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**MOSQUITO STUDIES (Diptera, Culicidae)**

**IX. The type specimens of New World mosquitoes  
in European museums.**

**By**

**John N. Belkin**

MOSQUITO STUDIES (Diptera, Culicidae)

IX. THE TYPE SPECIMENS OF NEW WORLD

MOSQUITOES IN EUROPEAN MUSEUMS<sup>1</sup>

By

John N. Belkin<sup>2</sup>

INTRODUCTION

During the summer of 1966 I visited the major museums in Europe reported to contain type material of New World species of mosquitoes. Although many of these types, primarily at the British Museum (Nat. Hist.), had been examined before by several workers, very few valid lectotype designations had been made for species without clearly designated or indicated holotypes. I am designating lectotypes for the majority of these species with the notable exception of those described by Adolpho Lutz because of the possible existence of additional material in the Instituto Oswaldo Cruz in Rio de Janeiro. The second objective of this study, the determination of the taxonomic identity of the species represented by the types, could not be accomplished in many instances on the basis of the type material alone and had to be postponed pending thorough revisions of the groups involved and a study of both sexes and particularly associated immature stages which are lacking for most species. For the present, I have retained the current taxonomic interpretation for these species.

Without the nearly perfect bibliographic, nomenclatural and type depository information contained in the world catalog of mosquitoes (Stone, Knight and Starcke, 1959; Stone, 1961, 1963, 1967), this study could not have been accomplished in the brief time available. Alan Stone's very careful study of the type material in the British Museum (Nat. Hist.) was also extremely helpful and I am very grateful to him for information provided for material in USNM. I am indebted to Sandra J. Heinemann for assembling all the original descriptions which were used for the determination of the type material and to Sheila Bernstein for the painstaking preparation of the copy for reproduction. I am most grateful to the following individuals in Europe for assistance provided for this study: M. Beier, S. Bettini, J. Bonne-Wepster, M. Coluzzi, P. Grenier, A. Grjebine, E. Lindner, A. Martelli, P. F. Mattingly, F. Mihályi, J. A. Reid, H. Schumann, E. Seguy, G. Senevet, R. zur Strassen, C. Toumanoff, M. L. Tsacas, S. L. Tuxen and G. C. Varley.

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## EXPLANATIONS

In addition to the main section on NOMINAL TAXA where the data on the type material are presented, I have included sections on AUTHORS and DEPOSITORIES and provided a general INDEX TO SCIENTIFIC NAMES for cross reference. Explanations for each of these sections as well as the REFERENCES CITED are given below.

**NOMINAL TAXA.** Included in the list of nominal taxa are all the species with type material found in European museums as well as others whose type material was indicated as LU (location unknown) in the world catalog but which I consider now as probably non-existent [NE]. Species with type material stated to be NE in the catalog are not included except in a few instances.

**Arrangement.** The specific names are listed in alphabetical order within an alphabetical arrangement of genera and subfamilies. In the subfamily Culicinae (=family Culicidae of the catalog), the genera are as recognized in the latest supplement to the catalog. Replacement names (nomina nova) are listed both separately within the alphabetical arrangement and under the names they replace where their type specimens are indicated. To simplify cross reference from the AUTHORS and DEPOSITORIES sections, the specific names are numbered in a single sequence. Preceding the list of species in some genera I have provided notes explaining some of the taxonomic problems and nomenclatural changes.

**Bibliographic Citation.** Following the specific name is a condensed bibliographic citation for the original publication with author's name, year and inclusive page numbers. Full bibliographic data are given under the author's name and date in the REFERENCES CITED. The entry for the condensed bibliographic citation is included in parentheses if the original combination of the specific name and the generic name was different from the present one; in these instances the generic name of the original combination is also given at the end of the citation. Nomina nova are listed in chronological order following the specific name they replace and are followed by similar condensed bibliographic citations. In instances where the same species was described by the same author under the same name twice, condensed bibliographic citations are given for both, in chronological order.

**Type Material Entry.** Following the condensed bibliographic citation is the entry dealing with the type material. Unless otherwise stated, all the type material I examined agrees in all pertinent characters and localities specified in the original publication. A holotype designation or indication in the original publication is considered valid usually only if: (1) one specimen is specified as "holotype" or "type," (2) a statement is made that only 1 specimen was before the author or only 1 specified specimen was used in the description. Departures from these criteria are based on the practices of the various authors and are explained in the AUTHORS section. The attachment of a "type" label by the original author by itself without specifying the specimen in the original publication does not constitute a holotype designation nor does a subsequent statement that the "type" is in a particular museum. Prior lectotype designations are considered valid only if they were published as such with a statement identifying the specimen in such a manner that it can be recognized. In designating new lectotypes I have followed the practice of selecting a specimen marked as type by the original author or as lectotype by a subsequent author. The depository of the type specimen is indicated in [brackets] at the end of the type material entry; the abbreviations used are those of the world catalog except for a few additional ones (see DEPOSITORIES).

Taxonomic Entry. Following the type material entry is a brief statement indicating the current taxonomic status of the nominal species or a departure from this as a result of the study of the type material. Nomenclatural problems are also included in the taxonomic entry. In subdivided genera the current or changed subgeneric assignment of the taxon is indicated in [brackets] at the end of the entry.

AUTHORS. This section provides an index of the nominal species described by every author and the location of the type material of these species. Included in the list are a few authors whose contributions have been primarily in the study of the type material. For several important authors discussions of special problems relevant to the determination of the type material are given.

DEPOSITORIES. The depository institutions are listed alphabetically by the abbreviations as used in the world catalog (Stone, Knight and Starcke, 1959); a few institutions have been added. This section provides an index of the type material contained in each institution by author.

REFERENCES CITED. Full bibliographic entries are provided for all literature citations. The citations of periodicals conform to the rules of entry in "Anglo-American Cataloging Rules; North American Text (Amer. Libr. Ass., 1967) and the abbreviations follow the "American Standard for Periodical Title Abbreviations" (Amer. Stand. Ass., 1964).

INDEX TO SCIENTIFIC NAMES. In this general index, the number in parentheses following a specific name refers to the number assigned to that name in the section on NOMINAL TAXA; all other references are to page numbers.

## NOMINAL TAXA

### CHAOBORINAE

#### Corethrella

1. kummi Lane, 1942:121-122. HOLOTYPE designated in original publication, ♀, Estado da Bahia, Brazil, 1931, H. W. Kumm [BM]. Apparently a distinct species as currently interpreted.

2. tarsata Lane, 1942:102-103. HOLOTYPE designated in original publication, ♂ with attached genitalia mount, Camassari (Bahia), Brazil, 1931, in house, H. W. Kumm [BM]. Apparently a distinct species as currently interpreted.

#### Edwardsops

3. brevisector (Edwards, 1931a:533-534; Chaoborus). Described from unique HOLOTYPE ♀, marked as type by Edwards, on "board S. S. 'Jerome,'" Manaus (Amazonas), Brazil, 24-27 Apr 1901 [BM]. Apparently a distinct species as currently interpreted.

#### Sayomyia

4. braziliensis (Theobald, 1901b:302-303; Corethra). Described from unique HOLOTYPE ♀, represented by slide of 1 wing and 1 leg, Brazil, A. Lutz [BM; not lost as stated by Lane (1953:103)]. Distinct species but probably with more restricted distribution than indicated by Lane.

## CULICINAE

Aedes

5. albifasciatus (Macquart, 1838:35; Culex). Apparently described from unique HOLOTYPE ♀ from unspecified locality in Brazil, bearing following labels, //Br.//12.//TYPE//Museum Paris/Brésil/Gaudichaud 1833//[MNHP; #1219 in box 37]. Recognizable as species currently interpreted under this name [Ochlerotatus].

6. annuliferus (E. Blanchard, 1852:333; Culex). Described from unspecified number of adults (probably ♀ only) from vicinity of Coquimbo, Illapel (Coquimbo), etc., Chile; 3 specimens under that name in MNHP collection, 1 agrees with description and bears Blanchard's label; LECTOTYPE by present designation, ♀ bearing following labels, //Museum Paris/Chili/Gay 15-43//15/43/[underside] Culex/annuliferus/Bl.//[MNHP; #1225 in box 37]. Recognizable as northern form of albifasciatus (Macquart, 1838) in Chile, similar to flavipes (Macquart, 1838) but specimen larger [Ochlerotatus].

7. arboREALIS Bonne-Wepster & Bonne, 1920:178-179. Described from unspecified number of ♂, ♀ and larvae from Dam (Suriname), Surinam, Jan 1919; 18 specimens in ITH collection, 1 bearing type label, others "cotype"; LECTOTYPE by present designation, ♂ (3893), marked as type, with slide of associated larval and pupal skins (M 53) and slide of genitalia (M 41), both slides marked BB 655 [ITH]. Distinct species with more restricted distribution than currently interpreted [Howardina].

8. argyrothorax Bonne-Wepster & Bonne, 1920:179. Described from 2 ♂ from Geiervslijt, an estate near Paramaribo, Surinam, HOLOTYPE indicated indirectly in original publication, ♂ (3925) marked as type, with genitalia on slide (BB 353, M 52); other ♂ designated as cotype in USNM [ITH]. Distinct species as currently interpreted [Finlaya].

9. aurites (Theobald, 1907:217-218; Howardina). Described from 2 ♀ (both in collection) from Newcastle, Jamaica, July 1905, Colonel Loscombe; in BM collection specimen marked as type by Theobald LECTOTYPE by present designation [BM]. Distinct species, not conspecific with aureostriatus (Grabham, 1906) or inaequalis (Grabham, 1907) [Howardina].

10. braziliensis Gordon & Evans, 1922:329; oswaldi var. HOLOTYPE designated in original publication, marked as type, ♂ (10.1/463), abdomen missing, Macapa (Amazonas), Brazil, 8 Dec 1921, R. M. Gordon; slide of male genitalia belongs to paratype (marked co-type, 10/463) [BM]. Distinct species, not conspecific with terrens (Walker, 1856) [Finlaya].

11. canadensis (Theobald, 1901b:3-5; Culex). Described from series of ♀ (12 remaining) and 1 ♂; all specimens in collection with identical label, //66 Canada/E. M. Walker//, and evidently part of type series although localities vary and none with type label; LECTOTYPE by present designation, ♂ with genitalia intact, Front Creek (Ontario), near Toronto, 1 June 1899, from low woods, E. M. Walker [BM]. Apparently as currently interpreted [Ochlerotatus].

12. crinifer (Theobald, 1903d:209-210; Culex). Described from 2 ♀ (both in collection) from São Paulo, Brazil, A. Lutz; specimen bearing Theobald's type label LECTOTYPE by present designation [BM]. Apparently as currently interpreted [Ochlerotatus].

13. exagitanS (Walker, 1856:430; Culex). HOLOTYPE ♀ (37), Pará [Brazil], Saunders 68-4, with Walker's handwritten species label; identified as type by Waterhouse [BM]. Evidently conspecific with aegypti (Linnaeus, 1762) as currently interpreted [Stegomyia].

14. fasciatus (Fabricius, 1805:36; Culex). Described from unspecified number of adults from "Americae Insulis Mus. Dom. Lund"; type locality restricted to St. Croix, Virgin Islands, by Belkin, Schick and Heinemann (1965:42); 2 specimens in ZMC collection, only 1 of which ( $\sigma$ ) is aegypti as currently interpreted; LECTOTYPE by present designation,  $\sigma$  bearing handwritten label [ZMC]. This is without doubt conspecific with aegypti (Linnaeus, 1762) as fixed by the International Commission on Zoological Nomenclature [Stegomyia].

15. flavicosta (Walker, 1856:431; Culex). HOLOTYPE ♀, Amaz[on region], Saunders 68-4, with Walker's handwritten label; identified as the type by Waterhouse [BM]. Apparently conspecific with fulvus (Wiedemann, 1828) as currently interpreted [Ochlerotatus].

16. flavipes (Macquart, 1838:35; Culex). Described from unique HOLOTYPE ♀ from Concepcion, Chile, only part of thorax and right wing remaining, bearing following label, //Concept./(Chili)/Durv.//[MNHP; #1223 in box 37]. In spite of fragmentary condition, recognizable as northern form of albifasciatus (Macquart, 1838) in Chile, possibly a distinct species conspecific with annuliferus (E. Blanchard, 1852) although type of latter larger [Ochlerotatus].

17. fluviatilis (Lutz, 1904b:8, 1904f:4, 1905:48-49, Culex; 1905:65, Gualteria). Described from unspecified number of adults from the states of São Paulo (Rio Grande, near Franca; Rio Mogy-guassú [Mogi-Guaçu] and Alagôas (Maceió), Brazil; in BM collection ♀ (abdomen missing) from Franca, Rio Grande, 23 Sept 1903, bearing label in Theobald's hand //Culex/fluviatilis/Type Lutz// is undoubtedly part of the type series and is available for designation as lectotype [BM, possibly also IOC and FMP]. Specimen in BM recognizable as the species currently interpreted under this name [Finlaya].

18. fulvus (Wiedemann, 1828:546; Culex). Apparently described from unique HOLOTYPE ♀, from Brazil; in SNG collection 1 ♀ (SMF D7) bearing label //Brazilia/Freireiss//, agrees well with description and is undoubtedly the HOLOTYPE [SNG; courtesy of Dr. R. zur Strassen]. Distinct species as currently interpreted [Ochlerotatus].

19. hirsuteron (Theobald, 1901b:98-99; Culex). Only 2 of the 4 ♀ of type series remaining, both with identical labels including type label; LECTOTYPE by present designation, ♀ with all legs present, Woodstock, Va [Virginia], 10 June 1898, F. C. Pratt [BM]. Currently considered conspecific with sticticus (Meigen, 1838) [Ochlerotatus].

20. impiger (Walker, 1848:6; Culex). Two ♀ in collection apparently part of type series, holotype not designated in original publication; LECTOTYPE by present designation, ♀ (44/17), St. Martin's Falls [Martin Falls], Albany River, Hudson's Bay [Ontario, Canada], identified as the type by Waterhouse and bearing type labels [BM]. Apparently distinct species as currently interpreted [Ochlerotatus].

21. implacabilis (Walker, 1848:7; Culex). HOLOTYPE ♀ (44/17), St. Martin's Falls [Martin Falls], Albany River, Hudson's Bay [Ontario, Canada], G. Barnston; identified as type by Waterhouse; all legs and right antenna missing [BM]. Apparently member of puncator complex, possibly conspecific with puncator (Kirby, 1837) [Ochlerotatus].

22. leucocelaenus Dyar & Shannon, 1924:484. See leucomelas (Lutz, 1904).

23. leucomelas (Lutz, 1904b:13, 1904e:4, Haemagogus; 1905:101-102, Stegoconops); leucocelaenus Dyar & Shannon, 1924:484, nom. nov. Described from unspecified number of ♀ and  $\sigma$  from states of Rio de Janeiro and São Paulo, Brazil; in BM collection 4 specimens under this name, 1 labeled Gualteria oswaldi Lutz (in Theobald's hand), 2 unlabeled; the remaining specimen, ♀ bearing

the following labels, // Franca/B. da Matto/23-9-03 [in Lutz's hand?]/Stegomyia/silvestris/(Type). Lutz [in Theobald's hand]// is probably part of the type series and may be available for designation as lectotype, the word "silvestre" appears as habitat in Lutz's descriptions [BM, possibly also IOC and FMP]. Junior secondary homonym of leucomelas (Meigen, 1804) in Aedes at present; a distinct species as currently interpreted under name of leucocelaenus [Finlaya].

24. luciensis (Theobald, 1901a:297; Stegomyia fasciata var.). Two ♀ (not 1 ♂ and 1 ♀ as stated in description) from Demerara, Georgetown, British Guiana, and 1 ♂ from St. Lucia in collection, neither with type labels. LECTOTYPE by present designation, ♂, Castries, St. Lucia, Otho Galgey, remounted on celluloid stage [BM]. Evidently conspecific with aegypti (Linnaeus, 1762) as currently interpreted [Stegomyia].

25. mathisi (Neveu-Lemaire, 1902:13-15; Culex). Described from 3 ♀ from Counani [Cunani] (Amapá), Brazil (as French Guiana), Jan 1901, Mathis; material presumably originally in FMP but none found, apparently lost or destroyed [NE]. Apparently conspecific with serratus (Theobald, 1901) [Ochlerotatus].

26. mediomaculatus (Theobald, 1907:245-246; Danielsia). Described from 1 ♂ and 1 ♀, Pará, Brazil, E. A. Goeldi, both in collection and labeled ♂ and ♀ types; LECTOTYPE by present designation, ♂ "type" with intact genitalia, lacking head, part of thorax and left foreleg, largely denuded [BM]. Evidently member of fluviatilis complex, possibly conspecific with fluviatilis (Lutz, 1904) [Finlaya].

27. niger (Giles, 1904:384; Taeniorhynchus). Holotype not designated in original publication; 5 ♀ in collection, 2 bearing printed cotype labels; LECTOTYPE by present designation, ♀ bearing handwritten labels, // Antigua/W. Indies/ 21. VII. 1901/W. R. Forrest//Taeniorhynchus/niger sp.n./Type G. M. Giles// [BM]. Apparently conspecific with taeniorhynchus (Wiedemann, 1821) as currently interpreted [Ochlerotatus].

28. nubilus (Theobald, 1903d:208-209; Culex). In BM collection 6 ♀ (not 5) but 1 or 2 probably not part of type series, 2 ♀ bear type label; LECTOTYPE by present designation, ♀ (in better condition) with following labels, // [underside of stage] Morawhanna/B. Guiana/N. W. //123-/British Guiana./Dr. Low. //Culex/nubilus/Type F. V. T. // [BM]. Evidently member of serratus complex as currently interpreted, possibly conspecific with serratus (Theobald, 1901) [Ochlerotatus].

29. oroecetor Martini, 1931b:204-205. LECTOTYPE designated by Mattingly (1955:29), ♂ (4/20, 8929) with genitalia slide, Sorata, Bolivia, 2300 m, 18 Dec 1902 [BM]. Possibly conspecific with milleri Dyar, 1922 as currently interpreted [Ochlerotatus].

30. oswaldi (Lutz, 1904b:13, 1904e:4, 1905:65-66; Gualteria, not Haemagogus as stated by Stone, Knight and Starcke (1959:171) since Gualteria is used in 1904b and through an obvious typographical error is left out in 1904e). Described from unspecified number of adults from the states of Rio de Janeiro and São Paulo, Brazil; in BM collection, ♀ bearing following labels, // [reverse of stage, difficult to decipher] Bonili/S. d. Bomi/na 22. V 03//Type//n. gen/Stegomyia/cruzi Lutz/Type [Theobald's hand]//Gualteria Oswaldi/[reverse of label] cruzi/Lutz// is probably part of type series and could be designated lectotype [BM, other material possibly in IOC and FMP]. Undoubtedly conspecific with terrens (Walker, 1856) as currently interpreted [Finlaya].

31. provocans (Walker, 1848:7; Culex). Described from unspecified num-

ber of ♂ from North America and Nova Scotia (♀ from Nova Scotia doubtfully referred to species and therefore not part of type series); in BM collection only 1 ♂ left; LECTOTYPE by present selection, ♂ with following labels, //N. Amer.//*Culex/provocans*/Walker/(Type).//Identified as the type by E. A. Waterhouse//[BM]. Possibly conspecific with punctor (Kirby, 1837) as currently interpreted [Ochlerotatus].

32. quasiserratus (Theobald, 1907:465-466; Protoculex). All 5 ♀ in collection; LECTOTYPE by present designation, ♀, //Kingston/Jamaica W. I./Dr. Grabham//*Culex/quasiserratus*/Type F.V.T.//Recd. from/F.V. Theobald,/1907-29//[BM]. Apparently conspecific with serratus (Theobald, 1901) as currently interpreted [Ochlerotatus].

33. scapularis (Rondani, 1848:109; Culex). Described from unspecified number of ♀ from unspecified locality in Brazil; type material not in FM, possibly in BOLOGNA [LU]. Apparently as currently interpreted [Ochlerotatus].

34. serratus (Theobald, 1901b:45-47; Culex). In BM collection 15 specimens of type series, of which 1 ♂ and 1 ♀ marked as types; LECTOTYPE by present designation, ♂ with attached genitalia mount (J. Lane preparation), //Parque de Museu/Rio de Jan/5. XI. 99/C. Moreira//9. 12. 99/Rio de Janeiro./ Senhor Carlos Moreira//*Culex/serratus*/Type-Theobald//[BM]. Distinct species as currently interpreted [Ochlerotatus].

35. sexlineatus (Theobald, 1901a:308-310; Stegomyia). Described from unique HOLOTYPE ♀ (101 not 102), Agua Santa, Trinidad, 26 Dec 1900, F. W. Ulrich [BM]. Distinct species with more restricted distribution than currently interpreted [Howardina].

36. solicitans (Walker, 1856:427; Culex). Described from unspecified number of ♀ from United States, type locality restricted to vicinity of Charleston, South Carolina by Belkin, Schick and Heinemann (1966:3); in BM collection 2 ♀ probably from type series; LECTOTYPE by present designation, ♀ with following labels, //U. S. //Saunders/68-4//[underside of green type label] appears/to be type/not marked/E. A. W. //Identified as the type/by E. A. Waterhouse/[underside] *Culex/solicitans* Walk//[BM]. Specimen in excellent condition, lacks only right foreleg, both hindlegs and tips of tarsi of other legs; recognizable as species currently interpreted under this name [Ochlerotatus].

37. spencerii (Theobald, 1901b:99-101; Culex). All 4 specimens (all ♀) of type series in collection, 2 of them with Theobald's type labels, the one bearing the following labels LECTOTYPE by present designation, ♀, //Stony Mountain/Manitoba/12. 7. 9/W. I. Spencer//Type//19. 1, 1900/Manitoba/Dr. Gordon Bell/(W. I. Spencer.)//*Culex/spencerii*/(Type). Theobald//[BM]. Distinct species as currently interpreted [Ochlerotatus].

38. stigmaticus Edwards, 1922:78-79. Described from 2 ♀ "cotypes," 1 ♀ presumably returned to HNM and lost in fire in 1956; LECTOTYPE by present designation, remaining ♀ with following labels, //Paraguay/Vezényi//Asuncion/1904//Cotype//1922. 61//[BM]. Apparently a distinct species as currently interpreted [Ochlerotatus].

39. taeniatus (Wiedemann, 1828:10-11; Culex). Described from unspecified number of ♂ and ♀ from Savannah [Georgia, U. S. A.]; Coquillett (1906:8) reports that L. O. Howard saw 1 ♂ and 1 ♀ in NMW in 1905, this material may still be in the collection but I lost my notes on this species and cannot be certain [possibly NMW]. Apparently a synonym of Aedes aegypti (Linnaeus, 1762) as currently interpreted [Stegomyia].

40. taeniorhynchus (Wiedemann, 1821:43; Culex). Described from unspecified number of ♀ from Mexico; in NMW collection only 1 ♀, bearing handwrit-



ten label //taeniorhynchus W./Savannah//, not selected as lectotype at this time since the locality does not agree with original description; however, this may be due to an error and this specimen may be part of original series (see under Howard in the AUTHORS section) [probably NMW]. Specimen in NMW agrees with current interpretation of taeniorhynchus [Ochlerotatus].

41. terrens (Walker, 1856:429; Culex). HOLOTYPE ♂ with attached genitalia mount, South America, Saunders 68-4, with Walker's handwritten species label, identified as type by Waterhouse [BM]. A distinct species; not conspecific with most current synonyms [Finlaya].

42. tortilis (Theobald, 1903c:281-282; Culex). In BM collection 7 ♀; LECTOTYPE by present designation, ♀ bearing the following labels, //Type//Kingston, Ja/20.8.03/Dr. Grabham//Culex/tortilis./Type. F. V. T.//[BM]. Distinct species as currently interpreted [Ochlerotatus].

43. toxorhynchus (Macquart, 1838:35-36; Culex). Described from unique HOLOTYPE ♀, in poor condition (as originally), matching description in all characters mentioned, greenish tinge of the coxae and base of femora due to corrosion from pin and grease, with following labels, //10./Museum Paris/Brésil/Gaudichaud 1833//[reverse of green circular label] 2602/33//[MNHP]. Undoubtedly conspecific with Aedes aegypti (L.) and not a species of Toxorhynchites as currently interpreted; clypeus and torus with silvery scales, hindtarsal light markings more extensive than usual [Stegomyia].

44. tripunctatus (Theobald, 1907:247-248; Danielsia). Described from unique HOLOTYPE ♀ with slide of wing (labeled 16 April 1906), Franca, Rio Grande (São Paulo), Brazil, 23 Sept 1903, A. Lutz [BM]. Apparently conspecific with fluviatilis (Lutz, 1904) as currently interpreted [Finlaya].

45. vanemdeni Martini, 1931b:208-209. LECTOTYPE ♂ (8890; 1/56) with genitalia slide, Yunga Coroico (La Paz), Bolivia, elev. 1000 m, 18 Nov 1906, designation of Mattingly (1955:31) [BM]. Distinct species as currently interpreted [Howardina].

46. vittatus (Theobald, 1903b:313-316; Grabhamia). In BM collection 3 ♂, 12 ♀ from type locality, 1 ♂ and 1 ♀ with type labels; LECTOTYPE by present designation, ♂ with intact genitalia, bearing type label, Pecos, New Mexico, U.S.A., 21 June 1903, Dr. Grabham [BM]. Apparently conspecific with increpitus Dyar, 1916; preoccupied in Aedes by vittatus (Bigot, 1861) [Ochlerotatus].

47. walkeri (Theobald, 1901a:424; Culex). Described from unique HOLOTYPE ♀, in poor condition but recognizable, with following labels, //Type//Jamaica/[underside] (45/110)//Culex/(?Stegomyia)/walkeri/(Type) F Theobald// One of Walkers/series named/C. fasciatus//; another specimen with type label, collected by Grabham in 1902 cannot be the type [BM]. Recognizable as the very distinct species currently known under this name [Howardina].

#### Anopheles

48. adolphoi (Neiva, 1908:457; Myzorhynchella). See lutzii Theobald, 1901.

49. albimanus Wiedemann, 1820:10. Described apparently from unique HOLOTYPE ♀ from the Dominican Republic; specimen present in NMW collection, in poor condition (abdomen and antennae missing, legs missing or incomplete except for complete left hindleg), with following labels, //[red square]//albimanus/det Wiedem//albimanus/Wied/St Domingo//, type label added by me [NMW]. Agrees in all respects with current interpretation of this species from the Greater Antilles [Nyssorhynchus].

50. albipes Theobald, 1901a:125-128; tarsimaculatus (Goeldi, 1905; Celia), nom. nov. Described from unspecified number of ♂ and ♀ from Jamaica,

British Guiana, Rio de Janeiro, Antigua and India; LECTOTYPE by present designation, ♂ with the following labels, //16.XII.99 ♂ //8.2.00 Jamaica Dr. Grabham//Type//Anopheles argyritarsis var. albipes Theobald (Type)//[BM]. In the restricted sense a junior synonym of albimanus Wiedemann, 1821 [Nyssorhynchus].

51. amazonicus Christophers, 1923:76. HOLOTYPE designated in original publication, ♀, River Amazon, June 1915, A. A. Clark [BM-LIVER]. Apparently conspecific with mattogrossensis Lutz & Neiva, 1911 as currently interpreted [Anopheles].

52. annulimanus van der Wulp, 1867:129-130. Apparently described from unique HOLOTYPE ♂ with following labels, //Kumlien/Wisconsin//Anopheles/annulimanus/type v. d. W.//, genitalia intact [LM]. Conspecific with quadrimaculatus Say, 1824 as currently interpreted [Anopheles].

53. argyritarsis Robineau-Desvoidy, 1827:411. Described from unspecified number of ♀ from Brazil; no material in MNHP collection, all culicid material of Robineau-Desvoidy destroyed or lost [NE; originally in MNHP]. Not separable from related species on basis of original description but should be retained as distinct species as currently interpreted [Nyssorhynchus].

54. bigotii Theobald, 1901a:135-137. Described from unique HOLOTYPE ♀ from Chili, in Verrall's portion of the Bigot Collection, marked by Bigot //Anopheles punctipennis. n. sp 1874. Chili// according to Theobald; type stated to be in BM by Theobald (1910:69) but not found by recent workers or by me, considered non-existent [NE, originally in BM]. Undoubtedly conspecific with pictipennis (Philippi, 1865) as currently interpreted [Nyssorhynchus].

55. boliviensis (Theobald, 1905b:66-68; Kerteszia). Described from unique HOLOTYPE ♀ from Songo [Zongo] (La Paz), Bolivia, M. Biro [HNM]. Distinct species as currently interpreted (Stone, 1957:171) [Kerteszia].

56. canorii Floch & Abonnenc, 1945d:1-3. Described from unique HOLOTYPE ♂, designated type, from Saut Canori, Haut-Approuague (Inini), French Guiana, 13 Feb 1944, mounted together with genitalia on one slide (704) [PIP]. Apparently a distinct species as currently interpreted [Stethomyia].

57. chilensis (R. Blanchard, 1905:289; Culex). See variegatus (E. Blanchard, 1853) [Nyssorhynchus].

58. cricillium Martini, 1932:99-101. Described from unspecified number of ♀ from San Cristóbal de las Casas (Chiapas), Mexico; type material not located in Europe, probably destroyed, other material from type series possibly in Mexico [LU]. Currently regarded conspecific with hectoris Giaquinto, 1931 [Anopheles].

59. crucians Wiedemann, 1828:12. Described from unspecified number of adults (♀ only), from Pennsylvania and New Orleans [Louisiana, U. S. A.], holotype not designated in original publication; in collection 5 ♀, 1 with only //crucians/coll. Winthem// printed label, 4 with //crucians [ink]/det. Wiedem [printed] //labels, 2 of latter with small square red label; LECTOTYPE by present designation, ♀ (one of the last mentioned) bearing in addition the following labels, //Coll. Winthem [printed]//crucians W/NOrleans [Wiedemann's hand]//[NMW]. In good condition, undoubtedly crucians as currently interpreted [Anopheles].

60. cruzii Dyar & Knab, 1908:53. See lutzii (Theobald, 1901).

61. ferruginosus Wiedemann, 1828:12-13. Described from unspecified number of ♀ from New Orleans [Louisiana, U. S. A.], holotype not designated in original publication; in NMW collection 3 ♀ probably part of type series, all in poor condition; LECTOTYPE by present designation, ♀ (palpus broken at end of segment 2) with following labels, //ferruginosus/Coll. Winthem//ferruginosus/

W. N Orleans [in Wiedemann's(?) hand]//[NMW]. These specimens agree in all respects with original description, Howard (in Coquillett, 1906:7) probably saw other specimens; this species is undoubtedly the same as atropos Dyar & Knab, 1906 [Anopheles].

62. grabhamii Theobald, 1901a:205-207. Described from unique HOLOTYPE ♂ (not ♀ as stated), wing, fragments of 2 legs, thorax and head (slide 27), Kingston, Jamaica, 1. XI. 99. ♂, Grabham; not ♂ and ♀ on pins labeled types [BM]. Distinct species as currently interpreted [Anopheles].

63. lutzii Theobald, 1901a:177-178; cruzii Dyar & Knab, 1908:53, nom. nov.; adolphoi (Neiva, 1908:457; Myzorhynchella), nom. nov. Described from 3 ♀ from same locality; LECTOTYPE by present designation, ♀ bearing printed red type label and handwritten type species label, Rio de Janeiro, Brazil, 4. 7. 1899, A. Lutz [BM]. Junior primary homonym of lutzii Cruz, 1901; distinct species as currently interpreted under name of cruzii [Kerteszia].

64. maculipes (Theobald, 1903d:81-83; Arribalzagia). Described from unique HOLOTYPE ♀, São Paulo, Brazil, A. Lutz [BM]. Distinct species as currently interpreted [Anopheles].

65. mediopunctatus (Theobald, 1903d:60-62; Cycloleppter). Described from unique HOLOTYPE ♂, genitalia missing from attached mount, left wing glued on stage, São Paulo, Brazil, A. Lutz [BM]. Distinct species as currently interpreted [Anopheles].

66. niger (Theobald, 1907:78-80; Myzorhynchella). Described from 1 ♂ and 3 ♀ from Brazil and Mexico; LECTOTYPE by present designation, ♀ (one of 2 specimens with Theobald's blue type label), Cantariera (São Paulo), Brazil, 9. 11. 04, A. Lutz [BM]. Apparently conspecific with lutzii Cruz, 1901 as currently interpreted [Nyssorhynchus].

67. nimbus (Theobald, 1902:182; Stethomyia). Described from unspecified number of adults without indication of localities; LECTOTYPE by present designation, ♀ (one of 2 specimens marked as types by Theobald), Cabacaburi, Pomeroon River, British Guiana [Guyana], G. C. Low [BM]. Distinct species as currently interpreted [Stethomyia].

68. parapunctipennis Martini, 1932:101-102. Described from unspecified number of ♂ and ♀ from San Cristóbal de las Casas (Chiapas), Mexico; type material not located in Europe, probably destroyed, other material from the type series possibly in Mexico [LU]. Currently interpreted as distinct species [Anopheles].

69. pseudopunctipennis Theobald, 1901b:305-306. Described from 1 ♂ and 1 ♀ from Grenada (Dr. Hatton, per Dr. Daniels), mounted in balsam; as in case of some other Daniels material no specimens are in BM collection and are presumably lost [NE]. No thorough study of material from type locality has been made to date for the widespread species complex known currently under this name [Anopheles].

70. tarsimaculatus (Goeldi, 1905:133; Cellia). See albipes Theobald, 1901.

71. variegatus (E. Blanchard, 1852:333; Culex); chilensis (R. Blanchard, 1905:289, Culex), nom. nov. Described from unspecified number of adults from Arquero [?Arqueros (Coquimbo)], Chile, in MNHP collection only 1 ♀, this matches description well and is undoubtedly part of original material; as other material may have existed and the above-mentioned specimen is not marked type, it is here designated LECTOTYPE, ♀ bearing following labels, //Arquero //Museum Paris/Chili/Gay 15-43//[reverse of folded green circular label] 15/43//Culex/variegatus/Bl. [in Blanchard's hand]//[MNHP; #1226 in box 37]. This is not a species of Psorophora as currently interpreted but the same species as

Anopheles (N.) pictipennis (Philippi, 1861); junior primary homonym of Culex variegatus Schrank, 1781 [Nyssorhynchus].

72. venezuelae Evans, 1922:214-217. Original description from unique HOLOTYPE ♀, La Cabrera (Carabobo), Venezuela, autumn 1921, M. Nuñez To-var [BM-LIVER]. Apparently conspecific with punctimacula Dyar & Knab, 1906 [Anopheles].

73. walkeri Theobald, 1901a:199-201. Described from several ♀ from same locality; LECTOTYPE by present designation, ♀ (only remaining one from type locality) bearing type label, Lake Simcoe, west shore, 2 mi from southern end, Ontario, Canada, 9 Sept 1899, E. M. Walker 66 [BM]. Distinct species as currently interpreted [Anopheles].

#### Coquillettidia

74. arribalzagae (Theobald, 1903d:261-263; Taeniorhynchus). Described from unspecified number of ♀ from 1 locality; LECTOTYPE by present designation, ♀ bearing Theobald's type label (other 2 ♀ without), with slide of wing, Pará, Brazil, Durham [BM]. Apparently a distinct species as currently interpreted [Rhynchoaenia].

75. perturbans (Walker, 1856:428; Culex). Apparently described from unique HOLOTYPE ♀ (Saunders 68-4), identified as the type by E. A. Waterhouse, United States, type locality restricted to vicinity of Charleston, South Carolina by Belkin, Schick and Heinemann (1966:3) [BM]. In fair condition, recognizable as species currently interpreted under this name [Coquillettidia].

76. testacea (van der Wulp, 1867:128-129; Culex). Apparently described from unique HOLOTYPE ♂, with following labels, //Kumlien/Wisconsin//Culex/testaceus/type v. d. W. //, tip of abdomen with genitalia missing [LM]. Conspecific with perturbans (Walker, 1856) as currently interpreted [Coquillettidia].

77. venezuelensis (Theobald, 1912:61; Pseudotaeniorhynchus). Described from 2 ♀ from Caño de la Viuda, Venezuela; in MNHP 1 ♀ bearing label in Theobald's hand //Pseudotaeniorhynchus/venezuelensis/Type ♀ F.V. Theobald// presumably the HOLOTYPE since type stated to be in MNHP in original publication; other ♀ stated to be in GDZ by Stone, Knight and Starcke (1959:108) not seen [MNHP]. Distinct species as currently interpreted [Rhynchoaenia].

#### Culex

In the synoptic catalog (Stone, Knight and Starcke, 1959; Stone, 1961, 1963, 1967) all neotropical species of Culex with short male palpus are assigned to the subgenera Eubonnea Dyar, 1919 and Aedinus Bourroul, 1904. It is evident, however, that this character occurs independently in several unrelated phylads, the majority of which are lumped at present in Aedinus Bourroul, 1904 of Stone, Knight and Starcke (1959). As indicated on page 51, in my opinion the subgenus Aedinus should be credited to Lutz, 1904 (in Bourroul) with the type species, A. amazonensis Lutz, 1905; it takes precedence over Eubonnea and includes at present only accelerans Root, 1927 and amazonensis (Lutz, 1905). The species currently listed under Aedinus Bourroul, 1904 of Stone, Knight and Starcke are reassigned to the following subgenera, all of which contain species with short male palpus but some of which also include species with long palpus. The subgenus Tinolestes Coquillett, 1906 with only latisquama (Coquillett, 1906). The subgenus Micraedes Coquillett, 1906 with the type species bisulcatus (Coquillett, 1906), antillummagnorum Dyar, 1928, and luteopleurus (Theobald, 1903). The subgenus Anoediopora Dyar, 1923 with type species conservator Dyar &

Knab, 1906 (with all its current synonyms, some of which may not be conspecific) and bamborum Rozeboom and Komp, 1948, belemensis Duret & Damasceno, 1955, browni Komp, 1936, canaanensis Lane & Whitman, 1934, corriganii Dyar & Knab, 1907 (with synonym chalcocorystes Martini, 1914), originator Gordon & Evans, 1922 and paganus Evans, 1923. The following species belong in the subgenus Melanoconion which contains primarily species with long male palpus: breviculus Senevet & Abonnenc, 1939, cauchensis Floch & Abonnenc, 1945 and mojuensis Duret & Damasceno, 1955. Aedeomyia americana Neveu-Lemaire, 1902 is a nomen dubium in the genus Culex without even subgeneric placement.

78. advieri Senevet, 1938:185-187. Apparently described from unique HOLOTYPE ♂, designated as type in original publication, on 2 slides (234 not G-354 as stated), 1 slide with ♂ and dissected genitalia, other with pupal skin, from above Prise d'Eau de Pointe-à-Pitre, Guadeloupe, elev. 90 m, 27 Aug 1936, G. Senevet [FMP-SENEVET, originally in LPFM]. Apparently conspecific with atratus Theobald, 1901 as currently interpreted [Melanoconion].

79. aestuans Wiedemann, 1828:11-12. LECTOTYPE designated by Stone (1958:186), ♂ so marked, with genitalia slide, Brazil; in addition to specimens mentioned by Stone there are 2 ♂ and 2 ♀ in collection [NMW]. Conspecific with fatigans Wiedemann, 1828 and quinquefasciatus Say, 1823 as variously interpreted at present [Culex].

80. aikenii (Aiken & Rowland, 1906:34; Gnophodeomyia). Described from unspecified number of larvae from New Amsterdam (Berbice), British Guiana [Guyana]; inadvertent publication of a former Theobald manuscript name for 118. C. inornatus; no material in BM collection, none located in Guyana, probably non-existent [NE]. Distinct species as currently interpreted [Melanoconion].

81. albinensis Bonne-Wepster & Bonne, 1920:173. Described from unspecified number of ♂, ♀ and larvae from near Paramaribo, Surinam; in ITH collection 1 specimen labeled type and 5 cotype; LECTOTYPE by present designation, ♂ (4154) with genitalia on slide (BB 349; G. d. 25), bearing label, //Type/Culex H/(Chloeroporpa)/albinensis/BW&B//[ITH]. A distinct species as currently interpreted [Melanoconion].

82. alcocki Bonne-Wepster & Bonne, 1920:171-172; as alcocci, corrected here to alcocki since it is evident from the original type label that this was the author's original spelling (name dedicated to Alcock), probably corrected by Dyar who transcribed k to c in scientific names (as in case of zeteci for zeteki). Described from unspecified number of ♂, ♀ and larvae from Zanderij I (Suriname), Surinam, 1 Mar 1918; in ITH collection 7 specimens (1 marked type, others cotype); LECTOTYPE by present designation, ♂ (4137) bearing label //Type/Culex LH/(Chloeroporpa)/alcocki/BW&B//, with slides of associated larval and pupal skins (BB 462) and genitalia (BB 462; G. d. 3); locality Kabelstation according to catalog [ITH]. A distinct species as currently interpreted [Melanoconion].

83. alticola Martini, 1931b:216-217. LECTOTYPE designated by Mattingly (1955:31), ♂ (4.12) with genitalia slide (8905), Serata [Sorata] (La Paz), Bolivia, elev. 2300 m, 19 Dec 1902 [BM]. May be a distinct species and not conspecific with apicinus Philippi, 1865 as interpreted by Bram (1967:24), see also Stone (1957a:304) [Culex].

84. americanus (Neveu-Lemaire, 1902:23-25; Aedeomyia). Described from 4 ♀ from Counani [Cunani] (Amapá), Brazil (as French Guiana), Jan 1901, Mathis, holotype not designated in original publication; material presumably

originally in FMP but none found, apparently lost or destroyed [NE]. Unrecognizable from original description except as a species of *Culex*; considered as *nomen dubium* for the present without assignment to a subgenus.

85. *annulipes* (Theobald, 1907:512-513; *Melanoconion*). Described from unique HOLOTYPE ♀, Red Hills, Jamaica, M. Grabham [BM]. Not conspecific with *taeniopus* Dyar & Knab, 1907 but apparently conspecific with *opisthopus* Komp, 1926; if latter synonymy is correct *annulipes* Theobald, 1907 will take precedence over *opisthopus* since junior secondary homonymy with *Culex annulipes* Meigen, 1830 (now in *Aedes*) and *Culex annulipes* Walker, 1857 (now in *Mansonia*) does not exist at this time [*Melanoconion*].

86. *annuliventris* (E. Blanchard, 1852:334; *Anopheles*). Described from unspecified number of ♂ from Valdivia, etc., Chile; in MNHP collection 3 ♂ under this name, 1 a chironomid, others 2 species of *Culex* agreeing in more or less with original description which has only 2 significant features (long plumose antenna and abdominal segments basally banded with white), 1 ♂ is species currently reported from Chile as *Culex dolosus* (Lynch Arribalzaga, 1891), the other is a species currently without name, it is here designated as LECTOTYPE of *annuliventris* to avoid possible change of name, ♂ bearing following labels, //Museum Paris/Chili/Gay 15-43//[reverse of green label] 15/43//Corethra/annuliventris/Bl.//, its genitalia on slide (660912-1), specimen in poor condition, both antennae missing and only parts of 2 legs remaining (glued to stage), abdominal banding distinct [MNHP; #1228 in box 37]. A species in the *Pha'angomyia* section, related to but distinct from *dolosus* of authors; not a synonym of *Aedes (Ochlerotatus) albifasciatus* (Macquart, 1838) [*Culex*].

87. *argenteoumbrosus* (Theobald, 1907:461-463; *Microculex*). Described from 2 ♀ and 2 ♂ from 1 locality; LECTOTYPE by present designation, ♂ with genitalia slide, marked as ♂ type, Rio de Janeiro, Apr 1903, Goeldi [BM]. Apparently conspecific with *imitator* Theobald, 1903, as currently interpreted [*Microculex*].

88. *atratus* Theobald, 1901b:55-57. Described from several ♀ and ♂ from 1 locality; LECTOTYPE by present designation, ♂ with attached genitalia mount, bearing circular red type label, Jamaica, 8 Feb 1900, M. Grabham [BM]. A distinct species as currently interpreted [*Melanoconion*].

89. *bigoti* Bellardi, 1862:3. Described from unspecified number of ♀ from unspecified locality in Mexico, Sallé; stated to be in Bigot Collection [BC, not seen]. Apparently as currently interpreted [*Lutzia*].

90. *bilineatus* Theobald, 1903d:196-198. Described from a ♂ and a ♀ from 1 locality; LECTOTYPE by present designation, ♂ with attached genitalia mount, bearing type label, Brazil, A. Lutz [BM]. Possibly conspecific with *dolosus* (Lynch Arribalzaga, 1891) as currently interpreted [*Culex*].

91. *biocellatus* Theobald, 1903d:224. Described from unique HOLOTYPE ♀, marked as type, Trinidad, C. H. Hewlett [BM]. Apparently a member of *nigripalpus* Theobald, 1901 complex; Stone (1957a:340-341) considers *biocellatus* as an infrasubspecific name; however, Theobald states "This probably forms a distinct variety" [underscoring mine] and Theobald's other "varieties" have all been treated as specific group names; furthermore, Theobald in the same "Notes" clearly distinguishes individual variation in other specimens from Trinidad; therefore *biocellatus* should be regarded as a specific group name as in Stone, Knight and Starcke (1959:252) [*Culex*].

92. *bonneti* Senevet, 1938:187-189. Apparently described from unique HOLOTYPE ♂, designated as type in original publication, from Prise d'Eau de Pointe-à-Pitre, Guadeloupe, 27 Aug 1936, G. Senevet, only genitalia slide (G-556) remaining [FMP-SENEVET; originally in LPFM]. Apparently conspecific

with elevator Dyar & Knab, 1906 as currently interpreted [Melanoconion].

93. breviculus Senevet & Abonnenc, 1939a:110-112. Apparently described from unique HOLOTYPE ♂, designated as type in original publication, from Poste de Saut-Tigre [Sinnamary River] (Inini), French Guiana, 24 Oct 1937, G. Senevet, ♂ (293) with dissected genitalia mounted on same slide (G 895) [FMP-SENEVET; originally in LPFM]. Apparently a distinct species, with mojuensis Duret & Damasceno, 1955 a junior synonym [Melanoconion, not Aedinus as stated in Stone (1961:47)].

94. brevispinosus Bonne-Wepster & Bonne, 1920:171. Described from unspecified number of ♂, ♀ and larvae from Surinam (localities later specified in Bonne and Bonne-Wepster (1925:236-237) as Kabelstation (Suriname), Dec 1918 and Kwakoegron (Saramacca), March 1919); in ITH collection 5 specimens (1 marked type, others cotype); LECTOTYPE by present designation, ♂ (4491) bearing label, //Type/H Culex L/(Culex)/brevispinosus/BW&B//, associated larval and pupal skins on slide (BB 902; G. h. 49) and genitalia (BB 902) mounted on a slide (G. h. 63) with those of another specimen; locality Kwakoegron according to catalog [ITH]. A distinct species as currently interpreted [Culex].

95. cauchensis Floch & Abonnenc, 1945b:1-4. Described from 2 ♂ from French Guiana, HOLOTYPE, designated as type in original publication, ♂ (685 bis, F) on slide with dissected genitalia, Caux, 25 Apr 1943 [PIP not PIG]. A very distinct species [Melanoconion not Aedinus].

96. cavernicolus Floch & Abonnenc, 1945c:1-3. Described from 3 ♂ from French Guiana, HOLOTYPE ♂ (280), designated as type, mounted on same slide with dissected genitalia, Cayenne, 17 Jan 1940 [PIP not PIG]. Apparently conspecific with putumayensis Matheson, 1934 as currently interpreted [Melanoconion].

97. cayennensis Floch & Abonnenc, 1945b:4-6. Described from 5 ♂ from French Guiana, HOLOTYPE ♂ (286), designated as type, mounted on same slide with dissected genitalia, 17 Jan 1940 (not 1941) [PIP not PIG]. Conspecific with portesi according to Aitken and Galindo (1966:198-208) [Melanoconion].

98. chalcocorystes Martini, 1914:70-76. Described from several males and females; LECTOTYPE designated by Mattingly (1955:31), ♂ (538), Portobelo, Panama, Nov 1913, E. Martini [BM]. Apparently conspecific with corrigani Dyar & Knab, 1907 as currently interpreted [Anodioporpa not Aedinus].

99. chrysothorax (Newstead and Thomas, 1910:147-148; Neomelanoconion). Described from several specimens from Iquitos, Peru and Manaus and vicinity, Brazil; LECTOTYPE by present designation, ♀ (160), only remaining specimen of type series, inner Flores swamp, Pensador, near Manãos [Manaus] (Amazonas), Brazil, 12 July 1906 [BM, pres. by Carter 1911-176]. Possibly conspecific with theobaldi (Lutz, 1904) as currently interpreted [Melanoconion].

100. clarki Evans, 1924:365-367. Described from 4 ♂; LECTOTYPE by present designation, ♂ (C 4) with attached wing mount and genitalia slide, River Amazon [Amazonas], Brazil, 1915, A. Aiken Clark [BM]. Apparently conspecific with nigrescens Theobald, 1907 as currently interpreted [Melanoconion].

101. commevynensis Bonne-Wepster & Bonne, 1920:176-177. Described from unique HOLOTYPE ♂ (4182), bearing type label, with genitalia on slide (BB 121; G. c. 9), Alkmaar (Commewijne), Surinam, Mar 1919 [ITH]. Distinct species as currently interpreted [Melanoconion].

102. coppenamensis Bonne-Wepster & Bonne, 1920:173-174. Described from unspecified number of ♂ and larvae from Kabelstation (Suriname), Surinam, May 1919; only 1 specimen in ITH collection, LECTOTYPE by present designation, ♂ (4160) with following label, //Type/Culex LH/(Chloeroporpa)/coppena-

menensis/BW&B//, with slides of genitalia (BB 944) and associated larval and pupal skins (BB 944; G. d. 5) [ITH]. Distinct species as currently interpreted [Melanoconion].

103. corniger Theobald, 1903d:173-174. Described from 2 ♀ and 1 ♂ from 1 locality; LECTOTYPE by present designation, ♂ with attached genitalia mount marked as ♂ type by Theobald, Pará, Brazil, E. A. Goeldi [BM]. Distinct species as currently interpreted [Culex].

104. cubensis Bigot, 1857:329. Described from unspecified number of ♀ from unspecified locality in Cuba, collection of Guérin-Ménéville; in MNHP collection 3 specimens under this name, 2 of them chironomids; LECTOTYPE by present designation, ♀ bearing following handwritten labels, //Cuba//Culex/cubensis./mihi//; latter label is written on reverse of another label on which Bigot's name appears [MNHP]. Apparently conspecific with quinquefasciatus Say, 1823 as currently interpreted [Culex].

105. curopinensis Bonne-Wepster & Bonne, 1920:177. Described from unspecified number of specimens from unspecified localities in Surinam (later specified in Bonne and Bonne-Wepster (1925:311) as Zanderij I, Mar 1918; Kabelstation, May 1919; Cultuurtuin, Paramaribo, Aug 1918; Dam, Jan 1919; and Moengo); in ITH collection 5 specimens (1 marked type and 4 cotype); LECTOTYPE by present designation, ♂ (4124) bearing label, //Type/Culex/(Mochlostyrax)/curopinensis/BW&B//, with genitalia on slide (G. f. 17); locality Dam according to catalog [ITH]. Probably conspecific with pilosus as currently interpreted [Mochlostyrax].

106. ensifformis Bonne-Wepster & Bonne, 1920:176. Described from unspecified number of ♂, ♀ and larvae from Kabelstation, Dec 1918 and Dam, Jan 1919 (Suriname), Surinam; in ITH collection 4 specimens (1 marked type, others cotype); LECTOTYPE by present designation, ♂ (4183) bearing label, //Type HL/Culex/(Melanoconion)/ensifformis/BW&B//, with genitalia on slide (BB 744; G. c. 4) and associated larval and pupal skins on slide (BB 744; G. c. 6); locality Dam according to catalog [ITH]. A distinct species close to commevynensis Bonne-Wepster & Bonne, 1920 not conspecific with zeteki Dyar, 1918 as currently interpreted [Melanoconion].

107. epirus Aiken, 1909:8. Described from unique HOLOTYPE ♀ from Epira, Corentyne [Courantyne] River (Berbice), British Guiana [Guyana]; not in BM collection or in Guyana, probably non-existent [NE]. Taxonomic status uncertain, currently interpreted as distinct species [Melanoconion].

108. equinoxialis Floch & Abonnenc, 1945c:3-5. Described from 4 ♂ from French Guiana, HOLOTYPE ♂ (687), designated as type in original publication, mounted on same slide with dissected genitalia, Camp Rochambeau, 29 May 1943 [PIP not PIG]. Apparently a distinct species as currently interpreted [Melanoconion].

109. gordoni Evans, 1924:369-370. Described from unique HOLOTYPE ♂ (16.1/463) with attached wing mount and 3 genitalia slides, Bosque, Manáos [Manaus] (Amazonas), Brazil, 29 Dec 1921, R. M. Gordon, in poor condition, reglued on micropin, proboscis and abdomen missing, 3 legs glued on cardboard [BM]. Apparently conspecific with albinensis Bonne-Wepster & Bonne, 1920 as currently interpreted [Melanoconion].

110. hildebrandi Evans, 1923b:377-380. Described from unique HOLOTYPE ♂ (1/467) with slide of wing and 2 slides of genitalia, River Amazon on S. S. "Hildebrand" on way to Manaus (Amazonas), Brazil, 1922, A. Aiken Clark [BM]. Apparently conspecific with amazonensis (Lutz, 1905) as currently interpreted [Aedinus Lutz, 1904 not Eubonnea].



111. humilis Theobald, 1901b:336-337. Described from unspecified number of ♂ and ♀ from 1 locality; LECTOTYPE by present designation, ♂ mounted on same pin as ♀, abdomen and 1 wing glued separately on card mount, genitalia apparently lost, both specimens marked as type by Theobald, São Paulo, Brazil, A. Lutz [BM]. Apparently a distinct species as currently interpreted [Melanoconion].

112. imitator Theobald, 1903d:175-177. Described from unique HOLOTYPE ♂ with attached genitalia mount, São Paulo, Brazil, A. Lutz [BM]. Distinct species, as currently interpreted probably a complex [Microculex].

113. indecorabilis (Theobald, 1903d:241-242; Melanoconion). Described from 3 ♀ and 1 ♂ from 1 locality, ♂ doubtfully referred to species; LECTOTYPE by present designation, ♀ marked as type by Theobald, Pará, Brazil, Durham [BM]. Apparently a distinct species as currently interpreted [Melanoconion].

114. inflictus Theobald, 1901b:115-116. Described from unspecified number of ♀ from Grenada; LECTOTYPE by present designation, ♀ marked as type by Theobald, Ballast grounds, Grenada (West Indies), 3 Mar 1900, W. E. Broadway [BM]. Apparently a distinct species as currently interpreted [Culex].

115. infoliatus Bonne-Wepster and Bonne, 1920:170-171. Described from unspecified number of adults and larvae from Dam (Suriname), Surinam, Jan 1919; in ITH collection 4 specimens (1 marked type, others cotype); LECTOTYPE by present designation, ♂ (4496) marked as type, with genitalia (G. g. 2; BB 690) on same slide as those of a specimen of tapena Dyar, 1919 [ITH]. Distinct species as currently interpreted [Carrollia].

116. innominatus Evans, 1924:363-365. Described from 2 ♂ "paratypes" and 3 ♂ "cotypes"; LECTOTYPE by present designation, ♂ (D 3) with attached genitalia mount, River Amazon, to or from Manaus (Amazonas), Brazil, 1915, A. Aiken Clark [BM]. Apparently conspecific with bastagarius Dyar & Knab, 1906 as currently interpreted [Melanoconion].

117. innovator Evans, 1924:373-375. Described from 3 ♂ paratypes; LECTOTYPE by present designation, ♂ (D 4) with attached wing mount and 4 genitalia slides, River Amazon, to or from Manaus (Amazonas), Brazil, 1915, A. Aiken Clark [BM-LIVER]. Apparently a distinct species as currently interpreted [Mochlostyrax].

118. inornatus (Theobald, 1905a:21-22; Gnophodeomyia). Described from 3 ♀ from 1 locality; LECTOTYPE by present designation, ♀ marked as type by Theobald, with unmarked slide of wing, New Amsterdam, 14 June 1905, caught in morning in house, B=C'&D', Rowland [BM]. Undoubtedly conspecific with aikenii Aiken & Rowland, 1906; rejected as junior secondary homonym of Culex inornatus Williston, 1893 (now in Culiseta) prior to 1960 and cannot be restored [Melanoconion].

119. iridescens (Lutz, 1905:81-82; Carrollia). Described from unspecified number of ♂ and ♀ from Serra da Cantareira (São Paulo), Brazil, holotype not designated in original publication; no authentic material in BM collection; material without original labels in FMP collection possibly part of type series but not checked; the neotype designation of Antunes and Ramos (1939:380-381) cannot be considered valid since they could not have reached their decision that Lutz's species was a composite one on the basis of 2 ♂ without locality or date from Lutz material in IOC without considering these specimens as part of the type series [IOC and possibly FMP, not FH where the "neotype" is deposited]. Currently interpreted as a distinct species [Carrollia].

120. janitor Theobald, 1903d:183-185. Described from series of ♂ and ♀ from 1 locality; LECTOTYPE by present designation, ♂ with genitalia mount,

1 of 2 specimens bearing type labels, the other being a ♀, Kingston, Jamaica, M. Grabham [BM]. A distinct species as currently interpreted [*Culex*].

121. *kelloggii* Theobald, 1903a:211-213. LECTOTYPE designated by Stone (1957a:341), ♂ (348-33) with genitalia intact, Stanford University, California, U. S. A., 6 Oct 1901, V. Kellogg et al [BM]. Undoubtedly conspecific with *tarsalis* Coquillett, 1896 as currently interpreted [*Culex*].

122. *lateropunctatus* Theobald, 1907:458-459. Described from unique HOLOTYPE ♀ (022), Supenaam Crk. (?Essequibo), British Guiana [Guyana], 21 Oct 1905, E.D. Rowland [BM]. Apparently conspecific with *mollis* Dyar & Knab, 1906 as currently interpreted [*Culex*].

123. *luteopleurus* (Theobald, 1903d:239-240; *Melanoconion*). Described from unique HOLOTYPE ♀, Pará, Brazil, Durham [BM]. Apparently a distinct species as currently interpreted [*Micraedes* not *Aedinus*].

124. *maculatus* Humboldt, 1819:340. Described from unspecified number of adults from flooded Guayaquil River valley near Las Bodegas de Babaoyo [Babahoyo], Ecuador; no material in existence[NE]. Unrecognizable from original description, should remain *nomen dubium* in *Culex* without subgeneric assignment; junior primary homonym of *maculatus* Meigen, 1804.

125. *madininensis* Senevet, 1936:129-132. Described from unique HOLOTYPE ♂, not designated as such in original publication, from Trinité, Martinique, June 1934, G. Senevet, only genitalia slide remaining (M 1204, MM 32) [FMP-SENEVET; originally in LPFM]. Possibly a distinct species in *educator* Dyar & Knab, 1906 complex; the so-called sulcus in the clasper (*Rozeboom* and Komp, 1950:92) is an artifact due to a tear as stated by Senevet in the legend to the figure [*Melanoconion*].

126. *manoasensis* Evans, 1924:370-371. Described from unique HOLOTYPE ♂, wharf, Manaus [Manaus] (Amazonas), Brazil, 5 Dec 1923, A. Aiken Clark [BM-LIVER]. Apparently conspecific with *eastor* Dyar, 1920 as currently interpreted [*Melanoconion*].

127. *maracayensis* Evans, 1923a:102-104. Described from unique HOLOTYPE ♂ (0/406) with genitalia on 4 slides, Maracay (Aragua), Venezuela, Oct 1922, bred, M. Nuñez Tovar [BM-LIVER]. Apparently a distinct species as currently interpreted [*Culex*].

128. *maroniensis* Bonne-Wepster & Bonne, 1920:175-176. Described from unique HOLOTYPE ♂ (4153), marked as type, with genitalia on slide (BB 131; G.d.29), unknown locality, Surinam [ITH]. Apparently conspecific with *albiniensis* Bonne-Wepster & Bonne, 1920 [*Melanoconion*].

129. *microannulatus* (Theobald, 1907:481-482; *Trichopronomyia*). Described from unique HOLOTYPE ♂, genitalia removed but no slide or mount found, labeled in Theobald's hand "minuto-annulata," Stanley Town, New Amsterdam (Berbice), British Guiana [Guyana], 22 July 1905, E. D. Rowland [BM]. Member of *nigripalpus* Theobald, 1901 complex, possibly conspecific [*Culex*].

130. *microsquamosus* Theobald, 1905d:407-410. Described from unspecified number of ♂ and ♀ from 1 locality; LECTOTYPE by present designation, ♂ with genitalia on slide, 1 of 2 specimens marked as type by Theobald, the other being a ♀, in poor condition (reglued), Rio Cobre Canal dam, near Spanish Town, Jamaica, 17 Jan 1905, bred, M. Grabham [BM]. Apparently conspecific with *nigripalpus* Theobald, 1901 as currently interpreted [*Culex*].

131. *molestus* Kollar, 1832:18. Described from unspecified number of ♂ and ♀ from Rio de Janeiro, Brazil; not located in any European museum, probably safe to assume that type material is non-existent [NE]. Unrecognizable from original description; should be regarded as *nomen dubium* in *Culex* without subgeneric assignment.

132. multispinosus Bonne-Wepster & Bonne, 1920:177-178. Described from unspecified number of ♂, ♀ and larvae from Kabelstation (Suriname), Surinam, May 1919; in ITH collection 1 type and 1 cotype; LECTOTYPE by present designation, ♂ (4122) marked as type, with associated larval and pupal skins on slide (BB 942) and slide of genitalia (G.f.2) loaned to Komp (see Komp and Rozeboom, 1951:122) in USNM, being returned by Stone (in litt, 1968) [ITH]. Apparently conspecific with caudelli (Dyar & Knab, 1906) as currently interpreted [Mochlostyrax].

133. neglectus Lutz, 1904a:27-30. Described from unspecified number of adults and larvae from Serra da Cantareira (São Paulo), Brazil, holotype not designated in original publication; no authentic material in BM collection; material with original labels in FMP collection not checked but possibly part of type series [LU, possibly FMP]. Currently interpreted as a distinct species [Microculex].

134. nicceriensis Bonne-Wepster & Bonne, 1920:174-175. Described from 1 ♂ and 1 ♀ from Kabelstation (Suriname), Surinam, Dec 1918 and May 1919; both specimens in ITH collection; LECTOTYPE by present designation, ♂ (4144) bearing label, //Type LH/Culex/(Chloeroporpa)/nicceriensis/BW&B//, with genitalia on slide (BB 998; G.d.2) and associated(?) larval and pupal skins (998) on slide (G.d.6) with 2 other specimens, date according to catalog 19 May [ITH]. Apparently a distinct species as currently interpreted [Melanoconion].

135. nigrescens (Theobald, 1907:248-249; Danielsia). Described from unique HOLOTYPE ♂, Santo Amaro (São Paulo), Brazil, 1 Nov 1900, A. Lutz (B.), with attached genitalia mount [BM]. Apparently a distinct species as currently interpreted [Melanoconion].

136. nigricorpus (Theobald, 1901b:231-232; Aedes). Described from unspecified number of ♀ from Itacoatiara, Lower Amazon (Austen) (96, 80); in collection 3 ♀ with identical Theobald type labels and //Lower Amazons/E.E. Austen 96-80//, another ♀ without type label but with same locality label and additional label //Itacoatiara/7 Feb 1896//; LECTOTYPE by present designation, 1 of the 3 ♀ bearing type label [Itacoatiara (Amazonas), Brazil, 7 Feb 1896], E. E. Austen [BM]. Taxonomic status uncertain, possibly a distinct species [Melanoconion].

137. nigripalpus Theobald, 1901b:322. Described from unique HOLOTYPE ♂, St. Lucia, G. C. Low [NE; originally in BM, specimen not located]. Name should be retained for an important species as currently interpreted, see Stone (1957a:341); however, a complex may be involved and true nigripalpus may have a more restricted distribution than currently reported [Culex].

138. ocellatus Theobald, 1903d:222-224. Described from unique HOLOTYPE ♀, broken off pin and glued on card, proboscis, 1 wing and 2 legs missing, diagnostic ocellate spot not apparent (possibly this specimen is not the type), São Paulo, Brazil, A. Lutz [BM]. Taxonomic position uncertain, probably not as interpreted by Lane and Whitman (1943:400-403) [not Melanoconion as currently interpreted, probably Microculex].

139. originator Gordon & Evans, 1922:323-327. Described from 1 ♂, 1 ♀ "type" and 3 ♂, 2 ♀ "cotypes"; LECTOTYPE by present designation, ♂ (13.2/463) with genitalia on 2 slides (association uncertain), 0.5 mi in forest, Macapa, Manaus [Manaus] (Amazonas), Brazil, 21 Dec 1921 (emerged 1 Jan 1922), bred from "Carapana uba" treehole, R. M. Gordon [BM]. Apparently a distinct species as currently interpreted [Anoedioporpa not Aedinus].

140. paganus Evans, 1923a:104-106. Described from ♂ and ♀ "type"; LECTOTYPE by present designation, ♂ (D/409) with genitalia on 3 slides, from

village, Estado Aragua, Venezuela, 28 Aug 1922, M. Nuñez Tovar [BM-LIVER]. Apparently a distinct species as currently interpreted [Anoedioporpa not Aedinus].

141. pallipes Robineau-Desvoidy, 1827:410. Described from unspecified number of ♀(?) from unspecified locality in Brazil; no material in MNHP collection, all Culicid material of Robineau-Desvoidy destroyed or lost [NE; originally in MNHP]. Unrecognizable from original description, should be considered nomen dubium for the present.

142. palus Theobald, 1903d:194-196. Described from 1 ♀ and several ♂ from St. Vincent and Barbados; LECTOTYPE by present designation, ♂ with attached genitalia mount, 1 of 2 specimens bearing Theobald's type labels, the other being a female, Barbados, June, bred from larva in swamp, G. C. Low [BM]. Apparently member of nigripalpus Theobald, 1901 complex [Culex].

143. pleuristriatus Theobald, 1903d:177-178. Described from unspecified number of ♀, from 1 locality; LECTOTYPE by present designation, ♀ marked as type by Theobald, São Paulo, Brazil, A. Lutz [BM]. Apparently a distinct species as currently interpreted [Microculex].

144. prasinopleurus Martini, 1914:68-70. Described from 8 ♂, 4 ♀; LECTOTYPE designated by Mattingly (1955:31), ♂ with genitalia removed (no slide or mount in collection), near Santiago de Cuba (Oriente), Cuba, Nov 1913, E. Martini and J. M. Espin [BM]. Apparently member of nigripalpus Theobald, 1901 complex [Culex].

145. pseudojanthinosoma Senevet & Abonnenc, 1946:135-140. Described from 3 ♀ with associated larval and pupal skins from unspecified locality in French Guiana, G. Senevet, HOLOTYPE ♀ (1553), designated as type in original publication, consisting of adult and larval and pupal exuviae mounted on one slide; 1 paratype also present [FMP-SENEVET; originally in PIA]. Apparently a distinct species [Culex].

146. pungens Wiedemann, 1828:9-10. Described from unspecified number of ♀ from New Orleans [Louisiana, U. S. A.], holotype not designated in original publication; in NMW collection 3 ♀ with pungens labels (1 additional ♀ with Coll. Winthem label only, possibly also part of type series); LECTOTYPE by present designation, ♀ (only specimen with handwritten label, ?Wiedemann's) bearing following labels, // [red square] // Coll. Winthem // pungens / det. Wiedem. // pungens W. / N Orleans [handwritten] // [NMW]. Conspecific with quinquefasciatus Say, 1823 as currently interpreted; probably based on specimens from Say mixed with others described by Wiedemann as Anopheles ferruginosus [Culex].

147. quasiselector Theobald, 1907:398-400. Described from 2 ♂ and several ♀ from 1 locality; LECTOTYPE by present designation, ♂ with genitalia on slide (remounted) (1 of 2 specimens with type labels, other being a ♀), with Lane's mount of genitalia, Newcastle, Jamaica, M. Graham [BM]. Conspecific with selector Theobald, 1901; specimens with more light scaling than usual [Culex].

148. radiatus Senevet & Abonnenc, 1939a:120-123. Described from unspecified number of specimens from Cayenne (marais Leblond), Crique Anguille (both Guyane) and Saut Tigre (Crique Mangue and Crique Plomb) (Inini), French Guiana, various dates; HOLOTYPE ♂ (371) designated as type in original publication, without locality or date, mounted on 2 slides (G-971), 1 with adult and dissected genitalia, other with larval and pupal skins [FMP-SENEVET; originally in LPFM]. Apparently conspecific with pilosus (Dyar & Knab, 1906) as currently interpreted [Mochlostyrax].

149. restuans Theobald, 1901b:142-143. Described from unique HOLO-

TYPE ♀, Toronto (Ontario), Canada, 12 June 1899, E. M. Walker (66) [BM]. Apparently as currently interpreted [Culex].

150. saramaccensis Bonne-Wepster & Bonne, 1920:172-173. Described from unspecified number of ♂, ♀ and larvae, from rock pools in Surinam River, Kabelstation (Suriname), Surinam, Dec 1918; in ITH collection 5 specimens (1 marked type, others cotype); LECTOTYPE by present designation, ♂ (4146) bearing label, //Type H/Culex/(Chloeroporpa)/sarmacensis/BW&B//, genitalia on slide (BB 483; G. d. 7), locality according to catalog Gansee [ITH]. Apparently a distinct species as currently interpreted [Melanoconion].

151. scholasticus Theobald, 1901b:120-122. Described from numerous specimens from Grenada, St. Vincent and St. Lucia; LECTOTYPE by present designation, ♂ with attached genitalia mount, 1 of 2 specimens marked as types by Theobald, the other being a ♀, Grenada, 14 Feb 1900, W. E. Broadway [BM]. Conspecific with inflictus Theobald, 1901 as currently interpreted [Culex].

152. secundus Bonne-Wepster & Bonne, 1920:170. Description based at least in part on description and figures of "iridescens" from Panama in Howard, Dyar and Knab (1913:figs.66 and 384; 1915:464); in ITH collection no specimens at all from Panama; in USNM collection 2 ♂ with genitalia slides from Tabernilla, Canal Zone, possibly seen by the Bonnes and possibly used for fig. 66 [Stone, in litt. 1968] are probably available for designation of lectotype [USNM]. Apparently a distinct species as currently interpreted [Carrollia].

153. secutor Theobald, 1901b:321-322. Described from 2 ♂ and 2 ♀ from 1 locality; LECTOTYPE by present designation, ♂ with genitalia on slide, 1 of 2 specimens bearing type labels, the other being a ♀, Cinchona (St. Andrew), Jamaica, elev. 4900 ft, M. Grabham (111) [BM]. Distinct species as currently interpreted [Culex].

154. similis Theobald, 1903d:207-208. Described from unique HOLOTYPE ♀, Red Hills, Kingston, Jamaica, M. Grabham [NE; presumably originally in BM but specimen not located; ♂, labeled similis type, Stanleytown, BG, Rowland cannot be the type]. Apparently member of the nigripalpus Theobald, 1901 complex [Culex].

155. spinus Lutz, 1905:26-28. Described from unspecified number of ♂ and ♀ from São Paulo, Brazil; redescribed by Theobald (1907:455-456) from unique ♂ from Brazil (Dr. Lutz), this specimen is mounted on 2 slides (BM slide collection, Culex box 6); it may be the only remaining specimen of the type series and eligible for designation as lectotype [BM and possibly IOC and FMP]. Distinct species as currently interpreted [Culex].

156. spissipes (Theobald, 1903d:242-243; Melanoconion). Described from unique HOLOTYPE ♀ (L), Trinidad, C. W. Hewlett [BM]. Apparently conspecific with menytes Dyar, 1918 and not as currently interpreted [Melanoconion].

157. subfuscus Theobald, 1907:403-405. Described from unique HOLOTYPE ♂ with genitalia on slide, Moneague (St. Ann), Jamaica, 12 Feb 1905, Lord Walsingham [BM]. Conspecific with corniger Theobald, 1903 as currently interpreted [Culex].

158. territans Walker, 1856:438. Described from unspecified number of ♀ from United States, type locality restricted to vicinity of Charleston, South Carolina, by Belkin, Schick and Heinemann (1966:3); specimen not located in BM collection, presumably lost [NE; originally probably in BM]. The current taxonomic interpretation of this species should be retained [Neoculex].

159. theobaldi (Lutz, 1904b:5, 1904f:2; Melanoconion). Described from unspecified number of ♀ from Lagão (São Paulo) and Itaparica (Bahia), Brazil; in BM collection 2 ♀ on same double mount but on separate micropins (the 1 next

to large pin in better condition), Lagão (São Paulo), Brazil, 6 Mar 1904, A. Lutz, "type selected John Lane 10-6-50" (not published) are undoubtedly part of original series and eligible for designation of lectotype [BM, possibly also IOC]. Apparently a distinct species as currently interpreted [Melanoconion].

160. thomasi Evans, 1924:372-373. Described from unique HOLOTYPE ♂ (8.1) with attached wing mount on pin and 4 slides of genitalia, swamp water from Amatory, Manáos [Manaus] (Amazonas), Brazil, 1910, H.W. Thomas [BM-LIVER]. Apparently a distinct species as currently interpreted [Melanoconion].

161. tisseuli Senevet, 1937:375-377; emended from tisseulli by Belkin, Schick and Heinemann (1965:24) as name dedicated to Dr. Tisseul. Described from unspecified number of ♂ from Cayenne, French Guiana, 3 Aug 1934, G. Senevet; HOLOTYPE ♂ (G 116), designated as type in original publication, represented only by slide of male genitalia; another slide of ♂ genitalia (115) also labeled type but this specimen not mentioned in original publication [FMP-SENEVET; originally in LPFM]. Undoubtedly a member of mollis Dyar & Knab, 1906 complex, possibly conspecific [Culex].

162. tovari Evans, 1924:367-369. Described from unique HOLOTYPE ♂ (5-6/492) with attached wing mount and genitalia on slide, Palo Negro (Aragua), Venezuela, 30 Aug 1922, M. Nuñez Tovar [BM]. Apparently conspecific with erraticus (Dyar & Knab, 1906) as currently interpreted [Melanoconion].

163. trisetosus Fauran, 1961:1-4. HOLOTYPE ♂ designated in original publication, with genitalia on slide, confluence of Oyac and Conté rivers, near St. Antoine (Guyane), French Guiana, 4 Feb 1957, P. Fauran [MNHP]. Apparently a distinct species [Melanoconion].

164. virgultus Theobald, 1901b:123-125. Described from 2 ♂ from Parque do Museu, Rio de Janeiro, Brazil, 5 Nov 1899, C. Moreira; as indicated by Stone (1957a:341-342) only 1 ♂ of the type series is in BM collection and the associated genitalia (originally on celluloid mount) are those of nigripalpus in the current sense and not similar to declarator Dyar & Knab, 1906 as determined by Lane (1951:334) when he synonymized declarator with virgultus; since Rio de Janeiro is out of the known range of nigripalpus there is reason to believe that the genitalia are incorrectly associated with this specimen [BM]. Until the other ♂ of the type series is located and studied, virgultus is unrecognizable and should be considered a nomen dubium [Culex].

165. willistoni Giles, 1902:281-282. Undoubtedly merely a name for species described by Williston (1893:283) as Culex n. sp. (allied to C. annulatus Meigen), this described from 1 ♀ from Argus Mountains, Calif, Apr.; Coquillett (1896:43-44) described C. tarsalis in part from same material collected by A. Koebele on Death Valley Expedition; no material in BM collection, apparently Giles did not have any material before him; in USNM collection, according to Stone and Knight (1957:57), 1 ♂ (lectotype) and 3 ♀ of type series of tarsalis, 1 of these ♀ should be designated lectotype of willistoni [USNM]. Objective synonym of tarsalis Coquillett, 1896 as currently interpreted [Culex].

#### Culiseta

166. incidens (Thomson, 1869:58-59; Culex). Described from unspecified number of ♀ from unspecified locality in California; material not located [LU, possibly in SM where other Thomson material is present]. Apparently distinct species as currently interpreted [Culiseta].

#### Deinocerites

167. cancer Theobald, 1901b:215-217. LECTOTYPE designated by Belkin

and Hogue (1959:432), ♀ marked as type by Theobald [Spanish Town Road], Kingston, Jamaica, 9.2.1900, W. Grabham [BM]. A distinct species as currently interpreted.

168. magnus (Theobald, 1901b:344-345; Brachiomyia). Described from unique HOLOTYPE ♀ from St. Lucia (Low, per Daniels); this specimen is not in BM collection and is presumably lost [NE]. Distinct species as currently interpreted.

#### Haemagogus

169. albomaculatus Theobald, 1903d:308-310. Described from unique HOLOTYPE ♀, marked as type by Theobald, Cara Cara [Kara Kara] Creek, Demerara River (Demerara), British Guiana [Guyana], G. C. Low (123) [BM]. Distinct species as currently interpreted [Stegoconops].

170. equinus Theobald, 1903c:282-283. Described from unique HOLOTYPE ♀, marked as type by Theobald, lower end of Old Pound Road, Kingston, Jamaica, 24 Aug, M. Grabham [BM]. Distinct species as currently interpreted [Longipalpifer].

171. lindneri Martini, 1931a:118. Described from unique HOLOTYPE ♀ from [?San José de] Chiquitos (Santa Cruz), Bolivia, Oct 1926 [SMNS]. Apparently conspecific with uriartei Shannon & Del Ponte, 1928 [Stegoconops].

172. obscurescens Martini, 1931b:212. Described apparently from 2 ♀; LECTOTYPE designated by Mattingly (1955:28), ♀ (8863; 3/30), Ucayali River (Loreto), Peru, 24 Oct 1903 [BM]. Apparently conspecific with anastasionis Dyar, 1921 as currently interpreted, see Stone (1957a:339-340) [Stegoconops].

173. splendens Williston, 1896:272. Described from 8 ♀ from St. Vincent; LECTOTYPE by present designation, ♀ (1 of 4 with original data), left foreleg and right midleg missing, abdomen detached and glued to stage separately, St. Vincent, 1000 ft elev., H. H. Smith [BM]. Distinct species as currently interpreted [Haemagogus].

#### Limatus

174. asulleptus (Theobald, 1903d:315-316; Dendromyia). Described from unspecified number of ♀ from British Guiana, Demerara River (Dr. Low); LECTOTYPE by present designation, ♀ with 1 wing mounted on slide and lacking both hindlegs, bearing following labels, //123./British Guiana/Dr. Low//Type//Wyeomyia/asullepta/(Type). F.V.T.//, stated to be from Demerara River [Guyana] in original publication [BM]. Distinct species as currently interpreted.

175. curvirostris (Laveran, 1902:1160; Simondella). Based on a description by a Dr. Simond (p.1158-1159) of an unspecified number of ♂ and ♀ from vicinity of Rio de Janeiro, Brazil, at elevations of 300-500 m; Laveran provided only the name and may not have seen any specimens for there is nothing in his comments that is not included in Simond's description; in PIP where the type material of Laveran's other species has been located no material of curvirostris was found; A. Lutz forwarded to Theobald (1903d:333-334) 1 ♂ reared by Simond which probably can be considered as part of type series and available for designation as lectotype; this specimen was mounted on a slide by Theobald (loc. cit.) and is still in the BM collection [BM]. From the description it is apparent that curvirostris is conspecific with durhamii Theobald, 1901 and it has been so interpreted since Theobald's time.

176. durhamii Theobald, 1901b:350-351. Described from a series of ♀ from Pará, Brazil; 4 ♀ in collection with identical locality label, 2 of them with Theo-

bald's type label; LECTOTYPE by present designation, ♀ (the better specimen, lacking only right foretarsus and left antenna) with the following labels, //Para/Dr. Durham//Limatus/durhamii/(Type) Theobald//[BM]. Distinct species as currently interpreted.

177. martiali Senevet & Abonnenc, 1939b:276-278. Described from unspecified number of ♂ from Poste de Saut-Tigre [Sinnamary River] (Inini), French Guiana, 28 Nov 1937; HOLOTYPE ♂ (G.945(5)), designated as type in original publication, adult with dissected genitalia (324(5)-1) mounted on same slide with another male (324(5)-2) [FMP-SENEVET; originally in LPFM]. Apparently a distinct species as currently interpreted.

178. paraensis (Theobald, 1903d:316-317; Dendromyia). Described from unique HOLOTYPE ♀ with the following labels, //Para/Brazil/Dr. Durham//Wyeomyia/paraensis/Type F. V. T.//[BM]. Apparently conspecific with durhamii Theobald, 1901 as currently interpreted.

179. pseudomethysticus (Bonne-Wepster & Bonne, 1920:166; Lemmamyia). Described from 4 ♀ and associated larval skins from unspecified locality in Surinam; in ITH collection 2 ♀ (1 with type label, other cotype); LECTOTYPE by present designation, ♀ (3449) marked as type, associated larval and pupal skins on slide (B 18) [ITH]. Possibly a distinct species as currently interpreted or individual variants of asulleptus (Theobald, 1903).

#### Mansonia

180. amazonensis (Theobald, 1901b:182-183; Panoplites). Described from unique HOLOTYPE ♀, S. S. Faraday, between Gurupá and Mont Alegre (Amazonas), Brazil, 25 Jan 1896, Lower Amazon, E. E. Austen (96-80) [BM]. Apparently distinct species as currently interpreted [Mansonia].

181. pseudotitillans (Theobald, 1901b:178-180; Panoplites). Described from 3 ♀ from Lower Amazons (Austen); LECTOTYPE by present designation, ♀ marked as type by Theobald, S. S. F[araday], Breves (Amazonas), Brazil, 1 Mar 1896, Lower Amazons, E. E. Austen (96-80) [BM]. Apparently distinct species as currently interpreted [Mansonia].

182. titillans (Walker, 1848:5; Culex). Apparently described from unique HOLOTYPE ♀ with genitalia on slide, identified as the type by E.A. Waterhouse, Brazil, presented by Mrs. J. P. G. Smith [BM]. Distinct species as currently interpreted [Mansonia].

#### Orthopodomya

183. albicosta (Lutz, 1904b:6, 1904d:1, 1904f:1; Bancroftia). Described from unspecified number of ♂ and ♀, apparently from Serra da Cantareira (São Paulo), Brazil; specimens in BM labeled as types by Lane are not part of the original series because of later date or different locality (Stone, 1957a:334), 2 other ♀ in BM labeled, //Brazil/Dr. Lutz//may be part of the type series; status of specimens in FMP not determined [possibly BM, FMP and IOC]. A distinct species as interpreted by Zavortink (1968:66-71).

184. kummi Edwards, 1939:121-123. HOLOTYPE ♀, designated in original publication and marked by Edwards as type, Orosi (Cartago), Costa Rica, 16 Dec [not June] 1937, H. W. Kumm [BM]. A distinct species as interpreted by Zavortink (1968:60-66).

185. longipalpis (Newstead & Thomas, 1910:145-147; Mansonia). Described from 4 ♀; LECTOTYPE designated by Zavortink (1968:75), ♀, neighborhood of Manãos [Manaus] (Amazonas), Brazil, bearing following labels, //Bach's outside



house/4 to 6 PM/23 Aug 1906//Thomasina longipalpis N&T Type ♀//Amazons/Pres by/H. F. Carter/1911.176//[BM]. Conspecific with fascipes (Coquillett, 1905) as interpreted by Zavortink (1968:75-82).

#### Phoniomyia

186. fascipes (Edwards, 1922:76; Wyeomyia). Described from 2 ♀ "cotypes"; LECTOTYPE by present designation the only ♀ in BM (other presumably lost by fire at HNM), with the following labels, //Paraguay/Fiebrig//Cotype//1922.61//[BM]. Apparently a distinct species as currently interpreted.

187. longirostris (Theobald, 1901b:275-277; Wyeomyia). Described from unspecified number of ♀ from 1 locality; in the collection are 3 ♀ with identical printed locality labels (1 of these with Theobald's type label), and 2 ♂ with handwritten labels, 1 of them (São Paulo) with Theobald's type label; these ♂ cannot be part of type series as this sex was not described; LECTOTYPE by present designation, ♀ with the following labels, //Type//4.7.99/Rio de Janeiro/Dr. Lutz [printed]//Wyeomyia/longirostris/(Type) Theobald//[BM]. Distinct species as currently interpreted.

188. pallidoventer Theobald, 1907:598-599. Described from unique HOLOTYPE ♂ (10) with genitalia on slide, specimen broken, head on pin, thorax and 4 legs glued on stage, with following labels, //Rio de Janeiro/Dr. Fajardo//Phoniomyia/pallidoventer/Type F. V. T.//[BM]. Distinct species as currently interpreted.

189. quasilongirostris Theobald, 1907:598. Described from 2 ♀ from Ma-na [Mauá], Rio de Janeiro, Brazil, holotype not designated in original publication; LECTOTYPE by present designation, ♀ (7), only specimen in collection, with following labels //Phoniomyia/quasilongirostris/FVT//Rio de Janeiro/Dr. Fajardo//[BM]. Apparently a distinct species as currently interpreted.

190. splendida (Bonne-Wepster & Bonne, 1919:111-113; Wyeomyia). Described from unspecified number of ♂, ♀, larvae and pupae from sandy district of colony (Suriname), Mar 1918; Lawa River (Marowijne), Mar 1917; and Sarah [Sara] Creek (Marowijne), Jan 1919, Surinam; in ITH collection 7 specimens (1 marked type, others cotype); LECTOTYPE by present designation, ♂ (3504, BB 669) marked as type, with larval and pupal skins (C. a. 34) and genitalia (C. a. 28) mounted on 1 slide (10670) [ITH]. Distinct species as currently interpreted.

191. trinidadensis (Theobald, 1901b:277-279; Wyeomyia). Described from series of ♀ from 1 locality; 7 ♀ with identical locality labels in collection, 1 of these with Theobald's type label; LECTOTYPE by present designation, ♀ lacking only left foreleg, with following labels, //Type//101/Trinidad, W. I. /F. W. Urich//Wyeomyia/trinidadensis/(Type). Theobald//[BM]. Apparently a distinct species as currently interpreted.

192. tripartita (Bonne-Wepster & Bonne, 1921:6-7; Dyarina). Apparently based on unique ♂ from Brazil, presumably specimen of longirostris mentioned in Howard, Dyar and Knab (1915:61) from São Paulo sent by A. Lutz, and described and figured by Dyar (1919:121 and fig. 2) as longirostris; this figure should be considered a representation of the HOLOTYPE of tripartita as according to Stone (*in litt*, 1968) the ♂ is no longer in USNM collection [NE]. Apparently a distinct species as interpreted by Lane (1953:1035-1036).

#### Psorophora

The taxonomic status of several nominal species cannot be determined with-

out a thorough revision of this complex genus as it is evident that many of the currently recognized species are actually complexes of forms with rather limited distribution, particularly in the subgenus Janthinosoma. The problem is complicated by the fact that the earlier workers described these large showy mosquitoes without giving definite localities and also because the type material of many forms is in very poor condition or non-existent.

193. albipes (Theobald, 1907:157, Janthinosoma; 1903d:126-128, as discrucians). Name proposed for species originally described as discrucians from an unspecified number of ♀ from Agua Santa, Trinidad; 2 ♀ of this series are in collection, type not designated in 1907 publication; LECTOTYPE designated by Stone (1957a:337), ♀ (101), Agua Santa, Trinidad, 22 Dec 1900, F. W. Urich (other specimen 25 Dec 1900) [BM]. Apparently a distinct species as currently interpreted [Janthinosoma].

194. antiguae (Giles, 1904:382, 384; Taeniorhynchus). Described from unspecified number of ♀ from Antigua; Theobald (1907:290) stated that the type was in BM; there are 2 ♀ in BM now with identical handwritten locality label, //Antigua, 11 June 1901, Forrest//; LECTOTYPE by present designation, ♀ with above data marked by Theobald as type of antiguae [BM]. Apparently conspecific with pygmaea Theobald, 1903 as currently interpreted [Grabhamia].

195. apicalis (Theobald, 1903d:171-172; Culex); neoapicalis (Theobald, 1910:336, nom. nov.; Culex). Described from 1 ♂ and 1 ♀, locality given as São Paulo (Dr. Lutz) and Pará (Dr. Durham), Brazil; in BM collection 1 ♂ and 1 ♀ marked types by Theobald with identical locality label //Rio de Janeiro/Dr. Lutz //, and 7 ♂ and 3 ♀ from Pará, Dr. Durham which are undoubtedly some of the "specimens...also...received from Para"; the ♂ and ♀ marked as types by Theobald agree with description and are apparently the 1 ♂ and 1 ♀ on which the description was based in spite of discrepancy in the locality; LECTOTYPE by present designation, ♂ marked as ♂ type by Theobald, Rio de Janeiro, Brazil, A. Lutz [BM]. Junior primary homonym of Culex apicalis Adams, 1903; apparently member of cingulata (Fabricius, 1805) complex as currently interpreted [Grabhamia].

196. arribalzagae (Giles, 1902:341-342; Janthinosoma). Giles' species is based not on specimens from Argentina as interpreted by Stone, Knight and Starcke (1959:127) but on: "a specimen I have just received from Dr. Lutz, labeled 'Janthinosoma, sp. n.' and which was at once recognized by Mr. Theobald as the missing [underscoring mine] species"; arribalzagae was redescribed by Theobald (1903d:128-131), "from a single ♀ taken by Dr. Lütz, now in the British Museum" which was presumably the type specimen of arribalzagae for, under discrucians, Theobald (1903d:128) states that Arribalzaga's discrucians: "has been sent over by Dr. Lutz, and was re-named by Colonel Giles J. Arribalzaga; the type, a ♀, is in the museum"; therefore it appears that arribalzagae was based on a unique HOLOTYPE ♀ from [São Paulo], Brazil, A. Lutz, which is still in the BM collection [BM]. Considered conspecific with discrucians (Walker, 1856) since Theobald's synonymy (1907:158); however exact taxonomic status cannot be determined without thorough revision of subgenus [Janthinosoma].

197. blanchardi Surcouf & Gonzalez-Rincones, 1911:120-124. Described from 5 ♀ and 1 ♂ from Maturín (Monagas), Venezuela, M. Nuñez Tobar, type stated to be in MNHP but without indication of sex; in MNHP collection 1 ♂ and 6 ♀ (not 5), none of specimens with type label; LECTOTYPE by present designation, ♂ with intact genitalia, legs all missing except right midleg, bearing label, //Psorophora Blanchardi/de Surcouf-Gonzalez//[MNHP]. Conspecific

with lineata (Humboldt, 1819) or saeva Dyar & Knab, 1906 [Psorophora].

198. ciliata (Fabricius, 1794:401-402; Culex). Described from unspecified number of adults from "Carolina Mus Dom. Bosc."; type locality restricted to vicinity of Ten Mile Station near Charleston, South Carolina by Belkin, Schick and Heinemann (1966:3-4); all material stated to be lost by Zimsen (1964:451) [NE]. Distinct species as currently interpreted [Psorophora].

199. cilipes (Fabricius, 1805:34; Culex). Described from unspecified number of ♂ from "America meridionali Dom. Smidt. Mus. Dom. Sehestedt"; type locality restricted to Cayenne, French Guiana by Belkin, Schick and Heinemann (1965:41-42); in collection 2 ♂; LECTOTYPE by present designation, ♂ with intact genitalia, bearing the original label [ZMC]. Distinct species as currently interpreted [Psorophora].

200. cingulata (Fabricius, 1805:36; Culex). Described from unspecified number of adults from "America meridionali Dom. Smidt. Mus. Dom. de Sehestedt"; type locality restricted to Cayenne, French Guiana by Belkin, Schick and Heinemann (1965:41-42); 2 specimens in collection; LECTOTYPE by present designation, ♂ with handwritten label [ZMC]. Apparently member of cingulata complex as currently interpreted [Grabhamia].

201. conterrens (Walker, 1856:427; Culex). Apparently described from unique HOLOTYPE ♀, abdomen, midlegs and hindlegs missing, identified as the type by E. A. Waterhouse, United States, type locality restricted to vicinity of Charleston, South Carolina by Belkin, Schick and Heinemann (1966:3) [BM]. Undoubtedly conspecific with ciliata (Fabricius, 1794) as currently interpreted [Psorophora].

202. cyanopennis (Humboldt, 1819:340; Culex). Described from unspecified number of adults from Magdalena River valley near Tenerife, Mompo [Mompós], Chilloa and Tamalameque, Colombia; no material in existence [NE]. Currently regarded conspecific with ciliata Fabricius, 1794 [Psorophora].

203. discrucians (Walker, 1856:430; Culex). Described from unspecified number of ♂ and ♀, South America; 1 ♂ and 1 ♀ now in BM collection with, // [white label with black bar, ?=South America], Saunders 68-4//identified as the type/by E. A. Waterhouse//; ♂ with hindlegs now missing, stated by Theobald, 1907:158 to have "the last two tarsals white" and possibly "not the original specimen" because of disagreement with Walker's description; ♀ in very bad condition, without legs or abdomen; lectotype designation postponed pending revision of the subgenus [BM]. Identity of species questionable, current interpretation retained [Janthinosoma].

204. ferox (Humboldt, 1819:340; Culex). Described from unspecified number of adults from flooded Guayaquil River valley near San Borondon [Samborondon], Ecuador; no material in existence [NE]. Currently interpreted as valid species [Janthinosoma].

205. fiebrigi Edwards, 1922:77. Described from 5 ♂, 4 ♀ "cotypes"; 1 ♂, 2 ♀ remain in BM, some of type series presumably returned to HNM and destroyed by fire; LECTOTYPE by present designation, ♂ with attached genitalia mount, lacking hindtarsal segments 4 and 5, Paraguay, Fiebrig [BM]. A distinct species as currently interpreted [Janthinosoma].

206. goeldii (Giles, 1904:383; Taeniorhynchus). Attributed to Theobald who did not describe any species under this name; no material marked with this name in BM collection where it should be, possibly represented in this collection by 1 or more specimens from Pará, Brazil, E. A. Goeldi [LU, possibly BM]. This species cannot be definitely identified from the description and should be considered a nomen dubium. Most characters mentioned in Giles'

description fit a member of the Psorophora (G.) cingulata complex. It is possible that Theobald may have intended to describe this species on material received from Goeldi but realized that he had already described it as Culex apicalis (see 195. Ps. apicalis). Giles' concept of Taeniorhynchus included species now placed in Culex (C.), Culex (Lutzia), Coquillettia, Mansonia, Aedes (Ochlerotatus) and Psorophora (Grabhamia).

207. jamaicensis (Theobald, 1901a:345-346; Culex). Described from ♀ only, without indication of number of specimens, bred from larvae collected along Spanish Road [Spanish Town Rd], Kingston; 2 ♀ in collection with identical data (1 marked as ♀ type), 1 ♀ (Jamaica, Dr. Grabham), 1 ♂ without locality but with date (20. VI. 02), marked ♂ type (not part of original series); LECTOTYPE by present designation ♀, marked as ♀ type by Theobald, //8. 2. 1900/Jamaica/Dr. Grabham//[BM]. Evidently member of confinnis (Lynch Arribalzaga, 1891), complex as currently interpreted; exact taxonomic status not determined [Grabhamia].

208. jamaicensis (Theobald, 1907:157; Janthinosoma). Described from 5 ♀ from Runaway Bay and Kingston, Jamaica; LECTOTYPE by present designation, ♀ marked as type by Theobald, Runaway Bay (St. Ann), Jamaica, 15 Apr, Lord Walsingham [BM]. Junior secondary homonym of Psorophora (Grabhamia) jamaicensis (Theobald, 1901); a member of the ferox (Humboldt, 1819) complex as currently interpreted, possibly a distinct species [Janthinosoma].

209. leucocnemis Martini, 1931b:214-215. Described from unique HOLOTYPE ♀, Montevideo, Uruguay, 19 Mar 1927, Vogelsang coll. 8846 [BM]. Apparently conspecific with varinervis Edwards, 1922 [Grabhamia].

210. lineata (Humboldt, 1819:340; Culex). Described from unspecified number of adults from Caño de Tamalameque north of junction of Magdalena and Tamalameque rivers, Colombia; no material in existence [NE]. Currently interpreted as valid species [Psorophora].

211. lutzii (Theobald, 1901a:257-259; Janthinosoma). Described from unspecified number of ♀ from Itacoatiara, Lower Amazon (Austen) and Rio de Janeiro (Lutz); 7 ♀ of type series in collection (1 marked type) and 1 ♂ (labeled type by Theobald) which is not part of type series; LECTOTYPE by present designation, ♀ with the following labels, //Parque/do Museu/Rio de Jan'/5-XI-99/C. Moreira [handwritten]//Type/9. 11. 99/Rio de Janeiro/Senhor Carlos Moreira [printed]//Conchyliates/Lutzii/(Type) Theobald//[BM]. Distinct species as currently interpreted [Janthinosoma].

212. mexicana (Bellardi, 1859:5-6; Culex). Described from unspecified number of ♀ from unspecified locality in Mexico (Sallé), stated to be in MNHP and Bellardi collections; no material in MNHP, possibly present in Instituto e Museo di Zoologia, Torino where Bellardi collection is located [LU, possibly TORINO]. Apparently a distinct species as currently interpreted [Janthinosoma].

213. molesta (Wiedemann, 1820:7-8; Culex). Described from unspecified number of ♀ from "Georgia Amer."; in NMW collection 2 ♀ with Coll. Wiedemann and molestus labels, 2 additional ♀ from Winthem collection without species label may also be part of series; LECTOTYPE by present designation, ♀, only specimen with handwritten label [?Wiedemann's]//C. molestus m./Georgia Amer./borealis/ciliatus Fb., and bearing also label //molestus m./Coll. Wiedem//[NMW]. Conspecific with ciliata (Fabricius, 1794) as currently interpreted [Psorophora].

214. neoapicalis (Theobald, 1910:336; Culex). See apicalis (Theobald, 1903).

215. ochripes (Macquart, 1850:11; Culex). Apparently described from

unique HOLOTYPE ♀ in spite of both ♂ and ♀ mentioned in description (see below), from "Amerique meridionale"; in MNHP collection ♀ in poor condition (both antennae, all legs except left midleg, right wing, and apex of abdomen missing; largely denuded) agreeing with description, with following labels, //62 //bords du/Parana, /pres les/missions//Museum Paris/Buenos-Ayres/A Corrientes/D'Orbigny//Type//Culex/ochripes/♀ Macq. n. sp. [Macquart's hand]//; type locality apparently shore of Parana River in vicinity of Buenos Aires, Argentina [MNHP]. This is not Aedes (O.) fulvus as currently interpreted but a species of Psorophora (P.); the type resembles a small denuded ciliata (Fabricius, 1794) but is somewhat darker; the reference to ♂ in the latin description is erroneous (probably typographical) as both the figure and the french description refer to ♀ only [Psorophora].

216. pallescens Edwards, 1922:76-77. Described from 1 ♂, 4 ♀ "cotypes"; 1 ♂ and 1 ♀ in BM collection, others presumably in HNM destroyed by fire; LECTOTYPE by present designation, ♂ with attached genitalia mount, Paraguay, Fiebrig (BM 1922.61) [BM]. Apparently a distinct species as currently interpreted, see Stone (1957a:337) [Psorophora].

217. paraguayensis (Strickland, 1911:268-269; Janthinosoma). Described from unique HOLOTYPE ♀, Puerto Max (Boqueron), Paraguay, Jan-Apr 1905, Vezenyi [NE; specimen seen by Edwards (1922:75), presumably sent to HNM and subsequently destroyed by fire]. Probably not conspecific with varipes (Coquillett, 1904) as currently interpreted [Janthinosoma].

218. perterrens (Walker, 1856:431; Culex). Described probably from unique HOLOTYPE ♀ from South America; as indicated by Stone (1957a:337-338) the specimen in BM identified as the type by E. A. Waterhouse is probably not perterrens [NE]. I am following Stone (loc. cit.) in considering perterrens a nomen dubium.

219. pilipes (Macquart, 1834:36-37; Culex). Described from ♀ in spite of reference to ♂ (see below) from unspecified locality in Brazil, perhaps more than 1 specimen; no specimens in MNHP, probably lost or destroyed [NE; originally in Macquart Collection]. Undoubtedly a species of Psorophora (P.) on the basis of large size, "ciliate" apex of hindfemur and of tibia, and "hairy" underside of proboscis, probably based on a denuded specimen(s) of ciliata (Fabricius, 1794) as with ochripes (Macquart, 1850); reference to ♂ palpus probably erroneous as in case of latter species [Psorophora].

220. posticata (Wiedemann, 1821:43; Culex). Apparently described from unique HOLOTYPE ♀ from Mexico, which is in NMW collection, bearing following labels, // [red square] // Coll. Winthem // posticatus / det. Wiedem. // posticatus / Wied / Mexico [handwritten] // [NMW]. Undoubtedly member of ferox (Humboldt, 1819) complex as currently interpreted [Janthinosoma].

221. pruinosa Martini, 1935:47-48. Described from unspecified number of ♀; LECTOTYPE designated by Mattingly (1955:28), ♀, Torreón (Coahuila), Mexico, A. Dampf (9421) [BM]. Very similar to signipennis (Coquillett, 1904), possibly conspecific [Grabhamia].

222. purpurascens Edwards, 1922:77-78. Apparently described from unique HOLOTYPE ♀, designated as type in original publication, from unspecified locality in Paraguay, Fiebrig, probably vicinity of Asunción (HNM). Apparently conspecific with cyanescens (Coquillett, 1902) as currently interpreted (Stone, 1957b:174) [Janthinosoma].

223. pygmaea (Theobald, 1903d:245-246; Grabhamia). Described from unspecified number of ♀ from Antigua; 3 ♀ of type series in collection; LECTOTYPE by present designation, ♀ with wing on slide, with following labels, // Lee-

ward Isl/Antigua/Forrest 119//*Poecillopterus jamaicensis*/sub.sp. *pygmaeus*/(Type) F Theobald//[BM]. A distinct species as currently interpreted [Grabhamia].

224. *scintillans* (Walker, 1848:1-2; Sabethes). Described presumably from more than 1 ♂ from Pará, Brazil; LECTOTYPE by present designation, ♂ (45.56) with genitalia intact, with following labels, //Para//Type//Sabethes/scintillans/(Type) Walker.//One of Walker's series so named/EAW//[BM]. Apparently conspecific with *cilipes* (Fabricius, 1805) as currently interpreted [Psorophora].

225. *simplex* Martini, 1935:36-37. Described from series of ♀ from Valle del Yaqui (Sonora), Mexico, 18 Aug 1926, A. Dampf (8496); LECTOTYPE ♀, designated by Mattingly (1955:28) [BM]. Apparently conspecific with *howardii* Coquillett, 1901 as currently interpreted [Psorophora].

226. *terminalis* (Coquillett, 1906:8, 17; Janthinosoma). Based on *posticata* of Theobald (1901a:253-254 and 1903d:125-126), type not designated in original publication; specimen mentioned in 1901 not in collection but 5 ♀ from series mentioned in 1903 present; LECTOTYPE by present designation, ♀, with only hindtarsal segment 5 white, Choe (3.5 mi north of Castries), St. Lucia, 5 July 1902, St. George Gray [BM]. Member of the *ferox* (Humboldt, 1819) complex as currently interpreted, possibly a distinct species [Janthinosoma].

227. *tovari* Evans, 1922:218-219. Described from 2 ♀ from region of Maracay (Aragua), Venezuela, M. Nuñez Tovar; 5 specimens in collection, 2 ♂ not part of type series, 1 ♀ (482) not part of type series, 2 ♀ (468) interpreted as original syntypes; LECTOTYPE by present designation, ♀ (1/468), one of the above-mentioned syntypes [BM-LIVER]. Apparently conspecific with *cyanescens* (Coquillett, 1902) as currently interpreted [Janthinosoma].

228. *varinervis* Edwards, 1922:78. Apparently described from unique HOLOTYPE ♀, designated as type in original publication, from unspecified locality in Paraguay, Fiebrig, probably vicinity of Asunción [HNM]. A distinct species as currently interpreted (Stone, 1957b:174) [Grabhamia].

229. *walsinghamii* (Theobald, 1907:484-486; Taeniorhynchus). Described from unique HOLOTYPE ♀, Runaway Bay (St. Ann), Jamaica, Apr., Lord Walsingham [BM]. Identical with *jamaicensis* (Theobald, 1901) and member of *confinis* (Lynch Arribáizaga, 1891) complex as currently interpreted [Grabhamia].

### Sabethes

The taxonomy and nomenclature in this small genus of generally conspicuously ornamented species are very confused at the present time. Some of the early confusion was due to the incorrect determination of the sex which is understandable as the females of some species have long dense flagellar whorls as in the males of most mosquitoes of other genera.

230. *albiprivatus* (Theobald, 1907:620-621; Sabethinus); *melanonymphe* Dyar, 1924, nom. nov. Described from 1 ♂ and 1 ♀ from Cantareira (São Paulo), Brazil, A. Lutz; both specimens in collection but without identification labels on pins; LECTOTYPE by present designation, ♂ with thorax and 5 legs on pin, abdomen and genitalia on one slide, head and left wing on another (slides labeled //Sabethinus/albiprivatus/♂ Lutz//Brazil/Dr. Lutz//), pin with label //Cantareira/16-4-05//[BM]. Junior secondary homonym of *Sabethes albiprivatus* Lutz, 1904; apparently a distinct species as currently interpreted under the name *melanonymphe* [Sabethinus].

231. *albiprivus* Theobald, 1903d:323. Attributed to Lutz but published by

Theobald in 1903, redescribed as albiprivatus n. sp. Lutz by Theobald (1907: 595-596); apparently based on same 2 ♀ (mentioned in 1907), both present in collection; LECTOTYPE by present designation, ♀ marked by Theobald, //Sabethes/albiprivus/(Type). Lutz//Sao Paulo/Brazil// and bearing following notation on underside of stage //28-XI/Matto Ent//[BM]. Apparently a distinct species as currently interpreted; also described as albiprivatus by Lutz in 1904 (Sabethes).

232. amazonicus Gordon & Evans, 1922:316-317. Described from unique HOLOTYPE ♀ (8/463), Macapa [near Manaus] (Amazonas), Brazil, 22 Dec 1921, R. M. Gordon [BM-LIVER]. Apparently a distinct species as currently interpreted [Sabethes].

233. argyrotum Edwards, 1928:283. Described from 2 ♀ from Melguerra, Rio Amalar, between Cuyabá and Diamantino (Matto Grosso), Brazil, Miss C. Longfield; LECTOTYPE by present designation, ♀, 26 May 1927, marked as type by Edwards [BM]. Apparently conspecific with belisarioi Neiva, 1908 as currently interpreted [Sabethes].

234. aurescens (Lutz, 1905:350; Sabethinus). Described from unspecified number of ♀ and ♂ from unspecified locality in Brazil, probably vicinity of São Paulo; only remaining original material appears to be the holotype of aurescens (Theobald, 1907) which was sent by Lutz with his manuscript name, this specimen is eligible for designation as lectotype of aurescens (Lutz), ♀, Cantareira (São Paulo), Brazil, 16 Apr 1905 [BM, possibly additional material in IOC and FMP]. Apparently a distinct species as currently interpreted [Sabethinus].

235. aurescens (Theobald, 1907:622-623; Sabethinus). Described from unique HOLOTYPE ♀ "sent by Dr. Lutz under MS. name aurescens," Cantareira (Sao Paulo), Brazil, with following labels, //Type/Sabethinus/aurescens/Theo.//Cantareira/16-4-05//, with legs and right wing on 2 slides, this specimen is also eligible for designation as lectotype of aurescens (Lutz, 1905) [BM]. Junior primary homonym and probably objective synonym of aurescens (Lutz, 1905) as currently interpreted [Sabethinus].

236. chloropterus (Humboldt, 1819:340; Culex). Described from unspecified number of adults from flooded Guyas River valley near San Borondon [Samborondon], Ecuador; no material in existence [NE]. Currently interpreted as valid species [Sabethoides].

237. confusus (Theobald, 1903d:328-330; Sabethoides). Based on 1 ♀ "remipes," several ♀ "nitidus," all from Pará, Brazil, Durham, and additional unspecified number of ♀ from British Guiana and São Paulo, Brazil; LECTOTYPE designation by Mattingly (1958:105) valid, ♀ marked by Theobald as type of nitidus, Pará, Brazil, Durham; this specimen is not the holotype of nitidus as interpreted by Mattingly (see nitidus) [BM]. Apparently conspecific with chloropterus (Humboldt, 1819) as currently interpreted [Sabethoides].

238. cyaneus (Fabricius, 1805:35; Culex). Apparently described from a single adult from "America meridionali Dom. Smidt. Mus. Dom. Lund."; type locality restricted to Cayenne, French Guiana by Belkin, Schick and Heinemann (1965:41-42); HOLOTYPE ♀, only specimen in collection [ZMC]. Apparently correctly identified as the species now interpreted as cyaneus (see Knab, 1909 and Howard, Dyar and Knab, 1915:28-30); I did not examine the foreclaws which are stated to be toothed [Sabethes].

239. imperfectus (Bonne-Wepster & Bonne, 1920:165-166; Sabethoides). Described from 2 ♀ from unspecified locality, presumably Dam (Suriname), Surinam, Jan 1919, according to Bonne and Bonne-Wepster (1925:42), HOLOTYPE ♀ implied in original publication since the other specimen (3426) desig-

named as cotype in USNM [ITH]. Apparently conspecific with chloropterus as currently interpreted [Sabethoides].

240. intermedius (Lutz, 1904b:14, 1904c:7, 1905:348-349; Sabethinus). Originally described from unspecified number of adults from unspecified locality in Brazil; lectotype designation by Lane (1953:1079) invalid as no indication is given of the nature of the specimen; in BM collection, ♀ marked as lectotype by Lane, with following label, //Brazil/Dr. Lutz// in Theobald's writing, without indication of specific locality as given by Lane but probably from São Paulo area, probably available for designation as lectotype [BM, additional material possibly in IOC and FMP]. Apparently a distinct species as currently interpreted [Sabethinus].

241. kappleri Bonne, 1923:122-123. Described from unique HOLOTYPE ♀ (3396), marked as type, only 2 wings and 2 legs remaining, Moengo (Marowijne), Surinam, Feb 1923, C. Bonne; [ITH, still in existence not completely "destroyed by moulds" as implied in Bonne and Bonne-Wepster (1925:33)]. Apparently conspecific with amazonicus Gordon & Evans, 1922 as currently interpreted [Sabethes].

242. longfieldae Edwards, 1928:283-284. Described from unique HOLOTYPE ♀, Melguerra, Rio Amolar, between Cuyabá and Diamantino (Matto Grosso), Brazil, 24 May 1927, Miss C. Longfield [BM]. Apparently conspecific with amazonicus Gordon & Evans, 1922 as currently interpreted [Sabethes].

243. lutzii Theobald, 1903d:323. Since Theobald states "I have seen three species, and Dr. Lutz mentions two others to me," and he makes no note of receiving material from Lutz (as he does for albiprivus), he obviously described lutzii entirely on characters mentioned in a letter from Lutz without seeing the unique specimen from Manaus (Amazonas), Brazil which Lutz (1905:214) stated came originally into his (Lutz's) hands completely crushed so that he could not give a detailed description; Theobald (1910:576) indicated the type to be in BM collection and it is possible that Lutz did eventually send the specimen to Theobald; however, this HOLOTYPE has not been found in BM but may be in Lutz's material elsewhere [not BM, possibly IOC]. Not recognizable from the very brief original description or from Lutz's (1905:214) subsequent description; should be considered nomen dubium for the present [Sabethes].

244. melanonymphe Dyar, 1924:100. See albiprivatus (Theobald, 1907).

245. nitidus Theobald, 1901b:347-348. Described from several ♀ and 1 ♂ from Pará, Brazil, Durham; holotype not designated in original publication, therefore Mattingly's interpretation that the ♀ marked by Theobald as type is the holotype is incorrect; LECTOTYPE by present designation, ♂ of the type series [BM]. The present lectotype designation restores nitidus as a species distinct from confusus which was Theobald's intent; the latter's statement that the type of nitidus is a ♀ (Theobald, 1910:575) does not constitute a lectotype designation and cannot be correct for all the original ♀ were removed to confusus; Theobald usually marked both a ♂ and a ♀ "type" and it is possible that the ♂ type label has been removed from the above specimen; nitidus may not be conspecific with bipartipes Dyar & Knab, 1906 as currently interpreted [Sabethes].

246. purpureus (Theobald, 1907:617-618; Sabethoides). Described from unspecified number of ♀ from Rio de Janeiro, Brazil; LECTOTYPE by present designation, ♀ with right wing on slide, with following labels, //Rio Janeiro/Prof Goeldi//Sabethoides/purpureus/Type ♀ F. V. T. //, specimen in very poor condition [BM]. Apparently a distinct species as currently interpreted [Sabethes].

247. rangeli (Surcouf & Gonzalez-Rincones, 1911:231-232; Sabethoides).



Described from unique HOLOTYPE ♀, 1 leg mounted on separate point, bearing label, //Sabethoides Rangeli/Surcouf et Gonzalez/1911./Maturin-Venezuela// [MNHP]. Apparently conspecific with chloropterus (Humboldt, 1819) as currently interpreted [Sabethoides].

248. remipes (Wiedemann, 1828:573; Culex). Presumably described from unique HOLOTYPE ♀, in ZMC collection with following labels, //♀//Mus. Westerm. //Type//C. remipes/Wied./Brazils/Lund//; the specimen is in excellent condition except for partially destroyed tip of abdomen; there is a discrepancy in the sex as in the description ♂ is specified (but without indication of any ♂ characters); this discrepancy is probably due to a misdetermination of the sex of the specimen by Wiedemann originally since the ♀ antenna of this species is extremely similar to that of the ♂ in the great development of the flagellar whorls; it is also possible that Westermann substituted another specimen for the original one as he apparently did in at least one case (see Zimsen, 1954:6) [ZMC]. Conspecific with cyaneus (Fabricius, 1805) as currently interpreted [Sabethes].

#### Toxorhynchites

The nomenclature and taxonomy of the subgenera Ankylorhynchus and Lynchiella are more confused than in any other group of neotropical mosquitoes. Stone (1961:31) pointed out that Ankylorhynchus is based on a misidentified type species. The taxonomy is very difficult because of strong sexual dimorphism in the adults, relatively undifferentiated male genitalia, and the apparent paucity of good specific characters in the immature stages. To complicate matters, these large, brilliantly ornamented species attracted the attention of early authors, who described them largely from unspecified localities. The type specimens of many of these species are either non-existent or have not been examined before. In view of this confusion, the identity of the species I have examined must await determination until a thorough revision of the subgenera is undertaken.

249. aldrichanus (Bonne-Wepster & Bonne, 1920:179-180; Megarhinus). Described from 2 ♀ from Dam (Suriname), Surinam, Jan 1919; both specimens in ITH collection; LECTOTYPE by present designation, ♀ (4571) marked as type, with associated larval skin on slide (L 12); other ♀ (4572) with "cotype" label [ITH]. Apparently conspecific with bambusicolus (Lutz & Neiva, 1913) as currently interpreted [Lynchiella].

250. ambiguus (Dyar & Knab, 1906:246; Megarhinus). Based on unique HOLOTYPE ♂, mentioned by Wiedemann (1828:2) following description of ferox, not seen by authors; specimen not located [LU; originally in Winthem Collection in Hamburg, possibly 1 of 2 double-mounted ♂ now in NMW; may have been obtained by Winthem from Meigen as suggested by his name being appended at end of Wiedemann's description]. Currently regarded conspecific with theobaldi (Dyar & Knab, 1906) [Lynchiella].

251. chrysocephalus (Theobald, 1907:136-137; Megarhinus). Described from unique HOLOTYPE ♂, abdomen glued to stage, with following labels, //São Paulo//17-8-03//Megarhinus/chrysocephalus/Type ♂ F.V.T.//[BM]. Apparently conspecific with solstitialis (Lutz, 1904) as currently interpreted [Lynchiella].

252. ferox (Wiedemann, 1828:1; Culex); wiedemanni (Dyar & Knab, 1906:246, nom. nov.; Megarhinus). Described from unspecified number of ♂ from unspecified locality in Brazil, stated to be in Frankfurt [SNG] and Wiedemann's

collections [now in NMW]; in SNG collection 4♂ (SMF-D3, D3a, D3b, D3c) agree well with description and apparently are part of the type series; in NMW collection 3♂, 2 double-mounted, the other apparently on original pin, bearing the following labels, // [red square] // Brasilia/Coll. Winthem//ferox/det Wiedem.// ferox W./Brasilia [in Wiedemann's hand]//, this specimen should probably be selected as lectotype [SNG and NMW]. Junior primary homonym of *Culex ferox* Humboldt, 1819 (now in *Psorophora*); currently synonymized with *theobaldi* (Dyar & Knab, 1906) [*Lynchiella*].

253. *grandiosus* (Williston, 1900:224; *Megarhina*). Described from unique HOLOTYPE ♀, Omilteme (Guerrero), Mexico, elev. 8000 ft, July, H. H. Smith [BM]. Apparently a distinct species as currently interpreted [*Lynchiella*].

254. *guianensis* (Bonne-Wepster & Bonne, 1920:180; *Megarhinus*). Described from 1♂ and 1♀ from 2 unspecified localities in Surinam; both specimens in ITH collection, labeled type and cotype, LECTOTYPE by present designation, ♂ (4567) bearing label, //Type/Megarhinus/guadeloupensis/var./guianensis/BW&B//, with slide (BB 272, L 16) of associated(?) larval and pupal skins and a slide (L 16) of genitalia; locality according to catalog Kwakoegeon (Saramacca), July 1918 [ITH]. Apparently conspecific with *guadeloupensis* (Dyar & Knab, 1906) as currently interpreted [*Lynchiella*].

255. *haemorrhoidalis* (Fabricius, 1794:401; *Culex*). Described from unspecified number of ♂ from "Cajennae [Cayenne, French Guiana] Dom. v. Rohr."; represented only by the label from Kiel collection, now in ZMC [NE]. Distinct species as currently interpreted [*Lynchiella*].

256. *herrickii* (Theobald, 1906:241; *Megarhinus*). Apparently based entirely on the description in Herrick (1905:281-282) of ♂ specimens identified for the latter by Coquillett as *portoricensis*, type locality Agricultural College, Mississippi, U.S.A.; there are no specimens in BM collection and Theobald's description consists entirely of characters mentioned by Herrick; therefore it appears that Theobald did not see any specimens; lectotype should be designated from material in USNM mentioned in Howard, Dyar and Knab (1915:950) from Agricultural College, Mississippi, Sept 26, 1905, W. V. Reed [USNM]. Currently synonymized with *rutilus septentrionalis* (Dyar & Knab, 1906) [*Lynchiella*].

257. *hexacis* (Martini, 1931b:217-218; *Megarhinus*). Described from unique HOLOTYPE ♀ from Yungas de Coroico [Nor Yungas] (La Paz), Bolivia; specimen not located in Dresden where it was stated to be, probably destroyed during World War II [NE]. Currently considered valid species [*Ankylorhynchus*].

258. *horei* (Gordon & Evans, 1922:330-335; *Megarhinus*). Described from 1♂, 1♀ from Macapa, near Manaus (Amazonas), Brazil, 21 Dec 1921, R. M. Gordon; both specimens in BM collection; LECTOTYPE by present designation, ♂ (463), 1 wing missing, some parts of legs glued on stage, genitalia mounted on 2 slides [BM-LIVER]. Apparently conspecific with *guadeloupensis* (Dyar & Knab, 1906) as currently interpreted [*Lynchiella*].

259. *longipes* (Theobald, 1901a:241-242; *Megarhinus*). Described from unique HOLOTYPE ♀ (56/143) from unspecified locality in Mexico, bearing Theobald's type label [BM]. Apparently conspecific with *grandiosus* (Williston, 1900) as currently interpreted [*Lynchiella*].

260. *moengoensis* (Bonne-Wepster & Bonne, 1923:7-9; *Megarhinus*). Described from unspecified number of ♂, ♀ and larvae from Moengo (Marowijne), Surinam; 1♂ and 1♀ in ITH collection both marked type; LECTOTYPE by present designation, ♂ (4569) bearing label //Type ♂/Megarhinus/moengoensis/BW&B//, with associated(?) larval skin on slide (L 6) and genitalia on slide (L 5) [ITH]. Apparently conspecific with *theobaldi* (Dyar & Knab, 1906) as currently interpreted [*Lynchiella*].

261. purpureus (Theobald, 1901a:230-231; Megarhinus). Described from 2 ♀ from the Amazon [Brazil], 1861, Bates, Hope Collection, holotype not designated in original publication; LECTOTYPE by present designation, 1 remaining ♀ in collection with attached genitalia mount, bearing Theobald's type label [BM]. Distinct species as currently interpreted [Ankylorhynchus].

262. portoricensis (von Röder, 1885:337-338; Megarrhina). Described from 2 ♂ from unspecified locality in Puerto Rico; type material probably non-existent, see AUTHORS section [NE]. Currently interpreted as distinct species [Lynchiella].

263. solstitialis (Lutz, 1904a:10-13, 1904b:3, 1904e:2; Megarhinus). Described from unspecified number of ♂ and ♀ from São Paulo (and Rio de Janeiro), Brazil; 3 specimens in BM evidently part of type series, 1 ♂ and 1 ♀ with type labels in Theobald's hand available for designation as lectotype, ♀ in better condition, with following data, //S. Paulo/7-10-03 [underside of stage]//Sao Paulo/Brazil//Type//Megarhinus/solstitialis/Type Lutz//[BM; possibly also IOC and FMP]. Distinct species as currently interpreted [Lynchiella].

264. theobaldi (Dyar & Knab, 1906:246; Megarhinus). Based on 1 ♂ and 1 ♀ used by Theobald (1901a:237-239) for his description of ferox; these specimens were from the "Hope Museum" and were probably the first ones listed under "Habitat" as Bogota (Bigot) since it was Theobald's practice usually to list first the material on which his descriptions were based; no such material in BM collection but both specimens in O collection; LECTOTYPE by present designation, ♂ bearing Westwood blue paper label and the following, // [in pencil] Megarhina ferox/Bogota/M. Bigot//[printed Hope Dept label] Megarhinus/ferox Wied./t. 1900 in BM//F. V. Theobald//; ♀ with same printed label and MS label, M. ferox Wied. ♀ [O; courtesy of G. C. Varley through P. F. Mattingly]. Currently regarded as valid name for a widespread species; possibly distinct from this, however, but type material not studied [Lynchiella].

265. trichopygus (Wiedemann, 1828:4-5; Culex). Described from unspecified number of specimens from Brazil; in SNG collection 3 ♂ (SMF-D4, D4a, D4b), bearing label //Brasilia/Freireiss//, agree well with original description and are obviously type material, all with tip of palpus broken, specimen D4b in best condition, may later be selected as lectotype [SNG; courtesy of Dr. R. zur Strassen]. Exact taxonomic status undetermined; present interpretation should be retained pending careful study [Ankylorhynchus].

266. violaceus (Wiedemann, 1820:7; Culex). Attributed to Hgg. [Hoffmann-segg]; described from unspecified number of ♂ from Bahia, Brazil; in NMW collection 3 ♂ apparently from type series (2 double-mounted), also in ZM collection an unspecified number of specimens may be part of type series; LECTOTYPE by present designation, ♂ with genitalia intact, mounted directly on pin and bearing labels, // [red square] //Coll. Winthem//violaceus/det. Wiedem. //violaceus/Bahia [handwritten]//[NMW]. Distinct species apparently as currently interpreted [Lynchiella].

267. wiedemanni (Dyar & Knab, 1906:246, nom. nov.; Megarhinus). See ferox (Wiedemann, 1828).

#### Trichoprosopon

The subgeneric classification of Trichoprosopon of Lane and Cerqueira (1942:484-529), followed in the world catalog by Stone, Knight and Starcke (1959:73-77), is artificial and unsatisfactory, primarily because Lane and Cerqueira completely disregarded excellent characters in the immature stages. Pending a thorough revision of the genus, I have retained the current subgeneric assign-

ment of all the species I have examined except for pallidiventer which obviously belongs to the nominate subgenus and not to Runchomyia. Since pallidiventer is the type species of Hyloconops, the latter should be transferred from synonymy with Runchomyia to that of Trichoprosopon (T.). As in the case of some species of Sabethes, females of some Trichoprosopon have the flagellar whorls very long and dense and have been described as males.

268. compressum Lutz, 1905:171-172. Described from unspecified number of ♂ and ♀ from unspecified localities in the states of São Paulo and Rio de Janeiro, Brazil, holotype not designated in original publication; type not in BM as stated by Lane (1953:825) who specified Pindamonhangaba (São Paulo) as type locality, no material from type series in BM; type stated to be in IOC by Stone, Knight and Starcke (1959:73); material in FMP without original labels possibly part of type series but not checked [IOC, possibly also FMP]. Currently interpreted as a distinct species [Trichoprosopon].

269. digitatum (Rondani, 1848:109-110; Culex). Described from unspecified number of ♀ from unspecified locality in Brazil; type material not in FM, possibly in BOLOGNA [LU]. Apparently as currently interpreted [Trichoprosopon].

270. espini (Martini, 1914:65-68; Lesticocampa). Described from 3 ♀, 1 of which was designated in original publication as type; HOLOTYPE ♀ (167), Miraflores Lake, Panama Canal, Nov 1913, E. Martini [BM, see Mattingly, 1955:27]. Distinct species as currently interpreted [Isostomyia].

271. frontosum (Theobald, 1903d:319-321; Runchomyia). Described from 2 ♀, Barima River (Essequibo), about 70 mi from coast, British Guiana [Guyana], Aug, G. C. Low; both ♀ in collection, 1 bearing Theobald's type label; LECTOTYPE by present designation, ♀ with following labels, //Turu/camp/R. bank/Barima R./11.8.01 [underside of stage]//123./British Guiana./Dr. Low//Type//Rugchiomyia[!]/frontosa./(Type) Theobald//[BM]. Distinct species as currently interpreted [Runchomyia].

272. fluviatilis (Theobald, 1903d:331-333; Goeldia). Stated to have been described from a single ♂ (actually a ♀ as shown below) from Brazil (Dr. Lutz). Since Theobald stated that the ♀ from Demerara River, British Guiana (Dr. Low) was "provisionally placed... here, with some doubt," this specimen, recognized by Bonne-Wepster and Bonne (1921:16) as a rubbed ♀ of their flui [currently synonymized with W. confusa (Lutz, 1905)], cannot be considered part of type series and the supposed ♂ may be regarded as the holotype. It is now obvious that the sex of the specimen from Brazil was incorrectly determined by Theobald as the palpus is stated to be "about one-third the length of the proboscis, completely covered with deep violet scales, so that the jointing cannot be seen" which is the case in the ♀ of this species, whereas in the ♂ the palpus is about as long as the proboscis and with very distinct segmentation. Theobald's error is understandable as females of this species have long dense flagellar whorls similar to those in the males of most mosquitoes; similar errors have been made with species of Sabethes. In the BM collection there is no specimen bearing a fluviatilis type label but I agree with the suggestion of Bonne-Wepster and Bonne (1921:16) that the following specimen placed in the collection under longipalpis Lutz is the missing HOLOTYPE of fluviatilis, ♀ bearing the following labels in Theobald's hand, //São Paulo/Dr. Lutz//Hyloconops/♀ longipalpis Lutz//and marked by Bonne-Wepster and Bonne//This one is different and probably/Lesticocampa moralesi/D&Kn//. This specimen agrees with Theobald's description of the "♂" of fluviatilis in all respects except that it lacks scales on the postnotum. However, this exception further supports the identity of this

specimen as the holotype since, as pointed out earlier by Bonne-Wepster and Bonne (loc. cit.), Theobald in referring to these scales states in the discussion (p. 332): "Dr. Lutz says of the ♂ that they are white and blue (none remain on the specimen sent)" [BM]. A distinct species as currently interpreted following Lane and Cerqueira (1942:503-505) who recognized that Theobald's type was a ♀ [*Shannoniana*].

273. *hyperleucum* (Martini, 1931b:201; *Goeldia*). Described from unique HOLOTYPE ♀(?) from Urubamba River (Cuzco), Peru; specimen not located by Mattingly (1955:27) or by me, probably non-existent [NE]. Currently considered a distinct species [*Runchomyia*].

274. *longipalpis* (Lutz, 1905:127; *Hyloconops*). Described from unspecified number of ♂ and ♀ from unspecified locality (probably São Paulo) in Brazil; 1 ♂ and 1 ♀ under this name in BM collection do not agree with Lutz's description but agree with that of *longipalpis* of Theobald (1907:588-590) and probably are conspecific with either *castroi* Lane & Cerqueira, 1942 or *similis* Lane & Cerqueira, 1942 (the name *longipalpis* Theobald, 1907 cannot be used for this species according to Art. 49); location of material of Lutz's species unknown [LU; possibly FMP or IOC]. Undoubtedly conspecific with *fluviatilis* (Theobald, 1903) as currently interpreted [*Shannoniana*].

275. *longipes* (Fabricius, 1805:34; *Culex*). Described from unspecified number of ♂ from "America meridionali Dom. Smidt. Mus. Dom. Lund."; type locality restricted to Cayenne, French Guiana by Belkin, Schick and Heinemann (1965:41-42); in collection only 1 specimen, presumably HOLOTYPE as Wiedemann (1828:7) stated that there was only 1 specimen of this species in the collection in his time [ZMC]. There are several discrepancies between the original description and Wiedemann's redescription, also Fabricius stated that the proboscis was somewhat swollen apically; it seems best to let matters stand and to accept the current interpretation of this species which is based on Wiedemann's redescription [*Runchomyia*].

276. *lunatum* (Theobald, 1901b:279-281; *Wyeomyia*). Described from series of ♀ from Rio de Janeiro, Brazil; in collection 4 ♀ with same data, 1 with Theobald's type label; LECTOTYPE by present designation, ♀ in poor condition, head lacking, only front legs complete, with following labels, //Mauá/common/22.7.99 [underside of stage]//Type//9.12.99/Rio de Janeiro/Senhor Carlos Moreira//*Wyeomyia/lunatus*/(Type). Theobald//[BM]. Distinct species as currently interpreted [*Runchomyia*].

277. *magnum* (Theobald, 1905b:117; *Phoniomyia*). Described from unique HOLOTYPE ♀ from San Antonio [de Mapiri] (La Paz), Bolivia, M. Biro [HNM]. Distinct species as currently interpreted (Stone, 1957b:173) [*Ctenogoeldia*].

278. *nivipes* Theobald, 1901b:285-287. Described from 1 ♂ and several ♀ from Agua Santa (St. George), Trinidad, Dec, F. W. Urich; in collection, 1 ♂ and 4 ♀ with identical printed labels, 1 ♂ and 1 ♀ labeled type by Theobald; LECTOTYPE by present designation, ♂ with following labels, //Agua Santa/Trinidad/22.12.1900/F. W. Urich [underside of stage]//101/Trinidad, W. I./F. W. Urich//*Trichoprosopon/nivipes*/(Type) Theobald//, perfect specimen except for lacking right foreleg and terminal tarsal segments [BM]. Conspecific with *digitatum* (Rondani, 1848) as currently interpreted [*Trichoprosopon*].

279. *pallidiventer* (Lutz, 1904b:15, 1904c:5, 1905:125-127; *Hyloconops*). The original description has been attributed to Lutz, 1905; however, as in case of *Bancroftia albicosta* [= *Orthopodomys*], *pallidiventer* is considered to be published with an indication as of 1904 through a combined description of a new nominal genus and new nominal species (see Stone, 1957a:334); originally de-

scribed from unspecified number of adults from São Paulo, Brazil; Theobald (1907:587-588) redescribed the species from 1 ♂ and 1 ♀ named by Lutz, presumably part of the original type series; in BM collection 1 ♀ (possibly 1 of its wings on slide used for fig. 268) and 2 ♂, 1 of these dissected on slide, the other pinned and with genitalia mount; since Theobald mentions claw characters in description of ♂ I consider that the ♂ on slide was the specimen before him; if other material is not found, the dissected ♂ on slide labeled, //Hyloconops pallidiventer. Lutz.// in Theobald's hand is available for designation as lectotype [BM; possibly also IOC and FMP]. Distinct species as currently interpreted [Trichoprosopon not Runchomyia].

280. perturbans (Williston, 1896:271; Aedes). Described from 8 specimens (♂ and ♀) from St. Vincent; in BM collection 2 ♂ and 2 ♀, all in poor condition, ♂ without abdomen; I failed to locate the ♂ (and its genitalia mount) which was found by Bonne-Wepster and Bonne (1921:11, 17) among material of 317. W. pertinans and apparently was considered by them as part of the type material of perturbans; no lectotype should be designated until this ♂ is studied [BM]. Distinct species, apparently as currently interpreted [Isostomyia].

281. subsplendens (Martini, 1931b:200; Joblotia). Described from unique HOLOTYPE ♀(?) from Pto. Bermudas [Bermudez] (Río Pichis), Peru; specimen not located by Mattingly (1955:28) or by me, probably non-existent [NE]. Currently considered conspecific with digitatum (Rondani, 1848) [Trichoprosopon].

#### Uranotaenia

282. albitarsis Gordon & Evans, 1922:335. Described from 1 ♂ and 1 ♀ "types" and 1 ♀ "cotype"; LECTOTYPE by present designation, ♂ (15/463) with genitalia slide, Saw mill near Macapa, Manaus (Amazonas), Brazil, 20 Jan 1922, R.M. Gordon [BM]. Apparently conspecific with calosomata Dyar & Knab, 1907 as currently interpreted.

283. apicalis Theobald, 1903d:298-299. Described from series of ♂ and ♀ from 1 locality; LECTOTYPE by present designation, ♂ (marked as one of 2 types by Theobald) with attached genitalia mount, Antigua [West Indies], January, W. R. Forrest, 103 [BM]. Distinct species as currently interpreted.

284. bicolor Martini, 1935:29; martinii Lane, 1943:152, nom. nov. Described from unique HOLOTYPE ♀ (bad condition), 5 km south of Río Cacao [probably near Blue Creek and La Boca (Orange Walk)], British Honduras, 16 Oct 1925, A. Dampf [BM]. Apparently conspecific with hystera Dyar & Knab, 1913 as currently interpreted.

285. geometrica Theobald, 1901b:247-249. Described from 2 ♀ from 1 locality; LECTOTYPE by present designation, ♀ marked as type by Theobald, Cubatão, near Santos (São Paulo), Brazil, A. Lutz, label reads, //São Paulo, Brazil, Dr. Lutz// but this probably merely indicates Lutz's residence and the locality specified in the original description must be taken as valid, specimen agrees with description in all details [BM]. Distinct species as currently interpreted.

286. leucoptera Theobald, 1907:575-576. Described from unique damaged HOLOTYPE specimen stated to be ♂ but actually ♀, Stanley Town, New Amsterdam (Berbice), British Guiana [Guyana], 18 Aug 1905, E. D. Rowland (44, 5, 20) [BM]. Apparently a distinct species as currently interpreted.

287. lowii Theobald, 1901b:339-340. Described from 2 ♀ from St. Lucia; LECTOTYPE by present designation, ♀ marked as type by Theobald (only remaining specimen), without locality label but agreeing in all respects with de-

scription and presumably from cemetery at Castries, St. Lucia (West Indies), Feb, G. C. Low [BM]. Distinct species as currently interpreted.

288. martinii Lane, 1943:152. See bicolor Martini, 1935.

289. minuta Theobald, 1907:559-560. Described from unique HOLOTYPE ♀ (513), marked as type by Theobald, New Amsterdam (Berbice), British Guiana [Guyana], 13 Jan 1906, E. D. Rowland [BM]. Apparently a small specimen of lowii Theobald, 1901 as currently interpreted.

290. modesta Martini, 1935:29. Described from unique HOLOTYPE ♀ from 5 km S of Río Cacao (Orange Walk), British Honduras; specimen not located by Mattingly (1955) or by me, probably non-existent [NE]. Currently considered conspecific with pulcherrima Lynch Arribalzaga, 1891.

291. pallidoventer Theobald, 1903d:300-301. Described from unique HOLOTYPE ♀, marked as type by Theobald, both wings cut off (slide not located), Pará, Brazil, Durham [BM]. Distinct species as currently interpreted.

292. rowlandii (Theobald, 1905a:34-36; Pseudouranotaenia). Described from ♂ and ♀ from 1 locality; LECTOTYPE by present designation, ♂ (G-44), marked by Theobald as ♂ type, with slide of foreleg and midleg, abdomen glued on stage, Stanley Town, New Amsterdam (Berbice), British Guiana [Guyana], 22 July 1905, [E. D.] Rowland [BM]. Apparently conspecific with nataliae Lynch Arribalzaga, 1891 as currently interpreted.

293. socialis Theobald, 1901b:340-342. Described from a series of ♂ and ♀ from Jamaica; LECTOTYPE by present designation, ♂ (111) marked as ♂ type by Theobald, with attached genitalia mount, Kingston district, Jamaica, M. Grabham [BM]. A distinct species probably with more restricted distribution than currently interpreted.

#### Wyeomyia

The subgeneric classification of Wyeomyia of Lane and Cerqueira (1942: 530-619), followed by Stone, Knight and Starcke (1959:77-88), is comparable in artificiality to that adopted by the former authors for Trichoprosopon. However, for the present I have retained the subgeneric assignment in the catalog for all the species examined except for quasiluteoventralis (Dendromyia from Wyeomyia) and have placed antillarum in Wyeomyia as a probable synonym of grayii which is not conspecific with pertinans. It is evident that many of the nominal species of the genus were incorrectly synonymized first by Dyar (1928) and subsequently by Lane and Cerqueira (loc. cit.) and also that there is still a multitude of undescribed species, largely in Central America and the Caribbean islands. Some of the synonymies are corrected in the following list.

294. albocaerulea Senevet & Abonnenc, 1939b:259-262. Described from unspecified number of ♀ and larvae from Saut-Tigre [Sinnamary River] (Inini), French Guiana, 1 Jan 1938 [data under compta, p. 267]; in SENEVET collection 2 ♀ (G-941-(1)(2)) with 3 larval and 3 pupal skins (latter not numbered) on same slide, larval skin (3) is compta; LECTOTYPE by present designation, ♀ (2), the better preserved, with apparently associated larval skin (2) [FMP-SENEVET; originally in PIA]. Conspecific with argenteostris (Bonne-Wepster & Bonne, 1920) as currently interpreted [Dendromyia].

295. albosquamata Bonne-Wepster & Bonne, 1919:107-109. Described from unspecified number of ♂, ♀ and larvae from Lawa River (Marowijne), Surinam, Mar 1917; 7 specimens in ITH collection, 1 labeled type; LECTOTYPE by present designation, ♂ (3550) bearing label, //Type/Wyeomyia/(Menolepis)/albosquamata/BW&B//, with genitalia on slide (C. e. 1), locality according to catalog

Lawa district [ITH]. Distinct species as currently interpreted [Dendromyia].

296. antillarum Floch & Abonnenc, 1945a:4-8. Described from ♂, ♀ and larva, from several localities on Guadeloupe, ♂ and ♀ syntypes designated in original publication; both specimens in collection; LECTOTYPE by present designation, ♂ (63(2)) mounted on same slide as genitalia and with larval and pupal skins on another slide, presumably from Matouba [PIP not PIG]. Apparently conspecific with grayii Theobald, 1901 in the pertinans (Williston, 1896) group [Wyeomyia].

297. argenteostris (Bonne-Wepster & Bonne, 1920:167-168; Cleobonnea). Described from unspecified number of ♂, ♀ and larvae from Lawa River (Marowijne), Surinam, Mar 1917; 2 specimens in ITH collection with type labels, ♀ type, ♂ (without abdomen) cotype; there is no record of ♂ genitalia slide from which fig. 4 in Bonne and Bonne-Wepster (1925) was made, presumably it was lost and the type label was changed from ♂ to ♀; LECTOTYPE by present designation, ♀ (3500) bearing label //Type/Wyeomyia/(Cleobonnea)/argenteostris/BW&B//; it is possible that one of the larval skins on slides (C.g. 4.5.6) was associated with this specimen although the locality given in the catalog is Moengo [ITH]. Distinct species as currently interpreted [Dendromyia].

298. bodkini Edwards, 1922:81-82. Described from 2 ♂, 1 ♀ "cotypes" and 2 additional ♀, from Issororo, North West District [Essequibo], British Guiana [Guyana], Sept 1921, G. E. Bodkin; in BM collection all 5 specimens as well as 3 additional specimens dated 16. IX. 21; LECTOTYPE by present designation, ♂ with attached genitalia mount and a slide of midleg, with the following labels, //Bred from larvae/inhabiting base of/leaves of pineapple plant//G. E. Bodkin/Issororo, N.W.D./Sept 1921//Cotype//Brit. Guiana/G. E. Bodkin/Pres. by L. B. E//Wyeomyia/bodkini/F. W. Edwards/det 1921//[BM]. Apparently conspecific with aphobema Dyar, 1918 as currently interpreted [Wyeomyia].

299. colsoni Senevet & Quievreux, 1941:249-251. Described from unspecified number of adults and larvae (M 2136-M 2144) from Habitation Lameynadie, near Colson, Martinique, 14 Aug 1939; 9 slides in SENEVET collection representing all above numbers, in majority first 2 digits of number are 11 not 21 but it is evident that the first digit was changed to 2 on slides 2138, 2139, 2141 and 2144, specimen on another slide (2133) appears to be the same species but cannot be considered part of type series; LECTOTYPE by present designation, ♂ (2138), the only specimen with dissected genitalia, mounted on same slide with pupal skin [FMP-SENEVET; originally in LPFM]. Apparently conspecific with grayii Theobald, 1901 [Wyeomyia].

300. compta Senevet & Abonnenc, 1939b:264-267. Described from unspecified number of ♀ and larvae from Saut-Tigre [Sinnamary River] (Inini), French Guiana, 1 Jan 1938, HOLOTYPE ♀ (341(3) not 641-3) "provisionally" designated in original publication (pending discovery of ♂), mounted on slide (G. 941(3); G-1-38); a larval skin (3) mounted on same slide with type of albocaerulea and 1 of the unmarked pupal skins on this slide may be individually associated with this ♀ [FMP-SENEVET; originally in LPFM]. Taxonomic position not determined; possibly a distinct species as currently interpreted [Dendromyia].

301. fallax Bonne-Wepster & Bonne, 1919:110-111. Described from unspecified number of ♀ and larvae from Paramaribo, Surinam, Dec 1916; 4 ♀ in ITH collection, none marked as type or cotype, 3(3461, 3462, 3463) apparently part of type series; LECTOTYPE by present designation, ♀ (3463, BB 224) in box 76; slide of ♀ genitalia (C. c. 2) may also be part of type series but not slide of ♂ genitalia (C. c. 1) [ITH]. Apparently conspecific with oblita (Lutz, 1904) as currently interpreted [Wyeomyia].



302. flavifacies Edwards, 1922:82. Described from unique HOLOTYPE ♀, marked as type by Edwards, Aruka River (Essequibo), Guyana, 21 Sept 1921, bred from larva in bromeliad axil, G. E. Bodkin [BM]. Apparently a distinct species as currently interpreted [Antunesmyia].

303. flui (Bonne-Wepster & Bonne, 1920:169-170; Prosopolepis). Described from unspecified number of ♀ from Albina (Marowijne), Apr 1917 and Dam (Suriname), Jan 1919, Surinam; in ITH collection 5 specimens of type series (1 type, 4 cotypes); LECTOTYPE by present designation, ♀ (3561) bearing label //Type/Prosopolepis/flui BW&B//[ITH]. Apparently conspecific with confusa (Lutz, 1905) as currently interpreted [Dendromyia].

304. grayii Theobald, 1901b:269-271. Described from unspecified number of ♀ from St. Lucia and Grenada; in BM collection 2 ♀ (one bearing Theobald's type label) from St. Lucia and 1 ♀ from Grenada; LECTOTYPE by present designation, ♀ nearly perfect, with following labels, //underside of stage] 25. XII. 99/2 PM/Piton Flore Farm/1000 ft/St G Gray/Castries//Type//1. 2. 1900/Castries/St. Lucia/St. George Gray//Wyeomyia/Grayii/(Type) Theobald//[BM]. Apparently distinct from pertinans (Williston, 1896), not as currently interpreted [Wyeomyia].

305. grenadensis Edwards, 1916:363. Described from 6 ♀ from Grenada, A. Macdonald, HOLOTYPE ♀, indicated as type in publication and so marked by Edwards, hindtarsi missing but present in the 2 ♀ paratypes in collection [BM]. Probably not conspecific with melanocephala Dyar & Knab, 1906 as currently interpreted [Dendromyia].

306. lamellata (Bonne-Wepster & Bonne, 1920:168-169; Hystatomyia). Described from 2 ♂ from Cie des Mines d'Or, Lawa River, Surinam, HOLOTYPE indirectly designated in original publication, ♂ (3559) bearing label, //Type/Wyeomyia/Hystatomyia/lamellata/BW&B//, with genitalia on slide (C.b.1.); the other ♂ is specified as a "cotype" deposited in USNM [ITH]. Distinct species as currently interpreted [Dendromyia].

307. leucostigma Lutz, 1904b:14, 1904e:5; 1905:269-270, Menolepis. Original description from unspecified number of adults from São Paulo, Brazil; 1905 description from unspecified number of ♂ and ♀; holotype not designated in original publication; no authentic material in BM; material with original labels in FMP collection not checked but possibly part of type series [LU, possibly FMP or IOC]. Currently interpreted as a distinct species [Menolepis].

308. luciae Senevet, Chabelard & Abonnenc, 1942:343-348. Described from unspecified number of adults and larvae from Port-Inini (Guyane), near Cayenne, French Guiana, 18 Aug 1939, HOLOTYPE ♂ (198), designated in original publication as type, mounted on a slide (M 1552 not M 1553) with dissected genitalia and associated larval and pupal skins [FMP-SENEVET; originally in LPFM]. Apparently distinct from chalcocephala Dyar & Knab, 1906 with which it is currently synonymized [Dendromyia].

309. luteoventralis Theobald, 1901b:348-349. Described from 3 ♀ from Pará, Brazil, Durham; only 1 ♀ remaining in BM collection, marked as type by Theobald, by present designation LECTOTYPE, the short hindtarsal segment 1 is an artifact due to pinching [BM]. Apparently as interpreted by Lane (1953:946) as specimens identified by him conform well with the lectotype [Dendromyia].

310. medialbipes Lutz, 1904b:14, 1904e:6; 1905:289-290, Dendromyia. Attributed to Theobald but described by Lutz from an unspecified number of adults from Cabulla and Matatú (Bahia), Brazil; 1 ♂ and 4 ♀ in BM collection labeled //Bahia/Dr. Lutz// in Theobald's hand, 1 ♂ and 1 ♀ with red type label,

are apparently part of the type series and eligible for lectotype designation; Lane's selection of lectotype (1953:894) is invalid as it did not specify the specimen which is the ♂ with attached genitalia mount, rest of abdomen glued on another attached mount, bearing red type label and Lane's lectotype label [BM; possibly also IOC]. Apparently a distinct species as interpreted by Lane (1953:893-894) [Wyeomyia].

311. mitchellii (Theobald, 1905c:35-37; Dendromyia). Described from unique HOLOTYPE ♀, bearing a bewildering array of labels, // [underside of stage] Phoniomyia/longirostris./Theob/Jamaica/7.1.04/Dr. Grabham/Jamaica/Dr. Grabham//Type//Wyeomyia/medioalbipes./ (Type) F. V. Theobald [in Theobald's hand; this was a manuscript name, see Theobald, 1907:605, footnote] //Dendromyia/mitchellii Theo./Type [in Edwards' hand]/F. W. Edwards/det. 1921//[BM]. A distinct species in the pertinans (Williston, 1896) complex with a more restricted distribution than currently interpreted [Wyeomyia].

312. monoleua (Martini, 1931a:116-117; Miamyia). Described from unique HOLOTYPE ♀ from San José (Formosa), Argentina, Oct 1925: present in collection [SMNS]. Apparently conspecific with petrocchia (Shannon & Del Ponte, 1928) as currently interpreted [Davismyia].

313. negrans Gordon & Evans, 1922:319-322. Described from 1 ♂ and 1 ♀ "types" and 5 ♀ "cotypes" from Macapa, near Manaus (Amazonas), Brazil, 20 Dec 1921, R. M. Gordon; all material except 1 ♀ "cotype" in BM collection; LECTOTYPE by present designation, "type" ♂ (20-5/463) with 2 slides of genitalia, specimen in poor condition, glued to end of pin on double mount, 1 foreleg and 1 midleg complete, others with tarsi and/or femora missing totally or in part [BM-LIVER]. Apparently a distinct species as currently interpreted [Dendromyia].

314. oblita (Lutz, 1904b:15, 1904e:6, 1905:270-271; Dendromyia). Described from unspecified number of adults (♂ and ♀ both mentioned in 1905) from São Paulo and Ponte Ipé Arcado (Goyaz), Brazil; redescribed by Theobald (1907:612-613) from a single ♀ (present in BM collection) bearing following labels //Brazil/Dr. Lutz//Dendromyia/oblita ♀/Lutz.//, with left wing on slide; this may be the only remaining specimen of the type series and eligible for designation as lectotype [BM and possibly IOC]. Distinct species as currently interpreted [Wyeomyia].

315. occulta Bonne-Wepster & Bonne, 1919:105-107. Described from unspecified number of ♂, ♀, larvae and pupae from unspecified localities in sandy district (Suriname), Surinam, Mar 1918; in ITH collection 3 specimens apparently of type series (1 type, 2 cotypes); LECTOTYPE by present designation, ♀ (3495) bearing "type" label [ITH]. Distinct species as currently interpreted [Dendromyia].

316. personata (Lutz, 1904a:22-26, 1904b:15; Dendromyia). Described from 2 ♂ and 8 ♀ from São Paulo, Brazil; redescribed by Theobald (1907:613-615) from 2 perfect ♂ from Lutz, presumably part of type series; both ♂ (whole or in part) in BM collection and apparently eligible for designation as lectotype preferably ♂ with attached genitalia mount (by Edwards) and following labels, //Type//Cantareira/M//Rcd. from/F. V. Theobald,/1907-29//Type selected by J. Lane [not published]//; second ♂ represented only by genitalia mount on pin, with following labels, //Dendromyia/personata Lutz/Remounted from/Theobald slide/27.111.20 [Edwards' hand]//Brazil/Dr. Lutz/1907-29//[BM and possibly IOC and FMP]. Distinct species, apparently as currently interpreted [Dendromyia].

317. pertinans (Williston, 1896:271; Aedes). Described from 6 specimens

(♂ and ♀) from St. Vincent; in BM collection 2 ♂, 2 ♀ of type series, including ♂ marked as type but not validly published as lectotype by Lane (1953:879); LECTOTYPE by present designation, ♂ mentioned above, with attached genitalia mount and the following additional labels, //sea level//Leeward side/St. Vincent, W. I./H. H. Smith//W. Indies/1907-66//[BM]. Distinct species, probably with more restricted distribution than currently interpreted [Wyeomyia].

318. quasiluteoventralis (Theobald, 1903d:317-318; Dendromyia). Described from an unspecified number of ♀ from Morawhanna, Barima River and Demerara River (Essequibo), Guyana, G. C. Low; although Theobald (1910:590) stated that the "type" was in BM no specimen has been located which corresponds to description or bears a type label, therefore all material is presumably lost [NE]. There is nothing in Theobald's description to separate this nominal species from luteoventralis Theobald, 1901 other than the artifact of the short hindtarsal segment 1 of the latter; therefore the 2 forms are here regarded as probably conspecific [Dendromyia not Wyeomyia as currently placed].

319. robusta Senevet & Abonnenc, 1939b:253-257. Described from unspecified number of ♂ and larvae from near Poste de Saut-Tigre [Sinnamary River] (Inini), French Guiana, 30 Nov 1937, HOLOTYPE ♂ (327 not G927), designated as type in original publication, mounted on slide (23-12) with genitalia, associated larval and pupal skins on another slide (also 23-12) [FMP-SENEVET; originally in LPFM]. A distinct species as currently interpreted [Wyeomyia].

320. rorotai Senevet, Chabelard & Abonnenc, 1942:336-343, 347. Described from unspecified number of ♂, ♀, pupae and larvae from the highlands of Rorota, near Cayenne (Guyane), French Guiana, 6 July 1939, ♂ and ♀ "types" designated in original publication; LECTOTYPE by present designation, ♂ (135, M 1543) "type," mounted on same slide with genitalia [FMP-SENEVET; originally in LPFM]. A distinct species, not conspecific with pseudopecten Dyar & Knab, 1906 as currently interpreted [Dendromyia].

321. roucouyana (Bonne-Wepster & Bonne, 1920:166-167; Dendromyia). Described from 2 ♀ from unspecified locality in Lawa District (Marowijne), Surinam, Mar 1917; HOLOTYPE indirectly designated in original publication, ♀ (3511) bearing label //Type/Wyeomyia/(Dendromyia)/roucouyana/BW&B//, with associated(?) larval and pupal skins (BB 143, C. d. l.) on slide; other ♀ specified as a "cotype" deposited in USNM [ITH]. Distinct species as currently interpreted [Dendromyia].

322. schnusei (Martini, 1931b:202). Described from unspecified number of adults from unspecified locality in South America, probably ♀ HOLOTYPE from Bolivia or Peru; material not located by Mattingly (1955:28) or by me, probably non-existent [NE]. Currently considered a distinct species [Davismyia].

323. serrata (Lutz, 1905:287-288; Dendromyia). Described from unspecified number of ♂ and ♀ from unspecified localities in Brazil (possibly states of São Paulo and Minas Gerais (Juiz de Fora) as stated in Peryassú, 1908:75); holotype not designated in original publication; type stated to be in IOC by Stone, Knight and Starcke (1959:81); no authentic material in BM collection; material with original labels in FMP collection not checked but possibly part of type series [IOC, possibly also FMP]. Currently interpreted as a distinct species [Wyeomyia].

324. surinamensis Bruijning, 1959:135-139. HOLOTYPE designated in original publication, ♂, Ornamibo (Suriname), Surinam, 11 Aug 1954, genitalia on slide (b 81) not seen [LM]. Taxonomic status uncertain, retained as distinct species for the present [Dendromyia].

325. testei Senevet & Abonnenc, 1939b:269-272. Described from unspecified number of ♂ and larvae from Saut-Tigre [Sinnamary River] (Inini), French Guiana, 13 Dec 1937; HOLOTYPE ♂ (338(5)), designated as type in original publication, mounted on same slide with its genitalia and another slide (G 958(5)-1) with its associated(?) larval and pupal skins (338(5)-1) together with aphobema (338(5)-2), pupal skins of the 2 species not separated [FMP-SENEVET; originally in LPFM]. Apparently a distinct species as currently interpreted [Dendromyia].

326. ulocoma (Theobald, 1903d:313-315; Dendromyia). Described from 4 ♀ from Demerara River (Essequibo), Guyana; 3 ♀ in BM collection, 2 with Theobald's type labels; LECTOTYPE by present designation, ♀ in better condition but with left foreleg, left midleg and both hindlegs missing, bearing following labels, // [reverse of stage] Bush/Christianburg/Demerara/River. // 123. / British Guiana/Dr. Low//Wyeomyia/ulocoma/(Type) Theobald//[BM]. Distinct species as currently interpreted [Dendromyia].

## DIXINAE

### Dixa

327. recens Walker, 1848:85. Described from unspecified number of ♂ (probably unique) from New York Factory [Hudson's Bay at mouth of Hayes River, Manitoba, Canada]; no material in BM collection, probably lost or destroyed [NE]. Considered as nomen dubium by Peters and Cook (1966:251) since it is not recognizable from original description.

### Dixella

The assignment of the following species to Dixella Dyar & Shannon, 1924 is only provisional pending a study of the type species of this and related genera. Dixella is not congeneric with Paradixa Tonnoir, 1924 as regarded by Lane (1953:33) and Peters and Cook (1966:252).

328. andeana (Lane, 1942:94-95; Dixa). HOLOTYPE designated in original publication, ♂, Iquitos, Peru, Mar-Apr 1931, R. C. Shannon [BM]. Apparently a distinct species.

329. clavulus (Williston, 1896:298; Dixa). Described from 4 specimens (stated to be ♂) from St. Vincent; in BM collection all 4 present but all ♀; LECTOTYPE by present designation, ♀, bearing Williston's label and red type label (probably attached by Edwards), windward side St. Vincent I., W. Indies (1907-66), 1500 ft, H. H. Smith [BM]. Apparently a distinct species.

330. hoffmani (Lane, 1942:95-96; Dixa). HOLOTYPE designated in original publication, ♀, Pueblo Viejo, Puerto Rico, bred from larva, 2 Nov 1935, W. A. Hoffman [BM]. Apparently a distinct species.

331. nova (Walker, 1848:85; Dixa). Described from unspecified number of ♂ from New York Factory [Hudson's Bay at mouth of Hayes River, Manitoba, Canada]; 1 ♂ in collection with following label //one of Walkers series so named//, status of this specimen not determined and lectotype not designated at this time [BM].

332. peruviana (Edwards, 1931b:261; Dixa). HOLOTYPE (unique) ♂, with attached genitalia mount, Verrugas, Lima, Peru, 5 May 1928, R. C. Shannon [BM]. A distinct species.

333. venezuelensis (Lane, 1942:91-93; Dixa). HOLOTYPE designated in

original publication, ♂ (D 1), Maracay, Venezuela, 15 July 1927, F. M. Root [BM]. Apparently a distinct species.

#### Nothodixa

334. atrovittata (Edwards, 1930:105-106; Dixa). HOLOTYPE designated in original publication, ♂ with attached genitalia mount, Bariloche [San Carlos de Bariloche] (Rio Negro), Argentina, elev. 2450 ft, 28 Nov-1 Dec 1926, F. W. Edwards [BM]. Distinct species as currently interpreted.

335. chilensis (Alexander, 1913:176-177; Dixa). Described from unspecified number of specimens, HOLOTYPE ♂, designated as such in original publication, Concepcion, Chile, 23 Aug 1904, P. Herbst [NE; originally in HNM, destroyed by fire or lost]. Distinct species as currently interpreted.

336. ensifera (Edwards, 1930:103-105; Dixa). HOLOTYPE designated in original publication, ♂ with attached genitalia mount, Casa Pangué (Llanquihue), Chile, elev. about 1000 ft, 4-10 Dec 1926, F. W. Edwards [BM]. Distinct species as currently interpreted.

337. nitida (Edwards, 1930:102-103; Dixa). HOLOTYPE designated in original publication, ♂ with attached genitalia mount, Bariloche [San Carlos de Bariloche] (Rio Negro), Argentina, elev. 2450 ft, 6-7 Nov 1926, F. W. Edwards [BM]. Distinct species as currently interpreted.

#### AUTHORS

Abonnenc, E. See Floch, Hervé and Senevet, Georges.

Aiken, James and E. D. Rowland. There is no type material of the species described by Aiken (107. C. epirus) and by Aiken & Rowland (80. C. aikenii) either in the BM collection or in Guiana. Therefore, it is probably safe to assume that type material of both species has been lost.

Alexander, Charles P. The clearly indicated holotype of the 1 species, 335. Nothodixa chilensis, described by this author from the area stated to be in a European museum is no longer in HNM and was presumably lost or destroyed by fire.

Bellardi, Luigi. The type material of 89. C. bigoti is stated to be in the BC collection and was presumably seen by Edwards and by Stone; I did not see this material and do not know the number of specimens in the type series. Type material of the other Bellardi species, 212. Ps. mexicana, is not in MNHP but may be in TORINO where Bellardi's own collection is presumably still in existence (see Horn and Kahle, 1935:16).

Bigot, Jacques M. F. The only Bigot type material I found was that of 104. C. cubensis located in MNHP.

Blanchard, Emile. This is apparently the first time that the Emile Blanchard culicid material from Chile has been examined although it has been known to be at MNHP. It is in poor condition but the species are recognizable and the specimens bear Blanchard's original labels. Like much of the Diptera of the Gay material it has been remounted (glued) on celluloid stages. Two of the species have been misidentified by previous workers: 86. C. annuliventris is a previously unrecognized species of Culex; 71. An. variegatus is conspecific with Anopheles pictipennis. The third species, 6. Ae. annuliferus, belongs to the Aedes (O.) albifasciatus complex.

Blanchard, Raphaël. The only contribution of this author was nomenclatural, involving the proposal of 57. An. chilensis for variegatus of Emile Blanchard, now in Anopheles.

Bonne, Cornelis. See Bonne-Wepster, Jean and C. Bonne.

Bonne-Wepster, Jean and Cornelis Bonne. The Bonnes did not publish type designations as such but marked 1 specimen as type in most instances. Where a species was described from 2 specimens only and 1 of these was stated to be a numbered cotype deposited in USNM, I consider the other specimen (in ITH) as the holotype by indication; it is always marked as type. For species described from more than 2 specimens I have designated as lectotype the specimen with BW&B type label. Nearly all the type material of the Bonnes (28 sp.) is in the ITH collection. The pinned adults in addition to the identification and "type" or "cotype" labels bear only an individual printed ledger or register number which was substituted for the original BB collection number by S. L. Brug. On some of the associated slides, identified by a ledger number, the original BB numbers have been partially or completely erased. The original field notes have been lost or destroyed but there remains a "Catalogue of mounts of larval skins, hypopygia and other parts of mosquitoes, belonging to the collection of mosquitoes made by C. Bonne and J. Bonne-Wepster in Dutch Guiana during the years 1916-1923" in which a combination of letters and numbers identifies individual slides (upper case letters for genera, lower case for subgenera, and numerals for individual slides); localities are sometimes given and more rarely breeding sites and dates. Type material of the following 28 species is in the ITH collection: 7. Ae. arborealis, 8. Ae. argyrothorax, 81. C. albinensis, 82. C. alcocki, 94. C. brevispinosus, 101. C. commevynensis, 102. C. coppenamensis, 105. C. curopinensis, 106. C. ensiformis, 115. C. infoliatus, 128. C. maroniensis, 132. C. multispinosus, 134. C. nicceriensis, 150. C. saramaccensis, 179. L. pseudomethysticus, 190. Phon. splendida, 239. S. imperfectus, 241. S. kappleri, 249. Tox. aldrichanus, 254. Tox. guianensis, 260. Tox. moengoensis, 295. W. albosquamata, 297. W. argenteostris, 301. W. fallax, 303. W. flui, 306. W. lamellata, 315. W. occulta, 321. W. roucouyana. Two species were apparently described by the Bonnes from material in the USNM or from figures and descriptions based on this material as in the case of Phoniomyia lessali for which a lectotype was designated by Stone (1967:202). According to Stone (in litt. 1968) such material is in the USNM collection for 152. C. secundus but is lost for 192. Phon. tripartita. In connection with the preparation of their monograph on the mosquitoes of Surinam, the Bonnes studied the type material at the BM (Bonne-Wepster and Bonne, 1921) and were the first workers to determine the taxonomic status of many species.

Bourroul, Celestino. See Lutz, Adolpho.

Brêthes, Jean (Juan). The type material of Brêthes species stated to be in MNHP collection by Stone, Knight and Starcke (1959) consists of "cotypes." Recently other type series material of all these species has been located in BA by O.H. Casal who is designating lectotypes from these specimens in Belkin, Schick and Heinemann (1968).

Bruijning, C.F.A. The holotype of 324. W. surinamensis, the only species described by Bruijning is in the LM collection.

Christophers, S. Rickard. The holotype of 51. An. amazonicus, the only species described by Christophers is in BM-LIVER collection.

Coquillet, Daniel W. Material of the only neotropical species, 226. Ps. terminalis, described by Coquillet is in the BM collection.

Dyar, Harrison G., F. Knab and R. C. Shannon. Four of the nominal species proposed by 1 or more of these authors are replacement names (nom. nov.): 22. Ae. leucocelaenus (for 23. leucomelas whose type may be in BM), 60. An. cruzii (for 63. lutzii whose type is in BM), 244. S. melanonymphe (for 230. al-

biprivatus whose type is in BM), and 267. Tox. wiedemanni (for 252. ferox, type material of which is in SNG and NMW). The 2 other nominal species are based on material not seen by these authors: 250. Tox. ambiguus (type material possibly in NMW) and 264. Tox. theobaldi (type in O).

Edwards, Frederick W. The direct contributions of Edwards to the study of New World mosquitoes have been relatively minor, probably because of the pre-emption of the field by Dyar. However, indirectly Edwards contributed to all the major studies on the New World mosquito fauna by providing notes on the type material in the BM collection (see particularly Lane and Cerqueira, 1942 where quotations from Edwards' letters are cited). Surprisingly, in many instances Edwards did not designate a type in the original publications but fortunately he clearly marked the type specimens for nearly every species he described. Type material of all 17 species described by Edwards is in existence, 2 species are in HNM collection (222. Ps. purpurascens, 228. Ps. varinervis) and 15 in BM collection (3. E. brevisector, 38. Ae. stigmaticus, 184. O. kummi, 186. Phon. fuscipes, 205. Ps. fiebrigi, 216. Ps. pallescens, 233. S. argyronotum, 242. S. longfieldae, 298. W. bodkini, 302. W. flavifacies, 305. W. grenadensis, 332. Dixella peruviana, 334. Noth. atrovittata, 336. Noth. ensifera, 337. Noth. nitida).

Evans, Alwen M. and Gordon, R. M. and Evans. These authors designated only "cotypes" and sometimes also "paratypes" for species described from more than 1 specimen. The types of all species described by Evans (and by Gordon & Evans) were presumably originally in the Liverpool School of Tropical Medicine. The following 18 species (12 by Evans and 6 by Gordon & Evans) are now in the BM collection, some segregated in the Liverpool collection, others in the general collection: 10. Ae. braziliensis, 72. An. venezuelae, 100. C. clarki, 109. C. gordonii, 110. C. hildebrandi, 116. C. innominatus, 117. C. innovator, 126. C. manoasensis, 127. C. maracayensis, 139. C. originator, 140. C. paganus, 160. C. thomasi, 162. C. tovari, 227. Ps. tovari, 232. S. amazonicus, 258. Tox. horei, 282. U. albitarsis, 313. W. negrensis.

Fabricius, Johann C. All the extant Fabrician material is now in the ZMC collection (see Zimsen, 1964). All the material of 198. Ps. ciliata and 255. Tox. haemorrhoidalis has been lost. Two species (238. S. cyaneus and 275. Trich. longipes) are represented by a single specimen each, which I consider holotypes; there are several discrepancies between the original description and the holotype of longipes but I am disregarding these to retain the name in the current usage. For the other 3 species (14. Ae. fasciatus, 199. Ps. cilipes and 200. Ps. cingulata), each represented by 2 specimens, I am designating lectotypes. Type localities for all these species except haemorrhoidalis (which had a locality specified) have been restricted by Belkin, Schick and Heinemann (1965:41-42; 1966:3-4). The current interpretation of Fabrician species is based on Wiedemann's (1820; 1821; 1828) redescrptions of the type material.

Fauran, Pierre. The holotype of 163. C. trisetosus is in the MNHP collection. See also Floch, Hervé, P. Fauran and E. Abonnenc.

Floch, Hervé, P. Fauran and E. Abonnenc. These authors clearly designated holotypes (as types) for all species found except for antillarum for which 2 syntypes were specified. Type material of the following 6 species was located in the PIP collection; all of these except the first species mentioned were originally stated to be in the collection of the Institut Pasteur, French Guiana [PIG] and are so listed in Stone, Knight and Starcke (1959): 56. An. canorii, 95. C. cauchensis, 96. C. cavernicolus, 97. C. cayennensis, 108. C. equinoxialis, 296. W. antillarum. The adult ♂ types of all 6 species are mounted on slides togeth-

er with their dissected genitalia. Type material of the following 5 species was located in the Pasteur Institute, French Guiana [PIG] by R. X. Schick early in 1967: C. patientiae Floch & Fauran, 1955, C. vidali Floch & Fauran, 1954, C. rorotaensis Floch & Abonnenc, 1946, C. reginae Floch & Fauran, 1955 and C. manaensis Floch & Fauran, 1955. Type material of the following 2 species stated to be in PIG collection was not located there by R. X. Schick or in PIP collection by me and is presumably lost: C. punctiscapularis Floch & Abonnenc, 1946 and C. rabanicolus Floch & Abonnenc, 1946.

Giles, George M. In most instances Giles did not specify the number of specimens from which his descriptions were made and in at least 2 instances he apparently described species entirely on the basis of other authors' descriptions. Type material of the following 3 species is in the BM collection: 27. Ae. niger, 194. Ps. antiquae and 196. Ps. arribalzagae; a fourth species, 206. Ps. goeldii, may also be represented by type material in this collection. Type material of 165. C. willistoni is in the USNM collection.

Goeldi, Emilio A. Type material of only 1 nominal species (70. An. tarsi-maculatus, nom. nov.) proposed by Goeldi is in the BM collection.

Gordon, Rupert M. and A. M. Evans. See Evans, Alwen M.

Grabham, Michael. There is no material of species described by Grabham in the BM collection but apparently some authentic Grabham type material is in the USNM collection and lectotypes will be designated for several species in a forthcoming publication on the mosquitoes of Jamaica. Zavortink (1968:31) designated a lectotype for Orthopodomyia waverleyi [USNM].

Howard, Leland O. According to Coquillett (1906:7-8) and Howard, Dyar and Knab (1915:358), Howard examined the type specimens of Wiedemann's species at the NMW during the summer of 1905. For the majority of species Howard apparently examined the same material as I did but not so in the case of 61. An. ferruginosus which Coquillett (loc. cit.) states was represented by 4 specimens of a Culex. These specimens may have been part of Say's material of C. quinquefasciatus sent to Wiedemann but could not have been the type series of Wiedemann's ferruginosus. The 3 ♀ ferruginosus I examined are undoubtedly part of Wiedemann's type material of this species as they agree perfectly with his description of a species of Anopheles. Howard's error, coupled with the interpretation (by Coquillett?) that ferruginosus "was not a new species but simply a change of name for Culex quinquefasciatus of Say" (Coquillett, 1906:7), marks the starting point of the controversy regarding the valid name applicable for the tropical house mosquito which persists to this day and probably cannot be resolved without recourse to the International Commission on Zoological Nomenclature because it appears that Say's species was a composite one. The confusion in the Wiedemann material at the NMW has been aggravated since Howard's time probably through loss, misplacement or relabeling of some of the specimens. The label on the only specimen of 40. Ae. taeniorhynchus I located specified the locality as Savannah, which properly belongs to 39. Ae. taeniatus, the only species described by Wiedemann from that locality. I am uncertain about the type material of Ae. taeniatus for I apparently lost my notes on this species but my recollection is that it is still in the collection and not non-existent as stated by Stone, Knight and Starcke (1959). Under 146. C. pungens I found an additional ♀ which may be part of the type series. A more careful study of the Wiedemann material in the entire NMW collection than either Howard or I were able to make is obviously needed.

Humboldt, F. H. Alexandre de. To my knowledge no one has ever seen any Humboldt mosquito material and it is very probable as suggested by Dyar (1923:



121-122) that none was brought back from the field where the descriptions were probably made. I looked and inquired for this material in all major museums in Europe without success and consider, therefore, that the material is non-existent for the 5 species described by Humboldt. It is unfortunate that Dyar (loc. cit.) felt that it was necessary to identify these species from the very poor descriptions and that he more or less arbitrarily assigned 4 of Humboldt's names to important species known previously under other names. Three of these names are currently considered valid: 204. Ps. ferox, 210. Ps. lineata, and 236. S. chloropterus. The fourth nominal species, 202. Ps. cyanopennis, has been synonymized with Psorophora (P.) ciliata (Fabricius, 1794). Only confusion would result if current interpretations were changed. To preserve the present usage of Humboldt's names, neotypes from the type localities of all 4 species should be designated since at least 2 of the species (lineata and ferox) are actually complexes of similar species and the others may prove to be in the future. Humboldt's fifth species, 124. C. maculatus, a junior primary homonym of maculatus Meigen, 1804, was not recognized by Dyar and should remain a nomen dubium.

Knab, Frederick. See Dyar, Knab and Shannon.

Kollar, Vincenz. No material of Kollar's 131. C. molestus has been located and there is no record of Kollar's collection in any European museum visited.

Lane, John. The clearly designated holotypes of 5 nominal species are in the BM collection: 1. Corethrella kummi, 2. Corethrella tarsata, 328. Dixella andeana, 330. Dixella hoffmani and 333. Dixella venezuelensis. Lane also proposed 288. U. martinii as a replacement name for 284. U. bicolor whose type is in the BM collection. Lane examined the type specimens of neotropical mosquitoes in the BM in 1950. He marked certain specimens of some of Lutz's species (159. C. theobaldi, 183. O. albicosta, 240. S. intermedius, 310. W. mediobipes and 316. W. personata) as lectotypes but these cannot be considered as valid designations since some were not published at all, others were published (Lane, 1953) without any data to identify the specimens, and 1 (albicosta) involved a specimen which was not part of the original type material.

Laveran, (Charles-Louis) Alphonse. The only New World species credited to Laveran (175. L. curvirostris) I did not find in the PIP collection and it is not mentioned by Reid (1947:86-91) who located in this collection material (on slides) of extralimital species described by Laveran. As indicated in the list of nominal species, Laveran may not have seen any specimens of curvirostris and the only remaining type material of this species may be the slide of a ♂ prepared by Theobald (1903d:333-334) from a specimen reared by Simond who actually described this species in a letter which Laveran published.

Lutz, Adolpho. The very involved problem of the determination of the type specimens of species described by Lutz cannot be resolved without careful examination of all extant material both in Brazil (IOC collection) and in Europe. Lutz did not designate types for any of his species in the original publications and usually did not specify the number of specimens from which the descriptions were made. The problem is further complicated by the very brief descriptions, the mention of only one sex and the lack of specific localities in some instances in his 1904 papers (in Bourroul). Of some assistance in these matters are redescriptions of some of the species in the 1905 paper, and the more precise locality data given for Lutz species in Peryassú (1908).

Essential to unraveling this problem is an understanding of the relationship between Lutz and Theobald. It began apparently in 1899 according to the record

of collection 14 in Theobald (1901b:358) and Lutz's letters in Theobald's correspondence file at the BM. The latter are difficult to interpret without copies of Theobald's replies and unfortunately do not cover the critical period of 1904-1905 when Lutz's descriptions were published. The only other published records of material received from Lutz are collection 94A (series of fragments) recorded in Theobald (1901b:365), collections 146 and 152 reported in Theobald (1903d:348) and the acknowledgment of receipt of material from Lutz in Theobald (1907:VII). In volumes 1 and 2 of the Monograph, Theobald (1901a, 1901b) described new species based on Lutz specimens without any reference to Lutz manuscript names. However, in volume 3 Theobald (1903d) used Lutz's manuscript names for all the species he described from the latter's material and acknowledged them either in the heading of the description or in the Observations following the description. There is reason to believe that Lutz intended to publish the descriptions himself from the following statement quoted by Theobald (1903d:223): "I send you a new Culex from bromelias which I propose to call ocellatus." Soon after, Lutz began publishing his own species first in Bourroul (1904) and later in the obscure medical journal "Imprensa Medica" (Lutz, 1905). That relations between Lutz and Theobald deteriorated is evident from the fact that although Theobald (1907) refers to Lutz's 1904 descriptions, he acknowledges receipt of Lutz's 1905 descriptions in the Addenda to this volume (1907: 630) which was presumably written after 10 Nov 1906, the date of the introduction, and in this volume describes several new species using names already published by Lutz (1905), not always in the same sense, however. Apparently the material on which these species were based reached Theobald sometime before the publication of Lutz's 1905 species since the material of the latter species in the BM collection is very scanty and extremely confused. At a later date some additional Lutz material was added to the BM collection.

As far as I have been able to determine, the bulk of the Lutz material is now in 3 institutions. Lutz's own collection is at the IOC in Rio de Janeiro. Apparently the IOC collection has never been thoroughly studied, even by Lane (1953) who only indicates the presence of the types of several species in this collection. Lutz's type material from this collection has apparently been shipped to several workers for study (Lane and Cerqueira, 1942; Antunes and Ramos, 1939 and probably others). I can find no published report on the contents and condition of the IOC collection but presumably the types of the Lutz species reported as being in this collection by Stone, Knight and Starcke (1959) are still there.

In Europe, in addition to the material in the BM collection, examined by several workers before and discussed below, I found authentic Lutz material in FMP in Paris. I was able to make only a cursory examination of this material which is located in the "Collection Theobald" in boxes III, V, VI, VII. The entire collection is in beautiful condition and apparently has never been examined by anyone working with neotropical mosquitoes since the time it was presumably sent by Theobald to the FMP. Subsequently, some species have been added to this collection. Some of the material bears labels in Theobald's hand. All Lutz material of the following 10 species lacks original labels and bears only the following data in addition to species labels, //Brazil/Dr. Lutz//or//São Paulo/Dr. Lutz//: 23. Ae. leucomelas, 30. Ae. oswaldi, 119. C. iridescens, 155. C. spinosus, 234. S. aurescens, 240. S. intermedius, 263. Tox. solstitialis, 268. Trich. compressum, 279. Trich. pallidiventer, 316. W. personata. Specimens of the following 6 species bear Lutz's original labels: 17. Ae. fluviatilis, 133. C. neglectus, 183. O. albicosta, 274. Trich. longipalpis, 307. W. leucostigma, 323. W. serrata. Although it is doubtful that Theobald sent type material to FMP, it is

possible that some of the specimens in this collection are part of the type series of some of Lutz's species. Unfortunately, I did not have time to study this material carefully and even failed to note the dates on the labels.

The material of Lutz's species in the BM collection is not extensive, some having been sent to FMP and to various workers (Lane and Cerqueira, 1942). It is also in rather poor condition, partially due to examination by several workers in the past. Some of the specimens bear Lutz's original labels which are difficult to decipher, others bear only labels written by Theobald or assistants. None of the specimens bear Lutz's type labels but several were marked by Theobald as types of Lutz's species. However, in volume 5 of the Monograph (Theobald, 1910) there is no indication that the types of any of Lutz's species were in the BM. Lane (1953) and Stone, Knight and Starcke (1959) state that the types of several Lutz species are in the BM collection, apparently on the basis of Theobald's type labels. Since all the species in question were originally described from an unspecified number of adults, lectotype designations are needed. None have been validly published to date and I refrain from designating as lectotypes specimens in the BM collection at this time because Lutz's own collection in IOC has not been thoroughly examined and may contain original material in better condition. As indicated above, some of the material in the FMP collection may also contain specimens from the type series. In the BM collection the following 13 species are represented by apparently authentic specimens of the type series: 17. Ae. fluviatilis, 23. Ae. leucomelas, 30. Ae. oswaldi, 155. C. spinosus, 159. C. theobaldi, 183. O. albicosta, 234. S. aurescens, 240. S. intermedius, 263. Tox. solstitialis, 279. Trich. pallidiventer, 310. W. medioalbipes, 314. W. oblita, 316. W. personata. The material under the name 274. Trich. longipalpis in the BM collection does not agree with Lutz's description.

Lutz's first species descriptions were in Celestino Bourroul's thesis, "Mosquitos do Brasil" (1904). There has been some question in the past concerning the authorship of new nominal taxa in this publication and considerable confusion regarding page citations. To take the latter matter first; Bourroul's thesis does not have a continuous pagination but consists of several parts each with a separate pagination. To simplify page citations different authors have written in continuous paginations in their copies which unfortunately do not correspond. I prefer to treat each part separately with its original individual printed pagination and have listed them separately in the References Cited section under their respective authors but with reference to the page numbers in the continuation pagination used by Stone, Knight and Starcke (1959) in the world catalog.

Now, as to the authorship of the nominal taxa in Bourroul's thesis: The key, in my interpretation, lies in the statement in the preface by Bourroul (p. II): "And, were this not enough, the Mentor [Adolpho Lutz] wished to enrich our work with the 'Conspectus of the Brazilian and South American Culicids,' 'Conspectus of the Subfamilies and Genera of the Culicids,' 'Key for the determination of the species of various genera of Culicinae,' 'Key for the determination of general encountered in Brazil,' Descriptions of New Sub-Families, New Genera, New Species which together with that encountered in Bahia number 23" [free translation, italics mine]. Furthermore, in the "Catalogo" [referred to in the introduction as Quadro], which is definitely stated to be prepared by Lutz, all the new genera and all the new species except Megarhinus mariae have Lutz's name appended to them; the latter on the other hand is attributed to Bourroul. Throughout the rest of Bourroul's thesis the same pattern is followed with Lutz's name after every new taxon other than mariae, which is attributed

to Bourroul. The one exception to this is in the "Chave para a determinação dos generos da sub-familia 'Culicinae' observados no Brasil" in which the authors of none of the genera are mentioned but which is clearly stated to have been prepared by Lutz. I consider, therefore, that every new taxon, except mariae, proposed in Bourroul's thesis should be attributed to Lutz and only mariae to Bourroul. In the synoptic catalog of the mosquitoes of the World, Stone, Knight and Starcke (1959) appear to have reached the same conclusion for all the taxa validly proposed in this publication which they attribute to Lutz, with the exception of the generic taxon Aedinus which they attribute to Bourroul. Stone (in litt, 1968) acknowledges this inconsistency and proposes that the only parts of Bourroul's thesis that can be definitely attributed to Lutz are "Quadro dos 'Generos' da familia Culicidae" "Catalogo..." and the 3 separate "Chave . . . ." This new interpretation is also inconsistent if I understand correctly that the criterion for the authorship of Lutz is based on the appearance of his name in the heading of each part; Lutz's name does not appear in the heading of "Chave para determinação das especies de Euculicidae..." or "Chave para determinação das especies da subfamilia Culicinae." I cannot accept Stone's interpretation and consider that the internal evidence in Bourroul's entire thesis, as shown above, clearly demonstrates that Lutz was the author of all the nominal taxa except mariae. Therefore, I attribute the generic taxon Aedinus to Lutz in Bourroul, 1904 (Lutz, 1904b:12, 1904c:4) and eliminate Aedinus Bourroul, 1904 of Stone, Knight and Starcke (1959:281) which they considered to be a generic taxon different from Aedinus Lutz, 1905; the latter, however, in my opinion is nothing more than a redescription of Aedinus Lutz, 1904. There still remains the problem of the type species of Aedinus Lutz, 1904. Stone, Knight and Starcke (1959:281) give for their Aedinus Bourroul, 1904 the haplotype Aedeomyia americana Neveu-Lemaire which is the only species referred to Aedinus on the page where this genus is described (Lutz, 1904c:4). However, in the "Catalogo" (Lutz, 1904b:12), americana is questionably referred to Aedinus and only A. amazonensis Lutz (n. e.) is included in Aedinus Lutz (n. gen.). Another nominal species is referred to Aedinus in Bourroul's thesis, nigricorpus (n. e.) on page 4 of the "Quadro das especies encontradas na Bahia" which is definitely the work of Bourroul but which includes footnotes by Lutz, one of them specifically referring to nigricorpus. A. nigricorpus appears to be an earlier name for amazonensis but its authorship is not clear and could be attributed to either Lutz or Bourroul. In view of this confusion, the action of Stone, Knight and Starcke (loc. cit.) appears to be the simplest solution but not acceptable because it does not take into account the questionable reference of americana to Aedinus elsewhere in the work. If the designation of americana, which is a nomen dubium, as type species is accepted, Aedinus also becomes a nomen dubium. In my opinion a better solution is to consider Aedinus without included species in 1904 since both amazonensis and nigricorpus were nomina nuda in 1904 (neither can be regarded as described by indication by a new generic description since 2 names are involved) and americana is referred to it questionably, and to designate Aedinus amazonensis Lutz, 1905 as the type species as it was the only included species in the first subsequent publication of the genus. This restores Aedinus Lutz, 1904 as a valid subgenus in Culex in the sense of Lutz, 1904 and 1905, and as it had been used before Stone, Knight and Starcke (1959), replacing its subjective junior synonym Eubonnea Dyar, 1919.

Lynch Arribálzaga, Félix. The type material of Uranotaenia nataliae stated to be in MNHP by Stone, Knight and Starcke (1959:116) is represented by a ♀ bearing 2 "cotype" labels and the following, //Museum Paris/Republ. Ar-

gentine/Haut Parana//[in ink] Uranotaenia/nataliae F Lch//[in ink] J. Brèthes/leg//. The specimen is in very good condition but it is very doubtful that it is part of Lynch's original material. O.H. Casal is designating the only remaining specimen in BA (not MLP as stated by Stone, Knight and Starcke) as the lectotype in Belkin, Schick and Heinemann (1968).

Macquart, P. Justin M. All the Macquart mosquito material is at MNHP; it is in poor condition but recognizable. Four New World species: 5. Ae. albifasciatus, 16. Ae. flavipes, 43. Ae. toxorhynchus and 215. Ps. ochripes are represented by single specimens which I can consider holotypes. There is no material of 219. Ps. pilipes and its type should be considered non-existent. This material has not been studied before and only 2 of the 5 species had been correctly identified in the past.

Martini, Eric. Type specimens of only 13 neotropical species described by Martini are still in existence in European museums; the remainder were presumably destroyed during World War II. Two species are in the SMNS collection: 171. H. lindneri and 312. W. monoleua. Eleven species are in the BM collection; they were examined by Mattingly (1955:27-33): 29. Ae. oroecetor, 45. Ae. vanemdeni, 83. C. alticola, 98. C. chalcocorystes, 144. C. prasinopleurus, 172. H. obscurascens, 209. Ps. leucocnemis, 221. Ps. pruinosa, 225. Ps. simplex, 270. Trich. espini, 284. U. bicolor. Paratypes of chalcocorystes and prasinopleurus are also in ZM. Type material of the following species has not been found in Europe by Mattingly (1955) or by me and is presumably destroyed: 58. An. cricillum and 68. An. parapunctipennis; however, other material of the type series of these species may be found in Mexico [LU]. Type material of the following is probably all destroyed and is considered to be non-existent [NE]: 257. Tox. hexacis, 273. Trich. hyperleucum, 281. Trich. subsplendens, 290. U. modesta, 322. W. schnusei.

Mattingly, Peter F. Mattingly has made important contributions to the study of New World mosquitoes through the study of types at BM for numerous workers. He studied the Martini material from the Tropical Institute at Hamburg (1955:27-33) designation lectotypes for all species represented originally by more than 1 specimen, and later (1958:105) designated a lectotype for 237. S. confusus and "identified" the type of 245. S. nitidus, the latter incorrectly in my opinion.

Neiva, Arthur. Neiva's 48. An. adolphi is a nom. nov. for 63. An. lutzii, whose type is in BM.

Neveu-Lemaire, Maurice. Neveu-Lemaire's material was presumably originally in FMP as stated under mathisi by R. Blanchard (1905:371); it was also probably mounted on slides according to the custom of French workers. This material was not located in FMP or elsewhere in Paris and is presumably non-existent for the 2 neotropical species described by Neveu-Lemaire: 25. Ae. mathisi and 84. C. americanus. The latter is recognizable only as a species of Culex and is considered to be a nomen dubium.

Newstead, Robert and H.W. Thomas. Type material of the 2 species described by these authors is in the BM collection: 99. C. chrysothorax and 185. O. longipalpis.

Robineau-Desvoidy, (André) Jean-Baptiste. All extant Robineau-Desvoidy material is in MNHP, it does not include any culicid material at all, which according to E. Seguy, was destroyed or lost. Therefore, the types of the following species, recorded in Stone, Knight and Starcke (1959) as being in MNHP, should be considered non-existent: 53. An. argyritarsis and 141. C. pallipes. The latter is unrecognizable from the original description and remains a nomen dubium.

von Röder, Victor. Type material of the only species described by this author, 262. Tox. portoricensis, originally may have been in the Zoological Museum at the University in Halle/Salle where, according to Horn and Kahle (1936:228), von Röder's collection was located. No one has seen this material and the entire collection was apparently destroyed during World War II.

Rondani, Camillo. Type material of 2 Rondani neotropical species, 33. Ae. scapularis and 269. Trich. digitatum is not in FM but may be in BOLOGNA where additional Rondani culicid material has been seen by A. Martelli according to M. Coluzzi (in litt.).

Senevet, Georges, E. Abonnenc, R. Chabelard and L. Quiévreux. These authors in nearly all cases designated a holotype (as type) in the original publications and fortunately provided sufficient data (not always accurate) about the holotype to identify it. All the material is mounted on slides including the adult as is still the custom with some French workers. All of this material was originally deposited in LPFM and PIA in Algeria. G. Senevet succeeded in rescuing some of this material during the Algerian conflict and this is now located in the Senevet collection at FMP in Paris. Dr. Senevet plans to deposit the material eventually in some other institution but has not reached a decision at this time. The types of the following 15 species are now in FMP-SENEVET: 78. C. advieri, 92. C. bonneti, 93. C. breviculus, 125. C. madininensis, 145. C. pseudojanthinosoma, 148. C. radiatus, 161. C. tisseuli, 177. L. martiali, 294. W. albo-caerulea, 299. W. colsoni, 300. W. compta, 308. W. luciae, 319. W. robusta, 320. W. rorotai, 325. W. testei. The types of the following 11 species were lost or destroyed in Algeria and must be considered non-existent: Aedes martineti, Ae. tracei, Anopheles ininii, An. sanctielii, Culex aurilatus, C. comatus, C. implicatus, C. portesi, C. productus, C. rigidus and C. tournieri.

Stone, Alan. Stone (1957a) studied all the type material in the BM collection, designated lectotypes and indicated taxonomic changes for several New World species. Included in his study of the mosquitoes in the Hungarian National Museum (Stone, 1957b) are several Neotropical species. Stone (1958) also designated a lectotype for 79. C. aestuans in the NMW collection.

Strickland, E. H. The holotype of the only species described by Strickland (217. Ps. paraguayensis) is non-existent, presumably lost by fire or destroyed at HNM.

Surcouf, Jacques M. R. and R. Gonzalez-Rincones. Type material of 2 species, 197. Ps. blanchardi and 247. S. rangeli is in the MNHP collection as reported in Stone, Knight and Starcke. I found no material in MNHP or elsewhere in Europe of Culex romeroi which was based entirely on Rangel and Romero Sierra's description of specimens misidentified as Culex nigritulus Zetterstedt; these specimens as well as all of the Rangel-Romero material is no longer extant.

Theobald, Frederick V. Theobald, the most prolific describer of culicid taxa and among the best, never designated in the original publications a type specimen as such for any of the more than 100 New World species he described. Therefore, only those species which were stated to be described from 1 specimen can be considered to have the holotypes designated. In case of species described from more than 1 specimen, almost without exception 1 or more specimens were marked "type" by Theobald, usually both 1 ♂ and 1 ♀ in case of those described from both sexes; rarely 2 or 3 specimens of the same sex were all marked "type." It is not known when these labels were affixed to the specimens and there is a considerable variation in the kinds of labels and in the handwriting. Apparently some confusion occurred when the material was

transferred at various times to the BM and particularly during the final transfer. It is very likely that H. F. Carter was involved in this final transfer and may have participated in labeling the specimens as he was involved in the preparation of volume 5 of the monograph (Theobald, 1910:VI-VII, 601). In this final volume of the monograph Theobald (1910) for the first time indicated the location of the types for many species by the simple statement: "Type in the British Museum." [or some other museum], rarely specifying the sex [incorrectly for 245. *S. nitidus*, p. 575]. Apparently this statement has been interpreted in conjunction with the affixing of a type label as corresponding to a holotype or lectotype designation by Theobald. However, this does not constitute a valid designation for either, in my interpretation, because the specimen involved cannot be identified in either the original or the subsequent publication. Therefore, for all Theobald species described from more than 1 specimen it is essential to designate a lectotype. I have done so for most Theobald species by designating in almost all instances a specimen marked as type by Theobald.

While the majority of Theobald type material is in the BM collection, the types of 4 species are deposited in other institutions. In the MNHP collection is the holotype of 77. *Coq. venezuelensis* examined by me. In the USNM collection are 2 specimens upon which Theobald based 256. *Tox. herrickii* (lectotype to be designated by Stone). In the HNM collection are the holotypes of 55. *An. boliviensis* and 277. *Trich. magnum* examined by Stone (1957b) and still in existence.

Type material of the following 6 species is not in the BM collection and has not been located elsewhere, and is therefore apparently non-existent: 54. *An. bigotii*, 69. *An. pseudopunctipennis*, 137. *C. nigripalpus*, 154. *C. similis*, 168. *D. magnus*, 318. *W. quasiluteoventralis*. The holotype of 243. *S. lutzii* is not in the BM collection but may be in IOC.

The BM collection contains the type material of the following 99 New World species described by Theobald (including 214. *Ps. neoapicalis* which is *nom. nov.* for 195. *apicalis* whose type is in BM): 4. *Saym. braziliensis*, 9. *Ae. aurtites*, 11. *Ae. canadensis*, 12. *Ae. crinifer*, 19. *Ae. hirsuteron*, 24. *Ae. luciensis*, 26. *Ae. mediomaculatus*, 28. *Ae. nubilus*, 32. *Ae. quasiseratus*, 34. *Ae. ser-ratus*, 35. *Ae. sexlineatus*, 37. *Ae. spencerii*, 42. *Ae. tortilis*, 44. *Ae. tripunctatus*, 46. *Ae. vittatus*, 47. *Ae. walkeri*, 50. *An. albipes*, 62. *An. grabhamii*, 63. *An. lutzii*, 64. *An. maculipes*, 65. *An. mediopunctatus*, 66. *An. niger*, 67. *An. nimbus*, 73. *An. walkeri*, 74. *Coq. arribalzagae*, 85. *Culex annulipes*, 87. *C. argenteoumbrosus*, 88. *C. atratus*, 90. *C. bilineatus*, 91. *C. biocellatus*, 103. *C. corniger*, 111. *C. humilis*, 112. *C. imitator*, 113. *C. indecorabilis*, 114. *C. inflic-tus*, 118. *C. inornatus*, 120. *C. janitor*, 121. *C. kelloggii*, 122. *C. lateropunc-tatus*, 123. *C. luteopleurus*, 129. *C. microannulatus*, 130. *C. microsquamatus*, 135. *C. nigrescens*, 136. *C. nigricorpus*, 138. *C. ocellatus*, 142. *C. palus*, 143. *C. pleuristriatus*, 147. *C. quasiselector*, 149. *C. restuans*, 151. *C. scholasticus*, 153. *C. selector*, 156. *C. spissipes*, 157. *C. subfuscus*, 164. *C. virgultus*, 167. *D. cancer*, 169. *H. albomaculatus*, 170. *H. equinus*, 174. *L. asulleptus*, 176. *L. durhamii*, 178. *L. paraensis*, 180. *M. amazonensis*, 181. *M. pseudotitillans*, 187. *Phon. longirostris*, 188. *Phon. pallidoventer*, 189. *Phon. quasilongirostris*, 191. *Phon. trinidadensis*, 193. *Ps. albipes*, 195. *Ps. apicalis*, 207. *Ps. (Grab.) jamaicensis*, 208. *Ps. (Janth.) jamaicensis*, 211. *Ps. lutzii*, 214. *Ps. neoapicalis*, 223. *Ps. pygmaea*, 229. *Ps. walsinghamii*, 230. *S. albiprivatus*, 231. *S. albi-privus*, 235. *S. aurescens*, 237. *S. confusus*, 245. *S. nitidus*, 246. *S. purpureus*, 251. *Tox. chrysocephalus*, 259. *Tox. longipes*, 261. *Tox. purpureus*, 271. *Trich. frontosum*, 272. *Trich. fluviatilis*, 276. *Trich. lunatum*, 278. *Trich. nivipes*, 283. *U. apicalis*, 285. *U. geometrica*, 286. *U. leucoptera*, 287. *U. lowii*, 289. *U.*

minuta, 291. U. pallidoventer, 292. U. rowlandii, 293. U. socialis, 304. W. grayii, 309. W. luteoventralis, 311. W. mitchellii, 326. W. ulocoma.

Thomson, Carl G. Some Thomson material has been reported from the SM collection but not the type series of 166. Culiseta incidens. More careful search must be made before the type material of this species is declared non-existent.

Walker, Francis. All the extant culicid material described by Walker is in the BM collection. The majority of species are represented by a single specimen identified as the type by E. A. Waterhouse. I regard these as holotypes as Walker apparently described most species from a single specimen. Where 2 specimens remain or the original description indicates that more than 1 specimen was in Walker's hands, I have designated lectotypes. Although the material is in poor condition, the majority of Walker species are recognizable and their current taxonomic interpretation appears to be correct. Careful study is needed to determine the taxonomic status of 2 species (203. Ps. discrucians and 331. Dixella nova) and therefore lectotype designations for these are not made at this time. The following 13 species are represented by type material in the BM collection: 13. Ae. exagitans, 15. Ae. flavicosta, 20. Ae. impiger, 21. Ae. implacabilis, 31. Ae. provocans, 36. Ae. sollicitans, 41. Ae. terrens, 75. Coq. perturbans, 182. M. titillans, 201. Ps. conterrens, 203. Ps. discrucians, 224. Ps. scintillans, 331. Dixella nova. There is no authentic Walker material of the following 3 species in the BM collection where it should be and therefore it is probably non-existent: 158. C. territans, 218. Ps. perterrens and 327. Dixa recens.

Wiedemann, Christian R. W. Authentic Wiedemann material is now in the collections of ZMC, NMW and SNG, and possibly in ZM (violaceus). In the ZMC collection is the holotype of 248. S. remipes. Type material of 3 species is in the SNG collection: 18. Ae. fulvus, 252. Tox. ferox (also in NMW) and 265. Tox. trichopygus. The majority of the Wiedemann types are in the NMW collection where the Winthem and Wiedemann's own collections are located and where type material of the following 10 species was found: 40. Ae. taeniorhynchus (questionable), 49. An. albimanus, 59. An. crucians, 61. An. ferruginosus, 79. C. aestuans, 146. C. pungens, 213. Ps. molesta, 220. Ps. posticata, 252. Tox. ferox (also in SNG), 266. Tox. violaceus. I failed to locate in this collection the 1 ♂ and 1 ♀ of 39. Ae. taeniatus which were seen by Howard in 1905 (Coquillett, 1906:8) but probably this material is still there (see discussion under Howard above).

Williston, Samuel. Type material of 5 species described by Williston is in the BM collection: 173. H. splendens, 253. Tox. grandiosus, 280. Trich. perturbans, 317. W. pertinans, 329. Dixella clavulus.

van der Wulp, Frederik M. The holotypes of 2 species described by van der Wulp, 52. An. annulimanus and 76. Coq. testacea, are in the LM collection.

#### DEPOSITORIES

BC (Bigot Collection, in collection of J. E. Collin, Raylands, Newmarket (Suffolk), England). I did not examine the type material of Bellardi's 89. C. bigoti which is stated to be in this collection.

BM (British Museum (Nat. Hist.), Cromwell Road, London, S. W. 7). Deposited in the BM collection are the types from the Liverpool School of Tropical Medicine [BM-LIVER], at present not all of these are segregated in a sep-



arate collection. The following types are in the BM collection: Christophers, 1 sp.; Coquillett, 1 sp.; Dyar, Knab & Shannon, 3 sp. (all nom. nov.); Edwards, 15 sp.; Evans and Gordon & Evans, 18 sp.; Giles, 3 or 4 sp.; Goeldi, 1 sp. (nom. nov.); Lane, 5 sp.; Laveran, possibly 1 sp.; Martini, 11 sp.; Neiva, 1 sp. (nom. nov.); Newstead & Thomas, 2 sp.; Theobald, 99 sp.; Walker, 13 sp.; Williston, 5 sp. In addition 13 of Lutz's species are represented by apparently authentic material which may be eligible for lectotype designation.

BM-LIVER. See BM.

BOLOGNA (Istituto di Zoologia, Università degli Studi, Bologna). M. Coluzzi (in litt.) informs me that A. Martelli has seen some Rondani material in this collection but there is no information at present as to presence of 33. Ae. scapularis or 269. Trich. digitatum in this collection.

FM (Museo Zoologico, Università degli Studi, Via Romana 17, Firenze). Type material of some Rondani culicid species is in this collection but according to A. Martelli and M. Coluzzi there are no specimens of 33. Ae. scapularis or 269. Trich. digitatum.

FMP (Faculté de Médecine de Paris, Laboratoire de Parasitologie et de Mycologie, 15 r. de l'Ecole-de-Médecine, Paris, VI<sup>e</sup>). In the "Collection Theobald" pinned material of 16 of Lutz's species is present; some of this may be part of original type material. In the Senevet collection [FMP-SENEVET], temporarily deposited in FMP, are the types of 15 species described by Senevet and co-workers which were originally in LPFM and PIA. No neotropical Neveu-Lemaire material was found in the FMP collection.

FMP-SENEVET. See FMP.

HNM (Természettudományi Múzeum Allattára, Baross utca 13, Budapest VIII). The only remaining culicid types at HNM are those studied by Stone (1957b). All the others were lost by fire in 1956 (F. Mihályi, in litt., 1967). The types of the following neotropical species are still in existence: 2 Edwards species (222. Ps. purpurascens and 228. Ps. varinervis) and 2 Theobald species (55. An. boliviensis and 277. Trich. magnum).

IOC (Instituto Oswaldo Cruz, Rio de Janeiro). Lutz's own collection at IOC probably contains more type material than currently recognized but apparently it has not been thoroughly studied to date. Pending such a study the status of authentic Lutz material at BM and FMP cannot be determined. The type of Theobald's 243. S. lutzii may still be in the Lutz material at IOC.

ITH (Instituut voor Tropische Hygiene, Mauritskade 57, Amsterdam-O.). The only neotropical type material in this collection is that of 28 species described by Bonne-Wepster & Bonne (see).

LM (Rijksmuseum van Natuurlijke Historie, Raamsteeg 2A, Leiden). The types of only 3 neotropical species are in the LM collection, 2 van der Wulp species (52. An. annulimanus and 76. Coq. testacea) and Bruijning's 324. W. surinamensis.

LPFM (Faculté de Médecine, Laboratoire de Parasitologie, Alger). There is no type material left in this collection. All the type material salvaged by G. Senevet is now in FMP in Paris.

LU (Location unknown). The location of the type material of some of the species described by the following authors (see AUTHORS section) is not positively known at present: Bellardi (2 sp.), Dyar & Knab (3 sp.), Giles (1 sp.), Laveran (1 sp.), Martin (2 sp.), Rondani (2 sp.), Theobald (1 sp.), Thomson (1 sp.), Wiedemann (1 sp.). See also NE.

MNHP (Muséum National d'Histoire Naturelle, Laboratoire d'Entomologie Generale, 45 bis r. Buffon, Paris, V<sup>e</sup>). Type material of the following neo-

tropical species is in MNHP: in the Meigen-Macquart collection, 3 E. Blanchard species (6. Ae. annuliferus; 71. An. variegatus; 86. C. annuliventris), 1 R. Blanchard species (57. An. chilensis, nom. nov. for variegatus above), and 4 Macquart species (5. Ae. albifasciatus, 16. Ae. flavipes, 43. Ae. toxorhynchus, and 215. Ps. ochripes); in the general collection, 1 Bigot species (104. C. cubensis), 1 Fauran species (163. C. trisetosus), 2 Surcouf & Gonzalez-Rincones species (197. Ps. blanchardi and 247. S. rangeli) and 1 Theobald species (77. Coq. venezuelensis). There is no Robineau-Desvoidy culicid material in MNHP, all is destroyed, according to E. Seguy. The Brèthes material in MNHP consists of "cotypes" only, other "cotypes" in BA collection in Argentina are being designated as lectotypes by O. H. Casal in Belkin, Schick and Heinemann (1968). The specimen labeled as "cotype" of Lynch Arribalzaga's Uranotaenia nataliae is not part of type series, a lectotype for this species is also being designated by O. H. Casal.

NE (Non-existent). Type material of some of the New World species described by the following authors (see AUTHORS section) is in all probability non-existent: Aiken & Rowland (2 sp.), Alexander (1 sp.), Bonne-Wepster and Bonne (1 sp.), Fabricius (2 sp.), Floch & Abonnenc (2 sp.), Humboldt (all 5 species), Kollar (1 sp.), Macquart (1 sp.), Martini (5 sp.), Neveu-Lemaire (2 sp.), Robineau-Desvoidy (all species), von Röder (1 sp.), Senevet, et al (11 sp.), Strickland (1 sp.), Surcouf & Gonzalez-Rincones (1 sp.), Theobald (6 sp.), Walker (3 sp.).

NMW (Naturhistorisches Museum, Burgring 7, Wien 1). Type material of the following neotropical species is in NMW: 10 Wiedemann species (40. Ae. taeniorhynchus, 61. An. ferruginosus, 79. C. aestuans, 146. C. pungens, 213. Ps. molesta, 220. Ps. posticata, 252. Tox. ferox (also in SNG), 266. Tox. violaceus) and 2 nom. nov. of Dyar & Knab for Wiedemann's ferox material (250. Tox. ambiguus and 267. Tox. wiedemanni). Type material of Wiedemann's 39. Ae. taeniatus may also be in the collection but was not located.

O (Hope Department, University Museum, Oxford, England). Type material of Dyar & Knab's 264. Tox. theobaldi has been located in this collection by G. C. Varley but its taxonomic identity has not been determined.

PIA (Institut Pasteur d'Algérie, Alger). There is no type material left in this collection. All the type material salvaged by G. Senevet is now in FMP in Paris.

PIG (Institut Pasteur de la Guyane Française, Cayenne, French Guiana). The only type material remaining in this collection, according to R. X. Schick, consists of the following: 4 Floch & Fauran species (Culex patientiae, C. vidali, C. reginae and C. manaensis) and 1 Floch & Abonnenc species (C. rorotaensis). Five species stated to be in PIG in Stone, Knight and Starcke (1959) are now in PIP in Paris (see). Type material of the following 2 species has not been located: C. punctiscapularis and C. rabanicolus.

PIP (Institut Pasteur, 25 r. du Docteur Roux, Paris, XV<sup>e</sup>). Type material of the following Floch, Fauran & Abonnenc species is in PIP; all except the first were originally in PIG in French Guiana: 56. An. canorii, 95. C. cauchensis, 96. C. cavernicolus, 97. C. cayennensis, 108. C. equinoxialis and 296. W. antillarum. For location of type material of other species described by these authors, see PIG and the AUTHORS section. No material of Laveran's 175. L. curvirostris was found by Reid (1947) or by me in PIP; the only remaining original material of this species may be in BM (see).

SM (Naturhistoriska Riksmuseet, Stockholm). Some Thomson material has been reported from this collection but type material of 166. Culiseta incidens has not been located as yet.

SMNS (Staatliches Museum für Naturkunde in Stuttgart, Zweigstelle Ludwigsburg, Arsenalbau, Arsenalplatz 3, 104 Ludwigsburg). Types of only 2 neotropical species are in SMNS, Martini's 171. H. lindneri and 312. W. monoleua.

SNG (Natur-Museum und Forschungs-Institut Senckenberg, Senckenberg-Anlage 25, 6 Frankfurt 1). I am greatly indebted to Dr. R. zur Strassen for providing me with detailed notes on the following Wiedemann types in this collection: 18. Ae. fulvus and 265. Tox. trichopygus. There is also authentic material of Wiedemann's 252. Tox. ferox (wiedemanni Dyar & Knab, nom. nov.) in this collection in addition to the material in NMW (see).

TORINO (Istituto e Museo di Zoologia, Università degli Studi, Torino). Type material of Bellardi's 212. Ps. mexicana may be in this collection but has not been located as yet.

USNM (U. S. National Museum, Wash., D. C. 20560). Type material of Bonne-Wepster & Bonne's 152. C. secundus, Giles' 165. C. willistoni and Theobald's 256. Tox. herrickii appears to be in USNM collection. Lectotypes for these will be designated by Alan Stone in the near future. There is also type material of several Grabham species for which lectotype designations will be made in a forthcoming publication on the Culicidae of Jamaica.

ZM (Institut für Spezielle Zoologie und Zoologisches Museum, Humboldt-Universität zu Berlin, Invalidenstrasse 13, Berlin 104). According to Dr. H. Schumann there is type material of Wiedemann's 266. Tox. violaceus in the ZM collection; I have, however, designated a lectotype for this species from Wiedemann's own collection in NMW. Paratypes of the following species, for which types have been designated, are also stated to be in this collection: Culex (L.) allostigma Howard, Dyar & Knab, 1915; 98. C. chalcocorystes; 144. C. prasinopleurus. There is also in ZM a specimen marked as the type of Skusea calopus Meigen but this is without doubt erroneous. There is no Humboldt material in the ZM collection.

ZMC (Universitetets Zoologiske Museum, Universitetsparken 15, København). The only neotropical culicid type material in ZM consists of 1 Wiedemann species (248. S. remipes) and 5 Fabrician species (14. Ae. fasciatus, 199. Ps. cilipes, 200. Ps. cingulata, 238. S. cyaneus and 275. Trich. longipes). The ZMC collection is the only European collection with type material segregated and adequately protected.

#### REFERENCES CITED

- Aiken, James  
1909. Notes on the mosquitoes of British Guiana. *Brit. Guiana Med. Annu.* 1909:1-25.
- Aiken, James and E. D. Rowland  
1906. Preliminary notes on the mosquitoes of British Guiana. *Brit. Guiana Med. Annu.* (1905):13-38.
- Aitken, Thomas H. G. and P. Galindo  
1966. On the identity of Culex (Melanoconion) portesi Senevet & Abonnenc, 1941 (Diptera, Culicidae). *Entomol. Soc. Wash., Proc.* 68:198-208.
- Alexander, Charles P.  
1913. A new species of Dixa from Chile (Dixidae, Dipt.). *Entomol. News* 24:176-177.
- Antunes, P. C. A. and A. S. Ramos  
1939. Culex (Carrollia) iridescens, bonnei e soperi (Diptera, Culicidae). *Bol. Biol. (n. s.)* 4:374-385.

- Belkin, John N. and C. L. Hogue  
1959. A review of the crabhole mosquitoes of the genus Deinocerites (Diptera, Culicidae). Calif. Univ., Publications Entomol. 14:411-458.
- Belkin, John N., R. X. Schick and S. J. Heinemann  
1965. Mosquito studies (Diptera, Culicidae). V. Mosquitoes originally described from Middle America. Amer. Entomol. Inst., Contrib. 1(5). 95 p.  
1966. Mosquito studies (Diptera, Culicidae). VI. Mosquitoes originally described from North America. Amer. Entomol. Inst., Contrib. 1(6). 39 p.  
1968. Mosquito Studies (Diptera, Culicidae). X. Mosquitoes originally described from Argentina, Bolivia, Chile, Paraguay, Peru and Uruguay. Amer. Entomol. Inst., Contrib. 4(1):9-30.
- Bellardi, Luigi  
1862. Saggio di Ditterologia Messicana. Appendice. Torino, Stamperia Reale. 28 p.
- Bigot, Jacques M. F.  
1857. Dipteros. In Sagra, Ramón de la. Historia física, política y natural de la Isla de Cuba. Paris, Bertrand. v.7:328-349 (1856).
- Blanchard, Emile  
1852. Orden IX. Dipteros. In Gay, C. Historia física y política de Chile. Zoologia 7:327-468.
- Blanchard, Raphaël  
1905. Les moustiques. Histoire naturelle et médicale. Paris, de Rudeval. 673 p.
- Bonne, Cornelis  
1923. A new Sabethes from Surinam. Insecutor Inscitiae Mens. 11:122-123.
- Bonne, Cornelis and J. Bonne-Wepster  
1925. Mosquitoes of Surinam. Koninkl. Inst. Trop., Mededeel. 21. 558 p.
- Bonne-Wepster, Jean and C. Bonne  
1919. Four new South American mosquitoes (Diptera, Culicidae). Insecutor Inscitiae Mens. 7:105-113.  
1920. Diagnoses of new mosquitoes from Surinam, with a note on synonymy. Insecutor Inscitiae Mens. 7:165-180.  
1921. Notes on South American mosquitoes in the British Museum. Insecutor Inscitiae Mens. 9:1-26.  
1923. A new Megarhinus from Surinam. Insecutor Inscitiae Mens. 11:7-9.
- Bourroul, Celestino  
1904. Mosquitos do Brasil. Bahia, Fac. Med. Bahia. [Consisting of Prefacio, p. i-vii; Novas especies, p. 1-6, 30-32; Quadro das especies encontradas na Bahia, p. 1-4; and Proposições, p. 1-18 by Bourroul, remainder and bulk of work by Adolpho Lutz (1904a-g)].
- Bram, Ralph A.  
1967. Classification of Culex subgenus Culex in the New World. U. S. Nat. Mus., Proc. 120:1-122.
- Bruijning, C. F. A.  
1959. Notes on Wyeomyia mosquitoes of Suriname. Stud. Fauna Suriname Guyanas 8:99-146.
- Christophers, S. Rickard  
1923. An Anopheles of the Myzorhynchus group (Anopheles amazonicus sp. n.) from South America. Ann. Trop. Med. Parasitol. 17:71-76.
- Coquillett, Daniel W.  
1896. New Culicidae from North America. Can. Entomol. 28:43-44.

1906. A classification of the mosquitoes of North and Middle America. U. S. Bur. Entomol., Tech. Ser. 11. 31 p.
- Dyar, Harrison G.  
 1919. A revision of the American Sabethini of the Sabethes group by the male genitalia. Insecutor Inscitiae Mens. 7:114-142.  
 1923. Mosquitoes described by von Humboldt. Insecutor Inscitiae Mens. 11:121-122.  
 1924. A note on Sabethes Robineau-Desvoidy (Diptera, Culicidae). Insecutor Inscitiae Mens. 12:97-100.  
 1928. The mosquitoes of the Americas. Wash., Carnegie Inst. [Publication 387]. 616 p.
- Dyar, Harrison G. and F. Knab  
 1906. The species of mosquitoes in the genus Megarhinus. Smithsonian Misc. Collect. 3:241-258.  
 1908. Descriptions of some new mosquitoes from tropical America. U. S. Nat. Mus., Proc. 35:53-70.
- Dyar, Harrison G. and R. C. Shannon  
 1924. The subfamilies, tribes and genera of American Culicidae. Wash. Acad. Sci., J. 14:472-486.
- Edwards, Frederick W.  
 1916. Eight new mosquitoes in the British Museum collection. Bull. Entomol. Res. 6:357-364.  
 1922. Mosquito notes. III. A. On a collection of mosquitos from Paraguay. Bull. Entomol. Res. 13:75-82.  
 1928. Mosquito notes. VII. X. Two new Brazilian Sabethes. Bull. Entomol. Res. 18:283-284.  
 1930. Culicidae. In Diptera of Patagonia and South Chile. London, Brit. Mus. (Natur. Hist.) 2(3):99-110.  
 1931a. Notes on exotic Chaoborinae, with descriptions of new species (Diptera, Culicidae). Ann. Mag. Natur. Hist. (10)6:528-540 (1930).  
 1931b. New Neotropical nematocerous Diptera. Ann. Mag. Natur. Hist. (10)7:255-261.  
 1939. A new species of Orthopodomyia (Diptera Culicidae). Roy. Entomol. Soc. London, Proc. (B) 8:121-123.
- Evans, Alwen M.  
 1922. Notes on Culicidae in Venezuela, with descriptions of new species. Part II. Ann. Trop. Med. Parasitol. 16:213-222.  
 1923a. Notes on Culicidae in Venezuela, with descriptions of new species. Part III. Ann. Trop. Med. Parasitol. 17:101-111.  
 1923b. Note on Aedinus amazonensis. Ann. Trop. Med. Parasitol. 17:377-380.  
 1924. Descriptions of new mosquitos from South America. Ann. Trop. Med. Parasitol. 18:363-375.
- Fabricius, Johann C.  
 1794. Entomologia systematica emendata et ancta. v. 4. Hafniae. 472 p.  
 1805. Systema antliatorum secundum ordines, genera, species. Brunsvigae. 373 - 30 p.
- Fauran, Pierre  
 1961. Notes sur les moustiques de la Guyane. Inst. Pasteur Guyane Franç. Inini, Arch. Publication 464. 15 p.
- Floch, Hervé and E. Abonnenc  
 1945a. Les moustiques de la Guadeloupe (11). Les genres Megarhinus,

- Aedes, Culex, Deinocerites, Mansonia et Wyeomyia. Inst. Pasteur Guyane Ter. Inini, Publication 110. 48 p.
- 1945b. Description de Culex nouveaux de la Guyane française. Inst. Pasteur Guyane Ter. Inini, Publication 112. 6 p.
- 1945c. Description de Culex nouveaux de la Guyane Française (II). Inst. Pasteur Guyane Ter. Inini, Publication 114. 5 p.
- 1945d. Description d'une nouvelle espèce d'anophèle. Inst. Pasteur Guyane Ter. Inini, Publication 116. 3 p.
- Giles, George M.
1900. A handbook of the gnats or mosquitoes. London, Bale, Sons & Danielsson. 374 p.
1902. A handbook of the gnats or mosquitoes. ed. 2. London, Bale, Sons and Danielsson. 530 p.
1904. Notes on some collections of mosquitoes received from abroad. J. Trop. Med. 7:381-384.
- Goeldi, Emileo A.
1905. Os mosquitos no Pará. Mus. Goeldi Hist. Natur. Ethnogr., Pará, Mem. 4, 154 p.
- Gordon, Rupert M. and A. M. Evans
1922. Mosquitoes collected in the Manáos region of the Amazon. Ann. Trop. Med. Parasitol. 16:315-338.
- Herrick, Glenn W.
1905. Notes on some Mississippi mosquitoes. Entomol. News 16:281-283.
- Horn, Walther and I. Kahle
- 1935-1937. Uber entomologische sammlungen. Entomol. Beih. Berlin-Dahlem 2-4, 536 p.
- Howard, Leland O., H. G. Dyar and F. Knab
1913. The mosquitoes of North and Central America and the West Indies. v.2. Plates. Wash., Carnegie Inst. Wash. [Publication 159 (1912)]. 150 plates.
1915. The mosquitoes of North and Central America and the West Indies. v.3 and 4. Systematic description (in two parts). Part I and Part II. Wash., Carnegie Inst. Wash. [Publication 159]. 1064 p.
- Humboldt, F. H. Alexandre de
1819. Voyage aux régions équinoxiales du Nouveau Continent... Pt.1. Relation historique. v.2. Paris, Maze. 722 p.
- Knab, Frederick
1909. The identification of Culex cyaneus Fabricius. Entomol. Soc. Wash., Proc. 11:154-156.
- Kollar, Vincenz
1832. In Pohl, Johann B. E. and V. Kollar. Brasiliens vorzüglich lästigen Insecten. 20 p. Extract from Pohl, Johann B. E. Reise im Innern von Brasilien. Vienna.
- Komp, William H. W. and L. E. Rozeboom
1951. Descriptions of eight new species of Culex subgenus Melanoconion (Diptera, Culicidae). Entomol. Soc. Wash., Proc. 53:121-137.
- Lane, John
1942. Dixinae e Chaoborinae. Revisão das espécies neotrópicas (Diptera, Culicidae). Rev. Entomol. 13:81-149.
1943. Sobre o genero Uranotaenia (Diptera, Culicidae, Culicini). Rev. Entomol. 14:137-161.
1951. Synonymy of Neotropical Culicidae. Entomol. Soc. Wash., Proc. 53:333-336.

1953. Neotropical Culicidae. São Paulo, Univ. São Paulo. 2 v. 1112 p.  
Lane, John and N. L. Cerqueira
1942. Os sabetíneos da América. Arq. Zool. Estad. São Paulo 3:473-849.  
Lane, John and L. Whitman
1943. Novas espécies de Culex do Brasil (Diptera, Culicidae). Rev. Entomol. 14:389-408.
- Laveran, (Charles-Louis) Alphonse
1902. (Simondella curvirostris) In Simmond, [?]. Description d'un moustique dont le male possède une trompe en faucille. Soc. Biol., Paris, Compt. Rend. 54:1159-1160.
- Lutz, Adolpho
- 1904a. Novas especies. In Bourroul, Celestino. Mosquitos do Brasil. p. 6-30 [pagination the same in Stone, Knight and Starcke (1959)].
- 1904b. Catalogo dos culicideos Brasileiros e Sul-Americanos. In Bourroul, Celestino. Mosquitos do Brasil. Bahia. 16 p. [pages 35-50 in Stone, Knight and Starcke (1959) pagination].
- 1904c. Euculicidae. Chave para a determinação dos generos encontrados no Brasil. In Bourroul, Celestino. Mosquitos do Brasil. Bahia. 7 p. [pages 51-57 in Stone, Knight and Starcke (1959) pagination].
- 1904d. Chave para a determinação dos generos da sub-familia "Culicinae" observados no Brasil. In Bourroul, Celestino. Mosquitos do Brasil. Bahia. 3 p. [pages 59-61 in Stone, Knight and Starcke (1959) pagination].
- 1904e. Chave para a determinação das especies de Euculicidae encontradas no Brasil. In Bourroul, Celestino. Mosquitos do Brasil. Bahia. 6 p. [pages 63-68 in Stone, Knight and Starcke (1959) pagination].
- 1904f. Chave para a determinação das especies de subfamilia Culicinae. In Bourroul, Celestino. Mosquitos do Brasil. Bahia. 5 p. [pages 69-73 in Stone, Knight and Starcke (1959) pagination].
- 1904g. Quadro dos 'Generos da familia Culicidae.' Organizado pelo Dr. Adolpho Lutz. In Bourroul, Celestino. Mosquitos do Brasil. Bahia. 1 folding table. [page 34 in Stone, Knight and Starcke (1959) pagination].
1905. Novas especies de mosquitos do Brasil. Imprensa Medica 13:(2)26-29 (25 Jan); (3)48-52 (10 Feb); (4)65-70 (25 Feb); (5)81-84 (10 Mar); (6)101-104 (25 Mar); (7)125-128 (10 Apr); (8)169-172 (10 May); (11) 212-214 (10 June); (14)269-271 (25 Jul); (15)287-290 (10 Aug); 16(311-314 (25 Aug); (18)347-350 (25 Sept).
- Macquart, P. Justin M.
1834. Histoire naturelle des insectes. Diptères. v.1. Paris, Roret. 578 p.
1838. Diptères exotiques nouveaux ou peu connus. v.1, pt.1. Paris, Roret. 221 p.
1850. Diptères exotiques nouveaux ou peu connus. 4<sup>e</sup> supplément. Paris, Roret. p. 5-161.
- Martini, Eric
1914. Some new American mosquitoes. Insecutor Inscitiae Mens. 2:65-76.
- 1931a. Die ausbeute der deutschen Chaco-Expedition 1925/26. Diptera. XXV. Culicidae. Konowia 10:116-120.
- 1931b. Ueber einige südamerikanische Culiciden. Rev. Entomol. 1:199-219.
1932. Dos nuevos mosquitos Anopheles, procedentes del Estado de Chiapas, Mexico. Rev. Mex. Biol. 12:99-102.
1935. Los mosquitos de Mexico. Mexico, Dep. Salubr. Publica, Bol. Tec. (A) 1. 65 p.

Mattingly, Peter F.

1955. Mosquitoes (Diptera:Culicidae) from the Tropical Institute at Hamburg. Roy. Entomol. Soc. London, Proc. (B) 24:27-33.

1958. Lectotypes of mosquitoes (Diptera:Culicidae) in the British Museum. Part III. Genera Sabethes, Udaya and Aedes (subgenera Paraedes, Cancraedes and Skusea). Roy. Entomol. Soc. London, Proc. (B) 27: 105-108.

Neiva, Arthur

1908. Das Anophelinas Brazileiras. Rev. Med. S. Paulo 11:455-459.

Neveu-Lemaire, Maurice

1902. Description de quelques moustiques de la Guyane. Arch. Parasitol. 6:5-25.

Newstead, Robert and H. W. Thomas

1910. The mosquitoes of the Amazon region. Ann. Trop. Med. Parasitol. 4:141-150.

Peryassú, Antonio G.

1908. Os culicideos do Brazil. Rio de Janeiro, Inst. Manguinhos. 407 p.

Peters, T. Michael and E. F. Cook

1966. The Nearctic Dixidae (Diptera). Entomol. Soc. Amer., Misc. Publications 5(5):231-278.

Reid, John A.

1947. Type specimens of Culicidae described by Laveran (Diptera:Culicidae). Roy. Entomol. Soc. London, Proc. (B) 16:86-91.

Robineau-Desvoidy, (André) Jean-Baptiste

1827. Essai sur la tribu des Culicides. Soc. Hist. Natur. Paris, Mem. 3: 390-413.

von Röder, Victor

1885. Dipteren von der Insel Portorico. Stettiner Entomol. Zeitung 46:337-349.

Rozeboom, Lloyd E. and W. H. W. Komp

1950. A review of the species of Culex of the subgenus Melanoconion (Diptera, Culicidae). Entomol. Soc. Amer., Ann. 43:75-114.

Senevet, Georges

1936. Les moustiques de la Martinique. Inst. Pasteur Algérie, Arch. 14: 123-134.

1937. Les moustiques de la Guyane Française (Mission 1934). Inst. Pasteur Algérie, Arch. 15:352-382.

1938. Les moustiques de la Guadeloupe (Mission 1936). Inst. Pasteur Algérie, Arch. 16:176-190.

Senevet, Georges and E. Abonnenc

1938. Quelques anophélinés de la Guyane Française. Inst. Pasteur Algérie, Arch. 16:486-512.

1939a. Les moustiques de la Guyane Française. II. Le genre Culex. Inst. Pasteur Algérie, Arch. 17:62-134.

1939b. Les moustiques de la Guyane Française. III. Les Sabéthiniés. Inst. Pasteur Algérie, Arch. 17:247-281.

1939c. Les moustiques de la Guyane. IV. Le genre Aedes. Inst. Pasteur Algérie, Arch. 17:467-480.

1941. Les moustiques de la Guyane Française. Le genre Culex. 2. Nouvelle espèce du sous-genre Melanoconion. Inst. Pasteur Algérie, Arch. 19: 41-44.

1946. Les moustiques de la Guyane Française. X. Le genre Culex (3).



- Nouvelle espèce du sous-genre Culex. Inst. Pasteur Algérie, Arch. 24:135-140.
- Senevet, Georges, R. Chabelard and E. Abonnenc  
1942. Les moustiques de la Guyane. III. Les Sabéthiniés (2). Inst. Pasteur Algérie, Arch. 20:336-348.
- Senevet, Georges and L. Quiévreux  
1941. Les moustiques de la Martinique. (2<sup>e</sup> mémoire). Inst. Pasteur Algérie, Arch. 19:248-264.
- Stone, Alan  
1957a. Corrections in the taxonomy and nomenclature of mosquitoes (Diptera, Culicidae). Entomol. Soc. Wash., Proc. 58(1956):333-344.  
1957b. Notes on types of mosquitoes in the Hungarian National Museum (Diptera, Culicidae). Entomol. Soc. Amer., Ann. 50:171-174.  
1958. The identity of Culex aestuans Wiedemann (Diptera, Culicidae). Entomol. Soc. Wash., Proc. 60:186.  
1961. A synoptic catalog of the mosquitoes of the world, supplement I (Diptera:Culicidae). Entomol. Soc. Wash., Proc. 63:29-52.  
1963. A synoptic catalog of the mosquitoes of the world, supplement II (Diptera:Culicidae). Entomol. Soc. Wash., Proc. 65:117-140.  
1967. A synoptic catalog of the mosquitoes of the world, supplement III (Diptera:Culicidae). Entomol. Soc. Wash., Proc. 69:197-224.
- Stone, Alan and K. L. Knight  
1957. Type specimens of mosquitoes in the United States National Museum: IV, The genus Culex (Diptera, Culicidae). Wash. Acad. Sci., J. 47: 42-59.
- Stone, Alan, K. L. Knight and H. Starcke  
1959. A synoptic catalog of the mosquitoes of the world (Diptera, Culicidae). Wash., Entomol. Soc. Amer. (Thomas Say Foundation Publication v. 6). 358 p.
- Strickland, E. H.  
1911. A new mosquito from Paraguay. Entomologist 44:268-269.
- Surcouf, Jacques M. R. and R. Gonzalez-Rincones  
1911. Essai sur les Diptères vulnérants du Venezuela. Première Partie. Diptères Nématocères vulnérants. Paris, Maloine. 320 p.  
1912. Diptères piqueurs et suceurs de sang actuellement connus, de la République de Venezuela. Arch. Parasitol. Paris 15:248-314.
- Theobald, Frederick V.  
1901a. A monograph of the Culicidae or mosquitoes. v. 1. London, Brit. Mus. Natur. Hist. 424 p.  
1901b. A monograph of the Culicidae or mosquitoes. v. 2. London, Brit. Mus. Natur. Hist. 391 p.  
1902. The classification of the Anophelina. J. Trop. Med. 5:181-183.  
1903a. Description of a new North American Culex. Can. Entomol. 35:211-213.  
1903b. Notes on the Culicidae and their larvae from Pecos, New Mexico, and a description of a new Grabhamia. Can. Entomol. 35:311-316.  
1903c. Two new Jamaican Culicidae. Entomologist 36:281-283.  
1903d. A monograph of the Culicidae or mosquitoes. v. 3. London, Brit. Mus. Natur. Hist. 359 p.  
1905a. New Culicidae from India, Africa, British Guiana and Australia. J. Econ. Biol. 1:17-36.  
1905b. A catalogue of the Culicidae in the Hungarian National Museum. Magyar Nemzeti Mus. Budapest, Ann. Hist.-Natur. 3:61-124.

- 1905c. The mosquitoes or Culicidae of Jamaica. Kingston, Inst. Jamaica. 40 p.
- 1905d. (*Culex microsquamosus*, n. sp.) in Grabham, M. Notes on some Jamaican Culicidae. Can. Entomol. 1905:407-410.
1906. A new Megarhinus. Entomologist 39:241.
1907. A monograph of the Culicidae or mosquitoes. v. 4. London, Brit. Mus. Natur. Hist. 639 p.
1910. A monograph of the Culicidae or mosquitoes. v. 5. London, Brit. Mus. Natur. Hist. 646 p.
1912. (*Pseudotaeniorhynchus venezuelensis* Theobald) In Surcouf, J. M. R. Note sur les culicides. Mus. Nat. d'Hist. Natur. Paris, Bull. 18:61.
- Walker, Francis
1848. List of the specimens of dipterous insects in the collection of the British Museum. Part I. London, British Museum. 229 p.
1856. Insecta Saundersiana. Vol. 1. Diptera. London, Van Voorst. p. 415-474.
- Wiedemann, Christian R. W.
1820. Diptera exotica. pt. 1. Kiel. 42 p.
1821. Diptera exotica. II. Kiel. p. 43-50.
1828. Aussereuropäische zweiflügelige insekten. v. 1. Hamm. 608 p.
- Williston, Samuel W.
1893. List of Diptera of the Death Valley Expedition. North American Fauna 7:253-259.
1896. On the Diptera of St. Vincent (West Indies). Roy Entomol. Soc. London, Trans. 44:253-446.
1900. Supplement. In Biologia Centrali-Americana. Diptera. v. 1, p. 217-332.
- van der Wulp, Frederik M.
1867. Eenige Noord-Americaansche Diptera. Tijdschr. voor Entomol. 10: 125-130.
- Zavortink, Thomas J.
1968. Mosquito Studies (Diptera, Culicidae). VIII. A prodrome of the genus *Orthopodomyia*. Amer. Entomol. Inst., Contrib. 3(2), 221 p.
- Zimsen, Ella
1954. The insect types of C. R. W. Wiedemann in the Zoological Museum in Copenhagen. Copenhagen Univ. Zool. Mus. Skr. 14, 43 p.
1964. The type material of I. C. Fabricius. Copenhagen, Munksgaard. 656 p.

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