

A Revision of the Genera *Dettopsomyia* LAMB and *Styloptera* DUDA (Diptera, Drosophilidae)

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Synopsis A revision of the genera *Dettopsomyia* LAMB and *Styloptera* DUDA of the family Drosophilidae is made with descriptions of 6 new species (1 *Dettopsomyia* and 5 *Styloptera*) from New Guinea, Java and Japan. A dendrogram showing relationships of the species is drawn on the basis of 13 diagnostic characters and a key to the species is provided basically from the dendrogram.

Dettopsomyia LAMB, 1914, and *Styloptera* DUDA, 1924, are closely related genera of the family Drosophilidae and even DUDA (1926) himself declared to retract the name *Styloptera* since he found intermediates between the two genera. WHEELER and TAKADA (1964) preserved, however, the name *Styloptera* for a group choosing *formosae* as the type species.

The present work is intended to revise and compare the two genera with descriptions of 6 new species (1 *Dettopsomyia* and 5 *Styloptera*) and to find the relationships of the genera and of the species by means of clustering procedure.

The characters common to the two genera are: Body about 1.5 mm in length, eye with pile, frons broader than long, orbitals located near the anterior end of periorbits, costal lappet more or less developed and black, dorsocentrals usually in 3 pairs, and frons and thorax usually ornamented.

The representative species of the two genera can be distinguished by the following 13 diagnostic characters (A-M), although they are not always archekastic or ruling every member of the taxon (STENZEL, 1963).

Dettopsomyia: A. Eye much oblique to the body axis; B. ocellars inserted inside triangle made by ocelli; C. anterior reclinate orbital minute; D. cheek not very broad, about 1/3 as broad as greatest diameter of eye; E. costal lappet large; F. C-index less than 1.0; G. R_{2+3} strongly curved to costa apically; H. R_{4+5} and M divergent distally; I. acrostichal bristles present; J. tibia ringed; K. wing spotted; L. acrostichal hairs in 2 rows; M. C3-fringe more than 1/2.

Styloptera: a. Eye nearly rectangular to the body axis; b. ocellars inserted outside triangle made by ocelli; c. anterior reclinate orbital more than 1/3 as long as proclinate; d. cheek very broad, about 2/3 as broad as greatest diameter of eye; e. costal lappet moderate; f. C-index more than 1.0; g. R_{2+3} straight or merely gently curved to costa; h. R_{4+5} and M parallel; i. acrostichal bristles absent; j. tibia not ringed; k. wing not spotted; l. acrostichal hairs in 4 or 6 rows; m. C3-fringe less than 1/2.

Dettopsomyia formosa LAMB

(Figs. 1A, 2A-C)

Dettopsomyia formosa LAMB, 1914, Trans. Linn. Soc. Lond. Ser. 2 (Zool.), 16: 350.—DUDA, 1924, Arch. Naturgesch., 90A (3): 191.—MALLOCH, 1938, Proc. Hawaii ent. Soc., 10: 54.—HEED, 1957, Univ. Texas Publ., (5721): 76.—WHEELER, 1957, *Ibid.*: 106.—WHEELER et TAKADA, 1964, Ins. Micronesia, 14 (6): 210.—HARDY, 1965, Ins. Hawaii, 12: 73.—WHEELER et KAMBYSELLIS, 1966, Univ. Texas Publ., (6615): 534.—CARSON et OKADA, 1980, Kontyû, 47: 21.—DAVID et TSACAS, 1980, C. R. Soc. biogeogr., 57: 19.

Diagnosis. ABCDEFGHIJKIM.

♂, ♀. Head as figured by HARDY (1965). Frons, mesoscutum and scutellum with complex stripes (Fig. 1A). Acrostichal hairs in 4 rows. Wing maculated as figured by LAMB (1914) and HARDY (1965). Male genitalia (Figs. 2A-B) as figured by WHEELER and TAKADA (1964).

Specimens examined. 1♂, 2♀, Headshump Forest near Bulolo, 910 m, Papua New Guinea, 15. IX. 1977 (CARSON).

Distribution. Seychelles, Philippines, New Guinea, Solomon Is., Micronesia, Samoa, Fiji, Tonga, Hawaii, C. America.

Dettopsomyia jacobsoni DUDA

(Figs. 1B, 2D)

Dettopsomyia jacobsoni DUDA, 1926, Supplta. ent., 14: 59.

Diagnosis. ABCDEFGHIJKLM.

Wing maculated as figured by DUDA (1926). Frons, mesoscutum and scutellum with complex stripes (Fig. 1B). Periphallallic organs as in Fig. 2D.

Specimen examined. 1♂, Tugu near Bogor, Java, 27-30. VII. 1971 (IKEDA).

Distribution. Sumatra, Java (new record).

Dettopsomyia preciosa (DE MEIJERE)

(Fig. 1C)

Drosophila preciosa DE MEIJERE, 1911, Tijdschr. Ent., 54: 410.

Pictostyloptera preciosa: DUDA, 1924, Arch. Naturgesch., 90A (3): 192.

Dettopsomyia preciosa: DUDA, 1926, Supplta. ent., 14: 60.—WHEELER et TAKADA, 1964, Ins. Micronesia, 14 (6): 211.—TAKADA et MOMMA, 1975, J. Fac. Sci. Hokkaido Univ. VI, 20: 18.—OKADA, 1976, Makunagi, (8): 3.

Diagnosis. ABCDefGHIJKLm.

♂, ♀. Frons, mesoscutum and scutellum with complex stripes (Fig. 1C). Wing with 2 black patches in cell R₁ as figured by DE MEIJERE (1911) and DUDA (1924). Male genitalia as figured by WHEELER and TAKADA (1964).

Specimens examined. Papua New Guinea: 1♂, 1♀, Bulolo, 18. IX. 1977 (OKADA); 1♀, Wau, 14. IX. 1977 (OKADA); Bishop Museum Collections: 1♂, 6 miles NW Lae, rain forest, 15 m, 9. VII. 1957 (HARDY); 1♀, 16 km up Kait R.,

250-750 m, SW ridge above Camp Bishop, 15. VII. 1956 (Gressitt).

Distribution. Java, Malaya, Sri Lanka, New Guinea (new record).

Dettopsomyia fruhstorferi (DUDA)

Styloptera fruhstorferi DUDA, 1924, Arch. Naturgesch., 90 A (3): 194.

Dettopsomyia fruhstorferi: DUDA, 1926, Supplta. ent., 14: 61.

Diagnosis. fGiJk.

Frons with anteriorly divergent black stripes. Mesoscutum with 10 brown longitudinal stripes.

Distribution. Viet Nam.

Dettopsomyia pictipes (DE MEIJERE)

Drosophila pictipes DE MEIJERE, 1911, Tijdschr. Ent., 54: 411.

Styloptera pictipes: DUDA, 1924, Arch. Naturgesch., 90 A (3): 192.

Dettopsomyia pictipes: DUDA, 1926, Supplta. ent., 14: 61.

Dettopsomyia pictipes var. *sumatrana* DUDA, 1926, Supplta. ent., 14: 62.

Diagnosis. ABCDefGHIJKLm.

Mesoscutum with 4 black longitudinal stripes, median pair close to each other.

Wing as figured by DE MEIJERE (1911).

Specimens examined. 2♂, Los Baños, Luzon, Philippines, 10. X. 1979 (HIHARA *et al.*).

Distribution. Java, Sumatra, Philippines (new record).

Dettopsomyia repletoides (CARSON et OKADA) n. comb.

Styloptera repletoides CARSON et OKADA, 1980, Kontyû, 47: 20.

Diagnosis. abcdEfGHIJKLm.

Mesoscutal ornamentation is closely similar as in the original form of *D. pictipes*.

Male genitalia as figured by CARSON & OKADA (1980).

Distribution. New Guinea.

Dettopsomyia alba CARSON et OKADA, n. sp.

(Figs. 1J, 3M)

Diagnosis. abcdEfGHIJKLm.

♂, ♀. Body about 1.5 mm in length. Antenna yellowish white. Arista with 3 upper and 2 lower branches and a moderate fork. Palpus yellow. Ocellar triangle black; ocellars inserted outside triangle made by ocelli. Frons yellowish white; carina high, long. Clypeus yellowish white. Cheek caudally half as broad as greatest diameter of eye. Anterior reclinate orbital 1/3 posteriors. Mesoscutum (Fig. 1J) whitish, with 8 black straight longitudinal stripes. Scutellum white, with 4 black longitudinal stripes. Thoracic pleura entirely white, thus the specific name.

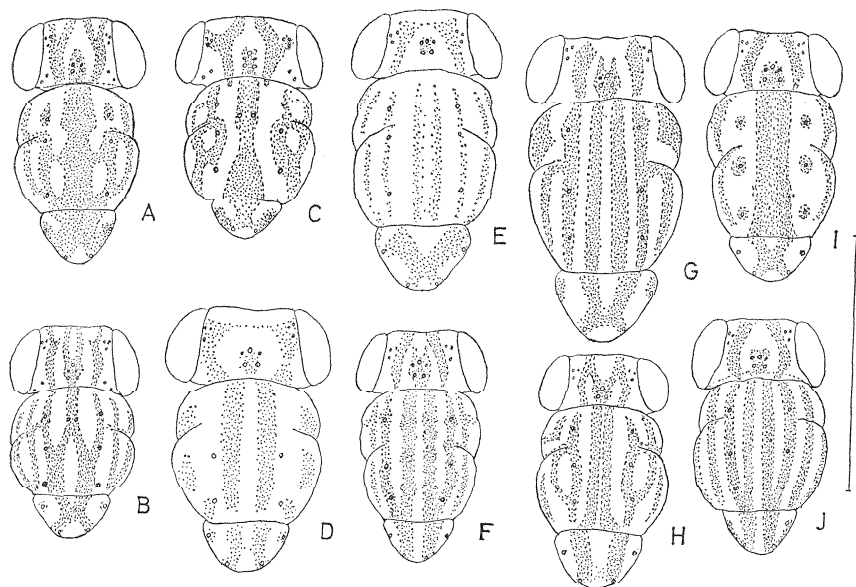


Fig. 1. Head and thorax of *Dettopsomyia* and *Styloptera*.— A, *D. formosa*; B, *D. jacobsoni*; C, *D. preciosa*; D, *S. nishiharui*; E, *S. formosae*; F, *S. globosa*; G, *S. tigrina*; H, *S. furcata*; I, *S. maculata*; J, *D. alba*. Scale 1 mm

Humeralis 2. Acrostichal hairs in 2 rows. Dorsocentrals in 3 pairs. Sterno-index 0.5. Lateral scutellars divergent, apicals much longer than laterals and much nearer to each other than to laterals. Legs entirely white. Wing hyaline, with a faint black patch below R_1 ; R_{2+3} strongly curved to costa apically; R_{4+5} and M slightly divergent distally. C-index 1.3; 4V-index 2.8; 4C-index 2.3; 5x-index 2.7; Ac-index 3.2. C1-bristles 2, long; C3-fringe 1/2. Halter yellow. Abdominal tergites yellowish orange. Periphallic and phallic organs strikingly similar as in *D. repletoides*. Ovipositor (Fig. 3M) yellow, with black teeth.

Holotype ♂ (C218.9), allotype ♀, and 2♂, 4♀ paratypes, Back road of Bulolo, 730 m, Morobe District, Papua New Guinea, 11. XI. 1977, ex flowers of *Cominsia* (CARSON). Types in Bishop Museum; 1♂, 1♀ paratypes in National Science Museum, Tokyo.

Distribution. Papua New Guinea.

This species can be hardly distinguished from *D. repletoides* by male genitalia, but it is clearly different from the latter in having thoracic pleura and legs entirely white.

Dettopsomyia acrostichalis DUDA

Dettopsomyia acrostichalis DUDA, 1926, Supplta. ent., 14: 61.

Diagnosis. GhIk.

Crossveins black. Abdominal tergites with broadly interrupted caudal black bands.

Distribution. Sumatra.

Dettopsomyia nigrovittata (MALLOCH)

Drosophila nigrovittata MALLOCH, 1924, Proc. Linn. Soc. N.S.W., 49: 352.

Dettopsomyia nigrovittata: WHEELER, 1951, Pan-Pacif. Ent., 27: 92.—WHEELER, 1952, Univ. Texas Publ., (5204): 182.—FREY, 1958, Soc. Sci. Fenn. Comment. Biol., 17 (4): 47.—HARDY, 1965, Ins. Hawaii, 12:74.—OKADA, 1972, Proc. Jap. Soc. syst. Zool., (7): 69.—DAVID et TSACAS, 1980, C. R. Soc. biogeogr., 57: 19.

Dettopsomyia argentifrons OKADA, 1956, Syst. Study Dros. Jap.: 57.

Diagnosis. abcdEFGhiJklM.

Wing as figured by OKADA (1956) and HARDY (1965). Male genitalia as figured by OKADA (1956).

Distribution. N. and S. America, Hawaii, Japan incl. Bonin Is., Australia, Africa, Canary Is.

Dettopsomyia philippina TAKADA

Dettopsomyia philippina TAKADA, 1976, Kontyû, 44: 169.

Diagnosis. abCdEfgHiJklm.

Acrostichal bristles often present. R_{2+3} straight. Crossveins slightly clouded. Mesoscutum with 4 longitudinal black stripes, median pair continuous to scutellum. Abdominal tergites with broadly interrupted black bands.

Distribution. Philippines.

This species closely resembles *D. acrostichalis* especially in mesoscutal stripes, but the latter species has crossveins black but not clouded. Straight R_{2+3} is unusual in *Dettopsomyia*.

Dettopsomyia equiscauda TAKADA et MOMMA

Dettopsomyia equiscauda TAKADA et MOMMA, 1975, J. Fac. Sci. Hokkaido Univ., VI, 20: 18.

Diagnosis. AbcdefGHIjKlM.

Male genitalia as figured by TAKADA and MOMMA (1975).

Distribution. Malaya.

Dettopsomyia bombax (BURLA)

Mycodrosophila? bombax BURLA, 1954, Rev. Suis. Zool., 61: 79.

Dettopsomyia bombax: TSACAS, 1980, Family Drosophilidae, in Catalogue of the Diptera of the Afrotropical Region: 677.

Diagnosis. CDEfGhijklm.

Cheek narrow, 1/6 as broad as greatest diameter of eye. Mesoscutum mat black, with silver spots. Periphallal organs and ovipositor as figured by BURLA

(1954).

Distribution. Africa.

Styloptera formosae DUDA

(Figs. 1E, 3A-D)

Styloptera formosae DUDA, 1924, Arch. Naturgesch., 90A (3): 194.—DUDA, 1926, Supplta. ent., 14: 61.—WHEELER et TAKADA, 1964, Ins. Micronesia, 14 (6): 219.

Diagnosis. abcdefghijklm.

Frons, mesoscutum and scutellum yellowish white, with brown stripes (Fig. 1E). Wing as figured by DUDA (1924). Male and female genitalia as in Figs. 3A-D.

Specimens examined. Taiwan: 5♂, 5♀, Chitou, Nantow, 16. VIII. 1967 (OKADA & THROCKMORTON); 1♀, Yunshuei, Chiayi, 12. VIII. 1967 (OKADA); 1♂, Shihtzulu, Chiayi, 15. VIII. 1967 (THROCKMORTON); 1♂, Fenchihu, Chiayi, 12. IV. 1965 (SAIGUSA); 20♂, 14♀, Wulai, Taipei, 15. XII. 1977 (IKEDA).

Distribution. Taiwan.

Styloptera nishiharui OKADA, n. sp.

(Figs. 1D, 2E-F)

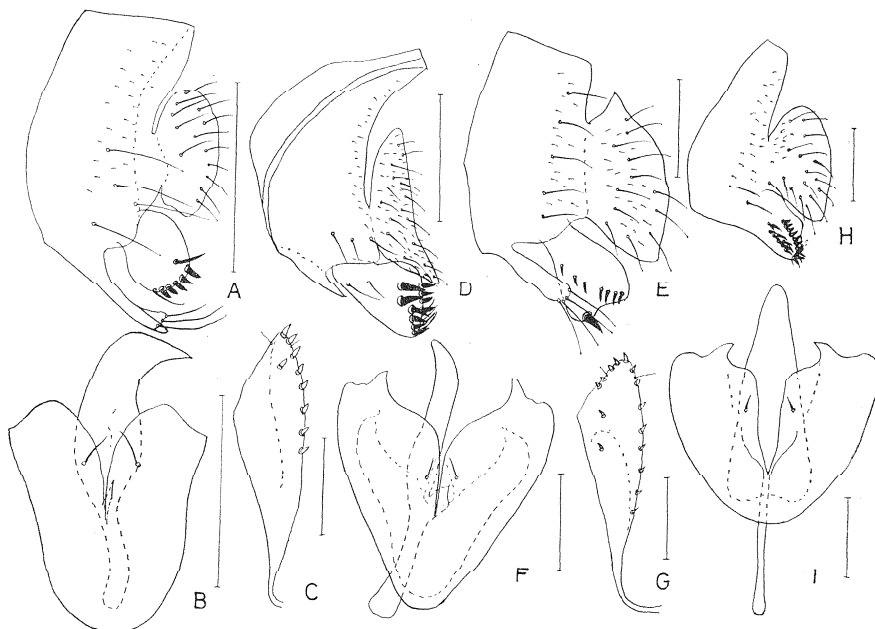


Fig. 2. Male and female genitalia of *Dettopsomyia* and *Styloptera*. — A-C, *D. formosa*; D, *D. jacobsoni*; E-F, *S. nishiharui*; G-I, *S. maculata*. A, D, E, H,Periphallia; B, F, I, Phallic organs; C, G, Ovipositor. Scales 0.1 mm.

Diagnosis. abCdefghijklm.

♂.♀ Body about 2 mm in length. Antenna with 2nd joint orange brown, anteriorly darkened; 3rd brown. Arista with 3 upper and 2 lower branches and a large fork. Palpus yellowish gray. Ocellar triangle grayish yellow; ocellars inserted outside triangle made by ocelli. Frons (Fig. 1D) yellowish gray, anteriorly orange brown, caudolaterally dark brown. Face gray, pruinose. Cheek yellow, broad. Carina large. Anterior reclinate orbital minute. Mesoscutum (Fig. 1D) yellowish gray, with 4 brownish stripes, median pair broad. Scutellum yellowish gray. Thoracic pleura with 3 obscure dark stripes. Acrostichal hairs in 6 rows. Dorsocentrals in 2 pairs. Legs yellow. Wing hyaline. C-index 2.0; 4V-index 1.7; 4C-index 1.1; 5x-index 1.6; Ac-index 2.8. C1-bristles 2, long; C3-fringe 1/2. Halter yellow. Abdominal tergites mat black. Male genitalia as in Figs. 2E-F.

Holotype ♂ (23552) and 1 ♀ paratype, Miyazaki, Kyushu, VI. 1978 (NISHIHARU). Types in National Science Museum, Tokyo.

Distribution. Japan.

This species is allied to *S. formosae* in having entirely pale legs and nearly straight R_{2+3} , but different from the latter in having broader mesoscutal stripes and only 2 pairs of dorsocentrals.

Styloptera globosa OKADA, n. sp.

(Figs. 1F, 3E-F)

Diagnosis. abcdefghijklm.

♂. Body about 1.5 mm in length. Antenna with 2nd joint yellowish gray, dorsally brown, 3rd brownish gray. Arista with 3 upper and 2 lower branches and a large fork. Palpus yellowish brown. Ocellar triangle mat black. Frons dark yellow, with black stripes (Fig. 1F). Face gray; carina large. Cheek about 1/3 as broad as greatest diameter of eye. Anterior reclinate orbital 1/3 posteriors. Vibrissa strong, other orals fine. Mesoscutum (Fig. 1F) yellowish gray, with 4 broad somewhat irregular black longitudinal stripes, inner pair extending to apex of scutellum. Thoracic pleura with 2 brown stripes. Acrostichal hairs in 6 rows. Dorsocentrals in 3 pairs. Lateral scutellars divergent. Wing hyaline. R_{2+3} gently curved to costa; R_{4+5} and M parallel. Costal lappet small. C-index 3.0; 4V-index 3.0; 4C-index 2.0; 5x-index 2.7; Ac-index 3.0. C1-bristles 2, long, subequal; C3-fringe 1/2. Halter yellow. Abdominal tergites yellow, with medially contiguous caudal black bands, which are laterally curved forwards, and with an isolated black spot on lateral margin. Male genitalia as in Figs. 3E-F. Aedeagus globular, thus the specific name.

Holotype ♂, Tugu near Bogor, Java, 27-30. VII. 1971 (IKEDA). Type in National Science Museum, Tokyo.

Distribution. Java.

This species resembles *S. formosae*, but differs from the latter in having meso-scutal stripes broader and aedeagus globular.

Styloptera furcata CARSON et OKADA, n. sp.

(Figs. 1H, 3J-L)

Diagnosis. abcdefghiJklm.

♂, ♀. Body about 1.5 mm in length. Antenna with 2nd joint yellow, black above; 3rd grayish black. Arista with 3 upper and 2 lower branches and a large fork. Palpus gray. Frons yellow, with black stripes (Fig. 1H). Face yellow. Carina broad. Clypeus yellow. Anterior reclinate orbital half as long as proclinate; posterior reclinate twice as long as proclinate. Ocellars inserted outside triangle made by ocelli. Mesoscutum and scutellum yellow with black stripes (Fig. 1H). Thoracic pleura yellow, with 3 irregular longitudinal black stripes. Humerals 2, subequal. Acrostichal hairs in 4 rows. Dorsocentrals in 3 or 4 pairs. Lateral scutellars divergent, half as long as apicals, which are also divergent and equally apart from each other and from laterals. Legs yellow, femora and tibiae ringed. Wing hyaline; R_{2+3} weakly curved to costa; R_{4+5} and M parallel, both gently convex anteriorly. C-index 1.3; 4V-index 2.9; 4C-index 2.3; 5x-index 4.2; Ac-index 3.8; C3-fringe about 1/2. Halter yellow. Abdominal tergites yellow,

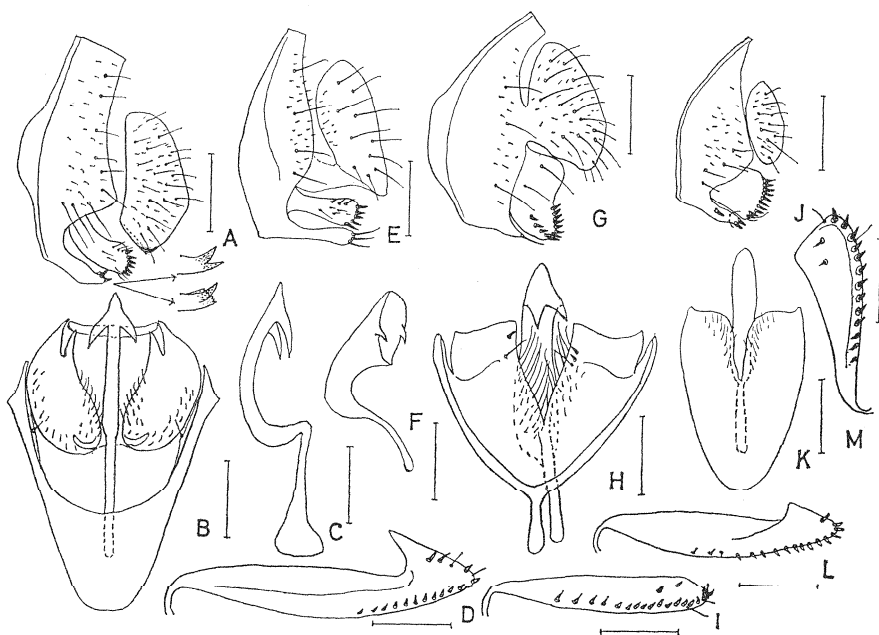


Fig. 3. Male and female genitalia of *Dettopsomyia* and *Styloptera*. — A-D, *S. formosae*; E-F, *S. globosa*; G-I, *S. tigrina*; J-L, *S. furcata*; M, *D. alba*. A, E, G, J,Periphallal organs; B, C, F, H, K, Phallic organs; D, I, L, M, Ovipositor. Scales 0.1 mm.

with large black patches laterally, caudal tergites entirely black. Male and female genitalia as in Figs. 3J-L.

Papua New Guinea: Bishop Museum Collections: Holotype ♂ (B207), Taenga, 1200 m, Upper Jimi Valley, 12. XII. 1955 (GRESSITT); allotype ♀, Elliptamin Valley, 1200-1300 m, 16-31. VII. 1959 (BRANDT); paratypes: 3♂, Big Wau Creek, Wau, 1300 m, XI. 1965 (SHANAHAN); 1♀, Mt. Missim, 1300 m, 12. XII. 1955 (GRESSITT); 2♀, 1 km N Aweldom, Umboi, 21. VI. 1961 (SAMUELSON); 1♀, Karimui, 1000 m, 2. VI. 1961 (GRESSITT). 1♀ paratype, Kunai Creek, Wau, 11. IX. 1977 (OKADA). Types in Bishop Museum; 1♀ paratype in National Science Museum, Tokyo.

Distribution. Papua New Guinea.

This species resembles *S. globosa* in the ornamentation of frons, mesoscutum and scutellum, but it is distinguished from the latter by having femora and tibiae ringed.

Styloptera tigrina CARSON et OKADA, n. sp.

(Figs. 1G, 3G-I)

Diagnosis. abcdefghiJklm.

♂, ♀. Body about 2 mm in length. Antenna with 2nd joint yellowish gray, black above; 3rd gray. Arista with 3 upper and 2 lower branches and a small fork. Palpus yellowish gray. Frons yellowish gray, with black stripes (Fig. 1G). Face orange gray, with black spot below carina, which is weakly convex. Clypeus yellowish gray. Proclinate orbital half as long as posterior reclinate; anterior reclinate half as long as proclinate. Ocellars outside triangle made by ocelli. Mesoscutum mat yellowish gray, with scattered black patches. Humeral 2. Acrostichal hairs in 6 rows. Dorsocentrals in 3 pairs. Apical scutellars longer than scutellum, equally apart from each other and from laterals, which are divergent and as long as apicals. Legs yellowish gray; femora and tibiae with black rings. Wing hyaline, broad, slightly pointed. R_{2+3} nearly straight. Costal lappet small. C-index 1.9; 4V-index 3.2; 4C-index 1.9; 5x-index 2.8; Ac-index 3.0. C1-bristles 2, long; C3-fringe 2/3. Halter yellowish gray. Abdominal tergites mat black, gray pruinose. Male and female genitalia as in Figs. 3G-I.

Papua New Guinea: Holotype ♂ (C "14"), Kunai Creek, Mt. Kaindi, 1515 m, 14. XI. 1977 (CARSON); allotype ♀, Mt. Kaindi, 2100 m, 26. IX. 1977 (CARSON); paratypes: 1♂, same locality as allotype, 2120 m, 14. X. 1977 (CARSON), 1♀, Wau, 1300 m, 13. IX. 1977 (OKADA). Types in Bishop Museum; paratypes in National Science Museum, Tokyo.

Distribution. Papua New Guinea.

This species resembles *S. furcata* in having femora and tibiae ringed, but is distinguished from the latter by having C3-fringe more than 1/2 and aedeagus hooked.

Styloptera maculata CARSON et OKADA, n. sp.

(Figs. 1I, 2G-I)

Diagnosis. abcdefghijkLm.

♂, ♀. Body about 2 mm in length. Antenna with 2nd joint orange yellow, black above; 3rd joint gray. Arista with 4 upper and 2 lower branches and a large fork. Palpus gray. Frons mat yellowish orange, with black patches (Fig. 1I). Ocellars inserted outside triangle made by ocelli. Face and clypeus yellowish gray. Carina gray, very broad but low. Anterior reclinate orbital 2/3 as long as proclinate, which is 2/3 as long as posterior reclinate. Mesoscutum (Fig. 1I) mat orange gray, with 2 median straight black stripes and black spots around insertion of dorsocentrals. Thoracic pleura mat yellowish brown, with 3 dark stripes. Scutellum mat yellowish gray, with 2 black stripes. Lateral scutellars convergent, slightly longer than apicals, which are slightly nearer to each other than to laterals. Humeral 1. Acrostichal hairs in 2 rows. Dorsocentrals in 3 pairs. Legs pale yellow, without rings. Wing hyaline, costal lappet not very large. R₂₊₃ straight. R₄₊₅ and M parallel. C-index 1.4; 4V-index 2.0; 4C-index 1.7; 5x-index 2.0; Ac-index 3.3. C1-bristles 2; C3-fringe 1/2. Halter yellow, stalk with black spot. Abdominal tergites mat yellowish orange, with medially interrupted laterally narrowing caudal black bands, and lateral margins black. Male and female genitalia as in Figs. 2G-I. Surstylus fused with epandrium. Aedeagus straight, basally broad.

Papua New Guinea: Holotype ♂ (C225.8), allotype ♀, Gurakor Creek near Lae, 607 m, 7. XI. 1977 (CARSON); 2♂, ~~Perenin River~~ Perenin River, S. of Lae, 227 m, 7. XI. 1977 (CARSON); 3♂, Garagos River, S. of Lae, 150 m, 29. IX. 1977; 2♂, 4♀, Bulolo Back Road, 730 m, 11-19. IX. 1977 (CARSON); 2♂, 3♀, Wau, 1300 m, 10-14. IX. 1977 (OKADA); 1♂, *ibid.*, 8. I. 1974 (SHINONAGA). Types in Bishop Museum; 3♂, 3♀ paratypes in National Science Museum, Tokyo.

Distribution. Papua New Guinea.

m This species differs from any other known species of *Styloptera* and *Dettopsomyia* in having surstylus and epandrium fused with each other.

Styloptera alocasiae OKADA et CARSON*Styloptera alocastae* OKADA et CARSON, 1980, *Pacif. Ins.*, **22**: 229.

Diagnosis. abcdefghijklm.

Mesoscutum uniformly brownish black. Wing anteriorly darkened.

Distribution. Papua New Guinea.

Styloptera sp. from Caroline Is., WHEELER & TAKADA*Styloptera* sp. ?, WHEELER & TAKADA, 1964, *Ins. Micronesia*, **14**: 219.

Diagnosis. bcDefijkM.

Male genitalia as figured by WHEELER and TAKADA (1964). Mesoscutum not striped.

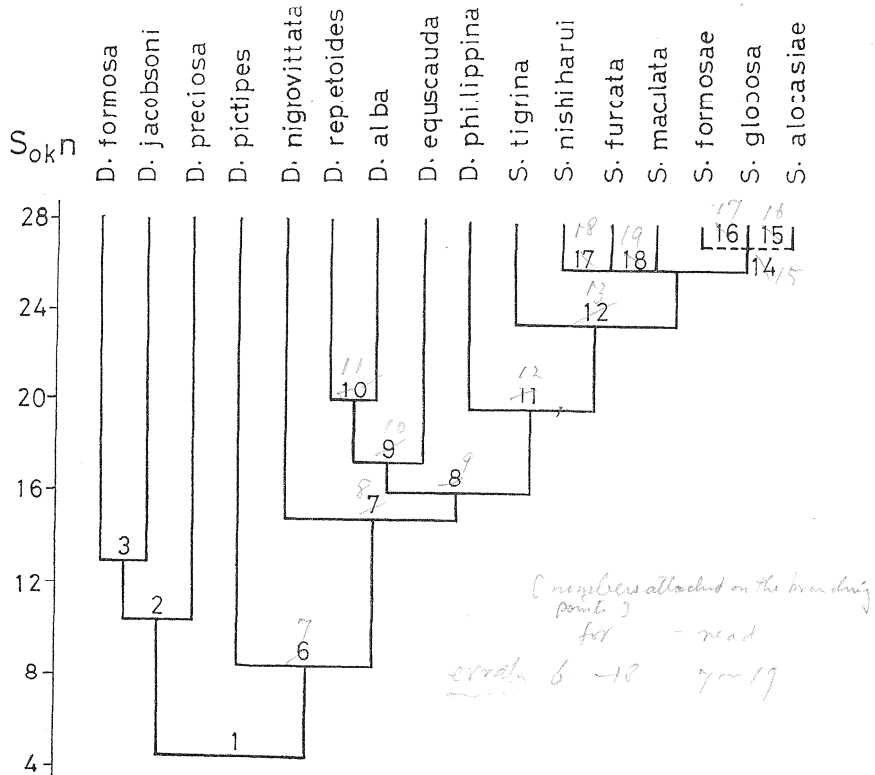


Fig. 4. A dendrogram of the species of *Dettopsomyia* and *Styloptera*. The numbers attached on the branching points correspond to those of key couplets. For other explanations see text.

Distribution. Palau, Caroline Is.

A dendrogram of relationships of the species and of the genera was drawn on the basis of 13 diagnostic characters (A-M) (Fig. 4). S_{ok} proximity analysis (OKADA, 1981) and UPGMA cluster analysis were applied. The species with poor information about their diagnostic characters were omitted from the dendrogram, but were introduced in the following key constructed from the dendrogram.

Key to the species of genera *Dettopsomyia* and *Styloptera*

1. Wing maculated.....2
Wing not maculated.....4
2. R_{4+5} and M parallel; acrostichal hairs in 2 rows*D. preciosa*
— R_{4+5} and M divergent; acrostichal hairs in 4 rows3
3. Acrostichal bristles absent*D. formosa*
— Acrostichal bristles present*D. jacobsoni*

4. Crossveins black 5
 — Crossveins clear 6
5. Acrostichal bristles present; mesoscutum and scutellum striped
 *D. acrostichalis*
 — Acrostichal bristles absent; mesoscutum and scutellum not striped
 *D. bombax*
6. Ocellars inserted inside triangle made by ocelli; cheek 2/3 as broad as greatest
 diameter of eye; acrostichal bristles present 7
 — Ocellars inserted outside triangle made by ocelli; cheek half broad as
 greatest diameter of eye; acrostichal bristles absent 8
7. Mesoscutal dark stripes somewhat confluent *D. pictipes*
 — Mesoscutal dark stripes clearcut *D. fruhstorferi*
8. C-index less than 1.2 *D. nigrovittata*
 — C-index more than 1.2 9
9. R_{2+3} strongly curved to costa; R_{4+5} and M divergent distally 10
 — R_{2+3} nearly straight; R_{4+5} and M nearly parallel 12
10. Eye much oblique to body axis *D. equiscauda*
 — Eye nearly rectangular to body axis 11
11. Femora and tibiae ringed *D. repletoides*
 — Femora and tibiae not ringed *D. alba*
12. Costal lappet large *D. philippina*
 — Costal lappet not very large 13
13. C3-fringe more than 1/2 14
 — C3-fringe less than 1/2 15
14. Mesoscutum not striped *S. sp. from Caroline Is.*
 — Mesoscutum striped *S. tigrina*
15. Anterior reclinate orbital large; femora and tibiae not ringed; acrostichal
 hairs in 4 or 6 rows 16
 — Not simultaneously as above 18
16. Mesoscutum uniformly dark brown *S. alocasiae*
 — Mesoscutum striped 17
17. Abdominal tergites with interrupted black bands *S. formosae*
 — Abdominal tergites with contiguous black bands *S. globosa*
18. Anterior reclinate orbital minute *S. nishiharui*
 — Anterior reclinate orbital long 19
19. Femora and tibiae ringed; acrostichal hairs in 4 rows *S. furcata*
 — Femora and tibiae not ringed; acrostichal hairs in 2 rows *S. maculata*

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Throckmorton David 今方 Cambridge Univ. Vilka Reed 高野 邦
 井 金 林 友 同 新 田 倉 橋 大 野 敏 秀 Evenhuis 邦子 McEvey
 金子 邦子 Evenhuis 邦子 Ping