

屋久島産シマバエ科(双翅目)数種の記録と1新種の記載

誌名	名城大学農学部学術報告
ISSN	09103376
著者	岡留, 恒丸
巻/号	46号
掲載ページ	p. 13-18
発行年月	2010年3月

農林水産省 農林水産技術会議事務局筑波産学連携支援センター
Tsukuba Business-Academia Cooperation Support Center, Agriculture, Forestry and Fisheries Research Council
Secretariat



Original

Some species of Lauxaniidae (Diptera) in the Yakushima Is., South Kyushu, Japan, with Description of a New Species

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Abstract Eighteen species belonging to 10 genera and 2 subfamilies of lauxaniid flies are listed from the Yakushima Island. The description of a new species, *Minettia kusubutaense* are new to science. A key to all known species of *Homoneura* and *Sapromyza* from Yakushima Island is provided.

屋久島産シマバエ科 (双翅目) 数種の記録と 1 新種の記載 (岡留恒丸*)

要約 屋久島に産するシマバエ科 2 亜科 10 属 18 種について報告した。この中で *Minettia* 属の 1 種は、新種 *M. kusubutaense* sp. nov. として記載し、また 9 属 12 種は今回、屋久島の分布が新しく確認された種であり、この中には日本新記録の 2 種が含まれる。さらに、これまで屋久島から記録された種も含め、*Homoneura* 属 8 種と *Sapromyza* 属 3 種については検索表を示した。

Key Words: Diptera, Lauxaniidae, Yakushima Is., new species, new records.

Introduction

The Yakushima Island is located in the southern sea of about 70 km away from Cape Sata in Kyushu mainland, and the area is 502.5 square kms, and an island of belonging to the Osumi Iss. The climate of the Yakushima Is. is different from neighboring islands. It is characterized by the yearly average temperature 21°C in the seaside areas, and the average annual rain fall is over 4,000 mm in the lowland.

This report 18 species, belonging to 10 genera and 2 subfamilies of Lauxaniidae are listed from the Yakushima Is., based on the collection of the Entomological Laboratory, Meijo University [ELMU]: 6 species of *Homoneura*, 3 species of *Sapromyza*, 2 species of *Steganopsis*, 1 species of *Pachycerina*, *Luzonomyza*, *Drepanephora*, *Minettiella*, *Minettia*, *Noetomima* and *Shatalkinella* respectively.

One of them, *Minettia kusubutaense* sp. nov., which were collected in a village of southwestern "Kurio" in the island, and 12 species are newly recorded for the first time from Yakushima Is., these species will also include 2 new record species in Japan.

First record on the lauxaniid flies from the Yakushima Is. by Okadome (1973). He recorded the following 4 species based on the collections of the Meijo University: *Homoneura unguiculata* Kertész, *Minettia longipennis* Fabricius,

Pachycerina sp. 1 and *Steganopsis convergens* Hendel. Since then, four other species have been added to the fauna of this island by Sasakawa et Ikeuchi (1982, 1983, 1985), used a part of lauxaniid specimens of Meijo University collections: *Homoneura latifrons* Malloch, *H. spinicauda* Sasakawa et Ikeuchi, *H. matsumurai* Sasakawa et Ikeuchi and *H. sphincta* Sasakawa et Ikeuchi.

Specimens studied were collected mainly by Malaise trap, and these are preserved the Entomological Laboratory, Faculty of Agriculture, Meijo University, Nagoya, Japan.

Subfamily Homoneurinae

1. *Homoneura repanda* Sasakawa et Ikeuchi

Homoneura repanda Sasakawa et Ikeuchi, 1982: 493.

Material examined. 1♂, Miyanoura, 13–31. V. 1999, T. Murata; 1♀, same locality, 6–27. VIII. 1999, T. Murata; 2♂, same locality, 20. IX. 1999, T. Murata; 1♀, same locality, 6. V.–20. VI. 2000, T. Murata.

Distribution. Japan (Kyushu, Yakushima Is., Ryukyus). New to fauna of Yakushima Is.

Remarks. This species described from Kyushu (Fukuoka Pref.) and Ryukyus (Tokuno-shima, Amami-Oshima, Ishigaki-jima, Iriomote-jima Iss.) in the firstly.

2. *Homoneura sphincta* Sasakawa et Ikeuchi

Homoneura sphincta Sasakawa et Ikeuchi, 1983: 292 (Miyanoura, type locality)

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Received at 27 January 2010
Accepted at 20 March 2010



Fig. 1. Collecting and World Natural Heritage Sites on Yakushima Is., South Kyushu.

Material examined. 1♂3♀, Miyanoura, 13–31. V. 1999, T. Murata; 1♂, same locality, 13–31. V. 1999, T. Murata.

Distribution. Japan (Honshu, Shikoku, Kyushu, Yakushima Is.)

3. *Homoneura spinicauda* Sasakawa et Ikeuchi

Homoneura spinicauda Sasakawa et Ikeuchi 1982: 490 (Miyanoura, Kusugawa, Hinokuchi nr. Anbo and Kurio, Type localities)

Material examined. 2♀, Miyanoura, 6–27. VIII. 1999, T. Murata; 4♂2♀, same locality, 20. IX. 1999, T. Murata.

Distribution. Japan (Honshu, Shikoku, Kyushu, Yakushima Is.)

4. *Homoneura tridentata* Sasakawa et Ikeuchi

Homoneura tridentata Sasakawa et Ikeuchi, 1985: 494 (Miyanoura, type locality)

Material examined. 1♀, Miyanoura, 20. IX. 1959, T. Murata; 1♂2♀, same locality, 24. I.–3. II. 2000, T. Murata; 1♀, Anbo, 19. V. 2000, T. Okadome.

Distribution. Japan (Honshu, Kyushu, Yakushima Is., Ryukyus).

5. *Homoneura unguiculata* (Kertész)

Lauxania unguiculata Kertész, 1913: 100.

Homoneura japonica Czerny, 1932: 15.

Homoneura unguiculata: Okadome, 1973: 100 (Hinokuchi nr. Anbo).

Homoneura unguiculata: Sasakawa et Ikeuchi, 1982: 494.

Material examined. 1♂, Miyanoura, 5–6. IV. 1971, K. Yamagishi; 2♀, same locality, 13–31. V. 1999, T. Murata; 1♂1♀, Anbo, 19. V. 2000, T. Okadome.

Distribution. Ceylon, China, Formosa, USA (immigrant), Japan (Honshu, Shikoku, Kyushu, Yakushima Is., Ryukyus).

6. *Homoneura yamagishii* Sasakawa et Ikeuchi

Homoneura yamagishii Sasakawa et Ikeuchi, 1982: 496.

Material examined. 5♂13♀, Miyanoura, 20. IX.–17. X. 1999, T. Murata; 2♂5♀, same locality, 3–20. IV. 1999, T. Murata.

Distribution. Japan (Hokkaido, Honshu, Kyushu, Yakushima Is., Ryukyus). New to fauna of Yakushima Is.

Remarks. This species described based many specimens collected from Hokkaido, Honshu, Kyushu and Ryukyus (Sasakawa, 1982), and lately added to Ishigaki-jima and Iriomote-jima Iss. (Sasakawa, 1998).

Key to species of *Homoneura* known from the Yakushima Is., Kyushu

1. Arista pubescent 2
- Arista plumose 4
2. Intradorsocentral setulae 4 rows; cercus brown
..... *H. matsumurai*
- Intradorsocentral setulae 6 rows; cercus yellow 3
3. Fifth abdominal tergite with a pair of small dark markings
..... *H. tridentata*
- Fifth abdominal tergite without dark mark *H. sphincta*
4. Wing with dark spots 5
- Wing without dark spots 6
5. Tergites 3 to 5 with median dark line *H. spinicauda*
- Tergites 3 to 5 without median dark line *H. latifrons*
6. Palpus entirely fulvous *H. repanda*
- Palpus entirely yellowish 7
7. Arista somewhat thick hairs; cercus yellowish
..... *H. yamagishii*
- Arista slightly coarse; cercus blackish brown
..... *H. unguiculata*

Subfamily Lauxaniinae

7. *Pachycerina javana* (Macquart)

Pachycerina javana Macquart, 1851: 247.

Pachycerina javana: Malloch, 1929: 20.

Pachycerina sp. 1: Okadome, 1973: 100 (Hinokuchi nr. Anbo).

Material examined. 1 ♂ 1 ♀, Miyanoura, 15. III. 1972, T. Murata; 6 ♂ 2 ♀, Hinokuchi nr. Anbo, 27–30. III. 1971, K. Yamagishi; 1 ♀, Onoaida, 3. I. 1965, I. Hiura; 3 ♀, Kurio, 13. VII. 1970, K. Yamagishi.

Distribution. Java, Ceylon, India (Assam), Nepal, Philippines, Sunda, Formosa, Japan (Yakushima Is.).

Remarks. This genus previously recorded as *Pachycerina* sp. 1 from Hinokuchi nr. Anbo in this island (Okadome, 1973).

8. *Steganopsis convergence* Hendel

Steganopsis convergence Hendel, 1913: 102.

Steganopsis convergence: Okadome, 1973: 100 (Hinokuchi nr. Anbo)

Material examined. 1 ♀, Kurio, 13. III. 1972, K. Yamagishi; 1 ♀, Hinokuchi, nr. Anbo, 8. VII. 1970, K. Yamagishi; 2 ♀, same locality, 27–30. III. 1971, K. Yamagishi.

Distribution. USA (immigrant), Formosa, Philippines,

Indonesia, Australia, Japan (Yakushima Is., Ryukyus).

Remarks. In Japan, this species was first recorded from Yakushima Is. by author (Okadome, 1973), thereafter, added to some specimens by Sasakawa (1998) from Amami-Oshima, Okinawa, Miyako-jima, Ishigaki-jima and Iriomote-jima Iss.

9. *Steganopsis dichroa* Shatalkin

Steganopsis dichroa Shatalkin, 1998: 59.

Material examined. 1 ♂ 1 ♀, Kurio, 13. VII. 1970, K. Yamagishi.

Distribution. Japan (Kyushu, Yakushima Is.). New to fauna of Yakushima Is.

Remarks. This species was originally described on the basis of two males collected from Kita-kyushu, Fukuoka, Japan (Shatalkin, 1998).

10. *Luzonomyza (Sinica) forficula* (Shatalkin)

Trigonometopus (Tetroxyrhina) forficula Shatalkin, 1997: 166.

Luzonomyza (Sinica) forficula: Shatalkin, 2000: 88.

Material examined. 1 ♀, Miyanoura, 20. IX–17. X 1999, T. Murata.

Distribution. Japan (Kyushu, Yakushima Is.). New to fauna of Yakushima Is.

Remarks. This species originally described on the basis 3 male specimens collected from Kita-kyushu, Fukuoka, Japan (Shatalkin, 1997).

11. *Drepanephora piliseta* Hendel

Drepanephora piliseta Hendel, 1913: 101.

Material examined. 1 ♂, Miyanoura, 5. IV. 1971, T. Murata; 1 ♂, Kurio, 1–4. IV. 1971, K. Yamagishi.

Distribution. Formosa, Japan (Ryukyu, Yakushima Is.). New to fauna of Yakushima Is.

Remarks. In Japan, first record from Okinawa Is. based one male specimens by Sasakawa (1998).

12. *Minettiella coracina* (Shatalkin)

Minettia (Minettiella) coracina Shatalkin, 1992: 73.

Minettiella coracina: Shatalkin, 2000: 54.

Material examined. 2 ♂ 1 ♀, Kurio, 12. VIII. 1964, T. Okadome; 1 ♀, Mt. Tachu-dake, Anbo, 17. VII. 1970, K. Yamagishi.

Distribution. Russia, Korea, Japan (Yakushima Is.). New to fauna of Japan.

13. *Minettia kusubutaense* Okadome, sp. nov.

Male. Body length 4.7–5.0 mm, Wing length 5.0–5.5 mm.

Head yellowish brown, slightly higher than long, wider than long. Frons width at level of posterior orbital bristles about 3.0 times length from anterior ocellus to frontal margin, parallel-sided. Anterior front-orbital bristle situated about midway between anterior edge of frons and posterior bristle. Eye nearly rounded. Antennae pale yellow, arising slightly above middle of head, third segment about 1.3 times as long as wide. Arista fulvous, except slightly basal pale yellow, long pubescent. Cheek/eye ratio about 0.16. Face fulvous, flat concave in profile. Palpus brownish yellow slightly darker at apex with some bristles on apical portion.

Thorax yellow to yellowish brown. Mesonotum uniformly covered with short setulae, 0+3 dorsocentral bristles, first *dc* weaker than strongest posterior pairs. Introdorsocentral setulae in about 10 irregular rows. Pair of prescutellar acrostichal bristles present. Pleura yellow, immaculate. Anepisternum with 1 strong anepisternal bristle near at upper margin. Legs pale yellow. Fore femur with 10–12 strong bristles on postero- to posterodorsal surface, 5 strong posterodorsal surface, 4–5 strong posteroventral bristles. Mid femur with 4–5

subapical anterior spurs, 1 strong subapical posterior bristle. Hind femur with 1 strong subapical anterior spur. Mid tibia as long as whole tarsus. Wings hyaline, without dark markings, stigma tinged with yellowish brown vein light yellow. Vein R_{2+3} almost straight apex gradually meeting costal vein, penultimate section of M_{3+4} about 1.3 times as long as posterior crossvein and 4.4 times as long as penultimate section of M_{3+4} and M_{1+2} almost parallel. Halteres yellowish white.

Abdomen yellowish brown, tergite 1+2 and tergite 3 about same in size, tergite 4 about equal to tergite 3, tergite 4 about 1.4 times tergite 5. Epandrium about 1.6 times as long as broad, rather sparsely setulose on lateral surface. Protandrium circular with a ventral bridge and without setulae around spiracle. Surstyli divided from epandrium, symmetry, stout and curved caudally, with a small process and bearing about 5 small bristles on subapically.

Female. Body length 6.0–6.5 mm, Wing length 6.3–6.7 mm.

Agreeing with male except for usual sexual differences. Sternite 8 with a pair black marking.

Holotype. ♂, Kurio, Yakushima Is. Kyushu, 12. VIII. 1964, T. Okadome; Paratypes. Japan, 1♀, Miyaura, Yakushima Is., 13–31. V. 1999, T. Murata; 1♂, same locality, 6–27. VIII. 1999, T. Murata; 1♀, same locality,

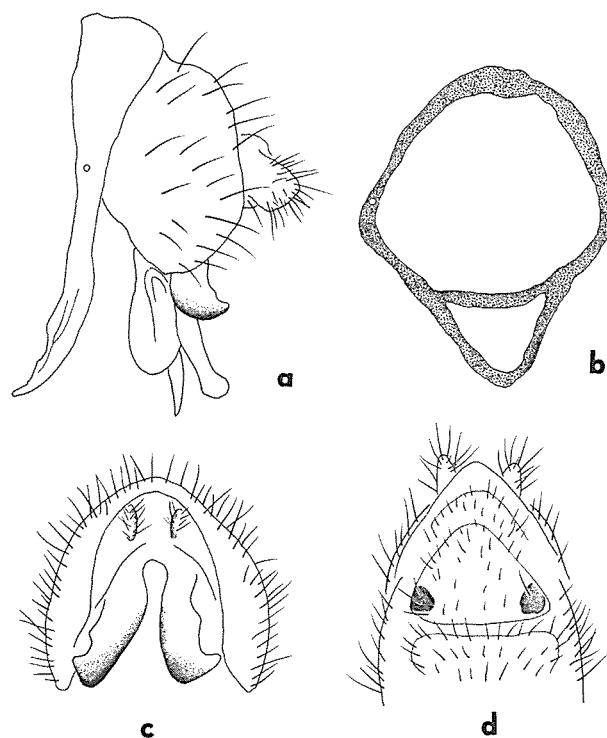


Fig. 2. *Minettia kusubutaense* sp. nov., ♂, epandrium and protandrium, lateral (a), protandrium, posterior (b), epandrium, anterior (c), ♀, postabdomen, ventral (d).

20. IX. 1999, T. Murata; 1 ♀, same locality, 18. X.–30. XI. 1999, T. Murata; 1 ♂, same locality, 10. III.–8. VIII. 2000, T. Murata; 1 ♂ 1 ♀, Shiratani, Miyanoura, 600 m, 6. V.–20. VI. 2000, T. Murata.

Remarks. This species closely related to *M. punctata* Sasakawa, 1985 occurring Japan, but differs in the following characters: the intradorsocentral setulae in the mesonotum are 10 irregular rows, but 6 rows in *punctata*; the scutellum with a pair black spot between basal and apical scutellar setae in *punctata*, but without in *kusubutaense*.

Etymology. The specific name comes from which were collected holotype specimens a place names in the Kurio village in Yakushima Is.

14. *Sapromyza laticincta* Shatalkin

Sapromyza laticincta Shatalkin, 1998: 214

Material examined. 5 ♂ 14 ♀, Mt. Tachiu-dake (1000 m), Anbo, Yakushima Is., 17. VII. 1970, K. Yamagishi; 1 ♂, Kurio, 1–4. IV. 1971, K. Yamagishi; 1 ♂, Anbo, 19. V. 2000, T. Okadome.

Distribution. Russia, Japan (Kyushu, Yakushima Is.). New to fauna of Yakushima Is.

Remarks. This species described from Japan (Kagamihaga, Kita-kyushu, Kyushu, one male) and Russia (one female).

15. *Sapromyza (Sapromyza) takagii* Elberg

Sapromyza (Sapromyza) takagii Elberg, 1993: 253

Sapromyza takagii: Okadome, 2008: 3.

Material examined. 1 ♀, Kurio, 1–4. IV. 1971, T. Murata; 1 ♂, Shiratani, Miyanoura, 13–31. V. 1999, T. Murata; 3 ♀, same locality, 20. IX.–17. X. 1999, T. Murata.

Distribution. Japan (S. Kuriles, Hokkaido, Yakushima Is., Ryukyus). New to fauna of Yakushima Is.

16. *Sapromyza (Sapromyza) zebra* (Kertész)

Lauxania (Minettia) zebra Kertész, 1913: 95.

Sapromyza (Sapromyza) zebra: Shewell, 1984: 193.

Material examined. 1 ♂, Koshima, 8. VII. 1970, K. Yamagishi; 2 ♂ 6 ♀, Hinokuchi nr, Anbo, 27–30. III. 1971, K. Yamagishi; 5 ♂ 1 ♀, Kurio, 1–4. IV. 1971, K. Yamagishi; 7 ♂ 10 ♀, Miyanoura, 5–6. IV. 1971, K. Yamagishi; 1 ♂, Koseda, 13. III. 1972, T. Murata; 1 ♂, Miyanoura, 10. III. 1972, T. Murata.

Distribution. Formosa, Nepal, Japan (Ryukyus,

Yakushima Is.). New to fauna of Yakushima Is.

Key to species of *Sapromyza* known from the Yakushima Is., Kyushu

1. Dorsocentral bristles 0+2 2
- Dorsocentral bristles 0+3 *S. laticincta*
2. Arista with short hairs; mesonotum with 2 median longitudinal dark bands; intradorsocentral setulae in irregular 4 rows; frons with 2 distinct submedian vittae; femora brown *S. zebra*
- Arista with long hairs; mesonotum without median longitudinal dark band; intradorsocentral setulae in irregular 6 rows; frons without vitta; femora yellow *S. takagii*

17. *Noeetomima aberrans* Shatalkin

Noeetomima aberrans Shatalkin, 1992: 79.

Material examined. 1 ♂, Miyanoura, 22. VII. 1971, T. Murata.

Distribution. Russia (Chishima Iss.), Japan (Yakushima Is.). New to the fauna of Japan..

18. *Shatalkinella okinawanus* (Sasakawa)

Protrigonometopus okinawanus Sasakawa, 1998: 71.

Shatalkinella okinawanus: Papp, 2007: 84.

Material examined. 1 ♂, Miyanoura, 22. VII. 1971, T. Murata.

Distribution. Japan (Okinawa Is., Yakushima Is.). New to the fauna of Yakushima Is.

Remarks. This species no record after original description from Okinawa Is.

Acknowledgements

The Entomological Laboratory, faculty of Agriculture, Meijo University material was made available through the courtesy of Professor K. Yamagishi. I am also grateful to Dr. A. L. Shatalkin, Zoological Museum of Moscow State University for identifying some lauxaniid species and Mr. T. Murata, Yakushima Is. for his kindness in collecting the valuable materials.

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