

The Neotropical Agromyzidae (Diptera)

Part 5. New or little-known species from Chile

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Abstract : A collection of the Agromyzidae from Chile in the California Academy of Sciences, San Francisco, has been studied. Nine new species: *Melanagromyza biobioensis* and *M. ustulata*, *Ophiomyia maipuensis* and *O. tuberimentula*, *Liriomyza bituberculata*, *L. maipuensis* and *L. quinquevittata*, *Haplopeodes punctiscutellatus*, and *Calycomyza turbida*, are described. Eleven species of six genera are recorded for the first time.

Key words : Diptera, Agromyzidae; Chile; new species; new records.

This is the fifth in a series of papers on the Neotropical Agromyzidae. The study is based on some 700 specimens collected by Drs. M.E. IRWIN, E.S. ROSS, E.I. SCHLINGER and their colleagues in Chile in 1950, 1966 and 1967, and now deposited in the California Academy of Sciences, San Francisco.

Seventy-three Chilean species in 12 genera were recorded by SPENCER (1982) (Table 1), and a tentative pattern of generic distribution in Chile was shown by him. In this paper 9 new species, belonging to the genera *Melanagromyza* and *Ophiomyia* of the subfamily Agromyzinae, and *Liriomyza*, *Haplopeodes* and *Calycomyza* of the Phytomyzinae, are described, and 11 species are recorded as new to the fauna, making the total thus 93 in 13 genera (Table 1). Although it occurs only in a small proportion of the Neotropical agromyzids, it exceeds the adjacent countries in the number of species: Argentina (56 species), Peru (40), Brazil (58), Ecuador (25), Colombia (58) and Venezuela (81).

A striking feature of the fauna is the dominance of *Melanagromyza* and *Liriomyza*, as has been mentioned previously in other countries in the Neotropical Region. Following this the high percentage of *Phytoliriomyza* and the low one of *Calycomyza* are shown characteristically in Chile at present, as compared with these proportions in other Neotropical countries. It is surprising that not a single species of *Japanagromyza* has been recorded from Chile, but it will be confirmed in future examination that this genus occurs there.

The following abbreviations are used for the collection in which the holotypes are deposited: California Academy of Sciences = CAS; for collectors: R.H. GONZALEZ = RG, N. HICHINS = NH, M.E. IRWIN = MI, E. M EDINA = EM, A.E. MICHELbacher = AM, E.S. ROSS = ER and E.I. SCHLINGER = ES.

AGROMYZINAE

Genus *Melanagromyza* Hendel

This genus is predominantly represented in the Neotropical Region. Spencer (1982) stated that this is the second largest genus with 14 species in Chile, following the genus *Liriomyza*. Seven additional species are now known from Chile, of which two are described as new.

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Table 1. Genera and number of species of the Chilean Agromyzidae

Genus	Number of species			
	Neotropical Region	Chile		Total
		Previously known	New to fauna*	
Agromyzinae				
<i>Melanagromyza</i>	87	14	7 (2)	21
<i>Ophiomyia</i>	41	5	3 (2)	8
<i>Agromyza</i>	10	1	—	1
<i>Japanagromyza</i>	24	—	—	—
Phytomyzinae				
<i>Phytobia</i>	16	—	1	1
<i>Amauromyza</i>	4	2	1	3
<i>Cerodontha</i>	34	7	—	7
<i>Liriomyza</i>	75	23	4 (3)	27
<i>Galiomyza</i>	2	1	—	1
<i>Haplopeodes</i>	8	1	1 (1)	2
<i>Calycomyza</i>	55	3	3 (1)	6
<i>Nemorimyza</i>	1	—	—	—
<i>Phytoliriomyza</i>	28	10	—	10
<i>Phytomyza</i>	11	5	—	5
<i>Chromatomyia</i>	4	1	—	1
<i>Pseudonapomyza</i>	1	—	—	—
Total	401	73	20 (9)	93

* Number of species in parentheses : endemic to Chile.

1. *Melanagromyza angolae* (Malloch)

Agromyza angolae Malloch, 1934, 483.

Melanagromyza angolae: Frick, 1952, 378.

This species is separable from *tetrae* (Malloch) only by the size (2.4-2.5 mm in wing length) (Malloch, 1934); differences between them in the phallic structures of male genitalia were illustrated by Spencer (1982, figs. 1-4). Parafrontalia and parafacialia are slightly or distinctly projected beyond eye margin in profile.

Specimens examined. 1 ♀, El Canelo (33° 35' S-70° 27' W), Santiago Prov., 9.I.1967 (MI); 2 ♀, Rinconada (450 m, 33° 31' S-70° 47' W), Maipú, Santiago Prov., 25. II. & 3. V. 1966, by Malaise trap (NH & MI); 1 ♀, 15 km N of Casablanca (33° 19' S-71° 25' W), Santiago Prov., 14. X. 1966 (ES & MI); 2 ♀, 18 km E of San Carlos, Nuble Prov., 24-25. XII. 1950 (ER & AM).

2. *Melanagromyza appendiculata* Sasakawa

Melanagromyza appendiculata Sasakawa, 1992a, 346.

The flies collected in Quebrada de la Plata, Maipú, in Feb.-March, are small, that is, 1.84 (1.7-2.0) mm in male wing length and 1.88 (1.8-2.0) mm in female.

Female terminalia: S6 nearly 1.8 times as wide as long, slightly wider than S5 and about 1.6 times length of S5; T9 shorter than S6, 180 µm long, shallowly constricted at middle of lateral sides, with a pair of setae on tip; S9 narrow clavate, 225 µm long, setulose on membranous part, with 2 pairs of *nsm*; cercus 1/4 length of T9, with 4 *ts*; egg guide 250 µm long, with 32-35 teeth of serration; spermathecae suboval,

55x40 to 64x50 μm , partite proximally, duct introverted into capsule; ventral receptacle of normal form, 95 μm long.

Specimens examined. 10 ♂3 ♀, Quebrada de la Plata (510 m, 33° 30' S-70° 55' W), near Maipú, Santiago Prov., 28. I., 2-12. II. & 12. III. 1966, by Malaise trap (MI); 3♂7 ♀, La Rinconada, Maipú, Santiago Prov., 15. II. & 10-17. III. 1966, on *Phaseolus vulgaris* and maize (NH); 3 ♀, El Canelo, Santiago Prov., (33° 35' S-70° 27' W), 9. I. 1967 (MI); 3♂, 20 km N of Concon, Valp. Prov., 26. XI. 1950 (ER & AM); 2 ♀, 50-60 km S of Copiapo (500-600 m), Atacama Prov., 24. VIII. 1966 (MI & ES).

Distribution. Argentina, Chile. New to Chile.

3. *Melanagromyza biobioensis* n. sp. (Fig. 1)

Male. Black; frons sparsely pollinose, ocellar triangle subshining, parafrontalia weakly shining; lunule, gena and antenna tinged with brown; thorax sparsely gray dusted, mesonotum with greenish coppery reflection; abdomen strongly greenish shining. Wing with calypter brownish white, fringed with whitish hairs. Legs brownish black.

Frons slightly narrower than long, about 1.5 times as wide as eye, slightly converging ventrally; parafrontalia slightly and parafacialia linearly projecting above eye margin in profile; *ors* and *ori* each 2, distance between *uti* and 1st *ors* 1.7 times as long as that between 1st and 2nd *ors* which is situated at middle between 1st *ors* and 1st *ori*; *oh* in a row, erect or reclinate; ocellar triangle with ventral tip extending to level of 1st *ori*; *oc* subequal to 1st *ori* in length; eye bare, a little higher than broad; gena distinctly projected ventrally on anteroventral corner and 1/3 as high as eye, but narrowed posteriorly; lunule lower than semicircular; face carinate between bases of antennae; 3rd antennal segment very small, shorter than broad, minutely pilose; arista about 2/3 as long as height of eye, appearing bare; proboscis somewhat long.

Mesonotum with 0+2 *dc*, 8 rows of *acr*, setula-like inner *pa*. Wing with 2nd, 3rd and 4th costal sections in proportion of 37:10:8; r-m slightly beyond middle of discal cell; ultimate section of M_{1+2} 3.5 times as long as penultimate; ultimate section of M_{3+4} 3/5 length of penultimate. Mid tibia without *pd*.

S6 quadrate, 1.2 times as wide as long, with very shallow emargination posteriorly; S5 about 1/3 length of S6 and 5/8 width of S6. Epandrium broadened ventrally; surstylus on anterior half of epandrium slightly projected ventroposteriorly on tip, bearing 3 groups of spines: 23-25 spines in 3 irregular rows along ventral and posterior margin, 4-5 long ones on posterior tip, and 4 short ones at middle between ventroposterior tip of surstylus and ventroposterior corner of epandrium; cercus with a row of 4-5 strong setae on anteroventral part; hypandrium slightly longer than half of phallapodeme, with basal apodeme about 1/3 of its side piece; phallus slightly shorter than hypandrium, distiphallus about 1/4 length of phallapodeme; ejaculatory apodeme curved, 190 μm long, 60 μm in distal greatest width.

Length of body 1.9 mm, of wing 1.8 mm.

Female. Unknown.

Holotype male, El Abanico, Bio-Bio Prov., Chile, 31. XII. 1950 (ER & AM) (CAS No. 17229); male genitalia mounted on a small slide and pinned with specimen.

Distribution. Chile.

Remarks. This species is related to *M. lappivora* Spencer (1966), known from Florida, in general appearance, but is distinguishable by the anteriorly broad gena, the elongate proboscis and distiphallus, and the presence of a small group of spines on the surstylus in addition to normal arrangement of spines along distal margin.

4. *Melanagromyza biseriata* Sasakawa

Melanagromyza biseriata Sasakawa, 1992a, 348.

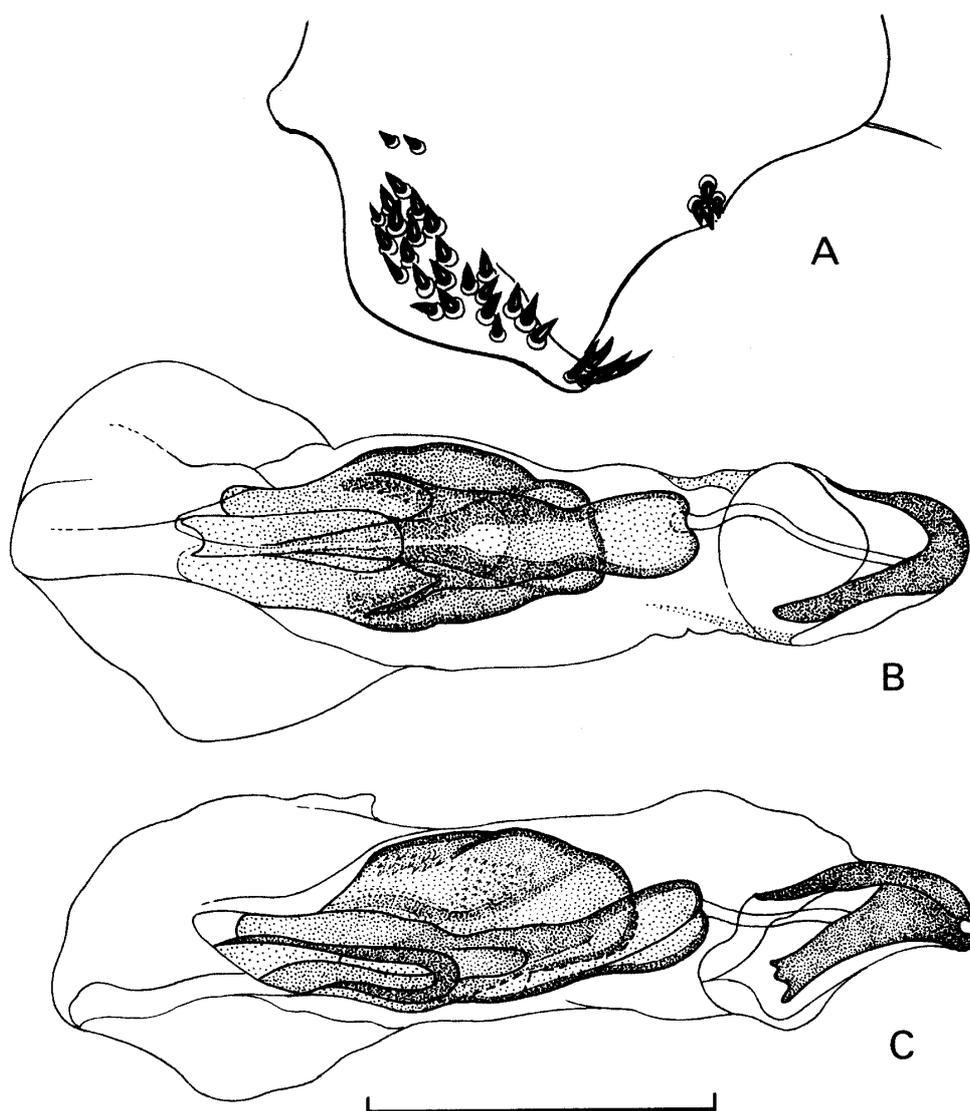


Fig. 1. Male genitalia of *Melanagromyza biobioensis* n. sp. A, ventral part of epanandrium and surstylus, inner view; B, phallus in ventral view; C, phallus in lateral view. Scale 0.1 mm.

A male has 27 spines in the dorsal rows as well as in the ventral rows on inner side of the surstylus; 2.2 mm in wing length.

Specimens examined. 2♂1♀, Quebrada de la Plata (550 m, 33° 30' S-70° 55' W), near Maipú, Santiago Prov., 9 & 17. III. 1966, by Malaise trap (MI).

Distribution. Argentina, Chile. New to Chile.

5. *Melanagromyza caerulea* (Malloch)

Agromyza caerulea Malloch, 1913, 322.

Melanagromyza caerulea: Frick, 1952, 378.

This large species, with wing length 2.9-3.3 mm in female, is distinct in having an external bristle on the fore tibia and white fringe on the calypter. The greenish blue luster of the female abdomen is distinct. The larva is known as a seed-feeder of *Ipomoea* spp.

Specimens examined. 2 ♀, Quebrada de la Plata (510 m, 33° 30' S-70° 47' W), Maipú, Santiago Prov., 17.X.1966, by Malaise trap (MI).

Distribution. U.S.A.; Mexico, Costa Rica, Cuba, Jamaica, Puerto Rico, Dominica, Grand Cayman; Venezuela, Peru, Brazil, Chile. New to Chile.

6. *Melanagromyza gibsoni* (Malloch)

Agromyza gibsoni Malloch, 1915, 106

Melanagromyza gibsoni: Frick, 1952, 378; Spencer, 1982, 7.

This species is distinct in the following characteristics: strongly shiny ocellar triangle and parafrontalia; wing length 2.3-2.4 mm in female, oblique cross vein r-m well beyond middle of discal cell, whitish fringe on calypter. The larva is a stem borer of *Medicago* sp.

Specimens examined. 2 ♀, La Rinconada (33° 34' S-71° 14' W), Santiago Prov., 10. III.1966, by Malaise trap (NH); 1 ♀, Quebrada de la Plata (550 m, 30° 31' S-70° 47' W), Rinconada, Maipú, 23. III.1966, by Malaise trap (MI); 1 ♀, 10 km E of Fray Jorge National Park, Coquimbo Prov., 28. XII.1966 (MI).

7. *Melanagromyza lini* Spencer

Melanagromyza lini Spencer, 1963, 315; Sasakawa, 1992a, 352.

Following variations on the external characters are observed: abdomen strongly shining coppery or greenish-coppery; frons 1.4-1.9 times as wide as eye; *ori* usually 2 but sometimes 3 (rarely 3 on one side); distance between two *ors* shortest and about 1/2 that between two *ori*, distance between 2nd *ors* and 1st *ori* shorter than that between two *ori* (4-5:3); *oh* all reclinate, in 2 dense rows laterad of *ori*; gena 1/4-1/5 (rarely 1/3) height of eye; facial carina narrow but distinctly raised below base of antennae; arista appearing bare but microscopically pubescent; *acr* in 10 rows before and behind suture but 8 rows between levels of two *dc* (anteriorly 8 rows and posteriorly 6 in small specimens); wing length 2.3-2.4 mm in male, 2.52 (2.2-2.9) mm in female, 2nd coatal section about 4.3 (3.5-4.8) times as long as 3rd, ultimate section of M_{1+2} 4 (3-5) times as long as penultimate, ultimate section of M_{3+4} 3/5 (rarely a little shorter or longer than 3/5) of penultimate; mid tibia usually with 2 *pd* (dorsal one shorter than ventral; rarely 1); cercus with 4-8 stout setae on anteroventral 1/3; surstylus with 18-30 spines; ejaculatory apodeme 140-170 μ m long and 90-100 μ m in greatest width.

Specimens examined. 3♂4♀, Quebrada de la Plata, Rinconada, Maipú, Santiago Prov., 33° 30' S-70° 55' W: 2 & 12. II. and 24. III.1966, by Malaise trap (MI); 33° 31' S-70° 47' W: 25-27. I. and 1 & 27. III.1966, by Malaise trap (MI); 16-25. II., 8-28. III., 29. IV. and 25-31. V.1966, by Malaise trap (NH & MI); 33° 34' S-71° 14' W: 9. III.1966, by Malaise trap (NH), 23. II. & 10. III.1966, by Malaise trap in maize field (NH), 19. III.1966, by Malaise trap in corn field (NH & MI); 1 ♀, Mouth of Lluta river (18° 25' S-70° 06' W), Tarapacá Prov., 1.X.1966 (MI); 1 ♀, Hacienda Illapel, Rio Illapel (600-900 m), Coquimbo Prov., 19.X.1966 (ES & MI).

Distribution. Peru, Chile, Argentina. New to Chile.

8. *Melanagromyza parvella* Spencer (Fig. 2)

Melanagromyza parvella Spencer, 1973, 46.

Although it was described as one of the species-group with the shiny black mesonotum and abdomen (without greenish reflection) and the black fringe on the calypter, the Chilean specimens examined are faintly greenish-lustrous in the mesonotum and abdomen. Also, the frons is 1.3 (♀) -1.7 (♂) times as wide as eye; the parafrontalia and parafacialia are slightly projected beyond the eye margin in profile; the *ori* are rarely 3; the gena is 1/5-1/4 height of eye; the wings (♂, ♀) are 1.9-2.1 mm in length; the mid

tibial *pd* is absent or present but very short.

The male genitalia are characteristic particularly in the structures of epandrium, cercus and distiphallus: epandrium with a serration of 4-5 teeth on posteroventral part; cercus with 11 spines along posteroventral margin, and surstylus with 31-36 spines in 2 irregular rows (*not* a row of fine bristles as stated by Spencer); distiphallus with a vacuous lobe dorsally and biforked membranous processes (with a pair of small sclerites at bases); ejaculatory apodeme small, 100 μ m in length and 80 μ m in the greatest width.

Specimens examined. 1♂2♀, Quebrada de la Plata, near Maipú, Santiago Prov., 2. II. & 12-17. III.1966, by Malaise trap (MI); 1♂4♀, Rinconada (450 m), Maipú, 8. III. & 15-17. V.1966, by Malaise trap (NH & MI); 1♂, Hacienda Illapel, Rio Illapel (600-900 m), Coquimbo Prov., 19.X.1966 (ES & MI).

Distribution. U.S.A. (Florida); Bahama Is.; Chile. New to Chile.

9. *Melanagromyza praeclara* Spencer

Melanagromyza praeclara Spencer, 1963, 321; 1982, 10.

This large black species is characterized by a conspicuous bluish luster of mesomotum and abdomen, both pro- and reclinate *oh*, and the dark fringe on calypter.

The following variations in some external characters are seen in the females: frons 1.5-1.7 times as wide as eye, parafrontalia a little wider than 1/4 width of frons at level of 2nd *ors*, gena 1/6-1/5 height of eye; mesonotum always with 3 postsutural *dc*, 1st *dc* 1/2 length of 3rd *dc* and situated at middle between suture and 2nd *dc*, and 8-10 row of *acr*; wing 3.0 (2.4-3.6) mm in length, r-m beyond middle of discal cell (15-16:10); mid tibia without or with 1-2 *pd*.

Specimens examined. 2♀, Quebrada de la Plata (510 m, 33° 31' S-70° 47' W), Maipú, Santiago Prov., 30. IX., 3.X. & 13-14.X.1966 (NH); 1♀, El Canelo (33° 35' S-70° 27' W), Santiago Prov., 9.I.1967 (MI).

10. *Melanagromyza splendida* Frick

Melanagromyza splendida Frick, 1953, 207; Spencer, 1982, 6.

This species is characteristic in the presence of conspicuous widening of the parafrontalia, the dorsal pilosity on eyes in both sexes, a spine-like stout process on posteroventral corner of the epandrium, and the long spines on apex of posterior projection of the surstylus which is strongly incurved. The dorsal lobe of distiphallus is sparsely wrinkled on lateral side and spinose internally.

Specimens examined. 8♂3♀, Quebrada de la Plata (510 m, 33° 31' S-70° 47' W), Rinconada, Maipú, Santiago Prov., 27-28.I. & 23-27. III.1966, by Malaise trap (MI), 2♂3♀, 8-10. III. & 31. V.1966, by Malaise trap (NH & MI), and 2♂6♀, 2 & 8-10. II. and 9-12. III.1966, by Malaise trap (MI); 4♀, La Rinconada (33° 34' S-71° 14' W), Maipú, 4 & 10. III.1966, by Malaise trap in maiz field (NH); 1♀, Pica, Tarapacá Prov., 20. IX.1966, by Malaise trap (MI & EM); 1♂, 20 km N of Concon, Valparaiso Prov., 26. XI.1950 (ER & AM); 1♂, 20 mil. E of La Serena, 3. XII.1950 (ER & AM).

11. *Melanagromyza tetrae* (Malloch)

Agromyza tetrae Malloch, 1934, 483.

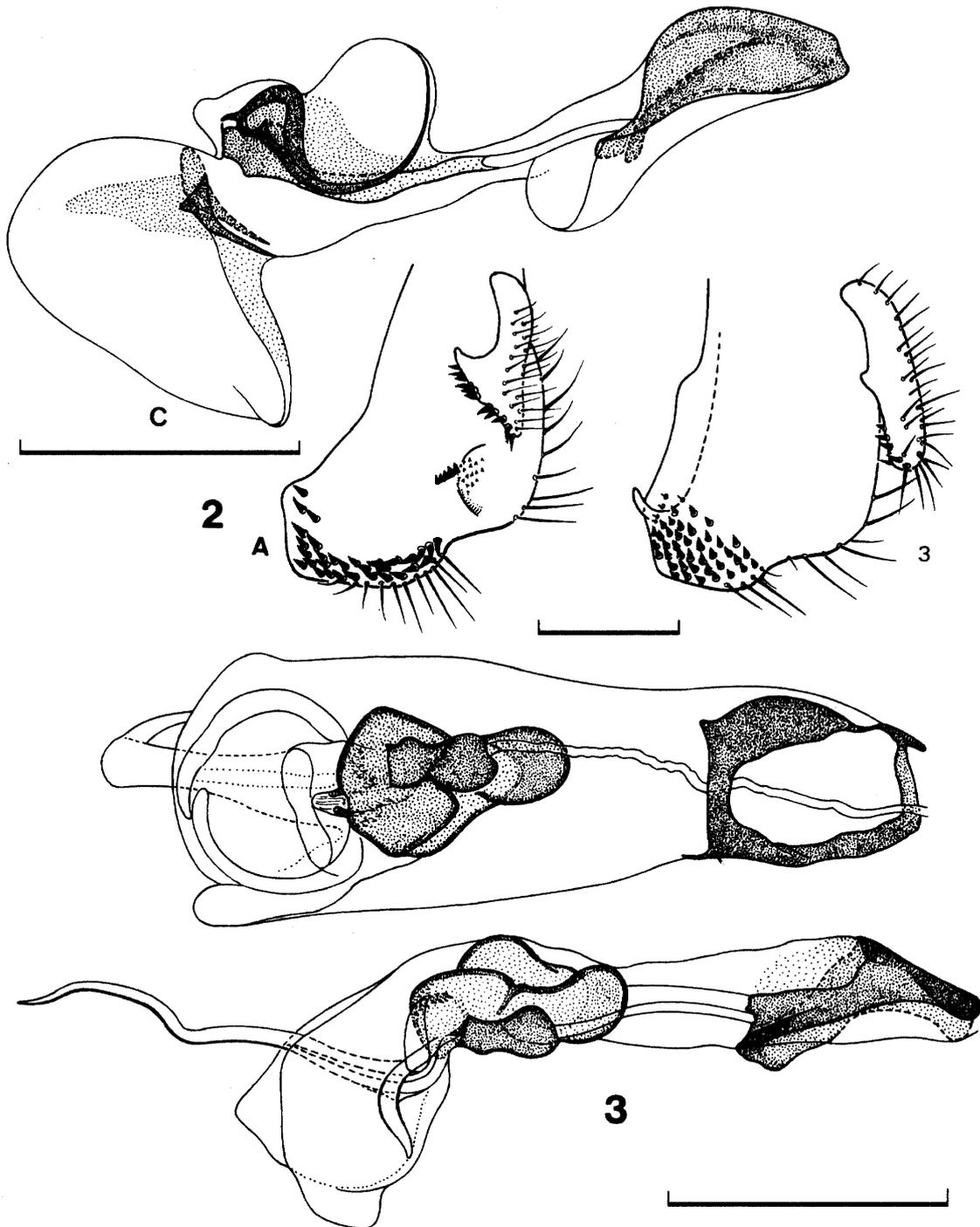
Melanagromyza tetrae: Frick, 1952, 380; Spencer, 1982, 5.

This species is unusual in having 0+3 or 1+3 *dc* and distinctly projecting parafrontalia and parafacialia (gena 1/3 height of eye); wing length 2.8 mm, calypter with white fringe.

Specimen examined. 1♀, 5 km W of Pachingo (30° 27' S-71° 32' W), Fray Jorge National Park, Coquimbo Prov., 30. IV.1966 (MI).

12. *Melanagromyza ustulata* n. sp. (Fig. 3)

Male. Black; ocellar triangle and parafrontalia weakly shining; gena very faintly brown tinged; face sparsely pollinose; antenna and palpus black; thorax dusted with gray, mesonotum subshining; abdomen strongly shining, without metallic reflection. Wing very faintly brown tinged throughout the surface and distinctly burned with brown at base; calypter brownish gray, with fringe dark brown; legs



Figs. 2-3. Male genitalia of *Melanagromyza parvella* Spencer (2) and *M. ustulata* n. sp. (3).

brownish black.

Frons almost twice as wide as eye, parallel-sided; parafrontalia and parafacialia distinctly projecting beyond eye margin in profile; parafrontalia 1/5 width of frons, bearing 2 *ors* and 2 or 3 *ori*; *oh* rather long, in a row, reclinate or erect, several setulae among *or* inclinate; eye bare; gena deepest in posterior part, 1/3 height of eye at middle; face with carina linear; 3rd antennal segment small, as long as wide (arista missing).

Mesonotum with 0+2 *dc*, about 6 rows of *acr*, inner *pa* only a little longer than *acr*. Wing with 2nd, 3rd and 4th costal sections in proportion of 40:10:9; r-m beyond middle of discal cell; ultimate section of M_{1+2} about 4.5 times as long as penultimate; ultimate section of M_{3+4} slightly longer than half of penultimate (13:20). Mid tibia without *pd*.

S6 1.5 times as long as wide, 1.5 times length of S5, with incision at middle of posterior 1/6. Epandrium with surstylus slightly projected, bearing 35-40 spines in 4-5 irregular rows; cercus about 1/2 height of epandrium, with 5 spines on anteroventral margin; hypandrium with side piece broad, apodeme nearly 1/3 of side piece; phallic hood with a pair of stout spines at middle of dorsal side and a pair of spinules at middle of lateral sides; phallus about 3/8 length of phallapodeme, epiphallus broad, basiphallus quadrate in ventral view, distiphallus with a long membranous tubule distally; ejaculatory apodeme with blade asymmetric, 250 μm in length and 100 μm in greatest width.

Length of body 2.3 mm, of wing 2.1 mm.

Female. Unknown.

Holotype male, 8 mil. W of Puerto Varas, Chile, 16.I.1951 (ER & AM) (CAS No. 17230); male genitalia mounted on a small slide and pinned with specimen.

Distribution. Chile.

Remarks. The distinctive characters of this species are the coloration of wing which is slightly brownish at base, the broad gena, and the presence of spines on the cercus and of a membranous tubule on the distiphallus. It differs from *M. marellii* (Brèthes) in the size and structures of the male genitalia (Spencer, 1963, fig. 32a).

Genus *Ophiomyia* Braschnikov

Five species have hitherto been known from Chile (Spencer, 1982). Three species are recorded below, of which two are described as new and one is added to the fauna.

13. *Ophiomyia maipuensis* n. sp. (Fig. 4)

Male. Black; frontalia mat, ocellar triangle and parafrontalia shining, but ventral part of the latter subshining; lunule, gena and antenna faintly tinged with brown; proboscis testaceous; thorax shining, very sparsely grayish pollinose; mesonotum weakly bluish when viewed from front; abdomen strongly shining. Wing hyaline; calypter brownish gray, with margin and fringe pale brown.

Frons slightly less than twice width of eye; parafrontalia not projecting above eye in profile, bearing 2 *ors* and 2 *ori*, and a row of minute *oh*; eye higher than broad (16:13); gena 1/5-1/6 height of eye, with vibrissal angle forming an angle of about 45°; vibrissal fasciculus slender and regularly curving; antennae divided by a bulbous facial carina which is as wide as or slightly less than diameter of 1st antennal segment; arista short, approximately 1/2 as long as height of eye, appearing bare.

Mesonotum with 0+2 *dc*, 5-6 rows of *acr* before level of 1st *dc* but 4 rows behind that. Wing with 2nd costal section about 4 times as long as 3rd or 4th section; r-m beyond middle of discal cell; ultimate section of M_{1+2} 6 times length of penultimate; ultimate section of M_{3+4} almost equal to penultimate in length.

S5 1/2 length of S6; S6 about 1/2 as long as wide, emarginated on posterior 1/3 at middle. Genitalia: Surstylus projected on anteroventral corner of epandrium, bearing 8 strong spines; cercus with 2

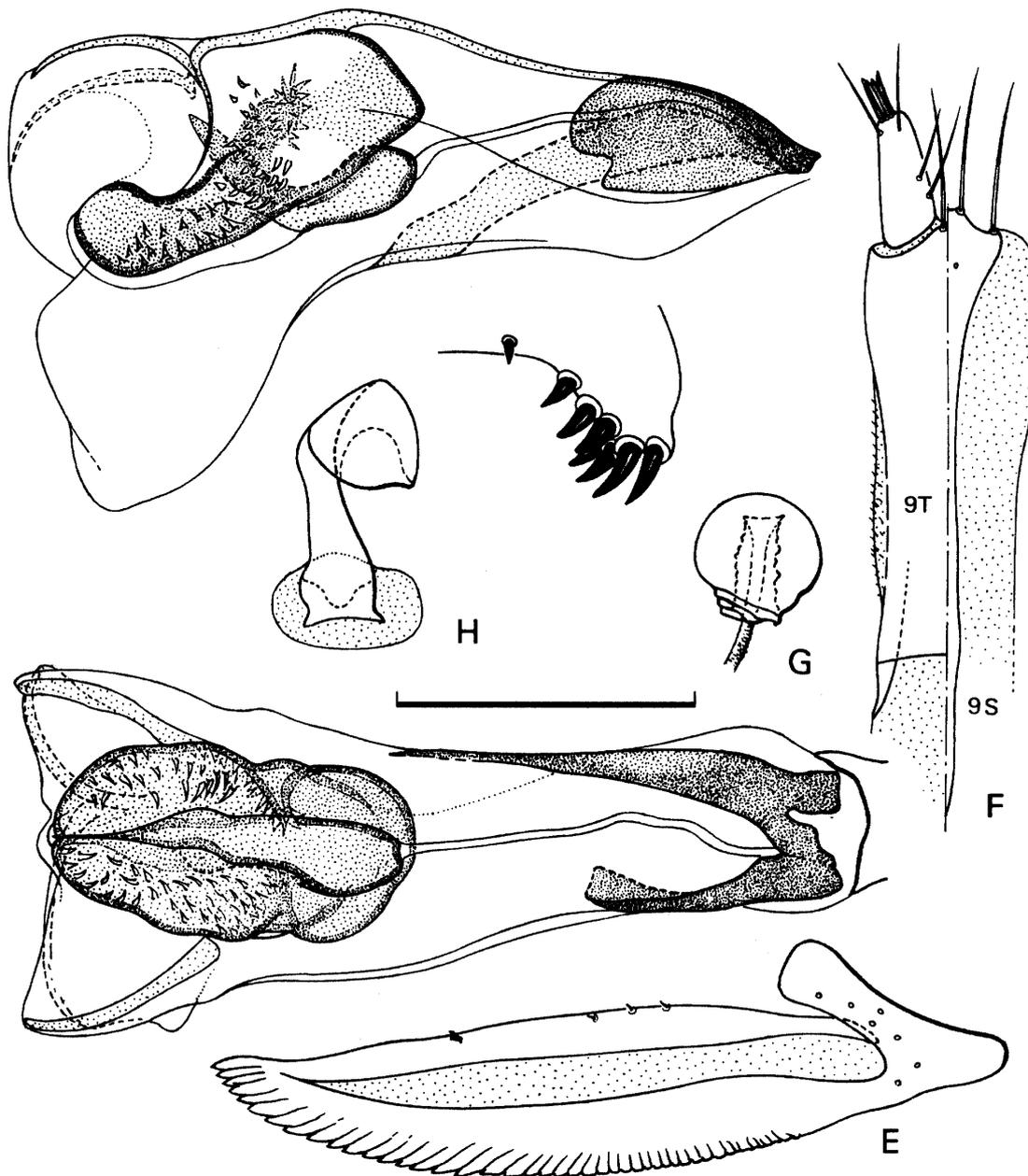


Fig. 4. Male and female genitalia of *Ophiomyia maipuensis* n. sp. E, egg guide, lateral view; F, 9th tergite (9T) and sternite (9S), each half; G, spermatheca; H, ventral receptacle.

irregular rows of 8 stout setae on anteroventral part, and one ventroapical seta about 1/3 of cercus height; hypandrium V-shaped, with side pieces united with each other at basal 1/3; distiphallus with ventrodiscal lobes spinulose and a pair of weakly chitinized arms diverging on dorsal side; ejaculatory apodeme 215 μm long, expanded narrowly, 60 μm in greatest width.

Length of body 1.6 (holotype) -1.7 mm, of wing 1.4 (holotype) -1.5 mm.

Female. Similar to male, but *vi* simple, S6 nearly 2.3 times as wide as long. Ovipositor sheath shiny black, almost as long as T6; egg guide about 260 μm long, with 23 distinct teeth of serration on distal half; T9 weakly sclerotized at middle and 175 μm in length; S9 narrow, 200 μm long, bearing 2 pairs of *nsm*; cercus 45 μm long, with 4 *ts*; spermatheca suborbicular, 90 \times 85 μm , with partite proximal end;

ventral receptacle pale brown, 85 μ m long.

Length of body 1.7-1.9 mm, of wing 1.6-1.7 mm.

Holotype male, Quebrade de la Plata (510 m, 33° 30' S-70° 55' W), near Maipú, Santiago Prov., 2. II.1966, by Malaise trap (MD) (CAS No. 17231). Paratypes: 2♂3♀, same data as holotype, excepting date: 2 & 8. II. and 24. III.1966.

Distribution. Chile.

Remarks. This species is similar to *vulgaris* Spencer in the general appearance and structures of male genitalia. However, it is distinguishable from the latter by having a distinct vibrissal angle, the sparse rows of acrostichals, the long ultimate section of M_{3+4} , and the strong spines on surstylus, and not having a basal process on distal lobes of the distiphallus.

14. *Ophiomyia malleensis* Spencer

Ophiomyia malleensis Spencer, 1982, 40.

This large black species is characterized by the broad gena (1/3-1/2 height of eye) and facial carina (about 1/3 width of face, distinctly wider than diameter of 1st antennal segment), and a distinct projection of vibrissal angle.

Female differs from male in the following points: frons 1.8 times as wide as eye; *vi* simple, shorter than 2nd *ori*; proboscis almost as long as height of eye; wing 2.0-2.4 mm in length, with outer cross vein slightly longer than penultimate section of M_{1+2} ; abdomen strongly shining.

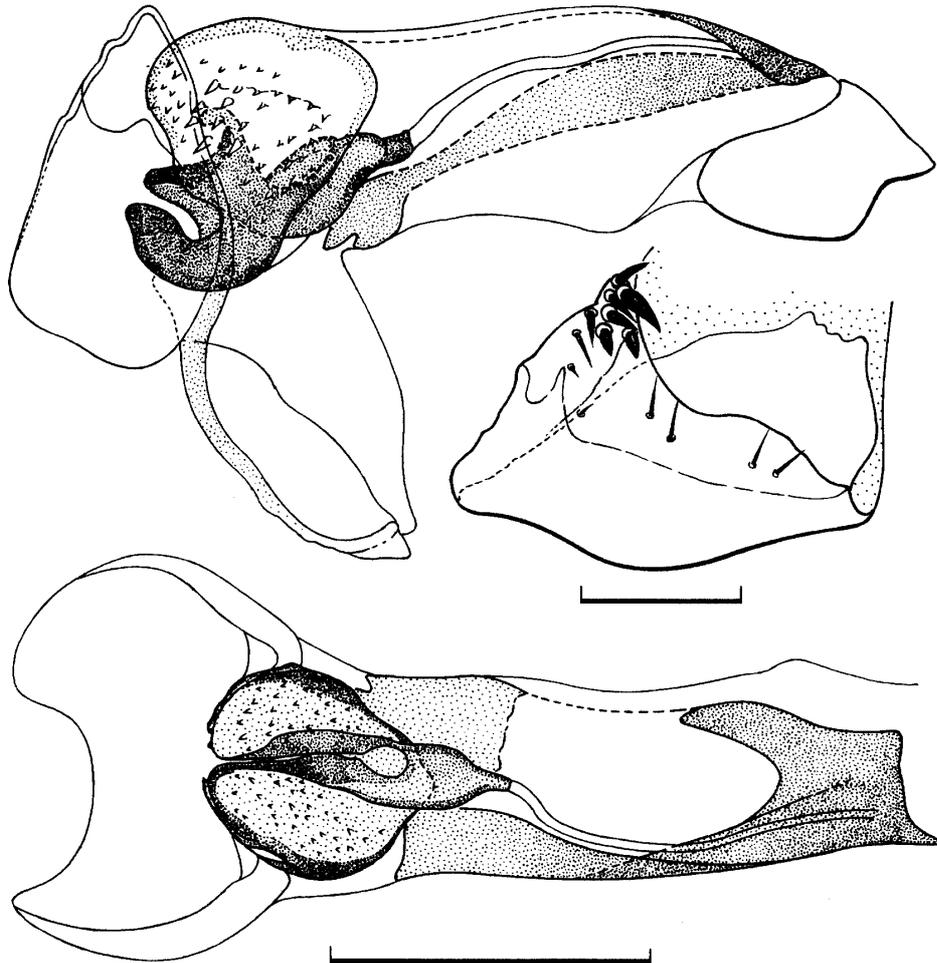


Fig. 5. Male genitalia of *Ophiomyia spicatae* Spencer.

Specimens examined. 1 ♀, El Canelo (33° 35' S-70° 27' W), Santiago Prov., 9. I.1967 (MI); 1 ♂ 1 ♀, 6 km SE of Quintero (32° 49' S-71° 29' W), Valparaiso Prov., 20. IX.1966 (ES); 1 ♂, Hacienda Illapel (600-900 m), Rio Illapel, Coquimbo Prov., 19. X.1966 (ES & MI).

15. *Ophiomyia spicatae* Spencer (Fig. 5)

Ophiomyia spicatae Spencer, 1963, 329.

This species is characteristic in the wing milky-white, with veins white except for pale brown costa and R_1 , and without outer cross vein. Male characters will be described below for the first time.

Frons a little wider than eye (8-9:7), parallel-sided; ocellar triangle with ventral tip well extending to level of 2nd *ors*; 2nd *ori* distinctly shorter than 1st; gena 1/6-1/7 height of eye; vibrissal fasciculus pale brown, slender, weakly curving upwardly; facial carina weakly shining, as wide as diameter of 1st antennal segment, bulbous just below base of antennae but keel-shaped on basal 1/3; proboscis slightly longer than height of head (in female about 1.5 times as long as height of head); wing 1.5 mm in length (1.7 mm in female).

Epandrium with surstylus projected on its ventroposterior corner, bearing a stout spine and several slender spines; hypandrium V-shaped, with basal apodeme short, slightly less than 1/5 length of side piece; phallus 1/2 of phallapodeme, basiphallus with sclerites weakly chitinized and asymmetric in length, much longer on right side, distiphallus with lateral lobes spinulate; ejaculatory apodeme narrow, clubbed, 230 μ m long, 15 μ m in greatest width.

Specimens examined. 2 ♂ 2 ♀, Quebrada de la Plata (510 m, 33° 30' S-70° 55' W), Maipú, Santiago Prov., 2. II. and 9-12 & 24. III.1966, by Malaise trap (MI).

Distribution. Brazil, Chile. New to Chile.

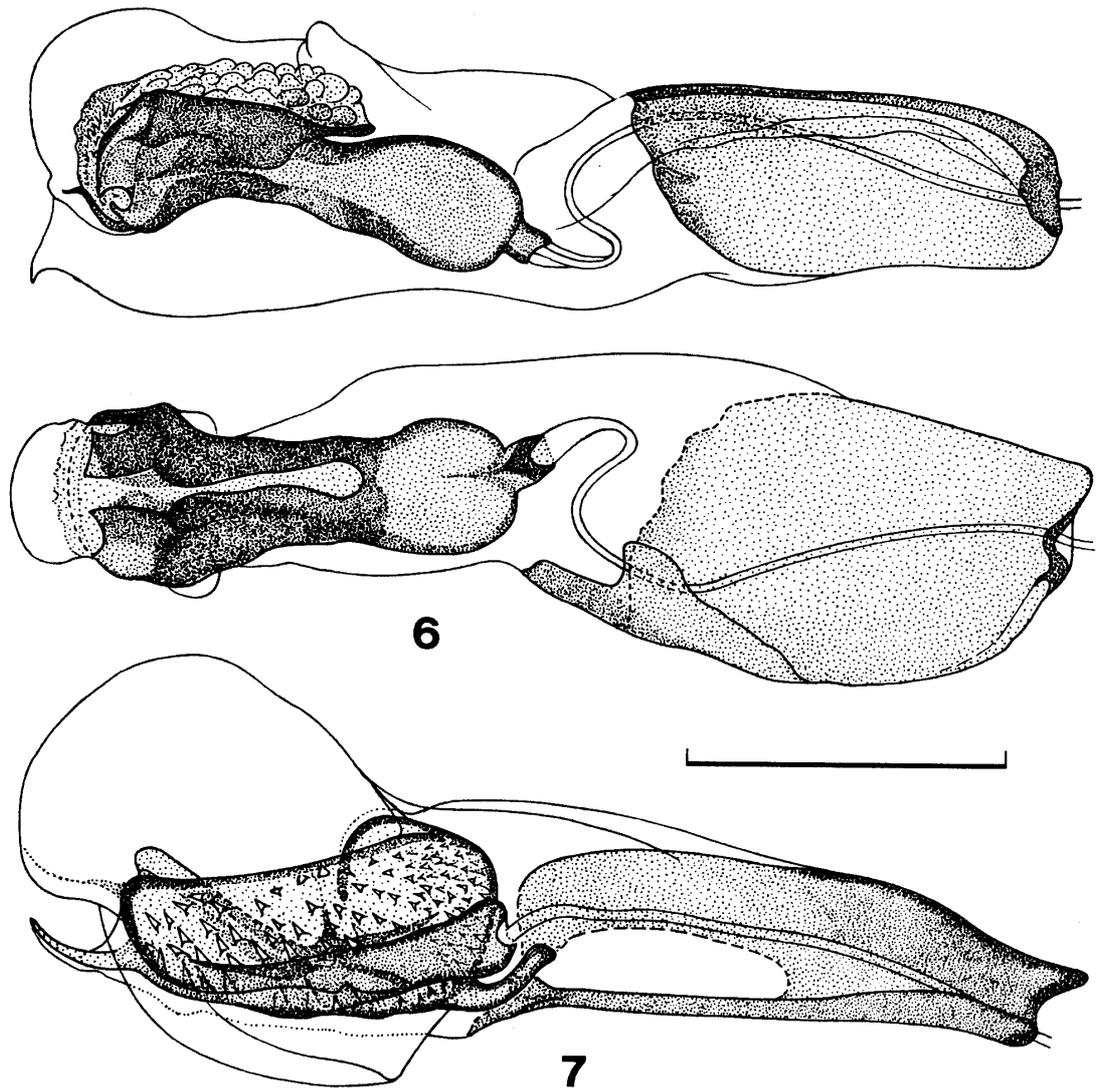
16. *Ophiomyia tuberimentula* n. sp. (Fig. 6)

Male. Black; lunule, gena and antenna blackish brown; frons and ocellar triangle brilliantly shining; mesonotum sparsely gray pollinose, with a faint greenish reflection; abdomen strongly shining, with greenish luster; legs brown tinged. Calypter white, with margin yellowish and fringe white.

Frons 1.5-1.6 times as wide as eye, slightly narrowing ventrally; parafrontalia and parafacialia usually a little projecting beyond eye margin in profile, the former with 2 reclinate *ors* and 2 inclinate *ori*, *oh* minute, in a dense row; ocellar triangle with ventral tip almost reaching to level of 2nd *ors*; lunule a little higher than semicircle, with median furrow; face with carina very narrow but distinctly extending to oral margin; eye 1.3-1.4 times as high as broad; gena 1/6-1/8 height of eye, bearing 2 rows of 10-14 *pm* (setae of dorsal row directed outward and those of ventral row for- and downward); vibrissal angle not projected, *vi* simple; antenna with 3rd segment small, as long as wide, with pile whitish; arista as long as width of eye, swollen on basal 1/6-1/8, appearing bare (pubescence distinctly shorter than pile on 3rd segment); proboscis short.

Mesonotum with 0+2 *dc*, 10-12 rows of *acr*, 6-7 rows of them ending at level of posteriormost *dc*; inner *pa* 1/4-1/7 length of the outer. Wing with 2nd costal section 4-4.4 times as long as the 3rd or 4th; r-m beyond middle of discal cell, ultimate section of M_{1+2} 4.4 (4-5) times as long as penultimate; ultimate section of M_{3+4} about 2/3 length of penultimate. Mid tibia with 1 *pd*.

S6 nearly thrice length of S5, 1.5 times as wide as long, emarginated at middle of posterior 1/3. Genitalia: Epandrium broadened ventrally; surstylus slightly projected ventrally, bearing 32-35 spines in 3-4 rows and 5-8 setae along posteroventral margin; cercus about 2/5 height of epandrium, with an irregular row of 6-8 rather stout setae on anteroventral part; hypandrium V-shaped, with side piece narrow; praegonite narrow, with 10 sensillae; postgonite almost as long as praegonite; phallus about 3/5 length of phallapodeme, basiphallus plate-like, distiphallus well sclerotized, with many tubercles on dorsal



Figs.6-7. Male genitalia of *Ophiomyia tuberimentula* n. sp. (6) and *O. vulgaris* Spencer (7).

membranous lobe; ejaculatory apodeme 135-250 μm long, 70-140 μm in greatest width.

Length of body 2.2-2.4 (2.3 in holotype) mm, of wing 1.8-2.2 (2.1 in holotype) mm.

Female. Similar to male, but S6 1.8 times as wide as long, 2.3 times as long as S5. Ovipositor sheath about 4/5 length of apodeme; egg guide almost as long as ovipositor sheath, 200-225 μm long, with minute teeth of serration; T9 350 μm long; spermatheca suboval, with partite proximal end, 125-165 \times 90 μm , with neck brown, about 150 μm long and introverted into capsule; ventral receptacle of normal form, about 100 μm long.

Holotype male, Quebrada de la Plata (550 m, 30° 31' S-70° 47' W), Rinconada, Maipú, Santiago Prov., 24. III.1966, by Malaise trap (MI) (CAS No. 17232). Paratypes: 2♂ 1♀, same data as holotype, but female on 1. III.1966; 11♂ 10♀, same locality as holotype, but 510 m, 33° 30' S-70° 55' W; 27. I., 2, 8-10. and 12. II., 16 & 23-24. III.1966 (MI); 1♀, same locality as holotype, but 510 m, 33° 31' S-70° 47' W, 1. III.1966 (MI); 1♂, La Rinconada (450 m, 33° 34' S-71° 14' W), Maipú, by Malaise trap in corn field (NH & MI).

Distribution. Chile.

Remarks. This species is related to Chilean *aricensis* Spencer in the absence of vibrissal fasciculus and distinct facial carina, but in *tuberimentula* the fringe on calypter is white, the frons and ocellar triangle

are strongly shining, and the distiphallus is provided characteristically with a pair of tuberculate lobes on dorsodistal part. Also, it differs from Peruvian *chancayana* Sasakawa with pale fringe on the calypter in the length of proboscis and the structures of surstylus and phallus.

17. *Ophiomyia vulgaris* Spencer (Fig. 7)

Ophiomyia vulgaris Spencer, 1982, 41.

This species is distinct in the presence of many spinulae on the membrane of distiphallus and an additional projection at dorsal base of distiphallus.

The specimens examined are small: 1.5-1.7 mm in male wing length and 1.7-1.9 mm in female; the ocellar triangle is weakly shining (*not* mat as described in the original description), and the fringe on calypter is pale brown (*not* black); gena is narrow, 1/5 height of eye (*not* 1/4-1/3).

Male genitalia: Epandrium with surstylus projected ventrally on anteroventral corner and incurved, bearing about 15 (14-16) spines (variable in size); cercus 1/2 height of epandrium, with 2 irregular rows of 5-7 stout setae on anteroventral 1/4 and 2 ventroapical setae each approximately 1/2 height of cercus; hypandrium with side pieces united at basal 2/5-3/5, postgonite subequal to praegonite in length; ejaculatory apodeme well expanded, 160-180 μm long, 100-110 μm in greatest width.

Specimens examined. 5♂21♀, La Rinconada (33°31' S-70°47' W; 33°34' S-71°14' W), Maipú, Santiago Prov., 20-23. II., 4, 9-10, 15-17. & 28-29. III. and 20 & 29. IV. 1966 by Malaise trap (NH & MI); 1♂, El Canelo (33°35' S-70°27' W), Santiago Prov., 9. I. 1967 (MI); 1♂, 10 km E of Fray Jorge National Park, Coquimbo Prov., 28. XII. 1966 (MI).

PHYTOMYZINAE

Genus *Phytobia* Lioy

Sixteen species of *Phytobia* have hitherto been known in the Neotropical Region (Spencer, 1963, 1966, 1973 & 1977; Sasakawa, 1992a-d) but nothing has been reported concerning Chilean species.

18. *Phytobia peruensis* Spencer

Phytobia peruensis Spencer, 1977, 242.

This large and black species was described by only a single male from Peru.

The female is similar to male excepting the following points: frons approximately 1.3 times as wide as eye; gena 1/7 height of eye; *acr* in 6 rows between posterior 3rd and 4th *dc*; wing 3.2 mm long, r-m slightly beyond middle of discal cell; mid tibia with 2 distinct *pd*.

Specimen examined. 1♀, Quebrada de la Plata (550 m, 30°31' S-70°47' W), Rinconada, Maipú, Santiago Prov., 27. III. 1966, by Malaise trap (MI).

Distribution. Peru, Chile. New to Chile.

Genus *Amauromyza* Hendel

Two species, *Amauromyza maculosa* (Malloch) and *fuscibasis* (Malloch), have hitherto been known to occur in Chile. One more species, *A. ranchograndensis* Spencer, previously known in Venezuela, is added to the Chilean fauna.

19. *Amauromyza maculosa* (Malloch)

Agromyza maculosa Malloch, 1913, 302.

Phytobia (Amauromyza) maculosa: Frick, 1952, 393; Spencer, 1963: 336.

Amauromyza maculosa: Spencer, 1982, 14.

This is a common leaf miner on Astereae, and occurs widely from the United States throughout South America to Chile. The adult is recognizable by the bicolored knob of halter and pale fringe on the calypter; wing length is variable: 2.16 (2.0-2.4; rarely 1.6-1.8) mm in male and 2.48 (2.2-2.7) mm in female.

Specimens examined. 25♂15♀, Quebrada de la Plata (450 & 510 m), nr. Maipú, Santiago Prov., 26. I.-24. III. & 21-26. IX.1966 (MI); 11♂6♀, Quebrada de la Plata (33° 30' S-70° 47' W), Rinconada, Maipú, Santiago Prov., 4-29. VIII., 2. IX. & 17. X.1966 (MI); 28♂19♀, Quebrada de la Plata (33° 30' S-70° 47' W), Rinconada, 23. II., 8-28. III., 14-29. IV., 3-31. V. & 1. VI.1966 (NH & MI); 1♂10♀, La Rinconada (33° 34' S-71° 14' W), Maipú, 4. III.1966 (NH & MI); 1♂1♀, El Canelo (33° 35' S-70° 27' W), Santiago Prov., 9. I.1967 (MI); 1♂3♀, Pica, Tarapaco Prov., 23. IX.-20. XI.1966, by Malaise trap (MI & EM); 1♂, Valle de Azapa, Tarapacá Prov., 26. IX.1966 (MI); 2♀, Pucatrihue (40° 28' S-73° 43' W), sea level, Osorno Prov., 4. II.1967 (ES); 1♀, Estero la Palma at Rio Teno, Fundo la Montana, 6 km E of Los Quenes, Curico Prov., 4. I.1967 (MI); 1♂, 20 km E. of Temuco, Cautin Prov., 8. I.1951 (ER & AM); 2♂4♀, 35 mil. S of Ovalle, Coquimbo Prov., 1. XII.1950 (ER & AM); 2♂2♀, El Abanico, Bio-Bio Prov., 30. XII.1950 (ER & AM).

20. *Amauromyza ranchograndensis* Spencer

Amauromyza ranchograndensis Spencer, 1973, 73; Sasakawa, 1992b, 10.

This species is characteristic in having the dark fringe on calypter and the tubules at the end of distiphallus. One male from Chile is extremely small, with the wing length 1.8 mm.

Specimen examined. 1♂, Quebrada de la Plata (510 m; 33° 31' S-70° 47' W), Maipú, Santiago Prov., 13-14. X.1966, by Malaise trap (NH).

Distribution. Venezuela, Colombia, Chile. New to Chile.

Genus *Cerodontha* Rondani

Thirty-three species of 4 subgenera: *Butomyza* (4 species), *Cerodontha* (15 species), *Dizygomyza* (11 species) and *Icteromyza* (3 species), have hitherto been known in the Neotropical Region, of which 7 species are recorded from Chile.

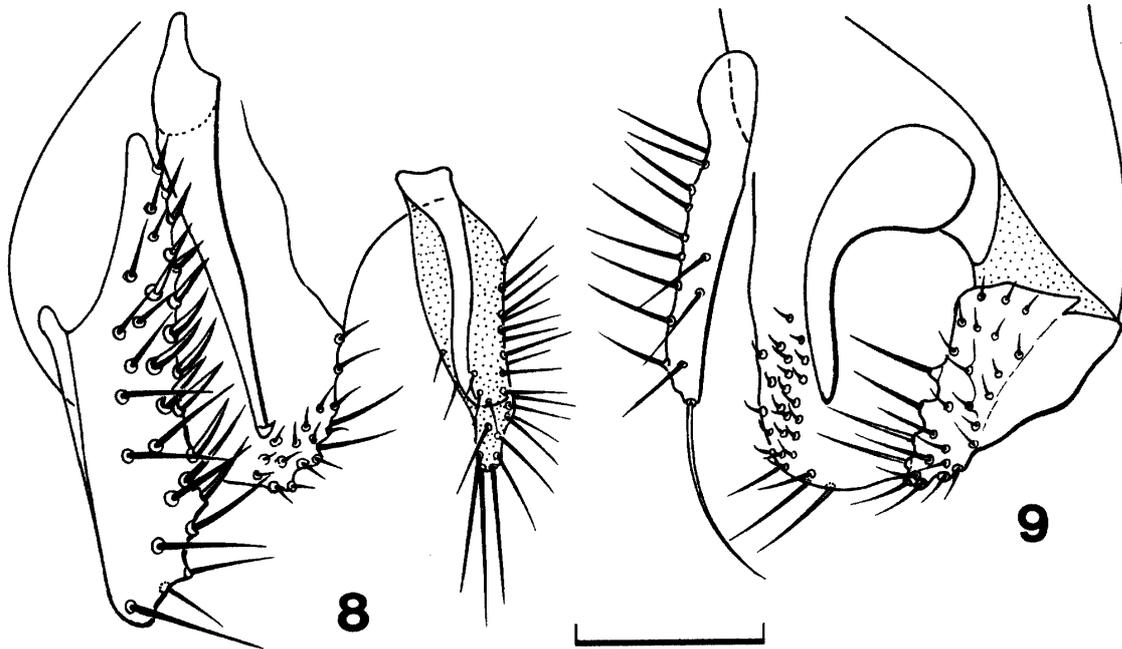
21. *Cerodontha (Cerodontha) chilensis* Spencer (Fig. 8)

Cerodontha (C.) chilensis Spencer, 1982, 41.

Following characters differ from those in the original description: 2.6 (♂) -2.8 (♀) mm in wing length; frons 1.5-1.6 times as wide as eye; parafrontalia and orbit entirely yellow; 3rd antennal segment brown, 1st-2nd segments yellow to pale testaceous; 2 rows of *acr* ending at middle between 2nd and 3rd *dc*, rarely in 3-4 rows before or behind suture; abdominal tergites, especially T1-4 distinctly yellow on lateral sides, and with posterior margins linearly yellow.

Male S5 about 4 times as wide as long; S6 1.6 times as wide as long, 2.5 times length of S5, with a median incision on posterior 3/5. Genitalia: Epandrium with a group of sensillae on posteroventral corner; cercus distinctly sclerotized on lateral side and ventral apex; surstylus (*not* cercus by Spencer) slightly lower than height of epandrium, densely setose or bristly along posterior margin; processus longus hooked on ventral tip; hypandrium V-shaped, 1/3 length of phallapodeme; phallus a little shorter than phallapodeme, basiphallus about 1/2 length of distiphallus, ventral processes with basal one almost as long as basiphallus but distal one 1/2 of that, distiphallus divided into 2 tubules on distal 1/6 before the united apices; ejaculatory apodeme 120 μm long, 70 μm in greatest width.

Specimens examined. 1♂1♀, Rinconada (450 m, 33° 31' S-70° 47' W), Maipú, Santiago Prov., 30. IV.1966,



Figs. 8–9. Epandria, surstyli, cerci and processus longi of *Cerodontha* (*Cerodontha*) *chilensis* Spencer (8) and *C. (C.) flavifrons* (Philippi) (9), inner view.

by Malaise trap (NH & MI); 2 ♀, Quebrada de la Plata (550 m, 33° 31' S-70° 47' W), Rinconada, Maipú, 27. III.1966, by Malaise trap (MI).

22. *Cerodontha* (*Cerodontha*) *flavifrons* (Philippi) (Fig. 9)

Micromma flavifrons Philippi, 1865, 777.

Cerodontha flavifrons: Malloch, 1934, 484; Spencer, 1982, 15; Sasakawa, 1992c, 820.

Male S5 1.5 times as wide as long; S6 as long as wide, twice length of S5, narrowed basally (about 1/2 of distal width), with incision on posterior 1/4. Genitalia: Epandrium with a group of many sensillae along ventroposterior margin; cercus with a long ventrodorsal seta; surstylus incurved triangularly, bearing many setae and hairs; processus longus curved, simple; hypandrium V-shaped, 1/2 length of phallapodeme; phallus slightly longer than hypandrium; basiphallus a little longer than 3/4 of distiphallus (longer than that illustrated by Spencer, 1963, fig.46a); ventral process nearly 5/6 length of basiphallus, distal tubules of distiphallus barely separated from each other on distal 2/5; ejaculatory apodeme 150 μ m long, 80 μ m in greatest width (not greatly expanded as in fig. 46b by Spencer, 1963.)

Specimens examined. 6♂2♀, Las Trancas (1,270 m), Nuble Prov., 28 & 29. I.1967 (ES); 1♂, 18 km E of San Carlos, Nuble Prov., 24. XII.1950 (ER & AM); 2♀, Quebrada de la Plata, Maipú, Santiago Prov., 9. II. & 22. IX.1966, by Malaise trap (MI); 1♂, Luz Negra, Maipú, Santiago Prov., 22. IX.1966 (RG); 1♂, Cajon de Rio Claro, SE of Los Quenes, Curico Prov., 9. X.1966 (ES); 1♂, 50 km S of La Seru, 1. XII.1950 (ER & AM); 1♂1♀, El Abanico, Bio-Bio Prov., 30-31. XII.1950 (ER & AM); 1♀, 10 mil. N of Perquenco, Malleco Prov., 6. I.1951 (ER & AM); 1♀, 30 km S of Valdivia, Valdivia Prov., 13. I.1951 (ER & AM); 1♀, 20 km W of Caramavida Nahuelbuta (750m), 13. I.1967 (ES).

23. *Cerodontha (Cerodontha) patagonica* Spencer

Cerodontha (C.) patagonica Spencer, 1982, 42.

This species was described by a single male. The female which was collected in the type locality is different from male in the following points: parafrontalia is darkened between bases of 1st *ors* to 1st *ori* and eye below vertical angle; 2nd *ori* is present, but only 1/2 length of the 1st; 2 rows of *acr* are extended posteriorly to level of 4th *dc*; T6 is distinctly yellow along posterior margin except for other tergites indistinct.

Specimen examined. 1 ♀, Tierra del Fuego, 11.8 km NW of Russfin (300 m), 1.XII.1966 (MI & ES).

24. *Cerodontha (Butomyza) chilénica* Spencer

Cerodontha (But.) chilénica Spencer, 1982, 43

The female specimens are identical with this species except for the width of frons and number of *acr* rows: frons twice as wide as eye and *acr* in 6 rows but 4 behind level of 3rd *dc*.

Specimens examined. 2 ♀, 30 km E of Puyehue, Osorno Prov., 25. I.1951 (ER & AM).

Genus *Liriomyza* Mik

This is the largest genus in Chile (Spencer, 1982). Four species are newly recorded below: three, *bituberculata*, *maipuensis* and *quinquevittata*, new to science, and one, *baccharidis* Spencer, for the first time in Chile.

25. *Liriomyza andina* (Malloch) (Fig. 10)

Agromyza andina Malloch, 1934, 471.

Liriomyza andina: Frick, 1952, 401; Spencer, 1982, 19.

This species is unique in the presence of two yellow equilateral triangles which are extended usually from scutoscuteellar suture to the middle between two posterior *dc* and inside of *dc*-lines. The larve is known as a leaf miner of *Plantago* spp.

Third antennal segment entirely yellowish brown or only darkened along apical margin; parafrontalia also infuscated from vertical angle to base of 2nd *ors* or 1st *ori*; wing length 1.9 (♂) -2.3 (♀) mm. Epandrium with a spine on posteroventral corner; surstylus hooked, with a minute process before tip and a seta at base; processus longus narrow, bearing a long seta; phallus with well-developed ventral processes, distiphallus spinose internally and externally; ejaculatory apodeme 200 μm long, 100 μm in greatest width.

Egg guide subquadrate, weakly sclerotized, 70 μm long; T9 200 μm long, S9 with marginal sclerite narrow, bearing 5 pairs of *ns*m; cercus with 6 *ts* which are about 1/9 length of cercus; spermatheca small, 40-43 μm in diameter.

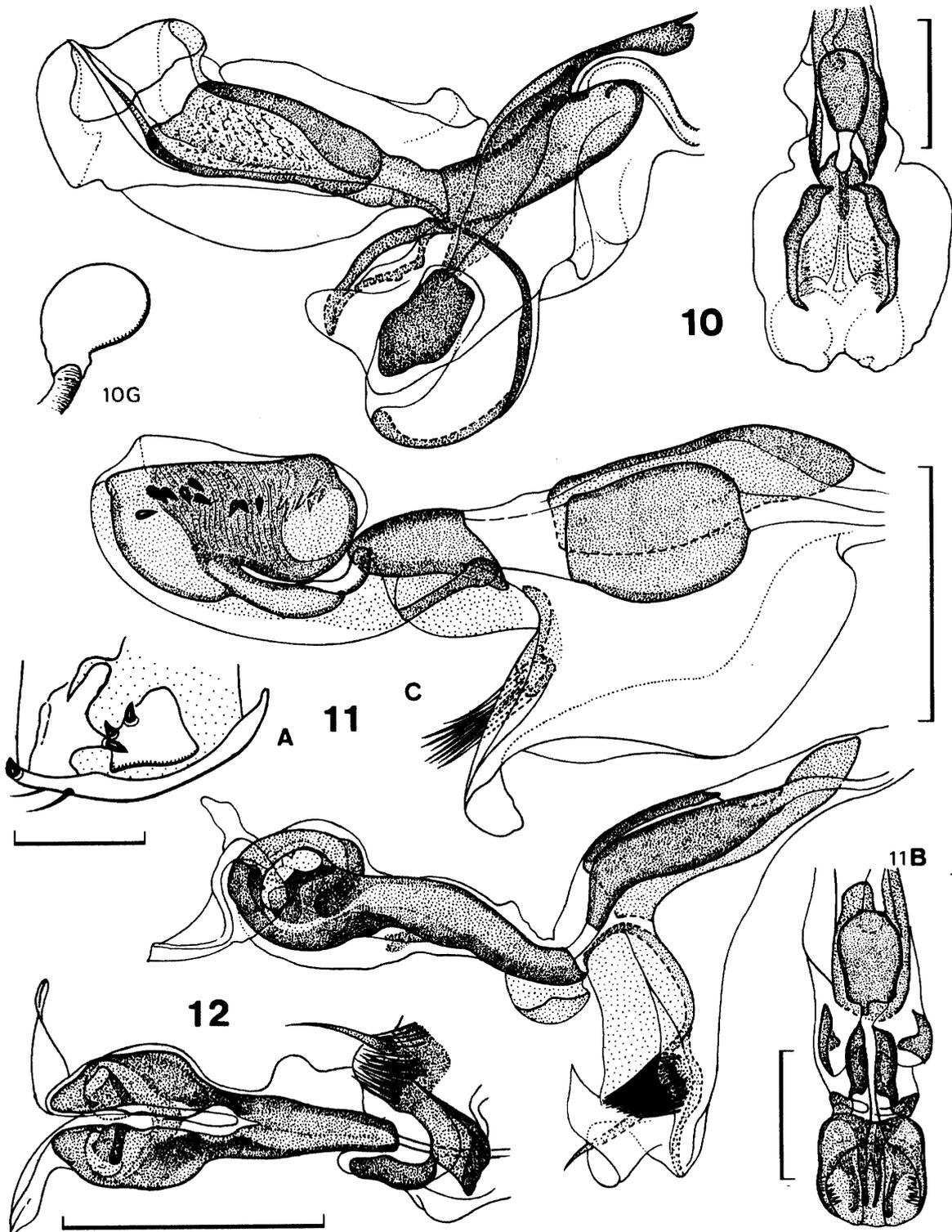
Specimens examined. 1♂, 30 km E of Puyehue, Osorno Prov., 25. I.1951 (ER & AM); 7♂15♀, 18 km E of San Carlos, Nuble Prov., 23 & 24.XII.1950 (ER & AM); 2♀, El Abanico, Bio-Bio Prov., 30.XII.1950 (ER & AM); 1♀, Hacienda Illapel, Rio Illapel, Coquimbo Prov., 19.X.1966 (ES & MI).

26. *Liriomyza baccharidis* Spencer

Liriomyza baccharidis Spencer, 1963, 354

This is a leaf miner of *Baccharis* spp.

Surstylus lobate, bearing 1 strong spine and 5 short setae near distal margin; phallus short, weakly



Figs. 10–12. Male genitalia of *Liriomyza andina* (Malloch) (10), *L. bituberculata* n. sp. (11) and *L. maipuensis* n. sp. (12).

sclerotized except for lateral sides of distiphallus; ejaculatory apodeme small, 90 μm long, 90 μm in greatest width.

Specimens examined. 1♂3♀, Quebrada de la Plata (510 m, 33°30' S-70°55' W), near Maipú, Santiago Prov., 9-24. III.1966, by Malaise trap (MI); 3♂1♀, La Rinconada (450 m, 33°34' S-71°14' W), Maipú, Santiago Prov., 10 & 16. III.1966, by Malaise trap in corn field (NH & MI); 9♀♂4♀, La Rinconada (450 m, 33°31' S-70°47' W), 28-29. III., 29. IV. & 16-17. V.1966, by Malaise trap (NH & MI).

Distribution. Colombia, Venezuela, Chile. New to Chile.

27. *Liriomyza bituberculata* n. sp. (Fig. 11)

Male. Head yellow, but face, parafacialia and gena whitish; ocellar triangle, vertical angle and parafrontalia between base of *or* and orbit brown except for pale ventral part of parafrontalia below 1st *ori*; occiput brown dorsally, extending laterally to about dorsal 1/2 of dorsal postorbit; *uti* at edge of dark area; antenna with 1st and 2nd segments yellow, 3rd segment and arista brown; palpus brown. Thorax and abdomen brownish black; mesonotum mat, densely whitish gray dusted, with lateral side including posterior margin of humerus and notopleuron yellow, but patch on posterolateral corner minute, inner *pa* on dark area; mesopleuron linearly yellow along dorsal and posterior margins; sternopleuron linearly and hypopleuron broadly yellow along each dorsal margin; pteropleuron and pleurotergite yellowish brown; scutellum yellow, with lateral triangle brown, basal *sc* on brown and apical *sc* on yellow area; T2-5 with posterior margins linearly yellow. Wing hyaline; calypter yellowish gray, with margin and fringe pale brown. Legs brown; distal end of fore coxa and all knees distinctly yellow.

Frons as wide as long, about twice as wide as eye, parallel-sided; parafrontalia (especially ventral part) and parafacialia distinctly projecting above eye margin in profile; *ors* and *ori* each 2, subequal to each other in length; *oh* minute, 2-3; eye slightly higher than broad; gena 1/2 height of eye; 3rd antennal segment small, as long as wide, rounded apically, pilose microscopically; arista as long as width of eye, microscopically pubescent.

Mesonotum with 1+3 *dc*, 2nd *dc* as far apart from 1st as from 3rd, distance between 3rd and 4th *dc* slightly wider than that between 2nd and 3rd; 2-3 irregular rows of *acr*, an incurved pair at middle between levels of 3rd and 4th *dc*; inner *pa* 1/2-2/3 of the outer; mesopleuron with 2 dorsally directed setulae. Wing with costal sections in proportion of 36-40:10:9; r-m slightly beyond middle of discal cell; ultimate section of M_{1+2} a little longer than 6 times length of penultimate; ultimate section of M_{3+4} 1.3 times as long as penultimate.

S5 about thrice as wide as long; S6 1.7 times as wide as long, nearly twice length of S5, with median incision on posterior 1/2. Genitalia: Epandrium rather distinctly projected ventroposteriorly, bearing a spine on inner apex, and with a spine at middle just above ventral margin; surstylus with 2 spines on posterior margin; hypandrium with side piece very narrow; phallus slightly longer than 1/2 of phallopodeme; distiphallus with distal lobes extremely expanded, spinose on dorsolateral part, accompanying by a pair of small tuberos processes on basal ventrolateral side; ejaculatory apodeme 210 μm long, slightly expanded distally, 115 μm in greatest width.

Body and wing length 1.7 mm, respectively.

Female. Unknown.

Holotype male, Quebrada de la Plata (510 m, 33°31' S-70°47' W), Rinconada, Maipú, Santiago Prov., 27. I.1966 (MI) (CAS No. 17226); genitalia mounted on a small slide and pinned with the specimen.

Remarks. This species is closely related to *L. schwabei* Spencer in the coloration of parafrontalia, antenna and mesonotum. However, in *bituberculata*, the parafrontalia and parafacialia are distinctly projected above and before eye margin in profile, the gena is very broad, the ultimate section of M_{3+4} is less than 1.5 times length of penultimate, and the basal tube of distiphallus is short and simple, but its

distal lobes are very large, and each with a ventral process at base and a row of spines on lateral side.

28. *Liriomyza huidobrensis* (Blanchard)

Agromyza huidobrensis Blanchard, 1926, 10.

Liriomyza huidobrensis: Blanchard, 1938, 356; Spencer, 1982, 22; Sasakawa, 1922c, 820; 1992d, 20.

This is a highly polyphagous species and widespread in the Neotropical Region.

Specimens examined. 30♂14♀, La Rinconada (450 m, 33°31' S-70°47' W), Maipú, Santiago Prov., 10-29. III., 14-20. IV., 3-31. V. & 1. VI.1966, by Malaise trap (NH & MI); 14♂1♀, La Rinconada, Maipú, 17. III.1966, swept on *Phaseolus vulgaris* (NH); 1♂9♀, Quebrada de la Plata (550 m, 33°30' S-70°55' W), near Maipú, Santiago Prov., 9 & 17. III.1966, by Malaise trap (MI); 2♂1♀, 5.6 km N of Cobquecura (10 m, 36°08' S-72°47' W), Nuble Prov., 27. I.1967 (ES); 50♂26♀, 18 km E of San Carlos, Nuble Prov., 24. XII.1950 (ER & AM); 1♀, Pica, Tarapacá Prov., 23. IX.1966 (MI & EM); 2♂, 20 km N of Concon, Valparaiso Prov., 26. XI.1950 (ER & AM); 1♂5♀, 5 mil. N of Concon, Acon., 16. XII.1950 (ER & AM); 4♂1♀, Angol, 31. XII.1950, 1 & 29. I.1951 (ER & AM); 1♂3♀, Lautaro, Mallece, 6. I.1951, swept in pea field (ER & AM); 1♀, 20 km E of Temuco, Cautin, 8. I.1951 (ER & AM).

29. *Liriomyza maipuensis* n. sp. (Fig. 12)

Male. Head yellow, but ocellar triangle, vertical angle and back of head including dorsal postorbites black; both *vt* growing on black shiny area; parafrontalia darkened to base of 1st *ors*; 3rd antennal segment and palpus orange yellow, the former slightly brownish around insertion of arista or along dorsoapical margin; arista brown. Mesonotum mat black, densely dusted with gray, with pale posterolateral corners indistinct; pleura yellow except for black transverse band on ventral 1/4 of mesopleuron and large triangles on sterno- and hypopleura; scutellum black on lateral sides and apical *sc* growing at edge of central yellow stripe; pleurotergite and postnotum black; calypter yellowish, with margin and fringe brown. Abdomen brownish black; tergites each yellow on lateral side and along posterior margin; cercus yellow. Legs with coxae and femora yellow, the latter each with a faintly brownish and short striation on anterodistal part; tibiae and tarsi dark brown to brownish black.

Frons as long as wide, almost twice as wide as eye, parallel-sided; parafrontalia linearly projecting above eye margin in profile, bearing 2 *ors*, 1 or 2 *ori* and a sparse row of *oh*; gena 1/4-1/5 height of eye; *pm* 4; 3rd antennal segment orbicular, as long as wide, slightly wider than height of gena, minutely pilose; arista distinctly shorter than height of eye, swollen on about basal 1/3.

Mesonotum with 1+3 *dc*, 2 rows of *acr* ending at level of 3rd *dc*, accompanying by a few setulae before or behind suture laterad of one *acr*-line, 3-4 setulae in *ia*-line. Wing with 2nd costal section about 4 times as long as 3rd or 4th, r-m at middle of discal cell; ultimate section of M_{1+2} 7 times length of penultimate; ultimate section of M_{3+4} about twice of penultimate.

S6 about 2.3 times as long as S5, 1.3 times as wide as long and with a median incision on posterior 1/3. Genitalia: Epandrium with surstylus unispinose apically and bearing several setae at middle of outer side; hypandrium with side piece very narrow; phallus a little more than 1/2 of phallopodeme, basiphallus slightly shorter than distiphallus, with ventral process consisting of a tuft of brown setae and one long seta; distiphallus divided into 2 bulbous parts before end; ejaculatory apodeme 200 μ m long, 100 μ m in greatest width.

Body and wing length 1.6-1.7 (holotype) mm, respectively.

Female. Unknown.

Holotype male, Quebrada de la Plata (550 m, 30°31' S-70°47' W), Rinconada, Maipú, Santiago Prov., 27. III.1966, by Malaise trap (MI) (CAS No. 17227); genitalia mounted on a small slide and pinned with specimen. Paratype; ♂, same data as holotype (3rd antennal segment missing; abdomen broken at

middle.).

Remarks. In general appearance, especially the coloration of upper postorbits, parafrontalia and 3rd antennal segment, the mat or weakly shining mesonotum, and the wing length, this species resembles *L. huidobrensis*, but is distinguishable by its more yellow coxae, femora and mesopleuron, and more mat mesonotum. The phallus of male genitalia of *maipuensis* is of a very distinctive form, showing that the two species are not closely related.

30. *Liriomyza patagoniensis* Spencer

Liriomyza patagoniensis Spencer, 1982, 47.

This dark species is distinct in having the frons, antenna and legs black, and the mesonotum and scutellum densely gray dusted, brownish black.

Specimen examined. 1 ♀, 8 km NW of Russfin (100 m), Tierra del Fuego, 1. XII.1966, in dry *Nothofagus* forest (MI & ES).

31. *Liriomyza peullae* (Malloch)

Agromyza peullae Malloch, 1934, 476.

Phytobia (*Praspedomyza*) *peullae*: Spencer, 1963, 337.

Liriomyza peullae: Spencer, 1982, 20.

This species is unusual in having the dark frons and scutellum. However, the presence of stridulatory organs and structures of male genitalia show that the species clearly belongs to *Liriomyza*.

All the specimens examined are small: 1.5 (1.3-1.8 in male or 1.9 in female) mm in wing length, excepting only 2 females (2.2 mm).

Specimens examined. 1♂2♀, 30 km S of Valdivia, 13. I.1951 (ER & AM); 2♂, 10 mil. N of Perquenco, Malleco Prov., 16. I.1951 (ER & AM); 1♂1♀, Cord. Nahuelbuta Nac. Park Contulmo, Palo Botado, Malleco Prov., 1. II.1967 (ES); 6♀, Los Muermos (forest), 19-20. I.1951 (ER & AM); 3♂2♀, 20 or 30 km E of Puyehue, Osorno Prov., 25-26. I.1951 (ER & AM); 1♀, Pucatrihue (sea level), Osorno Prov., 4. II.1967 (ES); 1♀, Quebrada de la Plata (775 m), Santiago Prov., 22. IX.1966 (MI); 1♀, Cajon de Rio Claro, SE of Los Quenes, Curico Prov., 9. X.1966 (ES); 2♂, 4 km W of Laguna Amarga, Magallanes Prov., 7-8. XII.1966 (MI & ES).

32. *Liriomyza quadrata* (Malloch)

Agromyza quadrata Malloch, 1934, 471.

Liriomyza quadrata: Frick, 1952, 405; Spencer, 1963, 365.

Specimens examined. 1♂, Salta da Pilmaiquen, Osorno Prov., 27. I.1951 (ER & AM); 1♂2♀, Pucatrihue (sea level), Osorno Prov., 4. II.1967 (ES); 1♂, Cord. Nahuelbuta Nac. Park Contulmo, Palo Botado, Malleco Prov., 1. II.1967 (ES); 3♂3♀, Quebrada de la Plata (510 m), near Maipú, Santiago Prov., by Malaise trap, 8-9. II., & 17 & 23. III.1966 (MI); 2♂5♀, La Rinconada (33°34' S-71°14' W), Maipú, Santiago Prov., 4-10. III.1966, by Malaise trap (NH); 17♂20♀, La Rinconada (510 m, 33°31' S-70°47' W), Maipú, 10-31. III., 29-30. IV., 17-30. V. & 15-29. VIII.1966 (NH & MI); 1♀, Cajon de Rio Claro, SE of Los Quenes (1,000-1,200 m), Curico Prov., 9. X.1966 (ES); 2♂, 20 km N of Concon, Valp. Prov., 26. XI.1950 (ER & AM).

33. *Liriomyza quinquevittata* n. sp.

Female. Yellow; ocellar triangle pale brown; occiput dark brown; postorbit and vertical angle entirely yellow; antenna and palpus yellow; mesonotum with 5 mat, grayish pollinose brown vittae which are

distinctly divided from each other by four yellow lines along bases of *dc* and outer row of *ia* setulae to inner *pa*: median one between *dc*-lines broadest, ending at anterior 1/3 between levels of 3rd and 4th *dc*; sublateral one with presutural part broader than the postsutural, extending from level of posterior margin of humerus to just behind level of 4th *dc*; lateral one narrowest, extending from level of notopleuron to level of inner *pa*; both *pa* on yellow area, *sa* at edge of lateral vitta; scutellum with small, pale brown triangle on anterolateral corner, basal *sc* on yellow ground; mesopleuron with a pale brown oval spot at middle above lower margin; dark brown triangle on sternopleuron distinct but that on hypopleuron small and indistinct; postnotum and pleurotergite around base of halter dark brown; abdominal tergites more or less testaceous; ovipositor sheath black. Wing hyaline, calypter with margin and fringe pale brown; legs yellow, tibiae and tarsi very faintly brown tinged.

Frons almost as wide as long, about 1.8 times as wide as eye, converging ventrally; parafrontalia linearly projecting above eye margin in profile; *ors* and *ori* each 2 (detectable by setal sockets), *oh* in a sparse row; gena 1/3-1/4 height of eye; *pm* 4-6; 3rd antennal segment orbicular, as long as wide, microscopically pilose; arista subequal to width of eye in length, microscopically pubescent.

Mesonotum with 1+3 *dc*, distance between 2nd and 3rd *dc* slightly wider than 1/2 that between 3rd and 4th *dc*; *acr* in 2 irregular rows, ending at level of 3rd *dc*; *ia*-setulae 5, in 2 rows; inner *pa* about 2/3 of the outer; mesopleuron with 2-3 dorsally directed setulae. Wing 1.8-2.1 (holotype) mm; 2nd costal section about 4.5 times as long as 3rd or 4th, r-m at or before middle of discal cell; ultimate section of M_{1+2} about 5.6 times as long as penultimate; ultimate section of M_{3+4} nearly twice length of penultimate.

Male. Unknown.

Holotype female, Quebrada de la Plata (510 m, 33° 30' S-70° 55' W), near Maipú, Santiago Prov., 9. II. 1966, by Malaise trap (MI) (CAS No. 17228). Paratype: ♀, same data as holotype except for 8. II. 1966.

Distribution. Chile.

Remarks. There are no related species in the Neotropical Region. This species is distinctive in the presence of five gray-dusted brown vittae on yellow mesonotum.

34. *Liriomyza schwabei* Spencer

Liriomyza schwabei Spencer, 1963, 368.

Following characteristics are different from those of the original description: wing is shorter, 1.44 (1.3-1.6) mm in male and 1.61 (1.4-1.8) mm in female; ultimate section of M_{3+4} 2.3 (1.8-2.7) times as long as the penultimate; 3rd antennal segment yellowish brown to brown, usually straight on dorsal side in profile, forming an angle at dorsoapical corner.

Epandrium with surstylus cylindrical, curved ventrally, bearing a spine on tip; basiphallus with left sclerite extending distally to base of hair-tuft of ventral process; distiphallus undulate, ending into a pair of large lobes which are provided with a row of stout spines along distal margin; ejaculatory apodeme 160 μ m long, 130 μ m in greatest width.

Specimens examined. 1♂2♀, Quebrada de la Plata (510 m, 33° 30' S-70° 55' W), near Maipú, 9. II. & 12-17. III. 1966, by Malaise trap (MI); 1♂, Quebrada de la Plata (33° 31' S-70° 47' W), 13. X. 1966 (NH); 28♀12♀, 15 & 18 km E of San Carlos, Nuble Prov., 23 & 24. XI. 1950 (ER & AM).

Genus *Haplopeodes* Steyskal

Spencer (1982) reported the occurrence of one species, without the accurate identification, in Chile. One new species from Santiago Prov. is described below.

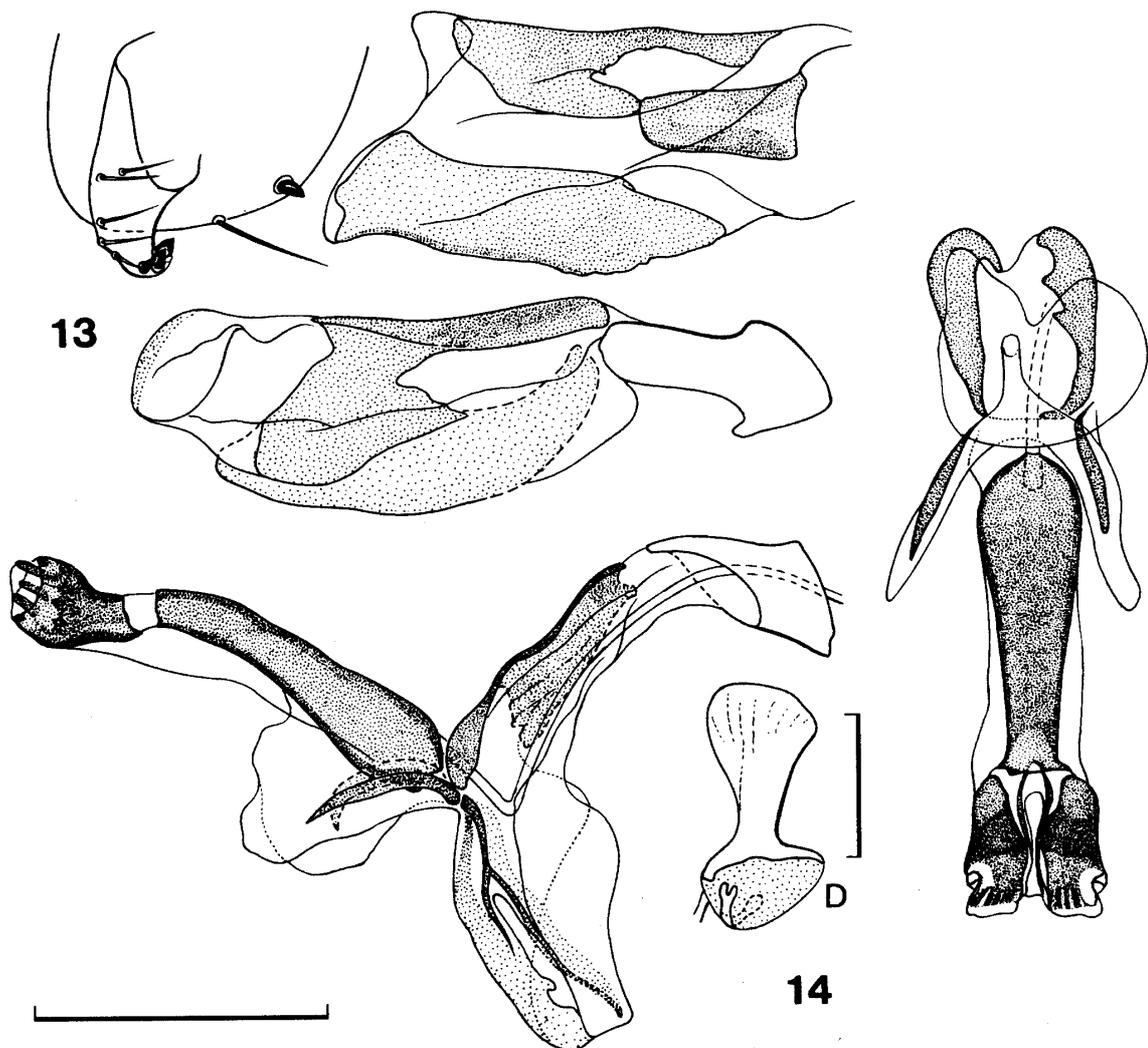
35. *Haplopeodes punctiscutellatus* n. sp. (Fig. 13)

Female. Head yellow but ocellar triangle and back of head brownish black; vertical angle and dorsal

1/2 of postorbit black, *vti* at edge of dark area; parafrontalia brown ventrally to base of 1st *ori*; orbit below level of 1st *ori* variable in degree of darkness; face brown; antenna with 1st-2nd segments yellow, 3rd segment and arista brown; palpus yellow. Thorax black, densely gray dusted; mesonotum and scutellum mat, the former with lateral side (including humerus largely and notopleuron) yellow, but not reaching to posterolateral corner of notum adjoining scutellum; *prs*, *sa* and outer *pa* at edge of black area, *h* on yellow; scutellum with a small yellow spot between bases of apical *sc*; dorsal margins of meso- and sternopleura linearly yellow. Wing hyaline; calypter yellowish, with margin and fringe faintly brown tinged; halter entirely yellow. Legs brown, all knees distinctly yellow, tibiae and tarsi pale to yellowish brown. Abdomen brownish black, subshining; ovipositor sheath glossy black.

Frons slightly narrower than long, about 1.5 times as wide as eye, slightly converging ventrally; parafrontalia not projecting above eye margin; *ors* 1, reclinate; *ori* 3, 1st-2nd directed in- and upward, 3rd slightly shorter than the uppers and inclinate; *oh* erect, in a sparse row; eye slightly higher than broad; gena 1/5 height of eye; *pm* 5-6; 3rd antennal segment small, round, as long as wide, microscopically pilose; arista slightly shorter than width of eye, appearing bare (microscopically pubescent).

Mesonotum with 1+3 *dc*, 1st and 2nd each 1/2-2/3 length of 3rd; 2 sparse rows of *acr* (3-5 pairs), ending at level of 2nd *dc*; inner *pa* a little longer than *acr*; 1 postsutural *ia* setula; mesopleuron with 1-2 dorsally



Figs. 13-14. Male genitalia of *Haplopeodes punctiscutellatus* n. sp. (13) and *Calycomyza turbida* n. sp. (14). D, ejaculatory apodeme.

directed setulae. Wing with costal sections in proportion of 22-25:7:7; r-m before level of R_1 termination.

Body length 1.6-1.7 (holotype) mm; wing length 1.6 (holotype) mm.

Male. Similar to female, but frons testaceous yellow, legs paler than those of female; S5 about twice as wide as long; S6 1.5 times length of S5, 1.4 times as wide as long and with shallow emargination posteriorly.

Epandrium with a spine on posteroventral corner; surstylus with 3 spines on tip; hypandrium long, U-shaped, 4/5 length of phallapodeme; praegonite large, 1/4 length of hypandrial side piece; phallus less than 1/2 of phallapodeme, basiphallus shorter than epiphallus, distiphallus weakly sclerotized on lateral sides, without tube distally; ejaculatory apodeme clavate, 130 μm long, 25 μm in greatest width.

Body length 1.2-1.5 mm; wing length 1.3-1.4.

Holotype female, Quebrada de la Plata (510 m, 33° 30' S-70° 55' W), near Maipú, Santiago Prov., 17. III.1966, by Malaise trap (MI) (CAS No. 17225). Paratypes: 2♂ 1♀, same data as holotype except for 12 & 16. III.1966.

Distribution. Chile.

Remarks. This species most closely resembles *H. tigrensis* (Spencer) known from Argentina, but is distinguishable by the dark parafrontalia, vertical angle, face, third antennal segment, scutellum and legs. The male genitalia are quite typical of the genus.

Genus *Calycomyza* Hendel

This is the third largest genus, with 55 species, in the Neotropical Region. Six species are now known from Chile, of which 3 are recorded below.

36. *Calycomyza crotalarivora* Spencer

Phytobia (*Calycomyza*) *crotalarivora* Spencer, 1963, 340.

Calycomyza crotalarivora: Spencer, 1973, 39.

This species is known as a leaf miner of *Crotalaria* in Venezuela. Following characters are added to the original description: *ori* 2 or 3; parafrontalia darkened from vertex to base of 1st or 2nd *ori* (not to 1st *ors*); face with antennal grooves brown (not entirely yellow); 1st postsutural *dc* 1/3-3/4 length of 2nd; *acr* in 4 rows; wing 1.9-2.0 mm long in both sexes; S6 thrice as long as S5, 1.3 times as wide as long, with a shallow emargination on posterior 1/6. Genitalia: Epandrium with 7-8 rows of 40-44 spines on each posteroventral corner; surstylus with 2 rows of 11-14 spines ventrally and 10-12 setae dorsally; ejaculatory apodeme broad at base, about 160 μm in length and in greatest width, respectively.

Specimens examined. 2♂ 1♀, Rinconada (450 m, 33° 31' S-70° 47' W), Maipú, Santiago Prov., 14 & 29-30. V.1966, by Malaise trap (NH & MI).

Distribution. Venezuela, Chile. New to Chile.

37. *Calycomyza sidae* Spencer

Calycomyza sidae Spencer, 1973, 88.

The male from Chile is as large as that in Peru, and the epandrium is provided with about 6 rows of 24-29 spines on each posteroventral corner (Sasakawa, 1992d).

Specimen examined. 1♂, 15 mil. S of Ros. de la Frontera Salta, 13. II.1951 (ER & AM).

Distribution. U.S.A. (Florida), Bahamas, Dominica, Costa Rica, Ecuador, Venezuela, Brazil, Peru, Chile. New to Chile.

38. *Calycomyza turbida* n. sp. (Fig. 14)

Male. Head yellow except for brownish black ocellar triangle, vertical angle, dorsal postorbit and back of head; parafrontalia dorsally brownish black to 1st *ors*, but rarely to 2nd *ors*; antenna, antennal groove entirely and palpus brownish black, 2nd antennal segment and arista somewhat paler. Thorax and abdomen moderately shining brownish black, sparsely pollinose; dorsal and caudal margins of humerus, and notopleuron yellow; mesopleuron only linearly yellow along dorsal margin. Wing with veins whitish at base; calypter white, with fringe white. Legs brownish black; fore knee indistinctly yellowish brown.

Frons 1.3-1.5 times as wide as eye, almost parallel-sided; parafrontalia with dorsal 1/2 distinctly and parafacialia narrowly projecting above eye margin in profile; *oc* short, about 2/3 length of 1st *ors*; *ors* 2, reclinate; *ori* 2, inclinate; *oh* reclinate, in a sparse row; eye higher than broad (13:10-11); gena about 1/3 height of eye; *pm* 4-5; 3rd antennal segment wider than long (4:3), minutely pilose; arista shorter than width of eye, microscopically pubescent.

Mesonotum with 1+3 *dc*, 1st *dc* 1/3 length of 2nd which is situated distinctly before level of *sa*, distance between 1st and 2nd *dc* 1/3 that between 2nd and 3rd; *acr* in 4 rows; inner *pa* about 1/2 of the outer. Wing with costal sections in proportion of 22-23:10:7-7.5; r-m distinctly beyond middle of discal cell; ultimate section of M_{3+4} thrice as long as penultimate.

S6 4 times as long as S5, 1.3 times as wide as its length or width of S5, very shallowly emarginated posteriorly (about 1/10 of whole length). Genitalia: Epandrium with 3-4 rows of 18-22 spines on each posteroventral corner; surstylus with 8-9 spines and 7 setae; hypandrium V-shaped, with side piece very narrow; postgonite short, less than 1/2 of hypandrial side piece; distiphallus well developed, with distal lobes separated from each other and each forming a tube in inner distal 1/3; ejaculatory apodeme 125 μ m long, 75 μ m in greatest width.

Body length 1.4 mm; wing length 1.4 (holotype) -1.5 mm.

Female. Similar to male; abdomen black, more strongly shining than that of male; body length 1.9 mm; wing length 1.6.

Holotype male, Quebrada de la Plata (510 m, 33° 30' S-70° 55' W), near Maipú, Santiago Prov., 10. II. 1966, by Malaise trap (MI)(CAS No. 17224). Paratypes: 1♂, same locality as holotype, 12. III.1966 (MI); 1♀, 18 km E of San Carlos, Nuble Prov., 24. XII.1950 (ER & AM).

Distribution. Chile.

Remarks. This species is similar to *C. chilena* Spencer in the pale coloration of fringe on calypter. However, it is smaller, with less darkened parafrontalia and orbit, the short third antennal segment and a small discal cell in the wing. Both species belong to N. American *jucunda* group in the structure of phallus, but in *turbida* a minute sclerite between two sections of distiphallus is absent as in *minor* Spencer.

Genus *Phytoliriomyza* Hendel

Ten species are now known from Chile.

39. *Phytoliriomyza arctica* (Lundbeck)

Agromyza arctica Lundbeck, 1900, 304.

Phytoliriomyza arctica: Shewell, 1953, 469; Spencer, 1982, 34.

This is the semi-cosmopolitan species; mesonotum and scutellum are mat brownish black and grayish pollinose; dorsal margins of meso- and sternopleura are distinctly yellow; wing length is 2.0-2.2 mm.

Specimens examined. 1♀, Rinconada (450m, 33° 31' S-70° 47' W), Maipú, Santiago Prov., 10. III.1966, by Malaise trap (NH & MI); 1♀, Quebrada de la Plata (550m, 33° 30' S-70° 55' W), Maipú, 17. III.1966, by

Malaise trap (MI).

40. *Phytoliriomyza frontalis* Spencer

Phytoliriomyza frontalis Spencer, 1982, 51.

This species is distinctive in the shape of head (lateral view) and third antennal segment. A female specimen collected at the type locality has the following characteristics: parafrofrontalia with 2-3 incurved *ori*; mesonotum with a pair of *acr* at level of presutural *dc*; wing length 2.2 mm.

Specimen examined. 1 ♀, Rinconada (450 m, 33° 31' S-70° 47' W), Maipú, Santiago Prov., 10. V.1966 (NH & MI).

41. *Phytoliriomyza kuscheli* (Spencer)

Liriomyza kuscheli Spencer, 1964, 253.

Phytoliriomyza kuscheli: Spencer, 1982, 31.

Following characters are worth mentioning: mesopleuron is largely yellow, faintly brownish-spotted ovately at middle above ventral margin; surstylus is provided with 7-9 comb-like spines (more than 6 by Spencer, fig. 1c), and epandrium with 4-5 rows of 35-42 spines (*not* some 30 strong bristles) on each inner posteroventral part; distiphallus is divided into 2 lobes (*not* constricted at base as shown by Spencer, fig. 1b.)

Specimens examined. 1 ♂, Quebrada de la Plata (510 m, 33° 30' S-70° 55' W), near Maipú, Santiago Prov., 9. II.1966, by Malaise trap (MI); 1 ♀, 40 km E of San Carlos, Nuble Prov., 23. XII.1950 (ER & AM).

42. *Phytoliriomyza nublensis* Spencer (Fig. 15)

Phytoliriomyza nublensis Spencer, 1982, 53.

Following characteristics will be added to the original description: vertical angle with pale brown spot between base of *vti* and dorsal corner of eye; 1st and 2nd *dc* short, approximately 1/2 of the 3rd, 2nd close to suture and at middle between 1st and 3rd; usually 3 pairs of *acr* before 3rd *dc*; wing length 1.5-1.7 mm in male, 1.6-2.0 mm in female, r-m before middle of discal cell, ultimate section of M_{3+4} usually 1.5-1.7 times length of penultimate; distiphallus with a pair of narrow and long sclerites surrounded by sparsely spinulose membrane.

Specimens examined. 1 ♂ 1 ♀, 40 km E of San Carlos, Nuble Prov., 23. XII.1950 (ER & AM); 1 ♂, 18 km E of San Carlos, 24. XII.1950 (ER & AM); 1 ♂ 1 ♀, El Abanico, Bio-Bio Prov., 30 & 31. XII.1950 (ER & AM); 1 ♂ 1 ♀, Quebrada de la Plata (510 m, 33° 31' S-70° 47' W), Rinconada, Maipú, Santiago Prov., 27. I. & 27. III.1966, by Malaise trap (MI).

Genus *Phytomyza* Fallén

43. *Phytomyza crassiseta* Zetterstedt

Phytomyza crassiseta Zetterstedt, 1860, 6469; Spencer, 1982, 34.

This Holarctic species is known to occur in Chile.

Specimens examined. 4 ♀, Quebrada de la Plata (550 m, 33° 30' S-70° 55' W), near Maipú, Santiago Prov., 17. III.1966, by Malaise trap (MI); 1 ♀, Quebrada de la Plata, Rinconada, Maipú, 27. III.1966 (MI).

44. *Phytomyza enigma* Malloch

Phytomyza enigma Malloch, 1934, 485; Spencer, 1982, 37.

Specimen examined. 1 ♀, Quebrada de la Plata (550 m), near Maipú, Santiago Prov., 17. III.1966, by Malaise trap (MI).

Genus *Chromatomyia* Hardy

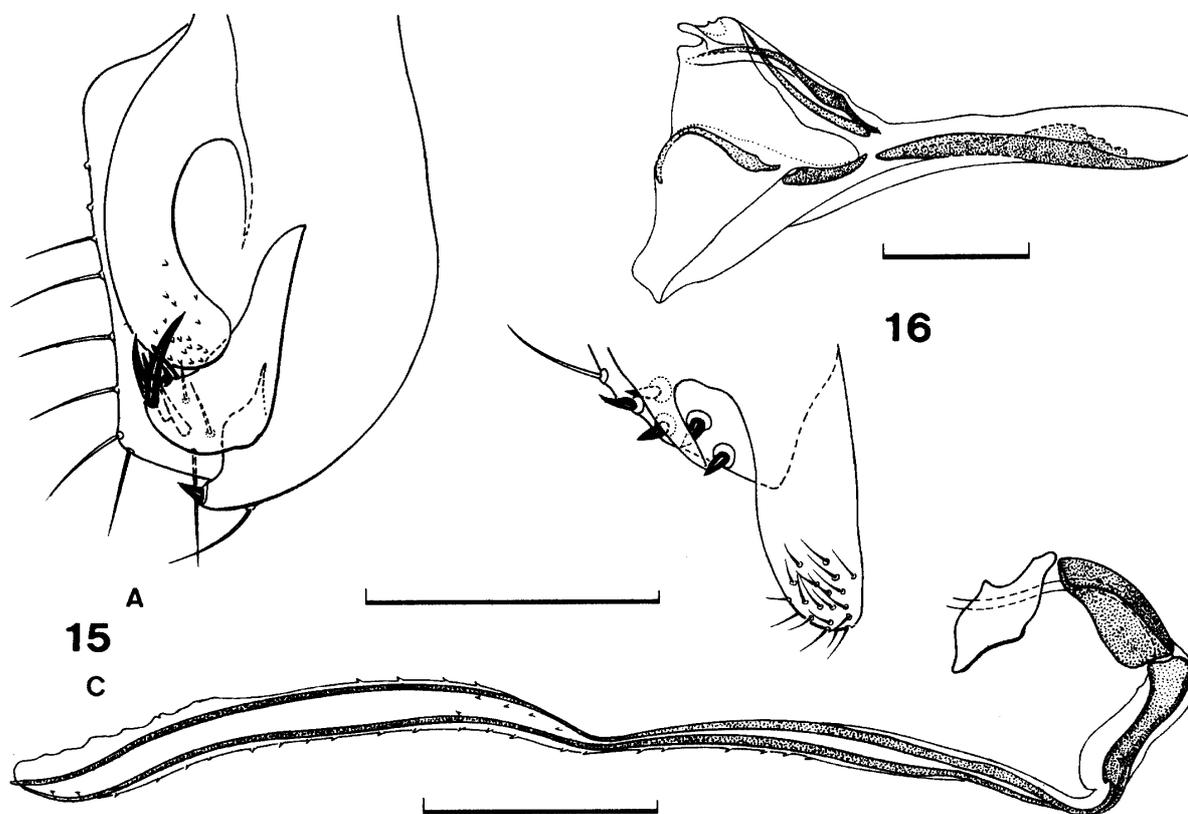
45. *Chromatomyia platensis* (Brèthes) (Fig. 16)

Phytomyza platensis Brèthes, 1923, 154.

Chromatomyia platensis: Spencer, 1982, 35.

The epandrium of male is uncommon in the presence of short but stout spines near posteroventral corner. The larva has been known as a leaf miner of Lamiaceae.

Specimens examined. 1 ♀, Quebrada de la Plata (510 m, 33° 30' S-70° 55' W), near Maipú, Santiago Prov., 9. II.1966, by Malaise trap (MI); 1 ♂, La Rinconada (443 m, 33° 31' S-70° 47' W), Maipú, 12. IX.1966, by UV light trap (RG & MI); 1 ♀, Cajon de Rio Claro, SE of Los Quenes (1,000 m), Curico Prov., 9. X.1966 (ES); 1 ♀, El Abanico, Bio-Bio Prov., 30. XII.1950 (ER & AM).



Figs. 15–16. Male genitalia of *Phytoliriomyza nublensis* Spencer (15) and *Chromatomyia platensis* (Brèthes) (16).

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* See the References in Parts 1-3, 1992.