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The beetle fauna of Dominica, Lesser Antilles (Insecta: Coleoptera): Diversity and distribution

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Abstract. The beetle fauna of the island of Dominica is summarized. It is presently known to contain 269 genera, and 361 species (in 42 families), of which 347 are named at a species level. Of these, 62 species are endemic to the island. The other naturally occurring species number 262, and another 23 species are of such wide distribution that they have probably been accidentally introduced and distributed, at least in part, by human activities. Undoubtedly, the actual numbers of species on Dominica are many times higher than now reported. This highlights the poor level of knowledge of the beetles of Dominica and the Lesser Antilles in general. Of the species known to occur elsewhere, the largest numbers are shared with neighboring Guadeloupe (201), and then with South America (126), Puerto Rico (113), Cuba (107), and Mexico-Central America (108). The Antillean island chain probably represents the main avenue of natural overwater dispersal via intermediate stepping-stone islands. The distributional patterns of the species shared with Dominica and elsewhere in the Caribbean suggest stages in a dynamic taxon cycle of species origin, range expansion, distribution contraction, and re-speciation.

Introduction

The islands of the West Indies are increasingly recognized as a "hotspot" for species biodiversity (Myers *et al.* 2000, Myers 2003, Mittermeier *et al.* 2005). But this generalization is mostly based on a few better-known groups such as vascular plants, terrestrial vertebrates and perhaps butterflies (Ricklefs and Lovette 1999). The terrestrial animal groups that are actually the most diverse are the insect orders Diptera (true flies), Lepidoptera (moths), Hymenoptera (bees, wasps and ants) and especially Coleoptera (beetles). Beetles alone are estimated to account for some 20% of all the world's animal species known to science (Wheeler 1990, Wilson 1992). The goal and purpose of this report is to provide a critical summary of knowledge of the diversity of the beetle fauna of Dominica, and to provide a starting point for others to add to what is now known.

The island. Dominica is in the Leeward Islands group, near the middle of the of the Lesser Antilles chain of islands. It lies between 15°10' to 15°40' N latitude and 61°15' to 61°30' W longitude, and between the French islands of Guadeloupe (45 km to the north) and Martinique (40 km to the south) (Fig. 1). It is 751 km² in area, with a maximum elevation of 1447 m and is roughly tear-drop in shape, with a length of 48 km and a width of 24 km at its widest (in the southern half). It is a lush and comparatively undisturbed island, with a drier leeward (western) side (with an average of 190 mm of rain annually), and a wetter

windward (eastern) side (with an average of 250 mm of rain annually). Rainfall is heavy and varies seasonally, with the dry season from mid-January to mid-June and the rainy season from mid-June to mid-January. April is the driest month. The yearly average temperature is 26°C at the southwestern coastal capital city of Roseau, with an average maximum of 29°C and a minimum of 24°C. In the highland interior of the island the temperatures are markedly lower (about 10°C lower at about 600 m). Large areas, especially at higher elevations, are protected in Forest Reserves and National Parks. Development has been relatively minor in comparison to some other islands in the Lesser Antilles. The present national policy of Dominica is to promote ecotourism through conservation practices for the generation of foreign exchange.

The geological age and origin of Dominica is similar to that of most of the other high islands in the mostly volcanic island arc of the Lesser Antilles. The whole island arc lies to the west of the trench into which the Atlantic (North American) seafloor plate is being overridden by the Caribbean seafloor plate. Dominica is volcanic in origin and bedrock and may be, at most, only of mid-Tertiary age, and available for terrestrial colonization only since the Miocene. There is no compelling evidence of continuous land connections between the major Lesser Antillean volcanic islands from the Miocene onwards (Donnelly, 1988). Thus, Dominica has probably always been an isolated oceanic island, never with a land bridge connection to other islands (Hedges 2001). The general biotic distri-

Table 1. Early collectors of insects who provided beetle records for the island of Dominica with time of their activity (if known), based upon specimens in the collections of the USNM or literature sources. Activity from 1964-1966 was during the Bredin-Archbold-Smithsonian Biological Survey.

Anderson, D. M.	1965	Kislink & Cooley	September, 1931
Angus, G. F.	Godman and Salvin (1884); Druce (1884)	Lutz, F. E.	Leng and Mutchler (1922: 461)
Ballou, H. A.	Fisher (1932: 49)	Matthews, E.	1964
Becher, E. F.	1908; Champion (1917: 230)	Miner, R. W.	Leng and Mutchler (1922: 461)
Blackwelder, R. E.	July, 1936; Blackwelder (1943)	Nicholls, H. A.	Leng and Mutchler (1922: 495)
Busch, A.	August, 1905	Porter, R. F.	November 1917
Clarke, J. F. G.	March, 1956; 1964	Ramage, G. A.	Leng and Mutchler (1922: 488)
Clarke, T. M.	1965	Robinson, H.	1964
Evans, H. E.	1965	Scott, H.	1912; AMNH Bull. (8) 10: 430 (1912)
Fennah, R. G.	July, 1941	Spilman, T. J.	1964
Flint, O. L.	July, 1963; 1964	Splangler, P. J.	1964
Fook, H. W.	1913, Yale Expedition	Stehle, H.	April, 1946
Gagne, R.	1966	Steyskal, G.	1966
Hays	April 15, 1930	Verrill, A. H.	1904-1905
Hespenheide, H.	1964	Wickham, H. F.	Leng and Mutchler (1922: 496)
Hubbard, H. G.	March, 1894	Wirth, W. W.	1965

butional patterns are of overwater dispersal, not a vicariant separation of prior continuous biotic distributions existing on a land bridge as in the model proposed by Iturralde-Vinent and MacPhee (1999).

The beetle fauna. The beetles of the entire West Indies are still very poorly known. Blackwelder (1944-1957) summarized beetle data for the Neotropics, including the West Indies, as of the date of that publication. A recent summary of the Greater Antillean island of Cuba enumerates 2673 beetle species (Peck 2005). This compares to the 4675 species known in the continental beetle fauna of Florida (Peck and Thomas 1998). The island of Hispaniola has 1466 known beetle species (Perez-Gelabert 2005). Tiny Guana Island in the eastern-most part of the Greater Antilles has received intensive attention by a variety of workers, and now has 405 documented beetle species (Valentine and Ivie 2005).

Within the Lesser Antilles, Leng and Mutchler (1914, 1917), listed 705 species of beetles for the Guadeloupe island group from the work of Fleutiaux and Sallé (1890), Grouvelle (1902), and Grouvelle and Raffray (1908, 1912). The next best-known island may be St. Vincent, which was collected by Mr. H. H. Smith in 1887-1889 as a part of a project of the British Association for the Advancement of Science on the insects of the islands of "British West India" (Holland 1919). The beetles were described by several workers (e. g. Champion 1897), and Howard (1898) summarized the results of the project up to that time. Later references are in Blackwelder (1944-1957). For the islands of Grenada and the Grenadines, Woodruff *et al.* (1998) list 507 species of beetles (in 51 families). Bennett and Alam (1985) list the insect fauna of

Barbados, with 239 species of beetles. Peck *et al.* (2002) list a very incompletely known fauna of 672 species of beetles from the continental shelf island of Tobago, northeast of Trinidad.

The most important "recent" work on presenting a multi-family overview of the beetles of a part of the Lesser Antilles may be Fleutiaux *et al.* (1947) on the French Antilles, because of its scope and thoroughness. This was projected to be a set of volumes, but I am aware of only one volume being published. This covers 25 families of Polyphaga, including 118 genera and 207 species, with keys for generic and species identification, and many descriptions and fine illustrations. It estimates the entire beetle fauna of the French Antilles to be about 500-600 genera and about 1500 species.

In the first summary compilation for Dominica, 57 beetle species were reported by Leng and Mutchler (1914, 1917) and then 123 species by Blackwelder (1944-1957) according to Spilman (1971). The first focused beetle survey of Dominica is that of Blackwelder (1943) as a part of his study of the Staphylinidae of the West Indies. He sampled in Dominica from 18 May to 12 July, 1936, with 26 sample stations, and found 26 species of Staphylinidae, excluding Aleocharinae. Spilman (1971) inaugurated a series of modern reviews of the beetles of Dominica, but, unfortunately, only a few papers on the beetle fauna have appeared since then (e. g., Cartwright and Chalumeau 1978). Chalumeau (1983a) and Chalumeau and Touroult (2005a) are summaries of their many studies on Scarabaeoidea and Cerambycidae of the Lesser Antilles, with a focus on Guadeloupe, Dominica, and Martinique.

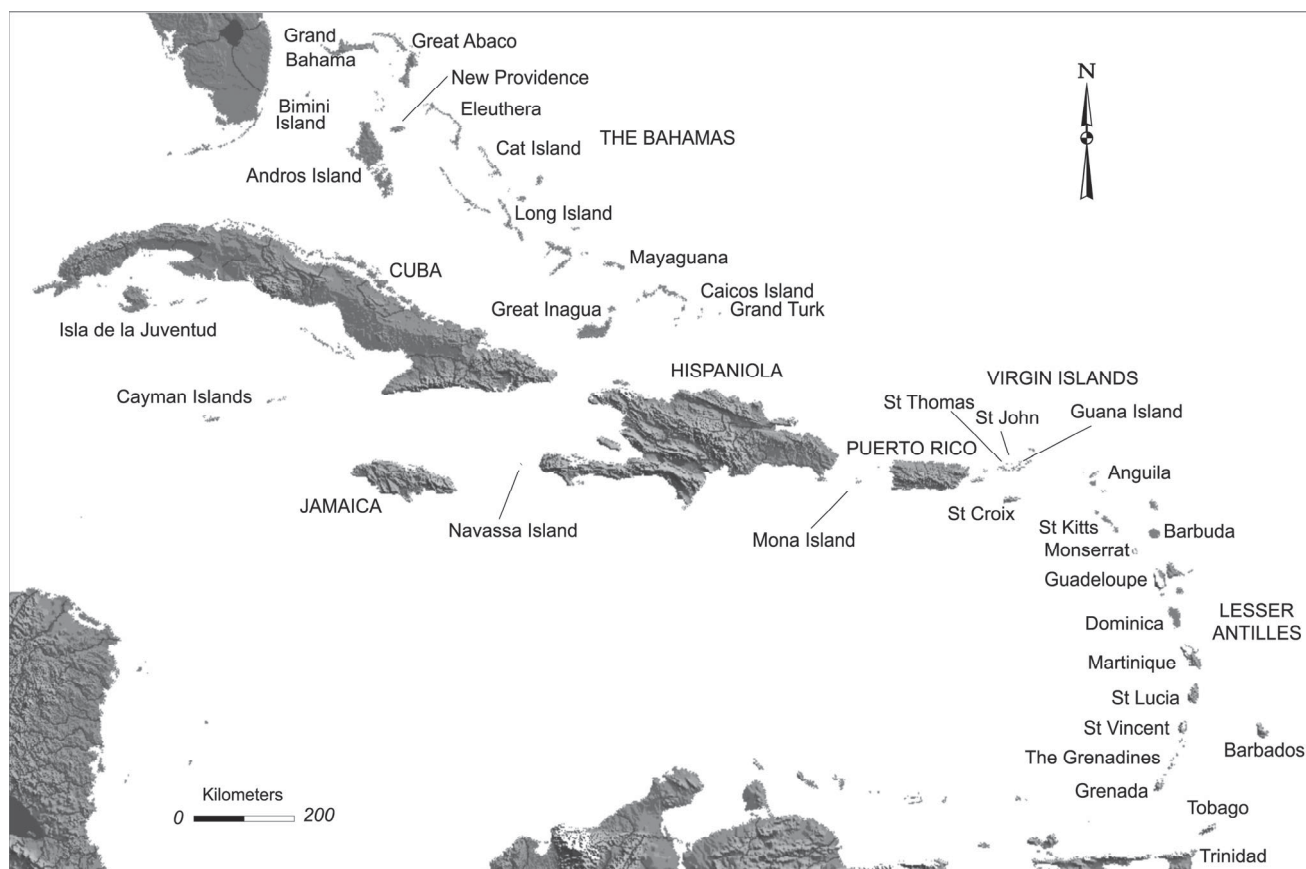


Figure 1. Principal islands of the eastern West Indies, showing the relative position of Dominica in the Lesser Antilles chain to other islands and continental lands (Florida, Nicaragua, and Colombia-Venezuela and continental shelf islands of northern South America).

Materials and Methods

The modern beetle collecting which was the basis of the work by Spilman (1971) and Cartwright and Chalumeau (1978) was based on a field sampling program called the Bredin-Archbold-Smithsonian Biological Survey of Dominica, conducted from May 1964 to October 1966. Although this resulted in many fine inventory reports for many groups of plants and animals on Dominica, the beetles have been negligibly reported. Undoubtedly, many unidentified or identified but unpublished specimens are in the collections of the US National Museum of Natural History (USNM), Smithsonian Institution, Washington, DC. Because of this, I spent a week with the USNM collections searching for Dominica records determined to species. Insect collections were also made by the Carnegie Museum of Natural History, Pittsburgh, PA (CMNH) in 1991 and beetles may be in that collection. A list of earlier insect collectors on Dominica is given in Table 1.

Collecting. The present inventory was generated as a result of my sampling in Dominica in May and June, 2004, in cooperation with the field biology course in tropical island biology, given by Texas A & M University (TAMU). This field course has been given since 1992, and it operates out of Springfield Estate Guest House and Biology Station (e-mail address: springfield2@cwdom.dm). The course has frequently been partly taught by the entomologists Dr. James Woolley and Dr. Bob Wharton of TAMU, as well as others. Their insect samples are in the collections of the Department of Entomology, TAMU, College Station, Texas. These, as well as those in the USNM and CMNH, should be consulted for material for any future study of any insects of Dominica. My records are in my collection (SBPC) or the Canadian Museum of Nature (CMNC), which contains undetermined material. My residues are in the Florida State Collection of Arthropods, Gainesville, FL (FSCA). Some additional records are given here for specimens in collections of the West Indian Beetle Fauna project (WIBF) of Mike Ivie (MAI collection), Department of

Table 2. Numbers of beetles named to species known from Dominica which are shared with other Caribbean Basin continental land masses and continental shelf islands or Caribbean oceanic island banks, arranged from north and west to south and east. Each oceanic island bank represents a paleo-island of continuous land at times of Pleistocene lowest sea levels. Presence of a non-endemic species on a bank represents a minimum of at least a single dispersal event by the crossing of an oceanic water gap. The irregularity in the decline of the numbers away from Dominica undoubtedly does not represent a natural decline in a pattern of dispersal and colonization ability, but the magnitude of the inequities in sampling the fauna of the oceanic islands of the Caribbean.

Southwestern USA	12	St. Kitts Bank, including Eustatus, Nevis	28
Mexico and Central America	108	Antigua Bank, including Barbuda	50
Southeastern USA	36	Montserrat	57
Cuba Bank	107	Guadeloupe Bank, including La Désirade,	
Bahamas Banks, including Turks and Caicos	28	Marie Galante, Les Saintes	201
Cayman Banks (Grand, Little, Brac)	11	Dominica	352
Jamaica Bank	76	Martinique	57
Hispaniola Bank	89	St. Lucia	57
Puerto Rico Bank, including Mona,		St. Vincent	91
British and most U. S. Virgin Islands	113	Grenada & Grenadines Bank	23
St. Croix Bank	43	Barbados	55
Sombrero Bank	0	Trinidad & Tobago shelf islands	44
Anguilla Bank, including St. Martin,		Other South American continental	
St. Bartholomew, etc.	26	shelf islands and South America	126
Saba Bank	0	Old World and Tropicopolitan	23

Entomology, Montana State University, Bozeman, MT, and Institute National de la Recherche Agronomique, Guadeloupe (INRA). Because Dominica was formerly a British colony there may also be unreported species in the collections of The Natural History Museum, London, U.K. (NHM; formerly British Museum of Natural History, BMNH).

Collecting and export permits are issued for an administrative fee for scientific research projects by the director of the Forestry, Wildlife and Parks Division (presently Mr Eric Hippolyte), Ministry of Agriculture and the Environment, located in the Botanical Gardens, Roseau; telephone: (767) 448-2401, ext. 3417; Fax: (767) 448-7999; e-mail: forestry@cwdom.dm. Our prime contact person was Mr. Arlington James.

Literature records. I have searched the literature for records of beetles from Dominica. This includes the Coleoptera sections of the Zoological Record, from 1940 to 2003. Catalogs and summaries with West Indian records were searched for references to Dominica. Undoubtedly, the vast taxonomic literature of family and generic revisions of beetles in the West Indies contains Dominica records which I have missed. A limitation of the Blackwelder (1944-1957) list and some other catalogs is that references are given for the original species description, but are often not given for later literature which added supplementary distributional information. Sometimes these do not specifically mention Dominica but vaguely group it with other islands as "West Indies," "Antilles" or "Lesser Antilles." "Identifications listed here for new records are

attributed to the person providing the determination or the collection holding the record. No effort was made to give all earlier citations of a species if these are given in a more recent work that is cited. Full citations for descriptions by early authors can be found in Blackwelder (1944-1957). To give these here would excessively lengthen the references section of this list.

Classification. The family, subfamily, and tribal level classification system and sequence used here is that of Lawrence and Newton (1995) as modified in Arnett and Thomas (2000) and Arnett *et al.* (2002). The families are listed in the sequence presented there but are re-numbered to incorporate all the families of the world so that later additions can be more easily inserted into the list. The genera and species are arranged alphabetically under subfamily or tribe. Complete synonymies are not given, but original generic assignments are provided when known. The last citation is usually that of the source from which the record is drawn. Earlier references to the species can be drawn from this source or from Blackwelder (1944-1957).

Distributions. Data on distributions outside of Dominica and biology is given when known or can be inferred. Names of West Indian "oceanic" islands are listed in alphabetical order. If continental mainland countries or continental shelf islands are known as a part of the species range these are listed separately in alphabetical order after the island localities.

A conservative approach is taken in the construction of the distribution list. It usually includes only

Table 3. Alphabetical list of beetles known from Dominica that have been at least partly distributed (accidentally introduced) by human agency. These species are mostly widespread or tropicopolitan in distribution and mostly originated in the Old World. The numbers are the minimum number of Caribbean Basin geographic areas of Table 2 in which they are known to occur. These numbers may reflect a relative and comparative measure of their invasiveness and dispersability. These species are excluded from the analyses in tables 5 and 6.

<i>Alphitobius laevigatus</i> (Tenebrionidae)	9	<i>Lobiopa insularis</i> (Nitidulidae)	7
<i>Anotylus glareosus</i> (Staphylinidae)	7	<i>Megacylene angulata</i> (Cerambycidae)	1
<i>Anotylus insignitus</i> (Staphylinidae)	20	<i>Perigona nigriceps</i> (Carabidae)	7
<i>Aphodius lividus</i> (Scarabaeidae)	9	<i>Philonthus hepaticus</i> (Staphylinidae)	20
<i>Aphodius nigritus</i> (Scarabaeidae)	22	<i>Philonthus ventralis</i> (Staphylinidae)	20
<i>Camptodontus angelicanus</i> (Carabidae)	1	<i>Premnobius cavipennis</i> (Curculionidae)	8
<i>Carpophilus mutilatus</i> (Nitidulidae)	7	<i>Sitophilus linearis</i> (Curculionidae)	9
<i>Coproporus pulchellus</i> (Staphylinidae)	15	<i>Sternochetus mangiferae</i> (Curculionidae)	2
<i>Cosmopolites sordidus</i> (Curculionidae)	10	<i>Strongylaspis corticarius</i> (Cerambycidae)	3
<i>Dactylosternum abdominale</i> (Hydrophilidae)	6	<i>Tribolium castaneum</i> (Curculionidae)	9
<i>Dinoderus minutus</i> (Bostrichidae)	8	<i>Xyleborus volvulus</i> (Curculionidae)	9
<i>Epuraea luteolus</i> (Nitidulidae)	10	<i>Xyloborus ferrugineus</i> (Curculionidae)	11
<i>Hypothenemus eruditus</i> (Curculionidae)	8	<i>Xylopsocus capucinus</i> (Bostrichidae)	4
<i>Lithocharis ochracea</i> (Staphylinidae)	12		

explicit literature records for Dominica or unpublished but identified Dominica material vouchered in collections identified by acronyms (i. e., CMNC, SBPC, TAMU, USNM). Species reported to be widespread in the Lesser Antilles, or from both Guadeloupe and Martinique, will probably be found on Dominica as well. A possible source of distributional error lies in the fact that some authors have confused the island of Dominica (Dominique in French) with the nation of the Dominican Republic (sometimes listed as Santo Domingo, and Republica Dominicana in Spanish and République Dominicaine in French) on the island of Hispaniola in the Greater Antilles. French mapmakers have at times applied the name St. Dominique to the island of Hispaniola, and this has been wrongly interpreted as the island of Dominica. Amber with fossil insects from the Dominican Republic is often called Dominican amber, and has sometimes been mistakenly attributed to the island of Dominica. I have tried to detect and eliminate such errors. The proper pronunciation of the two countries is: as nouns, Do-mi-ni'-ca, and Do-min'-i-can Republic; and as adjectives, Do-mi-ni'-can vs Do-min'-i-can.

The data set was examined to obtain some distributional or biogeographic generalizations. To gain these the detailed island data in the following list were summarized in an excel spread-sheet. Individual island records were then grouped by island banks, which represent the paleo-islands which were always isolated by water gaps during Pleistocene low-sea-level stands when sea level was 100 m or more below present. Exceptions in these groupings are Mona, the Cayman group, and the Bahamas group. Mona is here grouped with Puerto Rico, and the Caymans and

Bahamas (Browne and Peck 1996), both of which are composed of two or more banks isolated through the Pleistocene, are simply treated here as single banks.

Results and Discussion

Diversity. The list contains 269 genera, and 361 species (in 42 families), of which 347 are known by species name. Sixty-two species are endemic (limited) to Dominica and thus probably evolved on the island and have not moved beyond it. The other named species are known to occur on other islands or continental regions. It is evident that many more families, genera, and species remain to be sampled and reported. It is premature to make an estimate of the actual number of beetle species which exist on Dominica, but it is many times more than presently known.

Distribution patterns. Even though it is far from complete, the following listing can be viewed as a subset of the entire fauna and it can serve as a random sample for the extraction of major patterns of distribution, which is likely to be reflective of those of the whole fauna. Table 2 presents the numbers of naturally occurring species on Dominica which are shared with other islands or land masses. The varying distributions reflect the random opportunities and different dispersal abilities of the species in crossing oceanic water gaps and their subsequent colonization ability in a new island or land mass. The islands of the Lesser Antilles themselves are only of mid or late Tertiary age. Each beetle species is probably not older than a few million years, so their distributions have been achieved after the species originated.

Table 4. Beetles species which are widespread only in the New World and probably naturally occur in Dominica. The numbers are the Caribbean Basin lands and islands of Table 2 from which the species are known. This excludes the species in Table 3, which have probably been widely distributed by human activities. These species are probably very vagile, are probably common and ecologically adaptable, and can be called tramp species. Since many are associated with areas of human disturbance they also could have been at least partly dispersed by human activities. These species are included in the analyses in tables 5 and 6.

<i>Ligyryus cuniculus</i> (Scarabaeidae)	12	<i>Zophobas atratus</i> (Tenebrionidae)	14
<i>Thoracophorus guadelupensis</i> (Staphylinidae)	12	<i>Achryson surinamum</i> (Cerambycidae)	15
<i>Ataenius gracilis</i> (Scarabaeidae)	13	<i>Lagocheirus araneiformis</i> (Cerambycidae)	15
<i>Clivina fasciata</i> (Carabidae)	13	<i>Neocompsa cylindricollis</i> (Cerambycidae)	15
<i>Lithocharis limbata</i> (Staphylinidae)	13	<i>Aphodius cuniculus</i> (Scarabaeidae)	16
<i>Aspisoma ingitum</i> (Lampyridae)	14	<i>Cafius bistriatus</i> (Staphylinidae)	16
<i>Coproporus rutilus</i> (Staphylinidae)	14	<i>Neohypnus attenuatus</i> (Staphylinidae)	16
<i>Metamasius hemipterus</i> (Curculionidae)	14	<i>Platystethus spiculus</i> (Staphylinidae)	16
<i>Opatrinus clathratus</i> (Tenebrionidae)	14	<i>Ataenius scutellaris</i> (Scarabaeidae)	17
<i>Tropisternus lateralis</i> (Dytiscidae)	14	<i>Ataenius strigicauda</i> (Scarabaeidae)	17
<i>Xylomeira torquata</i> (Curculionidae)	14	<i>Diomus roseicollis</i> (Coccinellidae)	17

The varying distributions show the results of active or passive dispersal from the island or continental area in which the species originated. It could be predicted that the number of Dominican species shared with the other islands would be highest for neighboring islands such as Guadeloupe and Martinique, and then would decrease with distance from Dominica. Stepping-stone dispersal between other Lesser Antillean islands and South America would be expected to decline with distance from Dominica and to be more frequent than between the more distant Greater Antilles and Central and North America. The data only partly show this. Guadeloupe (201 species) and South America (126 species) have the highest number of shared species. Rather than other Lesser Antilles islands, next comes Puerto Rico (113 species), Cuba (107 species) and Mexico and Central America (108 species). This is not the expected, regular and natural pattern of diminution of species numbers over distance through stepping-stone islands. It is rather interpreted as a pattern that at least partly reflects the amount of collecting and research effort on other islands and land masses.

The neighboring island of Guadeloupe has the largest number of shared species, as expected. This is because of the pioneering work of Fleutiaux and Sallé (1890) and Fleutiaux *et al.* (1947) and the collecting over the past 35 years of Fortuné E. Chalumeau on Guadeloupe. The island of Martinique, similar in size, habitat diversity, and distance from Dominica, would be expected to have a similar number of shared species, but has only 57, which is undoubtedly because it has received less effort in collecting and publication.

Twenty-three species are of such wide distribution that they have probably been aided by human

activity in achieving a nearly tropicopolitan or wider distribution (Table 3). These are species which are often pests of agriculture or stored products.

There is a marked inequality in the number of areas from which the shared species are known, ranging from a single other area (often Guadeloupe), to up to 26 other geographic areas. Table 4 lists the species recorded from 12 or more of the areas in Table 2. These are obviously wide ranging and might be called tramp species and they are often associated with habitats disturbed by human activity.

Evolution of the distribution patterns. The above general patterns are ones which have been long known and frequently recognized (e. g., Darlington 1957, Liebherr 1988, Matthews 1966, Woods and Sergile 2001). It is a pattern of varying numbers of species shared with other areas (Table 5). Each island of the Lesser Antilles can have its own endemic species and additional species are shared with other combinations of islands. Some species are also shared with northern South America or other continental areas. While both islands and continents can originate species, the ultimate sources of island species are seemingly continents, and 124 species are broadly distributed in the mainland Neotropics. These may be considered the dominant taxa, which have tended to arise and spread from continents, which are the largest favorable land masses for species origin (Wilson 1961).

It is evident that, after their origin, some species do cross the water gaps between islands or continents and expand their ranges (Howden 1996). The major continental source of species for Dominica is South America via the Lesser Antilles with 34 species exhibiting this distribution. It can be expected that many more shared species are present and remain to

Table 5. Major geographic groupings of shared distributions of naturally occurring beetle species on Dominica and elsewhere in the Caribbean Basin and adjacent lands. The numbers show a possible source of shared species originating in South America (34) to be about twice as frequent as Central America-Mexico (17). Species on Dominica which are shared only with the Antilles and USA (Florida) are few (5). Progressively fewer species are shared with the entire oceanic Antilles (129), the Lesser Antilles (78), and species endemic to Dominica (62).

On Dominica and widely shared with continental Neotropics	124
On Dominica and in South America, but not in Central America-Mexico	34
On Dominica and in Central America-Mexico, but not in South America	17
On Dominica and in the southeastern USA, but not Central America-Mexico	5
On Dominica and elsewhere only on other Atlantic Ocean Islands, including Antilles, South American continental shelf islands and Bermuda	136
On Dominica and elsewhere only in oceanic Greater and/or Lesser Antilles	129
On Dominica and only on other Lesser Antilles Islands	78
On Dominica and Guadeloupe only	35
On Dominica and Martinique only	4
On Dominica and St. Lucia only	1
On Dominica and St. Vincent only	2
On Dominica and Puerto Rico only	3
On Dominica and Grenada and the Grenadines only	2
On Dominica and Barbados only	1
On Dominica and South America only	4
On Dominica and Central America only	1
On Dominica and USA only	1
Endemic (found only on Dominica)	62

be documented on the islands along the chain to the south of Dominica and connecting to South America. An additional 17 species also show that the second major avenue of dispersal to and from Dominica is probably through the islands of the Greater Antilles, and from there to a second continental source of species in Mexico and Central America, probably via the Yucatan Peninsula or Honduras. Only five species are shared with the southeastern United States which do not also occur in Mexico-Central America, suggesting that southeastern North America has not been an important source of colonizing species.

Taxon cycles. The above distributional patterns may contain data which are reflective of one or more cycles of taxon origin and expansion (Wilson 1961, Ricklefs 1970, Howden 1985). Such a "taxon cycle" is characterized as a syndrome of species origin, range expansion, local specialization, range contraction, and renewed speciation. These are most evident as cycles of evolutionary range expansion and contraction from continents to islands. Four stages are recognized in this continuum (Ricklefs and Cox 1972, 1978). Species move through the cycle from Stage I to Stage IV and this is accompanied by changes in dispersal ability, habitat distribution, and population density.

Stage 1 is characterized by species with widespread distributions expanding from larger (usually continental) land masses to smaller (usually insular) land masses. The species often occupy marginal and

lowland habitats and exhibit ecological release on islands due to lack of competition. Stage II is when differentiation begins between islands, and is best detected in vertebrates with a subspecies level of taxonomic nomenclature. Stage III is characterized by species with conspicuous gaps in ranges caused by extinction on individual (usually smaller) islands and more marked phenotypic (subspecies) differentiation and local ecological specialization. Stage IV is when the species have become differentiated into species endemic to single islands, and these are usually ecologically more restricted and specialized to island interior (often upland) habitats. Table 6 presents groups of Dominican beetle species whose known patterns of distribution suggest parallels with stages in a taxon cycle.

The dynamics of distribution are related to habitat type and geographical and ecological range of the species. This has been best studied and verified for West Indian birds (Ricklefs 1970, and Ricklefs and Cox 1972, 1978) which have a well developed subspecies taxonomy and on which data can be measured for habitat use and ecological amplitude. Ricklefs and Lovette (1999) examined the relative importance of island area versus habitat diversity as correlates of species richness in the Lesser Antilles. For four groups of animals they found that both were important to varying amounts depending on the animal group. The same would be expected for beetles and to vary for different families. Criticism of the taxon cycle

Table 6. Summary of data on shared natural distributions grouped as hypotheses representing stages of a continuum of a dynamic and evolutionary taxon cycle. Data as in table 5. The cycle passes through stages of species origination on larger land masses, dispersal to smaller land masses, range contraction, phenotypic differentiation, and re-speciation (Ricklefs and Cox 1972). See text.

Stage I. Number of expanding or widespread species, probably of continental origin, moving from larger to smaller land masses, with no local differentiation, probably naturally invasive (competitively dominant), and frequently inhabiting marginal habitats.

On Dominica and generally shared with continental Neotropics	124
On Dominica and in South America, but not in Central America-Mexico	34
On Dominica and in Central America-Mexico, but not in South America	17
On Dominica and in the southeastern USA, but not Central America-Mexico	5

Stage II. Number of widespread species limited to the Antilles (with lower dominance and no longer present on a continent), perhaps with some differentiation between islands. Some of these are found only on two banks. Few explicit examples are available because of the infrequent use of subspecies in beetles. Possible examples are in Cerambycidae where subspecies are used.

On Dominica and elsewhere only in oceanic Greater and/or Lesser Antilles	129
On Dominica and only on other Lesser Antilles Islands	78

Stage III. Number of species limited to the Lesser Antilles and with conspicuous gaps in geographic ranges because of island extinctions, and probably inhabitants of specialized and island interior habitats. More local differentiation (subspeciation) would be expected in these. Alternatively, these more probably represent inadequately sampled taxa and/or islands (or in some cases are misidentifications).

On Dominica and Guadeloupe only	35
On Dominica and Martinique only	4
On Dominica and St. Vincent only	2
On Dominica and Puerto Rico only	3
On Dominica and Grenada only	2
On Dominica and Barbados only	1

Stage IV. Number of species endemic to a single island-bank and probably inhabiting specialized island interior habitats.

Endemic to (found only on) Dominica	62
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concept has been countered (Ricklefs and Bermingham 2002) with molecular phylogenies which parallel ecological-distributional properties of Lesser Antillean birds.

Detailed data are not now available to test the reality of taxon cycles for beetle species in the Antilles, but such could be gained, following the methodology of Ricklefs (1970) and Ricklefs and Cox (1972, 1978). Research into the details of individual beetle species can test taxon cycle hypotheses and shed additional light on the underlying evolutionary meaning of the patterns and dynamics of species origin and distribution on Caribbean islands. This is a productive area for future synthetic study.

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Systematic List

Island records without any indication of their specific source are from Blackwelder 1944-1957 or other indicated literature. Island records marked by an asterisk are from vouchers housed in the USNM. General sources of other records are individually indicated by family. The abbreviated notes in the "Bionomics" sections refer to general observations or collecting localities for the island of Dominica. This section is presented even if no data are available, to provide a place for future annotations.

Suborder Adephaga

Family 9. Rhysodidae, the wrinkled bark beetles

Clinidium smithsonianum Bell and Bell 1985: 134; Bell 2001: 120. **Distribution.** Endemic to Dominica. Closely related species in the *guldingtoni* species group occur on Guadeloupe, Martinique and St. Vincent (Bell 2001: 123). **Bionomics.** Found in rotted wood, where they feed on slime molds in the wood.

Family 10. Carabidae, the ground beetles

Identifications and new records courtesy of G. E. Ball, supplemented by data from an unpublished report of GEB (10 May 1995) to Dominica Forestry, Wildlife and Parks Department, Ministry of Agriculture. Erwin (undated) is an online checklist of the Carabidae of the western Hemisphere. *Lebia viridis* Say 1823: 14 (listed in Blackwelder 1944-1957: 56 and

Erwin (undated) from Cuba, Dominica, Puerto Rico, Guatemala, Mexico, and widespread in USA) is probably not in Puerto Rico and Dominica (GEB), and is not included in the list below. Erwin and Sims (1984) provide keys for identification of the genera of the West Indies.

Subfamily Cicindelinae

Tribe Cicindelini

Cylindera (Plectographa) suturalis Fabricius 1798: 62; Erwin and Sims 1984: 424; Freitag 1992: 155; Erwin undated. **Distribution.** Antigua, Barbados, Barbuda, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Martinique, Puerto Rico, St. Barthélemy, St. John, St. Martin, St. Thomas, St. Vincent. South America. **Bionomics.** On open sandy substrates.

Cicindela (Cicindelidia) trifasciata Fabricius 1781: 286; Erwin and Sims 1984: 425; Freitag 1992: 157. **Distribution.** Anguilla, Antigua, Bahamas, Barbuda, Cuba, Dominica, Grand Cayman, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Barthélemy, St. Croix, St. John, St. Martin, St. Thomas. **Bionomics.** On open sandy coastal substrates.

Subfamily Carabinae

Tribe Carabini

Calosoma (Castridia) alternans (Fabricius) 1792: 146 (*Carabus*); Gidaspow 1963: 298; overlooked in Erwin and Sims 1984: 423; Bennett and Alam 1985: 20. **Distribution.** Barbados, Dominica, Martinique, St. Croix, St. Barthélemy. Trinidad, Mexico to Columbia and northern Brazil (nominate subspecies) and *S. a. granulatus* Perty throughout most of Brazil, to Bolivia, Paraguay, and Uruguay. Greater Antilles records are in error (Gidaspow 1963: 300). **Bionomics.** Adults and larvae are predators on lepidoptera larvae. Adults often appear in numbers at the start of the rainy season.

Subfamily Scaritinae

Tribe Clivinini

Aspidoglossa cribrata Putzeys 1846: 634; Nichols 1988: 99, 119. **Distribution.** Dominica, Grenada, Guadeloupe, Puerto Rico, St. Croix, St. John, St. Vincent. South America. **Bionomics.** Living in burrows in soft moist soil near fresh water.

Aspidoglossa schach (Fabricius) 1792: 153; Nichols 1988: 99, 119. **Distribution.** Dominica, Grenada, Grenadines, Guadeloupe, Hispaniola, Martinique, Puerto Rico, St. Croix, St. Vincent. South America. **Bionomics.** Living in burrows in soft moist soil near fresh water.

Clivina (Paraclivina) fasciata Putzeys 1846: 624; Nichols 1988: 94, 118. **Distribution.** Bahamas, Cayman Islands, Cuba, Dominica, Granada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Thomas, St. Croix. Mexico, South America, eastern USA. **Bionomics.** Living in burrows in soft moist soil near fresh water.

Clivina (Paraclivina) marginipennis Putzeys 1846: 619; Nichols 1988: 95, 118. **Distribution.** Dominica, Guadeloupe, Puerto Rico, St. Lucia. Mexico, Eastern USA. **Bionomics.** Living in burrows in soft moist soil near fresh water.

Clivina (Paraclivina) tuberculata Putzeys 1846: 615; Nichols 1988: 95, 119. **Distribution.** Barbados, Dominica, Guadeloupe, Martinique, St. Lucia. South America. **Bionomics.** Living in burrows in soft moist soil near fresh water.

Halocoryza arenaria (Darlington) 1939: 84 (*Schizogenius*); Nichols 1988: 90, 117. **Distribution.** Bahamas, Cayman Islands, Cuba, Dominica, Grenadines, Martinique, St. Croix, St. John, St. Lucia, St. Vincent. Mexico, eastern USA. **Bionomics.** Found on marine beaches and in the intertidal zone.

Tribe Forcipatorini

Camptodontus angelicanus Stephens 1827: 38; Nichols 1988: 89, 116. **Distribution.** Dominica. Accidentally introduced from South America. **Bionomics.** An inhabitant of subtropical wet forest, living in burrows in soft moist soil near fresh water, and established on the island.

Stratiotes iracunda Putzeys 1863: 9; Erwin and Sims 1984: 426; Nichols 1988: 89. **Distribution.** Dominica, Martinique. Nichols (1988: 89) indicates that the species, known only from the unique holotype, occurs only on Martinique.

Subfamily Trechinae Tribe Bembidiini

Mioptachys autumnalis Bates 1882: 137; Erwin and Sims 1984: 429. **Distribution.** Cuba, Dominica (new record), Guadeloupe, Montserrat. Mexico, Guatemala, Nicaragua, Panama. **Bionomics.**

Taken in flight intercept traps at Springfield Estate.

Paratachys abruptus (Darlington) 1934: 80 (*Tachys*); Mateu 1977: 378. **Distribution.** Cuba, Dominica, Guadeloupe (type locality), Hispaniola. **Bionomics.** In moist habitats, probably in gravel along rivers.

Paratachys dominicanus (Darlington) 1934: 81 (*Tachys*); Erwin and Sims 1984: 430. **Distribution.** Endemic to Dominica. **Bionomics.** Taken in flight intercept and uv light traps at Springfield Estate (GEB and SBP); in moist habitats, probably in gravel along rivers.

Subfamily Harpalinae Tribe Harpalini

Amblygnathus cephalotes Dejean 1829: 63; Erwin and Sims 1984: 441 (as *Amblygnathus vitraci* Fleutiaux and Sallé 1890: 364); Erwin undated. **Distribution.** Dominica, Guadeloupe. Bolivia, French Guiana, Surinam.

Notiobia (Notiobia), probably new species (GEB determination, SBPC). **Distribution.** Probably endemic to Dominica. New record. The subgenus is otherwise unknown in the West Indies. **Bionomics.** Taken in flight intercept traps at Springfield Estate, and at Trou Cuchon (in CMNH).

Selenophorus chalybaeus Dejean 1829: 110; Erwin and Sims 1984: 440. **Distribution.** Antigua, Bahamas, Cuba, Dominica (new GEB record), Guadeloupe, Hispaniola, Jamaica, Puerto Rico. **Bionomics.** Living in moist habitats on the ground. Taken at Clarke Hall and 3 mi E Pont Casse.

Selenophorus discopunctatus Dejean 1829: 92; Erwin and Sims 1984: 440. **Distribution.** Antigua, Cuba, Dominica (new GEB record), Hispaniola, Puerto Rico. South America. **Bionomics.** Living in moist habitats on the ground. Taken at Clarke Hall.

Selenophorus nonseriatus Darlington 1934: 109; Erwin and Sims 1984: 440. **Distribution.** Dominica (new GEB record), Hispaniola, Jamaica. **Bionomics.** Living in moist habitats on the ground. Taken on Morne Macaque.

Selenophorus propinquus Putzeys 1874: 118; Erwin and Sims 1984: 440. **Distribution.** Antigua, Dominica (new GEB record), Guadeloupe. **Bionomics.** Living in moist habitats on the ground. Taken at Antrim and Clarke Hall.

Selenophorus sinuatus Gyllenhal 1806: 203; Erwin and Sims 1984: 441. **Distribution.** Antigua,

Cuba, Dominica (new GEB record), Guadeloupe, Puerto Rico. **Bionomics.** At uv light at Springfield Estate.

Selenophorus subquadratus Putzeys 1878: 59; Erwin and Sims 1984: 441. **Distribution.** Cuba, Dominica (new GEB record), Hispaniola. **Bionomics.** Living in moist habitats on the ground. Taken at Bellevue-Chopin.

Tribe Pentagonicipini

Pentagonica flavipes flavipes (Leconte) 1853: 377 (*Didetus*); Bell 1985: 323. **Distribution.** Antigua, Bahamas, Cuba, Dominica, Grand Cayman, Guadeloupe, Montserrat, Brazil, Central America, Colombia, Mexico, Trinidad, southeastern USA. The subspecies *P. f. picipes* Darlington occurs on Hispaniola, Jamaica, Puerto Rico, and St. Croix. **Bionomics.** Taken in uv light and flight intercept traps at Springfield Estate (by GEB and SBP).

Pentagonica maculicornis Bates 1883: 217; Bell 1985: 322. **Distribution.** Dominica, Hispaniola, Jamaica, Puerto Rico, St. Croix, St. Lucia, St. Vincent. Colombia, Costa Rica, Panama, Trinidad, Venezuela. **Bionomics.** Taken in flight intercept traps at Springfield Estate.

Tribe Platynini

Dyscolus glaucipennis (Liebherr) 1987: 357 (*Platynus*). **Distribution.** Endemic to Dominica. **Bionomics.** Arboreal and occurring in forest.

Dyscolus lherminieri (Chaudoir) 1842: 838 (*Platynus*); Liebherr 1987: 352. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Upper elevation forest; with reduced flight wings. Known from Laudat.

Dyscolus paramemnonius (Liebherr) 1987: 359 (*Platynus*). **Distribution.** Endemic to Dominica. **Bionomics.** Arboreal and occurring in forest.

Dyscolus pseudellipticus (Liebherr) 1987: 352 (*Platynus*). **Distribution.** Endemic to Dominica. **Bionomics.** In forest above 800 m, with reduced flight wings.

Glyptolenus chalybaeus Dejean 1831: 720; Erwin and Sims 1984: 435; Erwin undated; Liebherr 1997: 90. **Distribution.** Dominica, Grenada, Guadeloupe, Montserrat, St. Christopher, St. Vincent. Costa Rica, Nicaragua, Panama, Brazil. **Bionomics.** Taken throughout Dominica.

Glyptolenus simplicicollis Darlington 1943: 97; Erwin and Sims 1984: 435; Liebherr 1997: 90.

Distribution. Endemic to Dominica. **Bionomics.** Taken at Morne Macaque, 1.1 mi E Pont Casse, trail to Morne Trois Pitons, and in flight intercept traps at Springfield Estate.

Tribe Perigonini

Perigona nigriceps Dejean 1831: 44; Erwin and Sims 1984: 443; Bennett and Alam 1985: 20. **Distribution.** Barbados, Cuba, Dominica (new GEB record), Guadeloupe, Martinique, Puerto Rico. Canada (PQ), USA (NH-FL-CA), Old World. **Bionomics.** An Old World (probably Asian) species widely distributed by commerce in the New World. Found around human dwellings, and probably living in decaying plant matter in and around gardens; collected at uv light (GEB) at Springfield Estate.

Tribe Ctenodactylini

Calophaena, undescribed species (GEB determination, SBPC). **Distribution.** Endemic to Dominica. The tribe is otherwise known in the West Indies by *Leptotrachelus dorsalis* of Cuba and Central America. **Bionomics.** Taken in flight intercept traps at Springfield Estate. Adults probably hunt on the leaves of *Heliconia* and *Calathea*.

Tribe Lebiini

Apenes dominica Ball and Shpeley in Ball 1992: 119. **Distribution.** Endemic to Dominica. **Bionomics.** Taken near Antrim, Clarke Hall, Chiltern, Portsmouth and Springfield Estate (GEB records).

Apenes marginalis Dejean 1831: 315; Erwin and Sims 1984: 445; Erwin undated; Bennett and Alam 1985: 20. **Distribution.** Barbados, Dominica, Guadeloupe, Puerto Rico. South America. A valid record (GEB pers. Comm.) even though Ball (1992) does not list it for the West Indies. **Bionomics.** Taken at Antrim, Cabrit Swamp, Springfield Estate, and Trafalgar (GEB records).

Apenes (Didymochaeta) plaumanni (Liebke) 1939: 120 (*Sphalera*). **Distribution.** Dominica* (Ball 1992: 106). Brazil. No other localities are known for the species. **Bionomics.** Collected at D'l'eau Gommier; 4 mi E Pont Casse; St. George; and ¾ mi W Freshwater Lake.

Apenes purpurata Fleutiaux & Sallé 1890: 36; Erwin and Sims 1984: 445. **Distribution.** Dominica (new GEB record), Guadeloupe. **Bionomics.** Liv-

ing in moist habitats on the ground; collected on Morne Macaque.

Apenes variegatus Dejean 1825: 217, replacement name for junior homonym *Apenes pallipes* (Fabricius) 1792: 159 (*Carabus*); Erwin and Sims 1984: 445. **Distribution.** Antigua, Dominica (new GEB record), Guadeloupe. Widespread in Neotropics. **Bionomics.** Living in moist habitats on the ground.

Lebia bitaeniata Chevrolat 1834 (no. 37); Blackwelder 1944-1957: 53; Erwin undated. **Distribution.** Cuba, Dominica, Puerto Rico. Mexico to Costa Rica. USA (TX).

Lebia marginicollis Dejean 1826: 271. = *Lebia pleurodera* Chaudoir 1870: 183. **Distribution.** Dominica (new GEB record). Widespread from Michigan to Peru and Chile, and "in all the Greater Antilles" (Darlington 1953: 11, as *L. cyanea* Dejean 1831: 386; Blackwelder 1944-1957: 53). **Bionomics.** Taken by GEB at uv lights at Springfield Estate. Adults are active on vegetation and the larvae are probably parasites on leaf-feeding beetles.

Tribe Galeritini

Galerita tristis Reiche 1842: 273; Erwin and Sims 1984: 442. **Distribution.** Dominica, Guadeloupe, Jamaica. Costa Rica, El Salvador, Panama, South America, Trinidad. **Bionomics.** Taken in flight intercept trap at Springfield Estate.

Family 11. Gyrinidae, the whirligig beetles Subfamily Gyrininae

Gyrinus rugifer Régimbart 1883: 179; Blackwelder 1944-1957: 81. **Distribution.** Dominica, Guadeloupe, Puerto Rico. **Bionomics.** Adults live on surface of bodies of water.

Family 15. Dytiscidae, the predaceous diving beetles Subfamily Copelatinae

Copelatus posticatus (Fabricius) 1801: 268 (*Dytiscus*); Blackwelder 1944-1957: 81. **Distribution.** Cuba, Guadeloupe, Hispaniola*, Puerto Rico*, St. Vincent. **Bionomics.** Taken 3 km W Pont Casse.

Subfamily Lacophilinae

Lacophilus proximus Say 1825: 201; Blackwelder 1944-1957: 74. **Distribution.** Antigua, Baha-

mas (Andros*), Cuba*, Dominica*, Hispaniola*, Guadeloupe, Puerto Rico*, St. John*, St. Lucia*. Mexico, USA. **Bionomics.** Taken in Cabrit Swamp.

Lacophilus subsignatus Sharp 1882: 296; Blackwelder 1944-1957: 74. **Distribution.** Dominica*, Guadeloupe, St. Vincent. Venezuela. **Bionomics.** Taken in Fresh Water Lake, Valley of Desolation, Boeri Lake, and 3 and 5 km N Pont Casse.

Subfamily Hydroporinae Tribe Hydrovatini

Hydrovatus pustulatus (Melsheimer) 1814: 29 (*Hygrotus*); = *H. compressus* Sharp 1882: 324; Spangler 1981: 151. **Distribution.** Cuba, Dominica*, Guadeloupe. USA (FL). **Bionomics.** Aquatic habitats.

Tribe Methlini

Celina sp.; det. Spangler. **Distribution.** Unknown. **Bionomics.** Papillote, 1000', CWO'Brien; in WIBF.

Subfamily Dytiscinae Tribe Hydatcini

Hydaticus subfasciatus LaPorte 1834: 96; Blackwelder 1944-1957: 79. **Distribution.** Dominica* det Spangler. Guatemala, Panama, French Guiana, Brazil. **Bionomics.** Fresh Water Lake, P. J. Spangler, X-13-64. USNM, WIBF.

Suborder Polyphaga *Series Staphyliniformia* Superfamily Hydrophiloidea

Family 18. Hydrophilidae, the water scavenger beetles

Subfamily Hydrophilinae Tribe Berosini

Berosus stribalus d'Orchymont 1946:10; Hansen 1999: 98. **Distribution.** Bahamas (Nassau*), Barbuda*, Cuba*, Dominica*, Grand Cayman*, Guadeloupe*, Hispaniola*, Jamaica*, Mona*, Puerto Rico, St. Lucia*, St. Thomas*. USA (TX). **Bionomics.** Taken in Cabrit Swamp.

Tribe Anacaenini

Paracymus confusus Wooldridge 1966: 719; 1971: 402. **Distribution.** Bahamas (Grand Bahama

and Rum Cay), Dominica*. Mexico, USA (NM to FL). **Bionomics.** Taken in Cabrit Swamp.

Paracymus delatus Wooldridge 1971: 401; Spangler 1981: 159; Hansen 1999: 110. **Distribution.** Cuba, Dominica, Puerto Rico, Virgin Islands (St. Thomas). **Bionomics.** In aquatic habitats; Greenhill Estate, Cabrit Swamp, and Swamp ravine N of Portsmouth.

Tribe Hydrophilini

Enochrus bartlettii Short 2004: 352. **Distribution.** Barbados, Cuba, Dominica, Hispaniola, Montserrat, Puerto Rico, St. Croix, St. Lucia, St. John, St. Thomas. **Bionomics.** Taken at Café and 3 km NW Pont Casse.

Enochrus pseudochraceus Gundersen 1977: 256; Short 2004: 355. **Distribution.** Cuba, Dominica, Grand Cayman, Hispaniola, Jamaica, Puerto Rico, St. John. Mexico to Costa Rica. **Bionomics.** Taken at Cabrit Swamp.

Tropisternus chalybeus (Laporte) 1840: 53 (*Hydrophilus*); Blackwelder 1944-1957: 170. **Distribution.** Cuba, Dominica*, Guadeloupe, Montserrat, Puerto Rico. Mexico to Panama, to Brazil (not Argentina, Hansen 1999: 219). **Bionomics.** Taken at Brantridge, Fresh Water Lake, and N of Pont Casse.

Tropisternus lateralis (Fabricius) 1775: 228 (*Hydrophilus*); Blackwelder 1944-1957: 170; Bennett and Alam 1985: 20. **Distribution.** Antigua, Bahamas (Andros*), Barbados, Barbuda*, Cuba*, Dominica*, Grand Cayman*, Guadeloupe, Hispaniola*, Jamaica, Puerto Rico, St. Croix*, St. Kitts, St. Lucia*, St. Thomas. Mexico to Brazil, Uruguay, Argentina, USA. **Bionomics.** Taken in Cabrit Swamp.

Subfamily Sphaeridiinae Tribe Coelostomatini

Dactylosternum abdominale (Fabricius) 1792: 79 (*Sphaeridium*); Blackwelder 1944-1957: 173. **Distribution.** Introduced to New World. Barbados, Cuba, Dominica, Guadeloupe, Montserrat, Puerto Rico. USA, Mexico to Brazil, Old World. Cosmopolitan, native to Afrotropics (Hansen 1999). **Bionomics.** Morne Salsbury and Dublane; in WIBF and in box 426 FC-INRA.

Phaenonotum exstriatum (Say) 1835: 171 (*Hydrophilus*); Blackwelder 1944-1957: 173; Hansen 1999: 251. **Distribution.** Cuba, Dominica, Guadeloupe, Jamaica, Puerto Rico. Argentina,

Brazil, Central America, USA. WIBF specimens determined as *Phaenonotum* sp. 1 by Spangler. **Bionomics.** In moist rotting organic matter.

Omicrus palmarum (Schwarz) 1878: 355 (*Cyclonotum*); Blackwelder 1944-1957: 174 (*Phaenotypus*); Smetana 1975: 170. **Distribution.** Dominica, Puerto Rico. USA (FL). **Bionomics.** In moist decaying organic matter.

Tribe Megasternini

Cercyon variegatus Sharp 1882: 107; Blackwelder 1944-1957: 174; Smetana 1978: 105. **Distribution.** Dominica, Jamaica, Puerto Rico. Argentina, Brazil, Colombia, Guatemala, Mexico, Nicaragua, Panama, Venezuela, USA (NC-TX). **Bionomics.** In moist decaying organic debris.

Pelosoma scotti Knisch 1924: 121; Blackwelder 1944-1957: 174. **Distribution.** Endemic to Dominica. **Bionomics.** In moist decaying organic debris.

Superfamily Staphylinoidea

Family 21. Histeridae, the clown beetles

Subfamily Dendrophilinae

Tribe Paromalini

Carcinops miserula Marseul 1862: 10; Mazur 1984: 100. **Distribution.** Dominica, new record. Central America, Columbia, Brazil, Paraguay. **Bionomics.** Wet Area Exp. Station, 300', MAI in WIBF, det R. Wenzel.

Family 22. Hydraenidae, the minute moss beetles Subfamily Hydraeninae

Hydraena insularis d'Orchymont 1945: 2; Perkins 1980: 183. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Taken 2 miles NW Pont Casse in stream.

Family 25. Leiodidae, the small carrion and round fungus beetles Subfamily Leiodinae Tribe Leiodini

Zeadalopus, undescribed species, SBPC. **Distribution.** Endemic to Dominica. **Bionomics.** A forest fungus scavenger captured in flight intercept traps in forest at 330-550 m at Springfield Estate, and 30 m at Cabrits National Park.

Tribe Scotocryptini

Aglyptinus, undescribed species, SBPC. **Distribution.** Endemic to Dominica. **Bionomics.** A forest fungus scavenger captured in flight intercept traps in forest at 330-550 m at Springfield Estate, and 560 m on Middleham Falls Trail, and in forest tree base litter at 560 m on Syndicate Trail.

Creagrophorus, undescribed species, SBPC. **Distribution.** Endemic to Dominica. **Bionomics.** A forest fungus scavenger captured in flight intercept traps in forest at 330-550 m at Springfield Estate and forest litter at 650 m on Middleham Falls Trail.

Family 26. Scydmaenidae, the antlike stone beetles
Subfamily Scydmaeninae
Tribe Cyrtoscydmini

Euconnus dominicae Franz 1991: 39. **Distribution.** Endemic to Dominica. **Bionomics.** Taken at Morne Trois Pitons

Microscydms (*Neoscydms*) *atomous* (Reitter) 1883: 46 (*Euconnus*); Leng and Mutchler 1914: 400; Blackwelder 1944-1957: 87; Franz 1991: 40. **Distribution.** Dominica, Puerto Rico, St. John. **Bionomics.** Taken at Morne Trois Pitons. In WIBF, det by H. Franz.

Family 28. Staphylinidae, the rove beetles
Subfamily Tachyporinae
Tribe Tachyporini

Coproporus pulchellus (Erichson) 1839: 247 (*Tachinus*); Blackwelder 1943: 520; Herman 2001: 832. **Distribution.** Antigua, Cuba, Dominica, Grenada, Hispaniola, Jamaica, Puerto Rico, St. Lucia, St. Vincent, Azores, Brazil, Canary Islands, Colombia, Guatemala, Mexico, Nicaragua, Trinidad, Venezuela, USA (AL, FL). **Bionomics.** Collected from decaying plant matter, under wood chips on stumps, from fungus, manure, forest debris, and flying at dusk.

Coproporus rutilus (Erichson) 1839: 253 (*Tachinus*); Blackwelder 1943: 522; Woodruff *et al.* 1998: 43; Herman 2001: 835. **Distribution.** Cuba, Dominica, Grenada, Grenadines, Hispaniola, Jamaica, Montserrat, Mustique, Puerto Rico, St. Croix, St. Thomas, St. Vincent. Argentina, Belize, Brazil, Colombia, Guatemala, Mexico, Nicaragua, Panama, Trinidad, USA (LA, TX), Venezuela. **Bionomics.** Collected on seaweed on the beach and flying at dusk.

Subfamily Piestinae

Piestus pygmaeus Laporte 1835: 130; Blackwelder 1943: 49; Herman 2001: 1793. **Distribution.** Dominica, Grenada, Guadeloupe, Hispaniola, St. Lucia, St. Vincent. Mexico to Argentina, Galapagos Islands, Trinidad. **Bionomics.** Found in decaying plant materials such as banana slash.

Piestus sulcatus Gravenhorst 1806: 224; Blackwelder 1943: 44; Herman 2001: 1795. **Distribution.** Cuba, Dominica, Grenada, St. Lucia, St. Vincent, Trinidad, Brazil. **Bionomics.** Found under fermented wood chips on breadfruit tree stump, under dry dung, in decaying cocoa pods.

Subfamily Osoriinae
Tribe Thoracophorini

Lispinus insularis Fauvel 1863: 442; Blackwelder 1943: 136; Herman 2001: 1261. **Distribution.** Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Montserrat, Puerto Rico, St. Vincent. Guatemala, Mexico, Nicaragua.

Thoracophorus guadelupensis Cameron 1913: 323; Blackwelder 1943: 151; Herman 2001: 1303. **Distribution.** Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Lucia, St. Thomas, St. Vincent. Brazil, Belize, Costa Rica, Panama, Peru, Trinidad. **Bionomics.** Found flying at dusk, under bark of rotting logs, and under wood chips on tree stumps.

Thoracophorus simplex Wendeler 1930: 181; Blackwelder 1943: 149; Herman 2001: 1305. **Distribution.** Dominica, Grenada, Guadeloupe, Montserrat, Puerto Rico, St. Lucia. **Bionomics.** Collected in banana trash, in fungus, in decaying cocoa pods, and under bark of rotting logs.

Subfamily Oxytelinae
Tribe Thinobiini

Apocellus ustulatus Erichson 1840: 813; Blackwelder 1943: 89; Herman 2001: 1411. **Distribution.** Dominica, Grenada, Guadeloupe, Montserrat, St. Croix, St. John. **Bionomics.** Found under cow dung, under seaweed on the beach, and flying at dusk.

Bledius caribbeanus Blackwelder 1943: 113; Herman 2001: 1523. **Distribution.** Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Montserrat, Puerto Rico, Tobago. **Bionomics.** Collected under seaweed on beaches and on muddy banks of tidal lagoons.

Thinobius opaculus Cameron 1923: 396; Blackwelder 1943: 106; Herman 2001: 1754. **Distribution.** Cuba, Dominica, Hispaniola, Jamaica. **Bionomics.** Found on sandy beaches, on soft mud, and along streams.

Tribe Oxytelini

Anotylus glareosus (Wollaston) 1854: 610 (*Oxytelus*); Blackwelder 1943: 100; Herman 2001: 1355. **Distribution.** Cuba, Dominica, Grenada, Hispaniola, Jamaica, St. Vincent. Africa, Atlantic Islands, Pacific Islands, Southeast Asia. **Bionomics.** Collected under seaweed on a coral rock, and flying at dusk.

Anotylus insignitus (Gravenhorst) 1806: 188 (*Oxytelus*); Blackwelder 1943: 92; Herman 2001: 1359. **Distribution.** Antigua, Cuba, Dominica, Grenada, Grenadines, Guadeloupe, Hispaniola, Jamaica, Montserrat, Puerto Rico, St. Croix, St. Lucia, St. Thomas, St. Vincent. Atlantic Islands, Argentina, Brazil, Colombia, Europe, Guatemala, Mauritius, Mexico, Nicaragua, Panama, Peru, Réunion, Tahiti, Tobago, Trinidad, USA (NY to FL to KS), Venezuela. **Bionomics.** Collected at dung, manure, excrement, sheep and burro dung.

Oxytelus incisus Motschulsky 1857: 504; Blackwelder 1943: 96; Woodruff *et al.* 1998: 40; Bennett and Alam 1985: 21; Herman 2001: 1433. **Distribution.** Antigua, Barbados, Bermuda, Cuba, Dominica, Grenada, Grenadines, Guadeloupe, Hispaniola, Jamaica, Mona Island, Montserrat, Mustique, Puerto Rico, St. Croix, St. Kitts, St. Lucia, St. Thomas, St. Vincent. Africa, Colombia, Costa Rica, Orient. Panama, Trinidad, Tobago, USA (FL, TX). **Bionomics.** Perhaps the most common and widespread staphylinid in the West Indies. It has been taken wherever cattle or horses are kept, and collected from dung, manure, excrement, in bat guano, flying at dusk, and on muddy banks of ponds.

Platystethus spiculus Erichson 1840: 784; Blackwelder 1943: 110; Bennett and Alam 1985: 21; Herman 2001: 1487. **Distribution.** Antigua, Barbados, Bermuda, Carriacou, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Croix, St. Lucia, St. Vincent. Argentina, Colombia, Guatemala, Mexico, Panama. Trinidad, USA (CA-TX-FL), Venezuela. **Bion-**

omics. Collected from dung and manure, in plant refuse, flying at dusk, and flying to lights.

Subfamily Paederinae (Not covered in Herman 2001) Tribe Paederini

Lithocharis limbata Erichson 1840: 621; Blackwelder 1943: 246. **Distribution.** Barbados, Dominica, Grenada, Guadeloupe, Hispaniola, Martinique, Puerto Rico, St. Croix, St. Lucia, St. Vincent. Colombia, Guatemala, Panama, Trinidad. **Bionomics.** Collected in dung, manure, excrement, rotten fruit, decaying cocoa pods, and fermenting coconut husks.

Lithocharis ochracea (Gravenhorst) 1802: 58 (*Paederus*); Blackwelder 1943: 242. **Distribution.** Antigua, Barbados, Dominica, Grenada, Guadeloupe, Jamaica, Puerto Rico, St. John, St. Kitts. Africa, Brazil, Chile, Europe, Guatemala, Oriental Region, USA (CA). **Bionomics.** Collected on horse manure, cattle dung, in decaying cocoa pods, and flying at dusk.

Medon johni Blackwelder 1943: 271. **Distribution.** Dominica, St. John. **Bionomics.** Collected from cut banana stalks and rotting cocoa pods.

Monista vola Blackwelder 1943: 298. **Distribution.** Endemic to Dominica. **Bionomics.** Caught flying at dusk.

Palaminus sp.; det J. S. Ashe. **Distribution.** Unknown. **Bionomics.** From Pt. Casse and Du blanc, in WIBF.

Stilomedon connexum (Sharp) 1876: 254 (*Lithocharis*); Blackwelder 1943: 257; Woodruff *et al.* 1998: 42. **Distribution.** Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, St. Lucia, St. Vincent. Brazil, Mexico, Panama, Trinidad, Venezuela. **Bionomics.** Collected in rotting cocoa pods, flying at dusk and flying to lights.

Stamnoderus labeo (Erichson) 1840: 648 (*Sunius*); Blackwelder 1943: 353. **Distribution.** Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. John. **Bionomics.** Collected by sifting leaf litter.

Thinocharis exilis (Erichson) 1840: 627 (*Lithocharis*); Blackwelder 1943: 237. **Distribution.** Antigua, Cuba, Dominica, St. Lucia. Argentina, Brazil, Colombia, Guatemala, Panama, Trinidad, USA (AL, FL, IN). **Bionomics.** Found in dung, in

decaying cocoa pods, in piles of dead grass, and flying at dusk.

Subfamily Staphylininae
Tribe Staphylinini

Belonuchus dominicus Blackwelder 1943: 431; Herman 2001: 2524. **Distribution.** Endemic to Dominica. **Bionomics.** Found in rotting cocoa pods at Hillsboro Estate, at mouth of Layou River.

Cafius bistriatus (Erichson) 1840: 502 (*Philonthus*); Blackwelder 1943: 438; Woodruff *et al.* 1998: 42; Herman 2001: 2569. **Distribution.** Antigua, Bahamas, Barbados, Carriacou, Cuba, Dominica, Grenada, Guadeloupe, Jamaica, Mona Island, Montserrat, Puerto Rico, St. Croix, St. John, St. Kitts, St. Lucia, St. Thomas. Canada (PQ), South America (unspecified countries), Trinidad, Tobago, USA (widespread). **Bionomics.** Found under seaweed and drift on beaches.

Cafius caribeanus Bierig 1934: 67; Blackwelder 1943: 437; Woodruff *et al.* 1998: 42; Herman 2001: 2571. **Distribution.** Antigua, Carriacou, Cuba, Dominica, Grenada, Guadeloupe, Jamaica, Puerto Rico, St. Croix. Mexico, USA (FL), Venezuela. **Bionomics.** Found under seaweed and drift on beaches.

Cafius subtilis Cameron 1922: 121; Blackwelder 1943: 436; Herman 2001: 2578. **Distribution.** Antigua, Cuba, Dominica, Guadeloupe, Jamaica, Mona Island, Montserrat, Puerto Rico, St. Croix, St. Kitts. USA (FL). **Bionomics.** Found under seaweed and drift on beaches.

Philonthus hepaticus Erichson 1840: 451; Blackwelder 1943: 401; Bennett and Alam 1985: 21; Herman 2001: 2837. **Distribution.** Antigua, Bahamas, Barbados, Cuba, Dominica, Grenadines, Guadeloupe, Hispaniola, Jamaica, Les Saintes, Montserrat, Puerto Rico, St. Croix, St. Kitts, St. Thomas, St. Vincent. Argentina, Australia, Canada, Chile, Colombia, Guatemala, Mexico, Nicaragua, Panama, Tobago, Trinidad, Venezuela, USA (widespread). **Bionomics.** Collected in dung, manure, excrement, from under seaweed on the beach, from decaying forest debris, and flying at dusk.

Philonthus ventralis (Gravenhorst) 1802: 174 (*Staphylinus*); Blackwelder 1943: 404; Woodruff *et al.* 1998: 43; Bennett and Alam 1985: 21; Herman 2001: 2996. **Distribution.** Antigua, Barbados, Cayman Islands, Cuba, Culebra, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Mona Island, Montserrat, Puerto Rico, St. Croix, St.

Kitts, St. Lucia, St. Thomas, St. Vincent. Africa, Asia, Europe, French Guiana, Tobago, Trinidad, USA (widespread). Cosmopolitan. **Bionomics.** Collected in dung, manure, from rotting plant debris, and flying at dusk.

Tribe Xantholini

Neohypnus attenuatus (Erichson) 1839: 330 (*Xantholinus*); Blackwelder 1943: 478; Herman 2001: 3708. **Distribution.** Antigua, Barbados, Cuba, Dominica, Grenada, Guadeloupe, Jamaica, Montserrat, Puerto Rico, St. Kitts, St. Thomas, St. Vincent. Argentina, Brazil, Mexico, Paraguay, St. Helena, Tobago, Trinidad, USA (CA-TX-FL), Venezuela. **Bionomics.** Collected from dung, manure, carrion, decaying grass, and at edge of streams.

Xantholinus humeralis Erichson 1839: 327; Blackwelder 1943: 479; Herman 2001: 3799. **Distribution.** Antigua, Cuba, Dominica, Hispaniola, Montserrat, Puerto Rico, St. Croix, St. John, St. Vincent. **Bionomics.** Collected from dung and in decaying forest debris.

Xantholinus illucens Erichson 1839: 315; Blackwelder 1943: 488; Herman 2001: 3800. **Distribution.** Dominica, Grenada, Guadeloupe, Montserrat, Puerto Rico, St. Lucia, St. Vincent. Colombia, Tobago, Trinidad, Venezuela. **Bionomics.** Collected from dung, manure, decomposing plant material.

Series Scarabaeiformia
Superfamily Scarabaeoidea

Chalumeau and Gruner (1974, 1976) and Chalumeau (1983a) summarize the fauna of Scarabaeiformia of the Lesser Antilles from Guadeloupe to Martinique and present keys to identify the genera and species.

Family 31. Passalidae, the bess beetles

Ivie and Gillogly (1998) give a summary of West Indian Passalidae.

Passalus unicornis Saint-Fargeau and Serville 1825: 20; Cartwright and Chalumeau 1978: 4; Chalumeau 1983a: 35; Ivie and Gillogly 1998: 4. *Passalus abortivus* (Percheron) (*Phoronous*), Fleutiaux and Sallé 1890; Paulian 1947; erroneously reported from Antilles and Guadeloupe. **Distribution.** Dominica, Guadeloupe, Jamaica,

Martinique, St. Lucia. Central and South America. **Bionomics.** Larvae and adults in rotting logs.

Spasalus crenatus (Macleay) 1819: 106 (*Paxillus*); Chalumeau 1983a: 33; Ivie and Gillogly 1998: 2. = *S. puncticollis* (Saint-Fargeau and Serville) 1825: 21 (*Passalus*); Cartwright and Chalumeau 1978: 4; synonymy by Chalumeau 1983a: 33. = *S. puncticollis*, Kaup 1869: 28. = *Paxillus robustus* Percheron; Fleutiaux and Salle 1889; Paulian 1947; Blackwelder 1944: (in South America, not Lesser Antilles); Chalumeau 1983a: 34. **Distribution.** Cuba, Dominica, Guadeloupe, Hispaniola, Martinique, Mustique, Puerto Rico, St. John, St. Thomas, Tortola. Argentina, Brazil, Guyana, Surinam. **Bionomics.** Larvae and adults in rotting logs at Springfield Estate. CMNC.

Family 33. Trogidae, the skin beetles

Omorgus suberosus (Fabricius) 1775: 31 (*Trox*); Blackwelder 1944-1957: 219; Fleutiaux *et al.* 1947: 25; Chalumeau 1983a: 38; Bennett and Alam 1985: 21. **Distribution.** Barbados, Cuba, Dominica (CMNC), Guadeloupe, Hispaniola, Jamaica, Marie Galante, Martinique, Puerto Rico, St. Vincent; probably throughout the Lesser Antilles. Widespread in New World, USA to Argentina and Brazil (Vaurie 1955). **Bionomics.** In carrion bait traps at Springfield Estate.

Family 38. Hybosoridae, the hybosorid scarab beetles

Allsopp (1984: 106) lists *Apalonychus rufulus* (Castelnau) 1840 from Dominica and *Apalonychus waterhousei* Westwood 1846 from Dominica and Guadeloupe, but these are errors. Both species actually occur only in the Greater Antilles.

Family 39. Ceratocanthidae, the ceratocanthid scarab beetles

Germarostes allorgei (Paulian) 1947: 27 (*Cloeotus*); Cartwright and Chalumeau 1978: 4 (*Cloeotus*); Chalumeau 1983a: 41. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Adults taken at many sites by beating dry vegetation and sifting leaf litter in forest. CMNC.

Cloeotus rufopiceus Arrow 1903: 517; Woodruff *et al.* 1998: 33. **Distribution.** Dominica, Grenada, St. Vincent.

Family 41. Scarabaeidae, the scarab beetles Subfamily Aphodiinae Tribe Aphodiini

Aphodius (Nialus) lividus (Olivier) 1789: 86 (*Scarabaeus*); subspecies *A. l. pseudolividus* Balthasar 1941: 148; Cartwright and Chalumeau 1978: 7; Chalumeau 1983a: 57. **Distribution.** Cuba, Désirade, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Les Saintes, Marie Galante, Martinique, Puerto Rico; practically all West Indian islands. *Aphodius lividus* is tropicopolitan; widespread from USA to Mexico to Argentina; native to the Old World and introduced to the New World. **Bionomics.** Common in cow dung and other excrement.

Aphodius (Nialus) nigritus Fabricius 1801: 73. = *A. cuniculus* Chevrolat 1864: 411; Cartwright and Chalumeau 1978: 8; Bennett and Alam 1985: 22; Woodruff *et al.* 1998: 32; Chalumeau 1983a: 58. = *A. granarius* var. *guadeloupensis* Fleutiaux and Sallé 1890: 46. **Distribution.** Antigua, Barbados, Carriacou, Cuba, La Désirade, Dominica, Grenada, Guadeloupe, Les Saintes, Jamaica, Marie-Galante, Martinique, Montserrat, Mustique, St. Croix, St. John, St. Kitts, St. Lucia, St. Thomas, St. Vincent, Tortola, Vieques. Tobago, Mexico to South America. An Old World species. **Bionomics.** Common in cow dung.

Tribe Eupariini

Ataenius cribrithorax Bates 1887: 95; Cartwright and Chalumeau 1978: 14. **Distribution.** Cuba, Dominica, Jamaica, Martinique, St. Thomas, Virgin Islands. Guatemala, Mexico, Nicaragua, Panama. **Bionomics.** Adults attracted to lights; found in cow dung.

Ataenius gracilis (Melsheimer) 1845: 137 (*Oxyomus*); Cartwright and Chalumeau 1978: 12; Chalumeau 1983a: 74; Bennett and Alam 1985: 22; Woodruff *et al.* 1998: 33. **Distribution.** Barbados, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Marie-Galante, Martinique, Puerto Rico, St. Croix, St. Kitts, St. Vincent, Vieques. Argentina, Chile, Colombia, Peru, Galapagos Islands, United States, Canada. **Bionomics.** Adults attracted to lights; found in cow dung; at Roseau, Clarke Hall, La Plaine.

Ataenius liogaster Bates 1887: 94; Stebnicka and Lago 2005: 60. = *A. edwardsi* Chapin 1940: 26; Cartwright and Chalumeau 1978: 14; Chalumeau 1983: 174; Chalumeau 1983a: 82; Bennett and

- Alam 1985: 22; Woodruff *et al.* 1998: 33. Stebnicka and Lago 2005: 60, synonymy. **Distribution.** Antigua, Barbados, Carriacou, Cuba, Dominica (overlooked in Stebnicka and Lago 2005: 61), Grenada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Croix, St. Lucia, St. Vincent. Costa Rica, Ecuador (including Galapagos), El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Trinidad, Venezuela. **Bionomics.** Adults attracted to lights; found in cow dung.
- Ataenius luteomargo* Chapin 1940: 36; Fleutiaux *et al.* 1947: 42; Cartwright and Chalumeau 1978: 12; Chalumeau 1983a: 84; Bennett and Alam 1985: 22; Woodruff *et al.* 1998: 33; Stebnicka 2002: 270. = *Aphodius marginellus*, Chevrolat 1864: 414 (not Fabricius). = *A. terminalis*, Arrow 1903: 512 (not Chevrolat). = *A. versicolor*, Hinton 1937: 183 (not Schmidt). **Distribution.** Antigua, Barbados, La Désirade, Dominica (CMNC), Grenada, Guadeloupe, Hispaniola, Les Saintes, [not Jamaica], Marie-Galante, Martinique, Montserrat, Puerto Rico, St. Kitts, St. Lucia, Panama, Surinam, Venezuela. **Bionomics.** Adults attracted to lights, found in cow dung.
- Ataenius morator* Harold 1869: 103; Chalumeau 1983a: 71. = *Ataenius picipes* Fleutiaux and Sallé 1890: 397; Cartwright and Chalumeau 1978: 13. = *A. tenebrosus* Arrow 1903: 512. **Distribution.** Dominica, Grenada, Guadeloupe, Hispaniola, Martinique, Puerto Rico, Vieques. Brazil, Trinidad. **Bionomics.** Adults attracted to lights; found in cow dung.
- Ataenius picinus* Harold 1867: 281; Cartwright and Chalumeau 1978: 14; Chalumeau 1983a: 80; Stebnicka 2004: 224. = *A. darlingtoni* Hinton 1937: 179. **Distribution.** Antigua, Cuba, Dominica, Guadeloupe, Hispaniola, Marie Galante, Martinique. Argentina, Australia, Brazil, Fiji, New Caledonia, New Hebrides, New Zealand, United States, Uruguay. The most widely distributed species in the genus, and undoubtedly on all other islands of the Lesser Antilles. **Bionomics.** Taken at Cabrit Swamp; adults attracted to lights; found in cow dung.
- Ataenius scutellaris* Harold 1867: 82; Cartwright and Chalumeau 1978: 14; Chalumeau 1983a: 69; Bennett and Alam 1985: 22. = *Ataenius frater* Arrow 1903: 512; Woodruff *et al.* 1998: 33. **Distribution.** Antigua, Bahamas, Barbados, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Marie Galante, Martinique, Montserrat, Puerto Rico, St. Croix, St. Kitts, St. Thomas, St. Vincent, Tortola. Belize, Brazil, Colombia, Guatemala, Mexico, Nicaragua, Trinidad, Venezuela. **Bionomics.** Adults attracted to lights; found in cow dung.
- Ataenius strigicauda* Bates 1887: 96; Cartwright and Chalumeau 1978: 13; Chalumeau 1983a: 81; Bennett and Alam 1985: 22; Woodruff *et al.* 1998: 33; Stebnicka 2004: 214. **Distribution.** Bahamas, Barbados, Bequia, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Martinique, Puerto Rico, St. Croix, St. Lucia, St. Thomas, St. Vincent. Trinidad, Mexico to Argentina. **Bionomics.** Adults attracted to lights; found in cow dung; taken at many sites.
- Ataenius temperei* Chalumeau and Gruner 1974: 799; Cartwright and Chalumeau 1978: 12; Chalumeau 1983a: 64. **Distribution.** Dominica, Guadeloupe, St. Christopher. **Bionomics.** Adults attracted to lights; not found on cow dung.
- Ataenius vincentiae* Arrow 1903: 513; Cartwright and Chalumeau 1978: 11; Chalumeau 1983a: 65. **Distribution.** Dominica, Guadeloupe, Hispaniola, Puerto Rico, St. Vincent. El Salvador. **Bionomics.** Adults attracted to lights; found in cow dung.
- Euparia baraudi* Chalumeau and Gruner 1974: 796; Cartwright and Chalumeau 1978: 10; Chalumeau 1983a: 59. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Taken at Clarke Hall. Possible myrmecophile.
- Pleurophorus parvulus* (Chevrolat) 1864: 415 (*Psammodyus*); Cartwright and Chalumeau 1978: 15; Chalumeau 1983a: 91 (*Diastictus*); Woodruff *et al.* 1998: 34. **Distribution.** Cuba, Dominica, Grenada, Guadeloupe, Jamaica, St. Croix, St. Vincent. Colombia, Trinidad. **Bionomics.** A humus feeder in soil, flying at dusk and attracted to lights.

Tribe Psammodiini

- Psammodyus cameneni* Chalumeau 1976: 128; Cartwright and Chalumeau 1978: 15; Chalumeau 1983a: 92. **Distribution.** Dominica, Guadeloupe, Puerto Rico. **Bionomics.** Adults attracted to lights at Portsmouth.
- Rhyparus spilmani* Cartwright and Chalumeau, in Chalumeau 1977: 76; Cartwright and Chalumeau 1978: 8; Chalumeau 1983a: 93. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Collected at light trap and by sifting plant debris at Clarke Hall.
- Saprosites wirthi* Cartwright and Chalumeau, in Chalumeau 1977: 72; Cartwright and Chalumeau

1978: 16; Chalumeau 1983a: 90. **Distribution.** Endemic to Dominica. **Bionomics.** Adults and immatures taken in decaying heart of *Euterpe* palm.

Subfamily Scarabaeinae

Onthophagus antillarum Arrow 1903: 510; Cartwright and Chalumeau 1978: 5; Chalumeau 1983a: 52. **Distribution.** Dominica, Grenada, Guadeloupe, Martinique, St. Vincent. **Bionomics.** Collected in cow and human dung. CMNC.

Pseudocanthion caeranum Matthews 1966: 93; Cartwright and Chalumeau 1978: 7; Chalumeau 1983a: 46. **Distribution.** Endemic to Dominica. **Bionomics.** A species of lowland coastal forests (and maybe up to 610 m) and scrub; can be taken in traps baited with cow or human dung. CMNC.

Pseudocanthion sylvaticus Matthews 1966: 91; Cartwright and Chalumeau 1978: 5; Chalumeau 1983a: 47. **Distribution.** Endemic to Dominica. **Bionomics.** Probably nocturnal, and can be baited to cow dung but not carrion, in highland humid forests above 427 m. CMNC.

Subfamily Orphninae

Aegidium dominicensis Cartwright and Chalumeau, in Chalumeau 1977: 78; Cartwright and Chalumeau 1978: 17; Chalumeau 1983a: 96. **Distribution.** Endemic to Dominica. **Bionomics.** Adults found in banana trash and rotting banana trunks.

Subfamily Melolonthinae

Phyllophaga (Cnemarachis) cambeforti Cartwright and Chalumeau, in Chalumeau 1977: 92; Cartwright and Chalumeau 1978: 21; Chalumeau 1983a: 108. **Distribution.** Endemic to Dominica. **Bionomics.** Adults attracted to lights at many localities. CMNC.

Phyllophaga (Cnemarachis) dominicensis Cartwright and Chalumeau, in Chalumeau 1977: 102; Cartwright and Chalumeau 1978: 19; Chalumeau 1983a: 118. **Distribution.** Endemic to Dominica. **Bionomics.** Adults attracted to lights at many localities. CMNC.

Subfamily Rutelinae

Anomala insularis (Castelnau) 1840: 136 (*Euchlora*); Cartwright and Chalumeau 1978: 24; Chalumeau

1983a: 131. **Distribution.** La Désirade, Dominica, Guadeloupe, Martinique, Marie Galante. Hispaniola is probably in error. **Bionomics.** Adults attracted to lights at many sites; larvae found in decaying breadfruit and mangos. CMNC. *Leucothyreus guadulpiensis* Burmeister 1844: 501; Cartwright and Chalumeau 1978: 22; Chalumeau 1983a: 133. **Distribution.** Dominica, Guadeloupe, Marie Galante. **Bionomics.** Adults feed on *Citrus* leaves at night. CMNC.

Macraspis tristis Castelnau 1840: 117; Cartwright and Chalumeau 1978: 22; Chalumeau 1983a: 126. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Taken at many sites; adults attracted to flowers of *Poinciana* (flametree); larvae in decaying trees. CMNC.

Subfamily Dynastinae

Tribe Cyclocephalini

Cyclocephala melanocephala (Fabricius) 1775: 36 (*Melolontha*); *C. m. rubiginosa* Burmeister 1847: 59; Cartwright and Chalumeau 1978: 25; Chalumeau 1983a: 145. **Distribution.** Dominica, Guadeloupe, Les Saintes, Marie Galante, Martinique are localities for the subspecies. The species ranges from Brazil and Argentina to the Lesser Antilles. **Bionomics.** Adults attracted to lights.

Cyclocephala tridentata (Fabricius) 1801: 170 (*Melolontha*); *C. t. dominicensis* Cartwright and Chalumeau, in Chalumeau 1977: 135; Cartwright and Chalumeau 1978: 25; Chalumeau 1983a: 151. **Distribution.** Subspecies endemic to Dominica. The species also occurs in Guadeloupe and Martinique. **Bionomics.** Adults attracted to lights; larvae a pest of the roots of sugarcane. A widespread and common beetle in Dominica. CMNC.

Tribe Dynastini

Dynastes hercules hercules (Linnaeus) 1758: 345 (*Scarabaeus*); Cartwright and Chalumeau 1978: 21; Chalumeau 1983a: 162. =*Dynastes lagaii* Verrill 1906: 318. Type locality: Dominica. =*Dynastes vulcan* Verrill 1906: 319. Type locality: Dominica. **Distribution.** Dominica and Guadeloupe comprise the range of the subspecies. Another subspecies occurs on Martinique and St. Lucia. The full range of the species includes these islands and from Mexico to Panama, and throughout northern South America to Bolivia and Brazil

(Chalumeau and Reid 2002; Silvestre 1996). Seemingly absent on St. Vincent and Grenada. **Bionomics.** Adults attracted to lights; larvae found in decaying trees. Rather common, and the largest beetle species in Dominica. The polymorphism in the male horns led to several names being applied to this species.

Tribe Oryctini

Ligyris cuniculus (Fabricius) 1801: 20 (*Geotrupes*); Cartwright and Chalumeau 1978: 27; Chalumeau 1983a: 154; Bennett and Alam 1985: 22. **Distribution.** Bahamas, Barbados, Bermuda, La Désirade, Dominica, Guadeloupe, Hispaniola, Les Saintes, Jamaica, Marie-Galante, Martinique, Puerto Rico, St. Barthélemy, St. Martin, St. Thomas, St. Vincent. Brazil, French Guiana, Trinidad, United States. **Bionomics.** Adults attracted to lights; larvae are a serious pest of roots of sugar cane, or may be saprophagous or coprophagous where sugar cane is absent.

Ligyris ebenus (DeGeer) 1774: 317 (*Scarabaeus*); Cartwright and Chalumeau 1978: 26; Chalumeau 1983a: 156. **Distribution.** Dominica, Guadeloupe, Hispaniola, Marie-Galante, Martinique, Saint Martin. Brazil, Colombia, Guyana, Mexico, Surinam, Venezuela. **Bionomics.** Adults attracted to lights; larvae feed on small tubers of Dioscoreaceae and Convolvulaceae and may damage gardens.

Strategus verrilli Ratcliffe 1976: 157; Cartwright and Chalumeau 1978: 26; Chalumeau 1983a: 160. = *Dynastes tricornis* sensu Verrill 1906: 317. = *S. vulcanus* sensu Arrow 1911: 151. **Distribution.** Endemic to Dominica. **Bionomics.** Adults attracted to lights; larvae are scavengers and are taken in decaying tree trunks and dung-compost.

Tribe Phileurini

Hemiphileurus laeviceps Arrow 1947: 222; Cartwright and Chalumeau 1978: 27; Chalumeau 1983a: 171 (*Epiphileurus*). = *Epiphileurus gysini* Cartwright and Chalumeau, in Chalumeau 1977: 152. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Adults attracted to lights at several localities; larvae in rotting logs and trees (mango, *Inga*, etc.

Homophileurus quadrituberculatus (Palisot de Beauvois) 1806: 42 (*Scarabaeus*); Cartwright and Chalumeau 1978: 21. **Distribution.** Cuba, Dominica, Grenada, Hispaniola, Puerto Rico. Bolivia, Brazil, Costa Rica, Ecuador, Guyana, Hondu-

ras, Nicaragua. **Bionomics.** Adults attracted to lights.

Phileurus didymus (Linnaeus) 1758: 347 (*Scarabaeus*); Cartwright and Chalumeau 1978: 27; Chalumeau 1983a: 169; Woodruff *et al.* 1998: 34. **Distribution.** Dominica, Grenada, Guadeloupe, Martinique, Puerto Rico, St. Vincent. Colombia, Costa Rica, Guatemala, Mexico, Nicaragua, Trinidad to Brazil. **Bionomics.** Adults attracted to lights; larvae found in decaying palm trees.

Phileurus valgus Linnaeus 1758: 347; *P. v. antillarum* Prell 1912: 179; Cartwright and Chalumeau 1978: 27; Chalumeau 1983a: 168. **Distribution.** Cuba, La Désirade, Dominica, Guadeloupe, Martinique, St. Barthélemy, St. Martin. Venezuela. The nominate subspecies is in USA (FL) and Central and South America. **Bionomics.** Adults attracted to lights; adults and larvae collected in decaying *Inga* log.

Subfamily Cetoniinae

Paragymnetis lanius (Linnaeus) 1766: 557 (*Gymnetis*); *P. l. guadelupensis* (Gory and Percheron) 1833: 351 (*Gymnetis*); Cartwright and Chalumeau 1978: 29 (seen flying only); Chalumeau 1983a: 173. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Adults very rare. One specimen, possibly not this species, CMNC.

Series Elateriformia

Superfamily Scirtoidea

Family 47. Scirtidae

Microcara sp. **Bionomics.** Wet habitats, various localities. In WIBF.

Scirtes sp. **Bionomics.** Wet habitats, various localities. In WIBF.

Superfamily Buprestoidea

Family 51. Buprestidae, the metallic wood-boring beetles

Micrasta fisheri Théry 1927: 35 and *Polycesta regularis* Waterhouse 1904: 256 (Polycestinae, Mastogeniini) were reported in error by Blackwelder (1944-1957: 306 and 341) from Dominica. Both are from the Dominican Republic.

Subfamily Buprestinae

Tribe Chalcophorini

Euplectalecia erythrope (Gory) 1840: 126 (*Buprestis*); Fisher 1925: 81 (*Halecia*); Blackwelder 1944-1957: 308; Fleutiaux *et al.* 1947: 143. **Distribution.** Dominica, Guadeloupe.

Chrysobothris tranquebarica (Gmelin) 1788 (1790): 1932 (*Buprestis*); Fleutiaux *et al.* 1947: 147. **Distribution.** Bahamas, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Puerto Rico, St. Thomas. Colombia, Surinam, USA (FL). **Bionomics.** The Australian pine borer. Larvae bore in *Casuarina* and *Rhizophora*; also in *Cassia*, *Conocarpus*, and *Pinus pallustris* (Benoit 1966: 330).

Subfamily Agrilinae
Tribe Agrilini

Leiopleura rosae Bellamy 1998: 96; replacement name for preoccupied *L. fisheri* Théry 1947: 681. **Distribution.** Endemic to Dominica. **Bionomics.** Collected near Mahaut, 1000 feet.

Lius fennahi Théry 1947: 676. **Distribution.** Endemic to Dominica. *L. nigra* Théry 1947: 677 is a variety of *L. fennahi*.

Neotrachys dominicanus Théry 1947: 677; Hespenheide 1980: 819. **Distribution.** Endemic to Dominica. **Bionomics.** Collected near Mahaut, 1000 feet.

Neotrachys fennahi Théry 1940: 165; Hespenheide 1980: 802. **Distribution.** Dominica, St. Lucia. **Bionomics.** Collected at Greenhill Estate

Superfamily Byrrhoidea
Family 53. Elmidae, the riffle beetles
Subfamily Larinae

Hexanchorus caraibus Coquerel 1851: 601. **Distribution.** Dominica (in WIBF), Guadeloupe. **Bionomics.** The larvae live in streams.

Family 54. Dryopidae, the long-toed beetles

Momentum sp.; Perkins 1997: 114; discussed by Ivie 1985b: 35 as *Protoparnus pusillus* (Hinton) 1937: 302. **Distribution.** Dominica. **Bionomics.** The specimen was taken in leaf litter in rain forest of *Sloanea* one mile north of Castle Bruce, along the road, at 1250 feet, near a waterfall. It may be either terrestrial or riparian. *Momentum pusillus* (Hinton) 1937: 302 (*Protoparnus*) is described from St. Vincent and the Dominican species may prove to be this when males become known (Perkins 1997: 114).

Family 63. Callirhipidae, the cedar beetles

Callirhipis lherminieri Laporte 1834: 250; Spilman 1971: 7. **Distribution.** Dominica, Guadeloupe, St. Vincent. **Bionomics.** Adults common; taken at lights and in malaise traps; larvae found in rotten wood.

Superfamily Elateroidea

Family 69. Elateridae, the click beetles

Subfamily Agrypninae

Tribe Oophorini

Heteroderes amplicollis Gyllenhal 1817: 141; Blackwelder 1944-1957: 289; Fleutiaux *et al.* 1947: 119. **Distribution.** Cuba, Dominica, Guadeloupe, Martinique, Puerto Rico, St. Barthélemy. South America, USA (CA-TX-AL-FL).

Tribe Hemirhipini

Chalcolepidius obscurus Laporte 1836: 13; Blackwelder 1944-1957: 283; Fleutiaux *et al.* 1947: 109; Casari 2002: 318. **Distribution.** Cuba, Dominica, Guadeloupe, Montserrat, St. Vincent. Trinidad.

Chalcolepidius sulcatus Fabricius 1777: 234; Blackwelder 1944-1957: 283; Fleutiaux *et al.* 1947: 108; Casari 2002: 335 (who does not confirm the questioned Guadeloupe record of Blackwelder). **Distribution.** Dominica, Guadeloupe?, Martinique, St. Lucia, St. Croix. Mexico?

Family 76. Lampyridae, the firefly beetles

Subfamily Lampyrinae

Tribe Photinini

Tribe Crateromorphini

Aspisoma ingitum (Linnaeus) 1767: 645 (*Lampyrus*); Blackwelder 1944-1957: 356; Fleutiaux *et al.* 1947: 159; Bennett and Alam 1985: 23. **Distribution.** Antigua, Barbados, Cuba, Dominica*, Grenada, Guadeloupe, Hispaniola, Martinique, Mustique, St. Kitts, St. Vincent, Union. Belize, Mexico, Venezuela, Trinidad, French Guiana.

Aspisoma insperata E. Olivier 1912: 22; Blackwelder 1944-1957: 356; Woodruff *et al.* 1998: 27. **Distribution.** Dominica, Grenada, Mustique, St. Lucia, St. Vincent, Union.

Lucidota incognita E. Olivier 1912: 21; Blackwelder 1944-1957: 354. **Distribution.** Dominica, Grenada, St. Vincent.

Subfamily Photurinae

Photinus geographicus Blackwelder 1944-1957: 358 (replacement name for *P. simplex* E. Olivier 1912: 28). **Distribution.** Dominica, Hispaniola?, St. Croix.

Photinus lutzi Leng and Muchler 1922: 461; Blackwelder 1944-1957: 358. **Distribution.** Endemic to Dominica. **Bionomics.** Collected in Roseau, Laudet, Long Ditton, and Picard.

Photinus sanctus E. Olivier 1909: 123; Blackwelder 1944-1957: 359. **Distribution.** Dominica, St. Thomas.

Photinus simplex Gorham 1881: 42; Blackwelder 1944-1957: 359. **Distribution.** Dominica. Guatemala, Mexico.

Family 78. Cantharidae, the soldier beetles
Subfamily Cantharinae

Tylocerus lineatus Gorham 1898: 320; Blackwelder 1944-1957: 363. **Distribution.** Dominica, Grenada, St. Vincent. The varieties *dominicus* and *melanicus* were named by Leng and Mutchler 1922: 495-496 from Dominica. **Bionomics.** Collected at Portsmouth, Long Ditton, Roseau, and Castle Bruce.

Subfamily Chauliognathinae
Tribe Ichthyurini

Belotus pallidiventrus Leng and Mutchler 1922: 488; Blackwelder 1944-1957: 369. **Distribution.** Endemic to Dominica. **Bionomics.** Collected at Laious and Laudet.

Series Bostrichiformia
Superfamily Bostrichoidea

Family 83. Bostrichidae, the horned powder-post beetles

Subfamily Polyaoninae

Heterarthron gonagrum (Fabricius) 1798: 156 (*Apate*); Blackwelder 1944-1957: 398; Spilman 1971: 3. **Distribution.** Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Barthélemy, St. Thomas, St. Vincent. **Bionomics.** Adults and larvae probably bore in the wood of hardwood trees.

Subfamily Bostrichinae
Tribe Xyloperthini

Tetrapriocera longicornis (Olivier) 1795: 15 (*Bostrichus*); Spilman 1971: 3; Fleutiaux *et al.* 1947: 209; Bennett and Alam 1985: 23. **Distribution.** Barbados, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Puerto Rico, St. Thomas. Central America, Mexico, South America, United States. **Bionomics.** Adults attracted to lights; adults and larvae bore into living and dead wood of various trees and shrubs.

Xylopsocus capucinus (Fabricius) 1781: 62 (*Apate*); Spilman 1971: 3. **Distribution.** Dominica, Brazil, Old World tropics, Surinam, Trinidad. **Bionomics.** Larvae and adults bore into wood of living and dead plants and wooden structures.

Xylomeira torquata (Fabricius) 1801: 382 (*Apate*); Fleutiaux *et al.* 1947: 208; Spilman 1971: 4. **Distribution.** Antigua, Bahamas (Eleuthera), Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Martinique, Mona Island, Montserrat, Puerto Rico, St. Croix, St. John, St. Lucia, St. Thomas, Tortola. Mexico, United States. **Bionomics.** Adults are attracted to lights; adults and larvae bore in seed pods of *Parkinsonia*, *Poinciana*, *Acacia*, and *Tamarindus*.

Subfamily Dinoderinae
Tribe Dinoderinae

Dinoderus minutus (Fabricius) 1775: 54 (*Apate*); Spilman 1971: 3. **Distribution.** Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Puerto Rico, St. Vincent. Old and New World tropics. **Bionomics.** The bamboo powder-post beetle. Adults and larvae bore into dry (not living) bamboo and canes, and the adults also bore into many kinds of timber, plants, and vegetable products.

Tribe Lyctinae

Lyctus caribeanus Lesne 1931: 96; Spilman 1971: 6. **Distribution.** Dominica, Guadeloupe, Hispaniola, Puerto Rico. Central America, Mexico. **Bionomics.** Adults collected at lights and adults and larvae boring in wood of various trees.

Family 84. Anobiidae, the death-watch beetles
Subfamily Ptininae

Ptinus tectus (Boieldieu) 1856: 652; Hatch 1933: 201; Papp 1962: 417. **Distribution.** Dominica, Grenada, Jamaica. Widespread in the Americas, cosmopolitan. **Bionomics.** Living in many kinds of dry stored foods.

Subfamily Dorcatominae

Protheca granulata White 1979: 12. **Distribution.** Endemic to Dominica. **Bionomics.** Adults and larvae probably bore in dry wood.

Protheca undulata White 1979: 20. **Distribution.** Endemic to Dominica. **Bionomics.** Adults and larvae probably bore in dry wood.

*Series Cucujiformia*Superfamily Lymexyloidea

Family 85. Lymexylidae, the ship-timber beetles

Atractocerus braziliensis Lepeltier and Audinet-Serville 1825: 309; Spilman 1971: 7; Bennett and Alam 1985: 24. **Distribution.** Barbados, Cuba, Dominica, Grenada, Guadeloupe, Jamaica, Puerto Rico, St. Vincent. Central America, Mexico, South America. **Bionomics.** Adults are attracted to lights and larvae live in dying trunks and logs of various trees.

Superfamily Cucujoidea

Family 97. Nitidulidae, the sap feedling beetles
Subfamily Cillaeinae

Colopterus posticus Erichson 1843: 237; Blackwelder 1944-1957: 409. **Distribution.** Dominica. Mexico to Colombia. **Bionomics.** Taken at Pont-Cassé, 23. 2. 74, det J. Jelinek 1981; in FC-INRA.

Subfamily Carpophilinae

Carpophilus mutilatus Erichson 1843: 258. = *Carpophilus hemipterus* Linnaeus 1755: 358. Blackwelder 1944-1957: 412. **Distribution.** Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Puerto Rico, St. Vincent. Central and South America, USA, Old World. Cosmopolitan, spread by commerce. **Bionomics.** Taken at Portsmouth, 23. 2. 74, det J. Jelinek 1981, in FC FC-INRA.

Epuraea luteolus (Erichson) 1843: 272 (*Haptoncus*); Blackwelder 1944-1957: 412. **Distribution.** Widespread West Indies; Cuba, Dominica, Grenada, Guadeloupe, Puerto Rico, St. Vincent. Central and South America, USA, Old World. Cosmopolitan, spread by commerce. **Bionomics.** Taken at Portsmouth, 23. 2. 74, det J. Jelinek 1981, in FC FC-INRA.

Subfamily Nitidulinae

Lobiopa insularis Laporte 1840: 10; Blackwelder 1944-1957: 414. **Distribution.** Cuba, Dominica, Grenada, Guadeloupe, Puerto Rico, St. Thomas, St. Vincent. Central and South America, USA. Distributed by commerce. **Bionomics.** Taken at St. Paul, 5. 8. 73, det J. Jelinek 1981, in FC FC-INRA.

Family 103 Silvanidae

Subfamily Brontinae
Tribe Psammoecini

Telephanus nodicornis Nevermann 1931: 21; Blackwelder 1944-1957: 422. **Distribution.** Dominica*, Guadeloupe, Montserrat. **Bionomics.** Taken at D'leau Gommier, in dead and decaying leaves.

Family 114. Erotylidae, the pleasing fungus beetles

Aegithus clavicornis Linnaeus 1758: 370; Blackwelder 1944-1957: 457. **Distribution.** Dominica, Grenada. Mexico to Panama, Colombia to Brazil and Argentina.

Brachysphaenus marginatus Olivier 1891: 437; Blackwelder 1944-1957: 459. **Distribution.** Dominica, Guadeloupe.

Family 122. Coccinellidae, the ladybird beetles

Subfamily Sticholatidinae
Tribe Microweisiini

Coccidophilus cariba Gordon 1978: 205. **Distribution.** Antigua, Dominica, Montserrat, Nevis, St. Kitts. Curaçao. **Bionomics.** Taken at Girandel, on coffee; predator on diaspidid scale insects.

Subfamily Scymninae

Tribe Scymnini

Nephaspis bootes Gordon 1996: 18. **Distribution.** Dominica*. Curaçao*. **Bionomics.** Widely distributed on Dominica. From Woodford Hill, Calibishie, D'leau Gommier, L'Anse Noir, and Portsmouth.

Tribe Diomini

Diomus roseicollis (Mulsant) 1853: 270 (*Scymnus*); Blackwelder 1944-1957: 445 (as *Scymnus*); Gordon 1999: 175. **Distribution.** Antigua*, Baha-

mas (Nassau*), Barbados*, Bequia*, Cuba*, Curaçao*, Dominica, Grenada*, Guadeloupe*, Hispaniola*, Jamaica*, Martinique*, Montserrat*, Mustique, Puerto Rico*, St. John*, St. Lucia*, St. Martin*, St. Thomas*, St. Vincent*, Vieques*. Central America, South America, USA (southern FL). **Bionomics.** Widespread in Dominica.

Tribe Chilacorini

Exochomus nitidula (Fabricius) 1792: 286 (*Cladis*); Blackwelder 1944-1957: 451. **Distribution.** Cuba, Dominica, Guadeloupe, Martinique*, Puerto Rico*, St. Lucia*.

Superfamily Tenebrionoidea

Family 130. Melandryidae, the false darkling beetles

Subfamily Serropalpinae

Phloeotrya mexicana (Champion) 1889: 83 (*Dircaea*); Spilman 1971: 7. **Distribution.** Dominica. Central America, Mexico, South America. **Bionomics.** Larvae found in rotted stump in area being cleared at 1900 feet.

Family 132. Rhipiphoridae, the wedge-shaped beetles

Ancholaemus acuminatus Fairmaire 1904: 155; Falin 2005 (pers. comm.). **Distribution.** Dominica. Brazil, Ecuador (Galapagos Islands), Panama. **Bionomics.** Adults usually collected at light. Larvae are endoparasitic in wood-boring beetle larvae. One male in BMNH (Falin 2005).

Macrosiagon octomaculatum (Gerstäcker) 1858: 480 (*Rhipiphorus*); Spilman 1971: 9; Bennett and Alam 1985: 27. **Distribution.** Barbados, Dominica, Guadeloupe, St. Vincent. Central America, South America, United States. **Bionomics.** Adults collected by beating vegetation; larvae probably hypermetamorphic and parasitic on larvae of wasps (Bembicidae, Tiphiidae, and Scolidae).

Family 133. Colydiidae, the cylindrical bark beetles
Tribe Adimerini

Monoedus, undetermined species in USNM. **Bionomics.** Widespread in Dominica.

Tribe Colydiini

Aulonium, undetermined species in USNM. **Bionomics.** Taken at Clarke Hall, Chiltern, N of Pont Casse, and Brantridge Estate.

Tribe Synchitini

Lasconotus, undetermined species in USNM. **Bionomics.** Taken N of Bagatette.

Microsicus, undetermined species in USNM. **Bionomics.** Taken at Clarke Hall and N of Bagatette.

Nematidium, undetermined species in USNM. **Bionomics.** Taken at Bagatette.

Paha, undetermined species in USNM. **Bionomics.** Taken at Fortune.

Tribe Pycomerini

Pycnomerus biimpressus Reitter 1877: 355; Ivie and Slipinski 1989: 69. **Distribution.** Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Martinique, Puerto Rico, St. Vincent, Tortola. Central and South America.

Pycnomerus uniformis Ivie and Slipinski 1989: 77. **Distribution.** Dominica*, Guadeloupe. **Bionomics.** Adults found with larvae of *Callirhipis lherminieri* Laporte (Rhipiceridae) in rotten wood. (Spilman 1971: 8.).

Pycnomerus infimus (Grouvelle) 1902: 464 (*Penthelispa*); Ivie and Slipinski 1989: 78. **Distribution.** Dominica*, Guadeloupe, Martinique. Brazil. **Bionomics.** Taken west of Pont Casse, probably under bark.

Family 134. Monommatidae, the opossum beetles

Hyporhagus marginatus (Fabricius) 1792: 506 (*Tritoma*); Freude 1955: 723; Spilman 1971: 7. **Distribution.** Dominica, Guadeloupe, Hispaniola, St. Thomas. Trinidad, Brazil. **Bionomics.** Adults come to lights and adults and larvae occur under bark and in rotting stems, wood and logs. Taken on Morne Guy.

Family 140. Tenebrionidae, the darkling beetles
Subfamily Lagriinae
Tribe Goniaderini

Lorelus, undetermined specimens in USNM. **Bionomics.** Taken W of Pont Casse, La Plaine, Fresh Water Lake, and Pt. Mulatre.

Tribe Lagriinae

Statira fulva Fleutiaux and Sallé 1890: 431; Champion 1917: 229; Spilman 1971: 6. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Adults attracted to lights and found on coffee trees.

Subfamily Phrenapatinae
Tribe Penetini

Dioedus debilis (Champion) 1896:20 (*Arrhabaeus*); Blackwelder 1944-1957: 530. **Distribution.** Dominica*, Grenada, St. Vincent. **Bionomics.** Taken at Fond Figues and Pont Casse.

Dioedus guadeloupensis Fleutiaux and Sallé 1890: 424; Blackwelder 1944-1957: 530. **Distribution.** Dominica*, Guadeloupe. **Bionomics.** Taken along road east of Pont Casse.

Subfamily Bolitophaginae
Tribe Bolitophagini

Rhipidandrus cornutus (Arrow) 1904:31 (*Eutomus*); Blackwelder 1944-1957: 527. **Distribution.** Dominica*, Grenada, Hispaniola, Montserrat, St. Vincent. **Bionomics.** Taken at Clarke Hall.

Subfamily Diaperinae
Tribe Phaleriini

Phaleria fulva Fleutiaux & Sallé 1890: 423; Watrous and Triplehorn 1982: 18; Woodruff *et al.* 1998: 44. **Distribution.** Antigua, Barbuda, Dominica, Grenada, Guadeloupe, Hispaniola, Montserrat, Mustique, St. Barthélemy, St. Lucia. **Bionomics.** A scavenger in sea beach sand.

Tribe Diaperini

Neomida deltocera Triplehorn 1994: 423. **Distribution.** Dominica, Brazil, Costa Rica, French Guiana, Guyana, Panama, Suriname. **Bionomics.** Found in *Fomes* and *Ganoderma* polypore bracket fungi in forests.

Platydemia guatemalensis Champion 1886: 187; Blackwelder 1944-1957: 538. **Distribution.** Dominica*, Mexico* to Panama*, Trinidad*, Venezuela. **Bionomics.** Widespread in Dominica, often taken at blacklights.

Ulomoides ocularis (Casey) 1891: 65 (*Palembus*); Blackwelder 1944-1957: 527. **Distribution.** Anguilla*, Bahamas (New Providence*, Eleuthera*), British Virgin Islands (Guana), Cuba*,

Dominica*, Hispaniola*, Montserrat*, Puerto Rico*, St. Croix*, St. Thomas*, St. Vincent*. USA (FL). Introduced and originating in the Philippines. **Bionomics.** Taken at Anse Bouleau and Castle Comfort in seedpods of *Tamarindus*.

Subfamily Opatrinae
Tribe Opatrini

Diastolinus sallei Mulsant and Rey 1859: 144; Marcuzzi 1984: 78. **Distribution.** Antigua, Barbuda, Dominica, Hispaniola.

Opatrinus (Opatrinus) clathratus (Fabricius) 1792: 90 (*Opatrum*); Dariusz 1995: 16. = *Opatrinus gemellatus* Olivier 1795: 9; Blackwelder 1944-1957: 524; Marcuzzi 1962: 31; Bennett and Alam 1985: 27. **Distribution.** Antigua, Barbados, Bequia, Dominica*, Grenada, Guadeloupe, Jamaica, Marie Galante, Mustique, Nevis, St. Croix, St. Kitts, St. Lucia, St. Vincent, Union. Brazil, Colombia, French Guiana, Guyana, Mexico (introduced), Surinam, Tobago, Trinidad, Venezuela (mainland, Margarita, Los Frailes and Los Testigos). **Bionomics.** Taken at West Cabrits, Belfast River, Clarke Hall, and Roseau under logs and in detritus.

Subfamily Tenebrioninae
Tribe Ulomini

Alegoria castelnaui Fleutiaux and Sallé 1890: 425; Marcuzzi 1984: 94. **Distribution.** Dominica, Guadeloupe.

Alegoria dilatata Laporte 1840: 221; Blackwelder 1944-1957: 531. **Distribution.** Dominica*, Grenada, St. Vincent. Mexico to Panama, Colombia to Brazil. **Bionomics.** Taken at Roseau in banana trash and the Bernard Estate near Portsmouth.

Antimachus roudeni Fleutiaux and Sallé 1890: 426; Marcuzzi 1984: 94. **Distribution.** Dominica, Guadeloupe.

Ulomaretusa (Fabricius) 1801:149; Blackwelder 1944-1957: 532; Spilman 1971: 7, 8. **Distribution.** Dominica*, Guadeloupe, Montserrat*, Puerto Rico*. Argentina*, Belize, Brazil, Colombia, Costa Rica, Ecuador*, French Guiana, Mexico, Nicaragua, Panama, Paraguay*, Peru. **Bionomics.** Reported from rotten stumps at Clarke Hall N of Pont Casse, and near Jean in association with *Phloeotrya mexicana* (Champion) (Melandryidae) and *Callirhipis lherminieri* Laporte (Rhipiceridae).

Tribe Tribolini

Tribolium castaneum (Herbst) 1797: 7; Blackwelder 1944-1957: 531; Bennett and Alam 1985: 27. **Distribution.** Barbados, Cuba, Dominica*, Hispaniola, Jamaica, Puerto Rico. Mexico to Panama, Colombia to Argentina, USA, Old World; cosmopolitan; introduced. **Bionomics.** Taken at a light in Roseau. A stored products pest.

Tribe Alphitobiini

Alphitobius laevigatus (Fabricius) 1781: 90; Marcuzzi 1962: 38; Bennett and Alam 1985: 27. **Distribution.** Antigua, Barbados, Cuba, Dominica*, Puerto Rico, Saba, St. Martin. Aruba, Curaçao, Mexico to Brazil, Old World: Cosmopolitan. Distributed by commerce. **Bionomics.** Taken in bat guano in a ruined basement in Cabrits.

Tribe Tenebrionini

Zophobas atratus Fabricius 1775: 256; Blackwelder 1944-1957: 534 (as *Z. morio* Fabr. 1776: 241); Marcuzzi 1984: 98 (as *Z. rugipes* Kirsch); Bennett and Alam 1985: 27. **Distribution.** Barbados, Cuba, Dominica*, Guadeloupe, Jamaica, Martinique, Puerto Rico, St. Thomas, St. Vincent, Saba, St. Croix, St. Martin. Aruba, Curaçao, Mexico to Panama, Trinidad to Paraguay, USA (CA-FL). **Bionomics.** Taken at Portsmouth, Cabrits, Greenhill Estate, and Roseau.

Subfamily Alleculinae

Lobopoda (Mesolobopoda) ebenina Champion 1896: 34; Campbell 1971: 39. **Distribution.** Grenada. Dominica record questionable because it is based on one female in USNM. **Bionomics.** Adults feed on lichens or algae on tree trunks, and larvae feed on humus.

Subfamily Coelometopinae

Acropteron chabrieri Fleutieux and Sallé 1890: 429; Blackwelder 1944-1957: 540. **Distribution.** Dominica*, Guadeloupe. **Bionomics.** Taken near Chiltern, at Greenhill Estate and Pont Casse; by beating decayed branches of fallen trees. *Cyrtosoma lherminieri* Chevrolat 1844: 123; Blackwelder 1944-1957: 538; Marcuzzi 1984: 101. **Distribution.** Dominica*, Grenada, Guadeloupe, Montserrat, St. Vincent. **Bionomics.**

Tribe Talanini

Talanus guadeloupensis Fleutieux and Sallé 1890: 430; Marcuzzi 1984: 104. **Distribution.** Dominica*, Guadeloupe. **Bionomics.** Taken at Clarke Hall and Pont Casse. One specimen in FC-INRA, box 362.

Tribe Strongyliini

Strongylium delauneyi Fleutieux and Sallé 1890: 429; Blackwelder 1944-1957: 546. **Distribution.** Dominica*, Guadeloupe. **Bionomics.** Taken at Fresh Water Lake, Chiltern, and Pont Casse.

Family 145. Meloidae, the blister beetles

Subfamily Nemognathinae

Tribe Horiini

Cissites maculata Swederus 1787: 199; Blackwelder 1944-1957: 482; Selander and Bouseman 1960: 212; Bennett and Alam 1985: 27. **Distribution.** Barbados, Cuba, Dominica, Guadeloupe, Hispaniola, Puerto Rico, St. Vincent. Argentina, Brazil, Chile, Colombia, Ecuador, French Guiana, Mexico to Panama to Peru, Trinidad, Venezuela. **Bionomics.** The larvae are parasitic upon the immatures of carpenter bees (Xylocopidae).

Tribe Nemognathini

Pseudozonitis marginata (Fabricius) 1781: 159 (*Lagria*); Selander and Bouseman 1960: 214. = *Epicauta annulicornis* Chevrolat 1877: ix; Blackwelder 1944-1957: 482. **Distribution.** Bahamas (Andros), Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Croix, St. Lucia. **Bionomics.**

Family 151. Salpingidae, the narrow-waisted beetles

Inopeplus praeustus (Chevrolat) 1858: 212 (*Ino*); Spilman 1971: 4 (in Inopeplidae). **Distribution.** Cuba*, Dominica*, Guadeloupe, Martinique, St. Vincent. **Bionomics.** Adults rarely at lights, adults and larvae mostly collected under bark of fallen trees.

Family 152. Anthicidae, the ant-like flower beetles

Sapintus pallidus (Say) 1826: 245 (*Anthicus*); Werner 1964: 230; 1983: 233 (*Anthicus*). **Distribution.** Cuba, Dominica, Grenada, Guadeloupe,

Hispaniola, Puerto Rico. Mexico to Panama, Venezuela, USA (TX, MS, AL, FL). **Bionomics.** Adults occur on flowers of herbaceous vegetation.

Superfamily Chrysomeloidea

Family 155. Cerambycidae, the long-horned beetles

Chalumeau and Touroult (2005a) summarize the fauna of the Lesser Antilles and provide keys for identification.

Subfamily Parandrinae Tribe Parandriini

Hesperandra glabra (Degeer) 1774: 352 (*Atellabus*); Blackwelder 1944-1957: 551; Villiers 1980a: 130; 1980b: 138; Chalumeau and Touroult 2005a: 42. **Distribution.** Dominica, Guadeloupe, St. Lucia, St. Vincent. Mexico to Panama to Venezuela, Trinidad and Argentina. **Bionomics.** Larvae have been found in wood of trees in the genera *Acacia*, *Araucaria*, *Aspidosperma*, *Ochroma*, *Phoebe*, *Spondias*, etc. Adults are under bark and sometimes in small groups.

Parandra (*Parandra*) *pinchoni* Villiers 1979: 182; 1980a: 129, 1980b: 137; Chemsak *et al.* 1992: 13; Monné and Giesbert 1995: 2; Chalumeau and Touroult 2005a: 43. **Distribution.** Dominica, Martinique. **Bionomics.** Taken at Ponte Cassé, Fond Figues, Fortune. Found in rotted logs and tree trunks.

Subfamily Prioninae Tribe Macrotomini

Stenodontes (*Nothopleurus*) *maxillosus* (Drury) 1773: pl 38, fig. 2 (*Cerambyx*); Blackwelder 1944-1957: 552; Villiers 1980b: 141; Chalumeau and Touroult 2005a: 45. **Distribution.** Antigua, Barbados, Barbuda, Cuba, Dominica, Guadeloupe, Martinique, Montserrat, Puerto Rico (seemingly absent in Virgin Islands), St. Barthélemy, St. Christopher, St. Kitts, St. Martin. **Bionomics.** Larvae attack healthy and unhealthy wood of orange, mango, *Bursera* and other trees. Taken at Pont-Cassé.

Strongylaspis corticarius (Erichson in Schomburg) 1848: 571 (*Ergates*); Villiers 1980a: 130; 1980b: 143; Monné and Giesbert 1995: 7; Chalumeau and Touroult 2005a: 49. **Distribution.** Cuba, Dominica (introduced, the only known Lesser Antilles locality), Jamaica. Northern South America to Panama to Mexico, USA (Florida).

Tribe Solenopterini

Solenoptera canaliculata (Fabricius) 1787: 130 (*Prionus*); Blackwelder 1944-1957: 554 (*Derancistrus*); Villiers 1980b: 145; Chalumeau and Touroult 2005a: 54. **Distribution.** Bequia, Guadeloupe, Martinique, Mustique, St. Lucia, St. Vincent, Union. Trinidad. To be expected in Dominica. **Bionomics.** In trunks of live trees such as *Acacia*, *Eugenia*, and *Pimenta*.

Solenoptera metallescens Thomson 1860: 306; Villiers 1980b: 148; Monné and Giesbert 1995: 12; Chalumeau and Touroult 2005a: 58. **Distribution.** Dominica, Martinique. Cuba reports are in error.

Solenoptera quadrilineata (Olivier) 1795: 66 (*Prionus*); Villiers 1980b: 150; Chalumeau and Touroult 2005a: 57. **Distribution.** Guadeloupe?, Martinique. To be expected in Dominica. Endemic to Lesser Antilles.

Solenoptera sulcicollis Thomson 1860: 306; Villiers 1980b: 147; Chalumeau and Touroult 2005a: 56. **Distribution.** Martinique, Guadeloupe. To be expected in Dominica. **Bionomics.** Larvae bore into wood of orange and other trees.

Subfamily Cerambycinae Tribe Methiini

Methia necydalea (Fabricius) 1798: 148 (*Saperda*); Villiers 1980a: 130; Philips and Ivie 1998: 72; Chalumeau and Touroult 2005a: 71. **Distribution.** Antigua, Bahamas, Cayman Islands, Cuba, Désirade, Dominica, Grenada, Guadeloupe, Hispaniola, Les Saintes, Marie Galante, Martinique, Mona, Montserrat, Nevis, Puerto Rico, St. Barthélemy, St. Croix, St. John, St. Kitts, St. Martin, St. Vincent, Union. Mexico, USA. **Bionomics.** Taken at lights. Host trees: *Sloanea*, *Inga*, *Laguncularia*, *Conocarpus*, *Rhizophora*, *Avicennia*.

Tribe Achrysonini

Achryson surinamum (Linnaeus) 1767: 632 (*Cerambyx*); Villiers 1980a: 130; Chalumeau and Touroult 2005a: 74. **Distribution.** Antigua*, Barbados*, Carriacou*, Dominica*, Grenada*, Guadeloupe*, Hispaniola*, Jamaica*, Marie Galante, Martinique*, Montserrat, Puerto Rico, St. Lucia*, St. Martin. Trinidad, Argentina to the USA. **Bionomics.** Taken at Morne Macaque. Host

trees: *Acacia*, *Leucaena*, *Lonchocarpus*, *Tamarindus*.

Tribe Eburiini

Eburia decemmaculata (Fabricius) 1775: 181 (*Stenocorus*); Villiers 1980a: 130; Bennett and Alam 1985: 28; Chalumeau and Touroult 2005a: 78. **Distribution.** Antigua*, Barbados*, Dominica*, Guadeloupe*, Martinique?, St. Barthélemy, St. Croix*, St. Eustache, St. Kitts*, St. Martin. **Bionomics.** Taken at Clarke Hall and Grande Savane. Host trees: *Delonix*, *Hippomane*, *Leucaena*, *Acacia*.

Eburia octomaculata Chevrolat 1862: 265; Villiers 1980a: 130; Monné and Giesbert 1995: 41; Bennett and Alam 1985: 28; Chalumeau and Touroult 2005a: 77. **Distribution.** Barbados, Cuba, Dominica, Guadeloupe, Martinique, Montserrat, St. Kitts. **Bionomics.** Taken at Clarke Hall and Springfield Estate. Host trees: *Citrus*, *Eugenia*, *Inga*, *Tamarindus*.

Tribe Elaphidionini

Curtomerus flavus (Fabricius) 1775: 191 (*Callidium*); Villiers 1980a: 131; Bennett and Alam 1985: 28; Ivie 1985a: 309; Chalumeau and Touroult 2005a: 88. **Distribution.** Anguilla, Bahamas (Andros, South Bimini*, New Providence, San Salvador*), Barbados, Barbuda*, British Virgin Islands (Guana*, Virgin Gorda*), Cuba*, Désirade, Dominica*, Grand Cayman, Grenada, Guadeloupe, Hispaniola*, Jamaica, Les Saintes, Marie Galante, Martinique, Mona, Puerto Rico*, St. Christopher, St. Croix*, St. John*, St. Lucia*, St. Martin, St. Vincent. Central and South America, USA (FL). Introduced to Tahiti, Marquesas Islands, Hawaii, and Philippines. **Bionomics.** Polyphagous on many tree genera.

Elaphidion glabratum (Fabricius) 1775: 180 (*Stenocorus*); Ivie 1985a: 310; Chalumeau and Touroult 2005a: 101. **Distribution.** Antigua*, Dominica*, Guadeloupe, Montserrat*, Nevis, Saba, St. Barthélemy, St. Croix*, St. Eustatius, St. John, St. Kitts, St. Lucia, St. Martin, St. Thomas. **Bionomics.** Taken at Greenhill Estate. Host trees: *Acacia*, *Citrus*.

Nesanoplum puberulum (Fleutiaux and Sallé) 1889: 464 (*Cyrtomerus*); Villiers 1980a: 131; Chalumeau and Touroult 2005a: 89. **Distribution.** Bahamas, Dominica, Grenada, Guadeloupe*, Hispaniola, Jamaica, Martinique*, Montserrat, St. Bar-

thélémy, St. Vincent, Virgin Islands. **Bionomics.** Host trees: *Inga*, *Hymenaea*, *Tamarindus*, *Acacia*, *Cyatharexylum*, *Coccoloba*.

Tribe Ibdionini

Neocompsa cylindricollis (Fabricius) 1798: 146 (*Stenocorus*); Villiers 1980a: 131 (as *N. quadrimaculata* (Fabricius) 1792); Woodruff *et al.* 1998: 16 (as *Heterachthes quadrimaculata* Fabricius); Monné and Giesbert 1995: 82; Chalumeau and Touroult 2005a: 109. **Distribution.** Antigua, Barbados*, Barbuda*, Dominica*, Grenada, Guadeloupe, Jamaica, Martinique, Montserrat*, Mustique, Saba, St. Croix*, St. Kitts*, St. Lucia, St. Martin, St. Thomas*, St. Vincent. Puerto Rico. Trinidad. **Bionomics.** Polyphagous on many tree genera.

Neocompsa fulgens (Fisher) 1932: 48 (*Heterachthes*); Villiers 1980a: 131; Chemsak *et al.* 1992: 52; Monné and Giesbert 1995: 82; Chalumeau and Touroult 2005a: 108. **Distribution.** Dominica*, Guadeloupe, Martinique, Union. **Bionomics.** Host trees: *Hippomane*, *Piscidia*, *Thespesia*.

Tribe Callidiopini

Caribbomerus attenuatus (Chevrolat) 1862: 263 (*Lampromerus*); Villiers 1980a: 131 (*Merostenus*); Chalumeau and Touroult 2005a: 110. **Distribution.** Bahamas, British Virgin Islands (Jost Van Dyke), Cuba, Dominica, Grenada, Guadeloupe, Jamaica, Puerto Rico*, St. Barthélemy, St. Martin. **Bionomics.** Xerophilic and mesophilic forests.

Tribe Callichromatini

Mionochochroma elegans (Olivier) 1790: 298 (*Cerambyx*); Villiers 1980a: 131, 1980d: 97; Monné and Giesbert 1995: 103; Woodruff *et al.* 1998: 15 (*Callichroma*); Chalumeau and Touroult 2005a: 115. **Distribution.** Dominica*, Grenada, Guadeloupe, St. Lucia. Not St. Thomas and South America. **Bionomics.** Taken at Rivière-la-Croix.

Tribe Clytini

Megacyllene (*Megacyllene*) *angulata* (Fabricius) 1775: 192 (*Callidium*); Villiers 1980a: 131 (as *M. cayennensis* Castelnau and Gory 1835: 10); Chemsak *et al.* 1992: 67; Monné and Giesbert 1995: 115;

Chalumeau and Touroult 2005a: 119. **Distribution.** Dominica (introduced). NW Brazil, French Guiana, Mexico to Panama, Venezuela. **Bionomics.** Taken at Chiltern. Establishment needs to be confirmed.

Tribe Rhopalophorini

Chlorida festiva (Linnaeus) 1758: 389 (*Cerambyx*); Villiers 1980a: 130; Bennett and Alam 1985: 28; Woodruff *et al.* 1998: 15; Chalumeau and Touroult 2005a: 130. **Distribution.** Antigua, Barbados, Dominica, Grenada, Guadeloupe, Marie Galante, Martinique, Montserrat, St. Lucia, St. Vincent. Central and South America to Argentina, USA (FL). Introduced to São Tome, Gulf of Guinea. **Bionomics.** Polyphagous on many tree genera.

Subfamily Lepturinae

Tribe Lepturini

Strangalia debroizei Chalumeau and Touroult 2005b: 156; Chalumeau and Touroult 2005a: 65. **Distribution.** Endemic to Dominica. **Bionomics.** Taken at Laudat, reared from larva. Visual mimic of soldier beetles (Cantharidae).

Strangalia insularis (Fisher) 1932: 56 (*Ophistomis*); Villiers 1980b: 156; Monné and Giesbert 1995: 176; Chalumeau and Touroult 2005a: 66. **Distribution.** Endemic to Dominica. **Bionomics.** Taken at start of trail to Boiling Lake. Visual mimic of *Photinus* (firefly beetles, Lampyridae).

Subfamily Lamiinae

Tribe Lamiini

Taeniotes insularis Thomson 1857: 171; Villiers 1980c: 466; Monné and Giesbert 1995: 176; Chalumeau and Touroult 2005a: 139. **Distribution.** Dominica and Guadeloupe; the subspecies *T. i. gahani* Breuning 1943: 246 is endemic to Dominica. **Bionomics.** Taken at Trafalgar, Pont Cassé, Springfield, Grand Bay, Pagua Bay.

Tribe Apomecynini

Adetus lherminieri Fleutiaux and Sallé 1890: 468; Villiers 1980c: 465, 1980d: 86; Chalumeau and Touroult 2005a: 144. **Distribution.** Canouan, Dominica, Grenada, Guadeloupe, Marie Galante, Martinique, Montserrat, Petit St. Vincent, St. Kitts, St. Vincent. Union. **Bionomics.** Taken at

Belle Fille, Clarke Hall, Mero, Grand-Savane. Host plants: *Coccoloba*, *Cordia*, *Gossypium*, *Hibiscus*, *Thespia*.

Tribe Onciderini

Cacostola ornata Fleutiaux and Sallé 1890: 470;; Chalumeau and Touroult 2005a: 158. **Distribution.** Limited to Lesser Antilles., Bequia, Dominica, Grenada, Guadeloupe, Martinique, Montserrat, Mustique. **Bionomics.** Taken at Bellevue. Host trees: *Mangifera*, *Chrysobalanus*, *Avicenia*.

Hypsioma grisea (Fleutiaux and Sallé) 1889: 469 (*Hypomia*); Villiers 1980c: 465; Monné and Giesbert 1995: 204; Chalumeau and Touroult 2005a: 154. **Distribution.** Endemic to Lesser Antilles. Barbados, Dominica, Grenada*, Guadeloupe, Martinique, St. Lucia, St. Vincent, Union. **Bionomics.** Taken in Chelston. Host trees: *Piscidia*, *Lonchocarpus*, *Mangifera*.

Oncideres amputator (Fabricius) 1792: 276 (*Lamia*); Villiers 1980c: 466; Chalumeau and Touroult 2005a: 151. **Distribution.** Dominica, Grenada, Guadeloupe*, Jamaica, Les Saintes, Martinique, St. Lucia*, St. Vincent. **Bionomics.** The female of this beetle lays its eggs in a small tree branch and then girdles the branch with its mandibles until the branch drops to the forest floor. Host trees are: "bois doux" (*Inga* sp., with a diameter up to 20 mm), *Coccoloba*, *Lonchocarpus*, *Diospyros*, *Acacia*, *Sloanea*, *Citrus*, etc. The natives of Dominica commonly and mistakenly think these fallen branches are the act of the large Hercules beetle (*Dynastes hercules*, Scarabaeidae), which supposedly grasps the branches between its two horn and flies in loops until the branch is cut.

Tribe Pteropliini

Epectasis similis Gahan 1895: 126; Villiers 1980c: 466; Chemsak *et al.* 1992: 118; Chalumeau and Touroult 2005a: 160. **Distribution.** Dominica, Grenada, Guadeloupe, Montserrat, St. Vincent. **Bionomics.** Taken at Pont Cassé. Host trees: *Mangifera* and *Sloanea*.

Tribe Pogonocherini

Ecyrus hirtipes Gahan 1895: 127; Villiers 1980c: 466; Chemsak 1969: 189; Ivie and Chemsak 1983: 199; Chalumeau and Touroult 2005a: 163. **Distribution.** Bahamas (South Bimini*), Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Martin-

ique, Montserrat, Puerto Rico, St. John, St. Thomas, Union. **Bionomics.** Taken at Clarke Hall. Polyphagous on many host trees.

Tribe Acanthoderini

Oreodera glauca (Linnaeus) 1758: 390 (*Cerambyx*); Villiers 1980c: 467; Chalumeau and Touroult 2005a: 169. **Distribution.** Bahamas (New Providence*), Dominica, Guadeloupe, Hispaniola*, Martinique*, Puerto Rico*, St. Lucia*. Central America (Mexico) to South America (Argentina). **Bionomics.** An anthropophile and possibly introduced to some islands. Host trees: *Ficus*, *Artocarpus*, *Coccoloba*, etc.

Tribe Acanthocinini

[*Alcidion dominicum* (Fisher) 1926: 30 (*Probatius*)]. Type specimen stated to have been collected by H. W. Foote on the June-July, 1913, Yale expedition to Dominica; Monné and Giesbert (1995: 246) list both Dominica and the Dominican Republic. **Distribution.** Dominica* (type locality); as stated in the description. Chalumeau and Touroult 2005 do not list any species of *Alcidion* from the Lesser Antilles. Other species occur in USA (FL), Mexico to South America, and the Greater Antilles (Monné and Giesbert 1995: 246). Dominica is here treated as an erroneous locality.

Amniscus assimilis (Gahan) 1895:136 (*Leptostylus*); Villiers 1980c: 466, 1980d: 91 (*Leptostyloides*); Monné and Giesbert 1995: 246; Chalumeau and Touroult 2005a: 179. **Distribution.** Désirade, Dominica*, Guadeloupe*, Martinique, Montserrat, St. Kitts, St. Lucia. **Bionomics.** Taken at Clarke Hall and La Sourcier; under bark of felled trees. Polyphagous on many tree genera.

Amniscus similis (Gahan) 1895:136 (*Leptostylus*); Villiers 1980c: 466, 1980d: 91 (*Leptostyloides*); Chalumeau and Touroult 2005a: 178. Literature records of *Leptostylopsis testaceus* (Froelich) 1792: 141 for Dominica (Woodruff *et al.* 1998: 16 (*Leptostylus*) may be *Amniscus* (= *Leptostyloides*) *similis* Gahan (Chalumeau and Touroult 2005a: 199). **Distribution.** Antigua, Barbados*, Bermuda*, Désirade, Dominica*, Grenada*, Guadeloupe, Guana*, Iles des Saintes, Marie Galante, Martinique*, Puerto Rico, St. Croix*, St. Lucia*, St. Vincent, Virgin Gorda*. Trinidad*. **Bionomics.** Taken at several sites in Dominica. Host trees: *Tabebuia*, *Delonix*, *Hippomane*, *Mangifera*.

Anisopodus dominicensis Villiers 1980d: 96; Villiers 1980c: 467; Chemsak *et al.* 1992: 134; Chalumeau and Touroult 2005a: 194. **Distribution.** Dominica, Martinique. **Bionomics.** Known from Trafalgar and Clarke Hall in mesophile forest.

Lagocheirus araneiformis (Linnaeus) 1767: 625 (*Cerambyx*); Villiers 1980c: 465; Bennett and Alam 1985: 28; Chalumeau and Touroult 2005a: 213. **Distribution.** Barbados, Bequia, Cuba*, Dominica*, Grand Cayman*, Guana*, Guadeloupe*, Grenada, Grenadines, Hispaniola*, Jamaica*, Martinique*, Mustique, St. Croix*, St. Lucia*, St. Thomas*, St. Vincent. The subspecies *L. a. guadeloupensis* Dillon 1957: 150 is reported in Guadeloupe, Guana, St. Barthélémy, St. Croix, St. John, St. Thomas. The subspecies *L. a. insulorum* Dillon 1957: 150 is distributed in Bequia, Dominica, Grenada, Martinique, Mustique, St. Lucia, St. Vincent, Union. Five other subspecies are elsewhere in the West Indies (Aruba, Bonaire, Curaçao), Mexico to Panama, and northern South America. Introduced to Tahiti and Hawaii. **Bionomics.** Polyphagous on many tree genera.

Nesuterpia deknuydti Chalumeau and Touroult 2005a: 175; Chalumeau and Touroult 2005b: 155. **Distribution.** Endemic to Dominica. The mention of *Nesuterpia curvipes* Villiers 1980d: 89; Chalumeau 1983b: 221; Monné and Giesbert 1995: 264 from Dominica is in error (Chalumeau and Touroult 2005a: 175); it is endemic to Guadeloupe. **Bionomics.** Known from one specimen, taken at Pont Cassé. Larva in stems of fallen fronds of *Prestoea montana* palm.

Oedopeza fleutiauxi (Villiers) 1980d: 95 (*Chaetanes*); Villiers 1980c: 467; Chemsak *et al.* 1992: 144; Monné and Giesbert 1995: 266; Chalumeau and Touroult 2005a: 183. **Distribution.** Dominica, Guadeloupe, Martinique. **Bionomics.** Taken at Fond-Figues, Pont-Cassé, Clarke Hall, La Plaine. Under bark of *Dacryodes*.

Styloleptus posticalis (Gahan) 1895:133 (*Leptostylus*); subspecies *bonsilsi* Villiers 1980d: 93; Villiers 1980c: 467; Chalumeau 1983b: 228, 229; Chalumeau and Touroult 2005a: 205. = *Styloleptus albosuturalis* Villiers 1980d: 93; Villiers 1980c: 467; Chemsak *et al.* 1992: 146; Monné and Giesbert 1995: 271. **Distribution.** Bermuda*, Dominica*, Guadeloupe, Marie Galante, Martinique, St. Barthélémy. The nominate subspecies is limited to Grenada and St. Vincent. **Bionomics.** Taken at many localities. Polyphagous on many tree genera.

Trypanidius spilmani Villiers 1980d: 95; Villiers 1980c: 467; Chalumeau 1983b: 224; Chemsak *et al.* 1992: 148; Chalumeau and Touroult 2005a: 209. **Distribution.** Nominate subspecies on Dominica*, Martinique, St. Lucia. The subspecies *T. s. liamaigae* Chalumeau 1983b: 225 is on St. Kitts. **Bionomics.** Taken at Clarke Hall.

Urgleptes guadeloupensis (Fleutiaux and Sallé) 1889: 472 (*Lepturges*); Villiers 1980c: 467; Chalumeau 1983b: 233; Chalumeau and Touroult 2005a: 190. **Distribution.** Bahamas, Barbados*, Cuba*, Dominica*, Grenada, Guadeloupe*, Hispaniola*, Iles des Saintes, Martinique, Montserrat*, Mustique, Puerto Rico*, St. Croix*. Cited as distributed from Cuba to Curacao, but details are not given. **Bionomics.** Taken at Laudat and Bellevue. Polyphagous on many tree genera.

Tribe Cyrtini

Cyrtinus hubbardi Fisher 1926: 38; Villiers 1980c: 467; Chalumeau and Touroult 2005a: 217. **Distribution.** Dominica*, Guadeloupe, Martinique, Montserrat. **Bionomics.** Taken at Clarke Hall. Larvae in branches of *Inga*, *Lonchocarpus* and *Acacia*.

Tribe Calliini

Drycothaea guadeloupensis Fleutiaux & Sallé 1890: 473; Chalumeau and Touroult 2005a: 224. **Distribution.** Dominica and Guadeloupe. **Bionomics.** Taken at Pont-Cassé. A rare hygrophile species taken by beating tree branches.

Family 156. Bruchidae, the pea and bean weevils Subfamily Pachymerinae

Caryobruchus gleditsiae (Johansson and Linné) 1767: 605; Alvarez and Kingsolver 1997: 215. **Distribution.** Bahamas, Bermuda, Cuba, Dominica, Hispaniola, Jamaica, El Salvador, Guatemala, Honduras, Mexico, Panama, USA. **Bionomics.** Feeds on seeds of various palms.

Family 159. Chrysomelidae, the leaf beetles Revised by Ed Riley, May 2006

USNM records for Alticini, Cassidinae and Chlamisinae are online at: www.sel.barc.usda.gov/Coleoptera/chrysom/about.htm. Takizawa (2003) is the most up-to-date listing of West Indian Chrysomelidae.

Subfamily Criocerinae Tribe Lemini

Lema obscura Fabricius 1801: 476; Blackwelder 1944-1957: 631. **Distribution.** Dominica*, Grenada, St. Vincent. Argentina, Brazil*, Peru*, Trinidad.

Lema ochracea Fleutieux 1889: 474; Blackwelder 1944-1957: 631. **Distribution.** Dominica*, Guadeloupe*.

Neolema dorsalis (Olivier) 1791: 201 (*Lema*); Blackwelder 1944-1957: 629. **Distribution.** Cuba*, Dominica*, Grenada, Guadeloupe*, Hispaniola*, Jamaica*, Martinique*, Puerto Rico, St. Kitts*, St. Vincent. S. Texas to Panama, Colombia to Argentina and Peru. **Bionomics.** On *Commelina* (Commelinaceae) in south Texas.

Subfamily Hispinae Tribe Cephaloleiini

Cephaloleia; undetermined species. **Distribution.** Possibly endemic to Dominica. **Bionomics.** Collected on Trail to Middleham Falls, Mornes Trois Piton Nat'l. Park, Malaise trap (TAMU)

Tribe Chalepini

Chalepus sanguinicollis (Linnaeus) 1775: 530 (*Hippa*); Blackwelder 1944-1957: 727. **Distribution.** Cuba, Dominica*, Grenada, Hispaniola, Puerto Rico, St. Thomas, St. Vincent. Central America to Argentina and Bolivia, USA (FL). **Bionomics.** Known elsewhere to feed on grasses.

Tribe Mesomphaliini

Chelymorpha cribraria (Fabricius) 1775: 90 (*Cassida*); Blackwelder 1944-1957: 744; Takizawa 2003: 99. = *Chelymorpha multipunctata* Olivier 1790: 384; Blackwelder 1944-1957: 745; Woodruff *et al.* 1998: 17; synonymized into the above in Takizawa 2003: 99. **Distribution.** Antigua, Dominica*, Grenada, Guadeloupe, Hispaniola, Puerto Rico*, St. Barthélemy, St. John*, St. Vincent. Brazil*, Central America, Colombia, French Guiana, Paraguay*, USA (FL). **Bionomics.** Taken at Pont Casse and Roseau (USNM). This species should be found feeding on members of the morning glory family, Convolvulaceae.

Tribe Cassidini

Charidotella sexpunctata (Fabricius) 1781: 109 (*Cassida*). **Distribution.** Antigua*, Dominica*, Guadeloupe*, St. Croix*, St. Kitts*, St. Lucia*, St. Vincent*. Mexico* to Costa Rica*, Venezuela to Argentina, USA. Found throughout most of the New World. **Bionomics.** Taken at Springfield Estate (TAMU); breeds on members of the Convolvulaceae.

Charidotella; undetermined species. **Distribution.** Unknown. **Bionomics.** Taken at Trafalgar Village (TAMU). This species should be found feeding on members of the morning glory family, Convolvulaceae.

Subfamily Galerucinae
Tribe Galerucini

Neolochmaea obliterated (Olivier) 1808: 635 (*Galeruca*); Takizawa 2003: 51. **Distribution.** Dominica, Jamaica, Puerto Rico. Central and South America and as immigrant to southern Florida. **Bionomics.** Elsewhere on *Diodia* and *Borreria* spp. (Rubiaceae).

Yingaresca brevivittata (Blake) 1968: 62 (*Galerucella*); Takizawa 2003: 53. **Distribution.** Endemic to Dominica. **Bionomics.** Collected at Clarke Hall Estate (type locality) and 3 mi W Pont Lolo, 1800 ft. alt.

Tribe Hylaspini

Acalymma innubum (Fabricius) 1775: 117 (*Diabrotica*); Blackwelder 1944-1957: 682. **Distribution.** Cuba*, Dominica*, Grenada*, Guadeloupe, Puerto Rico*, St. Lucia, Virgin Islands. Mexico to Costa Rica, Colombia to French Guiana. **Bionomics.** Should be found associated with Curcubitaceae.

Diabrotica furcata (Fabricius) 1787: 381 (*Crioceris*); Blackwelder 1944-1957: 681. **Distribution.** Dominica*, Martinique*, St. Barthélemy. French Guiana.

Diabrotica ochreatea (Fabricius) 1792: 4 (*Crioceris*); Blackwelder 1944-1957: 683. **Distribution.** Dominica*, Guadeloupe*, Montserrat*.

Tribe Alticini

Aedmon aspila (Blake) 1944: 253 (*Hadropoda*). **Distribution.** Endemic to Dominica. **Bionomics.**

Taken on the Yale expedition of 1913 (type specimen).

Aedmon dominicae (Blake) 1943: 438 (*Hadropoda*); Blackwelder 1944-1957: 715. **Distribution.** Endemic to Dominica. **Bionomics.** Taken at St. George, Fresh Water Lake, Greenhill Estate (type locality) and in forest at 800 feet.

Aedmon fennahi (Blake) 1943: 434 (*Hadropoda*); Blackwelder 1944-1957: 715. **Distribution.** Endemic to Dominica. **Bionomics.** Taken at 800 feet in forest (type specimen).

Aedmon glabra (Blake) 1943: 424 (*Hadropoda*); Blackwelder 1944-1957: 715. **Distribution.** Endemic to Dominica; not in Dominican Republic. **Bionomics.** Taken at Sylvania, Saulton Estate (type locality) and Pont Casse, at lights. Common at Springfield Estate in Malaise traps (TAMU).

Aedmon polkila (Blake) 1944: 252 (*Hadropoda*). **Distribution.** Endemic to Dominica. **Bionomics.** Taken on the Yale expedition of 1913 (type specimen).

Aedmon stenotrachela (Blake) 1943: 438 (*Hadropoda*); Blackwelder 1944-1957: 715. **Distribution.** Endemic to Dominica. **Bionomics.** Taken at L'Etang, Chiltern Estate, Greenhill Estate (type locality), and Clark Hall.

Aedmon xanthoura (Blake) 1968: 63 (*Hadropoda*). **Distribution.** Endemic to Dominica. **Bionomics.** Collected at Freshwater Lake, Springfield Estate, Chiltern Estate, and 2.5 mi E Pont Casse (type locality).

Altica; undetermined species. **Distribution.** Unknown. **Bionomics.** Specimens in USNM.

Aphthona insularis Blake 1964: 11. **Distribution.** Dominica*. Venezuela record needs verification. **Bionomics.** Specimens taken on 1913 Yale Expedition (type specimens); in USNM.

Chaetocnema; undetermined species. **Distribution.** Unknown. **Bionomics.** Specimens in TAMU and USNM.

Colaspis musae Bechyne 1950: 71. **Distribution.** Dominica, French Guiana, Guyana.

Epitrix; undetermined species. **Distribution.** Unknown. **Bionomics.** (USNM).

Exocerus flinti Blake 1966: 217. **Distribution.** Endemic to Dominica. **Bionomics.** Collected at Freshwater Lake (type locality), by sweeping ferns and other vegetation.

Exocerus heikertingeri Bechyne 1955: 145. **Distribution.** Dominica*, Guadeloupe. **Bionomics.** Taken near Pont Cassé, and at 1300 feet on trail near Castle Bruce.

Gioiaphiltata (Blake) 1968: 65 (*Sidfaya*). **Distribution.** Endemic to Dominica. **Bionomics.** Collected 1.6 mi W Pont Cassé (type locality).

Hekertingerella blakeae Takizawa 2003: 72; replacement name for *H. guadeloupensis* Blake 1960: 103. **Distribution.** Dominica*, Guadeloupe. **Bionomics.** Taken at Fond Figues. Taken at 3000 ft. on Guadeloupe (type specimen).

Hekertingerella dominicae Blake, 1960: 101. **Distribution.** Endemic to Dominica. **Bionomics.** Collected at Greenhill Estate, 800 feet (type locality).

Hekertingerella wirthi Blake 1968: 65. **Distribution.** Endemic to Dominica. **Bionomics.** Collected at Freshwater Lake (type locality), Clarke Hall, and Tareau Cliffs (La Franchetti).

Homoschema dominicae Blake 1968: 67; Blanco and Duckett 2001: 8. **Distribution.** Endemic to Dominica. **Bionomics.** Collected at Mero (type locality).

Homoschema lineatum Blanco and Duckett 2001: 12. **Distribution.** Endemic to Dominica. **Bionomics.** Taken east of Dublanc (type locality), on trail to Morne Trois Pitons, and Springfield Estate.

Lysathia occidentalis (Suffrian) 1868: 197 (*Haltica*); Blackwelder 1944-1957: 700 (*Altica*). **Distribution.** Cuba*, Dominica, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Lucia, Virgin Islands, Mexico.

Monomacra blakea (Bechyne) 1958: 661 (*Omophoita*). **Distribution.** Antigua*, Dominica*, Jamaica, Puerto Rico*, St. Croix*, St. Kitts*, St. Lucia*, St. Thomas*. Colombia, Ecuador, Trinidad. **Bionomics.** Taken at Canefields.

Monomacra dominicae (Blake) 1946: 267 (*Lactica*). **Distribution.** Endemic to Dominica. **Bionomics.** Taken at Saltoun Estate.

Monomacra flinti Blake 1968: 64 (*Lactica*). **Distribution.** Endemic to Dominica. **Bionomics.** Collected 0.4 mi E Pont Cassé at about 2000 ft. (type locality).

Monomacra nigripes (Blake) 1965: 11 (*Lactica*). **Distribution.** Endemic to Dominica. **Bionomics.** Collected at Greenhill Estate, 800 feet (type locality).

Omophoita aequinoctialis (Linnaeus) 1758: 374 (*Chrysomela*); Blackwelder 1944-1957: 707; Bennett and Alam 1985: 29. **Distribution.** Barbados, Dominica*, Jamaica, St. Thomas* (questionable record). Mexico to Panama, Colombia to Brazil and Bolivia, Trinidad. **Bionomics.** Taken on the 1913 Yale Expedition.

Omophoita cyanipennis Fabricius 1798: 97; Blackwelder 1944-1957: 707; Woodruff *et al.* 1998: 19.

Distribution. Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Croix, St. Thomas, St. Vincent. Trinidad. The variety *octomaculata* Crotch 1883: 59 is reported from Grenada, Guadeloupe, St. Vincent, and USA.

Systema s-littera (Linnaeus) 1758: 373 (*Chrysomela*); Blackwelder 1944-1957: 707. **Distribution.** Dominica, Grenada, St. Vincent. Mexico to Panama to Argentina. **Bionomics.** Collected at Springfield Estate in Malaise trap (TAMU).

Subfamily Eumolpinae Tribe Typophorini

Metachroma bredeni Blake 1958: 94; 1970: 82. **Distribution.** Endemic to Dominica. **Bionomics.** Taken at Castle Bruce Junction (type locality), (type); 2.2 mi. E Pont Cassé, 1 mi. W Pont Lolo; Pont Cassé (TAMU).

Metachroma gagnei Blake 1968: 62; 1970: 82. **Distribution.** Endemic to Dominica. **Bionomics.** Collected on path to Cabrits, and Green Hills Estate.

Typophorus; undetermined species. **Distribution.** Unknown. **Bionomics.** Collected at Springfield Estate, tropical deciduous forest, in flight intercept trap (TAMU).

Tribe Eumolpini

Alethaxius dominicae Blake 1968: 61. **Distribution.** Endemic to Dominica. **Bionomics.** Collected Clarke Hall (type) and ½ mile W of Pont Lolo, 1800 ft. alt. (Blake, 1968); Morne Trois Pitons Nat'l. Park, Boiling Lake Trail (TAMU).

Colaspis musae Bechyne 1950: 71. **Distribution.** Dominica, Guyana.

Tribe Mesascelidini

Megascelis; undescribed species being described by K. Marske. **Distribution.** Maybe endemic to Dominica. **Bionomics.** Collected at Springfield Estate in Malaise and yellow pan traps (TAMU, USNM and WIBF).

Tribe Adoxini (?)

Habrophora thelmae Blake 1968: 60. **Distribution.** Endemic to Dominica. **Bionomics.** Collected on Pont Lolo, 1800 ft. alt. (type locality), and trail to Middleham Falls, Morne Trois Piton Nat'l. Park, 2200 ft., Malaise trap (TAMU).

Subfamily Lamprosomatinae
Tribe Lamprosomatini

Oomorphus; undetermined species. **Distribution.** Unknown. **Bionomics.** Collected at Syndicate Trailhead (St. Peter Parish) (TAMU).

Subfamily Cryptocephalinae
Tribe Cryptocephalini

Diachus; undetermined species. **Distribution.** Unknown. **Bionomics.** Collected at Cuda Rd., N. Mero, and Springfield Estate; dry forest, forest margin and forest interior, Malasie trap (TAMU).

Superfamily Curculionoidea

Reviewed by R. S. Anderson, September, 2006.

Family 160. Anthribidae, the fungus weevils

Subfamily Choraginae

Tribe Choragini

Euxenulus, n. sp. 4 in USNM; Valentine 2003: 55. **Distribution.** Endemic to Dominica. **Bionomics.** Anderson (1992) noted that *Euxenulus piceus* (LeConte) is found in hardwood hammocks in southern Florida. Adults have been collected in flight intercept traps.

New Subfamily
New Tribe

New genus, n. sp. 1 in USNM, BDVC; Valentine 2003: 55. **Distribution.** Endemic to Dominica. A neotropical genus of two species, distributed from Lesser Antilles to Brazil.

Subfamily Anthribinae
Tribe Rhinotropidini

Homocloeus insularis (Frieser) 1959: 420 (*Piezocorynus*); Valentine 2003: 56. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Anderson (1992) noted that *Homocloeus distentus* Frieser is found in hardwood hammocks and pinelands in southern Florida. Adults have been collected in flight intercept traps and by beating dead vines and twigs.

Tribe Zygaenodini

Ormiscus conis Jordan 1924: 240; Valentine 2003: 61. **Distribution.** Dominica, Guadeloupe, Martinique. **Bionomics.** Anderson (1992) reported 6

species of *Ormiscus* in southern Florida. Most were found beating dead vegetation or sweeping.

Family 164. Brentidae, the straight-snouted weevils

Subfamily Brentinae

Tribe Arrhenodini

Rhaphirhynchus nitidicollis Gyllenhal 1833: 328; Blackwelder 1944-1957: 774. **Distribution.** Dominica, Guadeloupe. Brazil, Colombia, Costa Rica, Venezuela. **Bionomics.** One specimen in FC FC-INRA, box 432, det. R. Damoiseau, Bellevue-chopin, 22. 6. 73. FC.

Subfamily Trachelizinae

Tribe Acratini

Nemocephalus dolosus Kleine 1927: 456; Blackwelder 1944-1957: 775. **Distribution.** Endemic to Dominica.

Tribe Brentini

Brentus anchorago Linnaeus 1758: 383; Blackwelder 1944-1957: 776. **Distribution.** Dominica, Guadeloupe, Montserrat. Argentina, Brazil, Mexico to Panama, Paraguay, USA. **Bionomics.** Adults of this species are found commonly under loose bark of various trees, especially *Bursera simaruba* (L.) Sarg.

Subfamily Apioninae

Tribe Apionini

Apion insulicola Wagner 1914: 142; O'Brien and Wibmer 1982: 24. **Distribution.** Dominica, Grenada, St. Vincent. South America.

Family 167. Curculionidae, the snout beetles and true weevils

Subfamily Dryophthorinae

Tribe Orthognathini

Mesocordylus porriginosus (Boheman) 1838: 811 (*Sipalus*); O'Brien and Wibmer 1982: 220. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Hustache (1932) reported this species from the trunks of *Ormosia dasycarpa* (Fabaceae) as well as in the trunks of other trees, and under cut wood.

Tribe Rhyncophorini
Subtribe Rhynchophorina

Rhyncophorus palmarum (Linnaeus) 1758: 377 (*Curculio*); O'Brien and Wibmer 1982: 210; Bennett and Alam 1985: 30. **Distribution.** Barbados, Cuba, Dominica*, Guadeloupe, Martinique, St. Vincent. Mexico to Panama, South America, USA (CA, TX). **Bionomics.** Taken at Fortune, Pont Casse, Fond Figues, Grand Bay and Café; associated with palm trees. These large weevils primarily are associated with a wide variety of palms. According to Wattanapongsiri (1966), *R. palmarum* has been associated with species of the palm genera *Acrocomia*, *Attalaea*, *Bactris*, *Chrysalidocarpus*, *Cocos* (including coconut palm), *Desmoncus*, *Elaeis* (including oil palm), *Euterpe*, *Guilielma*, *Manicaria*, *Maximiliana*, *Oreodoxa*, *Ricinus*, and *Sabal* as well as *Gynierium* and *Saccharum* (sugar cane) (Graminae), *Carica* and *Jaracatia* (Caricaceae), *Ananas* (pineapple) (Bromeliaceae) and *Musa* (banana) (Scitamineae). Adult females lay eggs in the base of leaf sheaths, terminal shoots or in cuts made by man in the trunk. Larvae tunnel through the softest parts of the trunk, generally destroying the heart. Once they have finished feeding the top of the palm is weakened and may topple. Larvae prepare a cocoon inside the base of the trunk made from the fibers in the stem around them. The species develops throughout the year. The complete life cycle varies from 45-180 days depending on location. **Economic significance.** This species is a serious pest of coconut palms and other crops including banana, papaya, cacao, and sugarcane throughout the Central and South America and the West Indies. Damage is due to the feeding habits of the larvae which generally weaken the trunk to the point at which the plant is easily broken or toppled.

Subtribe Litosomina

Sitophilus linearis (Herbst) 1797: 5 (*Rhyncophorus*); O'Brien and Wibmer 1982: 220; Bennett and Alam 1985: 30. **Distribution.** Barbados, Cuba, Dominica*, Guadeloupe, Jamaica, Puerto Rico, St. Barthélemy. Costa Rica, South America, Old World, USA (FL, LA). **Bionomics.** Taken at Pont Cassé, Castle Comfort, Goodwill, Anse Bouleau, and Pringles Bay. Adults are often found in fallen tamarind pods. Species in this genus are cosmopolitan pests of stored products.

Subtribe Sphenophorina

Cosmopolites sordidus (Germar) 1824: 299 (*Calandra*); O'Brien and Wibmer 1982: 219; Bennett and Alam 1985: 30. **Distribution.** Barbados, Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Puerto Rico. Mexico to Panama, South America, Old World, USA (FL). **Bionomics.** This species is primarily, if not exclusively, associated with bananas, *Musa* spp. According to Woodruff (1969), there are some citations of the species also being associated with manilla hemp, plantain, sugar cane and yam but these may be in error, or these plants may be attacked only if bananas are not present. Eggs are laid singly between the leaf sheath as well as around the corm. Newly emerged larvae bore into the corm. The complete life cycle takes from 30-40 days with the egg stage lasting 5-7 days, the larval stage 15-20 days, and the pupal stage 6-8 days. Adults are primarily nocturnal. The immature stages were described by Anderson (1948). **Economic significance.** This species is commonly called the "banana root borer" but its status as a primary pest of bananas needs to be confirmed since most dryophthorids only attack plants that are already sick, weakened or injured. Damage to the banana plants consists of extensive tunneling by the larvae in the corm, thus weakening the plant and making it susceptible to damage or blow-down from winds or other factors.

Metamasius hemipterus (Linnaeus) 1758: 377 (*Curculio*); O'Brien and Wibmer 1982: 218; Bennett and Alam 1985: 30; Woodruff *et al.* 1998: 22. **Distribution.** Antigua, Barbados, Bequia, Dominica*, Grenada, Guadeloupe, Jamaica, Martinique, Montserrat, Puerto Rico, St. Croix, St. Kitts, St. Thomas, St. Vincent. South America. **Bionomics.** The common name is West Indian sugarcane borer (Vaurie 1966). This species is associated with a variety of monocot plants, especially those that are rotting, broken, damaged or weakened. Banana and sugarcane are the two plants most frequently mentioned in the literature; however, the species has also been recorded from coconut and royal palm sheaths, stumps of *Iriarteia ventricosa* Martius and *Jessenia batua* Burret in Brazil, and has been intercepted at customs in a stem of a species of *Chamaedorea*. In Costa Rica, numerous adults have been collected on fermenting palm trunks. Adults have also been recorded on a variety of rotting fruits. **Economic significance.** Woodruff and Baranowski

(1985) report that there is debate over the economic status of this species. Certainly the species has been associated with both banana and sugarcane but its impact, especially on the former is uncertain. They appear to prefer unhealthy or injured plants and thus may not be the primary pests but rather of a secondary nature. Regardless, the adult feeding and larval infestations cause serious damage, at least in sugarcane, especially if the plants have already been damaged by other insects or rats. Populations may build in damaged plants left out to rot and may reinfest subsequent crops.

Metamasius liratus (Gyllenhal) 1838: 914 (*Sphenophorus*); O'Brien and Wibmer 1982: 218. **Distribution.** Dominica, Guadeloupe, Martinique. **Bionomics.** Vaurie (1966) notes that in Guadeloupe this species is common on 'balisiers' (*Canna indica*) and has been found in rain-soaked banana trunks lying on the ground.

Metamasius maurus (Gyllenhal) 1838: 912 (*Sphenophorus*); O'Brien and Wibmer 1982: 218. **Distribution.** Dominica, Grenada, Guadeloupe, Martinique, St. Croix, St. Vincent. **Bionomics.** Vaurie (1966) reports specimens (including larvae and pupal cells) taken from rotting trunks of banana in Martinique. No larvae have been found in healthy trunks and it has been suggested that this species could prove useful in hastening decomposition of old trunks.

Metamasius quadrisignatus (Gyllenhal) 1838: 907 (*Sphenophorus*); O'Brien and Wibmer 1982: 218. **Distribution.** Dominica, Guadeloupe, Martinique, Montserrat. Panama. **Bionomics.** Vaurie (1966) reports specimens taken from the crowns of *Tillandsia* in Montserrat.

Subfamily Curculioninae Tribe Derelomini

Phyllotrox nigriventris Hustache 1929: 245; O'Brien and Wibmer 1982: 96. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Neotropical species placed in the genus *Phyllotrox* are usually associated with flowers of palms or cyclanths (Franz 2006). No specific details are available for this species.

Subfamily Bagoinae

Pantoteloides fennahi (Marshall) 1940: 175 (*Nannilipus*); O'Brien and Wibmer 1982: 95. **Distribution.** Endemic to Dominica.

Subfamily Cryptorhynchinae Tribe Cryptorhynchini

Macromerus lanipes (Olivier) 1790: 506 (*Curculio*); O'Brien and Wibmer 1982: 153. **Distribution.** Dominica, Grenada, Guadeloupe, Jamaica, St. Lucia. South America.

Sternochetus mangiferae (Fabricius) 1775: 139 (*Curculio*); Anonymous 1986: 215. **Distribution.** Dominica, widespread in Caribbean; native to Old World, not established in Florida. **Bionomics.** The mango seed weevil. A pest of mangos. Woodruff (1970) reports that in Hawaii eggs are laid on mango fruits in various stages of development. Eggs hatch 5-7 days later and the newly hatched larva burrows through the fruit into the seed. There are 5 larval instars. Pupation takes place in the seed. Generally one adult matures in each seed. This species has only been found in association with *Mangifera indica* L.

Styracopus phaseoli Marshall 1916: 468; O'Brien and Wibmer 1982: 157. **Distribution.** Dominica, St. Vincent. **Bionomics.** Unknown.

Subfamily Entiminae Tribe Anypotactini

Polydacrys scansorius (Klug) 1829: 13 (*Sitona*); O'Brien and Wibmer 1982: 29. **Distribution.** Cuba, Dominica, Guadeloupe.

Tribe Eustylini

Diaprepes abbreviatus (Linnaeus) 1758: 386 (*Curculio*); O'Brien and Wibmer 1982: 55; Bennett and Alam 1985: 30. **Distribution.** Barbados, Dominica, Guadeloupe, Hispaniola, Martinique, Mona, Montserrat, Puerto Rico, St. Lucia, St. Vincent. USA (FL, introduced, first reported in 1964). Native to the Caribbean. **Bionomics.** The citrus root weevil or the diaprepes root weevil. A serious pest in Florida, attacking roots of *Citrus* and many other cultivated plants. Woodruff (1964, 1968, 1985) reports that this weevil is commonly called 'the sugar-cane root-stalk borer weevil' or 'vaquita' in Puerto Rico. Adults feed on leaves of a wide variety of plants and larvae bore into the roots of many types of plants.

Diaprepes balloui Marshall 1916: 449; O'Brien and Wibmer 1982: 55. **Distribution.** Endemic to Dominica. **Bionomics.** Unknown but likely similar to that of *D. abbreviatus*.

Diaprepes famelicus (Olivier) 1790: 544 (*Curculio*); O'Brien and Wibmer 1982:55; Whitwell 1991. **Distribution.** Antigua, Barbados, Cuba, Dominica, Guadeloupe, Martinique, Montserrat, Nevis, St. Barthélemy, St. Kitts. **Bionomics.** This species is a pest in *Citrus* nurseries. The biology is likely similar to that of *D. abbreviatus*.

Tribe Geonemini

Lachnopus sp., Ambrose 1983: 60. **Distribution.** Dominica. Many species in the genus occur in the West Indies. **Bionomics.** This species is called the banana fruit-scarring beetle.

Tribe Naupactini

Litostylus boveli (Marshall) 1922: 184 (*Germariella*); O'Brien and Wibmer 1982:32; Bennett and Alam 1985: 30. **Distribution.** Barbados, Dominica. **Bionomics.** Adults feed on *Citrus* foliage. *Litostylus strangulatus* (Chevrolat) 1880: 213 (*Cyphus*); O'Brien and Wibmer 1982:33. **Distribution.** Dominica, Guadeloupe, Montserrat.

Tribe Tanymecini

Pandeleiteius testaceipes Hustache 1929: 181; Howden, 1970: 48; O'Brien and Wibmer 1982:49; Woodruff et al. 1998: 23. **Distribution.** Dominica, Grenada, Guadeloupe, St. Vincent.

Subfamily Molytinae

Tribe Cholini

Cholus zonatus (Swederus) 1787: 194 (*Curculio*); O'Brien and Wibmer 1982:124 (*Archarias*). **Distribution.** Dominica, Grenada, Guadeloupe. **Bionomics.** Associated with the endemic bromeliad *Pitcairnia micotrinensis* R. W. Read. Vaurie (1976) reports specimens collected from *Euterpe globosa* (at Morne Trois Pitons) and *Cyrtilla racemiflora* (at Pont Cassé). This species has been recorded as a pest of pineapple. *Homalinotus lherminieri* (Chevrolat) 1878: CXLI (*Homalonotus*); O'Brien and Wibmer 1982:124. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Associated with palms. Vaurie (1973) records specimens collected on *Euterpe dominica* near Castle Bruce in August.

Tribe Sternechini

Sternechus vicinus Fleutiaux and Sallé 1890: 442; O'Brien and Wibmer 1982:85. **Distribution.** Dominica*, Guadeloupe. **Bionomics.** Adults of related species are associated with Fabaceae.

Tribe Trypetidini

Trypetes guildingi Fahraeus 1844:36; O'Brien and Wibmer 1982:97. **Distribution.** Dominica*, St. Vincent. **Bionomics.** Adults were taken at Roseau, east of Pont Cassé and Fortune; in crowns of fallen *Euterpe dominicana* palm trees.

Subfamily Scolytinae, the bark and ambrosia beetles

Wood and Bright (1992) is a catalog of distribution and references for this beetle group. Adults and larvae bore tunnels and galleries under the bark of woody plants or bore into nuts and seeds.

Tribe Hylesinini

Subtribe Bothrosternina

Bothrosternus isolatus Bright 1972: 28; Bright 1985: 171, 179. **Distribution.** Dominica, Guadeloupe, Jamaica. **Bionomics.** Unknown. *Cnesinus gracilis* Blandford 1896: 141; Bright 1985: 171. **Distribution.** Dominica. Mexico to Colombia. **Bionomics.** Host trees: coffee, avocado, *Serjania* sp. *Pagiocerus frontalis* (Fabricius) 1801: 389 (*Bostri-chus*); Bright 1985: 171. **Distribution.** Cuba, Dominica, Guadeloupe. Widespread; Mexico to Chile and Argentina, USA (NC to FL to TX). **Bionomics.** Host trees: Avocado and *Ocotea*. A pest of stored corn.

Subtribe Phloeotribina

Phloeotribus insularis Egers 1940: 123; Bright 1985: 171. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Unknown.

Subtribe Phloeosinina

Chramesus opacicollis Egers 1940: 124; Bright 1985: 171. **Distribution.** Cuba, Dominica, Grenada, Guadeloupe, Jamaica. **Bionomics.** Unknown.

Tribe Scolytini
Subtribe Ctenophorina

- Gymnochilus insularis* (Egers) 1932: 232 (*Problechilus*); Bright 1985: 172. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Unknown.
- Microborus lectus* Wood 1971: 17; Bright 1985: 172. **Distribution.** Dominica. Venezuela. **Bionomics.** Host tree: *Clusia* sp., in limbs and boles.
- Scolytodes maurus* (Blandford) 1897: 178 (*Prionosceles*); Bright 1985: 172. **Distribution.** Dominica. Mexico to Panama, Venezuela. **Bionomics.** Host tree: *Cecropia* sp., in leaf petioles.
- Scolytodes notatus* (Egers) 1940: 133 (*Hexacolus*); Bright 1985: 172. **Distribution.** Cuba, Dominica, Guadeloupe, Puerto Rico. **Bionomics.** Unknown.

Subtribe Xyleborina

- Ambrosiodmus devexulus* (Wood) 1978: 398 (*Xyleborus*); Bright 1985: 173. **Distribution.** Dominica, Hispaniola, Puerto Rico. **Bionomics.** Host tree: *Cedrela mexicana*.
- Premnobius cavipennis* Eichhoff 1878: 404; Cognato and Bright 1996: 72. **Distribution.** Cuba, Dominica, Guadeloupe, Jamaica, Puerto Rico. Central and South America, Africa, USA (FL). **Bionomics.** Known to live in 54 genera of trees and woody vines.
- Theoborus theobromae* Hopkins 1915: 57; Bright 1985: 173. **Distribution.** Barbados, Dominica, Guadeloupe, Hispaniola, St. Vincent. Mexico to Panama, Colombia to French Guiana. **Bionomics.** Host trees: *Erythrina costaricensis*, *Ochroma* sp., *Theobroma cacao*.
- Xyleborinus buscki* (Hopkins) 1915: 63 (*Xyleborus*); Bright 1985: 173. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Unknown.
- Xyleborus affinis* Eichhoff 1868: 401; Bennett & Alam 1985; Wood and Bright 1992: 706. **Distribution.** Barbados, Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Puerto Rico. Widespread in Africa, Asia, Pacific Islands, North, Central, and South America. **Bionomics.** Attacks fermenting sugarcane in Barbados. Several hundred host plants are known.
- Xyleborus caraibicus* Egers 1914: 103; Bright 1985: 173. **Distribution.** Dominica, Guadeloupe. Costa Rica to Bolivia and Brazil, Trinidad. **Bionomics.** Hosts trees: *Ochroma* sp., *Theobroma cacao*.
- Xyleborus ferrugineus* (Fabricius) 1801: 388 (*Bostrichus*); Bright 1985: 173; Bennett and Alam 1985:

31; Cognato and Bright 1996: 72. **Distribution.** Bahamas, Barbados, Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Puerto Rico. Widespread North, Central, and South America, Africa, Pacific Islands. **Bionomics.** Found in many species of woody plants.

Xyloborus volvulus (Fabricius) 1775: 454 (*Bostrichus*); Bright 1985: 174. **Distribution.** Cuba, Dominica, Hispaniola, Jamaica, Puerto Rico. Widespread in Central and South America, Africa, Asia, USA (FL). **Bionomics.** Found in many species of woody plants.

Subtribe Cryphalina

- Cryptocarenus lepidus* Wood 1971: 36; Cognato and Bright 1996: 72. **Distribution.** Dominica. Mexico to Brazil. **Bionomics.** Host trees: *Canavalia villosa*, *Coffea robusta*, *Protium* sp., *Serjania* sp., *Xeiopia* sp.
- Cryptocarenus seriatus* Egers 1933: 10; Cognato and Bright 1996: 72. **Distribution.** Cuba, Dominica, Hispaniola, Jamaica, Virgin Islands. Mexico to Brazil and Bolivia, USA (FL, TX). **Bionomics.** Unknown.
- Hypothenemus eruditus* Westwood 1836: 34; Bright 1985: 175; Wood and Bright 1992: 919; Cognato and Bright 1996: 72. **Distribution.** Cuba, Dominica, Guadeloupe, Jamaica, Puerto Rico. Widespread in North and Central America, Africa, Asia, and Australia. **Bionomics.** Found in many species of woody plants.

Subtribe Corthylina

- Corthylus subasperulus* Egers 1940: 141; Bright 1985: 176. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Unknown.
- Corthylus tuberculatus* Egers 1940: 140; Bright 1985: 176. **Distribution.** Dominica, Guadeloupe. **Bionomics.** Unknown.
- Tricolus perdiligens* Schledl 1950: 171; Cognato and Bright 1996: 72. **Distribution.** Dominica, Hispaniola, Jamaica. **Bionomics.** Unknown.

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