Notes on the Tipulidae of Ecuador (Order Diptera)

PART VI

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In this report I am continuing the discussion of species of the genus Limonia Meigen, including the typical subgenus and Neolimnobia Alexander, these being species 58 to 76, inclusive. The remaining subgenera (Rhipidia Meigen, Dicranomyia Stephens, and Peripheroptera Schiner) will be treated in the succeeding part of these Notes.

LIMONIA Meigen

Limonia Meigen

Amphinome Meigen; Nouv. Class. Mouches, p. 15, 1800; preocc. by Amphinome Bruguiere, 1792; (nom. nud., no type).

Limonia Meigen; Illiger's Mag. fur Insektenk., 2: 262, 1803; (type tripunctata Fabricius).

Limnobia Meigen; Syst. Beschr, 1: 116, 1818; (type tripunctata Fabricius).

Unomyia Meigen; Syst. Beschr., 1: 135, 1818; (type tripunctata Fabricius).

Ataracta Loew; Bernstein und Bernsteinfauna, p. 38, 1850; (nom. nud., no type).

Numantia Bigot; Ann. Soc. Ent. France (3) 2: 470, 1854; (type fusca Meigen).

Limnomyza Rondani; Prodromus Dipterologiae Italicae, 1: 185, 1856; (type tripunctata Fabricius).

Atypophthalmus Brunetti; Rec. Indian Mus., 6: 273, 1911; (type, umbrata de Meijere, as holopticus Brunnetti).

A general discussion of the typical subgenus was provided in an earlier paper by the writer (Rev. de Entomologia, 21: 169 — 175, 1950), which should be consulted for various points not considered here. I am referring the 14 species so far discovered in Ecuador to the typical subgenus though with some question, as discussed in the reference cited. The species fall in four distinct groups, as follows:

1. **The eiseni group**. Includes bimucronata, hyperphallus, lachesis, lawlori, lustralis, macintyrei, optabilis, pastazicola, and velasteguii.

2. **The insularis group**. Includes aurigena and grossa.

3. **The repanda group**. Includes repanda.

4. **The reticulata group**. Includes pampoecila and subreticulata.

The immature stages of members of the subgenus as known occur chiefly in decaying wood permeated with fungous mycelia. Others that are placed at least tentatively in the subgenus are subaquatic, living in moss or algae growing on the faces of wet wood or cliffs, where the larvae dwell in silken tubes. Closely related forms live in organic earth, while still others are fungicolous. In the vast fauna of Tropical America it would seem that still other larval habitats might be used but to this date nothing is known of this particularly interesting subject.

Key to the Species

1. Wings with an abundant reticulated pattern that includes narrow crossbars in the cells. 2
Wings variosly patterned but never reticulately so. 3

2. Major brown areas at origin of Rs and at one-third the length of cell R solidly darkened; hypopygium (fig. 14) with the rostral spines subequal in length and placed at and near summit of a very long basal tubercle.
subreticulata Alexander
Major areas at origin of Rs and at one-third the length of cell R interrupted by pale behind; hypopygium (fig. 11) with the rostral spines much longer than the basal tubercle
pampoecila Alexander

3. Wings with a conspicuous darkened pattern, including areas at and near the arculus. 4.
Wing pattern less conspicuous, chiefly on outer half, without darkenings at arculus. 6

4. Wings with a broad solidly darkened brown band at and beyond arculus with further areas at and beyond the cord; hypopygium (fig. 9).
optabilis (Alexander)
Wings without a solidly darkened area on basal fourth. 5

5. Darkened wing pattern extensive, including a major area in cell R between the marks at arculus and origin of Rs; Sc very short, Sc1 ending shortly beyond origin of Rs, Sc2 opposite this origin; hypopygium (fig. 6).
lachesis Alexander
Wing pattern less conspicuous, with no darkening in cell R as described; Sc very long, both Sc1 and Sc2 ending nearly opposite the fork of the long Rs; tip of vein R3 bent cephalad at a right angle (fig. 1); hypopygium (fig. 8).
macintyrei Alexander

6. Wings with vein Sc very short, Sc1 ending just beyond origin of Rs, the latter very strongly arcuated; a conspi-

cuous darkened seam at end of vein 2nd A; hypopygium (fig. 13). repanda Alexander

Wings with vein Sc long to very long, Sc1 ending beyond midlength of Rs; no darkened seam on vein 2nd A. 7

7. Legs variegated black and white, the latter color including the tip of tibia and the outer tarsal segments; hypopygium (fig. 2)

aurigena Alexander

Legs uniform in color or virtually so, with no white color 8

8. Vein R1 deflected strongly caudad so vein R2 is very short, in transverse alignment with the long erect free tip of Sc2; hypopygium (fig. 4).

grossa Alexander

Vein R1 extending generally paralel to the anterior branch of Rs, vein R2 not shortened. 9

9. Wings almost unpatterned except for the pale brown stigma, with no darkening at origin of Rs; hypopygium (fig. 15).

velasteguii Alexander

Wings patterned, with a darkened cloud at origin of Rs. 10

10. Wings conspicuously patterned, the brown marks at origin of Rs and the stigma preceded and followed by whitened areas; outer radial field extensively infuscated, the outer ends of cells R2 and R3 more yellowed; stigma with numerous trichia; hypopygium (fig. 7).

lawlori Alexander

Wings less evidently patterned, without the whitened costal spots; outer radial cells weakly darkened, their outer ends not yellowed; stigma glabrous. 11

11. Wings with small marginal spots at ends of longitudinal veins, largest on R4 plus 5; and Rs long, Sc 1 ending nearly opposite four-fifths Rs; veins beyond cell 1st M2 short, the distal section of M1 plus 2 subequal to the cell.

lustralis Alexander

Wings without darkened marginal spots on the longitudinal veins; Sc and Rs shorter, Sc 1 ending about opposite

three-fourths Rs; veins beyond cell lst M2 longer, the distal section of M1plus 2 longer than the cell. 12

12. Stigmal darkening small and inconspicuous; hypopygium (fig. 3) with the aedeagus terminating in two elongate fingerlike points. bimucronata Alexander
Stigma circular in outline, conspicuous; male hypopygium (figs. 5, 12) with the apex obtuse. 13

13. Outer radial cells more uniformly darkened; hypopygium (fig. 12) with mesal apical lobe of gonapophysis a slender simple point; aedeagus slender. pastazicola Alexander
Outer radial cells pale basally, the outer ends conspicuously darkened; hypopygium (fig. 5) with the mesal apical lobe of gonapophysis very short and broad, bimucronate; aedeagus very broad. hyperphallus Alexander

58. **Limonia (Limonia) aurigena** Alexander, 1944.

Abitagua, Cunibunda, altitude 1100 meters, April 2, 1940 (Macintyre); types.

Male hypopygium (fig. 2) with the tergite, 9t, transverse, the posterior border very shallowly notched, the lobes correspondingly low, with few but long setae. Basistyle, b, long, the ventromesal lobe sessile, with long setae. Dorsal dististyle, d, projecting a trifle beyond the level of the ventral dististyle, a little expanded before the acute tip. Ventral dististyle with the body oval, with long setae; rostral prolongation elevated, virtually glabrous, the sensory area placed just before the sligthly pointed apex; a few scattered setae, chiefly on the outer fourth or fifth the prolongation. Gonapohysis, g, very broad, the mesal apical lobe relatively short, its tip a little curved or deflected. Aedeagus narrow, the apical lobe oval, with several pale spots or hyaline areas.

59. **Limonia (Limonia) bimucronata** Alexander, 1938.

Abitagua, altitude 1200 meters, August 20, 1937 (Macintyre); type; altitude 1800 meters, April 15, 1940 (Macintyre). Also from Bolivia (Cochabamba).

Male hypopygium (fig. 3) with the tergite transverse, the posterior border subtruncate to very feebly emarginate, the surface with a band of strong setae on posterior half of sclerite, a little removed border. Basistyle, b, with the ventromesal lobe large, oval, with a large ventral accessory lobule. Dorsal dististyle, d, a long very slender and nearly straight rod, the slightly enlarged apex curved to the acute tip. Ventral dististyle with the body small, only a little larger than the compressed-flattened rostrum, provided with abundant setae; at base of rostrum with a low tubercle that bears two setae of unusual length, being approximately two-thirds to three-fourths as long as the dorsal dististyle, one arising from the summit of the tubercle, the other from its base; prolongation with two widely separated pale spines; outer surface with abundant long silken setae. Gonapophysis, g, with the mesal-apical lobe bidentate and blackened at apex, the lateral tooth smaller. Aedeagus, a, broad, at apex produced into two long darkened fingerlike lobes.

60. **Limonia (Limonia) grossa** Alexander, 1938.

Abitagua, altitude 1200 meters, April 21, 1937 (Macintyre); types.

Male hypopygium (fig. 4) with the tergite transverse but long, the posterior border almost truncate, with scarcely indicated lobes; setae few but long, only about eight on either side. Basistyle, b, short, the ventromesal lobe very large. Dorsal dististyle, d, slender, scabrous. Ventral distisytle with the body relatively small, rostral prolongation short and deep, the sensory area proportionately large. Gonapophysis, g, with the mesal-apical lobe slender. Aedeagus with the apical lobe large.

61. **Limonia (Limonia) hyperphallus** Alexander, 1938.

Abitagua,, altitude 1200 meters, April5 — 7, 1937 April 2, 1940 (Macintyre).

Male hypopygium (fig. 5) with the tergite transverse, the broad lateral lobes protuberant, provided with strong setae, the depressed central region without major setae. Basistyle, b, with the ventromesal lobe large, very broadly attached to the style. Dorsal dististyle,

d, long and slender. Ventral dististyle pale, its body oval, the very large compressed rostral prolongation with the usual abundant silken setae and with two rostral spines, placed close together on face. A metatype shows three such spines on one side only, the opposite style being normal. Gonapophysis, g, with the mesal-apical lobe very short and broad, terminating in two spines. Aedeagus, a, broad, the apical lobes relatively short, near apex of organ with widely flaring membranous extensions.

62. **Limonia (Limonia) lachesis** Alexander, 1942.

Baños, altitude 2000 meters, April 28, 1939 (Macintyre); type. Also known from Peru.

Male hypopygium (fig. 6) with the tergite, 9t, large, transverse, the posterior border with a small median notch, the broad lateral lobes truncate; setae on posterior half of plate relatively sparse but very long. Basistyle, b, with the ventromesal lobe large, about two-thirds the extent of the body of the style. Dorsal dististyle, d, a strong sclerotized rod, at near two-thirds the length a little widened, thence bent at a strong angle into the very long straight spinous apex. Ventral dististyle relatively small, its total area less than that of the basistyle, due to the deep emargination between the body and the rostral prolongation of the style; body appearing as a stout cylindrical lobe, the prolongation flattened, abruptly narrowed into a slender beak; two rostral spines placed on disk of the expanded portion, directed outwardly. Gonapophysis, g, with the mesal-apical lobe straight, narrowed to the subacute tip. Aedeagus stout, the central part of apex very low and obtuse.

63. **Limonia (Limonia) lawlori** Alexander, 1934.

Mapoto, Rio Pastaza, altitude 1300 meters, October 1, 1938 (Macintyre). Described from Panama.

Male hypopygium (fig. 7) with the tergite transverse, the lobes low with abundant elongate setae. Basistyle, b, with the ventromesal lobe very broad-based. Dorsal dististyle, d, long and slender, the stem gently sinuous, the apex bent at a right angle into an acute spine. Ventral dististyle moderately large, its area, including the prolongation,

approximately equal to the basistyle; rostral prolongation very compressed-flattened, the two spines on face of disk, separated from one another by a distance nearly equal to their own length; a single very long seta at base of prolongation, with an additional puncture near by, indicating the probability of there being two such modified setae. Gonapophysis, g, with the mesal-apical lobe short and small. Aedeagus very broad, the apex low and obtuse.

64. **Limonia (Limonia) lustralis** Alexander, 1938.

The unique type female was from Abitagua, altitude 1200 meters, November 21, 1937 (Macintyre).

65. **Limonia (Limonia) macintyrei** Alexander, 1938.

Abitagua, 1200 meters, April 4 — 7, 1937 (Macintyre); types. Rio Arajuno, Napo Watershed, altitude 1000 meters, April 24, 1941 (Macintyre). Also from Peru.

Male hypopygium (fig. 8) with the tergite transverse, its posterior border very feebly emarginate, the lobes correspondingly low, each with about a dozen strong setae. Basistyle, b, blackened, the ventromesal lobe large, with an accessory lobule before the apex. Dorsal dististyle, d, a slender sinuous rod. Ventral dististyle whitened, its total area less than that of the basistyle, the body oval, with relatively few but long setae; rostral prolongation compressed-flattened, moderately deep at base, the two spines arising close together on the disk, placed in the usual patch of silken setae; at base of prolongation with a rounded tubercle that bears two unusually long setae, each nearly as long as the dorsal dististyle. Gonapophysis, g, with the mesal-apical lobe a curved smooth blackened spine. Aedeagus relatively narrow, terminating in a semicircular cap, the genital tubes contiguous or approximated.

The venation is shown (fig. 1). The abruptly upturned and angulated apex of vein R3 should be noted.

66. **Limonia (Limonia) optabilis** (Alexander, 1921).

Zumbi, Rio Zamora, Santiago-Zamora, altitude 700 meters, May 30, 1941 (Laddey). Originally described from the Napo River, Peru.

Male hypopygium (fig. 9) with the tergite transverse, the posterior border very gently emarginate, the lobes low, each with about 8 to 10 setae, nearly marginal in position. Basistyle, b, long, the ventromesal lobe low, appressed to the style, provided with very long setae. A single developed dististyle, d, the normal ventral one, smaller in area than the basistyle, oval in outline, narrowed into an acute decurved point; rostral spines two, virtually contiguous, placed near outer border of style; two or three stronger setae on face of style. Dorsal style lacking, its basal portion preserved, the outer end obsolete and lying in a deep furrow on face of the style, its position delimited by strong setae. Gonapophysis, g, with the mesal-apical lobe pale, long and straight, narrowed very gradually to the subcute tip. Aedeagus relatively narrow, the genital tubes contiguous, terminating in a low tubercle.

A very similar dististyle is found in Limonia (Limonia) velasteguii Alexander (see Nº 71).

67. **Limonia (Limonia) pampoecila** (Alexander, 1922).

Dicranomyia pampoecila Alexander; Proc. U. S. Nat. Mus., 60, Art. 25: 1 — 22; 1922.

Baños, Tungurahua, altitude 2000 meters, May 25 1937 (Macintyre). Described from Costa Rica. Widely distributed in Tropical America, as far south as southern Brazil.

Male hypopygium (fig. 11) with the tergite transverse, very gradually narrowed outwardly, the posterior border barely emarginate; setae few, marginal in position. Basistyle, b, relatively small; ventromesal lobe large. Dorsal dististyle, d, a short curved flattened blade, constricted beyond base, thence widened and very gradually narrowed to the long apical point. Ventral dististyle large, its area approximately twice that of the basistyle; rostral prolongation stout; two rostral spines from a common basal tubercle, placed close together, long and straight, approximately as long as the prolongation. Go-

napophysis, g, with mesal-apical lobe pale, long and slender, very curved. Apex of aedeagus simple.

68. **Limonia (Limonia) pastazicola** Alexander, 1938.

Abitagua, altitude 1200 meters, March 23 1937 (Macintyre); type.

Male hypopygium (fig. 12) with the tergite transverse, the lobes low, with long conspicuous setae. Basistyle, b, darkened, the ventromesal lobe rounded, with strong setae. Dorsal dististyle, d, very slender, especially at near midlength, the long pointed apex bent at a right angle. Ventral dististyle pale, the body small, oval, with long setae; rostral prolongation compressed, narrowed into a beak; two widely separated spines, each produced into a needlelike point; a strong tubercle at base of prolongation, bearing two powerful setae, one at apex, the other on outer face of tubercle near base. Gonapophysis, g, with mesal-apical lobe erect, suddenly narrowed into a blackened spine. Aedeagus with genital ducts united basally, almost contiguous outwardly.

69. **Limonia (Limonia) repanda** Alexander, 1928.

Pallatanga, altitude 4400 feet, March 26 — 31, 1922 (G.H.H. Tate); types.

Male hypopygium (fig. 13) with the dorsal dististyle, d, a pale, nearly straight rod, the strongly decurved outer end narrowly blackened, acute. Ventral dististyle large and fleshy, its area about- one-half greater than that of the basistyle; rostral prolongation short and stout, compressed; two short stout rostral spines, placed on outer margin near base. Gonapophysis, g, with the mesal-apical lobe pale, gently curved to the acute tip. Aedeagus bilobed at apex. Ninth sternite distinct, provided with relatively few coarse setae.

70. **Limonia (Limonia) subreticulata** Alexander, 1943.

Abitagua, altitude 1100 meters, July 2, 1940 (Macintyre); type.

Male hypopygium (fig. 14) with the tergite transverse, the posterior border nearly truncate, with scarcely indicated lobes; setae about

nine or ten on either side, more concentrated toward the midline which is broadly free from setae. Basistyle, b, with the ventromesal lobe provided with numerous setae, lacking on outer face. Dorsal dististyle, d, a relatively small strongly curved rod, narrowed into a long straight spine. Ventral dististyle large and fleshy, its area about two and one-half times that of the basistyle; rostral prolongation with the two spines borne at and near summit of an unusually long basal tubercle that occupies almost the entire outer margin of the prolongation; spines subequal, approximately equal in length to the basal tubercle. Gonapophysis, g, with the mesal-apical lobe long and conspicuous, its apex narrowed into a curved spinous point. Aedeagus relatively narrow, its apical lobe very small.

71. **Limonia (Limonia) velasteguii** Alexander, 1938.

Abitagua, altitude 1200 meters, April 12 — 18, 1937 (Macintyre); types.

Male hypopygium (fig. 15) generally as in optabilis, differing in slight details only. The two flies are readily told by the characters given in the key, particularly the unpatterned wings of the present fly. Both species have the outer dististyle, d, atrophied or virtually so, beyond the base so there is essentially a single dististyle.

Neolimnobia Alexander

Neolimnobia Alexander; Proc. Linn. Soc. New South Wales, 52: 68, 1927: (type diva Schiner).

The chief character for separating the present group from the other subgenera of Limonia in the local fauna lies in the supernumerary crossvein in cell R3 of the wings. The more detailed account of the group provided by the writer should be consulted (Rev. de Entomologia, 21: 193 — 194, 1950). As there indicated, the species that center about the subgenotype form a rather compact group, almost always with a reticulated wing pattern and commonly with darkened bands on the femora. The two species discussed below as interstitialis Alexander and orthogonia Alexander are more aberrant and are placed herein solely on the presence of the supernumerary crossvein. In other respects they more strongly suggest members of the repanda

group in the typical subgenus, previously considered. Despite the fact that certain of the species of Neolimnobia are common and wide-spread, nothing is known of the immature stages.

Key to the Species

1. Wings with a reticulated light to darker brown pattern, involving the cells. 2
   Wings with darkened seams over cord and on certain other veins, not involving the cells. 5

2. Legs with femora having two or three narrow dark rings that alternate with subequal yellow ones.
   (Extralimital) diva (Schiner)
   Legs patterned otherwise, the femora not clerly ringed as described. 3

3. General coloration of thorax coral red, unpatterned; wings pale yellow, with a reticulated pale brown pattern that involves all the cells, without well-marked crossbands of the ground; femur pale brown the tip narrowly, or, in cases, more brownish yellow with a single narrow darker subterminal ring; hypopygium (fig. 16).
   corallina Alexander
   General coloration of thorax yellow, patterned with dark brown or black; wing pattern darker, leaving two more or less distinct crossbands of the ground color before the cord; femur with a subterminal darkened rink. 4

4. Mesonotal praescutum yellow, with two dark brown intermediate stripes on posterior half; femur greenish yellow, the outer third yellowed, enclosing a broad pale gray ring, tibiae and tarsi brownish yellow; wings with the cells, including C and along the posterior border.
   muscosa (Enderlein)
   Mesonotal praescutum with three confluent black stripes that form a discal area; femur brownish black, the outer fourth yellow, enclosing a broad dark brown ring, tibiae and tarsi brownish black; wings with the dark pattern

heavy, with out narrow crosslines in the cells, cell C unpatterned; hypopygium (fig. 18).
pugilis Alexander

5. Wings with Sc longer, Sc1 ending about opposite one-third to one-fourth the length of Rs; a single crossvein in cell R3, virtually interstitial with vein R2; legs uniformly darkened. interstitialis Alexander
Wings with Sc short, both Sc1 and Sc2 ending opposite origin of Rs; two crossveins in cell R3, one virtually interstitial with vein R2, the other more distal in position; legs black, the femur with apex and a subterminal ring narrowly yellow; hypopygium (fig. 17).
orthogonia Alexander

72. **Limonia (Neolimnobia) corallina** Alexander, 1938.

Abitagua, altitude 1200 meters, April 7, 1937 (Macintyre); type.

Male hypopygium (fig. 16) with the tergite, 9t, gently emarginate, the lobes rounded; setae chiefly marginal, with a further small group on the disk. Basistyle, b, with ventromesal lobe relatively small. Dorsal dististyle, d, small, broadest at near midlength, strongly curved to the obtuse tip. Ventral dististyle very large and fleshy, in total area approximately four times the basistyle; rostral prolongation short and stout; spines two, relatively slender, the innermost from a small basal tubercle, the outer spine not quite apical in position. Gonapophysis, g, with the mesal-apical lobe long and slender, the apex obtuse. Aedeagus slender, the apex simple.

73. **Limonia (Neolimnobia) interstitialis** Alexander, 1940.

Mapoto, Rio Pastaza, altitude 1300 meters, October 1, 1938 (Macintyre); type.

74. **Limonia (Neolimnobia) muscosa** (Enderlein, 1912).

Santa Inez, collected by R. Haensch; type.
Femora greenish yellow, the outer third more yellowed, en-

closing a broad pale gray ring; tibiae and tarsi bright brownish yellow.

75. **Limonia (Neolimnobia) orthogonia** Alexander, 1945.

Abitagua, altitude 1100 meters, March 21, 1940 (Macintyre); type.

Male hypopygium (fig. 17) semicircular in outline, the posterior margin convexly rounded, the border thickened but without lobes. Basistyle, b, with the ventromesal lobe moderately large, about one-third the body of the style; a concentration of strong relatively short black setae on face of style below base of lobe. Dorsal dististyle, d, long and slender, near apex curved into the long acute terminal spine. Ventral dististyle fleshy, its area about one-third greater than that of the basistyle; rostral prolongation long and slender, with two long curved spines at near midlength of the outer margin, one spine slightly more curved than the other; outer face of style before base of rostrum with a low rounded lobe. Gonapophysis, g, with the mesal-apical lobe only slightly curved, its tip subacute. Aedeagus relatively slender, the apical lobe small and simple.

76. **Limonia (Neolimnobia) pugilis** Alexander, 1943.

Abitagua, Mayorga Playa, altitude 1100 meters, April 12, 1940 (Macintyre).

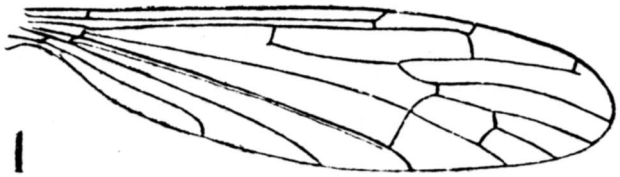
Male hypopygium (fig. 18) with the tergite transverse, narrowed outwardly, the posterior border with a small rounded notch, the lobes low and broad with the setae concentrated on their inner or mesal part; as shallow dorsal furrow, the posterior arms of which diverge. Basistyle, b, with the ventromesal lobe long, cylindrical, basal in position, the setae on outer two-thirds chiefly at and near the apex. Dorsal dististyle, d, relatively short, very strongly curved on outer third, the apex narrowly obtuse. Ventral dististyle very large and fleshy, its area more than three times that of the basistyle; rostral prolongation very short and stout, the two rostral spines flattened, one placed near extreme outer end of the prolongation. Gonapophysis, g, with the mesal-apical lobe gently curved, the apex obtuse. Aedeagus relatively long and slender.

EXPLANATION OF PLATES

Male hypopygia of Limonia

Fig. 1. Limonia (Limonia) macintyrei Alexander, 1938 venation.
Fig. 2. Limonia (Limonia) aurigena Alexander, 1944.
Fig. 3. Limonia (Limonia) bimucronata Alexander, 1938.
Fig. 4. Limonia (Limonia) grossa Alexander, 1938.
Fig. 5. Limonia (Limonia) hyperphallus Alexander, 1938.
Fig. 6. Limonia (Limonia) lachesis Alexander, 1942.
Fig. 7. Limonia (Limonia) lawlori Alexander, 1934.
Fig. 8. Limonia (Limonia) macintyrei Alexander, 1938.
Fig. 9. Limonia (Limonia) optabilis (Alexander, 1921).
Fig. 10. Limonia (Neolimnobia) pugilis Alexander, 1943; venation.
Fig. 11. Limonia (Limonia) pampoecila (Alexander, 1922).
Fig. 12. Limonia (Limonia) pastazicola Alexander, 1938.
Fig. 13. Limonia (Limonia) repanda Alexander, 1928.
Fig. 14. Limonia (Limonia) subreticulata Alexander, 1943.
Fig. 15. Limonia (Limonia) velasteguii Alexander, 1938.
Fig. 16. Limonia (Neolimnobia) corallina Alexander, 1938.
Fig. 17. Limonia (Neolimnobia) orthogonia Alexander, 1945.
Fig. 18. Limonia(Neolimnobia) pugilis Alexander, 1943.

(Symbols: b, basistyle; d, dististyles; g, gonapophysis; t, tergite).



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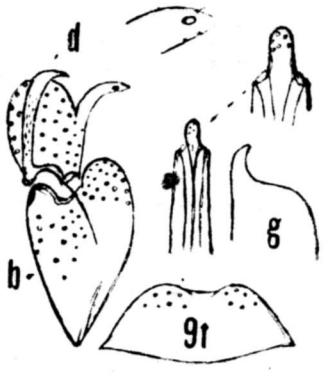

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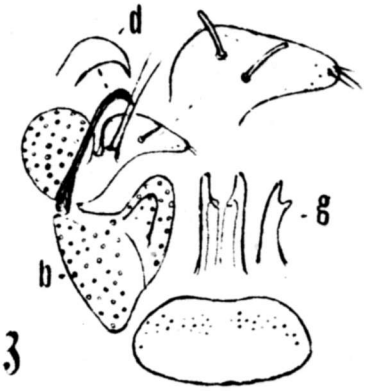

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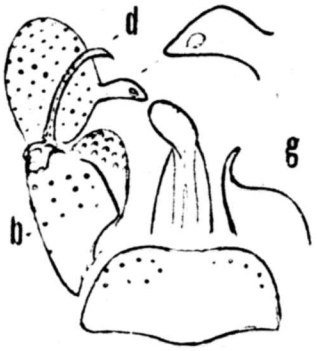

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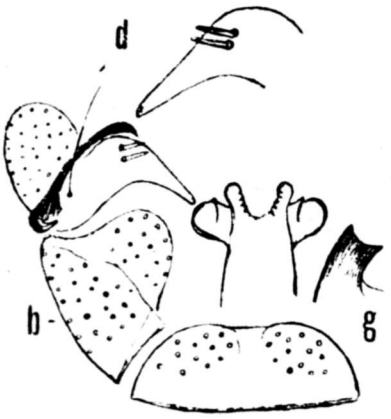

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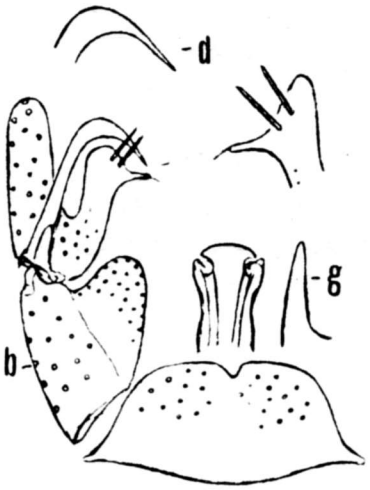

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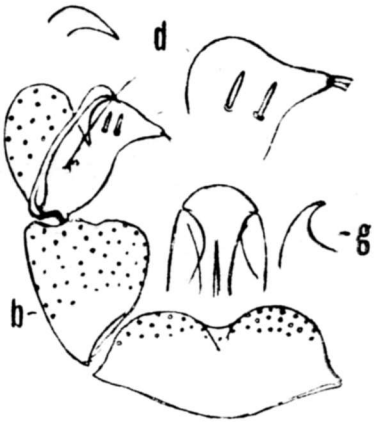

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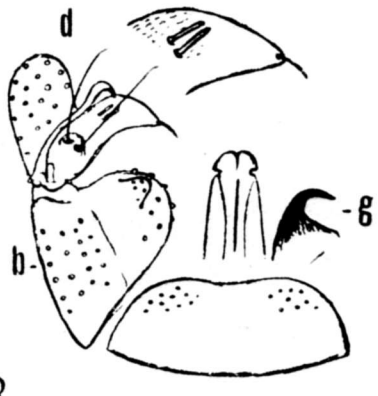

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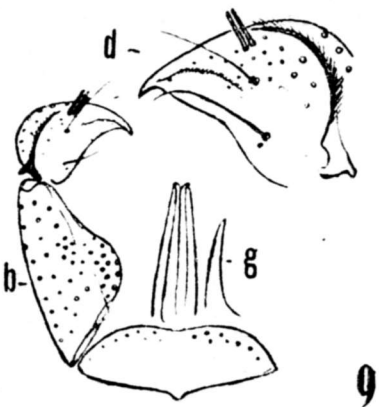

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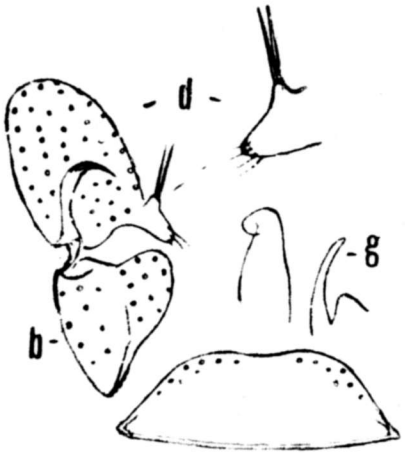

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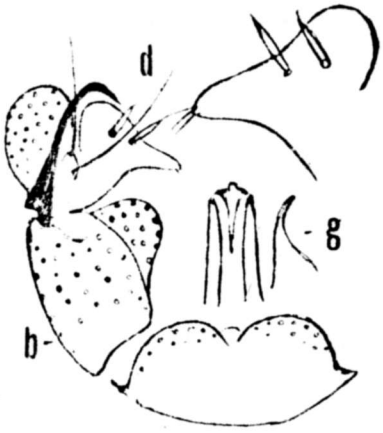

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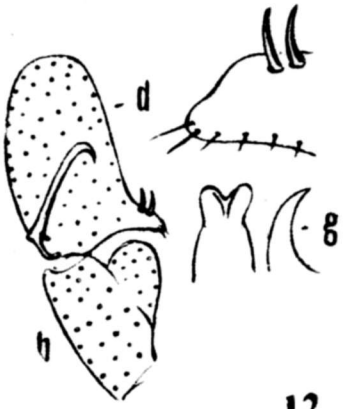

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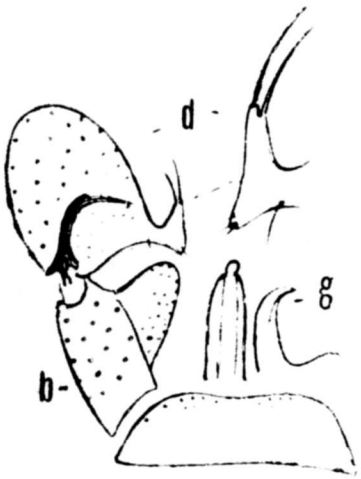

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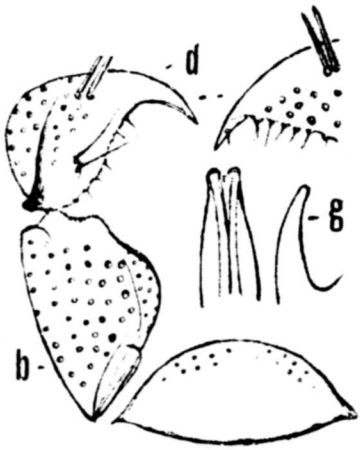

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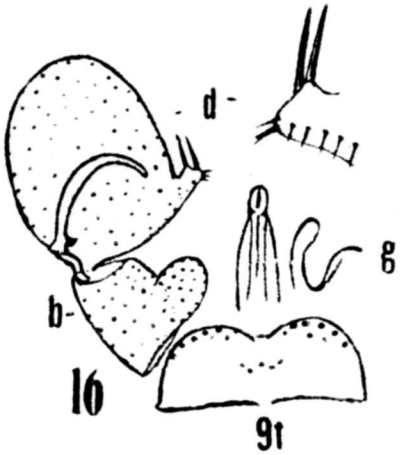

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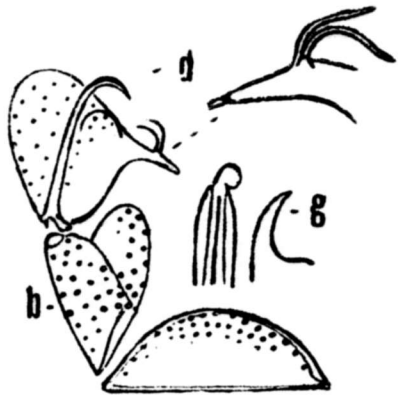

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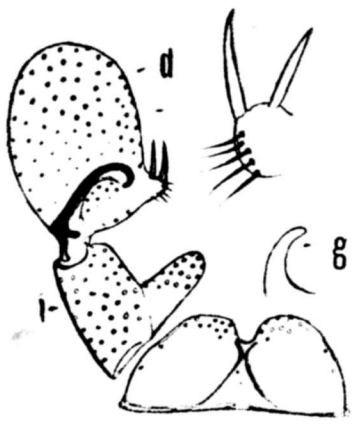

18