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The Beetles of Barbados, West Indies (Insecta: Coleoptera): Diversity, Distribution and Faunal Structure

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Abstract. The beetle fauna of the island of Barbados is summarized. It is now known to contain 202 genera, and 254 species (in 40 families), of which 232 are named at the species level. Undoubtedly, the actual numbers of species on Barbados are much higher than now known. Nine species are possibly endemic to the island, 15 have been intentionally introduced, and 51 have probably been accidentally introduced through human activity. The remaining 157 named species may occur naturally as a result of natural over-water dispersal processes. These species mostly have a wide distribution in the Antilles and Latin America. The total named fauna is thus about 72% naturally occurring, and 28% the result of human-aided dispersal.

Introduction

The island of Barbados is the easternmost island of the West Indies (Fig. 1). It is located at 13º10' north latitude and 59º35' west longitude, about 150 km east of the Windward Islands group of the main north-south chain of islands of the Lesser Antilles. The island is relatively small: 32 km long, 23 km across, and 445 km² in area. The human population density of 1560/km² (2000 data) is one of the world’s highest. Botanically and geologically Barbados is one of the best-known islands of the Lesser Antilles. It is a relatively isolated non-volcanic oceanic island which has been available as land for over-water colonization by terrestrial organisms only since the early Pleistocene (i.e. some one million years ago; Bender et al. 1973, Machel 2004, Matthews 1973).

Barbados lies in a belt of trade winds that generally blow from the east or northeast. The climate is tropical and subhumid to humid. Mean annual temperature ranges from 24ºC to 28ºC. The average island rainfall is 150 cm per year. Most precipitation falls in the rainy season of August to December, and rainfall is greatest in the central and higher parts of the island where it can support seasonal semi-evergreen forest vegetation. Most insect activity occurs in the rainy season.

The earliest entomology summary of Barbados is seemingly that of Stoner (1919). The island is now reported to have 1313 known species of terrestrial arthropods (Tucker 1952; Bennett and Alam 1985). The better known insects are those of large body size, are ecologically dominant or common, and of negative or positive economic importance. The best known insect groups may be Odonata (with 9 species) and the butterflies (with 25 species, including the skippers). Bennett and Alam (1985) list 239 species of beetles, up from the 152 species of Tucker (1952). These numbers are low in comparison with the smaller Lesser Antillean island of Grenada (356 km² in area, with over 2000 species of insects and 507 species of beetles, Woodruff et al. 1998) and with the larger island of Dominica (751 km² in area, with 347 species of beetles, Peck 2006). The lack of natural bodies of permanent surface fresh water is reflected by the absence of Ephemeroptera, Trichoptera, and Plecoptera, which are known from some of the “high” islands of the Lesser Antilles. The purpose of this contribution is to present a modern and critical reevaluation of the literature and taxonomy of the beetle species of Barbados for an ongoing overview and study of the beetles of this and other islands of the Lesser Antilles.

Natural history

Useful references for understanding the vegetation and its history (as a guide to insect habitats) are Fermore (1972), Gooding (1974), Randall (1970), and Watts (1970, 1978). These give background data on geology, geography, climate, topography, and additional references. The most informative map is the 1993 Ordnance Survey 1:50,000 topographic map obtained at Lands and Surveys Department, Culloden Road, St. Michael, Bridgetown, Barbados. There are also sets of sheets for the island at 1:2500 and 1:5000 scales. Weeks (1995) gives trail maps for many walks in comparatively natural habitats.
The geological history of Barbados is relatively simple, and different from that of most of the other Lesser Antilles, which are mostly volcanic in origin and composition (Machel 2004). The core of Barbados is marine clastic sediments accumulated in deep water some 50 million years ago. These are now exposed in the east in the rugged Scotland District. When the leading eastward edge of the Caribbean seafloor plate overrode the subducting Atlantic seafloor plate these sediments were deformed and uplifted to near the ocean surface as the north-south trending Barbados Ridge. Some 2 to 1 million years ago an ancestral Barbados rose above the ocean surface and a small land area was then first exposed and available for terrestrial colonization. This ancestral island was about 5 km by 10 km, the size of the Scotland District today, and was continuously modified since then by erosion. To the west of this early island, in clear and shallow water, a coral reef carbonate caprock was precipitated. This reef-caprock rose above the ocean surface some 500,000 years ago. Subsequent uplift continued in an episodic fashion and formed a broad and low set of stair-steps of terraces and bounding high cliffs (which mark the former reef faces) which make up most of the area of Barbados today. Exposed land area increased throughout the Pleistocene by episodic uplift. Additionally, during glacial times, when global sea level fell by 130 m or more, Barbados had even more exposed land area than at present. Compared to other “high” islands of the Lesser Antilles which have elevations of 1000 m or more, Barbados is comparatively low, with a maximum elevation of 340 m at Mt. Hillaby.

Vegetation. Barbados was originally completely covered with West Indian seasonal semi-deciduous forest. With European colonization, starting in 1627, Barbados underwent extensive deforestation, most of it within the 15 years following the introduction of sugar cane as a crop in 1645. Producing and fallow cane fields now cover some 80% of the island. Since the start of cane cultivation, less than 5% of the island’s area has remained continuously wooded throughout the past 300 years (Fig. 2). However, a remarkable diversity of some 700 native plants (Gooding et al. 1965), of which 388 are limited to the West Indies (Watts 1970, Carrington 1993), and many native insects, have survived in rough country along rocky escarpments and in the many kilometers of deep gullies which radiate from the island’s center.

Figure 1. The islands of the central and eastern West Indies and adjacent continental land masses, showing Barbados to the east of the main island arc of the Lesser Antilles.
Some southern, eastern and northern coastal areas are decidedly semi-arid with typical vegetation, including columnar *Cereus* cactus and *Acacia* thorn scrub (Fig. 2). An online introduction to the native vegetation is at http://ecflora.cavehill.uwi.edu.

Gully forests. Gullies are 5% of the land area of the island and contain 35% of the native plant diversity, of which 80% is native to the eastern Caribbean. It is usually possible to climb down into the gullies where highway bridges cross them, especially in the area east of Holetown. An attractive mix of introduced and native vegetation is preserved in Welchman Hall Gully, about 8 km E of Holetown,
operated as a tropical forest reserve by the Barbados National Trust. The Gully has over 150 plant species of the some 700 native to Barbados. Collecting is possible in the many other available gully forests, e.g., Jack-in-the-box Gully at Harrisons Cave (a tourist attraction) and its downhill continuation as the gully forest at Coles Cave (Peck 1981) (both near Welchman Hall village), and the forest in Whim Gully, east of Speightstown. There are also forests at Hackleton Cliff Woods, Joes River Forest, and Boscobell Woods, all in the more rugged Scotland District. Directions to these are given in Weeks (1995).

Turner Hall Woods. The finest native forest site is Turner Hall Woods (Fig. 3), about 20 ha (50 acres) in area, located on a hill slope between 180-240 m elev. It has a high and complete canopy, and is a multi-story tropical mesophytic (seasonal semideciduous) forest. This remnant gives an excellent idea of the nature of the former original mesophytic forests of Barbados. It is reached on foot by a dirt track, a former jeep road, going to the east from the spur road between Turners Hall and Mose Bottom villages, starting at N 13°13.338', W 59°35.257'. Parking is possible about 50 m down the track before it descends steeply. This track runs the length of the Woods and comes out at the village of Cheltenham (Weeks 1995) but is now interrupted by a large land-slip.

Mahogany groves. Watts (1978) discusses the high abundance of native sub-canopy plant species (and presumably their insect associates) found commonly around the island in old woodlots of mahogany (*Swietenia mahogoni*), first introduced some 250 years ago. Large woodlots with an understory of native vegetation are suitable for sweeping and blacklight trapping. Some examples are at St. Nicholas Abbey Plantation, St. Peter; at Grenade Hall Forest (with some original forest), St. Andrew; and Codrington College, St. John.

Mangrove forest. The Graeme Hall Nature Sanctuary, in Christ Church Parish, Main Road, Worthington (between Oistins and Bridgetown) is the only remaining coastal mangrove forest and sedge
swamp (Fig. 2). It is 1.3 ha (3.2 acres) in area, is part of the Graeme Hall Swamp National Environmental Heritage Site, and has insects of brackish-freshwater transition vegetation.

Materials and Methods

**Barbados Insect Collections.** A critical evaluation of the beetle records given in Bennett and Alam (1985) is hampered by the absence of voucher specimens of suspect records. Voucher specimens for the previously published species records were sought in two presently neglected collections. The collections were originally assembled by M. Alam of CARDI (Caribbean Agricultural Research and Development Institute) before his retirement and the breakup of that collection. Part of the collection is under the care of Dr. Ian H. Gibbs, in the Entomology Section, Ministry of Agriculture and Rural Development (Graeme Hall, Christchurch). The beetles in this collection are in three glass-topped drawers. The acronym **BMAC** (Barbados Ministry of Agriculture collection) is inserted in the following species list where one or more voucher specimens were present in 2007 in that collection. The remainder of the CARDI collection is now with the Department of Biology, University of West Indies, Cave Hill (Bridgetown). It is stored in three cabinets of 15 drawers apiece. The beetles, in four drawers, are mostly from islands other than Barbados (Grenada, Dominica, St. Vincent, etc.). Voucher specimens and residues from my collecting are in my collection (**SBPC**), the Canadian Museum of Nature (**CMNC**), Field Museum of Natural History, Chicago, IL (**FMNH**), United States National Museum (**USNM**) and the Florida State Collection of Arthropods, Gainesville, FL (**FSCA**). There is also a 20 drawer collection with 17 drawers of Lepidoptera and two drawers of beetles at the Barbados Museum and Historical Society, Garrison Road, Kingstown.

**Collecting.** No permits are needed for collecting or export of insects beyond land-owner permission. My field-work focus was on the forested gullies, as the sites most likely to contain remnants of the original forest beetle fauna of the island. Collecting was in February 1979, August 2005, May 2006, and June 2007 by sweeping, beating, Malaise traps, flight intercept traps, litter sifting, and baited pitfall traps. Results were good but not overly diverse. Sweeping and beating often yielded an abundance of the little red fire ant (**Wasmannia auropunctata** (Roger)) which is apparently native in Barbados. This ant is known to reduce diversity of ground and vegetation dwelling insects where it has been introduced (Holway et al. 2002). Many new beetle family and genus records are now available for Barbados but are not reported here in the hope that species level identifications will later become available.

**Field Station.** Accommodation, library and laboratory facilities for field-work are present at the Bellairs Research Institute (of McGill University), 1 km N of Holetown, on the coast road north of Bridgetown. Additional information for field-work is available at http://www.mcgill.ca/bellairs.

**Literature records.** The sources of the beetle species records in Tucker (1952) and Bennett and Alam (1985) were not documented. Some were drawn from the literature but the sources were not given. Some are undoubtedly from Leng and Mutchler (1914, 1917) and Blackwelder (1944-1957). 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. Additionally, much of the taxonomy in the records in Tucker (1952) and Bennett and Alam (1985) is incorrect or outdated. Such records are critically re-evaluated and corrected here. Catalogs, revisions, and summaries with West Indian records were searched for records of beetles from Barbados. Sometimes catalogues do not specifically mention Barbados but vaguely group it with other islands as “West Indies,” “Antilles” or “Lesser Antilles” and are not useful. Also searched were the Coleoptera sections of the Zoological Record (from 1940 to 2006). Undoubtedly, the vast taxonomic literature of family and generic revisions of beetles in the West Indies contains Barbados records which I have missed. Some recent publications have provided modern summaries of the beetles of other West Indian islands or bordering lands: Bahamas (Turnbow and Thomas 2008), Cuba (Peck 2005), Dominica (Peck 2006), Dominican Republic (Perez-Gelabert 2008) and Florida (Peck and Thomas 1998).

**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.
Table 1. Alphabetical listing, by family, of beetle species which are possibly endemic to Barbados. The young age of the island makes questionable the status of these as being really restricted to Barbados.

<table>
<thead>
<tr>
<th>Family</th>
<th>Genus and species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buprestidae</td>
<td>Chrysobothris antillarum Fisher</td>
</tr>
<tr>
<td>Carabidae</td>
<td>Selenophorus barbadensis Ball and Shpeley</td>
</tr>
<tr>
<td>Cerambycidae</td>
<td>Lagocheirus unicolor Fisher (?)</td>
</tr>
<tr>
<td>Cerambycidae</td>
<td>Plectromerus louisianus Dalens and Touroul</td>
</tr>
<tr>
<td>Histeridae</td>
<td>Acritus strigipennis Bickhardt</td>
</tr>
<tr>
<td>Hybosoridae</td>
<td>Aneides vartorelli Ocampo</td>
</tr>
<tr>
<td>Scarabaeidae</td>
<td>Phyllophaga smithii (Arrow)</td>
</tr>
<tr>
<td>Staphylinidae</td>
<td>Oligota barbadorum Frank</td>
</tr>
<tr>
<td>Staphylinidae</td>
<td>Clavelispinus mariannae Irmler</td>
</tr>
</tbody>
</table>

**Identifications.** Names listed here for new records are attributed to the person providing the determination or the voucher collection holding the record. No effort was made to give all earlier citations of a species if these are available 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. I give genus and species, author, year and page of publication (when I could find them), and subsequent West Indian or Lesser Antilles references (not all-inclusive), in chronological order. The most recent reference can be a lead into previous literature. Generic and specific synonyms are only those used in a West Indian context. Complete synonymies are not given, but original and later generic assignments are provided when known.

**Distributions.** A general statement of distribution is given for species presumed to be indigenous (naturally occurring). Then are given, in alphabetical order, the names of all West Indian “oceanic” islands known or reported to have the species. These islands are not on the submarine shelves of the neighbouring continents and were not connected by dry land to the continents during low sea levels at times of global Pleistocene glaciations. When continental mainland countries or continental shelf islands are known as a part of the species range these are then listed separately in alphabetical order. Species residency status is assumed to be indigenous (in Barbados as a result of natural dispersal processes), unless it is likely to be endemic (limited to Barbados) or introduced through either accidental or intentional human activity. Intentional introductions were usually by the CIBC (Commonwealth Institute of Biological Control, Trinidad). Intentionally introduced species are noted as being not established or as established; and it is noted if they became important biocontrol agent (data from Bennett and Alam 1985).

A conservative approach is taken in the construction of the geographic distribution list. It usually includes only explicit literature records for Barbados or identified Barbados material vouchered in collections identified by acronyms as above. Species reported to be widespread in the Lesser Antilles, but for which explicit Barbados island records are absent, are not included. Species listed as likely to have been accidentally introduced to Barbados are only those where a specialist has explicitly stated the species to be not native to Barbados, the West Indies, or the New World. Probably more species are in Barbados through accidental introduction than are here recognized.

**Bionomics.** Information on the bionomics (general natural history) of the species is given (if available), usually from the literature cited for the species. Scientific and common Barbadian local plant names for hosts of phytophagous species are listed in Bennet and Alam (1985). Prey names for predatory species of economic impact and common or scientific names for plant hosts of phytophagous species are given without indication of their order or family or author.

**Results and Discussion**

The beetle fauna of the island of Barbados is summarized. It is now known to contain 202 genera and 254 species (in 40 families), of which 232 are named at a species level. Undoubtedly many additional species remain to be discovered and/or identified. Of the known species, nine are recognized as possibly endemic to the island (Table 1). Fifteen species have been intentionally introduced to the island for biocontrol purposes (Table 2). An additional 51 species have probably been accidentally introduced to the
island by human activities (Table 3). This puts the known fauna at 72% occurring as a result of natural dispersal and speciation processes, with the remaining 28% the result of human-aided dispersal.

**Endemism.** The youth and low elevation of the island explains the low number of endemic plants (2-8 species depending on the authority). Few endemic insect species are known or should be expected. Nine beetle species are known only from Barbados, and may thus be endemic (unique) to the island (Table 1). However, the island seems to be too young to have been a site for the process of insect speciation. Alternatively, the apparent endemics may have originated on other lands or islands, dispersed to Barbados, and inadequate collecting or identification effort has not yet discovered them elsewhere. The young age of the island does give a valuable reference point in time since which the terrestrial flora and fauna has arrived. The dynamic dispersal capabilities of insect species may be deduced from what has and has not arrived in this time. For example, Scarabaeinae dung beetles (Matthews 1966), Passalidae, and Cholevinae (Leiodidae) small scavenger beetles do not occur in Barbados but are on other older main-chain islands of the Lesser Antilles. These groups have had the time and ability to cross the oceanic water gap from source areas to those islands, but not to Barbados.

**Intentionally introduced species.** Fifteen species are recognized to have been intentionally introduced to Barbados (Table 2), all for the purpose of biocontrol of pest insects or plants. Seven of these seem not to have become established, and four have become common and important biocontrol agents.

**Accidentally introduced species.** Species associated with human activities, especially when originating in the Old World, suggest that these have been accidentally brought to Barbados. Some have other data which suggests they are not naturally occurring in Barbados. Fifty one species are hypothesized as likely to be non-native components of the fauna (Table 3). This means that 28% of the named fauna is on Barbados because of some kind of aid to dispersal from accidental and intentional human action. Most of these have some level of negative effect on humans, but a few (10) seem to be neutral from a human perspective, or perhaps of positive advantage to humans (six are known predators on pest insects).

**Indigenous species.** The remaining 157 named species may be hypothesized as being indigenous components of the fauna of Barbados, having arrived by natural over-water dispersal processes. This is 72% of the total named fauna. Undoubtedly many more new species records are yet to be discovered. Based on a species/area relationship with other Lesser Antilles islands, it can be calculated that up to some 1270 beetles species may have originally been present on Barbados before the extensive habitat alteration following European colonization (SBP unpublished).

**Distributional patterns.** The indigenous fauna known to species name (157 species known to species name so that distributions can be analyzed) has one notable and dominant pattern of distribution (Table 4). It is that 55 species are widely distributed in or beyond the tropical parts of the New World.

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**Table 2.** Alphabetical listing of beetle species which were intentionally introduced as biocontrol agents to Barbados.

<table>
<thead>
<tr>
<th>Family</th>
<th>Genus and Species</th>
<th>Probable origin</th>
<th>Reason for introduction</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coccinellidae</td>
<td>Chilocorus cacti</td>
<td>Latin America</td>
<td>Predator on scales</td>
<td>Important agent</td>
</tr>
<tr>
<td>Coccinellidae</td>
<td>Cryptognatha nodiceps</td>
<td>South America</td>
<td>Predator on scales</td>
<td>Not established</td>
</tr>
<tr>
<td>Coccinellidae</td>
<td>Cryptolaemus montrouzieri</td>
<td>India</td>
<td>Predator on scales</td>
<td>Not established</td>
</tr>
<tr>
<td>Coccinellidae</td>
<td>Exochromus lituratus</td>
<td>Asia</td>
<td>Predator on scales</td>
<td>Not established</td>
</tr>
<tr>
<td>Coccinellidae</td>
<td>Hyperaspis sp.</td>
<td>India</td>
<td>Predator on scales</td>
<td>Not established</td>
</tr>
<tr>
<td>Coccinellidae</td>
<td>Nephus sp.</td>
<td>India</td>
<td>Predator on scales</td>
<td>Established</td>
</tr>
<tr>
<td>Coccinellidae</td>
<td>Pentilia insidiosa</td>
<td>South America</td>
<td>Predator on scales</td>
<td>Established</td>
</tr>
<tr>
<td>Coccinellidae</td>
<td>Pseudoauzzy trinitatus</td>
<td>South America</td>
<td>Predator on scales</td>
<td>Established</td>
</tr>
<tr>
<td>Coccinellidae</td>
<td>Rodolia cardinula</td>
<td>Australasia</td>
<td>Predator on scales</td>
<td>Important agent</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Athesapeuta cyperi</td>
<td>Asia</td>
<td>Herbivore on pest</td>
<td>Not established</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Smicronyx rorida</td>
<td>Asia</td>
<td>Herbivore on pest</td>
<td>Not established</td>
</tr>
<tr>
<td>Elateridae</td>
<td>Igelenter luminosus</td>
<td>Greater Antilles</td>
<td>Predator on pests</td>
<td>Important agent</td>
</tr>
<tr>
<td>Elateridae</td>
<td>Igelenter phosphoreus</td>
<td>New World</td>
<td>Predator on pests</td>
<td>Common</td>
</tr>
<tr>
<td>Histeridae</td>
<td>Pactolimus chinsis</td>
<td>Asia</td>
<td>Predator on flies</td>
<td>Not established</td>
</tr>
<tr>
<td>Nitidulidae</td>
<td>Cybocephalus nipponicus</td>
<td>Old World</td>
<td>Predator on scales</td>
<td>Established?</td>
</tr>
<tr>
<td>Family</td>
<td>Genus and Species</td>
<td>Probable origin</td>
<td>General habits or habitats</td>
<td>Impact on humans</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------</td>
<td>-----------------</td>
<td>----------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Anebiidae</td>
<td>Stegobium panicum</td>
<td>Old World?</td>
<td>Stored products, etc.</td>
<td>Negative</td>
</tr>
<tr>
<td>Anobiidae</td>
<td>Lasioderma serricorne</td>
<td>Old World</td>
<td>Stored products, etc.</td>
<td>Negative</td>
</tr>
<tr>
<td>Anthribidae</td>
<td>Araecerus fasceleutalus</td>
<td>Indo-pacific</td>
<td>Stored products, etc.</td>
<td>Negative</td>
</tr>
<tr>
<td>Bostrichidae</td>
<td>Dinoderus minutus</td>
<td>Orient</td>
<td>Stored products, etc.</td>
<td>Negative</td>
</tr>
<tr>
<td>Bostrichidae</td>
<td>Heterobostrichus aequalis</td>
<td>Orient</td>
<td>Plant &amp; wood borer</td>
<td>Negative</td>
</tr>
<tr>
<td>Bostrichidae</td>
<td>Sinosynix consigerum</td>
<td>Old World</td>
<td>Wood borer</td>
<td>Negative</td>
</tr>
<tr>
<td>Bruchidae</td>
<td>Bruchidius incarnatus</td>
<td>Old World</td>
<td>Stored seeds</td>
<td>Negative</td>
</tr>
<tr>
<td>Bruchidae</td>
<td>Callosobruchus analis</td>
<td>Old World</td>
<td>Stored seeds</td>
<td>Negative</td>
</tr>
<tr>
<td>Bruchidae</td>
<td>Callosobruchus chinensis</td>
<td>Old World</td>
<td>Stored seeds</td>
<td>Negative</td>
</tr>
<tr>
<td>Bruchidae</td>
<td>Callosobruchus maculatus</td>
<td>Africa</td>
<td>Stored seeds</td>
<td>Negative</td>
</tr>
<tr>
<td>Bruchidae</td>
<td>Caryedon serratus</td>
<td>Asia</td>
<td>Predator</td>
<td>Positive</td>
</tr>
<tr>
<td>Carabidae</td>
<td>Calleeida amethystina</td>
<td>Latin America</td>
<td>Predator</td>
<td>Neutral?</td>
</tr>
<tr>
<td>Carabidae</td>
<td>Selenophorus affinis</td>
<td>South America</td>
<td>Predator</td>
<td>Positive</td>
</tr>
<tr>
<td>Carabidae</td>
<td>Perigona nigriceps</td>
<td>Old World</td>
<td>Tree borer</td>
<td>Negative</td>
</tr>
<tr>
<td>Cerambycidae</td>
<td>Batocera rufomaculata</td>
<td>Old World</td>
<td>Tree borer</td>
<td>Neutral?</td>
</tr>
<tr>
<td>Cerambycidae</td>
<td>Lissoslopes sieperi</td>
<td>South America</td>
<td>Tree borer</td>
<td>Negative</td>
</tr>
<tr>
<td>Cerambycidae</td>
<td>Oedopeza ocellator</td>
<td>Latin America</td>
<td>Tree borer</td>
<td>Negative</td>
</tr>
<tr>
<td>Cerambycidae</td>
<td>Phryneta verrucosa</td>
<td>Africa</td>
<td>Tree borer</td>
<td>Negative?</td>
</tr>
<tr>
<td>Cerambycidae</td>
<td>Polyrhaphis spinosa</td>
<td>South America</td>
<td>Dry fish &amp; meats</td>
<td>Negative?</td>
</tr>
<tr>
<td>Cleridae</td>
<td>Negrobia rufipes</td>
<td>Old World</td>
<td>Sweet potato pest</td>
<td>Negative</td>
</tr>
<tr>
<td>Chrysomelidae</td>
<td>Chaeoconemus amazonia</td>
<td>South America</td>
<td>Predator</td>
<td>Positive</td>
</tr>
<tr>
<td>Coccinellidae</td>
<td>Curvis coeruleus</td>
<td>Latin America</td>
<td>Fungivore</td>
<td>Neutral?</td>
</tr>
<tr>
<td>Cryptophagidae</td>
<td>Curcurina japonica</td>
<td>Asia</td>
<td>Plant Pest</td>
<td>Negative</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Aratus xylophagus</td>
<td>South America</td>
<td>Latin America</td>
<td>Neutral?</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Chalcedermus angulicollis</td>
<td>Latin America</td>
<td>Nuts and seeds</td>
<td>Negative</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Coccytopenus campophagus</td>
<td>Old World</td>
<td>Plant pest</td>
<td>Negative</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Cosmolipites sordidus</td>
<td>Old World</td>
<td>Mango tree borer</td>
<td>Negative</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Hypochrhyus mangiferae</td>
<td>Old World</td>
<td>Leaf miner</td>
<td>Neutral?</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Hyporus berlandi</td>
<td>Old World</td>
<td>Stored products</td>
<td>Negative</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Sitophilus granarius</td>
<td>Old World</td>
<td>Stored products</td>
<td>Negative</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Sitophilus linearis</td>
<td>Old World</td>
<td>Stored products</td>
<td>Negative</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Sitophilus oryzae</td>
<td>Old World</td>
<td>Stored products</td>
<td>Negative</td>
</tr>
<tr>
<td>Dermestidae</td>
<td>Attagesus fasciatus</td>
<td>New World</td>
<td>Plant pest</td>
<td>Negative?</td>
</tr>
<tr>
<td>Elateridae</td>
<td>Conodesmus americus</td>
<td>Latin America</td>
<td>Predator</td>
<td>Neutral</td>
</tr>
<tr>
<td>Hydrophilidae</td>
<td>Dactylosternum abdininale</td>
<td>Afromoropics</td>
<td>Predator on pests</td>
<td>Positive</td>
</tr>
<tr>
<td>Nitidulidae</td>
<td>Carchorolys freemani</td>
<td>Old World?</td>
<td>Stored corn,etc</td>
<td>Negative</td>
</tr>
<tr>
<td>Nitidulidae</td>
<td>Carchorolys matutalis</td>
<td>Old World?</td>
<td>Stored fruits</td>
<td>Negative</td>
</tr>
<tr>
<td>Nitidulidae</td>
<td>Eupeodes luteolus</td>
<td>Old World?</td>
<td>Stored fruits</td>
<td>Negative</td>
</tr>
<tr>
<td>Scarabaeidae</td>
<td>Ateusis cretulatus</td>
<td>New World</td>
<td>Dung scavenger</td>
<td>Positive</td>
</tr>
<tr>
<td>Scarabaeidae</td>
<td>Ateusis heinekeni</td>
<td>New World</td>
<td>Litter decomposer?</td>
<td>Neutral</td>
</tr>
<tr>
<td>Scarabaeidae</td>
<td>Macropus tristis</td>
<td>Lesser Antilles</td>
<td>Decomposer</td>
<td>Neutral</td>
</tr>
<tr>
<td>Scarabaeidae</td>
<td>Nitropholus nigrita</td>
<td>Old World</td>
<td>Dung scavenger</td>
<td>Positive</td>
</tr>
<tr>
<td>Scarabaeidae</td>
<td>Parachalces barbarus</td>
<td>Latin America</td>
<td>Defoliator</td>
<td>Neutral?</td>
</tr>
<tr>
<td>Scarabaeidae</td>
<td>Phyllonochus vandali</td>
<td>Puerto Rico</td>
<td>Plant pest</td>
<td>Not established?</td>
</tr>
<tr>
<td>Scarabaeidae</td>
<td>Protoaetia fuscata</td>
<td>Old World</td>
<td>Defoliator</td>
<td>Negative?</td>
</tr>
<tr>
<td>Silvanidae</td>
<td>Monanus concinculus</td>
<td>Asia</td>
<td>Stored products</td>
<td>Negative</td>
</tr>
<tr>
<td>Silvanidae</td>
<td>Oryzaeus surinamensis</td>
<td>Old World</td>
<td>Stored products</td>
<td>Negative</td>
</tr>
<tr>
<td>Staphlinidae</td>
<td>Phacophillus parumpunctatus</td>
<td>Paleartec</td>
<td>Predator on pests</td>
<td>Positive</td>
</tr>
<tr>
<td>Tenebrionidae</td>
<td>Tribolium castaneus</td>
<td>Old World</td>
<td>Stored products</td>
<td>Negative</td>
</tr>
<tr>
<td>Trogossitidae</td>
<td>Tenebrionides mauritanicus</td>
<td>Old World</td>
<td>Stored products</td>
<td>Negative</td>
</tr>
</tbody>
</table>
These are so widespread that some may actually have reached Barbados with at least some aid of human activity. Most of the remaining species have distributions including most of the Antilles and Latin America (26 species) or the Antilles and South America (18 species). The predominant oceanic currents which can aid sea surface dispersal are from the south, from South America. The main direction of winds is from the east from the mid-Atlantic, and these seem less likely to have been of importance in dispersal to Barbados. Twenty-one species are limited to other islands throughout the Antilles and another 16 are limited only to islands of the Lesser Antilles.

This shows the fauna of Barbados is predominantly a widespread one, and can be summarized as mostly an immigrant fauna. Because Barbados is young, and the other West Indian islands and continental margin areas are older, it is these which probably served as the sites of speciation and sources of the species found on Barbados.

**Island comparisons.** Few other islands have modern summaries and analyses of their beetle faunas with which we can compare Barbados. These are Dominica within the Lesser Antilles (Peck 2006) and Bermuda in the mid Atlantic (Hilburn and Gordon 1989). Comparative data are given in Table 5. They do show a similarity in number of known families, ranging from 39 to 44. Otherwise, because these islands vary greatly in age, area, elevation, and isolation, it should be expected that they show few similarities in total species numbers, number of endemics, and proportions of introduced species. Generally, smaller, younger, and more isolated islands have a poorer and more widely distributed native fauna. The larger and older islands have had more time to assemble a diversity of species and possibly more ability to resist new arrivals.

**Acknowledgments**

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ogy, University of West Indies, Cave Hill, Barbados, allowed study of the Department’s insect collection. Additional beetle information or help with identifications were provided by Robert S. Anderson (Curculionoidea excluding Scolytinae), G. Ball (Carabidae), Charles Bellamy (Buprestidae), Don A. Bright (Scolytinae), J. Howard Frank (Staphylinidae), Alexander Konstantinov (Chrysomelidae), Steven Lingafelter (Cerambycidae, Chrysomelidae), Alfred F. Newton (Staphylinidae), Ed Riley (Chrysomelidae), Paul Skelley (Scarabaeidae), Warren Steiner (Tenebrionidae), and Natalia Vandenberg (Coccinellidae). The manuscript was reviewed and improved by comments from Hume Douglas and Andrew Smith. The author will appreciate and acknowledge notification of errors, omissions, and literature that was missed.

A critical systematic listing of the beetles known from Barbados

Suborder Adephaga
10. Family Carabidae, The ground beetles

Subfamily Carabinae

Tribe Carabini

*Calosoma (Castridia) alternans* (Fabricius) 1792: 146 (*Carabus*); Blackwelder 1944-1957: 20; Gidaspow 1963: 298; apparently overlooked in Erwin and Sims 1984: 423; Bennett and Alam 1985: 20. **Distribution.** Widespread Antilles and South America. Barbados (BMAC), Barbuda, Dominica, Jamaica, Martinique, St. Barthelemy, St. Croix, St. Vincent. Mexico to Colombia and Trinidad, 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.** Predaceous on Lepidoptera larvae and pupae of *Anomis* spp., *Spodoptera* spp., *Diatraea saccharalis*, *Plutella xylostella*, *Trichoplusia ni*, *Pseudoplusia includens*, *Anticarsia gemmatalis*, etc. Adults often appear in numbers at lights at the start of the rainy season.

Table 5. Comparison of the faunal structure of oceanic island beetle fauna of Barbados with Dominica (Peck 2006) and Bermuda (Hilburn and Gordon 1989). Only Bermuda can be considered to now have a well-known fauna.

<table>
<thead>
<tr>
<th>Island</th>
<th>Age (million years)</th>
<th>Area and elevation</th>
<th>Isolation: (nearest large neighbour as faunal source)</th>
<th>Number families</th>
<th>Total species</th>
<th>Endemic species</th>
<th>Introduced species; % of total fauna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bermuda</td>
<td>?0.1 myr</td>
<td>54 km²; 74 m</td>
<td>North Carolina, 1040 km WNW</td>
<td>44</td>
<td>228</td>
<td>0</td>
<td>104; 46%</td>
</tr>
<tr>
<td>Barbados</td>
<td>?11 myr</td>
<td>445 km²; 340 m</td>
<td>St. Vincent, 260 km W</td>
<td>40</td>
<td>254</td>
<td>9?</td>
<td>66; 28%</td>
</tr>
<tr>
<td>Dominica</td>
<td>?15 myr</td>
<td>751 km²; 1447 m</td>
<td>Guadeloupe, 45 km N</td>
<td>42</td>
<td>361</td>
<td>62</td>
<td>23; 6.4%</td>
</tr>
</tbody>
</table>
Table 6. Classification and family arrangement for the annotated list of the beetle families known from Barbados, from the world list by Arnett et al. 2002, with summary numbers of number of genera and species.

**SUBORDER ADEPHAGA**
10. Carabidae (+Cicindelinae); 14 genera, 19 species.
12. Haliplidae; 1 genus, 1 species
17. Dytiscidae; 3 genera, 3 species.

**SUBORDER POLYPHAGA**
**Series Staphyliformia**
Superfamily Hydrophiloidae
18. Hydrophilidae; 7 genera, 10 species.
21. Histeridae; 3 genera, 3 species.
Superfamily Staphylinoidae
22. Hydraenidae; 1 genus, 1 species.
25. Leiodidae; 1 genus, 1 species.
28. Staphylinidae (+Scaphidiinae and Pselaphinae); 17 genera, 23 species.

**Series Scarabaiformia**
Superfamily Scarabaeoidea
33. Trogidae; 1 genus, 1 species.
38. Hybosoridae; 1 genus, 1 species.
41. Scarabaeidae; 10 genera, 21 species.

**Series Elateriformia**
Superfamily Buprestoidea
51. Buprestidae; 1 genus, 2 species.
Superfamily Elateroidae
69. Elateridae; 4 genera, 5 species.
76. Lampyridae; 2 genera, 2 species.

**Series Bostrichiformia**
79. Jacobsoniidae; 1 genus, 1 species.
Superfamily Bostrichoidea
82. Dermestidae; 3 genera, 3 species.
83. Bostrichidae (+Lyctinae); 6 genera, 6 species.
84. Anobiidae (+Ptininae); 3 genera, 4 species.

**Series Cucujiformia**
Superfamily Lymexyloidea
85. Lymexylidae; 1 genus, 1 species.
Superfamily Cleroidae
87. Trogossitidae; 1 genus, 1 species.
89. Cleridae; 1 genus, 1 species.
Superfamily Cucujoidae
97. Nitidulidae; 4 genera, 5 species.
98. Smicripidae; 1 genus, 1 species.
102. Silvanidae; 4 genera, 4 species.
107. Phalacridae; 2 genera, 3 species.
110. Cryptophagidae; 1 genus, 1 species.
112. Languriidae; 1 genus, 1 species.
121. Coccinellidae; 19 genera, 25 species.
122. Corylophidae; 2 genera, 6 species.
Superfamily Tenebrionoidea
124. Mycetophagidae; 1 genus, 1 species.
131. Rhipiphoridae; 1 genus, 1 species.
139. Tenebrionidae (+Alleculinae and Lagriinae); 8 genera, 10 species.
Tribe Cicindelinae

*Cicindela suturalis* Fabricius 1898: 62; Leng and Mutchler 1914: 393; Blackwelder 1944-1957: 20, Tucker 1952: 340; Balazuc and Chalumeau 1978: 19-20; Ivie 1983: 197; Bennett and Alam 1985: 19; Freitag 1992: 157. **Distribution.** Widespread Antilles and South America. Antigua, Barbados, Barbuda, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Martinique, Puerto Rico, St. Barthelemy, St. John, St. Martin, St. Thomas, St. Vincent. Widespread South America. **Bionomics.** Barbados is reported as having the forms *suturalis* and *hebraea* (both on Calais Beach). Predaceous on various insects; in open habitats and on beaches.

Subfamily Scaritinae

Tribe Clivinini


*Halocoryza arenaria* (Darlington) 1939: 84 (*Schizogenius*); Nichols 1988: 90, 117. **Distribution.** Bahamas, Barbados, Cayman Islands, Cuba, Dominica, Martinique, Mustique, St. Croix, St. John, St. Lucia, St. Vincent. Mexico, USA (south FL), Panama, Brazil; Cameroon. **Bionomics.** Found on marine beaches in the intertidal zone, in mangrove swamps; halobiont.

Subfamily Trechinae

Tribe Bembidiini

Subtribe Tachyina

*Micratopus* sp. “croix” undescribed. **Distribution.** Barbados (det. T. Erwin, SBPC, USNM), Hispaniola, Jamaica, St. Lucia (FSCA). **Notes.** Widespread on Barbados and common at uv lights.

*Micratopus* sp. “cayman” undescribed. **Distribution.** Barbados (det. T. Erwin, SBPC, USNM); other unspecified islands.

Subfamily Harpalinae

Tribe Harpalini


*Selenophorus affinis* Dejean 1831: 822; Blackwelder 1944-1957: 49; Bennett and Alam 1985: 20 (possible). **Distribution.** Barbados (introduction or possible misidentification, BMAC, det. R. Madge). Panama, Colombia, French Guiana. **Bionomics.** Predaceous on insects attacking sugarcane, sweet potato, cotton, maize and vegetables. A species in this genus was reported as *Harpalus* sp. (Bennett and Alam 1985: 19).

*Selenophorus barbadensis* Ball and Shpley in Ball 1992: 100. **Distribution.** Barbados, endemic. **Bionomics.** Taken in light traps.


*Selenophorus striatopunctatus* Putzeys 1878: 33; Bennett and Alam 1985: 20; Ball 1992: 85. **Distribution.** Antilles and North and Central America. Bahamas, Barbados, Caymans, Cuba, Jamaica, Hispaniola, Leeward Islands, Puerto Rico, Windward Islands. SE USA, Central America. **Bionomics.** Predaceous on insects attacking sugarcane, sweet potato, cotton, maize and vegetables.

**Tribe Pentagonicini**


**Tribe Perigonini**

*Perigona nigriceps* Dejean 1831: 44; Blackwelder 1944-1957: 44; Erwin and Sims 1984: 443; Bennett and Alam 1985: 20; Turnbow and Thomas 2008: 14. **Distribution.** Bahamas (Andros, South Bimini), Barbados (SBPC; BMAC, det. R. Madge), Cuba, Dominica, Guadeloupe, Martinique, Puerto Rico, St. Vincent (SBPC), Canada (PQ), USA (NH-FL-CA); introduced. An Old World (probably Asian) species widely distributed by commerce in the New World. **Bionomics.** Found around human dwellings, and probably living in decaying plant matter in and around gardens; collected at uv light. In sugarcane fields; probably predacious on *D. saccharalis* and other pests in Barbados.

**Tribe Ctenodactylini**


**Tribe Lebiini**


*Calleida amethystina* Fabricius 1787, 203; Casale 1998: 419. **Distribution.** Barbados (det. T. L. Erwin USNM), introduced; also to St. Lucia, St. Vincent. From Mexico to Bolivia and Brazil, not in the West Indies according to Erwin and Sims 1984: 446. **Bionomics.** A probable recent introduction.
Tribe Zuphiini


Tribe Galeritini


12. Family Haliplidae, The crawling water beetles

*Haliplus gravidus* Aubé 1838: 26; Blackwelder 1944-1957: 72; Vondel and Spangler 2008: 94. =*Haliplus robustus* Sharp 1877: 120 of Antigua; Fleutiaux and Sallé 1890: 369 of Guadeloupe. **Distribution.** Widespread Antilles and Latin America. Antigua, Barbados, Guadeloupe, Marie Galante, Puerto Rico, St. Lucia, St. Martin. Mexico, Guatemala, Costa Rica, Panama, Colombia, Bonaire, Curacao, Margarita to Venezuela and Trinidad, south to Argentina, Bolivia, Brazil; Galapagos Islands. **Notes.** These beetles live among aquatic vegetation at the edges of ponds, lakes, and streams. The adults are slow moving, and the larvae feed by sucking on algal cells.

17. Family Dytiscidae, The predacious diving beetles

Subfamily Copelatinae

*Copelatus posticatus* (Fabricius) 1801: 268 (*Dytiscus*); Blackwelder 1944-1957: 81. **Distribution.** Widespread Antilles and Latin America. Barbados (SBPC), Cuba, Dominica, Guadeloupe, Hispaniola, Puerto Rico, St. Lucia (USNM), St. Vincent. Mexico to Panama to Venezuela, French Guiana and Brazil. **Bionomics.** Common at light traps, often without near-by standing water.

Subfamily Dytiscinae

Tribe Eretini

*Eretes occidentalis* Ericson 1847: 73 ; Larson et al. 2000: 829. =*Eretes sticticus* (Linnaeus) 1767: 666 (*Dytiscus*) [limited to Old World, Nilsson 2001: 99]; Bennett and Alam 1985: 20; Tucker 1952: 340; Turnbow and Thomas 2008: 36. **Distribution.** Widespread New World. Bahamas (Great Inagua), Barbados, Guadeloupe, Puerto Rico, St. Barthelemy; the only New World species in the genus, widespread from southern USA to Peru, including the West Indies and Galapagos Islands. **Bionomics.** An inhabitant of temporary ponds and pools in dry regions; colonizing temporary water bodies; often attracted to lights; larval stages are completed in 9-10 days.

Tribe Cybistrini

*Megadytes (Bifurcitus) giganteus* (Laporte) 1834: 99 (*Dytiscus*); Blackwelder 1947: 80; Bennett and Alam 1985: 20; Nilsson 2001: 94. **Distribution.** Widespread Antilles and Latin America. Bahamas, Antigua, Barbados, Cuba, Guadeloupe. Mexico to Argentina. **Bionomics.** The larvae of this large beetle are predacious on tadpoles of the giant toad, *Bufo marinus*. This beetle is apparently a serious limiting factor to population build-up of this agriculturally beneficial amphibian.
Suborder Polyphaga
Series Staphyliformia
Superfamily Hydrophilidae

18. Family Hydrophilidae, The water scavenger beetles

Subfamily Hydrophilinae
Tribe Hydrophilinae

Enochrus (Methydrus) bartletti Short 2004: 352. =Enochrus orchymonti Mouchamps 1956: 10 (of South America); misidentification in Bennett and Alam 1985: 20; Turnbow and Thomas 2008: 40. Distribution. Widespread Antilles native. Bahamas (Great Inagua), Barbados (SBPC), Cuba, Dominica, Hispaniola, Montserrat, Puerto Rico, St. Croix, St. Lucia, St. John, St. Thomas. Bionomics. Adults and larvae are aquatic.


Tropisternus (Pristosternus) apicipalpis (Chevrolat) 1834: no. 40 (Hydrophilus); Blackwelder 1944-1957: 170; Tucker 1952: 341; Bennett and Alam 1985: 20. Distribution. Widespread New World. Antigua, Bahamas (Great Inagua, San Salvador), Barbados (det. P. J. Spangler, BMAC), Cuba, Guadeloupe, Hispaniola. Southern USA to Costa Rica. The preceeding Barbados record could be a misidentification for this species; verification is needed.

Tropisternus (Tropisternus) lateralis lateralis (Fabricius) 1775:228 (Hydrophilus); Leng and Mutchler 1914: 406; Blackwelder 1944-1957: 170; Tucker 1952: 341; Bennett and Alam 1985: 20; Hansen 1999: 222; Turnbow and Thomas 2008: 42. Distribution. Widespread New World. Antigua, Bahamas (Andros, Great Inagua, South Bimini), Barbados, Barbuda, Cuba, Dominica, Grand Cayman, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Croix, St. Kitts, St. Lucia, St. Thomas. Other subspecies range from USA to Mexico to Brazil, Uruguay, Argentina, and Galapagos Islands.

Subfamily Sphaederiinae
Tribe Coelostomatini


Tribe Megasternini


21. Family Histeridae, The clown beetles

Subfamily Abraeinae


Subfamily Dendrophilinae


Subfamily Histerinae

*Pactolinus chinensis* (Quensel) in Schönherr 1806: 88b (*Hister*); Bennett and Alam 1985: 20 [as *Hister chinensis*]; Mazur 1984: 180. **Distribution.** Barbados (introduced, not established). Native to China, east India, Pacific Islands, Australia; introduced for biocontrol to Hawaii and Trinidad. **Bionomics.** Imported by CIBC Trinidad in 1950 to control houseflies.

22. Family Hydraenidae, The minute moss beetles

Subfamily Hydraeninae

*Hydraena particeps* Perkins 1980: 142. **Distribution.** Widespread Antilles and Latin America. Barbados (new record, det. P. Perkins, SBPC), Grenada. Honduras to Panama, Venezuela, Trinidad. **Bionomics.** This family occurs in aquatic and semi-aquatic habitats, in sand and gravel along stream edges, in aquatic vegetation, and brackish pools.

Superfamily Staphylinoidea

25. Family Leiodidae. The round fungus beetles

Subfamily Leiodinae

*Aglyptinus* sp., undescribed species, SBPC. **Distribution.** Barbados. **Bionomics.** Collected on soft fungi in Turners Hall Woods. **Notes.** Species are known on other Lesser Antilles islands.

28. Family Staphylinidae, The rove beetles
Herman (2001) is a world catalogue of Staphylinidae, excluding Pselaphinae, Paederinae, and Aleocharinae. The Lesser Antilles genera can mostly be identified with the keys in Navarette-Heredia et al. (2002).

Subfamily Tachyporinae
Tribe Tachyporini


Tribe Mycetoporini


Subfamily Aleocharinae


Tribe Hypocyphtini


Subfamily Osoriinae
Tribe Thoracophorini

*Clavilispinus mariannae* Irmler 2001: 350. **Distribution.** Barbados; single island endemic.

Subfamily Oxytelinae
Tribe Thinobiini


*Carpelimus correctus* Blackwelder 1943: 64; Tucker 1952: 341; Bennett and Alam 1985: 21; Herman 2001: 1648. **Distribution.** Widespread Antilles and South America. Barbados, Cayman Islands, Grenada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Croix, St. Lucia, St. Vincent. Trinidad. **Bionomics.** Found under stones and sand along streams, in dung, and flying at dusk.

*Carpelimus flavipes* (Erichson) 1840: 808 (*Troglophloeus*); Blackwelder 1943: 77; Tucker 1952: 341; Bennett and Alam 1985: 21; Herman 2001: 1660. **Distribution.** Widespread Antilles and Central America. Bahamas, Barbados, Cuba, Grenada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Croix, St. Lucia, St. John, St. Thomas, St. Vincent. Mexico. **Bionomics.** In chicken manure and under litter, and along streams and ponds.

Tribe Oxytelini

*Oxytelus incisus* Motschulsky 1857: 504; Blackwelder 1943: 96; Tucker 1952: 341; Woodruff et al. 1998: 40; Bennett and Alam 1985: 21; Herman 2001: 1433. **Distribution.** Widespread New World. Antigua, Barbados, Bermuda, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Mona Island, Montserrat, Mustique, Puerto Rico, St. Croix, St. Kitts, St. Lucia, St. Thomas, St. Vincent. Colombia, Costa Rica, Panama, Trinidad, Tobago, USA (FL, TX); Old World; Africa, Orient; circumtropical/subtropical. **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; Tucker 1952: 341; Bennett and Alam 1985: 21; Herman 2001: 1487. **Distribution.** Widespread New World. Antigua, Barbados, Bermuda, Carriacou, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Croix, St. Lucia, St. Vincent. USA (CA-TX-FL) through Panama to Trinidad, Venezuela and Argentina; introduced to Society Islands. **Bionomics.** Collected from dung and manure, in plant refuse, flying at dusk, and flying to lights.

Subfamily Paederinae

Tribe Paederini

*Lithocharis dorsalis* Erichson 1840: 616; Blackwelder 1943: 247; Bennett and Alam 1985: 21. **Distribution.** Widespread Antilles and South America. Antigua, Barbados, Cuba, Grenada, Guadeloupe, Hispaniola, Jamaica, Montserrat, Puerto Rico, St. Croix, St. Lucia, St. Vincent. Trinidad. **Bionomics.** A cosmopolitan species; in cow dung and other decaying plant materials.


*Lithocharis ochracea* (Gravenhorst) 1802: 58 (*Paederus*); Blackwelder 1943: 242; Tucker 1952: 341; Bennett and Alam 1985: 21. **Distribution.** Widespread New World. Antigua, Barbados, Dominica, Grenada, Guadeloupe, Jamaica, Puerto Rico, St. John, St. Kitts. Brazil, Chile, Guatemala, Mexico, USA (CA); Africa, Orient, Europe; cosmopolitan. **Bionomics.** Collected on horse manure, cattle dung, in decaying cocoa pods, and flying at dusk.

*Lithocharis sororcula* Kraatz 1859: 140; Blackwelder 1943: 241; Tucker 1952: 341; Bennett and Alam 1985: 21. **Distribution.** Widespread Antilles native. Antigua, Barbados, Grenada, Guadeloupe, Jamaica, Montserrat, Puerto Rico, St. Croix, St. Kitts, St. Lucia, St. Vincent. Orient; cosmopolitan. **Bionomics.** In cow and horse dung, rotting grass, flying at dusk.


Subfamily Staphylininae

Tribe Diochini

*Diochus nanus* Erichson 1839: 301; Blackwelder 1943: 455; Tucker 1952: 341; Bennett and Alam 1985: 21; Herman 2001: 2446. **Distribution.** Widespread New World. Barbados, Cuba, Grenada, Guadeloupe, Hispaniola, Jamaica, Mustique, Puerto Rico, St. Croix, St. Lucia, St. Vincent. Widespread USA to Mexico to Trinidad, Argentina and Brazil. Cosmopolitan. **Bionomics.** Found under sugar-cane trash, in other rotting plant matter and dung, at stream sides, and flying at dusk.
Tribe Xantholinini

**Neohypnus attenuatus** (Erichson) 1839: 330 (*Xantholinus*); Blackwelder 1944-1957: 147; Tucker 1952: 341; Smetana 1982: 201; Bennett and Alam 1985: 21; Herman 2001: 3708. **Distribution.** Widespread New World. Antigua, Barbados, Cuba, Dominica, Grenada, Guadeloupe, Jamaica, Montserrat, Puerto Rico, St. Kitts, St. Thomas, St. Vincent. USA (CA-TX-FL), to Venezuela, Tobago, Trinidad, to Argentina, and Paraguay. Introduced to St. Helena. **Bionomics.** Collected from dung, manure, carrion, decaying grass, and at edge of streams; from rotting foliage of *Beta vulgaris*.

**Phacophallus parumpunctatus** (Gyllenhal) 1827: 481 (*Staphylinus*); Blackwelder 1943: 494 [as *Leptacinus parumpunctatus*]; Tucker 1952: 341; Bennett and Alam 1985: 21; Herman 2001: 3738. **Distribution.** Antigua, Bahamas, Barbados (introduced), Cuba, Grenada, Jamaica, Puerto Rico, St. Kitts, St. Vincent. Widespread: USA-Canada; Africa; Asia; Pacific Islands. Cosmopolitan; native to Palearctic region; now widely distributed in North, but seemingly not in Central and South America (Smetana 1982:108). **Bionomics.** In decaying organic matter, especially in synanthropic situations; in chicken manure and cow dung.


**Philonthus hepaticus** Erichson 1840: 451; Blackwelder 1943: 401, Bennett and Alam 1985: 2; Smetana 1995: 175; Herman 2001: 2837. **Distribution.** Widespread New World. Antigua, Bahamas, Barbados, Carriacou, Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Les Saintes, Montserrat, Puerto Rico, St. Croix, St. Kitts, St. Thomas, St. Vincent, Canada and USA (widespread) to Panama to Tobago, Trinidad, south to Argentina and Chile; Australia. **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; Tucker 1952: 341; Woodruff et al. 1998: 43; Bennett and Alam 1985: 21; Smetana 1995: 190; Herman 2001: 2996. **Distribution.** Widespread New World. 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. Canada and USA (widespread) to Tobago, Trinidad, French Guiana. Cosmopolitan; Africa, Asia, Europe. **Bionomics.** Collected in fowl dung, manure, from rotting plant debris, in wet habitats and flying at dusk.

Series Scarabaeiformia

Superfamily Scarabaeoidea

**33. Family Trogidae, The skin beetles**

**Omorgus suberosus** (Fabricius) 1775: 31 (*Trox*); Blackwelder 1944-1957: 219; Fleutiaux et al. 1947: 25, Tucker 1952: 342; Vaurie 1955: 106; Bennett and Alam 1985: 21. **Distribution.** Widespread New World. Bahamas, Barbados, Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Marie Galante, Martinique, Puerto Rico, St. Vincent. Widespread in New World; USA to Colombia, Galapagos Is-
lands, Argentina and Brazil (Vaurie 1955: 106). **Bionomics.** In Barbados possibly predacious on eggs of *Schistocerca pallens* and other grasshoppers; also feeds on dry skin, hair, feathers, carcasses, hides, hooves, etc.

38. **Family Hybosoridae, The hybosorid scarab beetles**

*Anaides vartorellii* Ocampo 2006: 65; Bennett and Alam 1985: 21 [as *Anaides* sp.]. **Distribution.** Barbados; endemic. **Bionomics.** Taken in carrion and baited pitfall traps in Turners Hall Woods and Welchman Hall Gully (SBPC).

41. **Family Scarabaeidae, The scarab beetles**

Subfamily Aphodiinae

**Tribe Aphodiini**


**Tribe Eupariini**

*Ataenius beattyi* Chapin 1940: 17; Blackwelder 1944-1957: 213; Bennett and Alam 1985: 22; Stebnicka 2007: 57. **Distribution.** Lesser Antilles Native. Barbados, Jamaica, St. Croix, St. Thomas. **Bionomics.** In fowl dung in Barbados. This and the following species in this genus may have been at least partly spread through the Lesser Antilles with livestock.


*Ataenius gracilis* (Melsheimer) 1845: 137 (*Oxyomus, Pleurophorus*); Tucker 1952: 342; Chalumeau 1983: 74; Bennett and Alam 1985: 22; Woodruff et al. 1998: 35 [as *A. chilensis* Solier 1851: 72, in error from Barbados]; Turnbow and Thomas 2008: 48. **Distribution.** Widespread New World. Bahamas (New Providence), 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; introduced to Micronesia. **Bionomics.** Adults attracted to lights; found in cow dung.

*Ataenius heinekeni* (Wollaston) 1854: 228 (*Oxyomus*); Stebnicka 2004: 216 [synonymy]. = *Ataenius rhitycephalus* (Chevrolat) 1864: 413 (*Auperia*); Bennett and Alam 1985: 22. **Distribution.** Bahamas (Andros), Barbados (probably introduced), Cuba, Hispaniola, Puerto Rico, St. Thomas. USA (SC-FL-TX), Mexico to Brazil, introduced to Ascension and Madeira islands. **Bionomics.** Taken by beating, in leaf and log litter and in debris; seemingly not at dung.

*Ataenius imbricatus* (Melsheimer) 1845: 136 (*Aphodius*); Stebnicka 2003: 225; Turnbow and Thomas 2008: 48. **Distribution.** Widespread New World. Bahamas (San Salvador), Barbados. Cuba, Guadeloupe, Hispaniola, Puerto Rico, St. Croix. USA (PA-FL), Mexico, Central America, Colombia to Trinidad, Brazil and Argentina. **Bionomics.** In cattle dung; mostly collected at lights.

temala, Honduras, Mexico, Nicaragua, Panama, Trinidad, Venezuela; introduced to Australia, Micronesia, Galapagos. **Bionomics.** Adults attracted to lights; found in cow and fowl dung.


*Ataenius scutellaris* Harold 1867: 82; Tucker 1952: 342; Bennett and Alam 1985: 22. =*Ataenius frater* Arrow 1903: 512; Woodruff et al. 1998: 33. **Distribution.** Widespread Antilles and Latin America. Antigua, Bahamas, Barbados, Dominica, Grenada, Guadeloupe Hispaniola, Jamaica, Montserrat, Puerto Rico, St. Croix, St. Kitts, St. Thomas, St. Vincent, Tortola. Mexico to Colombia, Trinidad and Brazil. **Bionomics.** Adults attracted to lights; found in fowl and cow dung.

*Ataenius strigicauda* Bates 1887: 96; Bennett and Alam 1985: 22; Woodruff et al. 1998: 33. **Distribution.** Widespread Antilles and Latin America. Bahamas, Barbados, Bequia, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Jamaica, Martinique, Puerto Rico, St. Croix, St. Lucia, St. Thomas, St. Vincent. Mexico to Trinidad and Argentina and Chile; introduced to Madeira. **Bionomics.** Adults attracted to lights; found in cow and fowl dung.

Subfamily Melolonthinae

Tribe Melolonthini

*Phyllophaga smithi* (Arrow) 1912: 458 (*Phytalus*); Tucker 1952: 342; Bennett and Alam 1985: 22. **Distribution.** Barbados (BMAC, SBPC); endemic. Trinidad (mislabeled?); Mauritius (introduced). **Bionomics.** Sugarcane white-grub or brown hardback. I found adults in abundance in many gully forests. Larvae attack roots of sugarcane, *Citrus*, maize, rose and the tubers of yams and sweet potatoes. This species is a very destructive pest on the Indian Ocean island of Mauritius. A native biocontrol parasitoid in Barbados may be the scoliid wasp *Scolia (Dielis) dorsata* Fabricius. **Phyllophaga vandinei** Smyth 1917: 68; Bennett and Alam 1985: 22. **Distribution.** Barbados?, Puerto Rico. I have not been able to confirm the presence of this species in Barbados. It is possible that it was introduced to Barbados or was intercepted, but is not established. **Bionomics.** The species was described from Puerto Rico, where it is a serious pest (Walcott 1936: 247). In Barbados is supposedly attacks roots of sugarcane, banana; also breeds in decaying organic matter. Bennett and Alam 1985 also indicate the presence of another species of *Phyllophaga* in Barbados, which breeds on decaying roots, etc.

Subfamily Rutelinae

Tribe Anomalinae

*Leucothyreus vincentiae* Arrow 1900: 179. **Distribution.** Barbados (new record, det. S. B, Peck), St. Vincent. Lesser Antilles endemic. **Notes.** Common at lights in Turners Hall Woods; there is the possibly that this fairly large beetle is a recent introduction to Barbados because it was not previously recorded on Barbados. But the fact that it has not been taken in other sites argues against this.
Tribe Rutelini


Subfamily Dynastinae

Tribe Cyclocephalini


Tribe Pentodontini

*Tomarus cuniculus* (Fabricius) 1801: 20 (*Geotrupes*); Tucker 1952: 342 [as *Ligyrus cuniculus*]; Endrödi 1985: 256; Bennett and Alam 1985: 22 [as *Ligyrus cuniculus*]. **Distribution.** Widespread New World. Bahamas, Barbados (BMAC), Bermuda, Cuba, La Désirade, Dominica, Guadeloupe, Hispaniola, Les Saintes, Jamaica, Marie-Galante, Martinique, Nevis, Puerto Rico, St. Barthélémy, 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, tubers of yam and sweet potato; also breeds in decaying vegetable matter and manure.


Subfamily Cetoniinae

Tribe Cetoniini

*Protaetia fusa* (Herbst) 1790: 257 (*Cetonia*); Bennett and Alam 1985: 22 [as *Protaetta* sp.]; Woodruff 2006: 227; Turnbow and Thomas 2008: 49. **Distribution.** Barbados, introduced; Bahamas (Eleuthera, New Providence). USA (FL, three southern counties); introduced to New World, native and widespread in Southeast Asia and Australasia; also Pacific and Indian Ocean islands. **Bionomics.** The Asian mango flower beetle. Adults feed on flowers of pigeon pea in Barbados, and probably pollen of many plants as well, where they may cause plant damage. Adults may also feed on fermenting materials; larvae may feed on plant roots but more likely on rotting plant trash.

Series Elateriformia

Superfamily Buprestoidea

51. **Family Buprestidae,** The metallic wood-boring beetles

Subfamily Buprestinae

Tribe Chrysobothrini

Bionomics. A wood borer


Superfamily Elateroidea

69. Family Elateridae, The click beetles

Subfamily Lissominae


Subfamily Agrypninae

Tribe Oophorini

Conoderus amplicollis (Gyllenhal) 1817: 141 (Elater). =Heteroderes laurentii (Guérin-Méneville) 1839: 31 (Oophorus); Blackwelder 1944-1957: 289; Tucker 1952: 342; Bennett and Alam 1985: 22. Distribution. Probably introduced to Lesser Antilles; Barbados, Cuba, Dominica, Grenada, Guadeloupe, Martinique, Mustique, Puerto Rico, St. Vincent. Probably native to southern South America; Argentina, Brazil, Paraguay, Peru (H. Douglas, pers. comm.). Bionomics. Boring imported wallaba wood (Eperua falcata), probably from Demerara, 1929.

Tribe Pyrophorini

Ignelater luminosus (Illiger) 1807: 149 (Elater); Blackwelder 1944-1957: 285; Tucker 1952: 342; Bennett and Alam 1985: 23; Costa 1980: 162. Distribution. Barbados (introduced), Hispaniola, Puerto Rico, St. Croix, St. John, St. Lucia, St. Thomas. Venezuela is an error. Bionomics. Introduced in 1932 and 1935 as a predator against sugarcane root-borer (Diaprepes abbreviatus) and white-grub (Phyllophaga smithi) from Puerto Rico; present in 1951 and an important biocontrol agent, but I made no recent collections. Adults are bioluminescent.


Tribe Hemirhipini


76. Family Lampyridae, The firefly beetles

Subfamily Lampyrinae

Aspisoma ignitum (Linnaeus) 1767: 645 (Lampyris); Leng and Mutchler 1922: 451; Mutchler 1923: 12; Blackwelder 1944-1957: 356; Fleutiaux et al. 1947: 159; Bennett and Alam 1985: 23. Distribution.
Widespread Antilles and Latin America. Antigua, Barbados, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Martinique, Mustique, St. Kitts, St. Vincent, Union. Mexico, Central America to Venezuela, Trinidad, French Guiana. **Bionomics.** Larvae predacious on various terrestrial molluscs. Adult males flying at night and signaling with bioluminescence.

Subfamily Photurinae


Series Bostrichiformia

**79. Family Jacobsoniidae,** The Jacobsen’s beetles

*Derolathrus* undescribed species. **Distribution.** Widespread Antilles native? Barbados (det. S. B. Peck, SBPC), Guadeloupe. This species is also known from centraland north Florida. **Bionomics.** In moist bat guano (Coles Cave); not yet found in leaf litter in Barbados where it could also be expected.

Superfamily Bostrichoidea

**82. Family Dermestidae,** The skin and larder beetles

Tribe Atagenini

*Attagenus fasciatus* (Thunberg) 1795: 105 (*Anthrenus*); Tucker 1952: 343; Bennett and Alam 1985: 23. **Distribution.** Barbados (probably introduced), Cuba. Nearly cosmopolitan. **Bionomics.** The wardrobe beetle. It attacks stored products, but also wild shrubs. In Trinidad it is reported on vanilla beans.

Tribe Anthrenini


**83. Family Bostrychidae,** The horned powder-post beetles

Subfamily Bostrichinae

Tribe Bostrichini

Tribe Xyloperthini

*Tetrapriocera longicornis* (Olivier) 1795: 15 (*Bostrichus*); Blackwelder 1944-1957: 400; Fleutiaux et al. 1947: 209; Fisher 1950: 102; Tucker 1952: 343; Bennett and Alam 1985: 23; Turnbow and Thomas 2008: 8. **Distribution.** Widespread New World. Bahamas (Andros, Eleuthera, South Bimini), Barbados, Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Puerto Rico, St. Thomas. Central America, Mexico, South America, United States (FL). **Bionomics.** Adults attracted to lights; adults and larvae bore into living and dead wood of various trees and shrubs; attacks stems and branches of Barbados ebony.

**Tribe Sinoxylini**

*Sinoxylon conigerum* Gerstaecker 1855: 268; Fisher 1950: 60; Tucker 1952: 343; Bennett and Alam 1985: 23. **Distribution.** Barbados, introduced from Old World; widespread in tropical Asia and Africa; introduced to Venezuela and Hawaii. **Bionomics.** A wood-borer; members of this genus are serious pests of fallen trees and bamboo in India.

**Subfamily Dinoderinae**

*Dinoderus* sp., Bennett and Alam 1985: 23. **Distribution.** Barbados (introduced); probably *D. minutus* (Fabricius) 1775: 54 (*Apate*) (Fisher 1950: 30), a tropicopolitan species of Oriental origin; known from Cuba, Grenada, Hispaniola, Puerto Rico, St. Vincent. USA (FL, CA) to Argentina. **Bionomics.** The bamboo powderpost beetle. Attacks bamboo furniture and felled trees and wood of many genera; it can also attack sugarcane, rattan, packing cases, and stored products.

*Rhizopertha dominica* Fabricius 1792: 359. **Distribution.** Barbados (BMAC), Cuba, Puerto Rico, México to Brazil, USA?; cosmopolitan in stored products.

84. **Family Anobiidae, The death-watch beetles**

**Subfamily Anobiinae**

**Tribe Stegobiini**

*Stegobium paniceum* (Linnaeus) 1761: 145 (*Sitodrepa*); Blackwelder 1944-1957: 402; Tucker 1952: 343; Bennett and Alam 1985: 23. **Distribution.** Barbados (introduced), Guadeloupe, Puerto Rico. USA and Mexico to Brazil, Peru, and Argentina; Old World; cosmopolitan. **Bionomics.** The drug-store beetle. A cosmopolitan pest; attacks stored food-stuffs, onion seed etc.

**Subfamily Xyletininae**

**Tribe Lasiodermini**

*Lasioderma serricorne* (Fabricius) 1792: 251 (*Ptinus*); Blackwelder 1944-1957: 404; Bennett and Alam 1985: 23. **Distribution.** Barbados (introduced; BMAC), Cuba, Grenada, Guadeloupe, Puerto Rico. USA and Mexico to Paraguay; Old World. **Bionomics.** The cigarette beetle. A cosmopolitan pest; attacks a great variety of stored products, particularly tobacco. In Barbados it attacks bone-handled knives, cigarettes, wheat crackers etc.

**Subfamily Mesocoelopodinae**

**Tribe Tricorynini**

Tricorynus tabaci (Guérin-Méneville) 1850: 437 (Catorama); White 1981: 775. **Distribution.** Antilles and North and/or Central America. Barbados, Cuba. Guatemala, Mexico, USA (FL). **Bionomics.** A stored products pest. In Barbados supposedly attacking books, upholstered furniture, provisions, etc. **Notes.** This is probably the identity of the Barbados record of Tricorynus zeae (Waterhouse) 1849: lxviii (Catorama); Leng and Mutchler 1914: 435; Blackwelder 1944-1957: 406; Tucker 1952: 343; Bennett and Alam 1985: 23. Trichorynus zeae is likely to be a senior synonym of T. tabaci but specimens are not available to confirm this (White 1981: 783).

Series Cucujiformia
Superfamily Lymexyloidea

85. **Family Lymexylidae, The ship-timber beetles**

Atractocerus brasiliensis Lepeltier and Audinet-Serville 1825: 309; Blackwelder 1944-1957: 173; Tucker 1952: 343; Bennett and Alam 1985: 24. **Distribution.** Widespread Antilles and Latin America. Barbados, Cuba, Dominica, Grenada, Guadeloupe, Jamaica, Puerto Rico, Vincent. Mexico to Brazil and Argentina. **Bionomics.** Adults are attracted to lights and larvae live in dying trunks and logs of various trees; attacking stems and branches of Barbados ebony and mango.

Superfamily Cleroidea

87. **Family Trogossitidae, The bark-gnawing beetles**

Subfamily Trogossitinae

Tenebroides mauritanicus (Linnaeus) 1758: 417 (Tenebrio); Blackwelder 1944-1957: 394; Tucker 1952: 343; Bennett and Alam 1985: 23; Barron 1971: 92. **Distribution.** Barbados (introduced), Guadeloupe, Mona Island, Puerto Rico. USA and Mexico to Argentina; cosmopolitan. **Bionomics.** The ‘cadelle’; it attacks peanuts imported from India, grains, flour and other stored products, but is mainly a predator.

89. **Family Cleridae, The checkered beetles**

Subfamily Korynetinae

Necrobia rufipes De Geer 1875: 165; Blackwelder 1944-1957: 391; Tucker 1952: 343; Bennett and Alam 1985: 24. **Distribution.** Barbados (introduced; BMAC), Cuba, Puerto Rico. Mexico to Argentina and Chile; cosmopolitan. **Bionomics.** The redlegged ham beetle. Probably a predator on larvae of other insects; usually found on dry skin and dried or spoiled cheese and meats; collected in Barbados on empty copra bags; perhaps imported with copra.

Superfamily Cucujoidea

97. **Family Nitidulidae, The sap-feeding beetles**

Subfamily Cillaeinae

Conotelus conicus (Fabricius) 1801: 603 (Stenus); Blackwelder 1944-1957: 411; Bennett and Alam 1985: 24. **Distribution.** Barbados, Bequia, Guadeloupe, Jamaica, Montserrat, Mustique, Puerto Rico, St. Vincent. Mexico.
Subfamily Carpophilinae

**Carpophilus freemani** Dobson 1956: 41; **Distribution.** Barbados (det. W. A. Connell, introduced). Brazil, Morocco, probably cosmopolitan. **Bionomcs.** A pest of stored corn and Brazil nuts and probably other products.


**Epuraea luteolus** Erichson 1843: 272. Blackwelder 1944-1957: 412 [*Haptoncus*]; Tucker 1952: 343; Bennett and Alam 1985: 24; Turnbow and Thomas 2008: 45. **Distribution.** Bahamas (Great Abaco), Barbados (introduced; BMAC, det. R. Madge), Cuba, Grenada, Guadeloupe, Mona Island, Puerto Rico, St. Vincent. Widespread from USA to Mexico and South America; Old World; cosmopolitan. **Bionomcs.** The yellowbrown sap beetle. Found in rotten mangoes and tomatoes; also attends *Saccharicoccus sacchari* on sugarcane.

Subfamily Cybocephalinae

**Cybocephalus nipponicus** Endrödy-Younga 1971: 244; Smith and Cave 2007: 170. **Distribution.** Barbados, Grand Cayman, Nevis, St. Kitts. Eastern North America, Asia, southern Europe, Micronesia, South Africa. **Notes.** Reported feeding on at least 14 species of armored scales world wide and on *Aspidiotus destructor* Signoret and *A. yasumatsui* Signoret in the West Indies. It was introduced to Barbados from Florida and helps control scales on cycads.

98. **Family Smicripidae, The palmetto beetles**


102. **Family Silvanidae, The silvanid flat bark beetles**

Subfamily Silvaninae

**Cathartus quadricolis** (Guérin-Méneville) 1829: 198 (*Silvanus*); Blackwelder 1944-1957: 421; Bennett and Alam 1985: 24; Thomas 1993: 35; Turnbow and Thomas 2008: 51. **Distribution.** Widespread New World. Bahamas (Andros), Barbados (BMAC, det. R. Madge), Cuba, Grenada, Hispaniola, Jamaica, Puerto Rico, St. Vincent. Cosmopolitan; Mexico, Guatemala, Nicaragua, Panama, USA. **Bionomcs.** The square-necked grain beetle. In Barbados it attacks pigeon pea seeds in dry pods, and is a generally distributed pest of corn, in the field and in storage.

**Monanus concinulus** (Walker) 1858: 207 (*Monotoma*); Blackwelder 1944-1957: 421; Thomas 1993: 31; Turnbow and Thomas 2008: 51. **Distribution.** Bahamas (Andros, New Providence), Barbados (introduced, det. J. M. Kingsolver), Grenada, Guadeloupe, Hispaniola, Jamaica, Mustique, Puerto Rico, St. Croix, St. John, St. Vincent. USA (FL) and Central America; tropicopolitan, native to Asia. **Bionomcs.** Probably feeding on molds, often with spoiled fruit.

**Oryzaephilus surinamensis** (Linnaeus) 1758: 357 (*Silvanus*); Blackwelder 1944-1957: 421; Tucker 1952: 344; Bennett and Alam 1985: 24; Thomas 1993: 20. **Distribution.** Barbados (introduced, BMAC), Cuba, Guadeloupe, Puerto Rico; cosmopolitan and probably native to the Old World, Guatemala, Mexico, Suriname, Argentina. **Bionomcs.** The saw-toothed grain beetle; recorded in Barbados in sugar, and also found feeding in wheat crackers; a common and serious pest of stored products, especially on cereals and cereal products, dried fruit, copra, nuts, and carob.

107. Family Phalacridae, The shining flower beetles

Subfamily Phalacrinae


110. Family Cryptophagidae, The silken fungus beetles

Subfamily Atomariinae
Tribe Atomariini

Curelius japonicus (Reitter) 1877: 181 (Ephistemus) I was not able to find any of these; Bennett and Alam 1985: 24. Distribution. Barbados (introduced; BMAC), widely distributed including southern USA. Bionomics. Collected at light; probably a fungus feeder.

112. Family Languriidae, The lizard beetles

Subfamily Toraminae


Subfamily Xenoscelinae
Tribe Loberini


121. Family Coccinellidae, The ladybird beetles

Subfamily Sticholotodinae
Tribe Serangiini


Subfamily Scymninae
Tribe Scymnillini

Tribe Stethorini


Tribe Scymnini

*Cryptolaemus montrouzieri* Mulsant 1853: 268; Blackwelder 1944-1957: 445; Bennett and Alam 1985: 25. **Distribution.** Barbados, Puerto Rico. Central America, USA. **Bionomics.** Introduced from India, against *Saccharicoccus sacchari* but probably not established.


*Nephus sp.* nr. *bilucemarius* (Mulsant) 1850: 997 (*Scymnus*); Blackwelder 1944-1957: 444; Bennett and Alam 1985: 26. **Distribution.** Barbados. *Nephus* *bilucemarius* is recorded from Mexico, and Pearl Islands, Panama. **Bionomics.** Predaceous on *Saccharicoccus sacchari*, *Orthezia insignis*, *O. praelongaga*, *Planococcus citri*, and other coccids. What may be this or other species are reported by Bennett and Alam (1985: 26) as predaceous on *Planococcus citri*, *Phenacoccus gossypii*, *Ferrisia virgata*, *Aleurocanthus woglumi*, *Saccharicoccus sacchari*, *Aspidiotus destructor*, *Aleurodicus coccis*, *A. dispersus*, *Peregrinus maidis* and *Saccharosydne saccharivora*.

*Scymnus* (*Pullus*) sp. nr. *apicalis* Mulsant 1850: 987; Blackwelder 1944-1957: 444; Bennett and Alam 1985: 26. **Distribution.** Barbados. *Scymnus apicalis* is recorded from Mexico to Colombia, to Brazil. **Bionomics.** Predaceous on *Tetranychus* spp. (including *T. tumidus*), *Aphis* spp., *Saccharosydne saccharivora* and some coccids. What may be this or other species are reported by Bennett and Alam (1985: 26) as predaceous on *Aphis gossypii*, *Tetranychus tumidus*, *Tetranychus* spp., *Myzus persicae*, *Saccharosydne saccharivora*, *Saccharicoccus sacchari*, *Peregrinus maidis*, and some other aphids and coccids.

Tribe Diomini

*Diomus ochroderus* (Mulsant) 1850: 951 (*Scymnus*); Blackwelder 1944-1957: 445; Bennett and Alam 1985: 25. **Distribution.** Widespread Antilles native. Barbados, Cuba, Grenada, Guadeloupe, Mustique, Puerto Rico, St. Barts, St. Vincent. **Bionomics.** Predaceous on *Orthezia insignis*, *Sipha flava*, *Toxoptera aurantii*, *Aphis* spp., *Aleurothrixus floccosus*, *Aleurodicus coccis* and *A. dispersus*. **Notes.** What may be this species is reported as *Diomus* sp., Bennett and Alam 1985: 25 in Barbados as predaceous on *Icerya purchasi*; and *Diomus* sp. nr. *ochroderus* (Mulsant) by Bennett and Alam 1985: 25; Tucker 1952: 344 as predaceous on *Toxoptera aurantii*.


Aleurocanthus woglumi, Coccus viridis, Geococcus coffeae, Lepidosaphes beckii, Pulvinaria urbicola and *Aphis* spp.

Tribe Hyperaspidini

*Hyperaspis festiva* Mulsant 1850: 659; Blackwelder 1944-1957: 447; Bennett and Alam 1985: 26. **Distribution.** Widespread New World. **Distribution.** Barbados (aberration *apicalis* Weise 1885: 167) (SBPC), Grenada, Hispaniola, Puerto Rico. USA to Mexico, Panama, Colombia, Brazil and Argentina. **Bionomics.** Predaceous on *Rhopalosiphum maidis*

*Hyperaspis* sp., Bennett and Alam 1985: 26. **Distribution.** Barbados. **Bionomics.** Introduced from India against *Saccharicoccus sacchari*; probably not established.


Tribe Cryptognathini


Tribe Pentiliini


Subfamily Chilocorinae

Tribe Chilocorini

*Chilocorus cacti* (Linnaeus) 1767: 584 (*Coccinella*); Blackwelder 1944-1957: 451; Bennett and Alam 1985: 25; Gordon 1985: 646; Turnbow and Thomas 2008: 27. **Distribution.** Bahamas (Andros, Great Inagua), Barbados (introduced; BMAC, SBPC), Cuba, St. Vincent (SBPC). USA to Mexico to South America. **Bionomics.** Introduced to Barbados and an important biocontrol agent; predacious on *Planococcus citri*, *Phenacoccus gossypii*, *Icerya purchasi*, *Aspidiotus destructor*, *Aleurodicus coccis*, *A. dispersus*, *Coccus viridis*, *Geococcus coffeae*, *Lepidosaphes beckii*, and *Asperolecanium bambusae*.


*Exochomus lituratus* Gorham 1894: 203; Bennett and Alam 1985: 26. **Distribution.** Barbados (introduced). **Bionomics.** Introduced, probably from India or Pakistan, as a predator on *Pinnaspis strachani*, *Planococcus citri*, *Coccus viridis*, *Aspidiotus destructor* and *Planococcus* sp. (an Indian species); seemingly not established.


Subfamily Coccidulinae

Tribe Noviini

Tribe Azyini


Subfamily Coccinellinae

Tribe Coccinellini


Tribe Halyziini

*Psyllobora parvinotata* Casey 1899: 101; Gordon 1985: 861. **Distribution.** Antilles and North and/or Central America. Barbados (SBPC, det. N. Vandenberg; new island record). USA (FL-LA). **Notes.** The Caribbean distribution of this species has not been summarized.

122. Family Corylophidae, The minute fungus beetles

Subfamily Corylophinae

Tribe Sericoderini


*Sericoderus* sp. prob. *latus* Matthews 1888: 117; Blackwelder 1944-1957: 431; Bennett and Alam 1985: 25. **Distribution.** Barbados. *Sericoderus latus* is reported from Guatemala, Old World. **Bionomics.** Adults associated with colonies of sugarcane thrips (*F. serrata*)

Subfamily Orthoperinae


**Orthoperus sp.;** Blackwelder 1944-1957: 431; Bennett and Alam 1985: 24. **Distribution.** Barbados. **Bionomics.** Adults found amongst sugarcane thrips (*F. serrata*).

Orthoperus sp. ?crotchii Matthews [this name is not in Blackwelder 1944-1957: 431, and thus may not be a New World species], Bennett and Alam 1985: 24. **Distribution.** Barbados. **Bionomics.** Adults collected on *Citrus*. Members of this family mostly occur in rotting wood or in decaying vegetable matter; many feed on moulds, coccids etc.

Superfamily Tenebrionoidea

24. **Family Mycetophagidae, The hairy fungus beetles**

Subfamily Mycetophaginae

*Typhaea stercorea* (Linnaeus) 1758: 357 (*Dermestes*); Blackwelder 1944-1957: 469; Tucker 1952: 344; Bennett and Alam 1985: 27; Turnbow and Thomas 2008: 44. **Distribution.** Widespread New World. Bahamas (Andros), Barbados, Grenada, Guadeloupe, Puerto Rico, St. Vincent. USA to Mexico, Guatemala; Old World, cosmopolitan. **Bionomics.** The species occurs on moldy food products and in stored products and is associated with fungi.

131. **Family Rhipiphoridae, The wedge-shaped beetles**

*Macrosiagon octomaculatum* (Gestaecker) 1855: 22 (*Rhipiphorus*); Blackwelder 1944-1957: 480; Tucker 1952: 344; Bennett and Alam 1985: 27. **Distribution.** Widespread New World. Barbados, Guadeloupe, St. Vincent. USA to Guatemala to French Guiana, Brazil and Argentina. **Bionomics.** A parasite of *Campsomeris dorsata*; adult also feeds on *Icerya purchasi* with which it apparently tears open the sac, and feeds upon the eggs.

139. **Family Tenebrionidae, The darkling beetles**

Subfamily Pimeliinae

Tribe Epitragini


Subfamily Diaperinae

Tribe Phalerini


*Phaleria thinophila* Watrous and Triplehorn 1982: 15. **Distribution.** Widespread Antillean? Barbados (record needs confirmation, it is suspect because there are no other Lesser Antilles records), Hispaniola, Jamaica, Puerto Rico, St. Croix, St. John, St. Thomas. The Costa Rica and Venezuela records also need verification.
Subfamily Opatrini
Tribe Opatrini

Blapstinus simulans Marcuzzi 1962: 36. **Distribution.** Lesser Antilles and South America. Barbados. Venezuela (Isla de Caribe, Estado Sucre). **Notes.** The Barbados populations has been described as an endemic subspecies.


Subfamily Tenebrioninae
Tribe Triboliini

Tribolium castaneum (Herbst) 1797: 282 (Colydium); Blackwelder 1944-1957: 531; Tucker 1952: 345; Bennett and Alam 1985: 27. **Distribution.** Barbados (introduced), Cuba, Dominica, Hispaniola, Jamaica, Puerto Rico, USA, Mexico to Panama, Colombia to Venezuela, and Margarita and Curaçao to Argentina; native to Old World; cosmopolitan. **Bionomics.** The red flour beetle; a serious pest; attacks maize, wheat, rice and other grains in storage; also taken at lights in and near buildings.

Tribe Alphitobiini

Alphitobius diaperinus (Panzer) 1797: 16 (Tenebrio); Blackwelder 1944-1957: 532; Tucker 1952: 345; Marcuzzi 1984: 95; Bennett and Alam 1985: 27; Turnbow and Thomas 2008: 53. **Distribution.** Widespread New World. Bahamas (Grand Bahama), Barbados, Cuba, Guadeloupe, Jamaica, Puerto Rico, USA, Mexico, Trinidad, Old World. **Bionomics.** The lesser mealworm. In decaying cottonseed and in fowl dung.

Alphitobius laevigatus (Fabricius) 1781: 90 (Tenebrio); Tucker 1952: 345; Marcuzzi 1962: 38, 1984: 95; Bennett and Alam 1985: 27. **Distribution.** Widespread New World. Antigua, Barbados, Cuba, Dominica, Guadeloupe, Puerto Rico, Saba, St. Martin, St. Vincent. Aruba, Curaçao, Mexico to Brazil; Old World; cosmopolitan; distributed by commerce. **Bionomics.** The black fungus beetle; attacks cottonseed and wheat in stores; also in bat guano.

Tribe Tenebrionini


Subfamily Alleculinae

Brazil. **Bionomics.** Larvae probably in decomposing wood and leaf litter and adults feeding on algae or fungi on tree trunks at night.

142. **Family Oedemeridae, The pollen-feeding beetles**

Subfamily Oedemerinae

Tribe Asclerini

*Hypasclera* sp. nr. *nesiotes* (Arnett) 1951: 349 (*Alloxacis*); Arnett 1984: 3; Bennett and Alam 1985: 27; Turnbow and Thomas 2008: 46. **Distribution.** Barbados. *Hypasclera nesiotes* is known only from West Indian islands; Bahamas (widespread), Cuba, Hispaniola, Puerto Rico. USA (FL, Keys only), and its range may actually extend down to Barbados.


144. **Family Meloidae, The blister beetles**

Subfamily Nemognathinae

Tribe Horiini

*Cissites maculata* (Swederus) 1787: 199 (*Cucujus*); Blackwelder 1944-1957: 482; Tucker 1952: 344; Selander and Bouseman 1960: 212; Bennett and Alam 1985: 27. **Distribution.** Widespread Antilles and South America. Barbados, Cuba, Dominica, Guadeloupe, Hispaniola, Puerto Rico, St. Vincent. Colombia, Ecuador, French Guiana, Mexico to Panama to Peru, Trinidad, Venezuela, to Brazil, Argentina and Chile. **Bionomics.** The larvae are parasitic upon the immatures of carpenter bees (*Xylocopa fimbriata*, Xylocopidae) in Barbados.

Tribe Nemognathini


151. **Family Anthicidae, The antlike flower beetles**

Subfamily Anthicinae

*Anthicus* sp. nr. *spinicolis* Laferté Sénectère 1848: 138; Blackwelder 1944-1957: 434; Bennett and Alam 1985: 27. **Distribution.** Barbados. *Anthicus spinicollis* is reported from Mexico, Belize, Guatemala, Colombia, Brazil, Argentina. **Bionomics.** Collected on cabbage; possibly an opportunistic predator.

Superfamily Chrysomeloidea

154. **Family Cerambycidae, The long-horned beetles**

Monné and Giesbert (1995) and Monné and Hovore (2005) are catalogues or checklists of the species of the Western Hemisphere; Chalumeau and Touroult (2005) may be of help to identify the Barbados fauna.
Subfamily Prioninae
Tribe Macrotomini

*Nothopleurus maxillosus* (Drury) 1773: 86 and plate 38, fig. 3 (*Cerambyx*); Fleutiaux and Sallé 1889: 460 (as *Stenodentes exsertus* Olivier 1795: 17); Blackwelder 1944-1957: 552; Chalumeau and Touroult 2005a: 45 (as *Stenodentes maxillosus*). **Distribution.** Widespread Antilles native. Antigua, Barbados (needs verification), Barbuda, Cuba, Dominica, Guadeloupe, Martinique, Montserrat, Puerto Rico (seemingly absent in Virgin Islands), St. Barthélemy, St. Christopher, St. Kitts, St. Martin. **Notes.** Larvae attack healthy and unhealthy wood of orange, mango, *Bursera*, *Avicennia*, *Mangifera*, *Coccoloba*, *Haematoxylon*, and others.

Subfamily Cerambycinae
Tribe Methiini


Tribe Achrysonini


Tribe Eburiiini


Tribe Elaphidiini

Tribe Piezocerini


Tribe Ibidionini

_Neocompsa cylindricollis_ (Fabricius) 1798: 146 (_Heterachtes_); Chalumeau and Touroult 2005: 109 [as _Stenocorus cylindricollis_]. = _Heterachtes quadriramaculatus_ Haldeman 1847: 43 [not Fabricius 1792: 328], Tucker 1952: 345; Bennett and Alam 1985: 28 (det. R. E. White); Dalens and Touroult 2007: 291. **Distribution.** Widespread Antilles and South America. Barbados, Barbuda, Cuba, Desirade, Dominica. Jamaica, Guadeloupe, Les Saintes, Marie Galante, Martinique, Montserrat, Puerto Rico, St. Martin, Saba, St. Lucia, St. Vincent. Trinidad. **Bionomics.** Hosts: polyphagous; _Inga, Acacia, Mangifera, Sloanea, Tamarindus_, etc. in Barbados collected on _Aeschynomene americana_.

Tribe Plectromerini


Tribe Lissonotini


Tribe Torneutini

_Chlorida festiva_ (Linnaeus) 1758: 389 (_Cerambyx_); Leng and Mutchler 1914: 445; Tucker 1952: 345; Bennett and Alam 1985: 28; Chalumeau and Touroult 2005: 130. **Distribution.** Widespread New World. Antigua, Barbados (BMAC), Cuba, Dominica, Guadeloupe, Grenada, Jamaica, Martinique, Marie Galante, Puerto Rico, St. Lucia, St. Vincent. SE USA to Argentina. Introduced to São Tome (Gulf of Guinea). **Bionomics.** Bores stems of Barbados ebony, _Inga, Mangifera, Swietenia, Hymenaea, Psidium, Citrus_, etc.

Tribe Trachyderini


Subfamily Lamiinae

The report of _Acrocinus longimanus_ (Linnaeus) 1758: 388 from Barbados by Bennett and Alam 1985: 28 is an error. It is distributed from Mexico to Panama and South America and is not in the West Indies (Blackwelder 1944-1957: 608; Monné and Hovore 2005).

Tribe Apomecynini

_Adetus lherminieri_ Fleutiaux and Sallé 1889: 468; Chalumeau and Touroult 2005a: 144. **Distribution.** Widespread Antilles native. Barbados (new record, SBPC), Canouan, Dominica, Grenada, Guadeloupe, Marie Galante, Martinique, Montserrat, Petit St. Vincent, St. Kitts, St. Vincent, Union. **Bionom-
ics. Larvae develop in poorly lignified woody plants. Host plants: Coccoloba, Cordia, Gossypium, Hibiscus, Thespesia, etc.

Tribe Onciderini


Tribe Pogonocherini

*Ecyrus hirtipes* Gahan 1895: 127; Chalumeau and Touroult 2005a: 163; Dalens and Touroult 2007: 291; Turnbow and Thomas 2008: 17. **Distribution.** Widespread Antilles native. Bahamas (Andros, South Bimini), Barbados (new record, SBPC), Cuba, Dominica, Grenada, Guadeloupe, Hispaniola, Martinique, Montserrat, Puerto Rico, St. John, St. Thomas, Union. **Bionomics.** Polyphagous on many host trees.

Tribe Desmiphorini

*Desmiphora hirticollis* (Olivier) 1795:11 (*Saperda*). **Distribution.** Widespread New World. Barbados (det. R. E. White), Cuba, Grenada, Guadeloupe, Puerto Rico, St. Vincent, Union. USA (TX), Mexico, Panama, Curaçao, South America, including Galapagos. **Bionomics.** Hosts: Cordia and Sapium.

Tribe Batocerini


Tribe Phrynetini

*Phryneta verrucosa* (Drury) 1773: 90 (*Cerambyx*); Leng and Mutchler 1914: 448; Tucker 1952: 346; Bennett and Alam 1985: 28; Chalumeau and Touroult 2005: 142. **Distribution.** Barbados (BMAC, 1971 specimen record), Grenada. Trinidad. Introduced to New World; native to Gulf of Guinea (West Africa). **Bionomics.** Bores stems of figs in Barbados. No recent Antilles records are reported.

Tribe Polyrhaphidini

Tribe Acanthocinini


*Amniscus similis* (Gahan) 1895:136 (*Leptostylus*); Chalumeau and Touroult 2005a: 178; Dalens and Touroult 2007: 291. **Distribution.** Widespread Antilles and South America. Antigua, Barbados, Bermuda, Désirade, Dominica, Grenada, Guadeloupe, Guana, Les Saintes, Marie Galante, Martinique, Puerto Rico, Saba, St. Croix, St. Eustatius, St. Lucia, St. Vincent, Tortola, Virgin Gorda. Trinidad. **Notes.** Taken at several sites in Dominica. Host trees: *Tabebuia, Delonix, Hippomane, Mangifera*.

*Lagocheirus unicolor* Fisher 1947: 38; Chalumeau and Touroult 2005: 216; Dalens and Touroult 2007: 291. **Distribution.** Barbados; endemic (SPBC, BMAC). This is considered a valid species by Chalumeau and Touroult (I have seen the type in USNM and agree) and is sometimes listed as a synonym of *Lagocheirus araeniformis* (Linnaeus) 1767: 625 which is distributed in USA (FL), Central and South America and Greater and Lesser Antilles. **Bionomics.** In Barbados bores stems of avocado and dead or dying sugarcane stems.


155. Family Bruchidae, The pea and bean weevils

Subfamily Pachymerinae
Tribe Caryedontini

*Caryedon serratus* (Olivier) 1790: 1134 (*Bruchus*); Tucker 1952: 347; Bennett and Alam 1985: 28; Kingsolver 2004: 24. **Distribution.** Barbados (BMAC), Dominica, Hispaniola, Jamaica, Virgin Islands. USA (FL, HI), Mexico to South America; an introduced Asiatic species; tropicopolitan. **Bionomics.** An important pest; attacking beans, ground nuts, and other grains in stores, and *Tamarindus indicus*.


Callosobruchus maculatus (Fabricius) 1775: 65 (Bruchus). =Callosobruchus quadrimaculatus (Fabricius) 1792: 371 (Bruchus); Blackwelder 1944-1957: 761; Tucker 1952: 347; Bennett and Alam 1985: 28; Kingsolver 2004: 82. Distribution. Introduced to Barbados (BMAC), Cuba, Puerto Rico. Mexico, Belize, USA to South America; cosmopolitan; probably native to Africa. Bionomics. The cowpea weevil. Attacks beans, black-eye peas and pigeon peas in the field and in storage in Barbados, and many other legumes.

Tribe Acanthoscelidini


158. Family Chrysomelidae, The leaf beetles

This family can be of significant agricultural and economic importance because adults and larvae feed on leafy plant tissue. Takizawa (2003) is a checklist of West Indian species with known plant associations. Riley et al. (2003) is a catalog of leaf beetles of America north of Mexico, and indicates species occurring in the West Indies, but does not name individual islands.

Subfamily Criocerinae

Tribe Lemiini


Subfamily Hispinae

Tribe Cassidini


Probably an introduction. **Bionomies.** Feeds on leaves of sweet potato and sour grass

Subfamily Galerucinae
Tribe Galerucini


Tribe Luperini


**Distribution.** Widespread New World. Barbados, Bequia, Cuba, Grenada, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Vincent. USA (FL, TX), Mexico, Central America to Venezuela. **Bionomies.** On beans and other legumes.


Tribe Alticini


**Distribution.** Widespread Antilles and Latin America. Barbados, either an introduction or a misidentification. Brazil. **Bionomies.** Adults feeding on leaves of beans.


*Disomycha glabrata* (Fabricius) 1781:156 (*Crioceris*); Takizawa 2003: 69. **Distribution.** Widespread New World. Barbados (det. R. E. White), Grenada, Jamaica. USA to Central and South America. **Bionomies.** No data.

*Epitrix fasciata* Blatchley 1918: 56; Blackwelder 1944-1957: 703; Bennett and Alam 1985: 29; Takizawa 2003: 70. **Distribution.** Widespread New World. Bahamas, Barbados, Cuba, Grenada, Puerto Rico,
St. Vincent. USA to Panama. **Bionomics.** Larvae attack roots and adults feed on leaves of sweet potato, tomato, tobacco, eggplant, *Peperomia pellucida,* and *Citrus.*

*Lysathia occidentalis* (Suffrian) 1868: 197 (*Haltica*); Takizawa 2003: 81. = *Altica occidentalis* Suffrian 1868: 197; Blackwelder 1944-1957: 700; Bennett and Alam 1985: 29. **Distribution.** Widespread Antilles native. Barbados, Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Puerto Rico, St. Lucia, Vieques, Virgin Islands. **Bionomics.** The larvae and adults feed on leaves of *Ludwigia* spp. (Onagraceae). The species *Lysathia ludoviciana* (Fall) 1910: 157 (*Altica*) is widespread from the USA, Mexico, and West Indies (Puerto Rico) and may be useful for biocontrol of aquatic weeds because it feeds on *Myriophyllum* (Haloragaceae) as well as genera of Onagraceae (Habeck and Wilkerson 1980).

*Omophoita* (= *Homophoeita*) *aequinoctialis* (Linnaeus) 1758: 374 (*Chrysomela*); Blackwelder 1944-1957: 707; Bennett and Alam 1985: 29; Takizawa 2003: 87. **Distribution.** Widespread Antilles and Latin America. Barbados (BMAC, as *O. albicollis* (Fabricius)), Dominica, Grenada, Guadeloupe, Jamaica, St. Thomas (questionable record), St. Vincent. Mexico to Panama, Colombia to Brazil and Bolivia, Trinidad. **Bionomics.** Feeds on leaves of vervain (*Stachytarpheta indica* Vahl.)


*Leptophyes* sp., = *Pseudoepitrix* sp. **Distribution.** Barbados (det. R. E. White, USNM). **Notes.** Various species occur in the Greater Antilles, and *Leptophyes guadeloupensis* Scherer 1967: 215 is on Guadeloupe.

*Systena* sp., Bennett and Alam 1985: 29 (det. R. E. White, USNM). **Distribution.** Barbados. **Bionomics.** Adults feed on leaves of eggplant.

Subfamily Eumolpinae

Tribe Eumolpini

*Colaspis* sp. **Distribution.** Barbados (det. R. E. White, USNM).

Tribe Adoxini

*Myochrous barbadensis* Blake 1947: 26; Bennett and Alam 1985 29; Takizawa 2003: 39. **Distribution.** Lesser Antilles and Latin America. Barbados, Grenada. Trinidad, Guiana. **Bionomics.** Feeds on leaves of sweet potato, cabbage and maize in Barbados; also on young leaves of bananas (Blake 1950). This is probably the same species as the record *Myochrous* sp., Bennett and Alam 1985: 29 feeding on leaves of sweet potato.

Superfamily Curculionoidea

160. Family Anthribidae, The fungus weevils

Tribe Araeecerini

*Araeacerus fasciculatus* (De Geer) 1775: 276 (*Curculio*); Valentine 2003: 52. **Distribution.** Barbados (BMAC, introduced), Bermuda, Cuba, Grenada, Hispaniola, Jamaica; to be expected throughout the Lesser Antilles; cosmopolitan; native to Indopacific area. **Bionomics.** The coffee bean weevil. A pest of cocoa, coffee, and dozens of other dried plant materials (Childers and Woodruff 1980).

166. Family Curculionidae, The snout beetles and true weevils

O’Brien and Wibmer (1982) is a catalogue of the weevils of North America, including the West Indies, and Wibmer and O’Brien (1986) is a catalogue of the weevils of South America.
Subfamily Dryopthorinae
Tribe Rhynchophorini
Subtribe Rhynchophorina

**Rhynchophorus palmarum** (Linnaeus) 1758: 377 (*Curculio*); O'Brien and Wibmer 1982: 210; Bennett and Alam 1985: 30. **Distribution.** Widespread New World. Barbados, Cuba, Dominica, Guadeloupe, Martinique, St. Vincent. Mexico to Panama, South America, USA (CA, TX). **Bionomics.** *Rhynchophorus 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 plants such as *Gynernium and Saccharum* (sugar cane) (*Graminae*), *Carica and Jaracatia* (*Caricaeae*), *Ananas* (pineapple) (*Bromeliaceae*) and *Musa* (banana) (*Scitamineae*) (Wattanapongsiri 1966). Adult females lay eggs in the base of leaf sheaths, terminal shoots or in cuts made by man in the trunk. 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 (*Rhynchophorus*); Tucker 1952: 348; O’Brien and Wibmer 1982: 220; Wibmer and O’Brien 1986: 365; Bennett and Alam 1985: 30. **Distribution.** Barbados, Cuba, Dominica, Guadeloupe, Jamaica, Puerto Rico, St. Barthélemy. USA (FL, LA); Costa Rica, South America; cosmopolitan, introduced to and widespread in New World; native to Old World. **Bionomics.** In stored products; adults are often found in fallen tamarind pods.


Subtribe Sphenophorina

**Cosmopolites sordidus** (Germar) 1824: 299 (*Calandra*); O’Brien and Wibmer 1982: 219; Bennett and Alam 1985: 30. **Distribution.** Widespread New World. Barbados, Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Puerto Rico. USA (FL), Mexico to Panama, South America, Old World origin, introduced to New World. **Bionomics.** This species is primarily associated with bananas, *Musa* spp. 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 (Woodruff 1969). Eggs are laid singly between the leaf sheaths 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. **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 dryophthorines 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.

**Metamasius hemipterus** (Linnaeus) 1758: 377 (*Curculio*); Leng and Mutchler 1914: 478; Tucker 1952: 348; O’Brien and Wibmer 1982: 218; Bennett and Alam 1985: 30; Woodruff et al. 1998: 22. **Distribution.** Widespread Antilles and South America. 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 but the species has also been recorded from coconut and royal palm leaf sheaths, stumps of *Iriartea ventricosa* Martius and *Jessenia batua* Burret in Brazil, and has been intercepted at customs in a stem of a species of *Chamaedorea*. Adults have also been recorded on a variety of rotting fruits and on fermenting palm trunks. **Economic significance.** There is debate over the economic status of this species (Woodruff and Baranowski 1985). Certainly the species has been associated with both banana and sugarcane but its impact, especially on the former is uncertain. It appears to prefer unhealthy or injured plants and thus may not be a primary but rather a secondary pest. 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.

**Subfamily Curculioninae**

**Tribe Smicronychini**

*Smicronyx roridus* Marshall 1952: 267; Bennett and Alam 1985: 30. **Distribution.** Barbados. **Bionomics.** Introduced from Pakistan and India against parasitic love vine (dodder); seemingly not established.

**Subfamily Baridinae**

**Tribe Madarini**


**Subfamily Ceutorhynchinae**

**Tribe Hypurini**


**Subfamily Cryptorhynchinae**

**Tribe Cryptorhynchini**

*Euscepes postfasciatus* (Fairmaire) 1849:513 (*Cryptorhynchus*); Blackwelder 1944-1957: 862; Tucker 1952: 348; Bennett and Alam 1985: 30; Turnbow and Thomas 2008: 31. **Distribution.** Widespread New World. Antigua, Bahamas (Eleuthera, Exuma, Inagua New Providence), Barbados (BMAC), Cuba, Grenada, Jamaica, Nevis, Puerto Rico, St. Croix, St. Kitts, St. Lucia, St. Vincent, Brazil, USA (CA), Hawaii, Tahiti, Old World. **Bionomics.** The scarabe weevil; a serious pest of sweet potatoes.

**Subfamily Entiminae**

**Tribe Eustylini**

*Diaprepes abbreviatus* (Linnaeus) 1758: 386 (*Curculio*); Leng and Mutchler 1914: 468; Tucker 1952: 348; O’Brien and Wibmer 1982: 55; Bennett and Alam 1985: 30. **Distribution.** Widespread Antilles native. Barbados, Dominica, Guadeloupe, Hispaniola, Martinique, Mona Island, Montserrat, Puerto Rico, St. Lucia, St. Vincent, Vieques. USA (FL, introduced, first reported in 1964, O’Brien and Wibmer 1982: 55). **Bionomics.** The *Citrus* root weevil or the diaprepes root weevil. A serious pest, attacking roots of of *Citrus*, sugarcane, maize, avocado pear, grass and many other cultivated plants; larvae
bore into cane bases, sometimes severing them. Woodruff (1964, 1968, 1985) reports that this weevil is commonly called ‘the sugar-cane root-stalk borer weevil’ or ‘vaquita’ in Puerto Rico. 

*Diaprepes femelicus* (Olivier) 1790: 544 (*Curculio*); Tucker 1952: 348; Bennett and Alam 1985: 30; O’Brien and Wibmer 1982:55. **Distribution.** Widespread Antilles native. 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*. It feeds on leaves of maypole, sisal, pigeon pea, sugarcane, avocado pear and epidermis of spanish needle (*Agave* sp.) in Barbados.


**Tribe Naupactini**


**Subfamily Molytinae**

**Tribe Cleogonini**


**Tribe Sternechini**


**Subfamily Scolytinae**

**Tribe Hylesini**

*Phloeotribus* sp. **Distribution.** Barbados (det. D. M. Anderson). **Bionomics.** No data.

**Tribe Scolytini**

**Subtribe Phloeotribina**


**Subtribe Pityophthorina**

*Araptus xylotrupes* (Eichhoff) 1872: 135 (*Pityophthorus*); Bennett and Alam 1985: 30; Wood and Bright 1992: 963. **Distribution.** Barbados. South America (Argentina, Brazil). Not reported elsewhere in West Indies; probable introduction or misidentification. **Bionomics.** Attacks seeds of pigeon pea in dry pods in Barbados.
Subtribe Dryocoetina

*Coccotrypes carpophagus* (Hornung) 1842: 116 (*Bostrichus*); Bennett and Alam 1985: 30; Tucker 1952: 347; Wood and Bright 1992: 594. **Distribution.** Introduced to New World, probably native to Africa (Wood 1977: 68). Barbados, Bermuda, Cuba, Grenada, Guadeloupe, Jamaica, Montserrat, Puerto Rico, Hispaniola, Virgin Islands. Widespread in North, Central, and South America, Africa, and Asia (Wood and Bright 1992: 594). **Bionomics.** Attacks seeds of palms (*Thrinax argentea* and *Thrinax radiata*), ivory-nut buttons, etc. in Barbados. Elsewhere it is known from nuts and seeds of many species of trees. Commonly intercepted in seeds and nuts in temperate countries, where it cannot breed. Bennett and Alam (1985) also list another species of *Coccotrypes* in Barbados attacking seeds of palms (*T. argentea* and *T. radiata*) but it is probably this one.

Subtribe Cryphalina

*Hypocryphalus mangiferae* (Stebbing) 1914: 542 (*Cryphalus*); Bennett and Alam 1985: 30; Tucker 1952: 347, Wood and Bright 1992: 869. **Distribution.** Introduced to New World, probably native to India (Wood 1977: 68). Barbados, Guadeloupe. Widespread in Africa, Asia, Australia, Pacific Islands, South, Central, and to North America (FL). **Bionomics.** Bores in twigs of mango; *Mangifera indica* and *Mangifera odorata*. The record of *Cryphalus* sp., Tucker 1952: 347; Bennett and Alam 1985: 30 in twigs of mango and tubers of sweet potato is probably this species.


*Hypothenemus seriatus* (Eichhoff) 1872:133 (*Stephanoderes*); Wood and Bright 1992: 940; Turnbow and Thomas 2008: 32. **Distribution.** Widespread New World. Bahamas (Andros, Great Inagua), Barbados, Cuba, Hispaniola, Puerto Rico, Virgin Islands. North, Central and South America; native to tropical America (Wood 1977: 68); widespread in Africa, Asia, Pacific islands, Australia. **Bionomics.** Hosts: known from many genera of trees and shrubs.

Subtribe Xyleborina


INSECTA MUNDI 0073, April 2009

Found in many species of woody plants. Boring in twigs of mango in Barbados.

**Distribution.** Barbados, otherwise unreported from the New World; widespread in Asia and Africa, and Pacific islands. Probable misidentification for Barbados. **Notes.** Attacks fermenting sugarcane in Barbados. Known from many host plants in Asia and Africa.

Subfamily Platypodinae

**Platypus parallelus** (Fabricius) 1801: 284 (*Bostrichus*); Wood and Bright 1992: 1164. = **Platypus punctulatus** Chapuis 1868: 151; Tucker 1952: 347; Bennett and Alam 1985: 31. **Distribution.** Barbados, Cuba, Hispaniola, Jamaica, Puerto Rico. S. USA, Mexico to Chile, Peru; native to New World; introduced and widespread in Old World tropics. **Bionomics.** Hosts: many genera of trees. This is the most destructive and most widely distributed species of Platypodinae in the world.

Literature Cited


Erwin, T. L. [undated]. Checklist of the Carabidae of the Western Hemisphere. http://entomology.si.edu/Entomology/WstrnCarabids/search.lasso [URL no longer available contact the author.]


Woodruff, R. E. 1969. The banana root borer (Cosmopolites sordidus (Geinmar)), in Florida (Coleoptera: Curculionidae). Florida Department of Agriculture. Division of Plant Industry. Entomology Circular No. 88. 2 p.


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