

## A NEW SPECIES OF *NEOSPHAEROMIAS* FROM THE SOLOMON ISLANDS (DIPTERA: CERATOPOGONIDAE)

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Abstract. *Neosphaeromias choriodes*, n. sp., is described from the Solomon Islands, and a key is presented to separate it from the 2 previously described species. *Neosphaeromias magnus* from Vietnam is transferred to the genus *Mackerrasomyia*.

Das Gupta & Wirth (1971) proposed the genus *Neosphaeromias* for 4 Asian species: *gibbus* Das Gupta & Wirth (type-species) from Thailand and Laos, *niger* Das Gupta & Wirth from Sri Lanka, *magnus* Das Gupta & Wirth from Vietnam, and *Palpomysia caesia* Macfie from Sumatra. After examining the holotype of *P. caesia*, de Meillon & Wirth (1979) transferred this species to the genus *Mackerrasomyia* Debenham (1970). Further study of a paratype of *N. magnus* and a closer comparison of the genera *Neosphaeromias* and *Mackerrasomyia* now indicate that *magnus* must also be transferred and that the correct combination is now *Mackerrasomyia magna* (Das Gupta & Wirth) (**new combination**). The 2 genera are very closely related, the principal separation being in the structure of the 5th tarsomeres and claws; in females of *Neosphaeromias* the batonnets are distributed evenly to the apex of the 5th tarsomere and each claw bears a short external basal tooth and a long internal basal barb; in *Mackerrasomyia* the 2 distal pairs of batonnets are separated from the proximal pairs by a short bare space, and each claw bears a short internal basal barb but lacks the blunt external basal tooth.

From material received for study from the Bernice P. Bishop Museum in Honolulu, we are describing a new and unusual species of *Neosphaeromias* from the Solomon Islands. The holotype, allotype, and 3 paratypes are deposited in the Bishop Museum (BPBM); 2 paratypes are retained in the U.S. National Museum collection.

### *Neosphaeromias choriodes* Grogan & Wirth, new species

Fig. 1

*Diagnosis.* Distinguished from all other species in the genus by its large size (♀ wing length 3 mm) and yellowish coloration; ♂ genitalia with triangular divided aedeagus with pointed tip and claspettes with large hyaline dorsal processes.

*Holotype* ♀. Wing length 3.0 mm; breadth 0.8 mm.

*Head* (Fig. 1e). Pale brown. Eyes bare, separated a distance of 0.04 mm. Antennal pedicel dark brown; flagellum (Fig. 1a) with lengths of flagellomeres in proportion of 10-6-7-6-6-6-6-6-21-20-19-20-25; antennal ratio 1.98; total length of flagellum 2.34 mm; flagellomeres 1-8 each with distinct narrow apical brownish band. Palpus (Fig. 1b) slender, yellowish; lengths of

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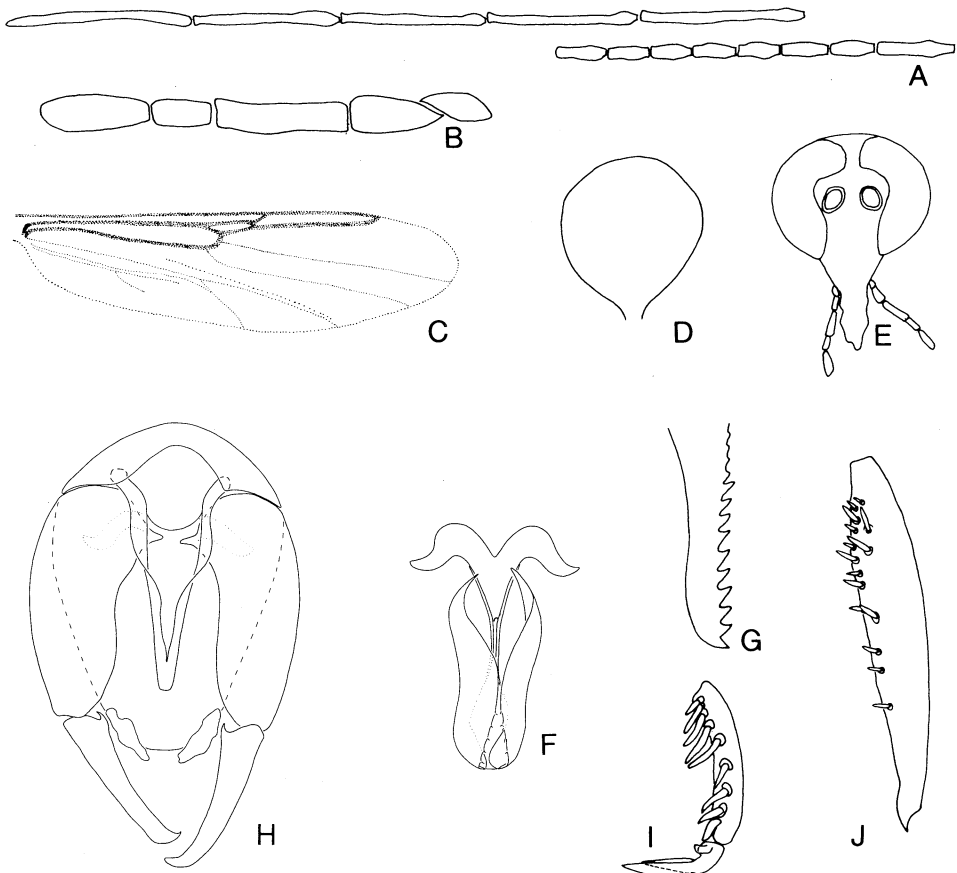


FIG. 1. *Neosphaeromias choriodes*, ♀ (a-e, g, i-j) and ♂ (f, h); a, antennal flagellum; b, palpus; c, wing; d, spermatheca; e, head, anterior view; f, claspette; g, mandible; h, genitalia, claspette removed; i, hind 5th tarsomere and claws; j, fore femur.

segments in proportion of 12-20-32-15-25; 3rd segment with 5-6 subapical stalked sensilla; palpal ratio 4.0. Mandible (Fig. 1g) with 9-10 coarse teeth. *Thorax*. Yellowish with faint whitish pollinosity. Scutum with long, stout, anterior spine; scutellum with 14-17 blunt spines; fore tibia darker than fore femur and arcuate; mid tibia with 1 apical spine; hind tibial comb with 9-10 large setae; tarsi brownish on fore and hind legs and distal 3 tarsomeres of mid leg, tarsomeres 1 and 2 of mid leg paler; well-developed palisade setae on 1st tarsomere of mid leg and tarsomeres 1 and 2 of hind leg; 4th tarsomeres slightly cordate with dense ventral pubescence; 5th tarsomeres (Fig. 1i) long and slender with 14-16 stout batonnets in 2 rows; each claw with small stout external basal tooth, main talon long and nearly straight with lamellate internal basal barb. Wing (Fig. 1c) slightly infuscated, veins brownish, surface covered with microtrichia only; costa extending 0.81 of wing length; 2nd anal vein branched as in *N. niger*. Halter pale brown. *Abdomen*. Brown. Eighth sternum with tuft of bristles as found in other Sphaeromiini. Spermatheca distorted, but measuring 0.120 mm long; that of a paratype (Fig. 1d) spheroid with short neck.

*Allotype* ♂. Wing length 1.43 mm; breadth 0.43 mm. Similar to ♀ holotype but smaller, with the following sexual differences. Interorbital space very narrow, eyes nearly in contact; distal 3 flagellomeres of flagellum elongated, plume brownish, sparse; palpus shorter, not as attenuated; legs darker brown, fore femur with 8 spines restricted to distal ½; 5th tarsomeres without ventral batonnets; claws smaller, without external basal tooth but with rather long internal barb; costa extending only 0.73 of wing length. Genitalia as in Fig. 1f, h. Ninth sternum 4.5× broader than long with nearly straight base and narrow caudomedian notch; 9th tergum tapering gradually distally to narrow rounded tip; cerci well developed, rounded, extending well beyond basimeres, setose with a single large apical seta. Basimere slightly curved with short ventral root, 2.5× longer than broad, tapering slightly distally, ventral surface with scattered, unusually strong bristles; telomere 0.73 length of basimere, tapering slightly distally to curved, bluntly pointed tip. Aedeagus (Fig. 1h) triangular, 3× as long as basal width; provided with a heavily sclerotized lateral margin; ventral surface and membrane spiculate; basal arch extending ¼ total length, basal arm nearly straight; apex prolonged in a slender, poorly sclerotized process. Claspettes (Fig. 1f) fused at extreme base; basal apodemes expanded, butterfly-like; distal portions expanded in a flattened platelike lobe, the 2 lobes forming a somewhat cylindrical sheath more or less enclosing distal process of aedeagus but much longer, extending to apex of 9th tergum.

*Distribution.* Solomon Islands.

*Types.* Holotype ♀ (BPBM 12,425), allotype ♂, SOLOMON IS: San Cristobal: Kira-Kira, 0–50 m, 7–20.XI.1964, R. Straatman, light trap. Paratypes, 4♀,4♂, same data as types.

*Discussion.* The specific name is from the Greek *chorion*, a membrane, in reference to the hyaline dorsal plates of the male claspettes. *Neosphaeromias gibbus* D.G. & W. and *N. niger* D.G. & W. both differ from *N. choriodes* in being blackish species having much broader male genitalia, with the aedeagus shield-shaped and the claspettes in the form of separate, simple, clavate processes.

KEY TO THE SPECIES of *Neosphaeromias*

1. Large yellowish species, wing 3.0 mm long; legs yellowish, only tarsi and tips of tibiae brownish; ♂ genitalia elongate, 9th tergum nearly 2× as long as broad basally; aedeagus triangular, with slender pointed tip; claspettes partly fused in a cylindrical sheath partly enclosing tip of aedeagus and extending to tip of 9th tergum ..... **choriodes, n. sp.**  
 Smaller blackish species, wing 1.7–2.6 mm long; legs dark brown, only fore tibia, proximal tarsomeres, and tip of mid tibia yellowish to pale brown; ♂ genitalia less elongate; aedeagus short and shield-shaped with blunt tip; claspettes separate, each a simple clavate process ..... 2
2. Female wing less than 2.0 mm long; tarsomeres 1–4 pale, only 5th dark brown; ♂ genitalia short and broad, 9th tergum about as broad as long ..... **gibbus**  
 Female wing 2.5–2.6 mm long; tarsomeres 1–2 pale, 3–5 each partly or entirely dark brown; ♂ genitalia more elongate, 9th tergum nearly 2× as long as broad basally ..... **niger**

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