Supporting Information

Molecular phylogenetics of the predatory lineage of flower flies *Eupeodes-Scaeva* (Diptera: Syrphidae), with the description of the Neotropical genus *Austroscaeva* gen. nov.

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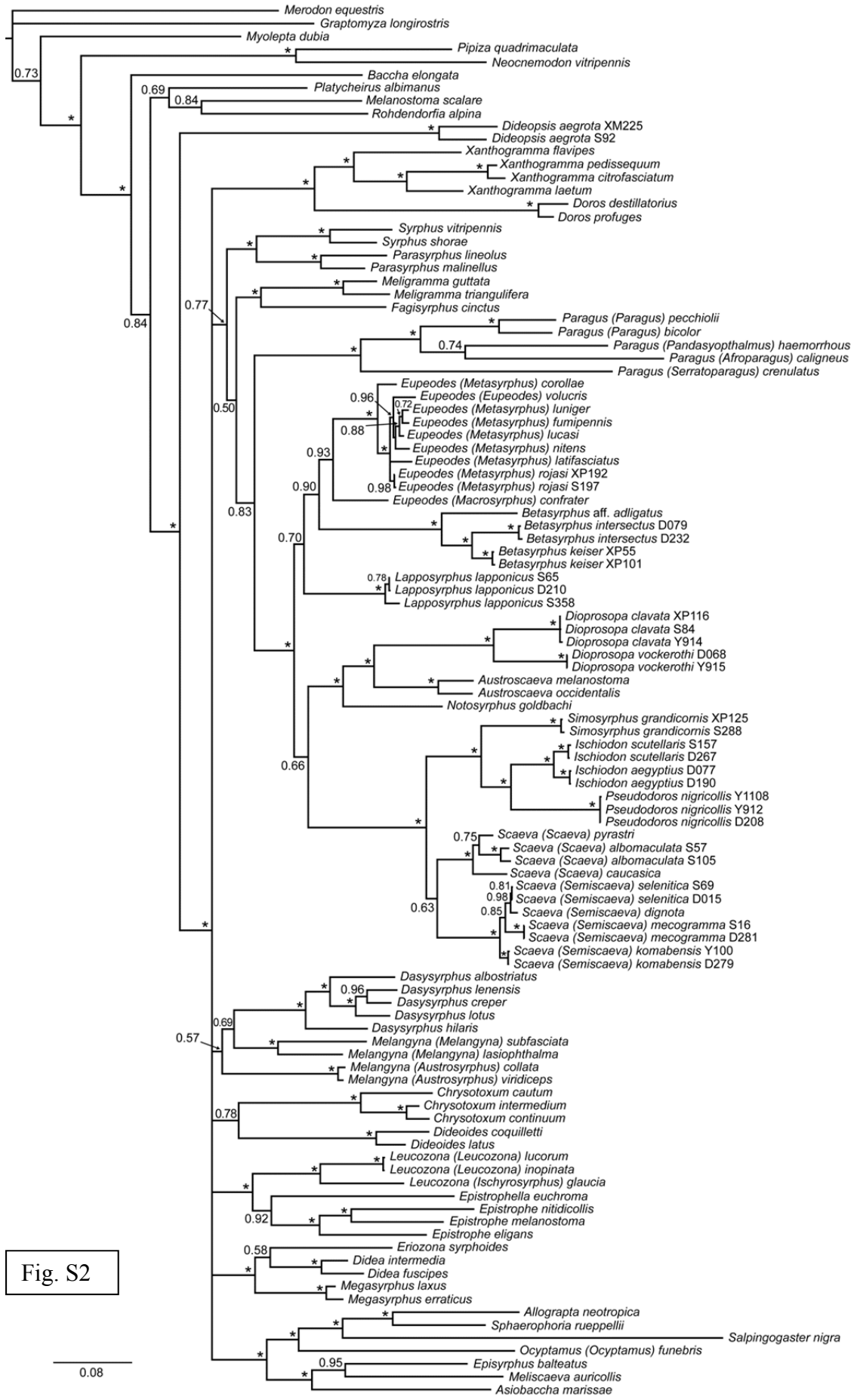
Fig. S1. Maximum Likelihood tree (ln L=(−31,292.223746) based on the combined dataset (COI, 28S and 18S) using Garli v.2.01.1067 and the structural alignment for 28S and 18S. Bootstrap support values (right) and Bayesian posterior probabilities (left) are depicted at the nodes (only >50 or >0.5 respectively). Asterisk (*) denotes Bootstrap support values = 100 or Bayesian posterior probabilities = 1.


Merodon equestris
Graptomyza longirostris
Myolepta dubia
Neocnemodon vitripennis
Pipiza quadrimaculata
Melanostoma scalare
Rohdendorfia alpina
Platycheirus albimanus
Baccha elongata
Dideopsis aegrota S92
Dideopsis aegrota XM225
Eriozona syrphoides
Didea fuscipes
Didea intermedia
Megasyrphus erraticus
Megasyrphus laxus
Leucozona (Ischyrosyrphus) glaucia
Leucozona (Leucozona) lucorum
Leucozona (Leucozona) inopinata
Epistrophella euchroma
Epistrophe nitidicollis
Epistrophe melanostoma
Epistrophe eligans
Salpingogaster nigra
Allograpta neotropica
Sphaerophoria rueppellii
Ocyptamus (Ocyptamus) funebris
Asiobaccha marissae
Episyrphus balteatus
Meliscaeva auricollis
Chrysotoxum cautum
Chrysotoxum intermedium
Chrysotoxum continuum
Dideoides coquilletti
Dideoides latus
Xanthogramma laetum
Xanthogramma citrofasciatum
Xanthogramma pedissequum
Xanthogramma flavipes
Doros profuges
Doros destillatorius
Melangyna (Austrosyrphus) collata
Melangyna (Austrosyrphus) viridiceps
Dasysyrphus hilaris
Dasysyrphus albostriatus
Dasysyrphus lotus
Dasysyrphus creper
Dasysyrphus lenensis
Melangyna (Melangyna) lasiophthalma
Melangyna (Melangyna) subfasciata
Parasyrphus malinellus
Parasyrphus lineolus
Syrphus vitripennis
Syrphus shorae
Fagisyrphus cinctus
Meligramma triangulifera
Meligramma guttata
Paragus (Serratoparagus) crenulatus
Paragus (Afroparagus) caligneus
Paragus (Pandasyopthalmus) haemorrhous
Paragus (Paragus) pecchiolii
Paragus (Paragus) bicolor
Betasyrphus aff. adligatus
Betasyrphus keiser XP55
Betasyrphus keiser XP101
Betasyrphus intersectus D232
Betasyrphus intersectus D079
Eupeodes (Macrosyrphus) confrater
Eupeodes (Metasyrphus) corollae
Eupeodes (Metasyrphus) rojasi XP192
Eupeodes (Metasyrphus) rojasi S197
Eupeodes (Metasyrphus) latifasciatus
Eupeodes (Eupeodes) volucris
Eupeodes (Metasyrphus) lucasi
Eupeodes (Metasyrphus) luniger
Eupeodes (Metasyrphus) fumipennis
Eupeodes (Metasyrphus) nitens
Lapposyrphus lapponicus S65
Lapposyrphus lapponicus S358
Lapposyrphus lapponicus D210
Simosyrphus grandicornis S288
Simosyrphus grandicornis XP125
Pseudodoros nigricollis Y1108
Pseudodoros nigricollis D208
Pseudodoros nigricollis Y912
Ischiodon aegyptius D077
Ischiodon aegyptius D190
Ischiodon scutellaris S157
Ischiodon scutellaris D267
Scaeva (Scaeva) caucasica
Scaeva (Scaeva) pyrastri
Scaeva (Scaeva) albomaculata S105
Scaeva (Scaeva) albomaculata S57
Scaeva (Semiscaeva) dignota
Scaeva (Semiscaeva) selenitica S69
Scaeva (Semiscaeva) selenitica D015
Scaeva (Semiscaeva) mecogramma D281
Scaeva (Semiscaeva) mecogramma S16
Scaeva (Semiscaeva) komabensis Y100
Scaeva (Semiscaeva) komabensis D279
Notosyrphus goldbachi
Austroscaeva melanostoma
Austroscaeva occidentalis
Dioprosopa clavata XP116
Dioprosopa clavata S84
Dioprosopa clavata Y914
Dioprosopa vockerothi D068
Dioprosopa vockerothi Y915
0.2

Fig. S1

Fig. S2. Bayesian phylogram based on the combined dataset (COI, 28S and 18S) using MrBayes 3.2.6 and the structural alignment for 28S and 18S. Posterior probability values higher than 0.5 are indicated on the branches.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Allograpta neotropica
Sphaerophoria rueppellii
Salpingogaster nigra
Ocyptamus (Ocyptamus) funebris
Episyrphus balteatus
Meliscaeva auricollis
Asiobaccha marissae
0.08

Fig. S2