# SOME AGROMYZIDAE (Diptera) FROM NEW GUINEA, MELANESIA AND POLYNESIA

## By Kenneth A. Spencer

The material forming the basis of this paper consists of 52 specimens from New Guinea and 15 further specimens from Ellice Is., New Britain, New Hebrides, New Ireland, Samoa and Solomon Is. Only 16 species are represented in this material, of which 7 are described below as new to science. Of these 16 species, 8 are known from the Oriental region, 5 from Micronesia and 4 from Australia.

The known distribution of species in the Pacific and adjoining areas is as follows:

	Agromyza	Japanagromyza	Melanagromyza	Ophiomyia	Cerodontha	Phytobia	Liriomyza	Metopomyza	Phytoliriomyza	Pseudonapomyza	Phytagromyza	Phytomyza	Ptochomyza	Napomyza	Total	Endemic species ·
Australia	1	1	24	6	3	7	9	-	1	1	-	4	-	-	57	24
Japan	14	6	14	4	3	25	20	2	1	-	6	43	-	7	145	77
Oriental Region	17	5	34	6	2	15	6	-	1	4	1	4	1	-	96	39
Ellice Is.				1											1	-
Fiji			3	2			12			1					8	-
Marquesas Is.			1												1	1
Micronesia		3	9	3		1	2			1					19	5
New Britain			3												3	1
New Guinea		1	6	2								1			10	3
New Hebrides		1	2												3	1
New Ireland			1												1	1
New Zealand			1		2	4	6					3			16	13
Philippine Is.		1	6	2		1				2					12	3
Samoa			2							1					3	1
Solomon Is.			1												1	-

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The number of species occurring in New Guinea is surprisingly small and in this respect closely resembles the situation in the Philippines. In both areas the Agromyzid fauna represents a limited extension of the main Oriental fauna to the west. The New Guinea species show no significant Australian affiliations. It is interesting to note that the percentage of endemic species in Micronesia, New Britain, New Guinea, New Hebrides and the Philippine Is. is closely parallel, in the range of 25 %-33 %. In New Zealand the percentage is significantly higher -81 %-as might be expected from the greater isolation of this fauna.

Most of the material considered here was kindly made available by Dr. J. L. Gressitt of Bishop Museum to whom my best thanks are due. I also wish to thank my wife for preparing the illustrations. The scale line in figs. 1–5 represents 0.1 mm, in fig. 6, 0.5 mm.

#### Genus Japanagromyza Sasakawa

Japanagromyza Sasakawa, 1958, Saikyo Univ. (Agr.), Sci. Rep. 10: 140.

The main concentration of this genus is in the area of the Western Pacific, which contains 14 of the 23 described species now known to be represented throughout the world. The genus is peculiar in the variable color of the halteres which may be uniformly dark, uniformly pale or variegated. Two species have recently been confirmed with uniformly yellowish halteres, *Japanagromyza* n. sp. from Micronesia and *J. eucalypti* Spencer from Australia, each having distinctive male genitalia. Three further species of this complex have now been discovered. One from Thailand is described in my Note 1 on the Oriental Agromyzidae; the two others from New Guinea and New Hebrides are described below. These three species are typical of the genus in having well-developed pre-scutellars, combined with two pairs of dorsocentrals as in *Melanagromyza*. They are extremely similar to the new species from Micronesia and *eucalypti* but the aedeagus in each case is highly distinctive (figs. 1 & 2). The 11 species in this group from the Pacific area occurring outside Japan can be distinguished by the following key:

Key to Pacific and Oriental Japanagromyza species occurring outside Japan

1.	Halteres uniformly yellow2
	Halteres at least partially dark 6
2(1).	Aedeagus conspicuously small, not ending in distinct tubule (Micronesia)n. sp.
	Aedeagus longer, distiphallus a conspicuous tubule 3
3 (2).	Cerci not greatly enlarged (Australia, Java, Micronesia) eucalypti Spencer
	Cerci greatly enlarged (Spencer, 1962, figs. 5b, 8b) 4
4(3).	Cross-vein 1 only slightly before mid-point of discal cell; orbital setulae sparse,
	scarcely detectable (New Guinea)triformis*
	Cross-vein 1 at basal 1/3 of discal cell; orbital setulae forming distinct row;
	distiphallus ending in single tubule 5
5(4).	Jowls narrow, at most 1/20 height of eye (Thailand) trientis*
	Jowls distinctly broader, 1/10 height of eye (New Hebrides) trifida*
6(1).	Halteres entirely black; fore-tibia with strong bristle

<sup>\*</sup> Described as new.

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Halteres variegated, black and white
7 (6). Pre-scutellars lacking (Formosa) setigera (Mall.)
Pre-scutellars present (Burma) delecta Spencer
8 (6). Frons exceptionally narrow, less than width of eye; all orbital bristles reclinate
(Formosa)angustifrons Spencer
Frons broader, at least width of eye; lower ori incurved
9(8). Mesonotum distinctly matt; aedeagus with distiphallus membranous, almost in-
detectable; aedeagal hood with distinctive spines at hind corners (leaf-miner
on Elaeagnus spp.) (Japan, Micronesia) elaeagni (Sas.)
Mesonotum more shining10
10(9). Halteres largely black, paler on inside and above; posterior spiracles of larva
with 10 buds in regular ellipse (leaf-miner on Antidesma bunias Wall., (Eu-
phorbiaceae) (Java)kalshoveni (de Meij.)
Halteres distinctly variegated, black and white; posterior spiracles of larva
trifurcated (Sasakawa, 1961, fig. 20n) (leaf-miner on Papilionaceae) (For-
mosa, Japan, Malaya, Ceylon) variihalterata (Mall.)

## Japanagromyza triformis Spencer, n. sp. Fig. 1.

Head: frons equal to width of eye viewed from above; ors and upper ori directed upwards, lower ori inwards; orbital setulae very sparse, only 1 or 2 minute hairs detectable; jowls extremely narrow; arista conspicuously long, equal to vertical height of eye. Mesonotum: 2 strong pairs of dorso-centrals, pre-scutellars well-developed. Legs: midtibiae with 2 strong postero-dorsal bristles, fore-tibiae with 1 distinct bristle. Wing: length in  $\partial^{\Lambda}$  2.4 mm, cross-vein 1 only slightly before mid-point of discal cell. Colour: frons matt, sooty black, ocellar triangle only weakly shining, orbits more distinctly shining, lunule contrasting, silvery-grey; mesonotum shining black; wings clear, veins dark, squamae dark-grey, fringe black; halteres whitish yellow. Male genitalia: tergite 9 rounded, normal, cerci enormously enlarged as J. trientis (see Spencer, 1962b, fig. 8b), aedeagus as in fig. 1a, distiphallus black, strongly chitinized at base, ending in paired tubules, sternite 9 with greatly elongated hypandrial apodeme (fig. 1b).

Holotype ♂ (Bishop 3249), New Guinea (Neth.), Vogelkop: Manokwari, 75 m, 20. VII. 1957 (D. E. Hardy).

#### Japanagromyza trifida Spencer, n. sp. Fig. 2.

Morphologically very close to *triformis*, with following points of difference: orbital setulae distinct, relatively long, forming well-defined row; jowls broader, 1/7 vertical height of eye; cross-vein 1 at basal 1/3 of discal cell; mesonotum not brilliantly shining, more distinctly matt, particularly from front.

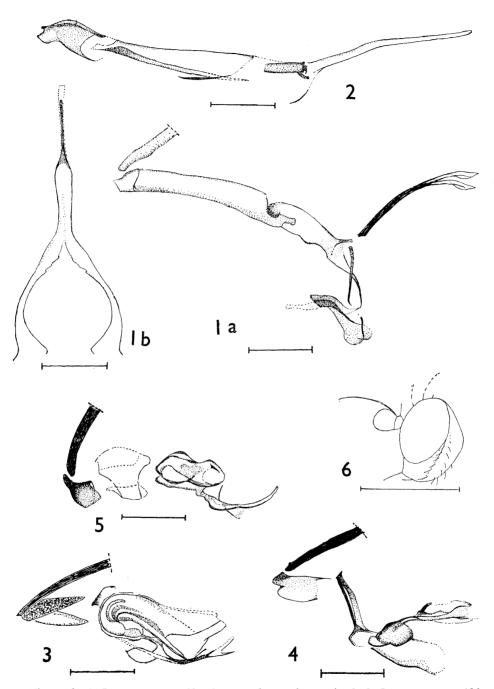
Male genitalia: cerci enormously enlarged, distiphallus a long, simple tubule (fig. 2).

Holotype ♂ (BISHOP 3250), New Hebrides, Vila, Efate, VIII. 1950 (N. L. H. Krauss); 1 ♀ paratype, same data.

## Genus Melanagromyza Hendel

Melanagromyza Hendel, 1920, Arch. Naturgesch., A. 84: 126.

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Figs. 1-6. 1, Japanagromyza triformis: a, aedeagus, b, sternite 9; 2, Japanagromyza trifida, aedeagus; 3, Melanagromyza geminata, aedeagus; 4, Melanagromyza normalis, aedeagus; 5, Melanagromyza sordidata, aedeagus; 6, Phytomyza orientalis, head.

#### Melanagromyza atomella (Malloch), 1914

Agromyza atomella Malloch, 1914, Mus. Nat. Hung., Ann. Hist.-Nat. 12: 331.

Melanagromyza atomella (Malloch): Hennig, 1941, Ent. Beihefte 8: 174.—Spencer, 1961, Roy. Ent. Soc. Lond., Trans. 113: 67.

New Guinea (NE): Wampit v. nr. Gurakor Village, 250 m, nr. Wan, 7. VII. 1957, 13<sup>(1)</sup> (D. E. Hardy).

There is now no significant gap in the distribution of this polyphagous species from Ceylon to Japan and Australia.

It is possible that M. marquesana Malloch, 1935 from the Marquesas Is. may prove to represent this species.

#### Melanagromyza conspicua Spencer

Melanagromyza conspicua Spencer, 1961, Roy. Ent. Soc. Lond., Trans. 113: 71.

New Guinea (NE): Minj area, 1700 m, 3. VII. 1957,  $2 \ 3^{\circ} \ 3^{\circ} \ 9^{\circ}$  (D. E. Hardy); Sinofi, 1590 m, 30 km S. of Kainantu, 30. IX. 1959,  $1 \ 3^{\circ}$  (T. C. Maa); Moife, 2100 m, 15 km NW of Okapa, 11–13. X. 1959,  $1 \ 3^{\circ}$  (T. C. Maa).

New Britain: Gazelle Pen., Baininge, St. Paul's, 350 m, 9. IX. 1955, 1 & (Gressitt).

New Hebrides: Aneityum, XI. 1930,  $1 \Leftrightarrow (L. E. Cheesman)$ .

This is the first record of this species from these three islands. It occurs widely in the Oriental region from Ceylon to Formosa and was recently found by the author in Australia at Clyde Mt., N. S. W., S. of Sydney on foliage of *Sigesbeckia* sp. (Compositae).

## Melanagromyza cordiophoeta Spencer

Melanagromyza cordiophoeta Spencer, 1961, Roy. Ent. Soc. Lond., Trans. 113: 71.

New Guinea (Papua): NE of Port Moresby, 150 m, Bisianumu, 18. VI. 1957,  $3 \eth \eth$ , 7  $\heartsuit \diamondsuit$ , D. E. Hardy. N. E. Lae, 10 m, 6. VII. 1957,  $2 \eth \eth$ , 1  $\heartsuit$ , D. E. Hardy.

New Britain, Gazelle Pen., Baining's, St. Paul's, 350 m, 1  $\Im$ , 8. IX. 1955; 1  $\Im$ , 2  $\Im$   $\varphi$ , same locality, 9. IX. 1955, J. L. Gressitt.

The only other record of this species is the type series from Singapore. The aedeagus of a  $3^{\circ}$  from New Britain agrees exactly with that of the holotype (Spencer, 1961: fig. 43). In the author's key to Australian *Melanagromyza* species, it runs to *albisquama* (Malloch), 1927. There are distinctive differences in the  $3^{\circ}$  genitalia but at the moment the species cannot be satisfactorily separated, apart from the somewhat larger size of *cordiophoeta*.

## Melanagromyza geminata Spencer, n. sp. Fig. 3.

*Head*: frons narrow, equal to width of eye viewed from above, not projecting above eye in profile; ocellar triangle large, shining, orbits conspicuously shining; eye large, bare, jowls extremely narrow, 1/20 height of eye; antennal segment 3 with distinct, though not excessively long, whitish pubescence; arista pubescent. *Wing*: length in  $\partial 2.2$  mm, crossvein 1 at mid-point of discal cell. *Colour*: mesonotum shining green, with distinct traces of coppery sheen, squamae and fringe whitish. *Male genitalia*: aedeagus complex, as illustrated (fig. 3).

Holotype & (BISHOP 3251), New Guinea (NE): Maprik, Sepik area, 160 m, 26. VIII. 1958 (D. E. Hardy). This species closely resembles M. albisquama (Malloch), 1927; the main points of difference are the narrower jowls and more distinct antennal pubescence. The aedeagi of the two species are entirely distinct; that of *albisquama* is being illustrated by the author in a forthcoming paper on the Agromyzidae of Micronesia.

## Melanagromyza metallica (Thomson)

Agromyza metallica Thomson, 1869, Eugenies Resa. Diptera : p. 609. Stockholm.

Agromyza similis Lamb, 1912, Linn. Soc. Lond., Trans. 15: 344-7.

Melanagromyza metallica (Thomson): Spencer, 1959, Roy. Ent. Soc. Lond., Trans. 111: 278; 1961, *ibid.* 113: 74.

New Guinea (*Neth.*): Vogelkop: Manokwari, 75 m, 21. VII. 1957, 1 Å, D. E. Hardy; Ifar, 300-600 m, 22. VI. 1959, 1 Å, 1  $\Leftrightarrow$ , J. L. Gressitt; Biak, Kampong Landbouw, 30 km NE of air strip, 40 m, 16. VII. 1957, 6, J. L. Gressitt; 27. V. 1959, 1 Å, J. L. Gressitt; Mangrowawa, 50-100 m, 31. X. 1959, 1  $\Leftrightarrow$ , J. L. Gressitt. (*NE*): Sinofi, 1590 m, 30 km S. of Kainantu, 4. X. 1959, 1 Å; Waghi V., Kerowagi area, 1700 m, 24. VI. 1957, 1 Å, D. E. Hardy; Wanpit V., nr. Gurakor Village, 950 m, nr. Wau, 1 Å, 1  $\Leftrightarrow$ , 7. VII. 1957, D. E. Hardy; Sepik, Maprik area, 160 m, 27. VIII. 1957. *Papua*: Kokoda-Pitoki, 450 m, 25. III. 1956, 1 Å, 1  $\Leftrightarrow$ , J. L. Gressitt; Bisianumu, E. of Port Moresby, 1500 m, 2 Å Å, 24. IX. 1955, J. L. Gressitt, 1  $\Leftrightarrow$ , 11. V. 1959, C. D. Michener; nr. Port Moresby, Brown R., 17. VI. 1957, 1 Å, D. E. Hardy. Goroka, 1530 m, 30. IV-3. V. 1959, 1  $\Leftrightarrow$ , C. D. Michener; Minj area, 1700 m, 1  $\Leftrightarrow$ , 3. VII. 1957, D. E. Hardy, 1  $\diamondsuit$ , 8-13. IX. 1959, T. C. Maa; Murua R., nr. Kerema, 6. V. 1959, 1  $\diamondsuit$ , C. D. Michener; Owen Stanley Range, Goilala, Loloipa, 25. XI-10. XII. 1957, 1 Å, W. W. Brandt; Catalina Estate, 48 km N. of Port Moresby, 1 Å, T. C. Maa; Darade Plantation, 500 m, 80 km N. of Port Moresby, 1 Å, T. C. Maa; Nokoda.

Solomon Is. Bougainville, Kokure, 690 m, 1  $\eth$ , 2  $\heartsuit$   $\diamondsuit$ , 11. VI. 1956; Simba Mission, 30. VI. 1956, 1  $\heartsuit$ , (B. J. Ford, Jr.).

New Hebrides. Vila, Efate, VIII. 1950, 1  $\mathcal{J}$ , 3  $\mathcal{P}$   $\mathcal{P}$ , N.L.H. Krauss; Banks Is., Vanna Lava, X. 1929, 3; Malekula, Ouna, 1, IV–V. 1929, 1, I. 1930, L. E. Cheesman.

The distribution of this species is now almost unbroken from the Cape Verde Is. to Micronesia, New Hebrides and Northern Australia. The biology has not yet been clarified.

## Melanagromyza normalis Spencer, n. sp. Fig. 4.

*Head*: frons slightly wider than eye from above, not projecting above eye in profile; 2 strong ors, upper slightly longer, 2 weaker ori, lower directed inwards; orbital setulae conspicuous, reclinate; ocellar triangle with apex just above level of lower ors, distinct furrow continuing to margin of lunule; orbits conspicuous; jowls distinct but not conspicuously broad, 1/7 height of eye, deepest in center; antennae adjoining, segment 3 rounded, with slight upturned pubescence, arista long, only slightly shorter than vertical height of eye, appearing bare. *Mesonotum*: 2 strong pairs of dc, acr coarse, in some 8 rows, some hairs extending to level of first dc. *Legs*: mid-tibia without defined postero-dorsal bristle. *Wing*: length in  $\partial$  1.8 mm, costa extending to vein  $m_{1+2}$ , rm at mid-point of discal cell, last section of  $m_4 2/3$  length of penultimate. *Male genitalia*: aedeagus (fig. 4) distinctive, as illustrated. Holotype & (BISHOP 3252), New Ireland (SW), Gilingil Plantation, 17. VII. 1956 (Gressitt).

This species closely resembles *M. dianellae* Kleinschmidt, 1961 and *M. paramonovi* Spencer, 1962a from New South Wales but is readily distinguishable by the shorter last segment of vein  $m_4$ , the more shining ocellar triangle, the longer arista and in the male by the distinctive aedeagus. It can be included in the following extension to the author's (1962a) key to Australian species:

In couplet 5, change 6, second alt. to 5a, add new couplet:

#### Melanagromyza papuensis Spencer, n. sp.

*Head*: frons broad,  $1\frac{1}{2} \times$  width of eye, slightly but not conspicuously projecting above eye in profile; 2 long, equal ors, 2 shorter ori, lower directed predominantly inwards; orbital setulae numerous, reclinate above, a few upright or proclinate in front; ocellar triangle ill-defined at apex which scarcely extends to level of lower ors; lunule large, slightly higher than semicircle; jowls broad, deepest in center below eye, 1/5 vertical height of eye, cheeks linear; antennal segment 3 large, somewhat longer than broad, arista long, equal to vertical height of eye, distinctly pubescent. *Mesonotum*: (damaged by pin) chaetotaxy apparently normal. *Legs*: fore-tibia with 1 distinct lateral bristle, mid-tibia with 2. *Wing*: length in  $\bigcirc$  3.1 mm, costa extending strongly to vein  $m_{1+2}$ , cross-vein 1 slightly before mid-point of discal cell, last segment of  $m_4$  short, in ratio 17:37 with penultimate. *Colour*: head entirely black, frons matt, orbits and ocellar triangle only weakly shining, mesonotum and abdomen shining black with faint purplish tinge, wings clear, veins black, squamae grey, margin and fringe black.

Holotype ♀ (BISHOP 3253), New Guinea, Owen Stanley Range, Goilala: Loloipa, 1– 15. II. 1958 (W. W. Brandt).

In the author's (1962a) key to Australian *Melanagromyza* species *papuensis* runs to couplet 21, which should now be amended and extended as follows:

21a Arista virtually bare, small species, wing length 2 mm ...... centrosematis de Meij. Arista distinctly pubescent, large species, wing length 3.1 mm......papuensis\*

The species runs to *setigera* (Malloch) in the author's (1961:67) key to Oriental species; *setigera* has conspicuously narrow jowls and has recently been transferred to the genus *Japanagromyza* (cf. Spencer, 1962b).

## Melanagromyza sordidata Spencer, n. sp. Fig. 5.

*Head*: frons equal to width of eye viewed from above, not projecting above eye in profile; 2 strong, equal ors, 2 ori, upper slightly shorter than ors, lower equal in length to upper but distinctly more slender; ors and upper ori reclinate, lower ori incurved;

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orbital setulae relatively long, from before lower ori to upper ors, reclinate; orbits welldefined, ocellar triangle with faint furrow extending to margin of lunule; jowls very narrow, 1/20 vertical height of eye; antennal segment 3 round, with fine white pubescence, arista long but shorter than vertical height of eye, appearing bare. Legs: mid-tibiae with 1 strong postero-dorsal bristle. Wing: length in  $3^{\circ}$  2.3 mm, costa extending to vein  $m_{1+2}$ but weaker from vein  $r_{4+5}$ , cross-vein 1 at mid-point of discal cell, last segment of  $m_4$  in ratio 15:25 with penultimate. Colour: entirely black, frons matt, ocellar triangle and orbits weakly shining, mesonotum brilliantly shining, wings clear, veins brownish, squamae grey, fringe black. Male genitalia: aedeagus as illustrated (fig. 5), distiphallus forming a conspicuous tubule, basiphallus strongly asymmetric.

Holotype & (BISHOP 3254), New Britain, Gazelle Pen., Baining, St. Paul's 350 m, 4. IX. 1955 (Gressitt).

In the author's (1962a) key to Australian *Melanagromyza* species, *sordidata* runs to couplet 23, which should be amended as follows:

Couplet 23, second alternative for cassiae Spencer read 24; Add new couplet:

24. Small species, wing length 1.9 mm.....cassiae\* Spencer Medium-sized species, wing length 2.3 mm......sordidata\*

The species runs to couplet 21 in the author's key to Oriental species. It can be distinguished from *ricini* de Meijere, 1922 by having only one bristle on the mid-tibiae and is substantially larger than the species in the following couplets.

## Melanagromyza sp. (Samoa)

Samoa, Tutuila, Leone-Aluau Trail, 1 9, II. 1930 (D. T. Fullaway), in Bishop Museum.

This specimen probably represents a new species; it is not in perfect condition and it seems preferable to await more material before describing the species as new. It runs to M. centrosematis de Meij., 1940 (couplet 21) in the author's key to Australian Melanagromyza species but is substantially larger, with wing length 2.5 mm and has broad, rounded jowls; wings appear faintly darkened. It can be readily distinguished from M. papuensis by the lack of a bristle on the fore-tibia and by the entirely shining black mesonotum and abdomen, without any trace of metallic coloration. It resembles M. cuscutae Hering, recently recorded from Pakistan (Spencer, 1962b) but in this species the wings are entirely clear.

#### Genus Ophiomyia Braschnikow

Ophiomyia Braschnikow, 1897, Ann. Inst. Agron. Moscow 3: 40.

#### Ophiomyia cornuta de Meijere

*Ophiomyia cornuta* de Meijere, 1910, Tijdschr. Ent. 53: 160-64.—Spencer, 1959, Roy. Ent. Soc. Lond., Trans. 111: 297; 1961, *ibid.* 113: 80.

Ophiomyia leucolepis Bezzi, 1928, Diptera Brachycera and Atherica of the Fiji Islands, pp. 164-65, London.

Ophiomyia scaevolae Frick, 1953, Hawaii Ent. Soc., Proc. 15: 207-15.

Ellice Is. Tukugetau (?), 20. IX. 1924, 2 ♂ ♂, 2 ♀ ♀, (P. A. Buxton & H. Hopkins). Tahiti. Tuamotu, Katin, VIII. 1925, 1 ♂, F. L. Washburn.

#### **Ophiomyia lantanae** (Froggatt)

Agromyza lantanae Froggatt, 1919, Agric. Gaz. N. S. W. 30: 665-68.

Ophiomyia lantanae (Froggatt): de Meijere, 1925, Tijdschr. Ent. 68: 253.—Spencer, 1959, Roy. Ent. Soc. Lond., Trans. 111: 298; 1961, *ibid.* 113: 80.

New Guinea (Neth.): Wisselmeren, 1530 m, Urapura, Kamo V., 30. VIII. 1955, 1  $3^{\circ}$  (Gressitt).

Tahiti. Society Is. VII. 1925,  $1 \neq$ , J. L. Washburn.

#### Ophiomyia sp. (N. G.)

New Guinea (NE), Eliptmin Valley, 1200-1350 m,  $1 \neq$ , 1-15. VII. 1959 (W. W. Brandt), in Bishop Museum.

This specimen appears to represent a new species. The jowls are narrow, 1/15 height of eye and scarcely projecting, arists short and fine, facial keel well-defined above but narrowing between base of antennae and not bulbous; in these characters the species resembles *solanicola* Spencer, 1962a. The wing venation is different, however, with a shorter last segment of vein m<sub>4</sub> and rm only slightly beyond midpoint of discal cell.

This species is close to *O. negrosensis* Spencer, 1962b from the Philippines, Negros. However, the jowls are distinctly narrower and the facial keel slightly wider and it is believed that two distinct species are involved.

The species can be included in the following extension to the author's (1962a) key to Australian *Ophiomyia* species: Couplet 2, second alternative, replace *solanicola* Spencer by 2a, add new couplet as follows:

## Genus Phytobia Lioy

Phytobia Lioy, 1864, Atti. Ist. Veneto, 9: 1313.

Phytobia (Icteromyza) piliseta (Becker)

Agromyza piliseta Becker, 1903, Mitt. Zool. Mus. Berl. 2: 190.

Agromyza pubicornis Lamb, 1912, Linn. Soc. Lond., Trans. 15: 344-47.

Agromyza flavofemorata Malloch, 1914, Mus. Nat. Hung., Ann. Hist.-Nat. 12: 315.

Phytobia (Icteromyza) piliseta (Becker): Spencer, 1959, Roy. Ent. Soc. Lond., Trans. 111: 306; 1961, ibid. 113: 85.

New Guinea (NE): Lae, Bubia Agric. Station, 15 m, 1  $\delta$ , 6. VII. 1957; Lae, 10 m, 1  $\delta$ , 1  $\varphi$ , same data (D. E. Hardy).

This is an interesting further record of this widespread species, which is already known from Micronesia (Yap), Formosa, Africa and Southern Europe.

## Genus Phytomyza Fallén

Phytomyza Fallén, 1810, Nov. Dipt. Dispon. Method., p. 21.

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## Phytomyza orientalis Spencer, n. sp. Fig. 6.

Head (fig. 6): frons  $1\frac{1}{3}$  width of eye, not projecting above eye in profile; 1 strong ors, upper lacking or reduced to a minute hair, 1 ori; jowls broad, elongated at rear, at deepest point almost 1/2 vertical height of eye, cheeks linear; antennal segment 3 conspicuously large, widening distally, rounded at end. *Mesonotum*: acrostichals sparsely in 2 rows. *Wing*: length in 24 and face uniformly orange-yellow, upper corner of orbits black, both inner and outer vertical bristles on black ground; antennal segments 2 and 3 black, 1 slightly paler, more yellowish; mesonotum largely shining black, humerus yellow with central black patch, notopleural area and upper 1/3 of mesopleura yellow, remainder of pleura black; legs: fore- and mid-coxae distally yellow, fore-femur slightly yellow distally, legs otherwise black; abdomen blackish brown, tergites more yellow laterally; wings clear, somewhat yellowish at base, squamae and fringe black.

Holotype  $\mathcal{Q}$  (BISHOP 3255), New Guinea, Wisselmeren : Kamo-Debei div., 1700 m, 13. VIII. 1955 (Gressitt), 1  $\mathcal{Q}$  paratype, W. Flores, Badjawa, 17. VI. 1927 (Rensch, Sunda Expedition), Deutsches Entomologisches Institut, Berlin.

The holotype is in imperfect condition and a very detailed description is not possible; however, the specimen is identical with the paratype, which is also badly damaged, and which was referred to as *Phytomyza* sp. (Flores) by Spencer (1961: 97). With two specimens now available, it seems justifiable to describe the species.

The species can be included in the author's key to Australian species by extending couplet 2 as follows:

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