Zootaxa 3847 (1): 097–114
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3847.1.5
http://zoobank.org/urn:lsid:zoobank.org:pub:3578236B-8CE0-42D5-8BEB-68A84D137BCD

Afrotropical flower flies (Diptera: Syrphidae). A new genus and species from Kenya, with a review of the melanostomine group of genera

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Abstract

A new genus and species of flower flies (Diptera: Syrphidae: Syrphinae: Syrphini) are described from central Africa (Kenya & Uganda), *Afrostoma quadripunctatum*. A key to the Afrotropical genera of the subfamily Syrphinae is given. A review of the melanostomine [Bacchini] genera and subgenera is provided along with a key to them. Phylogenetic placement of *Afrostoma* is included based on mitochondrial cytochrome c oxidase subunit I (COI) data.

Key words: Syrphinae key, Bacchini, Melanostomini

Introduction

Flower flies are common in all areas from the Arctic to the Antarctic. They are important pollinators and the larvae of some of these flies (subfamily Syrphinae) are predators of various soft-bodied insects, especially plant pests (see Rotheray 1993; Rotheray & Gilbert 2011).

The Afrotropical flower fly fauna has been little studied, especially its generic classification. Only two generic identification keys have ever been written for this fauna (Bezzi 1915, Curran 1927), although Hull (1949b) did provide an overview of all flower fly groups.

Now, continuing the trend that first began in Europe (Schiner 1860–64; most recent Papp & Darvas 1997–2000) and was followed in the Nearctic (Williston 1885, 1888, 1896, 1908; Curran 1934, 1965; McAlpine *et al.* 1981; McAlpine 1987, 1990) and most recently Central America (Brown *et al.* 2009–2010), an effort has commenced to revise the Afrotropical fly fauna (Kirk-Spriggs & Mostovski 2010). We herewith provide descriptions of a new genus and species of Afrotropical flower flies. The new genus is incorporated into an identification key to Afrotropical Syrphinae, as well as in a key covering the world genera of the Bacchine and Melanostomine groups. We do not present generic diagnoses for all of the syrphines here as the planned Manual of Afrotropical Diptera is intended to provide this.

Material and methods

The terminology used follows from Thompson (1999), which was derived originally from the *Manual of Nearctic Diptera* (McAlpine 1981) and is largely congruent with it. Updates to genitalic terminology are derived from Cumming & Wood (2009). Specimens examined in this study were obtained from the following collections: British Museum (Natural History), London, UK (BMNH), Canadian National Collection of Insects, Ottawa, ON, Canada (CNC) and National Museum of Natural History, Washington, DC, USA (USNM). Photographs were taken with a Canon EOS 50D camera equipped with a 65 mm macro lens. All specimens are labeled with a unique reference number, in the format "USNM ENT number [8 digits]" or "CNC DIPTERA number [6 digits]". Data are stored electronically in the CNC database (available from http://www.cnc-ottawa.ca/taxonomy/TaxonMain.php).

Accepted by C. Kehlmaier: 15 Jul. 2014; published: 6 Aug. 2014

Identification keys follow ergonomic design standards (see Thompson 1999: 323). Figures for various characters used in the key are available in the treatment of Nearctic flower fly genera (Vockeroth & Thompson 1987) and are indicated by the abbreviation "MND." For type specimen information, the exact details of the label on the holotype is presented, the data for each label is given within parens ("...") and each line is separated by single slashes/vigules (/) with appropriate annotations as necessary. In the material examined section, identical information from previous specimen(s) record is not repeated but replaced by ellipsis (...). The type-locality is given separately and in its proper modern geographical / political form.

All molecular specimens are dried, pinned, labeled, accompanied by a label with a unique number (see above) and are listed in Table 1. A single leg was removed from each specimen for sequencing and a 658 base pair fragment of the 5' end of the mitochondrial cytochrome c oxidase subunit I (COI) gene was amplified using the primer pair LepF1 (5'-ATTCAACCAATCATAAAGATATTGG-3') and LepR1 (5'-TAAACTTCTGGATGTCCAAAAAATCA-3') (Hebert *et al.* 2003). DNA extraction and sequencing was performed at both CNC and at the Canadian Centre for DNA Barcoding following the protocols outlined in Hajibabaei *et al.* (2005). The resultant sequences, as well as images and related data, can be accessed through the Barcode of Life Data Systems (BOLD) (http://www.barcodinglife.org/) in the public project 'Afrotropical Syrphidae (AFSYR)' (http://www.boldsystems.org/views/projectmenu.php?&). In addition, all sequences were deposited in GenBank (Table 1). Analytical methods followed Skevington and Thompson (2012).

TABLE 1. Voucher data for molecular specimens. Sequence length is given as the number of base pairs. The following number in square brackets is the number of ambiguous sites.

Sample ID	Species	Identifier	Country	Deposition	GenBank Number	COI-5P Sequence Length
USNM ENT 36401	Afrostoma quadripunctatum	F.C. Thompson	Kenya, Western Province, Kakamega Forest, 1.236°N, 34.864°E, 30.viii.–5.ix.2000, R. Copeland, Malaise trap	CNC	KF919067	647[0n]
CNC DIPTERA 102967	Argentinomyia altissimus	J.R. Vockeroth	Ecuador, Imbab. Lago Cuichoca, 0.299766°N, 78.364585°W, 31.iii1983, G. & D.M. Wood	CNC	KF919078	658[0n]
CNC DIPTERA 103111	Argentinomyia bolivariensis	J.R. Vockeroth	Ecuador, Pichincha, 46 km E. Quito, 0.219813°S, 78.102997°W, 1–7.iii.1976, G. E. Shewell, 4000 m	CNC	KF919068	658[0n]
CNC DIPTERA 102973	Argentinomyia currani	J.R. Vockeroth	Brazil, Santa Catarina, Nova Teutonia, 27.1833°S, 52.3833°W, 1.ii.1970, F. Plaumann, 300–500 m	CNC	KF919050	658[0n]
CNC DIPTERA 102977	Argentinomyia lanei	J.R. Vockeroth	Brazil, Santa Catarina, Nova Teutonia, 27.1833°S, 52.3833°W, 1.i.1970, F. Plaumann, 300–500 m	CNC	KF919053	658[0n]
CNC DIPTERA 102981	Argentinomyia lineatus	J.R. Vockeroth	Brazil, Santa Catarina, Nova Teutonia, 27.1833°S, 52.3833°W, 1.ii.1970, F. Plaumann, 300–500 m	CNC	KF919061	658[0n]
CNC DIPTERA 102985	Argentinomyia luculentus	J.R. Vockeroth	Venezuela, Lara, Yacambu National Park, 9.703890°N, 69.422798°W, 10.v.1981, H. Townes, 1200 m	CNC	KF919064	658[0n]
CNC DIPTERA 102990	Argentinomyia neotropicus	J.R. Vockeroth	Argentina, Entre Rios, Liebig, 32.154587°S, 58.189144°W, 1.ii.1978, S. Bolle	CNC	KF919085	658[0n]
CNC DIPTERA 96505	Baccha elongata	J.H. Skevington	United States, California, Meriposa County Yosemite National Park Crane Flat Meadow, 37.7537°N, 119.793°W, 15.vi.2003, J. & A. Skevington, 1890 m	CNC	KF919057	658[0n]

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TABLE 1. (Continued)

Sample ID	Species	Identifier	Country	Deposition	GenBank Number	COI-5P Sequence Length
CNC DIPTERA 103012	*Baccha maculata*	J.H. Skevington	Russia, Primorsky Krai, South Primoye, envir. of village of Kamenushka, 43.621988°N, 132.232256°E, 11.vi.1998, V. Mutin	CNC	KF919054	658[0n]
CNC DIPTERA 106346	*Leucopodella* sp.	J.H. Skevington	United States, New Mexico, Grant Co., 14mi n. Silver City Cherry Crk. Camgrd, 32.9133°N, 108.227°W, 3–4.viii.1999, J. E. O`Hara, 2256 m	CNC	KF919080	658[0n]
JSS22200	*Leucopodella* sp.	J.H. Skevington	Costa Rica, San Jose, Adventure Inn, 9.9768°N, 84.15555°W, 13.viii.2010, J.H. Skevington, 978 m	CNC	KF919051	658[0n]
CNC DIPTERA 105583	*Melanostoma dubium*	C. Kassebeer	Austria, Salzburg, Obertauern, 47.249159°N, 13.558248°E, 5.viii.1991, C. Kassebeer, 1850 m	CNC	KF919077	658[0n]
CNC DIPTERA 105586	*Melanostoma fasciatum*	J.R. Vockeroth	Sri Lanka, Nuwara Eljya, 6.970759°N, 80.78318°E, 13.x.1994, C. Kassebeer, 1900 m	CNC	JN992003	658[0n]
10PROBE-13855	*Melanostoma mellinum*	J.H. Skevington	Canada, Manitoba, 26 km SE Churchill, Twin Lakes fen, 58.6332°N, 93.7871°W, 9.vii.2010, J. Wang, 29 m	BIOUG	KF919073	658[0n]
CNC DIPTERA 162813	*Melanostoma scalare*	B. Harding	United Kingdom, England, Oxford, Kidlington St. Marys Fields, 51.823398°N, 1.290459°W, 12.iv.2011, B. Hardling	CNC	KF919075	658[0n]
CNC DIPTERA 102513	*Pipiza bimaculata*	C. Kassebeer	Germany, Schleswig-Holstein, Lk PLO 1823/3 Dosenmoor, 54.131672°N, 10.024775°E, 26.v.1991, C. Kassebeer	CNC	KF919049	658[0n]
CNC DIPTERA 162741	*Pipizella nigriana*	J. Van Steenis	France, Isere, Villars de Lans, Pic St. Michel, hill top, 45.0873°N, 5.61867°E, 20.vii.2010, J. Van Steenis, W. Van Steenis	CNC	KF919074	658[0n]
adys 0097	*Platycheirus aeratus*	M. Hauser	United States, California, Placer Co., Tahoe City, 39.166°N, 120.239°W, S.M. Blank	DEBU	HQ578027	658[0n]
debu00330482	*Platycheirus angustatus*	A.D. Young	Canada, Alberta, Banff Natl. Pk., Two Jack Lake, 51.231°N, 115.498°W, 14.vii.2010, A.D. Young, 1444 m	DEBU	JF879980	658[0n]
adys 0058	*Platycheirus ciliatus*	A.D. Young	United States, Arizona, Coconino, NNE Bitter Springs, 36.738°N, 111.61°W, R.S. Beal	CNC	KF919062	658[0n]
CNCD9493	*Platycheirus concinnus*	J.H. Skevington	Canada, Manitoba, 26 km SE Churchill, Twin Lakes burn site, 58.619°N, 93.829°W, 4.vii.2007, J.H. Skevington	CNC	KF919066	653[5n]
CNC DIPTERA 105894	*Platycheirus groenlandicus*	T.R. Nielsen	Norway, Spiterstulen, On: Lom, 61.624835°N, 8.404412°E, 6.vii.1974, T. Nielsen	CNC	KF919065	656[2n]
CNC DIPTERA 105907	*Platycheirus jaerensis*	T.R. Nielsen	Netherlands, North Holland, Stokka, 65.959444°N, 12.471944°E, 31.v.1972, T. Nielsen	CNC	KF919072	658[0n]
CNC DIPTERA 35791	*Platycheirus manicatus*	J.R. Vockeroth	Georgia, Caucasus, Kazbegi, Mount Koltesh heath, 42.584853°N, 44.750188°E, 30.vi.1983, A.C. Pont, 2500 m	CNC	JN992020	658[0n]

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TABLE 1. (Continued)

Sample ID	Species	Identifier	Country	Deposition	GenBank Number	COI-5P Sequence Length
debu01047404	*Platycheirus nearcticus*	A.D. Young	Canada, Ontario, Uxbridge, 44.108°N, 79.121°W, 23.v.2010, H. Penney	DEBU	JN285978	658[0n]
USNM ENT 00258189	*Platycheirus notatus*	F.C. Thompson	New Zealand, West Coast, Westland District, 11 km SE of Kumara, 42.7224°S, 171.251°E, 28.xii.1986, F.C. & B.J. Thompson	CNC	HQ969657	658[0n]
adys 0078	*Platycheirus orarius*	A.D. Young	Canada, Nova Scotia, Richmond Co., Morrison Beach, 45.705°N, 60.328°W, L. MacInnis	DEBU	HQ578013	658[0n]
CNC DIPTERA 162614	*Platycheirus podagratus*	J. Van Steenis	Switzerland, Valais, Zinal, 46.1264°N, 7.63056°E, 27.v.2008, W. van Steenis, 1675m	CNC	KF919055	658[0n]
adys 0089	*Platycheirus spinipes*	A.D. Young	United States, New Mexico, Otero, Lincoln Nat`l Forest, 32.834°N, 105.8°W, S.D. Gaimari	DEBU	HQ578020	658[0n]
CNC DIPTERA 73577	*Platycheirus thompsoni*	A.D. Young	Canada, New Brunswick, Kouchibouguac National Park, 46.85°N, 64.967°W, 15.vi.1978, S. J. Miller	CNC	KF919076	658[0n]
CNC DIPTERA 73709	*Platycheirus yukonensis*	A.D. Young	Canada, Yukon Territory, Mile 51, Dempster Highway, 64.606°N, 138.338°W, 25–27.vi.1973, G. & D.M. Wood	CNC	KF919084	658[0n]
adys 0071	*Pyrophaena granditarsa*	A.D. Young	Canada, Nova Scotia, Cape Breton, 46.15°N, 60.167°W, T.A. Jones	CNC	KF919079	658[0n]
CNC DIPTERA 105813	*Pyrophaena rosarum*	E. Torp	Denmark, Damende Haderslev, 55.250072°N, 9.489067°E, 14.viii.1970, E. Torp	CNC	KF919081	658[0n]
CNC DIPTERA 106389	*Rohdendorfia alpina*	J.R. Vockeroth	Italy, South Tyrol, Val di Planol, 7.vii.1988, Clauben, 2000–2400 m	CNC	KF919082	658[0n]
CNC DIPTERA 105890	*Spazigaster ambulans*	J.A.W. Lucas	Turkey, Afyon, Sultan Daglari, 15km S. of CAY, 38.454457°N, 31.040343°E, 1.viii.1981, H. Coene, J. Lucas, B. V. Oorschot, 1400 m	CNC	KF919069	658[0n]
CNC DIPTERA 162624	*Syrphocheilosia claviventris*	J. Van Steenis	Switzerland, Valais, Zinal, 46.126389°N, 7.630556°E, 27.vii.2006, W. van Steenis, 2400 m	CNC	KF919052	658[0n]
CNC DIPTERA 56756	*Trichopsomyia apisaon*	J.H. Skevington	Canada, Quebec, Minganie, Lac Simone, Ile d`Anticosti, 49.853°N, 64.138°W, 15–26.vii.2007, P.M. Brousseau	CNC	KF919048	655[0n]
CNC DIPTERA 102807	*Triglyphus primus*	C. Claussen	Germany, Schleswig-Holstein, Froruper Berge S. Flensburg, 54.68162°N, 9.458282°E, 21.vii.1978, C. Claussen	CNC	KF919070	658[0n]
CNC DIPTERA 106118	*Tuberculanostoma antennatum*	J.R. Vockeroth	Ecuador, Pichincha, 0.43333°S, 78.6667°W, 4.iii.1976, G. & D.M. Wood, 2500 m	CNC	KF919071	658[0n]
CNC DIPTERA 106123	*Tuberculanostoma browni*	J.R. Vockeroth	Ecuador, Pichincha, 46 km E. Quito, 0.219813°S, 78.102997°W, 1–3.iii1976, G. E. Shewell, 4000 m	CNC	KF919083	658[0n]

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TABLE 1. (Continued)

Sample ID	Species	Identifier	Country	Deposition	GenBank Number	COI-5P Sequence Length
CNC DIPTERA 106128	*Tuberculanostoma cilium*	J.R. Vockeroth	Ecuador, Pichincha, 0.28333°S, 78.2°W, 1–7.iii1976, G. & D.M. Wood, 4000 m	CNC	KF919056	658[0n]
CNC DIPTERA 106130	*Tuberculanostoma pectinis*	J.R. Vockeroth	Ecuador, Napo, 14 km W Papallacta, 0.383168°S, 78.270639°W, 27.iii.1983, G. & D.M. Wood, 4200 m	CNC	KF919058	658[0n]
CNC DIPTERA 106139	*Xanthandrus callidus*	J.R. Vockeroth	Malaysia, Pahang, Frazer`s Hill, 3.716698°N, 101.740259°E, 1.v.1974, B. Bendell	CNC	KF919063	658[0n]
CNC DIPTERA 106142	*Xanthandrus comptus*	J.R. Vockeroth	Russia, 29.ix.1982, V. Mutin	CNC	KF919059	658[0n]
CNC DIPTERA 106144	*Xanthandrus palliatus*	J.R. Vockeroth	Ecuador, Pichincha, 0.28333°N, 78.2°W, 1–7.iii1976, G. & D.M. Wood, 4000 m	CNC	KF919060	658[0n]

Results and discussion

Key to the genera and subgenera of Afrotropical syrphine flower flies

A. Postpronotum pilose (Fig. MND 64); male abdomen with tergum 5 not visible dorsally (Fig. MND 101) (subfamilies Microdontinae & Eristalinae) . . . . . other flower flies

\- Postpronotum bare (Fig. MND 65); male abdomen with tergum 5 visible dorsally (Fig. MND 97) (subfamily Syrphinae). . . . 1

1. Tergum 1 greatly reduced, frequently almost linear on disc and practically covered by scutellum, sublaterally at most 1/2 as long as tergum 2 (Fig. MND 96); terga not punctate; length 6.7 mm or more 5

\- Tergum 1 well-developed, especially on disc where it is frequently 1/2 as long as tergum 2 and always extends well beyond scutellum, sublaterally about 3/4 as long as tergum 2 (Fig. MND 97); terga minutely punctate; length 7.5 mm or less. . . . . ***Paragus***...2

2. Eye with pile of nearly uniform color, not forming vittae of contrasting color; scutellum entirely black . . . ***Pandasyopthalmus***

\- Eye with pile arranged in 2–5 more or less vertical vitta or contrasting color; scutellum black with apex narrowly yellow or reddish 3

3. Scutellum with conspicuous dentis (teeth) on posterior margin; eye in dorsolateral view with two dark and three more distinct white pile fasciae. . . . . ***Serratoparagus***

\- Scutellum with apical margin simple, without dens; eye with two white pile fasciae among dark pile. 4

4. Terga 1–5 completely fused, at least laterally . . . . . ***Afroparagus***

\- Only terga 1–2 fused completely. . . . . ***Paragus***

5. Abdomen parallel-sided (Fig. MND 96) to oval, never distinctly petiolate 7

\- Abdomen elongate, strongly petiolate (Fig. MND 95); 2nd tergum narrower than 3rd tergum 6

6. Laterotergum pilose, at least with a patch of long pile dorsally; postpronotum and/or anterior anepisternum pilose; metepisternum pilose; scutum usually with a well-develop collar of longer pile on anterior margin. . . . . ***Allobaccha***

\- Laterotergum, anterior anepisternum, metepisternum all bare; scutum without pile collar . . . . . ***Pseudodoros***

*** ***Baccha*** in our sense does not occur in the Aftropical region, but would run here in this key and is separate from the preceeding genera by a complete metacoxal bridge.

7. Face and scutellum entirely black in background color; abdomen usually without marginal sulcus; metasternum bare; eye bare. Note that one *Pelloloma* species has an indistinct marginal sulcus on the apical tergum 5 22

\- Face or scutellum or both at least partly yellow or yellowish brown in background color, both never entirely black, if in doubt, eye pilose; abdomen, metasternum, and eye variable 8

8. Antenna short, shorter than head; basoflagellomere at most twice as long as broad; scape and pedicel not longer than broad (Fig. MND 7–8). 10

\- Antenna elongate, longer than head; basoflagellomere at least three times as long as broad; scape or pedicel longer than broad (Fig. MND 4). 9

9. Metafemur and metatibia without pile brushes; eye densely long pilose; scape and pedicel subequal; abdomen strongly convex dorsally, strongly margined; vein R_{4+5} sinuate, looped into cell R_{4+5}; calypter bare . . . . . ***Chrysotoxum***

- Metafemur and metatibia with brushes of long pile; eye sparsely and short pilose; scape about 3 times as long as pedicel; abdomen not convex nor with marginal sulcus; vein R_{4+5} straight; calypter pilose on ventral lobe . . . . . ***Afrosyrphus***

10. Calypter with lower lobe pilose, especially on posteromedial portion (Fig. MND 62); metacoxa with a tuft of strong pile at posteromedial apical angle (Fig. MND 77) . . . . . ***Betasyrphus***
- Calypter bare; metacoxa without pile tuft 11

11. Anterior anepisternum bare; wing margin without minute closely spaced black maculae on posterior margin. 13
- Anterior anepisternum pilose at least posterodorsally (Fig. MND 65); wing margin with a series of minute closely spaced black maculae on posterior margin (Fig. MND 61) 12

12. Metasternum pilose; metepisternum pilose ventrad to spiracle . . . . . ***Episyrphus***
- Metasternum bare; metepisternum bare . . . . . ***Meliscaeva***

13. Abdomen without marginal sulcus 19
- Abdomen with at least a weak marginal sulcus on terga 4 and 5, often with a strong sulcus on terga 3–5 14

14. Metapleuron bare ventrad to spiracle; metasternum variable; size and shape variable 16
- Metapleuron with a tuft of fine pile ventrad to spiracle; metasternum pilose; large species with broad flattened abdomens with distinct marginal sulcus 15

15. Mesonotum anteriorly with a distinct collar of longer and denser pile; vein R_{4+5} sinuate, distinctly looped into cell R_{4+5} . . . . . ***Asarkina***
- Mesonotum without a collar of pile; vein R_{4+5} nearly straight . . . . . ***Achoanus***

16. Eye densely pilose; metacoxa with tuft of strong pile at posteromedial apical angle (Fig. MND 77) . . . . . ***Betasyrphus***
- Eye bare; metacoxal without such a pile tuft 17

17. Metasternum pilose; wing densely microtrichose on apical 1/3; scutum dark laterally; male metacoxa simple . . . . . ***Eupeodes***
- Metasternum bare; wing extensively bare, with only sparse scattered microtrichia on apical 1/3 18

18. Scutum with well-defined bright yellow lateral vitta, extending from postpronotum to scutellum; male metacoxa with ventral spine-like process (widespread) . . . . . ***Ischiodon***
- Scutum with ill-defined yellow lateral vitta; male metacoxa simple (northern Chad only) . . . . . ***Scaeva***

19. Scutum with lateral yellow vitta extending from postpronotum to scutellum 21
- Scutum with lateral yellow vitta not extending beyond transverse suture 20

20. Face with broad black vitta; subscutellar fringe well-developed except on medial 1/3; male genitalia small, with tergum 9 at most 1/2 as wide as abdomen; female 5th tergum with distinct yellow maculae which are isolated from lateral margins . . . . . ***Exallandra***
- Face yellow; subscutellar fringe absent; male genitalia large and globose, with tergum 9 as wide as abdomen; female 5th tergum either without yellow maculae or yellow maculae broadly reaching lateral margin . . . . . ***Sphaerophoria*** (s. s.)

21. Subscutellar fringe complete, dense; male holoptic; male genitalia small, inconspicuous, with tergum 9 at most 1/2 as wide as abdomen; female face without carina (widespread, but not St. Helena). . . . . ***Allograpta***
- Subscutellar fringe absent; male dichoptic; male genitalia large and globose, with tergum 9 as wide as abdomen; female face with a distinct median carina extending from antenna to tubercle (St. Helena only) . . . . . ***Sphaerophoria*** (***Loveridgeana***)

22. Metepisternum with some fine subappressed pile; katepisternum with pile patches broadly separated posteriorly, joined anteriorly (Fig. MND 42); metacoxa with tuft of pile at posteromedial apical angle (as in Fig. MND 48) . . . . . ***Xanthandrus*** (***Afroxanthandrus***)
- Metepisternum bare; katepisternal pile patches broadly separated throughout (as in Fig. 45); metacoxa with or without pile tuft 23

23. Metacoxal with tuft of pile at posteromedial apical angle (as in Fig. MND 48); metafemur swollen, usually about 3 times as broad as tibia; metasternum entire . . . . . ***Pelloloma***
- Metacoxa without posteromedial apical pile tuft; metafemur simple, not swollen, about as broad as tibia. 24

24. Metasternum greatly reduced, with deep posterior incision laterally so that sclerotized portion consists of a median diamond-shaped area with narrow anterior and lateral strips (Fig. MND 70); face not produced below, with small tubercle (Fig. MND 8) . . . . . ***Melanostoma***
- Metasternum entire (Fig. MND 71); face almost straight with strong tubercle (Fig. 1B), slightly produced forward ventrally . . . . . ***Afrostoma***

Key to the world genera of the Bacchine and Melanostomine groups

A. Postpronotum pilose (Fig. MND 64) or if postpronotum bare, then face and/or scutellum at least partially yellow . . . . . other Syrphidae
- Postpronotum bare; face usually and scutellum entirely black 1

1. Abdomen elongate to oval, as broad as or broader than thorax 4
- Abdomen petiolate, at its narrowest (usually 2nd tergum apex), distinctly narrower than thorax 2

2. Arista pilose, with pili much longer than aristal width; abdomen slightly petiolate, with 2nd tergum narrowed apically and distinctly narrower than 3rd tergum and thorax; hind tibia modified . . . . . ***Spazigaster***
- Arista bare or at most pubescent, with pili only as long as or slightly longer than basal diameter of arista; hind tibia unmodified 3

3. Face with distinct tubercle (Fig. MND 7); metathoracic pleuron bare; scutellum without ventral fringe (not Neotropical) . . . . . ***Baccha***

- Face without tubercle, straight or convex; metathoracic pleuron pilose; scutellum with ventral fringe (Neotropical only) . . . . . ***Leucopodella***

4. Metacoxa bare posteriorly; mesocoxa bare posteriorly. 7
- Metacoxa with a tuft of pile at posteromedial apical angle (Fig. MND 77); mesocoxa pilose posteriorly 5

5. Metepisternum with several fine subappressed hairs; katepisternum with pile patches broadly separated posteriorly, joined anteriorly . . . . . ***Xanthandrus***
- Metepisternum bare; katepisternal pile patches broadly separated throughout 6

6. Metafemur swollen; antennal pits continuous (Afrotropical only) . . . . . ***Pelloloma***
- Metafemur slender; antennal pits separated (Neotropical only) . . . . . ***Talahua***

7. Metasternum greatly reduced, with deep posterior incision laterally so that sclerotized portion consists of a median diamond-shaped area with narrow anterior and lateral strips (Fig. MND 70); face not produced below, with small tubercle; male legs slender, without bristles, pile tufts or modified hairs. . . . . ***Melanostoma***
- Metasternum entire (cf. Fig. MND 71); face variable, almost straight with weak tubercle or moderately or strongly produced forward ventrally; male sometimes with legs modified, either broadened, or with special bristles, pile tufts or modified hairs 8

8. Face not greatly produced anteriorly; basoflagellomere oval or slightly elongate, never more than twice as long as broad. . . 11
- Face produced greatly anteriorly, usually extending well anterior to antennal base; antenna elongate, as long as or longer than face; basoflagellomere elongate, 4 or more times as long as broad 9

9. Eye pilose; basoflagellomere elongate, more than 5 times as long as broad; male dichoptic . . . . . ***Pseudoplatycheirus***
- Eye bare; basoflagellomere shorter; male holoptic 10

10. Eye normal; gena and ventral occiput small, not enlarged; anterior tentorial pit shallow; facial stripe narrow (Neotropical (Andes)). . . . . ***Tuberculanostoma***
- Eye reduced; gena and ventral occiput enlarged; anterior tentorial pit deep; facial stripe broad (Palaearctic (Pamirs)) . . . . . "***Tuberculanostoma***"

11. Male proleg usually modified, with protibia apically and probasitarsomere expanded, or profemur or protibia with specialized chaetotaxy (Holarctic & Neotropical (Andean)). 13
- Male legs simple (Neotropical or Afrotropical) 12

12. Face with transverse grooves dorsally along tubercle; facial tubercle low dorsally, not distinct; antennal pits separated (Neotropical) . . . . . ***Argentinomyia***
- Facial tubercle distinct dorsally, without grooves; antennal pits confluent (Afrotropical). . . . . ***Afrostoma***

13. Mesonotum smooth or with puncta finer and more widely scattered, not producing a distinct rugose appearance; legs partially pale . . . . . ***Platycheirus*** ... 15
- Mesonotum distinctly and finely rugose; rugose appearance due to large and closely set puncta, puncta set in irregular rows; legs black. 14

14. Arista bare, inserted near middle of basoflagellomere; face wider ventrally, with sides divergent ventrally; abdomen with pale maculae . . . . . ***Rohdendorfia***
- Arista pubescent, with short, appressed pile, inserted basally; face not distinctly wider ventrally, with sides approximately parallel; abdomen entirely black . . . . . ***Syrphocheilosia***

15. Wing shorter than abdomen; abdomen broad or mostly red or black with 2 yellow maculae on 3rd tergum . . . . . ***Pyrophaena***
- Wing longer than abdomen; abdomen narrow, not with such abdominal pattern. 16

16. Male: Protibia apically and/or protarsus expanded, usually with specialized setae; profemur without specialized chaetotaxy . . . . . ***Platycheirus*** (s.s.)
- Male: Protibia and protarsus simple 17

17. Male: Profemur posteriorly on at least apical 1/2 with row of stiff straight black setae, with apical-most (last) seta longer and with its apex strongly curved . . . . . ***Pachysphyria***
- Male: Profemur without such specialized chaetotaxy. 18

18. Face produced ventrally, pollinose with distinct bare puncta; male protibia usually with long black bristles proteriorly (Holarctic and Andean) . . . . . ***Carposcalis***
- Face not produced, without distinct bare puncta; male protibia without such specialized chaetotaxy (New Zealand only) . . . . . ***Eocheilosia***

Synopsis of groups Bacchini and Melanostomini

Face usually (*Baccha elongata* with face partially yellow) and scutellum always entirely black in background color; eye bare; anepisternum with anterior flattened portion bare; metasternum bare; abdomen without marginal sulcus (except *Pelloloma* species with apical tergum with sulcus); phallus not segmented.

The group, based on *Melanostoma,* was originally recognized by Williston (1885: 133, as Melanostominae) largely based on syrphine species with black faces. He also recognized as a related group, the Bacchinae for just the genus *Baccha*. Within the subfamily Syrphinae, Hull (1949b: 280) had presented a rather muddled classification, in one place (p. 280) writing about two tribes (Syrphini and Epistrophini) and another about "two tribogenera" but in his listing/review of genera, he recognized three (Syrphini, Bacchini and Melanostomini) tribes.

Goffe (1952) recognized the subfamily Syrphinae and divided it into two supertribes on the basis of whether the abdomen was "margined" or not. Then each suptertribe was divided into two on the basis of whether there was a subscutellar pile fringe or not. He recognized the melanostomines as a subtribe of the Stenosyrphini, that is a group with a subscutellar pile fringe and Baccha as another subtribe of the Stenosyrphini, that is a group without a subscutellar pile fringe.

Fluke (1957) analyzed the male genitalia of the tribe Melanostomini, but never defined what that tribe was. Later Vockeroth (1969: 11, also 1990: 659) recognized five tribes in the subfamily Syrphinae, following Hull in having the tribes Melanostomini and Bacchini separate from the Paragini, Syrphini and Toxomerini.

Shatalkin (1975) suggested two subtribes for Melanostomini (Melanostominia and Platycheirina) and placed *Baccha* and related genera into Bacchini. His Melanostominia included *Leucopodella*, *Melanostoma*, *Tuberculanostoma* and *Xanthandrus* while Platycheirina included *Platycheirus*, *Pseudoplatycheirus*, *Pyrophaena*, *Rohdendorfia* and *Spathiogaster* (including *Spazigaster*).

Based on larval characters, Rotheray and Gilbert (1989) placed *Baccha*, *Sphaerophoria*, *Platycheirus* and *Pyrophaena* within Bacchini, while *Melanostoma* and *Xanthandrus* were placed in Melanostomini. However, their later paper muddies this result with a paraphyletic Melanostomini and *Sphaerophoria* and *Allograpta* being included in the Bacchini (Rotheray and Gilbert 1999).

Recent molecular analyses have attempted to shed light on Syrphinae relationships, including Bacchini. Using fragments of mitochondrial COI and ribosomal 28s DNA to construct a hypothesis of relationships within the Syrphidae, Ståhls *et al.* (2003) hypothesize that Bacchini are paraphyletic (based on only three Bacchini exemplars). Mengual *et al.* (2008) came to the same conclusion by extending this analysis for the Syrphinae using the same gene fragments and denser taxon sampling. Their results place *Baccha* as the sister group of the tribe Pipizini. More robust outgroup sampling, denser gene sampling and improved alignment methods need to be applied to test their hypotheses. Skevington *et al.* (2014) are currently working towards this goal.

We include an analysis of Bacchini *s.l.* genera (Fig. 2) here, largely in an effort to place *Afrostoma* into phylogenetic context. Taxon sampling is the densest yet provided for Bacchini but because our gene tree is based solely on COI data, we make no effort to include other syrphine taxa to test Bacchini monophyly. In our analysis, *Argentinomyia*, *Xanthandrus*, *Melanostoma* and *Afrostoma* form a well-supported monophyletic lineage. The latter is well-supported as the sister to *Melanostoma*. *Tuberculanostoma* forms a paraphyletic group within *Platycheirus*, and the rest of the taxa typically found with the *Platycheirus* lineage in analyses form a sister group to *Platycheirus* and *Tuberculanostoma*. The relationship of *Baccha* with these groups is unclear. There is clearly still a lot of work remaining to sort out higher relationships within the Syrphidae. In summary, we here recognize Bacchini as a working and possibly paraphyletic group with Melanostomini as well supported monophyletic group.

Genus *Argentinomyia* Lynch-Arribalzaga

Argentinomyia Lynch-Arribalzaga, 1891: 199. Type, *testaceipes* Lynch-Arribalzaga by monotypy.
Rhysops Williston, 1907: 2. Type, *Melanostoma rugosonasus* Williston by subsequent designation of Coquillett (1910: 601).
Braziliana Curran, 1925: 252. Type, *Melanostoma longicornis* Williston by original designation. = *longicornis* Walker
Allograptina Enderlein, 1938: 226. Type, *octomaculata* Enderlein by original designation.

Restricted to Neotropical region (32 species, last revision was Fluke (1945) but unfortunately he mixed up "*Rhysops*" and "*Melanostoma*" species. One needs, therefore, to run identifications through both of his keys.)

Genus *Baccha* Fabricius

Baccha Fabricius, 1805: 199. Type, *Syrphus elongatus* Fabricius by subsequent designation of Partington (1835: 275).
Bacca Rondani, 1845: 458. Misspelling of *Baccha* Fabricius.
Bacha Schiner, 1857: 383. Misspelling of *Baccha* Fabricius.
Bacchina Williston, 1896: 86. Type, *Syrphus elongatus* Fabricius by subsequent designation of Wirth *et al.* (1965: 572)
Vaccha Parsons, 1948: 226. Misspelling of *Baccha* Fabricius.

A north temperate group restricted to the Holarctic and northern Oriental region (13 species: Nearctic (1 species [*elongata* Fabricius]); Palaearctic (11 species); Oriental (2 species).

Genus *Leucopodella* Hull

Leucopodella Hull, 1949a: 94. Type, *Baccha lanei* Curran by original designation.
Xestoprosopa Hull, 1949a: 94. Type, *Baccha delicatula* Hull by original designation.

Primarily Neotropical, with one species in northern Mexico and southwestern USA (1 Nearctic species [*marmorata* Bigot], 10 Neotropical; last key Thompson (1981: 193)).

Genus *Melanostoma* Schiner

Plesia Macquart, 1850: 460. Type, *fasciata* Macquart by original designation. Preoccuppied by Jurine (1807: 150) and Klug (1833: 185).
Melanostoma Schiner, 1860: 213. Type, *Musca mellina* Linnaeus by original designation.
Psilogaster Lioy, 1864: 753. Type, *Musca mellina* Linnaeus by subsequent designation of Goffe (1946: 30).
Psylogaster Lioy, 1864: 753. Incorrect orginal spelling of *Psilogaster* Lioy by the revision of Verrall (1901: 56).
Ptylogaster Bigot, 1883: 225. Misspelling of *Psilogaster* Lioy.
Psilogaster Bezzi & Stein, 1907: 57. Misspelling of *Psylogaster* Lioy.
*Atrichostich*a Enderlein, 1938: 234. Type, *Spathiogaster aurantiaca* Becker by original designation.
Anocheila Hellen, 1950: 90. Type, *Chilosia freyi* Hellen by monotypy = *dubium* Zetterstedt.

All regions except Neotropics (57 species: Nearctic (1 species); Palaearctic (20 species); Afrotropical (23 species); Oriental (10 species) and Australasian (4 species)).

Genus *Pelloloma* Vockeroth

Pelloloma Vockeroth, 1973: 595. Type, *nigrifacies* Vockeroth by original designation.

Restricted to Afrotropical region (3 species; last revision by Kassebeer 2000b). Vockeroth (1973: 597) placed his new genus in the tribe Syrphini on the basis of the complex male genitalia and strong lateral margin on the abdominal terga. He did acknowledge that the black coloration of the face and scutellum as well as the unsegmented phallus suggested placement among the Melanostomine genera.

Genus *Platycheirus* Lepeletier & Serville

Cheilosia Panzer, 1809: 14. Type, *Syrphus rosarum* Fabricius by monotypy.
Platycheirus Lepeletier & Serville, 1828: 513. Type, *Syrphus scutatus* Meigen by subsequent designation of Westwood (1840: 137).
Platychirus Agassiz, 1846: 295. Emendation of *Platycheirus* Lepeletier & Serville.
Pyrophaena Schiner, 1860: 213. Type, *Syrphus rosarum* Fabricius by original designation.
Poliphaena Neuhaus, 1886: 105. Misspelling of *Pyrophaena* Schiner.
Polycheirus Neuhaus, 1886: 99. Misspelling of *Platycheirus* Meigen.
Polyphaena Neuhaus, 1886: 86. Misspelling of *Pyrophaena* Schiner.
Platychirus Williston, 1887: 56. Emendation of *Platycheirus* Lepeletier & Serville.
Stenocheilosia Matsumura, 1916: 242. Type, *isshikii* Matsumura by original designation.
Carposcalis Enderlein, 1938: 199. Type, *Syrphus stegnus* Say by original designation.
Pachysphyria Enderlein, 1938: 196. Type, *Scaeva ambigua* Fallen by original designation.
Eocheilosia Hull, 1949b: 327. Type, *Cheilosia ronana* Miller by original designation.
Pseudoplatychirus Doesburg, 1955: 48. Type, *peteri* van Doesburg by original designation.

All regions except Afrotropics (201 species: Nearctic (79 species, Vockeroth 1990 revision); Palaearctic (116 species); Neotropical (14 species); Oriental (5 species); Australasian (13 species, all New Zealand). The genus is divided into six subgenera (*Pyrophaena*, 4 species: Nearctic (3 species), Palaearctic (3 species); *Carposcalis*, Nearctic (19 species), Palaearctic (1 species [*cheilosiaeformis* Smit & Barkalov]), Neotropics (14 species); *Eocheilosia*, (13 species, New Zealand); *Pachysphyria*, 8 species: Nearctic (4 species), Palaearctic (6 species); *Pseudoplatychirus,* Palaearctic (2 species); and the typic subgenus for the rest of the species).

Genus *Rohdendorfia* Smirnov

Rohdendorfia Smirnov, 1924: 94. Type, *dimorpha* Smirnov by monotypy.

Palaearctic region only (3 species), last revision Barkalov & Nielsen (2010)

Genus *Spazigaster* Rondani

Spazigaster Rondani, 1843: 43. Type, *apennini* Rondani by monotypy = *ambulans* Fabricius.
Spazogaster Agassiz, 1846: 345. Emendation of *Spazigaster* Rondani.
Syrphisoma Costa, 1857: 440. Type, *lugubris* Costa by original designation = *ambulans* Fabricius.
Spatigaster Schiner, 1861: 298. Emendation of *Spazigaster* Rondani.
Spathegaster Schiner, 1868: 339. Misspelling of *Spazigaster* Rondani.
Spathiogaster Loew, 1876: 18. Emendation of *Spazigaster* Rondani.
Spathidogaster Loew, 1876: 18. Emendation of *Spazigaster* Rondani.
Spaziogaster Scudder, 1882: 292. Misspelling of *Spazigaster* Rondani.
Spazogaster Scudder, 1882: 310. Emendation of *Spazigaster* Rondani.
Sparzigaster Woodworth, 1913: 145. Misspelling of *Spazigaster* Rondani.

Palaearctic region only (2 species). Habitus figure of the type species is given by Speight & Lucas (1992).

Genus *Syrphocheilosia* Stackelberg

Syrphocheilosia Stackelberg, 1964: 467. Type, *aterrima* Stackelberg by original designation = *claviventris* Strobl.

Palaearctic region only, Central Asia (1 species). Claussen (1987) provides a figure of the male genitalia of *claviventris* (also see Thompson 1980).

Genus *Talahua* Fluke

Talahua Fluke, 1945: 22 (as a subgenus). Type, *Melanostoma fervidum* Fluke by original designation.

Neotropical region only, Ecuador (1 species).

Genus *Tuberculanostoma* Fluke

Tuberculanostoma Fluke, 1943: 425. Type, *antennatum* Fluke by original designation.

Neotropical region only, high Andes from Venezuela to Bolivia (4 species, last revision Fluke (1943). Another species, *solitarium* van Doesburg (1955: 50), was described from the Karakorum mountains (Oriental region). Unfortunately, the species was based only on females and differs significantly from the Neotropical species in having a head with reduced eyes, enlarged gena and ventral occiput, very deep anterior tentorial pits and very broad

facial stripes. *Tuberculanostoma* has a normal head (except for snout), with large eyes, small narrow gena and ventral occiput, shallow tentorial pits and narrow facial stripes. Unfortunately, without a male the description of a new genus for this strange Karakorum species would be premature.

Genus *Xanthandrus* Verrall

Xanthandrus Verrall, 1901: 316. Type, *Musca comtus* Harris by subsequent designation of Coquillett (1910: 620).
Hiratana Matsumura & Adachi, 1919: 129. Type, *Syrphus quadriguttulus* Matsumura by original designation = *comtus* Harris.
Androsyrphus Thompson, 1981: 106 (as a subgenus). Type, *Xanthandrus setifemoratus* Thompson by original designation.
Indosyrphus Kohli, 1987: 132. Type, *garhwalensis* Kohli by original designation.
Indosyrphus Kohli, *et al.* 1988: 121. Type, *garhwalensis* Kohli, Kapoor & Gupta by original designation.
Afroxanthandrus Kassebeer, 2000a: 150. Type, *Xanthandrus congoensis* Curran by original designation.

All regions (28 species: Nearctic (2 species), Palaearctic (3 species), Neotropical (14 species), Afrotropical (2 species), Oriental (6 species), Australasian (2 species)). The genus is divided into three subgenera (*Androsyrphus*, West Indies (1 species [*setifemoratus* Thompson]); *Afroxanthandrus*, Afrotropical (2 species); and the typic subgenus for the rest of the species).

Afrostoma Skevington, Thompson & Vockeroth, gen. nov.

(Figs 1A–C, 3A–D)

Type-species. *Afrostoma quadripunctatum* Skevington & Thompson.

Description. Small, slender black flies. Length: 7–8 mm. **Head**: Face straight, slightly projecting, with distinct medial tubercle; oral opening about 1.2 times as long as broad; gena narrow; frontal triangle not swollen; antennal sockets confluent; eye bare, holoptic in male, with eye contiguity slightly longer than frontal triangle; antenna short, with basoflagellomere oval; arista long, about as long as antenna, pubescent, with short pile about as long as aristal diameter. **Thorax**: Black; postpronotum (humerus) bare; notopleuron with indistinct tubercle; scutellum convex, not modified; subscutellar fringe present, of multiple rows; anterior anepisternum bare; katepisternal pile patches broadly separated throughout; metasternum not excavated anteriorly, bare; metathoracic pile patch absent; metapleuron bare; postmetacoxal bridge absent; legs simple; plumula simple, long. Wing: brownish, microtrichose; vein R_{4+5} straight; vein M_1 (apical crossvein) oblique, slightly sinuous; alula broad, about as wide as cell cup. **Abdomen**: elongate, slightly narrower than thorax, segments more or less quadrate, as long as broad, without marginal sulcus. Male genitalia: surstyles symmetric; lingula absent; postgonite free; phallus one-segmented.

Etymology. *Afrostoma* is an arbitrary word derived from combination of the first letters of Afrotropical and the last letters of *Melanostoma*. The name is to be treated as neuter as is *Melanostoma*.

Discussion (including comparative diagnosis). *Afrostoma* is the sister genus to *Melanostoma* (Fig. 2) and belongs among the basal syrphine groups in the paraphyletic assemblage known as the tribe Melanostomini or Bacchini (see above). While these flies look like *Melanostoma* species, close inspection of the metasternum reveals the lack of the basolateral excavation, characteristic of *Melanostoma* (Andersson 1970). Also, the male genitalia lack the specialized synapomorphies of *Platycheirus* (scythe-shaped gonostylus and basomedial lobe on surstyle).

Afrostoma is very distinctive by its lack of male external secondary characters and biogeography (being endemic to the Afrotropical region where the only other melanostomine group is *Melanostoma*).

Afrostoma quadripunctatum Skevington & Thompson, sp. nov.

Description. MALE. Head: Black; face sparsely gray pollinose except tubercle shiny, tawny pilose; gena shiny on anterior 1/2, sparsely gray pollinose, white pilose posteriorly; lunule black, shiny; frontal triangle sparsely gray pollinose, tawny pilose except with a few black pili intermixed; eye contiguity long, slightly longer than frontal triangle; ocellar triangle shiny, black pilose; occiput white pollinose except more grayish white on dorsal 1/3, white pilose on ventral 2/3, black pilose dorsally; antenna black. **Thorax**: Black except postalar callus slightly more

brownish black; prothorax grayish-white pollinose, white pilose; notum and scutellum shiny, golden pilose except with some black pili intermixed; pleuron sparsely gray pollinose, yellow pilose; plumula white; calypter white with brown margin and yellow fringe; halter yellow. Legs: Black, except trochanter, base of femora and femoral-tibial joints brownish orange, black pilose except coxae yellow pilose. Wing: Brownish, completely microtrichose. **Abdomen**: Black except for small yellow quadrate basolateral (only on basolateral 1/5) maculae on 3rd and 4th terga; terga dull black pollinose, yellow pilose except black pilose on apical 1/4 of 4th tergum and white and black pilose on genitalia segments; sterna black, subshiny, very sparsely pollinose, yellow pilose except black pilose apically on 4th sternum. Genitalia: Epandrium quadrate (Fig. 1A); surstylus elongate, simple (Figs 1A, B); ejaculatory apodeme cylindrical (Figs 1C, D); distiphallus notched (Fig. 1D). **FEMALE.** Unknown.

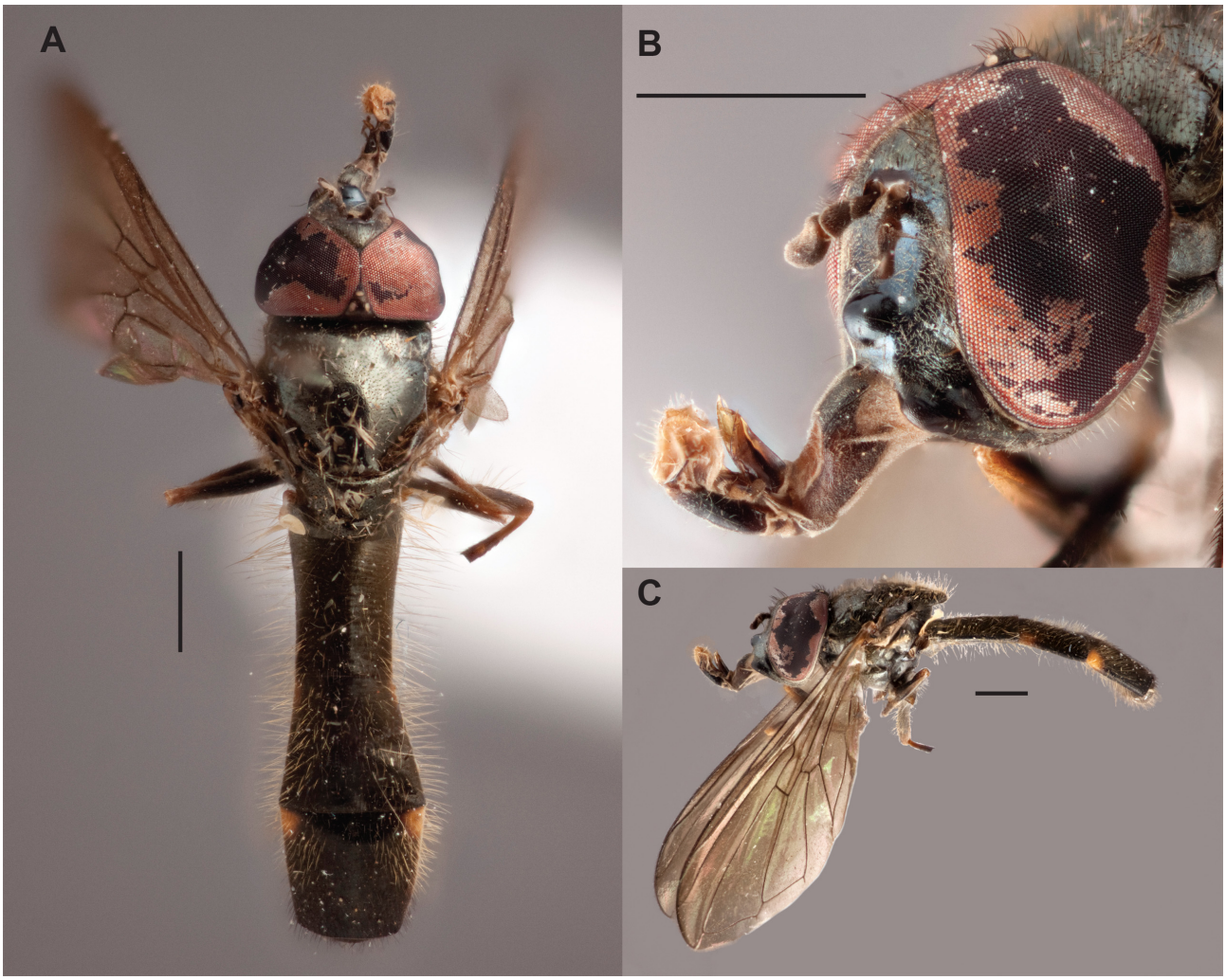

FIGURE 1. *Afrostoma quadripunctatum* Skevington & Thompson, male (specimen USNM ENT 00036401). A. habitus, dorsal view; B. oblique view of head; C. habitus, lateral view. Scale bars: 1 mm.

Type material. Holotype male: **Kenya:** Western Province: Kakamega Forest, [0.2355°N, 34.8645°E], 8–9.xi.[19]83, A. Freidberg (USNM ENT 00036402) (USNM); Paratypes: **Kenya:** same location as holotype: 30.viii.–5.ix.2000, ♂, R. Copeland, Malaise trap (USNM ENT 00036401) (CNC); ... 8–9.xi.1983, 2♂, I. Yarom (USNM ENT 00036403-4); ... 14.i.1996, ♂, I. Yarom & A. Freidberg (USNM ENT 00036405) (USNM); **Uganda:** South West: Rwenzori Mountains, 5 km west of Kilembe, [0.19882°N, 29.96895°E], 2500m, 6.i.1996, 1♂, A. Freidberg, Malaise trap (USNM ENT 00036406) (CNC). One Paratype will be returned to an appropriate museum in Kenya.

Type-locality. Kenya. Western Province: Kakamega Forest, 0.2355°N, 34.8645°E.

Etymology. The species epithet, *quadripunctatum*, is an adjective referring to the four yellow punctate maculae on the abdomen.

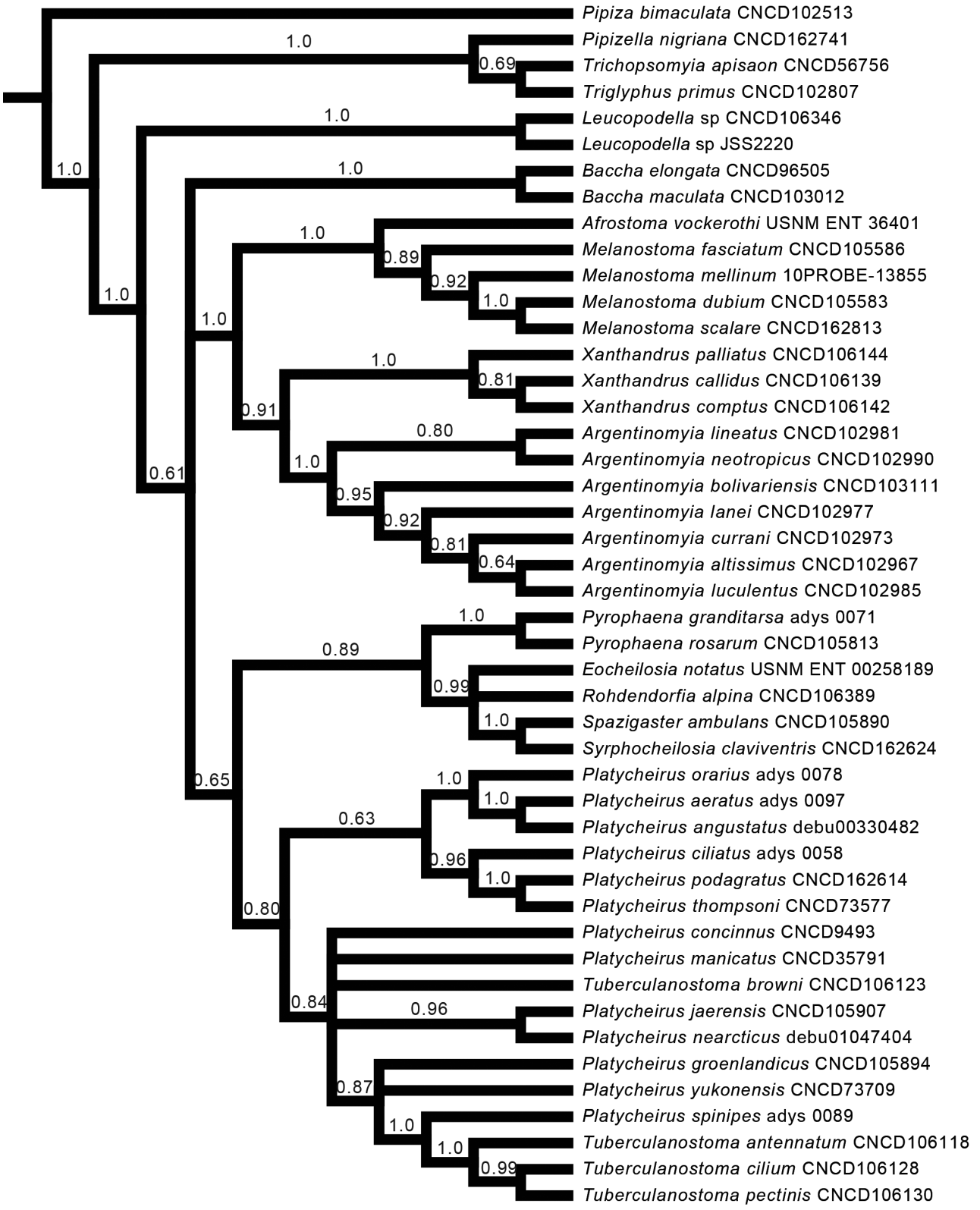

FIGURE 2. 50% majority rule consensus cladogram of *Bacchini* species produced from Bayesian analysis of COI data. Clade supports shown are posterior probabilities.

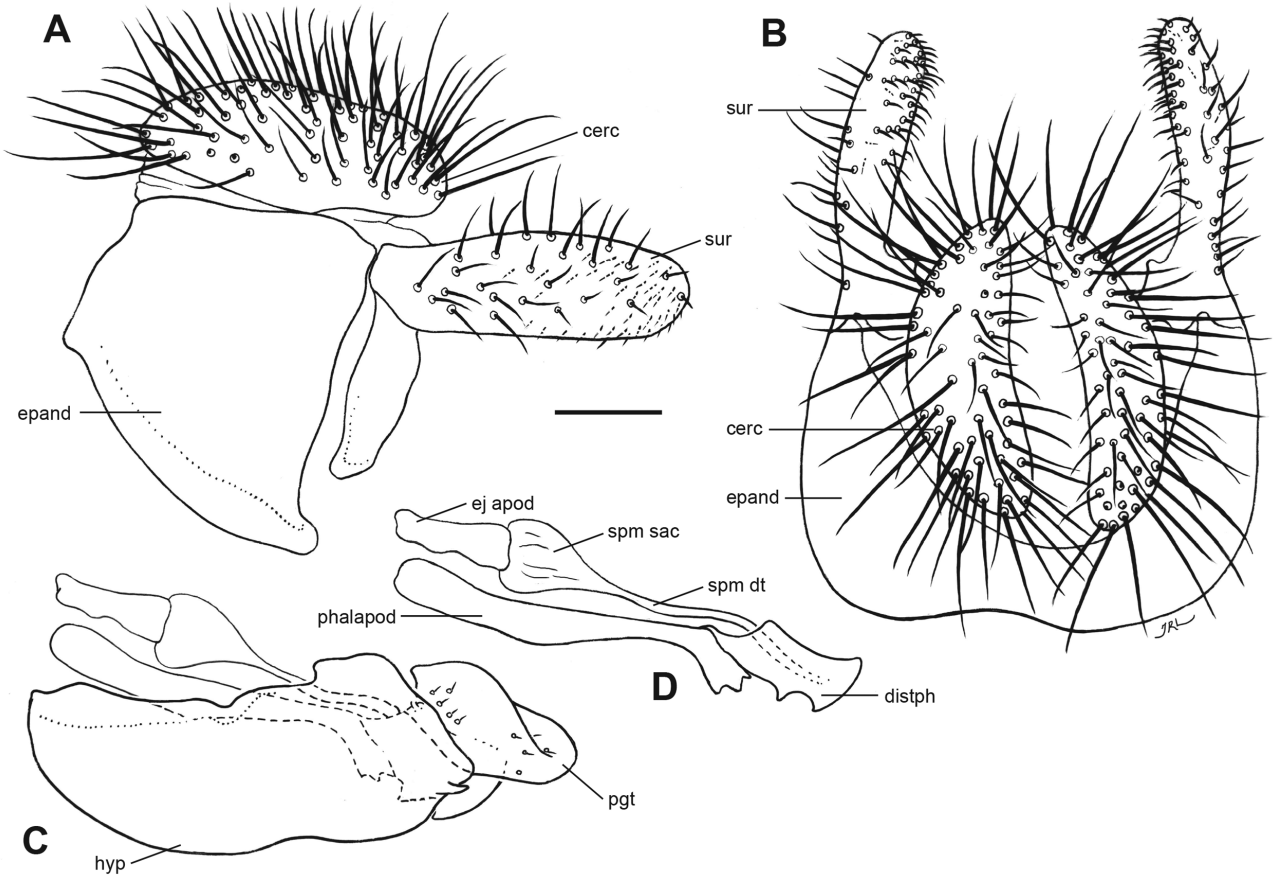

FIGURE 3. *Afrostoma quadripunctatum* Skevington & Thompson, male genitalia: A. epandrium, lateral view; B. epandrium, dorsal view; C. hypandrium, lateral view; D. aedeagal complex, lateral view. Abbreviations: cerc—cercus; distph—distiphallus; ej apod—ejaculatory apodeme; epand—epandrium; hyp—hypandrium; phalapod—phallapodeme; pgt—postgonite; smp dt—sperm duct; spm sac—sperm sac; sur—surstylus. Scale bar: 0.1 mm.

Discussion. *Afrostoma quadripunctatum* is superficially similar to *Melanostoma infuscatum* Becker, but the yellow abdominal maculae are much smaller and the facial tubercle is more abrupt and prominent than those in *infuscatum*. The type series of *infuscatum* Becker (2 males, 2 females in Paris) was examined and herewith we validate the unpublished lectotype selected by Kassebeer (a male, labeled by him) to ensure consistent and universal interpretation of this name.

Acknowledgments

Thanks to Christophe Daugeron, Muséum National d'Histoire Naturelle, Paris (MNHN) for details on the lectotype of *Melanostoma infuscatum* Becker and to Tiana Litwak for the illustrations of the male genitalia.

The authorship of this work is a team effort. Vockeroth first recognized that a central African species represented a new group. Thompson agreed and recognized that it was based on a new species, not *infuscatum* Becker. Skevington provided the DNA character evidence to place the group within the current classification. Together, Skevington and Thompson wrote the manuscript.

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