

REVISION OF *RHODOBAENUS*. PART 1.
SPECIES IN SOUTH AMERICA
(COLEOPTERA, CURCULIONIDAE,
RHYNCHOPHORINAE)

PATRICIA VAURIE

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PATRICIA VAURIE
Research Associate, Department of Entomology
American Museum of Natural History

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ABSTRACT

The genus *Rhodobaenus* is redescribed and the 29 species of South America are revised. The 29 species include five of the 15 formerly considered as the *nawradii* group which is here broken up and incorporated with the other species. Ten of the 29 species occur also in Central America or Mexico. *Rhodobaenus lebasii* (Gyllenhal) is resurrected as a valid species with three new synonyms: *femoralis* Chevrolat, *vittatipennis*, and *immaculatus* of Champion. Additional new synonymy is recorded: *ruficollis* (Hustache) of *adun-*

cus (Erichson); *goyaensis* (Hustache) of *rufirostris* (Hustache); *cordifer* Voss of *schnusei* Günther; *saucius* (Gyllenhal) and *implicatus*, *crucicollis*, *miniatus*, *nigricornis*, *bipunctatus*, and *quinquemaculatus* of Chevrolat of *suturalis* (Gyllenhal). Seven new species are described: *R. bivittatus*, Bolivia; *curvus*, Colombia; *nivosus*, Venezuela; *pullus* and *riparius*, Ecuador; *quadrus*, Peru; *rhinopilus*, Paraguay. Lectotypes are designated for several species of Champion and Günther.

INTRODUCTION

Rhodobaenus is a large genus of the New World consisting of approximately 80 species. The majority are from 10 to 15 mm. long; they are elongate, bright red, dark red (pruinose), or yellowish, with variable and various black spots, lines, bands, patches, or stripes. Some are black, appearing gray or reddish brown, often with whitish or buffy spots encircling the punctures, thus producing a tessellated or dappled aspect. They have no scales. In most species the long rostrum at the base is humped over the large, squarish antennal opening, and the prothorax is bent backward or upward from the tumid metasternum in a kind of jackknife position.

This group is the only unrevised large genus remaining in a continuing study of the subfamily Rhynchophorinae of the New World which I began in 1951 with a revision of *Sphenophorus* north of Mexico. Subsequently, I revised the allied Neotropical genus *Metamasius*, the *Sphenophorus* of South America, the tribe Sipalini, and one group of *Rhodobaenus*. The species of *Rhodobaenus* display such a wide range of variation in the shifting red and black color patterns that finding the line of demarcation between species and color varieties can pose an interesting problem. Except for the use of a few notable morphological characters, the descriptions of species from South America have been based on color and pattern. In the case of species from Central America and

Mexico, Champion in his revision attributed 15 color varieties to one species (*tredecimpunctatus*). As the species of South America have been represented by only scattered descriptions without keys and with few, if any, comments or discussion, I decided first to bring them together and then to proceed to the more numerous species from farther north.

The present paper deals with the 29 species from South America, 19 of which appear to be endemic, the remainder occurring as well in Central America or Mexico. I have examined more than 1200 specimens from North and South America, including the types of all forms with the exception of *tornowii* Brèthes and several species of Chevrolat and Gyllenhal.

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HISTORY

LeConte (1876) proposed the genus *Rhodobaenus* for two species "from our fauna," *Curculio tredecimpunctatus* Illiger (designated as type species by Vaurie, 1967b), and *Sphenophorus pustulosus* Gyllenhal. In these species, he observed, the mesosternum is narrower than that of other genera, the elevations above the antennal insertion are much stronger, the scape is longer, and the pubescent third tarsal segment is divided by a narrow line. Chevrolat (1885) added two groups of species, describing 25 new species and transferring some of Gyllenhal's *Sphenophorus* to *Rhodobaenus*. He did not characterize the groups or give keys to the species. In the same paper he described

Homalostylus with *Sphenophorus latiscapus* Kirsch (Colombia) as the only species.

Since 1885 many more species have been made known, notably by Champion ("1909-1910" [1910]), who described 40 forms, including four in *Homalostylus*, from Mexico and Central America, and reviewed the known species, with keys and illustrations. Subsequently, 12 more species were described, all from South America, one (in *Sphenophorus*) by Brèthes (1910), eight, including five in *Homalostylus*, by Hustache (1936, 1938), two by Günther (1941), and one by Voss (1954). The genus *Homalostylus* was synonymized by Vaurie (1967a, p. 179, footnote), who in the same year reviewed the *nawradii* group of *Rhodobaenus* (1967b).

DISTRIBUTION, BIOLOGY, AND SYMPATRY

The range of the genus extends from Canada and the United States south through Mexico and Central America to Argentina in South America. I know of no records from the Greater or Lesser Antilles, except for Trinidad, or from Chile. Only two species (perhaps three) occur north of Mexico (*tredecimpunctatus* Illiger, *pustulosus* Gyllenhal, and (?) *quinquepunctatus* Say); about 50 species are found in Mexico and Central America, and 29 in South America. Generally speaking, the range of the species is limited to either North or South America, not more than a dozen species spanning the two continents.

Of the species from South America, the

majority inhabit the north and west, from Colombia south through Ecuador, Peru, and Bolivia (table 1). Only five species (*aduncus*, *bicinctus*, *lebasii*, *rufirostris*, and *suturalis*) occur in Brazil, whereas 15 occur in the small country of Ecuador. The species from Brazil are found in the states of Pernambuco and Goyaz, in the São Paulo and Rio de Janeiro regions, and south in Santa Catarina and Parana. Brazil is widely inhabited, however, by species of the allied genera *Sphenophorus* and *Metamasius*. Knowledge of food or plant preferences or life histories would be helpful to explain the geographical distribution. Unfortunately, little has been recorded of the biology of the South Amer-

TABLE 1
Geographic Distribution of the Species of *Rhodobaenus* in South America
(The countries are listed from south to north.)

	Argen- tina	Uru- guay	Para- guay	Bra- zil	Bo- livia	Peru	Ecu- dor	Colom- bia	Vene- zuela	Suri- nam	French Gui- ana	Trini- dad
<i>aduncus</i>	—	—	—	+	+	+	—	—	—	—	—	—
<i>apicalis</i>	—	—	+	—	—	—	+	—	—	—	—	—
<i>augustinus</i>	—	—	—	—	—	—	—	+	—	—	—	—
<i>bicinctus</i> ^a	—	+	—	+	—	—	—	+	+	—	+	+
<i>bivittatus</i>	—	—	—	—	+	+	—	—	—	—	—	—
<i>curvus</i>	—	—	—	—	—	—	—	+	—	—	—	—
<i>deliciosus</i>	—	—	—	—	—	—	—	+	—	—	—	—
<i>dentirostris</i> ^a	—	—	—	—	—	—	+	—	—	—	—	—
<i>laticapus</i>	—	—	—	—	+	—	+	+	—	—	—	—
<i>lebasii</i> ^a	—	—	—	+	—	—	—	+	+	—	—	+
<i>lineiger</i> ^a	—	—	—	—	+	+	+	+	—	—	—	—
<i>longicollis</i>	—	—	+	—	—	—	+	+	—	—	—	—
<i>maior</i>	—	—	—	—	—	—	+	—	—	—	—	—
<i>melanocardius</i> ^a	—	—	—	—	—	+	+	+	—	+	+	—
<i>melanurus</i>	—	—	—	—	+	+	+	—	—	—	—	—
<i>nawradii</i> ^a	—	—	—	—	—	—	+	+	—	—	—	—
<i>nigripes</i>	—	—	—	—	+	+	—	—	—	—	—	—
<i>nigrofasciatus</i> ^a	—	—	—	—	—	—	—	+	—	—	—	—
<i>nivosus</i>	—	—	—	—	—	—	—	—	+	—	—	—
<i>pullus</i>	—	—	—	—	—	—	+	—	—	—	—	—
<i>quadripunctatus</i> ^a	—	—	—	—	—	—	+	+	—	—	—	—
<i>quadrus</i>	—	—	—	—	—	+	+	—	—	—	—	—
<i>rhinopilus</i> ^a	—	—	+	—	—	—	+	—	—	—	—	—
<i>riparius</i>	—	—	—	—	—	+	+	+	—	—	—	—
<i>rufirostris</i>	—	—	—	+	+	+	+	—	—	—	—	—
<i>rufus</i>	—	—	—	—	+	+	—	—	—	—	—	—
<i>schmusei</i>	—	—	—	—	+	+	—	—	—	—	—	—
<i>suturalis</i> ^a	+	—	+	+	—	—	—	—	+	—	—	—
<i>tornowii</i>	+	—	—	—	+	—	—	—	—	—	—	—
TOTALS	2	1	4	5	10	11	15	13	4	1	2	2

^a Occurs also in Central America or Mexico.

ican species other than that many are found on the banks of rivers, or on weeds or on leaves. The abundant *tredecimpunctatus* from the United States breeds in the stems of a great variety of plants, chiefly Compositae.

Sympatry of species appears to be common, all the species but one (*tornowii*) in South America being sympatric and even *tornowii* having been taken in the same province of Argentina (Misiones) as *suturalis*. From two to nine species are recorded from each of 41 localities (table 2 to 4). The num-

ber of specimens of each species in the tables ranges from one to 28 per locality. If one were to take a wider area, as a province or state, the sympatry would be even more extensive. At a locality given as Volcan, Colima, Mexico, 15 species of *Rhodobaenus* were collected by J. Lane (the volcano, of course, covers a wide area). Champion ("1909-1910" [1910] p. 120) remarked that sometimes "members of this genus are . . . found . . . occurring gregariously on the same bush."

TABLE 2
Number of Specimens of Sympatric Species in Colombia, Venezuela, Trinidad

	<i>augustinus</i>	<i>bicinctus</i>	<i>curvus</i>	<i>deliciosus</i>	<i>laticapus</i>	<i>lebasii</i>	<i>lineiger</i>	<i>longicollis</i>	<i>melanocardius</i>	<i>nawradii</i>	<i>nigrofasciatus</i>	<i>quadripunctatus</i>	<i>riparius</i>
COLOMBIA													
Caldas: Manizales	2	2	—	—	—	—	—	—	—	1	—	—	—
Cundinamarca:													
Bogota	—	2	—	1	9	1	1	1	—	1	—	2	1
Cananche	—	—	—	—	—	—	—	—	—	4	—	3	—
Muzo	—	—	—	—	—	—	2	—	—	2	—	1	—
Magdalena:													
Lorenzo	—	—	3	—	—	1	—	—	—	—	—	—	—
Rio Magdalena	—	2	—	—	—	—	1	—	—	—	—	—	—
Valle del Cauca:													
Anchicaya Dam, 70 km. east of Buenaventura	—	—	—	—	—	—	—	—	5	—	—	—	1
Cauca Valley	6	1	—	—	—	—	—	—	—	2	1	—	—
VENEZUELA													
Aragua: El Limon	—	1	—	—	—	2	—	—	—	—	—	—	—
Distrito Federal:													
Caracas	—	7	—	—	—	2	—	—	—	—	—	—	—
Miranda: Arvelo, moun- tains north of Petare	—	3	—	—	—	3	—	—	—	—	—	—	—
Tachira: Santa Ana	—	4	—	—	—	1	—	—	—	—	—	—	—
TRINIDAD: Arima Valley	—	1	—	—	—	1	—	—	—	—	—	—	—

SYSTEMATICS

GENUS *RHODOBAENUS* LECONTE

Rhodobaenus LeConte, 1876, p. 332 (type, by subsequent designation, *Curculio tredecimpunctatus* Illiger).

Homalostylus Chevrolat, 1885, p. 287 (type, by monotypy, *Sphenophorus laticapus* Kirsch).

DIAGNOSIS: The genus differs, with 15 exceptions (see Discussion below) from the closely allied New World genera *Sphenophorus* and *Metamasius* in having the claw segment between the claws excavated (figs. 1,

2), not smooth, and the pygidium similar in both sexes. A feeble concavity of the abdomen, if present, does not distinguish the sexes as it does in these other genera. Eleven species of *Rhodobaenus* differ further in having the antennal scape enlarged (figs. 3–8, 22).

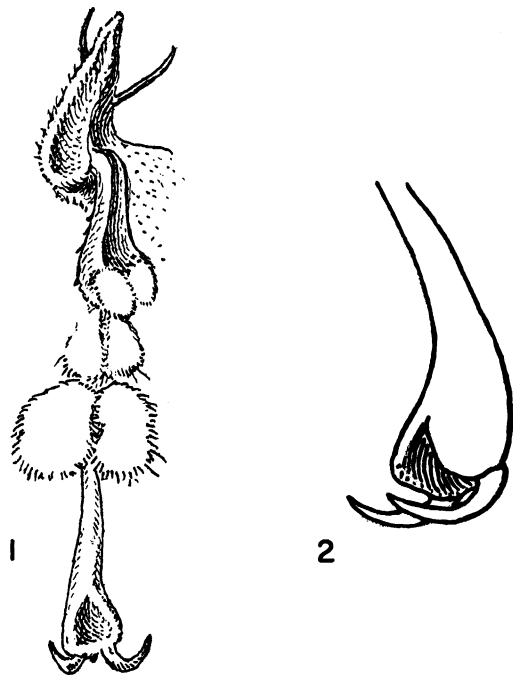
DESCRIPTION OF GENUS: (See also Sexual Dimorphism below.) Length 6 to 22 mm., generally 10 to 12 mm. Rostrum slightly shorter or longer than pronotum, arcuate or straight, subcylindrical or feebly com-

TABLE 3
Number of Specimens of Sympatric Species in Ecuador

	<i>apicalis</i>	<i>dentirostris</i>	<i>lineiger</i>	<i>longicollis</i>	<i>maior</i>	<i>melanocardius</i>	<i>melanurus</i>	<i>nawradii</i>	<i>nivosus</i>	<i>pullus</i>	<i>quadripunctatus</i>	<i>rhinopilus</i>	<i>riparius</i>	<i>rufirostris</i>
ECUADOR														
Chimborazo: Chimbo	14	—	—	—	28	—	—	8	—	—	9	1	—	—
Imbabura: Paramba	4	—	—	—	10	—	—	1	—	—	—	—	—	—
Los Rios: San Carlos	—	—	—	—	1	—	1	—	—	—	—	—	—	—
“Oriente”: Puyo	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Zatzayacu	—	—	1	—	—	—	1	—	—	—	—	—	—	—
Bolivar: Balzapamba	6	—	—	—	6	—	1	3	4	5	—	—	—	—
Pichincha: Santo Domingo	5	—	—	—	—	—	—	12	—	—	1	—	—	—
Rio Palenque, 47 km. south of Santo Domingo	5	—	2	—	2	—	—	3	—	—	—	—	—	—
Pastaza: Rio Pastaza	—	—	—	2	—	1	—	—	—	—	—	—	—	—
Mera	—	—	1	1	—	—	—	—	—	—	—	—	12	—
Rio Mapoto	—	—	—	—	—	1	—	—	—	—	—	—	1	—
Baños to Canelos	—	—	1	2	—	—	—	—	—	—	—	—	—	—
Tungurahua: Baños	1	—	—	3	—	—	—	—	—	—	—	—	—	—
Ambato	1	—	—	—	—	—	—	—	1	—	—	—	—	—

TABLE 4
Number of Specimens of Sympatric Species in Paraguay, Bolivia, Peru

	<i>aduncus</i>	<i>apicalis</i>	<i>bivittatus</i>	<i>lineiger</i>	<i>longicollis</i>	<i>melanocardius</i>	<i>melanurus</i>	<i>nigripes</i>	<i>quadrus</i>	<i>riparius</i>	<i>rufirostris</i>	<i>rufus</i>	<i>schnusei</i>	<i>suturalis</i>
PARAGUAY														
Sapucaí or Sapucay	—	3	—	—	6	—	—	—	—	—	—	—	—	7
BOLIVIA														
Las Yungas: Coroico	11	—	—	—	—	—	15	—	—	—	6	—	—	—
El Palmar	2	—	—	—	—	—	2	—	—	—	—	—	—	—
?: Callanga	2	—	1	—	—	—	1	1	—	—	—	2	1	—
PERU														
Cuzco: Callanga	1	—	—	—	—	—	—	—	—	—	—	3	—	—
Santa Isabel, Rio Cosnipata	1	—	—	—	—	—	—	12	—	—	—	—	1	—
Marcapata	—	—	—	—	—	—	1	6	—	—	1	—	—	—
Huanuco: Divisoria	—	—	—	—	—	—	—	—	—	4	—	—	3	—
Chinchao below Carpish	—	—	—	—	—	—	—	—	—	10	—	—	1	—
Rio Pachitea	—	—	—	—	—	—	—	—	—	—	2	—	1	—
Rio Huallaga	—	—	—	2	—	1	—	—	—	1	—	—	—	—
Tingo Maria	1	—	—	—	—	—	—	—	—	—	1	—	7	—
Junin: Chanchamayo	5	—	—	2	—	—	4	—	1	—	—	2	6	—
San Martin: Moyobamba	—	—	—	—	—	1	—	—	—	—	3	—	—	—



FIGS. 1-2. Tarsus of majority of *Rhodobanus*, with excavated claw segment. 1. Ventral view. 2. Lateral view of claw, enlarged.

pressed; base of rostrum tumid and humped over antennal insertion or merely convex or flat; pubescence present or not; basal dilation, viewed dorsally, longer than wide, rarely as wide as long, generally angulate in front. Eyes widely separated above, narrowly below. Gular peduncle or peduncle of postmentum (at ventral apex of rostrum) not readily visible as rostrum held so close to body; peduncle in lateral view angularly toothed in front or behind or both, or simply projected slightly forward.

Antennal scape inserted in front of eye at distance of its own width or more, emerging from large, open, squarish groove or scrobe, or inserted right at eye; scape about as long as or longer than funicle or longer than funicle and club combined, either subcylindrical and gradually widening to apex or laterally compressed and of about same width

throughout; scape less than one-half width of rostrum or as wide as or wider than width of rostrum; upper edge either thin and knifelike or sulcate from base to apex or rounded. Antennal funicle six-segmented, tomentose or shining. Antennal groove at lower edge tumid or sharply angulate. Antennal club elongate or round, dilated near middle; apical spongy part (viewed from outer side) as long as or longer than basal sclerotized part, rarely short and barely visible.

Pronotum generally longer than wide, shorter than elytra, flat or convex or transversely impressed near base medially; punctures, if present, encircled or not by buffy or whitish spots; surface smooth; base truncate or feebly sinuate. Scutellum oblong, as narrow as adjacent interval of elytra or triangular with wider base. Elytra slightly wider than pronotum, parallel-sided or narrowing to apex; intervals flat; striae punctate or not; subapical callus distinct or feeble.

Prosternal process behind coxae flat, tumid, or bituberculate. Mesosternal process slightly tumid, generally emarginate. Mesepimeron with anterior and posterior margins subparallel or anterior margin feebly arcuate. Metasternum generally strongly tumid anteriorly. Front coxae contiguous or separated by narrow line; middle coxal interspace scarcely wider than that of front coxae or from two to three times wider. Femora unarmed, linear or feebly clavate. Tibiae uncinata and mucronate; apex rounded. Tarsi spongy-pubescent beneath; third segment dilated; first segment about as long as claw segment; claw segment at apex between claws ventrally excavated (or bilamellate), or smooth (difficult to evaluate in several species). Pygidium generally tumid and projecting beyond apex of abdomen, with setae in punctures and in row or tuft at apex.

Aedeagus essentially similar in all species, (except for *lebasii*), with minute differences; dorsal and ventral plates not separated by lateral line. Eighth tergum of male with apex strongly emarginate, of female conjointly rounded or with apices slightly separated and setose.

CHECKLIST OF SPECIES OF *RHODOBAENUS* IN SOUTH AMERICA

(In the order in which they appear in the text.)

1. *laticapus* (Kirsch)
2. *deliciosus* (Champion)
3. *aduncus* (Erichson)
 - geniculatus* (Hustache)
 - ruficollis* (Hustache), new synonymy
4. *rufirostris* (Hustache)
 - goyaensis* (Hustache), new synonymy
5. *bivittatus*, new species
6. *rufus* (Hustache)
7. *nigrofasciatus* (Champion)
8. *quadrus*, new species
9. *dentirostris* (Champion)
10. *tornowii* (Brèthes)
11. *bicinctus* Chevrolat
12. *apicalis* Hustache
13. *nigripes* Hustache
14. *schnusei* Günther
 - cordifer* Voss, new synonymy
15. *curvus*, new species
16. *augustinus* Günther
17. *longicollis* Hustache
18. *pullus*, new species
19. *nivosus*, new species
20. *lineiger* Chevrolat
21. *suturalis* (Gyllenhal)
 - saucius* (Gyllenhal), new synonymy
 - implicatus* Chevrolat (not Gyllenhal), new synonymy
 - crucicollis* Chevrolat, new synonymy
 - miniatus* Chevrolat, new synonymy
 - nigricornis* Chevrolat, new synonymy
 - bipunctatus* Chevrolat, new synonymy
 - quinquemaculatus* Chevrolat, new synonymy
22. *riparius*, new species
23. *rhinopilus*, new species
24. *lebasii* (Gyllenhal)
 - variabilis* (Gyllenhal)
 - implicatus* (Gyllenhal)
 - femoralis* Chevrolat, new synonymy
 - vittatipennis* Champion, new synonymy
 - immaculatus* Champion, new synonymy
25. *nawradii* (Kirsch)
26. *maior* Voss
27. *melanocardius* (Linnaeus)
 - crassipes* Champion
28. *quadripunctatus* (Chevrolat)
29. *melanurus* (Kirsch)
 - boliviensis* Hustache
 - v. nigrum f. intermedia* Voss

SEXUAL DIMORPHISM: The only dependable means of differentiating the sexes of many species is by dissection, for, in contrast to most species of allied genera, neither the shape of the pygidium nor the concavity of the venter is helpful in sexing *Rhodobaenus*. There are, however, some relative characters: the rostrum of females is longer than that of males, therefore the antennal scape is shorter in relation to the length of the rostrum; the rostrum of females is also proportionately narrower and less punctate; the gular peduncle at the ventral apex of the rostrum generally differs between the sexes, that of males being rounded or flat, that of females projecting forward; in females of some species there is a distinct pendant tooth (fig. 4), or the peduncle (viewed laterally) is angulate both anteriorly and posteriorly, giving a "seesaw" effect (Vaurie, 1967b, p. 8 and fig. 12). In one species the peduncle forms an acute angle in both sexes.

In males of virtually all species there is a tiny sclerotized, triangular projection medially at the inner apex of the abdomen which can be seen if the pygidium is pried open. In males of a number of species the first segment of the abdomen is furnished anteriorly or medially with a small carina or compressed tubercle (the "longitudinal plica" of Champion). Although the ventral tubercle denotes a male, it is not invariably visible in all males of a species.

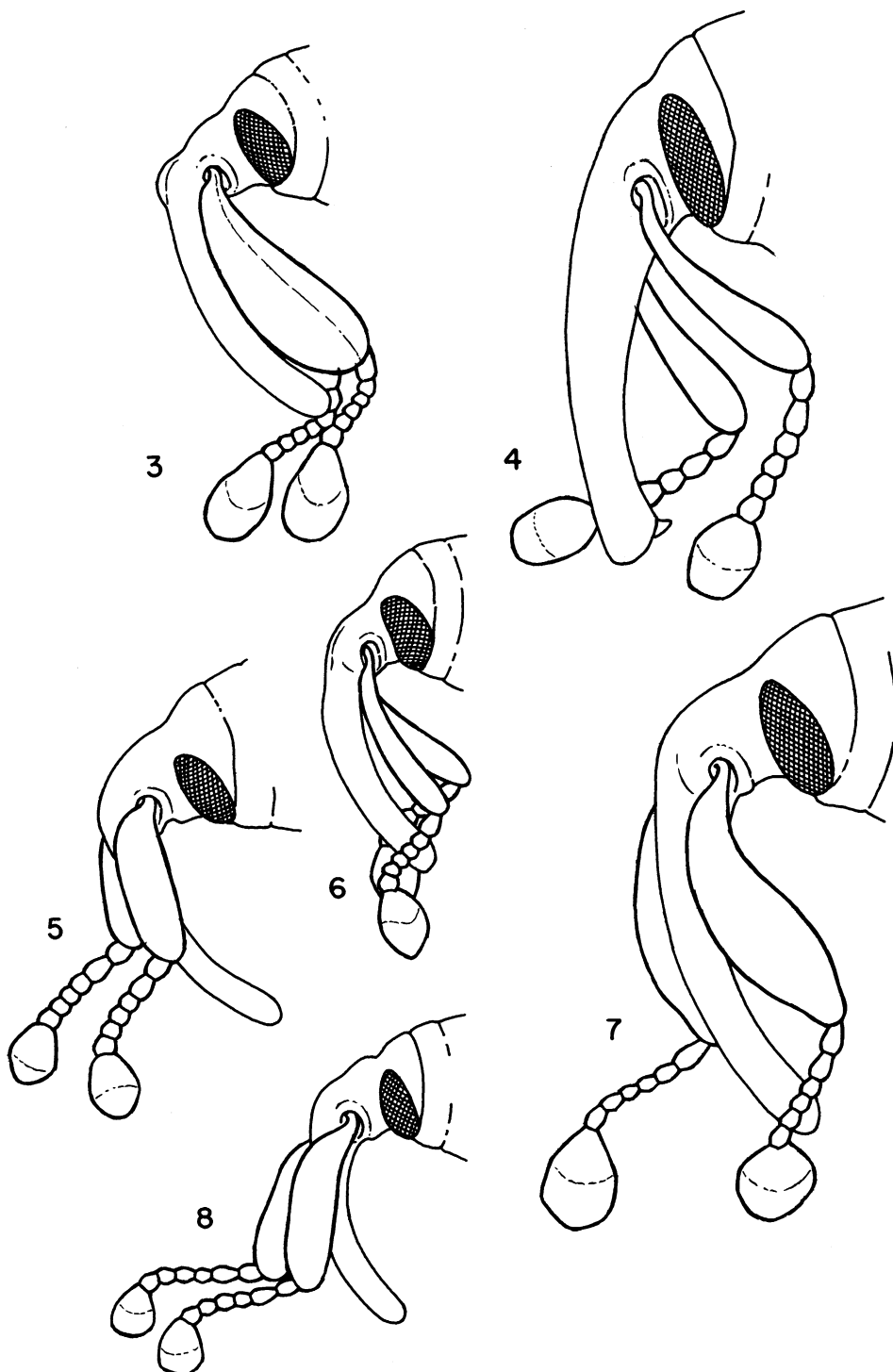
DISCUSSION: Champion ("1909-1910" [1910]) mentioned as generic characters of *Rhodobaenus* the narrow peduncle of the mentum, the gradually widened antennal scape, the narrowly spaced anterior and intermediate coxae, the subconical metasternum, and the spongy-pubescent tarsal soles. These characters do not necessarily distinguish the species from those of *Sphenophorus* and *Metamasius*. The diagnostic claw character, first reported by me (Vaurie, 1951, p. 49, fig. 1), and described by Kissinger (1964) as "tarsal segment 4 excavated in ventral medio-apical region," also does not characterize all species of *Rhodobaenus*. The 15 exceptions to the claw character mentioned in the Diagnosis are the species of the "nawradii group" (Vaurie, 1967b) which be-

long in the genus nonetheless on other characters: the narrow coxal interspaces, the swollen or humped rostrum, rostral setae, large antennal groove, tumid metasternum, and whitish spotting. The same anomalous situation occurs in *Sphenophorus* and *Metamasius* where the third tarsal segments of *Sphenophorus* are normally narrow, but in 15 of the 80 or more species are as widely dilated as those of *Rhodobaenus* or *Metamasius*, also in the 100 or more species of *Metamasius* where the front coxae are widely separated except for nine or 10 species in which they are almost as narrowly separated as those of *Rhodobaenus* and *Sphenophorus*.

As observed in the Description above, many characters vary so much that the genus does not lend itself to the formation of distinct species groups. Instead, I have arranged the species in what seems to be a logical (although perhaps not evolutionary) sequence. The first nine species (see Checklist above) agree in having the antennal scape widely dilated; in the next two species the scape is feebly dilated or dilated in some individuals only; in species 12 to 20 the pronotum is basally depressed; in the next species it is depressed in some examples; in species 22 to 24 the pronotum is convex or flat; and, finally, species 25 to 29 differ from all the preceding species in having the claw segment smooth in the ventral medio-apical region, not excavated.

Color: The red and black patterns of the majority of species are so frequently variable that identical elytral patterns exist in individuals of different species. In a few red and black species a phase occurs in which the elytra or the entire body are black; some of these individuals when wet with a brush show red coming through, but generally they revert to black when dry. Gray species, when worn or greased, appear shiny black and their darker spots or bands, if present, become invisible. In a number of species whitish spots encircle the punctures; they are composed of tiny, dense, depressed setae. The spots can be merged to form whitish streaks.

Antennal scape: The dilated scape of *rufus*



FIGS. 3-8. *Rhodobaenus* with dilated antennal scapes. 3. *R. rufus*, showing submedian swelling. 4. *R. incertus*, Guatemala, female. 5. *R. bivittatus*. 6. *R. deliciosus*. 7. *R. nigrofasciatus*. 8. *R. rufirostris*.

is more than twice the width of the rostrum, completely hiding it when lying next to it, as in the blinders on a horse. The scapes of other species are less wide, from one-half the width of the rostrum to as wide as or slightly wider than the rostrum. At its upper (dorsal) edge, the dilated scape is generally paper thin, whereas the narrow scape is subcylindrical. In *rufus* (fig. 3) and several other species there is a narrow median or submedian swelling from the base to the apex of the dilated scape which Hustache (1938) called a central "nervure" separating the upper and lower parts of the scape. The scape is more or less dilated in 11 species, nine in South America (two of which are also in Central America) and two in Central America. No one has speculated on the function of the widened scape; it is not a secondary sexual character; perhaps it has some connection with the habits or manner of feeding, or with mimicry. Anne T. Howden (personal commun.) noticed in Costa Rica that some gray and black *Rhodobaenus* [probably *nigrofasciatus*] were "perched on leaves along the trail with the dilated scape of the antennae positioned so that they had the habitus of a small mantispid!"

In the key to the species and in the descriptions that follow, where the scape is said to be one-half the length of the rostrum, this means that its apex extends halfway to the apex of the rostrum, or would do so if resting beside it. The scape seems shorter in some females because their rostrum is generally longer than that of males.

Rostrum: In a few species the characteristic swollen or humped base of the rostrum is flat or merely convex; even where it is present it is more exaggerated in some individuals than in others. The rostral setae which are present in *augustinus*, *lineiger*, *longicollis*, *pullus*, *quadrus*, *rhinopilus*, and *riparius* are not invariably visible in all specimens as they are readily subject to wear.

Coxae and pygidium: The coxae are narrowly separated, but within a species the front coxae can be contiguous or separated by a narrow line. The middle coxae are separated from each other by less than one-half

the diameter of a coxa, generally by less than that.

In some instances the pygidium, which is similar in both sexes, provides distinguishing characters in its shape, length, and pubescence. In all species, setae are probably present in the punctures or at the apex, but they are readily abraded and I mention them only where they are noticeable. The apex of the pygidium generally projects beyond the apex of the abdomen.

Diagnostic characters other than color, used in the key that follows, include chiefly the antennal scape and club, the rostrum, gular peduncle, pronotum, elytra, and pygidium.

KEY TO THE SPECIES OF *RHODOBAENUS* IN SOUTH AMERICA¹

1. Antennal scape widened, dilated (one-half or more width of rostrum), compressed; upper edge generally sharp, knife like 2
 Antennal scape narrow, subcylindrical; upper edge not sharp 12
2. Pronotum red with two oblique lateral black stripes; antennal scape wider than rostrum and scarcely one-half its length *bivittatus*, new species
 Pronotum red with one black stripe or three or no black stripes; antennal scape of various widths, but longer than one-half length of rostrum 3
3. Antennal scape at widest part three or four times wider than rostrum and nearly as long; dorsum dark red
 *rufus* (Hustache)
 Antennal scape not more than twice width of rostrum, long or short; dorsum red, red and black, or grayish 4
4. Antennal club with spongy apex short, one-third or less length of club
 *rufirostris* (Hustache)
 Antennal club with spongy apex one-half or more length of club 5
5. Dorsum grayish, with three faint black

¹ The antennal club should be viewed from the outer side; the word "red" serves for red, orange, or yellowish.

- bands on elytra; antennal scape distinctly wider than rostrum
 *nigrofasciatus* (Champion)
- Dorsum red or red and black; antennal scape feebly wider or narrower than rostrum 6
6. Rostrum black 7
- Rostrum red, dark red, or red and black 10
7. Elytra across base with black band; antennal scape (viewed laterally) with median swelling generally visible
 *laticapax* (Kirsch)
- Elytra with base red or partially so, or entire elytra black; antennal scape smooth, without swelling 8
8. Prosternum (except for extreme sides), venter, and legs black
 *deliciosus* (Champion)
- Prosternum and venter red and black, legs various 9
9. Elytra near apex with tenth (outermost) interval black and ninth interval red; antennal scape narrower than rostrum *torowii* (Brèthes) (part)
- Elytra near apex with two outer intervals not as stated above; antennal scape as wide as, generally wider than rostrum *aduncus* (Erichson) (part)
- 10(6). Pygidium from about middle to apex strongly carinate and tumid, extending well beyond apex of abdomen; rostrum generally red with base and apex black *aduncus* (Erichson) (part)
- Pygidium feebly convex; rostrum red or dark red 11
11. Antennal groove with posterior border acutely toothed and distant from eye by about width of antennal club
 *dentirostris* (Champion)
- Antennal groove with posterior border feebly tumid and distant from eye by no more than width of antennal scape *quadrus*, new species
- 12(1). Tarsus with claw segment in ventral medio-apical region smooth; grayish, dark red or black, generally 10 mm. or more 13
- Tarsus with claw segment in ventral medio-apical region excavated (figs. 1, 2); mostly red and black 17
13. Pronotum near base distinctly impressed; tarsus dorsally shining and with third segment ventrally entirely spongy-pubescent *nawradii* (Kirsch)
- Pronotum near base flat; tarsus dorsally tomentose and with third segment ventrally only two-thirds or three-fourths spongy-pubescent 14
14. Disc of elytra with common median V-shaped or heart-shaped dark mark 15
- Disc of elytra with two separated small dark spots 16
15. Larger (14 to 18 mm.), dark red; pronotum with three faint black stripes; elytra with black marks velvety, outlined by white; median mark heart-shaped *maior* Voss
- Smaller (10 to 12 mm.), grayish black or buffy; elytra dusty-looking, with black marks opaque; median mark V-shaped, oblique ... *melanocardius* (Linnaeus)
16. Pronotum longer than wide
 *quadripunctatus* (Chevrolat)
- Pronotum squarish, about as wide as long *melanurus* (Kirsch)
- 17(12). Rostrum red, wide, short (about four times longer than wide and wider than antennal club); dorsum red with sparse black markings; space between middle coxae nearly as wide as coxa; small (6 to 8 mm.) *lineiger* Chevrolat
- Not agreeing with all characters given above 18
18. Antennal club with spongy apex short, from one-fourth to one-fifth or less length of club; antennal scape short (reaching to about one-half length of rostrum) 19
- Antennal club with spongy apex longer, one-third or more length of club; antennal scape long (generally reaching three-fourths length of rostrum) ... 20
19. Rostrum ventrally with two rows of bristly setae; pronotum at middle red, as wide at base as long and only about one-half length of elytra
 *rhinopilus*, new species
- Rostrum not setose; pronotum medially striped with black, longer than wide and longer than one-half length of elytra *suturalis* (Gyllenhal)
20. Pronotum flat or convex, without trace of basal impression 21
- Pronotum near base feebly or strongly impressed 22
21. Red and black or entirely black, without whitish spots; rostrum slender, narrower at middle than apex of front femur, and glabrous, virtually impunctate (except near base) ... *lebasii* (Gyllenhal)

- Blackish gray with whitish spots around punctures (spots can be effaced); rostrum robust, as wide at middle as apex of front femur, with dense, minute, setose punctures on all sides
 *riparius*, new species
22. Rostrum at base with short setae either ventrally or dorsally (high magnification may be necessary) 23
 Rostrum not setose 25
23. Elytra red and black in transverse bands; antennal groove with lower (posterior) border sharply toothed (angle visible from above) *augustinus* Günther
 Elytra gray, black, or dark red with or without several black marks (but not in bands); antennal groove with lower border merely tumid 24
24. Elytra uniformly gray or blackish; pygidium feebly, if at all, setose; rostrum ventrally abundantly setose; rostrum and scape black
 *pullus*, new species
 Elytra either black with whitish spots around punctures, or dark red with from two to 10 black marks; pygidium with tuft of long setae apically; rostrum ventrally not setose; rostrum and scape red *longicollis* Hustache (part)
- 25(22). Elytra with whitish spots; gray, black, or dark red with short black stripes; antennal scape and rostrum dark red; pygidium with exposed part about as wide as long 26
 Elytra without whitish spots; red and black in contrasting pattern; antennal scape and rostrum black; pygidium longer than wide 27
26. Rostrum (viewed in profile) wider in basal third or at apex than at middle; base dorsally carinate; pygidium with long apical tuft of setae; larger (9.5 to 12 mm.) *longicollis* Hustache (part)
 Rostrum (in profile) same width throughout, not carinate dorsally; pygidium with short setae, no tuft, smaller (7.5 mm.) *nivosus*, new species
27. Rostrum strongly, uniformly arcuate, almost semicircular (fig. 26)
 *curvus*, new species
 Rostrum arcuate to almost straight .. 28
28. Pygidium in profile flattish or feebly convex; sides (viewed from above) scarcely narrowing to apex; apex truncate or rounded; male lacking ventral tubercle 29
- Pygidium in profile tumid, especially toward apex; sides (viewed from above) narrowing strongly to apex; apex subacuminate; male with minute tubercle at middle or front of first segment of abdomen 30
29. Elytra with U-shaped or broadly V-shaped black patch from base to beyond middle (but base narrowly red in two examples); rostrum opaque black, generally punctate to near apex and not humped over base .. *schnusei* Günther
 Elytra with black markings not U- or V-shaped; rostrum shining black, generally impunctate in apical half
 *nigripes* Hustache
30. Elytra near apex with outermost (tenth) interval black and ninth red; antennal scape dorsally sulcate, that of females appearing almost as wide as rostrum which is very narrow; Argentina, Bolivia *tornowii* (Brèthes) (part)
 Elytra near apex with ninth and tenth intervals both black or both red; antennal scape dorsally not sulcate, less than one-half width of rostrum; north of Bolivia 31
31. Aedeagus with apex entirely horny, and, viewed laterally, of about same width throughout; antennal funicle with second segment elongate, generally almost twice as long as wide
 *apicalis* Hustache
 Aedeagus with apex at middle membranous, and, viewed laterally, narrower at apex; antennal funicle with second segment generally scarcely, if at all, longer than wide
 *bicinctus* Chevrolat

Rhodobaenus latiscapus (Kirsch)

Figure 9

Sphenophorus latiscapus Kirsch, 1869, p. 221 (Bogota, Colombia; type, male, in Staatliches Museum für Tierkunde, Dresden, examined).

DIAGNOSIS: Rostrum and antennae black; elytra red and black; pronotum without median black stripe. Scape dilated, about same width (as wide as rostrum) as that of *aduncus*; differs from *aduncus* in having base of elytra black.

RANGE: Bolivia, Colombia, Ecuador.

(For the 23 specimens examined, see Appendix.)

DESCRIPTION: Length 8.5 to 10.5 mm. Rostrum humped at base, arcuate, impunctate except for base; of male about same length as pronotum; of female slightly longer; basal dilation slightly longer than wide; base below antennal groove angulate or tumid. Gular peduncle of male rounded, of female slightly projecting forward. Antennal scape as wide as and three-fourths as long as rostrum; median swelling visible; upper edge arcuate, knifelike, but sulcate within; scape longer than funicle and club combined. Antennal club elongate, at least as wide as rostrum; apical spongy part truncate, longer than base. Antennal groove with posterior border distant from eye by a little more than width of antennal segment.

Pronotum impunctate, red with hind angles black or with small black spot medially; basal impression deep, wide. Elytra almost twice length of pronotum, red with black across base, black extending slightly backward on sutural and first intervals; round black spot present or not at middle of sides; apical fourth entirely black; striae with tiny punctures. Prosternum red on sides, black at center, tumid in front of coxae; remainder of venter and legs black. Posterior femur gradually widened. Pygidium from middle to apex tumid; apex truncate.

Male: Abdomen with first segment at middle minutely tuberculate. Aedeagus not examined.

REMARKS: This species is the one on which Chevrolat based his genus *Homalostylus*. The dilated scape is of striking appearance, but it is not so wide as that of *rufus* (Hustache). The black-red-black elytral pattern of *latiscapus* resembles that of three species with the scape narrow, *augustinus*, *schnusei*, and some *apicalis*.

Rhodobaenus deliciosus (Champion)

Figures 6, 10

Sphenophorus deliciosus Champion, "1909-1910" [1910], p. 145 (Colombia; type, male, in British Museum, examined).

DIAGNOSIS: Rostrum and antennae black;

elytra red with black markings. Differs from most species with dilated scape in having scape of male narrower than rostrum at middle, not same width or much wider, in having more black at apex of elytra, and elytral pattern constant (fig. 10).

RANGE: Colombia. (For the 10 specimens examined, see Appendix.)

DESCRIPTION: Length 8 to 10 mm. Rostrum and gular peduncle as described for *latiscapus*. Antennal scape (fig. 6) of male narrower than but nearly as long as rostrum; that of female shorter but as wide as apex of rostrum; inner swelling faintly visible in some examples; scape as long as funicle and club combined; upper edge sharp, but sulcate within apically. Antennal club elongate, slightly wider than apex of rostrum; apical spongy part about one-half length of club. Antennal groove distant from eye by width of funicle.

Pronotum red with median black stripe and two very short lateral marks; basal impression deep. Elytra less than twice length of pronotum, red with black markings: black area on sutural and first intervals extending to about middle of elytra where black spreads feebly sideways; black spot on humerus and at middle of sides, spots not touching margin of elytra, black across apical third; striae with distinct equidistant punctures. Prosternum feebly tumid in front of coxae, black with red on sides of pronotum only; remainder below black. Posterior femur gradually widened, feebly clavate. Pygidium tumid from middle to apex; apex acuminate.

Male: First abdominal segment with minute tubercle in front. Aedeagus with apex feebly emarginate and membranous.

REMARKS: Champion described *deliciosus* as a variety of *R. bicinctus* (both occur in Bogota), a species which has perhaps the most variable of all elytral patterns. The antennal scape of *bicinctus*, however, is narrow and subcylindrical, not wide and compressed as in *deliciosus*. The unique specimen in the British Museum bears a printed label, "*Rhodobaenus bicinctus* Chevr. var." and an original handwritten label "*Sphenophorus deliciosus* Jekel Colombia." Champion thus

inadvertently described this form using Jekel's unpublished name. He did not mention the antennal scape, which is not so wide in his type as it is in specimens found subsequently. One male was dissected.

Rhodobaenus aduncus (Erichson)

Figures 28–31

Sphenophorus aduncus Erichson, 1847, p. 137 (Peru; type, male, in Dresden Museum, examined).

Homalostylus geniculatus Hustache, 1936, p. 93 (Yungas, Bolivia; lectotype, male, here designated from two "types" in Paris Museum; synonymized by Kuschel, 1950).

Homalostylus ruficollis Hustache, 1938, p. 233 (Callanga, Peru; type, male, in Paris Museum, examined). New synonymy.

DIAGNOSIS: Rostrum red and black, rarely entirely black; scape dilated; elytra red and black or black. No matter color of elytra, this species generally recognizable by red and black rostrum. Most similar to *rufirostris*, but differs in having scape and spongy apex of club long, not short.

RANGE: Bolivia, Peru. (For 48 specimens examined, see Appendix.)

DESCRIPTION: Length 7 to 11 mm. Rostrum humped at base, arcuate, red at middle, black at both ends (three examples with it black), impunctate except for base; that of male same length as pronotum; of female distinctly longer than pronotum and narrower than that of male; basal dilation slightly longer than wide; base below antennal groove feebly angulate. Gular peduncle as described for *latiscapus*. Antennal scape virtually straight, as wide as or slightly wider than rostrum at middle and almost as long in male; compressed but dorsally sulcate; longer than funicle and longer than two-thirds length of rostrum; median swelling not or scarcely evident. Antennal club dilated at middle, distinctly wider than apex of rostrum; apical spongy part at least one-half length of club. Antennal groove distant from eye by width of antennal funicle.

Pronotum red with black median stripe or three black stripes, or red except for black on basal margin; basal impression deep. Elytra less than twice length of pronotum, en-

tirely red, or entirely black, or red with two or three lateral black spots or other combinations (figs. 28–31); striae with punctures visible or not; intervals impunctate. Prosternum red on sides, black around coxae, tumid in front of coxae; underside black except for reddish metasternum or abdomen; legs black or red and black. Posterior femur gradually widened, feebly clavate. Pygidium abruptly tumid from middle to apex, acuminate.

Male: Ventral carina at middle of first segment distinct, elongate. Aedeagus with sides flared out apically where truncate and membranous.

REMARKS: As in a number of species, the femora are red with the apices black; the tibiae are red and black, but in some examples the hind tibiae are entirely black.

The specimen of *geniculatus* chosen as lectotype, although labeled as a female, is in fact a male (partly dissected). In the female the rostrum is markedly longer and narrower than that of the male and the scape is thus wider in relation to the narrow rostrum. The types of *ruficollis* and *geniculatus* differ from the type of *aduncus* only in variations of the color pattern of the elytra. The elytra are red in the paralectotype of *geniculatus*, red with black lateral spots in the lectotype of *geniculatus* and in the type of *aduncus*, and black in *ruficollis*. In the specimens with black elytra there is red on the basal lateral margins or the red shows through the black. Six males, including the types of *aduncus* and *geniculatus*, were dissected.

In Blackwelder's catalogue (1947), *aduncus* appears under the genus *Calendra*.

Rhodobaenus rufirostris (Hustache)

Figures 8, 32–34

Homalostylus rufirostris Hustache, 1936, p. 92 (Yungas, Bolivia; lectotype, male, designated from male and female syntypes in Paris Museum, examined).

Homalostylus goyaensis Hustache, 1936, p. 93 (Jatahy, Goyaz, Brazil; lectotype, male, designated from two male syntypes in Paris Museum, examined). New synonymy.

DIAGNOSIS: Rostrum and antennae red; remainder red and black. Differs from other

species with dilated scape except *bivittatus* in having spongy apex of club (on outer side) short, one-third or less length of club; differs from *bivittatus* in having longer, narrower scape and three, not two stripes on pronotum.

RANGE: Bolivia, Brazil, Ecuador, Peru. (For 59 specimens examined, see Appendix.)

DESCRIPTION: Length 7 to 9 mm. Rostrum humped at base, arcuate; that of male about same length as pronotum, of female longer, and narrower than that of male; impunctate except for base; basal dilation slightly longer than wide; base below antennal opening feebly angulate. Gular peduncle as described for *latiscapus*. Antennal scape straight, as wide as or slightly wider than rostrum; median swelling barely visible; upper edge sulcate; scape longer than funicle and longer than one-half length of rostrum. Antennal club elongate, scarcely wider than apex of rostrum; apical spongy part only one-third or one-fourth length of club. Antennal groove distant from eye by width of antennal funicle.

Pronotum red with three black stripes; basal impression deep. Elytra about one-half longer than pronotum; red with humerus black, or humerus and apex black, or with black spot on sides, or other combinations (figs. 32–34); striae with punctures faintly visible. Prosternum and underside partly red with black stripe on sides of prosternum; metepisternum black, or venter blackish suffused with red. Posterior femur gradually widened, feebly clavate. Pygidium from middle to apex strongly tumid, shining, acuminate.

Male: First abdomen with slight tubercle. Aedeagus with sides parallel, apex truncate, but membranous.

REMARKS: The type specimens of *goyaensis* differ from those of *rufirostris* only in the color of the elytra, which in *rufirostris* are more black. Of the series of "*goyaensis*" from Brazil, seven specimens are like the lectotype, with only humeral and apical black marks, 10 have also a mediolateral black spot, and one (Jatahy) has the suture black as in most other *rufirostris* from Bolivia and Peru. Because of this variability in

different areas, I believe these forms are conspecific.

Such a small spongy apex of the club is found elsewhere only in *suturalis*, a species with narrow, normal scape, and in *bivittatus* (see Diagnosis above).

The claw segment is scarcely excavated and difficult to see, a fact which led me to state in error (1967a, p. 2, footnote) that it was not excavated. Two males were dissected.

Rhodobaenus bivittatus, new species

Figure 5

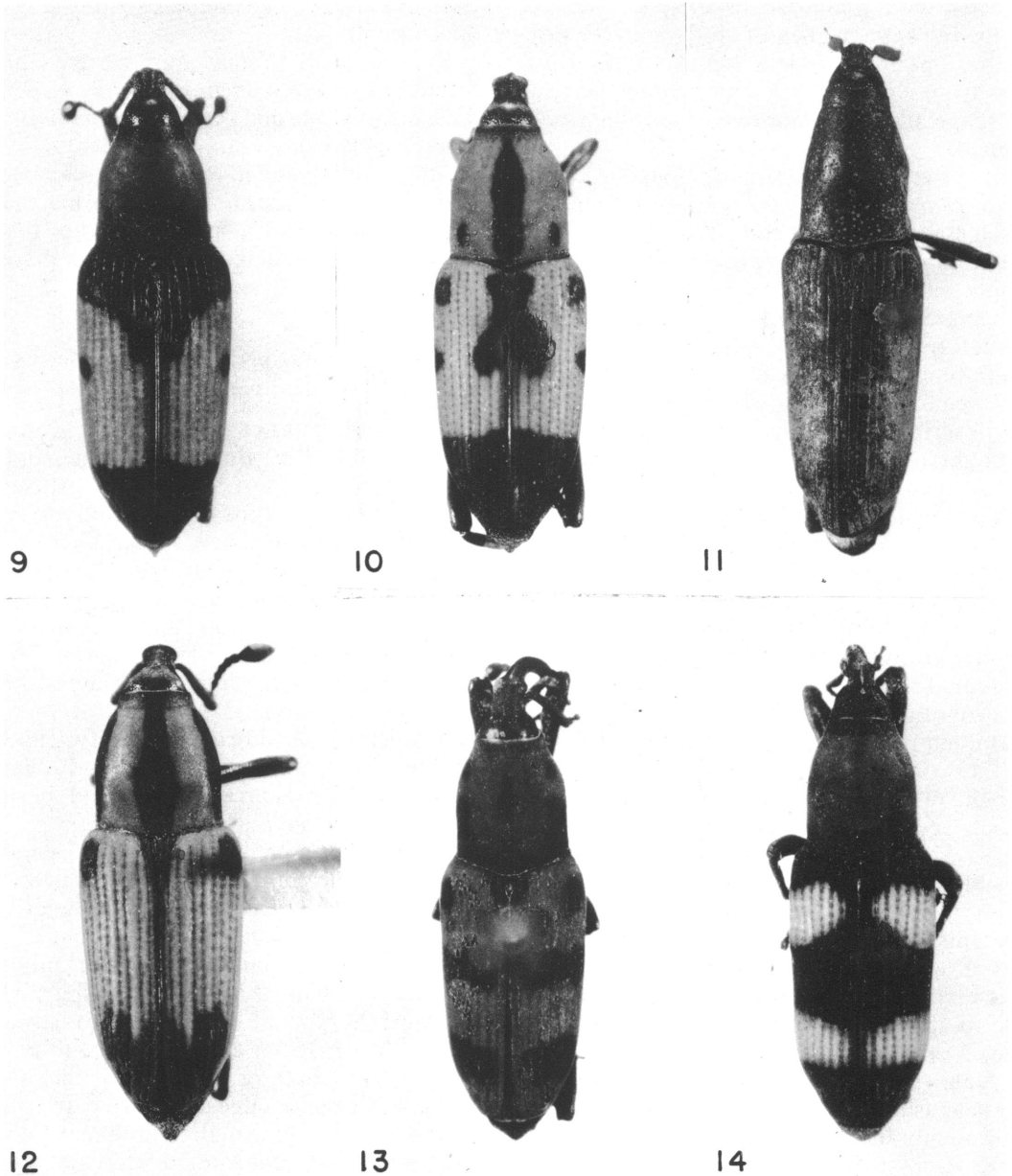
TYPE MATERIAL: Holotype, female, Yungas de la Paz, Bolivia, 1000 m., and female paratype, Peru, in Dresden Museum; two female paratypes from Bolivia: one, without specific locality, in Kuschel collection, Auckland; one, Callanga, Garlepp, collector, in Paris Museum.

DIAGNOSIS: Rostrum and antennae red; elytra red with black spots on sides. Differs from all species in having two lateral black stripes on pronotum. Similar to *rufirostris*, but with scape shorter, scarcely one-half length of rostrum, and wider, more dilated, and pronotum scarcely impressed basally.

RANGE: Bolivia, Peru.

DESCRIPTION OF HOLOTYPE: Length 8 mm. Rostrum humped at base, arcuate, impunctate except at base, slightly longer than pronotum; basal dilation slightly longer than wide; base below antennal groove only feebly tumid. Gular peduncle projecting slightly forward. Antennal scape (fig. 5) straight, wider than rostrum at middle, about as long as one-half length of rostrum; median swelling visible; upper edge sharp, sulcate within; scape scarcely longer than antennal funicle. Antennal club elongate, dilated at middle; apical spongy part about one-third of club. Antennal groove distant from eye by about width of antennal funicle.

Pronotum red with two oblique lateral black stripes; disc impunctate; sides sparsely punctate, subparallel; basal impression feebly indicated. Elytra more than one-half longer than pronotum, red with scutellum, humerus, mediolateral spot and subapical

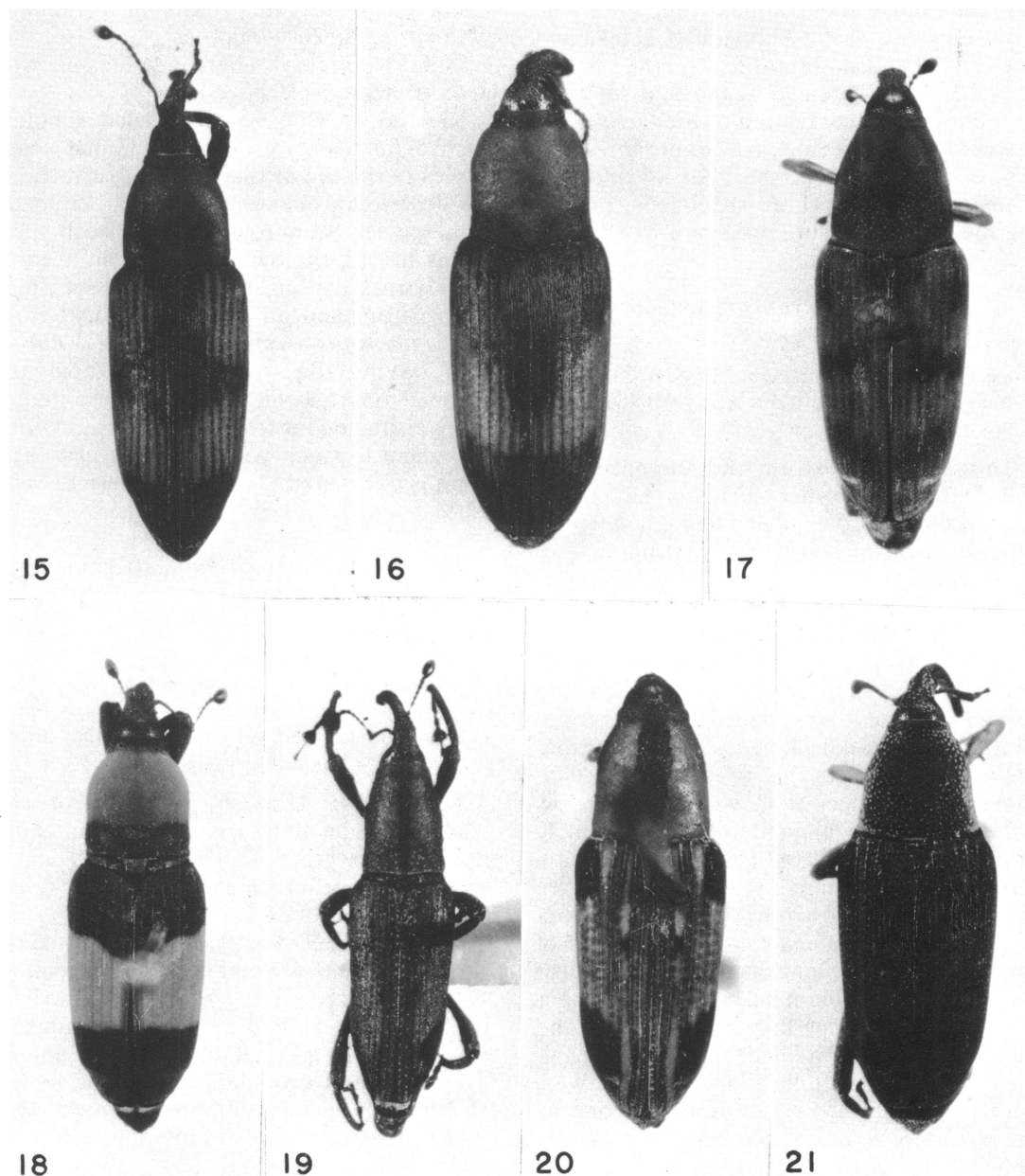


FIGS. 9-14. *Rhodobaenus*, not to scale. 9. *R. latiscapus*. 10. *R. deliciosus*. 11. *R. quadrus*. 12. *R. tornowii*. 13. *R. bicinctus*. 14. *R. nigripes*, typical.

callus black; strial punctures visible. Prosternum tumid in front of coxae, black on sides, red at center; remainder below and legs red and black. Posterior femur feebly

clavate. Posterior tibia incurved. Pygidium feebly tumid apically and rather acuminate.

VARIATION FROM HOLOTYPE: One paratype is 8.5 mm. The basal impression of the



FIGS. 15–21. 15. *R. nigripes*, variant. 16. *R. schnusei*. 17. *R. curvus*. 18. *R. augustinus*. 19. *R. nivosus*, showing white spotting. 20. *R. lineiger*. 21. *R. rhinopilus*.

pronotum is more distinct in one female, and in another it is more punctate than that of the holotype. In one specimen the black median spot is absent.

ETYMOLOGY: The species name is from the Latin *bivittatus*, meaning two-striped.

REMARKS: The four females are similar and distinctive enough to warrant being de-

scribed even without a male. They are narrow, elongate, have subparallel sides, and are readily recognizable by the short, straight, wide antennal scape and bivittate pronotum. The excavation of the tarsal claw segment is very feeble, as also in *rufirostris*. The eighth tergum at the apex is split and abundantly hairy. Three specimens, including the holotype, were dissected.

Rhodobaenus rufus (Hustache)

Figure 3

Homalostylus rufus Hustache, 1938, p. 233 (type, male, Callanga, Peru, in Paris Museum, examined).

DIAGNOSIS: Rostrum and antennae dark red. Differs from other species in having antennal scape paddle-shaped and much wider, at least three times width of rostrum and almost as long.

RANGE: Bolivia, Peru. (For 15 specimens examined, see Appendix.)

DESCRIPTION: Length 8 to 10.5 mm. Rostrum humped at base, arcuate, impunctate except for base, about same length as pronotum, that of female longer and proportionately narrower than that of male; basal dilation slightly longer than wide; base below antennal groove angulate. Gular peduncle apparently rounded, but generally hidden by large scape. Antennal scape (fig. 3) three times wider than rostrum; upper edge strongly arcuate; that of male as long as, and of female almost as long as rostrum; median swelling well visible near lower edge; upper edge knifelike; scape longer than funicle and club combined. Antennal club elongate, almost as long as funicle and almost twice width of rostrum; spongy apex as long as base. Antennal groove distant from eye by about width of rostrum.

Pronotum dark red, distinctly longer than wide; basal impression feeble or strong. Elytra dark red, less than twice longer than pronotum; punctures faint or not visible; base bisinuate. Prosternum flat, not tumid, very long (distance between front coxa and front border of prosternum at least two and one-half times diameter of coxa). Posterior

femur feebly clavate. Pygidium acuminate, with strong apical tumidity.

Male: No ventral tubercle. Aedeagus with apex truncate, sclerotized.

REMARKS: One wonders what function such a fantastically dilated antennal scape serves in the life of this weevil. Hustache in his description makes no special comment. This species is entirely dull red, fresh specimens having the humerus and the apex of the elytra a darker shade. In one specimen the rostrum and antennae are black. *Rhodobaenus rufus* is most similar to *dentirostris*, having the same narrow form and humped rostrum with its angulate antennal groove situated far from the eye, but in *rufus* the scape is much wider and the claw segment is excavated. Two males were dissected.

Rhodobaenus nigrofasciatus (Champion)

Figure 7

Homalostylus nigrofasciatus Champion, "1909-1910" [1910], p. 117, pl. 5, figs. 29, 29a, 30 (lectotype, female, Volcan de Chiriqui, Panama, here designated from original specimens from Panama and Costa Rica in the British Museum, examined).

DIAGNOSIS: Grayish, with one or two black bands on elytra; rostrum and antennae black. Differs from other species with dilated antennal scape in being grayish black, not red or red and black.

RANGE: Colombia; Costa Rica, Panama. (For 16 specimens examined, see Appendix.)

DESCRIPTION: Length 8 to 12 mm. Rostrum humped at base, arcuate, impunctate except for base, that of male as long as pronotum and crenulate below, of female slightly longer and notably narrower than that of male; basal dilation twice as long as wide; base below antennal opening sharply angulate. Gular peduncle of male carinate, angulate in front and behind, of female with small prominence extending forward. Antennal scape (fig. 7) arcuate, at widest part distinctly wider than rostrum; median swelling visible; upper edge knifelike; scape longer than funicle and club combined. Antennal club broadly oval, at least as wide as ro-

trum; apical spongy part rounded, longer than basal part. Antennal groove distant from eye by twice width of antennal segment.

Pronotum gray with whitish spots around punctures; subconical; basal impression deep. Elytra more than one-half longer than pronotum, with whitish spots around punctures and irregular blackish median and apical bands. Prosternum tumid in front of coxa; distance between coxa and front border twice diameter of coxa. Posterior femur slightly clavate. Posterior tibia feebly expanded. Pygidium feebly convex; apex narrowly rounded; punctures hairy.

Male: Ventral tubercle not invariably present. Aedeagus with apex emarginate, corneous.

REMARKS: The large, arcuate, black scape is second in width to that of *rufus*. Viewed dorsally *nigrofasciatus* could be mistaken for *nawradii*, *plicatus*, *cuneatus*, or *olivaceus*—all species with the antennal scape narrow. Two males were dissected.

***Rhodobaenus quadrus*, new species**

Figures 11, 22

TYPE MATERIAL: Holotype, male, Peru, and paratype, male, Chanchamayo, Peru, in Kuschel collection, Auckland (male paratype to be deposited in the American Museum of Natural History, New York); Sabanilla, Ecuador, 1907, Ohaus, collector, one female paratype in Staatliches Museum für Tierkunde, Dresden.

DIAGNOSIS: Rostrum red and antennae black or red: scape dilated. Narrow, elongate, red species with faint black markings, differing from *dentirostris* in having pygidium about as wide as long, and not acuminate.

RANGE: Ecuador, Peru.

DESCRIPTION OF TYPE: Length 11 mm. Rostrum humped at base, arcuate, virtually impunctate except for base, shorter than pronotum, dorsally carinate in front of antennal insertion where some show scarcely visible setae; basal dilation about as long as wide; base below antennal groove tumid. Gular peduncle carinate, obtusely angled be-

hind. Antennal scape (fig. 22) blackish, straight, slightly longer than funicle, nearly as wide as rostrum and more than one-half its length; median swelling visible; upper edge knifelike but sulcate within. Antennal club elongate, feebly dilated, about as wide as rostrum; spongy apex about one-half length of club. Antennal groove distant from eye by about width of base of scape.

Pronotum dark red with short lateral black stripes, sparsely punctate; punctures surrounded by buff; basal impression faint. Elytra dark red with faint black on humerus, scutellum, and subapical callus; longer than pronotum by one-half; intervals with scattered tiny, buffy-rimmed punctures. Prosternum scarcely tumid, red except for sides of base and area around front coxae where black; remainder below mostly black, but metasternum red and femora red with base and apex black; tibiae black. Posterior femur gradually widened. Pygidium feebly cristate and convex, with punctate part as wide as long; apex more or less truncate, with few apical setae.

Male: No ventral tubercle. Aedeagus with apex truncate and hollowed.

VARIATION FROM HOLOTYPE: The two paratypes measure 9.5 and 10 mm. In the female from Ecuador the apex of the rostrum (gular peduncle) is only feebly carinate and is not angled behind; this specimen is colored and spotted with whitish as in the type, but differs in having the tibiae red and the pronotum furnished with a black median line. The male from Chanchamayo has no red on the metasternum and the black areas of the elytra are distinct, not faint. In both paratypes the basal impression of the pronotum is more distinct and deeper, and the second segment of the abdomen is red basally.

ETYMOLOGY: The species name is from the Latin *quadrus*, or square, referring to the shape of the pygidium.

REMARKS: Dorsally, *quadrus* has much the aspect of *longicollis*, but in *longicollis* the antennal scape is narrow, not widened. The elytral pattern of black humeri and black apical band is similar to that of *apicalis* (the type), a species also with a narrow scape.

The rostrum of the male with its angulate gular peduncle is like that of *nigrofasciatus*, which is blackish, not red, and has a much wider scape. All three specimens were dissected.

Rhodobaenus dentirostris (Champion)

Homalostylus dentirostris Champion, "1909-1910" [1910], p. 118, pl. 5, figs. 31, 31a, 32 (Santecomapan, Veracruz, Mexico; type, male, in British Museum, examined).

DIAGNOSIS: Rostrum and antennae dark red to black. Similar to *rufus* in dark red coloration, shape, and structure of rostrum, but differs in having antennal scape much narrower (about width of rostrum), prosternum longer, and claw segment not excavated.

RANGE: Ecuador; Mexico, Costa Rica. (For six specimens examined, see Appendix.)

DESCRIPTION: Length 8 to 10.5 mm. Rostrum humped at base, arcuate, of male slightly shorter than pronotum, of female longer; basal dilation distinctly longer than wide; base below antennal groove acutely angulate. Gular peduncle of male rounded off; of female with acute pendant angle. Antennal scape not quite as wide as rostrum at middle, rather sinuous, nearly as long as rostrum; inner scape visible; upper edge sharp; scape as long as funicle and club combined. Antennal club about as wide as rostrum at middle, roundish; spongy apex slightly more than one-half length of club. Antennal groove as far from eye as club is wide.

Pronotum about one-half longer than wide, dark red with three black stripes; basal impression feeble, or, in two females, strong. Elytra dark red with black base and apex; scarcely longer than pronotum; punctures not visible; base feebly sinuate. Prosternum flat, very long, from coxa to apex three or more times longer than diameter of coxa. Posterior femur feebly clavate. Pygidium rather acuminate, convex, with apical hairs. Posterior tibia feebly incurved, in type slightly widened at middle. Claw segment not excavated.

Male: First abdominal segment with small

tubercle at middle. Aedeagus with apical border wide, truncate; lateral borders narrow.

REMARKS: Champion ("1909-1910" [1910]) explained the sharp angle of the lower border of the antennal opening as "rostrum acutely, triangularly dilated on each side near the base beneath," and he mentioned elsewhere that the angle is visible from above. Other species have this angle (*augustinus*, *apicalis*, *rufus*), but it is in many cases considerably worn or smudged. The rostrum in the two males from Costa Rica is feebly tumid ventrally at about the middle. Whether the type and other males have this character was not noted at the time of examination. The prosternum is very long, as is also the space between the base of the front coxa and the base of the prosternum.

Champion ("1909-1910" [1910]) described a female of *dentirostris* (with the same data as the type) as having "the antennae formed very much as in *Rhodobaenus* . . ." not dilated as in his male; but this female, which I have examined, differs not only in having the scape narrow, but also in having the claw segment distinctly excavated; it is a poor specimen of Champion's *arcuatus*. One male and two females were dissected.

Rhodobaenus tornowii (Brèthes)

Figure 12

Sphenophorus Tornowii Brèthes, 1910, p. 226 (Tucuman, Argentina; type said to be in Museo Nacional, Argentina).

DIAGNOSIS: Differs from more northern *bicinctus* and *apicalis* in coloration of elytral intervals near apex where ninth interval red and tenth, or outermost interval, black, and in having scape generally wider, feebly dilated.

RANGE: Northwestern Argentina, Bolivia. (For 54 specimens examined, see Appendix.)

DESCRIPTION: Length 7.5 to 9 mm. Rostrum black, humped at base, arcuate, impunctate except for base; that of male about same length as pronotum; of female longer

and narrower. Gular peduncle of male rounded or obtuse; of female with slight prominence or angle extending forward. Antennal scape black, laterally compressed, dorsally sulcate, longer than one-half length of rostrum and longer than funicle; almost one-half width of rostrum, and in some females almost as wide as rostrum at apex. Antennal club wider than apex of rostrum: spongy apex about one-half length of club. Antennal groove with posterior border distant from eye by width of scape at base.

Pronotum longer than wide, impunctate, red with three entire black stripes, or lateral stripes broken or interrupted; basal impression deep. Elytra about one-half longer than pronotum, red with suture, humerus, and most of apex black (suture in some examples red); outermost interval from about middle to apex black; ninth interval near apex red; striae distinctly punctate. Prosternum feebly tumid, red at center and sides, but with black stripe from coxa to apex; remainder below and legs black except for reddish metasternum in some individuals. Posterior femur wider at apex than at base. Pygidium tumid from middle to apex; sides narrowing to rather acuminate apex.

Male: First segment of abdomen at middle generally with tubercle. Aedeagus with apex truncate and medially membranous; viewed laterally, aedeagus narrower in front than at middle.

REMARKS: In the type of *apicalis* and in some other specimens, the elytra are marked much as in *tornowii*, but *tornowii* is constant in color pattern whereas *apicalis* has various patterns. The aedeagus agrees with that of *bicinctus*. Four males were dissected.

The antennal scape of *tornowii* is, in some individuals, intermediate between the narrow scape of the species that follow and the wide scape of the species that precede. In females, which have a very narrow rostrum, the scape often appears as wide as the rostrum, a characteristic of the species with wide scape. This ambiguity illustrates the undesirability of considering the species with a wide scape in a separate genus, as formerly proposed by Chevrolat (1885). This species

and *suturalis* are the only ones found as far south as Argentina.

Rhodobaenus bicinctus Chevrolat

Figures 13, 35–38

Rhodobaenus bicinctus Chevrolat, 1885, p. 282 (Magdalena River, Colombia; type, female, in Naturhistoriska Riksmuseum, examined).

DIAGNOSIS: Similar in pattern to some *apicalis* and to *curvus*; differing from *apicalis* in having membranous, not sclerotized apical border of aedeagus, and from both species in having second segment of antennal funicle scarcely longer than wide, not nearly twice longer.

RANGE: Northeastern Brazil (Pernambuco), French Guiana, Colombia, Venezuela, Trinidad, possibly Uruguay; Costa Rica, Guatemala. (For approximately 200 specimens examined, see Appendix.)

DESCRIPTION: Length 6 to 10 mm. Rostrum, gular peduncle, antennal club, and antennal groove as described for *tornowii*, but rostrum in some individuals reddish. Antennal scape black, subcylindrical or feebly compressed, longer than one-half length of rostrum, as long as funicle and club combined; less than one-half width of rostrum.

Pronotum longer than wide, impunctate, red with three black stripes extending from base to, or partway to, apex (median stripe may be broken in two); base in some individuals margined with black; basal impression deep. Elytra longer than pronotum by one-half or three-fourths, variable in pattern (see below); striae with well-spaced small or large punctures. Prosternum tumid in front of coxa; at center generally black, but red in some examples, on sides widely or narrowly red; remainder below and legs generally black. Posterior femur wider at apex where slightly clavate. Pygidium as described for *tornowii*.

Male: Ventral tubercle and aedeagus as given for *tornowii*.

REMARKS: In the type of *bicinctus* (Colombia) the black part of the elytral pattern includes the humeral spots, the line along the suture which extends to the median band

which extends to the sides of the elytra, and the subapical band (fig. 13). This black-cross pattern, however, is most commonly found in Central America. In the paratype (Colombia) and in many other specimens from South America, the median band is broken into lateral spots. In some specimens the apex of the elytra is black, in some it is narrowly red and the black humeral spots are absent from a number of specimens. In another individual the elytra are red except for a mere trace of black basally; in 14 specimens from the island of Trinidad and in one of two from Pernambuco, Brazil, the elytra are quite saturated with black, the specimens from Trinidad having only the humerus narrowly red. The rostrum is red instead of black in several specimens from Costa Rica. There is about as much variation in pattern and coloration as in the also abundant *lebasii*, but in contrast to *lebasii*, *bicinctus* has had no synonyms. In both forms, however, variation exists in the relative width of the scape.

Virtually similar elytral markings are found in *curvus* (see there), some *apicalis*, and some *nigripes*; in *nigripes*, however, the median black mark of the pronotum is absent and the pygidium is not tumid; in *apicalis* the aedeagus is not membranous at the apex.

Seven males and one female were dissected.

BIOLOGY: Champion ('1909-1910' [1910]) reported that some specimens collected by Biolley in Costa Rica were taken on Labiatae (mint family).

Rhodobaenus apicalis Hustache

Figures 39-42

Rhodobaenus apicalis Hustache, 1936, p. 109 (Tandapi [near Quito], Ecuador; type, male, but labeled as female, in Paris Museum, examined).

DIAGNOSIS: Similar to allopatric *bicinctus* and *tornowii* in several of its variable elytral patterns, but differs from both in corneous, not membranous apex of aedeagus. Antennal scape narrower than that of *tornowii*; elytra lacking black median transverse band of many *bicinctus*.

RANGE: Ecuador, Paraguay. (For 55 specimens examined, see Appendix.)

DESCRIPTION: Length 7 to 11 mm. Rostrum as described for *tornowii*. Gular peduncle of male right angled or obtuse, of female acutely angled in front. Antennal scape black, subcylindrical, about one-fourth width of rostrum and more than one-half its length, as long as funicle and club combined. Antennal club about as wide as apex of rostrum; spongy apex equal to or longer than base. Antennal groove with posterior border distant from eye by width of scape at apex; lower border sharply toothed, but tooth not visible from above.

Pronotum longer than wide, impunctate, either entirely red or red with median black stripe (stripe in some individuals broken into spots), or red with basal black area; lateral black spot present or not; basal impression deep or feeble. Elytra more than one-half longer than pronotum, red with variable black marks (figs. 39-42); striae punctate. Prosternum tumid in front of coxa, either red with area around coxa black or entirely black; remainder below and legs black or black with red patch on metasternum. Posterior femur wider at apex and generally distinctly clavate. Pygidium as given for *tornowii*.

Male: First segment of abdomen with tiny tubercle at middle. Aedeagus with apex, viewed dorsally, truncate and deeply hollowed out; viewed laterally apex as wide as or wider than at middle.

REMARKS: Hustache described *apicalis* on a single specimen in which the elytra show three black spots basally (at the suture and humeri) and a black band apically. Of 13 specimens from the area of Santo Domingo de los Colorados, only two are colored as in the type; the others are blacker, either on the suture, mediolaterally, across the entire base or on most of the elytra.

Slight differences to aid in the separation of *apicalis* from *bicinctus* are as follows: in *apicalis* the second tarsal segment and the second segment of the antennal funicle are generally longer, the antennal club is narrower, the posterior border of the antennal

groove is more acute, and the posterior femur is more clavate. In addition, no *apicalis* specimens have been seen with a black median band on the elytra as is common in many, but not in all, *bicinctus*. The aedeagus, which I dissected in seven *apicalis* and in six *bicinctus*, is more reliable to distinguish the two species. It is dark, corneous, and at the apex hollowed out in *apicalis*, but pale and flattish apically in *bicinctus*, with the middle of the apex membranous in that species.

Rhodobaenus nigripes Hustache

Figures 14, 15

Rhodobaenus nigripes Hustache, 1936, p. 108 (Marcapata, Peru; type, male, in Paris Museum, examined).

DIAGNOSIS: Similar to *schnusei* and differing from *apicalis* and *bicinctus* in having pygidium only feebly convex, not tumid, and not at all acuminate. Elytral pattern differing from that of *schnusei*.

RANGE: Bolivia, Peru. (For 90 specimens examined, see Appendix.)

DESCRIPTION: Length 8.5 to 11.5 mm. Rostrum black, humped at base, feebly arcuate; that of male as long as pronotum and punctate in basal half; of female slightly longer than pronotum and punctate at extreme base only. Gular peduncle as described for *tornowii*. Antennal scape black, subcylindrical, less than one-half width of rostrum, as long as funicle, and longer than one-half length of rostrum. Antennal club as wide as or slightly wider than apex of rostrum; spongy apex about one-half length of club. Antennal groove with posterior border distant from eye by about width of apex of scape.

Pronotum longer than wide, impunctate, red with apex narrowly and base broadly black or with two black triangles laterally, several examples with median black spot; basal impression deep or shallow. Elytra twice length of pronotum, black across base, middle, and apex, with large subbasal round or elliptical red spots divided by median black line, and subapical red band, but in

some specimens black at middle not extending to sides of elytra; striae in red areas punctate. Prosternum feebly tumid in front of coxa, red except for area around coxa or at middle; remainder below black, with or without red metasternum. Posterior femur wider at apex than at base, feebly clavate. Pygidium feebly convex, broadly rounded-truncate.

Male: Some males with ventral tubercle on first segment of abdomen. Aedeagus with apex truncate.

REMARKS: The red of the elytra of *nigripes* is generally orange. In typical examples there are two orange spots subbasally and a broad subapical orange band, all the rest being black (fig. 14). In many specimens, however, there is more red (or orange) than black, the median black band being reduced to a central diamond-shaped spot and the basal black reduced to a narrow black line (fig. 15). In one specimen the colored spots and subapical band are so reduced that the elytra are almost entirely black. The elytra of some *bicinctus* and *apicalis* resemble those of *nigripes*, but they lack the basal black band.

In comparison with *schnusei*, *nigripes* does not have a V-shaped black mark covering most of the elytra, the rostrum is more arcuate and less punctate, and the second segment of the tarsus appears in some specimens longer. Both species have been taken in some of the same localities. Seven males, including the type, and two females were dissected.

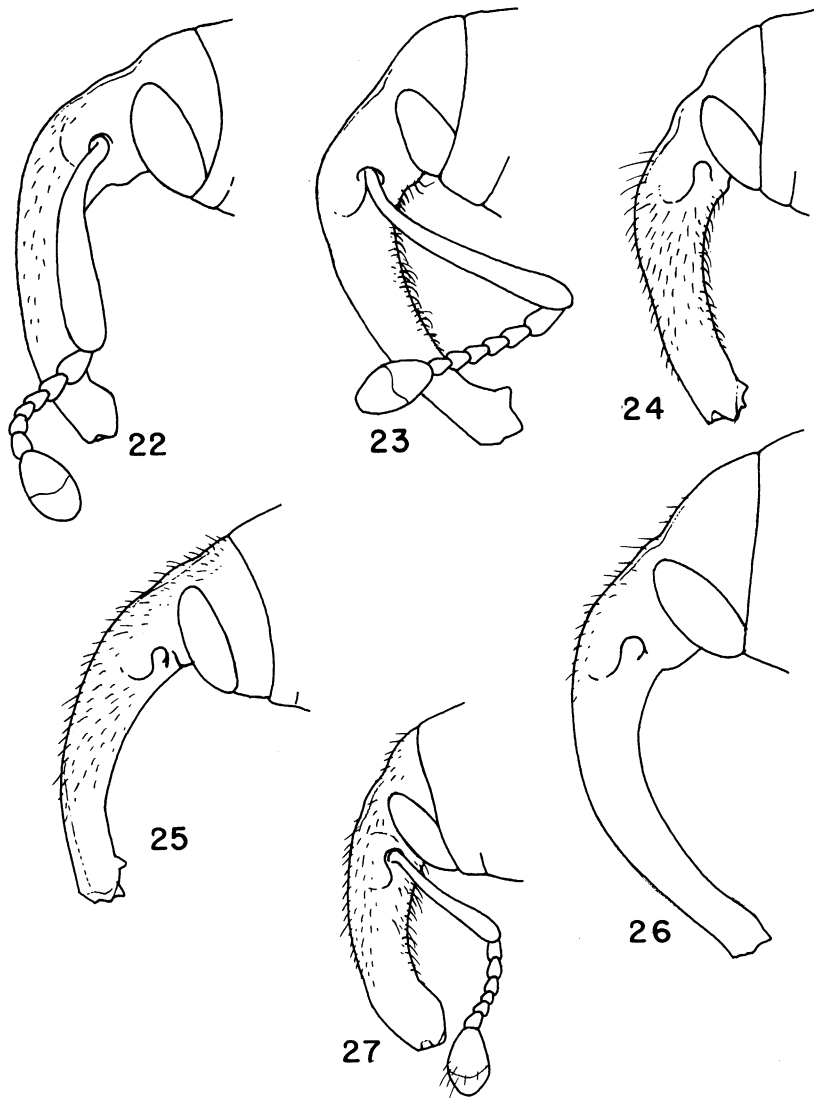
BIOLOGY: A female from Pilcopata River, Cuzco, Peru, was found in "maleza" or weeds.

Rhodobaenus schnusei Günther

Figure 16

Rhodobaenus schnusei Günther, 1941, p. 49 (Chanchamayo, "Pichis-Weg," Peru; lectotype, male, here designated from six original specimens in Dresden Museum, examined).

Rhodobaenus cordifer Voss, 1954, p. 336, fig. 18 (Peru; type destroyed by fire in Hamburg). New synonymy.



FIGS. 22-27. Rostra of *Rhodobaenus* with or without antennae. 22. *R. quadrus*, showing widened scape. 23. *R. pullus*, showing long scape. 24. *R. riparius*, female, Ecuador. 25. *R. varieguttatus*, female, Mexico. 26. *R. curvus*. 27. *R. lineiger*, showing short scape.

DIAGNOSIS: Differs from most allied species in having rostrum densely punctate; antennae inserted close to eye; pygidium only feebly, if at all convex. Characterized in having large, black V- or U-shaped patch on elytra.

RANGE: Bolivia, Peru. (For 32 specimens examined, see Appendix.)

DESCRIPTION: Length 8.5 to 10.5 mm. Rostrum black, scarcely, if at all humped over base, scarcely arcuate, punctate densely to near apex, as long as or slightly longer than

pronotum, at apex narrower than apex of anterior femur. Gular peduncle and antennal scape as described for *nigripes*. Antennal groove with posterior border distant from eye by less than width of scape.

Pronotum longer than wide, virtually impunctate, red with two black triangles basally; apex narrowly black; in some examples with black median spot; basal impression deep. Elytra almost twice length of pronotum, red with black apex and black V-shaped basal mark extending to beyond middle (base red in some specimens); striae in red area punctate. Prosternum red with black around coxa, scarcely tumid in front of coxa; remainder below black or with some red. Posterior femur wider at apex than at base, feebly clavate. Pygidium feebly convex, at apex broadly truncate.

Male: No ventral tubercle. Aedeagus with apex feebly emarginate.

REMARKS: The elytral pattern is the same in the type series of *schnusei* and in most other specimens. Two specimens that differ correspond to Voss's description and illustration of *cordifer* in which the black patch is isolated from the base by an area of red. In every other way these specimens agree with other *schnusei*; in one of them and in three specimens from Peru there is a median black spot on the pronotum in addition to the black basal triangles. The sexes are not readily differentiated, the female differing only in having a slight forward angle on the gular peduncle and a longer rostrum. Five males and two females were dissected.

***Rhodobaenus curvus*, new species**

Figures 17, 26

TYPE MATERIAL: Holotype, male, and male and female paratypes, San Lorenzo, Magdalena, Colombia, 41 km. south of Santa Marta, 7000 feet, May 3, 1973, Howden and Campbell, collectors, in Howden collection, Ottawa; same data and in same collection, but May 9, 1973, three males; same data, but May 7, 1973, one female (one male and one female paratype to be deposited in the American Museum of Natural History, New

York); Santa Marta, one female, in Kuschel collection, Auckland.

DIAGNOSIS: Large species with black cross on elytra as in some specimens of *bicinctus*, from which *curvus* differs in having rostrum strongly arcuate and second segment of antennal funicle long, not short.

RANGE: Known only from Sierra Nevada de Santa Marta region, Colombia.

DESCRIPTION OF HOLOTYPE: Length 10 mm. Rostrum black, humped at base, strongly arcuate (nearly half a circle), shining, about same width throughout, impunctate except for base, almost as long as pronotum. Gular peduncle flat, rounded off. Antennal scape black, subcylindrical, longer than one-half length of rostrum and about one-third its width, longer than antennal funicle. Antennal club elongate, about same width as apex of rostrum; spongy apex not quite one-half length of club. Antennal groove with posterior border distant from eye by more than width of scape.

Pronotum subconical, scarcely punctate, longer than wide, red with broad black lateral stripes and median black diamond; basal impression deep, wide. Elytra not quite twice length of pronotum, red with base, angulate median and subapical bands black; striae punctures distinct; intervals impunctate. Prosternum tumid in front of coxa, black with red lateral stripe not extending to apex; remainder below and legs black. Posterior femur wider at apex, feebly clavate, longer than apex of elytra. Pygidium convex, feebly tumid apically; sides oblique to rounded apex.

Male: No ventral tubercle. Aedeagus with apex membranous, slightly emarginate.

VARIATION FROM HOLOTYPE: The paratypes range in length from 10.5 to 12.5 mm. In females the gular peduncle projects forward slightly. In some paratypes the pronotum is punctate, in some the subapical black band of the elytra is interrupted, or the median band is not angulate or is interrupted at the suture. In all specimens the subapical callus of the elytra is red.

ETYMOLOGY: The species name is from the Latin *curvus*, referring to the curvature of the rostrum.

REMARKS: The ubiquitous *bicinctus* which presents a similar elytral pattern to that of *curvus* has been found by the same collectors at 16 km. from the type locality of *curvus*, but at a lower elevation, at Campana, 25 km. south of Santa Marta, at 3000 feet. These two species are separable, however, by the more robust, more arcuate rostrum of *curvus*, by its more elongate antennal club with shorter spongy apex, less tumid pygidium, and less elongate rostrum of the female. The majority of *bicinctus* are also smaller. Four males, including the type and two females, were dissected.

Rhodobaenus augustinus Günther

Figure 18

Rhodobaenus augustinus Günther, 1941, p. 48 (Caucathal [Cauca Valley], Colombia; lectotype, male, here designated from four original specimens in Dresden Museum, examined).

DIAGNOSIS: Differs from other species in having combination of dense setae under and on sides of rostrum, and base of rostrum on each side ventrally, acutely, triangularly toothed. Elytra black with median red band.

RANGE: Colombia. (For 13 specimens examined, see Appendix.)

DESCRIPTION: Length 9 to 13 mm. Rostrum black, humped at base, feebly arcuate; that of male about same length as pronotum; of female longer; both sexes furnished ventro-laterally with two rows of curling hairs from near apex to opening of antennal groove, hairs separated by median carina; male with ventral angle in apical third. Gular peduncle angulate in front, more marked in female. Antennal scape black, subcylindrical, less than one-half width of rostrum, as long as or longer than funicle and club combined, and as long as three-fourths length of rostrum. Antennal club elongate, not wider than apex of rostrum; spongy apex longer than one-half length of club. Antennal groove distant from eye by about width of scape; lower border with sharp triangular tooth that is visible from above.

Pronotum red with base broadly and apex narrowly black; slightly longer than wide, constricted at apex; basal impression rather

feeble, circular. Elytra longer than pronotum by one-half; red in median third, basal and apical thirds black; striae punctures distinct or not. Prosternum and venter black except for sides of prosternum where red of pronotum encroaches in semicircle; tumid in front of coxa. Posterior femur wider at apex where feebly clavate. Posterior tibia sinuate and expanded slightly at middle. Pygidium from middle to apex rather cristate, tumid; apex narrowly rounded.

Male: First segment of abdomen at middle feebly tuberculate. Aedeagus with apex rounded-truncate and feebly emarginate medially.

REMARKS: The black-red-black elytral pattern and mostly red pronotum of *augustinus* resemble those of *laticapax*, but in that species the scape is dilated. *Rhodobaenus pullus* and *rhinopilus* also have rostral setae but in those species the antennal groove is farther from the eye and not toothed. Two males and one female were dissected.

Rhodobaenus longicollis Hustache

Rhodobaenus longicollis Hustache, 1936, p. 108 (Ecuador; lectotype, female, here designated from original pair in Paris Museum, examined).

DIAGNOSIS: Very elongate, gray, black, or reddish; rostrum and scape red. Differs from other species with pronotum impressed basally in having setae both on base of rostrum dorsally and in abundant tuft on pygidium.

RANGE: Colombia, Ecuador, Paraguay. (For 41 specimens examined, see Appendix.)

DESCRIPTION: Length 9.5 to 12 mm. Rostrum humped over scrobe, strongly arcuate, shorter than pronotum, near base short dorsal yellow setae on each side of median carina (setae often worn off). Gular peduncle of male carinate, angulate behind; of female with tiny angle extending slightly forward. Antennal scape subcylindrical, less than one-half width of rostrum, slightly longer than funicle and longer than one-half length of rostrum. Antennal club as wide as apex of rostrum; spongy apex almost one-half length of club. Antennal groove with posterior bor-

der distant from eye by width of apex of scape or more.

Pronotum distinctly longer than wide, red or black (can have black stripes) with whitish spots around punctures; basal impression deep, wide. Elytra longer than pronotum by two-thirds, gray, black, or red with whitish spots around punctures; striae without evident punctures. Prosternum tumid in front of coxa, red or black, with whitish spots. Posterior femur wider at apex than at base. Pygidium with punctate part short, about as wide as long, broadly rounded, rather convex, with, at apex, long yellow setae forming acuminate tuft.

Male: No ventral tubercle. Aedeagus with apex truncate and corneous.

REMARKS: Although the lectotype and paralectotype and two or three additional specimens are dark red with whitish spots around the punctures, the majority of specimens are black with whitish spots, appearing gray to the naked eye. In the black specimens, however, the rostrum, antennae, and legs are reddish, and some of them, when wet, show red before returning to black. Black specimens might be confused with *pullus*, which has the same kind of angulate gular peduncle in the male, but in *longicollis* the rostral setae are dorsal, not ventral, and the aedeagus is truncate, not emarginate. Three males and two females, including the lectotype, were dissected.

A specimen from Bogota, Colombia, in the British Museum, bears an unpublished name of Jekel's.

***Rhodobaenus pullus*, new species**

Figure 23

TYPE MATERIAL: Holotype, male, and two male and one female paratypes, Balzapamba, Bolivar, Ecuador, 1894, de Mathan, collector, in Paris Museum (one male to be deposited in the American Museum of Natural History); two paratypes: one male, Ecuador, without specific locality, in Kuschel collection, Auckland; one male, Ambate [Ambato], Ecuador, in Paris Museum.

DIAGNOSIS: Blackish gray species similar to *longicollis*, but differs in having row of

abundant setae under rostrum; rostrum black, not red; elytra shorter; and pygidium with setae but not a long tuft at apex.

RANGE: Ecuador.

DESCRIPTION OF HOLOTYPE: Length 10.5 mm. Rostrum arcuate, humped at base, slightly longer than pronotum, impunctate and shining in apical two-thirds, ventrally with median carina between two rows of curling setae extending from base to apical third (fig. 23). Gular peduncle carinate, in front angulate, behind acutely toothed. Antennal scape black, subcylindrical, less than one-half width of rostrum, as long as funicle and club combined, and as long as three-fourths of rostrum. Antennal club roundish, not wider than apex of rostrum; spongy apex about one-half length of club. Antennal groove with posterior border distant from eye by nearly width of club.

Pronotum gray, longer than wide, not constricted at apex, rather sparsely punctate with whitish punctures; basal impression deep. Elytra about one-third longer than pronotum, gray with whitish punctures on intervals and striae. Prosternum tumid in front of coxa, short (from coxa to apex only twice diameter of coxa); venter gray; legs black. Posterior femur wider at apex, feebly clavate. Pygidium tumid from middle to apex; apex extending well beyond apex of abdomen and with two rows of setae; sides narrowing to acuminate apex.

Male: No ventral tubercle. Aedeagus with apex emarginate.

VARIATION FROM HOLOTYPE: The paratypes range in length from 9.5 to 10.5 mm. The female differs in having no tooth at the base of the gular peduncle, but the peduncle is feebly sinuous behind and the apex extends forward as a small angle. Dorsally, the type series is constant except for two paratypes in which the surface is rubbed and black, lacking most of the powdery punctures. The antennal club and most of the funicle are lacking in two specimens.

ETYMOLOGY: The species name is from the Latin *pullus*, referring to the dark, grayish, or blackish coloration.

REMARKS: *Rhodobaenus pullus* resembles superficially some of the blackish gray

species allied to *nawradii*, but they are generally more robust than *pullus* and differ further in having the claw segment smooth, not excavated; *pullus* resembles also *olivaceus* Champion of Central America which I had considered at first as the same species. (A male and female from Ecuador in the museum in Dresden were misidentified by me as *olivaceus*.) In *pullus*, however, both sexes have distinct subrostral setae which are present very faintly in the male of *olivaceus*, and the gular peduncle of the male of *pullus* is toothed or angulate behind. In both species the mesepimeron seems larger and more arcuate in front than that of other species. Three males, including the holotype, were dissected.

***Rhodoabaenus nivosus*, new species**

Figure 19

TYPE MATERIAL: Holotype, male, and male and female paratypes, Quebrada La Campana, San Domingo, Merida, Venezuela, 1900 m., March 23 to 25, 1967, Carlos Bordon, collector, and one female paratype, El Lambique, Barinitas, Barinas, with same data, in collection of Bordon (a male and female to be deposited in the American Museum of Natural History).

DIAGNOSIS: Like a small edition of *longicollis*, but elytra even longer proportionately, and rostrum differs in having no setae and no angulate peduncle at apex. Red with some black striping and covered with whitish yellow punctures.

RANGE: Venezuela in zone of very humid cloud forest south of city of Merida.

DESCRIPTION OF HOLOTYPE: Length 7.5 mm. Rostrum red, not humped at base, arcuate, virtually impunctate, same length as pronotum. Gular peduncle rounded. Antennal scape red, subcylindrical, slightly sinuous, less than one-third width of rostrum, longer than funicle and longer than one-half length of rostrum. Antennal club elongate, slightly wider than apex of rostrum; spongy apex about one-half length of club. Antennal groove with posterior border separated from eye by about width of scape at apex.

Pronotum distinctly longer than wide, red

with three black stripes; punctures sparse except on disc and surrounded by whitish yellow; basal impression transverse, not deep. Elytra nearly twice length of pronotum, red with suture black; third interval near middle and at apex, fifth interval at base and beyond middle with short black stripes; black also on humerus and on some outer intervals; whitish surrounding punctures of intervals and striae. Prosternum flat, red except for black stripe forward from coxa; remainder below black with some red. Posterior femur wider at apex than at base. Pygidium short, about as wide as long, with short apical setae.

Male: No ventral tubercle. Aedeagus with apex feebly sinuate or emarginate at middle.

VARIATION FROM TYPE: The rostrum of females is slightly longer than the pronotum. The basal impression of the pronotum is feeble in two paratypes; the punctures of the pronotum cover more of the disc in one paratype.

ETYMOLOGY: The species name is from the Latin *nivosus*, or snowy, referring to the scattered white spots.

REMARKS: The elongate narrow shape, whitish spotting, and basally smooth rostrum are very similar to those of *arcuatus* Champion from Mexico, but *nivosus* differs in having the pygidium very short and feebly convex, not long, pointed, and tumid, the antennal club elongate, not roundish, and the elytral intervals with short black patches, not uniformly red. The sexes differ only in the length of the rostrum. All four specimens were dissected. In one specimen the basal third of the posterior femur is scarcely wider than the tibiae.

***Rhodoabaenus lineiger* Chevrolat**

Figures 20, 27

Rhodoabaenus lineiger Chevrolat, 1885, p. 282 (banks of Rio Magdalena, Colombia; type, male, in Naturhistoriska Riksmuseum, examined).

DIAGNOSIS: Rostrum and scape red. Differs from other species in having combination of short, wide, ventrally setose rostrum; antennal groove close to eye; middle coxae

more widely separated; aedeagus with all borders narrowly, not broadly sclerotized.

RANGE: Bolivia, Colombia, Ecuador, Peru; Panama. (For 27 specimens examined, see Appendix.)

DESCRIPTION: Length 6.5 to 8 mm. Rostrum at base smooth, not humped, shorter than pronotum, feebly arcuate to nearly straight, generally coarsely punctate, wider near apex (viewed laterally) where somewhat bulbous, only about four times longer than wide, unicarinate dorsally with setae each side of carina or covering it, and in double row ventrally (fig. 27). Gular peduncle extending slightly forward in both sexes. Antennal scape subcylindrical, straight, slightly longer than one-half length of rostrum, scarcely one-fourth width of rostrum, about as long as antennal funicle. Antennal club elongate, narrower than rostrum at middle; spongy apex less than one-half length of club (somewhat longer in specimen from Panama). Antennal groove opening onto eye.

Pronotum longer than wide, red with median black stripe and lateral black spots or short stripe, sparsely punctate or impunctate; basal impression feeble in some individuals. Elytra one-third longer than pronotum, red with black spots on humerus and subapical callus, in some specimens black spot or short stripe at middle of each elytron, in some two or three paler, more yellow stripes (fig. 20); stria punctures visible or not. Prosternum not tumid, short (from coxa to front only one and one-half times diameter of coxa), with black and red stripes; remainder below and legs mixed red and black, or legs red. Posterior femur wider at apex than at base, feebly clavate. Pygidium at center cristate and setose; apex broadly rounded and at center strongly tumid; punctate part wider than long, tomentose.

Male: No ventral tubercle. Aedeagus with narrow borders; apex rounded. Inner apex of abdomen lacking usual small triangular piece.

REMARKS: *Rhodobaenus lineiger* resembles preceding species and differs from three of the four that follow in having a basal impression on the pronotum, although the impression is very feeble in a few individu-

als. In addition to the characters given in the Diagnosis, the claw excavation is feeble in *lineiger* and the sexes are scarcely distinguishable without dissection. Of 10 males dissected, two lack the dorsal setae of the rostrum (worn off, no doubt), and some lack the dorsal carina; a dissected female lacks both the setae and the carina. In all specimens, however, the ventral rostral carina and rows of setae are present. In several individuals the setae of the rostrum are filled with some clinging sticky substance.

Superficially and in its elytral color pattern, *lineiger* recalls *Metamasius laetus* (Erichson) which Hustache (1936) considered as belonging in *Rhodobaenus*, and in fact *laetus* is somewhat of an anomaly in *Metamasius* (Vaurie, 1967a, p. 201).

Rhodobaenus suturalis (Gyllenhal)

Sphenophorus suturalis Gyllenhal, 1838, p. 904 (Brazil; type, male, in Naturhistoriska Riksmuseum, examined).

Sphenophorus saucius Gyllenhal, 1838, p. 905 (Brazil; type, female, in Riksmuseum, examined). New synonymy.

Rhodobaenus implicatus Chevrolat (not Gyllenhal), 1885, p. 279 (Mexico; syntypes in Riksmuseum, examined). New synonymy.

Rhodobaenus crucicollis Chevrolat, 1885, p. 281 (Brazil; type, male, in Riksmuseum, examined). New synonymy.

Rhodobaenus miniatus Chevrolat, 1885, p. 281 (Brazil; type, male, in Riksmuseum, examined). New synonymy.

Rhodobaenus nigricornis Chevrolat, 1885, p. 281 (Brazil; type, female, in Riksmuseum, examined). New synonymy.

Rhodobaenus bipunctatus Chevrolat, 1885, p. 282 (Brazil; type, male, in Riksmuseum, examined). New synonymy.

Rhodobaenus quinque maculatus Chevrolat, 1885, p. 285 (Mexico; type, female, in Riksmuseum, examined). New synonymy.

DIAGNOSIS: Differs from other species except for *rhinopilus* in having short antennal scape and short spongy apex of club; differs from *rhinopilus* in dorsal pattern, in having pronotum longer than wide, and no rostral setae. Some individuals have whitish lines or streaks on dorsum.

RANGE: Argentina, Brazil, Paraguay,

Venezuela; Costa Rica, Guatemala, Mexico. (For 181 specimens examined, see Appendix.)

DESCRIPTION: Length 6 to 9 mm. Rostrum black or red, humped over base, arcuate, impunctate except near base; that of male same length as or slightly longer than pronotum; of female longer than pronotum and narrower than that of male; base dorsally narrowly sulcate. Gular peduncle of male rounded off, of female acutely angled. Antennal scape black or dark red, subcylindrical, about as long as one-half of rostrum, shorter than funicle, less than one-half width of rostrum. Antennal club about as wide as apex of rostrum; spongy apex about one-fifth length of club. Antennal groove with posterior border distant from eye by somewhat less than width of apex of scape.

Pronotum longer than wide, with or without basal impression, finely, sparsely punctate; punctures in some individuals whitish; red with three black stripes; lateral stripes short in some individuals. Elytra a little longer than one-half pronotum; markings variable: red; red with suture black; red with suture and two oblique median spots black; suture red, and black median spots separated; three lateral black spots in some individuals; short whitish patches or streaks forming kind of circle present or not; intervals and striae punctate or not. Prosternum feebly if at all tumid, red and black; remainder below and legs red and black. Posterior femur in some specimens feebly clavate. Pygidium with apex feebly tumid and row of apical setae; sides narrowing to acuminate apex.

Male: No ventral tubercle. Aedeagus with apex slightly emarginate or rounded and with a median tiny knob.

REMARKS: This species is the only one found abundantly in Brazil. The other species taken in Brazil (*aduncus*, *bicinctus*, *lebasii*, *rufrostris*) are represented by fewer specimens.

The many names synonymized with *suturalis* almost equal in number those synonymized with *lebasii*; in both species the black areas of the elytra increase or decrease, often in the same localities, resulting in var-

ious changing patterns. Not only the elytra of *suturalis* vary, but the three black stripes of the pronotum can be narrow or wide, long or short; the basal impression of the pronotum can be non-existent or faint or deep and distinct.

The whitish opaque spots or streaks present in some specimens recall those of *cinctus* (Gyllenhal) and *leucographus* (Fahraeus) of Central America and Mexico. They do not necessarily correlate with other characters, as the presence or absence of the basal impression of the pronotum, the presence of whitish dots around the punctures, or the color of the rostrum. In some of these streaked specimens the aedeagus at the apex (viewed dorsally) is slightly emarginate between the feebly advanced sides, whereas in other specimens (streaked or not) the apex is more or less rounded, but often with a tiny median knob or projection. In two individuals from Nova Teutonia, Santa Catarina, Brazil, however, the aedeagus seems to be a composite. The white-streaked specimens generally have more black on the pronotum and on the sides of the elytra and the rostrum is more often black than red, but there are so many variations and combinations that I hypothesize there is only one species concerned.

In the type of *suturalis* the suture, median patch, and the apex of the elytra are black, the pronotum is scarcely depressed and the rostrum is dark red. In *miniatus* and *saucius* there is black also on the sides of the elytra, the pronotum is depressed, the rostrum is red. In the types of *crucicollis* and *bipunctatus* the elytra have two median black oblique spots and the rostrum is black; in *bipunctatus* the pronotum is scarcely depressed, and a few whitish streaks are present on the elytra. In *nigricornis* the elytra and rostrum are red and the pronotum is depressed. The rostrum is red also in *implicatus*, but the pronotum is flat and the elytral marks are scarcely discernible. In the type of *quinquemaculatus* the rostrum is black, the pronotum is more or less flat, and the median black patch of the elytra is surrounded by white streaky marks. Champion ('1909-1910' [1910]), pl. 7, fig. 6, illustrated

what he said "seems to be a very dirty, pallid female example . . . of *Rhodobaenus cinctus*," of which he had seen the type, referring to *quinquemaculatus* as a variety. The type of *quinquemaculatus*, however, is furnished with a short antennal scape and a short spongy apex of the club as in *suturalis*, and a rostrum different from that of the female of *cinctus*. Twenty males, including the types of *bipunctatus* and *crucicollis*, and two females were dissected.

***Rhodobaenus riparius*, new species**

Figure 24

TYPE MATERIAL: Holotype, male, and seven male and four female paratypes, all from Mera [Napo-Pastaza], Ecuador, in Paris Museum. Twenty-five paratypes as follows: Ecuador: no specific locality: two males, one female; 1872, Boucard, collector, one female. Jarugui [not found], one female, all in Paris Museum; Mapoto, Rio Pastaza, 1300 m., October 1, 1938, Clark and MacIntyre, collectors, one male, in the American Museum of Natural History. Peru: Divisoria, Huanuco, 1700 m., September 26, 1946, Felix Woytkowski, collector, one male, two females; Chinchao, 25 km. below Carpish, Huanuco, 2500 m., September 2 to 21, 1946, Woytkowski, collector, nine males, one female; Rio Huallaga, December 12, 1925, Bassler, collector, one male, all in the American Museum of Natural History; Rio Huallaga, 1600 m., "2-9-47," Schunke, collector, one male, in Kuschel collection, Auckland. Colombia: "Nova Grenada," one male, one female, in British Museum; Valle, Anchicaya Dam, 1200 feet, 70 km. east of Buenaventura, H. and A. Howden, collectors, one male, in Howden collection, Ottawa; Bogota, one male, in Paris Museum.

DIAGNOSIS: Differs from those other species with flat, unimpressed pronotum in being black or dark gray, without any red; female differs further in having ventral apex of rostrum (viewed laterally) emarginate between two sharp points. Rostrum setose.

RANGE: Colombia, Ecuador, and Peru.

DESCRIPTION OF HOLOTYPE: Length 10.5 mm. Rostrum black, humped over antennal

opening, virtually straight, shorter than pronotum, wide, robust, widest (viewed laterally) in front of antennal groove, thence feebly narrowing to apex; densely punctate; punctures with bristly setae on top and on sides; ventral setae sparse; dorsally faintly carinate. Gular peduncle somewhat carinate, but rounded in profile. Antennal scape black, subcylindrical, distinctly longer than one-half length of rostrum and longer than antennal funicle. Antennal club roundish, dilated, at least as wide as rostrum; spongy apex almost one-half length of club. Antennal groove with posterior border distant from eye by width of apex of scape.

Pronotum flat, longer than wide, subconical, punctate sparsely, with feebly elevated median impunctate line. Elytra longer than pronotum by one-half, with widely separated punctures as wide as intervals; striae whitish with punctures not visible. Prosternum tumid in front of coxa, punctate as on dorsum, as also remainder below and legs. Posterior femur linear, only feebly wider at apex than at base. Pygidium convex, tumid apically, narrowly rounded.

Male: No ventral tubercle. Aedeagus with sides at apex flared outward and apex feebly emarginate, membranous.

VARIATION FROM HOLOTYPE: The size ranges from 8 to 11 mm. In females the gular peduncle at the ventral apex of the rostrum is emarginate between two sharp angles, the hind angle being slightly longer; the rostrum in profile is generally much wider and more humped in front of the antennal groove than that of males and the bristly setae are more abundant. In the four paratypes from Colombia there are darker spots on the humerus, at the middle and faintly at the apex of the elytra, and in two of these the median spots are surrounded by white streaks. The median line of the pronotum is lacking or is not elevated in many specimens.

All the paratypes from Peru are greased, even after two soakings in carbon tetrachloride; they are also caked with muddy patches; only a few, after soaking, reveal some of the characteristic whitish spots around the punctures.

ETYMOLOGY: The species name is from

the Latin *riparius*, meaning on the banks of rivers, referring to collecting sites.

REMARKS: Although *riparius* is distinct from other species of South America, it is remarkably similar to *varieguttatus* Chevrolat of Mexico, Guatemala, and Costa Rica, and I at first believed that they were the same species. In the females of both species, as also in females of *pustulosus* (Gyllenhal) and of five other species, the gular peduncle is angulate in front and behind ("seesaw"), but the two sharp angles of the peduncle of *varieguttatus* seem more widely separated than those of *riparius* (figs. 24, 25). In females of *varieguttatus* the rostral punctures are setose in the same manner as in *riparius*, but in the males that I have seen, the setae are not or scarcely visible. *Rhodobaenus riparius* differs further in having the antennal club more dilated and comparatively larger, and the rostrum, especially that of females, more massive, and wider in front of the antennal groove. None of the 36 examples of *riparius* shows any red, in contrast to many specimens of *varieguttatus*. Seven males, including the holotype, were dissected.

***Rhodobaenus rhinopilus*, new species**

Figure 21

TYPE MATERIAL: Holotype, male, Sapucay [Sapucaí], Paraguay, 1920, in British Museum, and two female paratypes from Ecuador: Chimbo [Chimborazo], M. de Mathan, collector, 1891, one in Paris Museum, and without further locality, Rühl, collector, one in Dresden Museum. Two paratypes from Costa Rica: 6 km. south of San Vito, Puntarenas, 8° 42' N, 83° 00' W, January 20, 1968, one male, H. Hespenheide, collector, in his collection, and one female, same data, but March 15, 1968, to be deposited in the American Museum of Natural History.

DIAGNOSIS: Pronotum flat, not impressed basally. Differs from other species in having combination of short, wide pronotum with center dark red, not black; long elytra; long rostral setae ventrally; and short spongy apex of club.

RANGE: Ecuador, Paraguay; Costa Rica.

DESCRIPTION OF HOLOTYPE: Length 8

mm. Rostrum black, humped at base, strongly arcuate, narrowing to apex, punctate nearly to apex, slightly longer than pronotum, ventrally with row of yellow setae nearly to apex. Gular peduncle flat, rounded. Antennal scape black, subcylindrical, scarcely longer than one-half length of rostrum, slightly shorter than antennal funicle, about one-fourth width of rostrum at base. Antennal club as wide as apex of rostrum; spongy apex short, one-fifth length of club. Antennal groove with posterior border distant from eye by width of scape.

Pronotum flat, as wide at base as long, dark red (vinous), with wide, indistinctly limited black borders; punctures sparse on disc, denser on sides, encircled with whitish yellow. Elytra twice length of pronotum, dark red, but with large spot medially, humerus, lateral borders, and apical third black; striae punctures indistinct; intervals impunctate. Prosternum tumid, short (from coxa to apex one and one-half times diameter of coxa); surface ventrally and legs with whitish punctures. Posterior femur wider at apex, feebly clavate. Pygidium in profile convex, feebly tumid apically; sides narrowing obliquely to apex.

Male: No ventral tubercle. Aedeagus with apex subtruncate.

VARIATION FROM HOLOTYPE: The paratypes measure from 7.5 to 8.5 mm. In the females the rostrum is slightly narrower, more arcuate, less punctate and longer than that of males, and the gular peduncle projects forward in a small acute angle. The two paratypes from Costa Rica are so darkened that the distinction between the dark red of the central parts and the black of the sides is virtually annulled; in the male of this pair the setae of the rostrum are mostly worn away and the aedeagus differs in having the apex feebly emarginate. In three of the paratypes the whitish punctures are less evident.

ETYMOLOGY: The species name is from the Latin *rhino*, beak or rostrum, and *pilus*, hairy or setose.

REMARKS: The combination in this species of a flat, wide, short pronotum, short spongy apex of the club and short antennal scape, setose rostrum, and dark red color

with some whitish spotting makes it quite distinct. A setose rostrum and flat pronotum are present also in *riparius*, but that species differs in its entirely black color, in having rostral setae dorsally and laterally as well as ventrally, and the rostrum wide and stout.

The female paratype from "Ecuador" in the Dresden Museum bears a manuscript name of Faust.

Rhodoabaenus lebasii (Gyllenhal)

Figures 43, 44

Sphenophorus lebasii Gyllenhal, 1838, p. 902 (type, female, Cartagena, Colombia, in Naturhistoriska Riksmuseum, examined).

Sphenophorus variabilis Gyllenhal, 1838, p. 899 (Colombia, type, female, in Riksmuseum, examined; synonymized by Gyllenhal, 1845).

Sphenophorus implicatus Gyllenhal, 1838, p. 901 (Mexico; type not found; synonymized by Gyllenhal, 1845).

Rhodoabaenus femoralis Chevrolat, 1885, p. 277 (Mexico; type in Riksmuseum, examined). New synonymy.

Rhodoabaenus tredecimpunctatus var. *vittatipennis* Champion, "1909-1910" [1910], p. 150, pl. 7, fig. 25 (lectotype, female, Bugaba, Panama, here designated from two females in British Museum, examined). New synonymy.

Rhodoabaenus tredecimpunctatus var. *immaculatus* Champion, "1909-1910" [1910], p. 151 (lectotype, female, Temax, Yucatan, Mexico, here designated from 10 of original series from Mexico and Panama in British Museum, examined). New synonymy.

DIAGNOSIS: Resembles three preceding species in absence of basal impression on pronotum; differs from two of these (*rhinopilus* and *suturalis*) in having longer antennal scape, longer spongy apex of club, and different elytral pattern; differs from *riparius* in having rostrum glabrous, not setose, and in coloration (red and black, not entirely black), and from all species in having ventral keel on aedeagus. Black inverted "V" of elytra typical of majority of specimens.

RANGE: Brazil, Colombia, Venezuela, Trinidad, and of Central America, Mexico. (For approximately 275 specimens examined, see Appendix.)

DESCRIPTION: Length 6.5 to 8.5 mm. Rostrum black or dark red, humped over an-

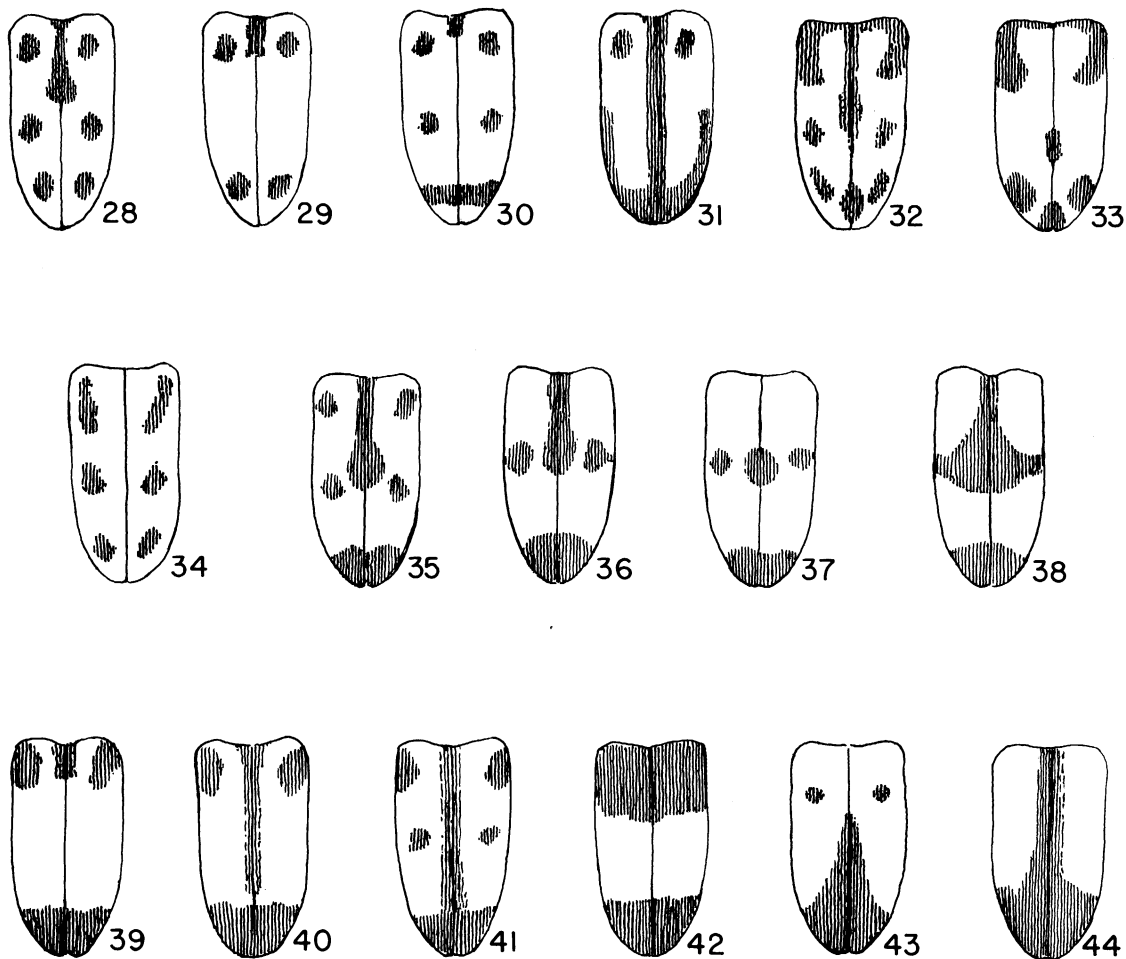
tennae, arcuate, impunctate or feebly punctate; that of male less arcuate, shorter than pronotum; of female somewhat longer and narrower. Gular peduncle of male rounded, of female with tiny angle in front. Antennal scape black, longer than one-half length of rostrum and longer than funicle, less than one-half width of rostrum. Antennal club as wide as or slightly wider than apex of rostrum; spongy apex about same length as base. Antennal groove with posterior border separated from eye by about, or nearly, width of apex of scape; lower border obtusely tumid or toothed.

Pronotum convex, impunctate or finely, sparsely punctate, scarcely longer than wide, red with median black stripe or spot and two lateral black spots each side, rarely entirely black. Elytra longer than pronotum by about one-half, red, either with apical third or half black in inverted "V" along suture to scutellum, or with large black spot covering apex and extending forward along suture, some examples with extra black spot behind humerus; intervals rarely entirely black and striae punctate. Prosternum rather convex, black with sides and apex in some specimens narrowly red; remainder below and legs black or black and red. Posterior femur linear, scarcely widened apically. Pygidium with apex tumid; sides narrowing to rather rounded apex.

Male: No ventral tubercle. Aedeagus with apex truncate; borders narrow; ventrally with longitudinal keel.

REMARKS: The names synonymized above were considered previously as varieties of the North American *tredecimpunctatus* (Illiger), as was also *lebasii*, but in *lebasii* the femora are distinctly linear, not clavate, and the aedeagus is ventrally carinate, not smooth. The name *variabilis* could have been used for the species, but I chose *lebasii* because Chevrolat (1885) gave *variabilis* as a synonym (in part) of five forms (*auctus*, *femoralis*, *implicatus*, *lebasii*, and *quinquepunctatus*) which is confusing to say the least.

The complete synonymy of *tredecimpunctatus* has not yet been studied in full, but I have found that, in addition to *lebasii*, a



FIGS. 28-44. Diagrammatic elytral patterns of *Rhodobaenus*; blank spaces are red, shaded parts black. 28-31. *R. aduncus*. 28. Type. 29. Form "geniculatus." 30-31. Variants.

FIGS. 32-34. *R. rufirostris*. 32. Type. 33. Form "goyaensis." 34. Variant.

FIGS. 35-38. *R. bicinctus*. 35. Paratype. 36. Variant with humeral spots absent. 37. Variant with base red. 38. Typical.

FIGS. 39-42. *R. apicalis*. 39. Type. 40. Variant resembling *R. tornowii*. 41. Variant with additional spots. 42. Variant resembling *augustinus*.

FIGS. 43, 44. *R. lebasii*. 43. Typical. 44. Variant.

number of Champion's varieties are valid species or synonyms of other species. Both *tredecimpunctatus* and *lebasii* will appear in a subsequent revision of the Central and North American species.

I have seen Champion's original series of both *immaculatus* (Yucatan, Mexico) and *vittatipennis* (Bugaba, Panama) and consider

them conspecific with *lebasii*. Nine of the 10 *immaculatus* are entirely black, one having the typical pattern of *lebasii*, and the two *vittatipennis* are black except for two short, broad, red longitudinal streaks from the base to about the middle of the elytra. Neither form has been seen from South America. Chevrolat's *femoralis*, however, which has

the same elytral pattern but red, instead of black legs, occurs abundantly in northern South America.

Gyllenhal's *implicatus*, which he later synonymized with *lebasii*, could not have been based on the "types" in Stockholm that bear the name, as these "types" are indisputably examples of *suturalis* (Gyllenhal), a species he would surely have recognized. Therefore he must have had another specimen on which he based his description. In effect, in the Chevrolat collection a true specimen of *variabilis-lebasii* is found nearby, but it is misidentified as a paratype of *deltoides* Chevrolat, a red and black species but one that differs in having the pronotum impressed basally.

More than a dozen males from various localities have been dissected; some have black legs, some mostly red legs, and all have a ventral keel on the aedeagus, a character not found in any other species in South America. This keel was discovered by Guillermo Kuschel (personal commun.); it occurs in a reduced form in Say's *quinquepunctatus* of the United States.

BIOLOGY: Two typical specimens were collected "en corteza de madera podrida" (in bark of rotten wood) at El Limon, Aragua, Venezuela, by Rodriguez and Galvez, June 1967.

In the five species that follow, the tarsal claw segment is smooth, not excavated, and the coloration is gray to black (faint reddish present in one species). The species were reviewed as part of the "*nawradii* group" (Vaurie, 1967b); see there for synonymies, description, and exact localities.

Rhodobaenus nawradii (Kirsch)

Sphenophorus Nawradii Kirsch, 1869, p. 223 (Bogota, Colombia; lectotype, female, in Staatliches Museum, Dresden, examined).

DIAGNOSIS: Large (15 to 20 mm.); elytra gray with two large black spots, often merged, medially. In South America, only species without claw segment excavation that has pronotum impressed basally.

RANGE: Brazil, Colombia, Ecuador; Panama, Costa Rica.

Rhodobaenus maior Voss

Rhodobaenus v. *nigrum* f. n. *maior* Voss, 1954, p. 336 (Balzapamba, Ecuador; neotype, male, in Zoologisches Museum, Berlin, examined).

DIAGNOSIS: Characterized by combination of large size (14 to 18 mm.), often reddish color, and pattern of elytra: large, common, heart-shaped black mark outlined by whitish area.

RANGE: Ecuador.

Rhodobaenus melanocardius (Linnaeus)

Curculio melanocardius Linnaeus, 1764, p. 45 (Central or South America; type in Zoological Museum, University of Upsala).

DIAGNOSIS: Agrees with two species that follow in having spongy apex of antennal club very short, antennal funicle tomentose, and third tarsal segment ventrally not entirely spongy pubescent; differs, in fresh specimens, in showing a black, V-shaped median mark on elytra, not two round spots.

RANGE: French Guiana, Surinam, Peru, Ecuador, Colombia; Panama, Costa Rica.

Rhodobaenus quadripunctatus (Chevrolat)

Cactophagus quadripunctatus Chevrolat, 1882, p. 581 (Colombia; type, male, in Naturhistoriska Riksmuseum, examined).

DIAGNOSIS: Similar to *melanocardius* and *melanurus*, and readily confused with them, but in fresh condition two black median spots of elytra more distinct.

RANGE: Ecuador, Colombia; Panama.

Rhodobaenus melanurus (Kirsch)

Sphenophorus melanurus Kirsch, 1875, p. 278 (Chanchamayo, Peru; type, female, in Dresden Museum).

DIAGNOSIS: Differs from *quadripunctatus* in having, generally, pronotum wider, more square, and from *melanocardius* in having two median black spots on elytra, not two oblique marks.

RANGE: Bolivia, Peru, Ecuador.

APPENDIX

SPECIMENS EXAMINED

For convenience, the species and the countries under each species are listed alphabetically. The institutions or individuals to which the specimens belong are indicated by letter symbols in parentheses as follows:

AMNH, American Museum of Natural History, New York

BM, British Museum (Natural History), London

CB, Carlos Bordon, Maracay

CDA, Canada Department of Agriculture, Ottawa

DM, Staatliches Museum für Tierkunde, Dresden

HH, Henry Hespenheide, University of California, Los Angeles

HO, H. and A. Howden collection, Ottawa

KU, Kuschel collection, Division of Entomology, Auckland

MN, Muséum National d'Histoire Naturelle, Paris

NR, Naturhistoriska Riksmuseum, Stockholm

SP, Museu de Zoologia, São Paulo

USNM, National Museum of Natural History, Smithsonian Institution, Washington, D.C.

UV, Universidad Central de Venezuela, Facultad de Agronomía, Maracay

ZM, Zoologisches Museum, Berlin

Rhodobaenus aduncus (Erichson)

BOLIVIA: 2(DM, KU); Callanga, 2 (MN); Coroico, 11 (KU, MN, SP); Chapare, Limbo, 1 (KU); Yungas de la Paz, 5 (including type of *geniculatus*, MN), 4 (DM, ZM); Ocobaya, Yungas, 2 (KU); Chaco Yungas, 2 (MN); Palmar and Yungas del Palmar, 3 (CB, KU).

BRAZIL: São Paulo, 1 (MN).

PERU: 1 (BM). *Cuzco*: Callanga, 2 (including type of *ruficollis*, MN), 1 (KU), Machu Pichu, 2 (KU, SP), Santa Isabel, Rio Cosnipata, 1 (KU). *Junin*: Chanchamayo, 5 (KU). *Huanuco*: Castillo, Tingo Maria, 1 (CB).

BOLIVIA OR PERU: 2 (MN).

Rhodobaenus apicalis Hustache

ECUADOR: 8; Ambato, 1 (MN); Balzapamba, Bolivar, 6 (DM, KU, MN, ZM); Baños, 1 (ZM); Bucay, 2 (DM); Chimbo, 14 (KU, MN); Loja, 1 (KU); Paramba, 4 (MN); Rio Palenque, 47 km. south of Santo Domingo, 5 (HO); Santo Domingo de los Colorados, 5 (MN); Tandapi, 1 (type, MN);

Tinalandia, Pichincha, 16 km. southeast of Santo Domingo, 3 (HO).

PARAGUAY: Sapucay, 3 (BM).

NO LOCALITY: 1 (MN).

Rhodobaenus augustinus Günther

COLOMBIA: 3 (KU); Calima, El Valle, 2 (MN); Cauca, 6 (MN and lectotype; DM); Manizales, 2 (MN).

Rhodobaenus bicinctus Chevrolat

BRAZIL: Carvaru, Pernambuco, 2 (AMNH).

COLOMBIA: 1 (DM); Bogota, 2 (MN); Cauca, 1 (DM); Campana, 25 km. south of Santa Marta, Magdalena, 3 (HO); Florida, Magdalena, 3 (DM); banks of Magdalena River, 2 (type and paratype, NR); Manizales, 2 (MN); Ocaña, Santander del Norte [Norte de Santander], 3 (UV); Prima, Santander del Norte [Norte de Santander], 8 (UV); San Antonio, 4 (DM, MN).

COSTA RICA: 13 (BM, DM, MN, USNM); Barba, 3, Carillo, 1, El Tablazo, 2, Irazu, 1 (all BM); Ochomogo, 7 (UV); Rancho Redondo, 1 (BM); San Jose, 5 (BM, DM, UV).

FRENCH GUIANA: "Cay" = Cayenne, 1 (MN).

GUATEMALA: 1 (DM); Capetillo, 2, Cerro Zunil, 2, Dueñas, 2 (all BM).

TRINIDAD: 8 (BM); Arima Valley, 1 (AMNH); Morne Bleu, 3 (HO); Mt. Tucuche, 2 (BM).

URUGUAY: 1 (MN).

VENEZUELA: 14 (BM, DM, KU, MN); Antinano, 1 (MN); Anzoategui, Cueva I, Guanta, 1 (CB); Arvelo, north of Petare, and mountains north of Petare, 3 (BM); Cachicamo, Selva de Caparo, 3 (CB); Caracas, 7 (CB, DM, MN); Caturaro, Sucre, 1 (CB); El Limon, D. F., Litoral, 1 (CB); Merida, 5 (AMNH, MN, ZM); Timotes, Merida, 1 (UV); La Mucuy, Merida, 2 (UV); La Azulita, Merida, 6 (UV); Escorial, 1 (MN); Curimagua, Hotel Parador, Falcon, 2 (UV); Guarico, Parque Nacional Guatopo, 1 (UV); Rio Caurimaro, Caracas, 1 (CB). *Aragua*: Carret, Maracay, Choroni, 3 (UV), Cumbre de Choroni, 1 (UV), Fila de Tiara, 5 (UV), Rancho Grande, 17 (AMNH, CB, KU, UV), Tiara, 3 (UV). *Barinas*: Altamira, 2 (UV), Soledad, Carretera I, 1 (UV). *Bolivar*: 2 (UV), El Pao, 1 (CB). *Carabobo*: C. Aguirre, 4 (UV), Santa Clara, 2 (UV). *Miranda*: Curupao, Guatenas, 1 (CB), Cortada de Maturin, 1 (CB). *Tachira*: La Grita, 5 (UV), Santa Ana, 4

(UV), Cordero, 1 (HO). *Trujillo*: Boca de Monte, Bocono, 1 (CB), La Mesa, 1 (UV).

***Rhodobaenus bivittatus*, new species**

BOLIVIA, PERU: (see under the species in the text).

***Rhodobaenus curvus*, new species**

COLOMBIA: (see under the species in the text).

***Rhodobaenus deliciosus* (Champion)**

COLOMBIA: 1 (type, BM), 1 (MN); Bogota, 1 (MN). *Cundinamarca*: Monte Redondo, near Bogota, 2 (AMNH). *Santander*: La Cimitarra, northwest of Valez, 1 (AMNH).

NO LOCALITY: 4 (AMNH, DM, KU, MN).

***Rhodobaenus dentirostris* (Champion)**

COSTA RICA: Turrialba, 3 (DM, USNM).

ECUADOR: Napo, 1 (KU); Puyo, Oriente, 1 (AMNH).

MEXICO: Santecomapan, Veracruz, 1 (type, BM).

***Rhodobaenus latiscapus* (Kirsch)**

BOLIVIA: 1 (KU).

COLOMBIA: 6 (BM, KU, MN); Bogota, 9 (type, DM; MN); Fusagasuga, 2 (MN).

ECUADOR: Baeza, 1 (ZM).

NO LOCALITY: 4 (MN).

***Rhodobaenus lebasii* (Gyllenhal)**

BRAZIL: 1 (MN).

COLOMBIA: 3 (BM; type *variabilis* NR); Bogota, 1 (MN); Cartagena, 3 (type *lebasii* NR; MN); Hacienda Victoria, Sierra, 1 (BM); Lorenzo, Magdalena, 1 (BM).

BRITISH HONDURAS: Rio Sarstoon, 1 (BM).

COSTA RICA: 1 (BM); Atenas, 1 (ZM); Cañas, 2 (HO); Escazu, 1 (BM); Puriscal, 1 (USNM); Santa Ana, 1 (USNM); Turrialba, 1 (ZM). *Guanacaste*: Bebedero, 1 (USNM).

EL SALVADOR: La Union, 1; San Andres, 1; San Salvador, 2; Santa Leda, 1; Santa Tecla, 2 (all USNM).

GUATEMALA: 1 (DM); Canalitos, 1 (ZM); Capetillo, 1 (BM); Cubulco, 2 (BM); Panzos, 4 (AMNH, MN); Rabinal, 1 (AMNH); San Geronimo, 9 (BM, USNM); San Juan, 2 (BM); San Sebastian, Retalhuleu, 3 (USNM); Trece Aguas, 3 (BM, USNM); Volcan Santa Maria, 1 (BM); Zapote, 2 (BM).

HONDURAS: Danli, 1 (USNM). *Morazan*: Zamorano, 2 (USNM).

MEXICO: 33 (type *femoralis*, BM; DM, MN, ZM). *Chihuahua*: La Republica, 1 (AMNH). *Colima*: 9 (BM, USNM); Vulcan, 2 (USNM); Vulcan, Esperanza, 2 (USNM); Tecuizitlan, 6 (USNM); Tonila, 71 (AMNH). *Distrito Federal*: Temascaltepec, 1 (USNM). *Durango*: 4 (BM); Canelas, 7 (ZM). *Guerrero*: Acapulco, 2 (BM); Amula, 2 (BM, USNM); Chilpancingo, 1 (BM); Tepetlapa, 2 (BM); Zumpango del Rio, 1 (USNM). *Hidalgo*: Chapulhuacan, 1 (AMNH). *Jalisco*: Ajijic, 1 (USNM); Colimilla, Barranca de Oblates, 2 (AMNH); Guadalajara, 15 (AMNH, MN, ZM); La Venta, 1 (AMNH); Ocotlan, 2 (MN). *Morelos*: Cuernavaca, 4 (BM, USNM); Puente de Ixtla, 2 (SP). *Nayarit*: Acaponeta, 3, Jalisco, 2, Navarrete, 2 (all AMNH); Sierra Nayarit, 1 (MN); Tepic, 14 (AMNH). *Oaxaca*: Juquila, 1 (BM); Tuxtepec, 2 (USNM); Yolos, 1 (BM). *Puebla*: Atlixco, 3 (USNM). *San Luis Potosi*: El Naranjo, El Salto, 2 (USNM); Huichihuyan, 7 (AMNH); Tamazunchale, 5 (AMNH, USNM). *Sinaloa*: Copala, 1 (AMNH); Mazatlan, 1 (BM); Villa Union, 1 (USNM). *Tabasco*: Cardenas, 1 (USNM); Teapa, 6 (BM, USNM). *Vera Cruz*: 12 (BM, MN); Almolonga, 1 (ZM); Cordoba, 1 (USNM); Fortin, 5 (AMNH, BM); Lake Catemaco, 14 (AMNH, USNM); Orizaba, 2 (BM, USNM); San Andres, 1 (BM); Santiago Tuxtla, 1 (HH); Sayula, 1 (USNM); Tierra Colorado, 1 (BM); Tuxpam, 2 (BM). *Yucatan*: 8 (MN, USNM); Colonia Yucatan, 1 (AMNH); Pichucalpa, 1 (AMNH); Temax, 6 (type *immaculatus*, BM).

NICARAGUA: Ameyá, 1 (USNM). *Esteli*: Ducuali, 1 (USNM).

PANAMA: Bugaba, 14 (type *vittatipennis*, BM); La Chorrera, 1 (USNM). *Veraguas*: Los Agarrobo, Rio San Pedro, 1 (USNM).

TRINIDAD: Arima Valley, 1 (AMNH).

VENEZUELA: 3 (BM, MN); Arvelo, Petare and mountains north of Petare, 3 (BM); Caripe, 2 (KU); El Baul, Cojedes, 3, El Pao, 1, El Piñero, Cojedes, 1, El Guacharo, 1, Guige, 1, Rio Santo Domingo, Cojedes, 1, Rio Socopo, Barinas, 2, Santa Ana, 1, Trujillo, 1, Yuma, 1 (all UV). *Aragua*: Cagua, 3 (BM, UV), Carmen de Cura, 21, Colonia Tovar, 2, El Limon, 2, Maracay, Pozo Diablo, 5, Maracay, 1 (all UV). *Distrito Federal*: Caracas, 2 (MN); Caracas Valley, Los Ruices, 2 (BM).

***Rhodobaenus lineiger* Chevrolat**

BOLIVIA: Yungas de la Paz, 3 (KU).

COLOMBIA: 3 (KU); Bogota, 1 (MN); Cofer

or Coper (?), 1 (MN); Muzo, 2 (MN); Magdalena River banks, 1 (type, NR).

ECUADOR: Ciemanda, Oriente, 1 (HO); Limoncocha, 1 (HO); Mera, 1 (MN); Rio Palenque, 47 km. south of Santo Domingo, 2 (HO); Santa Ines, Tungurahua, 1 (KU); Zatzayacu, Oriente, 1 (AMNH); Baños to Canelos, 1 (MN).

PANAMA: Cerro Campana, 2 (HH).

PERU: Chanchamayo, Junin, 2 (KU); Upper Rio Huallaga, 2 (AMNH).

PERU OR BOLIVIA: 2 (MN).

NO LOCALITY: 1 (AMNH).

Rhodobaenus longicollis Hustache

COLOMBIA: "Novo Grenada," 1 (ZM); Bogota, 1 (BM).

ECUADOR: 8 (lectotype, MN; KU); Abitagua, Pastaza, 1 (AMNH); Baños, 3 (DM, KU); Baños to Canelos, 2 (MN); Loja, 1 (MN); Macas, 2 (MN); Mera, 1 (MN); Papallacta (Rio), 1 (KU); Rio Pastaza, 2 (MN); Rio Blanco, vicinity of Baños, 4 (AMNH); Rio Blanco, Pastaza Watershed, 1 (AMNH); San Francisco, Rio Pastaza, 3 (AMNH); Santa Ines, 4 (DM, KU).

PARAGUAY: Sapucay, 6 (BM).

Rhodobaenus maior Voss

Additional records:

ECUADOR: Rio Palenque, 2 (HO); Pichincha Province, 1 (HO).

(For other localities in Ecuador, see Vaurie, 1967b.)

Rhodobaenus melanocardius (Linnaeus)

Additional records:

COLOMBIA: Anchicaya Dam, 5 (HO).

ECUADOR: Rio Pumayacu [?], 2 (HO); Pastaza, 1 (HO).

(For range, see under the species; for other localities, see Vaurie, 1967b.)

Rhodobaenus melanurus (Kirsch)

(For range, see under the species; for localities, see Vaurie, 1967b.)

Rhodobaenus nawradii (Kirsch)

Additional records:

ECUADOR: Rio Palenque, 3 (HO); Pichincha Province, 2 (HO).

(For range, see under the species; for other localities, see Vaurie, 1967b.)

Rhodobaenus nigripes Hustache

BOLIVIA: 4 (KU, MN); Buena Vista, Ichilo, 1 (KU); Bueyes, 1 (MN); Callanga, 1 (MN); Chimore, 2 (KU); Gutierrez, Santa Cruz, 1 (SP); Yungas de Coroico, 3 (MN); Yungas de la Paz, 2 (KU). *Cochabamba*: Carrasco, Liberia, 2 (CB), Chapare [Rio?], 1 (CB), Chapare, Libo, 11 (CB), Chapare, Locotal, 5 (CB, SP), Chapare, Villa Tunari, 6 (CB, SPO), Chapare, Yungas del Palmar, 29 (BM, CB, KU, SP).

PERU: *Cuzco*: Marcapata, 6 (type, MN); Pilocopata, 1 (KU), Santa Isabel, Rio Cosnipata, 12 (KU).

NO LOCALITY: 2 (MN).

Rhodobaenus nigrofasciatus (Champion)

COLOMBIA: Valle de Cauca, 1 (MN).

COSTA RICA: Guaitil de Pirris, 1 (BM); Orosi, 1 (DM); Rio Sucio, 1 (BM); Tablazo, 1 (USNM); Tuis, 1 (MN); Turrialba, 1 (BM). *Puntarenas*: Alajuela, Monteverde, 1 (HH); Monteverde Forest Reserve, 2 (HH). *San Jose*: San Isidro, Cerro, 1, 14 km. north San Isidro, 1 (both HH).

PANAMA: 1 (MN); Volcan de Chiriqui, 3 (lectotype, BM; DM).

Rhodobaenus nivosus, new species

VENEZUELA: (see under the species in the text).

Rhodobaenus pullus, new species

ECUADOR: (see under the species in the text).

Rhodobaenus quadripunctatus Chevrolat

(For range, see the species; for localities, see Vaurie, 1967b.)

Rhodobaenus quadrus, new species

ECUADOR, PERU: (see under the species in the text).

Rhodobaenus rhinopilus, new species

COSTA RICA, ECUADOR, PARAGUAY: (see under the species in the text).

Rhodobaenus riparius, new species

COLOMBIA, ECUADOR, PERU: (see under the species in the text).

Rhodobaenus rufirostris (Hustache)

BOLIVIA: 5 (DM, MN); Coroico, La Paz, 6 (KU, MN, SP); Songo, 1 (DM); Yungas de la Paz, 13 (lectotype of *rufirostris*, MN; KU, ZM); Yungas, Puente Villa, 1 (KU).

BRAZIL: 6 (MN). *Goyaz*: Jatahy, 14 (type of *goyaensis*, MN; DM, KU), Rio Verde, 2 (MN).

ECUADOR: 1 (MN); Puyo, Oriente, 1 (AMNH).

PERU: Marcapata, Cuzco, 1 (KU); Moyobamba, 3 (MN); Rio Pachitea, 2 (DM, KU); Pampas del Sacramento, 1 (MN); Pumahuasi, Tingo Maria, Huanuco, 1 (CB).

PERU OR BOLIVIA: 1 (MN).

Rhodobaenus rufus (Hustache)

BOLIVIA: Callanga, 2 (MN); Yungas de la Paz, 1 (DM).

PERU: 5 (BM, DM, MN); Callanga, 3 (type, MN; DM); Chanchamayo, Junin, 2 (DM, KU); Huambo, 1 (MN); Huanuco, 1 (DM).

Rhodobaenus schnusei Günther

BOLIVIA: Callanga, 1 (MN).

PERU: 4 (lectotype, DM); Chanchamayo, 6 (DM, KU, MN); Lima, 1 (AMNH); [Rio] Pachitea, 1 (KU). *Cuzco*: Santa Isabel, Rio Cosnipata, 1 (KU). *Huanuco*: Carpish, Tingo Maria, 5 (CB); Chinchao, 25 km. below Carpish, 1 (AMNH); Cordillera Azul, 6 (KU, AMNH); Divisoria, Sinchona, 2 (AMNH, KU); Divisoria, 1 (AMNH); Tingo Maria, 2 (AMNH, CB).

Rhodobaenus suturalis (Gyllenhal)

ARGENTINA: *Misiones*: 3 (MN), Campo Viera, 1 (CB), Tiju-Cuare, near San Ignacio, 4 (MN), Villa Lutecia, near San Ignacio, 1 (MN).

BRAZIL: 15 (types *bipunctatus*, *crucicollis*, *implicatus*, *miniatus*, *nigricornis*, *saucius*, *suturalis*, NR; BM, DM, MN). *Minas Gerais*: 1 (MN),

Cabo Verde, 1 (SP), Jaboticatubas, Serre do Cipe, 1 (SP). *Parana*: 3 (AMNH, KU), Caviuna, 3 (AMNH), Curitiba, 16 (KU, SP), Ponta Grossa, 6 (AMNH, KU, SP). *Rio Grande do Sul*: 1 (DM), Cruz Alta, 1 (KU), Pelotas, 1 (MN). *Rio de Janeiro*: 1 (KU), Mury, Nova Friburgo, 1 (SP), Serra Macae, 1 (SP). *Santa Catarina*: 8 (AMNH, MN, ZM), Colonia Hansa, 3 (MN), Corupa, 6 (AMNH), Hansa, 1 (MN), Jaragua, 5 (DM, MN), Nova Teutonia, 14 (AMNH, HH, KU, SP), Rio Natal, 2 (AMNH), Rio Vermelho, 5 (AMNH), Therezopolis, 1 (MN). *São Paulo*: 2 (ZM), Cassia dos Coqueiros, 2 (SP), Cipo, 4 (HH), Fazenda do Bonito, Serra da Bocaina, San Jose de Barreiro, 1 (SP), São Paulo, 1 (HH), Valle Rio Pardo, 10 (MN), Ribeirão Preto, Fazenda Dumont, 1 (ZM).

COSTA RICA: Piedras Negras, 1 (DM).

GUATEMALA: 1 (SP).

MEXICO: 5 (type *quinquemaculatus*, syntypes *implicatus*, NR; BM).

PARAGUAY: 6 (DM, MN), Guaira, 1 (KU), Hohenau, 9 (MN), Jaquaron, Santa Clara, 11 (MN), Paso Yobai, 8 (KU), Puerto Bertoni, Alto Parana, 1 (DM), Sapucay, 7 (BM, USNM).

VENEZUELA: 2 (DM).

NO LOCALITY: 13 (AMNH, KU, MN, ZM).

Rhodobaenus tornowii (Brèthes)

ARGENTINA: 10 (AMNH, KU). *Jujuy*: Digue La Cienaga, 2 (SP), Termas de Reyes, 1 (AMNH). *Salta*: Aguaray, 2 (KU), A. de Avias, 1 (AMNH), Cerro 20 de Febrero, 2 (KU), La Viña Coronel Moldes, 2 (KU), Parc Nacional El Rey, 1 (CB), Pocitos, 5 (SP), San Lorenzo, 11 (KU). *Tucuman*: 8 (BM, DM, MN, SP), San Pedro Colalao, 6 (KU, MN).

BOLIVIA: 1 (MN), Santa Cruz de la Sierra, 2 (MN).

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