Key to distinctive groups (genera, subgenera and others*) of Aftropical Flower Flies (Diptera: Syrphidae)

1. Antenna with terminal stylus (MND figs. 12,13). Postpronotum pilose (MND fig. 65); male abdomen with tergum 5 not visible in dorsal view (MND fig. 101). . . . . Key A (Ceriodines)
-- Antenna with dorsal arista (MND figs 4, 6, 15), with arista thin and basal, never at apex. 2

2. Postmetacoxal bridge complete (MND fig. 79). Usually basoflagellomere elongate and vein r 4+5 with appendix. Head posteriorly less strongly convex; postpronotum clearly exposed, usually pilose. Male abdomen with tergum 5 not visible in dorsal view (MND fig. 101). . . . . Key B (Microdontines)
-- Postmetacoxal bridge absent, membraneous posterior to metacoxa. Usually basoflagellomere shorter, only as long as broad; vein r 4+5 without appendix. 3

3. Postpronotum bare (MND fig. 65). Head posteriorly strongly convex and closely appressed to thorax so that postpronotum is partly or entirely hidden. Male abdomen with tergum 5 visible in dorsal view and varying in form of a subquate or subtriangular to short transverse sclerite (MND figs 96-99) 13
-- Postpronotum pilose (MND fig. 64). Head posteriorly less strongly convex; postpronotum clearly exposed. Male abdomen with tergum 5 not visible in dorsal view (MND fig. 101). 4

???? Exception. Some species of *Allobaccha* may have pilose postpronota. These can be separated as they have petiolate abdomens and the other characteristics of syrphines.

4. Vein R 4+5 moderately to strongly sinuate (MND figs 54, 57, 60). 10
-- Vein R 4+5 straight or nearly so, not sinuate (MND figs 48, 53). 5

5. Face produced into a long anteriorly porrect snout, without tubercle (MND fig. 17); costa and vein R 4+5 ending well posterior apex of wing. Arista bare; eye bare; thorax with weak to strong bristles. . . . . Key C (Rhingiines)
-- Face not produced into snout; costa and vein R 4+5 ending anterior to apex of wing. 6

6. Arista plumose or pectinate, with pile (rays) at least twice as long as basal diameter of arista (MND fig. 28); thorax with bristles; scutellum with a shallow to deep medial excavation. Eye pilose.. . . . . Key X (Volucellines)
-- Arista bare (MND figs 15, 19); body without bristles; scutellum convex, without medial excavation. 7

7. Transverse suture complete; anepisternum not differentiated into anterior flatten and posterior convex portions; oral margin evenly rounded, not notched anteromedially; head with occiput developed dorsally and with distinct indentation on dorsal 1/3.. . . . . ***Spheginobaccha***
-- Transverse suture not complete; antepisternum differentiated into anterior flatten and posterior convex portions; oral margin notched anteromedially; occiput simple, not as such. 8

8. Femora with distinct ventroapical spines (MND fig. 52); vein R 4+5 with last section much less than half as long as crossvein h or absent; cell R 4+5 closed at wing margin, not petiolate. anterior anepisternum pilose posterodorsally; scutellum triangular.. . . . . ***Myolepta***
-- Anterior femora without distinct ventral spines; vein R 4+5 with last section longer than crossvein h and usually longer than crossvein r-m; scutellum not triangular, rounded apically 9

9. Anterior anepisternum pilose posterodorsally.. . . . . Key K (Eumerines)
-- Anterior anepisternum bare.. 11

10. Metafemur with a anterobasal patch of short dense black setulae (MND fig. 53). 12
-- Metafemur without patch of setulae (MND figs 86, 88).. 11

11. Vein M1 perpendicular or recessive in respects to vein R 4+5 (MND fig. 53); eye frequently with pattern; abdomen short, oval; legs simple. . . . . Key J (Brachyopines)
-- Vein M1 processive in respects to vein R 4+5 (MND fig. 54); eye always unicolorous; abdomen elongate, parallel sided. . . . . Key I (Milesiines)

12. Cell R1 petiolate (MND fig. 60). . . Key E (Eristalines)
-- Cell R1 open, without petiole (MND fig. 59). . . . . Key D (Helophilines)

13. Tergum 1 greatly reduced, frequently almost linear on disc and practically covered by scutellum, sublaterally at most 1/2 as long as tergum 2 (MND fig. 98); terga not punctate. Length 6.7 mm or more. . . . . Syrphines (key F)

-- 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 (MND fig. 97; terga minutely punctate. Length 7.5 mm or less . . . . . Paragines (key H)

Section A

*** Cerioidines ***

A1. Postmetacoxal bridge present (MND fig. 8); metathoracic pleuron either completely fused or adjacent posterior to metacoxae. . . . . ***Polybiomyia***

-- Postmetacoxal bridge absent, broadly membraneous posterior to metacoxae. A2

A2. Frontal prominence absent or much shorter than scape (MND fig. 12). . . . . ***Sphiximorpha***

-- Frontal prominence present, at least as long as scape (MND fig. 13). A3

A3. Vein R4+5 with a spur into cell R4+5; abdomen not petiolate. . . . . ***Ceriana***

-- Vein R4+5 without a spur; abdomen petiolate. ***Monoceromyia***

Section B

*** Microdontines ***

NEW VERSION, modified from Reemer (Reemer & Stahl 2013)

B1. Vein R4+5 without an appendix. . . . . ***Afromicrodon***
-- Vein R4+5 with an appendix. B2

B2. Postpronotum bare. B14
-- Postpronotum pilose. B3

B3. Basoflagellomere greatly elongate, 4 or more times longer than scape, narrow, 6 or more times longer than broad; scutellum unarmed. B6
-- Basoflagellomere shorter. B4

B4. Scutum and scutellum joined at blunt angle of approximately 120 degrees; scutellum with posterior corner developed into massig pointed cones [Madagascar only]. . . . . ***Megodon***
-- Scutum and scutellum joined at even level; scutellum without such massig cones. B5

B5. Scutellum recessed apically, with parallel rounded and flattened platelet (=Plattchen) [Madagascar only]. . . . . ***Hovamicrodon***
-- Scutellum rounded apically or with simple spines or conical projections [Widespread]. B6

following couplets based on Reemer & Sthals (2013)

B6. Anepisternum extensively pilose, entirely pilose or with bare areas limited to ventral half. . . . . ***Metadon***
-- Anepisternum extensively bare, bare dorsad to midline. B7

B7. Propleuron pilose. . . . . ***Microdon***
-- Propleuron bare. B8

B8. Cell R4+5 with postero-apical angle widely rounded (sometimes with a small appendix). . . . . ***Microdon*** (***erythos*** group)
-- Cell R4+5 with postero-apical angle more or less rectangular or acute (usually with with small appendix). B9

B9. Antenna shorter than face (distance between antennal fossa and oral margin). . . . . ***Archimicrodon***
-- Antenna as long as or longer than face. B10

B10. Occiput dorsally widened (even if only slightly); eye margin dorsally diverging from posterior margin of head. . . . . ***Archimicrodon***
-- Occiput evenly narrow over entire length; eye margin dorsally parallele to posterior margin of head. B11

B11. Male: Metatarsus with basitarsomere with wide longitudinal groove dorsally, narrow, at most 1.5 times as wide as apex of tibia. . . . . ***Megodon***

-- Male: Metabasitarsomere without longitudinal groove, strongly swollen, about twice as wide as tibial apex. . . . . ***Microdon tarsalis***

B12. Basoflagellomere bare; arista normal, elongate, thin; scape short. Abdomen suboval. . . . . ***Myiacerapis***

-- Basoflagellomere covered with long pile in male; arista reduced, short, thick; scape long. B13

B13. Transverse suture complete; abdomen petiolate; facial groove indistinct; male basoflagellomere twice angulate. . . . . ***Ceratrichomyia***

-- Transverse suture incomplete, absence medially; abdomen oval; face with distinct oblique groover running ventrad from lunule to eye; basoflagellomere straight. . . . . ***Ptilobactrum***

B14. Transverse suture complete; terga 3 and 4 free, not fused; male basoflagellomere with long pile. . . . ***Ceratrichomyia***

-- Transverse suture incomplete, interrupted medially; terga 3 and 4 fused; male basoflagellomere bare. . ***Paramixogaster***

Key to the subfamily Microdontinae, Tribe Microdontini
old version (Cheng & Thompson 2008)

B1. Vein R4+5 without an appendix. . . . . ***Afromicrodon***
-- Vein R4+5 with an appendix. B2

B2. Basoflagellomere greatly elongate, 4 or more times longer than scape, narrow, 6 or more times longer than broad; scutellum unarmed. B6
-- Basoflagellomere shorter. B3

B3. Abdomen petiolate; 2nd segment elongate, narrower medially than basally or apically, narrower than 3rd segment. . . . . ***Paramixogaster***
-- Abdomen not petiolate, parellel-sided to oval; 2nd segment short, never narrower medially than basally, always broader than 3rd segement. B4

B4. Scutum and scutellum joined at blunt angle of approximately 120 degrees; scutellum with posterior corner developed into massig pointed cones [Madagascar only]. . . . . ***Megodon***
-- Scutum and scutellum joined at even level; scutellum without such massig cones. B5

B5. Scutellum rounded apically or with simple spines or concial projections [Widespread]. . . . . ***Microdon***
-- Scutellum recessed apically, with parallel rounded and flattened platelet (=Plattchen) [Madagascar only]. . . . . ***Hovamicrodon***

B6. Basoflagellomere covered with long pile in male; arista reduced, short, thick style; scape long. B8
-- Basoflagellomere bare; arista normal, elongate, thin; scape short. B7

B7. Abdomen petiolate . . . . . ***Paramixogaster***
-- Abdomen suboval. . . . . ***Myiacerapis***

B8. Arista absent; male basoflagellomere twice angulate. . . . . ***Ceratrichomyia***
-- Arista present; basoflagellomere straight. . . . . ***Ptilobactrum***

Section C

*** Rhingiines ***

C1. Male holoptic. . . . . ***Rhingia***
-- Male dichoptic. . . . . ***Eorhingia***

Section D

*** Helophilines ***

D1. Eye pilose; clypeus pilose. Katepimeron bare. . . ***Mallota***
-- Eye bare; clypeus bare. D2

D2. Katepimeron bare. D5
-- Katepimeron pilose. D3

D3. Metabasitarsis without specialized pile; male dichoptic; vein R4+5 only slightly sinuate. . . . . ***Chasmomma***
-- Metabasitarsis with globuliferous pile basoventrally; male holoptic; vein R4+5 strongly sinuate. D4

D4. Scutum with pale pollinose vittae; male genitalia never greatly enlarged (Widespread Old World tropics). . . . . ***Mesembrius***
-- Scutum without pollinose vittae; male genitalia usually greatly enlarged (Madagascar only). . . . . ***Vadonimyia***

D5. Wing entirely microtrichose; with postalar pile turf. . . . . ***Afrophilus***

**** for *Lejops* of Curran & Hull, *Anasimyia* of Afrotropical catalog

-- Wing partly bare on basal 1/3; without postalar pile tuft. D6

D6. Anepimeron with dorsomedial (triangular) portion pilose; stigmatic crossvein present, short (Madagascar only) . . . . . ***Madlota***

**** for *Mallota meromacrimima* Hull (=*hirsuta* Hull, n. syn.)

-- Anepimeron bare on posterior half. D7

D7. Scutellum emarginate, with a distinct marginal rim; wing entirely microtrichose; metathoracic pleuron bare; metatibia simple. . . . . ***Afromallota***

**** for *Protylocera aptera* Bezzi

-- Scutellum not emarginate; wing bare basomedially; metathoracic pleuron with some pile ventrad to metathoracic spiracle; metatibia acurate, expanded apically, with long brushes on pile on dorsal and ventral edges (Hervé-Bazin 1914: 289, fig. 2). . . . . ***Congolota***

for *Protylocera pennata* Herve-Bazin

Section E

*** Eristalines (sensu stricto) ***

E1. Anepimeron with dorsomedial (triangular) portion bare; postalar pile tuft absent. E6
-- Anepimeron with dorsomedial portion pilose; postalar pile tuft present. . . . . ***Eristalinus*** ... E2

E2. Wing densely and uniformly microtrichose on apical half. Small (about 7 mm), metallic green flies. . . . . ***Helophilina***
-- Wing bare or sparsely microtrichose; not metallic flies, larger (more than 10 mm). E3

E3. Metafemur thickened, distinctly arcuate; metatibia strongly compressed and carinate on basoventral 1/3; eye bare or very finely pilose dorsally, with pili no longer than ommatidial diameter; male metatrochanter with ventral patch of short stiff black setulae. . . . . ***Merodonoides***
-- Metafemur at most very slightly thickened, not arcuate; metatibia not carinate nor compressed ventrally; eye usually densely pilose, with pili much longer than ommatidial diameter; male metatrochanter simple. E4

E4. Eye fasciate and punctate; large flies (12 mm or more). . . . . ***Eristalodes***
Eye punctate; smaller flies (less than 12 mm). E5

E5. Brillant metallic bluish to green flies; mesonotum shiny, without pollinose maculae. . . . . ***Oreristalis***
-- Not as such; maybe aeneous, but if so with pollinose maculae on mesonotum. . . . . ***Eristalinus***

E6. Katepimeron bare. E11
-- Katepimeron pilose. E7

E7. Eye pilose; meron bare posteroventrally, without pile anterior or ventral to metathoracic spiracle; arista pilose; wing bare; male holoptic. . . . . ***Eristalis***
-- Eye bare; meron pilose posteroventrally, with pile anterior or ventral to spiracle. E8

E8. Arista bare; wing microtrichose on apical half; precallar depression bare or with at most a few pili mesially; male holoptic. . . . . ***Triatylosus***

**** for "*Senapis*" of authors

-- Arista pilose, with short to moderately long pili; wing at least bare apicoposteriorly; precallar depression with many stiff pili posteriorly. E9

E9. Frons smooth, not rugose; male dichoptic. . . . . ***Simoides***
-- Frons with strongly rugose area dorsal to antenna; male holoptic. E10

E10. Metafemur simple. . . . . ***Phytomia***
-- Metafemur with apicoventral spur or plate. . ***Dolichomerus***

E11. Eye pilose. E13
-- Eye bare. E12

E12. Male metafemur slender, with apicolateral ventral spur near apex, without a basolateral black setal patch. . . . . ***Milesia***
-- Male metafemur enlarged, with basolateral tubercle, with a distinct patch of black setulae basolaterally. . . . . ***Senaspis***

*** *flaviceps* Macquart [=*apophysata* Bezzi, n. syn.]

E13. Metafemur greatly swollen; cell R1 bulbous apically; ♂ dichoptic. . . . . ***Meromacroides***
-- Metafemur not greatly swollen; cell R1 not bulbous apically; ♂ holoptic. E14

E14. Metatibia not compressed nor carinate; wing bare apically. . . . . ***Eoseristalis***
-- Metatibia compressed and carinate on basoventral 1/3; wing usually microtrichose on apical 1/3 or more. . . . . ***"Eristalis" plumipes*** group

Section F

**** Syrphines ***

F1. Abdomen parallel-sided (Fig. 90) to oval, never distinctly petiolate. F3
-- Abdomen elongate, strongly petiolate (Figs 89, 91); 2nd tergum narrower than 3rd tergum.. . . . . F2

F2. 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.. . . . . ***Pseudodorus***

???? = Status in Afrotropical Region ????

*** With a postmetacoxal bridge. . . . . ***Baccha***
-- Wing margin with a series of minute closely spaced black maculae on posterior margin; anterior anepisternum pilose. . . . . ***Asiobaccha***

However, I do not believe either genus occurs in the Afrotropics

F3. Face and scutellum entirely black in background color. Abdomen usually without marginal sulcus. Metasternum bare. Eye bare. G1

*** *Pelloloma* has weak marginal sulcus on 4th & 5th terga

-- 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. F4

F4. Antenna short, shorter than head; basoflagellomere at most twice as long as broad; scape and pedicel not longer than board. F6
-- Antenna elongate, longer than head; basoflagellomere at least three times as long as board; scape or pedicel longer than broad (Fig. 3).. . . . . F5

F5. Metafemur and metatibia without pile brushs; eye densely long pilose; scape and pedicel subequal; abdomen strongly convex dorsally, strongly margined; vein R4+5 sinuate, looped into cell R4+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 margnal sulcus; vein R4+5

straight; calypter pilose on ventral lobe. . ***Afrosyrphus***

F6. Calypter with lower lobe pilose, especially on posteromedial portion (Fig.); metacoxa with a tuft of strong pile at posteromedial apical angle. . . . . ***Betasyrphus***
-- Calypter bare. F7

F7. Anterior anepisternum bare; Wing margin without such maculae F9
-- Anterior anepisternum pilose at least posterodorsally (Figs); wing margin with a series of minute closely spaced black maculae on posterior margin (Fig. ..). F8

F8. Metasternum pilose; metepisternum pilose ventrad to spiracle . . . . . ***Episyrphus***
-- Metasternum bare; metepisternum bare. . . . . ***Meliscaeva***

F9. Abdomen without marginal sulcus. F15
-- Abdomen with at least a weak marginal sulcus on terga 4 and 5, often with a strong sulcus on terga 3-5. . . . . F10

F10. Metapleuron bare ventrad to spiracle; metasternum variable. Vein R 4+5 straight or sinuate. Size and shape variable. F12
-- Metapleuron with a tuft of fine pile ventrad to spiracle; metasternum pilose. Large species with broad flattened abdomens with distinct marginal sulcus. F11

F11. Mesonotum anteriorly with a distinct collar of longer and denser pile; vein R4+5 sinuate, distinctly looped into cell R4+5. . . . . ***Asarkina***
-- Mesonotum without a collar of pile; vein R4+5 nearly straight . . . . . ***Achoanus***

F12. Eye densely pilose; metacoxa with tuft of strong pile at posteromedial apical angle. . . . . ***Betasyrphus***
-- Eye bare; metacoxal without such a pile tuft. F13

F13. 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. . . . . F14

F14. Scutum with well-defined bright yellow lateral vitta, extending from postpronotum to scutellum; male metacoxa usually with ventral spine-like process; medium sized species (less than 10 mm), narrow abdomen. . . . . ***Ischiodon***

-- Scutum with ill-defined yellow lateral vitta; male metacoxa simple; large sized species (12 mm or more); broad abdomen. . . . . ***Scaeva***

*** The common widespread species have male metacoxa armed. The endemic Cape Verde species has it unarmed

F15. Scutum with lateral yellow vitta extending from postpronotum to scutellum. F17

-- Scutum with lateral yellow vitta not extending beyond suture F16

F16. Face with broad black vitta; subsctellar 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 reach lateral margin. . . . . ***Sphaerophoria***

F17. Subscutellar fringe complete, densely; 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). . . . . ***Loveridgeana***

Section G

*** Melanostomines ***

G1. Metepisternum with some fine subappressed pile; katepisternum with pile patches broadly separated posteriorly, joined anteriorly (Fig. 42). Metacoxa with tuft of pile at posteromedial apical angle (as in fig. 48). . . . . ***Afroxanthandrus***

-- Metepisternum bare; katepisternal pile patches broadly separated throughout (as in fig. 45). G2

G2. Metacoxa with tuft of pile at posteromedial apical angle (as in fig. 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. G3

G3. Metasternum greatly reduced, with deep posterior incision laterally so that sclerotized portion consists of a median diamond-shaped area with a narrow anterior and lateral strips (MND fig. 70). Face not produced below, with small tubercle . . . . . ***Melanostoma***

-- Metasternum entire (MND fig. 71). Face almost straight with strong tubercle, slightly produced forward ventrally. . . . . ***Afrostoma***

Section H

*** Paragines ***

H1. Eye with pile of nearly uniform color, not forming vittae of contrasting color. Scutellum entirely black. . . . . ***Pandasyopthalmus***

-- Eye with pile arranged in 3 more or less vertical vitta or contrasting color. Scutellum black with apex narrowly yellow or reddish. H2

H2. 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. H3

H3. Terga 1-5 completely fused, at least laterally ***Afroparagus***

-- Terga 1-2 only fused completely. . . . . ***Paragus***

Section I

*** Milesiines / Xylotines ***

I1. Cell R1 petiolate. Metafemur with apicoventral spur. . . . . ***Milesia***

-- Cell R1 open, without petiole. I2

I2. Metasternum bare. Vein R4+5 strongly sinuate; scutellum with apical flatten rim; metafemur without basolateral black patch of setulae. . . . . ***Afrolastes***

**** for *kenya*, new species

-- Metasternum pilose. I3

I3. Metacoxa with long ventral "spurs;" scutellum with an apical flatten rim; vein r4+5 strongly sinuate. . ***Syrittosyrphus***

-- Metacoxa without spurs; scutellum without apical rim.. I4

I4. Metafemur swollen, with a large apicoventral triangular plate, without distinct anterobasal setulae (Fig.); metasternum with basal membraneous seam. Male holoptic, face carinate (Fig.). Female face concave. I6

-- Metafemur without apicoventral plate, with anterobasal patch of short dense black setulae; metasternum without a seam. Male holoptic or dichoptic, face tuberculate. Female face tuberculate or straight. D1

I5. Metafemur simple, without such apicoventral projections, may have a low apicoventral carina. I8

-- Metafemur with apicoventral spur or triangular plate.. I6

I6. Metafemur with a single apicoventral spur; metasternum without ventral membraneous band; vein R4+5 angulate over cell R4+5, usually with a spur into cell R4+5. . . . . ***Pogonosyrphus***

-- Metafemur with a large triangular apicoventral plate; metasternum divided into two part by a basal membraneous band; vein R4+5 evenly curved, without spur. I7

I7. Katepimeron pilose; metafemoral apicolateral plate notched to form a large spur and a small triangular tooth. . . . . ***Calcaretropidia***

-- Katepimeron bare; metafemoral plate not notched, merely triangular produced. . . . . ***Tropidia***

I8. Wing almost bare on basal 2/3, very sparsely microtrichose on apical 1/3; scutellum without ventral pile fringe; metepisternum with a patch of fine pile; metafemur greatly enlarged, with an anteroventral spinose carina on apical 1/3 . . . . . ***Syritta***

-- Wing entirely microtrichose or with just moderate bare areas on basally, densely and uniformly microtrichose on apical 1/3; metepisternum bare; metafemur not as such. . . . . ***"Xylota" hancocki***

Section J

*** Brachyopines / Chrysogasterines ***

J1. Sternum 1 shiny, metallic; vein M1 recurved, curved basally; basoflagellomere usually at least twice as long as wide; metasternum usually pilose. . . . . ***Orthonevra***

-- Sternum 1 dull, pollinose; vein M1 usually processive, directed apically, rarely curved very slightly basally; basoflagellomere at most 1.4 times as longas wide; metasternum bare. . . . . ***Chrysogaster***

Section K

*** Eumerines / Merodontines ***

K1. Cell R 4+5 divided by a crossvein between veins R 4+5 and M 1; katepisternum bare. . . . . ***Lyneborgimyia***

-- Cell R 4+5 not divided; vein R 4+5 may have a spur, but not extending to vein M1 making a crossvein; katepisternum pilose dorsally. K2

K2. Metafemur with apicoventral triangular plate on anterior face (Fig.); anepimeron with triangular area pilose; vein R4+5 sinuate; apical portion of vein M without external spurs. . . . . ***Merodon***

-- Metafemur only slightly swollen, without ventral plate; anepimeron with triangular area bare; vein R4+5 straight or sinuate; apical portion of vein M with usually with external spurs. K3

K3. Pedicel greatly elongate, about 1.5 times as long as basoflagellomere. . . . . ***Amphoterus***

-- Pedicel much shorter, never longer than basoflagellomere. K4

K4. Vein M1 (apical crossvein) without spur at point of angulation; occiput greatly expanded and tumid . . . . . ***Megatrigon***

-- Vein M1 with a spur at point of medial angulation; occiput only slightly expanded. . . . . ***Eumerus***

Section X

*** Volucellines ***

X1. Face with medial and 2 lateral tubercles; posterior anepimeron and katepimeron pilose; notopleuron enlarged and produced posteriorly; cell R1 closed and petiolate; male holoptic; vein M2 absent. . . . . ***Ornidia***

-- Face with only a medial tubercle; poterior anepimeron and katepimeron bare; notopleuron simple, not enlarged; cell R1 open, without petiole; male dichoptic; vein M2 present.. . . . . ***Graptomyza***

Notes on the keys:

The critical point that workers should note is that this is an identification key to the distinctive groups of adult flower flies. These groups may be genera, subgenera or just species groups. Their inclusion within the key does not implied a particular taxonomic rank. For example, the group *Pogonosyrphus* is included, whereas Hippa (1990) only recognized this as the *Milesia arnoldi* species group. A position I accept, but some of the Reemer (Reemer & Stahls 2013) microdontine groups, such as *Metadon* which I do not recognize.

The first 13 couplets breaks the syrphids into more or less higher groups. These Sections of keys for groups are as follows:

A => Cerioidines
B => Microdontines
C => Rhingines
D => Helophilines
E => Eristalines (SS)
F => Syrphines (SS)
G => Melanostomines
H => Paragines
I => Milesines / Xylotines
J => Brachyopines / Chrysogasterines
K => Eumerines
X => Volucellines

Brachyopines => section J, couplets J1-
Cerioidines => couplets A
Eumerines are couplets K #42-45
Eristalines (sensu stricto) couplets E #59-70
Helophilines couplets D #54-58
Melanostomines couplets G 31-33
Microdontines => B
Milesiines / Xylotines => couplets I
Paragines => couplet H
Rhingiines => couplet (only Rhingia & Eorhingia)
Syrphines (sensu stricto) couplets F #12-30
Volucellines => section X, couplets X1

New genera

Afrostoma =>
this is now in Press (ZooTaxa). See footnote #1 below

FCT => new eristaline groups
Afrolota for *aperta* Bezzi
Afrolastes for new species *kenya* Thompson
Afrophilus for *Anasimyia* of Afrotropical catalog
Congolota for *pennata* Herve-Bazin
Madlota for *meromacrimina* Hull

Change of status, etc.

Senaspis restricted to its type-species
Triatylosus for "*Senaspis*" of Bezzi & Curran and others
Eristalis restricted to *tenax* & *proserpina*
Eoseristalis for other "*Eristalis*" species
Mallota restricted to those species with pilose clypeus
Eristalinus recognized as having 4 subgenera
Eristalinus
Eristalodes
Merodonoides
Oreristalis

notes on taxonomy, etc.

1) Dick Vockeroth's new melanostomine genus. Dick told me years ago about a new genus as it did not have the typical reduced metasternum of *Melanostoma* and the male genitalia was also distinctive. This is now in press as *Afrostoma* (Skevington and FCT).

2) Years ago, Mario Bezzi (1915: 64) admitted that his "*Senaspis*" *apophysata* do not properly belong to the genus "*Senaspis*" and needed its own genus. Dick Vockeroth and I (Thompson 2003: 14) agreed. Unfortunately, when I recently checked the type of *Senaspis*, *flaviceps* Macquart, I discovered it was *apophysata* Bezzi (new synonym)! So, *Senaspis* is an monotypic endemic Madagascar group and the other species now need to be placed in *Triatylosus* Hull.

3) Dick Vockeroth when we (FCT & Vockeroth) worked out the World Eristalines (sensu stricto) came to slightly different conclusion on what warranted generic rank. He felt that the Afrotropical species of what is here called *Eoseristalis*, such as *plumipes* Bezzi, deserved generic rank.. *Eristalis* is restricted to *tenax* and the Oriental species, *proserpina*.

4) then there is "*Xylota*" *hancocki*, the only Afrotropical xylotine (sensu stricto) which has a pilose metasternum. I (FCT) am not happy with Hippa's (1978, 1985, 1985a) treatment of *Hovaxylota* Keiser. At best it should be ranked as a subgenus of *Xylota*, but when one looks at the aedeagii of the included species, one wonders whether the group is even monophyletic. So, the question is whether a name should be given to this atypic species or not. Future research will undoubted show that it is a distinctive group, but the question of rank will remain (species group or higher (subgenus / genus).

5) Likewise, "*Mallota*" *aptera* Bezzi is atypical and distinctive from the other Afrotropical "*Mallota*." But then again most of Afrotropical "*Mallota*" are quite different from the Palaearctic type-species of *Mallota* (*Syrphus fuciformis* Fabricius), which has a pilose clypeus. So I have provided a new new group for *aptera*.

6) Then there are the other problem, like *pennata* Herve-Bazin, which Herve-Bazin himself indicated, did not readily fit into *Protylocera*. Hence, the new group, *Congolota*.

7) And the three Afrotropical species of *Lejops* of Curran & Hull [or *Helophilus* (*Anasimyia*) of the Afrotropical catalog] are unlike the other subgenera of *Lejops*. They run to *Arctosyrphus* in my key

(Thompson 2000: 377), but are obviously distinct. They also have postalar pile tuft like *Eristalinus*. So, again they are here recognized as *Afrophilus*, new.