

## Collection Records of the Project "Mosquitoes of Middle America"

7. Costa Rica (CR)<sup>1</sup>Sandra J. Heinemann and John N. Belkin<sup>2</sup>

For general information and collections from the Dominican Republic (RDO) the first publication of this series should be consulted (Belkin and Heinemann 1973). Any departure from the method in this publication is indicated below. Publications 2-6 of the series (Belkin and Heinemann 1975a, 1975b, 1976a, 1976b, 1976c) recorded data on collections from the remainder of the West Indies except Jamaica (Belkin, Heinemann and Page 1970:255-304) and the islands adjacent to Venezuela as well as Trinidad and Tobago (to be covered later).

Included here are only the collections made expressly for the project except CR170-174, 200. The miscellaneous collections from Costa Rica and other countries in Central America made available to the project from various sources will be treated separately as a unit after the project collections from Central America are recorded individually. An index to all collections will be provided at the completion of the publication of all the records.

The collections from Costa Rica made expressly for the project are identified by the following printed labels: //No [handwritten 1-86]/Costa Rica/XI,7-XII,11,62/Hogue & Powder//CR [handwritten 87-169]/Costa Rica 63/June 6-Aug 8/C. L. Hogue//CR [handwritten 175-199]/Costa Rica 1964/Charles L. Hogue//CR [handwritten 200-254]/Costa Rica/Mosq Mid Amer//CR [handwritten 260-661]/Costa Rica 7[2, 5 or 6]/Mosq Mid Amer//. Included in the CR series are some specimens which bear individual locality labels but no CR printed labels. These can be correlated by the collector's name and the summary of CR collections. The latter provides also the dates of the collections.

A variety of maps were used in presenting the geographical and political data. Grid coordinates were determined on the following maps: Costa Rica 1:50,000, series E763, many sheets; Panama 1:50,000, series E762, sheet 3642-3; World 1:250,000, series 1501, sheets NC16-8, NC16-12, NC17-5, NC17-9, NC17-10, NC17-13, editions 1 and 2. Elevations were determined on these maps as well as on Costa Rica, Inst. Geogr. Nac. 1:200,000, sheets CR2CM-1, 2, 3, 4, 5, 6, 7, 8, 9, 1968-1970. Localities were determined on these maps and on Costa Rica, Inst. Geogr. de Costa Rica 1:500,000, sheets NE, NW, SE, SW, 1959; Valle Central 1:250,000, 1959; Costa Rica 1:500,000, 1 sheet, 1971; Costa Rica 1:400,000, 1949; Valle Central 1:150,000, 1966; Ciudad de San Jose 1:10,000, 1959. The Texaco road map of Costa Rica, 1969, was also used in determining localities, and the vegetation types were taken from Centro Cientifico Tropical, Costa Rica, Mapa Ecologico 1:750,000, by J. A. Tosi, 1969.

In the course of checking the data for publication in the present series, it has been noted that the information recorded on the original forms has often been incomplete, misleading, inconsistent or simply incorrect; this has been particularly true with regard to elevations. As much as possible these errors have been rectified through the use of large scale topographic maps and communication with the collectors. An unfortunate consequence has been that data recorded in previous papers published by the project "Mosquitoes of Middle America" have perpetuated these errors; in such cases the data from the collection record series should supercede the data in earlier papers.

With regard to the identifications published in this and all other papers in this series, it should be noted that they are **preliminary identifications only**, and as such they **in no way constitute a change in taxonomic status**. The use of the term "group" after a species name is an indication that there are definitely more than one species present in our material which are either undescribed or involve previously published names which cannot be assigned with certainty. It should be particularly noted that the sub-generic division of *Wyeomyia* used here is completely different from the currently accepted system and was instituted purely to facilitate preliminary identifications, and, as stated above, in no way constitutes

<sup>1</sup>Contribution from project "Mosquitoes of Middle America" supported by U.S. Public Health Service Research Grant AI-04379 and U.S. Army Medical Research and Development Command Research Contract DA-49-193-MD-2478.

<sup>2</sup>Department of Biology, University of California, Los Angeles, CA 90024.

a change in taxonomy.

We are greatly indebted to two organizations and their staff in Costa Rica for providing facilities, transportation and assistance to our topotypic survey: ICMRT-LSU, Dr. George W. Hunter III and Dr. Victor M. Villarejos; Facultad de Microbiologia, Universidad de Costa Rica, Dr. Mario Vargas V. We also received some assistance from the Organization for Tropical Studies (OTS), San Jose. Finally, we are very grateful to the numerous individuals who contributed to the collection and rearing of specimens over a period of more than 12 years (see sections on Collectors and Summary of Collections).

### Summary of Collections

CR 1-86	7 Nov-7 Dec 1962	JB, RC, CH, WP, JS
CR 87-168	8 Jun-8 Aug 1963	CH
CR 169	9 Aug 1963	HJ
CR 170-171	2 Aug-17 Aug 1962	FT
CR 172	9 Jul-1 Aug 1957	AM, FT
CR 173	24 Aug 1962	RC
CR 174	25 Jan 1963	KA
CR 175-199	14 Jun-23 Aug 1964	CH, EM
CR 200	8 Apr 1964 (Cocos Is.)	RS
CR 201-232	1 Sept-11 Sept 1965	WH
CR 233-253	19 Jun-6 Jul 1967	CH
CR 254	11 Feb 1969	BB, CH
CR 255-259	Not used	
CR 260-590	17 Jul 1971-16 Jan 1972	AB, JB, FF, DH, SH, DS, KS
CR 591-593	18 Apr-22 Apr 1975 (Cocos Is.)	CH
CR 594-599	Not used	
CR 600-661	19 Jun-30 Jul 1975, 14 Jul-22 Jul 1976	JH

### Collectors

KA	Keith A. Arnold	CH	Charles L. Hogue
JB	John N. Belkin	HJ	Daniel H. Janzen
AB	A. Berrios Arias	AM	Arnold Menke
BB	Donald B. Bright	EM	E. Miranda
RC	R. Casebeer	WP	William A. Powder
FF	Francisco Fallas	JS	Joe Saunders
JH	Jack Hayes	DS	Donald A. Schroeder
DH	Dennis W. Heinemann	KS	Karen Schroeder
SH	Sandra J. Heinemann	RS	R. O. Schuster
WH	W. L. Hjort	FT	F. S. Truxal

### CR Collection Records

1. Puntarenas, El Roble, Hacienda Bonilla, Quebrada Bomba Vieja, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 7 Nov 62, JB, CH, WP. Large ground pool (overflow of stream onto dirt road) in plantation; water stagnant, fresh, foul; algal scum and grassy vegetation; bottom with mud, sand; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) educator*, *Cx. (Mel.) erraticus*.

2. Puntarenas, about 6km E of center of Puntarenas, La Angostura (16PGG4303), near sea level; 7 Nov 62, JB, CH, WP. Adults biting-landing on men in mangrove area; 1200hrs; sunny, humid. *Ae. (Och.) taeniorhynchus*.

3. Puntarenas, about 6km E of center of Puntarenas, La Angostura (16PGG4303), near sea level; 7 Nov 62, JB, CH, WP. Adults resting in crabholes in mangrove area; 1200hrs; sunny, humid. *De. nicoyae*.

## CR Collection Records

4. Puntarenas, about 6km E of center of Puntarenas, La Angostura (16PGG4303), near sea level; 7 Nov 62, JB, CH, WP. Small crabholes along road in mangrove area; water turbid; bottom with mud; deep to partial shade. Early instars, lost.
5. San Jose, San Jose, University of Costa Rica, lawn E of medical school (16PHF2399), 1200m; 8 Nov 62, JB, CH, WP. Treehole in domestic area. *Ae. (Pro.) homoeopus*.
6. San Jose, San Jose, University of Costa Rica, lawn E of medical school (16PHF2399), 1200m; 8 Nov 62, JB, CH, WP. Treehole in domestic area. *Ae. (Pro.) homoeopus*.
7. San Jose, San Jose, University of Costa Rica, lawn E of medical school (16PHF2399), 1200m; 8 Nov 62, JB, CH, WP. Treehole in domestic area. *Ae. (Pro.) homoeopus*.
8. San Jose, San Jose, University of Costa Rica, wooded area S of Medical school (16PHF2399), 1200m; 8 Nov 62, JB, CH, WP. Adult resting on fallen banana leaf in second growth; 1130hrs; warm, partly cloudy. *Cx. (Ncx.)* sp undetermined.
9. Cartago, Cervantes, Natl. Rt. 10 about 1.5km SW of Cervantes (17PJA9093), 1490m; 9 Nov 62, JB, CH, WP. Epiphytic bromeliad. *Ae. (How.) allotecnon*.
10. Cartago, Cervantes, Natl. Rt. 10 about 1.5km SW of Cervantes (17PJA9093), 1490m; 9 Nov 62, JB, CH, WP. Epiphytic bromeliad (small *Tillandsia*). No specimens.
11. Cartago, Cervantes, Natl. Rt. 10 about 1.5km SW of Cervantes (17PJA9093), 1490m; 9 Nov 62, JB, CH, WP. Epiphytic bromeliad (leaves mottled purple). *Ae. (How.) allotecnon*.
12. Cartago, Cervantes, Natl. Rt. 10 about 1.5km SW of Cervantes (17PJA9093), 1490m; 9 Nov 62, CH. Epiphytic bromeliad (large, leaf margins entire). *Ae. (How.) allotecnon*, *Cx. (Mca.) erethyzonfer*.
13. Cartago, Cervantes, Natl. Rt. 10 about 1.5km SW of Cervantes (17PJA9093), 1490m; 9 Nov 62, JB, CH, WP. Epiphytic bromeliads (several types). *Ae. (How.) allotecnon*, *Ae. (How.) spinosus* (holotype), *An. (Ker.) neivai*, *Cx. (Mca.) erethyzonfer*, *Or. phyllozoa*, *Wy. (Wyo.) pertinans* group.
14. Cartago, Cervantes, Natl. Rt. 10 about 1.5km SW of Cervantes (17PJA9093), 1490m; 9 Nov 62, JB, CH, WP. Epiphytic bromeliad (small *Tillandsia*). *Ae. (How.) allotecnon*.
15. San Jose, San Jose, University of Costa Rica, lawn E of medical school (16PHF2399), 1200m; 13 Nov 62, JB, CH, WP. Treehole in domestic area. *Ae. (Pro.) homoeopus*.
16. Alajuela, about 1km E of Ciruelas on Rt. 124 (16PHG0104), 820m; 13 Nov 62, CH, WP. Small ground pool (1m X 0.5m, 15-25cm deep) along road in plantation; water clear, stagnant; algae, grassy vegetation; bottom with mud; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group.
17. Alajuela, about 2km E of Ciruelas on Rt. 124 (16PHG0205), 840m; 13 Nov 62, CH, WP. Drainage ditch (0.5m wide, 5-15cm deep) along road in plantation; water clear, stagnant; grassy vegetation; bottom with mud; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group, *Cx. (Mel.) conspirator*.
18. Alajuela, about 3km S of Alajuela on Rt. 124 (16PHG0406?), 880m; 13 Nov 62, CH, WP. Bamboo stumps along road in plantation; deep shade. *Ae. (Pro.) homoeopus*, *Hg. (Hag.) iridicolor*.
19. Alajuela, about 3km S of summit of Volcan Poas on Rt. 120 (16PHG0325), 2500m; 14 Nov 62, CH, WP. Epiphytic bromeliad in partially cleared lower montane wet forest; partial shade. *Ae. (How.) allotecnon*.
20. Alajuela, about 3km S of summit of Volcan Poas on Rt. 120 (16PHG0325), 2500m; 14 Nov 62, CH, WP. Epiphytic bromeliad in partially cleared lower montane wet forest; partial shade. *Ae. (How.) allotecnon*.
21. Alajuela, about 2km S of summit of Volcan Poas on Rt. 120 (16PHG0226), 2500m; 14 Nov 62, CH, WP. Epiphytic bromeliad in partially cleared lower montane wet forest; deep shade. *Ae. (How.) allotecnon*.
22. Alajuela, about 2.5km S of summit of Volcan Poas on Rt. 120 (16PHG0226), 2500m; 14 Nov 62, CH, WP. Pool (6m X 3m, 0.3m deep) in small stream in grassy area in partially cleared lower montane wet forest; water clear, with slow current; no vegetation except grass at edge; bottom with sand and decaying vegetation; partial shade. *Cx. (Ncx.)* sp 28, *Cs. (Cus.) ?dugesii*.
23. Alajuela, Poasito, Volcan Poas, Rt. 120, 8.3km W of Natl. Rt. 9 (16PHG0423), 2150m; 14 Nov 62, CH, WP. Epiphytic bromeliad (immatures and adult resting in bromeliad) in plantation. *Ae. (How.) allotecnon*, *Ae. (How.) quadrivittatus*, *Cx. (Mex.)* sp undetermined, *Wy. (Wyo.) pertinans* group.

## CR Collection Records

24. Cartago, 6km below Volcan Irazu summit on Natl. Rt. 8, Finca La Floresta (17PJB8902), 2950 m; 15 Nov 62, CH, WP. Epiphytic bromeliad in grazing area; partial shade. *Ae. (How.) alloteconon*.
25. San Jose, San Jose, University of Costa Rica, lawn E of medical school (16PHF2399), 1200m; 16 Nov 62, CH, WP. Treehole in domestic area. *Ae. (Pro.) homoeopus*.
26. Alajuela, Carrillos, 11.4km SE of Grecia on Natl. Rt. 1 (16PHG0009?), 900m; 17 Nov 62, RC, CH, WP. Bamboo stumps in plantation; partial shade. *Wy. (Pen.) arthro stigma*.
27. Puntarenas, about 6km E of center of Puntarenas, La Angostura (16PGG4303), near sea level; 17 Nov 62, CH, WP. Adults resting in crabholes in mangrove area; 1300hrs; hot, humid. *De. nicoyae*.
28. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 17 Nov 62, CH, WP. Crabholes along road in plantation (immatures and adults resting); water turbid, fresh; bottom with mud; partial shade. *Cx. (Cux.) inflictus* group, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.)* sp undetermined, *De. costaricensis* (holotype), *De. pseudes*.
29. Puntarenas, El Roble, Hacienda Bonilla, Quebrada Bomba Vieja, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 17 Nov 62, CH, WP. Large ground pool (overflow of stream onto dirt road) in plantation; water turbid, stagnant, fresh; grassy vegetation; bottom with mud, decaying vegetation; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) educator*.
30. San Jose, San Jose, University of Costa Rica, parasitology lab (16PHF2399), 1200m; 18 Nov 62, CH. Adult biting man inside lab; 1130hrs. Specimen misplaced.
31. San Jose, Division, 12km S of Villa Mills on Natl. Rt. 2 (17PKA0253), 2400m; 19 Nov 62, CH, WP. Small stream along road in partially cleared lower montane rain forest; water clear, with current; choked with watercress; bottom with mud, decaying vegetation; partial shade. *Dx.* ?sp 1.
32. San Jose, La Ese, 11km N of San Isidro on Natl. Rt. 2 (17PKA0144), 1300m; 20 Nov 62, RC, CH, WP. Large ground pool (10-15cm deep) fed by seepage along road in plantation; water clear, with slow current; grass, watercress; bottom with mud, sand; partial shade. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group, *Cx. (Cux.) ?thriambus*, *Cx. (Mel.) ?garcesi*, *Cx. (Mel.)* sp undetermined, *Dx.* ?sp 1.
33. Puntarenas, Dominical, 3.5km NW of Boca Rio Baru, near Guapil (17PJA8325), near sea level; 20 Nov 62, CH, WP. Epiphytic bromeliad in plantation. *Cx. (Mcx.) rejector*, *Wy. (Hys.)* sp undetermined, *Wy. (Wyo.) pertinans* group sp P, *Wy. (Wyo.) pertinans* group sp Q.
34. Puntarenas, Dominical, 3.5km NW of Boca Rio Baru, near Guapil (17PJA8325), near sea level; 20 Nov 62, CH, WP. Crabhole about 500m from sea. *Cx. (Cux.) inflictus* group, *De. costaricensis*.
35. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 21 Nov 62, CH, WP. Bamboo stumps in domestic area; water clear; full sun. *Hg. (Hag.) equinus*, *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthro stigma*.
36. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 21 Nov 62, CH, WP. Large artificial container (concrete tank) in domestic area; water clear; no vegetation; bottom with mud; full sun. *Cx. (Cux.) coronator* group.
37. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 21 Nov 62, CH, WP. Large artificial container (concrete tank, 0.5 X 0.3m, 6cm deep) in domestic area; water clear; floating vegetation (*Pistia*) at edge; bottom with mud; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group.
38. San Jose, Division, 13km S of Villa Mills on Natl. Rt. 2 (17PKA0252), 2400m; 21 Nov 62, CH, WP. Stream margin (outwash of stream onto small alluvial fan, 7-10cm deep) along road in partially cleared lower montane rain forest; water clear, with slow current; choked with watercress; bottom with mud, sand; full sun. *Dx.* sp undetermined.
39. San Jose, Division, 13km S of Villa Mills on Natl. Rt. 2 (17PKA0252), 2400m; 21 Nov 62, CH, WP. Epiphytic bromeliad in partially cleared lower montane rain forest; full sun. *Ae. (How.) alloteconon*.
40. Cartago, Natl. Rt. 2 about 3km E of Cerro Vueltas, Ojo de Agua (17PJA9164), 2950m; 21 Nov 62, CH, WP. Small ground pool (1m wide, 20-30cm deep) in plantation cleared from montane rain forest; water clear; no vegetation; bottom with mud, sand, decaying vegetation; full sun. *Cs. (Cus.) ?dugesii*.
41. Cartago, Natl. Rt. 2 about 3km E of Cerro Vueltas, Ojo de Agua (17PJA9164), 2950m; 21 Nov

## CR Collection Records

62, CH, WP. Depression in old fallen tree in plantation cleared from montane rain forest; water colored, volume about 8 l; scum; bottom with decaying vegetation; partial shade. *Cx. (Cux.) pinarocampa*, *Cx. (Ncx.)* sp 28, *Cs. (Cus.) ?dugesi*.

42. Puntarenas, Dominical, 3.5km NW of Boca Rio Baru, near Guapil (17PJA8325), near sea level; 20 Nov 62, CH, WP. Adult resting in epiphytic bromeliad; 1600hrs; hot, humid, calm. *Wy.* sp undetermined.

43. Puntarenas, Dominical, 3.5km NW of Boca Rio Baru, near Guapil (17PJA8325), near sea level; 20 Nov 62, CH, WP. Adults resting in crabholes; 1600hrs; hot, humid, calm. *Cx. (Cux.) inflictus* group, *De. costaricensis*.

44. San Jose, San Jose, University of Costa Rica, lawn E of medical school (16PHF2399), 1200m; 16 Nov 62, CH, WP. Large treehole in domestic area; water colored, volume about 20 l; bottom with decaying vegetation; partial shade. *Ae. (Pro.) homoeopus*.

45. Puntarenas, Dominical, 3.5km NW of Boca Rio Baru, near Guapil (17PJA8325), near sea level; 20 Nov 62, CH, WP. Fallen coconut shell on beach; water clear, fresh; full sun. Unidentifiable culicids.

46. Cartago, El Empalme, Natl. Rt. 2, 6km SE of La Sierra (17PJA7677), 2200m; 24 Nov 62, CH, WP. Large bromeliad along road in cleared lower montane rain forest; full sun. *Ae. (How.) allotecnon*, *Cx. (subg. B)* sp 46.

47. Cartago, El Empalme, Natl. Rt. 2, 10km SE of La Sierra (17PJA7674), 2400m; 24 Nov 62, CH, WP. Ground pool (1m X 0.5m, 8-10cm deep) in roadside ditch in partially cleared lower montane rain forest; water clear, stagnant; no vegetation; bottom with mud, decaying vegetation; partial shade. *Cx. (Ncx.)* sp 28.

48. Cartago, El Empalme, Natl. Rt. 2, 10km SE of La Sierra (17PJA7674), 2400m; 24 Nov 62, CH, WP. Ground pool (1.2 X 0.8m, 8-10cm deep) in partially cleared lower montane rain forest; water clear, stagnant; some grassy vegetation; bottom with mud, decaying vegetation, cow dung; full sun. *Cs. (Cus.) ?dugesi*.

49. Cartago, El Empalme, 10km SE of La Sierra on Natl. Rt. 2 (17PJA7674), 2400m; 24 Nov 62, CH, WP. Epiphytic bromeliad (large; leaves green, mottled red) in partially cleared lower montane rain forest; partial shade. *Ae. (How.) allotecnon*, *Ae. (How.) quadrivittatus*.

50. Cartago, El Empalme, 10km SE of La Sierra on Natl. Rt. 2 (17PJA7674), 2400m; 24 Nov 62, CH, WP. Depression in fallen tree (0.3m wide, 12cm deep) in partially cleared lower montane rain forest; water colored; no vegetation; bottom with decaying vegetation; partial shade. *Ae. (Pro.) aitkeni* (holotype), *An. (Ano.) powderi* (holotype).

51. Cartago, Canon, 20km SE of La Sierra on Natl. Rt. 2, Paso Macho (17PJA8172), 2500m; 24 Nov 62, CH, WP. Epiphytic bromeliad (large, leaves green and red) in partially cleared lower montane rain forest; partial shade. *Ae. (How.) allotecnon*, *Ae. (How.) quadrivittatus*.

52. Cartago, Canon, 20km SE of La Sierra on Natl. Rt. 2, Paso Macho (17PJA8172), 2500m; 24 Nov 62, CH, WP. Bromeliad (large, leaves green with red streaks) in partially cleared lower montane rain forest; partial shade. *Ae. (How.) allotecnon*, *Ae. (How.) quadrivittatus*.

53. Cartago, Cangreja, 6km N of La Sierra on Natl. Rt. 2, Casa Mata (17PJA7182), 1900m; 24 Nov 62, CH, WP. Bromeliad (large green epiphytic type growing on ground) along road in lower montane wet forest; full sun. *Ae. (How.) allotecnon*, *Ae. (How.) quadrivittatus*, *Cx. (Mcx.)* sp undetermined.

54. Cartago, 11km N of La Sierra on Natl. Rt. 2, Cangreja (17PJA7484), 1850m; 24 Nov 62, CH, WP. Epiphytic bromeliad (large, leaves broad and green) in grassy area of plantation; partial shade. *Ae. (How.) allotecnon*, *Ae. (How.) quadrivittatus*, *Cx. (Mca.) erethydonfer*.

55. Cartago, Turrialba, Instituto Interamericano de Ciencias Agricolas, pond near main entrance (17 PKA0994), 600m; 1 Dec 62, CH, WP. Epiphytic bromeliad (leaves long, narrow, green) in plantation; partial shade. *Wy. (Wyo.) pertinans* group sp B.

56. Cartago, Turrialba, Instituto Interamericano de Ciencias Agricolas, pond near main entrance (17 PKA0994), 600m; 1 Dec 62, CH, WP. Artificial pond (1.5 X 0.5m, 0.3m deep) in plantation; water permanent, clear, stagnant; filamentous algae; bottom with mud, decaying vegetation; full sun. *Cx. (Mel.) conspirator*, *Ur. geometrica*.

## CR Collection Records

57. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, pond near main entrance (17 PKA0994), 600m; 1 Dec 62, CH, WP. Adults biting-landing on man in plantation; 1100hrs; humid, 24°C. *Ae. (Och.) angustivittatus*.
58. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, pond near main entrance (17 PKA0994), 600m; 1 Dec 62, CH, WP. Large terrestrial bromeliad in plantation; deep shade. *Wy. (Wyo.) pertinans* group sp B.
59. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas (17PKA0994), 600m; 1 Dec 62, CH, WP. Artificial container (5 gal. tin) in cacao plantation; water rusty, volume about 0.5 l; deep shade. *Li. durhamii*.
60. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas (17PKA0994), 600m; 1 Dec 62, CH, WP. Adults landing-biting on men in cacao plantation; 1500hrs; cool, humid, deep shade. *Ae. (Och.) angustivittatus*, *Cq. (Rhy.) fasciolata* group.
61. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas (17PKA0994), 600m; 1 Dec 62, CH, WP. Bamboo stump in plantation; water turbid. *Cx. (Cux.)* sp undetermined.
62. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas (17PKA0994), 600m; 1 Dec 62, CH, WP. Bromeliads in plantation. *Cx. (Cux.) stenolepis*, *Cx. (Mcx.) jenningsi* group, *Wy. (Wyo.) ? celaenocephala* group, *Wy. (Wyo.) pertinans* group sp B, *Wy. (Wyo.) pertinans* group sp undetermined, *Wy. (Wyo.)* sp 59.
63. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, trail to river (17PKA0994), 500m; 2 Dec 62, CH, WP. Large terrestrial bromeliad (leaves long, narrow, channeled) in second growth; deep shade. Undetermined culicid.
64. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, trail to river (17PKA0994), 500m; 2 Dec 62, CH, WP. Adults landing in second growth; 1130hrs; cool, humid, deep shade. *Ae. (Och.) angustivittatus*.
65. Cartago, Tuis, 6km SE of La Suiza on Rt. 232 (17PKA1787), 800m; 2 Dec 62, CH, WP. Small ground pool in plantation; water clear, stagnant; bottom with mud; full sun. *Cx. (Cux.) coronator* group.
66. Cartago, Tuis, 6km SE of La Suiza on Rt. 232 (17PKA1787), 800m; 2 Dec 62, CH, WP. Ground pool (1.5 X 1m, up to 0.3m deep) near stream in plantation; water clear, stagnant; algae; bottom with mud, decaying vegetation; full sun. *Cx. (Mel.) iolambdis*, *Cx. (Mel.)* sp undetermined, *Dx.* sp undetermined, *Ur.* sp undetermined.
67. Cartago, Turrialba, 3km SE of main entrance to Instituto Interamericano de Ciencias Agrícolas (17PKA1093), 600m; 2 Dec 62, CH, WP. Epiphytic bromeliad (very large, leaf margins serrate) in plantation; partial shade. *Cx. (Cux.) stenolepis*, *Cx. (Mcx.) jenningsi* group, *Tx. (Lyn.) superbus*, *Wy. (Hys.)* sp G, *Wy. (Wyo.) ? celaenocephala* group, *Wy. (Wyo.) pertinans* group sp B, *Wy. (Wyo.)* sp 59.
68. Limon, Westfalia, government farm about 3km S of Westfalia (17PKA7996), near sea level; 4 Dec 62, CH, WP. Ground pool (1 X 0.5m, 8-10cm deep) in cacao plantation; water turbid, stagnant, fresh; no vegetation; bottom with mud, dead leaves; partial shade. *An. (Ano.) eiseni*, *Cx. (Cux.) coronator* group, *Cx. (Mel.) conspirator*.
69. Limon, Westfalia, government farm about 3km S of Westfalia (17PKA7996), near sea level; 4 Dec 62, CH, WP. Fallen coconut shell in cacao plantation; water turbid, fresh; partial shade. *Cx. (Cux.)* sp undetermined, *Li. durhamii*, *Tr. (Trc.) digitatum*.
70. Limon, Westfalia, government farm about 3km S of Westfalia (17PKA7996), near sea level; 4 Dec 62, CH, WP. Artificial container (1 lb tin) in cacao plantation; water clear, fresh; partial shade. *Li. durhamii*.
71. Limon, Westfalia, government farm about 3km S of Westfalia (17PKA7996), near sea level; 4 Dec 62, CH, WP. Fallen cacao pods in cacao plantation; water colored, foul; deep shade. *Tr. (Trc.) digitatum*.
72. Limon, Westfalia, government farm about 3km S of Westfalia (17PKA7996), near sea level; 4 Dec 62, CH, WP. Fallen breadfruit leaf in cacao plantation; water clear, fresh; partial shade. *Cx. (Car.) secundus*, *Cx. (Cux.) corniger*, *Li. asulleptus*, *Li. durhamii*.

## CR Collection Records

73. Limon, Westfalia, government farm about 3km S of Westfalia (17PKA7996), near sea level; 4 Dec 62, CH, WP. Crabholes in cacao plantation; water turbid, fresh; bottom with mud; deep shade. *De. epitedeus*.
74. Limon, Westfalia, government farm about 3km S of Westfalia (17PKA7996), near sea level; 4 Dec 62, CH, WP. Epiphytic bromeliad (leaves green, serrate) in cacao plantation. No specimens.
75. Limon, Westfalia, government farm about 3km S of Westfalia (17PKA7996), near sea level; 4 Dec 62, CH, WP. Fallen banana leaf in cacao plantation; water clear; partial shade. *Li. durhamii*.
76. Limon, Westfalia, about 1.5km S of Westfalia (17PKA8097), near sea level; 4 Dec 62, CH, WP. Large crabholes along road about 0.5km from sea; water turbid, fresh; full sun. *Cx. (Cux.) inflictus* group, *Cx. (Tin.) latisquama*, *De. epitedeus*.
77. Limon, Westfalia, government farm about 3km S of Westfalia (17PKA7996), near sea level; 4 Dec 62, CH, WP. Adults biting-landing on man in cacao plantation; 1200hrs; cool, humid. *Cx. (Cux.) inflictus* group, *Ps. (Jan.)* sp 3.
78. Limon, Madre de Dios, 15km E of Siquirres on railroad, Finca La Lola (17PKB3816), 40m; 4 Dec 62, JS. Fallen cacao pods in plantation; water colored, foul; deep shade. *Tr. (Trc.) digitatum*.
79. Cartago, Orosi, Rio Macho (17PJA8882), 1100m; 7 Dec 62, CH, WP. Epiphytic bromeliad in domestic area; partial shade. *Ae. (How.) allotecnon*.
80. Cartago, Orosi, Rio Macho (17PJA8882), 1100m; 7 Dec 62, CH, WP. Epiphytic bromeliad (large, leaf margins serrate) in domestic area; partial shade. *Cx. (Cux.) stenolepis*, *Cx. (Mcx.)* sp undetermined, *Tx. (Lyn.) superbus*, *Wy. (Wyo.) pertinans* group sp B.
81. Cartago, Orosi, 1km W of Rio Macho (17PJA8782), 1300m; 7 Dec 62, CH, WP. Debris sample from treehole. Sterile.
82. Cartago, Orosi, 1km S of Orosi on Rt. 224 (17PJA8783), 1100m; 7 Dec 62, CH, WP. Artificial container (metate stone) in domestic area; water clear, volume about 2 l; bottom with decaying vegetation; partial shade. *Cx. (Cux.) coronator* group, *Cx. (Cux.)* sp undetermined.
83. Cartago, Orosi, about 1.5km N of Orosi on Rt. 224 (17PJA8585), 1100m; 7 Dec 62, CH, WP. Epiphytic bromeliad (large, leaf margins serrate) in plantation; partial shade. *Ae. (How.) allotecnon*, *An. (Ker.) neivai*, *Cx. (Mcx.) jenningsi* group, *Or. phyllozoa*, *Tx. (Lyn.) superbus*, *Wy. (Wyo.) abebela*, *Wy. (Wyo.) ?celaenocephala* group, *Wy. (Wyo.) pertinans* group sp B, *Wy. (Wyo.) pertinans* group sp undetermined.
84. Cartago, 3km S of Paraiso on Rt. 224 (17PJA8686), 1200m; 7 Dec 62, CH, WP. Margin of pond (30m wide) in plantation; water clear, stagnant; algae, grassy vegetation; bottom with mud; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.)* sp 85.
85. Cartago, Orosi, 1.5km S of Orosi on Rt. 224 (17PJA8782), 1100m; 7 Dec 62, CH, WP. Small ground pools (tire ruts) in plantation; water turbid, stagnant; algae, scum, grassy vegetation; bottom with mud; full sun. *Cx. (Cux.) coronator* group.
86. Cartago, Orosi, Rio Macho (17PJA8882), 1100m; 7 Dec 62, CH, WP. Epiphytic bromeliads in domestic area. *Ae. (How.) allotecnon*, *Cx. (Cux.) stenolepis*, *Wy. (Wyo.) pertinans* group sp B.
87. San Jose, San Jose, 1150m; 8 Jun 63, CH. Adult flying in bedroom; 2300hrs. *Cx. (Cux.)* sp undetermined.
88. San Jose, San Jose, Parque Bolivar (16PHF210998), 1150m; 8 Jun 63, CH. Small treehole in park; 2.5m above ground; water clear, volume about 1 l; bottom with decaying vegetation; deep shade. *Ae. (Pro.) heteropus*, *Ae. (Pro.) homoeopus*, *Hg. (Hag.) mesodentatus*.
89. San Jose, San Jose, Parque Bolivar (16PHF210998), 1150m; 8 Jun 63, CH. Small treehole in park; 2.5m above ground; water clear, volume about 0.2 l; bottom with decaying vegetation; deep shade. *Ae. (Pro.) heteropus*, *Hg. (Hag.) mesodentatus*, *Wy. (Pen.) ?arthrostigma*.
90. San Jose, San Jose, 1150m; 8 Jun 63, CH. Adults flying and resting on walls in room; 1900-2000hrs. *Cx. (Cux.)* sp undetermined.
91. San Jose, San Jose, Rio Torres at Natl. Rt. 3 (16PHG174004), 1060m; 13 Jun 63, CH. Cut or broken bamboo along river; 0.5-2m above ground; water turbid; deep shade. *Wy. (Pen.) arthrostigma*.

## CR Collection Records

92. San Jose, San Jose, Rio Torres at Natl. Rt. 3 (16PHG174004), 1060m; 13 Jun 63, CH. Adults resting and biting-landing on man in bamboo along river; 1500hrs; stormy with light intermittent rain. *Ae. (Och.) angustivittatus*, *Wy. (Pen.) arthro stigma*.

93. San Jose, San Jose, Rio Torres at Natl. Rt. 3 (16PHG174004), 1060m; 13 Jun 63, CH. Cut or broken bamboo along river; 0.5-2m above ground; water turbid; deep shade. *Wy. (Pen.) arthro stigma*.

94. San Jose, San Jose, Rio Torres at Natl. Rt. 3 (16PHG174004), 1060m; 13 Jun 63, CH. Adult biting man at edge of bamboo brake near river; 1500hrs; stormy with light intermittent rain. *Ae. (Och.) angustivittatus*.

95. San Jose, San Jose, Rio Torres at Natl. Rt. 3 (16PHG174004), 1060m; 16 Jun 63, CH. Adult biting man near river; 2100hrs; cloudy, humid, cool. *Ae. (Och.) angustivittatus*.

96. Alajuela, San Ramon, about 1.5km NW of Palmares on Natl. Rt. 1 (16PGG7913), 1100m; 19 Jun 63, CH. Adult biting man in grazing area; 1100hrs; warm, cloudy, humid. *Sa. (Sbo.) chloropterus*.

97. Puntarenas, 11.8km E of Esparta on Natl. Rt. 1 (16PGG6308?), 320m; 19 Jun 63, CH. Adults biting-landing on man in dense riparian second growth; 1400hrs; warm, humid, intermittent rain, deep shade. *Hg. (Hag.) equinus*, *Hg. (Hag.) mesodentatus*.

98. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 19 Jun 63, CH. Large crabhole along road in plantation; water turbid, fresh; bottom with mud; full sun. *De. pseudes*.

99. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 19 Jun 63, CH. Adults resting in large crabhole along road in plantation; 1500hrs; cloudy, hot, humid. *De. pseudes*.

100. Puntarenas, El Roble, Boca del Rio Barranca, Hotel Marbella (16PGG481017), near sea level; 19 Jun 63, CH. Adult biting man in domestic area near mangroves; 1745hrs; 29°C, cloudy, humid. *Ae. (Och.) taeniorhynchus*.

101. Puntarenas, El Roble, Boca del Rio Barranca, Hotel Marbella (16PGG481017), near sea level; 19 Jun 63, CH. Adults resting, biting and landing inside room; 2000-2300hrs; hot, humid, still. *Ae. (Och.) taeniorhynchus*, *Cx. (Cux.) quinquefasciatus*, *De. pseudes*.

102. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 20 Jun 63, CH. Large crabhole at edge of grazing area; water turbid, fresh; bottom with mud; partial shade. *Cx. (Cux.) inflicus* group, *De. pseudes*.

103. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 20 Jun 63, CH. Adults resting and biting-landing on man near large crabholes (same as CR 102) at edge of grazing area; 0900hrs. *Ae. (Och.) taeniorhynchus*, *Cx. (Cux.) inflicus* group, *De. pseudes*, *Hg. (Hag.) equinus*.

104. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 20 Jun 63, CH. Adult resting in treehole near crabholes at edge of cultivated field; 2m above ground; 1000hrs; overcast, warm, humid. *De. pseudes*.

105. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 20 Jun 63, CH. Large crabhole at edge of grazing area; water turbid, fresh; bottom with mud; partial shade. *Cx. (Cux.) inflicus* group, *De. pseudes*.

106. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 20 Jun 63, CH. Adults resting and landing at mouth of large crabhole (same as in CR105) at edge of grazing area. *Cx. (Cux.) inflicus* group, *De. costaricensis*, *De. pseudes*.

107. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 20 Jun 63, CH. Large crabhole in plantation; water turbid, fresh; bottom with mud; partial shade. *Cx. (Cux.) inflicus* group, *De. costaricensis*, *De. pseudes*.

108. Puntarenas, Caldera, about 3km S of Boca del Barranca (16PGG4900?), 10m; 20 Jun 63, CH. Adults biting-landing on man in dense second growth near railroad; 1400-1500hrs; warm, still, humid. *Ae. (Och.) angustivittatus*, *Ae. (Och.) taeniorhynchus*, *Ps. (Jan.) ferox*.

109. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero (16PGG489013?), near sea level; 20 Jun 63, CH. Large crabhole at edge of mangroves; water very turbid, brackish; bottom with mud;



## CR Collection Records

partial shade. *Cx. (Cux.) inflicus* group, *De. pseudes*.

110. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero (16PGG489013?), near sea level; 20 Jun 63, CH. Adults resting in large crabholes near mangroves; 1500hrs; hot, humid, still. *De. pseudes*.

111. Puntarenas, Puntarenas, La Angostura, about 6km E of center of Puntarenas (16PGG4303), near sea level; 21 Jun 63, CH. Medium crabhole in mangroves above high tide line; water turbid; bottom with mud; deep shade. *De. pseudes*.

112. Puntarenas, Puntarenas, La Angostura, about 6km E of center of Puntarenas (16PGG4303), near sea level; 21 Jun 63, CH. Crabhole in mangroves below high tide line. No larvae present.

113. Puntarenas, Puntarenas, La Angostura, about 6km E of center of Puntarenas (16PGG4303), near sea level; 21 Jun 63, CH. Crabhole in mangroves below high tide line. No larvae present.

114. Puntarenas, Puntarenas, La Angostura, about 6km E of center of Puntarenas (16PGG4303), near sea level; 21 Jun 63, CH. Crabhole in mangroves below high tide line. No larvae present.

115. Puntarenas, Puntarenas, La Angostura, about 6km E of center of Puntarenas (16PGG4303), near sea level; 21 Jun 63, CH. Crabhole in mangroves above high tide line. *De. pseudes*.

116. Puntarenas, Puntarenas, La Angostura, about 6km E of center of Puntarenas (16PGG4303), near sea level; 21 Jun 63, CH. Adults biting man in mangroves; 1000-1100hrs; hot, humid, still. *Ae. (Och.) taeniorhynchus*.

117. Puntarenas, Puntarenas, La Angostura, about 6km E of center of Puntarenas (16PGG4303), near sea level; 21 Jun 63, CH. Pond margin along road on narrow spit; water permanent, brown, stagnant, slightly brackish; abundant flotage, herbaceous, grassy and woody vegetation; bottom with gravel; partial shade. *Ae. (Och.) taeniorhynchus*, *An. (Nys.) albimanus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) psatharus*.

118. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 21 Jun 63, CH. Adults resting in large crabhole in cultivated area; 1800hrs; hot, humid, still, cloudy. *De. costaricensis*, *De. pseudes*.

119. Puntarenas, El Roble, Hacienda Bonilla, about 1km N of Boca del Rio Barranca (16PGG4802), near sea level; 21 Jun 63, CH. Adults biting man in cultivated area; 1830hrs (dusk); hot, humid, still, cloudy. *Ae. (Och.) taeniorhynchus*.

120. Puntarenas, El Roble, Boca del Rio Barranca, Hotel Marbella (16PGG481017), near sea level; 21 Jun 63, CH. Adults taken sweeping in grassy area; 1730hrs; hot, humid, still, cloudy. *Ae. (Och.) taeniorhynchus*.

121. Puntarenas, Osa Peninsula, about 1km S of Rincon, near Rio Rincon (17PKV270613), near sea level; 26 Jun 63, CH. Ditch in partial forest; water temporary, turbid, stagnant, fresh; no vegetation; bottom with mud; full sun. *Cx. (Cux.) coronator* group.

122. Puntarenas, Osa Peninsula, about 1km S of Rincon, near Rio Rincon (17PKV270613), near sea level; 26 Jun 63, CH. Large crabhole in partial forest; water very turbid, fresh; bottom with mud; full sun. *De. costaricensis*.

123. Puntarenas, Osa Peninsula, about 1km S of Rincon, near Rio Rincon (17PKV270613), near sea level; 26 Jun 63, CH. Large crabhole in partial forest; water turbid, fresh; bottom with mud. *De. costaricensis*.

124. Puntarenas, Osa Peninsula, about 1km S of Rincon, near Rio Rincon (17PKV270613), near sea level; 26 Jun 63, CH. Adult resting in large crabhole (same as CR123) in partial forest; 1300hrs; warm, humid, still. *De. costaricensis*.

125. Puntarenas, Osa Peninsula, near Rincon (17PKV2662), 20m; 26 Jun 63, CH. Stream pool in second growth; water permanent, clear, fresh, with slow current; abundant herbaceous vegetation; bottom with mud, sand; partial shade. *An. (Ano.) eiseni*.

126. Puntarenas, Osa Peninsula, near Rincon (17PKV2662), 20m; 26 Jun 63, CH. *Heliconia* flower bracts in second growth. *Wy. (Dec.)* sp undetermined.

127. Puntarenas, Osa Peninsula, near Rincon (17PKV2662), 20m; 26 Jun 63, CH. Depressions in fallen tree trunk at edge of virgin tropical wet forest; water clear; full sun. *Cx. (Cux.) coronator* group, *Hg. (Hag.) chalcospilans*.

128. Puntarenas, Osa Peninsula, Rincon (17PKV2662), 20m; 27 Jun 63, CH. Large artificial con-

## CR Collection Records

tainer (oil drum) in domestic area; water temporary, clear; full sun. *Cx. (Cux.) coronator* group.

129. Puntarenas, Osa Peninsula, about 1km S of Rincon, near Rio Rincon (17PKV270613), near sea level; 27 Jun 63, CH. *Heliconia* flower bracts in partial forest. *Wy. (Dec.)* sp undetermined.

130. Puntarenas, Osa Peninsula, about 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level; 29 Jun 63, CH. Large treehole (in *Avicennia nitida*) in mangroves; 2m above ground; water black, turbid; partial shade. *Co. appendiculata*, *Cx. (And.) conservator*, *Hg. (Hag.) chalcospilans*, *Or. fascipes*.

131. Puntarenas, Osa Peninsula, about 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level; 29 Jun 63, CH. Large treehole (in *Laguncularia racemosa*) in mangroves; 1.5m above ground; water turbid, black; partial shade. *Co. appendiculata*, *Cx. (And.) conservator*, *Hg. (Hag.) chalcospilans*, *Or. fascipes*.

132. Puntarenas, Osa Peninsula, about 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level; 29 Jun 63, CH. Small treehole (in *Rhizophora mangle*) in mangroves; 1.5m above ground; water black; partial shade. *Hg. (Hag.) chalcospilans*.

133. Puntarenas, Osa Peninsula, about 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level; 29 Jun 63, CH. Epiphytic bromeliads in mangroves; 2-3m above ground; partial shade. *Wy. (Hys.)* sp undetermined, *Wy. (Wyo.) pertinans* group sp U.

134. Puntarenas, Osa Peninsula, about 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level; 29 Jun 63, CH. Small treehole (in *Laguncularia*) in mangroves; 1m above ground; water clear; partial shade. *Hg. (Hag.) chalcospilans*.

135. Puntarenas, Osa Peninsula, about 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level; 29 Jun 63, CH. Large crabhole at edge of mangroves; bottom with mud; full sun. *De. costaricensis*.

136. Puntarenas, Osa Peninsula, about 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level; 29 Jun 63, CH. Large crabhole at edge of mangroves; bottom with mud; full sun. *Cx. (Cux.) coronator* group, *De. costaricensis*.

137. Puntarenas, Osa Peninsula, about 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level; 29 Jun 63, CH. Fallen coconut shell in coconut grove; water clear; deep shade. *Hg. (Hag.) chalcospilans*, *Li. durhamii*, *Wy. (Tri.) aporonoma*.

138. Puntarenas, Osa Peninsula, about 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level; 29 Jun 63, CH. Adults resting in treehole (same as CR130) in mangroves; 2m above ground; 1100hrs; warm, humid, cloudy, still. *Cx. (And.) conservator*, *Hg. (Hag.) chalcospilans*.

139. Puntarenas, Osa Peninsula, just NW of Rincon (17PKV261629), 30m; 1 Jul 63, CH. *Heliconia* flower bracts (narrow, orange) along trail in *Heliconia* grove; 2-3m above ground; partial shade. *Wy. (Dec.) pseudopecten* group, *Wy. (Dec.) ulocoma* group.

140. Puntarenas, Osa Peninsula, just NW of Rincon (17PKV261629), 30m; 1 Jul 63, CH. *Heliconia* flower bracts (broad, red) along trail in *Heliconia* grove. *Li. asulleptus*, *Tr. (subg. A) ulopus*, *Wy. (Dec.) pseudopecten* group, *Wy. (Dec.) ulocoma* group.

141. Puntarenas, Osa Peninsula, about 2km W of Rincon (17PKV248612), 20m; 2 Jul 63, CH. *Heliconia* flower bracts (red, cup-like) at edge of tropical wet forest; 2m above ground; deep shade. *Wy. (Dec.) eloisa* group, *Wy. (Dec.) pseudopecten* group.

142. Puntarenas, Osa Peninsula, about 1km S of Rincon, near Rio Rincon (17PKV270613), near sea level; 2 Jul 63, CH. Several large crabholes in roadside thicket; water turbid, gray, fresh; bottom with mud; full sun. *De. costaricensis*, *De. pseudes*.

143. Puntarenas, Osa Peninsula, about 10km W of Rincon at end of ridge road (17PKV2063), 650 m; 4 Jul 63, CH. Fallen nut (*Couratari panamensis*) in tropical wet forest; water turbid. *Li. durhamii*.

144. Alajuela, about 2.5km S of Volcan Poas summit on Rt. 120 (16PHG0226), 2500m; 10 Jul 63, CH. Stream pool (same as in CR22) in grassy area of partially cleared lower montane wet forest. *Cx. (Ncx.)* sp 28, *Cs. (Cus.) ?dugesii*.

145. Alajuela, about 2.5km S of Volcan Poas summit on Rt. 120 (16PHG0226), 2500m; 9 Jul 63, CH. Epiphytic bromeliads in grassy area of partially cleared lower montane wet forest; 3-8m above

## CR Collection Records

ground; deep shade. *Ae. (How.) allotecon*, *Ae. (How.) quadrivittatus*.

146. Cartago, Salsipuedes, 28.6km N of La Georgina (Cerro de la Muerte) on Natl. Rt. 2 (17PJA87 68?), 2700m; 13 Jul 63, CH. Small ground pool in sphagnum bog; water 11.5°C, permanent, clear, stagnant; no vegetation; bottom with mud, decaying vegetation; partial shade. *Cx. (Ncx.)* sp 28.

147. San Jose, Villa Mills, Cerro de la Muerte (=Cerro Buenavista), summit of Natl. Rt. 2 (17PJA97 59), 3300m; 13 Jul 63, CH. Small ground pool in sedge marsh; water permanent, clear, stagnant; sedges at margin; bottom with mud, decaying vegetation; full sun. *Cx. (Ncx.)* sp 28, *Dx.* sp undetermined.

148. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 14 Jul 63, CH. Fallen palm frond in domestic area; water clear; deep shade. *Cx. (Cux.) declarator* group, *Cx. (Cux.) mollis*.

149. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 14 Jul 63, CH. Cut or broken bamboo in domestic area; partial shade. *Hg. (Hag.) iridicolor*, *Li. durhamii*, *Wy. (Pen.) arthro-stigma*.

150. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 14 Jul 63, CH. Adult flying around man in bamboo thicket; 1200hrs; 24°C, still, clear, moderately humid. *Hg. (Hag.) iridicolor*.

151. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 14 Jul 63, CH. Adult landing indoors; 1700hrs; 21°C, raining. *Wy.* sp undetermined.

152. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 14 Jul 63, CH. Adult at ultraviolet light in domestic area; 1900hrs; cool, cloudy. *Cx. (Mel.) ?mutator*.

153. San Jose, Villa Mills, 0.8km S of La Georgina on Natl. Rt. 2 (17PKA0158?), 3100m; 15 Jul 63, CH. Ground pool (2m X 0.2m) in grassy area; water permanent, clear, stagnant; watercress at edge; bottom with sand, decaying vegetation; full sun. *Cx. (Ncx.)* sp 28.

154. Cartago, El Empalme on Natl. Rt. 2 (17PJA7677), 2200m; 16 Jul 63, CH. Ground pool (1m wide) at edge of grazing area; water temporary, clear, stagnant; abundant grassy vegetation; bottom with mud, decaying vegetation; full sun. *Ae. (Och.) angustivittatus*.

155. Limon, Madre de Dios, Finca La Lola (17PKB3816), 40m; 22 Jul 63, CH. Small stream in domestic area; water permanent, clear, with slow current; abundant filamentous algae, herbaceous vegetation; bottom with mud; full sun. *Ur. geometrica*.

156. Limon, Madre de Dios, Finca La Lola (17PKB3816), 40m; 22 Jul 63, CH. Adults at ultraviolet light in domestic area; 2000hrs; warm, humid, overcast. *Ae. (Och.) taeniorhynchus*.

157. Limon, Madre de Dios, Finca La Lola (17PKB3816), 40m; 23 Jul 63, CH. Adult landing near horse in cacao plantation; 1400hrs; warm, humid, cloudy. Specimen misplaced.

158. Limon, Madre de Dios, Finca La Lola (17PKB3816), 40m; 23 Jul 63, CH. Adults at ultraviolet light in domestic area; 1800-2300hrs; warm, humid, cloudy. *Ae. (Och.) angustivittatus*, *An. (Ano.) pseudopunctipennis*.

159. Limon, Madre de Dios, Finca La Lola (17PKB3816), 40m; 24 Jul 63, CH. Small ground pool (road rut) in cacao plantation; water turbid, stagnant; no vegetation; bottom with mud, decaying vegetation; partial shade. *Cx. (Cux.) coronator* group.

160. Limon, Madre de Dios, Finca La Lola (17PKB3816), 40m; 24 Jul 63, CH. Ground pool (flooded road) in cacao plantation; water turbid, stagnant, warm (about 38°C); no vegetation; bottom with mud; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator* group.

161. Limon, Madre de Dios, Finca La Lola (17PKB3816), 40m; 24 Jul 63, CH. Large artificial container (half of 55gal drum) in domestic area; water permanent, clear; no vegetation; bottom with decaying vegetation; partial shade. *Cx. (Cux.) coronator* group.

162. Limon, Madre de Dios, Finca La Lola (17PKB3816), 40m; 24 Jul 63, CH. Adult flying in cacao plantation; 1100hrs; hot, humid, cloudy. *Sa. (Sab.) tarsopus*.

163. Puntarenas, about 7km E of Palmar Norte, Rio Zapote at Natl. Rt. 2 (17PKV363913), 40m; 6 Aug 63, CH. Depression in fallen tree trunk along road; water clear; full sun. *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group.

164. Puntarenas, Villa Neily (17PKV8656), 50m; 6 Aug 63, CH. Adults indoors. *Cx. (Cux.) quinquefasciatus*.

## CR Collection Records

165. Puntarenas, about 1.5km S of Villa Neily (17PKV8654), 20m; 7 Aug 63, CH. Ground pool in gravel road in tropical wet forest; water temporary, clear, stagnant, fresh; no vegetation; bottom with mud and gravel; full sun. *Cx. (Cux.) coronator* group.
166. Puntarenas, Villa Neily (17PKV8656), 50m; 6 Aug 63, CH. Cut or broken bamboo; 0.7m above ground; water turbid; deep shade. *Wy. (Pen.) arthrostigma*, *Wy. (Tri.) aporonoma*.
167. Puntarenas, Villa Neily (17PKV8656), 50m; 6 Aug 63, CH. Cut or broken bamboo. *Cx. (Car.) antunesi*, *Hg. (Hag.) iridicolor*, *Sa. (Sbn.) undosus*, *Wy. (Tri.) aporonoma*.
168. Puntarenas, 4.3km N of Villa Neily, Rio Cano Seco (17PKV8559), 150m; 8 Aug 63, CH. Adult at light (Coleman lantern) in second growth along river; 2200hrs; about 18°C, clear, still. *Ae. (Och.) taeniorhynchus*.
169. Heredia, "Los Diamantes"; 9 Aug 63, HJ. Attached cacao pod in cacao plantation. *Tr. (Trc.) digitatum*.
170. Puntarenas, Osa Peninsula, "Lagoon, Osa Prod. Forest"; 17 Aug 62, FT. Larval collection. *Cx. (Cux.) coronator* group.
171. Puntarenas, El Roble, near Boca del Rio Barranca (16PGG4802), near sea level; 2 Aug 62, FT. Mixed larval and adult collections. *Cx. (Cux.) inflictus* group, *Cx. (Cux.) nigripalpus*, *Cx. (Cux.) quinquefasciatus*, *Cx. (Mel.) egcymon*, *Cx. (Mel.)* sp undetermined.
172. Puntarenas, near Golfito; 9 Jul-1 Aug 57, AM, FT. Mixed larval and adult collections. *Ae. (Och.) angustivittatus*, *Ps. (Jan.) ferox*, *Sa. (Sab.) cyaneus*, *Tx. (Lyn.) hypoptes*, *Tr. (subg. A) ulopus*, *Tr. (Trc.) digitatum*.
173. Puntarenas, Coto Brus, Finca Gromaco (17PKV7190), 350m; 24 Aug 62, RC. Larval collection. *Cx. (Cux.) coronator* group, *Cx. (Lut.)* sp undetermined.
174. Puntarenas, Coto Brus, Finca Gromaco (17PKV7190), 350m; 25 Jan 63, KA. Artificial container (concrete) in domestic area; water colored; no vegetation; bottom with decaying vegetation; partial shade. *Cx. (Cux.) coronator* group.
175. San Jose, San Jose, University of Costa Rica (16PHF2399), 1200m; 14 Jun 64, CH. Large treehole in domestic area; 2m above ground; bottom with decaying vegetation; partial shade. *Ae. (Pro.) homoeopus*, *Cx. (Cux.) ?pinarocampa*, *Cx. (Cux.) quinquefasciatus*.
176. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 20 Jun 64, CH. Small treehole in domestic area; 1m above ground; abundant herbaceous vegetation (growing in hole); deep shade. *Cx. (And.) restrictor*, *Cx. (Cux.) declarator* group.
177. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 21 Jun 64, CH. Small treehole (in guava) in domestic area; 1m above ground; water clear; bottom with decaying vegetation; partial shade. *Hg. (Hag.) iridicolor*, *Wy. (Tri.) aporonoma*.
178. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 21 Jun 64, CH. Small treehole (in guava) in domestic area; water clear; bottom with dead leaves; partial shade. *Hg. (Hag.) iridicolor*.
179. San Jose, Hortensia, 14.5km N of San Isidro del General on Natl. Rt. 2 (17PKA0247), 1500m; 22 Jun 64, CH. Small ground pool in roadside fill; water temporary, clear, stagnant; no vegetation; bottom with sand; partial shade. *An.* sp undetermined, *Cx. (Mel.)* sp undetermined, *Ur. coatzacoalcos*.
180. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 23 Jun 64, CH. Artificial container (concrete pond) in domestic area; water permanent, clear, stagnant; abundant (in places) herbaceous and floating (*Pistia*) vegetation; bottom with decaying vegetation; partial shade. *An. (Ano.) apicimacula*, *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group, *Cx. (Cux.) declarator* group, *Cx. (Cux.) thriambus*, *Cx. (Lut.) allostigma*, *Cx. (Mel.) pilosus*, *Cx. (Mel.)* sp undetermined, *Sy.* sp undetermined.
181. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 23 Jun 64, CH. Adult biting man near artificial pond (same as in CR180) in domestic area; 1500hrs; 24°C, still, cloudy. *Ps. (Jan.) ferox*.
182. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 23 Jun 64, CH. Adult resting on rock near artificial pond (same as in CR180) in domestic area; 1500hrs; 24°C, still, cloudy. *Cx. (Cux.) corniger*.

## CR Collection Records

183. San Jose, San Isidro del General, Motel El Prado (17PKA0237), 750m; 24 Jun 64, CH. Cut or broken bamboo in domestic area; 0.1m above ground; water clear; deep shade. *Hg. (Hag.) iridicolor*, *Li. durhamii*, *Wy. (Pen.) arthrostigma*, *Wy. (Tri.) aporonomia*.
184. San Jose, 9km (on map) E of San Isidro del General, Santa Elena, Alexander Scutch's finca (17PKA1135?), 830m; 25 Jun 64, CH. Adults biting-landing on man along trail in tropical moist forest; 1100hrs; warm, still. *Ps. (Jan.) albipes*.
185. San Jose, Bajo La Hondura, 26.4km N of San Jose on Rt. 220, "Rio Claro" (17PJB7415), 1000m; 30 Jun 64, CH. Small ground pool in marshy depression; water temporary, clear, stagnant; abundant herbaceous and grassy vegetation; bottom with mud; full sun. *Cx. (Cux.) thriambus*.
186. Heredia, Uvita, Volcan Barba, Alto del Roble on Rt. 113 (16PHG2016), 2100m; 20 Jul 64, CH. Small ground pool in partially cut lower montane wet forest; water permanent, clear, stagnant; no vegetation; bottom with mud, decaying vegetation; deep shade. *Cx. (Ncx.)* sp 28, *Cs. (Cus.) ?dugesii*.
187. Guanacaste, 5km N and 8km W (on map) of Liberia, Rio Colorado, Hacienda Coyolar (16PFG 6279), 60m; 6 Aug 64, CH. Rockhole along river; water turbid; no vegetation; partial shade. *Cx. (Cux.) corniger*, *Cx. (Cux.)* sp undetermined.
188. Heredia, Puerto Viejo (16PHG2757), 80m; 15 Aug 64, CH. Adults landing in hotel room; 0900hrs; cool, cloudy, humid. *Cx. (Cux.) quinquefasciatus*, *Ps. (Jan.) ferox*.
189. Heredia, Puerto Viejo (16PHG2757), 80m; 15 Aug 64, CH. Cut bamboo in domestic area; 1m above ground; water clear; deep shade. *Cx. (Cux.) coronator* group.
190. Heredia, Puerto Viejo (16PHG2757), 80m; 15 Aug 64, CH. Cut bamboo in domestic area; 1m above ground; water clear; deep shade. *Li. durhamii*, *Wy. (Pen.) arthrostigma*, *Wy. (Tri.) aporonomia*.
191. Heredia, Puerto Viejo (16PHG2757), 80m; 15 Aug 64, CH. Small ground pool (road rut) in domestic area; water turbid, stagnant; no vegetation; bottom with mud; full sun. *Cx. (Cux.) coronator* group.
192. Heredia, 1km N of Puerto Viejo (16PHG2758), 80m; 16 Aug 64, CH. Adults biting-landing on man at edge of tropical wet forest; 1700hrs; warm, cloudy, still. *Ps. (Jan.) albipes*, *Ps. (Jan.) ferox*.
193. Heredia, Puerto Viejo (16PHG2757), 80m; 16 Aug 64, CH. Adult landing in hotel room; 1900hrs; warm, cloudy. *Cx. (Lut.) allostigma*.
194. Alajuela, Cinchona, Volcan Poas, Rio Angel, about 0.2km N of El Angel Falls (16PHG0731?), 1500m; 19 Aug 64, CH. Depression in fallen tree stump near stream in deep canyon with partial forest (lower montane rain forest); water clear; bottom with decaying vegetation; partial shade. *Cx. (Mel.) ?garcesi*, *Cx. (Ncx.)* sp 13, *Cx. (Ncx.)* sp 28, *Ur. ?coatzaocalcos*.
195. Guanacaste, Nicoya Peninsula, Samara (16PFF6192), near sea level; 23 Aug 64, CH, EM. Large crabhole at base of guava tree along road in second growth; water turbid, fresh; bottom with mud; deep shade. *Cx. (Cux.) inflictus* group, *De. pseudes*.
196. Guanacaste, Nicoya Peninsula, Samara (16PFF6192), near sea level; 23 Aug 64, CH, EM. Small treehole in second growth; water clear; deep shade. *Ae. (Pro.) podographicus*, *Hg. (Hag.) equinus*, *Or. fascipes*.
197. Guanacaste, Nicoya Peninsula, Samara (16PFF6192), near sea level; 23 Aug 64, CH, EM. Small treehole in second growth; water clear; deep shade. *Ae. (Pro.) podographicus*, *Tx. (Lyn.) moctezuma*.
198. Guanacaste, Nicoya Peninsula, Samara (16PFF6192), near sea level; 23 Aug 64, CH, EM. Adults resting in crabhole (same as in CR195); 1330hrs; cloudy, cool. *De. pseudes*.
199. Guanacaste, Nicoya Peninsula, Samara (16PFF6192), near sea level; 23 Aug 64, CH. Adults biting-landing on man in grassy area near sea. *Ae. (Och.) taeniorhynchus*.
200. Cocos Island, Chatham Bay (about 5°33'N, 87°03'W); 8 Apr 64, RS. Adult and larval collections. *Cx. (Cux.) dohenyi*, *Wy.* sp undetermined.
201. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole (larvae, and adults resting inside); water turbid, brackish; bottom with mud; partial shade; 0710hrs. *De. pseudes*, *Ps. (Jan.) ferox*.

## CR Collection Records

202. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole (larvae, and adults resting inside); water turbid, brackish; bottom with mud, partial shade; 0715hrs. *Ae. (Och.) serratus* group, *De. pseudes*.
203. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole; water turbid, brackish; bottom with mud; partial shade. *De. pseudes*.
204. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole (larvae, and adults resting inside); water turbid, brackish; bottom with mud; partial shade; 0730hrs. *De. pseudes*.
205. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole; water turbid, brackish; bottom with mud; partial shade. *De. pseudes*.
206. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole (larvae, and adults resting inside); 0730hrs. *De. pseudes*, *Ps. (Jan.) ferox*.
207. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole (larvae, and adult resting inside); 0740hrs. *De. pseudes*.
208. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Small crabhole (larvae, and adult resting inside). *De. pseudes*.
209. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole. *De. pseudes*.
210. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole. *De. pseudes*.
211. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Small crabhole. *De. pseudes*.
212. Guanacaste, El Coco, swamp about 100m behind motel at El Coco beach (16PFG4266), near sea level; 1 Sept 65, WH. Large crabhole. *De. pseudes*.
213. Guanacaste, Tronadora, 12km E of Tilaran on Rt. 150 (16PGG3160?), 540m; 3 Sept 65, WH. Epiphytic bromeliad in grazing area; partial shade. *Cx. (Mcx.)* sp undetermined.
214. Guanacaste, Tronadora, 12km E of Tilaran on Rt. 150 (16PGG3160?), 540m; 3 Sept 65, WH. Epiphytic bromeliad in grazing area; 8m above ground; partial shade. *Cx. (Mcx.)* sp undetermined, *Wy. (Wyo.) pertinans* group sp U.
215. Guanacaste, Tronadora, 12km E of Tilaran on Rt. 150 (16PGG3160?), 540m; 8 Sept 65, WH. Epiphytic bromeliad in grazing area; 6m above ground; partial shade. *Cx. (Mcx.)* sp undetermined.
216. Guanacaste, Tronadora, 12km E of Tilaran on Rt. 150 (16PGG3160?), 540m; 8 Sept 65, WH. Epiphytic bromeliad in grazing area; 8m above ground; partial shade. *Cx. (Mcx.)* sp undetermined.
217. Heredia, 0.2km from Puerto Viejo, pasture to left of road to Rio Sarapiqui (16PHG2757), 80m; 8 Sept 65, WH. Epiphytic bromeliad in grazing area; 5m above ground; partial shade. *Cx. (Cux.)* sp undetermined, *Cx. (Mcx.)* sp undetermined.
218. Heredia, 0.4km from Puerto Viejo, on road to "Semiramis Bar" (16PHG2757), 80m; 8 Sept 65, WH. Bromeliad. *Cx. (Mcx.)* sp undetermined, *Tx. (Lyn.) superbus*, *Wy. (Hys.)* sp undetermined.
219. Heredia, 0.4km from Puerto Viejo, on road to "Semiramis Bar" (16PHG2757), 80m; 8 Sept 65, WH. Epiphytic bromeliad at edge of tropical wet forest; 6m above ground; partial shade. *Cx. (Mcx.)* sp undetermined, *Wy. (Wyo.) pertinans* group sp U.
220. Heredia, 0.4km from Puerto Viejo, on road to "Semiramis Bar" (16PHG2757), 80m; 8 Sept 65, WH. Epiphytic bromeliad at edge of tropical wet forest; 8m above ground; partial shade. *Ae. (How.)* sp undetermined, *Cx. (Mcx.)* sp undetermined, *Wy. (Wyo.) pertinans* group.
221. Heredia, 0.4km from Puerto Viejo, on road to "Semiramis Bar" (16PHG2757), 80m; 8 Sept 65, WH. Epiphytic bromeliad at edge of tropical wet forest; 6m above ground; partial shade. No specimens.

## CR Collection Records

222. Heredia, 0.2km from Puerto Viejo, pasture to left of road to Rio Sarapiqui (16PHG2757), 80 m; 9 Sept 65, WH. Epiphytic bromeliad in grazing area; 6m above ground; partial shade. *Cx. (Cux.)* sp undetermined.
223. Heredia, 0.2km from Puerto Viejo, pasture to left of road to Rio Sarapiqui (16PGH2757), 80 m; 9 Sept 65, WH. Epiphytic bromeliad (larvae, and adults resting on) in grazing area near stream; 3m above ground; partial shade; 0820hrs. *Cx. (Mcx.)* sp undetermined, *Ps. (Jan.) ferox*, *Wy. (Wyo.) pertinans* group sp B.
224. Heredia, 0.2km from Puerto Viejo, pasture to left of road to Rio Sarapiqui (16PHG2757), 80 m; 9 Sept 65, WH. Epiphytic bromeliad in grazing area near stream; 8m above ground; partial shade. *Wy. (Wyo.) pertinans* group.
225. Heredia, 0.2km from Puerto Viejo, pasture to left of road to Rio Sarapiqui (16PHG2757), 80 m; 9 Sept 65, WH. Epiphytic bromeliad in grazing area near stream; 5m above ground; partial shade. *Cx. (Mcx.)* sp undetermined, *Wy. (Wyo.) pertinans* group.
226. Heredia, 0.8km from Puerto Viejo, hill to left of road to "Semiramis Bar" (16PHG2757), 80 m; 9 Sept 65, WH. Epiphytic bromeliad at edge of tropical wet forest; 6m above ground; deep shade. *Wy. (Wyo.) pertinans* group.
227. Heredia, 0.8km from Puerto Viejo, hill to left of road to "Semiramis Bar" (16PHG2757), 80 m; 9 Sept 65, WH. Epiphytic bromeliad at edge of tropical wet forest; 6m above ground; deep shade. *An. (Ker.) neivai*, *Wy. (Wyo.) pertinans* group.
228. Heredia, 0.8km from Puerto Viejo, hill to left of road to "Semiramis Bar" (16PHG2757), 80 m; 9 Sept 65, WH. Epiphytic bromeliad at edge of tropical wet forest; 6m above ground; deep shade. *Cx. (Mcx.)* sp undetermined, *Wy. (Wyo.) pertinans* group sp B.
229. Limon, about 10km S of Guapiles on road to San Jose (17PJB9321?), 600m; 11 Sept 65, WH. Epiphytic bromeliad in tropical wet forest; 4m above ground; deep shade. *Lz.* sp 2, *Wy. (Hys.)* sp H, *Wy. (Wyo.) pertinans* group, *Wy. (Wyo.)* sp 58.
230. Limon, about 10km S of Guapiles on road to San Jose (17PJB9321?), 600m; 11 Sept 65, WH. Epiphytic bromeliad in tropical wet forest; 2m above ground; deep shade. *An. (Ker.) neivai*.
231. Limon, about 10km S of Guapiles on road to San Jose (17PJB9321?), 600m; 11 Sept 65, WH. Epiphytic bromeliad in tropical wet forest; 3m above ground; deep shade. *An. (Ker.) neivai*, *Lz.* sp 2, *Wy. (Wyo.) pertinans* group.
232. Heredia, 0.8km from Puerto Viejo, on road to "Semiramis Bar" (16PHG2757), 80m; 9 Sept 65, WH. Fallen banana leaf in cultivated area; water clear; partial shade. *Li. durhamii*.
- 232A. Data not known but probably the same as 232. Contamination of 232 from bromeliad. *Cx. (Mcx.)* sp undetermined, *Wy. (Wyo.) pertinans* group sp X.
233. Puntarenas, El Roble, Boca del Rio Barranca, "Hotel Chanita" (16PGG482017), near sea level; 19 Jun 67, CH. Adult at light (15watt, ultraviolet) in domestic area near mangroves; 2000-2100hrs. *De. pseudes*.
234. Puntarenas, El Roble, Boca del Rio Barranca, near Quebrada Bomba Vieja (16PGG482017), near sea level; 23 Jun 67, CH. Depression in fallen tree near stream and mangroves; water turbid, brown, fresh; bottom with leaves, sticks; partial shade. Specimens not available.
235. Puntarenas, El Roble, Boca del Rio Barranca, near Quebrada Bomba Vieja (16PGG482017), near sea level; 26 Jun 67, CH. Large crabhole in bank of stream in grazing area near mangroves; water gray, fresh (40ppm Cl<sup>-</sup>); bottom with mud; partial shade. *De. pseudes*.
236. Puntarenas, El Roble, Boca del Rio Barranca (16PGG482017), near sea level; 5 Jul 67, CH. Large treehole in cultivated area; water brown; abundant flotage; deep shade. Specimens not available.
237. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero (16PGG489013), near sea level; 6 Jul 67, CH. Large crabhole along road in mangroves; water black, salty (13,200ppm Cl<sup>-</sup>); bottom with mud; deep shade. *De. pseudes*.
238. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero (16PGG489013), near sea level; 6 Jul 67, CH. Adults resting in crabholes (of *Ucides occidentalis*) in mangroves below high tide line; deep shade; 0900-0930hrs. *De. nicoyae*, *De. pseudes*.

## CR Collection Records

239. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero (16PGG489013), near sea level; 6 Jul 67, CH. Adults resting in crabholes (of *Cardisoma crassum*) in mangroves above high tide line; partial shade; 0830hrs. *De. pseudes*.
240. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero (16PGG489013), near sea level; 10 Jul 67, CH. Adults resting in crabholes (of *Ucides occidentalis*) in mangroves mostly below high tide line; 0900hrs; deep shade. *De. nicoyae*, *De. pseudes*.
241. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero (16PGG489013), near sea level; 10 Jul 67, CH. Large crabholes (of *Cardisoma crassum* and *Ucides occidentalis*) in mangroves; water clear, gray; bottom with mud, dead plant matter; partial shade. *De. pseudes*.
242. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero (16PGG489013), near sea level; 10 Jul 67, CH. Large crabholes (of *Cardisoma crassum* and *Ucides occidentalis*) in mangroves; water clear, gray; bottom with mud and dead plant matter; partial shade. *De. pseudes*.
243. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero (16PGG489013), near sea level; 10 Jul 67, CH. Large crabholes (of *Cardisoma crassum* and *Ucides occidentalis*) in mangroves; water gray; bottom with mud, dead plant matter; partial shade. *De. pseudes*.
244. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 20 Jun 67, CH. Small crabhole in grazing area near sea; water turbid; full sun. *De. pseudes*.
245. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 26 Jun 67, CH. Large crabhole in bare area near grazing area and sea; full sun. Specimens not available.
246. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 4 Jul 67, CH. Large crabhole in bare area near grazing area and sea; full sun. Specimens not available.
247. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 28 Jun 67, CH. Large crabhole. Specimens not available.
248. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 28 Jun 67, CH. Large crabhole. *De. pseudes*.
249. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 12 Jul 67, CH. Large crabhole. Specimens not available.
250. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 12 Jul 67, CH. Large crabhole. Specimens not available.
251. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 12 Jul 67, CH. Large crabhole. *De. pseudes*.
252. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 6 Jul 67, CH. Large crabhole. *De. pseudes*.
253. Puntarenas, El Roble, Boca del Rio Barranca (16PGG480021), near sea level; 6 Jul 67, CH. Large crabhole. *De. pseudes*.
254. Puntarenas, Caldera, Boca del Rio Barranca, Estero el Mero, "LCBA station no. 9" (16PGG489013?), near sea level; 11 Feb 69, BB, CH. Crabholes (25, of *Ucides occidentalis*) in mangroves; 0815-1115hrs. *De. nicoyae* (holotype), *De. pseudes*.
- 255-259. Apparently not used.
260. Cartago, Orosi, 4km SE of bridge at Tapanti over Rio Grande de Orosi on E side of river (17PJ A945789), 1240m; 17 Jul 71, JB. Roadside ditch fed by seepage in grazing area near river; water permanent, clear, with moderate current; abundant algae, grassy and herbaceous vegetation; bottom with mud, dead plant matter; full sun. *Dx.* sp undetermined.
261. Cartago, Orosi, 4km SE of bridge at Tapanti over Rio Grande de Orosi on E side of river (17PJ A945789), 1240m; 17 Jul 71, JB, SH. Animal tracks in grazing area near river; water temporary-semipermanent, clear, with slow or no current; choked with grass; bottom with mud, dead plant matter; full sun. *Cx. (Cux.) thriambus*, *Ur. coatzacoalcos*.
262. Cartago, Orosi, 4km SE of bridge at Tapanti over Rio Grande de Orosi on E side of river (17PJ A945789), 1240m; 17 Jul 71, DH. Small ground pools at edge of river in grazing area; water permanent, clear, with slow current; abundant algae, grass; bottom with mud, some dead plant and animal matter; full sun. *Ur. typhlosomata*.



## CR Collection Records

263. Cartago, Orosi, 3km SE of bridge at Tapanti over Rio Grande de Orosi on E side of river (17PJ A944799), 1210m; 17 Jul 71, AB. Leaf axils of terrestrial aroid (leaves circular) in second growth between road and river; 0.5m above ground; water clear; full sun. *Ae. (How.) brevis*.
264. Cartago, Orosi, 3km SE of bridge at Tapanti over Rio Grande de Orosi on E side of river (17PJ A944799), 1210m; 17 Jul 71, JB. Ground pool (stock furrow for watering cattle) in grazing area between river and road; water semipermanent, clear, stagnant; some algae, grassy and herbaceous vegetation; bottom with mud, some dead plant and animal matter; full sun. *Cx. (Cux.)* sp 85, *Cx. (Mel.) ?garcesi*, *Cx. (Mel.) pilosus*.
265. Cartago, Orosi, 3km SE of bridge at Tapanti over Rio Grande de Orosi on E side of river (17PJ A944799), 1220m; 17 Jul 71, DH, SH. Leaf axils of terrestrial aroids (0.5-1.2m high) in dense second growth on steep slope; water clear; partial shade. *Ae. (How.) allotecnon*, *Ae. (How.) brevis*.
266. Cartago, Orosi, 3km SE of bridge at Tapanti over Rio Grande de Orosi on E side of river (17PJ A944799), 1220m; 17 Jul 71, SH. Leaf axils of terrestrial *Heliconia* (3m high, bracts red) in dense second growth on steep slope; water clear; partial shade. *Wy. (Dec.)* sp P, *Wy. (subg. A)* sp 61.
267. San Jose, San Jose, University of Costa Rica (16PHF2399), 1200m; 18 Jul 71, DH. Small tree-hole (30cm X 3cm) in domestic area; water clear; bottom with some dead plant matter. *Ae. (Pro.) homoeopus*.
268. Alajuela, Alajuela, Rio Segundo just E of Rt. 111 (16PHG072057), 880m; 18 Jul 71, DH. Cut bamboo in coffee plantation along stream; 0.3m above ground; water clear; bottom with dead plant matter; partial shade. *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthrostigma*.
269. Alajuela, Alajuela, Rio Segundo just E of Rt. 111 (16PHG072057), 880m; 18 Jul 71, DH. Small treehole (3cm wide) in coffee plantation near stream; 1m above ground; water clear; bottom with dead plant matter; partial shade. No specimens.
270. Alajuela, Alajuela, Rio Segundo just E of Rt. 111 (16PHG072057), 880m; 18 Jul 71, DH. Large treehole (opening 15 X 6cm) in coffee plantation near stream; 3m above ground; water very dark brown, pH=about 9; bottom with dead plant matter; partial shade. *Cx. (And.) restrictor*, *Or. kummi*.
271. Alajuela, Alajuela, Rio Segundo just E of Rt. 111 (16PHG072057), 880m; 18 Jul 71, DH. Cut bamboo in coffee plantation near stream; 0.3m above ground; water clear; bottom with dead plant matter; partial shade. *Ae. (Pro.) homoeopus*, *Cx. (Cux.) corniger*, *Hg. (Hag.) iridicolor*, *Ur. trapidoi*, *Wy. (Pen.) arthrostigma*.
272. San Jose, San Jose, Parque Bolivar (16PHF210998), 1150m; 18 Jul 71, JB. Small treehole (in crotch of large buttressed tree) in domestic area (park); bottom with leaves. *Ae. (Pro.) homoeopus*.
273. San Jose, San Jose, Parque Bolivar (16PHF210998), 1150m; 18 Jul 71, JB. Large treehole (in crotch) in domestic area (park); bottom with leaves. *Ae. (Pro.) homoeopus*.
274. Cartago, Orosi, courtyard in front of Orosi Church (17PJA867841), 1055m; 19 Jul 71, JB, SH. Large artificial container (round, concrete) in domestic area; water temporary, clear, foul; some algae, flo-tage; bottom with dead plant and animal matter; full sun. *An.* sp undetermined, *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group, *Cx. (Cux.)* sp undetermined.
275. Cartago, Orosi, cemetery at Orosi Church (17PJA867841), 1055m; 19 Jul 71, SH. Small arti-ficial container (flower vase) in domestic area; water temporary, clear; some algae; bottom with some dead plant matter; full sun. *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group.
276. Cartago, Orosi, edge of cemetery at Orosi Church (17PJA867841), 1055m; 19 Jul 71, JB. Small treehole at edge of domestic area; water dark; bottom with some dead plant matter; full sun. *Ae. (Pro.) homoeopus*.
277. Cartago, Orosi, edge of coffee plantation behind Orosi Church (17PJA866841), 1060m; 19 Jul 71, JB. Small treehole at edge of coffee plantation; water medium-colored; full sun. No specimens.
278. Cartago, Orosi, edge of coffee plantation near stream behind Orosi Church (17PJA866841), 1060m; 19 Jul 71, DH. Large epiphytic bromeliad at edge of coffee plantation near stream; 3m above ground; partial shade. *Cx. (Cux.) stenolepis*, *Cx. (Mcx.) jenningsi* group, *Cx. (Mcx.)* sp undetermined, *Or. phyllozoa*, *Tx. (Lyn.) superbus*, *Wy. (Wyo.) melanopus*, *Wy. (Wyo.) pertinans* group sp B.

## CR Collection Records

279. Cartago, Orosi, edge of coffee plantation near stream behind Orosi Church (17PJA866841), 1060m; 19 Jul 71, JB. Small epiphytic bromeliad at edge of coffee plantation near stream; 3m above ground; partial shade. *Wy. (Wyo.) pertinans* group sp B.
280. Cartago, Orosi, 1km S of Orosi Church on Rt. 224 (17PJA873833), 1070m; 19 Jul 71, JB. Large treehole along road in coffee plantation; water light-colored; partial shade. *Ae. (Pro.) terrens* group, *Cx. (And.) restrictor*.
281. Cartago, Orosi, 1km S of Orosi Church on Rt. 224 (17PJA873833), 1070m; 19 Jul 71, DH. Several treeholes along road in coffee plantation; water light-colored; partial shade. *Ae. (Pro.) homoeopus*.
282. Cartago, Volcan Irazu, San Juan de Chicao, 1km down private road of Hacienda de Montana (17PJB900021), 2800m; 21 Jul 71, DH. Large ground pool at edge of road in grazing area; water temporary, clear, stagnant; no vegetation; bottom with mud, some dead plant and animal matter; partial shade. *Cs. (Cus.) ?dugesi*.
283. Cartago, Volcan Irazu, San Juan de Chicao, 1km down private road of Hacienda de Montana (17PJB900021), 2800m; 21 Jul 71, JB, DH. Epiphytic bromeliads (many different ones at assorted heights) near road in grazing area; partial shade. *Ae. (How.) allotecnon*.
284. San Jose, Alajuelita, Rio Tiribi about 0.3km W of Rt. 110 bridge (16PHF177964), 1090m; 23 Jul 71, SH. Volcanic rockholes (several, 30-60cm wide, 10-35cm deep) all within 2m of river at edge of second growth; water temporary, turbid, stagnant; some algae; bottom with some mud, dead plant matter; full sun. *Ae. (Och.) fluviatilis*, *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group, *Cx. (Cux.) declarator* group.
285. San Jose, Alajuelita, Rio Tiribi about 0.3km W of Rt. 110 bridge (16PHF177964), 1090m; 23 Jul 71, SH. Volcanic rockhole (deep cleft in rocks, 2m long, 0.6m deep) along river at edge of second growth; water temporary, clear, stagnant, slightly foul; no vegetation; bottom with mud, dead plant matter; partial shade. *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group.
286. San Jose, Alajuelita, Rio Tiribi about 0.3km W of Rt. 110 bridge (16PHF177964), 1090m; 23 Jul 71, SH. Volcanic rockhole (single hole, 15cm wide, 5cm deep) along river at edge of second growth; water temporary, clear, stagnant, slightly foul; no vegetation; bottom with dead leaves, flowers; partial shade. *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group.
287. San Jose, Alajuelita, Rio Tiribi about 0.3km W of Rt. 110 bridge (16PHF177964), 1090m; 23 Jul 71, AB. Volcanic rockhole along river at edge of second growth; no vegetation; partial shade. *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group.
288. San Jose, Alajuelita, Rio Tiribi about 0.3km W of Rt. 110 bridge (16PHF177964), 1090m; 23 Jul 71, SH. Volcanic rockhole (small, shallow, fed by seepage) along river at edge of second growth; water semipermanent, clear, with very slow current; no vegetation; partial shade. *Cx. (Cux.) chidesteri*, *Cx. (Cux.) corniger*, *Ur. coatzacoalcos*.
289. San Jose, Alajuelita, Rio Tiribi about 0.6km W of Rt. 110 bridge (16PHF175965), 1090m; 23 Jul 71, SH. Epiphytic bromeliad (about 0.5m wide; leaves bright green, 7-10cm wide) in second growth at edge of river; 2m above ground; partial shade. *Ae. (How.) allotecnon*.
290. San Jose, Alajuelita, Rio Tiribi about 0.3km W of Rt. 110 bridge (16PHF177964), 1090m; 23 Jul 71, AB. Small volcanic rockhole along river at edge of second growth; water very dark; no vegetation; partial shade. *Cx. (Cux.) coronator* group.
291. San Jose, Alajuelita, Rio Tiribi about 0.3km W of Rt. 110 bridge (16PHF177964), 1090m; 23 Jul 71, AB. Volcanic rockhole along river at edge of second growth; no vegetation; partial shade. *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group.
292. San Jose, Alajuelita, Rio Tiribi about 0.6km W of Rt. 110 bridge (16PHF175965), 1090m; 23 Jul 71, AB. Epiphytic bromeliad (1m wide, same type as in CR289) in second growth at edge of river; 4 m above ground; partial shade. *Ae. (How.) allotecnon*, *Tx. (Lyn.) moctezuma*.
293. San Jose, Santa Ana, Rt. 121 just N of Santa Ana and S of Pozos (16PHG087001), 860m; 25 Jul 71, AB, SH. Broken bamboo in clump of bamboo along road near house; 5-30cm above ground; water clear; bottom with dead leaves; deep shade. *Cx. (Cux.) corniger*, *Cx. (Cux.)* sp undetermined, *Hg. (Hag.) iridicolor*.

## CR Collection Records

294. San Jose, Santa Ana, Rt. 121 Just N of Santa Ana and S of Pozos (16PHG087001), 860m; 25 Jul 71, DH. Small treehole (25cm deep, in small fence post tree) at edge of maize field; 1m above ground; water clear. No specimens.

295. Alajuela, Ciruelas, 1km W of San Antonio and 4.0km E of Ciruelas on Rt. 124 (16PHG034057), 860m; 27 Jul 71, SH. Cut or broken bamboo along road near stream in domestic area; water muddy, foul; partial shade. *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthrostigma*.

296. Alajuela, Ciruelas, Rio Ciruelas S of railroad trestle and N of Rt. 124 bridge (16PHG009039), 780m; 27 Jul 71, AB. Rockhole along river at edge of second growth; water clear; no vegetation; deep shade. *Ae. (Och.) epactius*.

297. San Jose, San Jose, Rio Torres at Natl. Rt. 3 (16PHG174004), 1060m; 28 Jul 71, AB. Cut or broken bamboo at edge of river in second growth near domestic area; water clear; bottom with some dead plant matter; deep shade. *Wy. (Pen.) arthrostigma*.

298. Heredia, 1km E of San Rafael, Rio Turales at Rt. 112 (16PHG191088), 1310m; 28 Jul 71, SH. Volcanic streamside rockholes (several holes in same area) in grazing area; water temporary, clear, stagnant; some algae; partial shade. *Cx. (Cux.) coronator* group.

299. Heredia, 1km E of San Rafael, Rio Turales at Rt. 112 (16PHG191088), 1310m; 28 Jul 71, SH. Small shallow ground pool at edge of road in grazing area; water temporary (rainwater), muddy, stagnant; no vegetation; bottom with mud; full sun. *Cx. (Cux.) coronator* group.

300. San Jose, 4km E of San Isidro de Coronado on Rt. 216 (17PJB723047), 1520m; 30 Jul 71, DH, SH. Roadside ditch in grazing area; water semipermanent, clear, with slow current; abundant algae, grassy and herbaceous vegetation; bottom with mud, rock, some dead plant and animal matter; full sun. *Cx. (Cux.) corniger*, *Cx. (Cux.) thriambus*, *Cx. (Cux.)* sp 72.

301. San Jose, San Isidro de Coronado, 5km E of Rt. 216 junction on Natl. Rt. 6 and 0.2km N on road to Calle Durazno, just NW of bridge over Rio Durazno (17PJB732034), 1570m; 30 Jul 71, SH. Large artificial container (old car part) in second growth near road and river; water temporary, clear, foul; no vegetation except leaves on surface; bottom with dead leaves; partial shade. *Cx. (Cux.) pinarocampa*.

302. San Jose, San Isidro de Coronado, 5km E of Rt. 216 junction on Natl. Rt. 6 and 0.4km N on road to Calle Durazno (17PJB732036), 1600m; 30 Jul 71, AB. Roadside ditch in grazing area; water semipermanent, clear, foul, with slow current; abundant grassy and herbaceous vegetation; bottom with mud, rock; partial shade. *Cx. (Cux.) coronator* group, *Cx. (Cux.) thriambus*, *Cs. (Cus.) ?dugesi*, *Ur. coat-zacoalcos*.

303. San Jose, San Isidro de Coronado, 5km E of Rt. 216 junction on Natl. Rt. 6 and 0.2km N on road to bridge over Rio Durazno, about 0.3km W of bridge (17PJB729035), 1540m; 30 Jul 71, SH. Ground pool (between boulders about 1m from river; 0.5 X 1.3m wide, 0.5m deep; fed by seepage from steep river bank) at edge of grazing area; water temporary, fresh, very clear, with very slow current; small amount of algae on rocks at water line, no other vegetation; bottom with sand, rock, no organic matter; full sun. *Dx.* sp 2.

304. Alajuela, Turrucare, Calle del Coyol (turnoff S from Natl. Rt. 11, 0.5km E of Santa Rosa) at Rio Alajuela (16PGG947054), 650m; 31 Jul 71, SH. Streamside rockholes (several small-medium) in cultivation-grazing area; water temporary, clear, turbid, stagnant; no vegetation; bottom with much dead plant matter; partial shade. *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group.

305. Alajuela, Turrucare, Calle del Coyol (turnoff S from Natl. Rt. 11, 0.5km E of Santa Rosa) at Rio Alajuela (16PGG947054), 650m; 31 Jul 71, AB. Adults resting in hole in ground in cultivation-grazing area; 1200hrs; partial shade. *Cx. (Mel.)* sp undetermined.

306. Alajuela, 0.5km N of Turrucare, Rt. 136 at Rio Siquiare (16PGG942026), 625m; 31 Jul 71, SH. Streamside rockhole in second growth near domestic area; water temporary, pale yellow, stagnant, slightly foul; no vegetation; bottom with dead leaves; partial shade. *Cx. (Mel.) trifidus*.

307. Alajuela, Turrucare, Rt. 133 bridge over Rio Alajuela (16PGG913027), 490m; 31 Jul 71, SH. Adult flying inside parked car. *Sa. (Sbo.) chloropterus*.

308. Alajuela, Turrucare, Rio Alajuela a short distance W of Rt. 133 bridge (16PGG912027), 480 m; 31 Jul 71, AB, SH. Streamside rockholes in grazing area; water temporary, dark, stagnant, foul; no vegetation; bottom with dead plant matter; partial shade. *Ae. (Och.) euplocamus*, *Cx. (Cux.) corniger*,

## CR Collection Records

*Cx. (Cux.) declarator* group, *Cx. (Cux.) thriambus*, *Cx. (Cux.)* sp 72, *Ur. trapidoi*.

309. Alajuela, Turrucare, Rt. 133 where it crosses small stream about 1km S of junction with Natl. Rt. 11 (16PGG915039), 510m; 31 Jul 71, AB, SH. Volcanic streamside rockholes (several, small) in grazing area; water temporary, clear, stagnant; no vegetation; bottom with dead plant matter; partial shade. *Ae. (Och.) euplocamus*, *Cx. (Mel.)* sp undetermined.

310. Cartago, Cangreja, Natl. Rt. 2, 1.6km N of turnoff to San Cristobal Norte (17PJA723834), 1920m; 1 Aug 71, DH, SH. Epiphytic bromeliads (several, in various positions and exposures) in grazing area along road. *Ae. (How.) allotecnon*, *Ae. (How.) quadrivittatus*, *Ae. (How.) spinosus*, *Cx. (Mca.) erethyzofer*.

311. Cartago, Cangreja, Natl. Rt. 2, 1.6km N of turnoff to San Cristobal Norte (17PJA723834), 1915m; 1 Aug 71, DS. Stream margin in wooded gully in grazing area; water clear, with slow current; some grassy vegetation; bottom with mud, sand; partial shade. *Dx.* sp 3.

312. Cartago, 4.7km NW of El Empalme on Natl. Rt. 2 (17PJA741782), 2010m; 1 Aug 71, SH. Very small stream in grazing area; water semipermanent, clear, with slow current; abundant algae, grass, watercress; bottom with mud, some dead plant matter; partial shade. *Cs. (Cus.) ?dugesi*, *Dx.* sp 3.

313. Cartago, 4.7km NW of El Empalme on Natl. Rt. 2 (17PJA741782), 2010m; 1 Aug 71, SH. Pool in very small stream in grazing area; water semipermanent, clear, stagnant; some algae, grass, herbaceous vegetation; bottom with much dead plant matter; partial shade. *Cs. (Cus.) ?dugesi*.

314. Cartago, 4.7km NW of El Empalme on Natl. Rt. 2 (17PJA741782), 2010m; 1 Aug 71, SH. Epiphytic bromeliad (0.3m wide) in grazing area; partial shade. *Ae. (How.) quadrivittatus*, *Ae. (How.) spinosus*, *Cx. (Mca.) erethyzofer*.

315. Cartago, 4.7km NW of El Empalme on Natl. Rt. 2 (17PJA741782), 2010m; 1 Aug 71, DS. Margin of small stream in grazing area; water semipermanent, clear, with slow current; abundant grass; bottom with mud, dead plant matter; partial shade. *An. (Ano.) eiseni*, *Cs. (Cus.) ?dugesi*, *Dx.* sp 3.

316. Cartago, 4.7km NW of El Empalme on Natl. Rt. 2 (17PJA741782), 2010m; 1 Aug 71, DS. Animal tracks along small stream in grazing area; water stagnant; no vegetation; bottom with mud; partial shade. *Cx. (Cux.) thriambus*.

317. Cartago, 4.7km NW of El Empalme on Natl. Rt. 2 (17PJA741782), 2010m; 1 Aug 71, DS. Marshy depression in grazing area; water semipermanent, clear, stagnant; abundant grass, reeds; partial shade. *Cx. (Ncx.)* sp 28, *Cs. (Cus.) ?dugesi*, *Dx.* sp 3.

318. Cartago, 4.7km NW of El Empalme on Natl. Rt. 2 (17PJA741782), 2010m; 1 Aug 71, DS. Epiphytic bromeliad in grazing area; partial shade. *Ae. (How.) allotecnon*.

319. Alajuela, 9.5km W of Atenas and 3.9km E of Desmonte on new section of Natl. Rt. 11 where small stream crosses road (16PGG7903), 800m; 2 Aug 71, SH. Streamside rockhole (small, shallow) in wooded grazing area; water temporary, clear, stagnant; no vegetation; bottom with many dead leaves; deep shade. *Cx. (Cux.) thriambus*, *Ur. coatzacoalcos*, *Ur. trapidoi*.

320. Alajuela, 9.5km W of Atenas and 3.9km E of Desmonte on new section of Natl. Rt. 11 where small stream crosses road, about 0.2km upstream (16PGG7903), 800m; 2 Aug 71, SH. Cut bamboo near stream in wooded grazing area; water clear; bottom with dead leaves; partial shade. *Hg. (Hag.) iridicolor*.

321. Alajuela, 9.5km W of Atenas and 3.9km E of Desmonte on new section of Natl. Rt. 11 where small stream crosses road, about 0.2km upstream (16PGG7903), 800m; 2 Aug 71, DS. Adults biting-landing on man in wooded grazing area near stream; 1130-1300hrs; partial shade, sky overcast. *Hg. (Hag.) iridicolor*, *Sa. (Sbo.) chloropterus*, *Wy. (Pen.) arthrostigma*.

322. Alajuela, 9.5km W of Atenas and 3.9km E of Desmonte on new section of Natl. Rt. 11 where small stream crosses road, about 0.2km upstream (16PGG7903), 800m; 2 Aug 71, DS. Cut bamboo (single internode) near stream in wooded grazing area; 0.5m above ground; water clear; partial shade. *Hg. (Hag.) iridicolor*.

323. Alajuela, 9.5km W of Atenas and 3.9km E of Desmonte on new section of Natl. Rt. 11 where small stream crosses road, about 0.2km upstream (16PGG7903), 800m; 2 Aug 71, DS. Cut bamboo (single internode) near stream in wooded grazing area; 0.3m above ground; partial shade. *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthrostigma*.

## CR Collection Records

324. Alajuela, 9.5km W of Atenas and 3.9km E of Desmonte on new section of Natl. Rt. 11 where small stream crosses road, about 0.2km upstream (16PGG7903), 800m; 2 Aug 71, DS. Cut bamboo (single internode) near stream in wooded grazing area; 0.1m above ground; partial shade. *Hg. (Hag.) iridicolor*.

325. Alajuela, 9.5km W of Atenas and 3.9km E of Desmonte on new section of Natl. Rt. 11 where small stream crosses road, about 0.2km upstream (16PGG7903), 800m; 2 Aug 71, DS. Cut bamboo (single internode) near stream in wooded grazing area; 0.3m above ground; partial shade. *Tx. (Lyn.) moctezuma*.

326. Alajuela, 9.5km W of Atenas and 3.9km E of Desmonte on new section of Natl. Rt. 11 where small stream crosses road, about 0.2km upstream (16PGG7903), 800m; 2 Aug 71, DS. Small treehole at edge of stream in wooded gully used for grazing; 0.6m above ground; water clear, volume less than 50ml; bottom with dead plant matter; partial shade. *Ae. (Pro.) heteropus*.

327. Alajuela, 9.5km W of Atenas and 3.9km E of Desmonte on new section of Natl. Rt. 11, downstream from road (16PGG7903), 800m; 2 Aug 71, AB. Streamside rockholes in wooded gully used for grazing. *Cx. (Mel.) elevator*, *Cx. (Mel.)* sp undetermined, *Cx. (Ncx.)* sp 13, *Ur. trapidoi*.

328. Alajuela, 12.5km W of Atenas and 0.8km E of Desmonte on Natl. Rt. 11 (16PGG7802), 600 m; 2 Aug 71, SH, DS. Uncut bamboo (2 internodes with longitudinal split and very narrow opening) along road in grazing area; partial shade. *Wy. (Pen.) arthrostigma*, *Wy. (Tri.) aporonoma*.

329. Alajuela, 12.5km W of Atenas and 0.8km E of Desmonte on Natl. Rt. 11 (16PGG7802), 600 m; 2 Aug 71, DS. Cut bamboo along road in grazing area; 5cm above ground; partial shade. *Wy. (Pen.) arthrostigma*.

330. Alajuela, 12.5km W of Atenas and 0.8km E of Desmonte on Natl. Rt. 11 (16PGG7802), 600 m; 2 Aug 71, AB. Cut bamboo along road in grazing area; partial shade. *Cx. (And.)* sp undetermined, *Wy. (Pen.) arthrostigma*.

331. San Jose, San Gabriel, 1.4km S of Vuelta de Jorco on road to and just before Monte Redondo (16PHF155836), 1210m; 4 Aug 71, AB, SH. Cut bamboo (several internodes) along road in coffee plantation; water clear; clogged with dead leaves; deep shade. *Ae. (Pro.) heteropus*, *Ae. (Pro.) homoeopus*, *Tx. (Lyn.) moctezuma*, *Wy. (Pen.) arthrostigma*.

332. San Jose, San Gabriel, 1.4km S of Vuelta de Jorco on road to and just before Monte Redondo (16PHF155836), 1210m; 4 Aug 71, AB. Adults taken sweeping near bamboo clump along road in coffee plantation. *Wy. (Pen.) arthrostigma*.

333. San Jose, San Gabriel, 1.4km S of Vuelta de Jorco on road to and just before Monte Redondo (16PHF155836), 1210m; 4 Aug 71, DS. Small treehole along road in coffee plantation; 3.5m above ground; water clear, volume less than 50ml; bottom with dead plant matter; partial shade. *Ae. (Pro.) homoeopus*.

334. San Jose, San Gabriel, 1.4km S of Vuelta de Jorco on road to and just before Monte Redondo (16PHF155836), 1210m; 4 Aug 71, DS. Small treeholes (6 holes in buttresses of large *Ficus*) along road in coffee plantation; water clear; bottom with mud, dead plant matter; partial shade. *Ae. (Pro.) daryi*, *Ae. (Pro.) homoeopus*.

335. San Jose, San Gabriel, Limonal (16PHF161819), 1080m; 4 Aug 71, SH, DS. Large treehole (opening wide, in fence post tree) along road in coffee plantation; 0.5m above ground; water light brown, volume about 4 l; bottom with dead leaves; partial shade. *Ae. (Pro.) ?heteropus*, *Ae. (Pro.) homoeopus*, *Cx. (And.) restrictor*, *Cx. (Cux.) pinarocampa*.

336. San Jose, San Gabriel, Limonal (16PHF161819), 1080m; 4 Aug 71, DS. Small treehole (in same tree as CR335) along road in coffee plantation; 5m above ground; water clear, volume about 50ml; bottom with dead plant matter; partial shade. *Tx. (Lyn.) ?moctezuma*.

337. San Jose, 2.3km N of Las Nubes on Rt. 216 shortly before Cascajal (17PJB7507), 1750m; 8 Aug 71, DS. Epiphytic bromeliad in grazing area; 4m above ground; partial shade. *Ae. (How.) allotecnon*, *Ae. (How.) quadrivittatus*, *Cx. (Mca.) erethyzonfer*.

338. San Jose, 2.3km N of Las Nubes on Rt. 216 shortly before Cascajal (17PJB7507), 1750m; 8 Aug 71, DS. Epiphytic bromeliad in grazing area; 5m above ground; partial shade. *Ae. (How.) allotecnon*, *Ae. (How.) quadrivittatus*.

## CR Collection Records

339. San Jose, 2.3km N of Las Nubes on Rt. 216 shortly before Cascajal (17PJB7507), 1750m; 8 Aug 71, DS. Epiphytic bromeliad in grazing area; 2.5m above ground; partial shade. *Ae. (How.) alloteconon*.
340. Alajuela, 0.8km N of gothic church in San Ramon on road to San Juan (16PGG7717), 1050m; 12 Aug 71, SH. Ditch along road in domestic-grazing area; water semipermanent, clear to slightly turbid, with moderate current; abundant grass, a little algae; bottom with mud, dead plant matter; full sun. *Ae. (Och.) angustivittatus*, *An. (Nys.) argyritarsis*.
341. Alajuela, 0.8km N of gothic church in San Ramon on road to San Juan (16PGG7717), 1050m; 12 Aug 71, SH. Pool in drying ditch along road in domestic area; water temporary, clear, stagnant; some grassy vegetation; bottom with mud, dead leaves; full sun. *Cx. (Cux.) thriambus*.
342. Alajuela, 0.8km N of gothic church in San Ramon on road to San Juan (16PGG7717), 1050m; 12 Aug 71, DS. Marshy stream margin in grazing area near road; water semipermanent, clear, with slow current; abundant grassy and herbaceous vegetation; bottom with mud; full sun. *Ae. (Och.) angustivittatus*, *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group, *Cx. (Cux.) thriambus*.
343. Alajuela, 4.7km N of gothic church in San Ramon on road to Angeles Sur, just NW of where road crosses Rio Barranca (16PGG7620), 1000m; 12 Aug 71, SH. Cut bamboo (2 freshly cut internodes) on slope near road in cultivated area (coffee, maize); water clear; bottom without mud or plant debris; partial shade. *Cx. (Car.) metempsytus*, *Hg. (Hag.) iridicolor*.
344. Alajuela, 4.7km N of gothic church in San Ramon on road to Angeles Sur, just NW of where road crosses Rio Barranca (16PGG7620), 1000m; 12 Aug 71, SH, DS. Cut bamboo (several old stumps) on slope near road in cultivated area (coffee, maize); water clear; without moss on sides; bottom with much mud, plant debris; partial shade. *Ae. (Pro.) daryi*, *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthrostigma*.
345. Alajuela, 4.7km N of gothic church in San Ramon on road to Angeles Sur, just NW of where road crosses Rio Barranca (16PGG7620), 1000m; 12 Aug 71, SH, DS. Cut bamboo (several old stumps) on slope near road in cultivated area (coffee, maize); water clear; moss on rims and outside of stumps; bottom with much mud, plant debris; partial shade. *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthrostigma*.
346. Alajuela, San Ramon, Restaurant El Parqueo on Natl. Rt. 1 in town (16PGG7715), 1050m; 12 Aug 71, DS. Adult caught in spider web near light. *Cx. (Cux.)* sp undetermined.
347. Alajuela, San Ramon, near Restaurant El Parqueo on Natl. Rt. 1 in town (16PGG7715), 1050m; 12-13 Aug 71, DS. CDC light trap in small tree at edge of domestic area; 1.5m above ground; 1915-0600hrs. *Cx. (Cux.)* sp undetermined.
348. Alajuela, San Ramon, Natl. Rt. 1 in town (16PGG7615), 1070m; 13 Aug 71, SH. Adult flying inside car; 0600hrs. *Cx. (Cux.) quinquefasciatus*.
349. Alajuela, 3.4km W of San Ramon on Natl. Rt. 1, a short distance E of Magallanes (16PGG7414), 1100m; 13 Aug 71, DS. Epiphytic bromeliads (4 medium, 0.3-0.5m wide, 0.5m high; leaves to 10cm wide, medium green to reddish, apex abruptly acuminate) in grazing area; 2-3m above ground; partial shade. *Ae. (How.) alloteconon*, *Cx. (Cux.) stenolepis*, *Cx. (Mcx.) jenningsi* group.
350. Alajuela, 3.4km W of San Ramon on Natl. Rt. 1, a short distance E of Magallanes (16PGG7414), 1100m; 13 Aug 71, DS. Epiphytic bromeliad (1 large, 1m wide, 0.6m high; leaves medium green, to 15cm wide, gradually acuminate; old panicle inflorescence present) in grazing area; 5m above ground; partial shade. *Ae. (How.) alloteconon*, *Cx. (Cux.) stenolepis*, *Cx. (Mcx.) jenningsi* group, *Cx. (Mcx.)* sp undetermined.
351. Alajuela, 12.7km W of San Ramon on Natl. Rt. 1, about 3km E of Cambronero (16PGG702099), 770m; 13 Aug 71, SH. Wide shallow seepage from roadside bank in grazing area; water semipermanent, clear, with slow current; abundant filamentous algae, a little grass; bottom with mud; full sun. *Ur. geometrica*.
352. Alajuela, 12.7km W of San Ramon on Natl. Rt. 1, about 3km E of Cambronero (16PGG702099), 770m; 13 Aug 71, SH. Wide shallow seepage from roadside bank in grazing area; water semipermanent, clear, with slow current; choked with grasses; bottom with mud, much dead grass; full sun. *An. (Ano.) apicimacula*, *An. (Ano.) eiseni*, *Dx.* sp 1.
353. Alajuela, 12.7km W of San Ramon on Natl. Rt. 1, about 3km E of Cambronero (16PGG702099), 770m; 13 Aug 71, DS. Flooded area fed by seepage from roadside bank in grazing area; water tem-

## CR Collection Records

porary, clear, with slow current to stagnant; abundant herbaceous vegetation; bottom with mud, dead plant matter; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) thriambus*.

354. Alajuela, 12.7km W of San Ramon on Natl. Rt. 1, about 3km E of Cambronero (16PGG7020 99), 770m; 13 Aug 71, DS. Marshy depression in grazing area; water semipermanent, muddy, with slow current to stagnant, with some oil on surface; abundant grassy vegetation; bottom with mud, a little dead plant matter; full sun. *An.* sp undetermined.

355. Puntarenas, about 5km E of Esparta, 39.0km W of San Ramon on Natl. Rt. 1 (16PGG60306), 230m; 13 Aug 71, DS. Small treehole (in nance, *Byrsonima crassifolia*) in grazing area; 4m above ground; water turbid, brownish; bottom with debris; partial shade. *Ae. (Pro.) ?alboapicus*, *Ae. (Pro.) podographicus*, *Hg. (Hag.) anastasionis*.

356. Puntarenas, about 5km E of Esparta, 39.0km W of San Ramon on Natl. Rt. 1 (16PGG60306), 230m; 13 Aug 71, SH, DS. Small artificial containers (2 hollowed-out stones) in grazing area; water clear, volume about 1 l; moss at edges; bottom with dead leaves; partial shade. *Ae. (Pro.) podographicus*, *Cx. (Car.) urichii*, *Hg. (Hag.) iridicolor*.

357. Puntarenas, about 5km E of Esparta, 39.4km W of San Ramon on Natl. Rt. 1 (16PGG59906 7), 250m; 13 Aug 71, DS. Cut bamboo (1 internode cut on side) along road in domestic-grazing area. *Hg. (Hag.) equinus*, *Wy. (Pen.) arthrostroma*.

358. Puntarenas, about 5km E of Esparta, 39.4km W of San Ramon on Natl. Rt. 1 (16PGG59906 7), 250m; 13 Aug 71, DS. Cut bamboo (about 10 stumps) along road in domestic-grazing area. *Ae. (Pro.) podographicus*, *Hg. (Hag.) anastasionis*, *Hg. (Hag.) equinus*, *Hg. (Hag.) iridicolor*.

359. Puntarenas, about 5km E of Esparta, 39.4km W of San Ramon on Natl. Rt. 1 (16PGG59906 7), 250m; 13 Aug 71, DS. Small treehole (in fence post tree) along road in grazing area; 2.5m above ground; water volume about 0.3 l. *Ae. (Pro.) podographicus*.

360. Puntarenas, El Roble, 1.4km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4800 22), near sea level; 14 Aug 71, DS. Small treehole (in fence post tree) along road in domestic-grazing area; 1.5m above ground. *Co. appendiculata*, *Hg. (Hag.) chalcospilans*.

361. Puntarenas, El Roble, 1.4km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4800 22), near sea level; 14 Aug 71, DS. Small treehole (in fence post tree) along road in domestic-grazing area; 1.5m above ground. *Ae. (Pro.) terreus* group, *Tx. (Lyn.) moctezuma*.

362. Puntarenas, El Roble, 1.4km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4800 22), near sea level; 14 Aug 71, DS. Small treehole (in fence post tree) along road in domestic-grazing area; 2m above ground. *Hg. (Hag.) chalcospilans*.

363. Puntarenas, El Roble, 1.4km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4800 22), near sea level; 14 Aug 71, DS. Small treehole (in fence post tree, with large vertical opening) along road in domestic-grazing area; 2.8m above ground; water volume about 0.3 l; bottom with much plant debris. *Ae. (Pro.) podographicus*, *Co. appendiculata*, *Hg. (Hag.) chalcospilans*.

364. Puntarenas, El Roble, 1.4km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4800 22), near sea level; 14 Aug 71, DS. Small treehole (in fence post tree, with small vertical opening) along road in domestic-grazing area; 3m above ground. *Hg. (Hag.) chalcospilans*.

365. Puntarenas, El Roble, 1.4km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4800 22), near sea level; 14 Aug 71, DH. Small treehole in front yard of house; 0.5m above ground; partial shade. No specimens.

366. Puntarenas, El Roble, 1.4km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4800 22), near sea level; 14 Aug 71, DS. Small treehole (in leguminous tree with pods about 0.7m long) in front yard of house; 2m above ground. *Hg. (Hag.) chalcospilans*, *Tx. (Lyn.) moctezuma*.

367. Puntarenas, El Roble, 0.8km S of Natl. Rt. 17 on road to Boca del Rio Barranca, SE margin of Laguna Bonilla (16PGG478028), 5m; 14 Aug 71, SH. Marshy margin of large pond in open area; water permanent, clear, stagnant, fresh; abundant vegetation (grasses, waterlilies, sedges, small floating plants); bottom with mud, much plant debris; full sun. *Cx. (Mel.) erraticus*, *Cx. (Mel.)* sp undetermined.

368. Puntarenas, El Roble, 0.8km S of Natl. Rt. 17 on road to Boca del Rio Barranca, SE margin of Laguna Bonilla (16PGG478028), 5m; 14 Aug 71, SH. Margin of large pond shaded by trees; water permanent, clear, stagnant, fresh; some grassy vegetation; bottom with mud, many dead leaves; deep shade.

## CR Collection Records

*Cx. (Mel.) tecmarsis*, *Cx. (Mel.)* sp undetermined.

369. Puntarenas, El Roble, 0.8km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4780 28), 5m; 14 Aug 71, DS. Treehole (with 2 openings) near road in second growth; 1.5m above ground; deep-partial shade. *Co. appendiculata*, *Tx. (Lyn.) moctezuma*.

370. Puntarenas, El Roble, 0.8km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4780 28), 5m; 14 Aug 71, DS. Small treehole (hole opens upward, in same tree as CR369) near road in second growth; 1m above ground; deep-partial shade. *Hg. (Hag.) chalcospilans*.

371. Puntarenas, El Roble, 0.8km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4780 28), 5m; 14 Aug 71, DS. Small treehole (in same tree as CR369) near road in second growth; deep-partial shade. *Ae. (Pro.) podographicus*, *Co. appendiculata*.

372. Puntarenas, El Roble, 0.8km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4780 28), 5m; 14 Aug 71, DS. Small treehole near road in second growth; 2m above ground. *Ae. (Pro.) podographicus*.

373. Puntarenas, El Roble, 0.8km S of Natl. Rt. 17 on road to Boca del Rio Barranca (16PGG4780 28), 5m; 14 Aug 71, DS. Adult biting man under trees; 1500hrs. *Ae. (Och.) angustivittatus*.

374. Puntarenas, about 1.5km N of Pitahaya, Hacienda la Irma near the farm buildings (16PGG397 085), 8m; 15 Aug 71, SH, DS. Artificial container (1 tractor tire) in domestic area under trees; water very light brown, volume about 40 l; no vegetation; bottom with dead leaves; deep-partial shade. *Ae. (Pro.) podographicus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) conspirator*, *Tx. (Lyn.) moctezuma*.

375. Puntarenas, about 1.5km N of Pitahaya, Hacienda la Irma near the farm buildings (16PGG397 085), 8m; 15 Aug 71, SH, DS. Artificial containers (10 car tires) in domestic area near some trees; water clear to light brown, volume in each tire about 5 l; no vegetation; bottom with dead leaves; partial-full sun. *Ae. (Pro.) podographicus*, *Cx. (Cux.) quinquefasciatus*, *Cx. (Mel.) conspirator*, *Li. durhamii*, *Tx. (Lyn.) moctezuma*.

376. Puntarenas, about 1.5km N of Pitahaya, Hacienda la Irma near the farm buildings (16PGG397 085), 8m; 15 Aug 71, DS. Treehole (with small opening, about 0.3m deep, in mango tree) in domestic area; 2.5m above ground; water dark brown; deep shade. *Ae. (Pro.) podographicus*.

377. Puntarenas, Pitahaya, about 1km S of Aranjuez, "La Laguna de Aranjuez" (16PGG416110), 10m; 15 Aug 71, SH, DS. Swamp margin in grazing area; water permanent, clear, fresh, with very slow current; abundant vegetation (grasses, aroids, duckweed, *Pistia*); bottom with mud, dead plant matter; deep-partial shade. *Co.* sp 36, *Cx. (Cux.) declarator* group, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) dumni*, *Cx. (Mel.) egcymon*, *Cx. (Mel.) panocossa*, *Cx. (Mel.)* sp undetermined, *Ma. (Man.) dyari*, *Ma. (Man.) leberi*.

378. Puntarenas, Pitahaya, about 1km S of Aranjuez, "La Laguna de Aranjuez" (16PGG416110), 10m; 15 Aug 71, DS. Adult biting man near marsh. *Wy. (Cal.) ?melanocephala*.

379. Heredia, Cartagos, 7.9km N of Rt. 125 junction on Natl. Rt. 9 (16PHG1123?), 2000m; 19 Aug 71, DS. Stream margin; water permanent, clear, with slow current; some herbaceous vegetation; bottom with mud, sand; partial shade. *Dx.* sp 3.

380. Heredia, Cartagos, 7.9km N of Rt. 125 junction on Natl. Rt. 9 (16PHG1123?), 2000m; 19 Aug 71, DH. Adult biting man in parked car during light rain; 1600hrs. *Ae. (How.) allotecon*.

381. Alajuela, Poasito, Volcan Poas, along trail to Laguna del Poas (16PHG0327), 2600m; 19 Aug 71, DS. Epiphytic bromeliads (6 plants) in montane rain forest; partial shade. *Ae. (How.) allotecon*, *Cx. (Mx.)* sp undetermined.

382. Cartago, 2.1km N of Atirro on Rt. 234 (17PKA1090), 580m; 22 Aug 71, DS. Seepage in sugarcane field; water semipermanent, slightly turbid, stagnant; thick algae; partial-full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group, *Cx. (Cux.) declarator* group, *Ur. geometrica*.

383. Cartago, 2.1km N of Atirro on Rt. 234 (17PKA1090), 580m; 22 Aug 71, DH. Ditch in sugarcane field; water clear; some algae, grassy vegetation; bottom with mud, dead leaves; full-partial shade. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group, *Cx. (Mel.) pilosus*.

384. Cartago, 2.1km N of Atirro on Rt. 234 (17PKA1090), 580m; 22 Aug 71, DH. Small ground pool in sugarcane field; water temporary, clear, stagnant; no vegetation; bottom with mud, a little dead plant matter; full-partial sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group.



## CR Collection Records

385. Cartago, 2.1km N of Atirro on Rt. 234 (17PKA1090), 580m; 22 Aug 71, DH, DS. Ditch in sugarcane field; water temporary, turbid, stagnant; some algae; bottom with mud, dead leaves; partial-full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group.

386. Cartago, 2.1km N of Atirro on Rt. 234 (17PKA1090), 580m; 22 Aug 71, DS. Grassy margin of ditch in sugarcane field; water semipermanent, clear, with slow-moderate current; some grassy vegetation; bottom with mud, dead plant matter; partial-full sun. *Ch. bathana*, *Dx.* sp undetermined.

387. Cartago, Atirro (17PKA0988), 600m; 22 Aug 71, DH. Artificial container (tractor tire) in domestic area; water clear; bottom with mud, trash; full sun. *Cx. (Cux.) coronator* group.

388. Cartago, Atirro (17PKA0988), 600m; 22 Aug 71, DS. Cut bamboo (2 internodes) near house; water turbid, foul; bottom with dead plant matter; deep-partial shade. *Cx. (Car.) bihaicolus*, *Cx. (Cux.) corniger*, *Cx. (Cux.) mollis*, *Cx. (Cux.) stenolepis*.

389. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, Rio Reventazon (17PKA0994), 500m; 23 Aug 71, DH. Treehole (45 X 20cm, 12cm deep; formed by split in base of sloping trunk) in tropical moist forest; 0.1m above ground; water clear; bottom with mud, dead leaves; partial shade. *An. (Ano.) eiseni*, *Cx. (Cux.) declarator* group, *Cx. (Cux.) mollis*, *Cx. (Lut.) allostigma*, *Ur.* sp undetermined.

390. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, Rio Reventazon (17PKA0994), 500m; 23 Aug 71, DS. River margin rockholes (2) in tropical moist forest; partial shade. *Cx. (Cux.) corniger*, *Cx. (Cux.) mollis*, *Ur. coatzacoalcos*.

391. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, Rio Reventazon (17PKA0994), 500m; 23 Aug 71, DH. Saxicolous bromeliad (1.5m wide, 1m high; leaves 1.2m long, margins finely serrate) in tropical moist forest. *Cx. (Mcx.) jenningsi* group, *Wy. (Hys.)* sp G.

392. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, trail to Rio Reventazon (17PKA0994), 550m; 23 Aug 71, DS. *Heliconia* flower bracts (10 bracts; plants to 5m high; inflorescence compact, 16-20 bracts each; bracts red) in tropical moist forest; 2-3m above ground; deep shade. *Or. phyllozoa*, *Wy. (Dec.) eloisa* group, *Wy. (Dec.) pseudopecten* group.

393. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, fish pond (17PKA0994), 600m; 23 Aug 71, DS, KS. Pond in plantation; water permanent, clear, stagnant; a little algae, abundant water lilies, *Salvinia*, grassy and herbaceous vegetation; bottom with mud, dead plant matter; full sun. *Ad. squamipennis*, *Cx. (Mel.) erraticus*, *Cx. (Mel.)* sp undetermined, *Ur.* sp near *apicalis*.

394. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas, experimental fish pond near W edge of institute grounds (17PKA0994), 600m; 23 Aug 71, DH, DS. Pond in plantation; water permanent, clear, stagnant; abundant grassy vegetation; bottom with mud, dead plant matter; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) educator*, *Cx. (Mel.) iolambdis*, *Cx. (Mel.)* sp undetermined, *Dx.* sp undetermined, *Ur. socialis*.

395. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas (17PKA0994), 600m; 29 Sept 71, DS. Adult biting man in parked vehicle near lake; 0500hrs. *Cq. (Rhy.) nigricans*.

396. Cartago, Turrialba, Instituto Interamericano de Ciencias Agrícolas (17PKA0994), 600m; 29 Sept 71, DS. Adult biting man near lake; 0600hrs. *Cq. (Rhy.) nigricans*.

397. Limon, about 4km W of Limon, 0.5km E of Portete, "Bahia Bonita" (17PKB738069), near sea level; 30 Sept 71, DS. Large crabhole (8cm wide) in grassy area in coconut grove about 25m from high tide line; water clear, fresh to taste; bottom with mud, sand; partial shade. *Cx. (Cux.) inflictus* group.

398. Limon, about 4km W of Limon, 0.5km E of Portete, "Bahia Bonita" (17PKB738069), near sea level; 30 Sept 71, DS. Adults biting-landing on man near crabholes (same as CR397, 399); 1530-1600 hrs; sky overcast, partial shade. *Ae. (Och.) taeniorhynchus*, *Cx. (Cux.) nigripalpus*.

399. Limon, about 4km W of Limon, 0.5km E of Portete, "Bahia Bonita" (17PKB738069), near sea level; 30 Sept 71, DS. Adults resting in 5 crabholes (6-12cm wide) in grassy area in coconut grove about 30m from high tide line; 1500-1700hrs. *Cx. (Cux.) inflictus* group, *Cx. (Tin.) latisquama*.

400. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 6 Aug 71, SH. *Heliconia* flower bracts (plant 2m tall; inflorescence compact, 25cm long; bracts red) in premontane wet forest; deep shade. *Wy. (Dec.) eloisa* group.

## CR Collection Records

401. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 6 Aug 71, SH. Fallen nut (monkey pod, *Lecythis costaricensis*) in premontane wet forest; deep shade. *Tx. (Lyn.) hypoptes*, *Tr. (Trc.) digitatum*.
402. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 6 Aug 71, DH. Epiphytic bromeliads (on old cacao tree) in second growth in old cacao plantation; 1.6-1.8m above ground; partial shade. *Wy. (Hys.)* sp C, *Wy. (Wyo.) pertinans* group sp U, *Wy. (Wyo.) celaenocephala* group.
403. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 6 Aug 71, AB. Several epiphytic bromeliads in premontane wet forest. *An. (Ker.) neivai*, *Co. ?sp 4*, *Co. ?appendiculata*, *Cx. (Mcx.) daumastocampa*, *Cx. (Mcx.)* sp undetermined, *Lz. sp 2*, *Wy. (Hys.)* sp H, *Wy. (Wyo.) pertinans* group sp B.
404. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 6 Aug 71, AB. Leaf axils of terrestrial plants (?*Dieffenbachia*) in premontane wet forest. *Wy. (Prs.) complosa*.
405. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 6 Aug 71, AB. Adults biting man in premontane wet forest. *Cq. (Rhy.) fasciolata* group, *Ps. (Jan.) ferox*.
406. Heredia, Puerto Viejo, Finca La Selva, *Heliconia* grove along E boundary of finca (16PHG2754), 100m; 7 Aug 71, DH. *Heliconia* flower bracts (many bracts from *H. imbricata*) in premontane wet forest; 1-2m above ground; partial shade. *Or. phyllozoa*, *Wy. (Dec.) eloisia* group, *Wy. (Dec.) pseudopecten* group.
407. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, DH. Large ground pool (3 X 4m, shallow) in premontane wet forest; water semipermanent, clear, stagnant; no vegetation; bottom with mud, covered thickly with dead leaves; deep shade. *Dx. sp 4*.
408. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Adults taken sweeping and biting-landing on man in premontane wet forest. *Ae. (Och.) angustivittatus*, *Ae. (Och.) serratus* group, *Ps. (Gra.) cingulata* group, *Ps. (Jan.) ferox*, *Tr. (Trc.) digitatum*, *Wy. spp* undetermined.
409. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Large ground pool in premontane wet forest. *Cx. (Mel.)* sp 31.
410. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Fallen palm spathe in premontane wet forest. *An. (Ano.) eiseni*, *Li. asulleptus*, *Li. durhamii*.
411. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Fallen fruit in premontane wet forest. *Li. asulleptus*, *Tr. (Trc.) digitatum*.
412. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Fallen nuts (about 6 monkey pods from same tree, *Lecythis costaricensis*) in premontane wet forest. *An. (Ano.) eiseni*, *Cx. (Car.) secundus*, *Cx. (Lut.) allostigma*, *Li. asulleptus*, *Tx. (Lyn.) hypoptes*, *Tr. (Trc.) digitatum*, *Wy. (Tri.)* sp 22.
413. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, DH. Epiphytic bromeliad in premontane wet forest; 0.2m above ground; deep shade. *Wy. (Wyo.) pertinans* group sp B.
414. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Adults resting inside fallen monkey pod; midday. *Cx. (Car.) secundus*, *Wy. sp* undetermined.
415. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, DH, SH. Margin of small marsh in premontane wet forest; water permanent, clear; abundant grassy, herbaceous vegetation; bottom with mud, dead plant matter; partial shade. *Cx. (Cux.)* sp undetermined, *Cx. (Mel.) spp* undetermined.
416. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, DH. Adults biting-landing on man at edge of small marsh (same as in CR415) in premontane wet forest; at dusk. *Ae. (Och.) serratus* group, *An. (Ano.) apicimacula*, *Ps. (Gra.) cingulata* group.
- 417, 417A. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Small epiphytic bromeliads in old palm plantation; about 2m above ground; partial shade. *An. (Ker.) neivai*, *Cx. (Mcx.) pleuristriatus* group, *Cx. (Mcx.)* sp 79, *Cx. (Mcx.)* sp undetermined, *Lz. sp 2*, *Wy. (Hys.)* sp C, *Wy. (Hys.)* sp H, *Wy. (Hys.)* sp J, *Wy. (Wyo.) pertinans* group sp B, *Wy. (Wyo.) pertinans* group sp undetermined.
418. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Leaf axils of terrestrial plant (aroid, ?*Dieffenbachia*) in premontane wet forest at edge of stream; partial shade. *Wy. (Prs.) complosa*.

## CR Collection Records

419. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Fallen leaf (cacao) in old cacao plantation. *Li. asulleptus*.
420. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 7 Aug 71, AB. Artificial containers (old cans) in premontane wet forest. *Cx. (Lut.) allostigma*, *Cx. (Mel.)* sp 31, *Li. durhamii*.
421. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, SH. Adults taken sweeping and biting-landing on man along narrow path in premontane wet forest; 1100hrs; deep shade. *Ae. (Och.) angustivittatus*, *Ae. (Och.) serratus* group, *Ps. (Jan.) ferox*, *Wy.* spp undetermined.
422. Heredia, Puerto Viejo, Finca La Selva, Arboretum (16PHG2754), 100m; 8 Aug 71, DH. Large terrestrial bromeliad in partially cleared premontane wet forest; partial shade. *An. (Ker.) neivai*, *Wy. (Hys.)* sp B, *Wy. (Hys.)* sp H.
423. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, DH. Broken bamboo in premontane wet forest; 1.3m above ground; bottom with dead plant matter; deep shade. *Co.* sp 32, *Cx. (Car.) babahoyensis*, *Sa. (Sab.) cyaneus*, *Sa. (Sbn.) identicus*, *Sa. (Sbn.)* sp 3, *Wy. (Tri.)* sp undetermined, *Wy. (subg. B)* sp 62.
424. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, DH. Large ground pool in marshy depression in premontane wet forest; water semipermanent, clear, stagnant; choked with emergent vegetation (grasses, aroids), algae present; bottom with mud, dead plant matter; partial shade. *Ur. socialis*.
425. Heredia, Puerto Viejo, Finca La Selva, along E boundary (16PHG2754), 100m; 8 Aug 71, DH. Flower bracts of terrestrial plant (Marantaceae, *Calathea insignis*; inflorescence 25cm long, 8cm wide, 3 cm thick, compact; bracts bright yellow) in second growth of old cacao plantation; 1-2m above ground; partial shade. *Wy. (Dec.)* spp undetermined.
426. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, DH. Epiphytic bromeliad (0.3m wide, on cacao tree) in second growth in old cacao plantation; 1.3m above ground; partial shade. *An. (Ker.) neivai*, *Wy. (Hys.)* sp H, *Wy. (Wyo.) abebela*, *Wy. (Wyo.) pertinans* group.
427. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, DH. Adults biting-landing on man at edge of small marsh in premontane wet forest; 1500hrs. *Ae. (Och.) angustivittatus*, *Ps. (Jan.) ferox*, *Wy.* sp undetermined.
428. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, AB. Large depression in trunk of cut tree in clearing in premontane wet forest; 2m above ground; full sun. *Cx. (Cux.) bonnaeae*, *Cx. (Cux.) coronator* group, *Cx. (Cux.) declarator* group, *Cx. (Cux.) mollis*, *Cx. (Lut.) allostigma*.
429. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, AB. Small depression in trunk of cut tree in clearing in premontane wet forest. *Cx. (Cux.) mollis*, *Cx. (Lut.) allostigma*.
430. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, AB. Medium treehole (in buttress) in premontane wet forest. *Ae. (Pro.) ?galindoi*, *Cx. (Cux.) inflictus* group, *Cx. (Cux.) mollis*, *Tx. (Lyn.) hypoptes*.
431. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, AB. Horse hoof prints in old palm plantation; partial shade. *Cx. (Cux.) mollis*.
432. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, AB. Medium-sized deep treehole in premontane wet forest; 1-2m above ground. *Ae. (Pro.) ?galindoi*.
433. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Aug 71, AB. Medium-sized deep treehole in premontane wet forest. *Ae. (How.) septemstriatus*, *Ae. (Pro.) insolitus*, *Cx. (And.) corrigani*, *Tx. (Lyn.) hypoptes*.
434. Heredia, Puerto Viejo, Finca La Selva, Arboretum (16PHG2754), 100m; 8 Aug 71, AB. Artificial container (tin can) in partially cleared premontane wet forest; partial shade. *Li. asulleptus*, *Li. durhamii*.
435. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, Rio Tempisque delta swamp S of headquarters (16PFG815436), 1m; 17, 20 Aug 71, DH, SH. River delta swamp used for grazing; water permanent, clear, fresh, with very slow current; dense floating (*Eichhornia*) and emergent (aroids, grasses) vegetation, algae also present; bottom with mud; full sun. *Cx. (Cux.) ?chidesteri*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.)* spp undetermined, *Ur. geometrica*, *Ur. lowii*.

## CR Collection Records

436. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, Rio Tempisque delta swamp S of headquarters (16PFG815436), 1m; 17 Aug 71, SH. Adults biting man standing in swamp; late afternoon; full sun. *Ma. (Man.) titillans*, *Ps. (Pso.) howardii*.

437. Guanacaste, Puerto Humo, Palo Verde OTS Field Station (16PFG8244), 20m; 17 Aug 71, DH. Adults biting man in tropical dry forest; late afternoon; deep shade. *Ma. (Man.) titillans*.

438. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, headquarters (16PFG820439), 20 m; 17 Aug 71, DH, SH. Adults at light on screens outside building; evening. *Ae. (Och.) taeniorhynchus*, *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*, *Ma. (Man.) titillans*, *Ps. (Gra.) confinnis* group.

439. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, DH. Small treehole (5cm wide, 5cm deep with small deeper hole in center; opening upwards) in tropical dry forest used for grazing near small stream; 1.5m above ground; water volume about 30ml; deep-partial shade. No specimens.

440. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, DH. Small treehole (5cm wide, 8cm deep; opening upwards) in tropical dry forest used for grazing near small stream; deep-partial shade. No specimens.

441. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, DH. Small treehole (5cm X 8cm, 20cm deep; opening upwards) near small stream in tropical dry forest used for grazing; 0.6m above ground; water volume about 100ml; deep-partial shade. *Co. appendiculata*.

442. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, SH. Small treehole (10cm wide, 15cm deep; opening upwards) near small stream in tropical dry forest used for grazing; 1.5m above ground; water volume about 0.5 l; bottom with many dead leaves; deep-partial shade. *Ae. (Pro.) podographicus*, *Co. appendiculata*, *Tx. (Lyn.) moctezuma*.

443. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, DH, SH. Large treehole (20cm wide, roughly 1m deep; opening upwards and to side) near small stream in tropical dry forest used for grazing; 1.5m above ground; water light brown, volume roughly 40 l; deep-partial shade. *Cx. (And.) restrictor*.

444. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, SH. Large treehole (in same tree as in CR443; opening only 1cm wide but larger inside) near small stream in tropical dry forest used for grazing; 0.8m above ground; water light brown; deep-partial shade. *Co. appendiculata*, *Cx. (And.) restrictor*.

445. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, DH. Small treehole (shallow depression in declined tree trunk) near small stream in tropical dry forest used for grazing; water clear, volume about 50ml; bottom with dead leaves; deep-partial shade. *Cx. (Cux.) coronator* group, *Hg. (Hag.) anastasionis*.

446. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, SH. Cattle tracks at edge of small stream in tropical dry forest used for grazing; water temporary, clear, stagnant, fresh; a little algae; bottom with mud; deep-partial shade. *Cx. (Mel.)* sp undetermined.

447. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, SH. Among tree roots at margin of large shallow ground pool (overflow of small stream) in tropical dry forest used for grazing; water temporary, clear, fresh, with very slow current; no vegetation; bottom with mud, dead leaves; deep shade. *Cx. (Mel.)* sp undetermined.

448. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, about 5km NE of headquarters on road to El Tieso (16PFG842475), 10m; 18 Aug 71, DH, SH. Adults biting man near small stream in tropical dry forest used for grazing; about 1200hrs; deep-partial shade. *Ae. (Och.) scapularis*, *Ae. (Och.) taeniorhynchus*, *Sa. (Sbo.) chloropterus*.

449. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, near finca about 1km W of headquarters (16PFG810440), 10m; 19 Aug 71, DH. Large artificial containers (7 truck tires) in tropical dry forest used for grazing; water clear to light brown, slightly foul; no vegetation; bottom with mud, debris,

## CR Collection Records

many dead leaves; partial shade. *Ae. (Pro.) podographicus*, *Cx. (And.) restrictor*, *Tx. (Lyn.) moctezuma*.

450. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, Rio Tempisque delta swamp S of headquarters (16PFG815436), 1m; 19 Aug 71, SH. Cattle tracks at edge of swamp; water temporary, clear, stagnant, fresh, foul; some algae; bottom with mud; full sun. *Cx. (Cux.) nigripalpus*, *Ur. lowii*.

451. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, field just E of headquarters (16PFG 822440), 5m; 20 Aug 71, DH. Small treehole (25 X 12cm, 8cm deep; opening upwards) in grazing area; 2m above ground; water clear, volume about 20ml; bottom with mud, dead leaves; partial shade. *Ae. (Pro.) podographicus*.

452. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, forested ravine about 0.5km NE of headquarters (16PFG823442), 15m; 20 Aug 71, DH. Large treehole (30 X 20cm, 12cm deep) in tropical dry forest; 1m above ground; water clear, volume about 6 l; bottom with mud, dead leaves; deep shade. *Ae. (Pro.) podographicus*, *Co. appendiculata*, *Cx. (And.) restrictor*.

453. Guanacaste, Puerto Humo, Palo Verde OTS Field Station, forested ravine about 0.5km NE of headquarters (16PFG823442), 15m; 20 Aug 71, DH. Adult biting man in tropical dry forest; 1000hrs; deep shade. *Ma. (Man.) titillans*.

454. Limon, about 4km W of Limon, 0.5km E of Portete, "Bahia Bonita" (17PKB738069), near sea level; 1 Oct 71, DS. Fallen coconut shell in grassy area of coconut grove near sea; water clear, slightly amber, fresh to taste; no vegetation; bottom with dead plant matter; partial shade. *Tr. (Trc.) digitatum*.

455. Limon, Zent, 1.1km W of turnoff to Zent on road from Limon to Siquirres, 20m; 1 Oct 71, DS. Freshly cut bamboo along road in cacao plantation; 1m above ground; water clear; bottom with plant debris; partial shade. *Tr. (Trc.) digitatum*.

456. Limon, Zent, 0.6km E of turnoff to Zent on road from Limon to Siquirres, 20m; 1 Oct 71, DS. Stream margin in cacao plantation; water semipermanent, clear, fresh, with slow current; abundant grassy vegetation; bottom with mud. *An. (Nys.) ?anomalophyllus*, *Cx. (Mel.) educator*.

457. Limon, Zent, 0.6km E of turnoff to Zent on road from Limon to Siquirres, 20m; 1 Oct 71, DS. Epiphytic bromeliad (about 20cm wide) in cacao plantation; 1.5m above ground. *Cx. (Mex.)* sp undetermined, *Wy. (Wyo.) pertinans* group sp B.

458. Limon, Boston (17PKB5207), 15m; 1 Oct 71, DS. Ground pool (2 X 3m) in grassy area of cacao plantation near railroad; water temporary, clear, amber-brown, stagnant, fresh; some grass; bottom with mud, cacao leaves and pods; partial shade. *Ae. (Och.) serratus* group, *Ae. (Och.)* sp undetermined, *Ps. (Jan.)* sp undetermined.

459. Limon, Boston (17PKB5207), 15m; 1 Oct 71, DS. Fallen cacao pods (5) in cacao plantation near railroad; water turbid, dark brown, foul, fermenting; bottom with dead plant matter; partial shade. Specimens discarded.

460. Limon, Boston (17PKB5207), 15m; 1 Oct 71, DS. Small ground pool near road in domestic area; water temporary, turbid, muddy brown, stagnant, fresh; some grassy vegetation; bottom with mud, dead plant matter; partial-full sun. *Ps. (Gra.) confinnis* group.

461. Limon, about 4km W of Limon, 0.5km E of Portete, "Bahia Bonita" (17PKB738069), near sea level; 1-2 Oct 71, DS. CDC light trap under coconut palms about 25m from high tide line; 1.5m above ground; 1730-0520hrs. *Cx. (Tin.) latisquama*, *De. epitedeus*.

462. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 2 Oct 71, DS. Large crabhole (8cm wide) near small stream and sea in grassy area; partial shade. *De. epitedeus*.

463. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 2 Oct 71, DS. Adult resting in crabhole (same as CR465) near small stream and sea in grassy area; 1430hrs. *Cx. (Cux.) inflictus* group.

464. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 2 Oct 71, DS. Large abandoned crabhole (opening 15 X 8cm, 20cm deep) at edge of small stream near sea in grassy area; bottom with mud, dead plant matter; partial shade. *Cx. (Mel.) iolambdis*.

465. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 2 Oct 71, DS. Large crabhole (8cm wide) at edge of small stream near sea in grassy area; water turbid, fresh to taste; partial shade. *Cx. (Cux.) inflictus* group, *Cx. (Tin.) latisquama*.

## CR Collection Records

466. Limon, about 8km S of Limon, 1.8km E of Bomba on road to Westfalia (17PKA7597), 20m; 3 Oct 71, DS, KS. Leaf axils of terrestrial aroid (about 30 axils, *Xanthosoma*) in cacao plantation near road; partial shade. *Tr.* (subg. A) *ulopus*.
467. Limon, about 8km S of Limon, 1.8km E of Bomba on road to Westfalia (17PKA7597), 20m; 3 Oct 71, DS. Ground pool at mouth of drain under road in cacao plantation; water semipermanent or temporary, turbid, gray, stagnant, fresh; no vegetation; bottom with mud, sticks, leaves; deep-partial shade. *Ae.* (*Och.*) *serratus* group, *Ae.* (*Och.*) sp undetermined, *Ps.* (*Jan.*) sp undetermined.
468. Limon, about 8km S of Limon, 3.7km E of Bomba on road to Westfalia, just E of Beverly (17PKA7797), 10m; 3 Oct 71, DS, KS. Adults biting-landing on man under cacao tree in cacao plantation; 1515-1600hrs; deep shade. *Ae.* (*Och.*) *angustivittatus*, *Ae.* (*Och.*) *serratus* group, *Ps.* (*Jan.*) *ferox*, *Tr.* (*Trc.*) *digitatum*, *Wy.* sp undetermined.
469. Limon, about 8km S of Limon, 4.3km E of Bomba on road to Westfalia, just E of Beverly (17PKA7797), 10m; 3 Oct 71, DS. Soil-debris sample from dry large ground pool in cacao plantation; deep shade; first flooded 7 Oct 71, first larvae seen 8 Oct, first pupae seen 13 Oct; second flooding sterile. *Ae.* (*Och.*) *serratus* group, *Cx.* (*Cux.*) *corniger*, *Ps.* (*Jan.*) *ferox*.
470. Limon, about 8km S of Limon, 5.3km E of Bomba on road to Westfalia, just E of Beverly (17PKA7896), 10m; 3 Oct 71, DS. Debris sample from large dry treehole along road in domestic area of plantation; partial shade; first flooded 7 Oct 71, larvae seen 9 Oct; second flooding sterile. *Hg.* (*Hag.*) *equinus*, *Hg.* (*Hag.*) *iridicolor*.
471. Limon, 4.8km S of Limon, Limon Airport (17PKB7800), near sea level; 4 Oct 71, DS, KS. "Pit well" (0.4m wide, water level 0.2m below ground level, water depth 0.3m) in palm grove; water permanent, clear, stagnant, fresh; no vegetation; bottom with mud, dead plant matter; partial shade. *Cx.* (*Cux.*) *coronator* group, *Cx.* (*Mel.*) sp undetermined.
472. Limon, 7.9km S of Limon, just S of Westfalia, Boca del Rio Banano (17PKA8098), near sea level; 4 Oct 71, DS, KS. Swamp margin 50m from sea; water permanent, clear, stagnant, fresh; abundant grassy (cattails), herbaceous vegetation; bottom with mud, dead plant matter; partial shade. *An.* (*Nys.*) sp undetermined, *Cx.* (*Cux.*) sp undetermined, *Cx.* (*Mel.*) *educator*, *Cx.* (*Mel.*) *iolambdis*, *Cx.* (*Mel.*) *pilosus*, *Ur.* sp undetermined.
473. Limon, 7.9km S of Limon, just S of Westfalia, Boca del Rio Banano (17PKA8098), near sea level; 4 Oct 71, DS. Marshy depression near sea; some flottage, cattails; bottom with mud, sticks. *An.* (*Nys.*) *albimanus*, *An.* (*Nys.*) *aquasalis*, *Cx.* (*Mel.*) *pilosus*.
474. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 5 Oct 71, DS. Stream margin 20m from high tide line; water semipermanent, clear, fresh, with slow current; abundant grassy vegetation; bottom with mud; partial shade. *Cx.* (*Mel.*) sp undetermined.
475. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 5 Oct 71, DS. Large crabholes (4 holes, 3-10cm wide) in grassy area near sea; partial shade. *Cx.* (*Cux.*) *inflictus* group, *De.* *epitedeus*.
476. Limon, about 5km W of Limon, Portete (17PKB734070), near sea level; 5 Oct 71, DS. Old cut bamboo (7 internodes) 25m from high tide line; 1.5m above ground; water clear, brownish, fresh; bottom with dead plant matter; partial shade. *Hg.* (*Hag.*) *iridicolor*, *Sa.* (*Sbn.*) *undosus*, *Wy.* (*Pen.*) *arthrostigma*, *Wy.* (*Tri.*) *apronoma*.
477. Limon, about 5km W of Limon, Portete (17PKB734070), near sea level; 5 Oct 71, DS. Freshly cut bamboo 25m from high tide line; 1.5m above ground; water slightly turbid, fresh, slightly foul; bottom with dead plant matter; partial shade. *Tr.* (*Trc.*) *digitatum*.
478. Limon, about 5km W of Limon, Portete (17PKB734070), near sea level; 5 Oct 71, DS. Old cut bamboo (2 internodes) 25m from high tide line; water turbid, dark brownish, slightly foul; bottom with dead plant matter; partial shade. *Hg.* (*Hag.*) *iridicolor*, *Tr.* (*Trc.*) *digitatum*.
479. Limon, about 5km W of Limon, Portete (17PKB734070), near sea level; 5 Oct 71, DS. Cut bamboo (1 cut internode and internode below connected with hole) 25m from high tide line; water clear, fresh; bottom with a little dead plant matter; partial shade. *Tr.* (*Trc.*) *digitatum*.
480. Limon, about 5km W of Limon, Portete (17PKB734070), near sea level; 5 Oct 71, DS. Adult resting on surface of water in cut bamboo internode 25m from sea; 1.5m above ground; 1100hrs; female

## CR Collection Records

oviposited on water surface 11 Oct, eggs hatched on or before 13 Oct. *Tr. (Trc.) digitatum*.

481. Limon, about 2.5km N of Zent, about 1.5km S of Estrada (17PKB5011), 15m; 8 Oct 71, DS. Fallen cacao pod along road in cacao plantation; water clear; bottom with dead plant matter; partial shade. *Li. durhamii*.

482. Limon, about 2.5km N of Zent, about 1.5km S of Estrada (17PKB5011), 15m; 8 Oct 71, DS. Large ground pools in cacao plantation (rain water); water temporary, clear, stagnant, fresh; some grassy vegetation; bottom with mud, dead plant matter; partial shade. *Ae. (Och.) angustivittatus*, *An.* sp undetermined, *Cx. (Cux.) coronator* group, *Ps. (Jan.)* sp undetermined.

483. Limon, about 0.8km N of Zent (17PKB5010), 15m; 8 Oct 71, DS. Fallen cacao pods (2) in cacao plantation; water turbid, dark brown, foul; bottom with dead plant matter; partial shade. *Tr. (Trc.) digitatum*.

484. Limon, about 0.8km N of Zent (17PKB5010), 15m; 8 Oct 71, DS. Ground pool in ditch along road in cacao plantation; water temporary, turbid, whitish, stagnant, fresh; some grassy vegetation; bottom with mud; full sun. *Cx. (Cux.) coronator* group.

485. Limon, about 0.3km N of Zent (17PKB5009), 15m; 8 Oct 71, DS. Several small ground pools under cacao tree in cacao plantation; water temporary, clear, stagnant, fresh; no vegetation; bottom with mud, leaves, sticks; deep shade. *Ae. (Och.) angustivittatus*, *Ae. (Och.) serratus* group, *Ps. (Jan.)* sp undetermined.

486. Limon, about 3km E of Zent, Boston (17PKB5207), 15m; 9 Oct 71, DS. Small ground pool in ditch in cacao plantation; water temporary, clear, stagnant, fresh; some grassy vegetation; bottom with mud, dead leaves, grass; partial shade. *An.* sp undetermined, *Cx. (Mel.) pilosus*, *Ps. (Jan.)* sp undetermined, *Sy.* sp undetermined.

487. Limon, about 3km E of Zent, Boston (17PKB5207), 15m; 9 Oct 71, DS. Small ground pools (rain water) in depression under cacao trees in cacao plantation; water temporary, clear, stagnant, fresh; choked with grassy and herbaceous vegetation; bottom with mud, dead plant matter; deep-partial shade. *Ae. (Och.) angustivittatus*, *Ps. (Jan.) ferox*.

488. San Jose, San Jose, Lourdes, "Vargas Araya" (16PHF2599?), 1250m; 14 Oct 71, DS. Adult biting man in parked vehicle; 1900hrs. *Ae. (Pro.) homoeopus*.

489. Cartago, Turrialba, Instituto Interamericano de Ciencias Agricolas, Rio Reventazon (17PKA0994), 500m; 19 Oct 71, DS. Riverside rockhole (0.6 X 0.2m, 0.1m deep) in tropical moist forest; water clear, stagnant; bottom with mud, sand, dead leaves; partial-full sun. *Ae. (Och.) fluviatilis*, *Cx. (Mel.)* sp undetermined.

490. Cartago, Volcan Irazu, 8.4km NE of turnoff to Sanatoria Duran on Natl. Rt. 8 (17PJB8802?), 2900m; 30 Oct 71, FF, DS. Large artificial container (cement basin, 3m wide, 0.5m deep) in grazing area; water permanent, slightly muddy, stagnant; no vegetation; bottom with mud; full sun. *Cs. (Cus.) dugesi*.

491. San Jose, San Jose, Lourdes, "Vargas Araya" (16PHF2599?), 1250m; 29 Oct 71, DS. Old cut bamboo (about 15 internodes) in second growth near stream; deep shade. *Ae. (Pro.) homoeopus*, *Cx. (Car.) metempsychus*.

492. San Jose, San Jose, Lourdes, "Vargas Araya" (16PHF2599?), 1250m; 29 Oct 71, DS. Freshly cut bamboo (5 internodes) in secondary growth near stream; 0.1-0.8m above ground; partial shade. *Cx. (Car.) metempsychus*.

493. San Jose, San Jose, Lourdes, "Vargas Araya" (16PHF2599?), 1250m; 29 Oct 71, DS. Old cut bamboo in second growth near stream; 0.1-0.2m above ground; partial shade. *Ae. (Pro.) homoeopus*, *Cx. (Car.) metempsychus*.

494. San Jose, San Jose, Lourdes, "Vargas Araya" (16PHF2599?), 1250m; 29 Oct 71, DS. Adults biting man in second growth near stream; 0800-1000hrs; partial shade. *Hg. (Hag.) mesodentatus*.

495. Alajuela, about 3km E of San Mateo, 0.6km E of Desamparados on Natl. Rt. 11, Rio Machuca (16PGG742008), 260m; 1 Nov 71, DS. Streamside rockhole; water clear, stagnant, volume about 1 l; no vegetation; bottom with sand, dead leaves; partial-full sun. *Ae. (Och.) fluviatilis*, *Cx. (Cux.) coronator* group.

## CR Collection Records

496. Alajuela, about 3km E of San Mateo, 0.6km E of Desamparados on Natl. Rt. 11, Rio Machuca (16PGG742008), 260m; 1 Nov 71, DS. Streamside rockhole; water clear, stagnant, volume about 0.5 l; no vegetation; bottom with sand, dead plant matter; deep-partial shade. *Cx. (Cux.) corniger*.

497. Alajuela, about 3km E of San Mateo, 0.6km E of Desamparados on Natl. Rt. 11, Rio Machuca (16PGG742008), 260m; 1 Nov 71, DS. Large treehole (in 15m tree where limb had broken off, wide opening upwards) near stream; 2m above ground; water clear, slightly tan-colored, volume about 1 l; some moss at edges; bottom with dead plant matter; deep shade. *Cx. (And.) restrictor*, *Cx. (Mel.) ?arboricolus*.

498. Alajuela, about 3km E of San Mateo, 0.6km E of Desamparados on Natl. Rt. 11, Rio Machuca (16PGG742008), 260m; 1 Nov 71, DS. Small treehole (in crotch of 15m tree) near stream; 1.5m above ground; water clear, tan-colored, volume about 50ml; bottom with plant debris; deep shade. *Hg. (Hag.) iridicolor*.

499. Alajuela, about 3km E of San Mateo, 0.6km E of Desamparados on Natl. Rt. 11, Rio Machuca (16PGG742008), 260m; 1 Nov 71, DS. Large ground pool (3 X 4m, 0.7m deep) at edge of stream among boulders on sand bank; water temporary-semipermanent, muddy, stagnant; no vegetation; bottom with mud, sand, a few leaves; partial shade. *Cx. (Cux.) coronator* group, *Cx. (Mel.) ?conspirator*, *Cx. (Mel.) elevator*, *Cx. (Mel.) iolambdis*, *Cx. (Mel.)* spp undetermined.

500. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 27 Aug 71, DH. Epiphytic bromeliads (several small ones in cacao tree, each 15-30cm wide) in old cacao plantation; 1-1.5m above ground; partial shade. *An. (Ker.) neivai*, *Cx. (Mcx.) daumastocampa*, *Cx. (Mcx.) jenningsi* group, *Cx. (Mcx.)* sp 79, *Cx. (Mcx.)* sp undetermined, *Wy. (Hys.)* sp C, *Wy. (Hys.)* sp undetermined, *Wy. (Wyo.) celaenocephala* group, *Wy. (Wyo.) pertinans* group sp B, *Wy. (Wyo.) pertinans* group sp undetermined.

501. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 27 Aug 71, DH. Large treehole in secondary forest; 2m above ground; water clear; partial shade. No specimens.

502. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 27 Aug 71, DH. Epiphytic bromeliads (3 on fallen tree, each 30cm wide) in old cacao plantation; 1m above ground; partial shade. *An. (Ker.) neivai*, *Cx. (Mcx.) daumastocampa*, *Cx. (Mcx.)* sp 79, *Cx. (Mcx.)* sp undetermined, *Lz.* sp 2, *Wy. (Hys.)* sp H, *Wy. (Hys.)* sp undetermined, *Wy. (Wyo.) pertinans* group sp B, *Wy. (Wyo.) pertinans* group sp undetermined.

503. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 27 Aug 71, DH. Fallen nuts (about 20 small nuts, 2-10ml of water per nut) in premontane wet forest; water clear; bottom with mud; deep shade. *Li. asulleptus*, *Tr. (Trc.) digitatum*.

504. Heredia, Puerto Viejo, Finca La Selva, Arboretum (16PHG2754), 100m; 28 Aug 71, DH. Epiphytic bromeliads (many small plants) in partially cleared premontane wet forest; 0.5-2.5m above ground; partial shade. *An. (Ker.) neivai*, *Cx. (Mcx.) jenningsi* group, *Cx. (Mcx.)* sp undetermined, *Lz.* sp 2, *Wy. (Hys.)* sp J, *Wy. (Hys.)* sp undetermined, *Wy. (Wyo.) pertinans* group sp B, *Wy. (Wyo.) pertinans* group sp H.

505. Alajuela, about 3km E of San Mateo, 0.6km E of Desamparados on Natl. Rt. 11, Rio Machuca (16PGG742008), 260m; 1 Nov 71, DS. Streamside rockholes (5 holes of various sizes); water turbid, colored, stagnant; no vegetation; bottom with mud, sand, plant debris; partial-full sun. *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group.

506. Alajuela, about 3km E of San Mateo, 0.6km E of Desamparados on Natl. Rt. 11, Rio Machuca (16PGG742008), 260m; 1 Nov 71, DS. Streamside rockholes (4 holes); water clear; no vegetation; bottom with mud, sand, plant debris; partial-full sun. *Ae. (Och.) fluviatilis*, *Cx. (Cux.) coronator* group.

507. Alajuela, between Alajuela and San Antonio, Rio Ciruelas (16PHG0506), 880m; 3 Nov 71, DS. Small treehole (opening 1 X 10cm) in grazing-cultivated area; 0.4m above ground; water clear, amber-colored; bottom with plant debris; partial shade. *Ae. (Pro.) ?heteropus*.

508. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 3 Nov 71, DS, KS. Freshly cut bamboo (about 15 internodes) along road near stream in domestic area; 0.1-0.5m above ground; water clear; bottom with plant debris; deep shade. *Ae. (Pro.) heteropus*, *Hg. (Hag.) iridicolor*.

509. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 3 Nov 71, DS, KS. Old cut bamboo (about 15 internodes) along road near stream in domestic area; 0.1-1.5m above ground; water clear; bot-



## CR Collection Records

tom with plant debris; deep shade. *Ae. (Pro.) heteropus*, *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthrostigma*.

510. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 3 Nov 71, DS. Uncut bamboo internode (in fallen bamboo with narrow crack, 2mm wide) along road near stream in domestic area; water clear, light amber; bottom with plant debris; deep shade. *Wy. (Pen.) arthrostigma*.

511. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 3 Nov 71, DS. Uncut bamboo internode (with small slit in top, 4 X 30mm) along road near stream in domestic area; water clear; bottom with plant debris; deep shade. *Wy. (Pen.) arthrostigma*.

512. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 3 Nov 71, DS. Freshly cut bamboo along road near stream in domestic area; water clear; bottom with plant debris; partial shade. *Wy. (Pen.) arthrostigma*.

513. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 3 Nov 71, DS. Adults biting man in bamboo clump; 1600hrs; deep shade, sky overcast. *Wy. (Pen.) arthrostigma*.

514. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 3 Nov 71, DS. Small treehole (depression in buttress of ?*Ficus*) in coffee plantation near road; 0.2m above ground; water clear, tan-colored, volume about 100ml; bottom with plant debris; deep-partial shade. *Hg. (Hag.) iridicolor*.

515. Alajuela, Ciruelas, Rt. 124 at Rio Ciruelas (16PHG008038), 780m; 4 Nov 71, DS. Rockhole in grazing area; bottom with dead leaves, fruit; partial shade. *Cx. (Cux.) corniger*, *Cx. (Cux.) coronator* group.

516. Alajuela, Ciruelas, Rt. 124 at Rio Ciruelas (16PHG008038), 780m; 4 Nov 71, DS. Rockhole in grazing area; water clear, yellowish; bottom with plant debris; partial shade. *Ae. (Och.) epactius*.

517. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 4 Nov 71, DS. Uncut bamboo (internode with small hole in top, 2 X 3mm) along road in domestic area; partial shade. *Wy. (Pen.) arthrostigma*.

518. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 4 Nov 71, DS. Broken bamboo along road in domestic area; partial shade. *Wy. (Pen.) arthrostigma*.

519. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 4 Nov 71, DS. Freshly cut bamboo (3 internodes) along road in domestic area; 0.2-0.6m above ground; water clear, yellowish; bottom with plant debris; partial shade. *Wy. (Pen.) arthrostigma*.

520. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 7 Nov 71, DS, KS. Large crabholes (4) near stream and 5m from sea; water slightly whitish-yellow, fresh; bottom with mud; partial shade. *Cx. (Cux.) inflictus* group, *Cx. (Tin.) latisquama*, *De. epitedeus*.

521. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 7 Nov 71, DS, KS. Ground water near sea; partial shade. *An.* sp undetermined, *Dx.* sp undetermined.

522. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 7 Nov 71, DS. Adults biting near sea and stream (same site as CR523-525); 1100-1300hrs; deep-partial shade. *Ae. (Och.) taeniorhynchus*.

523. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 7 Nov 71, DS. Adults resting in crabholes near sea and stream; 1100-1300hrs; deep-partial shade. *Cx. (Cux.) inflictus* group, *Cx. (Tin.) latisquama*, *De. epitedeus*.

524. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 7 Nov 71, DS, KS. Large crabholes (12) near sea and stream; deep-partial shade. *An. (Ano.) eiseni*, *Cx. (Cux.) inflictus* group, *Cx. (Tin.) latisquama*, *De. epitedeus*.

525, 525A. Limon, about 4km W of Limon, 0.7km E of Portete on road to Limon (17PKB740068), near sea level; 7 Nov 71, DS, KS. Large crabhole near sea and stream; deep-partial shade. *Cx. (Cux.) inflictus* group, *Cx. (Lut.) allostigma*, *Cx. (Mel.) iolambdis*, *Cx. (Tin.) latisquama*, *De. epitedeus*.

526. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 3 Nov 71, DS. Uncut bamboo (1 internode with small hole in top) along road near stream and domestic area; water clear, slightly foul; bottom with plant debris; partial shade. *Wy. (Pen.) arthrostigma*.

527. Alajuela, Alajuela, Rio Segundo at Rt. 111 (16PHG071055), 880m; 13 Nov 71, DS, KS. Cut bamboo near stream in domestic area; 0.2m above ground; water clear, yellowish; bottom with plant

## CR Collection Records

debris; partial shade. *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthro stigma*.

528. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 14 Nov 71, DS. Old cut bamboo (18 internodes) near road and stream in domestic area; 0.1-1m above ground; water turbid, grayish; bottom with plant debris; deep-partial shade. *Ae. (Pro.) heteropus*, *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthro stigma*.

529. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 14 Nov 71, DS, KS. Artificial container (large tin can) near road and stream in domestic area; water clear; bottom with mud, rust, plant debris; deep-partial shade. *Li. durhamii*.

530. Alajuela, S outskirts of Alajuela (16PHG0507), 900m; 14 Nov 71, DS, KS. Artificial container (car tire) near road and stream in domestic area; water clear; bottom with plant debris; deep-partial shade. *Li. durhamii*.

531. Alajuela, NW outskirts of Alajuela (16PHG0408), 900m; 14 Nov 71, DS. Cut bamboo (7 internodes) near road and stream in domestic area; water turbid, yellowish; bottom with plant debris; partial shade. *Hg. (Hag.) iridicolor*, *Wy. (Pen.) arthro stigma*, *Wy. (Tri.) aporonomia*.

532. Alajuela, Alajuela, near Rt. 125 about halfway between Alajuela and Guadalupe (16PHG0710), 1020m; 14 Nov 71, DS. Cut bamboo (2 internodes) along road in coffee plantation; water clear; bottom with plant debris; partial shade. *Ae. (Pro.) heteropus*, *Wy. (Pen.) arthro stigma*, *Wy. (?Pen.) ?nigritubus*.

533. Alajuela, Alajuela, Natl. Rt. 1 at Rio Ciruelas (16PHG061074), 910m; 14 Nov 71, DS. Cut bamboo (1 internode) near road and stream in domestic area; 0.3m above ground; water slightly turbid and grayish; bottom with plant debris; partial shade. *Wy. (Pen.) arthro stigma*.

534. Puntarenas, Puntarenas, Cocal (16PGG4003), near sea level; about 8 Nov 71, AB. Debris sample from ground pool; first flooded 3 Dec 71; second flooding sterile. *Ae. (Och.) taeniorhynchus*.

535. Cartago, Orosi, 6.4km SE of Orosi on Rt. 224 near Purisil (17PJA9180), 1200m; 9 Oct 71, DS. Artificial containers (2 truck tires) along road in open area; water clear; bottom with small amount of gravel and plant debris; full sun. *Cx. (Cux.) coronator* group, *Cx. (Cux.) pinarocampa*.

536. Cartago, Orosi, 6.0km SE of Orosi on Rt. 224 near Purisil (17PJA9080), 1200m; 9 Oct 71, DS. Artificial container (car tire) near road in domestic area; water clear; bottom with plant debris; partial shade. *Cx. (Cux.) quinquefasciatus*.

537. Cartago, Orosi, 4.0km S of Orosi on Rt. 224 (17PJA8881), 1150m; 9 Oct 71, DS. Artificial container (half of truck tire) along road in domestic area; water clear, slightly amber-colored; bottom with much plant debris; partial shade. *Ae. (Och.) fluviatilis*, *Cx. (Cux.) coronator* group, *Cx. (Cux.) pinarocampa*.

538. Cartago, Orosi, Orosi Church (17PJA867841), 1055m; 9 Oct 71, DS. Artificial container (large cement container) in domestic area; 0.3m above ground; water clear, tannish; bottom with plant debris; full sun. *Cx. (Cux.) coronator* group.

539. Limon, about 3km E of Zent, Boston, finca headquarters (17PKB5207), 15m; 11-12 Dec 71, DS. Adults biting man inside vehicle in domestic area of cacao plantation; about midnight; light rain. *Cx. (Cux.) quinquefasciatus*.

540. Limon, Zent, about halfway between Zent and Boston (17PKB5108), 15m; 12 Dec 71, DS, KS. Adults biting man in cacao plantation; 1200-1330hrs; deep-partial shade; progeny rearings attempted: P-1 eggs laid on moist cotton bottom, P-2 eggs laid on sugar wad and top netting, P-3 eggs laid individually 17 Dec 71 on moist cotton bottom. *Ae. (Och.) angustivittatus*, *Ps. (Jan.) ferox*.

541. Limon, Zent, about halfway between Zent and Boston (17PKB5108), 15m; 12 Dec 71, DS, KS. Leaf axils of terrestrial aroid (?elephant ear, about 20 axils) in cacao plantation; 0-0.1m above ground; water clear, a few axils slimy; partial-full sun. *Tr. (subg. A) ulopus*, *Wy. (Prs.) complosa*.

542. Limon, about 0.8km S of Zent (17PKB5008), 20m; 12 Dec 71, DS, KS. Small ground pool in ditch along road in cacao plantation; water turbid, muddy tan, stagnant, fresh; some grassy vegetation; bottom with mud, plant debris; full sun. *Cx. (Cux.) coronator* group.

543. Limon, Zent (17PKB5009), 20m; 12 Dec 71, DS, KS. Small ground pool (1.5m wide, 0.2m deep) along railroad in domestic area; water semipermanent-temporary, turbid, milky tan, stagnant, fresh; some grassy vegetation; bottom with mud, gravel, plant debris; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator* group.

## CR Collection Records

544. Limon, about 3km E of Zent, Boston, finca headquarters (17PKB5207), 15m; 13 Dec 71, DS. Adult flying inside parked vehicle in domestic area; 0730hrs. *Cx. (Cux.) quinquefasciatus*.
545. Limon, Limon, about 0.8km S of Pueblo Nuevo (17PKB7503), 10m; 14 Dec 71, DS. Artificial container (tractor tire) along road in open area; water clear, fresh, volume about 70 l; some herbaceous vegetation; bottom with mud, small amount of plant debris; full sun. *Cx. (Cux.) coronator* group, *Cx. (Cux.)* sp undetermined.
546. Limon, Limon, about 0.8km S of Pueblo Nuevo (17PKB7503), 10m; 14 Dec 71, DS. Large ground pools (3) along road in open area; water semipermanent, clear or turbid and muddy tan, stagnant, fresh; algae, grassy vegetation abundant to absent; bottom with mud, plant debris; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator* group, *Cx. (Mel.) chrysonotum*, *Ps. (Gra.) confinnis* group.
547. Limon, Limon, about 0.8km S of Pueblo Nuevo (17PKB7503), 10m; 14 Dec 71, DS. Artificial container (wheel well of car) along road; water clear, fresh, volume about 10 l; some herbaceous vegetation; bottom with mud, plant debris; partial-full sun. *Cx. (Cux.) coronator* group, *Cx. (Cux.) declarator* group.
548. Limon, Limon, about 0.8km S of Pueblo Nuevo (17PKB7503), 10m; 14 Dec 71, DS. Adults biting man along road in open area; 1330hrs; partial-full sun. *Ae. (Och.) angustivittatus*, *Ps. (Jan.) albipes*.
549. Limon, Limon, about 0.8km S of Pueblo Nuevo (17PKB7503), 10m; 14 Dec 71, DS. Adult biting man along trail; 1300hrs; partial-full sun. *Ps. (Jan.) ferox*.
550. Limon, Limon, about 6km S of Pueblo Nuevo (17PKA7599?), 20m; 14 Dec 71, DS. Cut bamboo (12 internodes) along road near stream in cacao plantation; 0-0.5m above ground; water clear; bottom with plant debris; deep-partial shade. *An. (Ano.) eiseni*, *Hg. (Hag.) iridicolor*, *Tx. (Lyn.) hypoptes*, *Tr. (Trc.) digitatum*, *Wy. (Pen.) arthrostigma*, *Wy. (Tri.) aporonoma*.
551. Limon, Limon, about 6km S of Pueblo Nuevo (17PKA7599?), 20m; 14 Dec 71, DS. Adult resting in cut bamboo internode near stream in cacao plantation; 0.3m above ground; 1600hrs; deep-partial shade. *Wy. (Tri.) ?aporonoma*.
552. Limon, Limon, about 6km S of Pueblo Nuevo (17PKA7599?), 20m; 14 Dec 71, DS. Adults resting on stem of *Heliconia* near stream in cacao plantation; 1.5m above ground; 1600hrs; deep-partial shade. *Tr. (Trc.) digitatum*, *Wy.* sp undetermined.
553. Limon, Limon, about 6km S of Pueblo Nuevo (17PKA7599?), 20m; 14 Dec 71, DS. Adult biting man in shade of clump of *Heliconia* near stream in cacao plantation; progeny rearing made: eggs laid by morning of 15 Dec on bottom of dry vial, eggs hatched by morning of 16 Dec without free water, larvae then flooded and developed normally. *Tr. (Trc.) digitatum*.
554. Limon, Limon (17PKB7705), 10m; 14 Dec 71, DS. Adult resting in third floor hotel room; 2100hrs. *Ps. (Jan.) albipes*.
555. Limon, about 8km S of Limon, just S of Westfalia, Boca del Rio Banano (17PKA8098), near sea level; 15 Dec 71, DS. Swamp near sea; water permanent, clear, stagnant, fresh; abundant grassy (cattails) and herbaceous vegetation; bottom with mud, plant debris; partial-full sun. *An. (Nys.)* sp undetermined, *Cx. (Mel.) iolambdis*, *Cx. (Mel.) pilosus*, *Ur.* sp undetermined.
556. Limon, about 8km S of Limon, just W of Beverly on road to Bomba (17PKA7697), 10m; 15 Dec 71, DS, KS. Leaf axils of terrestrial aroid (?elephant ear) along road in cacao plantation; deep-partial shade. *Tr.* (subg. A) *ulopus*, *Wy. (Prs.) complosa*.
557. Limon, about 8km S of Limon, 0.6km E of Beverly on road to Westfalia (17PKA7797), 10m; 15 Dec 71, DS, KS. Adults biting man under cacao trees; 1700hrs. *Ae. (Och.) serratus* group.
558. Limon, about 8km S of Limon, 2.1km E of Beverly on road to Westfalia (17PKA7896), 5m; 15 Dec 71, DS, KS. Small ground pools (4) in ditch; water temporary, clear, amber-colored, stagnant, fresh; no vegetation; bottom with mud, plant debris; partial shade. *Ae. (Och.) angustivittatus*, *Ae. (Och.) serratus* group, *Cx. (Cux.) coronator* group, *Cx. (Mel.) pilosus*, *Cx. (Mel.)* sp undetermined, *Ps. (Jan.)* sp undetermined.
559. Limon, about 8km S of Limon, 2.1km E of Beverly on road to Westfalia (17PKA7896), 5m; 15 Dec 71, DS, KS. Fallen banana leaf; water clear; bottom with plant debris; partial shade. *Li. durhamii*.
560. Limon, about 8km S of Limon, 2.1km E of Beverly on road to Westfalia (17PKA7896), 5m; 15 Dec 71, DS, KS. Large crabhole; bottom with mud; partial shade. *Cx. (Cux.) inflictus* group.

## CR Collection Records

- 561, 561A. Limon, about 8km S of Limon, about 3km E of Beverly on road to Westfalia (17PKA7996), 5m; 15 Dec 71, DS, KS. Cut bamboo (about 15 internodes) along road in plantation; 0.1-1.0m above ground; water clear; bottom with plant debris; partial shade. *Cx. (Cux.) mollis*, *Li. asulleptus*, *Li. durhamii*, *Wy. (Pen.) arthrostigma*, *Wy. (Tri.) aporonoma*, *Wy. (Tri.)* sp 22.
562. Limon, about 3km E of Zent, Boston (17PKB5207), 15m; 17 Dec 71, DS. Adult resting in parked vehicle in domestic area; 0715hrs. *Cx. (Cux.) quinquefasciatus*.
563. Limon, Zent (17PKB5009), 20m; 17 Dec 71, DS. Ground pool (2 X 0.5m, 0.2m deep) along road in open area; water temporary, turbid, muddy gray, stagnant, fresh; no vegetation; bottom with mud, plant debris; partial-full sun. *Cx. (Cux.) coronator* group.
564. Limon, about 8km E of Zent, 2.3km E of turnoff to Cuba Creek on Limon-Siquirres road (17PKB5706?), 20m; 17 Dec 71, DS. Depression in fallen tree near stream in partially cleared premontane moist forest; water clear; bottom with plant debris; partial shade. *Cx. (Cux.) corniger*, *Cx. (Cux.) mollis*.
565. Limon, about 8km E of Zent, 2.3km E of turnoff to Cuba Creek on Limon-Siquirres road (17PKB5706?), 20m; 17 Dec 71, DS. Leaf axils of terrestrial plant ("wild banana," 15 axils). *Tr. (Iso.) espini*, *Tr. (subg. A) ulopus*, *Wy. (Prs.) complosa*.
566. Limon, about 4km E of Zent, 0.6km E of turnoff to Boston on road to Limon (17PKB5407?), 15m; 17 Dec 71, DS. Epiphytic bromeliad in cacao plantation; 4m above ground; partial shade. *Cx. (Mcx.) jenningsi* group, *Cx. (Mcx.)* sp 79, *Tx. (Lyn.) superbus*, *Wy. (Hys.)* sp G, *Wy. (Hys.)* sp undetermined.
567. Miscellaneous material without data. *Cx. (Mel.) elevator*, *Li. durhamii*.
568. Alajuela, 2.6km E of San Mateo on Natl. Rt. 11, just E of Desamparados, Quebrada Chavarria (16PGG737006), 260m; 26 Dec 71, DS. Small streamside ground pools (2) in grazing area; water ?semi-permanent, clear, stagnant to with slow current; no vegetation; bottom with mud, rock, many dead leaves; partial shade. *An. (Ano.) apicimacula*, *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator* group, *Cx. (Mel.)* sp undetermined, *Sy.* sp undetermined.
569. Puntarenas, Tarcoles, 2.9km N of ferry over Rio Grande de Tarcoles on Rt. 143 (16PGF6184), 15m; 27 Dec 71, DS. Small pond in open grazing area along road; water semipermanent, clear, stagnant, fresh; abundant grassy and floating vegetation; bottom with mud, plant debris; full sun. *An. (Nys.) albi-manus*, *Cx. (Mel.) bastagarius*, *Cx. (Mel.) dumni*, *Cx. (Mel.) erraticus*, *Cx. (Mel.)* sp undetermined.
570. Alajuela, 1.1km S of San Mateo on Rt. 143, Rio Machuca (16PGF718983), 180m; 27 Dec 71, DS. River margin pool in grazing area; water permanent, clear, fresh, with slow current; abundant flottage; bottom with mud, gravel, rock, plant debris; partial shade. *An. (Nys.) argyritarsis*, *Cx. (Mel.)* spp undetermined.
571. Alajuela, 2.3km W of San Mateo on road to Esparta (16PGF698996), 190m; 27 Dec 71, DS. Stream margin in grazing area; water permanent, clear, with slow current; some grassy vegetation; bottom with mud, rock, plant debris; partial-full sun. *Co.* sp 34, *Cx. (Mel.) iolambdis*, *Dx.* sp undetermined.
572. Alajuela, about 6km W of San Mateo, 2.7km E of Jesus Maria on San Mateo-Esparta road, Quebrada La Cruz (16PGG665010), 115m; 27 Dec 71, DS. Small ground pool near stream in grazing-cultivation area; water ?semipermanent; flottage but no vegetation; bottom with mud, many dead leaves; partial shade. *An. (Nys.) argyritarsis*, *Cx. (Cux.) declarator* group.
573. Alajuela, about 7km W of San Mateo, 1.1km E of Jesus Maria on San Mateo-Esparta road (16PGG652011), 210m; 27 Dec 71, DS. Stream margin in grazing area; water semipermanent, clear, with slow current; some grassy vegetation; bottom with mud, rock, plant debris; deep-partial shade. *Cx. (Mel.) iolambdis*.
574. Puntarenas, 1.0km S of Esparta on road to Artieda, Rio Esparta (16PGG548040), 110m; 28 Dec 71, DS. Streamside rockhole in grazing area; water clear, stagnant, fresh; no vegetation; bottom with many dead leaves; deep-partial shade. *An. (Nys.) argyritarsis*, *Co.* sp 34, *Cx. (Cux.) coronator* group, *Cx. (Cux.)* sp undetermined, *Cx. (Mel.) elevator*, *Ur. trapidoi*, *Ur.* sp near *typhlosomata*.
575. Puntarenas, 1.0km S of Esparta on road to Artieda, Rio Esparta (16PGG548040), 110m; 28 Dec 71, DS. Adult biting man near stream in grazing area; 1130hrs; deep shade. *Sa. (Sbo.) chloropterus*.
576. Puntarenas, Pitahaya, about 1km S of Aranjuez, "La Laguna de Aranjuez" (16PGG416110), 10m; 28 Dec 71, DS. Adults biting man near marsh in grazing area; 1730hrs; partial-full sun. *Cq. (Rhy.)*

## CR Collection Records

*nigricans*, *Ps. (Gra.) confinnis* group.

577. Puntarenas, Pitahaya, about 1km S of Aranjuez, "La Laguna de Aranjuez" (16PGG416110), 10m; 28-29 Dec 71, DS. CDC light trap in grazing area near marsh; 2.5m above ground; 1730hrs (28 Dec)-morning (29 Dec). *Cq. (Rhy.) nigricans*, *Cx. (Mel.) iolambdis*.

578. Puntarenas, Pitahaya, about 1km S of Aranjuez, "La Laguna de Aranjuez" (16PGG416110), 10m; 29 Dec 71, DS. Adults biting man in open grazing area between marsh and rice fields; 0730hrs; full sun. *Ps. (Gra.) confinnis* group.

579. Puntarenas, Puntarenas, about 1km S of Pitahaya (16PGG3906), near sea level; 29 Dec 71, DS. Small treehole in mangroves; 1m above ground; water turbid, muddy gray, fresh; bottom with mud, plant debris; partial shade. *Hg. (Hag.) chalcospilans*.

580. Puntarenas, Puntarenas, about 1km S of Pitahaya (16PGG3906), near sea level; 29 Dec 71, DS. Large treehole (with lateral opening) in mangroves; 1m above ground; water turbid, muddy gray, fresh, volume about 10 l; bottom with mud, plant debris; partial shade. *Co. appendiculata*, *Cx. (Cux.) coronator* group, *Cx. (Cux.) inflictus* group, *Hg. (Hag.) chalcospilans*.

581. Puntarenas, Puntarenas, about 1km S of Pitahaya (16PGG3906), near sea level; 29 Dec 71, DS. Small treehole (in same tree as CR580, with small vertical opening) in mangroves; 1m above ground; water turbid, dark gray, fresh, volume about 0.2 l; bottom with mud, plant debris; partial shade. *Co. appendiculata*, *Hg. (Hag.) chalcospilans*.

582. Puntarenas, Puntarenas, about 1km S of Pitahaya (16PGG3906), near sea level; 29 Dec 71, DS. Small treehole in mangroves; water clear, amber-colored; bottom with mud, plant debris; partial shade; hole found dry, flooded, then hatched larvae collected about 10hrs later. *Hg. (Hag.) chalcospilans*.

583. Puntarenas, Puntarenas, about 1km S of Pitahaya (16PGG3906), near sea level; 29 Dec 71, DS. Small treehole in mangroves; water turbid, muddy gray; bottom with mud, plant debris; partial shade; hole found dry, flooded, then hatched larvae collected about 10hrs later. *Hg. (Hag.) chalcospilans*.

584, 584A. Puntarenas, 1.0km S of Esparta on road to Artieda, Rio Esparta (16PGG548040), 110 m; 28 Dec 71, DS. Epiphytic bromeliads (4 large plants of same type; 0.7m wide and high; leaves light green, to 8cm wide, with entire margin, pliable) in grazing area near stream; 8m above ground; partial shade. *Co. ?sp 12*, *Cx. (Mcx.) rector*, *Wy. (Wyo.) pertinans* group sp P.

585. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Jan 72, DS. Small treeholes (3 holes in Pejiballe palm stumps, *Guiljelma utilis*) in old plantation; 0.8m above ground; water clear; some algae; bottom with plant debris; full-partial sun. *Hg. (Hag.) iridicolor*, *Or. fascipes*, *Tx. (Lyn.) hypoptes*, *Wy. (Tri.) aporonoma*.

586. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 8 Jan 72, DS. Fallen cacao pod in old plantation; water clear; bottom with plant debris; partial shade. *Li. durhamii*.

587. Not used.

588. Cartago, Turrialba, Instituto Interamericano de Ciencias Agricolas, Rio Reventazon (17PKA0994), 500m; 16 Jan 72, DS. Small rockhole at edge of river in tropical moist forest; water clear, stagnant; bottom with mud, plant debris; partial shade. *Ae. (Och.) fluviatilis*.

589. Cartago, Turrialba, Instituto Interamericano de Ciencias Agricolas, Rio Reventazon (17PKA0994), 500m; 16 Jan 72, FF, DS. Large treehole (same as CR389) in tropical moist forest; 0.1m above ground; water clear; partial shade. *Cx. (Cux.) corniger*, *Cx. (Lut.)* sp undetermined.

590. Cartago, Atirro, Rio Atirro at confluence with Rio Reventazon (17PKA090893), 590m; 16 Jan 72, DS. Ground pool (4m wide) at edge of river; water semipermanent, clear, stagnant; abundant algae, grassy and herbaceous vegetation; bottom with mud, plant debris; partial-full sun. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*, *Cx. (Mel.) bastagarius*, *Cx. (Mel.) erraticus*, *Cx. (Mel.) iolambdis*, *Ur. geometrica*.

590A. Cartago, Atirro, Rio Atirro at confluence with Rio Reventazon (17PKA090893), 590m; 16 Jan 72, DS. Large ground pool at edge of river; water clear, stagnant; abundant grassy and herbaceous vegetation; bottom with mud, sand, plant debris; full sun. *Cx. (Mel.) bastagarius*, *Cx. (Mel.)* sp undetermined.

590B. Cartago, Atirro, Rio Atirro at confluence with Rio Reventazon (17PKA090893), 590m; 16 Jan 72, DS. River margin; water permanent, clear, with slow current; abundant grassy and herbaceous

## CR Collection Records

vegetation; bottom with mud, sand, plant debris; partial-full sun. *An.* sp undetermined, *Cx.* (*Mel.*) *io-lambdis*, *Dx.* sp undetermined.

591. Cocos Island, Wafer Bay, near sea level; 18 Apr 75, CH. Epiphytic bromeliads (about 25 mostly mature plants, *Guzmania sanguinea*) in premontane rain forest and mangroves; mostly 0.5m above ground; partial shade. *Cx.* (*Cux.*) *dohenyi* (holotype).

592. Cocos Island, Wafer Bay, near sea level; 18 Apr 75, CH. Adults biting man in mangroves; mid-day; weather dry, mostly clear. Specimens not available.

593. Cocos Island, Wafer Bay, near sea level; 18-22 Apr 75, CH. Malaise trap in premontane rain forest, mangroves and second growth. *Cx.* (*Cux.*) *dohenyi*.

594-599. Not used.

600. Guanacaste, Puerto Humo, Palo Verde OTS Field Station (16PFG8143), 1m; 19 Jun 75, JH. Margin of marshy depression in grazing area; water semipermanent, clear, fresh; abundant floating and submerged vegetation; bottom with mud, dead plant matter; full sun. *An.* (*Nys.*) *albimanus*.

601. Guanacaste, Puerto Humo, Palo Verde OTS Field Station (16PFG8144), 10m; 20 Jun 75, JH. Artificial container (truck tire) in grazing area; water turbid, colored; no vegetation; partial shade. *Ae.* (*Pro.*) *podographicus*, *Cx.* (*Cux.*) *corniger*, *Cx.* (*Cux.*) *coronator* group, *Cx.* (*Cux.*) *declarator* group, *Cx.* (*Cux.*) *mollis*, *Cx.* (*Mel.*) sp undetermined.

602. Guanacaste, Puerto Humo, Palo Verde OTS Field Station (16PFG8144), 10m; 20 Jun 75, JH. Adults biting man along fence at pasture-tropical dry forest margin; partial shade. *Ae.* (*Och.*) *angustivittatus*, *Ae.* (*Och.*) *scapularis*, *Ae.* (*Och.*) *serratus* group, *Ae.* (*Och.*) *taeniorhynchus*.

603. Guanacaste, Puerto Humo, Palo Verde OTS Field Station headquarters (16PFG820439), 20m; 21 Jun 75, JH. Adults on screens outside building. *Ae.* (*Och.*) *taeniorhynchus*, *An.* (*Ano.*) *pseudopunctipennis*, *An.* (*Nys.*) *albimanus*, *Ma.* (*Man.*) *dyari*, *Ps.* (*Gra.*) *confinnis* group.

604. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 5 Jul 75, JH. Adults biting man along trail in premontane wet forest; 1500-1730hrs; deep shade. *Ae.* (*Och.*) *angustivittatus*, *Ae.* (*Och.*) *serratus* group, *Ae.* (*Och.*) sp undetermined, *Cx.* (*Cux.*) sp undetermined, *Ps.* (*Jan.*) *ferox*, *Ps.* (*Pso.*) *?lineata*, *Wy.* sp undetermined.

605. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 5 Jul 75, JH. Trap (light trap baited with dry ice) in premontane wet forest; 2m above ground; 2000-2400hrs. *Ae.* (*Och.*) *fulvus*, *Ae.* (*Och.*) *serratus* group, *Cq.* (*Rhy.*) *fasciolata* group, *Cx.* (*Cux.*) *corniger*, *Cx.* (*Cux.*) *coronator* group, *Cx.* (*Cux.*) spp undetermined, *Cx.* (*Mel.*) *taeniopus* group ?sp 39, *Cx.* (*Mel.*) spp undetermined, *Ps.* (*Jan.*) *ferox*.

606. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 6 Jul 75, JH. Fallen pods (monkey pods, *Lecythis costaricensis*) in premontane wet forest. *An.* (*Ano.*) *eiseni*, *Cx.* (*Car.*) *secundus*, *Li.* *asulleptus*, *Li.* *durhamii*, *Tr.* (*Trc.*) *digitatum*.

607. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 6 Jul 75, JH. Large epiphytic bromeliad in premontane wet forest; 20m above ground. *An.* (*Ker.*) *neivai*, *Wy.* (*Wyo.*) *pertinans* group, *Wy.* sp undetermined.

608. Puntarenas, El Roble, Boca del Rio Barranca (16PGG4801), near sea level; 8 Jul 75, JH. Adults resting in large crabhole (same as CR612) at edge of mangroves. *De.* *pseudes*, *Ps.* (*Jan.*) *ferox*.

609. Guanacaste, El Coco, Playas del Coco (16PFG4266), near sea level; 12 Jul 75, JH. Adults resting in small crabhole near sea; partial shade. *De.* *pseudes*.

610. Limon, Limon, "Limoncita" (17PKB7604), 10m; 16 Jul 75, JH. Adults biting man in domestic area; 2330-2400hrs. *Cq.* (*Rhy.*) *fasciolata* group, *Cx.* (*Cux.*) *corniger*, *Cx.* (*Cux.*) *quinquefasciatus*, *Wy.* sp undetermined.

611. Limon, Limon, "Limoncita" (17PKB7604), 10m; 17 Jul 75, JH. Ditch in grassy domestic area near stream; water semipermanent; no vegetation; bottom with mud, animal wastes; partial shade. Specimens not available.

612. Puntarenas, El Roble, Boca del Rio Barranca (16PGG4801), near sea level; 8 Jul 75, JH. Large crabhole (same as CR608) at edge of mangroves; water clear, brackish; bottom with mud; partial shade. *Cx.* (*Cux.*) *inflictus* group, *De.* *pseudes*.

## CR Collection Records

613. Guanacaste, El Coco, Playas del Coco (16PFG4266), near sea level; 12 Jul 75, JH. Small crab-hole (same as CR609) near sea; water clear; partial shade. *De. pseudes*.

614. Heredia, Puerto Viejo, Finca La Selva OTS Field Station headquarters (16PHG2754), 100m; 5 Jul 75, JH. Adults on screen outside building in premontane wet forest; 2100-2130hrs. *Ae. (Och.) du-preei* group, *Cq. (Rhy.) fasciolata* group, *Cx. (Cux.) ?declarator* group, *Cx. (Mel.) dunnii*, *Cx. (Mel.) ?pilosus*, *Cx. (Mel.) taeniopus*, *Cx. (Mel.)* sp undetermined, *Ur. hystera*.

615. Heredia, Puerto Viejo, Finca La Selva (16PHG2754), 100m; 6 Jul 75, JH. Fallen pods (monkey pod, *Lecythis costaricensis*; same as CR606) in premontane wet forest. *Tr. (Trc.) digitatum*.

616. Limon, Limon, "Limoncita" (17PKB7604), 10m; 17 Jul 75, JH. Ditch (same as CR611) in grassy domestic area near stream; water semipermanent; no vegetation; bottom with mud, animal wastes; partial shade. Specimens not available.

617. Puntarenas, Buenos Aires, Natl. Rt. 2 at turnoff to Buenos Aires (17PKA4311), 390m; 19 Jul 75, JH. Artificial container (discarded toilet) in grassy domestic area. *Cx. (Cux.) corniger*, *Cx. (Cux.) declarator* group, *Cx. (Cux.) interrogator*, *Cx. (Cux.) quinquefasciatus*.

618. Limon, Limon, "Limoncita" (17PKB7604), 10m; 17 Jul 75, JH. Ditch (same as CR611) in grassy domestic area near stream; water semipermanent; no vegetation; bottom with mud, animal wastes; partial shade. Specimens not available.

619. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 20 Jul 75, JH. Artificial container (no. 10 can) in garden; algae present; bottom with mud. *Cx. (Cux.) coronator* group.

620. Puntarenas, San Vito, Las Cruces OTS Field Station, Bob Wilson's house (17PKV845715), 1200m; 21 Jul 75, JH. Introduced epiphytic bromeliad in garden; partial shade. *An. (Ker.) neivai*, *Cx. (Mcx.)* sp undetermined, *Or. phyllozoa*, *Wy. (Wyo.) abebela*.

621. Puntarenas, San Vito, Las Cruces OTS Field Station, Bob Wilson's house (17PKV845715), 1200m; 21 Jul 75, JH. Introduced epiphytic bromeliad in garden; 1.2m above ground; partial shade. *Cx. (Mca.) erethyzonfer*, *Cx. (Mcx.)* sp undetermined, *Or. phyllozoa*, *Wy. (Wyo.) abebela*.

622. Puntarenas, San Vito, Las Cruces OTS Field Station, Bob Wilson's house (17PKV845715), 1200m; 21 Jul 75, JH. Introduced large epiphytic bromeliad in garden; partial shade. *Cx. (Mcx.)* sp 87, *Cx. (Mcx.)* sp undetermined, *Wy. (Wyo.) abebela*.

623. Puntarenas, San Vito, Las Cruces OTS Field Station, on trail to Rio Jaba (17PKV836713), 1150m; 21 Jul 75, JH. Adults biting man along trail in premontane rain forest; 1200-1300hrs. Specimens not available.

624. Alajuela, Poasito, Volcan Poas, Laguna del Poas (16PHG0327), 2600m; 23 Jul 75, JH. Epiphytic bromeliads in dwarf trees; deep shade. *Ae. (How.) allotecnon*.

625. Alajuela, Poasito, Volcan Poas, picnic area (16PHG0327), 2600m; 23 Jul 75, JH. Terrestrial bromeliads; partial shade. *Ae. (How.) allotecnon*.

626. Alajuela, Poasito, Volcan Poas, picnic area (16PHG0327), 2600m; 23 Jul 75, JH. Epiphytic bromeliads; 4.5m above ground; partial shade. *Ae. (How.) allotecnon*.

627. San Jose, Villa Mills, about 100m S of La Georgina Cafe on Natl. Rt. 2 (17PKA0158?), 3100m; 22 Jul 75, JH. Epiphytic bromeliad on fallen limb in cut-over forest; partial shade. *Ae. (How.) allotecnon*, *Wy. (Wyo.) abebela*.

628. Puntarenas, El Roble, Boca del Rio Barranca (16PGG4801), near sea level; 28 Jul 75, JH. Adults biting man in shade; 1430-1435hrs. *Ps. (Jan.) ferox*.

629. Puntarenas, El Roble, Boca del Rio Barranca (16PGG4801), near sea level; 28 Jul 75, JH. Fallen fruit; water black; surface with pulp and seeds. *Hg. (Hag.) chalcospilans*, *Li. durhamii*.

630. San Jose, Aserri, Mario Vargas' blackfly study site (16PHF1989), 1400m; 30 Jul 75, JH. Cattle tracks in pasture near stream. *Cx. (Cux.) thriambus*, *Cx. (Cux.)* sp 85, *Ur. geometrica*.

631. Puntarenas, El Roble, Boca del Rio Barranca (16PGG4801), near sea level; 28 Jul 75, JH. Adults resting in crabhole. *De. pseudes*.

632. Puntarenas, El Roble, Boca del Rio Barranca (16PGG4801), near sea level; 28 Jul 75, JH. Fallen fruit (same as CR629); water black; surface with pulp and seeds. *Li. durhamii*.

633. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 14 Jul 76, JH. Introduced bromeliad (*Vriesea imperialis*) in garden. *Cx. (Car.) bihaicolus*, *Cx. (Cux.)* spp undetermined,

## CR Collection Records

*Cx. (Mcx.)* spp undetermined, *Or. phyllozoa*, *Wy. (Wyo.) abebela*.

634. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 14 Jul 76, JH. Introduced bromeliads (*Vriesea imperialis*) in garden. *Cx. (Mcx.)* spp undetermined, *Or. phyllozoa*, *Wy. (Wyo.) abebela*.

635. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 15 Jul 76, JH. Introduced bromeliads (*Vriesea simplex*, *gemma*, *hieroglyphica*) in garden. *Ae. (How.) ?allotecnon*, *Cx. (Mcx.)* sp undetermined, *Or. phyllozoa*, *Wy. (Wyo.) abebela*, *Wy. (Wyo.) pertinans* group.

636. Puntarenas, San Vito, Las Cruces OTS Field Station, pasture below headquarters (17PKV844714), 1190m; 15 Jul 76, JH. Adults biting-landing on horse in pasture; 1900-1930hrs. *Ae. (Och.) angustivittatus*, *An. (Ano.) eiseni*.

637. Puntarenas, San Vito, Las Cruces OTS Field Station, path to bottom of coffee plantation (17PKV843717), 1170m; 15 Jul 76, JH. Adults biting-landing on horse in partially cleared forest; 1730-1830hrs. *Ae. (Och.) angustivittatus*, *Ae. (Och.)* sp undetermined, *An. (Ano.) eiseni*, *Wy.* sp undetermined.

638. Puntarenas, San Vito, Las Cruces OTS Field Station, spring house (17PKV843714), 1180m; 15 Jul 76, JH. Artificial container (pitcher) with spring water. *Ur. ?coatzacoalcos*.

639. Puntarenas, San Vito, Las Cruces OTS Field Station, trail to Rio Jaba (17PKV836713), 1150 m; 15 Jul 76, JH. Adults biting-landing on man along trail in premontane rain forest; 1300-1400hrs. *Ae. (Och.) angustivittatus*, *Ae. (Och.)* sp undetermined, *Ae. (Pro.) ?alboapicus*, *Ae. (Pro.) terreus* group, *Ps. (Jan.) ferox*.

640. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 15 Jul 76, JH. CDC light trap in garden; 2m above ground; dusk to dark. *Cx. (Cux.)* sp undetermined.

641. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 16 Jul 76, JH. Introduced bromeliad (*Aechmea tillandsioidea* var. *amazonica*) in garden. *Ae. (How.) allotecnon*, *Cx. (Mcx.)* sp undetermined, *Or. phyllozoa*, *Tx. (Lyn.) superbus*, *Wy. (Wyo.) abebela*.

642. Puntarenas, San Vito, Las Cruces OTS Field Station below spring house (17PKV843714), 1180m; 16 Jul 76, JH. Adults biting-landing on man; 1600-1700hrs; partial shade. *Ae. (Och.) angustivittatus*, *Ae. (Och.)* sp undetermined.

643. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 16 Jul 76, JH. Various artificial containers in domestic area. *Cx. (Cux.) coronator* group, *Li. durhamii*.

644. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 16 Jul 76, JH. Small introduced bromeliads (*Aechmea* 'Black Prince' hybrid) in garden. *Ae. (How.) allotecnon*, *Cx. (Mcx.)* sp undetermined, *Or. phyllozoa*, *Wy. (Wyo.) abebela*.

645. Puntarenas, San Vito, Las Cruces OTS Field Station, trail to Rio Jaba (17PKV836713), 1150 m; 17 Jul 76, JH. Adults biting-landing on man along trail through pasture and premontane rain forest; 0900-1000hrs. *Ae. (Och.) angustivittatus*, *Ae. (Och.)* sp undetermined, *Ps. (Jan.) ferox*, *Wy.* sp undetermined.

646. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 17 Jul 76, JH. Adult biting man in bedroom; 1300hrs. *Hg. (Hag.) janthinomys*.

647. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 17 Jul 76, JH. Artificial container (no. 10 can) along trail in second growth. *Cx. (Car.) bihaicolus*, *Cx. (Cux.) coronator* group, *Li. asulleptus*, *Li. durhamii*.

648. Puntarenas, San Vito, Las Cruces OTS Field Station, trail near Rio Jaba below coffee plantation (17PKV836713), 1150m; 17 Jul 76, JH. Adults biting-landing on horse and man near stream in premontane rain forest; 1500-1600hrs; partial shade. *Ae. (How.) allotecnon*, *Ae. (Och.) angustivittatus*, *Ae. (Och.)* sp undetermined, *Ae. (Pro.) ?alboapicus*, *Ae. (Pro.) terreus* group spp undetermined, *An. (Ano.) eiseni*, *Wy.* spp undetermined.

649. Puntarenas, San Vito, Las Cruces OTS Field Station, trail near Rio Jaba below coffee plantation (17PKV836713), 1150m; 17 Jul 76, JH. Adults biting-landing on horse and man near stream in premontane rain forest; 1600-1700hrs; partial shade. *Ae. (Och.) angustivittatus*, *Ae. (Och.)* sp undetermined, *An. (Ano.) eiseni*, *Tr. (Shn.)* sp undetermined, *Wy.* spp undetermined.

650. Puntarenas, San Vito, Las Cruces OTS Field Station, near Rio Jaba below coffee plantation (17PKV836713), 1150m; 17 Jul 76, JH. Adults biting-landing near stream in premontane rain forest; 1700-



## CR Collection Records

1800hrs; partial shade. *Ae. (Och.) angustivittatus*, *An. (Ano.) eiseni*, *Cx. (Cux.)* sp undetermined.

651. Puntarenas, San Vito, Las Cruces OTS Field Station, near Rio Jaba below coffee plantation (17PKV836713), 1150m; 17 Jul 76, JH. Traps (2 CDC light traps: 1 above horse's head, other above tail) near stream in premontane rain forest; 1830-2100hrs. *Ae. (Och.) angustivittatus*, *Ae. (Och.)* sp undetermined, *An. (Ano.) eiseni*, *Cx. (Cux.)* sp undetermined.

652. Puntarenas, San Vito, Las Cruces OTS Field Station, near Rio Jaba below coffee plantation (17PKV836713), 1150m; 17-18 Jul 76, JH. CDC light trap near river in premontane rain forest; 2100hrs (17 Jul)-dawn (18 Jul). Specimens not available.

653. Puntarenas, San Vito, E of Las Cruces OTS Field Station, "Jack Ozean's finca" (17PKV8471), 1200m; 20 Jul 76, JH. Introduced bromeliad (*Vriesea imperialis*) in garden. *Ae. (How.) allotecon*, *Cx. (Cux.)* sp undetermined, *Cx. (Mcx.)* spp undetermined, *Or. phyllozoa*, *Wy. (Wyo.) abebela*.

654. Puntarenas, San Vito, E of Las Cruces OTS Field Station, "Jack Ozean's finca" (17PKV8471), 1200m; 20 Jul 76, JH. Introduced bromeliad (*Vriesea imperialis*) in garden. *Cx. (Mcx.)* spp undetermined, *Or. phyllozoa*, *Tx. (Lyn.) superbus*, *Wy. (Wyo.) abebela*.

655. Puntarenas, San Vito, E of Las Cruces OTS Field Station, "Jack Ozean's finca" (17PKV8471), 1200m; 20 Jul 76, JH. Introduced bromeliad (*Vriesea simplex*) in garden. *Cx. (Mcx.)* sp undetermined, *Or. phyllozoa*, *Tx. (Lyn.) superbus*, *Wy. (Wyo.) abebela*.

656. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 20 Jul 76, JH. Artificial container (bird bath) in garden; water semipermanent; bottom with algae, dead leaves. *Ae. (Pro.) terreus* group, *Cx. (Car.) bihaicolus*.

657. Puntarenas, San Vito, "Sergio Tarrant Scofield's farm," Laguna Zoncho (17PKV843744), 1180m; 21 Jul 76, JH. Margin of small lake in grazing area; abundant vegetation; bottom with mud. *An. (Nys.) albitarsis*, *An. (Nys.) strodei*.

658. Puntarenas, San Vito, "Sergio Tarrant Scofield's farm" (17PKV8474), 1180m; 21 Jul 76, JH. Artificial container (50gal drum) in domestic area. *Cx. (Cux.) coronator* group.

659. Puntarenas, San Vito, "Sergio Tarrant Scofield's farm" (17PKV8474), 1180m; 21 Jul 76, JH. Epiphytic bromeliad in domestic area; 3m above ground. *Cx. (Mcx.)* sp undetermined, *Or. phyllozoa*, *Wy. (Wyo.) abebela*.

660. Puntarenas, San Vito, "Sergio Tarrant Scofield's farm" (17PKV8474), 1180m; 21 Jul 76, JH. Terrestrial bromeliad in domestic area. *Cx. (Mcx.)* sp undetermined, *Wy. (Wyo.) abebela*, *Wy. (Wyo.) pertinans* group.

661. Puntarenas, San Vito, Las Cruces OTS Field Station (17PKV845715), 1200m; 21-22 Jul 76, JH. CDC light trap in banana plantation; 1.5m above ground; dusk to dawn. *Cx. (Cux.)* spp undetermined.

## CR Locality Index

## ALAJUELA

*Alajuela* (16PHG0508) and vicinity. Southern outskirts of town (16PHG0507), 900m.—508, 509, 510, 511, 512, 513, 514, 517, 518, 519, 526, 528, 529, 530. 3km S of town on Rt. 124 (16PHG0406?), 880m.—18. About halfway between Alajuela and Guadalupe near Rt. 125 (16PHG0710), 1020m.—532. NW outskirts of town (16PHG0408), 900m.—531. Rio Ciruelas at Natl. Rt. 1 (16PHG061074), 910m.—533. Rio Ciruelas between Alajuela and San Antonio (16PHG0506), 880m.—507. Rio Segundo near Rt. 111 (16PHG0705), 880m.—268, 269, 270, 271, 527.

*Cambronero* (16PGG6810), about 3km E of. 12.7km W of San Ramon on Natl. Rt. 1 (16PGG702099), 770m.—351, 352, 353, 354.

*Carrillos* (16PGG9910), near. 11.4km SE of Grecia on Natl. Rt. 1 (16PHG0009?), 900m.—26.

*Ciruelas* (16PHG0004) and vicinity. Rio Ciruelas at Rt. 124 (16PHG008038), 780m.—515, 516. Rio Ciruelas between railroad trestle and Rt. 124 (16PHG009039), 780m.—296. Rt. 124, 1km E of Ciruelas (16PHG0104), 820m.—16. Rt. 124, 2km E of Ciruelas (16PHG0205), 840m.—17. Rt. 124, 4.0 km E of Ciruelas and 1km W of San Antonio (16PHG034057), 860m.—295.

## CR Locality Index

*Desmonte* (16PGG774017), near. Natl. Rt. 11, 0.8km E of Desmonte (16PGG7802), 600m.—328, 329, 330. Natl. Rt. 11, 3.9km E of Desmonte (16PGG7903), 800m.—319, 320, 321, 322, 323, 324, 325, 326, 327.

*Palmares* (16PGG8113), near. Natl. Rt. 1, about 1.5km NW of Palmares (16PGG7913), 1100m.—96.

*San Mateo* (16PGG7199), vicinity of. About 7km W of San Mateo and 1.1km E of Jesus Maria on San Mateo-Esparta road (16PGG652011), 210m.—573. 2.7km E of Jesus Maria on San Mateo-Esparta road, Quebrada La Cruz (16PGG665010), 115m.—572. 2.3km W of San Mateo on San Mateo-Esparta road (16PGF698996), 190m.—571. Rio Machuca, 1.1km S of San Mateo on Rt. 143 (16PGF718983), 180m.—570. Natl. Rt. 11, 2.6km E of San Mateo, Quebrada Chavarria (16PGG737006), 260m.—568. Rio Machuca about 3km E of San Mateo and 0.6km E of Desamparados on Natl. Rt. 11 (16PGG742008), 260m.—495, 496, 497, 498, 499, 505, 506.

*San Ramon* (16PGG7716) and vicinity. Natl. Rt. 1, 3.4km W of San Ramon (16PGG7414), 1100m.—349, 350. Natl. Rt. 1, in town (16PGG7615), 1070m.—348. Just NW of Rio Barranca on road to Angeles Sur, 4.7km N of center of San Ramon (16PGG7620), 1000m.—343, 344, 345. Restaurant El Parqueo, on Natl. Rt. 1 in town (16PGG7715), 1050m.—346, 347. 0.8km N of center of town, on road to San Juan (16PGG7717), 1050m.—340, 341, 342.

*Turrucare*s (16PGG940020), vicinity of. Rt. 133 at Rio Alajuela (16PGG912027, 913027), 480-490 m.—307, 308. Rt. 133 between Rio Alajuela and Natl. Rt. 11 (16PGG915039), 510m.—309. Rio Siqui-ares, 0.5km N of Turrucare on Rt. 136 (16PGG942026), 625m.—306. Rio Alajuela at Calle del Coyol, 0.5km E of Santa Rosa (16PGG947054), 650m.—304, 305.

*Volcan Poas* (16PHG0330), 2639m, slopes and near top of. Rt. 120, 2-3km S of summit (16PHG026, 0325), 2500m.—19, 20, 21, 22, 144, 145. Laguna del Poas, trail to, and picnic area (16PHG0327), 2600m.—381, 624, 625, 626. Rt. 120, 8.3km W of Natl. Rt. 9 (16PHG0423), 2150m.—23. Rio Angel about 0.2km N of El Angel Falls (16PHG0731?), 1500m.—194.

## CARTAGO

*Atirro* (17PKA0988) and vicinity. In Atirro (17PKA0988), 600m.—387, 388. Rio Atirro at confluence with Rio Reventazon (17PKA090893), 590m.—590, 590A, 590B. Rt. 234, 2.1km N of Atirro (17PKA1090), 580m.—382, 383, 384, 385, 386.

*Cangreja* (17PJA7484) and vicinity. Casa Mata, Natl. Rt. 2, 6km N of La Sierra (17PJA7182), 1900 m.—53. Natl. Rt. 2, 1.6km N of turnoff to San Cristobal Norte (17PJA723834), 1915-1920m.—310, 311. Cangreja, 11km N of La Sierra on Natl. Rt. 2 (17PJA7484), 1850m.—54.

*Canon* (17PJA7971), near. Paso Macho, 20km SE of La Sierra on Natl. Rt. 2 (17PJA8172), 2500m.—51, 52.

*Cervantes* (17PJA920939), near. Natl. Rt. 10 about 1.5km SW of Cervantes (17PJA9093), 1490m.—9, 10, 11, 12, 13, 14.

*El Empalme* (17PJA762770) and vicinity. Natl. Rt. 2, 4.7km NW of El Empalme (17PJA741782), 2010m.—312, 313, 314, 315, 316, 317, 318. Natl. Rt. 2, 10km SE of La Sierra (17PJA7674), 2400m.—47, 48, 49, 50. Natl. Rt. 2, 6km SE of La Sierra (17PJA7677), 2200m.—46. El Empalme (17PJA7677), 2200m.—154.

*Ojo de Agua*, Natl. Rt. 2 about 3km E of Cerro Vueltas (17PJA9164), 2950m.—40, 41.

*Orosi* (17PJA868841) and vicinity. Rt. 224, about 1.5km N of Orosi (17PJA8585), 1100m.—83. Orosi Church (17PJA866841, 867841), 1055-1060m.—274, 275, 276, 277, 278, 279, 538. Rt. 224, 1.5 km S of Orosi (17PJA8782), 1100m.—85. About 1km W of Rio Macho (17PJA8782), 1300m.—81. Rt. 224, 1km S of Orosi (17PJA8783), 1070-1100m.—82, 280, 281. Rt. 224, 4.0km S of Orosi (17PJA8881), 1150m.—537. Rio Macho (17PJA8882), 1100m.—79, 80, 86. Rt. 224, 6.0km SE of Orosi, near Purisil (17PJA9080), 1200m.—536. Rt. 224, 6.4km SE of Orosi, near Purisil (17PJA9180), 1200m.—535. 3 km SE of bridge at Tapanti over Rio Grande de Orosi on E side of river (17PJA944799), 1210-1220m.—263, 264, 265, 266. 4km SE of bridge at Tapanti over Rio Grande de Orosi on E side of river (17PJA945789), 1240m.—260, 261, 262.

*Paraiso* (17PJA8588), near. Rt. 224, 3km S of Paraiso (17PJA8686), 1200m.—84.

*Salsipuedes* (17PJA8768), near. Natl. Rt. 2, 28.6km N of La Georgina (17PJA8768?), 2700m.—146.

## CR Locality Index

*Tuis* (17PKA169886), near. Rt. 232, 6km SE of La Suiza (17PKA1787), 800m.—65, 66.

*Turrialba* (17PKA055958), vicinity of. Instituto Interamericano de Ciencias Agrícolas, about 3km SE of Turrialba on Rt. 232, on Rio Reventazon (17PKA0994), 500-600m.—55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 389, 390, 391, 392, 393, 394, 395, 396, 489, 588, 589. 3km SE of IICA main entrance (17PKA1093), 600m.—67.

*Volcan Irazu* (17PJB8704), 3432m, S slopes of. Natl. Rt. 8, 8.4km NE of turnoff to Sanatorio Duran (17PJB8802?), 2900m.—490. Finca La Floresta, 6km below Volcan Irazu summit on Natl. Rt. 8 (17PJB8902), 2950.—24. 1km down private road of Hacienda de Montana from Natl. Rt. 8 (17PJB900021), 2800m.—282, 283.

## COCOS ISLAND

*Chatham Bay*.—200.

*Wafer Bay*, near sea level.—591, 592, 593.

## GUANACASTE

*El Coco* (16PFG4266), near sea level.—201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 609, 613.

*Liberia* (16PFG7075), about 5km N of and 8km W of. Rio Colorado at Hacienda Coyolar (16PFG6279), 60m.—187.

*Palo Verde*, Organization for Tropical Studies Field Station, about 4km N of Puerto Humo at edge of Rio Tempisque river delta (16PFG820439) and vicinity. Various localities at and near station (16PFG8143, 8144, 8243, 8244, 8447), 1-20m.—435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 600, 601, 602, 603.

*Samara* (16PFF6192), near sea level.—195, 196, 197, 198, 199.

*Tronadora* (16PGG300607), near. Rt. 150, 12km E of Tilaran (16PGG3160?), 540m.—213, 214, 215, 216.

## HEREDIA

*Cartagos* (16PHG1122), near. Natl. Rt. 9, 7.9km N of Rt. 125 (16PHG1123?), 2000m.—379, 380.

*Finca La Selva*, Organization for Tropical Studies Field Station, on Rio Puerto Viejo just S of confluence with Rio Sarapiquí (16PHG2754), 100m.—400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 500, 501, 502, 503, 504, 585, 586, 604, 605, 606, 607, 614, 615.

"*Los Diamantes*."—169.

*Puerto Viejo* (16PHG2757) and vicinity. In Puerto Viejo (16PHG2757), 80m.—188, 189, 190, 191, 193. Road to Rio Sarapiquí, 0.2km from Puerto Viejo (16PHG2757), 80m.—217, 222, 223, 224, 225. Road to "Semiramis Bar," 0-0.8km down road (16PHG2757), 80m.—218, 219, 220, 221, 226, 227, 228, 232. 1km N of Puerto Viejo (16PHG2758), 80m.—192.

*San Rafael* (16PHG180082), about 1km E of. Rt. 112 at Rio Turales (16PHG191088), 1310m.—298, 299.

*Volcan Barba* (16PHG1721), 2906m, SE slopes of. Alto del Roble on Rt. 113 (16PHG2016), 2100m.—186.

## LIMON

*Beverly* (17PKA765976), vicinity of. Along road from Bomba to Westfalia, from just W of to about 4km E of Beverly (17PKA7697, 7797, 7896, 7996), 5-10m.—468, 469, 470, 556, 557, 558, 559, 560, 561.

*Bomba* (17PKA741971), near. 1.8km E of Bomba on road to Westfalia (17PKA7597), 20m.—466, 467.

*Boston* (17PKB5207) and vicinity. At Boston (17PKB5207), 15m.—458, 459, 460, 486, 487, 539, 544, 562. 0.6km E of turnoff to Boston on road to Limon (17PKB5407?), 15m.—566.

*Cuba Creek* (17PKB5507), near. 2.3km E of turnoff to Cuba Creek on Limon-Siquirres road (17PKB5706?), 20m.—564, 565.

## CR Locality Index

*Estrada* (17PKB504128), near. About 1.5km S of Estrada (17PKB5011), 15m.—481, 482.

*Finca La Lola* (17PKB3816), 40m.—78, 155, 156, 157, 158, 159, 160, 161, 162.

*Guapiles* (17PJB9330), about 10km S of. On "Guapiles-San Jose road" (17PJB9321?), 600m.—229, 230, 231.

*Limon* (17PKB7705) and vicinity. "Limoncita," barrio of Limon (17PKB7604), 10m.—610, 611, 616, 618. In city (17PKB7705), 10m.—554. Limon Airport, 4.8km S of Limon (17PKB7800), near sea level.—471.

*Portete* (17PKB734070) and vicinity. At Portete (17PKB734070), near sea level.—476, 477, 478, 479, 480. "Bahia Bonita," 0.5km E of Portete (17PKB738069), near sea level.—397, 398, 399, 454, 461. 0.7km E of Portete (17PKB740068), near sea level.—462, 463, 464, 465, 474, 475, 520, 521, 522, 523, 524, 525.

*Pueblo Nuevo* (17PKB7504), S of. About 0.8km S of Pueblo Nuevo (17PKB7503), 10m.—545, 546, 547, 548, 549. About 6km S of Pueblo Nuevo (17PKA7599?), 20m.—550, 551, 552, 553.

*Westfalia* (17PKA7999), S of. Government farm about 3km S of Westfalia (17PKA7996), near sea level.—68, 69, 70, 71, 72, 73, 74, 75, 77. About 1.5km S of Westfalia (17PKA8097), near sea level.—76. Boca del Rio Banano (17PKA8098), near sea level.—472, 473, 555.

*Zent* (17PKB5009) and vicinity. Various localities within 1km of Zent (17PKB5008, 5009, 5010, 5108), 15-20m.—483, 484, 485, 540, 541, 542, 543, 563. Within 1km of turnoff to Zent on Limon-Siquirres road, 20m.—455, 456, 457.

## PUNTARENAS

*Boca del Rio Barranca* (16PGG480015) and vicinity. Laguna Bonilla, 0.8km S of Natl. Rt. 17 (16PGG478028), 5m.—367, 368, 369, 370, 371, 372, 373. Various localities along road from El Roble to Boca del Rio Barranca (16PGG4801, 4802), near sea level.—1, 28, 29, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 118, 119, 120, 171, 233, 234, 235, 236, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 360, 361, 362, 363, 364, 365, 366, 608, 612, 628, 629, 631, 632. Estero el Mero (16PGG489013), near sea level.—109, 110, 237, 238, 239, 240, 241, 242, 243, 254. About 3km S of Boca del Rio Barranca (16PGG4900?), 10m.—108.

*Buenos Aires* (17PKA4314), S of. Natl. Rt. 2 at turnoff to Buenos Aires (17PKA4311), 390m.—617.

*Coto Brus* (17PKV722900), near. Finca Gromaco (17PKV7190), 350m.—173, 174.

*Dominical* (17PJA853240), about 4km NW of. Near Guapil (17PJA8325), near sea level.—33, 34, 42, 43, 45.

*Esparta* (16PGG5505), vicinity of. Rio Esparta, 1.0km S of Esparta on road to Artieda (16PGG548040), 110m.—574, 575, 584. Natl. Rt. 1, 39.0-39.4km W of San Ramon, about 5km E of Esparta (16PGG599067, 603066), 230-250m.—355, 356, 357, 358, 359. Natl. Rt. 1, 11.8km E of Esparta (16PGG6308?), 320m.—97.

*Golfito* (17PKV6155), near. Not specified.—172.

*Osa Peninsula*. "Lagoon, Osa Prod. Forest."—170.

*Palmar Norte* (17PKV3091), about 7km E of. Natl. Rt. 2 at Rio Zapote (17PKV363913), 40m.—163.

*Pitahaya* (16PGG398071), vicinity of. About 1km S of Pitahaya (16PGG3906), near sea level.—579, 580, 581, 582, 583. Hacienda la Irma, about 1.5km N of Pitahaya (16PGG397085), 8m.—374, 375, 376. "La Laguna de Aranjuez," about 1km S of Aranjuez (16PGG416110), 10m.—377, 378, 576, 577, 578.

*Puntarenas* (16PGG3703), E of. Cocal (16PGG4003), near sea level.—534. La Angostura (16PGG4303), near sea level.—2, 3, 4, 27, 111, 112, 113, 114, 115, 116, 117.

*Rincon* (17PKV265621) and vicinity. About 10km W of Rincon at end of ridge road (17PKV2063), 650m.—143. About 2km W of Rincon (17PKV248612), 20m.—141. In or near Rincon (17PKV2662), 20m.—125, 126, 127, 128. Just NW of Rincon (17PKV261629), 30m.—139, 140. About 1km N of Rincon, mouth of Quebrada Aparicio (17PKV265633), near sea level.—130, 131, 132, 133, 134, 135, 136, 137, 138. About 1km S of Rincon, near Rio Rincon (17PKV270613), near sea level.—121, 122, 123, 124, 129, 142.

## CR Locality Index

*San Vito* (17PKV831755), vicinity of. Various localities at and near Las Cruces Organization for Tropical Studies Field Station and Rio Jaba (17PKV8371, 8471), 1150-1200m.—619, 620, 621, 622, 623, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 661. "Sergio Tarrant Scofield's farm," including Laguna Zoncho, just SE of San Vito (17PKV8474), 1180m.—657, 658, 659, 660.

*Tarcoles* (16PGF602797), about 4km N of. Rt. 143, 2.9km N of ferry over Rio Grande de Tarcoles (16PGF6184), 15m.—569.

*Villa Neily* (17PKV8656) and vicinity. Rio Cano Seco, 4.3km N of Villa Neily (17PKV8559), 150 m.—168. About 1.5km S of Villa Neily (17PKV8654), 20m.—165. In Villa Neily (17PKV8656), 50m.—164, 166, 167.

## SAN JOSE

*Alajuelita* (16PHF181958), just N of. Rio Tiribi W of Rt. 110 (16PHF175965, 177964), 1090m.—284, 285, 286, 287, 288, 289, 290, 291, 292.

*Aserri* (16PHF188912), SE of. Mario Vargas' blackfly study site (16PHF1989), 1400m.—630.

*Bajo La Hondura* (17PJB7313), N of. "Rio Claro," 26.4km N of San Jose on Rt. 220 (17PJB7415), 1000m.—185.

*Cascajal* (17PJB7507), just S of. Rt. 216, 2.3km N of Las Nubes (17PJB7507), 1750m.—337, 338, 339.

*Division* (17PKA0252), vicinity of. Natl. Rt. 2, 13km S of Villa Mills (17PKA0252), 2400m.—38, 39. Natl. Rt. 2, 12km S of Villa Mills (17PKA0253), 2400m.—31.

*Hortensia* (17PKA033469), vicinity of. Natl. Rt. 2, 14.5km N of San Isidro del General (17PKA0247), 1500m.—179.

*La Ese* (17PKA019444), vicinity of. Natl. Rt. 2, 11km N of San Isidro del General (17PKA0144), 1300m.—32.

*Limal* (16PHF161819), 1080m.—335, 336.

*Monte Redondo* (16PHF154831), just N of. 1.4km S of Vuelta de Jorco on road to Limonal (16PHF155836), 1210m.—331, 332, 333, 334.

*San Isidro de Coronado* (16PHG280040), vicinity of. Rt. 216, about 4km E of San Isidro (17PJB723047), 1520m.—300. Near Rio Durazno on and W of bridge on road to Calle Durazno from Natl. Rt. 6, 5km E of Rt. 216 junction (17PJB729035, 732034, 732036), 1540-1600m.—301, 302, 303.

*San Isidro del General* (17PKA0237) and vicinity. Motel El Prado (17PKA0237), 750m.—35, 36, 37, 148, 149, 150, 151, 152, 176, 177, 178, 180, 181, 182, 183. "Finca St. Elena," Santa Elena, about 9km E of San Isidro (17PKA1135?), 830m.—184.

*San Jose* (16PHF2099) and vicinity. Rio Torres at Natl. Rt. 3 (16PHG174004), 1060m.—91, 92, 93, 94, 95, 297. Parque Bolivar (16PHF210998), 1150m.—88, 89, 272, 273. University of Costa Rica (16PHF2399), 1200m.—5, 6, 7, 8, 15, 25, 30, 44, 175, 267. "Vargas Araya," near Lourdes (16PHF2599?), 1250m.—488, 491, 492, 493, 494. Not specified.—87, 90.

*Santa Ana* (16PHF090990), just N of. Rt. 121 between Sta. Ana and Pozos (16PHG087001), 860 m.—293, 294.

*Villa Mills* (17PKA0358), vicinity of. Cerro de la Muerte, summit of Natl. Rt. 2 (17PJA9759), 3300 m.—147. Near La Georgina, Cerro de la Muerte, Natl. Rt. 2 (17PKA0158?), 3100m.—153, 627.

## CR Species Index

The following list of species consists mainly of preliminary identifications, and as such they in no way constitute a change in taxonomic status.

*Aedeomyia squamipennis* (Lynch Arribalzaga 1878).—393.

*Aedes (Howardina) alloteconon* Kumm, Komp and Ruiz 1940.—9, 11, 12, 13, 14, 19, 20, 21, 23, 24, 39, 46, 49, 51, 52, 53, 54, 79, 83, 86, 145, 265, 283, 289, 292, 310, 318, 337, 338, 339, 349, 350, 380, 381, 624, 625, 626, 627, 635, 641, 644, 648, 653.

*Aedes (Howardina) brevis* Berlin 1969.—263, 265.

## CR Species Index

- Aedes (Howardina) quadrivittatus* (Coquillett 1902).—23, 49, 51, 52, 53, 54, 145, 310, 314, 337, 338.  
*Aedes (Howardina) septemstriatus* Dyar and Knab 1907.—433.  
*Aedes (Howardina) spinosus* Berlin 1969.—13 (holotype), 310, 314.  
*Aedes (Howardina)* sp undetermined.—220.  
*Aedes (Ochlerotatus) angustivittatus* Dyar and Knab 1907.—57, 60, 64, 92, 94, 95, 108, 154, 158, 172, 340, 342, 373, 408, 421, 427, 468, 482, 485, 487, 540, 548, 558, 602, 604, 636, 637, 639, 642, 645, 648, 649, 650, 651.  
*Aedes (Ochlerotatus) dupreei* (Coquillett 1904) group: *hastatus*, *oligopistus* or related sp.—614.  
*Aedes (Ochlerotatus) epactius* Dyar and Knab 1908.—296, 516.  
*Aedes (Ochlerotatus) euplocamus* Dyar and Knab 1906.—308, 309.  
*Aedes (Ochlerotatus) fluviatilis* (Lutz 1904).—284, 489, 495, 506, 537, 588.  
*Aedes (Ochlerotatus) fulvus* (Wiedemann 1828).—605.  
*Aedes (Ochlerotatus) scapularis* (Rondani 1848).—448, 602.  
*Aedes (Ochlerotatus) serratus* (Theobald 1901) group: *nubilus*, *serratus* and/or related sp.—202, 408, 416, 421, 458, 467, 468, 469, 485, 557, 558, 602, 604, 605.  
*Aedes (Ochlerotatus) taeniorhynchus* (Wiedemann 1821).—2, 100, 101, 103, 108, 116, 117, 119, 120, 156, 168, 199, 398, 438, 448, 522, 534, 602, 603.  
*Aedes (Ochlerotatus)* sp undetermined.—458, 467, 604, 637, 639, 642, 645, 648, 649, 651.  
*Aedes (Protomacleaya) aitkeni* Schick 1970.—50 (holotype).  
*Aedes (Protomacleaya) ?alboapicus* Schick 1970.—355, 639, 648.  
*Aedes (Protomacleaya) daryi* Schick 1970.—334, 344.  
*Aedes (Protomacleaya) ?galindoi* Schick 1970.—430, 432.  
*Aedes (Protomacleaya) heteropus* Dyar 1921.—88, 89, 326, 331, ?335, ?507, 508, 509, 528, 532.  
*Aedes (Protomacleaya) homoeopus* Dyar 1922.—5, 6, 7, 15, 18, 25, 44, 88, 175, 267, 271, 272, 273, 276, 281, 331, 333, 334, 335, 488, 491, 493.  
*Aedes (Protomacleaya) insolitus* (Coquillett 1906).—433.  
*Aedes (Protomacleaya) podographicus* Dyar and Knab 1906.—196, 197, 355, 356, 358, 359, 363, 371, 372, 374, 375, 376, 442, 449, 451, 452, 601.  
*Aedes (Protomacleaya) terreus* (Walker 1856) group: any of above 8 species.—280, 361, 639, 648, 656.  
*Anopheles (Anopheles) apicimacula* Dyar and Knab 1906.—180, 352, 416, 568.  
*Anopheles (Anopheles) eiseni* Coquillett 1902.—68, 125, 315, 352, 389, 410, 412, 524, 550, 606, 636, 637, 648, 649, 650, 651.  
*Anopheles (Anopheles) powderi* Zavortink 1970.—50 (holotype).  
*Anopheles (Anopheles) pseudopunctipennis* Theobald 1901.—158, 590, 603.  
*Anopheles (Kerteszia) neivai* Howard, Dyar and Knab 1913.—13, 83, 227, 230, 231, 403, 417, 422, 426, 500, 502, 504, 607, 620.  
*Anopheles (Nyssorhynchus) albimanus* Wiedemann 1820.—1, 29, 117, 160, 394, 438, 473, 543, 546, 569, 590, 600, 603.  
*Anopheles (Nyssorhynchus) albitarsis* Lynch Arribalzaga 1878.—657.  
*Anopheles (Nyssorhynchus) ?anomalophyllus* Komp 1936.—456.  
*Anopheles (Nyssorhynchus) aquasalis* Curry 1932.—473.  
*Anopheles (Nyssorhynchus) argyritarsis* Robineau-Desvoidy 1927.—16, 17, 32, 37, 84, 340, 342, 353, 382, 383, 384, 385, 568, 570, 572, 574.  
*Anopheles (Nyssorhynchus) strodei* Root 1926.—657.  
*Anopheles (Nyssorhynchus)* sp undetermined.—472, 555, 657.  
*Anopheles* sp undetermined.—179, 274, 354, 482, 486, 521, 590B.  
*Chagasia bathana* (Dyar 1928).—386.  
*Coquillettidia (Rhynchotaenia) fasciolata* (Lynch Arribalzaga 1891) group: *fasciolata*, *venezuelensis* or related sp.—60, 405, 605, 610, 614.  
*Coquillettidia (Rhynchotaenia) nigricans* (Coquillett 1904).—395, 396, 576, 577.  
*Corethrella appendiculata* Grabham 1906.—130, 131, 360, 363, 369, 371, ?403, 441, 442, 444, 452, 580, 581.

## CR Species Index

- Corethrella* ?sp 4: near *downsi*.—403.  
*Corethrella* ?sp 12: near sp 3 and 6.—584.  
*Corethrella* sp 32: near *appendiculata*.—423.  
*Corethrella* sp 34: near *librata*.—571, 574.  
*Corethrella* sp 36: affinities unclear, possibly a new genus.—377.  
*Culex (Anoediopora) conservator* Dyar and Knab 1906.—130, 131, 138.  
*Culex (Anoediopora) corrigani* Dyar and Knab 1907.—433.  
*Culex (Anoediopora) restrictor* Dyar and Knab 1906.—176, 270, 280, 335, 443, 444, 449, 452, 497.  
*Culex (Anoediopora)* sp undetermined.—330.  
*Culex (Carrollia) antunesi* Lane and Whitman 1943.—167.  
*Culex (Carrollia) babahoyensis* Levi-Castillo 1953.—423.  
*Culex (Carrollia) bihaicolus* Dyar and Nunez Tovar 1927.—388, 633, 647, 656.  
*Culex (Carrollia) metempsychus* Dyar 1921.—343, 491, 492, 493.  
*Culex (Carrollia) secundus* Bonne-Wepster and Bonne 1920.—72, 412, 414, 606.  
*Culex (Carrollia) urichii* (Coquillett 1906).—356.  
*Culex (Culex) bonnae* Dyar and Knab 1919.—428.  
*Culex (Culex) chidesteri* Dyar 1921.—288, ?435.  
*Culex (Culex) corniger* Theobald 1903.—72, 163, 180, 182, 187, 271, 274, 275, 284, 285, 286, 287, 288, 291, 293, 300, 304, 308, 388, 390, 469, 496, 505, 515, 564, 589, 601, 605, 610, 617.  
*Culex (Culex) coronator* Dyar and Knab 1906 group: *coronator*, *ousqua*, *usquatissimus* and/or related sp.—16, 17, 32, 36, 37, 65, 68, 82, 85, 121, 127, 128, 136, 159, 160, 161, 163, 165, 170, 173, 174, 180, 189, 191, 274, 275, 284, 285, 286, 287, 290, 291, 298, 299, 302, 304, 342, 382, 383, 384, 385, 387, 428, 445, 471, 482, 484, 495, 499, 505, 506, 515, 535, 537, 538, 542, 543, 545, 546, 547, 558, 563, 568, 574, 580, 601, 605, 619, 643, 647, 658.  
*Culex (Culex) declarator* Dyar and Knab 1906 group: *declarator*, *proclamator*, *jubilator* and/or related sp.—148, 176, 180, 284, 308, 377, 382, 389, 428, 547, 572, 601, ?614, 617.  
*Culex (Culex) dohenyi* Hogue 1975.—200, 591 (holotype), 593.  
*Culex (Culex) inflictus* Theobald 1901 group: *inflictus* and/or related sp.—28, 34, 43, 76, 77, 102, 103, 105, 106, 107, 109, 171, 195, 397, 399, 430, 463, 465, 475, 520, 523, 524, 525, 560, 580, 612.  
*Culex (Culex) interrogator* Dyar and Knab 1906.—617.  
*Culex (Culex) mollis* Dyar and Knab 1906.—148, 388, 389, 390, 428, 429, 430, 431, 561, 564, 601.  
*Culex (Culex) nigripalpus* Theobald 1901.—28, 29, 117, 171, 374, 377, 398, 435, 450.  
*Culex (Culex) pinarocampa* Dyar and Knab 1908.—41, ?175, 301, 335, 535, 537.  
*Culex (Culex) quinquefasciatus* Say 1823.—101, 164, 171, 175, 188, 348, 375, 536, 539, 544, 562, 610, 617.  
*Culex (Culex) stenolepis* Dyar and Knab 1908.—?62, 67, 80, 86, 278, 349, 350, 388.  
*Culex (Culex) thriambus* Dyar 1921.—?32, 180, 185, 261, 300, 302, 308, 316, 319, 341, 342, 353, 630.  
*Culex (Culex)* sp 72: near *salinarius*.—300, 308.  
*Culex (Culex)* sp 85: near *chidesteri*.—84, 264, 630.  
*Culex (Culex)* sp undetermined.—61, 69, 82, 87, 90, 187, 217, 222, 274, 293, 346, 347, 415, 472, 545, 574, 604, 605, 633, 640, 650, 651, 653, 661.  
*Culex (Lutzia) allostigma* (Howard, Dyar and Knab 1915).—180, 193, 389, 412, 420, 428, 429, 525.  
*Culex (Lutzia)* sp undetermined.—173, 589.  
*Culex (Melanoconion) ?arboricolus* Galindo and Mendez 1961.—497.  
*Culex (Melanoconion) bastagarius* Dyar and Knab 1906.—569, 590, 590A.  
*Culex (Melanoconion) chrysonotum* Dyar and Knab 1908.—546.  
*Culex (Melanoconion) conspirator* Dyar and Knab 1906.—17, 56, 68, 374, 375, ?499.  
*Culex (Melanoconion) dunnii* Dyar 1918.—377, 569, 614.  
*Culex (Melanoconion) educator* Dyar and Knab 1906.—1, 29, 394, 456, 472.  
*Culex (Melanoconion) egcymon* Dyar 1923.—171, 377.  
*Culex (Melanoconion) elevator* Dyar and Knab 1906.—327, 499, 567, 574.  
*Culex (Melanoconion) erraticus* (Dyar and Knab 1906).—1, 367, 393, 438, 569, 590.

## CR Species Index

- Culex (Melanoconion) ?garcesi* Duret 1968.—32, 194, 264.  
*Culex (Melanoconion) iolambdis* Dyar 1918.—66, 394, 464, 472, 499, 525, 555, 571, 573, 577, 590, 590B.  
*Culex (Melanoconion) ?mutator* Dyar and Knab 1906.—152.  
*Culex (Melanoconion) panocossa* Dyar 1923.—377.  
*Culex (Melanoconion) pilosus* (Dyar and Knab 1906).—180, 264, 383, 472, 473, 486, 555, 558, ?614.  
*Culex (Melanoconion) psatharus* Dyar 1920.—117.  
*Culex (Melanoconion) taeniopus* Dyar and Knab 1907.—614.  
*Culex (Melanoconion) tecmarsis* Dyar 1918.—368.  
*Culex (Melanoconion) trifidus* Dyar 1921.—306.  
*Culex (Melanoconion)* sp 31: near *iolambdis*.—409, 420.  
*Culex (Melanoconion)* ?sp 39: near *epanastasis*, possibly Type G of Galindo 1969:85.—605.  
*Culex (Melanoconion)* sp undetermined.—28, 32, 66, 171, 179, 180, 305, 309, 327, 367, 368, 377, 393, 394, 415, 435, 446, 447, 471, 474, 489, 499, 558, 568, 569, 570, 590A, 601, 605, 614.  
*Culex (Micraedes) erethyzonfer* Galindo and Blanton 1954.—12, 13, 54, 310, 314, 337, 621.  
*Culex (Microculex) daumastocampa* Dyar and Knab 1908.—403, 500, 502.  
*Culex (Microculex) jenningsi* Dyar and Knab 1907 group: *jenningsi* and/or closely related spp.—62, 67, 83, 278, 349, 350, 391, 500, 504, 566.  
*Culex (Microculex) pleuristriatus* Theobald 1903 group: near *pleuristriatus*.—417.  
*Culex (Microculex) rejector* Dyar and Knab 1906.—33, 584.  
*Culex (Microculex)* sp 79: adults as for *jenningsi* but male genitalia near *rejector*.—417, 500, 502, 566.  
*Culex (Microculex)* sp 87: possibly *daumastocampa*.—622.  
*Culex (Microculex)* sp undetermined.—23, 53, 80, 213, 214, 215, 216, 217, 218, 219, 220, 223, 225, 228, 232A, 278, 350, 381, 403, 417, 457, 500, 502, 504, 620, 621, 622, 633, 634, 635, 641, 644, 653, 654, 655, 659, 660.  
*Culex (Neoculex)* sp 13: near *derivator*.—194, 327.  
*Culex (Neoculex)* sp 28: near *arizonensis*, possibly sp 7.—22, 41, 47, 144, 146, 147, 153, 186, 194, 317.  
*Culex (Neoculex)* sp undetermined.—8.  
*Culex (Tinolestes) latisquama* (Coquillett 1906).—76, 399, 461, 465, 520, 523, 524, 525.  
*Culex* (subgenus B) sp 46: undescribed sp with unique larva, possibly related to *Melanoconion* on basis of male genitalia.—46.  
*Culiseta (Culiseta) ?dugesii* Dyar and Knab 1906.—22, 40, 41, 48, 144, 186, 282, 302, 312, 313, 315, 317, 490.  
*Deinocerites costaricensis* Adames and Hogue 1970.—28 (holotype), 34, 43, 106, 107, 118, 122, 123, 124, 135, 136, 142.  
*Deinocerites epitedeus* (Knab 1907).—73, 76, 461, 462, 475, 520, 523, 524, 525.  
*Deinocerites nicoyae* Adames and Hogue 1970.—3, 27, 238, 240, 254 (holotype).  
*Deinocerites pseudus* Dyar and Knab 1909.—28, 98, 99, 101, 102, 103, 104, 105, 106, 107, 109, 110, 111, 115, 118, 142, 195, 198, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 233, 235, 237, 238, 239, 240, 241, 242, 243, 244, 248, 251, 252, 253, 254, 608, 609, 612, 613, 631.  
*Dixella* sp 1: possibly related to *lirio*.—?31, ?32, 352.  
*Dixella* sp 2: possibly *shannoni*.—303.  
*Dixella* sp 3: sp of unknown affinities.—311, 312, 315, 317, 379.  
*Dixella* sp 4: near sp 5 from Grenada, possibly a new genus.—407.  
*Dixella* sp undetermined.—38, 66, 147, 269, 386, 394, 521, 571, 590B.  
*Haemagogus (Haemagogus) anastasionis* Dyar 1921.—355, 358, 445.  
*Haemagogus (Haemagogus) chalcospilans* Dyar 1921.—127, 130, 131, 132, 134, 137, 138, 360, 362, 363, 364, 366, 370, 579, 580, 581, 582, 583, 629.  
*Haemagogus (Haemagogus) equinus* Theobald 1903.—35, 97, 103, 196, 357, 358, 470.  
*Haemagogus (Haemagogus) iridicolor* Dyar 1921.—18, 35, 149, 150, 167, 177, 178, 183, 268, 271, 293, 295, 320, 321, 322, 323, 324, 343, 344, 345, 356, 358, 470, 476, 478, 498, 508, 509, 514, 527, 528, 531, 550, 585.



## CR Species Index

- Haemagogus (Haemagogus) janthinomys* Dyar 1921.—646.  
*Haemagogus (Haemagogus) mesodentatus* Komp and Kumm 1938.—88, 89, 97, 494.  
*Limatus asulleptus* (Theobald 1903).—72, 140, 410, 411, 412, 419, 434, 503, 561, 606, 647.  
*Limatus durhamii* Theobald 1901.—59, 69, 70, 72, 75, 137, 143, 149, 183, 190, 232, 375, 410, 420, 434, 481, 529, 530, 559, 561, 567, 586, 606, 629, 632, 643, 647.  
*Lutzomiops* sp 2: possibly *pallida*.—229, 231, 403, 417, 502, 504.  
*Mansonia (Mansonia) dyari* Belkin, Heinemann and Page 1970.—377, 603.  
*Mansonia (Mansonia) leberi* Boreham 1970.—377.  
*Mansonia (Mansonia) titillans* (Walker 1848).—436, 437, 438, 453.  
*Orthopodomyia fascipes* (Coquillett 1905).—130, 131, 196, 585.  
*Orthopodomyia kummi* Edwards 1939.—270.  
*Orthopodomyia phyllozoa* (Dyar and Knab 1907).—13, 83, 278, 392, 406, 620, 621, 633, 634, 635, 641, 644, 653, 654, 655, 659.  
*Psorophora (Grabhamia) cingulata* (Fabricius 1805) group: *cingulata* or related sp.—408, 416.  
*Psorophora (Grabhamia) confinnis* (Lynch Arribalzaga 1891) group: *confinnis* or related sp.—438, 460, 546, 576, 578, 603.  
*Psorophora (Janthinosoma) albipes* (Theobald 1907).—184, 192, 548, 554.  
*Psorophora (Janthinosoma) ferox* (Humboldt 1819).—108, 172, 181, 188, 192, 201, 206, 223, 405, 408, 421, 427, 468, 469, 487, 540, 549, 604, 605, 608, 628, 639, 645.  
*Psorophora (Janthinosoma)* sp 3: *pisces*, *totonaci* or related sp.—77.  
*Psorophora (Janthinosoma)* sp undetermined.—458, 467, 482, 485, 486, 558.  
*Psorophora (Psorophora) howardii* Coquillett 1901.—436.  
*Psorophora (Psorophora) ?lineata* (Humboldt 1819).—604.  
*Sabethes (Sabethes) cyaneus* (Fabricius 1805).—172, 423.  
*Sabethes (Sabethes) tarsopus* Dyar and Knab 1908.—162.  
*Sabethes (Sabethinus) identicus* Dyar and Knab 1907, not *identicus* of Lane 1953:1083.—423.  
*Sabethes (Sabethinus) undosus* (Coquillett 1906), not *undosus* of Lane 1953:1084.—167, 476.  
*Sabethes (Sabethinus)* sp 3: near *undosus* of Lane 1953:1084.—423.  
*Sabethes (Sabethoides) chloropterus* (Humboldt 1819).—96, 307, 321, 448, 575.  
*Sayomyia* sp undetermined.—180, 486, 568.  
*Toxorhynchites (Lynchiella) hypoptes* (Knab 1907).—172, 401, 412, 430, 433, 550, 585.  
*Toxorhynchites (Lynchiella) moctezuma* (Dyar and Knab 1906).—197, 292, 325, 331, 336, 361, 366, 369, 374, 375, 442, 449.  
*Toxorhynchites (Lynchiella) superbus* (Dyar and Knab 1906).—67, 80, 83, 218, 278, 566, 641, 654, 655.  
*Trichoprosopon (Isostomyia) espini* (Martini 1914).—565.  
*Trichoprosopon (Shannoniana)* sp undetermined.—649.  
*Trichoprosopon (Trichoprosopon) digitatum* (Rondani 1848).—69, 71, 78, 169, 172, 401, 408, 411, 412, 454, 455, 468, 477, 478, 479, 480, 483, 503, 550, 552, 553, 606, 615.  
*Trichoprosopon* (subgenus A) *ulopus* (Dyar and Knab 1906).—140, 172, 446, 541, 556, 565.  
*Uranotaenia* sp near *apicalis* Theobald 1903.—393.  
*Uranotaenia coatzacoalcos* Dyar and Knab 1906.—179, 194, 261, 288, 302, 319, 390, 393.  
*Uranotaenia geometrica* Theobald 1901.—56, 155, 351, 382, 435, 590, 630.  
*Uranotaenia hystera* Dyar and Knab 1913.—614.  
*Uranotaenia lowii* Theobald 1901.—435, 450.  
*Uranotaenia socialis* Theobald 1901.—394, 424.  
*Uranotaenia trapidoi* Galindo, Blanton and Peyton 1954.—271, 308, 319, 327, 574.  
*Uranotaenia typhlosomata* Dyar and Knab 1907.—262.  
*Uranotaenia* sp near *typhlosomata*.—574.  
*Uranotaenia* sp undetermined.—66, 389, 472, 555.  
*Wyeomyia (Calladimyia) ?melanocephala* Dyar and Knab 1906.—378.  
*Wyeomyia (Decamyia) eloisa* Howard, Dyar and Knab 1913 group.—141, 392, 400, 406.  
*Wyeomyia (Decamyia) pseudopecten* Dyar and Knab 1906 group.—139, 140, 141, 392, 406.

## CR Species Index

- Wyeomyia (Decamyia) ulocoma* (Theobald 1903) group.—139, 140.  
*Wyeomyia (Decamyia)* sp P: undescribed sp with unique male genitalia.—266.  
*Wyeomyia (Decamyia)* sp undetermined.—126, 129, 425.  
*Wyeomyia (Hystatomyia)* sp B: possibly *circumcincta*.—422.  
*Wyeomyia (Hystatomyia)* sp C: possibly *circumcincta*.—402, 417, 500.  
*Wyeomyia (Hystatomyia)* sp G: possibly *intonca*.—67, 391, 566.  
*Wyeomyia (Hystatomyia)* sp H: possibly *intonca*.—229, 403, 417, 422, 426, 502.  
*Wyeomyia (Hystatomyia)* sp J: possibly *coenonus*.—417, 504.  
*Wyeomyia (Hystatomyia)* sp undetermined.—33, 133, 218, 500, 502, 504, 566.  
*Wyeomyia (Pentemyia) arthrostigma* (Lutz 1905).—26, 35, ?89, 91, 92, 93, 149, 166, 183, 190, 268, 271, 295, 297, 321, 323, 328, 329, 330, 331, 332, 344, 345, 357, 476, 509, 510, 511, 512, 513, 517, 518, 519, 526, 527, 528, 531, 532, 533, 550, 561.  
*Wyeomyia (?Pentemyia) ?nigritubus* Galindo, Carpenter and Trapido 1951.—532.  
*Wyeomyia (Prosopolepis) complosa* (Dyar 1928).—404, 418, 541, 556, 565.  
*Wyeomyia (Triamyia) aporonoma* Dyar and Knab 1906.—137, 166, 167, 177, 183, 190, 328, 476, 531, 550, ?551, 561, 585.  
*Wyeomyia (Triamyia)* sp 22: near *aporonoma*.—412, 561.  
*Wyeomyia (Triamyia)* sp undetermined.—423.  
*Wyeomyia (Wyeomyia) abebela* Dyar and Knab 1908.—83, 426, 620, 621, 622, 627, 633, 634, 635, 641, 644, 653, 654, 655, 659, 660.  
*Wyeomyia (Wyeomyia) celaenocephala* Dyar and Knab 1906 group: *celaenocephala* and/or related sp.—?62, ?67, ?83, 402, 500.  
*Wyeomyia (Wyeomyia) melanopus* Dyar 1919.—278.  
*Wyeomyia (Wyeomyia)* sp 58: larva near *simmsi* and male genitalia near *celaenocephala*.—229.  
*Wyeomyia (Wyeomyia)* sp 59: distinctive larva, possibly sp 25.—62, 67.  
*Wyeomyia (Wyeomyia) pertinans* group sp B: possibly *ablaves*.—55, 58, 62, 67, 80, 83, 86, 223, 228, 278, 279, 403, 413, 417, 457, 500, 502, 504.  
*Wyeomyia (Wyeomyia) pertinans* group sp H: near sp U.—504.  
*Wyeomyia (Wyeomyia) pertinans* group sp P: possibly *scotinomus*.—33, 584.  
*Wyeomyia (Wyeomyia) pertinans* group sp Q: possibly *scotinomus*.—33.  
*Wyeomyia (Wyeomyia) pertinans* group sp U: near sp H.—133, 214, 219, 402.  
*Wyeomyia (Wyeomyia) pertinans* group sp X: near sp G.—232A.  
*Wyeomyia (Wyeomyia) pertinans* group sp undetermined.—13, 23, 62, 83, 220, 224, 225, 226, 227, 229, 231, 417, 426, 500, 502, 607, 635, 660.  
*Wyeomyia* (subgenus A) sp 61: undescribed sp possibly related to *Calladimyia* or *Dinomyia*.—266.  
*Wyeomyia* (subgenus B) sp 62: sp closely related to *belkini*, *brucei* and *personata*.—423.  
*Wyeomyia* sp undetermined.—42, 151, 200, 408, 414, 421, 427, 468, 552, 604, 607, 610, 637, 645, 648, 649.

## REFERENCES

- Belkin, J. N. and S. J. Heinemann. 1973. Collection records of the project "Mosquitoes of Middle America." 1. Introduction; Dominican Republic (RDO). Mosq. Syst. 5:201-220.  
 Belkin, J. N. and S. J. Heinemann. 1975a. Collection records of the project "Mosquitoes of Middle America." 2. Puerto Rico (PR, PRA, PRX) and Virgin Is. (VI, VIA). Mosq. Syst. 7:269-296.  
 Belkin, J. N. and S. J. Heinemann. 1975b. Collection records of the project "Mosquitoes of Middle America." 3. Bahama Is. (BAH), Cayman Is. (CAY), Cuba (CUB), Haiti (HAC, HAR, HAT) and Lesser Antilles (LAR). Mosq. Syst. 7:367-393.  
 Belkin, J. N. and S. J. Heinemann. 1976a. Collection records of the project "Mosquitoes of Middle America." 4. Leeward Islands: Anguilla (ANG), Antigua (ANT), Barbuda (BAB), Montserrat (MNT), Nevis (NVS), St. Kitts (KIT). Mosq. Syst. 8:123-162.

- Belkin, J. N. and S. J. Heinemann. 1976b. Collection records of the project "Mosquitoes of Middle America." 5. French West Indies: Guadeloupe (FWI) and Martinique (FWIM, MAR). *Mosq. Syst.* 8: 163-193.
- Belkin, J. N. and S. J. Heinemann. 1976c. Collection records of the project "Mosquitoes of Middle America." 6. Southern Lesser Antilles: Barbados (BAR), Dominica (DOM), Grenada (GR, GRR), St. Lucia (LU), St. Vincent (VT). *Mosq. Syst.* 8:237-297.
- Belkin, J. N., S. J. Heinemann and W. A. Page. 1970. The Culicidae of Jamaica (Mosquito Studies. XXI). *Am. Entomol. Inst., Contrib.* 6(1). 458p. (Also published as *Inst. Jam., Bull. Sci. Ser.* 20).
- Galindo, P. 1969. Notes on the systematics of *Culex (Melanoconion) taeniopus* Dyar and Knab and related species, gathered during arbovirus investigations in Panama. *Mosq. Syst. Newsl.* 1:82-89.
- Lane, J. 1953. Neotropical Culicidae. Sao Paulo, Univ. Sao Paulo. 2 vol.