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SPHAEROHELEA, A NEW NEOTROPICAL PREDACEOUS MIDGE GENUS OF THE TRIBE SPHAEROMIINI (DIPTERA: CERATOPOGONIDAE)

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Sphaerohelea, *a new Neotropical genus of predaceous midges related to* Lanehelea, Sphaeromias, Chelohelea, Phaenobezzia *and* Leehelea *is described and illustrated from female specimens. This new genus includes only one species,* Sphaerohelea biestroi *n. sp. from northeastern Argentina as a type-species.*

Key-words: Neotropical predaceous midges – Tribe Sphaeromiini – *Sphaerohelea* new genus – *Sphaerohelea biestroi* n. sp.

Wirth et al. (1974), in their key of the genera of Ceratoponidae, recognized 19 genera of the tribe Sphaeromiini, and Wirth (1974) recorded the following 5 to the Neotropical region: *Johannsenomyia* Malloch, *Lanehelea* Wirth & Blanton, *Mallochohelea* Wirth, *Neobezzia* Wirth & Ratanaworabhan, and *Nilobezzia* Kieffer.

During a taxonomic study about the tribe Sphaeromiini in the Collection of the Museo de La Plata, Argentina (MLP), we found one undescribed species from northeastern Argentina that cannot be placed in any known ceratopogonid genus. Because it possesses a combination of characters not present in any of the other Sphaeromiini genera we propose a new genus for it in this paper.

For an explanation of general ceratopogonid terminology see Downes & Wirth (1981); for special terms and diagnoses dealing with genera in the tribe Sphaeromiini, see Wirth (1962), Wirth & Blanton (1972), Wirth & Ratanaworabhan (1972), Wirth & Grogan (1979) and Giles & Wirth (1985).

The specimens were monted on slides in Canada balsam in the manner of Wirth & Marston (1968).

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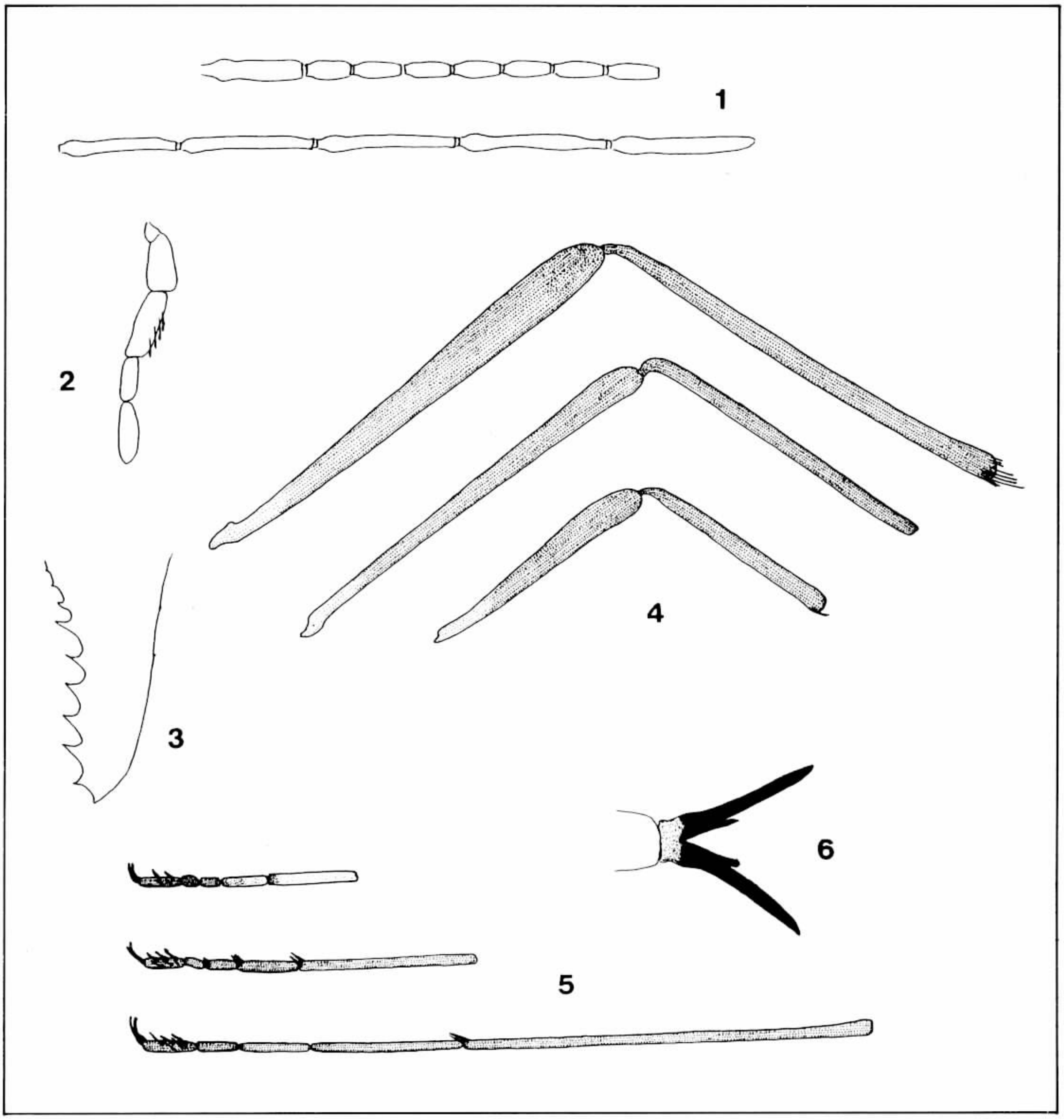
Sphaerohelea Spinelli and Felippe-Bauer, New Genus

Type-species: Sphaerohelea biestroi Spinelli and Felippe-Bauer, n. sp.

Diagnosis: a genus of large sized predaceous midges of the tribe Sphaeromiini distinguished from all other genera of the tribe by the following combination of characters: Eyes bare, separated. Scutum with short, anterior tubercle. Hind tarsus greatly elongated, linear; 4th tarsomere short and broad on fore and mid legs, subcylindrical on hind leg; 5th tarsomeres with 2-3 pairs of batonnets not restricted to base; tarsal claws short and equal on all legs, each with internal basal tooth. Femora without ventral spines. Wing with a single radial cell extending to wing tip, M broadly sessile. Female genital segment without a bare sclerotized plate and tufts of hairs flanking gonopore. Two spermathecae, a vestigial 3rd present. Male unknown.

Relationships: Sphaerohelea superficially resembles *Lanehelea*, from which it can be distinguished by the female genital segment without a bare sclerotized plate and a pair of finely setose folds flanking the gonopore, 5th tarsomeres with fewer batonnets, and costa extending to wing tip (costal ratio 0.85 in *Lanehelea).*

Sphaerohelea also closely resembles *Sphaeromias* Curtis, which differs from *Sphaerohelea* by the presence of several sharp, ventral spines on femora, 5th tarsomeres with 5 pairs of

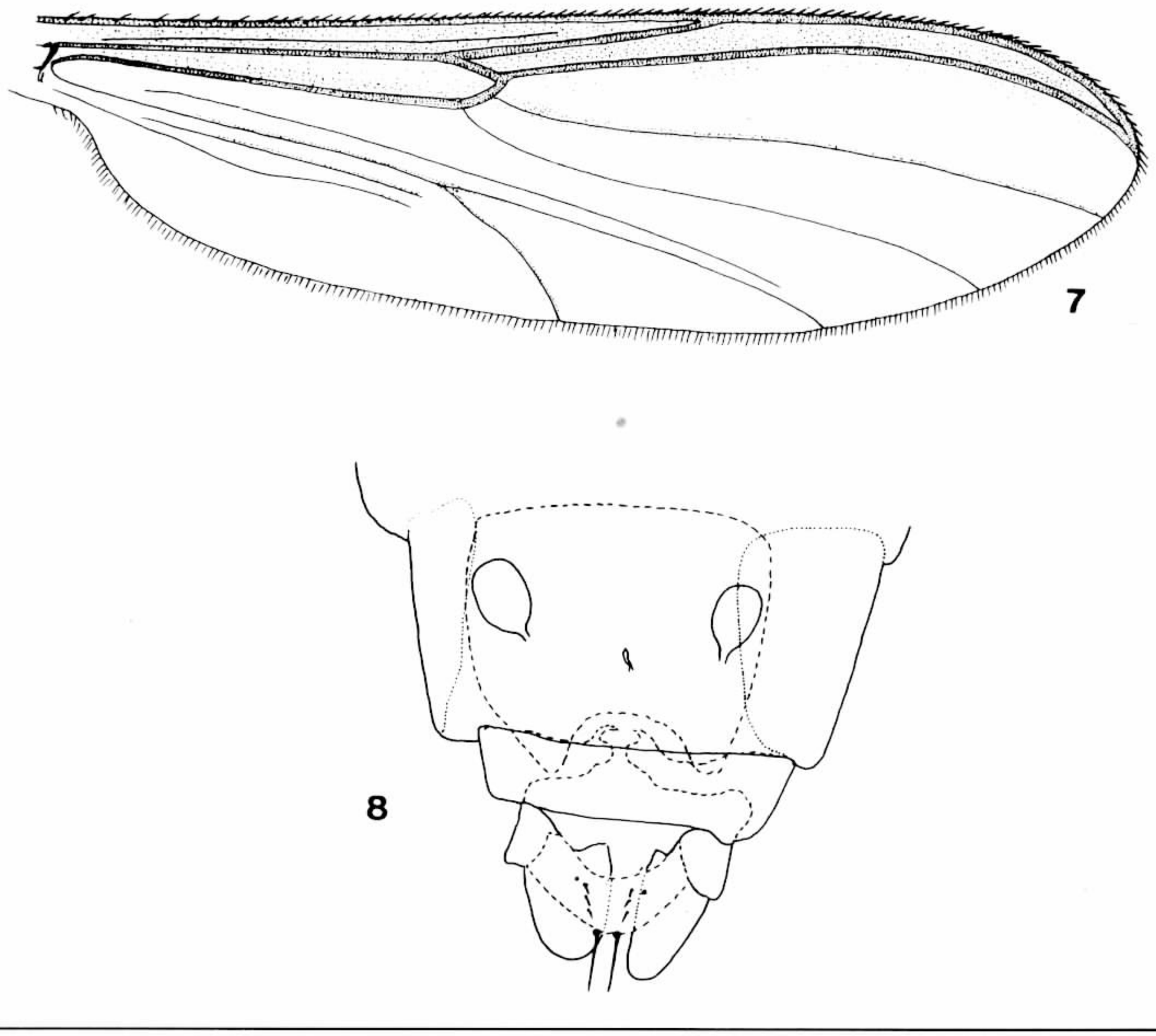


Sphaerohelea biestroi, n. sp., female. Fig. 1: flagellum. Fig. 2: palpus. Fig. 3: mandible. Fig. 4: legs (top to bottom) hind, mid and fore. Fig. 5: tarsi. Fig. 6: tarsal claws.

batonnets, and wing with 2 well formed radial cells.

A recently described genus from Malaysia, *Chelohelea* Giles & Wirth, 1985, is also similar to *Sphaerohelea*, especially by the lack of bare sclerotized plate and the pair of setose lateral lobes flanking the gonopore. *Sphaerohelea* can be readily distinguished from *Chelohelea* by several morphological characters, as follows: eyes separated, scutum with anterior tubercle, hind tarsus greatly elongated, 5th tarsomeres with 2-3 pairs of batonnets (5 in *Chelohelea*), shorter tarsal claws (0.54 as long as tarsomere 5 in *Sphaerohelea;* 0.76-0.83 in *Chelohelea*), costa extending to wing tip (costal ratio 0.82 in *Chelohelea*), and M broadly sessile.

The presence of body with uniformely brownish color, 5th tarsomeres with sharp--tipped batonnets and unarmed femora allies superficially *Sphaerohelea* with *Phaenobezzia* Haeselbarth, from which it can be distinguished by the costa that extending to wing tip, claws with internal basal tooth, tarsomeres not cordiformes and hind tarsus greatly elongated.



Sphaerohelea biestroi, n. sp., female. Fig. 7: wing. Fig. 8: abdominal segments 8-10.

Sphaerohelea superficially resembles the Australian genus *Leehelea* Debenham, from which it can be distinguished by the presence of one radial cell (2 in *Leehelea*) extending to wing tip, femora without ventral spines and tarsal claws with internal basal tooth.

Sphaerohelea biestroi n. sp.
(Figs 1-8)

Female: Wing length 3.08 (3.04-3.12, n = 2) mm; breadth 0.90 (0.86-0.94, n = 2) mm.

Head: Dark brown. Eyes bare, separated by a distance equal to diameter of 2 ommatidial facets (0.042 mm). Antenna with scape brownish, pedicel and flagellum (Fig. 1) dark brown; lengths of flagellomeres in proportion of 35-20-19-19-19-19-19-20-44-49-52-54-54; antennal ratio 1.48. Palpus (Fig. 2) dark brown; lengths of segments in proportion of 8-13-20-12-15; palpal ratio 3.20 (3.10-3.30, n = 2); 3rd segment with scattered sensilla on inner margin. Mandible (Fig. 3) with 7 coarse teeth, and 3 basal spinose.

Thorax: Enterely dark brown; scutum with small, pointed, anterior tubercle; 4-5 prealar setae, 1 postalar; scutellum with 4 similar setae. Legs slender, elongate (Fig. 4), dark brown, narrow bases of femora slightly paler; hind tibial comb with 5 bristles, spur plumose. Tarsi (Fig. 5) dark brown, slender, hind tarsus greatly elongated, linear; tarsomere 1 and basal 1/2 of tarsomere 2 of fore leg brownish; hind tarsal ratio 2.80 (n = 2); a pair of black, ventral spines at apices of tarsomeres 1-2 of mid leg and tarsomere 1 of hind leg; ventral palisade setae absent on fore tarsus, in one row on tarsomere 1 of mid leg, in two rows on tarso-

mere 1 of hind leg; 4th tarsomere short and broad on fore and mid legs, subcylindrical on hind leg; 5th tarsomeres armed ventrally with 2 pairs of batonnets on fore leg, 3 pairs on mid and hind legs; tarsal claws (Fig. 6) slightly curved, equal on all legs, each with internal basal tooth; ratio of claw length to 5th tarsomere length 0.54 on all legs. Wing (Fig. 7) with costa extending to tip; membrane deeply infuscated on radial cell and between M and costa; a single radial cell; venation as figured. Halter dark brown.

Abdomen (Fig. 8): Dark brown. Genital segment without definite tufts of hairs and a bare sclerotized plate; 10th segment with 4 pairs of short hairs and a single pair of strong, apical setae. Two ovoid, strongly sclerotized spermathecae, unequal, measuring 0.112 by 0.073 mm, and 0.095 by 0.064 mm; a vestigial 3rd present.

Male: Unknown.

Distribution: Argentina (Provinces of Corrientes and Missiones).

Type: Holotype female, Argentina, Corrientes, Monte Caseros, 22.iv.1987, L. Biestro, CDC trap, deposited in Museo de La Plata (MLP), Argentina. Paratype female (no. 198), Argentina, Misiones, Posadas, 10.xi.1970, C. Porter — L. Stange, deposited in Instituto Oswaldo Cruz (IOC), Rio de Janeiro, Brazil.

Remarks: This species is named for Mr Luis M. Biestro, in recognition of his important help in the collection of ceratopogonids from the area of the Salto Grande dam lake.

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