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THE STAPHYLINID BEETLES OF THE CAYMAN ISLANDS

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THE Oxford University Biological Expedition to the Cayman Islands (1938) collected several hundred beetles of the family Staphylinidae in the course of extensive light-trap operations. The specimens were made available to me through the kindness of C. B. Lewis, one of the collectors for the expedition and now of the Institute of Jamaica, and Prof. G. D. Hale Carpenter, of Oxford University. It was originally intended to include these records in my "Monograph of the West Indian Beetles of the Family Staphylinidae,"¹ but through an oversight records of only three of the species appeared therein. The present report includes the 18 species taken by the Expedition and the two previously reported from the Caymans.

The Staphylinidae of the Cayman Islands must be assumed to be very imperfectly known at the present time. It is to be expected that intensive collecting in various habitats would produce at least 50 species. For example, the three West Indian species of *Cafius* probably occur on the beaches, and others of the widespread species undoubtedly will be found. The present state of our knowledge therefore presents little that may be used in studying the geographical relationships or the origin of the fauna. In general, however, the species are among those which would be expected to occur. The only exceptions are one known otherwise only from Antigua in the Lesser Antilles and one known otherwise only from the United States. The first of

¹ U. S. Nat. Mus. Bull. 182, 658 pp. 1943.

these may doubtless be explained on the basis of mere failure so far to detect the species on the intervening islands, but the second case is doubtless one of accidental introduction; there is little reason to expect it to be found later in Cuba.

This report is arranged as a supplement to my monograph, to which reference must be made for details of synonymy and distribution as well as for descriptions of the species. A citation to the monograph is given with the original publication to facilitate cross reference. After each locality I have given in parentheses the number of specimens collected.

The material (except as noted) is in the Oxford University Museum and the British Museum (Natural History).

Subfamily OXYTELINAE

1. CARPELIMUS CORRECTUS Blackwelder

Carpelimus correctus BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 64, 1943.

Grand Cayman: Georgetown (2), Hut Road on north coast (1).

Little Cayman: South Town (1).

Taken in light-traps in May, June, and July 1938. This species was described from Jamaica, Hispaniola, and eight other islands. One specimen from Georgetown is deposited in the United States National Museum.

2. CARPELIMUS CHAPINI Blackwelder

Carpelimus chapini BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 81, 1943.

Grand Cayman: South Sound (3).

Taken in light-trap in June 1938. This species was described from a small series from Jamaica. One specimen is deposited in the U. S. National Museum.

3. CARPELIMUS DISSONUS (Bierig)

Trogophloeus dissonus BIERIG, Mem. Soc. Cubana Hist. Nat., vol. 9, p. 11, 1935.

Carpelimus dissonus (Bierig), BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 83, 1943.

Little Cayman: South Town (133).

Taken in a light-trap on May 29, 1938. This species was previously known only from Cuba, from the collections of Alexander Bierig. Fifteen examples are deposited in the United States National Museum.

4. CARPELIMUS SORDIDUS (Cameron)

Trogophloeus (Taenosoma) sordidus CAMERON, Ann. Mag. Nat. Hist., ser. 9, vol. 11, p. 394, 1923.

Carpelimus sordidus (Cameron), BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 84, 1943.

Grand Cayman: (no other locality).

Not taken since the original discovery by Dr. M. Cameron. I have examined the type briefly but was unable to identify any of my specimens with it. (The statement in my monograph that no examples had been seen was an error due to an oversight.)

5. CARPELIMUS sp.

Little Cayman: South Town (1).

One example that seems to differ from the four listed above is not identifiable at this time because of its condition. It appears to have an unusual type of sculpturing on the pronotum.

6. BLEDIUS ESPOSUS Blackwelder

Bledius esposus BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 114, 1943.

Little Cayman: South Town (4).

Taken in the light-traps in May and June 1938. This species was previously known only from the holotype from Antigua. One specimen is deposited in the U. S. National Museum.

7. BLEDIUS MANDIBULARIS Erichson

Little Cayman: South Town (127).

Taken in the light-traps in May and June 1938. This is the most unusual record in the entire collection, since it is a species previously unknown in the West Indies or in the Tropics. It is widespread but not common in the United States, ranging from Connecticut to Florida and west to Texas and Utah.

Synonymy.—The following synonymy is recognized:

Bledius mandibularis ERICHSON, 1840, p. 765.—LECONTE, 1877, pp. 218, 219.—SCHWARZ, 1878, p. 442.—HAMILTON, 1884, p. 187.—CASEY, 1889, p. 42.—WENZEL, 1897, p. 218.—BERNHAEUER and SCHUBERT, 1911, p. 133 (as synonym of *pallipennis* Say).—LENG, 1920, p. 97 (as synonym of *pallipennis* Say).—BRITTON, 1920, p. 226 (as synonym of *pallipennis* Say). (Not MacLeay, 1873.)

Bledius brevidens LECONTE, 1877, pp. 218, 219, 220.—HENSHAW, 1881, p. 221.—DUVIVIER, 1883, p. 186.—CASEY, 1889, p. 42.—SNOW, 1906, p. 143.—BERNHAEUER and SCHUBERT, 1911, p. 127.—LENG, 1920, p. 97.—LÖDING, 1945, p. 35.

Description.—Rufotestaceous throughout, the head generally somewhat picescent. *Head* very convex above but somewhat flattened between the eyes, with irregular elevations along the midline, which is more or less impressed; supraantennal ridges large and prominent; antennal segments 9 and 10 transverse; labrum just twice as wide as long, the anterior margin straight; third segment of maxillary palpus large, not flattened, fourth small, conical; submental suture nearly straight, submentum strongly and deeply impressed at base, the pit imperfectly divided into two by a broad elevation of its floor, the pit

nearly as wide as the submentum; surface above and below with dense (tuberculous) sculpture and scattered umbilicate punctures. *Pronotum* one-fourth wider than long, semioctagonal; midline finely but very distinctly impressed; lateral margin marked by a suture or ridge only near the front angles; with large umbilicate punctures generally separated by one to two times their diameter; with strong and dense scaly ground sculpture. *Elytra* feebly dehiscent, the apex broadly rounded except internally; with punctures as on pronotum but a little denser and much less definite, without definite ground sculpture but surface very uneven. Length, 6 to 9 mm.

Type locality.—"America septentrionali (?)." Of *brevidens*, "New York."

Types.—Either in the Hope Museum, Oxford, or the Zoologische Museum, Berlin. Of *brevidens*, in the Museum of Comparative Zoology, Cambridge, Mass. (Typical examples may also be in the Horn collection at the Academy of Natural Sciences of Philadelphia.)

Records.—The following are the records known to me:

Cayman Islands: Little Cayman (Lewis and Thompson, in Jamaica Institute, Oxford University, British Museum, and U. S. National Museum).

North America: (Erichson, 1840), New York, Atlantic coast of Middle States (LeConte, 1877), Florida (Schwarz, 1878), New Jersey (Hamilton, 1884), Texas (Snow, 1906, as *brevidens*), Alabama (Löding, 1945), Connecticut, New York, New Jersey, Maryland, Georgia, Florida, Illinois, Texas, Utah (U. S. National Museum).

Specimens examined.—I have seen 127 specimens from the Cayman Islands, as well as about 50 from the United States.

Remarks.—This is a very distinct species in the West Indian fauna, distinguishable at a glance by its size and color. In the United States it has two or three close relatives, from which it can be separated by the structure of the submentum. *B. lecontei* Sharp of Mexico is also very similar, but it differs in having a much narrower (almost circular) submental fossa and more deeply impressed gular sutures.

The following account of the collection of these beetles has been sent to me by Mr. Lewis: "On May 29, 1938, Thompson and I set up light-traps in three areas, one of these being on the southern side of a dead mangrove swamp north of South Town, the only settlement on the island. The traps were of a new design, using an acetylene lamp surrounded by four funnels, each of which was supplied with a killing jar. The traps were all started at about 7:30 each night.

"On the first night, after two hours of operation, the trap at the edge of the swamp had been put out of action by the tremendous volume of insects it had received. Most of them were this staphylinid. A quantitative method of counting the specimens was used, and it was found that at least 25,000 specimens of this species were taken in that 2-hour period. The trap was then cleared, cleaned, and reset.

During the rest of the night the insect catch was large, but only about 1,500 specimens of this staphylinid came in.

"On the following evening, May 30, the quantitative method of counting indicated that at least 25,000 specimens of this species were taken between 7:30 and 9:30 p. m. During the rest of the night only about 2,500 specimens were taken in the trap. After a similar experience on May 31, the trap was removed from the site, as most of the other insects taken were in such bad condition as a result of the hordes of *Bledius* that they were quite useless.

"The other traps were set less than a quarter of a mile away but in different habitats; one was in a pasture, and the other was near the top of a beach. In neither of these was there taken any specimen of this *Bledius* at any time."

Subfamily OSORIINAE

8. OSORIUS LEWISI Blackwelder

Osorius lewisi BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 197, 1943.

Grand Cayman: Georgetown (1).

Taken in a light-trap on April 25, 1938. This species is known only from the holotype, which is deposited in the British Museum.

Subfamily PAEDERINAE

9. SUNIUS DEBILICORNIS (Wollaston)

Lithocharis debilicornis WOLLASTON, Catalogue of the coleopterous insects of Madeira . . ., p. 194, 1857.

Sunius debilicornis (Wollaston), BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 267, 1943.

Grand Cayman: Georgetown (1).

Taken in a light-trap on April 23, 1938. The species was known previously from Cuba, Jamaica, the Lesser Antilles, the Americas, Europe, Africa, the Oriental region, Australia, and New Caledonia. It is always taken in small numbers.

10. SCOPAEUS PYGMAEUS Erichson

Scopaeus pygmaeus ERICHSON, Genera et species staphylinorum . . ., p. 608, 1840.—BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 287, 1943.

Grand Cayman: Georgetown (1), South Sound (1).

Little Cayman: South Town (1).

Taken in light-traps in April, May, and June 1938. The species was previously known from Jamaica and seven of the other islands. One example (Georgetown) is deposited in the United States National Museum.

11. LOBRATHIUM ODIUM Blackwelder

Lobrathium odium BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 318, 1943.

Grand Cayman: South Sound (22), Georgetown (1).

Taken in light-traps in April and June 1938. The species was described from Cuba and is perhaps the same as an older species occurring in Cuba, Hispaniola, and St. Thomas. Six specimens are deposited in the United States National Museum.

12. HOMOEOTARSUS ALBIPES (Erichson)

Cryptobium albipes ERICHSON, Genera et species staphylinorum . . . , p. 566, 1840.

Homoeotarsus albipes (Erichson), BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 328, 1943.

Grand Cayman: South Sound (9).

Taken in light-trap in June 1938. The species was previously known from Cuba, Jamaica, four of the other islands, and South and Central America. Three specimens are deposited in the United States National Museum.

13. STAMNODERUS LABEO (Erichson)

Sunius laqueo ERICHSON, Genera et species staphylinorum . . . , p. 648, 1840.

Stamnoderus laqueo (Erichson), BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 352, 1943.

Grand Cayman: South Sound (1).

Taken in light-trap on June 19, 1938. The species was known from Cuba, the Isle of Pines, Jamaica, and five other islands.

14. PINOPHILUS FLAVIPES Erichson

Pinophilus flavipes ERICHSON, Genera et species staphylinorum . . . , p. 383, 1840.—BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 383, 1943.

Little Cayman: South Town (5).

[Grand Cayman: by error, see below.]

Taken in light-traps in May and June 1938. The record of Grand Cayman in my monograph appears to be a lapsus, since the specimens are all from Little Cayman. The species is known also from the Bahamas, Cuba, Hispaniola, and Puerto Rico. Two specimens are deposited in the United States National Museum.

15. PINOPHILUS SCHWARZI Blackwelder

Pinophilus schwarzi BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 386, 1943.

Grand Cayman: South Sound (16).

Taken in light-traps in June 1938. The species was described from Cuba and the Caymans.

16. PALAMINUS sp.

Grand Cayman: Hut Road on north side (1).

Taken in light-trap on July 15, 1938. This species occurs also on Cuba, but the material available will not enable a specific determination to be made.

Subfamily STAPHYLININAE

17. PHILONTHUS VENTRALIS (Gravenhorst)

Staphylinus ventralis GRAVENHORST, Coleoptera Microptera Brunsvicensia . . . ,
p. 174, 1802.

Philonthus ventralis (Gravenhorst), BLACKWELDER, U. S. Nat. Mus. Bull. 182,
p. 404, 1943.

Grand Cayman: Georgetown (1).

Taken in light-trap on April 22, 1938. The species is known from Cuba, Jamaica, and most of the other islands, as well as from North and South America, Europe, Asia, and northern Africa.

18. PHILONTHUS HAVANIENSIS (Laporte)

Staphylinus havaniensis LAPORTE, Études entomologiques . . . , pt. 1, p. 116, 1834.

Philonthus havaniensis (Laporte), BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 418,
1943.

Grand Cayman: South Sound (10), Georgetown (2).

Taken in light-traps in April and June 1938. The species is known from Cuba, Jamaica, and five of the other islands. Three of these examples are deposited in the United States National Museum.

Subfamily ALEOCHARINAE

19. ATHETA GUATEMALAE Bernhauer and Scheerpeltz

Atheta guatemalae BERNHAUER and SCHEERPELTZ, Coleopterorum catalogus, pars.
82, p. 667, 1926.—BLACKWELDER, U. S. Nat. Mus. Bull. 182, p. 553, 1943.

Grand Cayman: (no other locality).

This species has not been reported since its description by Dr. M. Cameron (under the name *pumila*).

20. ZYRAS sp.

Grand Cayman: Georgetown (2).

Taken in light-trap on May 12, 1938. I am unable to identify this species, since most of the known species are not available for comparison.