

Table 2
Checklist of the known species of Culicidae found in Thailand.

SUBFAMILY: ANOPHELINAE

***Anopheles* (*Anopheles*)**

1. *aberrans* Harrison and Scanlon, 1975
2. *argyropus* (genetic forms A, B)
3. *asiaticus* Leicester, 1903
4. *baezai* Gater, 1933
5. *baileyi* Edwards, 1929
6. *barbirostris* (genetic forms A, B, C)
7. *barbumbrosus* Strickland and Chowdhury, 1927
8. *bengalensis* Puri, 1930
9. *bulkleyi* Causey, 1937
10. *campestris* Reid, 1962
11. *crawfordi* (genetic forms A, B)
12. *donaldi* Reid, 1962
13. *fragilis* (Theobald, 1903)
14. *gigas sensu lato*^a
15. *hodgkini* Reid, 1962
16. *insulaeflorum* (Swellengrebel and Swellengrebel de Graaf, 1920)
17. *interruptus* Puri, 1929
18. *kyondawensis* Abraham, 1947
19. *letifer* Sandosham, 1944
20. *lindesayi cameronensis* Edwards, 1929
21. *montanus* Stanton and Hacker, 1917
22. *nigerrimus* (genetic form B)
23. *nitidus* Harrison, Scanlon and Reid, 1973
24. *palmatus* (Rodenwaldt, 1926)
25. *paraliae* Sandosham, 1959
26. *peditaeniatus* (Leicester, 1908)
27. *pollicaris* Reid, 1962
28. *pursati* Laveran, 1902
29. *roperi* Reid, 1950
30. *separatus* (Leicester, 1908)

31. *sinensis* (genetic forms A, B)
32. *sintonoides* Ho, 1938
33. *stricklandi* Reid, 1965
34. *tigertti* Scanlon and Peyton, 1967
35. *umbrosus* (Theobald, 1903)
36. *whartoni* Reid, 1963

Anopheles (Cellia)

37. *aconitus* (genetic forms A, B, C)
38. *annularis* Van der Wulp, 1884
39. *culicifacies* (genetic forms A, B)
40. *dirus* Peyton and Harrison, 1979
41. *dirus* B^b
42. *dirus* C^b
43. *dirus* D^b
44. *dravidicus* Christophers, 1924
45. *hackeri* Edwards, 1921
46. *indefinitus* (Ludlow, 1904)
47. *introlatus* Colless, 1957
48. *jamesii* (genetic forms A, B)
49. *jeyporiensis* (genetic forms A, B, C, D)
50. *karwari* (genetic forms A, B, C)
51. *kochi* Doenitz, 1901
52. *leucosphyrus* A^b
53. *macarthuri* Colless, 1956
54. *maculatus* Theobald, 1901 (genetic forms E, K)
55. *minimus* (genetic form A)
56. *minimus* C^b
57. *nemophilous* Peyton and Ramalingam, 1988
58. *nivipes* (genetic forms A, B)
59. *notanandai* Rattanarithikul and Green, 1986
60. *pampanai* Buttiker and Beales, 1959
61. *philippinensis* Ludlow, 1902
62. *pseudojamesi* Strickland and Choudhury, 1927
63. *pseudowillmori* (Theobald, 1910)
64. *pujutensis* Colless, 1948
65. *sawadwongporni* Rattanarithikul and Green, 1986

66. *splendidus* Koidzumi, 1920
67. *stephensi* Liston, 1901
68. *subpictus* (genetic forms B, C, D)
69. *sundaicus* A^b
70. *tessellatus* Theobald, 1901
71. *vagus* (genetic forms A, B)
72. *varuna* Iyengar, 1924
73. *willmori* (James, 1903)

Note: Sallum et al (2005), are describing *dirus* B, C and D, and *Leucosphyrus* A, as new species.

SUBFAMILY: CULICINAE

TRIBE: AEDEOMYIINI

Aedeomyia (*Aedeomyia*)

74. *catasticta* Knab, 1909

TRIBE: AEDINI

Note: Reinert et al (2004), elevated 34 subgenera of *Aedes* and *Ochlerotatus* to generic status. These genera will be covered fully in section VI. Also, Reinert et al (2005, submitted) address the current status of generic and subgeneric names and new country records of aedine species in Thailand, resulting from Reinert et al (2004).

Aedes (*Aedimorphus*)

75. *alboscutellatus* (Theobald, 1905)
76. *caecus* (Theobald, 1901)
77. *culicinus* Edwards, 1922
78. *mediolineatus* (Theobald, 1901)
79. *orbitae* Edwards, 1922
80. *pallidostriatus* (Theobald, 1907)
81. *pampangensis* (Ludlow, 1905)
82. *pipersalatus* (Giles, 1902)
83. *vexans* (Meigen, 1830)

Aedes (*Alanstonea*)

84. *treubi* (De Meijere, 1910)

Aedes (*Bothaella*)

85. *eldridgei* Reinert, 1973
86. *helena* Reinert, 1973

Aedes (*Cancraedes*)

87. *indonesiae* Mattingly, 1958
88. *kohkutensis* Mattingly, 1958

Aedes (*Christophersiomyia*)

89. *annulirostris* (Theobald, 1905)
90. *ibis* Barraud, 1931
91. *thomsoni* (Theobald, 1905)

Aedes (*Diceromyia*)

92. *franciscoi* Mattingly, 1959
93. *iyengari* Edwards, 1923
94. *pseudonummatus* Reinert, 1973
95. *scanloni* Reinert, 1970
96. *whartoni* Mattingly, 1965

Aedes (*Edwardsaedes*)

97. *imprimens* (Walker, 1860)

Aedes (*Fredwardsius*)

98. *vittatus* (Bigot, 1861)

Aedes (*Isoaedes*)

99. *cavaticus* Reinert, 1979

Aedes (*Lorrainea*)

100. *amesii* (Ludlow, 1903)
101. *fumidus* Edwards, 1928

Aedes (*Neomelaniconion*)

102. *lineatopennis* (Ludlow, 1905)

Aedes (*Paraedes*)

103. *ostentatio* (Leicester, 1908)
104. *thailandensis* Reinert, 1981

Aedes (*Scutomyia*)

105. *albolineatus* (Theobald, 1904)

Aedes (*Stegomyia*)

106. *aegypti* (Linnaeus, 1762)
107. *albopictus* (Skuse, 1894)
108. *annandalei* (Theobald, 1910)
109. *craggi* (Barraud, 1923)
110. *desmotes* (Giles, 1904)
111. *gardnerii imitator* (Leicester, 1908)
112. *malayensis* Colless, 1962
113. *malikuli* Huang, 1973
114. *novalbopictus* Barraud, 1931
115. *patriciae* Mattingly, 1954
116. *perplexus* (Leicester, 1908)
117. *pseudalbopictus* (Borel, 1928)
118. *seatoi* Huang, 1969
119. *w-albus* (Theobald, 1905)

Armigeres (*Armigeres*)

120. *aureolineatus* (Leicester, 1908)
121. *bhayungi* Thurman and Thurman, 1958
122. *confusus* Edwards, 1915^c
123. *foliatus* Brug, 1931^c
124. *jugraensis* (Leicester, 1908)
125. *kesseli* Ramalingam, 1987
126. *kuchingensis* Edwards, 1915
127. *malayi* (Theobald, 1901)
128. *maximus* Edwards, 1922
129. *moultoni* Edwards, 1914
130. *subalbatus* (Coquillett, 1898)
131. *theobaldi* (Barraud, 1934)
132. sp^c

Armigeres (Leicesteria)

133. *annulipalpis* (Theobald, 1910)
134. *annulitarsis* (Leicester, 1908)
135. *balteatus* Macdonald, 1960
136. *cingulatus* (Leicester, 1908)
137. *dentatus* Barraud, 1927
138. *digitatus* (Edwards, 1914)
139. *dolichocephalus* (Leicester, 1908)
140. *flavus* (Leicester, 1908)
141. *inchoatus* Barraud, 1927
142. *longipalpis* (Leicester, 1904)
143. *magnus* (Theobald, 1908)
144. *omissus* (Edwards, 1914)
145. *pectinatus* (Edwards, 1914)
146. *pendulus* (Edwards, 1914)^c
147. *traubi* Macdonald, 1960^c
148. *vimoli* Thurman and Thurman, 1958

Ayurakitia

149. *griffithi* Thurman, 1954
150. *peytoni* Reinert, 1972

Heizmannia (Heizmannia)

151. *aureochaeta* (Leicester, 1908)
152. *chengi* Lien, 1968
153. *communis* (Leicester, 1908)
154. *complex* (Theobald, 1910)
155. *covelli* Barraud, 1929
156. *demeilloni* Mattingly, 1970
157. *macdonaldi* Mattingly, 1957
158. *mattinglyi* Thurman, 1959
159. *persimilis* Mattingly, 1970
160. *propinqua* Mattingly, 1970
161. *proxima* Mattingly, 1970
162. *reidi* Mattingly, 1957
163. *scanloni* Mattingly, 1970
164. *scintillans* Ludlow, 1905

165. *taiwanensis* Lien, 1968
166. *thelmae* Mattingly, 1970

Heizmannia (Mattinglyia)

167. *achaetae* (Leicester, 1908)
168. *catesi* Lien, 1968

Ochlerotatus (Bruceharrisonius)

169. *christophersi* (Edwards, 1922)
170. *greenii* (Theobald, 1903)

Ochlerotatus (Finlaya)

171. *albolateralis* (Theobald, 1908)
172. *alboniveus* (Barraud, 1934)
173. *albotaeniatus* (Leicester, 1904)
174. *assamensis* (Theobald, 1908)
175. *chrysolineatus* (Theobald, 1907)
176. *elsiae* (Barraud, 1923)
177. *feegradei* (Barraud, 1934)
178. *flavipennis* (Giles, 1904)
179. *formosensis* (Yamada, 1921)
180. *ganapathi* (Colless, 1958)
181. *harinasutai* (Knight, 1978)
182. *harveyi* (Barraud, 1923)
183. *inermis* (Colless, 1958)
184. *jugraensis* (Leicester, 1908)
185. *khazani* (Edwards, 1922)
186. *leonis* (Colless, 1958)
187. *litoreus* (Colless, 1958)
188. *lophoventralis* (Theobald, 1910)
189. *macfarlanei* Edwards, 1914
190. *mikrokopion* (Knight and Harrison, 1987)
191. *niveoides* (Barraud, 1934)
192. *novoniveus* (Barraud, 1934)
193. *pexus* (Colless, 1958)
194. *poicilius* (Theobald, 1903)
195. *prominens* (Barraud, 1923)

196. *pseudoniveus* (Theobald, 1905)
197. *pseudotaeniatus* (Giles, 1901)
198. *pulchriventer* (Giles, 1901)
199. *reinerti* (Rattanarithikul and Harrison, 1988)
200. *saxicola* (Edwards, 1922)
201. *shortti* (Barraud, 1923)
202. *simlensis* (Edwards, 1922)
203. *subniveus* (Edwards, 1922)
204. *togoi* (Theobald, 1907)
205. *unicinctus* (Edwards, 1922)
206. *vanus* (Colless, 1958)

Ochlerotatus (Kenknightia)

207. *dissimilis* (Leicester, 1908)
208. *harbachi* (Reinert, 1990)

Ochlerotatus (Mucidus)

209. *laniger* (Wiedemann, 1820)
210. *quasiferinus* (Mattingly, 1961)

Ochlerotatus (Ochlerotatus)

211. *vigilax* (Skuse, 1889)

Ochlerotatus (Rhinoskusea)

212. *longirostris* (Leicester, 1908)

Udaya

213. *argyrurus* (Edwards, 1934)

Verrallina (Harbachius)

214. *indecorabilis* Leicester, 1908
215. *yusafi* (Barraud, 1931)

Verrallina (Neomacleaya)

216. *adusta* (Laffoon, 1946)
217. *andamanensis* (Edwards, 1922)
218. *atria* (Barraud, 1928)

219. *clavata* (Barraud, 1931)
220. *cretata* (Delfinado, 1967)
221. *crytolabis* (Edwards, 1928)
222. *gibbosa* (Delfinado, 1967)
223. *hispida* (Delfinado, 1967)
224. *incerta* (Edwards, 1922)
225. *latipennis* (Delfinado, 1967)
226. *notabilis* (Delfinado, 1967)
227. *phnoma* (Klein, 1973)
228. *protuberans* (Delfinado, 1967)
229. *pseudodiurna* (Theobald, 1910)
230. *sohni* (Reinert, 1974)
231. *torosa* (Delfinado, 1967)
232. *unca* (Theobald, 1901)
233. *vallistris* (Barraud, 1928)

***Verrallina* (*Verrallina*)**

234. *butleri* (Theobald, 1901)
235. *dux* (Dyar and Shannon, 1925)
236. *lugubris* (Barraud, 1928)

Zeugnomyia

237. *gracilis* Leicester, 1908

TRIBE: CULICINI

***Culex* (*Culex*)**

238. *alienus* Colless, 1957
239. *alis* Theobald, 1903
240. *barraudi* Edwards, 1922
241. *edwardsi* Barraud, 1923
242. *fuscocephala* Theobald, 1907
243. *gelidus* Theobald, 1901
244. *hutchinsoni* Barraud, 1924
245. *jacksoni* Edwards, 1934
246. *longicornis* Sirivanakarn, 1976
247. *mimeticus* Noe, 1899
248. *mimulus* Edwards, 1915
249. *murrelli* Lien, 1968

- 250. *perplexus* Leicester, 1908
- 251. *pseudovishnui* Colless, 1957
- 252. *quinquefasciatus* Say, 1823
- 253. *sitiens* Wiedemann, 1828
- 254. *tritaeniorhynchus* Giles, 1901
- 255. *vishnui* Theobald, 1901
- 256. *whitei* Barraud, 1923
- 256. *whitmorei* (Giles, 1904)

Culex (Culiciomyia)

- 258. *bailyi* Barraud, 1934
- 259. *barrinus* Bram, 1967
- 260. *dispectus* Bram, 1966
- 261. *fragilis* Ludlow, 1903
- 262. *harrisoni* Sirivanakarn, 1977
- 263. *lampangensis* Sirivanakarn, 1973
- 264. *nigropunctatus* Edwards, 1926
- 265. *pallidothorax* Theobald, 1905
- 266. *papuensis* (Taylor, 1914)
- 267. *sasai* Kano, Nitahara and Awaya, 1954
- 268. *scanloni* Bram, 1967
- 269. *spathifurca* (Edwards, 1915)
- 270. *spiculothorax* Bram, 1967
- 271. *termi* Thurman, 1955
- 272. *thurmanorum* Bram, 1967
- 273. *viridiventer* Giles, 1901

Culex (Eumelanomyia)

- 274. *brevipalpis* (Giles, 1902)
- 275. *foliatus* Brug, 1932
- 276. *hinglungensis* Chu, 1957
- 277. *kiriensis* Klein and Sirivanakarn, 1969
- 278. *malayi* (Leicester, 1908)
- 279. *oresbius* Harbach and Rattanarithikul, 1988
- 280. *otachati* Klein and Sirivanakarn, 1969
- 281. *phangngae* Sirivanakarn, 1972
- 282. *richei* Klein, 1970
- 283. *tenuipalpis* Barraud, 1924

Culex (Lophoceraomyia)

284. *aculeatus* Colless, 1965
285. *alphus* Colless, 1965
286. *bengalensis* Barraud, 1934
287. *bicornutus* Theobald, 1910
288. *cinctellus* Edwards, 1922
289. *curtipalpis* (Edwards, 1914)
290. *demissus* Colless, 1965
291. *eukrines* Bram and Rattanarithikul, 1967
292. *ganapathi* Colless, 1965
293. *gracicornis* Sirivanakarn, 1977
294. *hirtipalpis* Sirivanakarn, 1977
295. *incomptus* Bram and Rattanarithikul, 1967
296. *infantulus* Edwards, 1922
297. *lucaris* Colless, 1965
298. *macdonaldi* Colless, 1965
299. *mammilifer* (Leicester, 1908)
300. *minor* (Leicester, 1908)
301. *minutissimus* (Theobald, 1907)
302. *pairoji* Sirivanakarn, 1977
303. *peytoni* Bram and Rattanarithikul, 1967
304. *pholeteer* Bram and Rattanarithikul, 1967
305. *pilifemoralis* Wang and Feng, 1964
306. *quadripalpis* (Edwards, 1914)
307. *reidi* Colless, 1965
308. *rubithoracis* (Leicester, 1908)
309. *spiculosus* Bram and Rattanarithikul, 1967
310. *traubi* Colless, 1965
311. *tuberis* Bohart, 1946
312. *variatus* (Leicester, 1908)
313. *whartoni* Colless, 1965
314. *wilfredi* Colless, 1965

Culex (Oculeomyia)

315. *bitaeniorhynchus* Giles, 1901
316. *infula* Theobald, 1901
317. sp near *infula*^c

318. *pseudosinensis* Colless, 1955
319. *sinensis* Theobald, 1903

Lutzia (Metalutzia)

320. *fuscanata* (Wiedemann, 1820)
321. *halifaxii* (Theobald, 1903)
322. *vorax* Edwards, 1921

TRIBE: FICALBIINI

Ficalbia

323. *minima* (Theobald, 1901)

Mimomyia (Etorleptomyia)

324. *elegans* (Taylor, 1914)
325. *luzonensis* (Ludlow, 1905)

Mimomyia (Ingramia)

326. *fusca* (Leicester, 1908)

Mimomyia (Mimomyia)

327. *aurea* (Leicester, 1908)
328. *chamberlaini* Ludlow, 1904
329. *chamberlaini metallica* (Leicester, 1908)
330. *hybrida* (Leicester, 1908)

TRIBE: HODGESIINI

Hodgesia

331. *bailyi* Barraud, 1929^c
332. *lampangensis* Thurman, 1959
333. *malayi* Leicester, 1908

TRIBE: MANSONIINI

Coquillettidia (Coquillettidia)

334. *crassipes* (Van der Wulp, 1881)
335. *nigrosignata* (Edwards, 1917)
336. *novochracea* (Barraud, 1927)
337. *ochracea* (Theobald, 1903)

Mansonia (Mansonioides)

- 338. *annulata* Leicester, 1908
- 339. *annulifera* (Theobald, 1901)
- 340. *bonneae* Edwards, 1930
- 341. *dives* (Schiner, 1868)
- 342. *indiana* Edwards, 1930
- 343. *uniformis* (Theobald, 1901)

TRIBE: ORTHOPODOMYIINI

Orthopodomyia

- 344. *albipes* Leicester, 1904
- 345. *andamanensis* Barraud, 1934
- 346. *anopheloides* (Giles, 1903)
- 347. *siamensis* Zavortink, 1968
- 348. *wilsoni* Macdonald, 1958

TRIBE: SABETHINI

Malaya

- 349. *genurostris* Leicester, 1908
- 350. *jacobsoni* (Edwards, 1930)

Topomyia (Suaymyia)

- 351. *apsarae* Klein, 1977
- 352. *cristata* Thurman, 1959
- 353. *houghtoni* Feng, 1941
- 354. *leucotarsis* Thurman, 1959
- 355. *pseudoleucotarsis* Thurman, 1959^c
- 356. *suchariti* Miyagi and Toma, 1989
- 357. *yanbarensis* Miyagi, 1976

Topomyia (Topomyia)

- 358. *aenea* Thurman, 1959
- 359. *angkoris* Klein, 1977
- 360. *argyropalpis* Leicester, 1908^c
- 361. *gracilis* Leicester, 1908^c
- 362. *inclinata* Thurman, 1959

- 363. *lindsayi* Thurman, 1959
- 364. *svastii* Thurman, 1959
- 365. *tenuis* Leicester, 1908^c
- 366. *tipuliformis* Leicester, 1908^c
- 367. *unispinosa* Thurman, 1959^c
- 368. *vijayae* Ramalingam, 1975^c

Tripteroides (Rachionotomyia)

- 369. *affinis* (Edwards, 1913)
- 370. *aranooides* (Theobald, 1901)
- 371. *serratus* (Barraud, 1929)
- 372. *tenax* (De Meijere, 1910)

Tripteroides (Tripteroides)

- 373. *aeneus* (Edwards, 1921)
- 374. *caeruleocephalus* (Leicester, 1908)
- 375. *denticulatus* Delfinado and Hodges, 1968
- 376. *hybridus* (Leicester, 1908)
- 377. *indicus* (Barraud, 1929)
- 378. *powelli* (Ludlow, 1909)
- 379. *proximus* (Edwards, 1915)
- 380. *similis* (Leicester, 1908)
- 381. *tarsalis* Delfinado and Hodges, 1968

TRIBE: TOXORHYNCHITINI

Toxorhynchites (Toxorhynchites)

- 382. *albipes* (Edwards, 1922)
- 383. sp near *albipes*^c
- 384. *amboinensis* (Doleschall, 1857)^c
- 385. *bickleyi* Thurman, 1959
- 386. *gravelyi* (Edwards, 1921)
- 387. *leicesteri* Theobald, 1904
- 388. *magnificus* (Leicester, 1908)
- 389. *manopi* Thurman, 1959
- 390. *splendens* (Wiedemann, 1819)
- 391. *sunthorpi* Thurman, 1959

TRIBE: URANOTAENIINI

Uranotaenia (Pseudoficalbia)

- 392. *abdita* Peyton, 1977
- 393. *abstrusa* Peyton, 1977^c
- 394. *albipes* Peyton, 1977
- 395. *approximata* Peyton, 1977
- 396. *bicolor* Leicester, 1908
- 397. *bimaculata* Leicester, 1908
- 398. *demeilloni* Peyton and Rattanarithikul, 1970
- 399. *enigmatica* Peyton, 1977
- 400. *gouldi* Peyton and Klein, 1970
- 401. *hirsutifemora* Peters, 1964
- 402. *koli* Peyton and Klein, 1970
- 403. *lutescens* Leicester, 1908
- 404. *maxima* Leicester, 1908
- 405. *modesta* Leicester, 1908
- 406. *nivipleura* Leicester, 1908
- 407. *nocticola* Peyton, 1977
- 408. *novobscura* Barraud, 1934
- 409. *obscura* Edwards, 1915
- 410. *patriciae* Peyton, 1977
- 411. *pseudomaculipleura* Peyton and Rattanarithikul, 1970
- 412. *spiculosa* Peyton and Rattanarithikul, 1970
- 413. *stricklandi* Barraud, 1926
- 414. *sumethi* Peyton and Rattanarithikul, 1970

Uranotaenia (Uranotaenia)

- 415. *annandalei* Barraud, 1926
- 416. *bimaculala* Leicester, 1908
- 417. *campestris* Leicester, 1908
- 418. *diraphati* Peyton and Klein, 1970
- 419. *edwardsi* Barraud, 1926
- 420. *hebes* Barraud, 1931
- 421. *lateralis* Ludlow, 1905
- 422. *longirostris* Leicester, 1908
- 423. *macfarlanei* Edwards, 1914
- 424. *metatarsata* Edwards, 1914

- 425. *micans* Leicester, 1908
 - 426. *orientalis* Barraud, 1926
 - 427. *prajimi* Peyton and Rattanarithikul, 1970
 - 428. *rampae* Peyton and Klein, 1970
 - 429. *sombooni* Peyton and Klein, 1970
 - 430. *subnormalis* Martini, 1920
 - 431. *testacea* Theobald, 1905
 - 432. *trilineata* Leicester, 1908
 - 433. sp 1^d
 - 434. sp 2^d
 - 435. sp 3^d
 - 436. sp 4^d
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^a*An. gigas sensu lato* is a new record for the country. The precise identity of this species has not been resolved, although it is clearly a member of the Gigas Complex.

^bThe species listed as *dirus* B, *dirus* C, and *dirus* D have all been confirmed by cytogenetics, crossing, and molecular studies. Similarly, *minimus* C is clearly a distinct species based on these types of studies. *Anopheles leucosphyrus* A and *An. sundaicus* A have been confirmed as a valid species based on cytogenetic and crossing studies.

^c*Armigeres confusus*, *Ar. foliatus*, *Ar. sp*, *Ar. pendulus*, *Ar. traubi*, *Culex* species near *infula*, *Hodgesia bailyi*, *Topomyia pseudoleucotarsis*, *Tp. argyropalpis*, *Tp. gracilis*, *Tp. tipuliformis*, *Tp. unispinosa*, *Tp. vijayae*, *Toxorhynchites amboinensis*, *Tx.* species near *albipes*, and *Uranotaenia abstrusa*, are new species records for Thailand.

^dFour new unnamed species of *Uranotaenia* (*Uranotaenia*) were confirmed by EL Peyton as occurring in Thailand.