Mem. Inst. Oswaldo Cruz, Rio de Janeiro, Vol. *84*, Supl. IV, 483-485 1989

SAPROMYZA LOPESI SP. N. FROM BRAZIL: A SPECIES RELATED TO *S. DUODECIMVITTATA* (FREY, 1919) (DIPTERA: LAUXANIIDAE)

G. E. SHEWELL

Biosystematics Research Centre, Agriculture Canada, Ottawa, Ontario, Canada, K1A OC6

A new species, Sapromyza lopesi, *is described from Brazil, and compared with its closest relative,* S. duodecimvittata *(Frey). Some remarks are made on the generic classification of South American Lauxaniidae as it affects these and other species.*

Key words: Diptera – Lauxaniidae – Systematics – Evolution

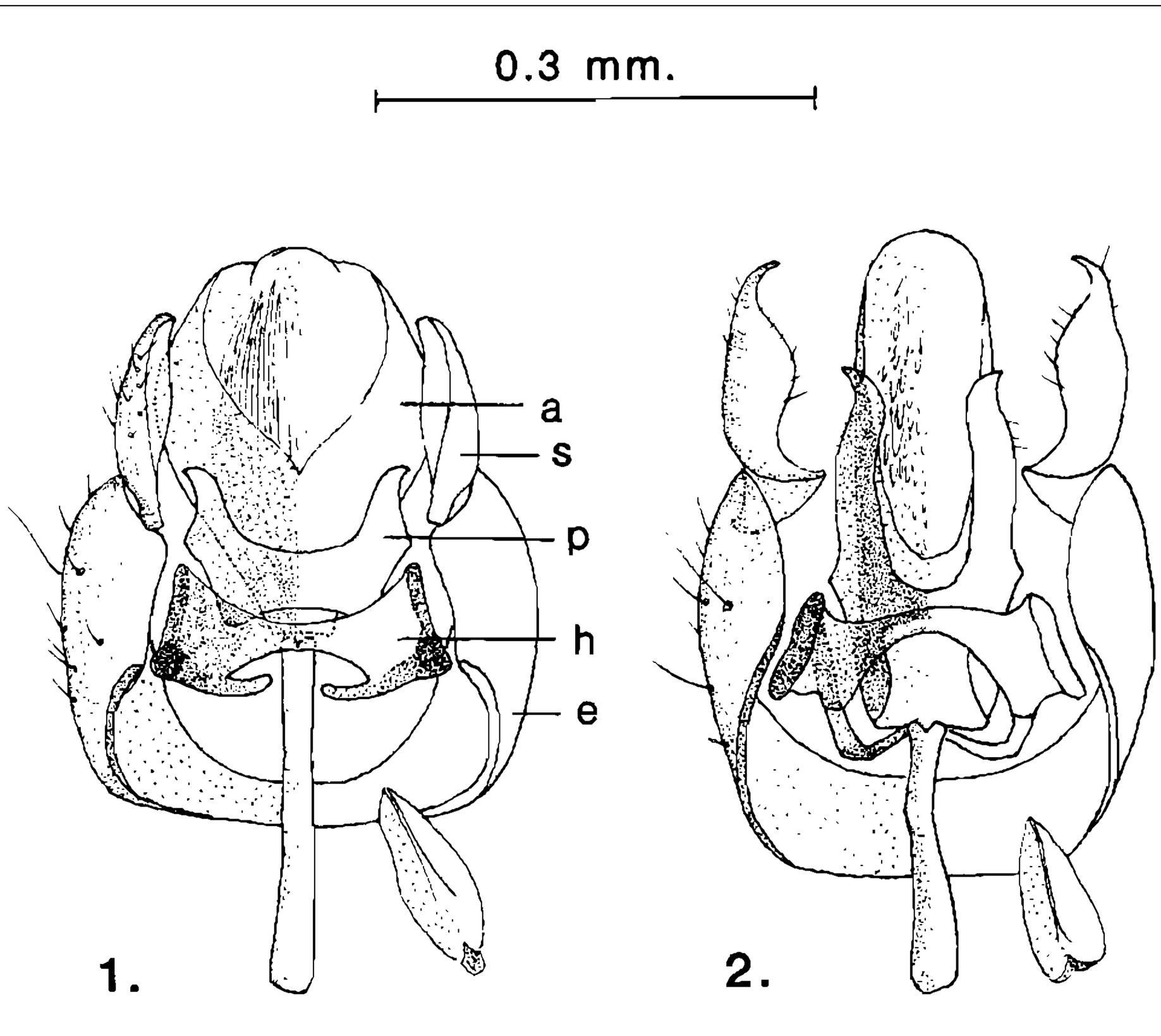
Sapromyza lopesi sp. n.

Pale yellow. Frons anteriorly orange-yellow, with two dark brown vittae. Scutum with six similar vittae evenly spaced; inner four ending well before scutellum. Prescutellar dorsocentral and acrostichal setae arising from dark brown spots. Wing clear. Legs with dark brown markings. Abdomen with dark median vitta and broad lateral segmental bands. Length 3.75 mm, wing 3.75 mm.

Head almost twice as broad as long, 1.4 times wider than high, pale yellow with white pruinosity. Frons slightly more than one third of head width, almost square; in profile sloping, forming obtuse angle with face; anterior margin orange-yellow. Ocellar triangle small. Orbital plates narrow, ending at anterior seta. Two dark brown vittae running from beside triangle to end of orbital plates. Face as long as frons, almost flat, with brown median mark on lower third. Parafacial about one quarter of facial width, not narrowed below. Supravibrissal hairs short, sparse, confined to lower half of facial ridge. Gena less than one quarter of eye height, with faint brown mark below eye continuous with broader dark polished mark on narrow subgena. Clypeus slightly prominent. Eye oval, narrower below, sparsely micro-setose. Vertex rounded. Upper occiput shallowly concave. Large silvery cervical patch present. Antennae narrowly separated. Scape and pedicel very short, latter brownish-yellow. Flagellomere not much longer than wide, bluntly rounded, brownish-yellow with erect pale dorsal pile. Arista slender, dark with pale base, short-plumose with dorsal hairs slightly longer. Palp slender, dark brown. Proboscis short; theca and part of labella dark brown, remainder pale.

Thorax. Scutum moderately arched, with six well defined, evenly spaced dark brown vittae; inner four ending just beyond first dorsocentral seta with median two curving outward at tips; outer two becoming paired behind suture, thus making eight vittae posteriorly. Prescutellar acrostichal and dorsocentral setae arising from dark brown spots. Pleuron with less conspicuous vittae, one from below postpronotal lobe (humerus) to base of wing, another from middle of anepisternum (mesopleura) to its posterior margin, a third along upper margin of katepisternum (stemopleura). Sides of scutellum broadly rounded with large dark brown spots laterally between setae and with conspicuously yellow apex. Wing clear; veins yellow; ventral costal hairs sparse; cross-vein r-m at about middle of discal cell; last section of M less than twice preceding section. Calypter pale. Halter yellow. Fore and mid femora dark brown, latter sometimes yellowish at apex. Hind femur yellow with apical third and broad anterior streak dark. Fore tibia yellow with apical third dark; others yellow with dark apical rings. Fore tarsus white on first two segments, dark on remainder; others more or less darkened on apical two or three segments.

Abdomen yellow, white-pruinose, with broad dark brown median vitta from third to sixth tergites, and with broad bands laterally from second to sixth, continued on venter. Genitalia of male (Fig. 1) small. Epandrium round, widened ventrally. Surstylus articulated, short, lamellate. Tenth sternite complete, nar-



Sapromyza lopesi sp. n. Fig. 1: hypopygium, ventral view. *Sapromyza duodecimvittata* (Frey). Fig. 2: the same. (a = aedeagus, s = surstylus, p = parameres, h = hypandrium, e = epandrium).

row (not shown in fig.). Hypandrium not continuous above, its dorsal arms short. Parameres fused basally, forming a U-shaped sclerite with tips pointed and curved outward. Aedeagus globular, with wide circular opening and large fascicle of numerous long slender internal stylets. Aedeagal apodeme long. Ejaculatory apodeme small. Female eighth sternite small.

Chaetotaxy. Orbital setae reclinate, evenly spaced in line between inner vertical and antennal base. Ocellars long, almost parallel. Postocellars equal to outer verticals. Dorso-centrals arranged 0 + 2, evenly spaced between transverse suture and scutellum. Prescutellar acrostichals present. Acrostichal hairs in six rows. Proepisternal (propleural) 1; katepisternal 1; anepimeron (pteropleura) bare; scutellum bare, basal setae convergent, apicals divergent. Fore femur with pd and pv rows, ctenidium absent. Mid femur with short anterior row. Hind femur with preapical ad. All tibiae with preapical d. Mid tibia with one spur.

Type, ♂. Brazil, Nova Teutonia, 27°11'S. 52°23'W, xi.1958, 300-500 m, F. W. Plaumann. Canadian National Collection No. 20704.

Paratypes, 2 ♀'s. Same locality and collector. In the University Zoological Museum, Helsinki.

It gives me much pleasure to name this species for my long-time colleague and friend Dr. Hugo de Souza Lopes, whose contribution to knowledge of the New World fauna of Sarcophagidae is unmatched. Having reached his eightieth year, Dr. Lopes is still describing new species in this immense group, and it is certain that future students of this family will rely mostly on his publications.

Sapromyza duodecimvittata (Frey)

Lauxania (Sapromyza) duodecimvittata Frey. 1919. Ofvers. finsk. Vetensk. Soc. forhandl. (1917-18) 60. A. No. 14: 1-35. 1 pl.

Type, ♂ (examined 1988). Condition; slight mould and verdigris, otherwise good. Appendages and most setae intact, except fore tarsi and part of right hind tarsus missing. The specimen is in the University Zoological Museum, Helsinki.

Differs from *S. lopesi* sp. n. as follows. Frontal vittae almost reaching bases of antennae, orange-yellow area much less extensive. Dark mark on face extending upward beyond middle. Dark mark on gena more distinct. Arista with shorter plumosity, hairs not much longer above than below. Vittae on scutum continuing uninterrupted to base of scutellum. Fore tibia brown except on basal third or less. Fore metatarsus white, remaining segments dark. Genitalia (Fig. 2). Epandrium scarcely widened ventro-laterally. Surstylus with sharply pointed, strongly incurved apex, and with expanded base joined internally to well developed tenth sternite. Hypandrium with long dorsal extensions to base of aedeagus. Parameres longer, joined near middle to form an H-shaped sclerite. Aedeagus cylindrical with elongate opening, and with internal fascicle of numerous short retrorse stylets.

Besides the type, two other specimens have been examined, both from Nova Teutonia.

Note. These two species are placed in *Sapromyza* Fall. provisionally, using this name in its widest possible sense. In a recent paper (Shewell, 1986), attention was drawn to the fact that several North American species that had long been placed in that genus, were, in fact, members of Neotropical species groups differing from *Sapromyza* not only in superficial appearance, but also in virtually all their genitalic characteristics. Although there is no doubt that the two species treated here will eventually be removed from *Sapromyza*, this can best be done in conjunction with an extensive review of all the many Neotropical species that superficially resemble it. While it is true that our classification systems are conceptual, and that the only reality available to us is the individual insect observed under the microscope, it is also necessary that concepts be changed to conform with changes in other concepts that have been taking place concerning the origin of continents, their geological and climatic history, and other factors that have influenced their present faunas. Charles Townsend, whose generic concepts were in advance of his time, remarked over seventy years ago "A genus can not be conceded by elimination but must be recognized by definition" (Townsend, 1917). Many South American genera are, at present, being conceded by elimination.

ACKNOWLEDGMENTS

To Dr B. Lindeberg, University Zoological Museum, Helsinki, for help in loaning types and other specimens of South American material studied by Richard Frey.

REFERENCES

FALLÉN, C. F., 1810. *Specim. entomolog. novam Diptera disponendi methodum exhibens.* 26 p. Lund.

FREY, R., 1919. Mitteilungen über südamerikanische Dipteren. Ofvers. Finsk. Vetensk. Soc. Förhandl. (1917-18) 60. A. No. 14. 1-35.

SHEWELL, G. E., 1986. New American Genera of Lauxaniidae, based on species of earlier authors, and a note on Lyciella rorida (Fallén) in North America (Diptera). *Can. Ent., 118:* 537-547.

TOWNSEND, C. H. T., 1917. Genera of the Dipterous tribe Sarcophagini. *Proc. Biol. Soc. Washington, 30:* 189-197.