

MOSQUITO STUDIES IN BELIZE, CENTRAL AMERICA: RECORDS, TAXONOMIC NOTES, AND A CHECKLIST OF SPECIES¹

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ABSTRACT. Data from mosquito collections made in Belize, Central America, between September 1990 and April 1993 are presented. A total of 537 collections yielding 15,139 specimens are summarized. One genus, 4 subgenera, and 31 species are recorded from Belize for the 1st time. A checklist of the 111 mosquito species now known to occur in Belize is presented.

KEY WORDS Culicidae, mosquitoes, checklist, Belize, distribution, bionomics

INTRODUCTION

This report summarizes information obtained during extensive mosquito surveys in Belize, Central America, conducted between September 1990 and April 1993. The surveys were conducted as a collaborative project between the Department of Entomology, Walter Reed Army Institute of Research, Silver Spring, MD; the Division of Preventive Medicine and Biometrics, Uniformed Services University of the Health Sciences, Bethesda, MD; and the Ministry of Health, Belize City, Belize. The objectives were to provide baseline ecological and faunistic data to support long-term ecological studies of malaria vectors in the coastal regions of Central America and to obtain taxonomic specimens for comparative morphological studies.

Belize, formerly known as British Honduras, is bordered on the north by Mexico, on the west and south by Guatemala, and on the east by the Caribbean Sea. With a land area of approximately 22,969 km² (8,866 mi²), Belize has the lowest population density of any country in Central America. Belize is divided into 6 districts: Belize, Cayo, Corozal, Orange Walk, Stann Creek, and Toledo. Elevation ranges from sea level to 1,122 m, with most of the land area below 500 m. The climate is generally warm tropical, with yearly rainfall from 1,200 to 3,800 mm (Hartshorn et al. 1984).

Several comprehensive reports have been made

on the mosquito fauna from Central America; however, few studies have been conducted in Belize (Ward 1982). Early reports on the mosquito fauna in Belize include those of Komp (1940a, 1940b), which 1st documented the presence of *Anopheles darlingi* Root in Central America; Kumm and Ram (1941), which summarized data on the biology, distribution, and sporozoite infection rates of 6 anopheline species; and Galindo and Trapido (1967), which described *Haemagogus aeritinctus* based on specimens collected in mangrove swamps in northern Belize. Bertram (1971) conducted the most extensive study of the mosquito fauna in Belize, and provided a detailed summary of the biology, ecology, and distribution for 65 species encountered during arboviral studies in 1967. A small voucher series from this study, consisting of approximately 300 adults (none with associated larval or pupal exuviae) subsequently was examined and reported on by Heinemann and Belkin (1977).

Additional notations on the mosquito fauna in Belize also have been included as part of wider regional faunistic or revisionary studies, including Theobald (1901a, 1901b), Howard et al. (1917), Martini (1935), Schick (1970a, 1970b), Zavortink (1972), Strickman and Pratt (1989), and Wilkerson and Strickman (1990). At the start of this study, 80 species representing 18 genera were known in the fauna of Belize.

Selected specimens accumulated during our surveys have been included in reports on the biology, taxonomy, and genetics for certain species of *Anopheles* Meigen. Rejmankova et al. (1993) summarized the ecology and distribution of larval *Anopheles* in northern Belize; Roberts et al. (1993) presented preliminary data on malaria vectors in southern Belize; Harbach et al. (1993) examined morphological variation of adult *An. darlingi*; Manguin et al. (1995, 1996b) provided a biological and biochemical evaluation of populations of *Anopheles pseudopunctipennis* Theobald; Manguin et al. (1996a) characterized larval habitats of *An. darlingi*; and Manguin et al. (1999) examined population structures of *An. darlingi* in Central and South America.

¹ The views of the authors do not purport to reflect the views of the Department of Defense.

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MATERIALS AND METHODS

Emphasis was placed on the collection of larvae with the intention of obtaining adults with associated larval and pupal exuviae. Surveys were conducted during both the wet and dry seasons. Although the primary goal of the field studies was to survey and characterize anopheline habitats, larvae and pupae were collected from all habitat types encountered. Collections were conducted during the wet season in 1990, 1992, and 1993, and during the dry season in 1991. Data from each collection were recorded on standard forms (Faran et al. 1985). Fourth-stage larvae and pupae were individually reared to the adult stage and associated immature exuviae were preserved in 80% ethanol. Fourth-stage larvae also were preserved from as many species as possible. Adults were killed in ethyl acetate vapor and mounted on points on pins. Immature stages were subsequently mounted in euparal on microscope slides. Male genitalia were dissected when necessary to assist identification. Specimens were identified to species by using the most recent keys, descriptions, and revisionary studies available (see taxonomic notes for individual references). The anatomical terminology used below follows that of Harbach and Knight (1980).

Changes made to the generic and subgeneric classification of Culicidae since the publication of *A Catalog of the Mosquitoes of the World* (Knight and Stone 1977) and its supplements (Knight 1978; Ward 1984, 1992; Gaffigan and Ward 1985) that apply to the mosquito fauna of Belize are followed here. These include the description of *Phenacomomyia* as a new subgenus of *Culex* Linnaeus (Harbach and Peyton 1992), elevation of *Isostomyia* Coquillett to generic rank from subgeneric status within *Runcho-myia* Theobald (Harbach and Peyton 1993), redefinition of subgenus *Dendromyia* Theobald of *Wyeomyia* Theobald that left several species without subgeneric placement (Motta and Lourenço-de-Oliveira 1995), resurrection of *Hystatomyia* Dyar as a subgenus of *Wyeomyia* (Judd 1998), separation of genus *Ochlerotatus* Lynch Arribalzaga (along with various subgenera) from *Aedes* Meigen (Reinert 2000), and recognition of *Deinocerites* Theobald as a subgenus of *Culex* (Navarro and Liria 2000). Abbreviations for generic and subgeneric names are those of Reinert (2001).

RESULTS AND DISCUSSION

A total of 537 collections (designated BHZ1–537) was made between September 1990 and May 1993, including 480 (89%) larval, 26 (<5%) adult biting or landing, and 2 (<1%) light trap collections (Table 1). The 1st collections (BHZ 1–223) were conducted during the wet season of September–October 1990 in all districts except Toledo. The same sites and additional localities (BHZ 224–364) were sampled during the dry season of April 1991. Col-

lections made in the southernmost district of Toledo (BHZ 365–516) were conducted during the wet season of August–September 1992. Additional miscellaneous collections (BHZ 517–537) were made by various investigators between September 1992 and May 1993.

Detailed descriptions of the 537 collections are given in Appendix 1. The collections yielded a total of 15,139 specimens, including 5,586 adults, 3,070 larval exuviae, 5,269 pupal exuviae, 704 larvae, and 510 slide preparations of adult genitalia, representing 90 species from 17 genera and 26 subgenera. One genus, 4 subgenera, and 31 species are new occurrence records for Belize. Twenty-one species not encountered during our field studies were previously recorded from Belize. Thus, the total number of species now known to occur in the country is 111 (Table 2). The distribution for the 90 species collected in Belize during our surveys is summarized by collection number and district in Appendix 2. Taxonomic notes for 32 species are provided below. The notes summarize new distribution records, species associations, ecological and locality data, and undescribed life stages encountered. Abbreviations used in the taxonomic notes include M, male; F, female; Pe, pupal exuviae; Le, larval exuviae; L, larva; and Mg, male genitalia. Taxonomic authorities and complete scientific names are given in Table 2.

Specimens obtained during the field studies are deposited at the Department of Entomology, National Museum of Natural History (NMNH), Smithsonian Institution, Washington, DC.

TAXONOMIC NOTES

Culex (Aneodioparpa) restrictor Dyar and Knab

This is a new occurrence record for Belize. The species can be readily separated (in all stages) from other members of the subgenus *Aneodioparpa* by using the keys provided by Berlin and Belkin (1980). Its known distribution is from Mexico to Venezuela. We collected larvae of *Cx. restrictor* from a bamboo stump and artificial containers. Species collected in association with this species include *Oc. (How.) cozumelensis*, *Tx. (Lyn.) theobaldi*, *Wy. aporonoma*, and *Wy. (Wyo.) celaenocephala*. Material examined: 17 M, 14 F, 29 Le, 31 Pe, and 4 Mg.

Culex (Culex) childesteri Dyar

Larvae of this species were collected from a heavily shaded black-water forest pool in Belize District. Identification was confirmed from larval exuviae and male genitalia by using characters provided by Bram (1967). This is the 1st report of *Cx. childesteri* from Belize. Material examined: 6 M, 12 F, 18 Pe, 11 Le, and 1 Mg.

Table 1. Summary of habitat types for Belize mosquito collections.

Habitat type	No. collections	% of total (n = 537)
Ground water habitats		
Temporary		
Ground pool	97	
Ditch	27	
Tire rut	14	
Pit	8	
Subtotal	146	27
Permanent/semipermanent		
Rice field	5	
Swamp/marsh	50	
Pond/lake	48	
Stream/river margin	51	
Subtotal	154	29
Container habitats		
Natural		
Bromeliad	55	
Fallen leaf	3	
Bamboo	44	
Crab hole	11	
Rock hole	18	
Tree hole	5	
Subtotal	136	25
Artificial		
Tire	7	
Miscellaneous	37	
Subtotal	44	8
Other		
Centers for Disease Control light trap	2	
Human biting/landing	26	
Collections with no specimens	29	
Subtotal	57	11
Total	537	100

Culex (Culex) declarator Dyar and Knab

This is a new occurrence record for Belize. We found *Cx. declarator* in 10 collections made in Cayo, Orange Walk, Stann Creek, and Toledo districts. These collections were always associated with human activity and include ground water habitats (7 sites) or container habitats (3 times). Identification is based on the distinctive male genitalia (Bram 1967). Material examined: 31 M, 41 F, 72 Pe, 34 Le, and 13 Mg.

Culex (Culex) infictus Theobald

Although *Cx. infictus* is recorded from Mexico to Colombia, it has not been reported from Belize and little is known about its biology. The only illustration of the larva is found in Dyar (1928). Bram (1967) treated the larva, listing characters to distinguish this species from other *Culex*, but did not illustrate it (the pupal stage is undescribed). According to Bram, the male genitalia of *Cx. infictus* are differentiated from those of all other members of subgenus *Culex* by the characteristic division

and shape of the subapical lobe of the gonocoxite. Dyar stated that larvae of this species occur in crab holes and "ground-holes of similar character." Stone (1969) reported finding larvae in "crab-holes and similar ground pools near the coast" in Dominica, and Clark-Gil and Darsie (1983) collected adult females "alighting on humans" in Guatemala. We collected pupae of *Cx. infictus* in 4 localities in Belize. These were found in crab holes on 3 occasions in the Toledo District and were associated with *Cx. (Dei.) cancer*. In addition, a single pupa was found in a tire lying on the ground near a house surrounded by a salt marsh (Stann Creek District). Larvae of *Ae. (Stg.) aegypti* and *Cx. (Cux.) quinquefasciatus* were also found in this habitat. Material examined: 6 M, 12 F, 17 Pe, and 3 Mg.

Culex (Culex) yojoae Strickman

This species was described by Strickman (1990) from specimens collected in a roadside ditch in Cortes Department, Honduras. We identified a sin-

Table 2. Checklist of the mosquito species known from Belize. Abbreviations used for previous occurrence records: BE, Bertram (1971); BH, Belkin and Heinemann (1971); BR, Bram (1967); F, Faran (1980); GT, Galindo and Trapido (1967); HB, Heinemann and Belkin (1977); HP, Harbach and Petersen (1992); HDK, Howard, Dyar, and Knab (1917); K, Komp (1940a); Ko, Komp (1942); KR, Kumm and Ram (1941); M, Martini (1935); S, Schick (1970a); SP, Strickman and Pratt (1989); Ta, Theobald (1901a); Tb, Theobald (1901b); WS, Wilkerson and Strickman (1990); Z, Zavortink (1973).

Taxon	Previous record	Present study ¹
<i>Aedeomyia (Aedeomyia)</i>		
1. <i>squamipennis</i> (Lynch Arribalza)	M	X
<i>Aedes (Aedimorphus)</i>		
2. <i>vexans</i> (Meigen)	BH	—
<i>Aedes (Stegomyia)</i>		
3. <i>aegypti</i> (Linnaeus)	Ta	X
<i>Anopheles (Anopheles)</i>		
4. <i>apicimacula</i> Dyar and Knab	M	X
5. <i>crucians</i> Wiedemann	M	X
6. <i>eiseni</i> Coquillett	KR	X
7. <i>galbaldoni</i> Vargas	WS	X
8. <i>neomaculipalpus</i> Curry	WS	X
9. <i>pseudopunctipennis</i> Theobald	KR	X
10. <i>punctimacula</i> Dyar and Knab	M	X
11. <i>vestitipennis</i> Dyar and Knab	M	X
<i>Anopheles (Kerteszia)</i>		
12. <i>neivai</i>	Z	—
<i>Anopheles (Nyssorhynchus)</i>		
13. <i>albimanus</i> Wiedemann	Ko	X
14. <i>argyritarsis</i> Robineau-Desvoidy	M	X
15. <i>darlingi</i> Root	K	X
16. <i>strodei</i> Root	F	—
<i>Chagasia</i>		
17. <i>bathana</i> (Dyar)	KR	X
<i>Coquillettidia (Rhynchochaenia)</i>		
18. <i>nigricans</i> (Coquillett)	BE	X
19. <i>venezuelensis</i> (Theobald)	BE	X
<i>Culex (Anoediopora)</i>		
20. <i>conservator</i> Dyar and Knab	BE	X
21. <i>restrictor</i> Dyar and Knab	—	X
<i>Culex (Culex)</i>		
22. <i>childsteri</i> Dyar	—	X
23. <i>coronator</i> Dyar and Knab	BR	X
24. <i>declarator</i> Dyar and Knab	—	X
25. <i>inflictus</i> Theobald	—	X
26. <i>interrogator</i> Dyar and Knab	BE	X
27. <i>mollis</i> Dyar and Knab	BR	X
28. <i>nigripalpus</i> Theobald	BR	X
29. <i>ousqua</i> Dyar	BR	—
30. <i>quinquefasciatus</i> Say	Tb	X
31. <i>usquatus</i> Dyar	BR	—
32. <i>yojoae</i> Strickman	—	X
<i>Culex (Deinocerites)</i>		
33. <i>cancer</i> Theobald	M	X
<i>Culex (Lutzia)</i>		
34. <i>allostigma</i> (Howard, Dyar, and Knab)	—	X
<i>Culex (Melanoconion)</i>		
35. <i>bastagarius</i> Dyar and Knab	M	X
36. <i>commevynensis</i> Bonne-Wepster and Bonne	—	X
37. <i>conspirator</i> Dyar and Knab	—	X
38. <i>dunni</i> Dyar	BE	X

Table 2. Continued.

Taxon	Previous record	Present study
39. <i>educator</i> Dyar and Knab	BE	X
40. <i>elevator</i> Dyar and Knab	—	X
41. <i>ensifomis</i> Bonne-Wepster and Bonne	—	X
42. <i>erraticus</i> (Dyar and Knab)	BE	X
43. <i>flabellifer</i> Komp	—	X
44. <i>inhibitor</i> Dyar and Knab	M	X
45. <i>iolambdis</i> Dyar	—	X
46. <i>limacifer</i> Komp	—	X
47. <i>mutator</i> Dyar and Knab	—	X
48. <i>panocossa</i> Dyar	BE	X
49. <i>pilosus</i> (Dyar and Knab)	M	X
50. <i>rooti</i> Rozeboom	—	X
51. <i>spissipes</i> (Theobald)	M	—
52. <i>taeniopus</i> Dyar and Knab	BE	—
53. <i>theobaldi</i> (Lutz)	BE	X
54. <i>vexillifer</i> Komp	—	X
55. <i>zeteki</i> Dyar	BE	X
<i>Culex</i> (<i>Microculex</i>)		
56. <i>rejector</i> Dyar and Knab	—	X
<i>Culex</i> (<i>Phenacomyia</i>)		
57. <i>corniger</i> Theobald	—	X
58. <i>lactator</i> Dyar and Knab	SP	X
<i>Haemagogus</i> (<i>Haemagogus</i>)		
59. <i>aeritinctus</i> Galindo and Trapido	GT	—
60. <i>equinus</i> Theobald	BE	X
61. <i>mesodentatus</i> Komp and Kumm	BE	—
<i>Isostomyia</i>		
62. <i>perturbans</i> (Williston)	M	—
<i>Limatus</i>		
63. <i>asulleptus</i> (Theobald)	BE	X
64. <i>durhamii</i> Theobald	BE	X
<i>Mansonia</i> (<i>Mansonia</i>)		
65. <i>dyari</i> Belkin, Heinemann, and Page	BE	—
66. <i>indubitans</i> Dyar and Shannon	M	—
67. <i>titillans</i> (Walker)	M	X
<i>Ochlerotatus</i> (<i>Howardina</i>)		
68. <i>cozumelensis</i> Diaz Najera	BE	X
69. <i>sexlineatus</i> (Theobald)	M	—
<i>Ochlerotatus</i> (<i>Ochlerotatus</i>)		
70. <i>angustivittatus</i> (Dyar and Knab)	BE	X
71. <i>fluviatilis</i> (Lutz)	—	X
72. <i>fulvus</i> (Wiedemann)	M	—
73. <i>hastatus</i> (Dyar)	—	X
74. <i>scapularis</i> (Rondani)	BE	X
75. <i>serratus</i> (Theobald)	M	X
76. <i>taeniorhynchus</i> (Wiedemann)	HDK	X
<i>Ochlerotatus</i> (<i>Protomacleaya</i>)		
77. <i>bertrami</i> (Schick)	S	X
78. <i>podographicus</i> (Dyar and Knab)	BE	X
79. <i>thorntoni</i> (Dyar and Knab)	—	X
<i>Psorophora</i> (<i>Grabhamia</i>)		
80. <i>cingulata</i> (Fabricius)	BE	X
81. <i>confinnis</i> Group (Lynch Arribalzaga)	BE	X
<i>Psorophora</i> (<i>Janthinosoma</i>)		
82. <i>albipes</i> (Theobald)	BE	X
83. <i>champerico</i> (Dyar and Knab)	BE	—
84. <i>ferox</i> (Von Humboldt)	M	X
85. <i>lutzii</i> (Theobald)	M	—

Table 2. Continued.

Taxon	Previous record	Present study
<i>Psorophora (Psorophora)</i>		
86. <i>ciliata</i> (Fabricius)	BE	X
87. <i>ciliipes</i> (Fabricius)	HB	—
88. <i>lineata</i> (Von Humboldt)	M	—
<i>Runchomyia (Ctenogoeldia)</i>		
89. <i>magna</i> (Theobald)	BE	—
<i>Sabethes (Peytonulus)</i>		
90. <i>undosus</i> (Coquillett)	—	X
<i>Sabethes (Sabethes)</i>		
91. <i>cyaneus</i> (Fabricius)	—	X
92. <i>gymnothorax</i> Harbach and Petersen	HP	X
<i>Shannoniana</i>		
93. <i>moralesi</i> (Dyar and Knab)	M	X
<i>Toxorhynchites (Lynchiella)</i>		
94. <i>haemorrhoidalis superbis</i> (Dyar and Knab)	—	X
95. <i>theobaldi</i> (Dyar and Knab)	—	X
<i>Trichoprosopon</i>		
96. <i>digitatum</i> (Rondani)	BE	X
<i>Uranotaenia (Uranotaenia)</i>		
97. <i>geometrica</i> Theobald	BE	X
98. <i>hystera</i> Dyar and Knab	M	—
99. <i>lowii</i> Theobald	BE	X
100. <i>pulcherrima</i> Lynch Aribalzaga	M	X
101. <i>socialis</i> Theobald	BE	X
<i>Wyeomyia (Hystatomyia)</i>		
102. <i>circumcincta</i> Dyar and Knab	—	X
<i>Wyeomyia (Wyeomyia)</i>		
103. <i>abebeba</i> Dyar and Knab	—	X
104. <i>adelpha</i> Dyar and Knab	BE	—
105. <i>arthrostigma</i> (Lutz)	BE	X
106. <i>celaenocephala</i> Dyar and Knab	BE	X
107. <i>melanopus</i> Dyar	—	X
108. Pertinans Group sp. 1	—	X
109. Pertinans Group sp. 2	—	X
<i>Wyeomyia</i> (subgenus uncertain)		
110. <i>apronoma</i> Dyar and Knab	BE	X
111. <i>chalcocephala</i> Dyar and Knab	—	X

¹X = mosquito found in present study.

gle male as *Cx. yojoae* by comparison with the original description and the illustrated genitalia provided by Strickman. The male was collected as a pupa in Cayo District (BHZ 32) from a bamboo internode lying in a cleared grassy area with no shade, approximately 20 m from the nearest house. The bamboo internode had been notched (about 8 cm wide) at 1 end and was filled with water. This is the 1st record of *Cx. yojoae* outside of Honduras. Material examined: 1 M, 1 Pe, and 1 Mg.

***Culex (Lutzia) allostigma*
(Howard, Dyar, and Knab)**

This species is reported to occur in Central America along the Pacific coast as far north as

Chiapas, Mexico (Heinemann and Belkin 1977), and along the Atlantic coast of Panama. We reared a single female from a pupa collected in Toledo District (BHZ 443). Because the pupal stage is undescribed, identification was based on the pattern of wing scales of the adult. The subcostal pale spot involves vein R₁ as well as the costa and subcosta, and vein Cu has dark scales confined to the base. *Culex bigoti* Bellardi, the only other member of the subgenus in Central America, has the subcostal pale spot extending only to the subcostal vein, and vein Cu has dark scales extending from the base to the fork of veins Cu₁ and Cu₂ (see Lane 1953 and Clark-Gil and Darsie 1983). The specimen was collected from a covered trash pit located approxi-

mately 20 m from a house. Material examined: 1 M and 1 Pe.

***Culex (Melanoconion) commevynensis*
(Bonne-Wepster and Bonne)**

We initially identified this species based on dissected male genitalia from 6 collections. On subsequent examination of the immature stages, it became apparent that the collections actually contained 2 species, which we identified as *Cx. commevynensis* and *Cx. ensiformis*. The pupal trumpet of *Cx. commevynensis* is straight (not flared) with an index greater than 10 and the distance between the bases of seta 1-II are about equal to the distance between the bases of seta 1-III. In the larva, the comb scales are uniform in size and apically fringed, seta 5-C is 2-4 branched, and the siphon is not heavily pigmented. Because this species has been reported only from Panama in Central America, Belize represents its northernmost occurrence record. *Culex commevynensis* was found in permanent bodies of water, including a pond (once) and a marsh (twice). The pH of 2 of these collections sites was measured at 7.1 and 7.0, and the conductivity was 88 and 98, respectively. Species found in association with *Cx. commevynensis* include *Cx. (Mel.) bastagarius*, *Cx. (Mel.) dunni*, and *Cx. (Mel.) ensiformis*. Material examined: 2 M, 2 F, 4 Pe, and 2 Mg.

***Culex (Melanoconion) conspirator*
Dyar and Knab**

Five pupae of *Cx. conspirator* were collected from a single site in Stann Creek District. This site was a heavily shaded ground pool (approximately 10 m²) in a partially cleared bamboo grove. The water was brownish and the surface was covered with bamboo leaves (pH 7.1; conductivity 180). Identification was confirmed by the male genitalia. This species was originally described from Mexico and Costa Rica and is known from throughout most of Central America, as well as Colombia and Venezuela (Pecor et al. 1992), but this is the 1st record for Belize. Material examined: 4 M, 1 F, 5 Pe, and 2 Mg.

***Culex (Melanoconion) elevator*
(Dyar and Knab)**

The recorded distribution of *Cx. elevator* extends from Mexico to Argentina (Pecor et al. 1992). The species is readily distinguished from other *Melanoconion* in the adult stage by the male genitalia, and in the immature stages by characters provided by Foote (1953). We made 4 collections of this species, 2 in Cayo District and 2 in Toledo District. The habitats included a heavily shaded pit (twice), a heavily shaded stream pool, and a rock pool. The last 2 collections were along a stream shaded by a

gallery forest. Species collected in association with *Cx. elevator* include *An. (Ano.) eiseni* and a *Cx. (Mel.)* sp. Material examined: 7 M, 9 F, 16 Pe, 8 Le, 8 L, and 4 Mg.

***Culex (Melanoconion) ensiformis*
(Bonne-Wepster and Bonne)**

This is a new occurrence record for Belize. The species is most readily distinguished from *Cx. commevynensis* in the pupal stage (see note for *Cx. commevynensis*). The trumpet is distinctly flared at the tip, the trumpet index is greater than 10, and the bases of seta 1-II are distinctly farther apart than the bases of seta 1-III. Larvae of *Cx. ensiformis* have seta 5-C with 5 or more branches, and the comb scales are not uniform in size. Material examined: 3 M, 2 F, 4 Pe, 4 Le, and 3 Mg.

***Culex (Melanoconion) flabellifer* Komp**

This is the 1st record of *Cx. flabellifer* from Belize. The species has been reported from Mexico to Argentina, but it apparently is rare and little is known about its biology. We collected a single male (as a pupa but exuviae was lost) from Cayo District. Larvae from this collection were found along the margins of a permanent pond with little shade in a secondary deciduous forest. The water was slightly turbid and contained abundant submerged and emergent plants and algae. Species found in association with *Cx. flabellifer* include *An. (Nys.) albimanus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) dunni*, and *Ur. (Ura.) lowii*. Material examined: 1 M and 1 Mg.

***Culex (Melanoconion) iolambdis* Dyar**

This is a well-known species with a distribution from the southern United States to Argentina (Pecor et al. 1992), but this is the 1st record from Belize. Based on variations observed in the larval stage, Belkin et al. (1970) speculated that *Cx. iolambdis* may represent more than 1 species. The male genitalia of specimens collected in Belize agree well with the illustrations of Rozeboom and Komp (1950a) and Belkin et al. (1970). The larvae, as suggested by Belkin et al. (1970), show variation in the degree of pigmentation present in the post-median ring of the siphon. Material examined: 18 M, 28 F, 46 Pe, 28 Le, and 9 Mg.

***Culex (Melanoconion) limacifer* Komp**

No previous record of this species exists in Belize. It is apparently a rare species, and almost nothing is known about its biology. Komp (1936) described *Cx. limacifer* from 2 male genitalia on microscope slides (no associated adults). The holotype was reared from a "pupa found in a stream at Chase, Costa Rica," and the paratype was reared

“from a male bred from a pupa brought to the Ancon Sanitary Office, February, 1934, locality of capture unknown, but probably in the environs of Panama City.” The original description was later restated in Rozeboom and Komp (1950a) and Lane (1953). Martinez Palacios (1952) reported a male and female from Morales State, Mexico (no other information provided), and Pecor et al. (1992) reported this species from Mertalio, El Salvador (no other information provided). Identification is based on the distinctive shape of the lobes of the IX tergites, by the form and shape of the lateral plates of the aedeagus, and the subapical lobes of the gonocoxite. The male, female, pupa, and larva are undescribed. We encountered larvae of *Cx. limacifer* in 5 collections in Belize. These collections were made in partially or fully cleared areas. These included 2 from ground pools of a newly planted orchard, a stream pool next to a cleared pasture, a tire rut on a dirt road next to a sugar cane field, and a flood pool fed by seepage in a secondary forest. Water from 2 of the sites had pH readings of 6.9 and 7.8, and water conductivity values of 80 and 140, respectively. Larvae of other species found in association with *Cx. limacifer* include *An. (Nys.) albimanus*, *Cx. (Cux.) declarator*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) educator*, *Cx. (Mel.) pilosus*, *Cx. (Phc.) lactator*, and *Oc. (Och.) angustivittatus*. Material examined: 14 M, 12 F, 26 Pe, 10 Le, and 5 Mg.

Culex (Melanoconion) mutator Dyar and Knab

This is the 1st report of *Cx. mutator* from Belize. Larvae of this species were collected from rock pools by Howard et al. (1915) and Galindo and Blanton (1955). Illustrations and description of the male genitalia by Rozeboom and Komp (1950a) and of the larva by Foote (1953) served as the basis for the identification of specimens from Belize. We found larvae in rock pools (8 times) and stream pools (4 times) along the Rio On in Cayo District. Larvae were found in both the wet and dry seasons, in association with *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) erraticus*, and *Oc. (Och.) fluviatilis*. Material examined: 30 M, 22 F, 50 Pe, 26 Le, and 13 Mg.

Culex (Melanoconion) rooti (Rozeboom)

This is the 1st record of *Cx. rooti* from Belize. The species has been found in temporary pools in Panama (Rozeboom and Komp 1950a). We collected the immature stages of *Cx. rooti* in unshaded temporary ground pools in cleared or partially cleared areas, including a pasture (once), open secondary forest (once), and scrub savannah (twice). These habitats contained emergent grasses and sometimes floating vegetation or blue-green algal mats. Species found in association with the immature stages of *Cx. rooti* include *An. (Ano.) crucians*,

An. (Ano.) neomaculipalpus, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) pilosus*, *Oc. (Och.) serratus*, and *Ps. (Gra.) Confinnis* Group. Material examined: 12 M, 19 F, 31 Pe, 10 Le, 5 L, and 5 Mg.

Culex (Melanoconion) vexillifer Komp

This is a new occurrence record for Belize. Komp (1936) described *vexillifer* from specimens collected in Panama from “water held between the buttressed roots of a tree overhanging a stream” and Heinemann and Belkin (1977) found larvae in a “blocked stream in forest.” We collected 2 pupae from an unshaded rock pool along the Rio On in Cayo District. *Culex (Mel.) pilosus* was the only other species collected from this rock pool. Material examined: 1 M, 1 F, 2 Pe, and 1 Mg.

Culex (Microculex) rejector (Dyar and Knab)

Subgenus *Microculex* Theobald includes some 33 species variously recorded from Mexico to Argentina, but this is the 1st record of a species of the subgenus in Belize. The larvae of a majority of species are found in leaf axils of bromeliads. We found a large number of larvae of *Cx. rejector* in several locations across Belize. Identification was confirmed by dissection of male genitalia (Rozeboom and Komp 1950b). All specimens were found in bromeliads in either partially or fully shaded areas. The areas where larvae were found include primary deciduous forest (7 times), secondary deciduous forest (5 times), secondary coniferous forest (once), swamp forest (8 times), edge of cultivated field (4 times), and partially cleared forest (once). Species found in association with larvae of *Cx. rejector* include *Tx. (Lyn.) haemorrhoidalis*, *Tx. (Lyn.) theobaldi*, *Wy. (Wyo.) abebela*, *Wy. (Wyo.) celaenocephala*, and *Wy. (Wyo.) mitchellii* Group. Material examined: 36 M, 47 F, 80 Pe, 38 Le, 13 L, and 8 Mg.

Culex (Phenacomyia) corniger Theobald

Bertram (1971) reported *Cx. corniger* from Belize and a single male with associated dissected genitalia on a slide was deposited at the NMNH. This specimen, also cited by Heinemann and Belkin (1977), was determined to be *Cx. lactator* by Strickman and Pratt (1989). Hence, no specimens of *Cx. corniger* have been identified from Belize until now. We collected both of these species. Specimens of *Cx. corniger* were found in 4 collections in Toledo District. Specific determination was confirmed by the male genitalia, which according to Strickman and Pratt (1989) can be distinguished from those of *Cx. lactator* by the presence of a moderately stout seta c proximal to seta g on the gonocoxite. Also, adults of *Cx. corniger* generally are darker with greater contrast between light and dark areas of the scutum. Specimens we collected

in Belize closely agree with the description provided by Strickman and Pratt (1989). Habitats where larvae of this species were found include a fallen log, a roadside ground pool, a garbage pit, and an artificial container, all in partial shade with little or no vegetation. Other species found in association with *Cx. corniger* include *Cx. (Cux.) coronator*, *Cx. (Cux.) declarator*, *Cx. (Cux.) mollis*, *Cx. (Cux.) quinquefasciatus*, *An. (Nys.) albimanus*, and *Cx. (Lut.) allostigma*. Material examined: 12 M, 14 F, 26 Pe, 18 Le, 3 L, and 3 Mg.

Ochlerotatus (Ochlerotatus) fluviatilis (Lutz)

The known distribution of *Oc. fluviatilis* extends from southern Mexico to northern Argentina; however, this species is not previously recorded from Belize. The immature stages of this species were found in 4 collections made along the margins of the Rio On (Cayo District), including 3 collections from rock pools and 1 from a stream pool. This species is readily attracted to humans and is considered a possible vector of sylvan yellow fever (Davis and Shannon 1931, Soper et al. 1933). Larvae of *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) erraticus*, and *Cx. (Mel.) mutator* were found in association with *Oc. fluviatilis*. Material examined: 5 M, 5 F, 10 Pe, 7 Le, 2 Mg, and 5 L.

Ochlerotatus (Ochlerotatus) hastatus (Dyar)

Two adults of *Oc. hastatus* were reared from pupae collected in a partially shaded forest pool in Toledo District. This species is known from Mexico to Argentina, but this is the 1st record from Belize. The pupal stage of this species is undescribed. The distinctive shape of the subapical lobe of the gonocoxite of the male readily separates *Oc. hastatus* from other species of *Ochlerotatus* (Lane 1953). Material examined: 1 M, 1 F, 2 Pe, and 1 Mg.

Ochlerotatus (Protomacleaya) bertrami (Schick)

Schick (1970a) described *Oc. bertrami* from a single female collected biting or landing on a human in Cayo District. We collected the immature stages of this species together with *Oc. (Pro.) podographicus* in a tree hole in Cayo District, near the type locality of *Oc. bertrami*. The male, larva, and pupa of *Oc. bertrami* are undescribed. Material examined: 1 M, 3 F, 4 Pe, 3 Le, and 1 Mg.

Ochlerotatus (Protomacleaya) thorntoni (Dyar and Knab)

This is the 1st record of *Oc. thorntoni* from Belize. A single collection from a partially shaded stump hole in Orange Walk District yielded 2 males of this species. Identification was confirmed by us-

ing the male genitalia (Schick 1970a). Material examined: 2 M, 2 Pe, and 1 Mg.

Sabethes (Peytonulus) undosus (Coquillett)

Sabethes undosus has a reported range from Costa Rica and Honduras in Central America south to Paraguay and Bolivia in South America (Knight and Stone 1977). We identified specimens as *Sa. undosus* from 5 collections made in Belize and Stann Creek districts. This is the 1st report of a species of subgenus *Peytonulus* in Belize; the collections represent the northernmost record of the species and the subgenus. Larvae of *Sa. undosus* were collected from bamboo internodes, bamboo stumps, and an artificial container placed in a bamboo grove. The habitats were shaded and located next to a river or stream. Associated species include *Hg. (Hag.) equinus*, *Sh. moralesi*, *Wy. aporonoma*, *Wy. (Wyo.) arthro stigma*, and *Cx. (And.) conseruator*. Material examined: 8 M, 1 F, 9 Pe, 9 Le, and 2 L.

Sabethes (Sabethes) cyaneus (Fabricius)

This is the 1st record of *Sa. cyaneus* from Belize. Three adults were reared from immature stages taken from an artificial container at ground level in a heavily shaded primary forest in Cayo District. Material examined: 2 M, 1 F, 3 Pe, 2 Le, and 1 Mg.

Toxorhynchites (Lynchiella) haemorrhoidalis superbus (Dyar and Knab)

This and the next species represent the 1st occurrence records of *Toxorhynchites* from Belize. Other studies have documented the presence of this species in every other country in Central America (Knight and Stone 1977). We found larvae of *Tx. haemorrhoidalis superbus* in 8 collections from 4 districts. All collections were from bromeliads, in either partial or full shade in a coniferous forest (3 times), a secondary swamp forest (twice), a secondary deciduous forest (once), at the edge of an orchard (once), and at the edge of a stream adjacent to a village (once). Associated species include *Cx. (Mcx.) rejector*, *Wy. (Hys.) circumcincta*, *Wy. (Wyo.) celaenocephala*, and *Wy. (Wyo.) melanopus*. Material examined: 5 M, 2 F, 7 Pe, 4 Le, and 1 L.

Toxorhynchites (Lynchiella) theobaldi (Dyar and Knab)

This and the previous species are the 1st *Toxorhynchites* recorded from Belize. We collected *Tx. theobaldi* at 12 localities in Belize, Cayo, and Orange Walk districts. Larvae were found in artificial containers (7 times) and bromeliads (5 times) in partial or heavy shade. Associated species include *Cx. (And.) restrictor*, *Cx. (Cux.) mollis*, *Cx. (Mcx.) rejector*, *Wy. (Wyo.) abebela*, *Wy. (Wyo.)*

melanopus, and *Wy. (Wyo.) celaenocephala*. Material examined: 9 M, 2 F, 12 Pe, and 11 Le.

***Wyeomyia (Hystatomyia) circumcincta*
Dyar and Knab**

This is the 1st record of this species and a member of subgenus *Hystatomyia* in Belize. It was collected from bromeliads in Toledo District. These sites were along a stream in a deciduous forest. Identification was based on the characteristic male genitalia and pupal stage (Lane 1953). Very little is known about the biology of *Wy. circumcincta*. Dyar (1928), Kumm et al. (1940), and Horsfall (1955) reported larvae from bromeliads. Nothing is known about the habits of the adults. Previously published country records for the species include Panama (type locality), Costa Rica (Kumm et al. 1940), and Brazil and Venezuela (Lane and Cerqueira 1942). Belize represents the northernmost occurrence record for this species. Material examined: 2 M, 2 F, 4 Pe, and 1 Mg.

***Wyeomyia (Wyeomyia) abebela* Dyar and Knab**

This is the 1st record of *Wy. abebela* from Belize. Originally described from Cordoba, Veracruz, Mexico, this species is also known from Costa Rica, Guatemala, and Panama (Heinemann and Belkin 1977, Knight and Stone 1977). Larvae are known to inhabit bromeliads (Dyar 1928, Lane 1953); however, little else is known about the biology of this species. We collected *Wy. abebela* in bromeliads in Cayo and Orange Walk districts. These collections were at or near ground level in partial or heavy shade. Other species found in these collections include *Cx. (Mx.) rejector*, *Wy. (Wyo.) celaenocephala*, *Wy. (Wyo.) melanopus*, and *Wy. (Wyo.) Pertinans Group sp. 1 and sp. 2*. Identification was based on features of the male genitalia (Lane 1953). Material examined: 1 M, 2 F, 2 Pe, 1 Le, 1 Mg, and 1 L.

***Wyeomyia (Wyeomyia) melanopus* Dyar**

This is a new occurrence record for Belize. The species was collected from bromeliads in Cayo (once), Orange Walk (twice), and Toledo (twice) districts. The bromeliads were at or near ground level in partial or heavy shade in or at the edge of a forest. Species found in association with *Wy. melanopus* include a species of *Corethrella* (*Corethrella*), *Tx. (Lyn.) haemorrhoidalis superbus*, *Tx. (Lyn.) theobaldi*, *Wy. abebela*, *Wy. celaenocephala*, and *Wy. circumcincta*. In addition to Belize, this species is recorded from Panama, Costa Rica, Mexico, Guatemala, and Honduras. Our collections represent the northernmost record of this species along the Atlantic coast. Material examined: 3 M, 8 F, 11 Pe, 4 Le, and 2 Mg.

Wyeomyia (Wyeomyia) Pertinans Group sp. 1 and sp. 2

Based on characters of the male genitalia and pupal stage provided by Belkin et al. (1970), we identified 2 species collected in bromeliads from Orange Walk District as members of the Pertinans Group of *Wyeomyia*. Because this group is poorly defined and includes some 10–13 species, the 2 species are referred to here as species 1 and 2 until more material becomes available to define individual members of the Pertinans Group.

***Wyeomyia chalconecephala* Dyar and Knab**

Previously published country records for *Wy. chalconecephala* in Central America include Guatemala, Honduras, and Panama (Heinemann and Belkin 1977, Knight and Stone 1977). We collected a single larva of this species from a leaf axil of an elephant-ear plant in a secondary deciduous forest in Toledo District. This larva is distinguished from other *Wyeomyia* in having a siphon with a row of spiniforms resembling pectin spines and a siphon index greater than 3.0 (Lane 1953, Clark-Gil and Darsie 1983). Material examined: 1 L.

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Appendix 1

Collection records for Belize

Data for each collection are summarized as follows: collection number; district; locality (loc.); latitude, longitude; elevation; date of collection; general environment; habitat type; distance to house; water condition, including color, pH, conductivity (C), and oxygen level (O; ppm); vegetation type or plant species; degree of shade; and mosquito species. Missing numbers are collections that did not produce successful rearings.

BHZ 1. Belize, Belize City, 17°30'N, 88°12'W, sea level, September 6, 1990. Cleared area; ground pool; 10 m from house; water clear, stagnant; emergent grasses and mats of dead grass; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) erraticus*, *Oc. (Och.) taeniorhynchus*.

BHZ 2. Belize, same loc./date as BHZ 1. Cleared area next to road along marsh; crab hole (6.0–8.0 cm diameter); water turbid, pH 7.3, C 140; full sun. *Cx. (Dei.) cancer*.

BHZ 3. Belize, same loc./date as BHZ 1. Cleared area next to road along marsh; crab hole (6.0–8.0 cm diameter); 100 m from house; full sun. *Cx. (Dei.) cancer*.

BHZ 4. Belize, same loc./date as BHZ 1. Cleared area adjacent to swamp; ditch; 100 m from house; water stagnant, pH 7.3, C 140; abundant vegetation (all types); partial shade. *Cx. (Cux.) nigripalpus*, *Oc. (Och.) taeniorhynchus*.

BHZ 5. Belize, same loc./date as BHZ 1. Domestic area; ground pool in yard of home; water shallow, temporary, stagnant, pH 7.5, C 50; abundant grasses and scarce green algae; full sun. *Cx. (Cux.) nigripalpus*, *Oc. (Och.) scapularis*, *Oc. (Och.) taeniorhynchus*.

BHZ 6. Belize, same loc./date as BHZ 1. Partially cleared area; swamp; 50 m from house; water permanent; abundant vegetation (all types); partial shade. *Cx. (Cux.) nigripalpus*, *Oc. (Och.) scapularis*, *Oc. (Och.) taeniorhynchus*.

BHZ 7. Belize, same loc./date as BHZ 1. Partially cleared area; swamp; 50 m from house; water permanent; abundant vegetation (all types); full sun. *Cx. (Cux.) nigripalpus*, *Oc. (Och.) scapularis*, *Oc. (Och.) taeniorhynchus*.

BHZ 8. Belize, same loc./date as BHZ 1. Cleared area next to road along swamp; crab hole (8.0–10.0 cm diameter); water turbid, pH 7.8, C 110. *Cx. (Dei.) cancer*.

BHZ 9. Belize, same loc./date as BHZ 1. Swamp area; waterlogged depression; 50 m from house; water permanent, stagnant, pH 7.4, C 40; dense emergent grasses. *Cx. (Cux.) nigripalpus*, *Oc. (Och.) taeniorhynchus*, *Ur. (Ura.) lowii*.

BHZ 10. Belize, same loc./date as BHZ 1. Cleared area; ground pool; 30 m from house; stagnant water; abundant submersed vegetation and

emergent grasses; full sun. *Oc. (Och.) scapularis*, *Oc. (Och.) taeniorhynchus*.

BHZ 11. Belize, Buffer Hole Beach, 17°29'N, 88°15'W, sea level, September 7, 1990. Cleared area; small pit (60 × 80 cm); water temporary, stagnant, pH 7.4, C 1,600; no vegetation; full sun. *Oc. (Och.) taeniorhynchus*.

BHZ 12. Belize, same loc./date as BHZ 11. Cleared area; crab hole; turbid water. *Cx. (Del.) cancer*.

BHZ 13. Belize, same loc./date as BHZ 11. Cleared area, recently cut mangrove swamp; water brackish, pH 7.6, C 7,900; sparse vegetation (*Fimbristylis* sp., *Cyperus* sp.); full sun. *An. (Nys.) albimanus*, *An. (Ano.) crucians*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) erraticus*, *Cx. (Mel.) educator*, *Cx. (Mel.) iolambdis*.

BHZ 14. Belize, same loc./date as BHZ 11. Beach area; crab hole; water pH 7.6, C 40,000; partial shade. *Cx. (Del.) cancer*.

BHZ 15. Belize, Northern Highway, near Belize City, 17°33'N, 88°16'W, sea level, September 7, 1990. Cleared area; ground pool (5.0 × 5.0 m) in recently cut mangrove swamp; water stagnant, pH 8.4, C 990; floating *Lemna* sp.; partial shade. *Cx. (Mel.) erraticus*.

BHZ 16. Belize, same loc./date as BHZ 15. Cleared area; large ground pool (5.0 × 10.0 m); 300 m from house; water temporary, stagnant, pH 7.8, C 630; abundant floating vegetation (*Nymphaea* sp., *Nymphoides* sp.) and emergent macrophytes (*Cyperus odoratus*, *Typha domingensis*). *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) erraticus*, *Ps. (Gra.) confinnis* Group, *Ps. (Pso.) ciliata*.

BHZ 17. Belize, Western Highway, mile 32, 17°22'N, 88°34'W, September 8, 1990. Domestic area; cut bamboo laying on ground; <5.0 m from house; full sun. *Cx. (Cux.) interrogator*, *Cx. (Cux.) quinquefasciatus*, *Cx. (Mel.) theobaldi*, *Cx. (Phc.) lactator*.

BHZ 18. Belize, same loc./date as BHZ 17. Domestic area; cut bamboo standing on end; next to BHZ 17. *Cx. (Cux.) quinquefasciatus*.

BHZ 19. Cayo, Blue Hole National Park, 17°09'N, 88°41'W, 61 m, September 8, 1990. Forested area; small metal garbage can with 15 cm of water; heavy shade. *Cx. (Cux.) mollis*, *Cx. (Phc.) lactator*.

BHZ 21. Cayo, Hummingbird Highway at Sibun Camp, 17°06'N, 88°39'W, 60 m, September 8, 1990. Cultivated area; ground pool; water temporary, pH 6.7, C 60; emergent vegetation (*Cyperus odoratus*, *Ludwigia octovalvis*). *An. (Nys.) albimanus*, *Cx. (Mel.) educator*, *Cx. (Mel.) pilosus*, *Cx. (Mel.) theobaldi*, *Ps. (Gra.) confinnis* Group.

BHZ 22. Cayo, same loc./date as BHZ 21. Cultivated area; ground pool in orange and banana grove; 100 m from house; water temporary, pH 7.0, C 45; abundant floating vegetation and green algae; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) declar-*

ator, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) theobaldi*, *Ur. (Ura.) geometrica*.

BHZ 23. Cayo, same loc./date as BHZ 21. Cultivated area; ground pool; 100 m from house; water temporary, pH 6.5, C 24; abundant submersed and emergent vegetation; full sun. *Oc. (Och.) angustivittatus*.

BHZ 24. Cayo, same loc./date as BHZ 21. Cultivated area; roadside ditch; 400 m from house; water temporary, pH 6.6, C 100; abundant emergent vegetation (*Cyperus*, Gramineae); full sun. *Cx. (Cux.) declarator*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) pilosus*, *Cx. (Phc.) lactator*, *Oc. (Och.) angustivittatus*, *Ps. (Pso.) ciliata*.

BHZ 25. Cayo, Hummingbird Highway, at Sibun River, 17°08'N, 88°39'W, 100 m, September 8, 1990. Cultivated area; large ground pool in newly planted orchard; water temporary, pH 6.9, C 140, sparse emergent vegetation (*Cyperus rotundus*); full sun. *Cx. (Mel.) limacifer*.

BHZ 26. Cayo, same loc./date as BHZ 25. Cultivated area; ground pool (1.0 × 2.0 m) in newly planted orchard; water slow moving (from larger pool), temporary, pH 8.6, C 120; sparse submersed (*Chara* sp.), emergent (*Cyperus rotundus*) vegetation and blue-green algae. *Cx. (Mel.) theobaldi*.

BHZ 27. Cayo, Hidden Valley Falls, 17°04'N, 88°51'W, 640 m, September 9, 1990. Pine forest; cut bamboo internode next to house; clear water; partial shade. *Tr. digitatum*.

BHZ 28. Cayo, same loc./date as BHZ 27. Pine forest; bromeliad axil 1.0 m above ground, 70 m from house; partial shade. *Cx. (Mcx.) rejector*, *Wy. (Wyo.) celaenocephala*.

BHZ 29. Cayo, same loc./date as BHZ 27. Pine forest; bromeliad axil 1.0 m above ground, 70 m from house; partial shade. *Wy. (Wyo.) celaenocephala*.

BHZ 30. Cayo, same loc./date as BHZ 27. Pine forest; bromeliad axil 1.0 m above ground, 70 m from house; partial shade. *Cx. (Mcx.) rejector*, *Wy. (Wyo.) celaenocephala*.

BHZ 31. Cayo, same loc./date as BHZ 27. Pine forest; bromeliad axil 1.0 m above ground, 70 m from house; partial shade. *Wy. (Wyo.) celaenocephala*.

BHZ 32. Cayo, same loc./date as BHZ 27. Pine forest; pit (1.0 m deep); water 15–20 cm deep, temporary, stagnant; scarce submersed vegetation; partial shade. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator*, *Cx. (Cux.) yojoae*, *Cx. (Cux.) mollis*.

BHZ 33. Cayo, same loc./date as BHZ 27. Pine forest; bromeliad axil at ground level; clear, fresh water; partial shade. *Wy. (Wyo.) celaenocephala*, *Wy. (Wyo.) melanopus*.

BHZ 34. Cayo, Cooma Cairn Road, 17°03'N, 88°56'W, 500 m, September 9, 1990. Pine forest; bromeliad axil 1.0 m above ground; partial shade. *Cx. (Mcx.) rejector*, *Tx. (Lyn.) haemorrhoidalis superbus*, *Wy. (Wyo.) celaenocephala*.

BHZ 35. Cayo, same loc./date as BHZ 34. Pine

forest; bromeliad axil; 1.0 m above ground; partial shade. *Corethrella* (*Corethrella*) sp.

BHZ 36. Cayo, same loc./date as BHZ 34. Pine forest; bromeliad axil 2.0 m above ground; partial shade. *Tx.* (*Lyn.*) *theobaldi*.

BHZ 37. Cayo, Chiquibul Road, 17°07'N, 88°58'W, 200 m, September 9, 1990. Partially cleared area; pond/lake; 500 m from house; water permanent, pH 7.8, C 120; abundant submersed and emergent (*Eleocharis intersticta*, *Cyperus odoratus*, *Ludwigia octovalvis*) vegetation around margins and blue-green algal mats; full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Cux.*) *nigripalpus*, *Cx.* (*Mel.*) *dunni*, *Cx.* (*Mel.*) *flabellifer*, *Cx.* (*Mel.*) *inhibitor*, *Ur.* (*Ura.*) *lowii*.

BHZ 38. Cayo, Belmopan, 17°15'N, 88°46'W, 60 m, September 10, 1990. Domestic area; tire; 10 m from house; clear water; full sun. *Cx.* (*Cux.*) *nigripalpus*, *Cx.* (*Cux.*) *quinquefasciatus*.

BHZ 39. Cayo, Hummingbird Highway, 17°11'N, 88°46'W, 100 m, September 10, 1990. Pond/lake; water permanent; scarce floating and emergent vegetation; heavy shade. *Cx.* (*Mel.*) *com-mevynensis*, *Cx.* (*Mel.*) *ensiformis*.

BHZ 40. Cayo, same loc./date as BHZ 39. Ground pool (2.0 × 3.0 m); water temporary, stagnant; abundant floating and emergent vegetation; full sun. *Cx.* (*Mel.*) *rooti*.

BHZ 41. Cayo, same loc./date as BHZ 39. Ground pool (10 × 10 m); water pH 7.7, C 450; abundant emergent vegetation (*Typha* sp.) and blue-green algal mats. *Cx.* (*Mel.*) *educator*.

BHZ 42. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, September 10, 1990. Pasture; ground pool (1.0 × 2.0 m); water clear, temporary; abundant vegetation of all types; full sun. *Cx.* (*Cux.*) *declarator*, *Cx.* (*Cux.*) *nigripalpus*, *Cx.* (*Mel.*) *limacifer*, *Cx.* (*Mel.*) *pilosus*, *Cx.* (*Phc.*) *lactator*, *Oc.* (*Och.*) *angustivittatus*.

BHZ 43. Cayo, same loc./date as BHZ 42. Pasture; ground pool (0.5 × 0.5 m); turbid water; no vegetation; full sun. *Cx.* (*Cux.*) *coronator*.

BHZ 44. Cayo, same loc./date as BHZ 42. Ground pool (1.0 × 1.0 m); water clear, pH 9.2, C 120; filamentous algae; full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Cux.*) *coronator*, *Cx.* (*Mel.*) *pilosus*.

BHZ 45. Cayo, Hummingbird Highway, 1 km W of Blue Hole, 17°09'N, 88°41'W, 60 m, September 10, 1990. Ground pool (5.0 × 5.0 m); abundant emergent short grasses; full sun. *Cx.* (*Mel.*) *pilosus*, *Ps.* (*Pso.*) *ciliata*.

BHZ 46. Cayo, same loc./date as BHZ 42. Pond/lake; water permanent, clear, pH 6.3, C 24; abundant emergent, submersed, and floating vegetation. *An.* (*Ano.*) *crucians*, *Cx.* (*Cux.*) *nigripalpus*, *Cx.* (*Mel.*) *bastagarius*, *Cx.* (*Mel.*) *dunni*, *Cx.* (*Mel.*) *ensiformis*, *Cx.* (*Mel.*) *pilosus*, *Cx.* (*Mel.*) *theobaldi*.

BHZ 47. Cayo, same loc./date as BHZ 42. Ground pool (4.0 × 6.0 m); water pH 7.3, C 22; abundant emergent grasses; full sun. *An.* (*Nys.*) *al-*

bimanus, *Cx.* (*Cux.*) *nigripalpus*, *Cx.* (*Mel.*) *bastagarius*, *Ur.* (*Ura.*) *geometrica*.

BHZ 48. Cayo, same loc./date as BHZ 42. Stream pool (0.7 × 4.0 m); water stagnant, pH 7.8, C 180; emergent vegetation, numerous fish present; full sun. *Cx.* (*Mel.*) *bastagarius*.

BHZ 49. Cayo, same loc./date as BHZ 42. Stream pool (0.7 × 4.0 m); water stagnant, pH 7.8, C 80; abundant emergent vegetation; full sun. *Cx.* (*Mel.*) *limacifer*.

BHZ 50. Cayo, same loc./date as BHZ 42. Pasture; large flood pool (20 × 20 m); water temporary, pH 6.5, C 26; scarce emergent vegetation; full sun. *An.* (*Ano.*) *crucians*, *An.* (*Ano.*) *neomaculipalpus*, *Cx.* (*Cux.*) *nigripalpus*, *Cx.* (*Mel.*) *pilosus*, *Cx.* (*Mel.*) *rooti*.

BHZ 51. Belize, Western Highway, mile 8, 17°29'N, 88°19'W, September 11, 1990. Brackish savanna; marshy depression; water temporary, stagnant; some emergent vegetation; full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *educator*.

BHZ 52. Belize, same loc./date as BHZ 51. Brackish savanna; small pond (20 × 20 m); water temporary, stagnant; scarce emergent vegetation; full sun. *An.* (*Nys.*) *albimanus*, *An.* (*Ano.*) *crucians*, *Cx.* (*Mel.*) *educator*, *Cx.* (*Mel.*) *erraticus*.

BHZ 53. Belize, same loc./date as BHZ 51. Savanna; marshy depression; water permanent, stagnant, pH 6.3, C 240; abundant emergent vegetation (*Eleocharis interstincta*, *Cyperus* sp.); full sun. *Cx.* (*Mel.*) *educator*.

BHZ 54. Belize, same loc./date as BHZ 51. Brackish savanna; marshy depression; water permanent, stagnant, pH 6.3, C 240; abundant emergent vegetation (*Cyperus* sp.). *Cx.* (*Mel.*) *educator*.

BHZ 55. Belize, same loc./date as BHZ 51. Brackish savanna; marshy depression; water permanent, stagnant; abundant emergent vegetation (*Cladium jamaicense*, *Eleocharis interstincta*); full sun. *Cx.* (*Mel.*) *erraticus*.

BHZ 56. Cayo, Coastal Highway, 17°24'N, 88°31'W, September 11, 1990. Ground pool; water temporary, stagnant, full sun, slightly turbid, pH 6.6, C 58; abundant emergent vegetation (*Kylinga* sp., *Ludwigia octovalvis*). *Cx.* (*Mel.*) *pilosus*.

BHZ 57. Cayo, same loc. as BHZ 56, September 11, 1990. Ground pool; water temporary, stagnant, slightly turbid, pH 6.6, C 58; dense emergent vegetation (*Ludwigia octovalvis*); partial shade. *Cx.* (*Cux.*) *nigripalpus*, *Cx.* (*Mel.*) *educator*, *Cx.* (*Mel.*) *erraticus*, *Cx.* (*Mel.*) *pilosus*, *Ur.* (*Ura.*) *lowii*, *Ps.* (*Jan.*) *ferox*.

BHZ 58. Belize, Western Highway, mile 28, 17°28'N, 88°31'W, September 11, 1990. Pond; water permanent, pH 6.6, C 68; sparse floating vegetation (*Limnanthemum humboldti*); full sun. *Cx.* (*Mel.*) *erraticus*.

BHZ 59. Belize, Western Highway, mile 10, 17°29'N, 88°21'W, September 11, 1990. Mangrove swamp; bromeliad axil 0.5 m above ground. *Wy.* (*Wyo.*) *celaecephala*.

BHZ 60. Belize, same loc./date as BHZ 59. Mangrove swamp; bromeliad axil 0.3 m above ground. Wy. (Wyo.) *celaenocephala*.

BHZ 61. Belize, same loc./date as BHZ 59. Mangrove swamp; bromeliad axil 2.5 m above ground. Wy. (Wyo.) *celaenocephala*.

BHZ 62. Belize, same loc./date as BHZ 59. Mangrove swamp; bromeliad axil 2.5 m above ground. Wy. (Wyo.) *celaenocephala*.

BHZ 63. Belize, same loc./date as BHZ 59. Mangrove swamp; bromeliad axil 2.5 m above ground. Wy. (Wyo.) *celaenocephala*.

BHZ 64. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, September 12, 1990. Forest; bromeliad axil 2.5 m above ground; 200 m from house; water temporary, yellowish; partial shade. Cx. (*Mcx.*) *rejector*, Tx. (*Lyn.*) *haemorrhoidalis superbus*, Wy. (Wyo.) *celaenocephala*.

BHZ 65. Belize, same loc./date as BHZ 64. Forest; bromeliad axil 4.0 m above ground; water yellowish. Cx. (*Mcx.*) *rejector*, Wy. (Wyo.) *celaenocephala*.

BHZ 66. Belize, same loc./date as BHZ 64. Ground pool (6.0 × 12 m); temporary, stagnant, clear water; abundant emergent vegetation and green algae; partial shade. An. (*Nys.*) *albimanus*, An. (*Ano.*) *crucians*, Cx. (*Cux.*) *nigripalpus*, Cx. (*Cux.*) *quinquefasciatus*, Ur. (*Ura.*) *lowii*.

BHZ 67. Belize, same loc./date as BHZ 64. Ground pool (10 × 10 m); water temporary, stagnant, turbid; abundant emergent grasses at margins; partial shade. An. (*Ano.*) *crucians*, An. (*Nys.*) *albimanus*, Cx. (*Mel.*) *educator*, Cx. (*Mel.*) *erraticus*, Ur. (*Ura.*) *lowii*.

BHZ 68. Belize, same loc./date as BHZ 64. Forest; small bromeliad axil with very little water, on dead tree; partial shade. Wy. (Wyo.) *celaenocephala*.

BHZ 69. Belize, same loc./date as BHZ 64. Pasture; pond/lake (30 × 30 m), 60 m from house; water permanent, pH 6.2, C 66; abundant floating vegetation (*Nymphaea ampta*, *Limnanthemum humboldti*); full sun. Cx. (*Mel.*) *erraticus*.

BHZ 70. Belize, same loc./date as BHZ 64. Pasture; pond/lake (30 × 30 m), 60 m from house; water permanent; abundant emergent vegetation (*Eleocharis interstincta*, *Cyperus rotundus*); full sun. Cx. (*Mel.*) *erraticus*.

BHZ 71. Belize, same loc./date as BHZ 64. Pasture; pond/lake (30 × 30 m), 60 m from house; water permanent; abundant submersed vegetation; full sun. Cx. (*Mel.*) *erraticus*.

BHZ 72. Belize, same loc./date as BHZ 64. Pasture; pond/lake (30 × 30 m); water permanent; floating (*Limnanthemum humboldti*) and emergent (*Eleocharis interstincta*) vegetation and blue-green algal mats; full sun. Cx. (*Mel.*) *erraticus*.

BHZ 73. Belize, same loc./date as BHZ 64. Pasture; pond/lake (10 × 5.0 m), adjacent to pond of BHZ 69–72; 60 m from house; water temporary; emergent vegetation (*Cyperus rotundus*) and peri-

phytic algae; full sun. An. (*Ano.*) *crucians*, Cx. (*Mel.*) *erraticus*.

BHZ 74. Belize, same loc./date as BHZ 64. Pasture; pond/lake (60 × 40 m); 70 m from house; water permanent, pH 5.9, C 34; some emergent vegetation (*Eleocharis interstincta*, *Cyperus rotundus*); full sun. An. (*Ano.*) *crucians*.

BHZ 75. Belize, same loc./date as BHZ 64. Pasture; ground pool (2.0 × 2.0 m) adjacent to BHZ 74; water temporary; emergent vegetation (*Cyperus rotundus*); full sun. An. (*Ano.*) *crucians*, Cx. (*Mel.*) *dunni*.

BHZ 76. Belize, same loc./date as BHZ 64. Pasture; pond (40 × 40 m); water permanent; emergent vegetation (*Cyperus* sp.); full sun. Cx. (*Mel.*) *educator*.

BHZ 77. Belize, same loc./date as BHZ 64. Pasture; pond/lake (50 × 50 m); water permanent, pH 6.2, C 54; abundant floating (*Limnanthemum humboldti*) and emergent (*Eleocharis interstincta*) vegetation; full sun. Cx. (*Mel.*) *erraticus*.

BHZ 78. Belize, same loc./date as BHZ 64. Pasture; ground pool; water temporary, pH 6.0, C 48; abundant emergent vegetation (*Cyperus rotundus*, *Eleocharis interstincta*) and periphytic algae; full sun. An. (*Ano.*) *crucians*, Cx. (*Mel.*) *dunni*.

BHZ 79. Cayo, Aquacate Park, Turtle Puddle, 17°20'N, 89°04'W, 100 m, 13 September 1990. Forest; pond (20 × 20 m); water permanent, light teal-colored; larvae in dead leaves at margin; partial shade. Cx. (*Mel.*) *educator*.

BHZ 80. Cayo, same loc./date as BHZ 79, Aquacate Lagoon. Forest; lake (100 × 200 m), adjacent to pond of BHZ 79; water permanent, pH 7.2, C 180; partial shade. Cx. (*Mel.*) *educator*.

BHZ 81. Cayo, same loc./date as BHZ 79, Reptile Pool. Forest; pond/lake (30 × 30 m), adjacent to pond/lake of BHZ 79 and 80; water permanent, clear, pH 7.8, C 180; abundant emergent vegetation and blue-green algal mats; partial shade. An. (*Nys.*) *albimanus*, Cx. (*Mel.*) *erraticus*.

BHZ 82. Orange Walk, Orange Walk, 18°06'N, 88°33'W, 15 m, September 14, 1990. Domestic area; tire; 10 m from house; water clear; partial shade. Ae. (*Stg.*) *aegypti*, Cx. (*Cux.*) *quinquefasciatus*.

BHZ 83. Orange Walk, same loc./date as BHZ 82. Domestic area; tire laying on ground; water clear, some debris; partial shade. Ae. (*Stg.*) *aegypti*, Cx. (*Cux.*) *quinquefasciatus*.

BHZ 84. Orange Walk, San Antonio, 18°11'N, 88°39'W, 7 m, September 14, 1990. River margin next to village; 30 m from house; water permanent, slow moving; abundant vegetation (graminoids, *Nymphaea ampta*). An. (*Nys.*) *albimanus*, Cx. (*Cux.*) *interrogator*.

BHZ 85. Orange Walk, 1.5 km ESE of San Antonio, 18°10'N, 88°39'W, 10 m, September 14, 1990. Cleared area; ditch (2.0–3.0 m wide) next to sugar cane field; water temporary, stagnant; scarce

vegetation (*Chara* sp., tall grasses). *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 86. Orange Walk, same loc./date as BHZ 85. Swamp forest; bromeliad axil about 2.5 m above ground; water yellowish; partial shade. *Cx. (Mcx.) rector*, *Tx. (Lyn.) theobaldi*.

BHZ 87. Orange Walk, same loc./date as BHZ 85. Swamp forest; bromeliad axil about 3.0 m above ground; water pinkish. *Cx. (Mcx.) rector*, *Wy. (Wyo.) celaenocephala*.

BHZ 88. Orange Walk, same loc./date as BHZ 85. Swamp forest; bromeliad axil about 1.5 m above ground; water yellowish. *Cx. (Mcx.) rector*, *Wy. (Wyo.) celaenocephala*.

BHZ 89. Orange Walk, same loc./date as BHZ 85. Swamp forest; bromeliad axil about 1.5 m above ground; water yellowish; partial shade. *Wy. (Wyo.) melanopus*.

BHZ 90. Orange Walk, same loc./date as BHZ 85. Swamp forest; bromeliad axil about 1.5 m above ground; water yellowish. *Cx. (Mcx.) rector*, *Tx. (Lyn.) haemorrhoidalis superbus*.

BHZ 91. Orange Walk, same loc./date as BHZ 85. Swamp forest; bromeliad axil about 1.5 m above ground; water yellowish. *Cx. (Mcx.) rector*, *Wy. (Wyo.) celaenocephala*.

BHZ 92. Orange Walk, same loc./date as BHZ 85. Swamp forest; bromeliad axil about 1.5 m above ground; water yellowish. *Cx. (Mcx.) rector*.

BHZ 93. Orange Walk, same loc./date as BHZ 85. Swamp forest; bromeliad axil about 1.5 m above ground; water yellowish. *Cx. (Mcx.) rector*, *Tx. (Lyn.) haemorrhoidalis superbus*, *Wy. (Wyo.) celaenocephala*.

BHZ 95. Orange Walk, same loc./date as BHZ 85. Lagoon; water permanent; abundant vegetation (all types); full sun. *Cx. (Mel.) educator*.

BHZ 96. Orange Walk, same loc./date as BHZ 85. Bromeliad axil on ground; water yellow; partial shade. *Cx. (Mcx.) rector*, *Tx. (Lyn.) theobaldi*.

BHZ 98. Orange Walk, same loc./date as BHZ 85. Cleared area; ditch (2.0–3.0 m wide) next to sugar cane field; water clear, fresh, pH 7.5, C 1,400; abundant floating dead leaves; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 99. Orange Walk, same loc./date as BHZ 85. Cleared area; ditch (2.0–3.0 m wide) next to sugar cane field; water clear, fresh; floating vegetation (*Nymphaea ampta*); full sun. *Cx. (Cux.) inflictus*, *Cx. (Mel.) erraticus*.

BHZ 100. Orange Walk, same loc./date as BHZ 85. Lagoon next to sugar cane field; water permanent, pH 7.7, C 480; submersed vegetation (*Chara* sp.); full sun. *Cx. (Mel.) erraticus*.

BHZ 101. Orange Walk, same loc./date as BHZ 85. Lagoon next to sugar cane field; water permanent, clear, pH 7.7, C 480; emergent (*Eleocharis cellulosa*) vegetation; full sun. *Cx. (Mel.) erraticus*.

BHZ 103. Belize, Coastal Highway, 17°20'N,

88°30'W, September 15, 1990. Flood pool; water temporary, fresh, clear; floating and emergent vegetation; full sun. *An. (Ano.) crucians*, *Cx. (Mel.) bastagarius*, *Cx. (Mel.) educator*.

BHZ 104. Belize, same loc./date as BHZ 103. Flood pool; water temporary, fresh, clear; scarce emergent vegetation; partial shade. *Cx. (Mel.) theobaldi*.

BHZ 105. Belize, same loc./date as BHZ 103. Flood pool; water fresh, clear; full sun. *Cx. (Mel.) erraticus*.

BHZ 106. Belize, same loc./date as BHZ 103. Road rut; water temporary; filamentous algae; full sun. *Cx. (Mel.) theobaldi*.

BHZ 107. Belize, 4 km NNW of Hattieville, 17°29'N, 88°25'W, 6 m, September 15, 1990. Ground pool; water temporary, clear, pH 7.9, C 34; blue-green algal mats; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 108. Belize, 5 km NNW of Hattieville, 17°30'N, 88°25'W, 10 m, September 15, 1990. Lagoon; water permanent, fresh, clear, pH 7.2, C 240; abundant emergent vegetation; full sun. *Cx. (Mel.) erraticus*.

BHZ 110. Belize, 5 km S of Burrell Boom, 17°31'N, 88°35'W, 10 m, September 15, 1990. Mangrove swamp; bromeliad axil (with short broad leaves) 1.0 m above water; full sun. *Wy. (Wyo.) celaenocephala*.

BHZ 111. Belize, same loc./date as BHZ 110. Mangrove swamp; bromeliad axil about 1.0 m above ground; full sun. *Wy. (Wyo.) celaenocephala*.

BHZ 112. Belize, same loc./date as BHZ 110. Mangrove swamp; bromeliad axil 0.5 m above ground. *Wy. (Wyo.) celaenocephala*.

BHZ 113. Belize, same loc./date as BHZ 110. Mangrove swamp; bromeliad axil about 1.0 m above ground. *Wy. (Wyo.) celaenocephala*.

BHZ 115. Belize, same loc./date as BHZ 110. Mangrove swamp; bromeliad axil about 2.0 m above ground; full sun. *Wy. (Wyo.) celaenocephala*.

BHZ 116. Belize, same loc./date as BHZ 110. Mangrove swamp; bromeliad axil about 1.0 m above ground; full sun. *Wy. (Wyo.) celaenocephala*.

BHZ 117. Belize, same loc./date as BHZ 110. Mangrove swamp; bromeliad axil about 1.0 m above ground; full sun. *Wy. (Wyo.) celaenocephala*.

BHZ 119. Belize, same loc./date as BHZ 110. Marsh pool (4.0 × 5.0 m); water temporary, pH 8.6, C 1,000; abundant emergent vegetation (*Cyperus*). *An. (Nys.) albimanus*, *Cx. (Mel.) educator*.

BHZ 120. Stann Creek, 1 km S of Dangriga, 16°58'N, 88°13'W, sea level, September 17, 1990. Brackish marsh; water pH 7.3, C 2,500; emergent vegetation (*Cyperus* sp., *Eleocharis mutata*, *Typha domingensis*). *Oc. (Och.) taeniorhynchus*.

BHZ 121. Stann Creek, same loc./date as BHZ 120. Domestic area; tire next to house; water clear; partial shade. *Ae. (Stg.) aegypti*, *Cx. (Cux.) inflictus*, *Cx. (Cux.) quinquefasciatus*.

BHZ 122. Stann Creek, same loc./date as

BHZ 120. Domestic area; tire next to house (near BHZ 121); water clear; partial shade. *Ae. (Stg.) aegypti*.

BHZ 123. Stann Creek, 1.0 km W of Pomona, 17°00'N, 88°23'W, 40 m, September 17, 1990. Flood pool; water fresh, clear; abundant submersed and emergent vegetation; full sun. *Oc. (Och.) angustivittatus*, *Ps. (Jan.) ferox*.

BHZ 125. Stann Creek, 4 km W of Alta Vista, 17°00'N, 88°23'W, 100 m, September 17, 1990. Forest area; bamboo internode, ground level, 75 m from house; heavy shade. *Li. durhamii*.

BHZ 126. Stann Creek, same loc./date as BHZ 125. Cultivated area; bamboo stump (0.5 m) in orchard, 75 m from house; heavy shade. *Wy. aporonomia*, *Wy. (Wyo.) arthrostigma*.

BHZ 127. Stann Creek, same loc./date as BHZ 125. Cultivated area; bamboo stump (0.5 m) in orchard, 75 m from house; heavy shade. *Wy. (Wyo.)* sp. 1.

BHZ 128. Stann Creek, same loc./date as BHZ 125. Cultivated area; bamboo stump (0.5 m) in orchard, 75 m from house; heavy shade. *Wy. (Wyo.)* sp. 1.

BHZ 129. Stann Creek, same loc./date as BHZ 125. Cultivated area; bamboo stump in orchard, 75 m from house; leaves and debris in cavity; heavy shade. *Wy. aporonomia*.

BHZ 130. Stann Creek, 8 km W of Alta Vista, 17°00'N, 88°30'W, 100 m, September 17, 1990. Bamboo grove; adults collected biting/landing on human, from 1500 to 1600 h; light wind; heavy shade. *Oc. (Och.) angustivittatus*, *Ps. (Gra.) cingulata*, *Ps. (Jan.) ferox*, *Ps. (Jan.) albipes*, *Wy. aporonomia*, *Wy. (Wyo.)* sp.

BHZ 131. Cayo, Mountain Pine Ridge, Navel Road, 16°59'N, 88°55'W, 620 m, September 18, 1990. Gallery forest; stream pool (3.0–6.0 cm deep); sandy bottom; floating dead leaves and abundant submersed vegetation; heavy shade. *Cx. (Mel.) elevator*, *Cx. (Mel.) iolambdis*.

BHZ 132. Cayo, same loc./date as BHZ 131. Pine forest; rock pool along stream; water temporary, fresh, clear; no vegetation; full sun. *Cx. (Mel.) elevator*.

BHZ 133. Cayo, same loc./date as BHZ 131. Pine forest; rock hole (15 × 30 × 15 cm), 2 m above stream; water clear; no vegetation; full sun. *Oc. (Och.) fluviatilis*.

BHZ 134. Cayo, same date/loc. as BHZ 131. Pine forest; bromeliad axil 2.0 m above ground, with very little water; partial shade. *Corethrella appendiculata*, *Wy. (Wyo.) celaenocephala*.

BHZ 135. Cayo, same loc./date as BHZ 131. Pine forest; bromeliad axil 2.0 m above ground, 1.0 m from BHZ 134; water fresh, clear. *Cx. (Mcx.) rector*, *Wy. (Wyo.) celaenocephala*.

BHZ 136. Cayo, Mountain Pine Ridge, Rio On, Navel Road, 16°59'N, 88°59'W, 480 m, September 18, 1990. Pine forest; rock pool (0.5 × 1.5 × 0.3

m); water fresh, clear; full sun. *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 137. Cayo, same loc./date as BHZ 136. Pine forest; rock hole (1.5 × 0.15 × 0.3 m); water fresh, clear; leaf litter/debris, no vegetation; full sun. *Oc. (Och.) fluviatilis*.

BHZ 138. Cayo, same loc./date as BHZ 136. Pine forest; rock pool (0.2 × 0.5 m); water fresh, clear; no vegetation; full sun. *Cx. (Cux.) coronator*.

BHZ 139. Cayo, same loc./date as BHZ 136. Pine forest; rock hole (0.3 × 0.7 m); water fresh, clear; no vegetation; full sun. *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 140. Cayo, same loc./date as BHZ 136. Pine forest; rock pool (3.0 × 0.5 m); water fresh, clear; sparse emergent vegetation; full sun. *Cx. (Mel.) pilosus*, *Cx. (Mel.) vexillifer*.

BHZ 141. Cayo, same loc./date as BHZ 136. Pine forest; rock pool (0.7 × 0.6 × 0.1 m); water fresh, clear; no vegetation; full sun. *Cx. (Cux.) coronator*.

BHZ 142. Cayo, same loc./date as BHZ 136. Pine forest; flood pool (1.0 × 0.3 m); water fresh, clear; abundant submersed vegetation; full sun. *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 143. Cayo, Mountain Pine Ridge, 1961 Road, 16°59'N, 88°55'W, 620 m, September 18, 1990. Forest; adult collected biting human nose on bridge over stream; partial shade. *Sa. (Sab.) gymnothorax*.

BHZ 144. Cayo, Hummingbird Highway, 3 miles S of Belmopan, 17°12'N, 88°46'W, 60 m, September 19, 1990. Rain forest; flood pool (5.0 × 3.0 m); water fresh, clear, pH 7.4, C 260; emergent vegetation; partial shade. *Oc. (Och.) scapularis*, *Oc. (Och.) serratus*.

BHZ 145. Belize, Northern Highway, 2 km E of Ladyville, 17°33'N, 88°17'W, 1 m, September 19, 1990. Ground pool; water fresh, tan-colored; numerous dead leaves; partial shade. *Oc. (Och.) taeniorhynchus*, *Ps. (Gra.) confinnis* Group.

BHZ 146. Corozal, 50 m from Four Mile Lagoon, 18°28'N, 88°24'W, 5 m, September 20, 1990. Cleared/cultivated area; ground pool (1.0 × 1.0 m) near sugar cane field; abundant emergent grasses; full sun. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) educator*, *Cx. (Mel.) pilosus*.

BHZ 147. Corozal, same loc./date as BHZ 146. Partially cleared area; ground pool near mangrove swamp and sugar cane field; water pH 7.4, C 3,800; emergent grasses (*Cyperus* sp., *Fimbristylis spadiacea*) and abundant blue-green algae; full sun. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Mel.) educator*.

BHZ 148. Corozal, same loc./date as BHZ 146. Partially cleared area; ground pool near mangrove swamp and sugar cane field; water slightly tea-colored; abundant emergent grasses; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) pilosus*.

BHZ 149. Corozal, same loc./date as BHZ 146. Partially cleared area; ground pool near mangrove swamp and sugar cane field; water slightly tea-colored, pH 7.8, C 4,000; emergent vegetation (*Eleocharis cellulosa*); full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) pilosus*.

BHZ 150. Corozal, same loc./date as BHZ 146. Cultivated area; ground pool next to sugar cane field; water fresh, clear; abundant floating and emergent vegetation; heavy shade. *An. (Nys.) albimanus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) pilosus*, *Oc. (Och.) taeniorhynchus*.

BHZ 151. Corozal, 5 km WNW of Chan Chen, 18°27'N, 88°28'W, 5 m, September 20, 1990. Marshy depression; fresh, clear water; abundant emergent vegetation (*Typha domingensis*); partial shade. *Cx. (Mel.) iolambdis*.

BHZ 152. Corozal, same loc./date as BHZ 151. Marsh, (same as BHZ 151); adults collected biting/landing on human at 1450 h; partial shade. *An. (Ano.) crucians*, *Wy. (Wyo.) arthrostigma*, *Wy. (Wyo.) celaenocephala*.

BHZ 153. Corozal, 2.5 km SW of Chan Chen, 18°26'N, 88°27'W, 5 m, September 20, 1990. Partially cleared area; marshy depression next to sugar cane field; water permanent, fresh, clear; abundant floating and emergent vegetation and blue-green algae. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Mel.) educator*.

BHZ 154. Corozal, same loc./date as BHZ 153. Partially cleared area; marshy depression (near BHZ 153); water pH 7.7, C 2,400; abundant emergent vegetation (*Cladium jamaicense*, *Eleocharis cellulosa*). *An. (Nys.) albimanus*, *Cx. (Mel.) educator*, *An. (Ano.) crucians*.

BHZ 155. Corozal, same loc./date as BHZ 153. Marshy depression; water permanent, pH 8.0, C 2,400; abundant emergent vegetation (*Eleocharis cellulosa*) and blue-green algal mats; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) educator*.

BHZ 156. Corozal, same loc./date as BHZ 153. Marshy depression; water permanent, pH 7.7, C 71; emergent vegetation (*Typha domingensis*); full sun. *Cx. (Mel.) iolambdis*.

BHZ 157. Corozal, same loc. as BHZ 153, September 22, 1990. Bamboo grove; bamboo stump (1.0 m high), 50 m from house; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 158. Corozal, same loc./date as BHZ 157. Bamboo grove; bamboo stump (approximately 13 cm diameter, at ground level); 50 m from house; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 159. Corozal, same loc./date as BHZ 157. Bamboo grove; bamboo stump (1.0 m above ground); 50 m from house; water tea-colored; heavy shade. *Wy. aporonoma*, *Wy. (Wyo.) arthrostigma*.

BHZ 160. Corozal, same loc./date as BHZ 157. Bamboo grove; bamboo stump (1.0 m above ground); 50 m from house; clear water; heavy

shade. *Hg. (Hag.) equinus*, *Wy. aporonoma*, *Wy. (Wyo.) arthrostigma*.

BHZ 161. Corozal, same loc./date as BHZ 157. Bamboo grove; bamboo stump (ground level); 50 m from house; heavy shade. *Wy. aporonoma*.

BHZ 162. Corozal, same loc./date as BHZ 157. Bamboo grove; bamboo stump (0.5 m above ground); 50 m from house; water clear; heavy shade. *Wy. aporonoma*.

BHZ 163. Corozal, same loc./date as BHZ 157. Bamboo grove; bamboo stump (2.0 m above ground); 50 m from house; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 164. Corozal, same loc./date as BHZ 157. Bamboo grove; bamboo stump (0.3 m above ground), cut at internode with small hole in top; 50 m from house; heavy shade. *Wy. aporonoma*, *Wy. (Wyo.) arthrostigma*.

BHZ 165. Corozal, same loc./date as BHZ 157. Bamboo grove; bamboo stump (6.0 cm diameter, 2.0 m above ground); 50 m from house; water clear; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 166. Corozal, same loc./date as BHZ 157. Bamboo grove; bamboo stump (ground level); 50 m from house; water clear, with leaves and organic debris; heavy shade. *Wy. aporonoma*.

BHZ 168. Cayo, Hummingbird Highway, 1.5 km E of Sibun Camp, 17°05'N, 88°39'W, 80 m, September 22, 1990. Stream margin (1.5 m wide); slow current, with clear, fresh water; 25 m from house; submersed/emergent grasses at margins; full sun. *An. (Nys.) argyritarsis*.

BHZ 169. Cayo, same loc./date as BHZ 168. Stream margin (separate branch of same stream as BHZ 168); water semipermanent, fresh, clear; abundant vegetation (all types); full sun. *An. (Nys.) albimanus*, *An. (Nys.) argyritarsis*.

BHZ 170. Cayo, same loc./date as BHZ 168. Seepage pool (2.0 × 3.0 × 0.4 m); water fresh, clear; abundant emergent grasses and blue-green algal mats; full sun. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*, *An. (Nys.) argyritarsis*.

BHZ 171. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, September 22, 1990. Forest; artificial container (500-ml plastic jar) on ground near stream, no lid; organic litter; heavy shade. *Li. durhamii*.

BHZ 172. Cayo, Western Highway, 2 km N of San Ignacio, 17°10'N, 89°05'W, 60 m, September 25, 1990. Pasture; tree hole (6.0 cm diameter), less than 1.0 m above ground. *Oc. (Pro.) podographicus*.

BHZ 173. Cayo, same loc./date as BHZ 172. Grazing area; stump hole; containing about 1.0 liter of clear, fresh water; abundant plant debris; full sun. *Oc. (Pro.) bertrami*, *Oc. (Pro.) podographicus*.

BHZ 174. Cayo, same loc./date as BHZ 172. Bromeliad axil, 3.0 m above ground; clear, fresh water; partial shade. *Cx. (Mcx.) rejector*, *Wy. (Wyo.) celaenocephala*.

BHZ 176. Cayo, same loc./date as BHZ 175.

Forest; artificial container (1-liter plastic jar) with no lid, placed at ground level; heavy shade. *Cx. (And.) restrictor*, *Cx. (Cux.) mollis*, *Tx. (Lyn.) theobaldi*.

BHZ 177. Cayo, same loc./date as BHZ 175. Forest; adults collected biting/landing human between 1500 and 1530 h; heavy shade. *Oc. (Och.) serratus*, *Ps. (Jan.) ferox*.

BHZ 178. Cayo, same loc./date as BHZ 175. Forest; artificial container (1-liter plastic jar) with no lid, placed at ground level; heavy shade. *Cx. (And.) restrictor*.

BHZ 179. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, September 26, 1990. Forest; artificial container (500-ml plastic jar) with no lid, placed at ground level; 200 m from house; heavy shade. *Cx. (Cux.) interrogator*, *Li. durhamii*, *Wy. aporonomia*.

BHZ 180. Belize, same loc./date as BHZ 179. Forest; adults collected biting/landing on human between 1100 and 1200 h; 200 m from house. *Ps. (Jan.) albipes*, *Ps. (Jan.) ferox*, *Oc. (Och.) serratus*.

BHZ 181. Belize, same loc./date as BHZ 179. Forest; bromeliad axil 2.5 m above ground; 200 m from house; water temporary, yellowish. *Cx. (Mcx.) rejector*, *Tx. (Lyn.) haemorrhoidalis superbus*, *Wy. (Wyo.) celaenocephala*.

BHZ 182. Belize, same loc./date as BHZ 179 (same collection site as BHZ 68). Forest; small bromeliad axil with very little water, on dead tree; partial shade. *Cx. (Mcx.) rejector*, *Wy. (Wyo.) celaenocephala*.

BHZ 183. Belize, same loc./date as BHZ 179. Forest; ground pool; 200 m from house; black water; sparse emergent grasses; heavy shade. *Cx. (Cux.) chidesteri*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) educator*, *Ur. (Ura.) lowii*.

BHZ 184. Belize, same loc./date as BHZ 179. Pasture; ground pool; 500 m from house; abundant floating and emergent vegetation and green algae; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*, *Ur. (Ura.) socialis*.

BHZ 185. Belize, same loc./date as BHZ 179. Grazing area; road rut (approximately 6.0 cm deep); 100 m from house; water fresh, clear; no vegetation; full sun. *Ps. (Gra.) confinnis* Group.

BHZ 186. Belize, same loc./date as BHZ 179. Pasture; cement animal trough; 150 m from house; water clear, fresh, shallow (<3.0 cm deep); abundant leaves and twigs; partial shade. *Cx. (Cux.) coronator*, *Cx. (Cux.) nigripalpus*, *Cx. (Cux.) quinquefasciatus*, *Cx. (Mel.) bastagarius*.

BHZ 187. Belize, Burrell Boom, 0.25 mi W of Sebastian Bridge, 17°35'N, 88°29'W, 10 m, September 28, 1990. Road rut; emergent grasses; partial shade. *Cx. (Mel.) bastagarius*.

BHZ 188. Belize, Burrell Boom, 2 km E Sebastian Bridge, 17°35'N, 88°25'W, 10 m, September 28, 1990. Ground pool (3.0 × 1.0 m); 100 m from house; water fresh, clear; emergent grasses; partial shade. *Cx. (Mel.) rooti*.

BHZ 189. Belize, Burrell Boom, along Belize River, 17°34'N, 88°24'W, 10 m, September 28, 1990. Cleared area; seepage next to road; abundant leaves and sticks and scarce emergent grasses; partial shade. *Cx. (Cux.) coronator*, *Cx. (Cux.) interrogator*, *Cx. (Cux.) nigripalpus*.

BHZ 190. Belize, Cedar Bank, 17°23'N, 88°26'W, October 1, 1990. Primary forest; flood pool next to road along river; water clear, fresh; no vegetation; partial shade. *Cx. (Cux.) coronator*, *Cx. (Cux.) interrogator*.

BHZ 191. Belize, same loc./date as BHZ 190. Road rut (4.0 × 2.0 × 0.2 m); filamentous algae and scarce emergent grasses; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator*.

BHZ 193. Belize, same loc./date as BHZ 190. Partially cleared bamboo grove next to river; bamboo stump; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 194. Belize, same loc./date as BHZ 190. Partially cleared bamboo grove next to river; bamboo stump; heavy shade. *Corethrella* sp., *Cx. (Cux.) mollis*.

BHZ 195. Belize, Gracy Rock, 17°23'N, 88°26'W, October 1, 1990. Forest of mixed palm and deciduous trees; ground pool; emergent vegetation; heavy shade. *Cx. (Mel.) iolambdis*.

BHZ 196. Belize, base of Rockville Quarry, 17°23'N, 88°26'W, October 1, 1990. Roadside ground pool (2.0 × 2.0 m); water temporary, clear fresh; no vegetation; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator*.

BHZ 197. Belize, same loc./date as BHZ 190. Cleared area; single adult collected biting/landing on human inside car at 1200 h. *Ps. (Pso.) ciliata*.

BHZ 198. Belize, Salt Creek Road, 3.0 km E of Northern Highway, 17°39'N, 88°20'W, October 2, 1990. Forest of mixed palm and deciduous trees; adults collected biting/landing on human approximately 100 m from road; heavy shade. *Cq. (Rhy.) venezuelensis*, *Oc. (Och.) serratus*, *Ps. (Jan.) ferox*.

BHZ 199. Belize, same loc./date as BHZ 198. Pit (approximately 30 m from BHZ 198); water brownish; no vegetation. *An. (Nys.) argyritarsis*, *Oc. (Och.) angustivittatus*, *Ps. (Jan.) ferox*.

BHZ 200. Belize, Salt Creek Road, 8.0 km E Northern Highway, 17°39'N, 88°17'W, October 2, 1990. Flood pool; 50 m from house; partial shade. *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) pilosus*, *Oc. (Och.) serratus*.

BHZ 201. Belize, Salt Creek, 17°39'N, 88°18'W, October 2, 1990. Cleared area; bromeliad axil approximately 3.0 m from road and 1.5 m above ground, along fence row; partial shade. *Tx. (Lyn.) haemorrhoidalis superbus*, *Wy. (Wyo.) celaenocephala*.

BHZ 202. Cayo, Hummingbird Highway, 1.5 km E of Sibun Camp, 17°05'N, 88°39'W, 80 m, October 3, 1990. Domestic area; seepage pool in village; water temporary; abundant vegetation of all types; full sun. *An. (Ano.) pseudopunctipennis*, *An.*

(*Nys.*) *albimanus*, *An.* (*Nys.*) *argyritarsis*, *Cx.* (*Mel.*) *pilosus*.

BHZ 203. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, October 3, 1990. Pasture; flood pool; water temporary; scarce emergent grasses; full sun. *Cx.* (*Mel.*) *pilosus*, *Cx.* (*Mel.*) *educator*, *Ps.* (*Gra.*) *confinnis* Group, *Ps.* (*Pso.*) *ciliata*.

BHZ 204. Cayo, same loc./date as BHZ 203. Pasture; flood pool; 50 m from BHZ 203; water temporary; sparse emergent grasses; full sun. *Cx.* (*Mel.*) *educator*, *Cx.* (*Mel.*) *pilosus*, *Ps.* (*Pso.*) *ciliata*.

BHZ 205. Belize, Western Highway at Mount Hope, 17°13'N, 88°56'W, October 5, 1990. Partially cleared area; bromeliad axil (2.5 m above ground) along freshly cut roadway into forest; water fresh, clear. *Cx.* (*Mcx.*) *rejector*.

BHZ 206. Belize, Burrell Boom Road, 6.0 km N of Hattieville, 17°31'N, 88°25'W, October 5, 1990. Scrub savanna; ground pool (1.0 × 3.0 m); water fresh, coffee-colored; abundant green algae; partial shade. *Cx.* (*Mel.*) *pilosus*, *Oc.* (*Och.*) *serratus*, *Ps.* (*Gra.*) *confinnis* Group.

BHZ 207. Belize, same loc./date as BHZ 206. Ground pool (0.75 × 5 m); water temporary, fresh, clear; scarce emergent grasses and abundant blue-green algae; full sun. *An.* (*Ano.*) *crucians*, *Cx.* (*Mel.*) *pilosus*, *Cx.* (*Mel.*) *rooti*, *Oc.* (*Och.*) *serratus*, *Ps.* (*Pso.*) *ciliata*, *Ps.* (*Gra.*) *confinnis* Group.

BHZ 208. Cayo, Hummingbird Highway, 3 km N of Good Living Camp, 17°09'N, 88°43'W, October 7, 1990. Forest; artificial container (500-ml plastic bottle) with closed cap and 2.0-cm hole in side, hung 7.0 m above ground; placed out September 7, 1990. *Cx.* (*Mel.*) *pilosus*, *Tx.* (*Lyn.*) *theobaldi*.

BHZ 209. Cayo, same loc./date as BHZ 208. Cultivated area; tire rut in orange grove; water clear, fresh; emergent grasses; full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *educator*, *Cx.* (*Mel.*) *pilosus*, *Cx.* (*Mel.*) *theobaldi*, *Ur.* (*Ura.*) *lowii*.

BHZ 210. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, October 7, 1990. Forest of mixed deciduous and palm trees, near river; artificial container (500-ml plastic bottle) with no lid, at ground level. *Li.* *durhamii*.

BHZ 211. Cayo, same loc./date as BHZ 210. Cultivated/cleared area; tire rut (2.0 × 6.0 m) along edge of sugar cane field; 100 m from house; no vegetation; full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *educator*, *Cx.* (*Mel.*) *limacifer*.

BHZ 212. Cayo, Chiquibul Road, 17°07'N, 88°58'W, 200 m, October 9, 1990. Bromeliad axil, near ground level; partial shade. *Wy.* (*Wyo.*) *abe-bela*.

BHZ 213. Cayo, same loc. as BHZ 212. Forest; artificial container (500-ml plastic bottle) with 1.27 cm hole in side with cap, approximately 2 m from ground, placed out 1 month earlier; heavy shade. *Tx.* (*Lyn.*) *theobaldi*.

BHZ 214. Cayo, same loc./date as BHZ 212. Forest; artificial container (plastic bottle) with 1.27 cm hole in side with closed top, placed at ground level 1 month earlier; heavy shade. *Cx.* (*Mcx.*) *rejector*.

BHZ 215. Cayo, same loc./date as BHZ 212. Forest area; artificial container (1-liter plastic bottle) with open top, ground level; heavy shade. *Cx.* (*And.*) *restrictor*, *Tx.* (*Lyn.*) *theobaldi*, *Wy.* (*Wyo.*) *celaenocephala*.

BHZ 216. Cayo, same loc./date as BHZ 212. Forest; artificial container (1-liter plastic bottle) with open top, placed at ground level 1 month earlier. *Cx.* (*And.*) *restrictor*, *Oc.* (*How.*) *cozumelensis*, *Wy.* *apronoma*.

BHZ 217. Cayo, same loc./date as BHZ 212. Mixed evergreen and deciduous forest; >500 m from house; adults collected biting/landing on human; heavy shade. *Oc.* (*Och.*) *serratus*, *Ps.* (*Jan.*) *ferox*.

BHZ 218. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, October 10, 1990. Forest; artificial container (500-ml plastic bottle) with open top, placed at ground level 1 month earlier; heavy shade. *Tx.* (*Lyn.*) *theobaldi*.

BHZ 219. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, October 10, 1990. Forest; artificial container (1-liter plastic bottle) with open top; placed at base of tree approximately 1 month earlier; heavy shade. *Tx.* (*Lyn.*) *theobaldi*.

BHZ 220. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, October 10, 1990. Cleared area; bromeliad axil at ground level, next to cultivated field; tea-colored water; partial shade. *Tx.* (*Lyn.*) *haemorrhoidalis superbus*, *Wy.* (*Wyo.*) *celaenocephala*.

BHZ 221. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, October 10, 1990. Cleared area; bromeliad axil at ground level, next to cultivated field (adjacent to BHZ 220). *Cx.* (*Mcx.*) *rejector*, *Wy.* (*Wyo.*) *celaenocephala*.

BHZ 222. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, October 10, 1990. Forest; ground pool; 200 m from house; black water; sparse emergent grasses; heavy shade. *Cx.* (*Cux.*) *interrogator*, *Cx.* (*Mel.*) *iolambdis*.

BHZ 223. Stann Creek, Hummingbird Highway, mile 35, 17°02'N, 88°31'W, April 8, 1991. Partially cleared area along river; log hole (10 cm above surface of water, approximately 2.0 m from shore); 50 m from house; partial shade. *Cx.* (*Cux.*) *coronator*, *Cx.* (*Cux.*) *declarator*, *Cx.* (*Cux.*) *mollis*.

BHZ 224. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, April 8, 1991. Pasture; ground pool; abundant green filamentous algae and emergent vegetation; full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *erraticus*.

BHZ 225. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, April 8, 1991. Pasture area; pond margin; water permanent, pH 5.6, C 45; filamentous algae and scarce emergent vegetation

(*Ludwigia octovalvis*). *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 226. Belize, Western Highway, mile 8, 17°29'N, 88°19'W, April 9, 1991. Marsh; floating and emergent vegetation and mats of blue-green algae; full sun. *Cx. (Mel.) erraticus*.

BHZ 227. Belize, same loc./date as BHZ 226. Marshy depression; water pH 6.8, C 600; scarce emergent (*Eleocharis* sp.) vegetation and abundant blue-green algal mats; full sun. *An. (Ano.) crucians*, *Cx. (Mel.) erraticus*.

BHZ 228. Belize, Western Highway, mile 9, 17°29'N, 88°21'W, April 9, 1991. Lagoon; water permanent, pH 8.2, C 2,000; abundant blue-green algae and scarce emergent vegetation (*Eleocharis interstincta*); full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 229. Belize, same loc./date as BHZ 228. Marshy depression (4.0 × 2.0 m); clear water; floating and emergent vegetation and abundant green algae; full sun. *Cx. (Mel.) erraticus*.

BHZ 230. Belize, Burrell Boom Road, 2.0 km from Western Highway, 17°28'N, 88°24'W, April 9, 1991. Marshy depression (100 × 50 m); water permanent, fresh, clear; abundant emergent grasses (*Eleocharis interstincta*) and numerous frogs; full sun. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Cux.) coronator*, *Cx. (Mel.) dunni*, *Cx. (Mel.) erraticus*, *Ur. (Ura.) lowii*.

BHZ 231. Belize, same loc./date as BHZ 230. Marshy depression (10 × 20 m); water permanent, clear, fresh, pH 9.2, C 230; emergent (*Eleocharis interstincta*), floating (*Limnanthemum humboldti*), and submersed (*Cabomba* sp.) vegetation; full sun. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 232. Belize, Burrell Boom Road, 3.0 mi from Western Highway, 17°29'N, 88°24'W. Ground pool (3.0 × 5.0 m); emergent grasses, full sun. *An. (Ano.) crucians*, *An. (Nys.) albimanus*.

BHZ 233. Belize, same loc./date as BHZ 232. Edge of swamp; water permanent; emergent (*Eleocharis interstincta*) and floating (*Nymphaea ampta*) vegetation. *An. (Ano.) crucians*, *Cx. (Mel.) dunni*, *Cx. (Mel.) erraticus*.

BHZ 234. Belize, same loc./date as BHZ 232. Marshy depression (70 × 50 m); water permanent, pH 8.6, C 360; emergent (*Eleocharis interstincta*) and submersed (*Utricularia* sp.) vegetation and blue-green algal mats. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Cux.) coronator*, *Cx. (Mel.) educator*, *Cx. (Mel.) erraticus*.

BHZ 236. Cayo, Mountain Pine Ridge, Rio On, Navel Road, 16°59'N, 88°59'W, 480 m, April 10, 1991. Forest; rock pool; abundant sticks and leaves; full sun. *Cx. (Cux.) coronator*, *Oc. (Och.) fluviatilis*.

BHZ 237. Cayo, same loc./date as BHZ 236. Forest; stream pool (3.0–5.0 cm); pH 7.6, C 54; filamentous algae. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) argyritarsis*.

BHZ 238. Cayo, same loc./date as BHZ 236. Forest; rock pool (10 × 20 cm); approximately 1.5 m from BHZ 236; sandy bottom; leaves and sticks; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 239. Cayo, same loc./date as BHZ 236. Forest; rock pool (1.0 × 0.5 m); water fresh, clear; partial shade. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 240. Cayo, same loc./date as BHZ 236. Forest; rock pool (20 × 30 × 6 cm); water fresh, clear, pH 9.5; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 241. Cayo, same loc./date as BHZ 236. Forest; rock pool (10 × 30 × 6 cm); water fresh, clear, pH 8.0; full sun. *Cx. (Cux.) coronator*.

BHZ 242. Cayo, same loc./date as BHZ 236. Forest; rock pool (1.0 × 3.0 m); water slightly tea-colored; no vegetation; full sun. *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 243. Cayo, same loc./date as BHZ 236. Forest; rock pool; water pH 9.0, C 60; filamentous algae; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Mel.) erraticus*, *Cx. (Mel.) mutator*.

BHZ 244. Cayo, same loc./date as BHZ 236. Forest; stream pool (approximately 200 m from BHZ 243); water temporary, stagnant, pH 8.9, C 36; scarce filamentous algae; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 245. Cayo, same loc./date as BHZ 236. Forest; stream pool (approximately 300 m from BHZ 243); water pH 8.3, C 36; filamentous algae; full sun. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) argyritarsis*.

BHZ 246. Cayo, same loc./date as BHZ 236. Forest; rock pool (approximately 300 m downstream from BHZ 236); water pH 8.4, C 30; filamentous algae; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 247. Cayo, same loc./date as BHZ 236. Forest; stream pool; water fresh, clear, pH 7.9, C 60; scarce filamentous algae; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) erraticus*, *Cx. (Mel.) mutator*, *Oc. (Och.) fluviatilis*.

BHZ 248. Cayo, Pinol Creek at Chiquibul Road, 17°01'N, 88°58'W, 400 m, April 9, 1991. Forest; rock pool (1.0 × 0.25 m); water fresh, clear; no vegetation; full sun. *Cx. (Cux.) coronator*.

BHZ 250. Cayo, same loc./date as BHZ 248. Forest; stream pool (approximately 100 m upstream from bridge); water fresh, clear, pH 7.8, C 30; no vegetation; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*, *Cx. (Mel.) mutator*.

BHZ 251. Cayo, same loc./date as BHZ 248. Forest; stream pool (approximately 100 m upstream from bridge); water pH 7.8, C 30; scarce filamentous algae; full sun. *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*.

BHZ 252. Stann Creek, Dangriga, Commerce

Bight Port Authority, 16°58'N, 88°15'W, sea level, April 11, 1991. Salt marsh; crab hole (6.0 cm diameter); water turbid, C 30,000. *Cx. (Dei.) cancer*.

BHZ 253. Stann Creek, same loc./date as BHZ 252. Salt marsh; crab hole (9.0 cm diameter and 30–40 cm deep); water turbid; heavy shade. *Cx. (Dei.) cancer*.

BHZ 254. Stann Creek, same loc./date as BHZ 252. Salt marsh; crab hole (6.0 cm diameter); water turbid; heavy shade. *Cx. (Dei.) cancer*.

BHZ 255. Stann Creek, same loc./date as BHZ 252. Salt marsh; crab hole (6.0 cm diameter); water turbid; heavy shade. *Cx. (Dei.) cancer*.

BHZ 256. Stann Creek, Southern Highway at Mullins River Bridge, 17°05'N, 88°20'W, April 11, 1991. Bamboo grove next to river; bamboo internode (8.0 cm diameter); water clear; heavy shade. *Sa. (Pey.) undosus*, *Wy. (Wyo.) arthrostigma*.

BHZ 257. Stann Creek, same loc./date as BHZ 256. Bamboo grove next to river; bamboo internode; heavy shade. *Sh. moralesi*.

BHZ 258. Stann Creek, same loc./date as BHZ 256. Bamboo grove next to river; bamboo internode; water clear; heavy shade. *Sh. moralesi*.

BHZ 259. Stann Creek, same loc./date as BHZ 256. Bamboo grove next to river; ground pool; water brownish, pH 7.1, C 180; numerous bamboo leaves on surface. *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) conspirator*.

BHZ 260. Stann Creek, same loc./date as BHZ 256. Cultivated area; stream pool at edge of orchard; water pH 7.3, C 260; abundant emergent vegetation; heavy shade. *Cx. (Mel.) erraticus*, *Ur. (Ura.) lowii*.

BHZ 261. Stann Creek, Southern Highway at Mangrove Creek Bridge, 17°08'N, 88°20'W, April 11, 1991. Cultivated area; stream pool at edge of orchard; water permanent, pH 7.3, C 260; abundant floating vegetation (*Nymphaea ampta*); partial shade. *Cx. (Mel.) erraticus*.

BHZ 262. Stann Creek, same loc./date as BHZ 261. Partially cleared bamboo grove; stream pool at edge of bamboo grove; water pH 6.9, C 52; abundant floating bamboo leaves; partial shade. *An. (Ano.) crucians*, *Cx. (Mel.) educator*, *Cx. (Mel.) theobaldi*.

BHZ 263. Stann Creek, same loc./date as BHZ 256. Partially cleared bamboo grove; adults collected biting/landing on human between 1400 and 1430 h. *Oc. (Och.) taeniorhynchus*.

BHZ 264. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, April 12, 1991. Forest; artificial container (plastic bottle) with cap and 2.0-cm hole in side; hung 2.0 m above ground in heavy shade. *Cx. (Mel.) erraticus*, *Wy. aporonoma*.

BHZ 265. Belize, same loc./date as BHZ 264. Pasture; pond (100 × 150 m); water permanent; abundant lily pads and emergent grasses; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 266. Belize, same loc./date as BHZ 264. Pasture; pond; water pH 7.2, C 90; floating (*Nym-*

phaea ampta) and submersed (*Utricularia* sp.) vegetation and filamentous algae; full sun. *Cx. (Mel.) erraticus*.

BHZ 267. Belize, same loc./date as BHZ 264. Pasture; pond; water pH 7.5, C 90; emergent (*Eleocharis interstincta*) and floating (*Limnanthemum humboldti*) vegetation; full sun. *Cx. (Mel.) erraticus*.

BHZ 268. Belize, same loc./date as BHZ 264. Pasture; pond; water pH 7.2, C 90; emergent vegetation (*Typha domingensis*); full sun. *Cx. (Mel.) erraticus*.

BHZ 269. Belize, same loc./date as BHZ 264. Pasture; pond; water pH 7.6, C 130; floating (*Limnanthemum humboldti*) and emergent (*Eleocharis interstincta*) vegetation; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 270. Belize, same loc./date as BHZ 264. Pasture; pond; water pH 6.2, C 130; floating (*Limnanthemum humboldti*), emergent (*Eleocharis interstincta*, *Rhynchospora* sp.), and submersed (*Utricularia* sp.) vegetation; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*, *Ur. (Ura.) pulcherrima*.

BHZ 271. Belize, same loc./date as BHZ 264. Pasture; pond; water pH 6.8, C 84; filamentous algae and emergent vegetation (*Ludwigia octovalvis*); full sun. *An. (Ano.) crucians*, *An. (Ano.) pseudopunctipennis*, *Cx. (Mel.) educator*, *Cx. (Mel.) erraticus*.

BHZ 272. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, April 13, 1991. Drying stream pool (3.0 cm deep); abundant filamentous algae on rocky bottom; full sun. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*, *Cx. (Mel.) theobaldi*.

BHZ 273. Cayo, same loc./date as BHZ 272. Pond in field; abundant algae and emergent grasses; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) bastagarius*, *Cx. (Mel.) erraticus*.

BHZ 274. Cayo, Hummingbird Highway at Sibun Camp, 17°06'N, 88°39'W, 60 m, April 13, 1991. Cultivated area; stream pool at edge of orchard; water fresh, clear moderate movement; filamentous algae. *An. (Ano.) pseudopunctipennis*.

BHZ 275. Cayo, Hummingbird Highway at Silver Creek, 17°05'N, 88°39'W, 80 m, April 13, 1991. Cultivated area; stream pool at edge of orchard; floating leaves and abundant filamentous algae; partial shade. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) argyritarsis*, *Cx. (Mel.) theobaldi*.

BHZ 277. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, April 13, 1991. Stream pool; water pH 9.2, C 160, no movement; filamentous algae; full sun. *An. (Ano.) pseudopunctipennis*, *Cx. (Mel.) theobaldi*.

BHZ 278. Cayo, same loc./date as BHZ 277. Pasture; pond; water permanent, pH 5.9, C 105; emergent vegetation (*Eleocharis interstincta*); full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 279. Cayo, same loc./date as BHZ 277. Pasture; pond; water pH 7.8, C 28; planktonic al-

gae; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) basitragarius*.

BHZ 280. Cayo, same loc./date as BHZ 274. River pool at edge of citrus grove; moderate flow, pH 8.5, C 100; abundant filamentous algae; full sun. *An. (Ano.) pseudopunctipennis*.

BHZ 281. Cayo, same loc./date as BHZ 274. River pool at edge of citrus grove and secondary forest; pH 8.8, C 90; abundant filamentous algae; full sun. *An. (Ano.) pseudopunctipennis*.

BHZ 282. Cayo, same loc./date as BHZ 274. River pool at edge of citrus grove and secondary forest; water pH 8.6, C 84; abundant filamentous algae; partial shade. *An. (Ano.) pseudopunctipennis*.

BHZ 283. Cayo, same loc./date as BHZ 275. River pool at edge of citrus grove; water pH 6.9, C 70; filamentous algae; partial shade. *An. (Ano.) pseudopunctipennis*.

BHZ 284. Corozal, Four Mile Lagoon, 18°28'N, 88°24'W, 5 m, April 15, 1991. Seepage; temporary. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) argyritarsis*, *Cx. (Cux.) coronator*.

BHZ 285. Corozal, same loc./date as BHZ 284. Cleared area; roadside ditch; emergent vegetation (*Fimbristylis spadicea*); full sun. *Cx. (Mel.) pilosus*.

BHZ 286. Corozal, same loc./date as BHZ 284. Forest; ditch; water pH 7.6, C 3400; emergent vegetation (*Eleocharis cellulosa*, *Fuirena umbellata*, *Hymenocallis* sp.); full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) pilosus*.

BHZ 287. Corozal, Rio Hondo, 18°29'N, 88°28'W, 5 m, April 15, 1991. Secondary forest; ground pool; heavy shade. *An. (Ano.) punctimacula*, *Cx. (Cux.) nigripalpus*, *Oc. (Och.) angustivittatus*, *Oc. (Och.) scapularis*.

BHZ 288. Corozal, same loc./date as BHZ 287. Secondary forest; ground pool; heavy shade. *Cx. (Cux.) nigripalpus*.

BHZ 289. Corozal, Chan Chen, 18°26'N, 88°26'W, 5 m, April 15, 1991. Marsh; water permanent, pH 7.8, C 2,600; abundant blue-green algal mats and emergent vegetation (*Eleocharis cellulosa*); full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 290. Corozal, same loc./date as BHZ 289. Marsh; water permanent, pH 7.8, C 2700; blue-green algal mats; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 291. Orange Walk, San Antonio, 18°11'N, 88°39'W, 7 m, April 15, 1991. Canal (3.0 × 200 m wide); water permanent, pH 7.6, C 1,700; floating (*Nymphaea ampta*) and submersed (*Chara* sp.) vegetation; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 292. Orange Walk, same loc./date as BHZ 291. Marsh; water permanent, pH 7.6, C 1,700; emergent vegetation (*Cladium jamaicense*) and blue-green algal mats; heavy shade. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 293. Orange Walk, same loc./date as BHZ 291. Scrub forest; lagoon/lake (60 × 30 m);

water semipermanent, pH 7.3, C 620; blue-green algal mats and abundant emergent vegetation (*Eleocharis cellulosa*); full sun. *An. (Ano.) crucians*.

BHZ 294. Orange Walk, same loc./date as BHZ 291. Scrub forest; lagoon/lake (60 × 30 m); water permanent, pH 7.3, C 620; floating vegetation (*Nymphaea ampta*) and blue-green algae; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*, *Ur. (Ura.) lowii*.

BHZ 295. Orange Walk, same loc./date as BHZ 291. Scrub forest; lagoon/lake; water permanent, pH 8.5, C 620; floating vegetation (*Nymphaea ampta*); full sun. *Cx. (Mel.) educator*.

BHZ 296. Orange Walk, same loc./date as BHZ 291. Scrub forest; lagoon; water permanent, pH 8.7, C 620; submersed vegetation (*Chara* sp.) and blue-green algal mats; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 297. Cayo, Entrance to Aquacate Park, 17°20'N, 89°04'W, 110 m, April 16, 1991. Partially cleared area; stream margin; moderate water flow; abundant filamentous algae; partial shade. *An. (Nys.) albimanus*.

BHZ 298. Cayo, Chiquibul Road, 17°07'N, 88°58'W, 200 m, April 16, 1991. Forest; artificial container (1-liter plastic bottle) with open lid, set at ground level in heavy shade. *Cx. (And.) restrictor*, *Oc. (How.) cozumelensis*, *Wy. aporonoma*.

BHZ 299. Cayo, same loc./date as BHZ 298. Forest; artificial container (500-ml plastic bottle) without lid; set 1.5 m above ground in heavy shade. *Tx. (Lyn.) theobaldi*.

BHZ 300. Cayo, same loc./date as BHZ 298. Forest; artificial container (500-ml plastic bottle) without lid; set at 1.5 m above ground in heavy shade. *Sa. (Sab.) cyaneus*.

BHZ 302. Cayo, Gracyville Pond, 17°07'N, 88°58'W, 175 m, April 16, 1991. Pasture; pond (40 × 40 m); water permanent, pH 7.7, C 140; emergent vegetation (*Eleocharis intersticta*) and blue-green algal mats; full sun. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Mel.) dunni*, *Cx. (Mel.) erraticus*.

BHZ 303. Cayo, same loc./date as BHZ 302. Pasture; same pond as BHZ 302; water permanent, pH 10.4; submersed vegetation (*Naias guadalupensis*, *Chara* sp.). *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 304. Cayo, Spanish Lookout, 17°12'N, 89°00'W, 100 m, April 16, 1991. Marsh (200 × 60 m); water permanent; blue-green algal mats and emergent vegetation (*Eleocharis intersticta*). *Cx. (Mel.) erraticus*.

BHZ 305. Cayo, same loc./date as BHZ 297. Secondary forest; stream margin; water pH 8.1, C 400; abundant filamentous algae. *An. (Ano.) pseudopunctipennis*, *Cx. (Mel.) theobaldi*, *Ur. (Ura.) geometrica*.

BHZ 306. Stann Creek, Hummingbird Highway at north branch of North Stann Creek, 17°00'N, 88°20'W, 120 m, April 17, 1991. Cultivated area;

stream margin in orange grove; abundant filamentous green algae. *An. (Ano.) pseudopunctipennis*, *Ur. (Ura.) geometrica*.

BHZ 307. Stann Creek, Alta Vista, 17°00'N, 88°25'W, April 17, 1991. Edge of river; stream pool; water pH 8.9, C 64; abundant filamentous green algae. *An. (Ano.) pseudopunctipennis*.

BHZ 308. Stann Creek, Middlesex, 17°02'N, 88°31'W, 120 m, April 17, 1991. Edge of river; stream pool; water temporary, pH 8.1, C 70; abundant filamentous green algae. *An. (Ano.) pseudopunctipennis*.

BHZ 309. Stann Creek, Over the Top Camp, 17°06'N, 88°37'W, 120 m, April 17, 1991. River in partially cleared area (pool at edge of river); water temporary, pH 7.5, C 75; abundant filamentous green algae. *An. (Ano.) pseudopunctipennis*.

BHZ 310. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, April 16, 1991. River in partially cleared area (stream pool at base of bridge); water temporary; no vegetation; partial shade. *An. (Nys.) albimanus*.

BHZ 311. Belize, Crooked Tree, 17°45'N, 88°32'W, 20 m, April 18, 1991. Marsh/swamp (30 × 20 m); water pH 9.2, C 1,000; abundant blue-green algal mats, and scarce emergent *Eleocharis interstincta*. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 312. Belize, same loc./date as BHZ 311. Marsh/swamp (30 × 50 m); water permanent, pH 9.5, C 1,800; abundant blue-green algal mats. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 313. Belize, same loc./date as BHZ 311. Marsh/swamp (15 × 50 m); water permanent, pH 8.5, C 1,000; emergent *Eleocharis interstincta*; partial shade. *Cx. (Mel.) erraticus*.

BHZ 314. Belize, same loc./date as BHZ 312. Pond (15 × 20 m); water permanent, pH 8.5, C 1,000; emergent *Eleocharis interstincta* and blue-green algal mats. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*, *Ur. (Ura.) geometrica*.

BHZ 317. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, April 16, 1991. Partially cleared area at base of bridge, approximately 2.0 m from river; adults collected biting/landing on human between 1800 and 1920 h. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*, *An. (Nys.) darlingi*, *Cx. (Mel.) erraticus*, *Oc. (Och.) angustivittatus*.

BHZ 318. Belize, Northern Highway at Chica-go, 17°50'N, 88°19'W, 10 m, April 19, 1991. Pond (30 × 20 m); water permanent; abundant submersed *Chara* sp. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 319. Belize, Northern Highway near Burrell Boom Road, 17°35'N, 88°20'W, 10 m, April 19, 1991. Scrub savanna; marsh (40 × 20 m); water permanent, pH 7.3, C 200; abundant *Pistia stratiotes*, *Nymphaea ampta*, and blue-green algal mats. *Ad. (Ady.) squamipennis*, *Cx. (Mel.) panocossa*.

BHZ 320. Belize, same loc./date as BHZ 319.

Scrub savanna; marsh; water permanent, pH 7.6, C 200; abundant filamentous algae. *Cx. (Mel.) erraticus*.

BHZ 321. Belize, Northern Highway 2.0 km N of Haulover Bridge, 17°35'N, 88°15'W, April 19, 1991. Scrub savanna; marsh/swamp; water permanent, pH 8.0, C 180; emergent *Eleocharis interstincta* and periphytic algae. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 322. Belize, Rancho Dolores, 17°32'N, 88°37'W, 20 m, April 20, 1991. Pond (20 × 5 m); water permanent, pH 7.7, C 350; floating *Limnanthemum humboldti*. *Cx. (Mel.) erraticus*.

BHZ 323. Belize, Burrell Boom Road at Bermudian Landing, 17°33'N, 88°31'W, 20 m, April 20, 1991. Scrub savanna; marsh/swamp (20 × 30 m); water permanent, pH 8.4, C 180; emergent *Eleocharis interstincta* and abundant blue-green algae. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 324. Belize, same loc./date as BHZ 323. Scrub savanna; marsh/swamp; water pH 7.8, C 160; emergent *Eleocharis interstincta*. *An. (Ano.) crucians*.

BHZ 325. Belize, Burrell Boom Road, 2.0 km from Western Highway, 17°28'N, 88°24'W, April 20, 1991. Marsh/swamp (10 × 20 m); water permanent, clear, fresh; emergent (*Eleocharis interstincta*), floating (*Limnanthemum humboldti*), and submersed (*Cambomba aquatica*) vegetation; full sun. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 326. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, April 21, 1991. Partially cleared area; stream pool near pasture; water pH 7.21, C 222; abundant filamentous algae. *An. (Ano.) pseudopunctipennis*, *Ur. (Ura.) geometrica*.

BHZ 327. Cayo, Hummingbird Highway at Sibun Camp, 17°06'N, 88°39'W, 60 m, April 21, 1991. Cultivated area; stream margin near orange grove; water pH 7.77, C 100; abundant filamentous algae. *An. (Ano.) pseudopunctipennis*, *Cx. (Mel.) theobaldi*.

BHZ 328. Cayo, same loc./date as BHZ 327. Stream pool; water pH 6.65, C 92; floating leaves and abundant filamentous algae; partial shade. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*, *An. (Nys.) argyritarsis*, *Cx. (Mel.) theobaldi*, *Ur. (Ura.) socialis*.

BHZ 329. Belize, Cedar Bank, 17°23'N, 88°26'W, April 22, 1991. Cultivated area; ground pool near orange grove. *Cx. (Mel.) theobaldi*.

BHZ 330. Stann Creek, Southern Highway at Mullins River Bridge, 17°05'N, 88°20'W, April 22, 1991. Bamboo grove; bamboo stump internode; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 331. Stann Creek, same loc./date as BHZ 330. Bamboo grove; artificial container (500-ml plastic bottle) filled with water and bamboo leaves; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 332. Stann Creek, same loc./date as BHZ 330. Bamboo grove; bamboo stump; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 333. Stann Creek, same loc./date as BHZ 330. Bamboo grove; bamboo stump (8.0 cm wide and 1.0 m high); heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 334. Stann Creek, same loc./date as BHZ 330. Bamboo grove; bamboo stump (8.0 cm wide); heavy shade. *Cx. (And.) conservator*, *Sa. (Pey.) undosus*, *Sh. moralesi*, *Wy. aporonoma*, *Wy. (Wyo.) arthrostigma*.

BHZ 335. Cayo, Mountain Pine Ridge, Rio On, Navel Road, 16°59'N, 88°59'W, 480 m, April 23, 1991. Stream pool; water pH 8.1, C 45; abundant filamentous green algae. *An. (Ano.) pseudopunctipennis*.

BHZ 336. Cayo, same loc./date as BHZ 335. Stream pool (40 × 40 × 5 cm); water temporary, pH 4.9, C 35; abundant filamentous green algae; partial shade. *Ur. (Ura.) geometrica*, *An. (Nys.) argyritarsis*.

BHZ 337. Belize, Sand Hill, Thurston Ranch, 17°38'N, 88°23'W, April 24, 1991. Ground pool (10 × 10 m); water permanent, pH 5.1, C 68; submersed, floating, and emergent vegetation and abundant filamentous algae. *An. (Nys.) albimanus*.

BHZ 338. Cayo, same loc. as BHZ 206, April 26, 1991. Ground pool; water temporary, pH 6.70, C 178; abundant filamentous algae; heavy shade. *An. (Ano.) crucians*, *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 339. Belize, same loc. as BHZ 311, April 26, 1991. Ground pool (20 × 7 m); floating and emergent vegetation; heavy shade. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 340. Belize, same loc./date as BHZ 339. Pond/lake; water permanent, pH 8.0, C 1028; submersed, emergent, and floating vegetation. *An. (Nys.) albimanus*.

BHZ 341. Belize, same loc. as BHZ 11, April 9, 1991. Cleared area; human biting, partial shade, 200 m from house, 1100 h. *Oc. (Och.) taeniorhynchus*.

BHZ 342. Cayo, Hummingbird Highway at Sibun Camp, 17°06'N, 88°39'W, 60 m, April 21, 1991. Human biting, next to river, 1830–1900 h. *An. (Ano.) pseudopunctipennis*, *An. (Ano.) punctimacula*.

BHZ 343. Stann Creek, same loc. as BHZ 307, April 27, 1991. Stream margin in cultivated area; rock pool next to orange grove; water pH 6.9, C 68; filamentous algae. *Ur. (Ura.) geometrica*.

BHZ 344. Stann Creek, same loc. as BHZ 306, April 27, 1991. Stream pool (2.0 × 0.7 m); water pH 6.35, C 76; floating leaves and abundant filamentous algae. *An. (Ano.) pseudopunctipennis*, *Ur. (Ura.) geometrica*.

BHZ 345. Stann Creek, Southern Highway at Mullins River Bridge, 17°05'N, 88°20'W; May 3,

1991. Bamboo grove; bamboo internode; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 346. Stann Creek, same loc./date as BHZ 345. Bamboo grove; bamboo stump; heavy shade. *Sa. (Pey.) undosus*.

BHZ 347. Stann Creek, same loc./date as BHZ 345. Bamboo grove; artificial container (500-ml plastic bottle) placed on ground. *Sa. (Pey.) undosus*, *Wy. aporonoma*.

BHZ 348. Stann Creek, same loc./date as BHZ 345. Bamboo grove; bamboo stump; heavy shade. *Wy. (Wyo.) arthrostigma*.

BHZ 349. Failed collection.

BHZ 350. Stann Creek, same loc./date as BHZ 345. Bamboo grove; artificial container (500-ml plastic bottle) placed at ground level. *Wy. (Wyo.) arthrostigma*.

BHZ 351. Stann Creek, same loc./date as BHZ 345. Bamboo grove; artificial container (1-liter plastic bottle) placed at ground level. *Wy. aporonoma*.

BHZ 352. Cayo, Duck Run, 17°16'N, 89°03'W, September 26, 1991. Domestic area; pit 15 m from house; overhanging grasses; full sun. *An. (Nys.) albimanus*, *An. (Nys.) argyritarsis*.

BHZ 353. Cayo, same loc./date as BHZ 352. Cultivated area; roadside ditch (3.0 × 20 m) next to orange grove; abundant emergent grasses. *Ps. (Gra.) confinnis* Group.

BHZ 354. Orange Walk, Yalbac, 17°16'N, 89°03'W, September 26, 1991. Forest; stump hole (1.0 m high); 100 m from house. *Cx. (And.) restrictor*, *Oc. (Pro.) thurtoni*.

BHZ 355. Orange Walk, same loc./date as BHZ 354. Cleared area; bromeliad axil at base of dead tree; 20 m from house; partial shade. *Cx. (Mcx.) rejector*, *Wy. (Wyo.) abebela*, *Wy. (Wyo.) celaenocephala*.

BHZ 356. Orange Walk, same loc./date as BHZ 354. Cleared area; bromeliad axil next to BHZ 355. *Tx. (Lyn.) theobaldi*, *Wy. (Wyo.) abebela*, *Wy. (Wyo.) celaenocephala*, *Wy. (Wyo.) melanopus*.

BHZ 357. Orange Walk, same loc./date as BHZ 354. Cleared area; bromeliad axil next to BHZ 355. *Cx. (Mcx.) rejector*, *Wy. (Wyo.) celaenocephala*.

BHZ 359. Cayo, Western Highway at Guanacaste Park, 17°16'N, 88°48'W, September 27, 1991. Forest; bromeliad axil on fallen log; heavy shade. *Cx. (Mcx.) rejector*, *Wy. (Wyo.) abebela*, *Wy. (Wyo.) celaenocephala*, *Wy. (Wyo.) pertinans* Group (2 species).

BHZ 360. Cayo, same loc./date as BHZ 359. Forest; fallen leaf (with approximately 250 ml water) next to footpath. *Li. asulleptus*, *Li. durhamii*.

BHZ 361. Belize, Cedar Bank, 17°23'N, 88°26'W, September 27, 1991. Partially cleared bamboo grove next to river; bamboo stump (3.0 cm diameter); numerous leaves and sticks. *Hg. (Hag.) equinus*, *Sa. (Pey.) undosus*, *Wy. (Wyo.) arthrostigma*.

BHZ 362. Belize, same loc./date as BHZ 361. Partially cleared bamboo grove next to river; bamboo stump with very small hole (<3.0 cm diameter) at top. Wy. (Wyo.) *arthrostigma*.

BHZ 363. Belize, Cedar Bank, 17°23'N, 88°26'W, September 27, 1991. Partially cleared bamboo grove next to river; bamboo stump (6.0 cm diameter); very turbid water. Wy. (Wyo.) *arthrostigma*.

BHZ 365. Toledo, Big Fall, 16°16'N, 88°53'W, August 26, 1992. Cultivated area; seepage (1.0 × 2.0 m) next to rice paddy; water clear, temporary, stagnant; submersed vegetation (*Chara* sp.). *An. (Nys.) albimanus*, *Cx. (Mel.) educator*, *Cx. (Mel.) theobaldi*.

BHZ 366. Toledo, San Pedro Colombia, 16°14'N, 88°57'W, August 26, 1992. Secondary forest; bromeliad axil 1.5 m above ground; partial shade. *Cx. (Mcx.) retractor*.

BHZ 367. Toledo, same loc./date as BHZ 366. Secondary forest; small ground pool (0.2 × 0.2 m); water temporary, turbid; floating dead leaves; partial shade. *An. (Nys.) albimanus*, *Cx. (Mel.) educator*, *Cx. (Mel.) theobaldi*.

BHZ 368. Toledo, same loc./date as BHZ 365. Rice field; water temporary, pH 8.4, C 108, O 8.0; abundant vegetation (*Chara* sp.); full sun. *Cx. (Mel.) erraticus*.

BHZ 369. Toledo, same loc./date as BHZ 365. Rice field; water temporary, stagnant, pH 6.8, C 108, O 7.0; floating and submersed vegetation; full sun. *Cx. (Mel.) erraticus*, *Cx. (Mel.) theobaldi*.

BHZ 370. Toledo, Silver Creek, 16°17'N, 88°53'W, August 26, 1992. Secondary forest; roadside ditch; water clear, stagnant, pH 8.5, C 89, O 8.0; abundant vegetation (*Chara* sp.); full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) theobaldi*.

BHZ 371. Toledo, same loc./date as BHZ 370. Secondary forest; roadside ditch; water temporary, clear, pH 9.5, C 89, O 8.0; abundant submersed vegetation (*Chara* sp.) and blue-green algal mats; full sun. *An. (Nys.) albimanus*.

BHZ 372. Toledo, same loc./date as BHZ 366. Secondary forest; roadside ditch; water clear, temporary, pH 8.3, C 125, O 7.5; abundant blue-green algal mats; partial shade. *An. (Nys.) albimanus*.

BHZ 374. Toledo, same loc./date as BHZ 366. Secondary scrub; canal/marsh; water semipermanent, clear, pH 7.3, C 357, O 8.7; abundant emergent vegetation (*Eleocharis interstincta*); full sun. *An. (Nys.) albimanus*.

BHZ 375. Toledo, same loc./date as BHZ 366. Secondary forest; marshy depression; water temporary, pH 7.1, C 115, O 6.6; emergent vegetation (*Hymenachne amplexicaulis*); partial shade. *An. (Nys.) albimanus*, *Cx. (Mel.) educator*.

BHZ 376. Toledo, approximately 20 m from abandoned quarry, 3 km S of San Pedro, 16°14'N, 88°57'W, August 26, 1992. Partially cleared area at edge of secondary forest; small ground pool; water temporary, stagnant, pH 7.0, C 288, O 5.2; floating

dead leaves; heavy shade. *An. (Ano.) vestitipennis*, *An. (Nys.) albimanus*.

BHZ 377. Toledo, same loc./date as BHZ 366. Secondary forest; roadside ground pool; water pH 8.0, C 174, O 8.0; abundant submersed vegetation (*Chara* sp.); partial shade. *An. (Nys.) albimanus*.

BHZ 378. Toledo, Esso Landing, 16°09'N, 88°46'W, August 27, 1992. Swamp forest; larvae collected in approximately 15 cm of water in bottom of wooden boat; water turbid; abundant dead leaves and sticks; heavy shade. *Cx. (Cux.) mollis*.

BHZ 379. Toledo, same loc./date as BHZ 378. Cleared area at edge of secondary forest across from rice field; roadside ground pool; water stagnant; partial shade. *Cx. (Mel.) educator*.

BHZ 380. Toledo, approximately 100 m W of BHZ 378, August 27, 1992. Domestic area; large tire in trash dump; water turbid; full sun. *Cx. (Cux.) nigripalpus*.

BHZ 382. Toledo, same loc./date as BHZ 378. Edge of secondary forest; roadside ditch; water clear, pH 7.2, C 307, O 8.3; abundant submersed vegetation (*Naias guadalupensis*, *Chara* sp.); full sun. *Cx. (Mel.) erraticus*.

BHZ 383. Toledo, Jacinto Landing, next to Jacinto River, 16°09'N, 88°50'W, August 27, 1992. Edge of river; water clear, permanent, with slow to moderate flow, pH 7.9, C 277, O 8.4; abundant submersed vegetation (*Cabomba aquatica*); full sun. *Cx. (Mel.) educator*.

BHZ 384. Toledo, Santa Anna, 16°14'N, 88°57'W, August 27, 1992. Rice field; water clear, temporary, pH 7.4, C 256, O 7.3; abundant emergent vegetation and blue-green algal mats; full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) educator*.

BHZ 385. Toledo, same loc./date as BHZ 383. Domestic area; adults collected landing/biting on human outdoors (approximately 10 m from house in BHZ 386) from 1830 to 1915 h. *An. (Ano.) vestitipennis*, *An. (Nys.) albimanus*, *Ma. (Man.) titilans*, *Ps. (Gra.) confinnis* Group.

BHZ 386. Toledo, same loc./date as BHZ 383. Domestic area; adults collected landing/biting on human indoors from 1830 to 1915 h. *An. (Ano.) vestitipennis*, *An. (Nys.) albimanus*, *Cx. (Cux.) chidesterei*, *Ps. (Gra.) confinnis* Group.

BHZ 387. Toledo, Aguacate, 16°09'N, 89°05'W, August 28, 1992. Deciduous forest; large bromeliad 1.0 m above ground; 100 m from house; heavy shade. *Cx. (Mcx.) retractor*, Wy. (Wyo.) *arthrostigma*.

BHZ 388. Toledo, same loc./date as BHZ 387. Deciduous forest; pooled sample from several axils of large bromeliad 1.0 m above ground next to small stream; partial shade. *Corethrella (Corethrella) sp., Tx. (Lyn.) haemorrhoidalis superbus*, Wy. (Wyo.) *melanopus*.

BHZ 389. Toledo, same loc./date as BHZ 387. Cleared area at edge of secondary forest; pooled sample from several axils of large bromeliad; 50 m

from village; full sun. *Corethrella* (*Corethrella*) sp., *Wy.* (*Wyo.*) *celaecephala*, *Wy.* (*Wyo.*) *melanopus*.

BHZ 390. Toledo, same loc./date as BHZ 387. Cleared area at edge of secondary forest; small ground pool (15 × 3.0 cm) at edge of soccer field; 50 m from house; full sun. *Cx.* (*Cux.*) *ousqua*.

BHZ 391. Toledo, same loc./date as BHZ 387. Cleared/cultivated area; tire rut leading to rice field; water stagnant, milky white; no vegetation; full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Cux.*) *coronator*, *Cx.* (*Mel.*) *theobaldi*.

BHZ 392. Toledo, same loc./date as BHZ 387. Forest; log hole of fallen tree next to stream; 100 m from house; partial shade. *Cx.* (*Cux.*) *coronator*, *Cx.* (*Cux.*) *mollis*, *Cx.* (*Phc.*) *corniger*.

BHZ 393. Toledo, same loc./date as BHZ 387. Domestic area; ground pool next to roadside in village; water temporary, turbid, pH 7.5, C 252, O 10.2; no vegetation; partial shade. *An.* (*Nys.*) *albimanus*, *Cx.* (*Cux.*) *coronator*, *Cx.* (*Phc.*) *corniger*.

BHZ 394. Toledo, same loc./date as BHZ 387. Forest; roadside ground pool; water turbid, temporary, pH 8.3, C 252, O 12.9; no vegetation; partial shade. *Cx.* (*Cux.*) *coronator*.

BHZ 395. Toledo, Blue Creek, 16°10'N, 89°04'W, August 28, 1992. Cultivated area; ditch next to rice field; water clear, temporary, pH 8.5, C 180, O 12.7; abundant vegetation (*Chara* sp. and scarce *Oryza* sp.); full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *erraticus*.

BHZ 396. Toledo, same loc./date as BHZ 395. Cultivated area; marshy depression next to rice field; water temporary, pH 8.0, C 160, O 10.2; abundant submersed vegetation (*Naias guadalupensis*, *Chara* sp.); full sun. *An.* (*Nys.*) *albimanus*.

BHZ 397. Toledo, same loc./date as BHZ 395. Rice field; water clear, temporary, pH 7.5, C 180, O 3.0; partial shade. *Cx.* (*Mel.*) *iolambdis*.

BHZ 399. Toledo, same loc./date as BHZ 395. Secondary forest; roadside ditch, pH 7.6, C 332; submersed vegetation (*Naias guadalupensis*, *Chara* sp.) and mats of blue-green algae; full sun. *An.* (*Nys.*) *albimanus*.

BHZ 400. Toledo, same loc./date as BHZ 395. Partially cleared area; large ground pool; water clear, temporary, pH 7.4, C 332, O 7.3; abundant emergent vegetation (*Eleocharis interstincta*); full sun. *An.* (*Nys.*) *albimanus*.

BHZ 401. Toledo, Monkey River Town, 16°27'N, 88°30'W, August 29, 1992. Swamp; crab hole along edge; water turbid; full sun. *Cx.* (*Cux.*) *inflictus*, *Cx.* (*Dei.*) *cancer*.

BHZ 404. Toledo, same loc./date as BHZ 401. Swamp forest; marshy depression; water clear, permanent, pH 7.2, C 63, O 10.2; emergent vegetation (*Cyperus* sp.). *Cx.* (*Mel.*) *erraticus*.

BHZ 406. Toledo, same loc./date as BHZ 395. Cleared area; roadside ditch; abundant tall emergent grasses (1.0–1.5 m); heavy shade. *An.* (*Ano.*) *vestitipennis*.

BHZ 407. Toledo, Punta Gorda, Texaco Service

Station, 16°07'N, 88°48'W, sea level, August 30, 1992. Domestic area; tire next to service station; water clear, temporary; partial shade. *Ae.* (*Stg.*) *aegypti*, *Cx.* (*Cux.*) *nigripalpus*, *Cx.* (*Cux.*) *quinquefasciatus*.

BHZ 408. Toledo, Santa Anna at the Moho River, 16°06'N, 88°57'W, August 30, 1992. Cleared area; flood pool (2.0 × 10.0 m); water slightly turbid, temporary; dense emergent grasses; full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *bastagarius*, *Cx.* (*Mel.*) *theobaldi*.

BHZ 409. Toledo, Laguna, 16°10'N, 88°56'W, August 30, 1992. Forest; bromeliad axil. *Corethrella* (*Corethrella*) sp.

BHZ 411. Toledo, same loc./date as BHZ 408. Cultivated area at edge of secondary forest; flood pool in orchard; water temporary, pH 7.9, C 139, O 15.4; abundant submersed vegetation (*Chara* sp.); full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *pilosus*.

BHZ 412. Toledo, same loc./date as BHZ 408. Secondary forest; marshy depression (20 × 20 m); water clear, temporary, pH 8.1, C 139, O 14.5; emergent vegetation (*Eleocharis caribea*, *Fuirena* sp., *Ludwigia* sp.); full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *theobaldi*.

BHZ 413. Toledo, same loc./date as BHZ 408. Secondary forest; tire track in road (0.5 × 2.0 m); water temporary, turbid, pH 8.5, C 124, O 12.8; some blue-green algal mats; full sun. *Cx.* (*Cux.*) *coronator*, *Cx.* (*Mel.*) *educator*, *Ps.* (*Gra.*) *confinnis* Group.

BHZ 414. Toledo, same loc./date as BHZ 408. Forest; flood pool; water turbid, temporary, pH 7.34, C 289, O 3.2; abundant emergent vegetation (*Paspalum* sp.); full sun. *An.* (*Nys.*) *albimanus*.

BHZ 415. Toledo, same loc./date as BHZ 408. Secondary forest; roadside ditch; water permanent, turbid, pH 7.0, C 74, O 8.6; abundant emergent vegetation (*Cyperus* sp.); full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *educator*.

BHZ 416. Toledo, same loc./date as BHZ 408. Domestic area; marsh next to village; water semi-permanent, clear, pH 7.7, C 239, O 5.3; abundant emergent vegetation (*Fuirena* sp., *Ludwigia* sp.); full sun. *An.* (*Nys.*) *albimanus*, *Cx.* (*Mel.*) *erraticus*.

BHZ 417. Toledo, same loc./date as BHZ 409. Swamp forest; pit from fallen palm tree; water temporary, pH 5.5, C 23, O 1.5; no vegetation; heavy shade. *An.* (*Ano.*) *eiseni*, *Cx.* (*Mel.*) *elevator*.

BHZ 418. Toledo, same loc./date as BHZ 409. Seasonal swamp; 1.5 km from village; water clear, temporary, pH 6.0, C 58, O 1.4; abundant emergent vegetation (*Scleria* sp.); partial shade. *Cx.* (*Mel.*) *educator*.

BHZ 420. Toledo, Wilson's Landing, 16°10'N, 88°48'W, August 31, 1992. Forest; ground pool; water permanent, pH 6.9, C 208, O 1.2; scarce vegetation; heavy shade. *Cx.* (*Mel.*) *iolambdis*.

BHZ 421. Toledo, same loc./date as BHZ 420. Cultivated area; ditch in citrus grove; water clear,

temporary, pH 8.2, C 149, O 20.1; abundant submerged vegetation (*Chara* sp.); full sun. *An. (Nys.) albimanus*.

BHZ 422. Toledo, 1.0 km N of Big Fall Road, 16°14'N, 88°56'W, August 31, 1992. Cultivated area; marsh next to rice field; water permanent, clear, pH 7.5, C 81, O 8.5; floating vegetation (*Limnanthemum humboldti*); full sun. *An. (Nys.) albimanus*, *Cx. (Mel.) erraticus*.

BHZ 423. Toledo, same loc./date as BHZ 422. Rice field; water clear, temporary, pH 6.9, C 87.6, O 4.1; abundant emergent vegetation; full sun. *An. (Ano.) crucians*.

BHZ 424. Toledo, Santa Ellena, 16°13'N, 89°06'W, 200 m, September 1, 1992. Domestic area; roadside ditch in village; water turbid, temporary, 20 m from house; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator*.

BHZ 425. Toledo, San Antonio, 16°14'N, 89°02'W, 200 m, September 1, 1992. Secondary forest swamp area; tire rut at edge of swamp; water clear, temporary; emergent grasses and dead leaves. *Cx. (Cux.) declarator*, *Cx. (Cux.) interrogator*.

BHZ 426. Toledo, same loc./date as BHZ 425. Forested; seepage next to road; water clear, moderate flow; abundant overhanging grasses. *Cx. (Cux.) declarator*, *Cx. (Cux.) interrogator*, *Cx. (Cux.) nigripalpus*, *Cx. (Phc.) lactator*.

BHZ 427. Toledo, same loc./date as BHZ 425. Marshy depression; abundant emergent vegetation (*Wedelia* sp.); partial shade. *Cx. (Mel.) dumni*, *Ur. (Ura.) lowii*.

BHZ 428. Toledo, Santa Cruz, 16°13'N, 89°06'W, September 1, 1992. Domestic area; roadside ditch in village; water brown, temporary; overhanging grasses; partial shade. *Cx. (Cux.) coronator*, *Cx. (Cux.) mollis*, *Cx. (Mel.) iolambdis*, *Ps. (Gra.) confinnis* Group.

BHZ 429. Toledo, same loc./date as BHZ 424. Domestic area; ground pool (3.0 × 5.0 m) in village; water clear, temporary, pH 7.9, C 381, O 12.0; emergent vegetation and scarce filamentous algae; full sun. *Cx. (Cux.) coronator*, *Ps. (Gra.) confinnis* Group.

BHZ 430. Toledo, same loc./date as BHZ 425. Secondary forest; canal/ditch, water clear, semipermanent, pH 7.0, C 98, O 9.5; emergent vegetation (*Typha domingensis*); full sun. *Cx. (Mel.) bastagarius*, *Cx. (Mel.) commevynensis*, *Cx. (Mel.) dumni*.

BHZ 431. Toledo, same loc./date as BHZ 425. Secondary forest; canal/ditch; water clear, permanent, pH 6.9, C 98, O 4.5; abundant emergent vegetation (*Paspalum* sp.); full sun. *Cx. (Mel.) dumni*, *Cx. (Mel.) zeteki*.

BHZ 432. Toledo, same loc./date as BHZ 425. Secondary forest; marshy depression; water clear, permanent, pH 7.1, C 98, O 7.1; abundant emergent vegetation (*Typha domingensis*); full sun. *Cx. (Mel.) commevynensis*.

BHZ 434. Toledo, same loc./date as BHZ 424. Domestic area; ground pool in village; 10 m from

house; water turbid, pH 7.2, C 427, O 7.1; emergent vegetation (*Ludwigia octovalvis*) and filamentous algae; full sun. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator*.

BHZ 435. Toledo, same loc./date as BHZ 424. Domestic area; adults collected biting/landing on human inside house from 1830 to 1915 h; sky clear, three-quarter moon. *An. (Nys.) albimanus*, *Cx. (Cux.) quinquefasciatus*.

BHZ 436. Toledo, same loc./date as BHZ 424. Domestic area; adults collected biting/landing on human outside house approximately 10 m from BHZ 435 from 1830 to 1915 h; sky clear, three-quarter moon. *An. (Ano.) apicimacula*, *An. (Nys.) albimanus*, *Oc. (Och.) angustivittatus*.

BHZ 437. Toledo, Mafredi Creek, 16°13'N, 88°60'W, September 2, 1992. Secondary forest; flood pool formed from seepage draining into river; water clear, moderate flow; emergent grasses; partial shade. *Cx. (Mel.) limacifer*.

BHZ 438. Toledo, same loc./date as BHZ 437. Partially cleared area; tire rut (1.0 × 2.0 m); water turbid, temporary, mud bottom; overhanging grasses and filamentous algae; partial shade. *Cx. (Cux.) coronator*, *Cx. (Mel.) theobaldi*.

BHZ 439. Toledo, same loc./date as BHZ 437. Partially cleared area; ground pool next to road; water turbid, temporary, mud bottom. *Cx. (Mel.) educator*, *Ps. (Pso.) ciliata*, *Ps. (Gra.) confinnis* Group.

BHZ 440. Toledo, same loc./date as BHZ 437. Partially cleared area; tire rut; water tea-colored; floating green leaves. *Cx. (Cux.) coronator*.

BHZ 441. Toledo, Crique Jute, 16°15'N, 89°59'W, September 2, 1992. Forest; bamboo stump (1.5 m high); partial shade. *Wy. (Wyo.) arthrostroma*.

BHZ 442. Toledo, same loc./date as BHZ 441. Forest; bamboo stump next to BHZ 441; partial shade. *Wy. (Wyo.) arthrostroma*.

BHZ 443. Toledo, San Jose, 16°15'N, 89°05'W, 230 m, September 2, 1992. Domestic area; garbage pit (1.0 m deep) partially covered with logs; approximately 20 m from road and house; water light brown; heavy shade. *Cx. (Cux.) declarator*, *Cx. (Cux.) quinquefasciatus*, *Cx. (Lut.) allostigma*, *Cx. (Phc.) corniger*.

BHZ 444. Toledo, same loc./date as BHZ 437. Forest; marsh/swamp; water permanent, pH 6.7, C 83, O 1.2; abundant emergent vegetation; full sun. *Cx. (Mel.) bastagarius*.

BHZ 445. Toledo, same loc./date as BHZ 437. Forest; swamp; water permanent, pH 7.2, C 92, O 4.8; sparse floating and emergent vegetation. *Ur. (Ura.) socialis*.

BHZ 446. Toledo, same loc./date as BHZ 443. Domestic area; roadside ditch in village; water temporary, stagnant, pH 7.3, C 40, O 3.8; emergent vegetation (*Ludwigia octovalvis* and *Commelinaceae*); full sun. *An. (Ano.) albimanus*, *Cx. (Cux.) coronator*.

BHZ 447. Toledo, Deep River, 16°23'N, 88°43'W, September 3, 1992. Swamp forest; ground pool; water clear, temporary, pH 6.0, C 33, O 0.6; no vegetation; heavy shade. *Ps. (Gra.) confinnis* Group.

BHZ 448. Toledo, same loc./date as BHZ 447. Swampy area; ground pool; water clear, temporary, pH 6.4, C 16, O 7.2; abundant emergent vegetation; full sun. *Cx. (Mel.) pilosus*.

BHZ 449. Toledo, same loc./date as BHZ 447. Secondary forest; swamp; water clear, pH 6.4, C 576, O 2.3; no vegetation; heavy shade. *Cx. (Mel.) erraticus*.

BHZ 450. Toledo, Mafredi Creek, 16°13'N, 88°60'W, September 3, 1992. Domestic area; adults collected biting/landing on human inside house at edge of rice field from 1830 to 1915 h; sky clear. *An. (Ano.) apicimacula*, *An. (Ano.) vestitipennis*, *An. (Nys.) albimanus*, *Oc. (Och.) angustivittatus*.

BHZ 451. Toledo, same loc./date as BHZ 450. Domestic area; adults collected biting/landing on human outside of house (approximately 10 m from BHZ 450) from 1830 to 1915 h. *An. (Ano.) apicimacula*, *An. (Ano.) galbaldoni*, *An. (Ano.) vestitipennis*.

BHZ 452. Toledo, Punta Gorda, 16°06'N, 88°49'W, September 4, 1992. Secondary forest; roadside ditch; water temporary, moderate movement, pH 7.6, C 90.7; abundant submersed vegetation (*Chara* sp.); full sun. *Cx. (Mel.) theobaldi*.

BHZ 453. Toledo, same loc./date as BHZ 452. Secondary forest; roadside ditch; water clear, temporary, pH 7.4, C 67.8, O 6.4; emergent vegetation (*Fuirena* sp., *Rhynchospora* sp.); full sun. *An. (Nys.) albimanus*.

BHZ 454. Toledo, same loc./date as BHZ 452. Domestic area; ground pool in village; water clear, temporary, pH 7.2, C 153.1, O 7.2; emergent vegetation (*Cyperus odoratus*); full sun. *An. (Ano.) vestitipennis*.

BHZ 455. Toledo, same loc./date as BHZ 452. *Cx. (Mel.) educator*.

BHZ 456. Toledo, same loc./date as BHZ 452. Secondary forest; roadside ditch; water turbid, stagnant, pH 8.4, C 90.7, O 12.1; floating vegetation (*Nymphaea ampta*); full sun. *Cx. (Mel.) erraticus*, *Cx. (Mel.) theobaldi*.

BHZ 457. Toledo, Punta Gorda, Voice of America compound, 16°05'N, 88°49'W, September 4, 1992. Swampy area; waterlogged depression; water temporary, stagnant, pH 7.0, C 100, O 9.6; emergent grasses. *Cx. (Cux.) nigripalpus*.

BHZ 458. Toledo, Crique Trosa, 16°16'N, 88°59'W, September 4, 1992. Domestic area, approximately 20 m from primary forest; adults collected biting/landing on human inside house from 1830 to 1915 h. *An. (Ano.) apicimacula*, *An. (Ano.) neomaculipalpus*, *An. (Ano.) vestitipennis*, *Cq. (Rhy.) nigricans*, *Oc. (Och.) angustivittatus*, *Ps. (Gra.) confinnis* Group.

BHZ 459. Toledo, same loc./date as BHZ 458. Domestic area, approximately 20 m from primary

forest; adults collected biting/landing on human outside house from 1830 to 1915 h. *An. (Ano.) apicimacula*, *An. (Nys.) albimanus*, *Oc. (Och.) serratus*, *Ps. (Gra.) confinnis* Group.

BHZ 460. Toledo, same loc. as BHZ 452, September 2, 1992. Domestic area; adults collected biting/landing on human next to road, 10 m from house and 20 m from street lamp, from 1830 to 1915 h. *An. (Ano.) vestitipennis*, *An. (Nys.) albimanus*, *Cq. (Rhy.) nigricans*, *Cx. (Dei.) cancer*.

BHZ 461. Toledo, same loc./date as BHZ 460. Domestic area; adults collected biting/landing on human inside house, approximately 10 m from BHZ 460, from 1830 to 1915 h. *An. (Ano.) vestitipennis*, *Cx. (Dei.) cancer*, *Ma. (Man.) titillans*.

BHZ 462. Toledo, same loc./date as BHZ 458. Pasture/scrubland; ground pool; water temporary, pH 7.4, C 218, O 7.6; emergent vegetation (*Cyperus* sp.); full sun. *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) pilosus*.

BHZ 463. Toledo, Mafredi Creek, 16°13'N, 88°60'W. Cultivated area; roadside ditch next to rice field, 100 m from house; water turbid, temporary, pH 7.15, C 210, O 4.5; abundant filamentous algae; full sun. *An. (Nys.) albimanus*, *Ur. (Ura.) geometrica*.

BHZ 464. Toledo, San Pedro, 16°17'N, 88°58'W, September 5, 1992. Secondary deciduous forest; plant axil, ground level; 50 m from house; partial shade. *Wy. chalconecephala*.

BHZ 465. Toledo, Big Fall Road, approximately 2 km N of Southern Highway, 16°14'N, 88°54'W, September 5, 1992. Cultivated area; roadside canal/ditch at edge of rice field; water semipermanent, turbid, pH 5.9, C 15.5; floating vegetation (*Nymphaea ampta*) and filamentous algae; partial shade. *An. (Nys.) albimanus*, *Cx. (Mel.) educator*, *Cx. (Mel.) dunnii*.

BHZ 466. Toledo, approximately 20 m from abandoned quarry, 3.0 km S of San Pedro, 16°14'N, 88°57'W, September 5, 1992. Secondary deciduous forest; ground pool; water clear, temporary; emergent grasses around margins and abundant floating dead leaves; heavy shade. *An. (Ano.) apicimacula*, *An. (Nys.) albimanus*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) iolambdis*, *Cx. (Mel.) pilosus*, *Oc. (Och.) hastatus*, *Oc. (Och.) serratus*, *Ps. (Jan.) ferox*.

BHZ 467. Toledo, same loc./date as BHZ 466. Forest; bromeliad axil near BHZ 466; heavy shade. *Wy. (Wyo.) celaenocephala*.

BHZ 468. Toledo, Eldorado, approximately 2 km N of Southern Highway, 16°08'N, 88°50'W, September 6, 1992. Swamp forest; water permanent, pH 5.7, C 222; abundant submersed and emergent vegetation; heavy shade. *Cx. (Mel.) iolambdis*.

BHZ 469. Toledo, same loc./date as BHZ 468. Forest; flood pool; water temporary, pH 5.85, C 191; emergent vegetation and filamentous algae; partial shade. *An. (Nys.) albimanus*, *Cx. (Mel.) pilosus*, *Cx. (Mel.) theobaldi*.

BHZ 470. Toledo, Hellgate, Southern Highway and Golden Stream, 16°21'N, 88°48'W, September 7, 1992. Cultivated area; ground pool in banana grove; water clear, temporary, pH 6.0, C 248; abundant emergent and submersed vegetation (*Typha domingensis*, *Chara* sp.); partial shade. *Cx. (Mel.) bastagarius*, *Cx. (Mel.) dunni*, *Cx. (Mel.) ensiformis*.

BHZ 471. Toledo, Crique Jute, 16°15'N, 89°59'W, September 7, 1992. Primary deciduous forest; artificial container (plastic bucket); water turbid; dead leaves in bottom. *Cx. (Cux.) mollis*, *Li. durhamii*, *Tr. digitatum*.

BHZ 472. Toledo, same loc./date as BHZ 472. Primary deciduous forest; artificial container (tin can); heavy shade. *Cx. (Cux.) mollis*, *Li. asulleptus*, *Li. durhamii*.

BHZ 473. Toledo, same loc./date as BHZ 472. Primary deciduous forest; artificial container (tin can); heavy shade. *Li. asulleptus*, *Li. durhamii*.

BHZ 474. Toledo, Crique Jute, 16°15'N, 89°59'W, September 7, 1992. Primary deciduous forest, ditch next to road; partial shade. *Cx. (Cux.) coronator*.

BHZ 475. Toledo, Big Fall, 16°15'N, 88°53'W, September 7, 1992. Domestic area; roadside ditch in village; water temporary, stagnant, pH 6.2, C 480; abundant emergent grasses. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator*, *Cx. (Mel.) pilosus*, *Cx. (Mel.) theobaldi*.

BHZ 476. Toledo, same loc./date as BHZ 475. Domestic area; adults collected biting/landing on human approximately 10 m from house from 1800 to 1900 h. *An. (Ano.) vestitipennis*, *An. (Nys.) albimanus*, *Cx. (Cux.) quinquefasciatus*, *Ma. (Man.) titillans*.

BHZ 477. Toledo, same loc./date as BHZ 475. Domestic area; adults collected biting/landing on human inside of house from 1800 to 1900 h. *An. (Nys.) albimanus*, *Cx. (Cux.) quinquefasciatus*.

BHZ 479. Toledo, Punta Gorda, Voice of America compound, 16°05'N, 88°49'W, September 8, 1992. Partially cleared marsh; crab hole; water turbid; in heavy shade. *Cx. (Cux.) inflictus*.

BHZ 480. Toledo, same loc./date as BHZ 479. Partially cleared marsh; crab hole; water turbid; full sun. *Cx. (Cux.) inflictus*, *Cx. (Dei.) cancer*.

BHZ 481. Toledo, Toledo Settlement, 16°08'N, 88°50'W, September 9, 1992. Domestic area; artificial container (tin can) in yard of house; water clear, temporary; heavy shade. *Corethrella (Corethrella) sp.*, *Cx. (Cux.) declarator*, *Cx. (Phc.) corniger*.

BHZ 482. Toledo, same loc./date as BHZ 481. Domestic area; bamboo stump (4.0 cm diameter); 10 m from house; partial shade. *Hg. (Hag.) equinus*.

BHZ 483. Toledo, same loc./date as BHZ 481. Domestic area, bamboo stump (4.0 cm diameter); 10 m from house; partial shade. *Wy. (Wyo.) arthrostroma*.

BHZ 484. Toledo, same loc./date as BHZ 481.

Domestic area; bamboo internode (8.0 cm diameter); 10 m from house. *Wy. (Wyo.) arthrostroma*.

BHZ 485. Toledo, same loc./date as BHZ 481. Domestic area; bamboo stump (25 cm high); 10 m from house; partial shade. *Wy. (Wyo.) arthrostroma*.

BHZ 486. Toledo, same loc./date as BHZ 481. Domestic area; bamboo stump; 10 m from house; partial shade. *Wy. (Wyo.) arthrostroma*.

BHZ 487. Toledo, same loc./date as BHZ 481. Domestic area; bamboo stump; 15 m from house; partial shade. *Hg. (Hag.) equinus*.

BHZ 488. Toledo, same loc./date as BHZ 481. Domestic area; bamboo internode (8.0 cm diameter); next to house in village; partial shade. *Wy. (Wyo.) arthrostroma*.

BHZ 489. Toledo, same loc./date as BHZ 481. Domestic area; bamboo stump; 15 m from house; partial shade. *Hg. (Hag.) equinus*, *Wy. (Wyo.) arthrostroma*.

BHZ 490. Toledo, Punta Gorda, Voice of America compound, 16°05'N, 88°49'W, September 9, 1992. Cleared area; bromeliad axil approximately 10 m from road; partial shade. *Wy. (Wyo.) celaenoccephala*.

BHZ 491. Stann Creek, Cowpen, 16°32'N, 88°33'W, September 10, 1992. Cultivated area; ground pool (2.0 × 6.0 m) at edge of banana grove next to house; water pH 6.02, C 323; emergent grasses. *Cx. (Cux.) coronator*, *Cx. (Cux.) quinquefasciatus*, *Cx. (Phc.) lactator*.

BHZ 492. Stann Creek, same loc./date as BHZ 491. Cultivated area; pit (1.0 m deep) in banana grove, 50 m from house; water stagnant; no vegetation; partial shade. *Cx. (Cux.) quinquefasciatus*, *Cx. (Phc.) lactator*.

BHZ 493. Stann Creek, same loc./date as BHZ 491. Cultivated area; artificial container (plastic 55-gal drum cut in half); water temporary, pH 6.7, C 24; no vegetation; partial shade. *Cx. (Cux.) quinquefasciatus*.

BHZ 494. Toledo, Southern Highway, approximately 2 km W of Rice Station, 16°12'N, 88°56'W, September 11, 1992. Pine forest; tire rut; water turbid, temporary, pH 6.4, C 150; floating pine needles; heavy shade. *An. (Nys.) albimanus*, *Cx. (Cux.) coronator*, *Cx. (Mel.) pilosus*.

BHZ 495. Toledo, Southern Highway, 2 km N of Machaca Forest Station, 16°12'N, 88°55'W, September 11, 1992. Secondary forest; ground pool (2.0 × 1.0 m); water clear, temporary, pH 6.05, C 169; scarce emergent vegetation; heavy shade. *An. (Ano.) eseni*.

BHZ 496. Toledo, Laguna, 16°10'N, 88°56'W, September 11, 1992. Cultivated area; flood pool in orange grove; water temporary, pH 5.8, C 89; floating and emergent grasses; partial shade. *An. (Nys.) albimanus*, *Cx. (Cux.) declarator*, *Cx. (Mel.) pilosus*, *Ps. (Gra.) confinnis* Group.

BHZ 497. Toledo, same loc./date as BHZ 496. Secondary forest; pooled sample from several axils

of bromeliad located approximately 0.5 m above ground; heavy shade. *Cx. (Mcx.) rejector*.

BHZ 498. Toledo, Machaca compound, 16°10'N, 88°53'W, September 11, 1992. Pasture surrounded by secondary forest; flood pool; water clear, temporary, pH 5.5, C 30; abundant emergent grasses; partial shade. *Cx. (Mel.) theobaldi*.

BHZ 499. Toledo, same loc./date as BHZ 498. Secondary deciduous forest; ground pool; water clear; dead leaves; heavy shade. *Cx. (Cux.) mollis*, *Cx. (Mel.) pilosus*.

BHZ 500. Toledo, same loc./date as BHZ 498. Secondary deciduous forest; large fallen leaf with floating smaller leaves; heavy shade. *Cx. (Cux.) mollis*, *Li. asulleptus*.

BHZ 501. Toledo, same loc./date as BHZ 498. Secondary deciduous forest; artificial container (tin can) containing dead leaves and sticks; 10 m from home; partial shade. *Li. asulleptus*.

BHZ 502. Toledo, Machaca Camp, 1 km N of Southern Highway. Secondary forest; ground pool; water clear, temporary, pH 5.1, C 27; floating sticks; full sun. *Cx. (Mel.) pilosus*, *Cx. (Mel.) theobaldi*.

BHZ 503. Toledo, Dem Dats Doin Botanical Garden, 2 km S of San Pedro, 16°15'N, 88°58'W, September 12, 1992. Cultivated area; ground pool (3.0 × 10 m) in orchard; 20 m from house; water clear, temporary, pH 5.65, C 104; dense emergent grasses; full sun. *Cx. (Cux.) nigripalpus*, *Oc. (Och.) angustivittatus*.

BHZ 504. Toledo, same loc./date as BHZ 503. Cultivated area; bromeliad in orchard; heavy shade. *Cx. (Mcx.) rejector*.

BHZ 505. Toledo, Machaca Forest Station, 16°11'N, 88°55'W, September 13, 1992. Secondary deciduous/pine forest; roadside ditch; water clear, temporary, pH 6.6, C 271; abundant emergent grasses; partial shade. *An. (Nys.) albimanus*, *Cx. (Mel.) pilosus*.

BHZ 506. Toledo, same loc./date as BHZ 505. Secondary pine forest; road rut; 500 m from house; water stagnant, light brown, pH 6.1, C 207; partial shade. *Cx. (Cux.) coronator*, *Cx. (Cux.) nigripalpus*.

BHZ 507. Toledo, same loc./date as BHZ 506. Secondary pine forest; rut in logging road; water stagnant, pH 5.3, C 40, mud bottom; partial shade. *Cx. (Mel.) pilosus*.

BHZ 508. Toledo, Aguacate Creek, 16°09'N, 89°05'W, September 15, 1992. Primary forest; pit; water turbid (rust color), pH 5.9, C 64; heavy shade. *An. (Ano.) eiseni*, *Cx. (Mel.) elevator*.

BHZ 509. Toledo, same loc./date as BHZ 508. Primary forest; flood pool; water clear, pH 6.7, C 122; emergent grasses; partial shade. *Cx. (Cux.) coronator*.

BHZ 510. Toledo, same loc./date as BHZ 508. Primary forest; artificial container (1-liter plastic bottle with leaves and sticks) placed out on August 28, 1992. *Li. durhamii*, *Wy. aporonoma*.

BHZ 511. Toledo, same loc./date as BHZ 508. Primary forest; artificial container (500-ml plastic bottle) placed approximately 1.0 m above ground on August 28, 1992. *Li. durhamii*.

BHZ 512. Toledo, same loc./date as BHZ 508. Primary forest; artificial container (1-liter plastic bottle) placed at ground level on August 28, 1992; water with leaves. *Li. asulleptus*, *Li. durhamii*, *Oc. (How.) cozumelensis*.

BHZ 513. Toledo, same loc./date as BHZ 508. Primary forest; artificial container (500-ml plastic bottle with 2.0-cm hole in side) placed at ground level on August 28, 1992. *Li. durhamii*.

BHZ 514. Toledo, same loc./date as BHZ 508. Primary forest; artificial container (1-liter plastic bottle with 2.0-cm hole in side) placed at ground level on August 28, 1992. *Wy. aporonoma*.

BHZ 515. Toledo, same loc./date as BHZ 508. Primary forest; artificial container (1-liter plastic bottle with 2.0-cm hole in side) placed 15 cm above ground level on August 28, 1992. *Li. durhamii*, *Wy. aporonoma*.

BHZ 516. Toledo, same loc./date as BHZ 508. Primary forest; artificial container (1-liter plastic bottle with no lid) placed at ground level on August 28, 1992. *Li. durhamii*.

BHZ 517. Cayo, Specific locality unknown, November 15, 1993. Cleared area; artificial container (black plastic cup) placed out for 2 wk. *Li. durhamii*.

BHZ 518. Belize, Belize City, 17°30'N, 88°12'W, sea level, May 13, 1993. Cleared area; Centers for Disease Control (CDC) miniature light trap with dry ice, hung at edge of salt marsh; approximately 50 m from house; 1800–0600 h. *An. (Ano.) vestitipennis*.

BHZ 519. Belize, same loc. as BHZ 518, September 19, 1992. Domestic area; CDC miniature light trap with dry ice, hung approximately 1.0 m above ground in yard of house. *Cq. (Rhy.) venezuelensis*.

BHZ 520. Belize, Cedar Bank, 17°23'N, 88°26'W, May 13, 1993. Secondary forest; stream margin east of Sibun River bridge; moderate water movement; larvae collected in leaves, roots, and plants hanging into water; partial shade. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*.

BHZ 521. Belize, same loc./date as BHZ 520. Secondary forest; stream margin east of Sibun River bridge; moderate water movement, larvae collected in roots and grasses overhanging and touching water; partial shade. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*, *Cx. (Mel.) educator*, *Cx. (Mel.) theobaldi*.

BHZ 522. Cayo, Hummingbird Highway at Caves Branch, 17°09'N, 88°43'W, 100 m, May 13, 1993. Secondary forest; stream margin; larvae collected in large mass of floating plant matter accumulated around leaves and branches of tree overhanging river and partially submersed, 1.0–3.0 m

from shore; partial shade. *Ad. (Ady.) squamipennis*, *Cx. (Mel.) educator*.

BHZ 523. Cayo, Valley of Peace, May 15, 1993. Secondary forest; stream margin with steep banks; water permanent; floating herbaceous plants. *An. (Nys.) albimanus*.

BHZ 524. Cayo, Sibun River, approximately 1.0 km NE of St. Thomas, 17°09'N, 88°37'W, 20 m, May 17, 1993. Secondary forest; stream margin; small stem of bamboo reaching into water about 4.0 m from bank; accumulation of leaves, sticks on water surface. *An. (Ano.) pseudopunctipennis*.

BHZ 525. Cayo, same loc./date as BHZ 524. Secondary forest area; stream margin; larvae collected in roots of 2 small trees at water edge. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*.

BHZ 526. Cayo, same loc./date as BHZ 524. Secondary forest; stream margin; larvae collected in floating mass of plant debris caught among submersed logs and branches; partial shade. *An. (Ano.) pseudopunctipennis*, *Cx. (Cux.) nigripalpus*, *Cx. (Mel.) educator*.

BHZ 527. Cayo, same loc./date as BHZ 524. Secondary forest; stream margin; larvae collected among grasses and branches of shrubs reaching into water up to 1.0 m from bank; partial shade. *An. (Ano.) pseudopunctipennis*.

BHZ 528. Cayo, Roaring Creek 1.5 km W of Hummingbird Highway, 17°15'N, 88°48'W, 20 m, May 18, 1993. Secondary forest; stream margin (3.0 × 3.0 m); large patch of aquatic moss and scattered dead leaves, twigs, and other material. *An. (Nys.) albimanus*, *An. (Nys.) darlingi*, *Cx. (Mel.) educator*.

BHZ 529. Cayo, same loc./date as BHZ 528. Secondary forest; stream pool (1.0 × 2.0 m); larvae collected in mass of dead plant matter tangled beneath fallen tree and adjacent scrubs; partial shade. *Ad. (Ady.) squamipennis*, *An. (Nys.) albimanus*, *An. (Nys.) darlingi*, *Cx. (Mel.) educator*.

BHZ 530. Cayo, Hummingbird Highway, 6.0 km S of Belmopan, 17°11'N, 88°48'W, 100 m, May 20, 1993. Secondary forest; ground pool (3.0 × 3.0 m); abundant floating organic debris; full sun. *Cx. (Cux.) coronator*.

BHZ 531. Cayo, same loc./date as BHZ 528, May 25, 1993. Same pool described in BHZ 530, but with partial shade. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*, *An. (Nys.) darlingi*, *Cx. (Mel.) educator*.

BHZ 532. Cayo, same loc. as BHZ 528, May 25, 1993. Secondary forest; stream margin; larvae collected in floating plant debris (twigs, stems, seeds, flowers, and other material) entangled in submersed tree branches. *An. (Ano.) pseudopunctipennis*, *An. (Nys.) albimanus*, *An. (Nys.) darlingi*.

BHZ 533. Cayo, same loc. as BHZ 528, May 25, 1993. Secondary forest; stream pool (1.0 × 1.5 m) separated from stream by fallen log; slow current; mass of submersed macrophytes and floating dead

leaves; heavy shade. *An. (Nys.) albimanus*, *An. (Nys.) darlingi*.

BHZ 534. Cayo, same loc. as BHZ 524, May 25, 1993. Secondary forest; stream pool; with mass of dead plant debris under heavy shade of overhanging trees. *An. (Nys.) darlingi*, *Cx. (Mel.) educator*.

BHZ 535. Cayo, same loc. as BHZ 524, May 13, 1993. Secondary forest; adults collected biting/landing on human from 1830 to 2000 h. *An. (Nys.) darlingi*.

BHZ 536. Cayo, same loc./habitat as BHZ 535, May 25, 1993. Secondary forest; adults collected biting/landing on human from 1830 to 2000 h. *An. (Nys.) darlingi*.

BHZ 537. Cayo, Hummingbird Highway at Sibun Camp, 17°06'N, 88°39'W, 60 m, August 10, 1993. Stream margin in partially cleared area, next to orange grove; abundant floating and emergent vegetation at margins. *Ch. bathana*.

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Cx. (Mel.) flabellifer

Cayo: 37

Cx. (Mel.) inhibitor

Cayo: 37

Cx. (Mel.) iolambdis

Belize: 13, 195, 222
 Cayo: 131
 Corozal: 151, 156
 Toledo: 397, 420, 428, 466, 468

Cx. (Mel.) limacifer

Cayo: 25, 42, 49, 211
 Toledo: 437

Cx. (Mel.) mutator

Cayo: 136, 139, 142, 237, 239, 240, 242

Cx. (Mel.) panocossa

Belize: 319

Cx. (Mel.) pilosus

Belize: 200, 202, 203, 204, 206, 207
 Cayo: 21, 24, 42, 44, 45, 46, 50, 56, 57, 140,
 208
 Corozal: 146, 148, 149, 150, 285, 286
 Toledo: 411, 448, 462, 466, 469, 475, 494,
 496, 499, 502, 505, 507

Cx. (Mel.) rooti

Belize: 188, 207
 Cayo: 40, 50

Cx. (Mel.) theobaldi

Belize: 17, 104, 106, 329, 521
 Cayo: 21, 22, 26, 46, 209, 272, 275, 277, 305,
 327, 328

Stann Creek: 262
 Toledo: 365, 367, 369, 370, 391, 408, 412,
 438, 452, 456, 470, 475, 498, 502

Cx. (Mel.) vexillifer

Cayo: 140

Cx. (Mel.) zeteki

Toledo: 431

Cx. (Mcx.) rejector

Belize: 64, 65, 181, 182, 205, 221
 Cayo: 28, 30, 34, 135, 174, 214, 359
 Orange Walk: 86, 87, 88, 90, 91, 92, 93, 96,
 355, 357
 Toledo: 366, 388, 497, 504

Cx. (Phc.) corniger

Toledo: 392, 393, 497, 504

Cx. (Phc.) lactator

Belize: 17
 Cayo: 19, 24, 42
 Stann Creek: 491, 492
 Toledo: 426

Hg. (Hag.) equinus

Cayo: 160
 Stann Creek: 262
 Toledo: 482, 487, 489

Li. asulleptus

Cayo: 360
 Toledo: 472, 473, 500, 501, 512

Li. durhamii

Belize: 179
 Cayo: 171, 210, 360, 517
 Stann Creek: 125
 Toledo: 471, 472, 473, 510, 511, 512, 513,
 515, 516

Ma. (Man.) titillans

Toledo: 385, 461, 476

Oc. (How.) cozumelensis

Cayo: 216, 298
 Toledo: 512

Oc. (Och.) angustivittatus

Belize: 199
 Cayo: 23, 24, 42, 317

Corozal: 287
 Stann Creek: 123, 130
 Toledo: 436, 450, 458, 503

Oc. (Och.) fluviatilis

Cayo: 133, 137, 236, 247

Oc. (Och.) hastatus

Toledo: 466

Oc. (Och.) scapularis

Belize: 5, 6, 7, 10
 Cayo: 144
 Corozal: 287

Oc. (Och.) serratus

Belize: 180, 198, 200, 206, 207
 Cayo: 144, 177, 217
 Toledo: 459, 466

Oc. (Och.) taeniorhynchus

Belize: 1, 4, 5, 6, 7, 9, 10, 11, 145, 341
 Corozal: 150
 Stann Creek: 120, 263

Oc. (Pro.) bertrami

Cayo: 173

Oc. (Pro.) podographicus

Cayo: 172, 173

Oc. (Pro.) thornтони

Orange Walk: 354

Ps. (Gra.) cingulata

Stann Creek: 130

Ps. (Gra.) confinnis Group

Belize: 16, 145, 185, 206, 207
 Cayo: 21, 203, 353
 Stann Creek: 130
 Toledo: 385, 386, 413, 428, 429, 439, 447,
 458, 459, 496

Ps. (Jan.) albipes

Belize: 180
 Stann Creek: 130

Ps. (Jan.) ferox

Belize: 180, 198, 199
 Cayo: 57, 177, 217

Stann Creek: 123, 130
Toledo: 466

Ps. (Pso.) ciliata

Belize: 16, 196
Cayo: 24, 45, 203, 204, 207
Toledo: 439

Sa. (Pey.) undosus

Belize: 361
Stann Creek: 256, 334, 346, 347

Sa. (Sab.) cyaneus

Cayo: 300

Sa. (Sab.) gymnothorax

Cayo: 143

Sh. moralesi

Stann Creek: 257, 258, 334

Tx. (Lvn.) haemorrhoidalis superbus

Belize: 181, 201, 220
Cayo: 34, 63
Orange Walk: 90, 93
Toledo: 388

Tx. (Lyn.) theobaldi

Belize: 218, 219
Cayo: 36, 176, 208, 213, 299
Orange Walk: 86, 96, 356

Tr. digitatum

Cayo: 27
Toledo: 471

Ur. (Ura.) geometrica

Belize: 314
Cayo: 22, 47, 305, 426, 336
Stann Creek: 306, 343, 344
Toledo: 463

Ur. (Ura.) lowii

Belize: 9, 57, 66, 67, 183, 230

Ur. (Ura.) pulcherrima

Belize: 270

Ur. (Ura.) socialis

Belize: 184
Cayo: 328

Toledo: 445

Wy. (Hys.) circumcincta

Toledo: 388, 389

Wy. (Wyo.) abebela

Cayo: 212, 359
Orange Walk: 355, 356

Wy. (Wyo.) arthrostroma

Belize: 193, 361, 362, 363
Corozal: 152, 157, 158, 159, 160, 163, 164, 165
Stann Creek: 126, 256, 330, 331, 332, 333, 334, 345, 348, 350
Toledo: 387, 441, 442, 483, 488, 485, 488,

Wy. (Wyo.) celaenocephala

Belize: 59, 60, 61, 62, 63, 65, 68, 181, 182, 201, 220, 221
Cayo: 28, 29, 30, 31, 33, 34, 134, 135, 174, 215, 359
Corozal: 152
Orange Walk: 87, 88, 91, 93, 110, 111, 112, 113, 115, 116, 117, 355, 356, 357
Toledo: 389, 467, 490

Wy. (Wyo.) melanopus

Cayo: 33
Orange Walk: 89, 356
Toledo: 388, 389

Wy. (Wyo.) sp. 1

Stann Creek: 127, 128

Wy. (Wyo.) Pertinans Group sp. 1

Cayo: 359

Wy. (Wyo.) Pertinans Group sp. 2

Cayo: 359

Wy. aporonoma

Belize: 179
Cayo: 216, 264, 298
Corozal: 159, 160, 162, 164, 166
Stann Creek: 126, 129, 130, 334, 347, 351
Toledo: 510, 514, 515

Wy. chalconecephala

Toledo: 464