THE LYGAEIDAE OF THE CAYMAN ISLANDS WITH THE DESCRIPTION OF A NEW SPECIES OF *OCHRIMNUS* (HEMIPTERA)

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ABSTRACT

A key to the 50 species known from the Cayman Islands is provided, brief descriptions are given and the origin and relationships of the lygaeid fauna are discussed. A new species is described and new synonymy is presented.

Key Words: Cayman Islands, Lygaeidae, new species

RESUMEN

Se introduce una clave para las 50 especies que se conocen de las islas Caimán, se presentan descripciones breves, y se discuten el origen y las relaciones de la fauna Lygaeidae. Se describe una especie nueva y se introduce nueva sinonimia.

The insect fauna of the Cayman Islands has received considerable attention in recent years. Our own interest in these islands has been stimulated by this work since we have for a number of years been concentrating a considerable part of our research and field work on the lygaeid fauna of the West Indies. It thus seems appropriate to

bring together our information on these interesting islands, discuss the faunal relationships, and present a faunal list that is more in keeping with the actual species composition than that currently reflected in the literature.

The natural history and biogeography of the Caymans have been treated in detail by Brunt & Davies (1994) and will not be repeated here except to note that the islands are all low lying and are closer geographically to such islands of the Greater Antilles as Cuba and Jamaica than they are to any of the small island groups of the Caribbean.

One of the interesting aspects of the Cayman lygaeid fauna is that, in contrast to the butterfly fauna (Askew 1994) in which endemism occurs only at the subspecific level, at least 5 species are endemic. It must be admitted, however, that the Lygaeidae have not been collected as intensively as the butterflies of the Caribbean. Thus some of the apparent Cayman endemics may be the result of limited collecting on other islands. Nevertheless, the Cuban lygaeid fauna have been more carefully studied in the past than has that of any of the other islands, and we have collected extensively on Jamaica without taking any of these endemic species.

Our prior knowledge of the Cayman fauna comes from the 1938 Oxford University Expedition material that was studied by Scudder (1958). He reported 17 species present of which four were described as new. Askew (1994) noted that thirteen species were collected on Grand Cayman, eight on Cayman Brac, and three on Little Cayman. Slater (1964) listed the same species. Froeschner (1983) listed two species from Grand Cayman Island, one of which represented an additional species. Based on our collecting over the past 10 years, we can list a total of 50 species, a number surprisingly close to the known butterfly fauna. With this number of species we feel confident that we have a reasonably complete inventory of the fauna of the Caymans.

From the outset we have been interested in the possible vicariant nature of the fauna relative to overwater dispersal. We feel that it is not yet possible to analyze statistically the number of species relative to island size, particularly because Little Cayman seems relatively poorly collected. Nor can we make meaningful contributions to the degree of faunal "turnover" due to arrival of new immigrants and extinction of elements of the known fauna. We do believe that our present knowledge of the lygaeid fauna provides a base line from which future studies can be profitably pursued. All species described as endemic by Scudder (1958), with the exception of *Ozophora minuscula* Scudder, have been taken on the Cayman Islands and none have been taken on any other island of the Caribbean. We also recognize one additional new species as endemic so that at least 5 species are considered endemic, or 10% of the fauna. Askew (1994) commented upon the dominance of Lygaeidae in the Hemiptera fauna, at least on Grand Cayman, and while he noted that this figure represented only a small fraction of the fauna, he believed that the figures probably accurated reflected the balance of family representatives. We see no reason to doubt the validity of this conclusion.

Of the species that are not endemic on the Caymans, the great majority are widespread in the West Indies. Many of these are "weed species" that live in disturbed habitats and frequently reproduce on a number of host plants, or that live on or below host plants that thrive in ruderal environments.

Dieuches armatipes (Walker) and *Oxycarenus hyalinipennis* Costa are Old World species that have only recently been reported from the Western Hemisphere.

Excluding these recently introduced species what can we conclude about the origin and relationships of the Caymans lygaeid fauna? To attempt to answer this question, we compared the fauna of the Caymans with that of Cuba and Jamaica, the two large islands most likely to have served as source areas. Askew (1994) found that the butterfly fauna of the Caymans was derived predominantly from Cuba. He found that 42 of the 48 butterfly taxa were also in Cuba but only 29 were shared with Jamaica and progressively fewer with Hispaniola, Puerto Rico, and the Bahamas.

The lygaeid fauna, while not contradicting this relationship, does not support it to any extent. Of the total of 50 lygaeid species now known from the Caymans, 39 also occur on Cuba, but 34 occur on Jamaica. Even this difference appears more likely to represent lack of collecting than actual absence of species on one or the other of the islands. For example, *Nysius raphanus* Howard and *Cymodema breviceps* Stål have been reported from Cuba but not Jamaica, but both are widespread almost throughout the Caribbean. Conversely, *Oedancala cladiumicola* Baranowski and Slater is a relatively recently recognized species that is known from southern Florida as well as the Bahamas, Caicos, and Jamaica. It is host specific and is almost certain to be found on Cuba.

We conclude that most, if not all, of the Caymans fauna has reached the islands by overwater dispersal rather than as a result of vicariance. Slater's (1988) paper detailing his disagreement with Rosen's (1985) depreciation of dispersalist concepts, should be consulted to understand our position on this matter.

Although we believe the present evidence strongly supports the probability of overwater dispersal as the primary reason for the present Caymans lygaeid fauna (in agreement with Askew's (1994) conclusions on the butterfly fauna), we feel that while Cuba may well be the source area from which much of the fauna is derived, the majority of species are so widespread in the Caribbean that it is impossible to demonstrate this.

In support of our hypothesis that the origin of the Cayman fauna is primarily the result of overwater dispersal, several points should be considered. Most important is to consider what is not there, as Rosen (1985) and some other biogeographers seem reluctant to do. None of the higher taxa that have restricted distributions in the Greater Antilles are present. Particularly striking is the absence of the Pamphantinae. Slater (1988) indicated that the distribution on the islands suggests vicariance between Cuba and Hispaniola (and possibly Puerto Rico) since a number of sister taxa occur on the two islands and the subfamily is not otherwise represented in the West Indies, including its absence from Jamaica. This still seems essentially true for the islands, although extensive collecting in South America has revealed a considerable pamphantine fauna. Concepts of the taxon as an island-mainland vicariance example, however, will require cladistic reexamination once the mainland fauna is better understood.

None of the endemic antillocorine West Indian genera, such as *Bathydema* and *Antillodema*, are present on the Caymans, nor are representatives of the geocorine *Ninyas* that occurs in less disturbed habitats in both Jamaica and Cuba.

Several widespread Caribbean species are absent, indicating a rather random dispersal pattern. Examples are *Pachygrontha compacta* Distant and *Oedancala bimaculata* (Distant), both of which are sedge feeders and might be expected on the islands. The absence of *Ozophora rubrolinea*, an abundant species on the north coast of Jamaica, and common on the mainland of Central and northern South America is unexpected. Its absence appears to be real, for members of the genus come to lights abundantly, and a number of widespread species of *Ozophora* are common on the Caymans.

Thus we see a general pattern of a fauna composed primarily of species very widespread on the islands. This distribution suggests the importance of overwater colonization in producing this pattern, even relative to the two species apparently recently introduced from the Eastern Hemisphere. Superimposed on this basic pattern is the presence of several endemic species and the absence of some widespread and common species, as well as the absence of taxa that tend to be restricted to islands of the Greater Antilles.

All measurements are given in millimeters. The following abbreviations are used; RMB - Richard M. Baranowski collection, JAS - James A. Slater collection, USNM - United States National Museum, BMNH - British Museum of Natural History. Orig-

inal references are not given as they can be found in Slater (1964) or Slater and O'Donnell (1996). We are aware of the higher classification proposed by Henry (1997), but prefer to retain the traditional classification for a faunal paper of this type.

KEY TO THE CAYMAN ISLANDS SPECIES OF LYGAEIDAE

1. Suture between abdominal sterna 4 and 5 curving forward laterally and not attaining lateral margin of abdomen (Rhyparochrominae) 2
1'. Suture between abdominal sterna 4 and 5 straight or nearly so and attaining lateral margin of abdomen 32
2. With at least spiracles of abdominal segments 3 and 4 located dorsally 3
2'. All abdominal spiracles located ventrally 4
3. Lateral margins of anterior pronotal lobe carinate or explanate; only spiracle of abdominal segments 3 and 4 located dorsally (Rhyparochromini) . . . . . *Dieuches armatipes*
3' Lateral margins of anterior pronotal lobe rounded; abdominal spiracles on segments 2, 3, and 4 located dorsally (Myodochini) 16
4. Apical corial margins deeply concave on inner half (Antillocorini) 5
4'. Apical corial margin straight or nearly so 6
5. Posterior pronotal lobe uniformly brown . . . . . *Botocudo* species
5'. Posterior pronotal lobe brown with pale markings . . . . . *Cligenes distinctus*
6. Trichobothria on abdominal sterna 4-5 arranged in a longitudinal linear row with posterior trichobothrium located caudad of spiracle 5; head dorsally with an iridescent area at base; usually with a trichobothrium present at each antero-lateral pronotal area (Lethaeini) . . . . . *Paragonatas divergens*
6'. Two posterior trichobothria on segments 4 and 5 located dorso-ventrad of one another; head above lacking iridescent areas; never with antero-lateral pronotal trichobothria (Ozophorini) 7
7. Forewings coleopteroid, meeting along midline; membrane absent or greatly reduced . . . . . *Ozophora coleoptrata*
7'. Forewings macropterous, fully developed 8
8. Dorsal surface of body with short, but distinct upstanding hairs (viewed laterally) 9
8'. Dorsal surface glabrous or with scattered decumbent hairs, or at most an isolated upstanding hair 10
9. Small species, 5 mm or less in length . . . . . *Ozophora coleoptrata*
9'. Larger species, more than 5 mm in length . . . . . *Ozophora burmeisteri*
10. Bucculae U-shaped; head anteriorly declivent, almost at a right angle to body length . . . . . *Ozophora laticephala*
10'. Bucculae V-shaped; head somewhat declivent, but never downward curved at almost a right angle to body length 11
11. Small species, less than 4.75 mm in length . . . . . *Ozophora minuscula*
11'. Larger species, well over 5 mm in length 12
12. Femora dark brown . . . . . *Ozophora pallidifemur fuscifemur*
12'. Femora stramineous, with or without a brown annulus, never completely dark brown 13
13. Humeral pronotal angles weakly, but distinctly notched . . . . . *Ozophora pallidifemur pallidifemur*
13'. Humeral pronotal angles evenly rounded 14
14. Membrane completely dark, lacking a conspicuous white apical macula or stripe . . . . . *Ozophora umbrosa*

14'. Apex of membrane with a conspicuous pale macula or stripe 15
15. Hemelytra anterior to transverse dark fascia variegated with brown and yellow areas (sometimes colors obscured in very pale faded specimens) . . . . . *Ozophora quinquemaculata*
15'. Hemelytra anterior to transverse dark fascia either completely pale and strongly contrasting or at most with oblique dark dash on corium laterally at level of distal ½ of scutellum . . . . . *Ozophora caroli*
16. Interocular distance less than postocular distance . . . . *Myodocha unispinosa*
16'. Interocular distance greater than postocular distance 17
17. A crescent-shaped striated area present ventro-laterally on anterior portion of abdominal sternum 18
17'. Striated area lacking on anterior portion of abdominal sternum 19
18. Pronotum markedly bilobed with transverse impression deeply incised; forefemur with spines present on both inner and outer edges of ventral surface . . . . . *Froeschneria piligera*
18'. Pronotum with transverse impression not deeply incised; forefemur with spines present only along inner edge of ventral surface. . . . . *Ligyrocoris litigiosus*
19. Evaporative area covering a considerable portion of metapleuron; more than 3 rows of claval punctures; 3rd antennal segment usually longer than interocular distance 22
19'. Evaporative area around metathoracic scent gland auricle reduced to a narrow band around auricle; claval punctures usually in 3 rows; length of 3rd antennal segment usually less than interocular distance (*Prytanes*) 20
20. First antennal segment with distal end dark . . . . . *Prytanes confusa*
20'. First antennal segment unicolorous throughout 21
21. Forefemora light yellow . . . . . *Prytanes minima*
21'. Forefemora chiefly dark brown . . . . . *Prytanes dissimilis*
22. Mesoacetabulum with mesepimeron emergent from between meso- and metepisternum 23
22'. Mesepimeron enclosed by metepisternum touching mesepisternum 29
23. Head relatively elongate with a distinct "neck" present; postocular distance equal to or greater than distance between ocelli (*Heraeus*) 24
23'. Head less elongate, lacking a distinct "neck"; postocular distance less than distance between ocelli (*Neopamera*) 25
24. Smaller species (less than 6 mm), apical area of corium and apex of membrane without white areas . . . . . *Heraeus pulchellus*
24'. Larger species (7-8 mm), apical area of corium with large irregular white macula; apex of membrane with median white area . . . . . *Heraeus triguttatus*
25. Fourth antennal segment with a conspicuous white or light yellow subbasal annulus 26
25'. Fourth antennal segment unicolorous throughout 27
26. Relatively large species (7-10 mm) with eyes strongly produced . . . . . *Neopamera neotropicalis*
26'. Relatively small species (less than 6 mm), eyes not large, not prominently produced . . . . . *Neopamera albocincta*
27. Anterior pronotal lobe impunctate, corium with a distinct dark transverse fascia . . . . . *Neopamera bilobata*
27'. Anterior pronotal lobe punctate, corium nearly uniformly testaceous, lacking a transverse dark fascia 28
28. Third antennal segment only two-thirds length of segment two; smaller species (not over 4.5 mm) . . . . . *Neopamera intermedia*

28'. Third antennal segment much more than two thirds length of segment two; larger species (5 mm) . . . . . *Neopamera vicarius*
29. Elongate (6-9 mm in length); anterior pronotal lobe flattened, slightly convex, in lateral view lower than posterior lobe; pronotal collar with a median "dip" to posterior margin (*Paromius*) 30
29'. Small (not over 5-6 mm); anterior pronotal lobe strongly convex, not lower than posterior lobe in lateral view; pronotal collar essentially straight across midline (*Pseudopachybrachius*) 31
30. Length of anterior pronotal lobe at least 1.8 times length of posterior pronotal lobe; anterior pronotal lobe usually reddish brown . . . . . *Paromius dohrnii*
30'. Length of anterior pronotal lobe less than 1.6 times length of posterior pronotal lobe; anterior pronotal lobe usually black . . . . . *Paromius longulus*
31. Posterior (apical) margin of corium black, posterior femora pale . . . . . *Pseudopachybrachius vinctus*
31'. Posterior margin of corium pale or light brown; posterior femora with dark markings . . . . . *Pseudopachybrachius basalis*
32. Abdominal spiracles on segments 2 through 7 all placed dorsally 33
32'. At least one pair of spiracles on segments 2 through 7 located ventrally . . . 44
33. Clavus punctate; posterior pronotal margin not depressed laterad of base of scutellum . . . . . *Kleidocerys virescens*
33'. Clavus impunctate; posterior pronotal margin depressed laterad of base of scutellum 34
34. General coloration dull yellowish brown, never with bright red or orange markings, apical corial margin sinuate on mesal half; hind wing lacking a subcosta and possessing intervanals (Orsillinae) 35
34'. Generally with red or orange coloration; apical corial margin straight, hind wing possessing a subcosta and lacking intervanals (Lygaeinae) 40
35. Costal margin of corium straight for greater part of length, at least to level of distal end of claval commissure; connexivum often exposed laterad of corium . . . . . *Neortholomus jamaicensis*
35'. Costal margin of corium expanded from base, never straight for distance beyond level of posterior end of scutellum; connexivum not exposed laterad of corium 36
36. Stridulatory structure consisting of a row of fine grooves and ridges present on lateral corial margin (*Xyonysius*) 37
36'. Lateral margins of corium lacking a stridulatory structure (*Nysius*) 38
37. Corium not or scarcely constricted at base; pronotum distinctly longitudinally calloused on each side of midline; veins of corium unspotted or at most very faintly spotted . . . . . *Xyonysius basalis*
37'. Corium conspicuously constricted at base; pronotum not distinctly longitudinally calloused on either side of midline; veins of corium more or less heavily spotted with fuscous . . . . . *Xyonysius californicus*
38. Bucculae low, gradually tapering posteriorly, fading out gradually near base of head . . . . . *Nysius raphanus*
38'. Bucculae high anteriorly, slightly narrowing posteriorly, ending abruptly at or near base of head 39
39. Basal portion of lateral corial margins with prominent hairs . . . . . *Nysius scutellatus*
39'. Basal portion of lateral corial margins devoid of hairs, or at most with minute, extremely small hairs present . . . . . *Nysius tenellus*

40. Scutellum tumid and swollen with a weak median longitudinal carina, but never with lateral areas excavated; lacking a subbasal transverse carina (*Oncopeltus*) 41
40'. Scutellum not tumid and swollen with a median carina and adjacent areas flat or excavated; a subbasal transverse carina usually present 42
41. Hemelytral membrane with a white mark just basad of center . . . . . *Oncopeltus aulicus*
41'. Hemelytral membrane without white markings . . . . . *Oncopeltus fasciatus*
42. Pronotum with 4 short deep transverse impressions present behind calli (*Ochrimnus*) 43
42'. Pronotum often punctate behind calli, but without 4 transverse impressions . . . . . *Ochrostomus pulchellus*
43. Dorsum black except for indistinct ocher pronotal and corial margins . . . . . *Ochrimnus nigriceps*
43'. Dorsum black except posterior pronotal lobe largely orange . . . . . *Ochrimnus bracensis* n. sp.
44. Abdominal spiracles on segments 2 to 5 located dorsally, spiracles of segment 7 located ventrally 45
44'. Abdominal spiracles on at least segments 6 and 7 located dorsally, or all spiracles ventral 48
45. Hemelytra coarsely punctate (Cyminae) 46
45'. Hemelytra impunctate, or at most with a few scattered punctures (Blissinae) 47
46. Head strongly deflexed in front; eyes somewhat stalked and produced away from antero-lateral margins of pronotum; corium chiefly hyaline with only a few mesally located punctures . . . . . *Cymoninus notabilis*
46'. Head not strongly declivent anteriorly; eyes usually in contact with or nearly in contact with antero-lateral pronotal angles; corium not hyaline, densely punctate over almost entire surface . . . . . *Cymodema breviceps*
47. Body relatively short (less than 4 mm); black with white markings; forecoxal cavities open posteriorly . . . . . *Blissus antillus*
47'. Body elongate and slender; gray brown; forecoxal cavities closed posteriorly . . . . . *Ischnodemus praecultus*
48. Abdominal spiracles on segments 3 and 4 located dorsally; eyes protruding and reniform; forefemora not greatly incrassate and not armed below with numerous spines (Geocorinae) 49
48'. All abdominal spiracles located ventrally; eyes not unusually large and reniform; forefemora incrassate and armed below with numerous spines 50
49. Head and pronotum yellow-brown; vertex smooth and shining . . . . . *Geocoris punctipes*
49'. Head and pronotum black, at least pronotum with a strongly contrasting white stripe running longitudinally through meson . . . . . *Geocoris lividipennis*
50. Forefemora only moderately swollen; corium expanded, extending beyond lateral margins of abdomen; bucculae extending to base of head; hind coxae widely separated (Oxycareninae) . . . . . *Oxycarenus hyalinipennis*
50'. Forefemora strongly swollen; corium not extending beyond lateral margins of abdomen; bucculae short, confined to front of head; hind coxae not widely separated (Pachygronthinae) 51
51. Apical corial margin with a distinct dark spot (may be faint) along margin . . . . . *Oedancala crassimana*
51'. Apical corial margin lacking a distinct dark spot . . . *Oedancala cladiumicola*

LYGAEINAE

Ochrimnus bracensis Baranowski & Slater, **NEW SPECIES**

Black, posterior portion of pronotum orange, fourth antennal segment, labium and tarsi brown. Line between black and orange portions of pronotum forming a "W." Head, black areas of pronotum, scutellum, clavus, corium, pleural areas of thorax, and abdominal segments 2-5 densely clothed with decumbent black hairs tipped with gold. Hairs on orange part of pronotum light with gold tips. Lateral margin of membrane narrowly white. Abdominal segment 6 and sternal areas of segments 2-5 and legs with long golden hairs.

Length head 1.0, width 1.20, interocular space 0.75. Pronotum trapezoidal, anterior margin concave, lateral margins straight, posterior margin slightly convex. Length pronotum 1.33, width 2.08. Scutellum with prominent median carina stem and arms. Length scutellum 0.88, width 1.15. Length claval commissure 0.65. Midline distance apex clavus to apex corium 2.10. Midline distance apex corium to apex membrane 2.65. Labium short, extending posteriorly between meso- and metacoxae. Length labial segments I 0.62, II 0.65, III 0.68, IV 0.58. Antennal segments I-III densely clothed with short, decumbent black, gold tipped hairs sparsely interspersed with long upright dark hairs. Segment IV densely clothed with short decumbent gold hairs and long upright gold hairs. Length antennal segments I 0.44, II 1.02, III 0.90, IV 1.06. Total body length 5.50.

Types. Holotype. ♂ CAYMAN BRAC: The Creek, 17-X-1995, H. V. & R. M. Baranowski (blacklight trap). In United States National Museum (USNM). Paratypes. 4♂, 4♀, same data as holotype; 1♂, 2♀, same except 20-X-95; 1♀, same except 6-9-VII-97; 2♂, 3♀ same except 7-XI-95, E. A. Dilbert; 2♀, same except 8-XI-95; 1♀, same except 26-V-96; 1♀, same except 28-V-96; 1♀ 13-VI-96; 2♀, same except 26-VI-96; 1♀, same except 22-VII-96. In R. M. Baranowski, J. A. Slater, United States National Museum, Florida State Collection of Arthropods, American Museum of Natural History collections.

Etymology: Named for the island, Cayman Brac, on which it appears to be endemic.

This striking species very similar to *O. nigriceps*, is readily distinguished by the unique black coloration with only the posterior pronotal lobe a strongly contrasting orange and by the uniquely colored hairs.

Ochrimnus nigriceps Scudder

Moderate sized (5.8-6.8), almost completely black-brown, covered with a dense, decumbent dark pubescence. Apical four-fifths of fourth antennal segment and margin of membrane very narrowly pale.

Grand Cayman (Scudder 1958, RMB,JAS).

Ochrostomus pulchellus (Fabricius)

Head dark brown with pale basal spot. Pronotal calli and 2 broad rays on posterior pronotal lobe dark brown. Area anterior to calli white, lateral areas red. Inner one-half of clavus white, outer one-half dark brown. Corium dark brown with lateral and apical margins broadly white, banded with red stripe just within pale margin. Membrane black with white margin.

Grand Cayman (Scudder 1958, Froeschner 1983, RMB), Cayman Brac (RMB), Little Cayman (RMB).

Oncopeltus aulicus (Fabricius)

Red and black, easily recognizable by the large black macula covering most of posterior pronotal lobe. Usually a conspicuous white bar on forewing membrane.

Grand Cayman (RMB).

Oncopeltus fasciatus Dallas

One of the larger members of the genus (10-12). Orange-red and black. Central area of pronotum with a transverse fascia, most of membrane and appendages black.

Grand Cayman (Froeschner 1983, RMB, NMNH).

ORSILLINAE

Neortholomus jamaicensis (Dallas)

Small (4-5), narrow, elongate. Dull yellowish gray with numerous brown spots on head, pronotum, and hemelytra. Scutellum dark anteriorly with a broad pale Y-shaped callosity.

Grand Cayman (RMB).

Nysius raphanus Howard

Very small (3-4), yellowish brown. Scutellum black, except at extreme distal end. Pronotum short, nearly twice as wide as long. Bucculae very low and tapered to posterior end.

Grand Cayman (RMB).

Nysius scutellatus Dallas

Small (3-3.5), bucculae high anteriorly, ending abruptly at or near base of head. Basal portion of corial margins with prominent hairs.

Grand Cayman (Scudder 1958), Cayman Brac (RMB).

Nysius tenellus Barber

Small (3.6-4), pale yellowish testaceous, bucculae strongly elevated throughout. Pronotum only one-third wider than long. Corial veins usually unspotted. Scutellum bicolored or black.

Grand Cayman (RMB).

Xyonysius basalis (Dallas)

Subequal in size to *X. californicus* and paler in color, yellowish testaceous rather than cinereus. Lateral corial margin scarcely contracted basally, entire lateral corial margin slightly convex rather than straight. Male genital capsule either completely pale yellow or slightly fuscous basally.

Cayman Brac (Scudder 1958).

Xyonysius californicus (Stål)

Moderate sized (4.7-7), dull yellowish to brownish gray. Bucculae very short, scarcely extending midway to base of head, head and pronotum subequal in length. Male genital capsule black with broad pale yellow margin.

Grand Cayman (RMB), Cayman Brac (RMB), Little Cayman (RMB).

ISCHNORHYNCHINAE

Kleidocerys virescens (Fabricius)

Relatively small (3-3.5), with head, pronotum, and scutellum ochraceous with fuscous punctures. Scutellum usually dark anteriorly with distal end pale.

Grand Cayman (RMB).

CYMINAE

Cymoninus notabilis (Distant)

Small (3-3.3), elongate, slender. Head, pronotum, and scutellum somewhat pubescent, dark reddish brown. Corium yellowish with extreme apex darkened. Legs dull yellow. Abdomen usually brownish or yellowish, sometimes, particularly in females, green. Apex of labium and distal tarsal segment fuscous. Second antennal segment 1.5 times length of segment 3.

Grand Cayman (RMB), Cayman Brac (RMB), Little Cayman (RMB).

Cymodema breviceps (Stål)

Moderate sized (3.4-3.7), light yellow-brown with first 3 antennal segments concolorous, head and 4th antennal segment darker. Pronotum with yellow line mesally on anterior half. Scutellum also with median yellow line. Apical margin of corium darker.

Grand Cayman (RMB).

BLISSINAE

Blissus antillus Leonard

Blissus planus Leonard 1968: 151-152. **NEW SYNONYMY**.
Blissus slateri Leonard 1968: 150-151. **NEW SYNONYMY**.

Moderately small (2.5-3.5), posterior pronotal lobe black, strongly contrasting with gray anterior lobe. Labium frequently extending posteriorly beyond middle of mesosternum. Hemelytra white with black-brown markings; membrane white. Both macropterous and brachypterous forms known.

Grand Cayman (RMB), Cayman Brac (RMB), Little Cayman (RMB).

Leonard (1968) described three species of Blissus from the Caribbean: *B. slateri* and *B. antillus* from Puerto Rico, and *B. planus* from Grenada. His descriptions are based largely on color, pruinosity, size, and the shape of the metathoracic scent gland peritreme. In some instances he described a feature for one species, but did not discuss or compare the condition of the same feature in the other species. For example, he stated that the scutellum of *B. slateri* is distinctly punctate, but did not indicate the condition of the punctation in the other two species. In fact, the scutellum is punctate in all three species. We have examined considerable material from Jamaica, Dominican Republic, Trinidad, St. Barthelemy, Dominica, Tortola, Virgin Gorda, and St. Lucia and find the scutellum punctate in all specimens examined. Leonard stated *B. slateri* possesses light straw-yellow setae on the pronotum but that *B. antillus* has silvery setae on the pronotum. We cannot see these differences even in the paratypes examined. Because the scent gland peritreme varies in the island populations we examined, we believe that it is not a reliable differentiating character. We dissected male genital capsules and parameres of several paratypes, representing all three species, as well as from

specimens from other islands and do not find significant differences. In our opinion *Blissus* is represented by a single species in the West Indies. We elect to use the name *antillus* for this species and reduce *B. slateri* and *B. planus* to synonymy.

In addition to our inability to find differentiating features, the West Indian populations occur exclusively in ruderal habitats, suggesting that this is another example of a "weed" species found in disturbed habitats throughout the Caribbean.

The relationship of *B. antillus* to the ubiquitous Florida chinch bug, *B. insularis* Barber, is important. We have not found differences in the genital capsule or in the parameres between West Indian specimens and specimens from Florida. However, this is the case with a number of apparently distinct species of *Blissus*.

B. insularis can be separated from *B. antillus* by a combination of characters. *B. insularis* always has uniformly straw-colored legs whereas *B. antillus* varies from having dark brown legs to light brown with a dark brown annulus on one or more femora. The most constant differentiating feature is the anterior portion of the pronotum, which in *B. insularis*, is covered by a uniform, undivided pubescent band that reached the anterior margin. The pubescent band of *B. antillus* does not reach the anterior margin and is completely, or partially, divided along the midline.

B. insularis does occur in the West Indies, as we have examined specimens from the Bahamas.

Ischnodemus praecultus Distant

Ischnodemus slateri Alayo & Grillo 1982: 58-62 **NEW SYNONYMY**.

Moderate sized (5-5.5). Hemelytra smoky colored with pale white to dull testaceous membrane. Surface of head, pronotum, and scutellum predominantly or entirely dull grayish or reddish brown pruinose. Lateral corial margins grayish brown with shining areas of posterior portion of pronotum separated into three distinct maculae.

Grand Cayman (RMB).

We have examined the holotype of *I. slateri* from Cuba and believe it to be conspecific with the widespread and somewhat variable *I. praecultus*.

GEOCORINAE

Geocoris lividipennis Stål

Small (2.5-3), strikingly colored, with head, pronotum, and scutellum chiefly black contrasting with the pale yellow wings. Pronotum with a complete median longitudinal pale stripe and lateral areas of pronotum often yellow-brown. Vertex granulose.

Grand Cayman (RMB), Cayman Brac (RMB), Little Cayman (RMB).

Geocoris punctipes (Say)

A moderate sized (3-3.5) big-eyed bug; pale straw-yellow, usually with a dark median scutellar stripe. Vertex of head smooth and polished with a median sulcus extending to base of head.

Grand Cayman (RMB).

OXYCARENINAE

Oxycarenus hyalinipennis Costa

Small (3-4), elongate, pronotum and head tapering anteriorly. Head and pronotum uniformly brown with dense, upright hairs, entire hemelytra hyaline. Abdomen and

femora shining dark brown, meso- and metatibiae with a striking median, broad, white annulus.

This insect, known as the cotton seed bug, is a common and widespread species in the Old World tropics. It is an introduced species in the Western Hemisphere and has been established for many years in South America.

Slater & Baranowski (1994) reported it for the first time from the West Indies from Long Island, Bahamas.

PACHYGRONTHINAE

Oedancala crassimana (Fabricius)

A relatively robust yellowish brown species with relatively thick antennal segments. Usually less than 7.5 mm in length. Often with a dark spot present midway along apical corial margin. This is often absent in West Indian specimens, in which case it can be distinguished from *O. acuminata* by the shorter labium; from *O. cladiumicola* by the lack of reddish coloration and from *O. cubana* by the more robust nonlinear body and by not having the scutellum black adjacent to the pale median vitta.

Grand Cayman (Scudder 1958, RMB).

Oedancala cladiumicola Baranowski & Slater

Similar to crassimana, but lacking black spot along apical corial margins. Reddish. Found only on sawgrass.

Grand Cayman (RMB).

RHYPAROCHROMINAE

ANTILLOCORINI

Cligenes distinctus Distant

Small (2.5-3.0), robust with generally dark appearance. Head blackish, anterior pronotal lobe, scutellum, and ventral surface dark brown, strongly contrasting with testaceous hemelytra and legs. Corium with two spots along lateral margins, one at apex of corium, one midway between base and apex. Entire pronotal surface densely punctate with a very coarse row anteriorly, giving impression of a weak pronotal collar.

Grand Cayman (RMB), Cayman Brac (RMB).

Botocudo species

We have collected an apparently undescribed species of the *Botocudo* complex on Cayman Brac. The relationships of species currently placed in *Botocudo* are very unsatisfactory. Therefore, we feel it best to wait until the generic limits of this tribe are studied and redefined before attempting to place this species.

LETHAEINI

Paragonatas divergens (Distant)

Moderate sized (4-5); dark brown with humeral angles of pronotum, an elongate vitta on clavus, and irregular spots on corium yellow. Dorsal surface with sparse upright hairs. Femora dark brown with distal tips pale; tibiae and tarsi light brown.

Grand Cayman (Scudder, 1958, RMB), Cayman Brac (Scudder 1958, RMB).

MYODOCHINI

Heraeus pulchellus Barber

One of the smallest West Indian *Heraeus* species, barely exceeding 4 mm in length; testaceous, lacking an annulus on fourth antennal segment; possesses complete dark brown fascia across hemelytra.

Grand Cayman (RMB), Cayman Brac (RMB).

Heraeus triguttatus (Guerin)

Larger (7-8) than *pulchellus*. Typically bright reddish brown with apex of corium and most of membrane black. Apical area of corium possessing a large irregular white macula. Apex of membrane with conspicuous subquadrate median white area.

We have specimens from Grand Cayman and Cayman Brac that are dark brown rather than bright reddish brown; however, we can find no morphological differences other than the color.

Grand Cayman (Scudder 1958, RMB), Cayman Brac (RMB).

Neopamera albocincta (Barber)

Elongate (5-5.5), pale reddish to reddish brown, postmedian corial fascia generally broken into series of spots. Fourth antennal segment with proximal white annulus. Elongate head relatively more attenuated than *N. bilobata*.

Grand Cayman (RMB), Cayman Brac (Scudder 1958, RMB).

Neopamera intermedia (Barber)

Moderate sized (4-4.5), brownish with pale markings; legs yellowish with a narrow band near distal end of posterior femora; antennae light brown with distal third of segment III and all of segment IV darker.

Grand Cayman (RMB), Cayman Brac (Scudder 1958, RMB).

Neopamera bilobata (Say)

Rhyparochromus scutellatus Dallas 1852: 575-576 **NEW SYNONYMY**.

Resembles *N. albocincta* closely in form and color, but tends to run somewhat darker (although the color is variable), and is slightly larger and more robust and lacks a pale proximal area on the 4th antennal segment.

Dallas' species *N. scutellatus* has been treated as a subspecies of *N. bilobata* since its status was reduced by Van Duzee (1909). Barber (1953) discussed the status, noting the darker femora, relatively shorter anterior pronotal lobe, and shorter second antennal segment. However, such specimens apparently have no geographic significance and occur in many populations. There seems no reason to treat this as a trinomen in the modern concept of the subspecies, and it is here synonymized.

Grand Cayman (Scudder 1958), Cayman Brac (RMB).

Paromius longulus (Dallas)

Elongate, moderate sized (5.5-7), head, anterior pronotal lobe, scutellum and under surface frequently dull black, often thickly clothed with grayish pubescence. Pos-

terior pronotal lobe reddish brown with darker punctures. Corium and clavus dull testaceous. Antennae reddish brown with distal end of third and usually all of fourth segment fuscous.

Grand Cayman (RMB).

Paromius dohrnii Guerin

Light tan, elongate, with anterior pronotal lobe reddish brown and almost twice the length of posterior lobe, with transverse impression shallow and usually obsolete mesally.

Grand Cayman (RMB).

Pseudopachybrachius basalis (Dallas)

Small (3.5-5), robust; lateral corium lacking a distinct postmedian transverse fascia, margins completely pale. Oval pale spot present near inner apical corial angle. Head, pronotum, and scutellum dull black, corium dull yellow with dark brown punctures. Antennae reddish brown.

Grand Cayman (RMB), Cayman Brac (RMB).

Pseudopachybrachius vinctus (Say)

Small (2.8-3.0), head dark, pronotum contrasting with pale hemelytra having a conspicuous black spot on apical corial margin. Fourth antennal segment dark brown, contrasting with 3 pale proximal segments. Legs pale.

Grand Cayman (Scudder 1958, RMB), Cayman Brac (Scudder 1958, RMB), Little Cayman (RMB).

Prytanes minima (Guerin)

Small (2.5-3), reddish brown. Third antennal segment (males in particular) somewhat thickened. Hemelytra variegated. Legs uniformly pale yellow.

Grand Cayman and Cayman Brac (Scudder 1958, RMB).

Prytanes formosa (Distant)

Body relatively elongate, head acuminate, clothed with decumbent sericeous hairs. Anterior pronotal lobe convex, not higher than posterior lobe and considerably narrower. Antennnae prominent, first, third, and fourth segments uniformly dark brown, second segment paler.

Grand Cayman (RMB).

Prytanes dissimilis (Barber)

A relatively robust, moderately large species for the genus (3.5 mm or greater). Scutellum frequently bicolored. Posterior pronotal lobe usually with a median dark stripe. Subdistal ends of middle and hind femora in part dark red-brown.

Cayman Brac (RMB).

Froeschneria piligera (Stål)

Large, robust (7-8) with a deep transverse pronotal impression. Abdominal stridulitrum well developed. Body surface with numerous elongate upstanding hairs.

Head, anterior pronotal lobe, scutellum, and ventral surface black, hemelytra black and dull brown with a transverse macula.

Cayman Brac (RMB).

Ligyrocoris litigiosus (Stål)

Medium sized with a distinct lunate abdominal stridulitrum. First antennal segment pale, fourth antennal segment completely dark. Legs and antennae dull yellow. Femora spotted distally.

Grand Cayman (RMB).

Myodocha unispinosa Stål

Relatively large (8) with very elongate "neck." Head and neck, shining black. Forefemur slender with a single large spine present. Antennae brightly colored, first segment red-brown, strongly shining, contrasting with pale yellow second segment.

Grand Cayman (RMB).

OZOPHORINI

Ozophora umbrosa Slater

Moderately large (5.5-6.5), generally dark chocolate brown with pale spots on corium; membrane lacking pale apical macula. Dorsal surface glabrous. Fourth antennal segment with a conspicuous white annulus.

Scudder (1958) reported *Ozophora atropicta* Barber from the Caymans. Despite our rather extensive collection of *Ozophora* species, we have been unable to collect this species on the Caymans. We have recently examined part of the Scudder material, which is deposited in the Natural History Museum (London—not Oxford as the Scudder paper states). These specimens are *O. umbrosa* Slater, a species not described at the time of Scudder's paper. We are thus referring the Caymans records of *O. atropicta* here.

Little Cayman (Scudder 1958, RMB) Cayman Brac (RMB).

Ozophora burmeisteri (Guerin)

Pronotum nearly uniformly black or dark chocolate brown. Posterior pronotal lobe with yellow streak midway between meson and margin or a pair of yellow spots in same area. Fourth antennal segment with conspicuous white annulus, 3rd segment slightly swollen distally and dark chocolate brown on distal ⅓. Readily distinguishable by the combination of its very dark pronotum and erect dorsal hairs.

Grand Cayman (Scudder 1958, RMB), Cayman Brac (Scudder 1958, RMB).

Ozophora caroli Slater & Baranowski

Body elongate, relatively stout; head, anterior pronotal lobe and broad rays extending through posterior pronotal lobe dark red brown. Anterior pronotal color broadly pale yellow on either side of median red brown spot. Scutellum chiefly dark red brown, but with raised elliptical calloused area yellow, shading anteriorly to reddish brown. Antennal segments I, II, and III pale yellow with distal end of III, proximal end and distal ¾ of IV contrastingly dark chocolate brown. Body nearly glabrous above, lacking conspicuous upstanding hairs.

Grand Cayman (RMB).

Ozophora coleoptrata Slater

Small (3-4.5), chiefly dark chocolate brown with contrasting pale yellow bands on the posterior pronotal lobe, and on the cubital vein of the clavus. Legs and antennae uniformly pale yellow. Dorsal surface possesses numerous upright hairs. Color varies considerably with some specimens pale yellow laterally on the corium.

Slater (1990) described this species from a series consisting only of coleopteroid individuals with the clavus and corium fused and the membrane reduced to a small flap. We have collected immatures on Grand Cayman that molted to macropterous adults. The macropterous form differs from other small (3-4.5) *Ozophora* in having sparse upright hairs on the dorsum.

Grand Cayman (RMB), Cayman Brac (RMB), Little Cayman (RMB).

Ozophora laticephala Slater & O'Donnell

Small (2.8-3.3), short, stout. Generally pale yellow with the posterior pronotal lobe and most of the hemelytra contrasting with the dark anterior pronotal lobe, the latter having pale white or yellow lateral margins. Bucculae U-shaped, rather than V-shaped as in other Caribbean species of *Ozophora*.

Grand Cayman (RMB) and Cayman Brac (RMB).

Ozophora minuscula Scudder

Moderate sized (4.3), markings somewhat similar to *O. pallidifemur*, but much smaller. Known only from the type series consisting of two males collected in a light trap near Georgetown. Dr. Peter Fitzgerald operated a blacklight trap for us for several years but never collected this species.

Originally described and known only from Grand Cayman (Scudder 1958, BMNH).

Ozophora pallidifemur pallidifemur Scudder

Moderate sized (5-5.5), predominantly dark brown with uniformly pale yellow legs. Antennal segments I, II, and III pale with distal ends of II and III darkened. Fourth antennal segment brown with white subbasal annulus. Membrane uniformly dark.

Originally described and known only from Grand Cayman (Scudder 1958, BMNH, JAS, NMNH, RMB).

Ozophora pallidifemur fuscifemur Scudder

Similar to nominal *O. pallidifemur*, but can be separated by the dark brown legs.

Originally described as a distinct species. Slater (1987) reduced this taxon to a subspecies of *O. pallidifemur* on the basis of each being endemic on separate islands.

Cayman Brac (Scudder 1958, RMB), Little Cayman (Scudder 1958, RMB).

Ozophora quinquemaculata Barber

Moderate (5-6) sized, relatively stout with strongly variegated light and dark markings on pronotum and hemelytra. Posterior pronotal lobe with three dark longi-

tudinal stripes, the median one occurring as a broad lobe along the meson, lacking a pale streak. Apical corial margins dark distally from inward extension of dark apical corial macula completely over raised corial margin apex.

Grand Cayman (RMB).

RHYPAROCHROMINI

Dieuches armatipes (Walker)

Large, robust (9-10), variegated with chocolate brown to black and light yellow to almost white. Pronotum with broadly explanate pale lateral margins contrasting strongly with the predominantly dark remainder of pronotum. Scutellum with a pair of small yellow spots. Hemelytra variegated, with a complete transverse dark fascia and large oval elliptical white subapical corial macula.

This African species apparently has recently become established in the Western Hemisphere. It was first reported from Grand Cayman and St. Kitts and from intercepted specimens from the Dominican Republic and Jamaica by Henry and Froeschner (1993). It is also now known from the Florida mainland.

Grand Cayman (Henry and Froeschner 1993, RMB) and Cayman Brac (RMB).

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