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West Indian Carabidae (Coleoptera) The Bahama Species

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The present short paper on Bahama Carabidae has two purposes. One is to report on a collection from the Biminis made by M. A. Cazier, W. J. Gertsch, F. H. Rindge, and C. and P. Vaurie of the American Museum of Natural History.² This is the best collection of Carabidae ever made in the Bahamas. The other purpose is, by adding all other available Bahama records, to present as full a list as possible of the Carabidae (exclusive of Cicindelinae) now known from the Bahamas. The additional records are based mostly on material that I have seen in the American Museum (A.M.N.H.), the United States National Museum (U.S.N.M.), and the Museum of Comparative Zoölogy (M.C.Z.). The last-named possesses a number of interesting species collected by W. J. Clench and his associates on several different islands in the Bahamas and a few obtained by R. A. McLean and B. Shreve on Inagua. The total number of species of Carabidae now known from the Bahamas is 45, of which 32 have been found on South Bimini and one additional one on North Bimini. All this material is still far from sufficient for a complete survey of Bahama Carabidae. No island, not even South Bimini, has been fully collected, and many of the islands have not even been touched for Carabidae. But although so many details are unknown, the material probably is sufficient to show clearly both the general nature of the Bahama carabid fauna and its general relationships. Very little has been published on Bahama Carabidae heretofore. Only six species are listed from the Bahamas by Blackwelder (1944); one is identified only

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as to genus, and another (*Apenes* "*opaca*") is wrongly identified (see under *Apenes parallela* in the present list). Bahama Carabidae are only briefly mentioned in my paper on mountain and island carabids (Darlington, 1943, p. 56).

The Bahama Islands are scattered from off the Atlantic coast of Florida east and south nearly to Hispaniola (Haiti and the Dominican Republic) in the main West Indies. They thus lie across the northern edge of the tropics. They are rather small, very low and flat, rather dry islands, and are exposed to both trade and hurricane winds. The Biminis are small, even among the Bahamas, and are at the western end of the archipelago, nearest Florida. These islands and the insect collecting done on them by members of the staff of the American Museum of Natural History have recently been described by Patricia Vaurie (1952).

As to the general nature of the Bahama carabid fauna, it has four definite, noteworthy characteristics. (1) It consists of fewer species than do the faunas of Florida or the larger islands of the West Indies. Additional species will probably be found in the Bahamas, but the total carabid fauna there is almost certainly much more limited than on the neighboring mainland or large West Indies. (2) All the species are small or moderate in size; none is very large. (3) All the species thus far known are fully winged and probably able to fly. This is usual on low islands in the tropics no matter how exposed to winds they may be, and it is one of the facts which show that Darwin's explanation of flightlessness of insects on some other islands, by mere blowing away of flying forms, was too simple (*cf.* Darlington, 1943). (4) Very few of the species are endemic. Of the 45 species here listed from the Bahamas I find only one, not very strongly characterized, endemic species and two endemic subspecies, plus one possibly new endemic species of *Bembidion*. In its general nature, in these four ways, the Bahama carabid fauna is very much like that of the Cayman Islands (Darlington, 1947), which are somewhat similar islands but more isolated, on the other side of Cuba. Ecologically, the Carabidae of the Bahamas are unexpectedly diverse, though less so than those of continental areas or larger islands, and in this, too, they are like the Carabidae of the Caymans. The habitats of most of the species in the Bahamas are not recorded. Many were apparently taken at light. But judging from the habits of the same species outside the Bahamas, Bahama Carabidae include a number of ground-living forms that are not associated with open surface water, a number that are usually associated with swamps or other wet places, and a few more or less arboreal forms. Of the water lovers, some are usually found in fresh-water habitats, but they may be able to live by brackish water,

too, and a few are definitely associated with brackish or salt water. The latter include *Bembidion chevrolati* and *Tachys occultator*.

As to geographical relationships, the Bahama carabid fauna is a mixture of West Indian and Floridian elements. My impression is that the true Bahama fauna is predominantly West Indian and that the elements from Florida include some recently introduced species. The one endemic species and two endemic subspecies here described from the Bahamas all belong to West Indian, not Floridian, groups. Some of the Floridian species here recorded from the Bahamas may not be established there at all. Carabidae fly to light in great numbers in Florida. Numbers of them might board a ship lying lighted at dock or near the shore of Florida, so that many individuals might be carried to the Bahamas on a single voyage, and some of the stowaways might finally be caught in light traps on the islands. This might have happened for example in the case of such conspicuous species as *Harpalus pennsylvanicus* and *Galerita lecontei*, which are common in Florida and which fly to light, and which are known in the Bahamas by only one or two specimens from the Biminis. Another element of doubt is introduced by a few Bahama species which belong to groups not yet properly worked out in North America or the West Indies, so that their relationships are doubtful. This is the case with some of the Bembidiini and smaller Harpalini. These doubts make it impossible to express the West Indian and Floridian relationships of Bahama Carabidae in exact percentages. It will be noted that most of the species of Carabidae that occur in the Bahamas are wide ranging elsewhere. Most of them are probably good fliers capable of dispersing across at least moderate water gaps. My guess is that they have reached the Bahamas through the air, some longer ago (but just when I cannot guess) and some more recently, and more from the West Indies than from Florida. This would account for the mixed relationships of Bahama Carabidae and for the small amount of endemism among them, and for the relative strength of the West Indian relationships in the more surely endemic part of the fauna. The available material is not enough to show how Carabidae are distributed within the Bahamas, but there are indications that some species occur over the whole archipelago, while others may be confined to parts of it. In only one species is there evidence of differentiation on different islands within the Bahamas. This is *Apenes parallela*, which inhabits Cuba, and of which more or less typical specimens have been found on Andros, New Providence, Eleuthera, and Watlings Islands, while a single specimen from Inagua seems to represent a distinct subspecies.

In the following list I have given in condensed form all Bahama

records of Carabidae known to me. The Bimini records, if any, are placed first in each case, and it is to be understood that they are based on specimens in the American Museum (with some duplicates in the Museum of Comparative Zoölogy) collected by persons named in the first paragraph of the present paper. For each species I have indicated also its distribution outside the Bahamas and its usual habitat.

ANNOTATED LIST OF SPECIES OF CARABIDAE OF THE BAHAMAS

Scarites species

An unidentified *Scarites* is listed from "Bahamas" by Leng and Mutchler (1914, p. 395). I do not know the source of this record and have seen no specimens of the genus from the Bahamas. The species in question may be the rather small, lightly striate *Scarites*, with reduced inner wings, which occurs always on the sea coast in Florida south to Key West and on Cuba. Specimens of it from Florida have sometimes been incorrectly referred to *S. californicus* LeConte. Bänninger (1938, p. 138, footnote 2) refers them to *patruelis* LeConte. The status of this coastal form, whether a subspecies of *Scarites subterraneus* Fabricius or a separate species, remains to be determined. Whether or not this is the *Scarites* referred to by Leng and Mutchler, it should be looked for in the Bahamas under cover on and just above the beach. Not only it but some other beach-inhabiting or even intertidal Carabidae may occur in the Bahamas. Intertidal Carabidae have never been properly searched for anywhere in the West Indies. They are likely to be flightless, as *Scarites patruelis* is, so that they cannot fly to light.

Dyschirius erythrocerus LeConte

Dyschirius erythrocerus LECONTE, 1847, Jour. Acad. Nat. Sci. Philadelphia, ser. 2, vol. 1, p. 78.

South Bimini, May and August, two specimens; occurs also in the southeastern United States including Florida, and on Cuba and Hispaniola; in wet places, sometimes (usually ?) on salt marshes.

TYPE LOCALITY: Ohio, Pennsylvania.

Clivina morula LeConte

Clivina morula LECONTE, 1857, Proc. Acad. Nat. Sci. Philadelphia, p. 81.

South Bimini, May and June, three specimens; known otherwise only in southeastern United States including Florida; in wet places, often by fresh water.

TYPE LOCALITY: None given.

Aspidoglossa vulnerata Putzeys

Aspidoglossa vulnerata PUTZEYS, 1846, Mem. Soc. Roy. Sci., Liège, vol. 2, p. 633.

Arthurs Town, Cat Island, July, 1935, W. J. Clench, one specimen (M.C.Z.); and on Cuba, where it is very comon, and Hispaniola, where it is most less common, and perhaps elsewhere in the West Indies or on the mainland; in wet places, usually fresh water.

TYPE LOCALITY: Cuba.

Bembidion chevrolati (Gemminger and Harold)

Bembicidium chevrolati GEMMINGER AND HAROLD, 1868, Catalogus coleopterorum, vol. 1, p. 409.

Bembidion apicale DUVAL, 1857 in de la Sagra, Histoire physique, politique et naturelle de l'Ile de Cuba, p. 23.

South Bimini, May and June, four specimens; Inagua, July, 1938, McLean and Shreve, two specimens (M.C.Z.); and all the Greater Antilles and perhaps elsewhere (the taxonomy of this group of *Bembidion* is not settled); usually in salt marshes.

TYPE LOCALITY: Cuba.

Bembidion species

South Bimini, June, 1951, Cazier and C. and P. Vaurie, one specimen. This is a large species of the same group as *chevrolati* (Gemminger and Harold; see above) and *contractum* Say and *constrictum* LeConte of the mainland. I do not care to describe a new species in this difficult group from one specimen, especially since I do not know to what other species it may be related. All the species of the group that I have collected are characteristic of salt marches and other saline habitats.

Tachys (Tachyura) xanthopus (Dejean)

Bembidium xanthopus DEJEAN, 1831, Species général des coléoptères, vol. 5, p. 60.

South Bimini, May and June, six specimens; previously known from eastern United States, including Florida, and from Cuba; in wet places, by fresh water.

TYPE LOCALITY: "Amérique septentrionale."

Tachys (Isotachys) occultator Casey (provisional determination)

Tachys occultator CASEY, 1884, Contributions to the descriptive and systematic coleopterology of North America, pt. 2, p. 69.

South Bimini, May, June, July, August, 40 specimens; and Andros, Cat, and Inagua Islands, and probably throughout the Bahamas. This or closely related species are very widely distributed in the West Indies and North, Central, and South America. Usually by *salinas* or in salt marshes, but sometimes also by fresh water. The group is very difficult taxonomically and has not been satisfactorily studied. Most of the Bimini specimens have the elytra piceous, with posthumeral pale areas; two have the elytra entirely piceous, with no pale marks; one has each elytron conspicuously trimaculate (with posthumeral, subapical, and apical pale marks); and several have them less conspicuously or vaguely trimaculate. Similar variation in marking occurs in series of this or related species outside the Bahamas.

TYPE LOCALITY: Cape May, New Jersey.

Tachys (sensu stricto) corruscus LeConte (provisional determination)

Tachys corruscus LECONTE, 1848, Ann. Lyc. Nat. Hist., New York, vol. 4, p. 472.

South Bimini, June and August, three specimens; this or related species are widely distributed in North and Central America and the Greater Antilles; in wet places, usually connected with fresh water. This belongs to another difficult group, much in need of study.

TYPE LOCALITY: "NovEboraci et ad Rocky Mountains."

Tachys (sensu stricto) vorax LeConte (provisional determination)

Tachys vorax LECONTE, 1852, Ann. Lyc. Nat. Hist., New York, vol. 5, p. 194.

South Bimini, May, June, July, nine specimens; and widely distributed in North America and the Greater Antilles and perhaps elsewhere; in wet places, both fresh water and brackish. This is a member of still another difficult, inadequately studied group of *Tachys*. In fact this and the preceding species are not easy to distinguish from each other in some places in the West Indies, though they seem distinct in the United States.

TYPE LOCALITY: Gila and Colorado rivers.

Micratopus insularis Darlington

Micratopus insularis DARLINGTON, 1934, Psyche, vol. 41, p. 86.

South Bimini, July, 1951, C. and P. Vaurie, one specimen; known previously from Hispaniola, Puerto Rico, Jamaica, and the Cayman Islands, but not yet from Cuba. This is an obscure species which probably lives in leaf mold or damp soil but is usually collected at light or in flood debris.

TYPE LOCALITY: San Juan, Puerto Rico.

Loxandrus floridanus LeConte

Loxandrus floridanus LECONTE, 1878, Proc. Amer. Phil. Soc., vol. 17, p. 376.

South Bimini, May, 1951, Cazier and Gertsch, one specimen; previously known, I think, only from Florida; probably in very wet (fresh-water) places, like most other species of the genus.

TYPE LOCALITY: Capron and Enterprise, Florida.

Loxandrus celeris (Dejean)

Feronia celeris DEJEAN, 1828, Species général des coléoptères, vol. 3, p. 246.

Arthurs Town, Cat Island, July, 1935, W. J. Clench, one specimen (M.C.Z.); and Inagua, July, 1938, McLean and Shreve, two specimens (M.C.Z.); also on Cuba, Hispaniola, Puerto Rico, and the Cayman Islands, and widely distributed in southeastern United States including Florida and probably also in Central and South America; in very wet, usually fresh-water places. This species varies both individually and geographically in the presence or absence of a red spot on the elytral suture near apex. The spot is present in all three Bahama specimens.

TYPE LOCALITY: "Amérique septentrionale."

Agonum floridanum (LeConte)

Platynus floridanus LECONTE, 1878, Proc. Amer. Phil. Soc., vol. 17, p. 374.

South Bimini, May and June, and North Bimini, June, six specimens in all; previously known only from Florida; habitat unknown.

TYPE LOCALITY: Capron and Lake Harney, Florida.

Agonum coptoderoides Darlington

Agonum coptoderoides DARLINGTON, 1937, Mem. Soc. Cubana Hist. Nat., vol. 11, no. 2, p. 134.

South Bimini, May, July, August, 19 specimens; previously known only from the types from eastern Cuba, taken in debris beside rivers. Related species occur in the mountains of eastern Cuba and of Hispaniola, and are usually found among dead leaves on the ground in forest.

TYPE LOCALITY: Cabo Maisí, Oriente Province, Cuba.

Perigona nigriceps (Dejean)

Bembidium nigriceps DEJEAN, 1831, Species général des coléoptères, vol. 5, p. 44.

South Bimini, May, two specimens; cosmopolitan in the warmer parts of the world, and recorded from southeastern United States and many

of the West Indies; usually occurs in fermenting vegetable debris (and sometimes under bark) and often carried by commerce.

TYPE LOCALITY: "Amérique septentrionale."

Badister flavipes LeConte

Badister flavipes LECONTE, 1853, Trans. Amer. Phil. Soc., new ser., vol. 10, p. 388.

South Bimini, June, 1951, Cazier and C. and P. Vaurie, one specimen; previously known from southeastern United States including Florida; in wet (usually fresh-water) places.

TYPE LOCALITY: Louisiana.

Badister seclusus Blatchley

Badister seclusus BLATCHLEY, 1922, Canadian Ent., vol. 54, p. 12.

Arthurs Town, Cat Island, July 29, 1935, W. J. Clench, three specimens (M.C.Z.); known otherwise from southern Florida, Cuba, Hispaniola, and the Cayman Islands; in wet (usually fresh-water) places.

TYPE LOCALITY: Dunedin, Florida.

Chlaenius floridanus Horn

Chlaenius floridanus HORN, 1876, Trans. Amer. Ent. Soc., vol. 5, p. 263.

Inagua, July, 1938, McLean and Shreve, one specimen (M.C.Z.); known elsewhere only in Florida; in wet places.

TYPE LOCALITY: Florida.

Chlaenius maxillosus Horn

Chlaenius maxillosus HORN, 1876, Trans. Amer. Ent. Soc., vol. 5, p. 260.

South Bimini, June, 1951, Cazier and C. and P. Vaurie, one specimen; otherwise confined to Florida and adjacent parts of southeastern United States; a rare species of which the habitat is unknown.

TYPE LOCALITY: Lake Harney and Haulover, Florida.

Stenocrepis duodecimstriata (Chevrolat)

Oodes 12-striatus CHEVROLAT, 1835, Coléoptères du Mexique, fasc. 8, no. 173.

South Bimini, June and August, three specimens; North Bimini, June, one specimen; and Andros, Cat, and Inagua Islands; and occurs also on the mainland including Florida, and on Cuba, Hispaniola, and Jamaica; in swamps, chiefly fresh-water ones.

TYPE LOCALITY: Tuspan.

Harpalus pennsylvanicus (DeGeer)

Carabus pennsylvanicus DEGEER, 1774, Mémoires pour servir à l'histoire des insectes, vol. 4, p. 108.

South Bimini, May, 1951, Cazier and Gertsch, one specimen; widely distributed in North America including Florida but not previously known in the West Indies; on the ground usually in more or less dry, more or less open places.

TYPE LOCALITY: Pennsylvania.

Selenophorus chalybeus Dejean

Selenophorus chalybeus DEJEAN, 1829, Species général des coléoptères, vol. 4, p. 110.

South Bimini, July and August, two specimens; and New Providencè, Andros, Cat, and Long Islands; and widely distributed in the West Indies and perhaps on the mainland (the limits of this species and closely related ones have not been determined); on the ground in more or less dry and open places.

TYPE LOCALITY: Saint Barthelemy, Antilles.

Selenophorus palliatus (Fabricius)

Carabus palliatus FABRICIUS, 1798, Supplementum entomologiae systematicae, p. 58.

South and North Bimini, May, July, August, September, October, 52 specimens; not otherwise known from the Bahamas or West Indies, but common in southeastern United States including Florida; on the ground in more or less dry and open places.

TYPE LOCALITY: "America Boreali."

Selenophorus alternans pyritosus Dejean

Selenophorus pyritosus DEJEAN, 1829, Species général des coléoptères, vol. 4, p. 84.

New Providence, four specimens (M.C.Z. and U.S.N.M.), and Eleuthera, two specimens (M.C.Z.); otherwise confined to Cuba; on the ground in more or less dry and open places. This form is very close to *S. alternans* Dejean of South America and the West Indies excepting Cuba; in fact it seems to be no more than a large form of *alternans*. Some of the Bahama examples are almost small enough to be *alternans*, but the Bahama series as a whole is closer to *pyritosus*.

TYPE LOCALITY: Cuba.

Selenophorus sinuatus (Gyllenhal)

Carabus sinuatus GYLLENHAL, 1806, in Schönherr, Synonymia insectorum, vol. 1, p. 203.

South and North Bimini, July, August, October (it is curious and perhaps significant that the species was not collected in May or June), 83

specimens; and Andros, Cat, and Turks Islands; and throughout the Greater Antillean region, where it is perhaps the most common carabid; on the ground in more or less dry and open places.

TYPE LOCALITY: America.

Selenophorus discopunctatus Dejean

Selenophorus discopunctatus DEJEAN, 1829, Species général des coléoptères, vol. 4, p. 92.

Cat and Grand Bahama Islands, four specimens in all (M.C.Z.); occurs also throughout the West Indies and much of South America, and in Florida; on the ground in more or less dry and open places.

TYPE LOCALITY: Saint Barthelemy, Antilles.

Selenophorus striatopunctatus Putzeys

Selenophorus striatopunctatus PUTZEYS, 1878, Stettiner Ent. Zeitg., vol. 39, p. 33.

South Bimini, August 10, 1951, C. and P. Vaurie, three specimens; and on Cuba, Hispaniola, and Puerto Rico and perhaps also Mexico and Florida; on the ground, not directly associated with open water but often taken in flood debris. The relationship of the insular and mainland forms has not been determined.

TYPE LOCALITY: Antilles, "Mexique" (Chiapas).

Stenolophus ochropezus (Say)

Feronia ochropeza SAY, 1825, Trans. Amer. Phil. Soc., new ser., vol. 2, p. 54.

South Bimini, August 10, 1951, C. and P. Vaurie, one specimen; and Andros and Inagua Islands; and widely distributed throughout the Greater Antillean region and much of North America, including Florida; very common in wet places, often fresh water.

TYPE LOCALITY: North America.

Bradycellus tantillus (Dejean)

Acupalpus tantillus DEJEAN, 1829, Species général des coléoptères, vol. 4, p. 465.

South Bimini, May, June, August, three specimens; and occurs in southeastern United States, including Florida; in wet places. A closely related form (*velatus* Darlington) occurs on the Greater Antilles.

TYPE LOCALITY: "Amérique septentrionale."

Acupalpus longulus Dejean

Acupalpus longulus DEJEAN, 1829, Species général des coléoptères, vol. 4, p. 459.

South Bimini, May and June, three specimens; in the southeastern United States including Florida; probably in wet places.

TYPE LOCALITY: "Amérique septentrionale."

Agonoderus infuscatus Dejean

Agonoderus infuscatus DEJEAN, 1829, Species général des coléoptères, vol. 4, p. 54.

South Bimini, August 17, 1951, C. and P. Vaurie, one specimen; and Andros and Cat Islands; occurs also in the southeastern United States, including Florida, and on Cuba; on the ground in more or less dry and open places.

TYPE LOCALITY: "Amérique septentrionale."

Lebia cyanea Dejean

Lebia cyanea DEJEAN, 1831, Species général des coléoptères, vol. 5, p. 386.

South Bimini, June, 1951, Cazier and C. and P. Vaurie, one specimen; widely distributed on the mainland of America including Florida, and on all the Greater Antilles; subarboreal, often in low vegetation over wet ground, and often in company with superficially similar chrysomelid beetles which the *Lebia* may mimic.

TYPE LOCALITY: Cuba.

Callida decora (Fabricius)

Carabus decorus FABRICIUS, 1801, Systema Eleutheratorum, vol. 1, p. 181.

Eight Mile Rock, Grand Bahama, May, 1936, W. J. Clench, one specimen (M.C.Z.); known otherwise from southeastern North America including Florida and from parts of Central America; arboreal, in vegetation.

TYPE LOCALITY: Carolina.

Callida bahamensis, new species

DESCRIPTION: Smaller and with elytra broader than usual in the genus; brown above and below, without metallic color; appendages brown to brownish testaceous; upper surface moderately shining, elytra a little duller; microsculpture faint on head and pronotum, distinct and isodiametric with rather small meshes on elytra.

Head appearing at least as wide as prothorax but actually (by measurement) slightly narrower; eyes moderately prominent; genae shorter than eyes, strongly oblique, slightly convex in profile; front almost smooth except slightly and variably impressed anteriorly and finely and

sparsely punctulate; antennae rather short in genus, with middle segments not much more than twice as long as wide.

Prothorax cordate, about one-sixth to one-fourth wider than long at middle (by measurement); base about one-fifth or one-fourth wider than apex (by measurement); sides strongly rounded for most of length, strongly sinuate about one-sixth before base; anterior angles not well defined; posterior angles approximately right, would be acute except sides of base oblique; lateral margins only moderately wide and not strongly reflexed; pronotum distinctly but not strongly transversely strigulose, irregularly punctate across base and apex and along middle line.

Elytra nearly parallel, slightly narrowed anteriorly, rather short (in genus); apices faintly and broadly emarginate, almost truncate, with inner angles very narrowly rounded (almost right) and outer angles broadly rounded; striae moderately impressed, faintly punctulate; each elytron tripunctate on third interval. Inner wings fully developed. Mesosternum not tuberculate between coxae. Lobes of fourth hind tarsal segment oval. Last ventral abdominal segment of male bipunctate each side; of female, tripunctate or quadripunctate each side. Male front tarsi with first three segments biserially squamulose below; male middle tarsi with squamules on about apical half of first segment and on second and third segments. Length, 5.5 to 7 mm.

TYPE MATERIAL: Holotype, male (A.M.N.H.), from South Bimini Island, Bahamas, British West Indies, May, 1951, Cazier and Gertsch; and eight paratypes (including three now in M.C.Z., type No. 28895) as follows: two with same data as type; two from South Bimini, June, 1951, Cazier and C. and P. Vaurie; three from South Bimini, July, 1951, C. and P. Vaurie; and one from North Bimini, June, 1951, Cazier and C. and P. Vaurie.

DISCUSSION: This new species is close to *Callida decolor* Chaudoir which was described from Martinique and of which I have (M.C.Z.) two specimens from Port-au-Prince, Haiti, identified from description. The Bimini specimens differ from the Haitian ones chiefly in having the prothorax narrower, with lateral margins obviously narrower, especially anteriorly. *Callida tinctula* Darlington of Cuba probably belongs to the same group, but has still narrower prothoracic margins and green elytra.

Plochionus species

South Bimini, December 17, 1952, A. M. Nadler, one specimen; and Long Island, April 4, E. A. Schwarz, one specimen (U.S.N.M.). When I saw the Long Island specimen many years ago, I noted that it was like *P. timidus* (Haldeman) but had more prominent eyes than usual in

North American examples of the species, and this is also true of the South Bimini specimen. These specimens may represent an entirely pale form of the following species, but I cannot be sure of this without revising the whole genus, which I have not time to do now.

Plochionus amandus discoideus Schaupp

Plochionus discoideus SCHAUPP, 1880, Bull. Brooklyn Ent. Soc., vol. 2, no. 10, p. 86.

North Bimini, June 4, 1950, Cazier and Rindge, and December 7, 1952, A. M. Nadler; two specimens in all; known otherwise only from Florida and adjacent parts of southeastern United States; probably arboreal. The status of *discoideus* is not clear. It may be just a color form of *amandus*.

TYPE LOCALITY: None given.

Plochionus pallens (Fabricius)

Carabus pallens FABRICIUS, 1775, Systema entomologiae, p. 244.

Recorded from "Bahamas" by Leng and Mutchler (1914). I do not know the basis of this record nor have I seen any Bahama specimens. The species is more or less cosmopolitan and often carried by commerce. Among the many places it has been found are Florida, Cuba, Hispaniola, and Puerto Rico. It is probably arboreal.

TYPE LOCALITY: "Dresdae."

Apenes sulcicollis (Duval)

Cymindis sulcicollis DUVAL, 1857, in de la Sagra, Histoire physique, politique et naturelle de l'Ile de Cuba, p. 8.

New Providence, July, 1904, Barber, one specimen (M.C.Z.); known otherwise only from Cuba; probably on the ground in more or less dry and open places.

TYPE LOCALITY: Cuba.

Apenes parallela parallela (Dejean)

Cymindis parallela DEJEAN, 1825, Species général des coléoptères, vol. 1, p. 218.

(*Apenes opaca* Leng and Mutchler, 1917, not LeConte.)

New Providence, Andros, Eleuthera, and Watling Islands; and Cuba, with related forms on Inagua (see below), Hispaniola, Puerto Rico, and Jamaica; on the ground in more or less dry and open places. Long ago I borrowed from Mr. Wickham a specimen which had been recorded from

the Bahamas as *Apenes opaca* by Leng and Mutchler; it proved to be a misidentified specimen of the present species.

TYPE LOCALITY: Cuba.

Apenes parallela inaguae, new subspecies

DESCRIPTION: Generally similar to typical *parallela* in form and sculpture but different in color, being entirely dull brownish piceous, without the pale humeral marks which are always present in *parallela*. Similar to the Hispaniolan *Apenes morio* (Dejean) in color but differing from it slightly in form and obviously in sculpture. In *inaguae* the head and pronotum are comparatively finely punctate rugulose as in typical *parallela*, not more coarsely so as in *morio*. Length, 12 mm.

TYPE MATERIAL: Holotype, male (M.C.Z. No. 28896), from Inagua, Bahamas, July, 1938, McLean and Shreve; unique.

DISCUSSION: Presence or absence of markings is usually a constant character in populations of this genus. Humeral marks are uniformly present in 22 specimens of true *parallela* and uniformly absent in 42 specimens of *morio* now before me (I have seen additional material of both in the past), and humeral spots are uniformly present again in shorter series of the representative forms of *parallela* which occur on Puerto Rico and Jamaica. I dislike describing subspecies from single specimens, and I have therefore set aside the unique from Inagua until now, but in a paper dealing specially with Bahama Carabidae I can no longer ignore it. I am reasonably sure it will prove to represent an easily distinguishable population.

Apenes lata Darlington

Apenes lata DARLINGTON, 1934, Psyche, vol. 41, p. 119.

South Bimini, May, June, July, August, six specimens in all; and Andros Island (type locality); and known also from Cuba and Hispaniola; I do not know the habitat of this species, but it and other small species of *Apenes* related to it probably live among dead leaves on the ground in shady places. The Cuban and Hispaniolan populations of this species may be distinguishable subspecies, but I have not yet seen adequate material of them.

TYPE LOCALITY: Mangrove Cay, Andros Island, Bahamas.

Apenes delicata laevior, new subspecies

DESCRIPTION: Similar to *Apenes delicata* Darlington (1934, p. 118) of Cuba but with the central part of the pronotum more shining and with reticulate microsculpture obsolete. In five Cuban specimens of *delicata*

now before me (several others have been distributed) the entire surface of the pronotum is dull and plainly reticulate. This species occurs also in Haiti. My single specimen from there agrees with the Cuban ones in pronotal reticulation but differs in some other details and may represent an undescribed subspecies. To return to the specimens from Bimini, they have the legs and antennal bases darker than in typical *delicata*, and the posterior transverse elytral fascia tends to be more regular in outline and to extend less far laterally than in *delicata*, but this last character is variable. Length, \pm 5 mm.

TYPE MATERIAL: Holotype, male (A.M.N.H.), from South Bimini Island, Bahamas, British West Indies, May, 1951, Cazier and Gertsch; and seven paratypes (two males and a female, M.C.Z.; M.C.Z. type No. 28897) as follows: four with same data as the type; one (crushed) from South Bimini, June 12, 1950, Cazier and Rindge; one from South Bimini, July 11, 1951, C. and P. Vaurie; and one from South Bimini, August, 1951, C. and P. Vaurie.

DISCUSSION: The two small species of *Apenes* (*lata*, above, and the present one) that occur in the Bahamas are both more or less widely distributed on some of the Greater Antilles and both probably vary from island to island, although their variations are not yet fully worked out. More material from additional localities in the Bahamas and elsewhere would be very interesting. Both species probably live on the ground among dead leaves in shady places. In the past they have usually been taken in flood debris or at light, but they could probably be found under more natural conditions by raking together, bagging, and washing out leaves and leaf mold from the proper places. I have taken a third small *Apenes* (*laevicincta* Darlington) in this way in Haiti. More or less similar small species of this genus occur on the mainland of southeastern North America and of Central and South America. Just how they are related to the West Indian forms has not been determined, except that they all seem to be different.

Pentagonica flavipes flavipes (LeConte)

Didetus flavipes LECONTE, 1853, Trans. Amer. Phil. Soc., new ser., vol. 10, p. 377.

South Bimini, May, June, July, three specimens in all; and Andros Island, one specimen (U.S.N.M.); and widely distributed in North America, including Florida, and on Cuba and the Cayman Islands, with a dark-legged subspecies on the other Greater Antilles; usually among dead leaves on the ground or in low vegetation in damp places.

TYPE LOCALITY: Louisiana.

Tetragonoderus intersectus (Germar)

Bembidion intersectum GERMAR, 1824, Insectorum species, vol. 1, p. 28.

South Bimini, August 7, 1951, C. and P. Vaurie, one specimen; known otherwise only in southeastern United States, including Florida; on the ground in dry, sandy places.

TYPE LOCALITY: Kentucky.

Galerita lecontei Dejean

Galerita lecontei DEJEAN, 1831, Species général des coléoptères, vol. 5, p. 294.

South Bimini, May, 1951, Cazier and Gertsch, two specimens; previously unknown in the West Indian region, but widely distributed in North America, including Florida; usually on the ground in more or less dry and open places.

TYPE LOCALITY: "Amérique septentrionale."

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