REFERENCES CITED

ALAYO, P., AND G. TZANKOV. 1974. Revisión de la familia Ichneumonidae en Cuba, II. Academia de Ciencias de Cuba, Serie Biológica, No. 51: 1-20.

PORTER, C. 1986. South American and Floridian disjuncts in the Sonoran genus Compsocryptus (Hymenoptera: Ichneumonidae). Psyche 93: 13-33.

Townes, H. K. 1962. Ichneumon-flies of America north of México: Subfamily Gelinae, Tribe Mesostenini. Bull. U. S. Natl. Museum 216(3): 1-602.



COLEOPTERA OF BERMUDA

DANIEL J. HILBURN
Dept. of Agriculture & Fisheries
P.O. Box HM834, Hamilton HMCX, Bermuda

ROBERT D. GORDON
Systematic Entomology Laboratory, USDA
c/o U.S. National Museum of Natural History
Washington, DC 20560

ABSTRACT

A new survey of Bermuda's insects was initiated in 1987. Two hundred and twenty-eight species of Coleoptera (beetles), in 44 families, are found in the Bermuda Department of Agriculture and Fisheries collection, or are reported in the literature. One hundred and twenty-six are new Bermuda records. Sixty-five of the species listed may not be established on the islands; twenty-four are interceptions, and the rest are probably misidentifications or species which were once present but are no longer established. Approximately 41% of the beetles are cosmopolitan or tropicopolitan species, a further 34% occur in eastern or southeastern North America, and 20% originate from the Caribbean region. There are no known endemics.

RESUMEN

Se inició en 1987 una nueva encuesta de los insectos de las Bermudas. Doscientas veinte y ocho especies de Coleópteros (escarabajos) en 44 familias se encuentran en la colección del Departamento de Agricultura y Pesca, o son reportados en la literatura. Ciento veinte y seis son nuevos registros para las Bermudas. Sesenta y cinco de las especies listadas pudieran no estar establecidas en las islas; veinte cuatro son intercepcciones, y el resto son probablemente identificaciones erróneas o especies que estuvieron presente pero que ya no están establecidas. Aproximadamente el 41% de los escarabajos son especies cosmopolitas or tropicopolitanas, el 34% ocurre en las zonas este o sudeste de Norteamérica, y el 20% se origina de la región del Caribe. No hay especies endemicas.

Bermuda is a small archipelago in the North Atlantic. Seven main islands and numerous smaller ones lie in a fishhook-shaped cluster centered at 32°18′ N, 64°46′ W. The closest land is Cape Hatteras, North Carolina, USA., 1040 km to the west-northwest. Total land area is approximately 54 km² with a maximum elevation of only 74 m. The

climate is mild and frost-free due to the nearby Gulf Stream. Rainfall is distributed fairly evenly throughout the year and averages 1420 mm annually. Vegetation is lush and subtropical. The human population is dense on nearly all of the land; there are approximately 60,000 residents.

Due to its small size, isolation, and geologically young age, Bermuda's native terrestrial flora and fauna are depauperate. There are few endemic species and no known endemic Coleoptera; nearly all the beetles have been introduced accidentally by human activity. Approximately 41% of the Coleoptera are cosmopolitan or tropicopolitan species, a further 34% occur in eastern or southeastern North America, and 20% originate from the Caribbean region.

Kevan (1981) presents a historical review of our knowledge of terrestrial arthropods in Bermuda from the earliest mention of insects in 1603 through the early 1900s. The most complete and reliable species lists are given by Jones (1876) and Verrill (1902). Ogilvie (1928) reviewed these and other early accounts of insects in Bermuda and published a "complete" list of Bermuda's insects, including seventy-eight species of Coleoptera. Eight additional species were reported in a supplementary list published by Waterston (1940), and one new record appears in Hughes & Schuster (1986).

In the late 1940s and early 1950s, Bermuda's dominant tree species, Juniperus bermudiana L., was nearly wiped out by an infestation of scale insects, Carulaspis minima (Targgioni-Tozzetti) and Insulaspis newsteadi (Sulc) (Challinor & Wingate 1971). The Bermuda Department of Agriculture and Fisheries (BDAF) imported forty-four species of Coccinellidae in an attempt to control this outbreak. Bennett & Hughes (1959) and Bennett et al. (1985) list these species and others brought in over the years for biological control.

BDAF has maintained an insect collection since 1923. Many specimens collected by Lawrence Ogilvie between 1923 and 1927 are still found there. Since then, additions to the collection have been sporadic. Major contributions were made by Dr. I. W. Hughes between 1954 and 1975, and Francis Monkman between 1964 and 1971. Kevin Monkman, an Entomologist employed from 1983 to 1986, also made additions. As a result of an initiative by Dr. I. W. Hughes in 1977, a beginning was made of a modern reappraisal of the Bermudian insect fauna. This resulted in the publication of a comprehensive account of the orthopteroid fauna of the islands by Kevan (1980). In 1987 the project was revived by the senior author and an attempt was made to survey the remainder of Bermuda's insects, upgrade the BDAF collection, and transfer most of it to the new Bermuda Natural History Museum (BNHM). A small reference collection will be maintained at the BDAF laboratory in Paget. Thousands of new specimens were added and a major effort was made to get the entire collection identified. Determinations of Coleoptera were made with the help of the junior author and twenty other specialists. Additional reports are planned to cover other insect groups.

The following list of two hundred and twenty-eight species in forty-four families includes all the Coleoptera currently found in the DFAF collection as well as those reported by Jones (1876), Verrill (1902), Ogilvie (1928), Waterston (1940) and Hughes & Schuster (1986). Of the coccinellids that were brought in for biological control, only the established species are listed. Sixty-five records are tentative, including twenty-four interceptions; most of the rest are probably misidentifications, but some may represent species that were present at one time, but are no longer established. One hundred and twenty-six new Bermuda records are reported. The list is arranged alphabetically by family, and by genus and species within families. Common names are from the approved list of the Entomological Society of America.

Voucher specimens are in the collections at BNHM in Flatts, and BDAF in Paget.

ALLECULIDAE

Hymenorus obscurus Say

(Jones 1876, Ogilvie 1928). Rare (Jones 1876). No specimens in BDAF collection. May no longer be established.

ANOBIIDAE

Caenocara sp. New Record

One specimen collected in 1951 on *Cycas revoluta* Thunberg infested with mealybugs. *Cryptoramorphus* sp. New Record

Two specimens collected May 1987, St. Paul's Church, Paget Parish, while beating trees and shrubs. One additional specimen collected May 1987, Botanical Gardens. Paget Parish while sweeping. Species is apparently undescribed.

Lasioderma serricorne (F.)

(Verrill 1902, Ogilvie 1928). Cigarette beetle. In papaya seeds from Florida, gelatin boxes, citrus pulp, etc. Common in stored products. Cosmopolitan.

Nicobium castaneum (Olivier) New Record

Two specimens collected July 1956, Hamilton, Pembroke Parish in a wooden box. Known from Europe and North America.

Oligomerus sp.

(= Oligomerus obtusus Lec.; Waterston 1940). First collected June 1939 in woodwork. In June 1987 collected from maple flooring in Paget Parish.

Tricorynus herbarius (Gorham)

(Catorama herbarium Gorh.; Ogilvie 1928). In upholstery, books, and various foodstuffs and stored products. Common. Neotropical.

ANTHICIDAE

Anthicus cervinus LaFerte New Record

One specimen collected June 1966, Botanical Gardens, Paget Parish, with vapour lamp. A common species in eastern USA.

Anthicus ephippium LaFerte New Record

Three specimens collected August 1967, Warwick Pond, Warwick Parish, in a light trap. Widespread in North America.

ANTHRIBIDAE

Araecerus fasciculatus (De Geer)

(Verrill 1902, Ogilvie 1928). Coffee bean weevil. Reared from bananas in July 1925. Adults collected by sweeping grass on Nonsuch Island, St. George's Parish, Aug. 1967. One specimen intercepted on orchids from Thailand July 1987. Cosmopolitan.

BOSTRICHIDAE

Amphicerus bicaudatus (Sav) New Record

Apple twig borer. One specimen collected December 1982 in Paget Parish. May not be established. Known from eastern North America.

Rhyzopertha dominica (F.) New Record

Lesser grain borer. First collected June 1966, Paget Parish, in chicken feed. Distributed by commerce throughout the world.

Xylopsocus capucinus (F.) New Record

One specimen collected July 1941, Paget Parish, under dead bark of *Delonix regia* (Bojer) Rafinesque. Widely distributed in all tropical regions by commerce.

BRUCHIDAE

Acanthoscelides obtectus (Say)

(=Bruchus obtectus Say; Verrill 1902, Ogilvie 1928). Bean weevil. Last collected in 1983, no locality given. Attacks Phaseolus spp. seeds. Cosmopolitan.

Bruchus chinensis L.

(Verrill 1902, Ogilvie 1928). No specimens in BDAF collection. Possibly misidentified or no longer established. A cosmopolitan insect with many hosts.

Bruchus pisorum (L.)

(Verrill 1902, Ogilvie 1928). Pea weevil. No specimens in BDAF collection. Reported to be destructive to seeds of Fava and broad beans (Ogilvie 1928). *B. pisorum* is restricted to *Pisum* sp., Fava and broad beans are host to *B. rufimanus* Boheman.

Bruchus quadrimaculatus F.

(Ogilvie 1928). No specimens in BDAF collection. Reported to be destructive to stored beans (Ogilvie 1928).

Callosobruchus maculatus (F.) New Record

Cowpea weevil. First collected September 1950. Common in dried beans. Cosmopolitan.

Caryedon serratus (Olivier)

 $(=Pachymerus\ gonager\ (F.);\ Ogilvie\ 1928).$ Intercepted in seeds from India, 1924. Not established. Tropicopolitan. Spread through plantings of $Tamarindus\ sp.$

Caryobruchus gleditsiae (L.) New Record

Larvae develop in palm seeds. Adults first collected in October, 1987 in a light trap and a Malaise trap on Berry Hill Road, Paget Parish. Found in seeds of Sabal bermudana L. H. Bailey, June 1988, Nonsuch Island, St. George's Parish. Seventy one (7.3%) of a total of 971 S. bermudana seeds collected in Sept. 1988 on Nonsuch Island had round holes in the seed coat indicating parasitism by C. gleditsiae. Known from the West Indies, Florida, and Gulf Coast States.

Pygiopachymerus lineola (Chevrolat) New Record

Intercepted in *Cassdia javanica* L. seeds from Trinidad Feb. 1935 and April 1968. Not established. Known from Costa Rica to Brazil.

BUPRESTIDAE

Buprestis aurulenta L. New Record

Golden buprestid. Collected in a house May 1967, Paget Parish. Not established. Known from western USA and Canada.

Buprestis salisburyensis Herbst

(=Buprestis decora F.; Jones 1876, Ogilvie 1928, =Ancylocheira decora (F.); Verrill 1902). No specimens in BDAF collection. Probably misidentified or no longer established. Known from eastern USA and Canada.

Buprestis lineata (F.) New Record

Collected from a bookshelf 1950, Tuckers Town, St. George's Parish. Not established. Known from eastern USA and Canada.

Chrysobothris tranguebarica Gmelin

(=Chrysobothris impressa F.; Verrill 1902, Ogilvie 1928). No specimens in BDAF collection. Probably no longer established. Known from Florida and the West Indies.

CANTHARIDAE

Caccodes oceaniae Bourgois New Record

First collected May 1987, Admiralty House Park, Pembroke Parish, while beating trees and shrubs. Subsequent collections Sept. 1987, Berry Hill Rd., Paget Parish, and Botanical Gardens, Paget Parish. Recorded from the New Hebrides.

CARABIDAE

Agonum punctiforme (Say)

(Verrill 1902, Ogilvie 1928, = Platynus punctiformis; Jones 1876). Not common. Occasionally in light traps or under stones. Occurs in eastern North America.

Anchomenus cincticollis (Say)

(Ogilvie 1928,m = Platynus cincticollis; Jones 1876). No specimens in BDAF collection. Possibly nmisidentified or no longer established. Known from eastern North America.

Notiobia prob. terminata (Say) New Record

First collected Sept. 1966, Mount Hill, Pembroke Parish. Now widespread and common in light traps in the fall. *N. terminata* is an eastern North American speccies.

Perigona nigriceps Dejean New Record

First collected October 1987 in light traps at Spittal Pond, Smith's Parish, and Berry Hill Road, Paget Parish, Widespread in USA.

Pristonychus complanatus Dejean

(Jones 1876, = Laemosthenes complanatus Dej.; Ogilvie 1928). Fairly common, most specimens collected from soil. This species is native to north Africa and western Europe, but it has been introduced into North America.

Stenolophus lineola (F.)

(= Agonoderus lineola F.; Jones 1876, Ogilvie 1928). Common in light traps. Known from southeastern USA.

Stenolophus plebejus Dejean New Record

Two specimens collected Feb. 1988 in light traps at Spittal Pond, Smith's Parish, and Berry Hill Rd., Paget Parish. Occurs in eastern North America.

CERAMBYCIDAE

Achryson surinamum (L.)

(=Achryson~sp.,~Ogilvie~1928). No specimens in BDAF collection. Known from North, Central, and South America and the West Indies.

Anelaphus cinereum (Olivier) New Record

One specimen collected on a building at the Botanical Gardens, Paget Parish, in 1955; a second specimen from a light trap in Smith's Parish, 1955. Known from Florida and the West Indies.

Curtomerus flavus (F.) New Record

First collected in a house, Sept. 1967, Mount Hill, Pembroke Parish. Now widespread and common. Known from Florida, Mexico, South America, and the West Indies.

Eburia stigma (Olivier) New Record

Intercepted in floor boards from USA, no date given. Known from Florida, Mexico, Costa Rica, and the West Indies.

Eburia quadrigeminata (Say) New Record

Intercepted on furniture from England Dec. 1949. Not established. An eastern North American species.

Leptostyloides assimilis (Gahan) New Record

One specimen collected Aug. 1973, Hamilton Parish. Known from Mexico and the West Indies.

Leptostyloides praemorsus (F.)

(Ogilvie 1928). At lights and in dead wood. Larvae destructive to *Delonix regia* trees (Ogilvie 1928). Common. Known from Mexico and the West Indies.

Monochamus titillator (F.)

(Ogilvie 1928). Southern pine sawyer. No collections since 1928. Not established. Known from eastern USA and the West Indies.

Oeme rigida (Say)

(= Oeme linearis Harris; Ogilvie 1928). Collected at a light in 1950. Reared from dead Cupressus sp., Feb. 1986, Hamilton Parish. Known from eastern USA.

Plectromerus dentipes (Olivier) New Record

First collected 1950 on *Juniperus bermudiana*. One specimen from a house July 1970, Bailey's Bay, Hamilton Parish. Known from Florida to Louisiana and Cuba. *Styloleptus posticalis* (Gahan) New Record

First collected June 1950 from wood of *Juniperus bermudiana*. Also April 1967, Mount Hill, Pembroke Parish, at a light. A West Indian species.

Urgleptes quadaloupensis (Fleutiaux & Sallé) New Record

First collected Feb. 1967, Botanical Gardens, Paget Parish. Now widespread but not common. A West Indian species.

CERYLONIDAE

Euxestus erithacus Chevrolat New Record

One specimen collected Aug. 1987, Mullet Bay Rd., St. George's Parish, on *Turnera ulmifolia* L.; a second specimen collected July 1988, Berry Hill Rd., Paget Parish, in a house. Known from Mexico and the West Indies.

CHRYSOMELIDAE

Agelastica alni (L.)

Intercepted on Rosa sp. from Holland, Jan. 1933. Not established. Known from North America and Europe.

Altica sp. near fuscoaenea Melsheimer New Record

Collected in a light trap, July 1971, Ferry Reach, St. George's Parish.

Altica spp.

(=Graptodera chalybea (Illiger), Haltica ignita (Illiger); Verrill 1902; =H. amaena Horn, H. chalybea (Illiger), H. ignita (Illiger); Ogilvie 1928). Specimens from Botanical Gardens, Paget Parish, 1925; Devonshire Marsh, Devonshire Parish, 1955; and near Camden House. Paget Parish, 1955.

Calomicrus sp. or near New Record

Intercepted on Protea sp. from South Africa May 1967. Not established.

Chaetocnema brunnescens Horn New Record

First collected Aug. 1966, Spittal Pond, Smith's Parish, on *Conocarpus erecta* L. leaves. Also on *C. erecta* Aug. 1967, Nonsuch Island, St. George's Parish, and July 1987, airport, St. George's Parish. A West Indian species.

Chaetocnema sp. prob. confinis Crotch

(=Chaetocnema apricaria Suff.; Ogilvie 1928). Sweetpotato flea beetle. Reported to be injurious to leaves of sweet potato, Irish potato, tomato, and eggplant (Ogilvie 1928). Common on leaves of sweet potato, Ipomoea batatas (L.), leaves. A North American species.

Chaetocnema denticulata Illiger New Record

Toothed flea beetle. One specimen collected April 1967, Botanical Gardens, Paget Parish. Known from eastern USA.

Chaetocnema sp. near perplexa Blake New Record

One specimen collected Aug. 1987, Spittal Pond, Smith's Parish, while sweeping.

Chirodica elongata Baly New Record

Intercepted on Protea sp. from South Africa, May 1967. Not established.

Chrysomela polita L. New Record

Collected on cabbage in 1949, Pembroke Parish. Not established. A European species.

Epitrix hirtipennis (Melsheimer)

(=E. parvula (F.); Verrill 1902, Ogilvie 1928). Tobacco flea beetle. Reported as injurious to leaves of sweet potato, Irish Potato, morning glory and related plants during the summer (Ogilvie 1928). Common on Irish potato, Solanum tuberosum L., leaves May 1969, Southampton Parish. Known from eastern USA.

Leptinotarsa decemlineata (Say)

(Waterston 1940). Colorado potato beetle. Intercepted on Irish potatoes Dec. 1940. Not established. Known from North America and Europe.

Phyllotreta sp.

(Ogilvie 1928). No specimens in BDAF collection. Possibly misidentified or no longer established.

CICINDELIDAE

Cicindela trifasciata LeConte

(Hughes & Schuster 1986, = Cicindela tortuosa Dej.; Jones 1876, Verrill 1902, Ogilvie 1928). Once very common in summer (Jones 1876). Now rare in intertidal and supratidal beach habitats. Most recently collected at Hungry Bay, Paget Parish, June 1956 and Whale Bone Bay, St. George's Parish, October 1970. Known from southeastern USA.

CLERIDAE

Necrobia rufipes (DeGeer)

(Verrill 1902, Ogilvie 1928). Redlegged ham beetle. Larva damages hams and bacons (Verrill 1902). No specimens in BDAF collection. Probably no longer established. Cosmopolitan.

Tarsostenus univittatus (Rossi) New Record

Collected from mahogany lumber June 1969, Pembroke Parish. Not established. Cosmopolitan.

COCCINELLIDAE

Azya orbigera Mulsant

(Bennett et al. 1985, =A. luteipes Mulsant; Bennett & Hughes 1959). Feeds on scales. 15,000 imported from Trinidad in 1956-57. Larvae covered with wax. Neotropical, but intentionally established in several parts of the world.

Chilocorus cacti (L.)

(Bennett & Hughes 1959, Bennett et al. 1985). Feeds on scales, especially *Comstockiella sabalis* (Comst.). Imported from Cuba and Jamaica in 1948 and 1951. Known from southern USA to South America.

Clitostethus arcuatus (Rossi)

(Bennett et al. 1985). Feeds on *Metaleurodicus cardini* (Back), a whitefly on fiddlewood, *Citharexylum spinosum* L. A European species.

Coccinella septempunctata (L.) New Record

Intercepted on Christmas trees from Washington, USA in Dec. 1987. Not established. Palearctic, but established in USA.

Cryptolaemus montrouzieri Mulsant

(Bennett & Hughes 1959, Bennett et al. 1985). Mealybug destroyer. Imported in large numbers from Australia via Trinidad in 1956-57. Rare in Bermuda. Native to Australia, but intentionally established in many parts of the world.

Cycloneda munda (Say)

(=Coccinella munda L.; Ogilvie 1928). Feeds on aphids. Once common, now very rare. Known from eastern North America.

Decadiomus sp.

(?=Scymnus sp., Bennett et al. 1985). An undescribed species. Common on $Pittos-porum \text{ sp. and } Cycas \ revoluta$ when infested with mealybugs; also collected by sweeping.

Diomus terminatus (Say)

 $(=Scymnus\ terminatus\ Say.;\ Ogilvie\ 1928).$ Fairly common in sweepnet samples. Known from eastern USA.

Exochomus californicus Casey New Record

Intercepted on Christmas trees from Oregon, USA in Dec. 1987. Not established. Known from west coast USA.

Exochomus jamaicensis Sicard

(Bennett & Hughes 1959, Bennett et al. 1985). Very common. Feeds primarily on aphids. Imported from Jamaica in 1951. Previously known only from Jamaica.

Hippodamia tredecempunctata tibialis (Say) New Record

Thirteenspotted lady beetle. Intercepted on vegetables from USA Oct. 1946. Not established. Nearctic.

Microweisea suturalis (Schwarz)

(Bennett & Hughes 1959, Bennett et al. 1985). On *Juniperus bermudiana*. Feeds on scales. Imported from California in 1949. Known from California, USA.

Naemia seriata seriata (Melsheimer) New Record

Three specimens collected in 1955 at "Camden Marsh", Paget Parish (now filled in). One adult collected Nov. 1987 at Spittal Pond, Smith's Parish, a larva collected July 1987 also at Spittal Pond. Very rare. East coast USA from Rhode Island to Texas.

Rhyzobius lophanthae (Blaisdell)

(Bennett et al. 1985, = Lindorus lophanthae; Bennett & Hughes 1959). Primarily on Juniperus bermudiana. Common. Feeds on scales. Imported from Australia in 1947-48, and 1951. Known from eastern North America.

Rodolia cardinalis (Mulsant)

(Bennett & Hughes 1959, Bennett et al. 1985, = Novius cardinalis Muls.; Ogilvie 1928). Vedalia. Feeds on cottony cushion scale, *Icerya purchasi* Mask. Imported from California in 1902. Native to Australia, but intentionally established in many parts of the world.

Scymnus (Pullus) creperus Mulsant

(?=Scymnus sp.; Bennett & Hughes 1959, Bennett et al. 1985). Occasionally in sweepnet samples. Known from southeastern USA.

Scymnus (Scymnus) floralis (F.)

(?=Scymnus sp.; Bennett & Hughes 1959, Bennett et al. 1985). Very common. Often collected while sweeping or beating. Feeds on aphids. A West Indian species.

CORYLOPHIDAE

Sericoderus sp.

(Ogilvie 1928). No specimens in BDAF collection. Reported from decaying bananas (Ogilvie 1928). Possibly misidentified or no longer established.

CRYPTOPHAGIDAE

Ephistemus sp. New Record

Three specimens collected in a light trap, Oct. 1987, Berry Hill Rd., Paget Parish.

CUCUJIDAE

Ahasverus advena (Waltl) New Record

Foreign grain beetle. In raw peanuts Jan. 1967, Mount Hill, Pembroke Parish. Cosmopolitan.

Cryptolestes ferrugineus (Stephens)

(=Laemophlaeus pusillus Schonh.; Ogilvie 1928). Rusty grain beetle. From stored flour. No collections since 1924. Cosmopolitan.

Oryzaephilus mercator (Fauvel) New Record

Merchant grain beetle. In flour 1955, Botanical Gardens, Paget Parish, and in raw peanuts Jan. 1967, Mount Hill, Pembroke Parish. Cosmopolitan.

Oryzaephilus surinamensis (L.)

(=Silvanus surinamensis L.; Verrill 1902, Ogilvie 1928) Sawtoothed grain beetle. In dry dog food and other stored products. Cosmopolitan.

CURCULIONIDAE

Acalles sp. New Record

On beach or strand plants. First collected 1955, Botanical Gardens, Paget Parish. On *Conocarpus erecta* at Spittal Pond, Smith's Parish, August 1968, and on *Tamarix* sp. at Ferry Reach, St. George's Parish, May 1987.

Anchonus spp.

(Verrill 1902, Ogilvie 1928). At least two species. On beach or strand plants. Also collected under bark, in soil, and at lights. Fairly common.

Anthonomus juniperinus (Sanborn) New Record

First collected March 1987 on *Juniperus bermudiana*, but probably established years before. Feeds on fungus. Widespread and common. Known from southeastern USA and Oregon.

Anthonomus irroratus Dietz New Record

First collected March 1987, but probably established years before. Common. Feeds on Surinam cherry, *Eugenia uniflora* L. and secondarily on guava. Collected in houses, light traps. Malaise traps, and on *E. uniflora*. Known from Florida, Mexico, Cuba, and Puerto Rico.

Artipus sp. New Record

Intercepted from Jamaica on Casuarina sp. June 1960. Not established.

Brachyomus octotuberculatus (F.) New Record

Intercepted from Trinidad in peppers, March 1987. Not established. Known from northeastern South America and Trinidad.

Cosmopolites sordidus (Germar)

(Ogilvie 1928). Banana root borer. Ogilvie (1928) reported this species was of serious

importance in Bermuda only where bananas were grown in unsuitable soil or situations where the plants were otherwise weakened. Last collected in 1955, may no longer be established. Pantropical.

Diaprepes famelicus (Olivier)

(=Diaprepes esuriens Gyl.; Verrill 1902, Ogilvie 1928). Very common. Known locally as the "donkey beetle." Adults eat notches from leaves of loquats, roses, sweet peas, citrus, etc. Larvae feed on roots of citrus and probably other plants. Occasionally a pest of potatoes. Known from the Lesser Antilles.

Epicaerus imbricatus (Sav)

(Verrill 1902, Ogilvie 1928). Imbricated snout beetle. Reported to be destructive to onions, cabbages, and other crops (Verrill 1902). No longer a pest. No specimens in BDAF collection. Possibly no longer established. Known from eastern USA and Mexico.

Euscepes porcellus Boheman New Record

One specimen collected Sept. 1983, on sweet potato, *Ipomoea batatas* (L.)., Devonshire Parish. Known from Florida, Central America, and the West Indies.

Euscepes postfaciatus (Fairmaire)

(Waterston 1940). West Indian sweetpotato weevil. Causes loss to sweet potato tubers, *Ipomoea batatas* (L.), when left too long in the ground (Waterston 1940). Known from the West Indies, South America, California, Hawaii, Tahiti, and the Old World.

Exophthalmus vittatus (L.) New Record

Intercepted from Jamaica, June 1956. Not established. A Jamaican species.

Himatium sp. New Record

Intercepted from South Africa on Protea sp., June 1967. Not established.

Hypera postica (Gyllenhal) New Record

First collected in 1945. Common on *Medicago hispida* Gaertner on Nonsuch Island, St. Georges's Parish, February 1967. An Old World species which has spread throughout North America.

Lepyrus sp.

(Jones 1876, Ogilvie 1928). Common in summer (Jones 1876). No specimens in BDAF collection. Possibly misidentified or no longer established.

Listroderes difficilis Germain New Record

Several specimens collected June 1966, Mount Hill, Pembroke Parish, at a light. Immigrant from South America, probably via USA. May not be established. Native to southern South America, but now widespread in southern USA.

Nanus uniformis Boheman New Record

Collected on dead palm leaves in Paget Parish, 1955. A West Indian species also found in Florida and Central America.

Otiorryhynchus sulcatus F.

(Ogilvie 1928). Black vine weevil. Intercepted on plants from England, 1925. Not established. Native to Europe, but now widespread in North America.

Pantomorus cervinus (Boheman) New Record

On Conocarpus erecta at Spittal Pond, Smith's Parish, July 1968. Widespread in both Old and New Worlds.

Rhynchophorus ferrugineus F.

(Waterston 1940). Intercepted on seeds of *Elaeis guineensis* Jacquin from India in 1931. No specimens in BDAF collection. Not established. An oriental species.

Sitona hispidulus (F.) New Record

Clover root curculio. One specimen collected July 1982, Pembroke Parish. May not be established. An Old World species now widespread in North America.

Sitona lineatus (L.)

(=S. lineata L.; Ogilvie 1928). Pea leaf weevil. Large number collected on Nonsuch

Island, St. George's Parish, February 1967 on *Medicago hispida*, and while sweeping grasses in Paget Marsh, March 1968. Recent collections from Spittal Pond, Smith's Parish, and Stokes Point, St. George's Parish, Jan. 1988. Immigrant from Europe now established on east and west coasts of North America.

Sitophilus granarius (L.)

(=Calandra granaria (L.) in part; Verrill 1902, Ogilvie 1928). Granary weevil. Last collected in 1924 from a grocery store. Probably not established. Cosmopolitan.

Sitophilus oryzae (L.)

(=Calandra oryzae (L.); Jones 1876, Verrill 1902, Ogilvie 1928). Rice weevil. In chicken feed, macaroni and other stored products. Common. Cosmopolitan.

Sitophilus zeamais Motschulsky

(=Calandra granaria (L.) in part; Ogilvie 1928). Maize weevil. Recorded as early as 1622 as destructive to stored corn (Ogilvie 1928). Common in stored corn and macaroni. Cosmopolitan.

Sphenophorus venatus vestitus Chittenden

(=Sphenophorus reticulaticollis Boh., Ogilvie 1928). Not uncommon in 1928. Now rare. Probably an immigrant from eastern North America.

Tomolips sp. New Record

First collected March 1966, Hayden House, Sandy's Parish, in an old cedar.

DERMESTIDAE

Anthrenus flavipes LeConte New Record

(= Anthrenus vorax Waterh.; Waterston 1940). Furniture carpet beetle. From damaged upholstered furniture and bristles of a paint brush. Cosmopolitan.

Anthrenus scrophulariae (L.)

(Verrill 1902, Ogilvie 1928). Carpet beetle. No specimens in BDAF collection. Cosmopolitan.

Anthrenus verbasci (L.)

(Verrill 1902, Ogilvie 1928). Varied carpet beetle. No specimens in BDAF collection. Cosmopolitan.

Attagenus unicolor (Brahm)

(= $A.\ piceus$ Olivier; Verrill 1902, Ogilvie 1928). No specimens in BDAF collection. Cosmopolitan.

Caccoleptus sp. New Record

One specimen collected in 1951, no locality given. A genus found in the Neotropics.

Cryptorhopalum sp. New Record

One specimen collected in a house July 1966, Mount Hill, Pembroke Parish. A genus found in the Neotropics.

Dermestes lardarius L.

(Verrill 1902, Ogilvie 1928). Larder beetle. No specimens in BDAF collection. Cosmopolitan.

Dermestes maculatus De Geer New Record

Hide beetle. Severral specimens collected in 1982, Warwick Parish. Cosmopolitan. Orphinus fulvipes (Guerin-Meneville) New Record

One specimen collected June 1987, St. George's Parish, in a house. Cosmopolitan.

DRYOPIDAE

Pelonomus sp. near obscurus LeConte New Record Collected in a light trap July 1967, Smith's Parish.

DYTISCIDAE

Rhantus calidus (F.) New Record

One specimen collected August 1956, from a pond near Horseshoe Bay, Southampton Parish.

Thermonectus ornaticollis Aubé

(Jones 1876, Verrill 1902, Ogilvie 1928). No specimens in BDAF collection. Possibly misidentified or no longer established.

ELATERIDAE

Agriotes sp.

(Jones 1876, Verrill 1902, Ogilvie 1928). Reported to be common by Jones (1876) and Verrill (1902). No specimens in BDAF collection. Probably misidentified or no longer established.

Anoplischius sp. New Record

Intercepted on citrus from Florida, Jan. 1934. Not established.

Conoderus amplicollis (Gyllenhal) New Record

Gulf wireworm. First collected Sept. 1966, Mount Hill, Pembroke Parish. In soil or at lights. A pest species found in southeastern USA.

Conoderus sp. possibly castanipes (F.) New Record

First collected June 1964, Mount Hill, Pembroke Parish. Most collections from sweeping or in light traps.

Monocrepidius lividus De Geer

(Verrill 1902, Ogilvie 1928). No specimens in BDAF collection. Probably misidentified or no longer established.

HELODIDAE

Cyphon sp. New Record

Three specimens collected as follows: May 1987, St. Paul's Church, Paget parish, while beating trees and shrubs; and Nov. and Jan. 1988, Devonshire Marsh, Devonhire Parish.

HETEROCERIDAE

Neoheterocerus angustatus (Chevrolat) New Record

Collected in a light trap at Warwick Pond, Warwick Parish, Aug. 1967. Known from the West Indies, Florida, and Louisiana.

HISTERIDAE

Carcinops sp. New Record

One specimen from rotting papaya May 1966, Botanical Gardens, Paget Parish.

Hypocaccus sp. prob. apricarius Erichson

(Ogilvie 1928). One specimen on seaweed Oct. 1924, Paget Parish. No subsequent collections. *H. apricarius* is a New World species.

HYDROPHILIDAE

Berosus infuscatus Leconte

(Waterston 1940). Common water beetle in Pembroke Marsh (Waterston 1940). Ad-

ditional collections from Devonshire Marsh, Devonshire Parish, Camden Marsh, Paget Parish (now filled in), and in a light trap Berry Hill Rd., Paget Parish. Found in southern Canada, USA, and Central America.

Cercyon depressus Stephens New Record

One specimen collected Oct. 1987, Berry Hill Rd., Paget Parish. Found along east coast USA from Massachusetts to Virginia.

Cercyon litoralis (Gyllenhal) New Record

Three specimens collected July 1959, no locality given. A coastal species found from Nova Scotia to Virginia.

Cercyon praetextatus (Say) New Record

One specimen collected August 1967, Warwick Pond, Warwick Parish, in a light trap. Widespread in North and Central America, and in the West Indies.

Cyclonotum sp.

(Ogilvie 1928). No specimens in BDAF collection. Possibly misidentified or no longer established.

Dactylosternum abdominale (F.)

(Ogilvie 1928). From Devonshire Marsh, Devonshire Parish, and on a building 1955, Botanical Gardens, Paget Parish. A common pantropical species.

Enochrus hamiltoni (Horn) New Record

Collected April 1966, Spittl Pond, Smith's Parish, and August 1967, Warwick Pond, Warwick Parish, in a light trap. Found from Nova Scotia to Florida, and Texas to California.

Enochrus ochraceus (Melsheimer) New Record

First collected August 1967, Warwick Pond, Warwick Parish, in a light trap. Subsequent collections October 1987, Berry Hill Rd., Paget Parish, in a light trap; and January 1988, Devonshire Marsh, Devonshire Parish, while sweeping. Occurs in eastern USA, Central America, and the West Indies.

Tropisternus lateralis nimbatus (Say) New Record

First collected 1955, Devonshire Parish, in a drainage ditch. Also February 1966, Camden Marsh, Paget Parish (now filled in). *T. lateralis* is a common species with numerous subspecies; *T. l. nimbatus* occurs in southeastern Canada and eastern USA.

LAMPYRIDAE

Photinus sp.

(Jones 1876, Verrill 1902, Ogilvie 1928). Introduced by Governor Lefroy before 1876. Seen but not collected by Ogilvie in June 1927. No recent sightings, probably no longer established.

LATHRIDIIDAE

Eufallia seminiveus (Motschulsky) New Record

Intercepted in wicker baskets Nov. 1980. Not established. Known from USA, Mexico, and Puerto Rico.

LYCTIDAE

Lyctus africanus Lesne New Record

In shipment of doors Nov. 1966 and mahogany lumber July 1969, Pembroke Parish. Probably not established. Cosmopolitan.

MORDELLIDAE

?Mordellistena sp. New Record

One specimen collected May 1987, Bermuda Aquarium, Smith's Parish, on *Pittosporum* sp.

MYCETOPHAGIDAE

Typhaea stercorea (L.) New Record

Hairy fungus beetle. First collected Oct. 1987 in light traps at Berry Hill Rd., Paget Parish, and Admiralty House Park, Pembroke Parish. Feeds on fungal hyphae. Cosmopolitan.

NITIDULIDAE

Carpophilus hemipterus (L.) New Record

One specimen collected May 1967, BDAF laboratory, Paget Parish. Probably not established. Cosmopolitan.

Carpophilus sp. a

(= Carpophilus dimidiatus F.; Ogilvie 1928). Reported by Ogilvie (1928) as common in decaying bananas. C. dimidiatus is a New World species.

Carpophilus sp. b New Record

First collected May 1966, Botanical Gardens, Paget Parish, in strawberries. Also from rotting papaya and in a house.

Conotelus sp. New Record

First collected Mar. 1966, Botanical Gardens, Paget Parish. Now common in flowers, especially morning glory, *Ipomea purpurea* (L.).

Cubocephalus gibbulus Erichson

Imported from Japan via Trinidad 1958-60 (Bennett et al. 1985). No recoveries and no specimens in BDAF collection. Probably not established. A Japanese species.

Cybocephalus sp.

Imported from Trinidad in 1955 for control of *Pseudaulacaspis pentagona* (Targioni-Tozzetti). Established and contributes to control (Bennett and Hughes 1959, Bennett et al. 1985). Recent collections Oct. 1987, Botanical Gardens, Paget on *Sabal bermudana* infested with *Comstockiella sabalis* (Comstock), and Jan. 1988, Warwick on *Nerium oleander* L. infested with *P. pentagona*.

Glischrochilus quadrisignatus (Say) New Record

One specimen collected Oct. 1948, St. George's Parish. probably not established. Known from temperate North America.

Haptoncus luteolus (Erichson)

(Ogilvie 1928, $=Epuraea\ luteola\ Ev.$; Verrill 1902). Common in decaying fruits and in light traps. Widespread in the New World.

Stelidota sp. nr. geminata (Say) New Record

First collected in May 1966, Camden, Paget Parish, in rotting papaya. Also from rotting citrus. S. geminata is a New World species.

Urophorus humeralis (F.) New Record

First collected in 1955 in rotten watermelon. Large numbers in canteloupe June 1966, Southampton Parish. Known from the Old World and Puerto Rico.

OEDEMERIDAE

Nacerdes melanura (L.)

(= Nacerda melanura L.; Ogilvie 1928). Wharf borer. Several collections at lights and from houses. Adults active in June. Cosmopolitan.

Oxycopis vittata (F.) New Record

Collected in 1955, Botanical Gardens, Paget Parish, in a light trap; and July 1988, Tucker's Town, St. George's Parish, at a light. A West Indian species.

PASSALIDAE

Passalus punctiger Serville New Record

Intercepted on potted *Cryptostegia grandiflora* R. Brown from Trinidad Dec. 1950. Not established. A Neotropical species.

PHALACRIDAE

Acylomus calcaratus Casey New Record

One specimen collected May 1987, Devonshire Bay, Devonshire Parish. Common in southeastern USA.

Olibrus sp.

(Ogilvie 1928). No specimens in BDAF collection. Possibly misidentified or no longer established.

Phalacrus politus Melsheimer New Record

First collected by L. Ogilvie Sept. 1925, Camden Marsh, Paget Parish, but not reported by him (Ogilvie 1928). Common in sweepnet samples. Size quite variable. Known from eastern USA.

PTILIIDAE

Achratrichis sp. New Record

Two specimens collected Sept. and Oct. 1987, Berry Hill Rd., Paget Parish, in a Malaise trap.

PTILODACTYLIDAE

Ptilodactyla nanoderma Johnson & Freytag New Record

First collected Aug. 1967, Warwick Pond, Warwick Parish, in a light trap. One additional specimen Oct. 1987, Spittal Pond, Smiths Parish, in a light trap. Species previously known from midwestern USA (Kansas, Indiana).

PTINIDAE

Ptinus fur (L.)

(Verrill 1902, Ogilvie 1928). Whitemarked spider beetle. Destructive to dried animal substances (Verrill 1902). No specimens in BDAF collection. Cosmopolitan.

Gibbium aequinoctiale Boieldieu New Record

Three specimens collected May 1987, Nov. 1987, and Mar. 1988 in BDAF offices, Paget Parish. Cosmopolitan.

RHIZOPHAGIDAE

Bactridium sp. New Record

Intercepted on Protea sp. from South Africa June 1967. Not established.

SCARABAEIDAE

Ataenius gracilis (Melsheimer) New Record

First collected Oct. 1987, Berry Hill Rd., Paget Parish in a light trap. Known from eastern North America.

Ataenius havanensis Balthasar New Record

First collected Oct. 1987, Spittal Pond, Smith's Parish, at a black light. Known from the West Indies and Florida Keys.

Ataenius spretulus (Haldeman) New Record

First collected Oct. 1987, Berry Hill Rd., Paget Parish, in a light trap. Widespread in North America.

Ataenius sp. New Record

First collected June 1956 on *Conocarpus* sp. Several subsequent collections in light traps.

Aphodius fimetarius (L.)

(Jones 1876, Verrill 1902, Ogilvie 1928). Rare (Jones 1876). No specimens in BDAF collection. Possibly misidentified or no longer established. Native to Europe, but distributed by commerce to many parts of the world.

Aphodius granarius (L.) New Record

One specimen collected Mar. 1968, Paget Marsh, Paget Parish, while sweeping in grass. Native to Europe, but distributed by commerce to many parts of the world.

Aphodius lividus (Olivier)

(Ogilvie 1928). Common in light traps. Cosmopolitan in tropical and subtropical areas.

Aphodius ruricola Melsheimer

(Jones 1876, Verrill 1902, Ogilvie 1928). Rare (Jones 1876). No specimens in BDAF collections. Possible misidentified or no longer established. Known from eastern North America.

Cyclocephala sp. New Record

One specimen collected Jan. 1983, Paget Parish.

Ligyrus gibbosus Dejean

(Verrill 1902, Ogilvie 1928, =L. juvencus (Oliv.); Jones 1876). Reported to be the most common beetle on the islands (Jones 1876). Injurious to sweet potatoes and various other crops (Verrill 1902). No specimens in BDAF collection. Probably L. cunculus. Known from USA and Mexico.

Ligyrus cuniculus (F.)

 $(=L.\ tumulosus$ Burmeister; Verrill 1902, Ogilvie 1928). Known locally as "hardbacks". At lights in the summer. Once very common, now less so. Known from the West Indies and Florida.

Macrodactylus subspinosus (F.)

(Waterston 1940). Rose chafer. Intercepted on Rosa sp. from USA June 1939. Not established. Known from eastern North America.

Popillia japonica Newman

(Waterston 1940). Japanese beetle. Intercepted from USA in 1939. A single live adult was collected on *Lathyrus odoratus* L., June 1940 in St. George. Not established. Native to Japan, but established in eastern North America.

Psammodius sp.

(Verrill 1902). No specimens in BDAF collection. Probably misidentified or no longer established.

Trox scaber L.

(Jones 1876, Ogilvie 1928). Rare (Jones 1876). No specimens in BDAF collections. Possibly misidentified or no longer established. Known from most of the USA and southern Canada.

Trox suberosus (F.)

(Jones 1876, Ogilvie 1928. Not common. All collections from lights. Cosmopolitan.

SCOLYTIDAE

Coccotrypes carpophagus (Hornung) New Record

One specimen collected July 1987, Paget Parish, in a house; three additional specimens Oct. 1987, Berry Hill Rd., Paget Parish, in a light trap. Widely distributed in both New and Old World tropics and subtropics.

Coccotrypes distinctus (Motschulsky) New Record

First collected Dec. 1965, Botanical Gardens, Paget Parish, on *Sabal causiarum* (O. F. Cook) Beccari. Occasionally in houses. Known from Florida, Honduras, Puerto Rico, British Guiana, Hawaii, Micronesia, and Ceylon.

Coccotrypes sp. possibly cyperi (Beeson)

(=C. dactyliperda F.; Ogilvie 1928). From fallen fruits of Sabal bermudana. No collections since 1925. C. cyperi occurs in Florida, Central America, West Indies, and from Java to India.

Cryphalus sp. New Record

Intercepted on Nerium oleander from Japan 1956. Not established.

Hypothenemus eruditus Westwood New Record

One specimen collected Feb. 1986, Smith's Parish, on Cupressus sp. Nearly cosmopolitan.

Hypothenemus seriatus (Eichhoff) New Record

Several specimens collected Aug. 1965 on *Morus* sp., Pembroke Parish. Known from southeastern USA to Brazil, Hawaii, Australia, Indonesia, and Madagascar.

Hypothenemus squamosus (Hopkins) New Record

Several specimens collected Oct. 1987 from pods of *Tamarindus* sp. Botanical Gardens, Paget Parish. Known from southern Florida, Mexico, and Cuba.

Hypothenemus sp. New Record

One specimen collected July 1987, Paget Parish, in a garden.

Xyleborinus saxeseni (Ratzeburg) New Record

One specimen collected July 1987, Penhurst Park, Smith's Parish, in a Malaise trap. Widespread in both New and Old Worlds.

STAPHYLINIDAE

Acrotona sp. New Record

Several specimens collected in a Malaise trap October 1987, Berry Hill Rd., Paget Parish

Aleochara puberula Klug New Record

Two specimens collected in a light trap October 1987, Berry Hill Rd., Paget Parish. Cosmopolitan.

Anotylus insignitus (Gravenhorst) New Record

Several specimens collected May 1966, Camden, Paget Parish, in rotting fruit. Also in a light trap March 1988, Berry Hill Rd., Paget Parish. A pantropical and subtropical species.

Atheta coriaria (Kraatz)

(Ogilvie 1928). From decaying bananas and papaya. Native to Europe, immigrant to North America.

Cafius bistriatus (Erichson)

(Ogilvie 1928, Hughes & Schuster 1986). Under beached seaweed or debris along shoreline. On beach April 1988, Shelly Bay, Hamilton Parish. Known from the Atlantic coast of North America and the West Indies.

Cafius subtilis Cameron New Record

One specimen collected 1959, no location given. A West Indian species.

Carpelimus sp. a New Record

One specimen collected in BDAF Laboratory, Paget Parish, June 1987.

Carpelinus sp. b New Record

First collected in a light trap in October 1987, on Berry Hill Rd., Paget Parish.

Coproporus hepaticus (Erichson) New Record

One specimen collected 1955, Paget Parish, in bananas. Known from the neotropics and subtropics.

Coproporus pulchellus (Erichson) New Record

One specimen collected Sept. 1987, Paget Parish, in a Malaise trap. A second specimen from a light trap Oct. 1987, Berry Hill Rd., Paget Parish. Known from the Neotropics and subtropics.

Creophilus maxillosus (L.)

(= C. villosus Kirby; Jones 1876, Verrill 1902, Ogilvie 1928). No specimens in BDAF collections. Known from Eurasia, North and Central America, and northern Africa.

Diestota sp. New Record

First collected May 1966, Paget Parish, from rotting papaya. Also from canteloupe.

Diochus schaumii Kraatz New Record

One specimen collected in a light trap in October 1987, Berry Hill Rd., Paget Parish. A North American species.

Gabronthus thermarum (Aube) New Record

One specimen collected Nov. 1987, Berry Hill Rd., Paget Parish, in a house. A pantropical and subtropical species.

Lithocharis nigriceps Kraatz New Record

First collected in light traps in October 1987, Berry Hill Rd., Paget Parishl; and Spittal Pond, Smith's Parish. Also from cabbage March 1988, Trimingham Hill, Paget Parish. Native to the Old World tropics and Eurasia; an immigrant to North America.

Lithocharis ochracea (Gravenhorst) New Record

First collected in light traps in October 1987, Berry Hill Rd., Paget Parish, and Admiralty House Park, Pembroke Parish. A pantropical species known also from Eurasia and North America.

Lithocharis spp.

Females difficult to identify to species. Probably $L.\ nigriceps$ and $L.\ ochracea$. Most specimens from light traps.

Philonthus hepaticus Erichson New Record

One specimen collected Nov. 1987, Berry Hill Rd., Paget Parish in a light trap. Known from North, Central and South America and the West Indies.

Philonthus longicornis Stephens New Record

One specimen collected May 1966, Botanical Gardens, Paget Parish, in strawberries. Cosmopolitan.

Platystethus spiculus Erichson New Record

One specimen collected Nov. 1966, Devonshire Parish on sweet potato. Also collected Sept. 1973, Botanical Gardens, Paget Parish, while sweeping grass. A neotropical species.

TENEBRIONIDAE

Alphitobius diaperinus (Panzer) New Record

Lesser mealworm. First collected 1955, Sandy's Parish. In light traps and in houses. Large numbers in a poultry house, Dec. 1987, Paget. Cosmopolitan stored products pest.

Alphitobius laevigatus (F.)

(Ogilvie 1928). Black fungus beetle. Several collections from houses in Paget and Pembroke Parishes. Cosmopolitan stored products pest.

Blapstinus metallicus (F.)

(Jones 1876, Verrill 1902). Rare (Jones 1876). From under decaying rubbish on the shore (Verrill 1902). Recent collections: May 1966, in a lilly field, Devonshire Parish, and from Horseshore Bay dunes, Southampton Parish, Jan. 1988. A North American species.

Diaperis affinis Laporte

(Jones 1876, Verrill 1902, Ogilvie 1928). No specimens in BDAF collection. Probably misidentified.

Diaperis maculata (Olivier) New Record

Under dead bark on a stump July 1987, Admiralty House Park, Pembroke Parish. Also Oct. 1987, Spittal Pond, Smith's Parish, in a light trap. Known from eastern North America, the West Indies, and Panama.

Gnatocerus cornutus (F.) New Record

Broadhorned flour beetle. One specimen collected May 1967, Botanical Gardens, Paget Parish. Almost cosmopolitan.

Neomida bicornis (F.)

(=Hoplocephala viridipennis F.; Ogilvie 1928). No collections since 1925. May not be established. Known from North America and the West Indies.

Opatrinus pullus (Sahlberg)

(Ogilvie 1928, ?= Opatrinus sp.; Jones 1876, ?= O. anthracinus; Verrill 1902). Under stones and dead bark. Common. Known from Central America, Florida, and the West Indies.

Palorus subdepressus (Wollaston) New Record

Depressed flour beetle. One specimen collected Oct. 1987, Spittal Pond, Smith's Parish, at a light trap. A widely spread stored products pest.

Phaleria picipes Say

(Hughes & Schuster 1986). In light traps. Adults and larvae associated with seaweed where they feed as scavengers. Known from North America and the West Indies.

Phaleria punctipes LeConte New Record

One specimen collected 1955, Grape Bay, Paget Parish, under seaweed. Known from North America and the West Indies.

Phaleria testacea Say

(Jones 1876, Verrill 1902). Rare (Jones 1876). Found under decaying rubbish on the shore (Verrill 1902). No specimens in BDAF collection. Probably misidentified or no longer established. Known from North America and the West Indies.

Tenebrio molitor L.

(Verrill 1902). Yellow mealworm. No specimens in BDAF collection. Cosmopolitan stored products pest.

Tribolium castaneum (Herbst)

(Ogilvie 1928, =T. ferrugineum F.; Verrill 19021). Red flour beetle. From stored flour and rat poison. Cosmopolitan stored products pest.

Tribolium confusum Jacquelin du Val

(Verrill 1902, Ogilvie 1928). Confused flour beetle. In turtle food at pet store. Cosmopolitan stored products pest.

ACKNOWLEDGMENTS

We are grateful to the following scientists for providing identifications:

Arnett, R. H. Florida State Collection of Arthropods (Oedemeridae)

Barr, W. F. Univ. of Idaho (Buprestidae, Cleridae)

Booth, R. G. British Museum, Natural History (Mordellidae, Nitidulidae in part)

Bright, D. E. Agriculture Canada (Scolytidae)

Chemsak, J. A. Univ. of California (Cerambycidae)

Cox, M. L. British Museum (Chrysomelidae in part)

Davidson, R. Carnegie Museum (Carabidae in part, Cicindelidae)

Dogger, J. R. U. S. Dept. of Agriculture (Elateridae)

Frank, J. H. Univ. of Florida (Staphylinidae in part)

Gordon, R. D. U. S. Dept. of Agriculture (Cantharidae, Coccinellidae, Scarabaeidae, Tenebrionidae in part)

Hoffman, R. Radford Univ., Va. (Carabidae in part)

Kingsolver, J. M. U. S. Dept. of Agriculture (Bruchidae, Cryptophagidae, Dermestidae, Heteroceridae, Histeridae, Lathridiidae, Lyctidae, Mycetophagidae, Nitidulidae in part, Ptiliidae, Rhizophagidae)

Madge, R. British Museum, Natural History (Dryopidae, Ptinidae, Staphylinidae in part)

Spangler, P. J. Smithsonian Institution (Hydrophilidae)

Spilman, T. J. U. S. Dept. of Agriculture (Bostrichidae, Tenebrionidae in part)

Steiner, W. E. Smithsonian Institution (Cerylonidae, Phalacridae)

Stribling, J. B. visiting scientist U.S. Dept. of Agriculture (Helodidae, Ptilodactylidae)

Werner, F. G. Univ. of Arizona (Anthicidae)

White, R. E. U.S. Dept. of Agriculture (Anobiidae, Anthribidae, Chrysomelidae in part)

Whitehead, D. R. U. S. Dept. of Agriculture (Curculionidae)

We would also like to thank A. G. Wheeler, Jr., E. R. Hoebeke, and N. E. Woodley for reviewing the manuscript, Joelle Hendrickson for assistnace with the collection, and Penny Hill for searching out old records.

REFERENCES CITED

BENNETT, F. D., AND I. W. HUGHES. 1959. Biological control of insect pests in Bermuda. Bull. Entomol. Res. 50(3): 423-436.

Bennett, F. D., M. J. W. Cock, I. W. Hughes, F. J. Simmonds, and M. Yaseen. 1985. Biological control in Bermuda, pp. 119-142 in M. J. W. Cock [ed.], A review of biological control of pests in the Commonwealth Caribbean and Bermuda up to 1982. Commonwealth Inst. of Biol. Control Tech. Com. No. 9.

CHALLINOR, D., AND D. B. WINGATE. 1971. The struggle for survival of the Bermuda Cedar. Bio. Conserv. 3(3): 220-222.

HUGHES, I. W., AND R. SCHUSTER. 1986. Class Insecta (insects), pp. 383-392 in W. Sterrer [ed.], Marine fauna and flora of Bermuda. A systematic guide to the identification of marine organisms. John Wiley & Sons. New York & Chichester.

JONES, J. M. 1876. The visitor's guide to Bermuda. With a sketch of its natural history. Reeves & Turner. Halifax, New York, and London. 156 pp.

KEVAN, D. K. McE. 1980. The orthopteroid insects of the Bermudas. Mem. Lyman Entomol. Mus. & Res. Lab. No. 8. 182 pp.

KEVAN, D. K. McE. 1981. The terrestrial arthropods of the Bermudas: an historical review of our knowledge. Archives of Nat. Hist. 10(1): 1-29.

OGILVIE, L. 1928. The insects of Bermuda. Bermuda Dept. of Agriculture Pub. 52 pp.

VERRILL, A. E. 1902. The Bermuda Islands: their scenery, climate, productions, physiography, natural history and geology; with sketches of their early history, and the changes due to man. Trans. Conn. Acad. Arts Sci. 11: 413-896 [and 11: 897-957 published in 1903].

WATERSTON, J. M. 1940. Supplementary list of Bermuda insects. Bermuda Dept. of Agriculture Pub. 10 pp.