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Part 2. New Species of *breviscapus* Group  
(Coleoptera, Curculionidae, Cholinae)



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## Revision of *Cholus* (*Aphyoramphus*) Part 2. New species of *breviscapus* Group (Coleoptera, Curculionidae, Cholinae)

PATRICIA VAURIE<sup>1</sup>

### ABSTRACT

Two new species of the *breviscapus* species group of *Cholus*, subgenus *Aphyoramphus*, are described, as well as the hitherto unknown female of

*breviscapus*. The new species are *howdenae* from South America and *guttatus* from Panama.

### INTRODUCTION

The two species described below bring to three the number of species of the *breviscapus* group. *Cholus breviscapus* was described from a single male, the female of which is also described below. The specimens examined, aside from those in the American and Paris museums, are from the collections of Henry and Anne Howden, Ottawa, Canada, Henry P. Stockwell, Canal Zone, Panama, and Henry Hespenheide, University of California, Los Angeles, California.

The species of the *breviscapus* group were separated (Vaurie, 1977) from another group of four species (the *undulatus* group) partly on the basis of the absence, on all the femora, of the usual inner tooth (in the *undulatus* group the tooth is absent from the front femora only). Now it appears that in the female of *breviscapus*, as well as in the two new species, the tooth is absent also from the front femora only,

being present, albeit rather inconspicuously, on the other femora, and even on the front femora of two of the four females examined.

The three species of the *breviscapus* group are distinguished from the species of the *undulatus* group in having larger eyes; shorter antennal scape (not reaching the eyes); vestiture of the underside and legs composed of elongate, hairlike pale scales that are much finer than the dorsal scales and sparsely, regularly spaced (distant from each other by their length); a slight carination of the sides of the flattened apex of the rostrum in front of the scrobe; and seven or eight small asperities or tubercles on the sides of the prosternum toward the apex. These tubercles were not noted in the original description of *breviscapus*, but they are present in the three species although less markedly in females than in males.

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KEY TO THE SPECIES OF THE *breviscapus*  
SPECIES GROUP

1. Elytra with rows of white (or yellow) scaly spots ..... *guttatus*  
Elytra not spotted, but with scales covering elytra, scales denser laterally, forming stripes . . . 2
2. Dorsal scales mostly at least twice as long as wide; pronotum appearing squarish; elytra with base wider than pronotum, but not dilated . . .  
..... *howdenae*  
Dorsal scales scarcely longer than wide; pronotum subconical; elytra with humerus broadly dilated ..... *breviscapus*

***Cholus howdenae***, new species  
Figures 1-4

**TYPE MATERIAL:** Type, male, and two male and three female paratypes, Rio Palenque, 47 km. south of Santo Domingo, Pichincha, Ecuador, 700 ft., February 22-27, 1976, H. and A. Howden, collectors, in H. and A. Howden collection (a male and female to be deposited in the American Museum of Natural History); two males, same data, but February 26, 1976, "on *Heliconia*"; male and female, same locality, but May 18-30, 1975, S. and J. Peck, collectors, in Howden collection; one male, Anchicaya Dam, 70 km. east of Buenaventura, Valle, Colombia, 1200 ft., July 21, 1970, H. and A. Howden, collectors, in Howden collection; one female, Upper Rio Huallaga, Peru, December 16, 1925 (?), H. Bassler, collector, in the American Museum of Natural History, New York; one female without locality, in Muséum National d'Histoire Naturelle, Paris.

**DIAGNOSIS:** Black or dark red with elongate yellow scales. Resembling *breviscapus* in pattern and sculpture, but differing from it in having scales more elongate, pronotum not conical, humerus of elytra not dilated. Similar to *guttatus* in shape of pronotum and elytra and in elongate scales, but differing in pattern of elytra in which scales generally denser laterally where forming stripe, not dotted with separate scaly spots.

**RANGE:** Colombia, Ecuador, and Peru, in vicinity of rivers or dams.

**DESCRIPTION OF TYPE:** Length 15 mm. Pronotum black, elytra and venter reddish, both with yellow scales. Eyes large, prominent, ex-

tending well below base of rostrum. Head and basal three-fourths of rostrum densely punctate. Rostrum distinctly longer than pronotum, feebly arcuate over insertion of antennae; dorsally with apex slightly widened; ventrally with postmentum (fig. 1) elevated, showing, when viewed in profile, as sharp little tooth; apex with sides carinate in front of scrobe. Antennae inserted at about apical third of rostrum; funicle with segments 1 and 2 elongate, remaining segments as wide as long; club robust, roundish. Pronotum wider than long; sides rounded to apical constriction; irregularly, finely punctate; disk basally with scattered scales; sides more or less flatly tuberculate, with scales elongate, dense, arranged horizontally in vague stripes; postocular lobe absent. Scutellum shield shaped, punctate. Elytra slightly wider than pronotum, with vertical appressed yellow scales in all punctures, those on sides denser and forming vague irregular stripes; intervals with flat, round tubercles inconspicuous, continuing transversely across striae; striae with large foveae as wide as intervals; subapical callus prominent.

Underside and legs with elongate, hairlike sparse scales. Prosternum feebly tumid in front of each coxa, concave between coxae; sides in front with transverse rows of from six to eight sharp little tubercles that are visible from above. Front coxae narrowly separated by only width of antennal funicle; inner edge with small round tubercle; middle coxae more widely separated than front. Mesosternum feebly tumid. Femora slightly clavate; front femora unarmed; other femora minutely toothed within apical third. Middle and hind tibiae with outer apical fringe of setae more than one-third length of tibiae. Metasternum and abdomen very feebly concave. Aedeagus (figs. 2, 3) with sides subparallel to beyond middle, thence narrowing to acuminate apex; in profile straight; apodemes about same length as lobe.

**VARIATIONS FROM TYPE:** The length of the paratypes ranges from 14 to 20 mm. In females the postmentum is flat and the prosternal and coxal tubercles less evident. There are many differences from the type: the elytra are black, not red, in about half of the specimens, or the entire body is black; the scutellum in several

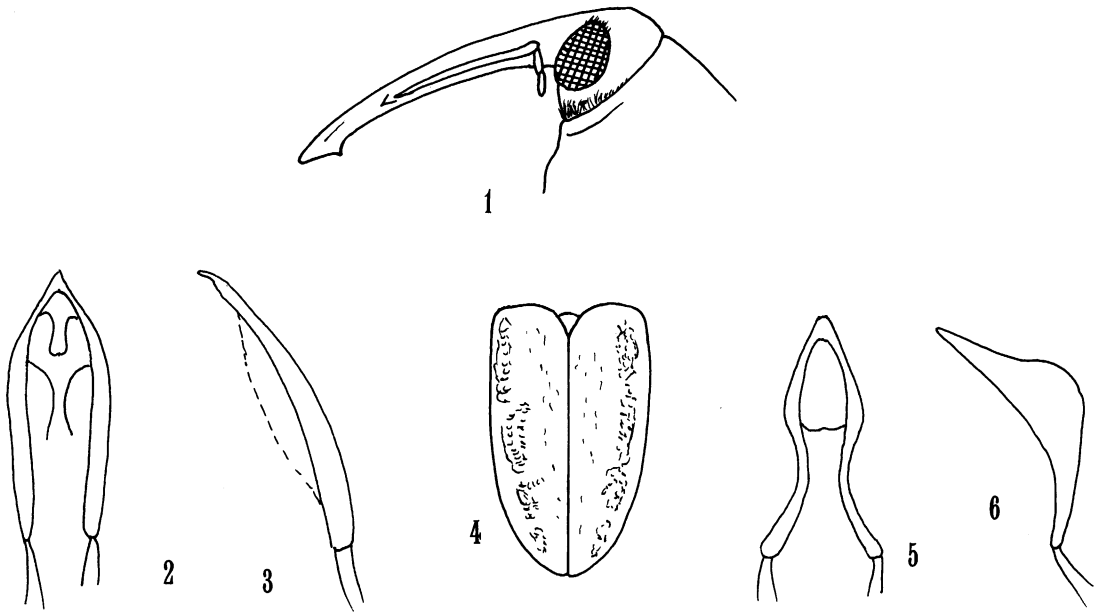


FIG. 1. Head and rostrum of *Cholus howdenae*; characteristic also of *C. guttatus*; note short antennal scape and toothed ventral apex of rostrum (postmentum).

FIGS. 2-4. *Cholus howdenae*. 2, 3. Aedeagus. 2. Dorsal view. 3. Lateral view. 4. Diagram of elytra with lateral scaly stripes and scattered scales.

FIGS. 5, 6. *Cholus guttatus*, aedeagus. 5. Dorsal view. 6. Lateral view.

specimens is medially depressed; the pronotum appears impunctate in one paratype. In one of the paratypes from Rio Palenque the scales cover almost the entire dorsum, but in the majority they are worn off in great part, especially on the disks of the pronotum and elytra.

**ETYMOLOGY:** The species is named in honor of the curculionidist Anne Howden, who is also the collector of the majority of specimens of the type series.

**REMARKS:** The elytral pattern of *howdenae* (fig. 4), when viewed with the naked eye, presents a broad lateral stripe of scales laterally, interrupted in several places; the scattered scales down the center of the elytra are not evident without magnification.

In addition to the characters given in the Diagnosis, *howdenae* differs from *breviscapus* in having the base of the elytra narrower, the sides more parallel, not rapidly narrowing, and the punctures of the pronotum larger and generally spaced irregularly. The aedeagus differs in

being almost straight, not abruptly arcuate, in profile view, and in having the apex more acuminate.

### ***Cholus guttatus*, new species**

Figures 1, 5, 6

**TYPE MATERIAL:** Type, male, Madden Forest, Canal Zone, Panama, September 27, 1969, and paratype, female, Madden Forest, mile 2.5, lat. 9° 05' N, long. 79° 37' W, July 18, 1974, both H. P. Stockwell, collector, in Stockwell collection; one female, same locality, but mile 4.5, July 29, 1971, in H. Hesperheide collection.

**DIAGNOSIS:** Black, shining, with yellow scaly spots on elytra and scaly lateral vittae on pronotum. Allied closely to *howdenae* and *breviscapus* in characters of group, but differing from them in having elytra spotted with scaly clusters, neither entirely scaly nor with scales in lateral stripes; surface generally more shin-

ing, less punctate, less scaly; elytra not at all tuberculate; and aedeagus of different shape.

RANGE: Known only from the type locality.

DESCRIPTION OF TYPE: Length 17 mm. Head and rostrum finely, sparsely punctate. Eyes, remainder of rostrum, and antennae as described for *howdenae*. Pronotum mostly as described for *howdenae*, but punctures sparser, scarcely visible, and yellow scales present only in lateral stripes, not on disk or at base, and no tubercles. Scutellum wider than long, medially depressed. Elytra slightly wider than pronotum, spotted with clusters of scales on each stria row (from two to seven or eight spots); intervals impunctate; striae with large squarish foveae almost as wide as intervals, becoming smaller toward apex of elytra; subapical callus strong.

Underside and legs, prosternum, etc., as described for *howdenae*. Aedeagus (figs. 5, 6) in profile abruptly humped and arcuate at middle; dorsally, sides emarginate to near middle where narrowing to truncate apex; apodemes longer than lobe.

VARIATIONS FROM TYPE: The two female paratypes are slightly shorter, 15.5 and 16 mm. They differ from the male in having a tiny tooth on the front femur, the ventral apex of the rostrum (postmentum) smooth, not toothed, the metasternum and abdomen rather flat, not concave, and the pronotum virtually impunctate.

ETYMOLOGY: The species name is from the Latin *guttatus*, meaning spotted.

REMARKS: Externally, aside from the spotted elytra, *guttatus* is more similar to *howdenae* than it is to *breviscapus*, but the aedeagus is more like that of *breviscapus*.

There are a number of other white-spotted black species of *Cholus*: *buckleyi* Pascoe, *dilatatus* (Taschenberg), *magnidens* Vaurie, *nitidicollis* Pascoe, *niveopunctatus* (Gyllenhal), *nivisparsus* (Chevrolat), *nivosus* Pascoe, *oberthuri* Pascoe, some *undulatus* (Gyllenhal), *viduatus* Pascoe, and several undescribed species. Most of these species differ from *guttatus* in having contiguous, broad scales on the underside, not well separated hairlike scales; *undulatus* and *viduatus* differ in having the dorsum tuberculate and the eyes smaller, *nitidicollis* in having no scales on the pro-

notum; *magnidens* in having a very large tooth on the femora. The spots, of course, can be of different sizes and density from those of *guttatus*. The front femora of these species, except for those of *niveopunctatus* and *undulatus*, are distinctly toothed.

Females have now been recognized of *Cholus breviscapus*, known hitherto from the unique male from Lower Rio Ucayali, Peru. Two of the females are from Limoncocha, Ecuador, 300 m., lat. 0° 23' S, long. 76° 39' W, March 31, 1977, H. P. Stockwell, collector, in his collection; and two are from [Puerto] Umbria, Guines Fluss, Colombia, in the Muséum National d'Histoire Naturelle, Paris.

The female differs from the male in having the sides of the elytra at base only feebly dilated, not widely dilated and bent down over the epipleurae; the femoral tooth absent from the front, not from all femora (a minute swelling where the tooth should be is actually visible in one of the females); the ventral apex of the rostrum (postmentum) flat, not toothed; the front coxae without a curved hook, and the abdomen flat. In the four females examined (14 to 17 mm.), the yellow scales are mostly rubbed off from the elytral disk, but they are present in lateral stripes; in two of the females the scales are also scattered across the elytral declivity. Wear has obscured the tubercles of the elytral intervals so that they are visible only when the specimen is tipped forward; in the type the tubercles are distinct. The squarish stria foveae appear very large because the scales are not there to fill them in, such as is true of the type.

This species differs from *howdenae* and *guttatus* in having the pronotum conical; the base of the elytra dilated laterally; the dorsal scales smaller, scarcely longer than wide; the postmentum of the male only feebly elevated, not sharply angulate, and the aedeagus of different shape.

#### LITERATURE CITED

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1977. Revision of *Cholus* (*Aphyoramphus*). Part 1. Species groups *basalis*, *breviscapus*, and *undulatus* (Coleoptera, Curculionidae, Cholinae). Amer. Mus. Novitates, no. 2623, pp. 1-15, figs. 1-24.



