

The subgenera of *Culicoides* of the Americas (Diptera, Ceratopogonidae)

by

L. Vargas*

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The genus *Culicoides* comprises a large number of species of wide distribution. As more species become known, and our knowledge of their morphology, ecology and life habits increases their natural affinities and interrelationships become clearer to us. The present study is an attempt to define the subgenera of *Culicoides* present in the American continent; since most of them have a world-wide distribution, a completely satisfactory understanding of their status, definition and composition will require contributions from investigators in many countries. Not all the subgenera that have been proposed are discussed here, nor is an attempt made to place every known species of *Culicoides* in a certain subgenus. There are many valid names of species that can be so identified, but not to the subgeneric level. We have tried to relate wing and male genitalia characters; there seems to be a good correlation between them, and the subgenera proposed may prove generally acceptable, although more knowledge, especially of early stages of development, is necessary for a more critical evaluation of the present treatment.

SUBGENERA OF *CULICOIDES* OF THE AMERICAS DISCUSSED IN THIS PAPER, WITH TYPES

<i>Anilomyia</i> n. subgen.	<i>covagarcai</i>
<i>Avaritia</i> Fox, 1955	<i>obsoletus</i>
<i>Beltranmyia</i> Vargas, 1953	<i>crepuscularis</i>
<i>Culicoides</i> s. str.	<i>pulicaris</i>
<i>Diphaomyia</i> n. subgen.	<i>baueri</i>
<i>Drymodesmia</i> n. subgen.	<i>copiosus</i>
<i>Glaphiromyia</i> n. subgen.	<i>scopus</i>
<i>Haematomyidium</i> Goeldi, 1905	<i>paraensis</i>
<i>Hoffmania</i> Fox, 1947	<i>insignis</i>
<i>Macjiella</i> Fox, 1955	<i>phlebotomus</i>
<i>Mataemyia</i> n. subgen.	<i>mojingaensis</i>
<i>Monoculicoides</i> Khalaf, 1954	<i>nubeculosus</i>
<i>Oecacta</i> Poey, 1851	<i>furens</i>
<i>Selfia</i> Khalaf, 1954	<i>hieroglyphicus</i>

* Instituto de Salubridad y Enfermedades Tropicales, México.

KEY TO THE SUBGENERA OF *CULICOIDES* USING CHARACTERS OF
THE MALE GENITALIA

- 1 — Mesosome cross-shaped and with and added, curved process, longitudinally parallel to the longest arm of the cross *Macfiella*
 — Mesosome entirely different 2
- 2 — Aedeagus "bottle-shaped"; ventral root of basistyle absent or small; parameres with sharp points, sometimes with very small terminal hairs 3
 — Aedeagus different; ventral root of basistyle absent or present; parameres with points bare, or spinose, or with subapical lobe, or with small hairs 4
- 3 — Parameres with strongly angulated base with point directed laterally, never fused; distal margin of the ninth tergum with a median notch and well developed apicolateral processes; inner side of basistyle without short pilosity *Anilomyia* n. subgen.
 — Parameres with a common base or this expanded; distal margin of ninth tergum commonly convex, with a median notch and apicolateral processes small, usually convergent; inner side of basistyle usually with short pilosity *Hoffmania*
- 4 — Basistyle usually without ventral root or this very short; inner side with short pilosity. Parameres strongly angulated at the base, with point directed laterally; tips usually with short hairs. Distal margin of ninth tergum usually convex and with short apicolateral processes *Culicoides* s. str.
 — Basistyle with ventral root well developed; inner side without short pilosity. The parameres if strongly angulated do not have terminal hairs. Distal margin of ninth tergum with or without median notch; with or without long apicolateral processes 5
- 5 — Parameres fused in a single piece 6
 — Parameres never fused 7
- 6 — Parameres bifid; aedeagus prominently bifid *Monoculicoides*
 — Parameres not bifid; aedeagus not bifid *Selfia*
- 7 — Basistyle with ventral root well developed, without notch; parameres without terminal spines, subapical lobe or other processes, at most with fine terminal hairs 8
 — Basistyle with ventral root notched or with a retrose tooth; parameres with subapical lobe or spinose tip or both 12
- 8 — Bases of the parameres strongly angulate, points directed laterally 9
 — Bases of parameres not strongly angulate, only slightly undulated; aedeagus usually arch-shaped 10
- 9 — Distal margin of ninth tergum convex and without apicolateral processes or these very small; aedeagus Y-shaped *Avaritia*
 — Distal margin of ninth tergum truncated, with apicolateral processes directed inwards *Drymodesmia* n. subgen.
- 10 — Bases of parameres are broad and their sharp tips are directed proximally *Beltranmyia*
 — Bases of parameres not greatly expanded and without sharp tips 11
- 11 — Parameres with distal half with curves *Glaphiromyia* n. subgen.
 — Parameres with only a distal curve *Mataemyia* n. subgen.
- 12 — Parameres with subapical lobe 13
- 13 — Aedeagus Y-shaped, truncated, with small flaps at the sides of the central stem *Oecacta*
 — Aedeagus usually arch-shaped, distally is rounded *Haematomyidium*

KEY TO DETERMINE SUBGENERA OF *CULICOIDES* USING FEMALE EXTERNAL CHARACTERS

- 1 — Wings dark, without pale markings *Selfia*
 — Wings different 2
- 2 — Wing spots not very marked; machrotrichia sparse; small specimens *Avaritia*
 — Wings with very apparent markings 3
- 3 — Second radial cell of the wing included in a pale spot 4
 — Second radial cell of the wing included in a dark spot 5
- 4 — Cell R_5 of the wing with a marginal dark spot shaped like a sand-glass; without pale spot on vein M_2 *Culicoides* s. str.
 — Cell R_5 of the wing without dark spot shaped like a sand-glass; pale spot on vein M_2 *Hoffmania*, *Anilomyia* n. subgen.
- 5 — The fourth segment of the hind tarsus is not cordiform 6
 — The fourth segment of the hind tarsus is not cordiform 6
- 6 — With pale oval spot on vein M_1 and M_2 ; pale oval spot subterminal on cell M_2 *Glaphiromyia* n. subgen.
 — With a pale spot on M_1 , or on M_2 , or without spots on these veins 7
- 7 — Usually with a pale oval spot on vein M_2 of the wing *Diphaomyia* n. subgen.
 — Usually the vein M_2 of the wing without pale oval spot 8
- 8 — Usually the cross-vein r-m is dark *Haematomyidium*
 — The cross-vein r-m is not dark 9
- 9 — From the second radial cell to the tip of the wing, on cell R_5 , usually there are only two pale spots; mesonotum usually without dark dotting 10
 — From the second radial cell to the tip of the wing, on cell R_5 , usually there are more than two pale spots 12
- 10 — Veins M_1 and M_2 of the wing within long pale bands 11
 — Vein M_1 and M_2 never included in pale bands *Beltranmyia*
- 11 — Usually there is an oval pale spot on vein M_1 of the wing *Drymodesmyia* n. subgen.
 — Usually without pale spot on vein M_1 of the wing *Mataemyia* n. subgen.
- 12 — Veins C_1 and C_2 of the wing included in broad pale bands *Monoculicoides*
 — Veins C_1 and C_2 of the wing not included in broad pale bands or they are very narrow *Oecacta*

Anilomyia n. subgen.subgenus type *covagarcai* Ortiz, 1950*rostratus* Wirth & Blanton, 1956.*cockerellii* (Coquillet, 1901).*luteovenus* Root & Hoffman, 1937.

WIRTH and BLANTON (1959) mention three groups in the subgenus *Culicoides* Latreille s. str.: *pulicaris*, *covagarcai* and *nigrigenus*. The *covagarcai* group is here treated and presented as a new subgenus.

DIAGNOSIS: Long to medium-sized specimens. Legs yellow or with femoral tibial joint broadly yellow-banded; mesonotum yellowish to brown, subshining, with few markings. Third segment of the palpus slender or the last segment about half as long as the third segment or longer. *Anilomyia* n.

subgen. differs from the group *nigrigenus* in that the palpus of the latter has the third segment much swollen and is over twice as long as the last segment.

Wings light-colored with small dark markings. The darkest spot occurs basal to the second radial cell. This cell wholly or mostly included in a light spot.

Male genitalia: As in the *pulicaris* group, the inner margins of the basistyles are spinose. The distal margin of the ninth tergum may have well developed apicolateral processes or not. Ventral root of the basistyle absent or marked only by a small point. The aedeagus is "bottle-shaped", as in the subgenus *Hoffmania*. Parameres fused or closely appressed, with a terminal brush.

Female genitalia: Two spermathecae well developed.

In the species *pulicaris*, the subgenus type of *Culicoides* s. str., the parameres are very much like those of *Anilomyia* n. subgen. but the aedeagus is Y-shaped. The mesonotum in *Anilomyia* n. subgen. shows very few markings; this is in sharp contrast with *pulicaris*.

The dark spot on the second radial cell present in the subgenus *Beltrannymia*, or the absence of markings, or the slight spots on the wing, as are seen in *Selfia*, *Oecacta* or *Monoculicoides*, are good characters to separate these subgenera from *Anilomyia* n. subgen.

DISTRIBUTION: Nearctic and Neotropical regions.

Beltrannymia Vargas, 1953

Subgenus type *crepuscularis* Malloch, 1915

travisi Vargas, 1949

nanus Root & Hoffman, 1937

wirthi Foote & Pratt, 1954

alaskaensis Wirth, 1951

antefurcatus Wirth & Blanton, 1959

crescentis Wirth & Blanton, 1959

daedalus Mackie, 1948

commatis Wirth & Blanton, 1959

pampoikilus Macfie, 1948

phaeonotus Wirth & Blanton, 1959

lutealaris Wirth & Blanton, 1956

daedaloides Wirth & Blanton, 1959

cbrysonotus Wirth & Blanton, 1956

knowltoni Beck, 1946

bermudensis Williams, 1956

WIRTH & BLANTON (1959) pointed out that a number of species, which they called the *daedalus* group, was quite homogeneous and distinct from others included in the subgenus *Oecacta*, whose type is *furens*. In our opinion the

species of the *daedalus* group are Panamenian species of *Beltranmyia* and therefore are very close to the nearctic *crepuscularis* (Malloch, 1915), *canithorax* Hoffman, 1925, *salinarius* Kieffer, 1914, *travisi* Vargas and others.

NEW DEFINITION. Medium-sized specimens. Third segment of the palpus moderately swollen. Fourth and fifth segments together over half as long as the third segment. The fourth segment as long as broad. Thorax usually with many markings. Wing dark with pale markings with many long hairs; distal part of the first radial cell and all the second radial cell covered by the darkest spot of the wing. A pale spot on cross vein r-m and the proximal half of the first radial cell. No dark spot is included in this pale area.

Male genitalia: Ninth tergum with well marked apicolateral processes but of size variable from one species to another. Distal margin with median notch. The ventral root of the basistyle slender, usually short and smaller than the dorsal root, never as long as in the *iriartei* group, without the retrograde process. Dististyle hook-shaped. Aedeagus V- or Y-shaped with truncated, broad tip. Parameres never bent at right angles, as in *pilosus*, *poikilonotus* or *jamaicensis*. Parameres with pointed proximal end. The ninth sternum is a narrow band.

Female genitalia: Two big spermathecae. One in *crepuscularis*.

Culicoides s. str.

DISTRIBUTION: Nearctic and Neotropical regions.

Subgenus type *pulicaris* Linnaeus, 1758

neopulicaris Wirth, 1955

tristiatulus Hoffman, 1925

yukonensis Hoffman, 1925

DIAGNOSIS: Mesonotum not uniformly marked. Never with many, small round dots. Third segment of the palpus only slightly engrossed. Wing with the darkest spot covering the distal half of the first radial cell and the proximal half of the second radial cell. A light spot that reaches the costa covers the transverse vein r-m. Cell R_5 with very large light areas, at the middle there is a dark spot in the shape of a sandglass. Cell M_1 with two large light areas. Cell M_2 with apical light spot that reaches the margin. Cell M_4 with a central light spot.

Male genitalia: Basistyle with the inner margin covered with short but strong pilosity; with or without a ventral root. Parameres with sharply bent bases close together, the tips bearing short hairs.

Aedeagus V-shaped. Ninth sternum very high. Ninth tergum with convergent apicolateral processes and without median notch on the distal margin.

Female genitalia: Two spermathecae.

DISTRIBUTION: Mostly nearctic with some extension to the northern limit of the neotropical region.

Diphaomyia n. subgen.Subgenus type *baueri* Hoffman, 1925*iriartei* Fox, 1952*evansi* Wirth & Blanton, 1959*baematopotus* Malloch, 1915*footei* Wirth, 1956*blantoni* Vargas & Wirth, 1955

DIAGNOSIS: The species of this subgenus were formerly considered as included in the subgenus *Oecacta* Poey. Mesonotum with several markings. Distal half of the first radial cell and all the second radial cell included in a dark spot. Cell R_5 with several pale spots. A well marked light spot on vein M_1 . Other light spot on M_2 . More or less round, light spots on cells M_1 and M_2 .

Male genitalia: Ventral root of the basistyle long, curved, and rounded apically, with a very small notch at the base. Parameres with small bases, long, slender and apically with many short spines. Aedeagus with short processes on the arch, near the main stem. Distal margin of the ninth tergum convex and usually with small apicolateral processes.

Female genitalia: Two spermathecae.

DISTRIBUTION: Nearctic and Neotropical.

The black spot on the second radial cell separates *Diphaomyia* n. subgen. from *Avaritia*, *Hoffmania*, *Culicoides* s. str., and *Anilomyia*. The light spots on veins M_1 and M_2 recall those of *Glaphiromyia*, the other subgenus with this character, but are very easily distinguished because in *Diphaomyia* n. subgen. the parameres have many spines, and are neither plain nor adorned with very small terminal hairs. The ventral root of the basistyle is notched at the base, the apicolateral processes of the ninth tergum are neither very prominent nor broad-based. The arch of the aedeagus in *Glaphiromyia* lacks the small submedian processes.

Drymodesmyia n. subgen.Subgenus type *copiosus* Root & Hoffman, 1937*jamaicensis* Edwards, 1922*loughnani* Edwards, 1922*panamensis* Barbosa, 1947*antunesi* Forattini, 1954*copiosus* Root & Hoffman, 1937 (n. syn. *pilosus* W. & B. 1959)*biguttatus* (Coquillett, 1901)*poikilonotus* Macfie, 1948*dummi* Wirth & Blanton, 1959*mulrenani* Beck, 1957*wirthomyia* Vargas, 1953.

DIAGNOSIS: Small specimens. Third palpus segment greatly swollen. Mesonotum usually with several markings. Wing hairy. A dark spot covers the distal half of the first radial cell and the whole of the second radial cell. The cross vein r-m included in a pale spot. Cell R_5 usually with one pale spot, not

strangled, contiguous to the second radial cell and another pale spot about the middle of the cell R_5 . Sometimes the vein M_2 divides a clear spot.

Male genitalia: Ninth tergum with well developed apicolateral processes. The middle notch not well marked. Basistyle with ventral hook of medium size, never with retrorse hook. Dististyle hook-shaped. Aedeagus with long and broad main body tip with sharp transverse cut. Parameres with long, sharp tips devoid of spines or hairs. The base bent about 90 degrees, broadened.

Female genitalia: Two large spermathecae.

C. dunni might belong here but as the male is unknown no strong statement is advanced.

The shortest central stem in the species of the subgenus *Beltranmyia* and the less angulated parameres differentiate the male genitalia of species included in *Drymodesmia* n. subgen.

From the so called *iriartei* and other groups differs because in these the parameres are not strongly angulate, bear several prominent spines and the ventral hook of the basistyle is either too long or has a retrose spine. This late character occurs in *furens* and related species of the subgenus *Oeacta*. Also the parameres show a globose process at the joint of the spinose tips.

C. wirthmoyia is very close to or identical with, *jamaicensis* but there are doubts as some *jamaicensis* have clear spots on the wing different from *wirthmoyia* and the apicolateral processes of the ninth tergum are very short (see WIRTH, 2, p. 113, fig. 3). Also in *wirthmoyia* the second radial cell is about half as long as the first radial cell. This characters induced FORATTINI (1) to consider the species as *Dasybelea*.

DISTRIBUTION: Nearctic and Neotropical regions.

Glaphiromyia n. subgen.

Subgenus type *scopus* Root & Hoffman, 1937

villosipennis Root & Hoffman, 1937

dampfi Root & Hoffman, 1937

pecosensis Wirth, 1955

guttipennis (Coquillett, 1901)

arboricola Root & Hoffman, 1937

bakeri Vargas, 1954

DIAGNOSIS: Medium-sized or large specimens. Mesonotum usually with many markings. Wings with the distal half of the first radial cell and all the second cell included in a dark spot. Light markings on each of veins M_1 and M_2 . The cross vein r-m, which is within a light spot, is dark in some species.

Male genitalia: Long and sharp ventral root of the basistyle, without retrorse tooth or notch. Parameres long, with curved base and blunt apex pointing basally. The tips are slender and show small terminal hairs. Aedeagus in the shape of an ample arch and a long stem. Apicolateral processes of the ninth tergum well prominent, set on a broad base.

DISTRIBUTION: Nearctic and Neotropical.

Thorax without the punctiform dots so characteristic of the *furens* groups. The ventral root of basistyle unnotched and without a retrorse tooth differentiates *Glaphiromyia* n. subgen. from the *furens* groups of *Oecacta* Poey. The parameres lack the globose subapical process or the long terminal spines of the *furens* groups of *Oecacta* or *Haematomyidium*. The main stem of the aedeagus lacks the small blades present in the *furens* groups of *Oecacta*. For other distinctions see under *Diphaomyia*.

Haematomyidium Goeldi, 1905
Subgenus type *paraensis* (Goeldi, 1905)

- lopesi* Barreto, 1944
leopoldoi Ortiz, 1951
borticola Lutz, 1913
camposi Ortiz & León, 1955
carpenteri Wirth & Blanton, 1953
galindoi Wirth & Blanton, 1953
dicrourus Wirth & Blanton, 1955
carsiomelas Wirth & Blanton, 1955
alabialinus Barbosa, 1952
limai Barretto, 1944
stellifer (Coquillett, 1901)
debilipalpis Lutz, 1913
- pachymerus* Lutz, 1914
stigmalis Wirth, 1952
lanei Ortiz, 1950
balsapambensis Ortiz & León, 1955
castillae Fox, 1946
propiipennis Macfie, 1948
tetrabyris Wirth & Blanton, 1959

DIAGNOSIS: No uniformity of characters is seen in the mesonotum wing markings or palpi joints. The only constant distinctions are the dark spot covering the second radial cell and distal half of the first radial cell, and the immediately basal clear spot that embraces the transverse r-m vein. There are various other clear spots either on cells or veins.

Male genitalia: Basistyle with the ventral well developed and with a retrorse tooth. Root shape variable. Parameres without a broadened base; with subapical, globose processes and spinose tips. Aedeagus arched and with a prominent main stem rounded apically. Apicolateral processes of the ninth tergum usually well developed.

DISTRIBUTION: Few nearctic representatives, mostly neotropical.

In *Haematomyidium* Goeldi we include most of the species usually placed in *Oecacta* Poey. As the type of *Oecacta*, the species *furens*, has so definite

characters of a group we think that it is more convenient to limit the definition of *Oecacta* to a very homogenous, if small, number of species and open *Haematomyidium* for the multitude of species more or less related to *paraensis*.

The criterium to separate subgenera according to the number of spermathecae, one or two, is not a sound one, on an absolute basis, as that would separate for example two closely related species *castillae*, with one spermatheca, from *balsapambensis* and *spurius* with two spermathecae.

Hoffmania Fox, 1947

Subgenus type *insignis* Lutz, 1913

- foxi* Ortiz, 1950
- hylas* Macfie, 1940
- flavivenula* Lutz, 1937
- guttatus* (Coquillett, 1904)
- ignaciosi* Forattini, 1957
- lutzi* Lima, 1937
- marium* Lutz, 1913
- ruizi* Forattini, 1954
- travassosi* Forattini, 1957
- venustus* Hoffman, 1925

DIAGNOSIS: Mesonotum usually marked in a uniform pattern. A wide central pale band in which the prescutellar spot shows very strongly. The darkest spot of the wing covers all or only the distal half of the first radial cell and a small portion of the second radial cell. The cross vein r-m dark, within a large light spot. Beyond the first radial cell usually there are only two large light spots. Cell M_1 usually with one light spot. Vein M_2 with one light spot. Veins M_1 and M_2 may be light all along. Cell M_2 with one apical light spot. Branches of the medio-cubital fork usually white all along.

Male genitalia: Basistyle without ventral root or this slightly marked. Aedeagus "bottle-shaped" as in *Anilomyia* n. subgen. Parameres with a very large base and tapering apically, with or without a small brush. The base of the parameres is fused in some species. The ninth tergum with small apicolateral processes pointing toward the mid-line.

Female genitalia: two spermathecae.

DISTRIBUTION: Nearctic and Neotropical region but mostly in the latter.

Subgenus type *mojigaensis* Wirth & Blanton, 1953

Mataemyia n. subgen.

- azureus* Wirth & Blanton, 1959
- lyrionotatus* Wirth & Blanton, 1955
- caprilesi* Fox, 1952

DIAGNOSIS: Medium-sized specimens. Mesonotum usually with several round light areas in a dark background. Wing: A black spot covers the apical half of the first radial cell and all or most of the second radial cell. The second radial cell too long in *caprilesi*. The cross-vein r-m is included in a light area. Cell R_5 with two large clear spots of irregular shape. Veins M_1 and M_2 in light bands. Cell M_1 with two large light areas. Cell M_2 with one marginal, oval light area.

Male genitalia: Basistyle with prominent ventral root. This root without a retrorse tooth or a notch. Parameres long, with sharp points, without spines or small hairs. The base of the parameres is not directed basally. Aedeagus triangular in shape. Ninth tergum with well developed apicolateral processes and median notch.

Female genitalia: Two spermathecae.

DISTRIBUTION: Neotropical.

The darkest spot on the wing on second radial cell separates *Mataemyia* n. subgenus from genera like *Culicoides* s. str., *Anilomyia* n. subgen. and *Hoffmania*.

The absence of oval light areas on veins M_1 and M_2 separates this new subgenus from *Glaphiromyia* n. subgen. The absence of parameres with spines or hairs or the absence of a subapical globose process separates *Mataemyia* n. subgen. from *Oecacta*. *Haematomyidium* Goeldi stands apart by the retrorse tooth of the ventral root.

Oecacta Poey, 1851

Subgenus type *furens* (Poey, 1851)

venezuelensis Ortiz & Mirsa, 1950

barbosai Wirth & Blanton, 1956

gorgasi Wirth & Blanton, 1953

Oecacta Poey is a homogeneous subgenus which includes few species. Most of the heterogeneous groups now form other subgenera. *Haematomyidium* Goeldi is proposed to include the more closely related species. *Oecacta* is distinguished by the pattern of numerous punctiform dots on the mesonotum; third segment of the palpus not very engrossed; by the dark spot on the second radial cell and apical half of the first radial cell and by the three clear spots on cell M_1 with absence of clear spot on vein M_2 .

Male genitalia: Basistyle with the ventral root well developed, with a retrorse tooth. Parameres with small base, with subapical globose process and spinose tips. Aedeagus triangular in shape, the tip is short, finely serrated, flanked by lateral flaps. Usually well developed apicolateral processes on the ninth tergum.

Female genitalia: Two spermathecae.

DISTRIBUTION: Nearctic and Neotropical.

SUMMARY

The subgenera of *Culicoides* are discussed using as examples species from the Americas. A clear understanding should be achieved when these species are compared with those from outside the Americas. Proposed as new subgenera are *Anilomyia*, *Diphaomyia*, *Drymodesmia*, *Glaphiromyia* and *Mataemyia*. Type species and related species are mentioned.

RESUMEN

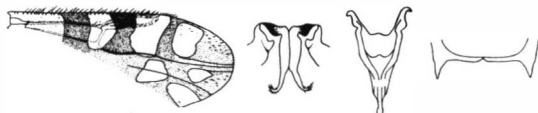
Se discuten los subgéneros de *Culicoides* usando como ejemplo especies de América. Un estudio más profundo se logrará cuando se cotejen especies de otros lugares. Se proponen como nuevos subgéneros *Anilomyia*, *Diphaomyia*, *Drymodesmia*, *Glaphiromyia* y *Mataemyia*. Las especies tipos y las cercanas se mencionan.

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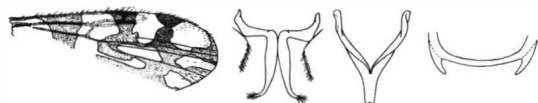
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Fig. 1: Morphological characteristics of the subgenera of *Culicoides*.

ANILOMYIA n. subgen.
covagarciai



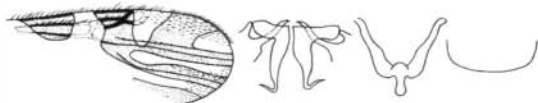
CULICOIDES s. str.
pulicaris



HOFFMANIA Fox, 1947
insignis



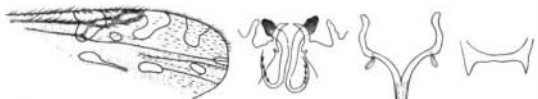
AVARITIA Fox, 1955
absoletus



BELTRANMYIA Vargas, 1953
crepuscularis



DIPHAOMYIA n. subgen.
iriartei



DRYMODESMIA n. subgen.
pilosus



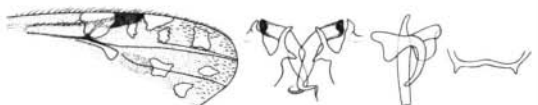
GLAPHIROMYIA n. subgen.
scopus



HAEMATOMYIDIUM n. subgen.
paraensis



MACFIELLA Fox, 1955
phlebotomus



MATAEMYIA n. subgen.
mojingoensis



OFCACCTA Poey, 1851
furens

