

NOTES ON SOUTH PACIFIC PTEROPHORIDAE (Lepidoptera)¹

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Abstract: South Pacific moths of the family Pterophoridae are reported in three sections: 1, Solomon Islands (10 spp.; 1 n. sp.); 2, New Guinea and Bismarck Archipelago (19 spp.; 3 n. spp.); and 3, Polynesia (7 spp.; 1 n. sp.).

This paper is the result of a study of the South Pacific Pterophoridae in Bishop Museum, and in the collection of Dr. S. Issiki. Material, including type specimens, collected by Dr. S. Issiki is preserved in his collection; the remainder is in Bishop Museum. Abbreviations used in parentheses in the text to indicate type locality and deposition of type specimens, are as follows: BISHOP—Bishop Museum, Honolulu; BMNH—British Museum (Nat. Hist.), London; LEIDEN—Rijksmuseum van Natuurlijke Historie, Leiden; MCZ—Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts; OSAKA—University of Osaka Prefecture, Sakai, Osaka.

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I. Solomon Islands

To my knowledge, the known fauna of the Solomon Islands Pterophoridae has been represented by only 5 species up until now. They are *Cosmoclostis lamprosema* Fletcher, *C. aglaodesma* Meyrick, *Trichoptilus defectalis* (Walker), *Aciptilia lacteipennis* (Walker) and *A. niveodactyla* Pagenstecher. The specimens examined here comprise 10 species belonging to 7 genera. One species is described as new and 8 are recorded for the first time from

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the islands. Thus, at present, the fauna in this family is represented by 14 species belonging to 8 genera.

KEY TO SOLOMON ISLANDS SPECIES OF PTEROPHORIDAE

1. Wings entire, not cleft into lobes (subfamily Agdistinae)..... 2
- Wings cleft into lobes 3
- 2 (1). Ground color of wings, thorax and abdomen pale yellowish white; costa of fore wing usually dark brown; hind wing darker than ground color of fore wing.....**Ochyrotica concursa**
- Ground color of wings, thorax and abdomen whitish; costa of fore wing not dark brown; hind wing similar to fore wing in ground color...**Ochyrotica cretosa**
- 3 (1). Lobe 2 of hind wing with 3 veins and lobe 3 with 1 vein (subfamily Platyptiliinae) 4
- Lobes 2-3 of hind wing with 2 veins each (subfamily Pterophorinae) 11
- 4 (3). Fore wing with vein radius all present 5
- Fore wing with vein radius lacking 1 or more branches 7
- 5 (4). Fore wing with vein R₁ separate 6
- Fore wing with veins R₁ and R₂ stalked **Sphenarches anisodactylus**
- 6 (5). Inner margin of lobe 3 of hind wing with a scale tuft at about middle.....
- **Platyptilia petila**
- Inner margin of lobe 3 of hind wing with a scale tuft at near apex
- **Platyptilia pusillidactyla**
- 7 (4). Fore wing with 3 or 4 branches of vein radius present.....8
- Fore wing with 1 branch of vein radius present..... 9
- 8 (7). Fore wing with 4 branches of vein radius present..... **Marasmarcha pumilio**
- Fore wing with 3 branches of vein radius present.....**Trichoptilus defectalis**
- 9 (7). Segment 3 of labial palpus longer than segment 2 **Cosmoclostis aglaodesma**
- Segment 3 of labial palpus shorter than segment 2 10
- 10 (9). Hind tibia with a white dot above at origin of medial spur; length of fore wing 8.5-10 mm **Cosmoclostis lamprosema**
- Hind tibia without a white dot above at origin of medial spur; length of fore wing 7-8 mm..... **Cosmoclostis hemiadelpa**
- 11 (3). Fore wing with lobes not linear; length of fore wing 6 mm ...**Adaina microdactyla**
- Fore and hind wings with all lobes linear; length of fore wing 8-14 mm12
- 12 (11). Fore wing with 2-4 small dark brown dots on lobe 1.....13
- Fore wing without such dark brown dots; both wings snow white
- **Aciptilia niveodactyla**
- 13 (12). Fore wing with 4 small but distinct dark brown dots on lobe 1; length of fore wing about 14 mm.....**Aciptilia lacteipennis**
- Fore wing with 2 small dark brown dots on lobe 1; length of fore wing 8-9 mm **Aciptilia suffiata**

Subfamily AGDISTINAE

Ochyrotica concursa (Walsingham)

Steganodactyla concursa Wlsm., 1891, Ent. Month. Mag. 27: 241 (Pundaloya; BMNH).

SPECIMEN EXAMINED: 1 ♂, Kiwi Creek, Guadalcanal I., 18. IX. 1944, Milliron.

DISTRIBUTION: Ryukyu Is., Taiwan, Minami-Daito-jima, China, India, Ceylon, Philippines, Molucca Is., New Guinea, Solomon Is.

Ochyrotica cretosa (Durrant), n. comb. Figs. 1, 2 A, B.

Steganodactyla cretosa Dur., 1916, Rep. B. O. U. & Wollaston Exped. Dutch New Guinea 2 (15): 163 (Mimika River; BMNH).

Male genitalia: Uncus rather long, slightly dilated apically; tegumen triangular; valva with a large harpe extending beyond posterior end of valva; sacculus conspicuous, and with sclerotized projections at its posterior end and dorsal margin; vinculum heavily sclerotized; aedeagus heavily sclerotized.

Female genitalia: Apophyses posteriores rather long; ostium bursae distinct, its antrum cup-shaped; caudo-ventral margin of abdominal segment 7 heavily waved, its caudo-lateral part somewhat projected and covered with minute hairs; a sclerotized plate, of which margin is toothed, situated dorsad of posterior margin of segment 7; corpus bursae with a somewhat sclerotized ring at departure of ductus bursae, and with a small patch of scobinations.

SPECIMENS EXAMINED: 1 ♀, Kolutu, Santa Ysabel I., 16. VI. 1960, O'Brien, light trap; 1 ♀, Molao, Maringe Distr., ca 6 km W of Mt. Sasari, Santa Ysabel I., 29. VII. 1960, O'Brien, light trap; 1 ♀, Tangtalau, 150–200 m, Malaita I., 26. IX. 1957, Gressitt, light trap; 1 ♂, Maniate, San Cristobal I., 5. VIII. 1960, O'Brien, light trap.

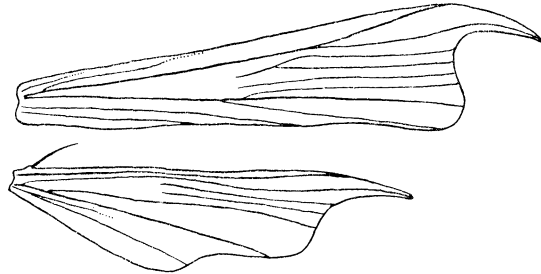


Fig. 1. *Ochyrotica cretosa* (Durrant), venation.

DISTRIBUTION: Molucca Is., New Guinea, Solomon Is.

Termen of fore wing of this species greatly sinuate inwardly just below apex; that of hind wing distinctly sinuate 2× and with apex pointed. Veins R₃ and R₄ of fore wing arising from same point and R₂ arising from near base of wing. This species was originally recorded by Durrant from 7 specimens collected in the Molucca Is. and West New Guinea.

Subfamily PLATYPTILIINAE

Platyptilia petila Yano, n. sp. Fig. 2 C, D.

Male: *Head* with vertex and frons brownish white, the latter projecting forwards. Labial palpus rather slender; pale brown mixed with pale yellowish white. *Thorax* with metathorax whitish, slightly tinged with pale yellowish brown, remaining part brownish white suffused rather distinctly with brown at posterior part of mesothorax. *Legs.* Fore leg with coxa and femur brownish mixed with pale yellowish white; tibia brownish on one side, rest whitish, thickened at end; tarsus whitish slightly tinged with pale brown. Mid leg with femur brownish mixed with pale yellowish white; tibia whitish partly suffused

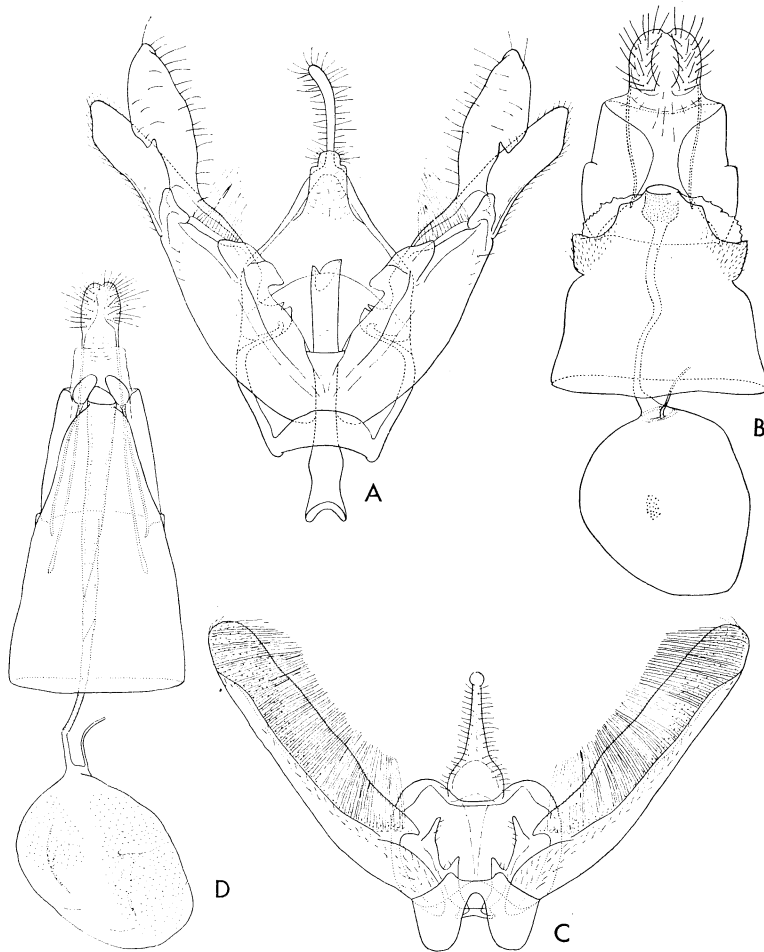


Fig. 2. A, *Ochyrotica cretosa* (Durrant), ♂ genitalia; B, ditto, ♀ genitalia; C, *Platyptilia petila* n. sp., ♂ genitalia, excluding aedeagus; D, ditto, ♀ genitalia.

with brown; tarsus whitish slightly tinged with pale brown. Hind leg with femur, tibia and tarsus whitish tinged with pale brown. *Fore wing* cleft from about 2/3; both lobes rather broad; termen of lobe 1 faintly sinuate inwardly; termen of lobe 2 round; ground color pale yellowish brown and suffused with brown and dark brown; costa and inner margin brown except for basal part of the latter; brownish scales gathering at about middle between base of wing and base of cleft; a dark brown triangular patch on costa just before base of cleft, inner margin of it not clearly indicated, outer margin somewhat inwardly sinuate, tips of it scarcely reaching base of lobe 2; beyond this patch whitish narrowly; both lobes yellowish brown cut by a whitish transverse line at about 2/3, this whitish line parallel to termen; beyond this line somewhat darker than that of before. Cilia of both termens whitish with dark brown bases; cilia within cleft whitish, slightly tinged with pale

yellowish brown on posterior margin of lobe 1, dark brown before termens of both lobes, few brownish scales scattered within cleft; cilia of inner margin whitish mixed with dark brown cilia at just before base of cleft, beyond it and before termen, and with a rather distinct dark brown scale tuft at about 2/3 between base of wing and termen of lobe 2, some dark brown scales scattered before and beyond it; this scale tuft mixed with a few narrow whitish scales. *Hind wing* cleft from a little before middle and from near base; lobe 1 broadening towards a little before apex which is somewhat pointed; termen of lobe 2 slightly sinuate inwardly; lobe 3 slender; pale grayish brown. Cilia pale grayish brown, somewhat paler near base of wing on inner margin of lobe 3; lobes 1-2 with some dark brown scales at their apices; inner margin of lobe 3 with a dark brown scale tuft at about middle, some dark brown scales scattered before and rarely beyond this. *Abdomen* pale yellowish white, slightly suffused with brownish except for basal 2 segments; a dark brown dot on dorsum of posterior margins of segments 2-6. Length of fore wing 7 mm.

Female: As in ♂. Length of fore wing 7 mm. *Paratypes*: length of fore wing 6-7 mm.

Male genitalia: Uncus slender except for its basal part; posterior margin of vinculum incised shallowly; juxta with 2 pairs of pointed arms, basal one slightly projected, caudal one moderately long; aedeagus similar to that of *P. farfarella*.

Female genitalia: Apophyses posteriores long, slightly inflated at its anterior end; apophyses anteriores very short; dorsal side of ostium bursae projected posteriorly; ductus bursae sclerotized just before corpus bursae and gradually narrowing posteriorly; corpus bursae scobinous partially; 2 signa rather slender.

Holotype ♂ (BISHOP 3453), Molas, Maringe Distr., ca 6 km W of Mt. Sasari, Santa Ysabel I., 30. VI. 1960, O'Brien, light trap; allotype ♀ (BISHOP), Napagiwae, San Cristobal I., 17. VIII. 1960, O'Brien, light trap. Paratypes: 1 ♂, Kira Kira, San Cristobal I., 27. VII. 1960, O'Brien, light trap; 3 ♂♂, 2 ♀♀, *ibid.*, 14-26. VIII. 1960, O'Brien, light trap; 1 ♂, Lam, near Mt. Tatuve, 600 m, Guadalcanal I., 16. V. 1960, O'Brien, light trap.

DISTRIBUTION: Solomon Is.

This species is allied to *P. farfarella* (Zeller, 1867) from Europe and Japan, but it may be separated from the latter by the following characters: fore wing with termen of lobe 1 slightly sinuated inwardly, termen of lobe 2 round, not biconcave; dark brown costal patch of fore wing more indefinite than the latter species; scale tuft of lobe 3 of hind wing usually more indistinct than the latter species; uncus in ♂ genitalia slender; posterior margin of vinculum more shallowly incised; apophyses posteriores in ♀ genitalia somewhat inflated at its anterior end; dorsal side of ostium bursae projected posteriorly, not seen in *farfarella*; signa slender. Judging from the original description and figure, it is also somewhat allied to *P. phanerozona* Diakonoff, 1952 from New Guinea, but is differentiated from the latter by almost the same characters mentioned above.

This species is variable in color and in some parts of the genitalia. In some specimens there are some different characters from the description mentioned above. These are as follows: ground color of fore wing nearly whitish and slightly suffused with brownish scales; dark brown costal patch of fore wing not clearly indicated; dark brown scales along inner margin of lobe 3 of hind wing very few, only indistinct scale tuft occurring.

Platyptilia pusillidactyla (Walker)

Oxyptilus pusillidactylus Walk., 1864, Cat. Lep. Het. Brit. Mus. 30: 934 (Jamaica; BMNH).

SPECIMENS EXAMINED: 1 ♀, Lunga River (mouth), Guadalcanal I., 31. V. 1944, Milliron; 2 ♀ ♀, *ibid.*, 20. VI. 1944, Milliron.

DISTRIBUTION: India, Ceylon, Solomon Is., Hawaiian Is., W. Indies, Reunion, Seychelles.

Sphenarches anisodactylus (Walker)

Oxyptilus anisodactylus Walk., 1864, Cat. Lep. Het. Brit. Mus. **30**: 934 (Colombo; BMNH).

SPECIMENS EXAMINED: 1 ♂, 1 ♀, Kukundu, SW Coast, Kolombangara I., 1–12 m, New Georgia Group, 10. VII. 1959, Gressitt; 1 ♀, Hanavaivine, Small Nggela, Florida Group, 16. IX. 1960, O'Brien, light trap.

DISTRIBUTION: Japan, India, Ceylon, Thailand, Solomon Is., New Hebrides, Australia, W. Indies, S. America, W. Africa, Madagascar.

Adamczewski (1951) who revised this species in his work on the generic group *Oxyptilus* Zeller examined the specimens of this species from the following localities: Ceylon, Australia, New Hebrides, W. Africa, S. America, W. Indies, Madagascar and India, and mentioned, "In addition, I have very little doubt that many of the records made under the name *Sphenarches caffer* refer to *S. anisodactylus*, particularly those from the following countries: Brazil, French Guiana, Central Africa, East Africa, Mauritius, Maldives Is., Burma, Sumatra, Java, Philippines, Japan, China, New Guinea, Tenimber, Tonga, Samoa". I (1962, 1963) recorded this species from Thailand and Japan.

Marasmarcha pumilio (Zeller)

Mimeseoptilus pumilio Zell., 1873, Verh. Zool.-Bot. Ges. Wien **23**: 324 (Texas; MCZ).

SPECIMENS EXAMINED: 6 ♂♂, 1 ♀, Kira Kira, San Cristobal I., 14–29. VIII. 1960, O'Brien, light trap; 1 ♂, Tangtalau, 150–200 m, Malaita I., 26. IX. 1957, Gressitt, light trap; 1 ♀, Auki, Malaita I., 18. IX. 1957, Gressitt, light trap; 1 ♂, 1 ♀, Lunga River (mouth), Guadalcanal I., 31. V. 1944, Milliron; 1 ♂, Rorohi, near Tetere, Guadalcanal I., 11. V. 1960, O'Brien, light trap; 5 ♂♂, 1 ♀, Ha-a, Big Nggela, Nggela River, Florida Group, 9–10. IX. 1960, O'Brien, light trap; 1 ♂, Takopekope, Big Nggela, Florida Group, 12. IX. 1960, O'Brien, light trap.

DISTRIBUTION: Ryukyu Is., Taiwan, China, India, Ceylon, Borneo, Bismarck Arch., Solomon Is., Society Is., Austral Is., Samoa, Marquesas Is., N. America, Africa.

Cosmoclostis hemiadelpha Fletcher, 1947, Proc. R. Ent. Soc. Lond. (B) **16**: 49 (Queensland; BMNH).

SPECIMEN EXAMINED: 1 ♂, Derda, Small Nggela, Florida Group, 18. IX. 1960, O'Brien.

DISTRIBUTION: New Guinea, Solomon Is., Australia.

This species and the 2 following species are closely allied to each other superficially. These species can easily be distinguished through the notes and descriptions of this group given by Fletcher (1947).

Cosmoclostis lamprosema Fletcher, 1947, Proc. R. Ent. Soc. Lond. (B) **16**: 50 (New Ireland; BMNH).

DISTRIBUTION: Molucca Is., New Guinea, Louisiade Arch., Bismarck Arch., Solomon Is.

This species is the most well marked one among the group. I did not examine this species from the Solomon Islands.

Cosmoclostis aglaodesma Meyrick, 1886, Trans. Ent. Soc. Lond. **1886** : 12 (Sydney ; BMNH).

DISTRIBUTION : India, Ceylon, Solomon Is., Australia.

Meyrick (1886) described this species from Australia. Fletcher (1947) recorded it from Ceylon, and mentioned "Occurs also in Eastern Australia and in some of the South Pacific and Malayan Islands", and he also redescribed it in 1947. Meyrick (1910, 1913) listed the Solomon Is., India and Ceylon in addition to E. Australia as its distribution. I did not examine this species.

Trichoptilus defectalis (Walker)

Pterophorus defectalis Walk., 1864, Cat. Lep. Het. Brit. Mus. **30** : 943 (Sierra Leone ; BMNH).

DISTRIBUTION : Taiwan, China, India, Ceylon, Thailand, Palau Is., Mariana Is., New Guinea, Solomon Is., Australia, Hawaiian Is., N. & S. America, Africa.

This species was recently recorded from Rennell I. of the Solomon Is. by Whalley (1962).

Subfamily PTEROPHORINAE

Adaina microdactyla (Hübner)

Alucita microdactyla Hübn., 1825, Samml. Eur. Schmett., 26-27.

SPECIMENS EXAMINED : 1♂, Gold Ridge, 800 m, Guadalcanal I., 23. VI. 1956, Gressitt ; 1♂, Kolosulu, Guadalcanal I., 19. V. 1960, O'Brien, light trap.

DISTRIBUTION : Europe, Asia Minor, Japan, Solomon Is.

Up to the present, this small species has been recorded only from Europe, Asia Minor and Japan. I examined 2 specimens from the Solomon Is. and discovered that there is no difference in any point, including the ♂ genitalia, between these specimens and those of Japan.

Aciptilia lacteipennis (Walker)

Aciptilus lacteipennis Walk., 1864, Cat. Lep. Het. Brit. Mus. **30** : 949 (Moulmein ; BMNH).

SPECIMEN EXAMINED : 1♀, Kwalo-E, 600-750 m, Malaita I., 29. IX. 1957, Gressitt.

DISTRIBUTION : Taiwan, Burma, Borneo, New Guinea, Solomon Is., Australia.

This well marked species is easily recognized from other species.

Aciptilia suffiata Yano, 1963, Pac. Ins. **5** (1) : 200, fig. 4e, 94-96 (Nase ; OSAKA).

I wish to redescribe the wings of this species as I examined many specimens of various localities of the South Pacific and found that this species is variable in the degree of the development of the dark brown scales on the wings.

Fore wing cleft from about 3/7 or before it ; both lobes linear ; white faintly tinged with pale yellow especially near base of cleft ; minute brownish scales scattered along posterior margin of lobe 1 and near base on anterior margin of lobe 2, but in both places often slight, sometimes disappeared ; lobe 1 with 2 small dark brown dots on posterior

margin at before middle and before apex, these dots vary in position and development, sometimes disappeared; lobe 2 with 2 small dark brown dots on posterior margin at about 1/7 and 7/9, sometimes very indefinite, rarely another one appearing at middle between them; minute dark brown dots rarely appearing at beyond middle on anterior margin of lobe 1 and just before base of cleft on inner margin. Cilia white; pale grayish brown wisps situated at about middle on posterior margin of lobe 2, rarely appearing also at dark brown dots of this lobe and within cleft, these wisps not clearly indicated. *Hind wing* cleft from about 1/3 and from near base; color as fore wing; some pale brownish scales gathered at base of 1st cleft, also scattered along anterior and rarely posterior margins of lobe 1, but indefinite. Cilia white; 2 indistinct pale grayish brown wisps situated at before and beyond middle on posterior margin of lobe 2.

SPECIMENS EXAMINED: 1 ♀, Metanikan River (mouth), Guadalcanal I., 24.VI.1944, Milliron; 1 ♀, Metanikan River, 2.5 km from mouth, Guadalcanal I., 2.VII.1944, Milliron; 2 ♀ ♀, Tathimani, ca 17 km SE of Tetere, Guadalcanal I., 13.V.1960, O'Brien, light trap; 1 ♀, Rorohi, nr. Tetere, Guadalcanal I., 11.V.1960, O'Brien, light trap; 1 ♀, Maringe Distr., Buala, Santa Ysabel I., 7.VII.1960, O'Brien, light trap; 1 ♀, Kira Kira, San Cristobal I., 14.VIII.1960, O'Brien, light trap.

DISTRIBUTION: Japan, Ryukyu Is., Solomon Is.

Aciptilia niveodactyla Pagenstecher, 1900, Zoologica 29: 240 (Bismarck Arch.).

DISTRIBUTION: Taiwan, China, India, Ceylon, Malaya, Java, Sumatra, Philippines, Borneo, New Guinea, Bismarck Arch., Solomon Is., Australia.

I saw no specimen of this species in the present material.

II. New Guinea and Bismarck Archipelago

In the preceding section I recorded and described the Solomon Islands Pterophoridae in Bishop Museum. In this part, I treat the family from the remaining parts of the Papuan subregion³ in Bishop Museum and in Dr. S. Issiki's collection. The material of the former, mainly collected by Dr. J. L. Gressitt, contains 16 species from New Guinea and the Bismarck Archipelago, while that collected by Dr. S. Issiki in 1936 contains 10 species from NW New Guinea. The present material contains no specimen from the Molucca Islands.

The Papuan Pterophoridae have been mainly investigated by Meyrick (1886, 1908, 1913, 1938), Walsingham (1891), Pagenstecher (1900), Fletcher (1910, 1911, 1947), Gaede (1916), Durrant (1916), Diakonoff (1949, 1952) and Whalley (1962). So far I have been able to ascertain 11 species from the Molucca Islands, 40 species from New Guinea and 7 species from the Bismarck Archipelago have been recorded respectively. I here record 19 species belonging to 13 genera; 19 species are from New Guinea and 6 of them also from the Bismarck Archipelago. Three of them are described as new, and one other is not named.

3. The Papuan subregion used here includes the Molucca Islands, New Guinea, the Bismarck Archipelago and the Solomon Islands, according to Gressitt (1956).

Subfamily AGDISTINAE

Ochyrotica concursa (Walsingham)

Steganodactyla concursa Wlsm., 1891, Ent. Month. Mag. **27**: 241 (Pundaloya; BMNH).

SPECIMENS EXAMINED. NE NEW GUINEA: 1 ♀, Korn Farm, 1560 m, W. Highlands, 19. X. 1958, Gressitt; 2 ♂♂, Morobe Distr., 1200 m, Wau, 7. VII. 1961, Sedlacek, Malaise trap; 1 ♂, *ibid.*, 8. VII. 1961, Sedlacek, light trap; 3 ♂♂, 1 ♀, *ibid.*, 25-26. VII. 1961, Sedlacek, Malaise trap; 2 ♀♀, *ibid.*, 2-4. VIII. 1961, Sedlacek, light trap; 3 ♂♂, 1 ♀, *ibid.*, 17-19. VIII. 1961, Sedlacek, Malaise trap. SE NEW GUINEA: 1 ♂, N of Mendi, 1800 m, S. Highlands, 8. X. 1958, Gressitt, light trap.

DISTRIBUTION: Ryukyu Is., Taiwan, Minami-Daito-jima, China, India, Ceylon, Philippines, Molucca Is., New Guinea, Solomon Is.

Ochyrotica cretosa (Durrant)

Steganodactyla cretosa Dur., 1916, Rep. B. O. U. & Wollaston Exped. Dutch New Guinea **2** (15): 163 (Mimika River; BMNH).

SPECIMENS EXAMINED. NW NEW GUINEA: 1 ♀, Wareng, 17. VIII. 1936, Issiki. NE NEW GUINEA: 1 ♀, Busu R., E of Lae, 100 m, 14. IX. 1956, Gressitt. BISMARCK ARCH.: 1 ♀, Malmalwan-Vunakanau, Gazelle Pen., New Britain I., 8. V. 1956, Gressitt.

DISTRIBUTION: Molucca Is., New Guinea, Bismarck Arch., Solomon Is.

This remarkable species is easily recognized. I recorded this species from the Solomon Islands.

Subfamily PLATYPTILIINAE

Deuterocopus issikii Yano, n. sp. Fig. 3.

This species may be nearest to *D. albipunctatus* Fletcher, 1910 from Japan, Korea and China. However, it is separated from the latter according to the following characters.

Male: Fore wing with small white dots at following points: 5/7 between base of wing and base of cleft, base of lobe 1, just before 1/3 and 2/3 along posterior margin of lobe 1, about 2/3 of lobe 2, a little beyond middle on anterior margin of lobe 3 and just below base of 2nd cleft; dot of lobe 2 occupying whole width of lobe; dot at 5/6 of lobe 1 seen in *albipunctatus* not found. *Abdomen* with a whitish patch at each subdorsal part of segment 1; these patches very indefinite in remaining segments. Length of fore wing 5.5 mm.

Female: As in ♂. Length of fore wing 5.5 mm.

Male genitalia: Tegumen large; paired long arms situated at dorsal side of tuba analis; cucullus large; valva with a long harpe which does not extend to posterior end of cucullus and without a small weakly sclerotized process as seen in *albipunctatus*; dorso-posterior end of sacculus with a rather long spine; aedeagus long, curved.

Holotype ♂ (ISSIKI), Andai, NW New Guinea, 1. VI. 1936, Issiki; allotype ♀, Manokwari, NW New Guinea, 3. VIII. 1936, Issiki.

DISTRIBUTION: New Guinea.

This species is also allied to *D. socotranus* Rebel, 1907 from the Oriental, Australian and Ethiopian regions, but it may be differentiated from it by the absence of a white patch

at base of 1st cleft of fore wing (though there is a minute white dot almost at the same place), and by the absence of a transverse whitish line cut at about 1/3 of lobe 1 of fore wing and the characters of genitalia.

Deuterocopus sp.

Judging by the original description and figure, this species is somewhat similar to *D. citrogaster* (Fletcher, 1910) from the Molucca Is., but it is easily differentiated from the latter and other species of the genus by the characters mentioned below. I examined 2 specimens of this species. These specimens, however, are not in good condition and I wish to refrain from naming it until more specimens are obtained.

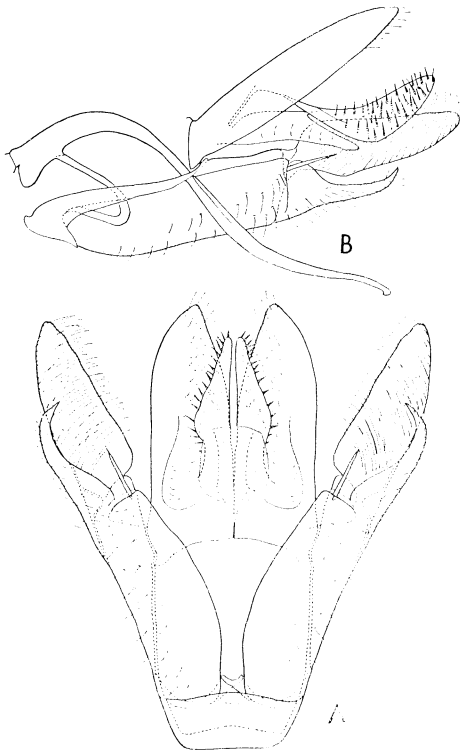


Fig. 3. *Deuterocopus issikii* n. sp. A, ♂ genitalia, excluding aedeagus; B, ditto, lateral view, excluding left valva.

Male and ♀: Fore wing cleft from slightly beyond middle, lobe 2 again cleft from 7/10 of its length; lobe 1 slightly dilated towards termen, and anal angle round; 2nd cleft rather wide, lobe 2 narrow beyond base of cleft and pointed terminally; lobe 3 short; dark brown with many round and transverse linear pale yellowish brown patches. Cilia of posterior margin of lobe 1 pale yellowish brown, dark brown towards anal angle continuing to termen but interrupted by small pale yellowish wisp at just before anal angle; cilia of anterior margin of lobe 2 somewhat darker than that of posterior margin of lobe 1, dark brown near apex; cilia within 2nd cleft pale yellowish white; cilia of inner margin pale yellowish brown to about middle between bases of both clefts, beyond this dark brown. Hind wing cleft from about 1/3 and from near base; all lobes linear; dark brown partially suffused with pale yellowish brown; lobe 1 with a linear patch at little before apex. Cilia pale yellowish brown, somewhat darker towards apices of all lobes. Abdomen with segment 1 pale yellowish white, remaining segments yellowish

brown suffused with pale yellowish white and whitish partially; ventral surface pale yellowish white, pale yellowish brown near caudal end. Length of fore wing 6 mm.

SPECIMENS EXAMINED. NW NEW GUINEA: 1♂, Hollandia-Binnen, 100 m, 1. XI. 1958, Gressitt; 1♀, Waris, S of Hollandia, 450-500 m, 16-23. VIII. 1959, Maa.

DISTRIBUTION: NW New Guinea.

Hexadactilia trilobata Fletcher, 1910, Trans. Ent. Soc. Lond. 1910: 108, pl. 44, fig. 1 (Ron; BMNH).

SPECIMENS EXAMINED. SE NEW GUINEA: 1 ♀, C. Distr., Otomata Plantation, 1 m, E of Moresby, 2. XI. 1960, Gressitt, Malaise trap; 1 ♀, Cape Rodney, 10 m, 2-4. XI. 1960, Gressitt, Malaise trap.

DISTRIBUTION: New Guinea.

Platyptilia petila Yano, 1963, Pac. Ins. 5 (4): 851, fig. 2 C, D (Santa Ysabel I.; BISHOP).

SPECIMENS EXAMINED. NE NEW GUINEA: 1 ♂, 1 ♀, Minj area, 1700 m, 23. VI. 1957, Hardy, light trap; 1 ♂, Sepik, Maprik area, 1600 m, 27. VIII. 1957, Hardy, light trap. NW NEW GUINEA: 1 ♂, Swart Val., Karubaka, 1450 m, 16. XI. 1958, Gressitt, light trap.

DISTRIBUTION: New Guinea, Solomon Is.

Platyptilia taprobanes (Felder)

Amblyptilia taprobanes Feld., 1875, Reise Novara, Lep. Het., pl. 140, fig. 54 (India; BMNH).

SPECIMENS EXAMINED. NE NEW GUINEA: 1 ♂, Minj area, 1700 m, 23. VI. 1957, Hardy, light trap; 1 ex., Wau, Morobe Distr., 1200 m, 26. VII. 1961, Sedlacek, Malaise trap.

DISTRIBUTION: Europe, Syria, Japan, India, Ceylon, Burma, Thailand, New Guinea, Africa.

The present specimens somewhat differ in the wing markings from those of Thailand and Japan. Costal triangular patch of fore wing indefinite, and area beyond this not distinctly paler; a whitish transverse line of fore wing also indefinite, scarcely visible in lobe 2. These specimens, however, are best regarded as *taprobanes* according to the other characters including the ♂ genitalia.

Nippoptilia spinosa Yano, n. sp. Figs. 4, 5.

Male: *Head* with vertex and frons smooth; grayish brown, somewhat paler towards anterior margin of the latter. Labial palpus slender, upturned, basal segment somewhat broad; yellowish brown, somewhat paler on basal segment; segment 2 with a pale yellowish white ring at its end; segment 3 darker than other segments. Occipital fringe yellowish brown on dorsum. *Thorax* grayish brown with a rather broad yellowish brown transverse band between each base of fore wing; metathorax whitish, tinged with pale yellowish brown on dorsum, this pale yellowish brown area extending slightly into posterior part of mesothorax; pectus whitish mixed with pale yellowish brown. *Legs:* Fore leg with coxa and femur yellowish brown; tibia pale yellowish brown with a small dark brown patch, somewhat rough at its end. Mid leg with femur and tibia yellowish brown, the latter with 2 scale tufts, one at 1/3 and another at end. Tarsi of fore and mid legs dark brown above slightly mixed with yellow on 2 basal segments, pale yellowish brown beneath except for terminal part which is dark brown. Hind leg with femur yellowish brown on outer side, whitish on inner side; tibia yellowish brown, tinged with pale yellowish white on inner side, somewhat raised scales occurring at basal part above and with 2 scale tufts at a little before middle where medial spur occurs and at end; tarsus dark brown mixed with whitish partially. *Fore wing* cleft from 5/8; lobe 1 moderate, slightly dilated towards termen which is slightly sinuate inwardly; lobe 2 distinctly dilated towards termen which is concave just below its anterior angle which is somewhat pointed; dark brown; costa dotted with white from base of wing to before base of cleft; irregular, small and large yellowish

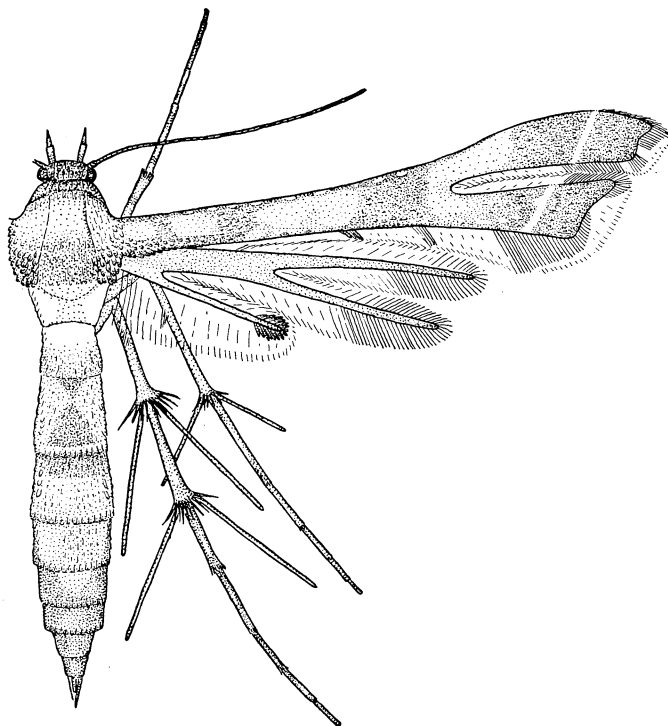


Fig. 4. *Nippoptilia spinosa* n. sp.

brown patches scattered from base of wing to $3/4$ between base of wing and base of cleft; basal $1/4$ of lobe 1 yellowish brown and extending to base of cleft and basal part of lobe 2; a narrow white line parallel to termen crossing both lobes at $2/3$ of their length, some white scales scattered on both lobes before this white line. Cilia within cleft pale yellowish white to a white line on lobes, beyond this to apex of lobe 1 dark brown interrupted $2\times$ by pale yellowish white at before and above anal angle, beyond this to apex of lobe 2 dark brown and extending to round apex; cilia of inner margin pale yellowish white with 2 dark brown scale tufts, the one at $3/4$ between base of wing and base of cleft, another at just before base of cleft, cilia of outer $2/3$ of inner margin of lobe 2 dark brown, extending to round anal angle. *Hind wing* cleft from before middle and from near base; 3 lobes all linear; pale yellowish brown from base of wing to base of 1st cleft, beyond this dark brown; lobe 3 pale yellowish brown except for near apex. Cilia pale yellowish white, somewhat darker towards apices of lobes 1-2; terminal $2/9$ of lobe 3 covered with dark brown scales. *Abdomen* with anterior $1/2$ of segment 1 pale yellowish white; a large dark brown patch covering posterior part of segment 2 and anterior margin of segment 3 on dorsum, and extending to anterior margin of segment 2; segment 5 to caudal end of abdomen dark brown, remaining part of abdomen yellowish brown mixed with dark brown laterally; this yellowish brown part extending to anterior margin of segment 5; anal tuft dark brown slightly mixed with whitish; ventral surface whitish slightly tinged with

pale yellowish brown. Length of fore wing 7.5 mm.

Female: As in ♂, except as follows: a dark brown patch on segment 2 of abdomen extending slightly to anterior margin of segment 3; segment 5 of abdomen almost yellowish brown, posterior margin narrowly dark brown; anal tuft yellowish brown. Length of fore wing 7 mm. *Paratype*: Length of fore wing 7.2 mm.

Male genitalia: Tegumen narrow; uncus rather large; valva simple, broad; juxta sclerotized distinctly and with 2 large, elliptical lobes; a long arm arising from vinculum ventrad of valva, posterior 1/2 of this arm distinctly sclerotized and hairy, and with 4 small spines at its end, its basal 1/2 connected with juxta; aedeagus rather simple.

Holotype ♂ (Issiki), Wareng, NW New Guinea, 21. V. 1936, Issiki; allotype ♀, Windesi-Majosi, NW New Guinea, 3. VIII. 1936, Issiki. Paratype: 1 ♂, Manokwari, NW New Guinea, 3. VIII. 1936, Issiki.

DISTRIBUTION: New Guinea.

This species exhibits a somewhat superficial resemblance to the species of the generic group *Oxyptilus* Zeller. It has, however, the characters of the genus *Nippoptilia* Matsumura. It is easily separated from other species of the genus by the yellowish brown markings on the wings.

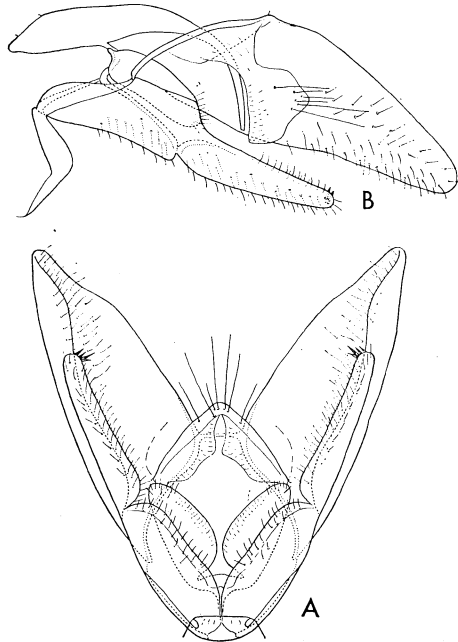


Fig. 5. *Nippoptilia spinosa* n. sp. A, ♂ genitalia, excluding aedeagus; B, ditto, lateral view, excluding left valva.

Fletcherella niphadothysana Diakonoff, 1952, Verh. Kon. Ned. Ak. Wet. Nat. Sect. 2, 49 (1): 14, figs. 1, 9 (NW New Guinea; LEIDEN).

SPECIMEN EXAMINED. NW NEW GUINEA: 1 ♀, Windesi-Majosi, 3. VIII. 1936, Issiki.

DISTRIBUTION: New Guinea.

This unique species was originally described in 1952 based on 1 ♂ specimen. I examined here 1 ♀ specimen.

Sphenarches anisodactylus (Walker)

Oxyptilus anisodactylus Walk., 1864, Cat. Lep. Het. Brit. Mus. 30: 934 (Colombo; BMNH).

SPECIMENS EXAMINED. NW NEW GUINEA: 1 ♂, Wareng, 11. VIII. 1936, Issiki; 3 ♂ ♂, 3 ♀ ♀, Kebar Val., W of Manokwari, 550 m, Vogelkop, 4–31. I. 1962, Quate, Malaise trap. SE NEW GUINEA: 1 ♂, 1 ♀, Brown River, 5 m, 23. X. 1960, Gressitt, Malaise trap; 3 ♀ ♀, Cape Rodney, 10 m, 2–4. XI. 1960, Gressitt, Malaise trap. BISMARCK ARCH.: 1 ♂, Kerawat, Gazelle Pen., 60 m, New Britain, secondary growth clearing, 2. IX. 1955, Gressitt; 1 ♂, 1 ♀, Lindenhafen, 2 m, S. Coast, New Britain, 22–26. IV. 1956, Gressitt, *Cocos*; 1 ♀, *ibid.*, 21. VI. 1956, Gressitt; 3 ♀ ♀, Malmalwan-Vunakanau, Gazelle Pen., New Britain, 6–16. V. 1956,

Gressitt.

DISTRIBUTION: Japan, India, Ceylon, Thailand, New Guinea, Bismarck Arch., Solomon Is., New Hebrides, Australia, W. Indies, S. America, W. Africa, Madagascar.

Tetraschalis lemurodes Meyrick, 1908, Trans. Ent. Soc. Lond. **1907**: 476 (Kei I.; BMNH).

SPECIMENS EXAMINED. SE NEW GUINEA: 1♂, C. Distr., Otomata Plantation, 1 m, E of Moresby, 2. XI. 1960, Gressitt, Malaise trap; 2♂♂, Cape Rodney, 10 m, 2-4. XI. 1960, Gressitt, Malaise trap.

DISTRIBUTION: New Guinea, Kei I. This distinct species was originally described from Kei I.

Marasmarcha pumilio (Zeller)

Mimeseoptilus pumilio Zell., 1873, Verh. Zool.-Bot. Ges. Wien **23**: 324 (Texas; MCZ).

SPECIMENS EXAMINED. SE NEW GUINEA: 1♂, Mendi, 1660 m, S. Highlands, 6. X. 1958, Gressitt; 1♂, *ibid.*, 13. X. 1958, Gressitt, light trap. NE NEW GUINEA: 1♀, Wau, Morobe Distr., 1100 m, 29. VIII. 1961, Sedlacek, at light. BISMARCK ARCH.: 1♂, Malmalwan-Vunakanau, Gazelle Pen., New Britain, 5-12. V. 1956, Gressitt.

DISTRIBUTION: Ryukyu Is., Taiwan, China, India, Ceylon, Borneo, New Guinea, Bismarck Arch., Solomon Is., Samoa, Society Is., Austral Is., Marquesas Is., N. America, Africa. This widely distributed species is recorded here for the first time from New Guinea.

Xyroptila marmarias Meyrick, 1908, Trans. Ent. Soc. Lond. **1907**: 480 (Queensland; BMNH).

SPECIMENS EXAMINED. NW NEW GUINEA: 1♂, Windesi-Majosi, 3. VIII. 1936, Issiki; 1♂, Manokwari, 75 m, Vogelkop, 18. VII. 1957, Hardy; 2♂♂, 2♀♀, 1 ex., Bodem, 100 m, 11 km SE of Oerberfaren, 7-17. VII. 1959, Maa.

DISTRIBUTION: New Guinea, Australia. Meyrick (1908) recorded this species from Australia. Since then no other specimen has been recorded. This is the first record from New Guinea.

Cosmoclostis lamprosema Fletcher, 1947, Proc. R. Ent. Soc. Lond. (B) **16**: 50 (New Ireland; BMNH). Fig. 6 A, B.

Male genitalia: Uncus stout, constricted at about middle and with a conical projection densely covered with hairs at dorsal part; tegumen stout, its posterior 1/2 densely covered with spine-like hairs dorsally; a paired projection occurring from ventral side of tegumen; anterior end of tegumen with a bundle of long hairs (not illustrated in fig. 6); vinculum triangular at mid-ventral part; valva asymmetrical as shown in figure; concavity on outer surface of valva not distinct; juxta developed, with 2 long arms posteriorly, and bifurcated at its anterior end, sclerotized rather heavily at middle; aedeagus heavily sclerotized, irregularly curved as shown in fig. 6B.

SPECIMENS EXAMINED. NE NEW GUINEA: 1♂, Maprik, 160 m, 15. X. 1957, Gressitt; 1 ex., Sepik, Maprik area, 160 m, 28. VIII. 1957, Hardy, light trap. SE NEW GUINEA: 1♂, Cape Rodney, 10 m, 2-4. XI. 1960, Gressitt, Malaise trap. BISMARCK ARCH.: 1♂, Keravat, 30 m, New Britain, 29. V. 1956, Dun.

DISTRIBUTION: Molucca Is., New Guinea, Louisiade Arch., Bismarck Arch., Solomon Is.

Cosmoclostis hemiadelpha Fletcher, 1947, Proc. R. Ent. Soc. Lond. (B) 16: 49 (Queensland; BMNH). Fig. 6 C, D.

Male genitalia: Uncus rather long, broadened posteriorly, posterior end slightly incised; each side of uncus projected ventrally at a little before posterior end; vinculum triangular and incised posteriorly at its mid-ventral part; valva elongate and with 4 spines at posterior part, 3 of which are small and situated on ventral margin, 1 is long and on dorsal margin; a long arm occurring from dorsal margin of valva, reaching a little before end of valva and with a strong spine at just before its end; outer surface of valva with a large elongate concavity, and a bundle of long hairs occurring from its base; juxta narrow, weakly sclerotized; aedeagus stout, with spinous cornuti.

SPECIMENS EXAMINED. NW NEW GUINEA: 1 ♂, Wareng, 12. VII. 1936, Issiki. SE NEW GUINEA: 1 ♂, Oriomo Govt. Sta., W. District, 26-28. X. 1960, Gressitt, Malaise trap.

DISTRIBUTION: New Guinea, Solomon Is., Australia.

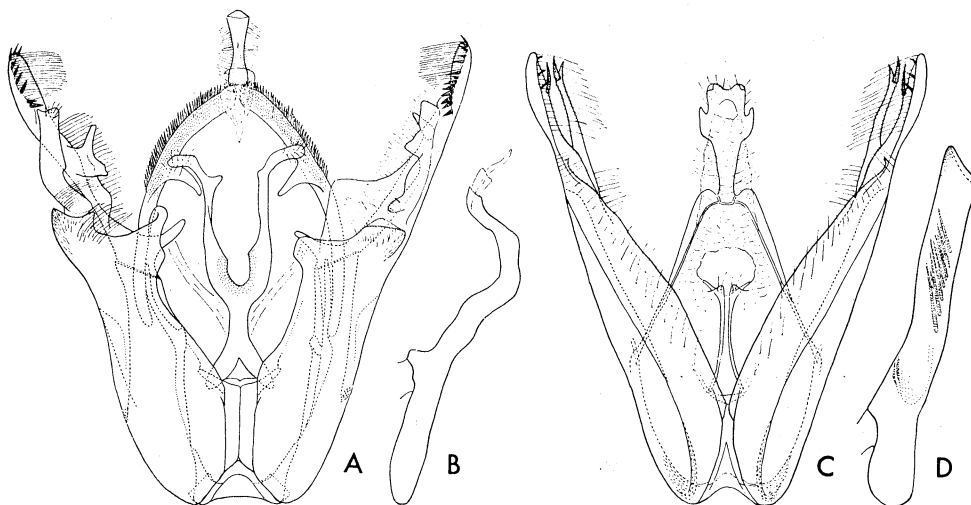


Fig. 6. A, *Cosmoclostis lamprosema* Fletcher, ♂ genitalia, excluding aedeagus; B, ditto, aedeagus; C, *Cosmoclostis hemiadelpha* Fletcher, ♂ genitalia, excluding aedeagus; D, ditto, aedeagus.

This species is closely allied to the preceding species. But it may be differentiated by the characters pointed out by Fletcher (1947) and the distinct characters of the genitalia mentioned above.

Cosmoclostis premnicola Fletcher, 1932, Imp. Counc. Agr. Res. Sci. Mon. 2: 1, pl. 1 (Pusa; BMNH).

SPECIMENS EXAMINED. NW NEW GUINEA: 1 ♂, Wareng, 15. VIII. 1936, Issiki; 1 ♀, Hollandia-Binnen, 100 m, 24. XI. 1958, Gressitt, light trap. BISMARCK ARCH: 1 ♀, Malmalwan-Vunakanau, Gazelle Pen., New Britain, 16. V. 1956, Gressitt.

DISTRIBUTION: India, New Guinea, Bismarck Arch.

This small, pretty species was described by Fletcher based on 8 specimens bred from

larvae on *Premna latifolia* at Pusa. The present specimens from New Guinea and the Bismarck Arch. agree well with the original description and figures given by Fletcher.

Trichoptilus defectalis (Walker)

Pterophorus defectalis Walk., 1864, Cat. Lep. Het. Brit. Mus. **30**: 943 (Sierra Leone; BMNH).

SPECIMENS EXAMINED: SE NEW GUINEA: 1♂, Aroa Estate, W of Redscar Bay, 1 m, 30. IX. 1958, Gressitt.

DISTRIBUTION: Taiwan, China, India, Ceylon, Thailand, Palau Is., Mariana Is., New Guinea, Solomon Is., Australia, Hawaiian Is., N. & S. America, Africa.

Subfamily PTEROPHORINAE

Aciptilia denticulata Yano, n. sp. Figs. 7, 8.

Male: Head with vertex and frons whitish, posterior margin of the former slightly tinged with pale yellowish brown. Labial palpus rather short; basal segment distinctly brushy, white; segments 2-3 smooth, whitish, slightly tinged with pale yellowish brown on segment 3. Occipital fringe conspicuous, whitish. *Thorax* pale yellowish brown mixed with white scales except for tegula and metathorax which are white. *Legs*: All whitish; under sides of fore and mid femora and tibiae tinged with brownish, indistinctly on both femora.

Mid tibia with 2 scale tufts, one at about 1/3, another at end. Hind tibia with medial spur at 3/5 of its length, and rough scales occurred on basal 2/5 above. *Fore wing* cleft from 2/5; both lobes linear; white; some grayish brown scales gathered at base of cleft; along cleft on basal 1/2 some grayish brown scales scattered; lobe 1 with 3 small clusters of dark brown scales at just before middle, 5/7 and 4/5, the 1st on costa distinct, the 2nd on costa minute, the last on posterior margin; lobe 2 with

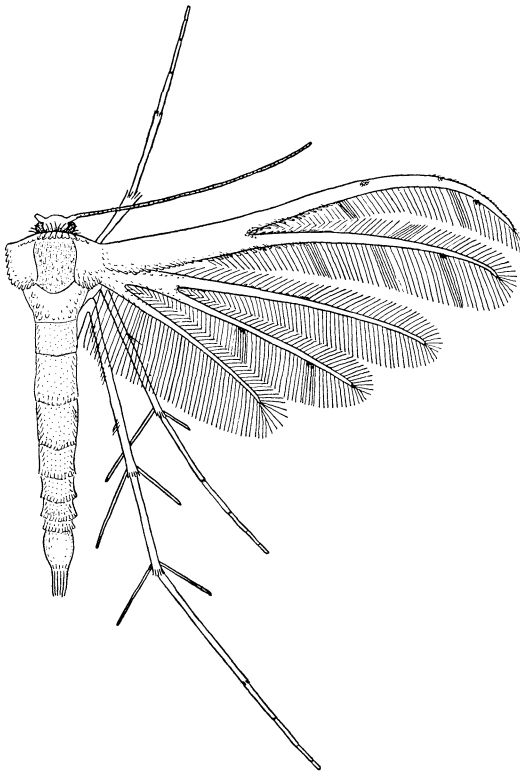


Fig. 7. *Aciptilia denticulata* n. sp.

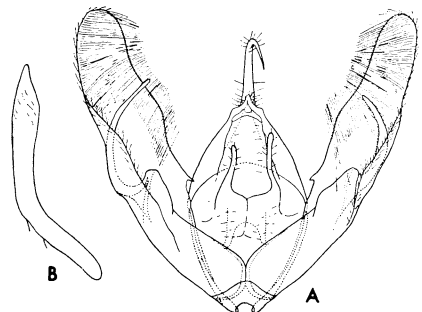


Fig. 8. *Aciptilia denticulata* n. sp. A, ♂ genitalia, excluding aedeagus; B, ditto, aedeagus.

a small cluster of dark brown scales on posterior margin at 3/4; posterior margins of both lobes mixed with some gathered grayish brown scales at 2/5 on lobe 1, 1/2 on lobe 2. Cilia white; pale grayish brown wisps situated at 2/5, 4/5 on posterior margin of lobe 1, 3/5 on anterior margin and 1/5, 1/2 and 3/4 on posterior margin of lobe 2. *Hind wing* cleft from about 1/4 and from near base; white with a small pale grayish brown spot at base of 1st cleft; pale grayish brown scales scattered along anterior margin of lobe 1 from 1/4-1/2, few pale grayish brown scales scattered along posterior margin towards base of lobe 1; lobe 2 with 3 minute indefinite clusters of dark brown scales on posterior margin at 3/8, 3/4 and apex. Cilia white slightly tinged with pale gray; pale grayish brown wisps situated at 1st 2 clusters on lobe 2. *Abdomen* whitish tinged with pale yellowish brown; under surface of abdomen nearly whitish, slightly tinged with pale yellowish brown. Length of fore wing 9 mm.

Paratypes: As in ♂, except as follows: lobe 1 of fore wing without 2 of 3 small clusters of dark brown scales in some paratypes; posterior margins of both lobes of fore wing with some gathered grayish brown scales, but sometimes indistinct, rarely without them. Length of fore wing 9 mm.

Male genitalia: Uncus narrow, pointed and distinctly bent ventrally; both valvae nearly equal in length, left valva with a long arched pointed harpe; right valva with a shorter arched harpe, its inner margin toothed; juxta with 2 pairs of developed arms, the one directed caudad and not equal in length, another directed cephalad; aedeagus simple.

Holotype ♂ (Issiki), Wareng, NW New Guinea, 17.VIII.1936, Issiki. Paratypes: 2♂♂, same data as holotype; 1♂, *ibid.*, 21.V.1936, Issiki.

DISTRIBUTION: New Guinea.

This species is somewhat similar to *A. endogramma* (Meyrick, 1922) from Fiji, but it may be separated from the latter by the absence of 2 grayish basal spots on dorsum of lobe 3 of hind wing and presence of rather distinct pale grayish brown wisps within cilia of both wings.

Aciptilia suffiata Yano, 1963, Pac. Ins. 5 (1): 200, figs. 4e, 94-96 (Nase; OSAKA).

SPECIMENS EXAMINED. NW NEW GUINEA: 1♂, Wareng, 12.VII.1936, Issiki; 1♂, *ibid.*, 15.VIII.1936, Issiki; 4♂♂, 1 ex., Kebar Val., W of Manokwari, 550 m, Vogelkop, 4-31.I.1962, Quate. NE NEW GUINEA: 3♂♂, Wau, Morobe Distr., 1100 m, 29.VIII.1961, Sedlacek, at light. BISMARCK ARCH.: 2♀♀, Malmalwan-Vunakanau, Gazelle Pen., New Britain, 8-10.V.1956, Gressitt.

DISTRIBUTION: Japan, Ryukyu Is., New Guinea, Bismarck Arch., Solomon Is.

III. Polynesia

Six species are known from Polynesia⁴. It is, however, doubtful that *Sphenarches caffer* (Zeller, 1852) occurs in Polynesia according to the reason pointed out by Adamczewski (1951) and that mentioned in this paper. The present material consists of 7 species. Four of them are newly recorded from Polynesia and one is described as new. The fauna of

4. The Polynesian subregion used here covers Southeastern Polynesia, Central Polynesia and Western Polynesia (E. Melanesia), according to Gressitt (1956).

Polynesian Pterophoridae is now comprised of 10 species (excluding *S. caffer*) belonging to 5 genera: 5 species from New Hebrides, 2 from New Caledonia, 3 from Fiji, 5 from Samoa, 2 from Tonga and one each from the Society Is., Austral Is., Tuamotu Arch., Marquesas Is., Phoenix Is., and Jarvis I. No species of the subfamily Agdistinae is known from Polynesia. The distribution of the species from Polynesia is shown in table 1.

KEY TO POLYNESIAN SPECIES OF PTEROPHORIDAE

1. Lobe 2 of hind wing with 3 veins and lobe 3 with 1 vein (subfamily Platyptiliinae) 2
 - Lobes 2-3 of hind wing with 2 veins each (subfamily Pterophorinae)..... 7
- 2 (1). Fore wing with vein radius all present 3
 - Fore wing with vein radius lacking 1 or more branches 6
- 3 (2). Fore wing with vein R_1 separate4
 - Fore wing with veins R_1 and R_2 stalked.....5
- 4 (3). Inner margin of lobe 3 of hind wing with a scale tuft at near apex
 - **Platyptilia pusillidactyla**
 - Inner margin of lobe 3 of hindwing with a scale tuft at about middle
 - **Platyptilia petila**
- 5 (3). Lobe 2 of fore wing slender throughout its length, without a distinct anal angle; metathorax and abdomen with 2 pale yellowish white longitudinal stripes on dorsum.....**Sphenarches bilineatus**
 - Lobe 2 of fore wing with an anal angle; metathorax and abdomen without such distinct stripes **Sphenarches anisodactylus**
- 6 (2). Fore wing with 4 branches of vein radius present..... **Marasmarcha pumilio**
 - Fore wing with 3 branches of vein radius present.....**Trichoptilus defectalis**
- 7 (1). Lobe 2 of fore wing without dark dots except for few dark scales at base of cleft
 - **Aciptilia candidalis**
 - Lobe 2 of fore wing with dark dots or at least some blackish irroration.....8
- 8 (7). Lobe 2 of fore wing with dark dots on posterior margin..... 9
 - Lobe 2 of fore wing without dark dots on posterior margin, but with some blackish irroration on anterior margin at base and before middle; lobe 1 of fore wing with a line of blackish irroration on posterior margin from base to 2/3 of its length **Aciptilia endogramma**
- 9 (8). Fore wing usually with a transverse mark at base of cleft; lobe 2 of fore wing with 3 dark dots on posterior margin at 1/2, 2/3 and 3/4 of its length and 1 at apex **Aciptilia aptalis**
 - Fore wing without such a transverse mark at base of cleft; lobe 2 of fore wing with 2 small dots on posterior margin at about 1/7 and 7/9, rarely another one appearing at middle between them **Aciptilia suffiata**

Subfamily PLATYPTILIINAE

Platyptilia petila Yano, 1963, Pac. Ins. 5 (4): 851, fig. 2 C, D (Santa Ysabel I.; BISHOP).

SPECIMENS EXAMINED. NEW HEBRIDES: 1♂, Limestone plateau, N of Maat, 100 m, Efate I. (NW), 15.VIII.1957, Gressitt, light trap; 1♂, Luganville, 2 m, Espiritu Santo I., 25.VIII.1957, Gressitt,

Table 1. Distribution of Polynesian Pterophoridae

	SE Polynesia	C. Polynesia	W. Polynesia (E. Melanesia)	Other areas
	Society Is. Austral Is. Tuamotu Arch. Marquesas Is. Phoenix Is. Jarvis I.	Samoa Tonga	Fiji New Hebrides New Caledonia	
Subfamily Platyptiliinae				
<i>Platyptilia petila</i>			×	Oriental region
<i>Platyptilia pusillidactyla</i>		×		Oriental region, Hawaiian Is., W. Indies, Reunion, Seychelles
<i>Sphenarches anisodactylus</i>		×	×××	Japan, Oriental region, Australia, W. Indies, S. America, W. Africa, Madagascar
<i>Sphenarches bilineatus</i> *		×		
<i>Marasmarcha pumilio</i>	××××	×		Oriental region, N. America, Africa
<i>Trichoptilus defectalis</i>			×	Oriental region, Australia, Hawaiian Is., N. & S. America, Africa
Subfamily Pterophorinae				
<i>Aciptilia candidalis</i>		×	×	Oriental region, Australia, Africa
<i>Aciptilia aptalis</i>		×	×	Australia
<i>Aciptilia endogramma</i>			×	
<i>Aciptilia suffiata</i>			×	Japan, Oriental region

* Described as new.

DISTRIBUTION: New Guinea, Solomon Is., New Hebrides.

Platyptilia pusillidactyla (Walker)

Oxyptilus pusillidactylus Walk., 1864, Cat. Lep. Het. Brit. Mus. 30: 933 (Jamaica; BMNH).

SPECIMENS EXAMINED. SAMOA: 1♂, Afiamalu, 670 m, Upolu I., 28. VI. 1940, Swezey & Zimmerman, at light; 1♂, *ibid.*, 5. VII. 1940, Swezey & Zimmerman, at light; 1♀, 1 ex., Tapatapao, 30 m, Upolu I., 20–22. VII. 1940, Swezey & Zimmerman, at light.

DISTRIBUTION: India, Ceylon, Philippines, Solomon Is., Samoa, Hawaiian Is., W. Indies, Reunion, Seychelles.

Sphenarches anisodactylus (Walker)

Oxyptilus anisodactylus Walk., 1864, Cat. Lep. Het. Brit. Mus. 30: 934 (Colombo; BMNH).

SPECIMENS EXAMINED. NEW CALEDONIA: 1♂, Anse Vata, 8. XI. 1958, Joyce, light trap. FIJI: 1♀, Suva, Viti Levu I., 6. XII. 1958, Joyce. SAMOA: 1♀, Apia, Upolu I., 14. IX. 1923, Swezey & Wilder; 1♂, Tutuila I., 7. XI. 1956, Kellen; 1 ex., Mapusaga, Tutuila I., 17. XII. 1956, Kellen.

DISTRIBUTION: Japan, India, Ceylon, Thailand, New Guinea, Bismarck Arch., Solomon Is., New Hebrides, New Caledonia, Fiji, Samoa, Australia, W. Indies, S. America,

W. Africa, Madagascar.

Meyrick (1927) recorded *Sphenarches caffer* (Zeller) from the Samoan Is. based on 2 examples collected at Upolu I., and mentioned "Also one in Bishop Museum." The last specimen must be the one I examined here. *S. caffer* has been recorded from New Hebrides, Samoa and Tonga within Polynesia. The record from Samoa, however, should be regarded as that of the present species as stated above. I am also in doubt about the remaining records for following reasons: Adamczewski (1951) examined specimens of *anisodactylus* from New Hebrides; *caffer* is known only from Africa according to Adamczewski (1951) who revised it.

Sphenarches bilineatus Yano, n. sp. Figs. 9, 10.

Male: *Head* with vertex and frons smooth, the former with a small scale tuft just behind base of each antenna, the latter slightly convex; pale yellowish brown, paler at anterior margin of frons and posterior part of vertex. Labial palpus slender; whitish, slightly mixed with brown and dark brown scales at segments 2-3. Occipital fringe conspicuous. *Thorax* pale yellowish white tinged with pale brown and suffused with brownish on anterior and posterior parts, metathorax with 2 pale yellowish white longitudinal stripes on dorsum. *Legs* whitish with dark brown stripes and patches; tibiae of all legs thickened at their ends and with a scale tuft at 1/3 of mid leg and at base of medial spur of hind leg.

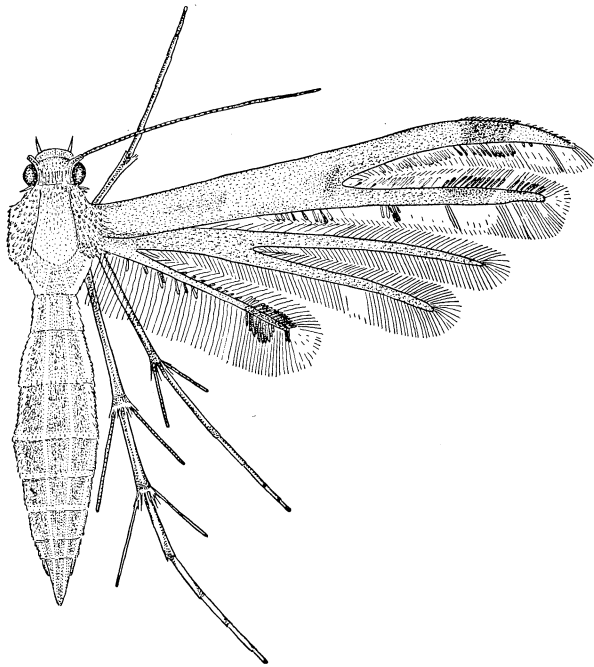


Fig. 9. *Sphenarches bilineatus* n. sp.

Fore wing cleft from about 1/2; lobe 1 falcate; lobe 2 slender, termen slightly sinuate inwardly, anal angle very faint; pale yellowish brown suffused with whitish, slightly darker at about middle between base of wing and base of cleft; a small dark brown patch just at base of cleft; lobe 1 with a small darker costal patch at 2/7 and with a broad dark brown band at a little beyond this costal patch, areas before and beyond this broad band pale yellowish white narrowly but not distinct, costa before apex narrowly dark brown; lobe 2 darker at outer 1/2, before this narrowly slightly paler, a whitish line crossing the lobe at about 2/3 but not clearly indicated. Cilia of costa whitish before and beyond broad dark brown band of lobe 1; cilia of apex dark brown; cilia within cleft whitish, grayish brown along dark brown areas of both lobes and

just before apex of lobe 1, whitish scales densely mixed from base of cleft to inner margins of dark brown areas of lobes, and dark brown scales distinctly mixed along dark

brown areas, a narrow but clearly indicated dark brown tuft of cilia situated at about middle between outer margin of dark brown area and apex of lobe 1; cilia of apex of lobe 2 whitish; cilia of inner margin whitish slightly tinged with grayish brown, cilia along outer 2/7 of lobe 2 grayish brown mixed with 2 narrow white wisps, 3 small dark brown scale tufts at a little before base of cleft, at 1/4 and 1/2 of lobe 2 and some dark brown scales scattered before innermost scale tuft; some whitish scales scattered along inner margin. *Hind wing* cleft from about 1/3 and from near base; 3 lobes linear; brownish. Cilia pale grayish brown, somewhat paler on lobe 3; lobes 1-2 partially mixed with white cilia, especially at 2/3 of posterior margin of lobe 2; cilia of apex of lobe 3 white; anterior margin of lobe 3 with dark brown scattered scales from base to 3/4 where few white scales are situated, beyond this dark brown scales densely mixed, inner margin with a strong rather wide dark brown scale tuft at a little before apex and a slight scale tuft just below apex, dark and white scales scattered from base of wing to strong scale tuft. *Abdomen* nearly equal in color to thorax, somewhat paler towards basal part; 2 pale yellowish white longitudinal stripes on dorsum running from the same stripes on metathorax to caudal end of abdomen; ventral surface pale yellowish brown mixed with dark brown partially, and with a pale yellowish white stripe on venter but not reaching caudal end. Length of fore wing 7 mm.

Female: As in ♂. Length of fore wing 7.2 mm.

Male genitalia: Tegumen incised at its posterior margin; uncus large, long and pointed, and with minute hairs; vinculum broad and membranous, not heavily sclerotized; valva simple, sacculus not distinctly developed; aedeagus long, gradually broadening towards base and with scobinous cornuti.

Holotype ♂ (BISHOP 3454), Utulei, Tutuila I., 200 m, Samoa, 18. VIII. 1940, Swezey; allotype ♀ (BISHOP), same data as holotype.

DISTRIBUTION: Samoa.

This species is closely allied to *S. anisodactylus* (Walker, 1864), but it differs from the latter in the following characters: lobe 2 of fore wing slender throughout its length, without a distinct anal angle; a white area before dark brown broad band on lobe 1 of fore wing narrow and not clearly indicated; metathorax and abdomen with 2 pale yellowish white longitudinal stripes on dorsum and characters of genitalia.

Marasmarcha pumilio (Zeller)

Mimeseoptilus pumilio Zell., 1873, Verh. Zool.-Bot. Ges. Wien 23: 324 (Texas; MCZ),

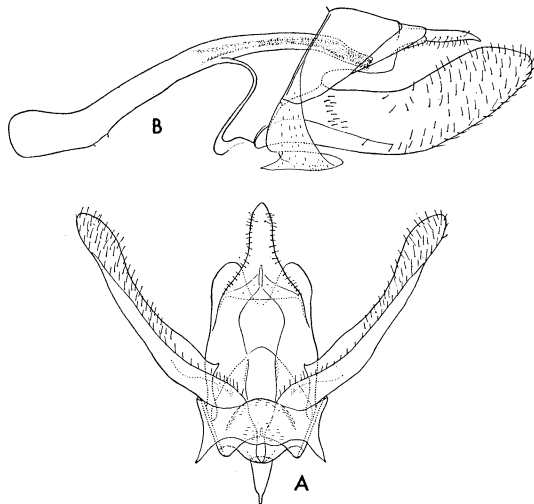


Fig. 10. *Sphenarches bilineatus*, n. sp. A, ♂ genitalia, excluding aedeagus; B, ditto, lateral view, excluding left valva.

SPECIMENS EXAMINED. MARQUESAS IS.: 1♂, Tapuhiva, Hanavave Vall., 150 m, Fatu Hiva I., 9.IX.1930, Le Bronnec. TUAMOTU ARCH.: 8♀♀, NE Slope, Mt. Duff, 30–150 m, Mangareva I., 23.V.1934, Zimmerman.

DISTRIBUTION: Ryukyu Is., Taiwan, China, India, Ceylon, Borneo, New Guinea, Bismarck Arch., Solomon Is., Samoa, Society Is., Austral Is., Marquesas Is., Tuamotu Arch., N. America, Africa.

Trichoptilus defectalis (Walker)

Pterophorus defectalis Walk., 1864, Cat. Lep. Het. Brit. Mus. **30**: 943 (Sierra Leone; BMNH).

SPECIMENS EXAMINED. JARVIS I.: 7♂♂, 6♀♀, 2 exs., V. 1935, Graf. PHOENIX IS.: 5♂♂, 6♀♀, 7 exs., Sydney I., 10–25.III.1924, Bryan.

DISTRIBUTION: Taiwan, China, India, Ceylon, Thailand, Palau Is., Mariana Is., New Guinea, Solomon Is., Phoenix Is., Jarvis I., Australia, Hawaiian Is., N. & S. America, Africa.

Subfamily PTEROPHORINAE

Aciptilia candidalis (Walker)

Aciptilus candidalis Walk., 1864, Cat. Lep. Het. Brit. Mus. **30**: 948 (Sierra Leone; BMNH).

DISTRIBUTION: Taiwan, India, Ceylon, Philippines, New Guinea, New Hebrides, New Caledonia, Samoa, Tonga, Australia, Africa.

There is no specimen of this species in the present material.

Aciptilia aptalis (Walker)

Aciptilus aptalis Walk., 1864, Cat. Lep. Het. Brit. Mus. **30**: 950 (Sydney; BMNH).

DISTRIBUTION: New Hebrides, Fiji, Tonga, Australia.

I have seen no specimen of this species in the present material.

Aciptilia endogramma (Meyrick)

Alucita endogramma Meyr., 1922, Exot. Microlep. **2**: 549 (Nausori; BMNH).

DISTRIBUTION: Fiji.

This species was described from Fiji. It is allied to the 2 preceding species. I have seen no specimen of this species in the present material.

Aciptilia suffiata Yano 1963, Pac. Ins. **5** (1): 200, figs. 4e, 94–96 (Nase; OSAKA).

SPECIMENS EXAMINED. NEW HEBRIDES: 1♂, 1♀, Maat (Mat, Ambryn Vill.), 3 m, Efate I. (NW), 20.VIII.1957, Gressitt, light trap.

DISTRIBUTION: Japan, Ryukyu Is., New Guinea, Bismarck Arch., Solomon Is., New Hebrides.

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