

Notes of the Tipulidae of Ecuador (Order Diptera)

PART V

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The preceding report under this general title was published in Rev. Ecuat. Ent. Par. 1 (4): 77 — 94 (1953).

As indicated at that time, the present paper is a direct continuation of that article and completes the consideration of the species of the subgenus *Geranomyia* of the genus *Limonia* Meigen. In this report I am discussing the remaining 22 species of the subgenus so far discovered in Ecuador, the included numbers being 36 through 57.

GERANOMYIA HALIDAY

(concluded)

36. ***Limonia (Geranomyia) inquisita* Alexander, 1942.**

Zamora, Loja altitude 1000 meters, December 20, 1941 (Laddey).

The types were from Ayna, La Mar, Ayacucho, Peru, altitude 2400 meters, April 25, 1941, taken by Felix Woytkowski.

Rev. Ecuat. Ent. Par. 2 (1—2) Enero—Abril 1954.

Male hypopygium (fig. 10) with the ninth tergite, 9t, transverse, the posterior border very shallowly emarginate; lobes low with strong setae. Ninth sternite, 9s, broad, with relatively few setae, two outer pairs stronger than the others; the Ecuador material has the sternite a little narrower than in the type, as figured. Basistyle, b, with the ventro-mesal lobe only slightly constricted at base. Dorsal dististyle a nearly straight rod, at apex suddenly deflected and narrowed into a straight spine. Ventral dististyle, d, dark-colored, relatively large, its total area exceeding twice that of the basistyle; rostral prolongation tumid at base, the actual rostrum short and stout; two spines from very unequal basal tubercles, the inner spine slender, subequal in length to its tubercle; outer spine approximately as long, its tubercle much smaller. Gonapophysis, g, with the mesal-apical lobe a curved spine, its tip acute. Aedeagus, a, with the apical lobes small and inconspicuous, pointed at tips.

37. **Limonia (Geranomyia) lachrymalis** (Alexander, 1916).

Huigra, altitude 4500 feet, June 13, 1914 (Parish); types. Known also from Mexico, Panama and Peru.

Male hypopygium (fig. 11) with the tergite, 9t transverse, the posterior border very shallowly emarginate, the low lobes with broadly thickened margins; setae of lobes and margins unusually sparse. In cases, the posterior border of tergite with a small median notch. Proctiger extensive, microscopically setulose except at apex. Ninth sternite oval, relatively narrow, with unusually strong setae, including series of about six or seven pairs of marginal ones, with still others on the disk of the outer half. Basistyle, b, large, its ventromesal lobe low, broadly attached. Dorsal dististyle a nearly straight blackened rod, narrowed to the acute tip. Ventral dististyle, d, small, the body oval, the area much less than that of the basistyle, in cases only about one-half as large; rostral prolongation stout; a single well-developed rostral spine from a small basal tubercle, more posteriorly with a low darkened tubercle without spine. Gonapophysis, with the mesal-apical lobe broad, narrowed to an acute spine. Aedeagus broadened outwardly; with conspicuous lateral shoulders, the terminal flaps small.

38. **Limonia (Geranomyia) luteimana** Alexander, 1938.

Abitagua, altitude 1200 — 1600 meters, September 21, 1937 (Macintyre); type; topotypical on April 9, 1940 (Laddey).

Male hypopygium (fig. 12) with the tergite, 9t, transverse, very narrow, representing the extreme in the local fauna; lobes very low and broad, setae abundant, involving more than the posterior third of the segment. Ninth sternite broadly semioval, with numerous setae on the central third, virtually lacking along the margin; in the only male available, the sternite is folded on the microscope slide so that its full width is difficult to determine. Basistyle, b, with the ventromesal lobe very long. Dorsal dististyle a small curved sickle, the tip acute. Ventral dististyle, d, large and fleshy, entirely darkened, its area nearly three times that of the basistyle; rostral prolongation slender, with two unequal rostral spines; inner spine on outer margin at base, from an elongate tubercle; outer spine placed more distally on face of style, arising from a very small inconspicuous tubercle, bent backward, about three-fourths as long as the inner spine. Gonapophysis, g, with mesal-apical lobe blackened, relatively slender. Aedeagus, a, glabrous, at apex suddenly narrowed, terminating in two microscopic lobules.

39. ***Limonia (Geranomyia) nugatoria*** Alexander, 1943.

Abitagua, Mayorga Plaza, altitude 1100 meters, April 12, 1940 (Macintyre); type.

Male hypopygium (fig. 13) uniformly dark brown; ninth tergite transverse, the posterior border shallowly emarginate, the thickened margins of lobes with strong setae. Ninth sternite relatively long and narrow, its apex difficult to see in slide mount; setae relatively few but strong setulae abundant; major setae arranged in pairs on either side of midline, lacking on the lateral portions except near base. Dorsal dististyle curved to the long terminal spine. Ventral dististyle, rostral prolongation flattened, pendant; spines placed at base of prolongation, arising from small approximated but separate tubercles; spines straight, subequal to one another. Gonapophysis, g, with the mesal-apical lobe darkened, appearing as a stout gently curved horn. Aedeagus outwardly relatively slender, clothed with abundant erect setulae.

40 ***Limonia (Geranomyia) numenius*** (Alexander, 1913).

Abitagua, altitude 1000 meters, November 6 — 7, 1936 (Macintyre). Widespread in northern South America, northward to Panama.

Male hypopygium (fig. 14) with the ninth tergite transverse, its posterior borders very shallowly emarginate, with low lateral lobes; setae continued basad along the sides of the tergite. Ninth sternite semioval, moderately broad, with abundant coarse setae that are concentrated on the disk, the actual margins virtually glabrous; outermost setae smaller than others on the disk. Basistyle, b, with the ventromesal lobe relatively small. Dorsal dististyle a long gently curved rod, the long tip acute. Ventral dististyle, d, fleshy, its area about two and one-half times the basistyle; setae abundant and conspicuous; rostral prolongation very short and obtuse; outer spine shorter, arising from a small tubercle on face of prolongation; inner spine longer, on upper margin, from a larger tubercle. Gonapophysis, g, with the mesal-apical lobe a slender curved black spine. Aedeagus, a, glabrous, unusually long and slender, representing almost the extreme in the local fauna, apical lobes very reduced.

14. *Limonia (Geranomyia) opulens* Alexander, 1945.

Baños, altitude 1900 meters, April 29, 1939 (Macintyre); type.

Male hypopygium (fig. 15) with the tergite large, the lobes conspicuous, with heavily thickened margins, separated by a narrow notch. Ninth sternite moderately broad, with abundant setae over most of the surface, two pairs of outer marginal ones larger and more flattened. Dorsal dististyle unusually long and slender. Ventral dististyle, d, relatively small, its area only a little more than twice the basistyle; rostral prolongation slender, slightly expanded outwardly, the tip obtuse, entire, provided with several short setae; spines two, from the summit of an elongate tubercle, each arising from its own reduced individual tubercle at the summit of the major one, spines straight, slender. Gonapophysis, g, with the mesal-apical lobe unusually long and slender, gently curved to the narrowly obtuse tip. Aedeagus glabrous.

42. *Limonia (Geranomyia) pallidapex* Alexander, 1945.

Zumbi, Rio Zamora, Santiago-Zamora, altitude 700 meters, November 1, 1941 (Laddey); type.

Male hypopygium (fig. 16) entirely darkened. Ninth tergite transverse, narrow, the posterior border shallowly emarginate, the lo-

bes low and broad, the outer margins more thickened; setae long but relatively sparse. Ninth sternite rather broadly oval, with numerous setae that are chiefly discal, the outer ones smaller; lateral margins without setae or virtually so. Basistyle, b, with ventromesal lobe long, with relatively few but long setae. Dorsal dististyle a relatively stout flattened sickle, narrowed to the long acute tip. Ventral dististyle, d, a little more than twice as extensive as the basistyle, provided with sparse scattered setae; rostral prolongation slender, the two spines unequal, the more basal one stout, from a low tubercle, the outer spine shorter and more slender, from a scarcely indicated tubercle. Gonapophysis, g, with the mesal-apical lobe relatively narrow, gently curved. Aedeagus, a, blackened, a little dilated on outer half, the apex abruptly narrowed into compressed blades.

43. ***Limonia (Geranomyia) parilis*** Alexander, 1945.

Runtun, Tungurahua, altitude 2200 meters, July 21, 1939 (Macintyre); type.

Male hypopygium (fig. 17) with the tergite transverse, the posterior border very shallowly emarginate, the low lobes slightly thickened; cephalic border of sclerite slightly convex. Ninth sternite oval, with numerous setae of moderate length scattered over virtually the whole surface, more concentrated on the sides, the narrow central line with fewer setae. Basistyle, b, with the ventromesal lobe oval, constricted basally. Dorsal dististyle a gently curved rod, narrowed very gradually into the long straight apical spine. Ventral dististyle, d, large and fleshy, its area nearly the basistyle; rostral prolongation beyond the spines compressed-flattened, the apex obtusely rounded; spines two, from a common tubercle at extreme base of prolongation, one spine at summit, the second from a small lateral tubercle at just beyond midlength of the major common one. Gonapophysis, g, with the mesal-apical lobe darkened, curved to the obtuse tip. Aedeagus, a, relatively broad, glabrous, the two apical flaps hyaline, relatively small, extended into slender points.

44. ***Limonia (Geranomyia) pastazina*** Alexander, 1944.

Abitagua, Mayorga Plaza, altitude 1100 meters, April 12, 1940 (Macintyre); type.

Male hypopygium (fig. 18) with the ninth tergite transverse, the posterior border with a very broad and shallow V-shaped notch, the lobes obliquely truncate, with numerous black setae. Ninth sternite very short, its posterior border not or scarcely produced medially, with unusually few setae that are more concentrated near the outer lateral corners, there being only about four setae across the mid-region. Basistyle, b, small, the ventromesal lobe with long setae. Dorsal dististyle a very strongly curved and relatively slender rod, the tip narrowly obtuse. Ventral dististyle, d, darkened, large and fleshy, its area exceeding three times the basistyle; rostral prolongation stout, the apex truncate to very obtuse; two rostral spines, the inner from a very low tubercle on the disk, the outer spine from a smaller tubercle on the upper margin, both spines subequal in length, the inner a trifle more curved. Gonapophysis, g, with the mesal-apical lobe pale, unusually long and slender, appearing as a nearly straight rod. Aedeagus relatively broad, with microscopic setulae, terminating in two microscopic oval lobules.

45: ***Limonia (Geranomyia) plumbeipleura*** (Alexander, 1916).

Huigra, altitude 4500 feet, June 16, 1941 (Parish); Types. Widespread in the American Tropics: Dominica, Panama, Trinidad, Colombia, Venezuela.

Male hypopygium (fig. 19) with the ninth tergite transverse, narrowed outwardly, the posterior border with a narrow median notch, the lobes large and obtuse; setae on lobes and extensively so along sides to the base of tergite. Ninth sternite oval, with relatively few but large setae, the strongest of these just inside the margin, those of the disk smaller, the outer two or three pairs larger. Basistyle, b, with the ventromesal lobe large, with an accessory lobule on face near base. Dorsal dististyle a strongly curved rod, narrowed into a straight terminal spine. Ventral dististyle, d, large and fleshy, its area about four times that of the basistyle; rostral prolongation a long, more or less compressed-flattened blade, the two spines from very large tubercles, one lying above, the other below the base of the prolongation, directed outward; tubercles and spines subequal in length and size. Gonapophysis, g, with the mesal-apical lobe relatively pale, gently curved, the main body of the apophysis small. Aedeagus, a, relatively broad, glabrous, terminating in two nearly hyaline lobes that are extended into acute spinous points.

46. ***Limonia (Geranomyia) rabula*** Alexander, 1940.

Baños, altitude 2000 meters, May 25, 1937 (Macintyre); type.

Male hypopygium (fig. 20) with the tergite, 9t, transverse, its posterior border broadly emarginate; lobes obtuse, with relatively few setae, approximately 11 or 12, with about two additional isolated setae along sides of the tergal plate. Ninth sternite (not figured) broadly oval, with relatively few setae, including a series of about eight strong ones along the posterior border, with fewer and weaker setae on the disk; setae on cephalic third of sclerite lacking or virtually so. Basistyle very small, its ventromesal lobe large. Dorsal dististyle a strong rod, curved on outer half, the apex suddenly narrowed into a straight spine. Ventral dististyle, d, very large, its area exceeding four times that of the basistyle; rostral prolongation small, its apex short, obtuse; two long rostral spines from a low common tubercle placed at near midlength of the outer margin of the prolongation; spines nearly equal, nearly straight, exceeding the prolongation in length. Gonapophysis with mesal-apical lobe a flattened pale blade that curves into an acute point; body of apophysis small, conspicuously blackened. Aedeagus, a, glabrous; apical lobes relatively small, oval, obtuse.

47. ***Limonia (Geranomyia) recondita*** (Alexander, 1921).

Syn. *Limonia (Geranomyia) gelatifex* Edwards, 1934.

Abitagua, altitude 1200 meters September 20, 1937 (Macintyre).

Wide-spread in northern South America— Panama, British Guiana, Ecuador, Peru, Brazil.

Male hypopygium (fig. 21) with the ninth tergite transverse, the posterior border with two broad obtusely rounded lobes, separated by a narrow notch, provided with abundant setae. Ninth sternite oval, with strong setae, the largest nearly marginal, the outer pair strongest and decussate; fewer and weaker setae on disk. Basistyle, b, with the ventromesal lobe large, with a smaller accessory lobule at its base. Dorsal dististyle a small, very strongly curved rod that na-

rows very gradually into a long terminal spine. Ventral dististyle, d, large and fleshy, its area exceeding three times the basistyle; rostral prolongation a flattened cleaverlike blade, with numerous long setae along the lower margin; two very unequal spines, inserted on style below base of prolongation, the outer from a long strong tubercle that is about equal in length to the spine, the latter obliquely pointed at apex; second spine lying in the axil, very delicate to virtually setoid, from a small tubercle. Gonapophysis, g, with mesal-apical lobe bent strongly at near midlength, thence narrowed into a blackened terminal spine. Aedeagus, a, glabrous, relatively narrow; apical lobes small, extended into acute spines.

48. ***Limonia (Geranomyia) refuga*** Alexander, 1944.

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

Male hypopygium (fig. 22) with the ninth tergite, 9t, transverse, narrowed outwardly, the posterior border with a broad but shallow emargination; lobes low, with abundant long setae; marginal thickenings, particularly of the lobes, conspicuous. Ninth sternite broad, semioval with numerous setae, the marginal series stouter, especially the outer three pairs; additional setae on disk, the central ones weak. Basistyle, b, with the ventromesal lobe about one-third the size of the body of style. Dorsal dististyle a relatively slender curved rod, narrowed very gradually to the long acute terminal spine. Ventral dististyle, d, large and fleshy, its area nearly four times the basistyle; rostral prolongation slender, especially the terminal part; spines two, separated, arising from slightly unequal basal tubercle. Gonapophysis, g, with the mesal-apical lobe pale, the concave margin with a conspicuous flange. Aedeagus, a, glabrous; apical flaps smooth and apparently subangulate at apex but not extended into a hairlike point.

49. ***Limonia (Geranomyia) scolopax*** (Alexander, 1913).

Huigra, altitude 4500 feet, June 19, 1914 (Parish).

Wide-spread from Guatemala, southward to Peru.

Male hypopygium (fig. 23) with the tergite transverse, its posterior border with a narrow u-shaped notch, the lobes broadly obtu-

se, with thickened margins; setae of the lateral borders very sparse. Ninth sternite broadly oval, with relatively few setae, the outer marginal ones stronger. Basistyle, b, with its ventromesal lobe pale, with long setae. Dorsal dististyle a nearly straight rod, the outer third slightly curved, narrowed into a straight spine. Ventral dististyle, d, unusually small, its area scarcely one-half greater than that of the basistyle, with relatively few setae; rostral prolongation slender with two separated spines, the outer a little longer, from a larger tubercle; inner spine at extreme base of prolongation, straight, from a small tubercle. Gonapophysis, g, with the mesal-apical lobe dark colored, straight and pointed. Aedeagus, a relatively broad; apical lobes large, pale, with obtuse tips.

50. ***Limonia (Geranomyia) separata*** (Alexander, 1921).

Duran, altitude 300 feet, April 25, 1914 (Parish). Known also from Peru.

Male hypopygium (fig. 24) with the ninth tergite transverse, the posterior border very shallowly emarginate, the low lateral lobes only narrowly thickened, obtuse, with relatively sparse setae that are continued cephalad onto the disk but not onto the margins. Ninth sternite relatively narrow, with strong setae on sides of basal half and toward apex. Basistyle with the ventromesal lobe stout. Dorsal dististyle a curved rod that narrows very gradually into the long terminal spine. Ventral dististyle, d, small, its area about two and one-half times that of the basistyle; rostral prolongation slender, the two straight spines subequal, shorter than the prolongation beyond them, placed near base of prolongation, arising from small tubercles. Gonapophysis, g, with the mesal-apical lobe pale, long and slender, gently curved to the acute tip. Aedeagus moderately broad, terminating in two relatively small hyaline blades that are produced into slender points.

51. ***Limonia (Geranomyia) stenophallus*** Alexander, 1944.

Abitagua, altitude 1100 meters, April 12, 1940 (Macintyre); type. Zumbi, Rio Zamora, altitude 700 meters, October 31, 1941 (Laddey). Known also from Venezuela and Perú.

Male hypopygium (fig. 25) with the ninth tergite transverse but relatively long; posterior border shallowly emarginate, the low lateral lobes with relatively few long setae. Ninth sternite narrowed to the obtuse tip, setae numerous and scattered. Basistyle, b, with the ventromesal lobe long and narrow. Dorsal dististyle a slender gently curved rod that narrows into a long straight apical spine. Ventral dististyle, d, fleshy, its area somewhat more than twice that of the basistyle; rostral prolongation short and stout, the apex truncate, with several setae; spines two, from small separate basal tubercles; spines slender, bent slightly backward. Gonapophysis, g, with the mesal-apical lobe a slender smooth curved darkened spine, the tip acute. Aedeagus, a very long and slender, a little expanded before apex; surface glabrous; no developed apical flaps.

52. ***Limonia (Geranomyia) subpentheres*** Alexander, 1943.

Abitagua, Mayorga Plaza, altitude 1100 meters, April 12, 1940 (Macintyre); type.

Male hypopygium (fig. 26) with the ninth tergite transverse, the posterior lobes large, broadly rounded, with darkened and slightly thickened margins; setae at apices of lobes smaller than the large and powerful ones on sides of sclerite. Ninth sternite, 9s, unusually narrow, much longer than broad, with strong setae, chiefly marginal and submarginal but with some weaker ones on disk, the outer marginal pair strongest. Basistyle, b, with the ventromesal lobe relatively short. Dorsal dististyle a small rod, gently curved, narrowed to the apical spine. Ventral dististyle, d, large and fleshy, its area exceeding three times that of the basistyle; rostral prolongation stout and nearly glabrous before the spine, the apex slender, with about seven small setae; a single rostral spine from a long conspicuous basal tubercle that is longer than the outer end of the prolongation; spine long and slender, curved. Gonapophysis, g, pale, the mesal-apical lobe curved to a subacute spinous point. Aedeagus, a, slender, glabrous; apical lobes small, each apparently extended into a long needlelike point.

53. ***Limonia (Geranomyia) tibialis*** (Loew, 1851).

Galapagos Islands: Isla San Cristobal (Chatham), April 18, 1932 (M. Willows, Jr.). One of the commonest and most widely distri-

buted of Tropical American members of the subgenus: Mexico; Jamaica, Puerto Rico, Dominica, Grenada; British Guiana, Paraguay.

Male hypopygium (fig. 27) with the ninth tergite transverse, the posterior border shallowly emarginate, the low lobes with relatively numerous pale setae. Ninth sternite low and transverse, the posterior margin truncate or weakly concave, with about nine setae on either side. Basistyle with the ventromesal lobe large, more than one-third the body of the style. Dorsal dististyle an unusually broad blade, suddenly narrowed into a long straight apical spine. Ventral dististyle, *d*, fleshy, its area approximately three times that of the basistyle; rostral prolongation slender, the two spines placed near its base, close together on individual small tubercles. Gonapophysis, *g*, with the mesal-apical lobe conspicuously bidentate, the axial spine longer. Aedeagus, *a*, broad, glabrous, at apex with two pale blades that are extended into hairlike points.

54. ***Limonia (Geranomyia) tumidibasis*** Alexander, 1938.

Abitagua, altitude 1200 meters, May 27, 1939 (Macintyre); type.

Male hypopygium (fig. 28) with the posterior border of the tergite thickened, shallowly notched, the obtuse lobes provided with abundant setae. Ninth sternite relatively small, oval. Basistyle, *b*, with the ventromesal lobe large. Dorsal dististyle a gently curved rod, narrowed very gradually to the acute tip. Ventral dististyle, *d*, moderately large, fleshy, its total area only about two and one-half times that of the basistyle; rostral prolongation sclerotized, the thickening continued along the cephalic border of the style to its base; apex of prolongation very short and precipitous; two long spines from very separate tubercles, the outer one longest, placed almost at the extreme end of the prolongation. Gonapophysis, *g*, with mesal-apical lobe slender, curved. Aedeagus glabrous, the apical lobes of moderate size.

55. ***Limonia (Geranomyia) umbricolor*** Alexander, 1937.

Baños, altitude 5850 feet, September 12, 1936 (Macintyre); type. Abitagua, Mayorga Plaza, altitude 1100 meters, April 12, 1940. (Macintyre). Known also from Peru.

Male hypopygium (fig. 29) with the ninth tergite transverse, the posterior border emarginate; lobes rounded, their margins thickened and provided with abundant setae. Ninth sternite- rather narrowly oval, with strong setae that are chiefly marginal or submarginal in distribution, three pairs being longer and more powerful, especially the outermost pair. Basistyle, b, with the ventromesal lobe broad-based. Dorsal dististyle relatively short and broad, curved very gradually into a long terminal spine. Ventral dististyle, d, darkened, large and fleshy, its area approximately three times that of the basistyle; rostral prolongation narrow, the two spines placed near midlength, leaving a more constricted basal necklike portion; spines subequal in length but appearing unequal because of the slightly different basal tubercles, these very closely approximated or partly fused at base. Gonapophysis, g, with mesal-apical lobe a strongly curved spine, its tip acute, the surface with microscopic appressed spinous setae. Aedeagus relatively broad, narrowed outwardly, the two apical lobes small, hyaline, extended into hairlike points.

56. ***Limonia (Geranomyia) vindicta dilucida*** subsp. n.

Generally as in the typical form, differing especially in certain details of the male hypopygium (fig. 32). Ninth tergite transverse, the posterior border conspicuously emarginate but the lobes not thickened marginally, setae more abundant. Ninth sternite narrower than in typical *vindicta*, setae very few but powerful, marginal in distribution. Basistyle, b, with a small setiferous tubercle on mesal face near the ventromesal lobe. Dorsal dististyle longer and more slender. Ventral dististyle, d, large and fleshy, its area approximately four times that of the basistyle; rostral prolongation very short and obtuse, much as in the typical form. Gonapophysis with mesal-apical lobe uniformly light horn color, not blackened at tip, with a low marginal flange. Aedeagus relatively broad, with abundant erect setulae.

Holotype, male, Zumbi, Rio Zamora, altitude 700 meters, October 28, 1941 (Laddey).

Typical *vindicta* Alexander (Venezuela) has the male hypopygium (fig. 31) slightly different. Ninth tergite narrowly transverse, the posterior margin virtually truncate, the lobes being barely indicated, their margins not thickened. Ninth sternite broadly oval, with

very strong setae that are nearly marginal in position, the outermost pair a little stronger. Dorsal dististyle relatively strong. Ventral dististyle, d, large and fleshy, its area approximately four times that of the basistyle; rostral prolongation exceedingly short and obtuse, the spines from very low basal tubercles placed beside one another, one spine slightly larger. Gonapophysis, g, pale, only the abruptly narrowed apical point blackened. Aedeagus, a, relatively broad, with abundant erect pale setulae; apical flaps small.

57. ***Limonia (Geranomyia) xanthoplaca* (Alexander, 1921).**

Rio Arajuno, headwaters of the Rio Napo, Napo-Pastaza, altitude 1000 meters, April 21, 1941 (Macintyre). Elsewhere from Amazonian Peru.

Male hypopygium (fig. 30) with the ninth tergite transverse, narrowed outwardly, the posterior border with a very shallow emargination, the lobes correspondingly low, with numerous setae. Ninth sternite small and very obtuse, the margin with only about six to eight setae. Basistyle with the ventromesal lobe large, nearly one-half the body of the style. Dorsal dististyle a moderately stout curved rod, narrowed to the long acute terminal spine. Ventral dististyle, d, large and fleshy, its area approximately three times that of the basistyle; rostral prolongation long, its apex slender, the tip narrowed to subacute; spines widely separated, both from long basal tubercles, that of the inner spine a little longer second spine not far removed from apex of prolongation; spines very long and slender, as long or longer than the dorsal dististyle, subequal or the outer one a little longer. Gonapophysis, g, with mesal-apical lobe pale, broad, narrowed to the acute tip. Aedeagus slender; terminal lobes oval, obtuse, of moderate size.

EXPLANATION OF PLATES

Male hypopygia of *Geranomyia*

- Fig. 10. *Limonia (Geranomyia) inquisita* Alexander, 1942.
 Fig. 11. *Limonia (Geranomyia) lachrymalis* (Alexander, 1916).
 Fig. 12. *Limonia (Geranomyia) luteimana* Alexander, 1938.
 Fig. 13. *Limonia (Geranomyia) nugatoria* Alexander, 1943.
 Fig. 14. *Limonia (Geranomyia) numenius* (Alexander, 1913).

- Fig. 15. *Limonia* (*Geranomyia*) *opulens* Alexander, 1945.
 Fig. 16. *Limonia* (*Geranomyia*) *pallidapex* Alexander, 1945.
 Fig. 17. *Limonia* (*Geranomyia*) *parilis* Alexander, 1945.
 Fig. 18. *Limonia* (*Geranomyia*) *pastazina* Alexander, 1944.
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 Fig. 20. *Limonia* (*Geranomyia*) *rabula* Alexander, 1940.
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 Fig. 22. *Limonia* (*Geranomyia*) *refuga* Alexander, 1944.
 Fig. 23. *Limonia* (*Geranomyia*) *scolopax* (Alexander, 1913).
 Fig. 24. *Limonia* (*Geranomyia*) *separata* (Alexander, 1921).
 Fig. 25. *Limonia* (*Geranomyia*) *stenophallus* Alexander, 1944.
 Fig. 26. *Limonia* (*Geranomyia*) *subpentheres* Alexander, 1943.
 Fig. 27. *Limonia* (*Geranomyia*) *tibialis* (Loew, 1851).
 Fig. 28. *Limonia* (*Geranomyia*) *tumidibasis* Alexander, 1938.
 Fig. 29. *Limonia* (*Geranomyia*) *umbricolor* Alexander, 1937.
 Fig. 30. *Limonia* (*Geranomyia*) *xanthoplaca* (Alexander, 1921).
 Fig. 31. *Limonia* (*Geranomyia*) *vindicta vindicta* Alexander, 1943.
 Fig. 32. *Limonia* (*Geranomyia*) *vindicta dilucida* subsp. n.

(Symbols: a, aedeagus; b, basistyle; d, ventral dististyle;
 g, gonapophysis, s, sternite; t, tergite).

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