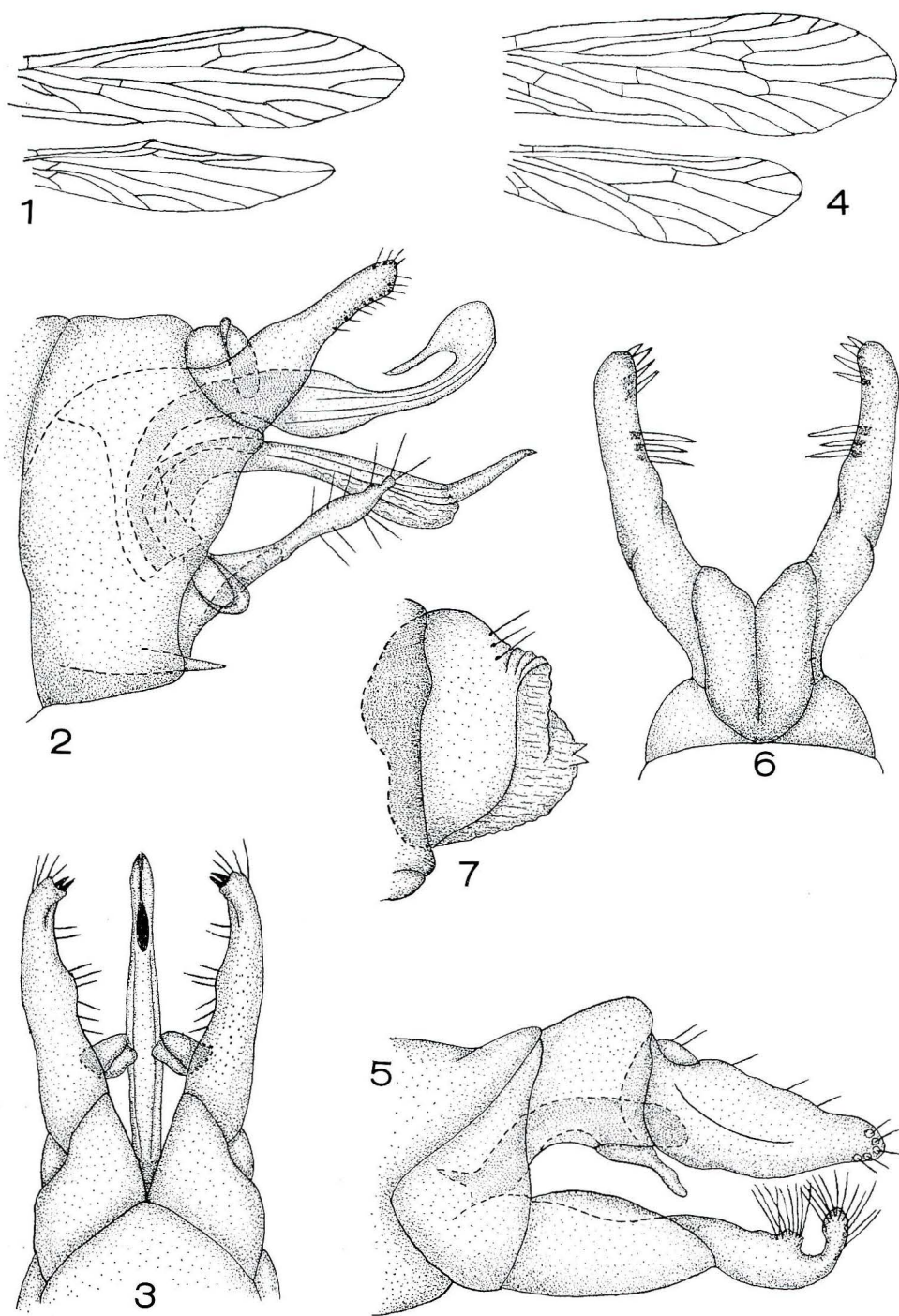
*Trichosetodes japonica* TSUDA, 1942, Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17 (1): 302, figs. 56, 57.

Specimen examined: 1♂, Yamada (200m), Daito-mach, Ohara-gun, 10. VI. 1964 (H. KADOWAKI).

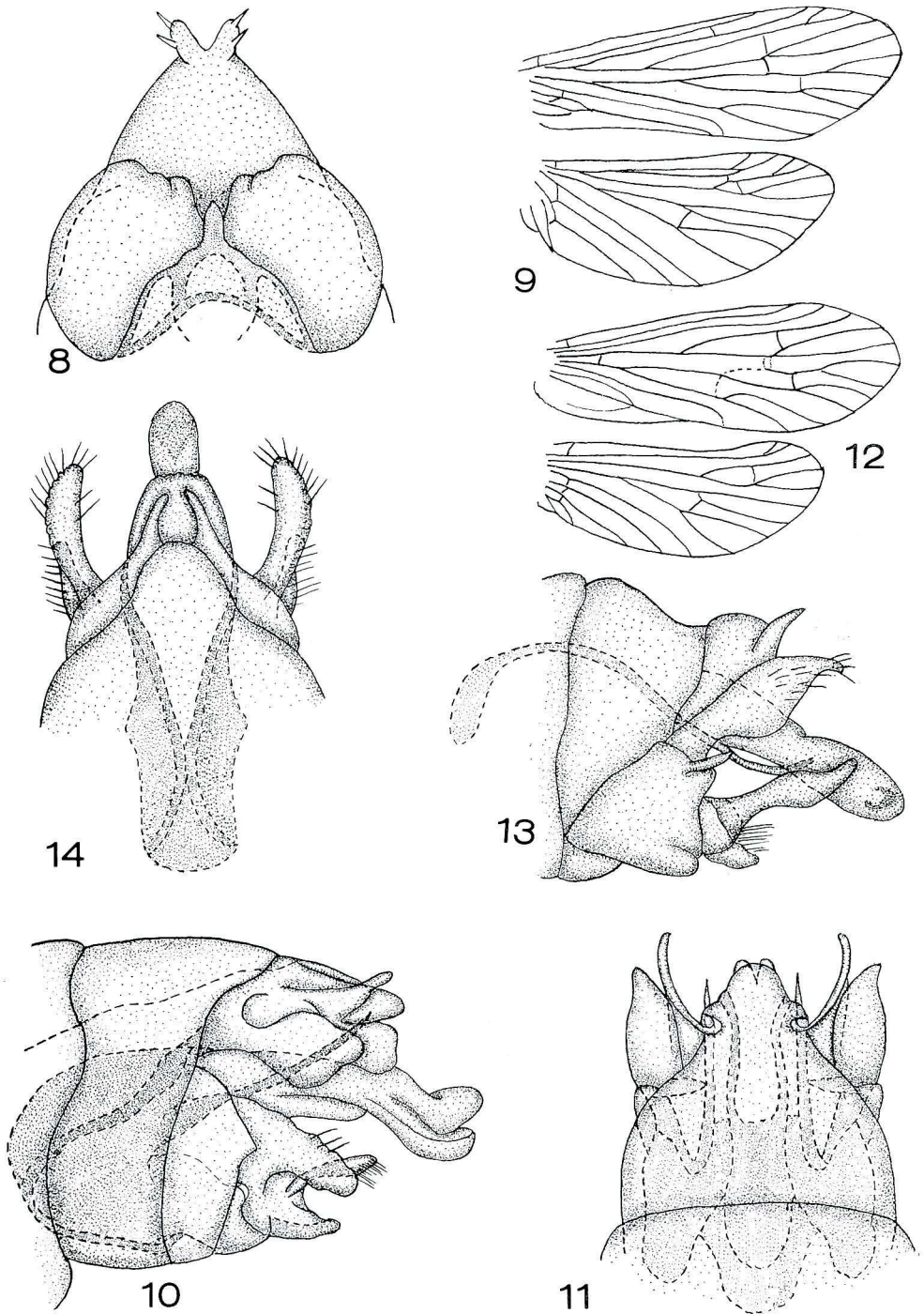
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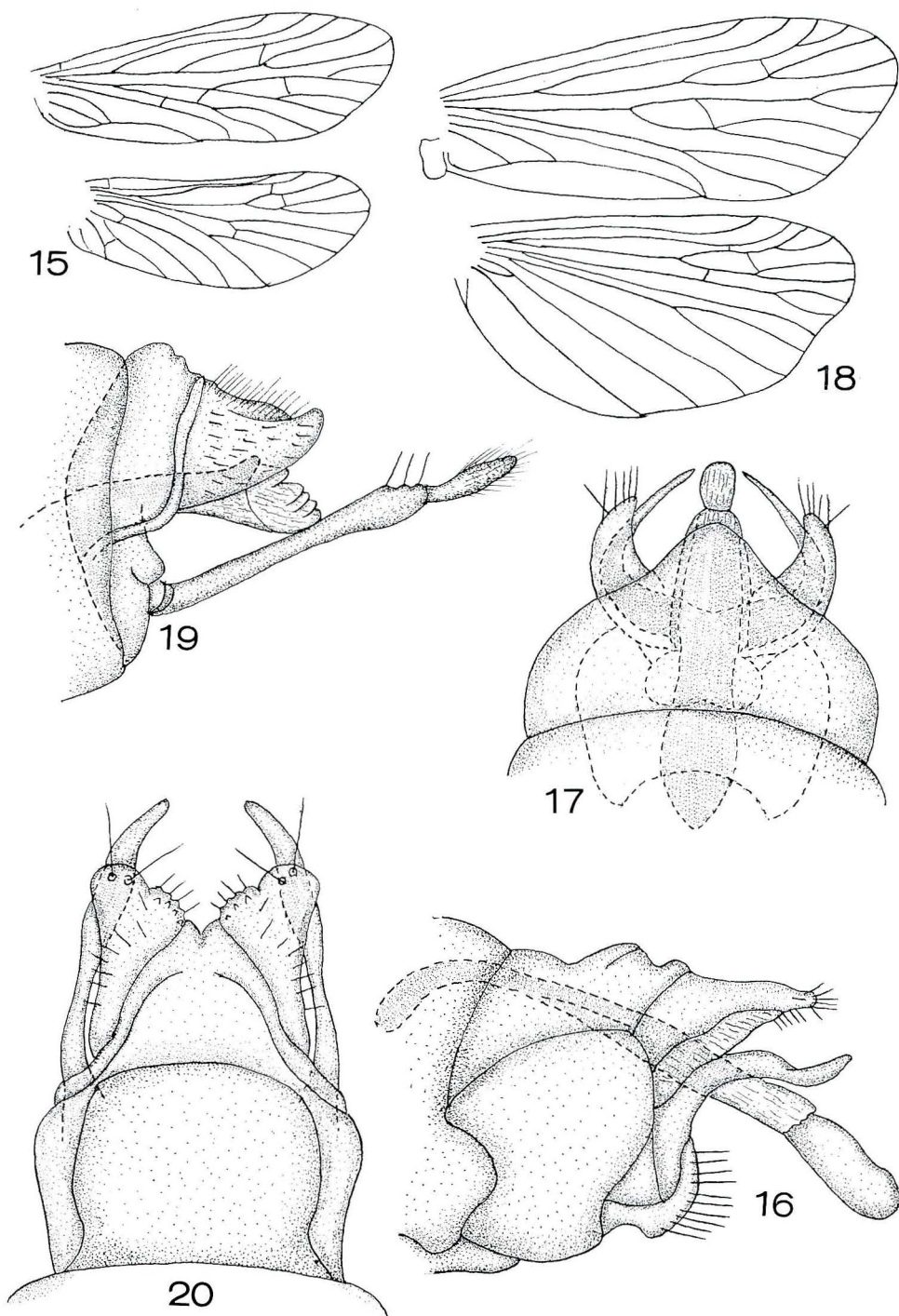
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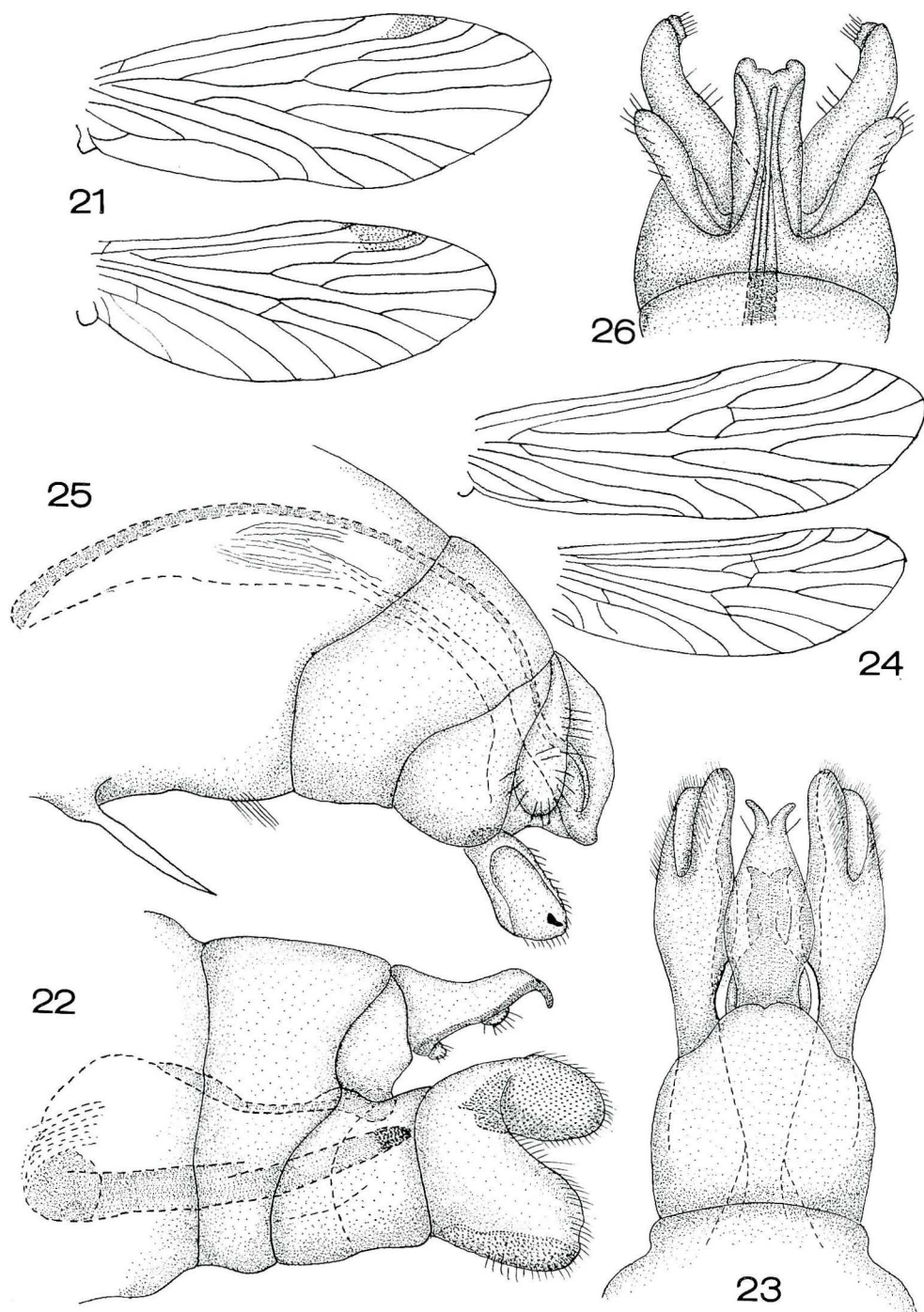
Figs. 1-7. 1-3, venation and male genitalia of *Psychomiella billnis* sp. nov., 1, venation; 2, male genitalia, lateral; 3, same, dorsal. 4-7, venation, male and female genitalia of *Economus kososiensis* sp. nov., 4, venation; 5, male genitalia, lateral; 6, same, dorsal; 7, female genitalia, lateral.



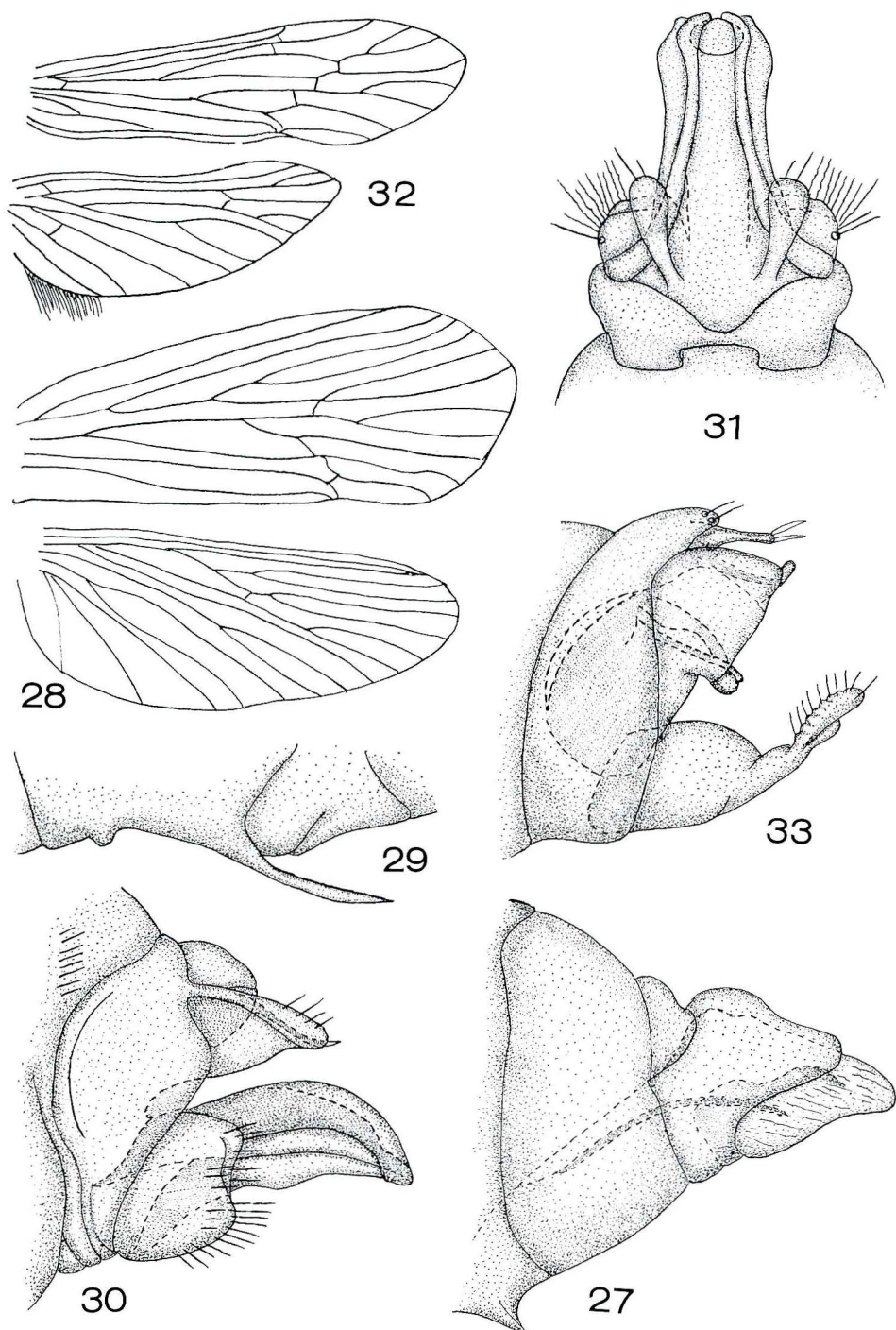
Figs. 8-14. 8, female genitalia of *Economus kososiensis* sp. nov., 8, dorsal. 9-11, venation and male genitalia of *Plectrocnemia okiensis* sp. nov. 9, venation; 10, male genitalia, lateral; 11, same, dorsal. 12-14, venation and male genitalia of *Plectrocnemia kadowakii* sp. nov., 12, venation; 13, male genitalia, lateral; 14, same, dorsal.



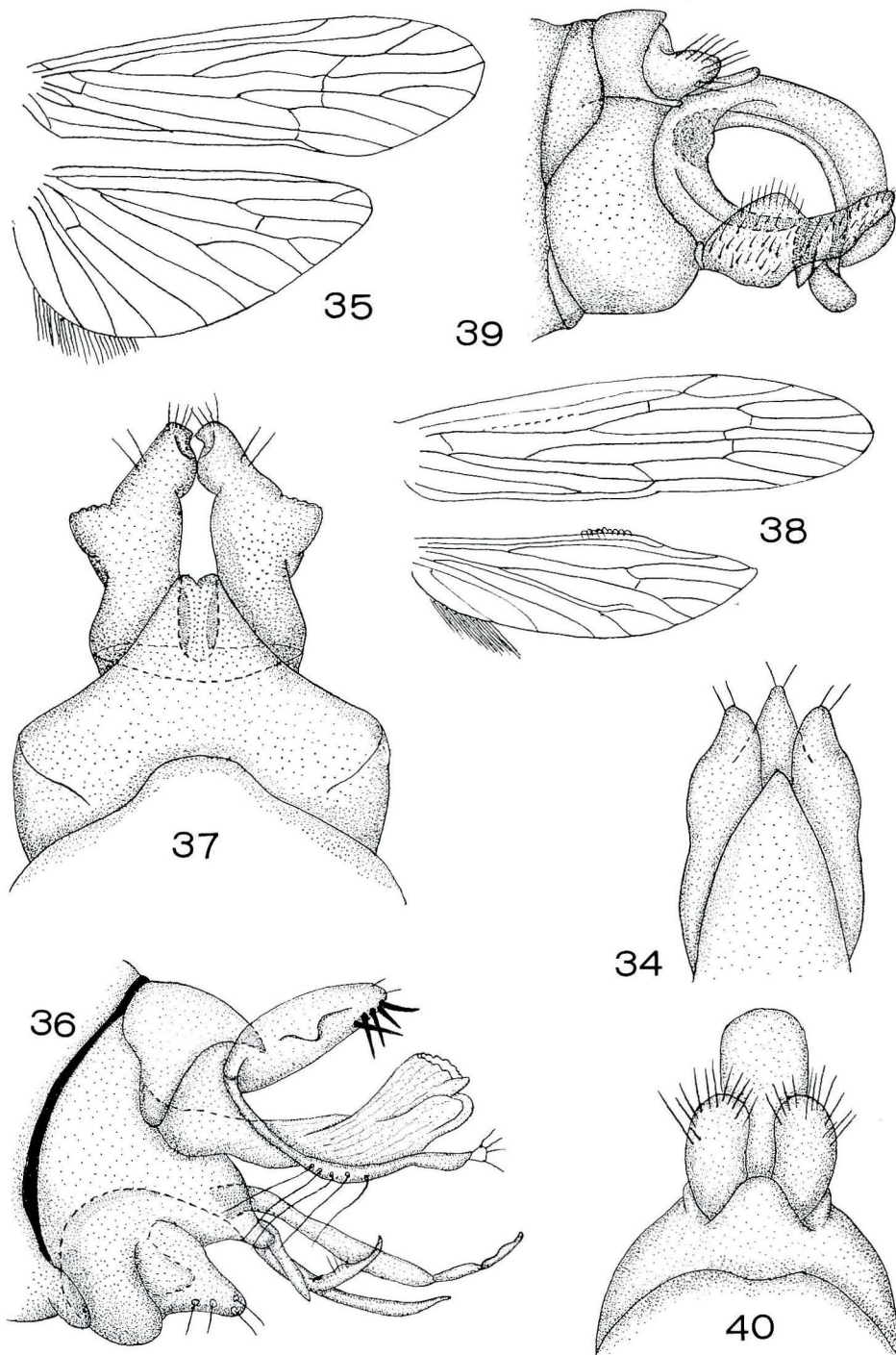
Figs. 15-20. 15-17, venation and male genitalia of *Plectocnemis makiensis* sp. nov. 15, venation; 16, male genitalia, lateral; 17, same, dorsal. 18-20, venation and male genitalia of *Diplectrona aiensis* sp. nov. 18, venation; 19, male genitalia, lateral; 20, same dorsal.



Figs. 21-26. 21-23, venation and male genitalia of *Rhyacophila makiensis* sp. nov. 21, venation; 22, male genitalia, lateral; 23, same, dorsal. 24-26, venation and male genitalia of *Electragapetus kuriensis* sp. nov. 24, venation; 25, male genitalia, lateral; 26, same, dorsal.



Figs. 27-33. 27, female genitalia of *Electragapetus kuriensis* sp. nov., lateral. 28-31, venation, ventral plate and male genitalia of *Goera kawamotonis* sp. nov., 28, venation; 29, ventral plate, lateral; 30, male genitalia, lateral; 31, same, dorsal. 32-33, venation and male genitalia of *Leptocerus takatsunis* sp. nov., 32, venation; 33, male genitalia, lateral.



Figs. 34-40. 34, male genitalia of *Leptocerus takatsunis* sp. nov., dorsal. 35-37, venation and male genitalia of *Leptocerus seikunis* sp. nov., 35, venation: 36, male genitalia, lateral; 37, same, dorsal; 38-40, venation and male genitalia of *Oecites odanis* sp. nov. 38, venation; 39, male genitalia, lateral; 40, same, dorsal.