

The Mosquitoes of Pakistan

II. Mosquitoes Originally Described from Pakistan^{1/}

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In an effort to collect information about the "Mosquitoes of Pakistan" a checklist has been prepared which revealed the presence of 134 species within the boundaries of Pakistan (Aslamkhan, 1971). The present paper has been prepared to collect information about all the nominal species of mosquitoes originally described from the localities now in Pakistan. The necessity to prepare such a list arose because most of the type localities were either poorly documented originally or their political names have been changed since then.

The present list of species consists of all the nominal species which are valid or currently considered as synonyms. They are arranged in the sequence used in Stone, Knight and Starcke (1959) and Stone (1961, 1963, 1967, 1970). The names of species or senior synonyms have been given in brackets for sub-species and junior synonyms.

Under TYPE the data from the original description has been given, including the number of individuals examined by the original author, the name of collector, the date of collection and the locality. The corrected type locality has been placed within parenthesis. In a few cases the type locality has been restricted to a comparatively limited area. Type material has not been seen. However, the name of the depository where the type specimens are supposed to be, has been placed within parenthesis.

The present list records 31 nominal taxa which have been described since 1902 from Pakistan (24 from the West and 7 from the East). Of this number, 16 are valid species and sub-species (14 from the West and 2 from the East) and 15 are synonyms (10 from the West and 5 from the East).

NOMINAL TAXA

Genus ANOPHELES Meigen

Subgenus ANOPHELES Meigen

1. *Anopheles barianesis* James, 1911, in James and Liston, *Anopheline Mosquitoes of India*, ed. 2, p. 76. TYPE: 2 adults (female), coll. Assistant Surgeon J. L. Wredde, 14 X. 1910, from Barian (7,000') in the Murree Hills, Western Himalayas, (Rawalpindi district, Punjab, Pakistan), (British Museum).

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2. *Patagiamyia simlensis* James, 1911, [=A. (A.) *gigas* var. *simlensis* (James, 1911)], in James and Liston, Anopheline Mosquitoes of India, ed. 2, p. 66. TYPE: Adults (female), coll. A. D. Imms from Mahasu (8,000') near Simla, Kalighat (6,000'), Garhwal district, U. P., India, (in the Malaria Survey of India collection) and Major F. Smith from Murree (7,500') (Rawalpindi district, Punjab, Pakistan), (British Museum).
3. *Anopheles habibi* Mulligan and Puri, 1936, Rec. Malar. Surv. India, 6, p. 68. TYPE: Female from Hudda village on banks of Habib Nullah, Quetta (5,505') Baluchistan, (Pakistan), (British Museum).
4. *Myzorrhynchus minutus* Theobald, 1903 [=A. (A.) *nigerrimus* Giles, 1900], Mon. Cul., 3, p. 91 TYPE: 1 female from Lahore, Punjab, (Pakistan), (British Museum).

Subgenus CELLIA Theobald

5. *Myzomyia leptomerus* Theobald, 1903, [=A. (C.) *fluviatilis* James, 1902], Mon. Cul., 3, p. 38. TYPE: 1 female from Lahore, (Punjab, Pakistan), (British Museum).
6. *Christophersia halli* James, 1910, [= A. (C.) *kochi* Dönitz, 1901], Paludism, no. 1, p. 33. TYPE: Female and male from Sylhet, Southern Assam, (Pakistan), (female, Indian Museum).
7. *Nyssorrhynchus willmori* James, 1903, [= A. (C.) *maculatus* var. *willmori* James, 1903], in Theobald, Mon. Cul., 3, p. 100. TYPE: Female, from Kashmir, (Pakistan), (British Museum).
8. *Anopheles jeyporiensis* var. *moghulensis* Christophers, 1924, [= A. (C.) *moghulensis* Christophers, 1924], Indian J. Med. Res., 12, p. 296. TYPE: Adults from Quetta (5,505'), (Baluchistan, Pakistan), Kasauli (Punjab Hill States), Bombay and Satpura Hills, India, (British Museum).
9. *Pyretophorus nigrifasciatus* Theobald, 1907, [= A. (C.) *multicolor* Cambouliu, 1902], Mon. Cul., 4, p. 65. TYPE: Female from Peshin (5,300'), (Baluchistan, Pakistan), (British Museum).
10. *Anopheles pulcherrimus* Theobald, 1902, Proc. Roy. Soc. 69, p. 369. TYPE: 3 females from Lahore, (Punjab, Pakistan), (British Museum).
11. *Anopheles pulcherrimus* James, 1902, [=A. (C.) *pulcherrimus* Theobald, 1902], Sci. Mem., No. 2, p. 48. TYPE: Adult from Lahore, (Punjab, Pakistan).
12. *Anopheles metaboles* Theobald, 1902, [=A. (C.) *stephensi* Liston, 1901], Proc. Roy. Soc., 69, p. 374. TYPE: 5 females, from Lahore, (Punjab, Pakistan), (British Museum).
13. *Pyretophorus nursei* Theobald, 1907, [=A. (C.) *superpictus* Grassi, 1899], Mon. Cul., 4, p. 66. TYPE: 1 female from Quetta (5,505'), (Baluchistan, Pakistan), (British Museum).

Genus FICALBIA Theobald

Subgenus FICALBIA Theobald

14. *Mimomyia minuta* Theobald, 1908, [=F. (F.) *minima* Theobald, 1901], Rec. Indian Mus., 2, p. 301. TYPE: 1 male, coll. Hall, XI. 1904, from Sylhet, Southern Assam, (Pakistan), (Indian Museum).

Genus COQUILLETIDIA Dyar

Subgenus COQUILLETIDIA Dyar

15. *Chrysoconops pygmaeus* Theobald, 1908, [=C. (C.) *crassipes* (van der Wulp, 1881)], Rec. Indian Mus., 2, p. 300. TYPE: 1 female, coll. Hall, from Sylhet, Southern Assam, (Pakistan), (Indian Museum).

Genus AEADES Meigen

Subgenus OCHLEROTATUS Lynch Arribálzaga

16. *Finlaya versicolor* Barraud, 1924, [=A. (O) *pulchritarsis* var. *versicolor* (Barraud, 1924)], Indian J. Med. Res., 12, p. 73. TYPE: 1 female, coll. T. B. Fletcher, VIII. 1923, from Yusimarg (7,500'), Kashmir (Pakistan), (British Museum).

17. *Aedes (Ochlerotatus) pulchritarsis asiaticus* Edwards, 1926, Riv. Malar., 5, p. 430. TYPE: Female, coll. W. O. Walker, X. 1915, from Drosch (4,212'), Chitral, (N.-W. Frontier Province, Pakistan), (British Museum).

Subgenus FINLAYA Theobald

18. *Stegomyia assamensis* Theobald, 1908, [=A. (F.) *assamensis*, (Theobald, 1908)], Rec. Indian Mus., 2, p. 290. TYPE: Female, coll. Hall, IV. 1905, from Sylhet, Southern Assam, (Pakistan), (Indian Museum).
19. *Ochlerotatus oreophilus* Edwards, 1916, [=A. (F.) *oreophilus* (Edwards, 1916)], Bull. Ent. Res., 6, p. 357. TYPE: Female, coll. Agric. Res. Inst. Pusa, India, from Gharia (7,000'), Murree Hills, (Rawalpindi district, Punjab, Pakistan), (British Museum).
20. *Finlaya sintoni* Barraud, 1924, [=A. (F.) *sintoni* (Barraud, 1924)], Indian J. Med. Res., 2, p. 967. TYPE: Male and female, coll. Sinton, IX. 1923 from Ferozepur Nullah near Tangmarg (over 7,000'), Kashmir, (Pakistan), (British Museum).

Subgenus CHRISTOPHERSIOMYIA Barraud

21. *Stegomyia thomsoni* Theobald, 1905, [=A. (C.) *thomsoni*, (Theobald, 1905)], Gen. Ins. Fam. Culicidae, p. 19. TYPE: Female, coll. Wyville-Thomson, from North West Provinces (=North-West Frontier Province and Punjab, Pakistan), (British Museum).

Subgenus INDUSIUS Edwards

22. *Aedes pulverulentus* Edwards, 1922, Indian J. Med. Res., 10, p. 273.
TYPE: Female, coll. Smith, VI. 1911, from Nowshera district, North-West Frontier Province, (Pakistan), (British Museum).

Subgenus AEDES Meigen

23. *Neomacleaya indica* var *simplex* Theobald, 1908, [= *A. (A.) andamanesis* (Edwards, 1922)], Rec. Indian Mus., 2, p. 291. TYPE: Female, coll. Hall, VI. 1905, from Sylhet, Southern Assam, (Pakistan), (British Museum).
24. *Neomacleaya indicus* Theobald, 1907, [= *A. (A.) indicus* (Theobald, 1907)], Mon. Cul., 4, p. 238. TYPE: coll. Christophers, probably from Lahore, (Punjab, Pakistan), (British Museum).
25. *Skusea mediofasciata* Theobald, 1907, [= *A. (A.) indicus* (Theobald, 1907)], Mon. Cul., 4, p. 238. TYPE: Male and female, coll. Christophers probably from Lahore, (Punjab, Pakistan), (British Museum).

Genus ARMIGERES Theobald

Subgenus LEICESTERIA Theobald

26. *Brevirhynchus apicalis* Theobald, 1910, [= *A. (L.) flavus* (Leicester, 1908)], Rec. Indian Mus., 4, p. 7. TYPE: Female, coll. Major Hall from Sylhet, Southern Assam, (Pakistan), (Indian Museum).
27. *Brevirhynchus magnus* Theobald, 1908, [= *A. (L.) magnus* (Theobald, 1908)], Rec. Indian Mus., 2, p. 293. TYPE: Male and female, coll. Hall, V. 1905, from Sylhet, Southern Assam, (Pakistan), (Indian Museum).

Genus CULEX Linnaeus

Subgenus BARRAUDIUS Edwards

28. *Culex eadithae*, Barraud, 1924, [= *C. (B.) modestus* (Ficalbi, 1890)], Indian J. Med. Res., 11, p. 1004. TYPE: Male, coll. Sinton, X. 1923, from Sopor village (2,200'), Jhelum River, Kashmir, (Pakistan), (British Museum).

Subgenus NEOCULEX Dyar

29. *Culex (Neoculex) quettensis* Mattingly, 1955, Ann. Parasit. Hum. Comp., 30, p. 374. TYPE: Male, female from Quetta (5,505'), Baluchistan, Pakistan, (British Museum).

Subgenus CULEX Linnaeus

30. *Culex (Culex) afridii* Qutubuddin, 1956, Mosquito News, 16, p. 140. TYPE: Male, coll. Qutubuddin, X. 1952, from Dacca (East Bengal), Pakistan (British Museum).

31. *Culex minor* Theobald, 1908, [= *C. (C.) pipiens fatigans* Wiedemann 1828], *Rec. Indian Mus.*, 2, p. 298. TYPE: Male and female coll. MacLeod (male) and Major Hall (female) from Sylhet, Southern Assam (Pakistan), Lungleh, Lushai Hills (Western Assam) and Calcutta (Western Bengal), India, (British Museum).

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