
日米科学協力研究：太平洋地域の昆虫類の地理的分布と生態
Japan-U. S. Co-operative Science Program : Zoogeography and
Ecology of Pacific Area Insects

NEW AND UNRECORDED SPECIES OF DROSOPHILIDAE IN THE AMAMI ISLANDS, JAPAN

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By the courtesy of kind recommendation and arrangement of Dr. Syoziro Asahina, National Institute of Health, an opportunity was given to the author to participate in a scientific expedition to investigate insect fauna in the Amami Islands (Amamiôshima and Tokunoshima) in the summer, 1963, as a project of the Japan-U. S. Cooperative Science Program. The following is a result of the expedition with respect to Drosophilidae collected by the author, combined with a result of a survey made in the autumn, 1960, by Dr. Yûzo Kitazawa, Tokyo Metropolitan University.

Six species of the family have hitherto been known in the Amami Islands. They are *Drosophila (Dorsilopha) busckii* Coquillett, *D. (Sophophora) melanogaster* Meigen, *D. (S.) ananassae* Doleschall, *D. (S.) kikkawai* Burla, *D. (Drosophila) repleta* Wollaston and *D. (D.) komaii* Kikkawa and Peng, all recorded by Kikkawa and Peng (1938). Among these, only one (*repleta*) is involved in the author's collection and two (*melanogaster*, *kikkawai*) in Dr. Kitazawa's. The present research resulted in adding to the fauna nineteen species, three of which are new to science and two are newly recorded from Japan. In addition, so far as the species found in the Amami Islands are concerned, the data of new record from other districts are given, as shown in parenthesis.

The author wishes to express his sincere thanks to Dr. Syoziro Asahina for his kind management for the expedition, and to Dr. Yûzo Kitazawa and Mr. Ken-ichi Toda who have bestowed valuable material to the author.

1. *Leucophenga ornata* Wheeler

Leucophenga ornata Wheeler, 1959. Univ. Texas Publ., 5914: 184.

Specimen examined: 1♂, Mt. Yuwan, Amamiôshima, 7. viii. '63 (by sweeping, Okada). (1♂, Kirishimajingu, Kagoshima Pref., 30. x. '63, Okada).

Distribution: Java, Amami (new record), Kyushu proper (new record), Honshu, Korea.

2. *Leucophenga interrupta* Duda

Leucophenga interrupta Duda, 1924. Arch. Nat. 90A 3: 237.

Specimen examined: 1♂, Sumiyō, Amamiōshima, 8.viii.'63 (by sweeping, Okada). (stock from Yunomine, Wakayama Pref., 12.x.'56, Okada).

Distribution: Formosa, Amami (new record), Kyushu proper, Honshu (new record).

3. *Leucophenga guttiventris* (de Meijère)

Drosophila guttiventris de Meijère, 1911. Tijd. Ent., 54: 414.

Specimens examined: 2♀♀, Nase, Amamiōshima, 3-4.viii.'63 (by sweeping); 1♀, Sumiyō, Amamiōshima, 8-9.viii.'63 (by sweeping); 4♀♀, Kametsu, Tokunoshima, 11-14.viii.'63 (by sweeping; at fungi) (all by Okada).

Distribution: Africa, Java, Formosa, Amami (new record), Honshu, Fiji.

4. *Leucophenga concilia* Okada

Leucophenga concilia Okada, 1956. Syst. Study of Dros.: 31.

Specimens examined: 6♂♂, 19♀♀, Nase, Amamiōshima, 3-4.viii.'63 (by sweeping); 1♂, Yuwan, Amamiōshima, 5-9.viii.'63 (by sweeping); 1♂, Sumiyō, Amamiōshima, 8-9.viii.'63 (by sweeping); 1♀, Kametsu, Tokunoshima, 11-14.viii.'63 (by sweeping) (all by Okada).

Distribution: Amami (new record), Shikoku, Honshu, Korea.

5. *Leucophenga angusta* Okada

Leucophenga angusta Okada, 1956. Syst. Study of Dros.: 28.

Specimen examined: 1♂, Nase, Amamiōshima, 3-4.viii.'63 (by sweeping, Okada).

Distribution: Amami (new record), Honshu.

6. *Mycodrosophila takachihonis* Okada

Mycodrosophila takachihonis Okada, 1956. Syst. Study of Dros.: 47.

Specimens examined: 1♀, Mt. Yuwan, Amamiōshima, 7.viii.'63 (at fungi, Okada). (1♂, 1♀, Kamikawa, Mie Pref., 19-21.x.'60, by sweeping, Okada; 2♂♂, 3♀♀, Naeba, Gunma Pref., 3.viii.'63, (at fungi, K. Toda).

Distribution: Amami (new record), Kyushu proper, Honshu (new record).

7. *Liodrosophila bicolor* Okada

Liodrosophila bicolor Okada, 1956. Syst. Study of Dros.: 59.

Specimens examined: 1♀, Nase, Amamiōshima, 3-4.viii.'63 (by sweeping, Okada); 1♂, Sumiyō, Amamiōshima, 8-9.viii.'63 (by sweeping, Okada). Male was collected for the first time.

Distribution: Amami (new record), Kyushu proper.

8. *Lissocephala asiatica* sp. nov. (Figs. 1-3)

♀. Body about 2.4 mm, orange brown. Head metallic blue black, much broader than thorax. Eye dark red, with thick piles. Ocelli dark red. Antenna with second

joint orange yellow, third black, elongate, apically narrowing, and hairy. Arista with about seven upper and three lower branches besides a small fork. Palpus orange yellow, slender, with an apical strong seta. Ocellar triangle, periorbits and front metallic blue black; former two slightly convex; boundary between latter two with grey pollinosity. Periorbits reaching anterior margin of front. Proboscis pale yellowish orange, comparatively large and long. Clypeus, occiput and face black; carina whitish, narrow and long. Cheek black, about one fifth as broad as the greatest diameter of eye. Lower reclinate orbital minute, outside proclinate, slightly nearer to proclinate than to upper reclinate; proclinate subequal to upper reclinate in size. Only one weak oral.

Mesonotum orange brown, laterally with a large glossy black somewhat purplish spot. Scutellum orange brown, laterally black. Metanotum laterally black. Thoracic pleura yellow, sternepisternum purplish black, upper and lower margins of episternum black. One small humeral. Acrostichals in two rows. Anterior dorsocentrals as long as posteriors, slightly more apart from each other than from posterior. Posterior scutellars divergent, long. Anterior sternopleurals minute; sterno-index about 0.2.

Legs yellow, mesocoxa black, femora dark on distal half, metatarsus longer than three succeeding tarsal joints taken together. Preapicals on all tibiae, apicals on first and second. Wings (Fig. 1) comparatively narrow, with two broad cross dark bands: inner band occupies area below r_{4+5} , remaining pale streak in discal cell; outer band occupies apical two-thirds of the wing, clearly demarkated with an undulated line on inner margin, diffused outward. Cells below first costal section and below r_1 also black. Posterior crossvein clear, not covered by dark band. Anal lobe vestigial. Costa reaching end of m , r_{2+3} apically gently curved to the costa, r_{4+5} and m slightly convergent distally. C-index about 1.5; 4V-index about 2.2; 4C-index about 1.7; 5X-index about 2.4. Cl-bristles two, lower longer: C3-bristles on basal 1 two-thirds. Halteres black, posterior margin pale.

Abdomen narrow, especially at base, glossy dark brownish black, somewhat purplish. Cerci conical and yellow. Abdominal sternites grey, quadrate, more or less broader than long, ninth sternite elongate and apically bifid.

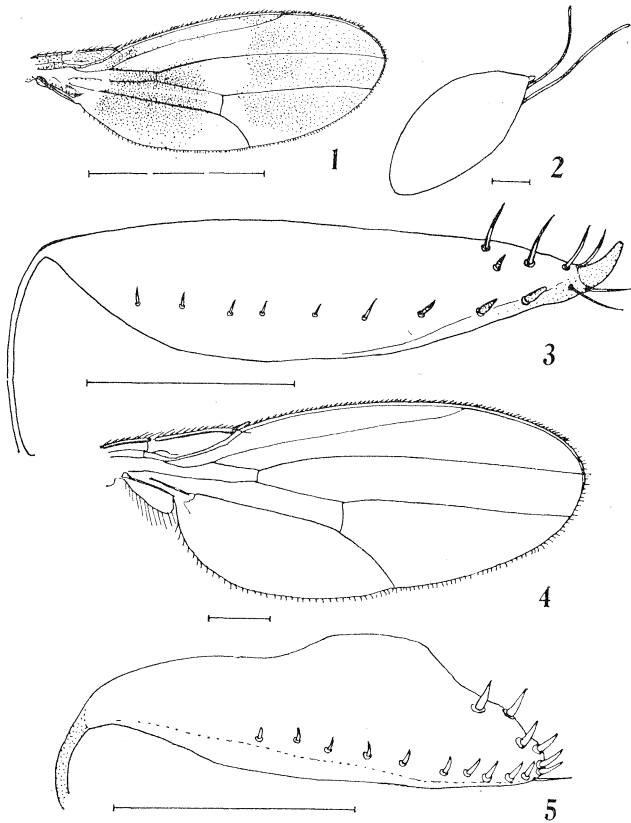
Egg-guide (Fig. 3): Lobe elongate, fusiform, pale yellowish orange, apically darker, triangularly pointed, with about fifteen marginal and one distal discal orange teeth, ultimate marginal tooth huge and thick, slightly curved upward, succeeding two or three lower marginal teeth smaller, upper marginal teeth very slender. Basal isthmus dark, long, narrow, about two-fifths as long as lobe.

Egg (Fig. 2) about 0.5 mm in length, 0.2 mm in width, thick elliptical in ventral aspect, both tips somewhat pointed in lateral aspect. Egg filaments four, slender, subequal in length, slightly shorter than egg. A longitudinal row of egg surface cells about twenty.

Holotype: ♀, Nase, Amamiōshima, 4. viii. '63 (by sweeping, Okada). Deposited at the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

Relationships: Differs from African forms, *L. unipuncta* Malloch and *L. sanu* Burla in wing patterns, which are restricted near the costa in both allied species.

Remarks: The genus *Lissocephala* Malloch, 1929, seems to be recorded for the second time from Asia, if it is granted that *Drosophila metallescens* de Meijère is



Figs. 1-3. *Lissocephala asiatica* sp. nov. 1, female wing, 2, egg, 3, egg-guide, (scale 1 mm in fig. 1, otherwise 0.1 mm).

Figs. 4-5. *Drosophila (Paradrosophila) kitazawai* sp. nov. 4, female wing, 5, egg-guide, (scale 0.1 mm).

really *Lissocephala* as pointed out by Malloch (1934, Ins. Samoa, VI, 8, p. 289) and Harrison (1954, Trans. Roy. Ent. Soc. London, 105, p. 114), not belonging to *Liodrosophila* Duda, 1922, as considered by Duda (1923, Ann. Mus. Nat. Hung., 20, p. 38, etc.).

9. *Drosophila (Paradrosophila) coracina* Kikkawa and Peng

Drosophila (Paradrosophila) coracina Kikkawa and Peng, 1938. Japan. J. Zool., 7: 523.

Specimens examined: 4♂♂, 1♀, Sumiyō, Amamiōshima, 26. x. '60 (in garbage, Kitazawa).

Distribution: Amami (new record), Kyushu, Honshu, Hokkaido, Korea, China.

10. *Drosophila (Paradrosophila) dorsata* Duda

Drosophila dorsata Duda, 1924. Arch. Naturg., 90A 3: 248.

Specimen examined: 1 ♀, Yuwan, Amamiōshima, 5-8. viii. '63 (at fruit trap, Okada).

Distribution: Viet-nam, Formosa, Amami (new record).

Remarks: The specimen strictly coincides with Duda's original description, except that acrostichals in the present form are more than six rows.

11. *Drosophila (Paradrosophila) kitazawai* sp. nov. (Figs. 4-7)

♂, ♀. Body about 2.5 mm in length, deep yellowish brown, abdominal tergites nearly entirely black. Eye red, with short thick piles. Antenna with first joint yellowish brown; second greyish, slightly more than twice as long as broad, somewhat narrowing distally. Arista with comparatively long branches, upper four and lower two, besides a large terminal fork. Ocellar triangle grey, pollinose. Periorbits grey, pollinose, straight, not reaching anterior margin of front. Front deep reddish brown, anteriorly paler, nearly as broad as long. Clypeus pale brown. Carina high, narrow and long. Cheek yellowish brown, narrow, about one-twelfth as broad as the greatest diameter of eye. Occiput dark brown. Proclinate orbital strong, slightly longer than upper reclinate; lower reclinate slightly less than half upper reclinate in length, situated just outside proclinate. Only one long oral.

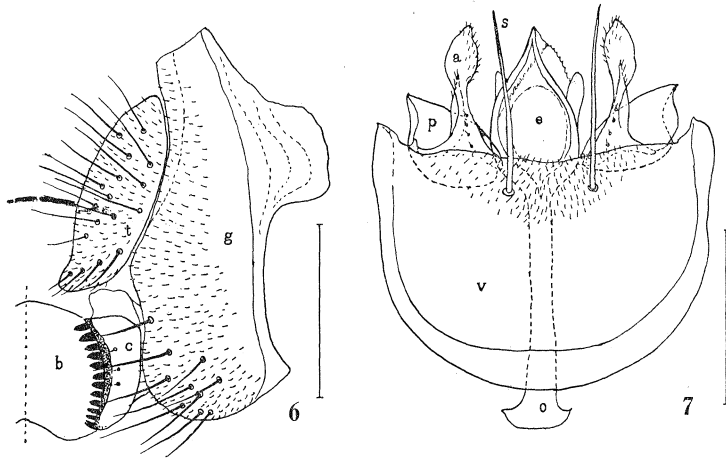
Mesonotum reddish brown, submedially often with a pair of narrow dark longitudinal stripes. Scutellum reddish brown, unicolorous. Thoracic pleura usually brownish black, sternepisternum yellowish. Humerus pale brown, with two humerals, lower longer. Prescutellars rather weak but long. Acrostichals in about eight rows. Cross distance of dorsocentrals slightly less than twice length distance. Anterior dorsocentrals about half as long as posteriors. Sterno-index about 0.55.

Legs pale yellowish orange, metatarsus longer than two succeeding tarsal joints taken together. Preapicals on third tibia, fine but long; apicals on second, strong. Wings (Fig. 4) hyaline, crossveins clear. Costa somewhat dark, r_{2+3} apically slightly curved to costa. Wing tip exceedingly rounded. C-index about 1.6; 4V-index about 2.6; 4C-index about 1.7; 5X-index about 2.0-2.5. C1-bristles two, equal in length. C3-bristles on basal three-fourths. Halteres yellowish brown, stalk darker.

Abdominal tergites black, narrowly yellowish anteriorly; pale area broader in first and second tergites. Abdominal sternites pale yellow.

Periphallal organs (Fig. 6) brownish black. Genital arch truncate below, lower anterior margin rectangular, lower posterior margin rounded; upper portion without macrotrichia but microtrichia, lower portion with about ten macrotrichia besides microtrichia. Clasper one, oblong, slightly projected below genital arch, posterior margin slightly concaved, with about twelve strong black teeth in a slightly concaved row, secondary teeth absent, three fine setae on inner surface at middle. Anal plate oblong, with thick micro- and macrotrichia; lower portion somewhat curved posteriorly and paler. Decasternum pale, large, pentagonal.

Phallic organs (Fig. 7): Aedeagus pale yellowish brown, oval and apically pointed in ventral aspect, oblong and truncate in lateral aspect; dorsal margin with fine serration. Apodeme of aedeagus brown, thick and straight. $PI=0.67$. Anterior



Figs. 6-7. *Drosophila (Paradrosophila) kitazawai* sp. nov. 6. periphallallic organs, 7. phallic organs (ventral aspect), (scale 0.1 mm). a. anterior paramere, b. decasternum, c. clasper, e. aedeagus, g. genital arch, o. apodeme of aedeagus, p. posterior paramere, s. submedian spine, t. antennal plate, v. ventral fragma.

paramere club-shaped, pale yellowish grey, with a longitudinal row of about four sensilla near base, distally with fine microtrichia. Posterior parameres broad, lobule, dark brownish yellow, dorsally curved. Ventral fragma round anteriorly, pale brown, medially paler, distal margin nearly straight, mediodistally with fine microtrichia. Submedian spines strong, black, longer than anterior paramere.

Egg-guide (Fig. 5): Lobe yellowish orange, fusiform, apically gently pointed, with about fourteen marginal and two distal discal strong yellow teeth. Ultimate marginal tooth distantly located on the upper margin of lobe, apart from penultimate. Sub-terminal hair subapical. Basal isthmus thick, rather short and dark brown.

Holotype: ♂, Nase, Amamiōshima, 4. viii. '63 (at fruit trap, Okada).

Allotype: ♀, Sumiyō, Amamiōshima, 25. x. '60 (in garbage, Kitazawa). Types deposited at the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

Other specimens examined: 7♂♂, 2♀♀, collected together with allotype (Kitazawa); 3♂♂, Akakina, Amamiōshima, 30. x. '60 (in garbage, Kitazawa).

Relationships: Resembles *D. (P.) interrupta* Duda from New South Wales in having dark abdomen, broad pale periorbits, fewer number of arisal branches, somewhat dark thoracic pleura, etc., but differs from it in having abdominal black bands not sharply interrupted at middle, 4V- and 5X-indices higher, and scutellum unicolorous.

Remarks: The specific name is contributed to Dr. Yūzo Kitazawa who collected this species for the first time.

12. *Drosophila (Sophophora) suzukii* (Matsumura)

Leucophenga suzukii Matsumura, 1931. Six thous. Illus. Ins. Japan: 367.

Specimen examined: 1 ♀, Kametsu, Tokunoshima, 11-14. viii. '63 (by sweeping, Okada).

Distribution: Amami (new record), Kyushu proper, Shikoku, Honshu, Hokkaido, Korea, China, Manchuria.

13. *Drosophila* (*Sophophora*) *takahashii* Sturtevant

Drosophila takahashii Sturtevant, 1927. Philip. J. Sci., 32: 371.

Specimens examined: 1 ♀, Nase, Amamiōshima, 3-4. viii. '63 (at fruit trap, Okada): 5 ♂ ♂, 3 ♀ ♀, Sumiyō, Amamiōshima, 8-9. viii. '63 (at fruit trap, Okada); 3 ♂ ♂, 5 ♀ ♀, ibid., 25.x.'60 (at fruit trap and garbage, Kitazawa): 1 ♀, Mt. Yuwan, Amamiōshima, 7-8. viii. '63 (by sweeping, Okada); 4 ♂ ♂, 1 ♀, Akakina, Amamiōshima, 30. x. '60 (at fruit trap, Kitazawa).

Distribution: Nepal, Formosa, Okinawa, Amami (new record), Kyushu proper, Shikoku, China, Manchuria.

14. *Drosophila* (*Sophophora*) *ficusphila* Kikkawa and Peng

Drosophila ficusphila Kikkawa and Peng, 1938. Japan. J. Zool., 7: 531.

Specimen examined: 1 ♀, Nase, Amamiōshima, 3-4. viii. '63 (by sweeping, Okada).

Distribution: Amami (new record), Kyushu proper, Shikoku, Honshu.

15. *Drosophila* (*Sophophora*) *bipectinata* Duda

Drosophila bipectinata Duda, 1923. Ann. Mus. Nat. Hung., 20: 52.

Specimens examined: 2 ♂ ♂, 1 ♀, Sumiyō, Amamiōshima, 25-26. x. '60 (in garbage, Kitazawa).

Distribution: India, Nepal, Sumatra, Formosa, Ishigakijima, Amami (new record), Micronesia.

16. *Drosophila* (*Sophophora*) *asahinai* sp. nov. (Figs. 8-13)

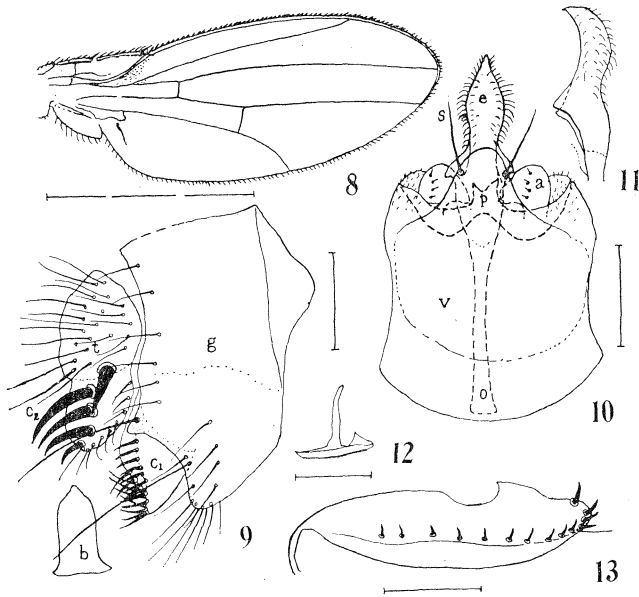
♂, ♀. Body slender, about 2.5-2.8 mm in length, yellowish brown with abdomen paler. Eye bright red, with piles. Antenna with second joint dark yellowish brown, third anteriorly darker, more than twice as long as broad. Arista with four upper and three lower moderate branches and a small fork. Palpus pale yellowish grey, club-shaped, with one prominent terminal bristle half as long as palpus. Ocellar triangle somewhat fuscous and convex. Periorbits somewhat grey, pollinose, not reaching anterior margin of front. Front yellowish brown, anterior border pale, with a few frontal hairs. Clypeus pale yellowish brown. Carina high, narrow and long. Cheek pale at corner, about one-eighth as broad as the greatest diameter of eye. Occiput deep yellowish brown, proboscis pale yellowish grey. Lower reclinate orbital about one-third length of upper reclinate, outside and nearer to proclinate than to upper reclinate; upper reclinate slightly longer than proclinate. Two long orals, third half length of vibrissa.

Mesonotum and scutellum deep yellowish brown, glossy. Thoracic pleura with a dark longitudinal patch obscurely demarkated. Humerals two, long, subequal. Acro-

stichals in eight rows. Cross distance of dorsocentrals about twice the length distance; anterior dorsocentrals about half the length of posteriors. Sterno-index about 0.8; median sternopleural about half as long as anterior.

Legs yellow, metatarsus subequal to the three succeeding tarsal joints taken together. Fore metatarsus with a longitudinal sex-comb of about twenty black teeth, covering entire length of the joint except proximal end; second tarsal joint of fore leg with similar comb of about fourteen teeth, extending to entire length. Preapicals on all tibiae, apicals on second. Wing (Fig. 8) hyaline, slightly fuscous, crossveins clear, r_{2+3} slightly curved apically to costa, r_{4+5} and m slightly divergent distally. C-index about 1.9 (σ) to 2.3 (♀); 4V-index about 2.3 (♀) to 2.7 (σ); 4C-index about 1.2 (♀) to 1.7 (σ); 5X-index about 2.5. C1-bristles two, subequal: C3-bristles on proximal half or slightly more. Halteres dark yellow.

Abdominal tergites yellow, somewhat glossy, with black rather broad laterally tapering non-interrupted caudal bands: sixth to ninth tergites in male nearly entirely



Figs. 8-13. *Drosophila (Sophophora) asahinai* sp. nov. 8. male wing, 9. peripheral genitalia, 10. phallic organs (ventral aspect), 11. aedeagus (lateral aspect, left hand dorsal), 12. ejaculatory apodeme, 13 egg-guide, (scale 1 mm in fig. 8, otherwise 0.1 mm). c₁. primary clasper, c₂. secondary clasper, other abbreviation as in Figs. 6-7.

black. Abdominal sternites pale.

Peripheral genitalia (Fig. 9): Genital arch broad, black and bare above, pale on

lower half; heel high, obscure, toe projected below, triangular; upper caudal margin with about eight long setae; lower portion with about fifteen setae, especially dense at lower tip; caudal margin with a triangular process above primary clasper, a long hair is inserted on the process. Primary clasper conical, dark, projected downward slightly below tip of genital arch, with about fifteen black long pointed teeth in two rows on nearly entire caudal margin, and with a very long hair and several short recurved setae inside teeth rows. Anal plate separated from genital arch, black, oval, anteriorly rounded, ventrally with a strong black pointed tooth, with about twenty long macrotrichia, without microtrichia. Secondary clasper pale, conical, fused to the lower end of anal plate, medially with a vertical row of about four black strong ventrally curved teeth, lower teeth smaller; anteroventral margin fringed with short curved hairs. Decasternum oblong, black, apically dilated and truncate.

Phallic organs (Figs. 10-11): Aedeagus yellowish brown, pubescent, apically narrowing and curved dorsally, subbasally with a pair of ventrolateral dilated hook-like processes. Apodeme of aedeagus dark brown, straight. PI about 1.0. Anterior parameres hemispherical, dark brown, inserted on hypandria, each with a row of about five sensilla. Posterior parameres dark brown, like cross bows concaved posteriorly, fused to each other on median line, leaving apical triangular incision, laterally narrowing to reach outer corners of hypandria. Hypandria yellowish brown, pubescent; median process large, apically rounded, with a pair of strong rather short black submedian spines inserted on the margin of median process at its lateral corners. Ventral fragma pale, quadrate, marginally darker.

Egg-guide (Fig. 13): Lobe narrow, fusiform, well sclerotized, yellowish brown, with about fourteen marginal black pointed teeth mostly on ventral margin; ultimate tooth largest, somewhat apart from penultimate. Basal isthmus dark brown, straight, narrow, rather short, about one-sixth as long as lobe.

Internal structures: Mid-intestine coiled twice or two and half times. Rectal papillae conical, pointed, about two-thirds as broad as long. Testis pale yellow, with one inner and five outer coils, distal end of inner coil much swollen. Paragonia white, twice folded. Ejaculatory bulb hyaline, without caeca. Ejaculatory apodeme (Fig. 12) T-shaped in lateral aspect. Ovary with about eight ovarioles. Spermatheca hyaline, head quadrate, inbedded in thick fat sheath. Parovaria with stem longer than that of spermatheca, head smaller than spermatheca. Ventral receptacle with about six folds, discoidal in total appearance.

Egg with two thick apically tapering filaments.

Holotype: ♂, Kametsu, Tokunoshima, 14. viii. '63 (at fruit trap, Okada).

Allotopotype: ♀, collected together with holotype. Types are deposited at the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

Other specimens examined: 5 ♂♂, Nase, Amamiōshima, 4. viii. '63 (at fruit trap, Okada); 2 ♂♂, Sumiyō, Amamiōshima, 8-9. viii. '63 (at fruit trap, Okada); 1 ♂, 1 ♀, *ibid.*, 25. x. '60 (at fruit trap, Kitazawa); 24 ♂♂, 21 ♀♀, Yuwan, Amamiōshima, 5-8. viii. '63 (at fruit trap, Okada); 6 ♂♂, 2 ♀♀, Mt. Yuwan, Amamiōshima, 7. viii. '63 (by sweeping, Okada).

Relationships: Allied to *D. seguii* Smart from Africa, especially in having broad

median process of hypandrium, but distinguished from it in apically rounded (pointed in *seguii*) median process and small cross (large, vertical in *seguii*) posterior parameres. Belonging to the *montium* subgroup of the *melanogaster* group.

Remarks: Specific name is contributed to Dr. Syoziro Asahina. In the present expedition in summer numerous specimens were found in various localities, while no specimens of *D. (S.) kikkawai*, a related species, were collected. On the contrary, the former species was very rare and the latter was abundant in autumn survey of Dr. Kitazawa. The fact suggests certain seasonal replacement operated between the two related species.

17. ***Drosophila (Drosophila) daruma*** Okada

Drosophila (Drosophila) daruma Okada, 1956. Syst. Study of Dros.: 155.

Specimens examined: 1♀, Mt. Yuwan, Amamiōshima, 7-8.viii.'63 (at fruit trap, Okada). (1♂, Asakawa, Tokyo, 25.viii.'56, at fruit trap, Okada).

Distribution: Amami (new record), Kyushu proper, Honshu (new record).

18. ***Drosophila (Drosophila) bizonata*** Kikkawa and Peng

Drosophila bizonata Kikkawa and Peng, 1938. Japan. J. Zool., 7: 532.

Specimens examined: 1♀, Yuwan, Amamiōshima, 5-8.viii.'63 (at fruit trap); 4♂♂, 3♀♀, Mt. Yuwan, Amamiōshima, 7-8.viii.'63 (at fruit trap, by sweeping); 1♂, 1♀, Kametsu, Tokunoshima, 11-14.viii.'63 (at fungi) (all by Okada). 1♂, 1♀, Akakina, Amamiōshima, 30.x.'60 (in garbage, Kitazawa).

Distribution: Amami (new record), Kyushu proper, Shikoku, Honshu, Hokkaido, Korea.

19. ***Drosophila (Drosophila) nasuta*** Lamb

Drosophila nasuta Lamb, 1914. Trans. Linn. Soc., 16: 346.

Specimens examined: 11♂♂, 26♀♀, Nase, Amamiōshima, 3-4.viii.'63 (at fruit trap, by sweeping, Okada); 17♂♂, 12♀♀, Sumiyō, Amamiōshima, 8-9.viii.'63 (at fruit trap, by sweeping, at light trap, in tree sap, Okada); 24♂♂, 13♀♀, *ibid.*, 25-26.x.'60 (at fruit trap, in garbage, Kitazawa); 14♂♂, 14♀♀, Yuwan, Amamiōshima, 5-9.viii.'63 (at fruit trap, Okada); 1♂, Kametsu, Tokunoshima, 11-14.viii.'63 (at fruit trap, Okada).

Distribution: Sumatra, Formosa, Amami (new record), Seychelles, Moluccas, New Guinea, Samoa, Fiji.

Remarks: Recorded from Japan for the first time.

摘 要

従来奄美諸島から知られるショウジョウバエは、ヒョウモンショウジョウバエ (以下ショウジョウバエ省略) *Drosophila (Dorsilopha) busckii* Coquillett, キイロ *D. (Sophophora) melanogaster* Meigen, アナナス *D. (S.) ananassae* Doleschall, トラフ *D. (S.) kikkawai* Burla, マダラ *D. (D.) repleta* Wollaston および アカ *D. (D.) komaii* Kikkawa and

Peng の 6 種にすぎなかつたが、1963 年 8 月 2-14 日 日米科学協力研究による奄美大島および徳之島における著者の採集の結果、それに 1960 年 10 月 23-30 日 北沢右三氏による奄美大島での採集結果を加えて、今回新たに次の 3 新種 (ゴジックで示す) を含む 19 種を追加、記録することができた。

1. カザリコガネ *Leucophenga ornata* Wheeler, 2. ナカジロコガネ *L. interrupta* Duda,
3. ハラモンコガネ *L. guttiventris* (de Meijère), 4. ヤマガタコガネ *L. concilia* Okada,
5. クロコガネ *L. angusta* Okada, 6. タカチホキノコ *Mycodrosophila takachihonis* Okada,
7. クロセダカ *Liodrosophila bicolor* Okada, 8. カグヤ (新称) *Lissocephala asiatica* Okada,
9. クロツヤ *Drosophila (Paradrosophila) coracina* Kikkawa and Peng, 10. チャイロマメ (新称) *D. (P.) dorsata* Duda, 11. キタザワマメ (新称) *D. (P.) kitazawai* Okada,
12. オウトウ *D. (Sophophora) suzukii* (Matsumura), 13. タカハシ *D. (S.) takahashii* Sturtevant, 14. イチジク *D. (S.) ficusphila* Kikkawa and Peng, 15. フタクシ *D. (S.) bipectinata* Duda, 16. アサヒナシマ (新称) *D. (S.) asahinai* Okada, 17. ダルマ *D. (D.) daruma* Okada, 18. フタオビ *D. (D.) bizonata* Kikkawa and Peng, 19. ハナダカ (新称) *D. (D.) nasuta* Lamb.

以上のうち 11, 13, 15, 16, 18, 19 の諸種は北沢氏および著者がともに採集せるもの、9 は北沢氏のみ、他は著者のみの採集にかかるものである。また 8 は本邦未記録種、10, 15, 19 は本邦未記録種 (15 の石垣島をのぞく) である。なお 1 は九州本土より、2, 6, 17 は本州よりも本報で新たに記録された。