

Studies of the Subtribe Tachyina
(Coleoptera: Carabidae: Bembidiini),
Part II: A Revision of the
New World-Australian Genus
Pericompsus LeConte

TERRY L. ERWIN

SMITHSONIAN CONTRIBUTIONS TO ZOOLOGY • NUMBER 162

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ABSTRACT

Erwin, Terry L. Studies of the Subtribe Tachyina (Coleoptera: Carabidae: Bembidiini), Part II: A Revision of the New World-Australian Genus *Pericompsus* LeConte. *Smithsonian Contributions to Zoology*, number 162, 96 pages, 161 figures, 1 table, 1974.—The New World-Australian Genus *Pericompsus* LeConte is revised and thirty-five species are described as new; thirty-three of forty-nine previously described and named species are retained as valid, the other sixteen names are recognized as junior synonyms, twelve of them for the first time; two new subgenera are erected, one for the Australian species and one for a Neotropical group of species; three previously erected generic names are recognized as junior synonyms, one of them for the first time. A key to subgenera, species groups, and species is given and pertinent characteristics are illustrated. All taxa are described or redescribed and partially illustrated. Distribution for each species is listed by locality records and pictorially provided by dot maps. Evolutionary considerations and natural history are discussed where data are available.

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Contents

| | <i>Page</i> |
|--|-------------|
| Introduction | 1 |
| Acknowledgments | 3 |
| Methods | 3 |
| Terminology | 3 |
| Checklist of <i>Pericompsus</i> species | 5 |
| Genus <i>Pericompsus</i> LeConte | 5 |
| Key to the Subgenera, Species Groups, and Species | 6 |
| <i>Upocompsus</i> , new subgenus | 11 |
| The <i>yarrensis</i> group | 12 |
| 1. <i>P. yarrensis</i> (Blackburn), new combination | 12 |
| The <i>australis</i> group | 12 |
| The <i>australis</i> subgroup | 12 |
| 2. <i>P. australis</i> (Schaum), new combination | 14 |
| 3. <i>P. olliffi</i> (Sloane), new combination | 15 |
| 4. <i>P. bogani</i> (Darlington), new combination | 15 |
| 5. <i>P. habitans</i> (Sloane), new combination | 16 |
| The <i>punctipennis</i> subgroup | 16 |
| 6. <i>P. punctipennis</i> (Macleay), new combination | 16 |
| 7. <i>P. seticollis</i> (Sloane), new combination | 19 |
| 8. <i>P. semistriatus</i> (Blackburn), new combination | 20 |
| 9. <i>P. pubifrons</i> (Darlington), new combination | 20 |
| <i>Eidocompsus</i> , new subgenus | 21 |
| The <i>brasiliensis</i> group | 24 |
| 10. <i>P. reticulatus</i> , new species | 24 |
| 11. <i>P. brasiliensis</i> (Sahlberg), new combination | 26 |
| 12. <i>P. metallicus</i> Bates | 28 |
| 13. <i>P. dynastes</i> , new species | 28 |
| 14. <i>P. immaculatus</i> Bates | 30 |
| 15. <i>P. commotes</i> , new species | 31 |
| 16. <i>P. bilbo</i> , new species | 31 |
| 17. <i>P. leucocarenum</i> , new species | 34 |
| 18. <i>P. crossarchon</i> , new species | 34 |
| 19. <i>P. crossodmos</i> , new species | 35 |
| The <i>gongylus</i> group | 35 |
| 20. <i>P. gongylus</i> , new species | 37 |
| The <i>jeppeseni</i> group | 37 |
| 21. <i>P. jeppeseni</i> (Jensen-Haarup), new combination | 37 |
| 22. <i>P. tolype</i> , new species | 39 |
| Subgenus <i>Pericompsus</i> sensu stricto | 40 |
| The <i>univittatus</i> group | 40 |
| 23. <i>P. univittatus</i> (Jensen-Haarup), new combination | 40 |
| The <i>ephippiatus</i> group | 41 |
| 24. <i>P. ephippiatus</i> (Say) | 41 |
| 25. <i>P. sagma</i> , new species | 45 |

| | <i>Page</i> |
|--|-------------|
| 26. <i>P. leechi</i> , new species | 46 |
| 27. <i>P. pauli</i> , new species | 47 |
| 28. <i>P. nevermanni</i> (Darlington), new status | 48 |
| 29. <i>P. reichei</i> (Putzeys) | 49 |
| 30. <i>P. laetulus</i> LeConte | 50 |
| 31. <i>P. longulus</i> Bates | 50 |
| 32. <i>P. silicis</i> , new species | 51 |
| 33. <i>P. tlaloc</i> , new species | 54 |
| 34. <i>P. gracilior</i> (Bates), new combination | 56 |
| 35. <i>P. jamcubanus</i> , new species | 57 |
| 36. <i>P. elegantulus</i> (Laferte), new combination | 57 |
| 37. <i>P. morantensis</i> , new species | 61 |
| 38. <i>P. philipi</i> , new species | 62 |
| 39. <i>P. prionomus</i> , new species | 63 |
| 40. <i>P. histrionellus</i> Bates | 64 |
| 41. <i>P. circuliformis</i> (Solier) | 64 |
| 42. <i>P. andinus</i> (Jensen-Haarup), new combination | 65 |
| 43. <i>P. nonandinus</i> , new species | 66 |
| 44. <i>P. amygdali</i> , new species | 66 |
| 45. <i>P. callicalymna</i> , new species | 68 |
| 46. <i>P. tetraphalarus</i> , new species | 68 |
| 47. <i>P. subincisus</i> , new species | 70 |
| 48. <i>P. eubothrus</i> , new species | 71 |
| 49. <i>P. jucundus</i> Schaum | 71 |
| 50. <i>P. alcimus</i> , new species | 72 |
| 51. <i>P. clitellaris</i> (Erichson) | 74 |
| 52. <i>P. pegasus</i> , new species | 75 |
| 53. <i>P. micropegasus</i> , new species | 75 |
| 54. <i>P. acon</i> , new species | 77 |
| 55. <i>P. anassa</i> , new species | 77 |
| The <i>sellatus</i> group | 78 |
| 56. <i>P. sellatus</i> LeConte | 78 |
| The <i>centroplagiatus</i> group | 79 |
| 57. <i>P. centroplagiatus</i> (Putzeys) | 80 |
| 58. <i>P. picticornis</i> Bates | 83 |
| 59. <i>P. diabalius</i> , new species | 83 |
| 60. <i>P. stenocitharus</i> , new species | 84 |
| 61. <i>P. crossotus</i> , new species | 85 |
| The <i>hirsutus</i> group | 85 |
| 62. <i>P. hirsutus</i> Schaum | 85 |
| 63. <i>P. polychaetus</i> , new species | 88 |
| 64. <i>P. grossepunctatus</i> Bates | 88 |
| The <i>incisus</i> group | 89 |
| 65. <i>P. incisus</i> Bates | 89 |
| 66. <i>P. concinnus</i> (Laferte), new combination | 91 |
| 67. <i>P. vorschachinus</i> , new species | 92 |
| 68. <i>P. carinatus</i> , new species | 93 |
| Natural History | 93 |
| Evolutionary and Zoogeographic Considerations | 94 |
| Literature Cited | 95 |

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Terry L. Erwin

Introduction

The purposes, goals, and general methods of this study are explained in Part I (Erwin, 1973). The present part deals with a moderately large New World-Australian genus of riparian or at least subhygrophilus Tachyina.

The species of the genus *Pericompsus* have never been collectively reviewed. The literature mostly consists of brief original descriptions from a variety of authors. Darlington's (1963) review of the *australis* group of *Tachys* is the only synoptic treatment of any part of the genus as here defined, although Sloane (1896, 1921) treated some of the *australis* group in a general key to Australian *Tachys* species. Some early authors placed *Pericompsus* species in genera such as *Bembidium* (now spelled *Bembidion*), *Trechus*, and *Tachys*. Most catalogs have treated all species actually described in *Pericompsus* as *Tachys*. One species described by Motschulsky (1844:261) as *Pericompsus punctatellus* is really a *Bembidion* (type in MMM) from the Lake Baikal region. This synonymy was recognized by Bates (1871:247).

The immature stages of *Pericompsus* are unknown. Indications as to when larvae and pupae are present in the fauna are derived from the discovery of teneral adults. This information is given under each pertinent species description and then summarized and analyzed under "Natural History" at the end of the paper.

Until now, the *australis* group and *yarrensis* group as here defined were not considered as part of *Pericompsus* although Bates (1882:145) alluded to the relationship. However, I think there is ample evidence that this relationship is real, and the evidence is provided in the descriptions below. This evidence is weighed against an unpublished background study of all the rest of the world Tachyina. Based on the evidence presented in the descriptions and the background study mentioned above, I conclude that the *Pericompsus* species exhibit three major trends of evolutionary development (Figure 161) which are reflected in my subgeneric arrangement. Each of these three major trends exhibits two or more minor trends, each of which is reflected by my species group arrangement. Finally, some of the species groups show still further specialized trends which are reflected in my species subgroups.

Unlike the primitive *Xystosomus* of Part I, *Pericompsus* is a derived group. Its relationships within the higher Tachyina must await the detailed analy-

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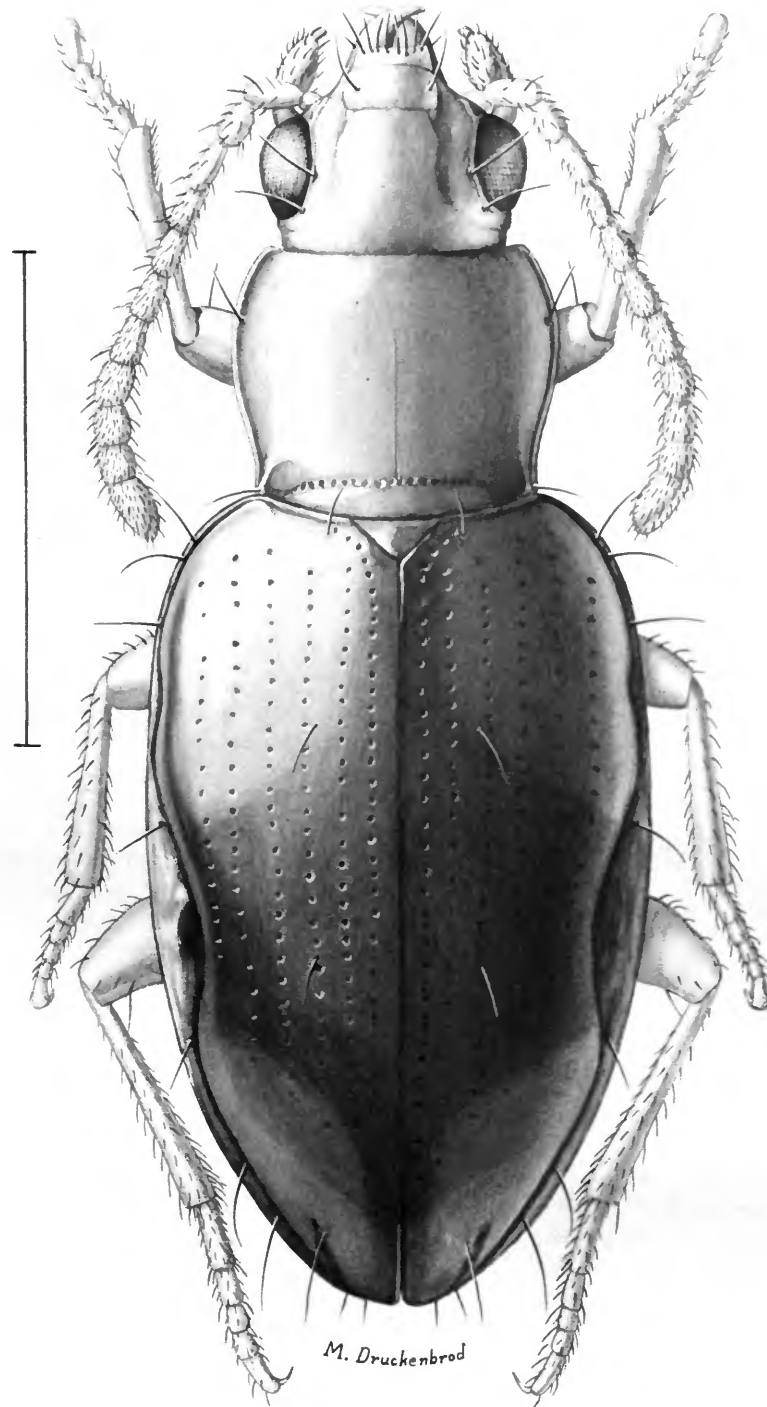


FIGURE 1.—Habitus of *P. nevermanni* female, Hamburg Farm, Costa Rica.

sis of other derived groups. This will be discussed in another part of the study where all generic components can be treated together. However, phylogeny and zoogeography of *Pericompsus* species are discussed here in a general way.

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Commonwealth Scientific and Industrial Research Organization (CSIRO), Canberra City,

Australia, is the probable location of the old Australian types.

In addition, I thank M. Druckenbrod for the habitus and body profile drawings and G. Steyskal for help with making Greek and Latin names.

Specimens deposited in the National Museum of Natural History, Smithsonian Institution, are listed under the catalog numbers of the old United States National Museum (USNM).

METHODS.—This study is the result of the examination of 2,039 specimens of *Pericompsus* and several thousand specimens of other Tachyina. *Pericompsus* members are readily collected because of their easily accessible riparian habitat or subhygrophilus habits and their attraction to ultraviolet light. However, many species, especially South American ones, are poorly represented in collections, and it is hoped the information provided here will stimulate collectors and natural historians to look carefully for these small, beautifully colored beetles.

The methods used here are the same as described in Part I of this study (Erwin, 1973) and need not be repeated here.

A new illustration of the code for elytral chaetotaxy (Figure 2) is provided here, as a new setal position was discovered in members of this genus. The previous illustration (Erwin, 1972) is thus superseded. Note that the short line accompanying the habitus and body profile illustrations equals 1.0 mm, and the line accompanying the genitalia illustrations equals 0.25 mm. Unless otherwise noted in the legends accompanying distribution maps, a circled star represents a locality I could not find exactly or a locality given on a label simply as county or state without specific reference. All type-specimens were seen unless otherwise noted.

The abbreviations given under "Acknowledgments" indicate the museums from which studied specimens were borrowed. The locality records are listed in the following order: Country, state, province, or other political subdivision, exact locality (abbreviation of museum in which specimen or specimens are housed).

TERMINOLOGY.—The confusion of coleopterists when reading or writing descriptions of elytral surface structure is the result of a very loose definition of the word "stria." Many coleopterists use the term in its strictest sense, that is, an impressed line or furrow. Others refer to any longitudinal elytral surface structure, even a serial row of punctures as

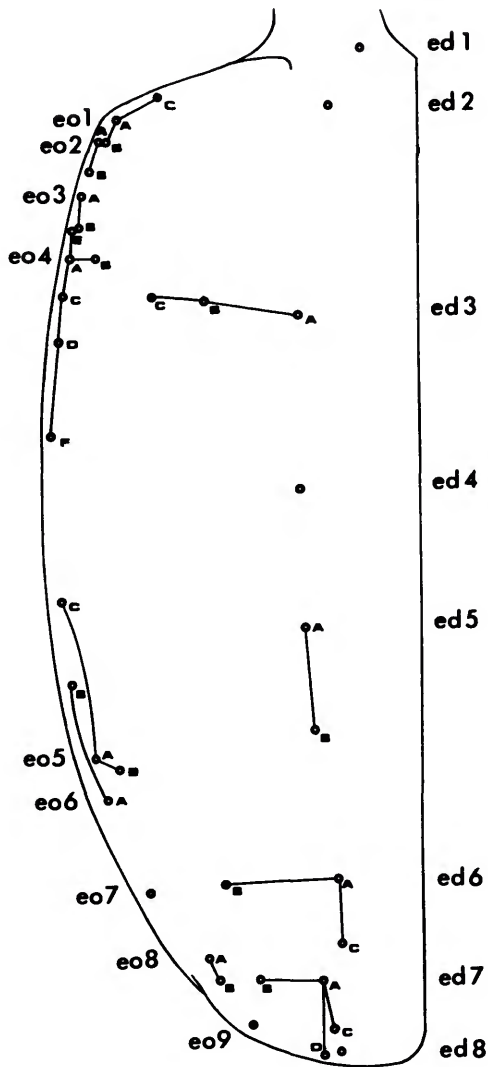


FIGURE 2.—Hypothetical elytron showing all known positions of setae in tachyine beetles. The Eo series is the elytral "ombilicate" setal positions. The Ed series is the elytral disc positions. The small letters represent various positions in which these setae are found in different tachyine groups.

a "stria." Spilman (1971) discussed the problem and has generated much verbal controversy, at least at the National Museum of Natural History. In the past, coleopterists have used the following terminology for elytral surface structure:

- a. Impressed longitudinal line or shallow furrow = stria.
- b. Impressed unconnected punctures arranged in longitudinal rows = serial row of punctures.
- c. Impressed punctures that are longitudinally connected and arranged in rows = punctate stria.
- d. Deeply impressed longitudinal groove = sulcate stria.

Furthermore, the intervals between the rows of elytral structure may be flat, convex, costate, carinate, bicarinate, and so on.

This problem in terminology among coleopterists is a lack of a term for the actual structure that exhibits the various conditions described in a to d. If the intervals (see above) are the derived character state of the wing veins of the primitive beetle wing, and if the structures between the intervals are the derived character state of the wing "cells" or membrane, then the latter should have a name equivalent to "interval." Unfortunately, coleopterists have used "stria" for this structure since a "stria" (in its proper definition) on a beetle elytron is common to most coleopterous families and thus to most coleopterists. When the unnamed elytral structure described above is a serial row of unconnected punctures some coleopterists retain the term "stria" as a structural name, rather than a descriptive name. Therein lies the problem. Both applications of the term have been used for a long time among diverse coleopterists and it will be a long time before the issue is finally settled.

Eight structural rows on each elytron is pleisomorphic in Tachyina. In certain groups, one or more of these structural rows have disappeared. In describing these animals it is sometimes necessary to indicate which rows have been lost. (This is, of course, the phylogenetic descriptive technique. Another descriptive technique is to state only what one sees when looking at a specimen. This method does not take into account evolutionary changes within taxa, nor does it allow for phylogenetic comparisons in the descriptive process. I endeavor to make my descriptions comparative within a broad taxon framework.)

One cannot state "stria 7 absent" without meaning the plesiomorphic elytral structure was indeed a stria; it may have been a serial row of punctures or some other modification of the unnamed structure. In this case, I have adopted a new term to mean the basic elytral structure occurring between the elytral intervals and this term is "interneur." Since the word is a noun, it can be combined with any of the usual adjectives used in describing beetle

elytra; for example, interneur striate, strjatio-punctate, costate, and punctate. The word can also be used in a topographic reference sense; for example, interneur 7 and interneur 1. Or it can be used in a general descriptive sense; for example, elytron with eight interneurs, fourteen interneurs. In the present paper I have used this format throughout.

In addition, an elytron of most beetles has a "lateral channel" dorsomedially to the epipleura and lateral to the lateralmost interval or interneur. This lateral channel is the groove formed by the margin of the elytron as it is reflexed away from the convex-shaped disc.

Checklist of *Pericompsus* species

Subgenus *Upocompsus*, new subgenus

The *yarrensis* group

1. *P. yarrensis* (Blackburn), 1892:20

The *australis* group

2. *P. australis* (Schaum), 1863:90
3. *P. olliffi* (Sloane), 1896:376
4. *P. bogani* (Darlington), 1963:27
5. *P. habitans* (Sloane), 1896:386
6. *P. punctipennis* (Macleay), 1871:116
7. *P. seticollis* (Sloane), 1896:366
8. *P. semistriatus* (Blackburn), 1888:41
9. *P. pubifrons* (Darlington), 1963:24

Subgenus *Eidocompsus*, new subgenus

The *brasiliensis* group

10. *P. reticulatus*, new species
11. *P. brasiliensis* (Sahlberg), 1844:513
12. *P. metallicus* Bates, 1871:246
13. *P. dynastes*, new species
14. *P. immaculatus* Bates, 1871:246
15. *P. commotes*, new species
16. *P. bilbo*, new species
17. *P. leucocareus*, new species
18. *P. crossarchon*, new species
19. *P. crossodmos*, new species

The *gongylos* group

20. *P. gongylus*, new species

The *jeppeseni* group

21. *P. jeppeseni* (Jensen-Haarup), 1910:553
22. *P. tolype*, new species

Subgenus *Pericompsus* sensu stricto

The *univittatus* group

23. *P. univittatus* (Jensen-Harrup), 1910:553

The *ephippiatus* group

24. *P. ephippiatus* (Say), 1834:439
25. *P. sagma*, new species
26. *P. leechi*, new species
27. *P. pauli*, new species
28. *P. nevermanni* (Darlington), 1934:160
29. *P. reichei* (Putzeys), 1846:415

30. *P. laetulus* LeConte, 1851:192
 31. *P. longulus* Bates, 1878:601
 32. *P. silicis*, new species
 33. *P. tlaloc*, new species
 34. *P. gracilior* (Bates), 1884:289
 35. *P. jamcubanus*, new species
 36. *P. elegantulus* (Laferte), 1841:46
 37. *P. morantensis*, new species
 38. *P. philipi*, new species
 39. *P. prionomus*, new species
 40. *P. histrionellus* Bates, 1884:290
 41. *P. circuliformis* (Solier), 1849:165
 42. *P. andinus* (Jensen-Haarup), 1910:554
 43. *P. nonandinus*, new species
 44. *P. amygdali*, new species
 45. *P. callicalymma*, new species
 46. *P. tetraphalarus*, new species
 47. *P. subincisus*, new species
 48. *P. eubothrus*, new species
 49. *P. juncundus* Schaum, 1859:202
 50. *P. alcimus*, new species
 51. *P. clitellaris* (Erichson), 1847:73
 52. *P. pegasus*, new species
 53. *P. micropegasus*, new species
 54. *P. acon*, new species
 55. *P. anassa*, new species
- The *sellatus* group
56. *P. sellatus* LeConte, 1851:191
- The *centroplagiatus* group
57. *P. centroplagiatus* (Putzeys), 1846:415
 58. *P. picticornis* Bates, 1871:245
 59. *P. diabalius*, new species
 60. *P. stenocitharus*, new species
 61. *P. crossotus*, new species
- The *hirsutus* group
62. *P. hirsutus* Schaum, 1863:88
 63. *P. polychaetus*, new species
 64. *P. grossepunctatus* Bates, 1871:245
- The *incisus* group
65. *P. incisus* Bates, 1871:246
 66. *P. concinnus* (Laferte), 1841:47
 67. *P. rorschachinus*, new species
 68. *P. carinatus*, new species

Genus *Pericompsus* LeConte

Pericompsus LeConte, 1851:191. [Type-species: *Bembidium ephippiatum* Say, 1834:439. Subsequent designation by LeConte, 1859:553.]

Tachysops Casey, 1918:171. [Type-species: *Bembidium ephippiatum* Say, 1834:439. Subsequent designation by Jeannel, 1941:423. Synonymized by Jeannel, 1941:423.]

Tachysalia Casey 1918:173. [Type-species: *Pericompsus laetulus* LeConte, 1851:192, original designation. Synonymized by Jeannel, 1941:423.]

Leiotachys Jeannel, 1962:616. [Type-species: *Bembidium circuliformis* Solier, 1849:165, original designation. New synonymy.]

DESCRIPTION.—*Form* (Figures 1, 3, 25): Various, members of most species elongate and depressed, others subconvex and robust. Easily distinguished from members of other Tachyina by the presence of two mental foveae, punctate basal transverse impression on the pronotum, elytral interneurs striate, punctate or both, and female apical sternum with 4 setae in a straight row transversely across sternum.

Color: Body testaceous to black, elytra multicolored or concolorous, appendages mostly testaceous or palpi and some antennal articles infuscated.

Head: Mentum with acute tooth on anterior margin, bifoveate; antenna with pubescence on apical two-thirds of article 4 and all of articles 5–11, articles 2 and 3 plurisetose; frons with two or three supraorbital setae per eye; eyes pubescent or not.

Prothorax: Prosternum plurisetose or glabrous; coxal cavities biperforate—separate—closed; tibia notched laterally at apex; claws simple.

Mesothorax: Elytron with marginal explanation setose, serrate-setulose, or smooth, recurrent groove moderately long, arcuate, and not quite parallel to side margin but closer to it than suture, anterior apex of recurrent groove straight, disc with five, six or seven interneurs, interneur 8 punctate or

sulcate, if sulcate the sulcus foveate or not, intervals flat, slightly convex, or carinate, plica present, chaetotaxy various; middle coxae conjunct-confluent.

Abdomen: Last visible sternum of female with four setigerous pores in straight row across sternum, that of male with two setigerous pores, sterna 3–6 of both sexes with accessory setae or not.

Secondary sexual characteristics: Male with probasitarsus spiniform medially and with squamate setae beneath; male with two slender parameres, each with three to five setae, internal sac, and apex of median lobe various; female with stylus of ovipositor bladelike without spines but with two small setae near apex.

Size: Length, 1.72–3.72 mm; width, 0.72–1.48 mm.

DISTRIBUTION.—The combined ranges of the 68 species of this genus extend from Massachusetts and southern California (U.S.A.) to approximately 40° S latitude in Chile and Argentina and throughout Australia and Tasmania. One species is probably introduced by man (Darlington, 1963) into New Zealand. The majority of species occur in the Neotropical region.

Key to the Subgenera, Species Groups, and Species

1. Interneur 8 subsulcate throughout length of elytron; range New World 2
Interneur 8 a serial row of punctures in basal two-thirds of elytra; range Australia, Tasmania, New Zealand (subgenus *Upocompsus*, new subgenus) 3
2. (1) Interneur 8 with a deep, nearly perforate fovea at or just anterior to middle of elytron; elytron also with 2 various-sized subhumeral foveae; elytral seta Eo4 at position "d" (Figure 2) (subgenus *Pericompsus*, sensu stricto) 23
Interneur 8 not foveate at or near middle of elytron; if foveate posterior to humerus, then foveae shallow and bear setae or perforate fovea small and at basal fourth near seta Eo4c (subgenus *Eidocompsus*, new subgenus) 11
3. (1) Elytron (Figure 4) with 8 interneurs, each an entire serial row of punctures; recurrent groove not well impressed (*yarrensis* group) 1. *P. yarrensis* (Blackburn)
Elytron (Figures 5–11) with less than 8 interneurs, each only a partial serial row of punctures; recurrent groove deeply impressed (*australis* group) 4
4. (3) Frons (Figure 11) with a large and depressed U-shaped area of pubescence 9. *P. pubifrons* (Darlington)
Frons glabrous, not depressed, and without pubescence 5
5. (4) Pronotum (Figure 9) anterolaterally with several accessory setae; elytral margin with setiferous fringe, the setae longer than width of elytral explanation 7. *P. seticollis* (Sloane)
Pronotum without accessory setae, only the two normal pairs present; elytral margin with or without fringe 6
6. (5) Elytron with lateral margin with setiferous fringe, which is extended to apical sixth; the setae longer than width of elytral explanation 6. *P. punctipennis* (Macleay)
Elytron with lateral margin without fringe, but humeral margin serrate-setulose in basal fourth 7

7. (6) Pronotum without marginal bead, proepipleura smooth, fused to pronotum 8. *P. semistriatus* (Blackburn)
 Pronotum with marginal bead 8
8. (7) Pronotum (Figure 7) broadly transverse with hind angles strongly obtuse, side margins not sinuate in basal half 4. *P. bogani* (Darlington)
 Pronotum narrower, with sharp hind angles and sinuate side margins 9
9. (8) Prosternum glabrous; color shiny piceous 5. *P. habitans* (Sloane)
 Prosternum densely setiferous; color rufotestaceous or piceous 10
10. (9) Eyes (Figure 6) quite small and nearly flat; color piceous; flight wings reduced 3. *P. olliffi* (Sloane)
 Eyes (Figure 5) large and prominent; color rufotestaceous; flight wings fully developed 2. *P. australis* (Schaum)
11. (2) Interneur 8 with a deep, but small, nearly perforate fovea at basal fourth near seta Eo4c; form short, robust, and convex (*jeppeseni* group) 12
 Interneur 8 without small fovea; form various 13
12. (11) Elytron with lateral margin fringed with setae from base to apical fourth, setae longer than width of elytral explanation 22. *P. tolype*, new species
 Elytron with lateral margin not fringed with setae, but basal fourth serrate-setulose 21. *P. jeppeseni* (Jensen-Haarup)
13. (11) Elytral interneurs with a very small number of large coarse punctures, each serial row (2-6) with 7 or less punctures . (*gongylus* group) 20. *P. gongylus*, new species
 Elytral interneurs with numerous punctures, each serial row with more than 10 punctures (*brasiliensis* group) 14
14. (13) Elytron dorsal surface with finely impressed, nearly isodiametric reticulation 10. *P. reticulatus*, new species
 Elytron dorsal surface without reticulate microsculpture 15
15. (14) Elytron with lateral margin fringed with setae from base to apical fourth, setae longer than width of elytral explanation 16
 Elytron without fringe, but may have humeral margin serrate-setulose in basal fourth ... 17
16. (15) Forebody dark piceous or black, sharply contrasting with rufescent elytra; eyes rather small, longitudinal diameter (dorsal view) subequal to combined length of basal two antennal articles 19. *P. crossodmos*, new species
 Forebody rufopiceous, not strongly contrasting with rufescent elytra; eyes large and prominent, longitudinal diameter greater than combined length of basal two antennal articles 18. *P. crossarchon*, new species
17. (15) Elytron with 6 interneurs, each a serial row of punctures 12. *P. metallicus* Bates
 Elytron with 5 interneurs, each a serial row of punctures 18
18. (17) Pronotum with hind angles slightly obtuse, side margins not or feebly sinuate 19
 Pronotum with hind angles about right or slightly acute, side margins moderately sinuate 21
19. (18) Dorsal surface bicolored or, at least, two-toned with head, pronotum, and elytral disc rufous, elytral margins testaceous 15. *P. commotes*, new species
 Dorsal surface uniformly concolorous, piceous or rufopiceous 20
20. (19) Antennal articles 4-11 infuscated, body piceous, size large, length, 2.76 mm, width, 1.12 mm 13. *P. dynastes*, new species
 Antennal articles testaceous, body rufopiceous; size small, length, 2.20-2.28 mm, width, 0.96-1.04 mm 16. *P. bilbo*, new species
21. (18) Antennal articles 4-11 darkly infuscated; forebody and venter dark piceous or black; elytral margins paler than elytral disc 11. *P. brasiliensis* (Sahlberg)
 Antennal articles testaceous or lightly infuscated at most; forebody and venter infuscated at most, usually rufous or paler; elytral margins concolorous with disc or paler 20
22. (21) Dorsal surfaces concolorous rufotestaceous; elytral punctation very fine, in general punctures separated longitudinally by their own diameter or less 14. *P. immaculatus* Bates
 Dorsal surfaces bicolored, head, pronotum, and elytral disc rufous or infuscated, elytral margins paler than disc; elytral punctation coarsely impressed, in general punctures separated longitudinally by more than their own diameter 17. *P. leucocaremus*, new species

23. (2) Pronotum broadly explanate at sides and strongly narrowed posteriorly with acutely denticulate hind angles; eyes densely pubescent; interneur 8 with 2 large subequal foveae; clytral disc with 6 entire striate-punctate interneurs; dorsal surface granulate (*sellatus* group) 56. *P. sellatus* LeConte
 Combination of characteristics not as above 24
24. (23) Elytron with 7 interneurs, each a serial row of punctures and interval 7 carinate at apex; interneur 8 with 2 very small, nearly perforate foveae, one just anterior to middle and the other at basal fourth (*univittatus* group) 23. *P. univittatus* (Jensen-Haarup)
 Combination of characteristics not as above 25
25. (24) Elytron with disc plurisetose (*hirsutus* group) 26
 Elytron with only 2 or 3 setae in interval 3 28
26. (25) Head each side with 2 supraorbital setiferous pores; pronotum with well-defined lateral bead 62. *P. hirsutus* Schaum
 Head each side with 3 supraorbital setiferous pores; pronotum without lateral bead in basal two-thirds 27
27. (26) Antennal articles uniformly testaceous; clytra rufous at base, paler apically 62. *P. grossepunctatus* Bates
 Antennal articles 1-3 testaceous, 4-6 infuscated, 7-11 white; clytra testaceous with rufous cloud on disc 63. *P. polychaetus*, new species
28. (25) Elytron with each interval, immediately adjacent to punctate interneur carinate, punctures thus set in a furrow, carinae entire at apex; humeral margin strongly angulate and connected to carinate base of interneur 7 (*incisus* group) 29
 Elytron with intervals flat or slightly convex; humeral margin angulate or not, connected to base of interneur 4 or not, punctures well separated and/or feebly striate between, but not set in a deep furrow 32
29. (28) Pronotum and head with perfectly isodiametric and well-impressed reticulation, surface smooth 30
 Pronotum and head with moderately strongly granulate reticulation, surface rugose 31
30. (29) Elytron with midfovea of interneur 8 located anterior to level of seta Ed3a; humeral margin smooth 67. *P. rorschachinus*, new species
 Elytron with midfovea of interneur 8 located posterior to level of seta Ed3a; humeral margin serrate-setulose in basal fourth 65. *P. incisus* Bates
31. (29) Elytron with midfovea of interneur 8 small, subequal in diameter to posterior fovea of humeral group; clytral intervals strongly carinate, flat part of intervals almost absent; pronotum quadrate with broadly reflexed marginal explanations 68. *P. carinatus*, new species
 Elytron with midfovea of interneur 8 large; larger in diameter than posterior fovea of humeral group; clytral intervals moderately carinate; flat part of intervals quite evident; pronotum subcordate with narrowly reflexed marginal explanations 66. *P. concinnus* (Laferte)
32. (28) Elytron with interval 3 trisetose, setae in positions Ed-2, 3a, and 5a (*centroplagiatus* group) 33
 Elytron with interval 3 bisetose, setae in positions Ed-3a and 5a (*ephippiatus* group) 37
33. (32) Elytron with lateral margin fringed with setae from base to apical third, setae longer than width of elytral explanation 6. *P. crossotus*, new species
 Elytron without fringe, but humeral margin in basal fourth may be finely serrate-setose, setae very short 34
34. (33) Pronotum laterally with a single pair of setiferous pores, pores located at middle 59. *P. diabalius*, new species
 Pronotum laterally with two pairs of setiferous pores, pores located at middle and at hind angles 35
35. (34) Elytron dull, with moderately well-impressed, nearly isodiametric reticulation 60. *P. stenocitharus*, new species
 Elytron shiny, without microsculpture 36
36. (35) Body color uniformly rufous, apex of elytron sometimes paler due to white flight wings folded beneath; antennal articles 3-6 infuscated 58. *P. picticornis* Bates
 Body color testaceous with rufopiceous elytral cloud; antennae testaceous 57. *P. centroplagiatus* (Putzeys)

37. (32) Color dark piceous or almost black, each elytron with 2 white spots, outer antennal articles infuscated, appendages testaceous 29. *P. reichei* (Putzeys)
Color various; head and pronotum, if dark, always differently pigmented from each other, elytra pale with darker cloud or spots 38
48. (37) Elytron with evident, nearly isodiametric reticulation, surface relatively dull 39
Elytron without reticulation, surface very shiny 60
39. (38) Pronotum laterally with a single pair of setiferous pores, pores located at middle; prothorax very large and robust; elytra tri-colored, white, black, and rufotestaceous 55. *P. anassa*, new species
Pronotum laterally with two pairs of setiferous pores, pores located at middle and hind angles; prothorax normal; elytra without white coloration 40
40. (39) Elytron with midfovea of interneur 8 much larger in diameter than posterior fovea of humeral group 41
Elytra with midfovea of interneur 8 subequal to or only slightly larger in diameter than posterior fovea of humeral group (doubtful cases treated in both directions) 47
41. (40) Elytron with interneurs 3-6 well impressed in apical third, entire or nearly so 42
Elytron with interneurs 3-6 effaced in apical third 44
42. (41) Pronotum broad and subquadrate with shallow sinuations laterally in basal half 44. *P. amygdali*, new species
Pronotum subcordate, strongly narrowed and sinuate laterally in basal half 43
43. (42) Form and elytral pattern (Figure 110) 46. *P. tetraphalarus*, new species
Form and elytral pattern (Figure 120) 48. *P. eubothrus*, new species
44. (41) Elytron with midfovea of interneur 8 huge, much larger in diameter than width of elytral interval 6 45
Elytron with midfovea of interneur 8 moderately large, subequal or smaller in diameter than width of elytral interval 6 46
45. (44) Pronotum quadrate, sides feebly sinuate in basal half; elytron with punctures of interneurs large and mostly separated longitudinally by more than their own diameter 38. *P. nevermanni* (Darlington)
Pronotum subcordate, sides strongly constricted and sinuate in basal half; elytron with punctures of interneurs small and mostly separated longitudinally by less than their own diameter 40. *P. histrionellus* Bates
46. (44) Elytron with humeral margin coarsely serrate-setulose; interneurs with large, coarsely impressed punctures (in part) 50. *P. alcimus*, new species
Elytron with humeral margin smooth and minutely setulose; interneurs with small, finely impressed punctures (in part) 42. *P. andinus* (Jensen-Haarup)
47. (40) Elytron with base of interneur 4 not carinate and separated from base of humeral margin by the width, at least, of elytral interval 1 48
Elytron with base of interneur 4 at least feebly carinate and connected to base of angulate or rounded humeral margin 49
48. (47) Elytron with 6 entire and striate-punctate interneurs, punctures very fine and shallowly impressed; form elongate and depressed 54. *P. acon*, new species
Elytron with 6 punctate interneurs, punctures separated, large and coarsely impressed; form robust 36. *P. elegantulus* (Laferte)
49. (47) Head between eyes with very shallowly impressed (almost effaced) isodiametric reticulation 50
Head between eyes with strongly impressed isodiametric reticulation 52
50. (49) Forebody and venter pale rufous; form short and convex, with narrowly subcordate pronotum 49. *P. jucundus* Schaum
Forebody infuscated, venter piceous; form elongate, with broad transverse pronotum 51
51. (50) Elytra with extensive piceous cloud (Figure 76); pronotum with very narrowly reflexed margins especially in basal half 32. *P. silicis*, new species
Elytra with smaller piceous cloud (Figure 65); pronotum with moderately wide reflexed margins from base to apex 31. *P. longulus* Bates
52. (49) Elytron with midfovea of interneur 8 large, large enough to slightly constrict width of interval 7 53
Elytron with midfovea of interneur 8 small, width of interval 7 not constricted 54

53. (52) Elytron with humeral margin coarsely serrate-setulose
 (in part) 50. *P. alcinus*, new species
 Elytron with humeral margin smooth, minutely setulose
 (in part) 42. *P. andinus* (Jensen-Haarup)
54. (52) Pronotum, medial to hind angles, strongly carinate, carina extended to at least midpoint
 of marginal sinuation; elytron with humeral margin coarsely serrate-setulose
 51. *P. clitellaris* (Erichson)
 Pronotum, medial to hind angles, feebly or not carinate, if feebly carinate then carina
 short and not extended anteriorly to midpoint of marginal sinuation; elytron with
 humeral margin smooth, setulose, or very feebly serrate-setulose 55
55. (54) Elytral pattern elaborate (Figures 97, 109); elytron with basal half of interval 5
 darker than 4 56
 Elytral pattern simple (Figures 64, 77, 95, 111); elytron with basal half of interval
 5 concolorous with 4 57
56. (55) Elytron with apex of elytral cloud piceous; pronotum (Figure 109)
 45. *P. callicalymma*, new species
 Elytron with apex of elytral cloud rufous or rufotestaceous; pronotum (Figure 97)
 43. *P. nonandinus*, new species
57. (55) Elytron with 6 distinctly striate interneurs extended from base to apex, interneurs with
 very small finely impressed punctures (high magnification)
 47. *P. subincisus*, new species
 Elytron with 6 punctate interneurs, punctures longitudinally separated and moderately
 large, easily discernible 58
58. (57) Pronotum with lateral margins broadly explanate-reflexed; elytra elongate and narrow,
 parallel sided (Figure 64) 30. *P. laetulus* LeConte
 Combination of characteristics not as above 59
59. (58) Elytron with apical margin of cloud broadly piceous, cloud rufous
 41. *P. circuliiformis* (Solier)
 Elytron with cloud not margined apically 33. *P. tlaloc*, new species
60. (38) Elytron with midfovea of interneur 8 clearly larger than posterior fovea of humeral
 group 61
 Elytron with midfovea of interneur 8 subequal to posterior fovea of humeral group ... 67
61. (60) Elytron with punctures of interneurs well separated longitudinally, at least by three or
 four times their own diameter 34. *P. gracilior* (Bates)
 Elytron with punctures of interneurs much closer together, separated longitudinally
 by their own diameter or slightly more 62
62. (61) Elytron with interneur 2 entire, with punctures or punctate stria well impressed to apex
 63
 Elytron with interneur 2 effaced or interrupted in apical third 64
63. (62) Elytron with midfovea of interneur 8 huge, interval 7 strongly constricted medial to
 midfovea; elytral pattern (Figure 61) 26. *P. leechi*, new species
 Elytron with midfovea of interneur 8 moderately large, but interval not constricted
 medial to midfovea; elytral pattern (Figure 62) 27. *P. pauli*, new species
64. (62) Forebody infuscated to piceous; form and elytral pattern (Figure 91)
 37. *P. morantensis*, new species
 Forebody testaceous; form and elytral pattern (Figures 60, 92, 127) 65
65. (64) Elytron with midfovea of interneur 8 located slightly posterior of middle of elytron
 53. *P. micropegasus*, new species
 Elytron with midfovea of interneur 8 located slightly anterior of middle of elytron ... 66
66. (65) Pronotum subquadrate, sides very shallowly sinuate in basal half; elytral cloud quadrate
 25. *P. sagma*, new species
 Pronotum subcordate, sides strongly sinuate in basal half; elytral cloud triangular
 38. *P. philipi*, new species
67. (60) Pronotum, medial to hind angle, not or feebly carinate; pronotum subquadrate, side
 margins very slightly sinuate in basal half 24. *P. ephippiatus* (Say)
 Pronotum, medial to hind angle, strongly carinate, carina long and sharp and extended
 anteriorly past midpoint of marginal sinuation; pronotum strongly sinuate and con-
 stricted in basal half 68

68. (67) Elytron with humeral margin minutely setulose, not serrate; elytral cloud expanded (Figure 79); pronotum usually infuscated, at least at sides 35. *P. jamcubanus*, new species
- Elytron with humeral margin coarsely serrate-setulose; elytral cloud small (Figures 93, 126) 69
69. (66) Elytron with punctures of interneurs large and coarse, punctures separated longitudinally by more than their own diameter on the average 52. *P. pegasus*, new species
- Elytron with punctures of interneurs small and fine, punctures separated by less than their own diameter, nearly contiguous 39. *P. prionomus*, new species

Upocompsus, new subgenus

TYPE-SPECIES.—*Tachys australis* Schaum 1863:90, here designated.

DESCRIPTION.—*Form* (Figure 3): Moderately elongate and narrow, moderately depressed. Easily distinguished from members of the other *Pericomp-sus* subgenera by the presence of interneur 8 as a serial row of punctures.

Color: Body and elytra shiny testaceous to piceous, appendages testaceous except in some species with slightly infuscated distal antennal articles.

Head: As described for genus except eyes apparently glabrous, ocular bulge posterior to eye with some setae, frons with two supraorbital setae per eye, middle of frons pubescent or glabrous.

Prothorax: Prosternum plurisetose or not; pronotum with lateral margins effaced or not, margins with two or more pairs of setae; basal transverse impression strongly punctate, punctures slightly stretched longitudinally, base strongly lobed at middle, hind angles various.

Mesothorax: Elytral disc with serial rows of punctures, interneur 8 a row of punctures in basal two-thirds and a stria in apical third and not foveate at middle or basal fourth; humeral margin rounded, then straight to level of interneur 4 or 5; chaetotaxy various (see below).

Metathorax: Flight wings fully developed, dimorphic, or reduced.

Abdomen: Sterna IV–VI each, in both sexes, with accessory setae, in some species also II and III finely pubescent.

Size: Length, 1.72–2.76 mm; width, 0.72–1.04 mm.

ETYMOLOGY.—Greek adjective, *oupos*, meaning “not at all” and, *komp-sus*, meaning “elegant” or “pretty,” referring to the drabness of these beetles relative to members of *Pericomp-sus* sensu stricto.

DISTRIBUTION.—The combined ranges of the species of this group extend throughout Australia and Tasmania, with one species supposedly introduced into New Zealand by man (Darlington, 1963).

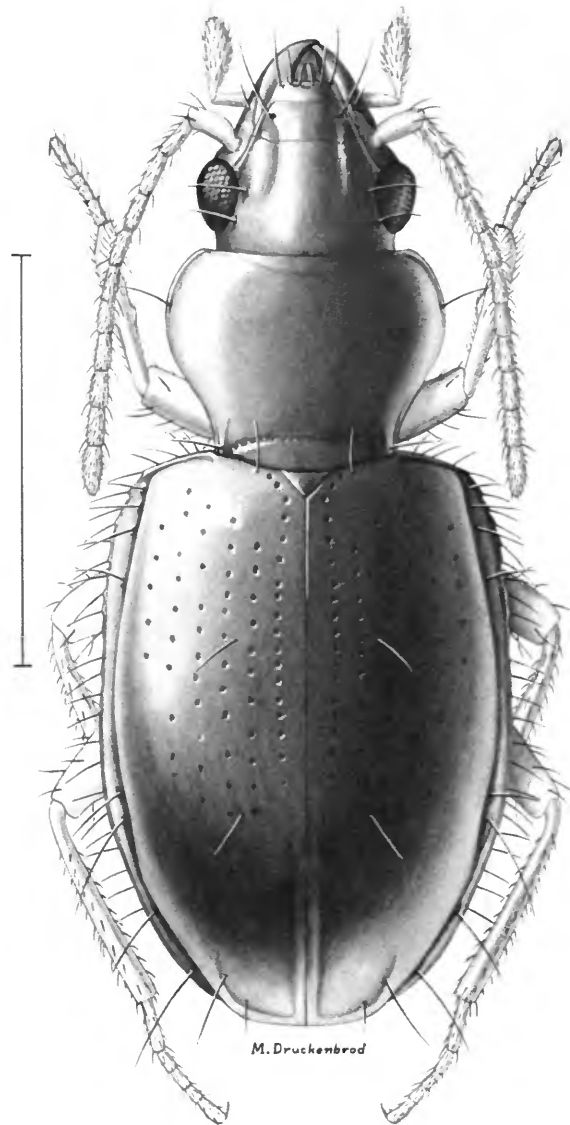


FIGURE 3.—Habitus of *P. punctipennis* male, Richmond River, Australia.

The *yarrensis* group

There is presently only one species in the *yarrensis* group. Its members are characterized by the presence on the elytron of eight entire punctate interneurs.

The range of the group extends throughout parts of southeastern Australia (Figure 18).

1. *Pericompsus yarrensis* (Blackburn), new combination

FIGURES 4, 18

Tachys yarrensis Blackburn 1892:20. [Lectotype, here selected, a female, in BMNH. Type-locality: Upper Yarra River, east of Melbourne, Victoria, Australia.]

DESCRIPTION.—*Form* (Figure 4): Elongate, narrow, and depressed, with small eyes and strongly punctate elytra. Easily distinguished from members of all other Australian *Pericompsus* by the presence of eight punctate interneurs extended from elytral base to apex, and by the absence of a well-defined recurrent groove at the elytral apex.

Color: Shiny rufotestaceous, appendages paler, head darker.

Head: Across eyes narrower than width of pronotum; frontal furrows deeply impressed and evenly arcuate to posterior margin of eye, bordered laterally by small carina; eyes small and more or less flat; ocular bulge posterior to eye sparsely setiferous.

Pronotum (Figure 4): Subcordate, sides shallowly sinuate in basal half; base strongly lobed at middle; hind angles about right; side margins narrowly reflexed; disc flat, convex at sides only; venter sparsely setiferous.

Elytra: Each elytron with 8 entire punctate interneurs, puncture large and coarse, separated by their own diameter or more; lateral channel also coarsely punctate, not foveate; humeral margin rounded to level of interneur 5, then directed anteriorly to base of elytron; side margins narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy Eo-1a, 2a, 3a, 4c, 5a, 6a, 7, 8b, 9 and Ed-1, 4, 6a, 7b; plica long and well developed externally.

Abdomen: Sterna III-IV sparsely setiferous; each sternum in female with 4 ambulatory setae.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male not seen; female characteristic of *ephippiatus* group (4 examined).

Size: Length, 2.16-2.28 mm; width, 0.78-0.84 mm; 5 specimens measured.

VARIATION.—The small sample available is quite homogeneous.

NATURAL HISTORY.—Specimens were collected in October; none were teneral. Sloane (1896) found these beetles "under logs and debris in very damp situation" and Darlington (1963) found some in "flood debris."

LOCALITY RECORDS (Figure 18).—I have seen five specimens from the following localities:

AUSTRALIA: NEW SOUTH WALES: Urana (BMNH). VICTORIA: Sale (MCZ, USNM); Upper Yarra River east of Melbourne (the type, BMNH).

Note: Sloane (1896) recorded the species at Mulwala and Tamworth, New South Wales.

The *australis* group

The members of the *australis* group are characterized by similarities of the male genitalia and the presence of a nonfoveate punctate interneur 8.

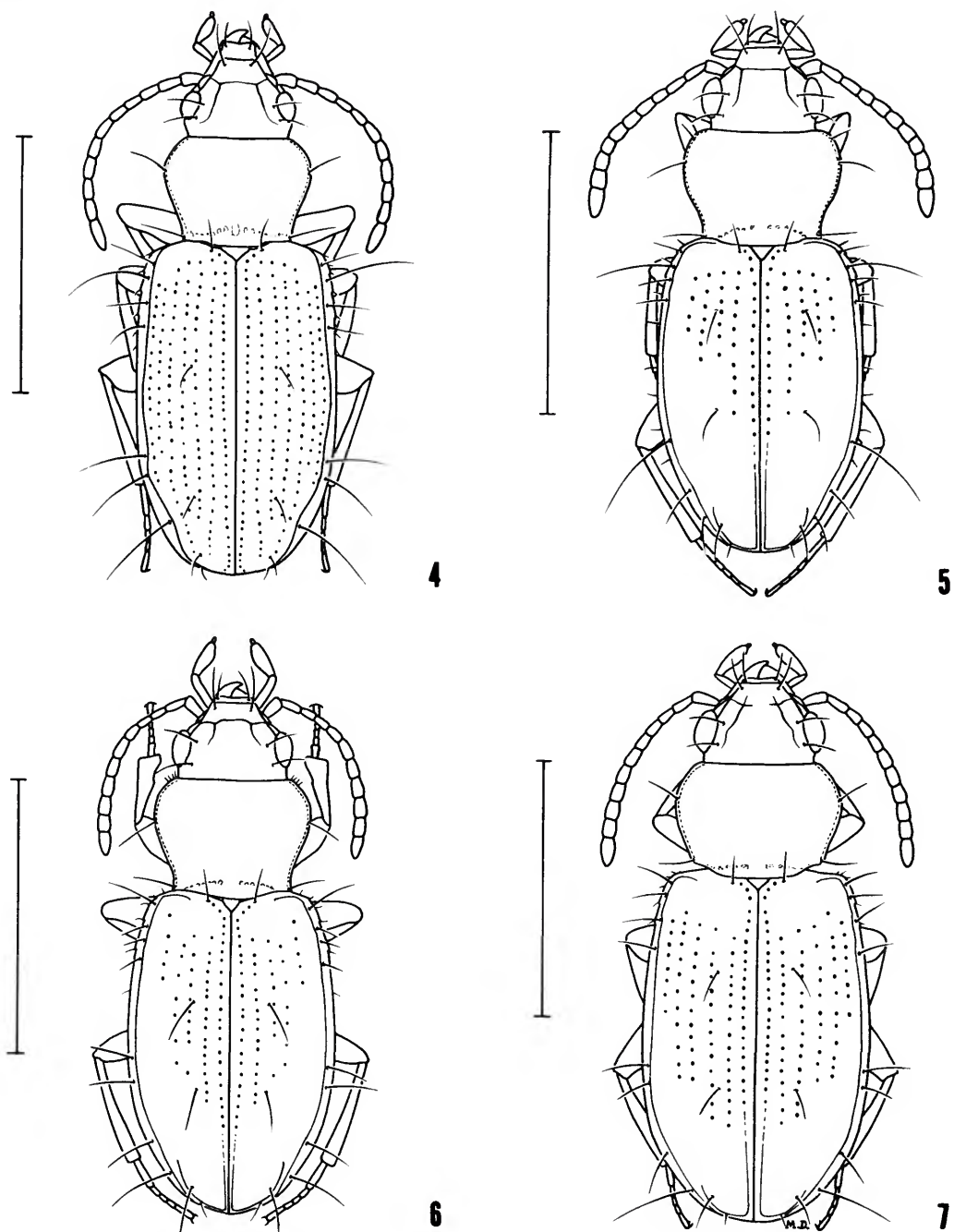
Various morphological developments in some members of this group of beetles parallel similar developments in some members of the two following subgenera. These developments include elytral margin fringes, loss of externally modified elytral interneurs, and presence of accessory setae on the margin of the pronotum.

There are eight species presently representing this group, with a combined range (Figures 18-24) extending throughout eastern and western Australia and Tasmania, and (introduced into) New Zealand.

The *australis* subgroup

The members of the *australis* subgroup are characterized by the presence of a bead along the margin of the pronotum. One member of the group is apparently wingless, and thus flightless. If this is so, it is probably the only member of the genus that has lost powers of flight.

There are four species presently representing this subgroup.



FIGURES 4-7.—Dorsal outline with setae of *Pericompsus* species: 4, *P. yarrensii* female, Sale, Australia; 5, *P. australis* female, Iron Range, Australia; 6, *P. olliffi* female, Vermont, Australia; 7, *P. bogani* female paratype, Bogan River, Australia.

2. *Pericompsus australis* (Schaum), new combination

FIGURES 5, 12, 19

Tachys australis Schaum, 1863:90. [Type (s) not in HUB; not seen. I agree with Darlington's (1963) logic in regard to the history of this name. Type-locality: Victoria, Australia.]

Tachys monochrous Schaum, 1863:90. [Absolute synonym. Actually, I think Schaum meant his title "*Tachys australis*" to mean "southern *Tachys*" as a title of subsequent descriptions. His arrangement, however, must result in synonymy as Darlington (1963:28) points out.]

Tachys flindersi Blackburn, 1888:41. [Lectotype, here selected, a male, in BMNH. Synonymized by Darlington, (1963:28). Type-locality: Port Lincoln, Australia.]

Bembidium tersatum Broun, 1893:1010. [Lectotype, here selected, a female, in BMNH. Synonymized by Darlington (1963:28). Type-locality: Mokohinau Island, New Zealand.]

DESCRIPTION.—*Form* (Figure 5): Broad and depressed, not subpedunculate as in *semistriatus* subgroup. Easily distinguished from other Australian *Pericompsus* members by the pale color, presence of a lateral bead on the pronotum, and the sharp, 90° hind angles of the pronotum.

Color: Shiny rufotestaceous, appendages testaceous.

Head: Across eyes narrower than width of pronotum; frontal furrows shallow, linear, and prolonged only to level of mideye; eyes medium sized and slightly prominent; ocular bulge posterior to eye very sparsely setiferous.

Pronotum (Figure 5): Broadly subcordate, sides moderately sinuate in basal half; base slightly lobed at middle; hind angles about right; side margins beaded, not reflexed disc quite flat, convex at sides; venter sparsely setiferous.

Elytra: Each elytron with 6 or 7 punctate interneurs; punctures medium sized and coarse, separated longitudinally by their own diameter or more; punctures of rows 2–5 effaced posterior of middle, row 6 present or not and represented by 1 or more punctures when present, rows 1 and 8 entire but striate in apical third, interneur 7 effaced externally throughout, lateral channel punctate to basal third, not foveate; humeral margin rounded at base, then slightly concave to level of interneur 4, not connected to base of 4; side margins narrowly explanate, coarsely serrate-setulose to apical fourth, less serrate posterior to middle; setae equal in

length to width of elytral explanation; chaetotaxy as in *P. semistriatus*; plica long but only slightly developed externally.

Abdomen: Sterna III–IV each sparsely setiferous.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 12) (1 examined); female characteristic of ephippiatus group (8 examined).

Size: Length, 1.72–2.40 mm; width, 0.72–0.92 mm; 10 specimens measured.

VARIATION.—The punctuation of interneur 6 is present or absent, when present it may be represented by 1 to 7 punctures. The two elytra of each beetle vary from each other as well. The punctuation of the other interneurs varies also, but at least some punctures are always present.

NATURAL HISTORY.—Specimens were collected in January through April, June, October through December; one specimen labeled "Oct.-Nov." was teneral. Darlington (1963) records these beetles as occurring "under cover by standing or running water or in other wet places." Blackburn (1888) recorded his specimens from swampy ground and the banks of the Torrens River. The species is no doubt subhygrophilus.

DISTRIBUTION.—The range of this species extends throughout the eastern half of Australia and extends southward to Tasmania and New Zealand. It is probably introduced into the latter country (Darlington, 1963). An apparent disjunction occurs toward the west as Darlington found one specimen at Wiluna, Western Australia, in 1931 (see Figure 19).

LOCALITY RECORDS (Figure 19).—I have seen 64 specimens from the following localities:

AUSTRALIA: AUSTRALIAN CAPITOL TERRITORY: Cotter Dam (MCZ). NEW SOUTH WALES: Bellangry F St. NW Wauchope (MCZ, USNM); Bogan River south of Nyngan (MCZ, USNM); vicinity of Dubbo (MCZ); vicinity of Sydney (MCZ); marsh, north of Sydney (BMNH). QUEENSLAND: North of Bowen (MCZ, USNM); Cape York, Rocky River (MCZ); Davis Creek, Kuranda Mareeba Road (MCZ); Gladstone to Many Peaks (MCZ); Shipton's Flat south of Cooktown (MCZ); Townsville (BMNH); vicinity of Mount Molloy (MCZ); by field, north of Yeppon (MCZ). SOUTH AUSTRALIA: Aroona Dam site southwest of Copley (MCZ); Cooper Crossing (MCZ); North Flinders Range, Ilpounda Water (MCZ); Oodnadatta (MCZ); Port Lincoln (BMNH). TASMANIA: Arve River, Harz National Park (MCZ). VICTORIA: Ferntree Gully (MCZ). WESTERN AUSTRALIA: Wiluna (MCZ).

NEW ZEALAND: Mokohinau Island (BMNH).

3. *Pericompsus olliffi* (Sloane), new combination

FIGURES 6, 20

Tachys olliffi Sloane, 1896:376. [Type (s) probably in CSIRO, not seen, but Sloane's description is good. Type-locality: Forest Reefs, New South Wales, Australia.]

DESCRIPTION.—*Form* (Figure 6): Similar to *P. habitans* except head and pronotum narrower and eyes considerably smaller. Easily distinguished from members of all other Australian *Pericompsus* by the form of the forebody and overall color.

Color: Shiny dark rufopiceous, legs testaceous, antennae and palpi infuscated.

Head: Much narrower across eyes than width of pronotum; frontal furrows short and well impressed, not prolonged on frons past mid-eye level; eyes small and feebly prominent; ocular bulge posterior to eye glabrous.

Pronotum (Figure 6): Moderately subcordate, sides narrowed and slightly sinuate in basal half; base slightly lobed at middle; hind angles slightly obtuse and sharp; side margins narrowly beaded; disc moderately convex; venter densely setiferous.

Elytra: Each elytron with 6 punctate interneurs, punctures small and separated longitudinally by twice their own diameter or more; row 2-5 effaced in apical third or before, rows 1 and 8 entire and striate in apical half, interneur 7 effaced externally throughout, lateral channel punctate to apical third, not foveate; humeral margin rounded at base to level of interneur 4, not connected to base of 4; side margins narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. semistratus*; plica short and well developed externally.

Abdomen: Sterna IV-VI each sparsely setiferous.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male not seen; female characteristic of ephippiatus group (1 examined).

Size: Length, 1.92-2.08 mm; width, 0.76-0.84 mm; 2 specimens measured.

VARIATION.—Too few specimens were seen to assess variation.

NATURAL HISTORY.—Specimens were collected in September and October; none were teneral. The wings of both specimens seen were reduced, making the beetles incapable of flight, but, as pointed out by Darlington (1963), the species may be wing dimorphic as in other members of this group.

LOCALITY RECORDS (Figure 20).—I have seen two specimens from the following localities:

AUSTRALIA: NEW SOUTH WALES: Mount Lofty (MCZ).
VICTORIA: Vermont at Danenong Creek (MCZ).

4. *Pericompsus bogani* (Darlington), new combination

FIGURES 7, 22

Tachys bogani Darlington, 1936:27. [Holotype, a male, in MCZ. One paratype female also in MCZ. Type-locality: Bogan River, south of Nyngan, New South Wales, Australia.]

DESCRIPTION.—*Form* (Figure 7): Similar to *P. habitans*, except more robust and with a broader head. Easily distinguished from members of all other Australian *Pericompsus* members by the form of the pronotum.

Color: Shiny rufotestaceous, legs testaceous, antennae and palpi slightly infuscated.

Head: Across eyes narrower than width of pronotum; frontal furrows moderately impressed and prolonged on frons to mid-eye level; eyes moderately large and prominent; ocular bulge posterior to eye glabrous.

Pronotum (Figure 7): Broadly transverse, sides slightly narrowed and sinuate in basal half; base strongly lobed at middle; hind angles rounded with small denticle; side margins not reflexed, narrowly beaded; disc moderately convex; venter glabrous.

Elytra: Each elytron with 7 punctate interneurs, punctures medium sized and coarse, separated longitudinally by their own diameter or more; rows 3-6 effaced in apical half, row 2 effaced in apical third, rows 1 and 8 entire and striate in apical third, interneur 7 effaced throughout, lateral channel punctate to apical third of elytron, not foveate; humeral margin rounded to level of interneur 4, not connected to base of 4; side margins narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica short and well developed externally.

Abdomen: Sterna IV-VI each sparsely setiferous.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male not dissected (because of poor condition of male holotype); female characteristic of ephippiatus group (one examined).

Size: Length, 2.20 mm; width, 0.96 mm; 2 specimens measured.

VARIATION.—Too few specimens are available to assess variation.

NATURAL HISTORY.—Specimens were collected in October; none were teneral. Darlington (1963) reported these beetles as collected by "washing wet sand or debris beside pools in the bed of the Bogan River, which was not flowing at the time." The species is probably riparian.

LOCALITY RECORDS (Figure 22).—I have seen only the two type-specimens, from the Bogan River, south of Nyngan, New South Wales, Australia.

5. *Pericompsus habitans* (Sloane), new combination

FIGURES 8, 13, 22

Tachys habitans Sloane, 1896:368. [Type(s) probably in CSIRO, not seen. Sloan's description is good. Type-locality: Darling Ranges, West Australia.]

DESCRIPTION.—*Form* (Figure 8): Similar to *P. australis*, except pronotum more narrowed at base and elytra narrower and slightly more convex. Easily distinguished from members of all other Australian *Pericompsus* species by the piceous color and moderately large and prominent eyes.

Color: Shiny piceous, legs testaceous, antennae and palpi infuscated.

Head: Narrower across eyes than width of pronotum; frontal furrows very shallowly impressed to mid-eye level; eyes moderately small and feebly prominent; ocular bulge posterior to eye glabrous.

Pronotum (Figure 8): Moderately subcordate, sides strongly constricted and sinuate in basal half; base strongly lobed at middle; hind angles acute, prominent; side margins narrowly beaded; disc moderately strongly convex; venter glabrous.

Elytra: Each elytron with 6 or 7 punctate interneurs, punctures small and coarse, separated longitudinally by their own diameter or more; rows 2–5 effaced in apical half, row 6 present or not, if present then represented by 1 to 7 punctures, rows 1 and 8 entire and striate in apical half, interneur 7 effaced externally throughout; elytron not foveate; humeral margin rounded to level of interneur 4, not connected to 4; side margins narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. semistriatus*; plica long and feebly developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 13) (2 examined); female characteristics of *cphippiatus* group (5 examined).

Size: Length, 1.84–2.28 mm; width, 0.80–0.92 mm; 10 specimens measured.

VARIATION.—The punctuation of interneur 6 varies from zero to seven punctures.

NATURAL HISTORY.—Specimens were collected in October, November, and January; two collected in January were teneral as well as one collected in November. The exact habitat has not been recorded, but one of Darlington's labels states "salt lake."

DISTRIBUTION.—The range of this species extends throughout extreme southwestern Australia south of 30° S latitude, with one record slightly north of 25° S.

LOCALITY RECORDS (Figure 22).—I have seen 59 specimens from the following localities:

AUSTRALIA: WESTERN AUSTRALIA: Authur River (MCZ); Belmont (MCZ, USNM); Bridgetown (MCZ); Fremantle, North Lake (MCZ); Mandurah (MCZ); Margaret River (MCZ, USNM); Mundaring Weir (MCZ); Pemberton (MCZ); Pinjarra (BMNH); Rockingham (MCZ); Rottneest (MCZ).

The *punctipennis* subgroup

The members of the *punctipennis* subgroup are characterized by the absence of a bead along the margin of the pronotum. One member of the group is dimorphic in respect to length of flight wing membrane; those individuals with short wings are probably incapable of flight.

There are four species presently representing this subgroup.

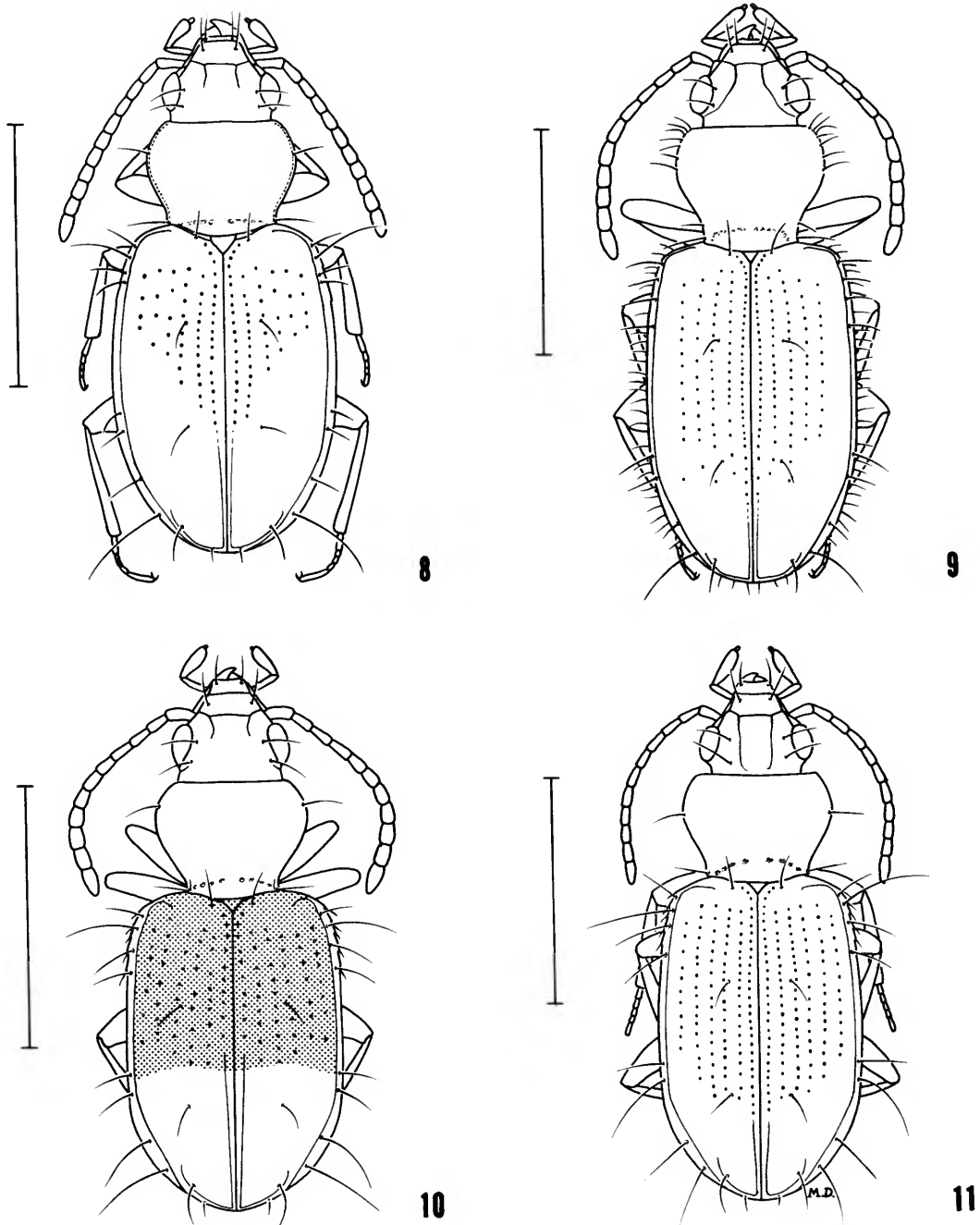
6. *Pericompsus punctipennis* (Macleay), new combination

FIGURES 3, 14, 24

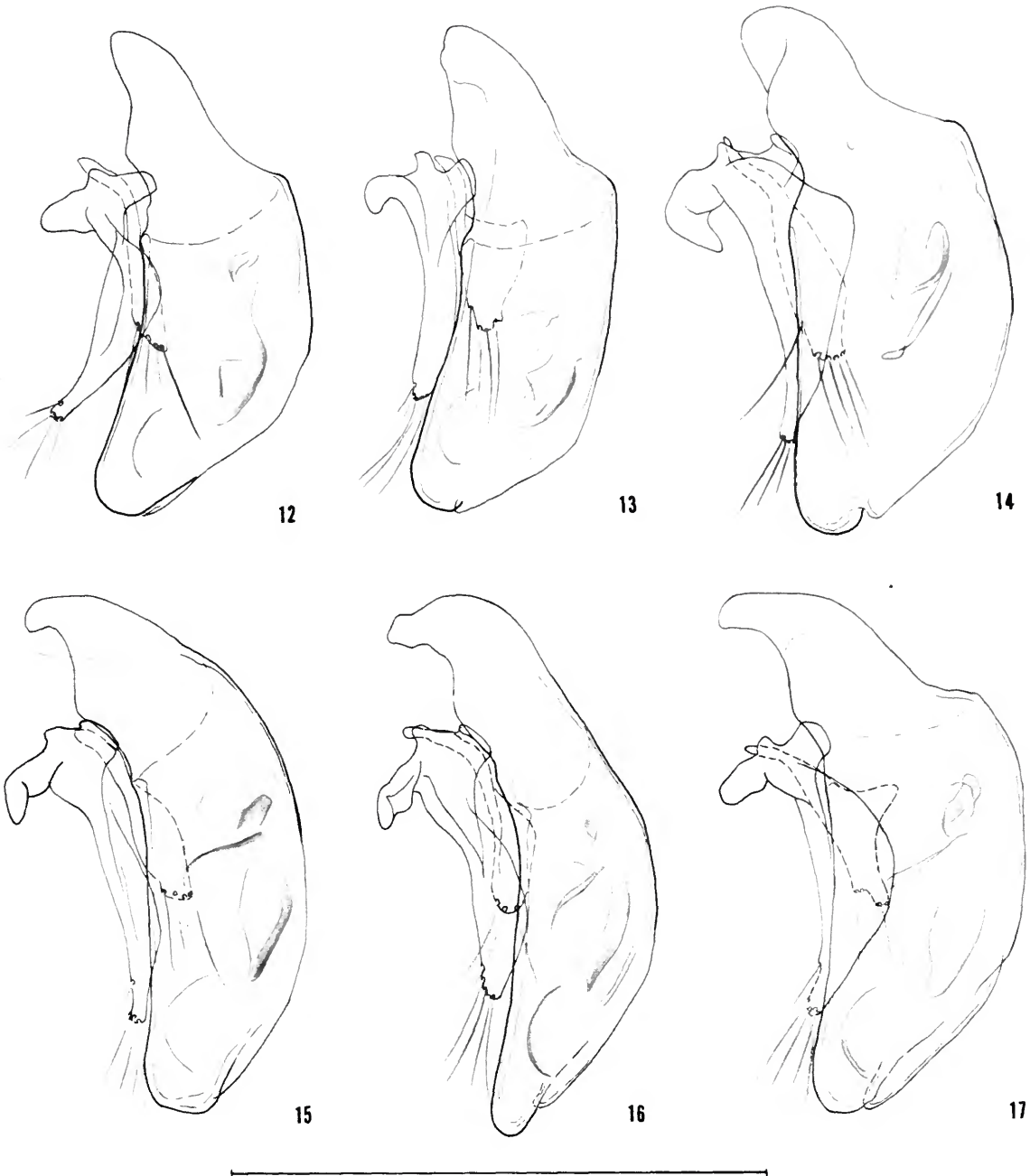
Bembidium punctipenne Macleay, 1871:116. [Type(s) probably in Macleay Museum, Sydney (not seen). I fully agree with Darlington's (1963) logic that this is a good species and not a synonym of *Tachys monochrous* Schaum as suggested by Sloane (1896). Type-locality: Gayndah, South Queensland, Australia.]

DESCRIPTION.—*Form* (Figure 3): Similar to *P. seticollis*, but with smaller and flatter eyes and more convex elytra. Easily distinguished from members of *P. seticollis* by the lack of accessory setae on the margins of the pronotum and from members of all other Australian species by the fringe of setae on the elytral lateral margins.

Color: Shiny rufotestaceous, appendages testaceous.



FIGURES 8-11.—Dorsal outline with setae of *Pericompsus* species: 8, *P. habitans* female, Rottneat Island, Australia; 9, *P. seticollis* male, Bogan River, Australia; 10, *P. semistriatus* female, Murray Bridge, Australia; 11, *P. pubifrons* male holotype, Termeil, Australia.



FIGURES 12-17.—Male genitalia, left lateral aspect: 12, *P. australis*, Bellangry, Australia; 13, *P. habitans*, Margaret River, Australia; 14, *P. punctipennis*, Jimna, Australia; 15, *P. seticollis*, Cardwell, Australia; 16, *P. semistriatus*, Gellibrand River, Australia; 17, *P. pubifrons*, Termeil, Australia.

Head: Across eyes narrower than width of pronotum; frontal furrows short, deep, and linear, prolonged onto frons to mid-eye level and each separated from eye by slightly raised carina; eyes moderately small and slightly prominent; ocular bulge posterior to eye sparsely setiferous.

Pronotum (Figure 3): Strongly subcordate, sides strongly constricted and abruptly sinuate in basal half; base slightly lobed at middle; hind angles about right; side margins without bead; disc moderately convex; venter densely setiferous.

Elytra: Each elytron with 6 or 7 punctate interneurons, punctures moderately large and coarse, separated by their own diameter or more; rows 2–5 effaced in apical half, row 6 present or not, if present then represented by 1 or more punctures, rows 1 and 8 entire but striate in apical half, interneur 7 effaced externally throughout: lateral channel punctate to apical third of elytron, not foveate; humeral margin rounded to level of interneur 4, not connected to base of 4; side margins narrowly explanate, coarsely serrate in basal half, setose to apical fourth, setae longer than width of elytral explanation; chaetotaxy as in *P. semistriatus*; plica short and well developed externally.

Abdomen: Sterna III–VI each sparsely setiferous.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 14) (2 examined); female characteristic of ephippiatus group (5 examined).

Size: Length, 2.32–2.76 mm; width, 0.92–1.04 mm; 10 specimens measured.

VARIATION.—The punctuation of interneur 6 on each elytron varies from 0 to 7; this occurs in the same population, and the same individual may have different numbers of punctures on each elytron. The length of flight wings also varies, some individuals have fully developed membranes while others have the membrane, distal to the stigma, reduced.

NATURAL HISTORY.—Specimens were collected in March, April, July, and October through December; one teneral specimen was collected in October.

DISTRIBUTION.—The range of this species is restricted to southeastern Australia south of 25° S. One specimen collected by Ross and Cavagnaro at Langi Crossing (not located) in Western Australia represents a broad disjunction. The specimen may be mislabeled.

LOCALITY RECORDS (Figure 24).—I have seen 51 specimens from the following localities:

AUSTRALIA: NEW SOUTH WALES: Braidwood (MCZ); Clyde Mts. (MCZ); "National Park" (MCZ); Richmond River, vicinity of Wiangaree (MCZ, USNM); Tamworth (BMNH); Williams River, B'ton House (MCZ). QUEENSLAND: Vicinity of Brisbane (MCZ, USNM); 30.0 miles north of Brisbane (MCZ); Jamna (MCZ, USNM); Mount Tambourine (MCZ). WESTERN AUSTRALIA: Langi Crossing (CAS).

7. *Pericompsus seticollis* (Sloane), new combination

FIGURES 9, 15, 23

Tachys seticollis Sloane, 1896:366. [Type(s) presumably in CSIRO (not seen). Sloane's original description is good. Type-locality: King Sound, North West Australia.]

DESCRIPTION.—*Form* (Figure 9): Similar to *P. semistriatus*, but easily distinguished from this and all other members of Australian *Pericompsus* species by the accessory setae on the lateral margins of the pronotum.

Color: Shiny rufotestaceous, appendages testaceous.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows shallowly impressed and evenly arcuate to posterior margin of eye; eyes large and prominent; ocular bulge posterior to eye sparsely setiferous.

Pronotum (Figure 9): Strongly subcordate, sides strongly constricted and abruptly sinuate in basal half; base slightly lobed at middle; hind angles about right; side margins without bead; disc quite flat, convex at sides; venter densely setiferous.

Elytra: Each elytron with 6 punctate interneurons, punctures moderately large and coarse, separated longitudinally by their own diameter or more; rows 2–5 effaced in apical half, rows 1 and 8 striate in apical third, interneurons 6 and 7 effaced externally throughout; lateral channel punctate to middle of elytron, not foveate; humeral margin rounded to level of interneur 4, not connected by 4; side margins narrowly explanate, coarsely serrate-setose in basal fourth, setose also to apical sixth, setae longer than width of elytral explanation; chaetotaxy as in *P. semistriatus*; plica short and well developed externally.

Abdomen: Sterna II–VI each sparsely setiferous.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 15) (1 examined); female characteristic of ephippiatus group (1 examined).

Size: Length, 2.32–2.52 mm; width, 0.92–0.96 mm; 6 specimens measured.

VARIATION.—The small samples available are quite homogeneous.

NATURAL HISTORY.—Specimens were collected in February, June, and October; none were teneral. Darlington (1963) recorded these beetles from "wet places but not by freely running water."

LOCALITY RECORDS (Figure 23).—I have seen six specimens from the following localities:

AUSTRALIA: NEW SOUTH WALES: Bogan River, south of Nyngan (MCZ); Mulwala (BMNH). QUEENSLAND: Vicinity of Cardwell (MCZ, USNM); vicinity of Cairns (MCZ).

Note: Figure 23 shows also the type-locality in northwest Australia.

8. *Pericompsus semistriatus* (Blackburn), new combination

FIGURES 10, 16, 21

Tachys semistriatus Blackburn, 1888:41. [Lectotype, here selected, sex undetermined because of poor condition of specimen, in BMNH. Type-locality: Port Lincoln, South Australia.]

DESCRIPTION.—*Form* (Figure 10): Subpedunculate, pronotum strongly constricted posteriorly; body subcylindrical as in New World *Pericompsus* sensu stricto members. Easily distinguished from all other Australian *Pericompsus* members by the smooth frons, absence of pronotal lateral bead, and absence of long marginal setae on the elytron.

Color: Various (see below).

Head: Across eyes narrower than width of pronotum; frontal furrows short and foveiform; eyes medium sized and prominent; ocular bulge posterior to eye very sparsely setiferous.

Pronotum (Figure 10): Strongly subcordate, sides strongly constricted in basal half; base strongly lobed at middle; hind angles acute, slightly prominent; side margins without bead; disc moderately convex; venter glabrous.

Elytra: Each elytron with 7 punctate interneurs; punctures moderately large and coarse, separated longitudinally by twice their own diameter or more; rows 2–6 effaced in apical half; rows 1 and 8 striate in apical half, interneur 7 effaced externally throughout; lateral channel punctate to middle of elytron, not foveate; humeral margin rounded to level of interneur 5, not connected to base of 5; side margins narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy Eo–1a, 2a, 3a,

4c, 5a, 6a, 7, 8b, and d–1, 3a, 5a, 7b, 8; plica short and well developed externally.

Abdomen: Sterna IV–VI each sparsely setiferous.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 16) (1 examined); female characteristic of *ephippiatus* group (7 examined).

Size: Length, 2.08–2.40 mm; width, 0.80–0.92 mm; 10 specimens measured.

VARIATION.—The color of the forebody is rufous; the elytra, in the basal half, varies from rufous to piceous, while the apical half varies from rufous to rufotestaceous within population samples. The flight wings are dimorphic, either fully developed or reduced distal to the stigma.

NATURAL HISTORY.—Specimens were collected in July and September; none were teneral. Blackburn (1888) recorded specimens as collected in swampy ground near Port Lincoln, and Darlington (1963) found them along the Murray River and in flood debris at Bodalla. It is probable the beetles are hygrophilus.

DISTRIBUTION.—The range of this species is confined to the southernmost coastal lands of southeastern Australia and Tasmania.

LOCALITY RECORDS (Figure 21).—I have seen 19 specimens from the following localities:

AUSTRALIA: NEW SOUTH WALES: Bodalla (MCZ, USNM). SOUTH AUSTRALIA: Meningie (MCZ, USNM); Murray Bridge (MCZ, USNM); Port Lincoln (BMNH). VICTORIA: Gellibrand River, Otway Ridges (MCZ); Lillydale (MCZ); Portland to Point Fairy (MCZ); Winchelsea (MCZ).

Note: Figure 21 also shows Sloane's (1920) localities in Tasmania, namely Starhan, Latrobe, Jordan River, Hobart, and also King Island between Tasmania and the mainland.

9. *Pericompsus pubifrons* (Darlington), new combination

FIGURES 11, 17, 23

Tachys pubifrons Darlington, 1963:24. [Holotype, a male, in MCZ. Seven paratypes from the same locality, also collected by Darlington, in MCZ and USNM. Type-locality: Termeil, New South Wales, Australia.]

DESCRIPTION.—*Form* (Figure 11): Similar to *P. semistriatus* except pronotum broader and less convex and elytra longer. Easily distinguished from members of all other *Pericompsus* species by the pubescent frons.

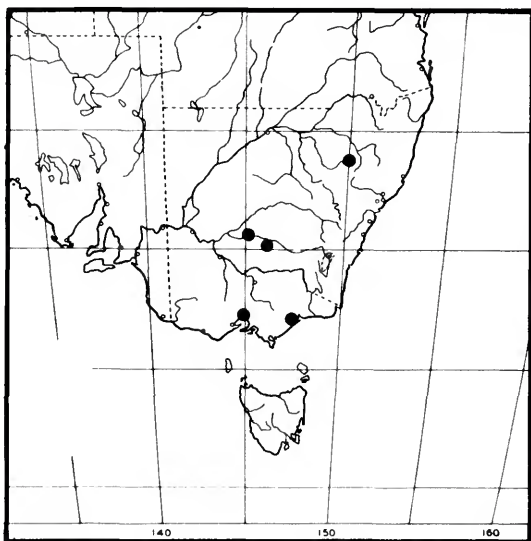


FIGURE 18.—Distribution map of *P. yarrensii*.

Color: Shiny rufotestaceous, apex of elytron slightly paler, appendages testaceous.

Head: Across eyes narrower than width of pronotum; frontal furrows moderately impressed and convergent, delimiting a U-shaped depression; depression pubescent; eyes moderately small and slightly prominent; ocular bulge posterior to eye very sparsely setiferous.

Pronotum (Figure 11): Subcordate, sides moderately strongly constricted and sinuate in basal half; base slightly lobed at middle; hind angles about right; side margins without bead; disc quite flat, laterally slightly convex; venter sparsely setiferous.

Elytra: Each elytron with 7 punctate interneurs; punctures small and separated longitudinally by their own diameter or more; rows 2–6 effaced in apical half, row 6 very short and of only a few punctures, rows 1 and 8 striate in apical half, interneur 7 effaced externally throughout; lateral channel punctate to apical third of elytron, not foveate; humeral margin rounded to level of interneur 4, not connected to 4; side margins narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. semistriatus*; plica short and well developed externally.

Abdomen: Sterna II–VI each sparsely setiferous.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 17) (1 examined); female characteristic of *ephippiatus* group (2 examined).

Size: Length, 2.48–2.58 mm; width, 0.96–1.04 mm; 6 specimens measured.

VARIATION.—The small sample available is quite homogeneous.

NATURAL HISTORY.—Specimens were collected in October; none were teneral. Darlington (1962) recorded these beetles from the water edge of sand bars of a small brook in a eucalyptus woods north-west of Termeil.

LOCALITY RECORDS (Figure 23).—I have seen eight specimens, all from Termeil, New South Wales, Australia.

Eidocompsus, new subgenus

TYPE-SPECIES.—*Trechus brasiliensis* Sahlberg, 1844:513, here designated.

DESCRIPTION.—*Form* (Figure 25): Rather broad and depressed or short, broad, and convex. Easily distinguished from members of the other *Pericompsus* subgenera by the presence of a subsulcate interneur 8 on the elytron which is not foveate at or near the middle.

Color: Body shiny testaceous to almost black, some species with almost metallic dorsum on some individual members, appendages testaceous except distal antennal articles and palpi infuscated in some members.

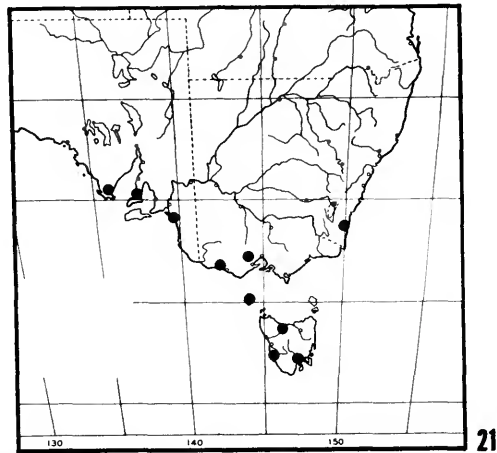
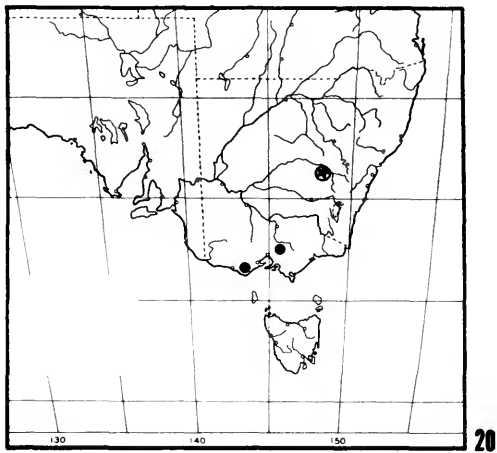
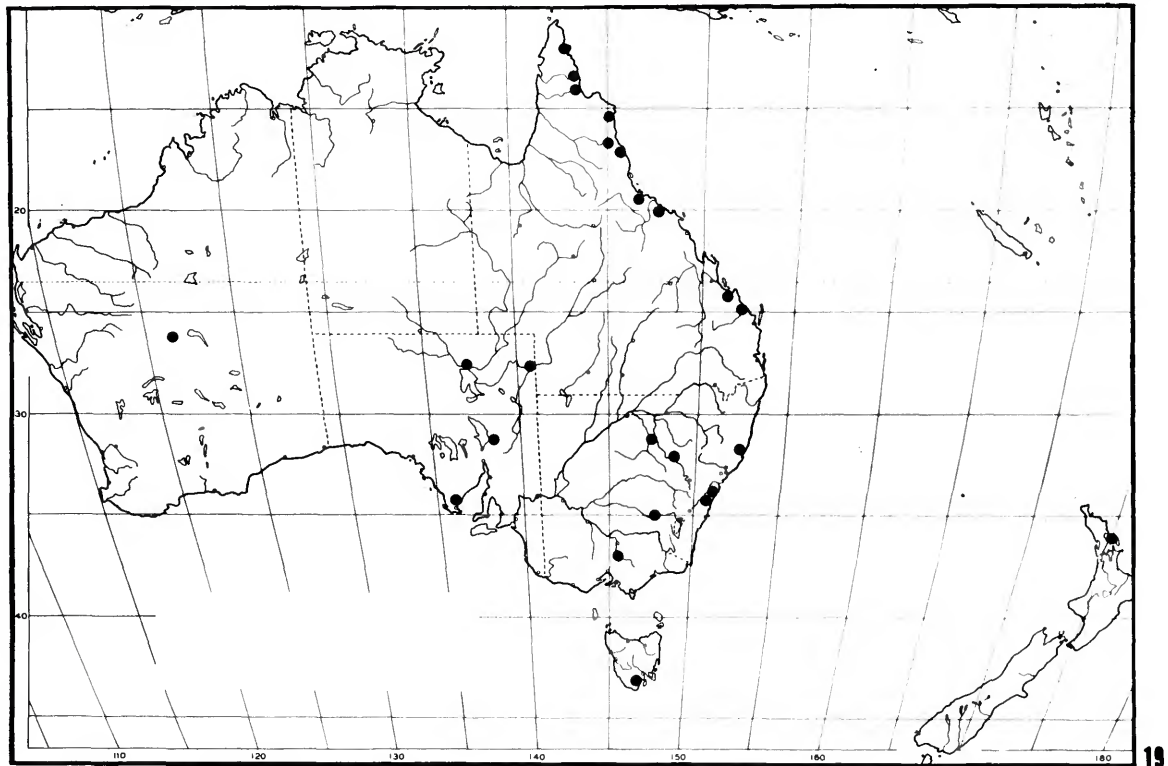
Head: As described for genus except eyes apparently glabrous, ocular bulge posterior to eye glabrous, frons with two supraorbital setae per eye, middle of frons glabrous.

Prothorax: Prosternum glabrous; pronotum with strongly beaded or slightly reflexed lateral margins, margins with two or more pairs of setae, basal transverse impression finely or coarsely punctulate, base slightly lobed at middle, hind angles various.

Mesothorax: Elytral disc with 5 or 6 punctate interneurs, interneur 8 subsulcate throughout and nonfoveate at middle, foveate or not at basal fourth near seta Eo4c, humeral margin rounded, then straight or slightly concave to level of interneur 4; chaetotaxy Eo-1a, 2a, 3a, 4c, 5a, 6a, 7, 8b, and Ed-1, 3a, 5b, 7b, 8; plica various in shape, always present.

Metathorax: Flight wings fully developed.

Abdomen: Sterna III–V each with two pairs of paramedial ambulatory setae, males with one pair



FIGURES 19-21.—Distribution maps: 19, *P. australis*; 20, *P. olliffi*; 21, *P. semistriatus*.

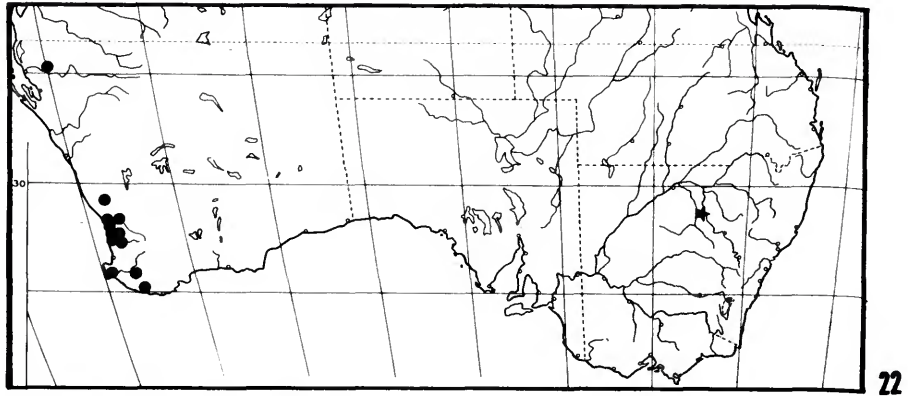
on sternum VI, females with two pairs on VI arranged in a straight row across sternum, females also with scattered and shorter setae on VI.

Size: Length, 1.84–3.04 mm; width, 0.84–1.28 mm.

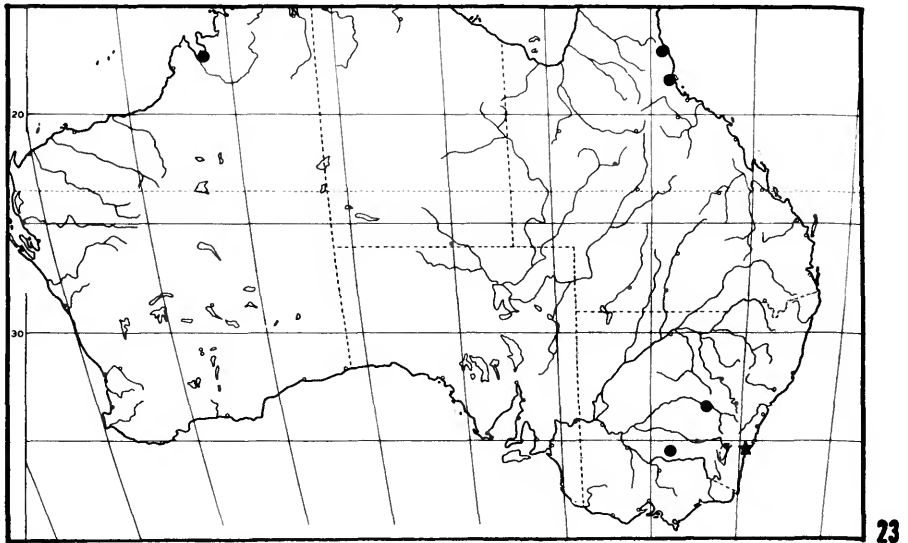
ETYMOLOGY.—Greek masculine noun, *eidos*,

meaning “form,” and *kompso*, meaning “pretty,” referring to the graceful outline of the beetles.

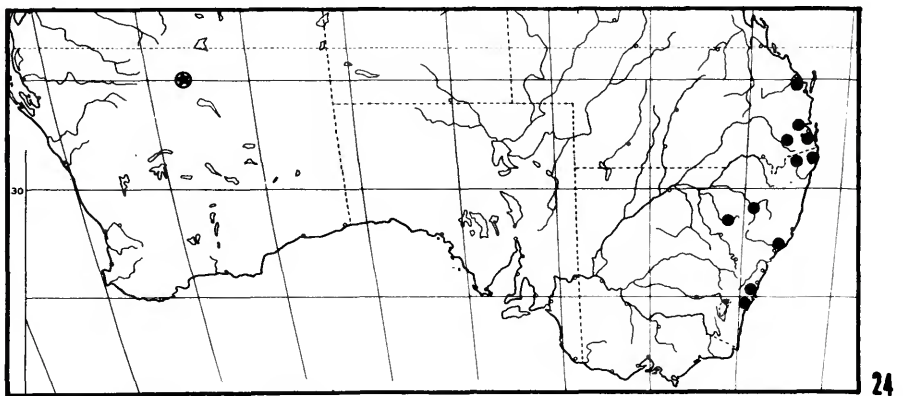
DISTRIBUTION.—The combined ranges of the species of this group extend from mid-Mexico south to about 35° S latitude in Argentina. The records



22



23



24

FIGURES 22-24.—Distribution maps: 22, *P. habitans* (circles), *P. bogani* (star); 23, *P. seticollis* (circles), *P. pubifrons* (star); 24, *P. punctipennis*.

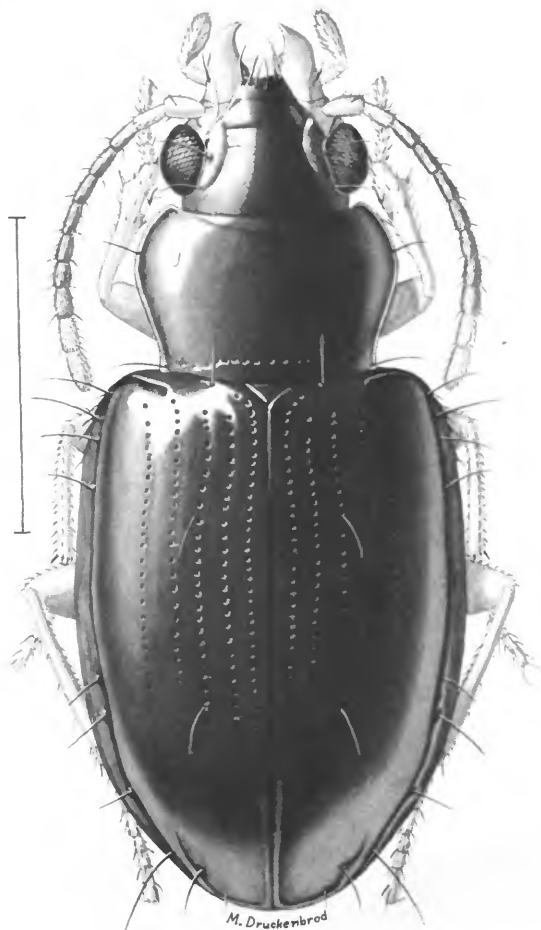


FIGURE 25.—Habitus of *P. brasiliensis* female, 31.8 miles east of Escarcega, Mexico.

from Chile are too general to locate exactly on a map. One species occurs both on the Middle American mainland and Cuba.

The *brasiliensis* group

The members of the *brasiliensis* group are characterized by the structure of interneur 8, which is not foveate, and the broad, depressed body form.

Some species of this group are similar to some species of the *australis* group, *hirsutus* group, and *jeppeseni* group in the presence of an elytral fringe and accessory pronotal setae.

There are 10 species presently representing this group with a combined range as given for the subgenus.

10. *Pericompsus reticulatus*, new species

FIGURES 26, 30, 36

TYPE-LOCALITY.—Fortaleza, Ceara, Brazil.

TYPE-SPECIMENS.—The holotype male is in MCZ. It was collected by F. Werner in 1963. Six paratypes are listed below.

DESCRIPTION.—*Form* (Figure 26): Very similar to *P. brasiliensis*, but easily distinguished from members of all species of this group by the well-impressed elytral microsculpture.

Color: Piceous, forebody shiny, appendages, except infuscated palps and antennal articles 3–11, testaceous.

Head: Much narrower across eyes than width of pronotum; frontal furrows well impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 26): Broadly transverse, sides shallowly sinuate in basal half; base moderately lobed at middle; hind angles about right; side margins slightly reflexed; disc moderately convex.

Elytra: Each elytron with 5 punctate interneurs; punctures medium sized and separated longitudinally by less than their own diameter; rows 2–5 effaced in apical fourth, row 1 well impressed and striate apically, interneur 6 and 7 effaced externally throughout, interneur 8 well impressed throughout, not foveate; humeral margin rounded and slightly concave to level of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

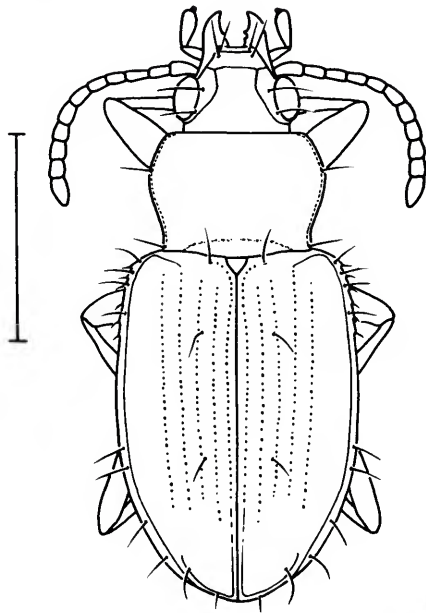
Microsculpture: Effaced from pronotum, well impressed, nearly isodiametric reticulation on elytra and frons.

Genitalia: Male (Figure 30) (2 examined); female not dissected.

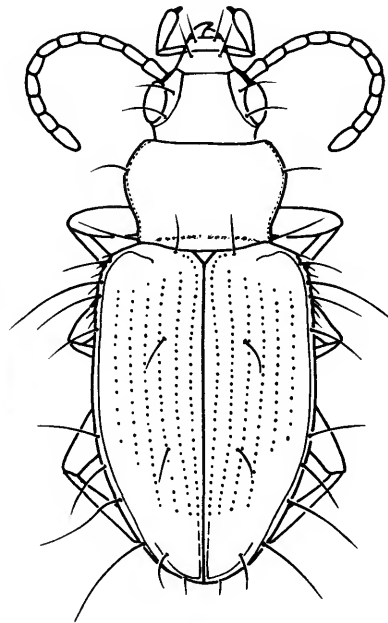
Size: Length, 2.68–3.04 mm; width, 1.12–1.28 mm; 5 specimens measured.

VARIATION.—The small samples available are quite homogeneous.

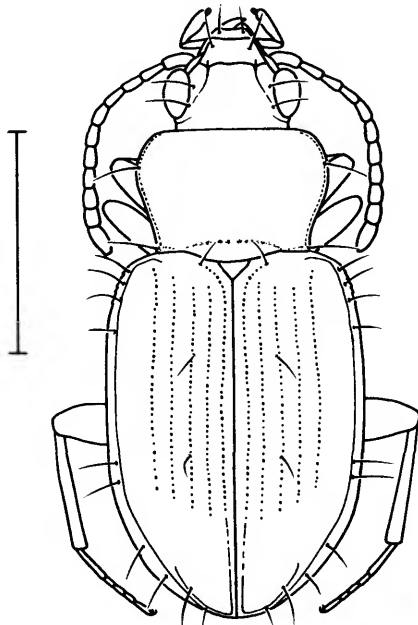
NATURAL HISTORY.—The Brazil specimens are labeled "March-April" and the Guyana specimens



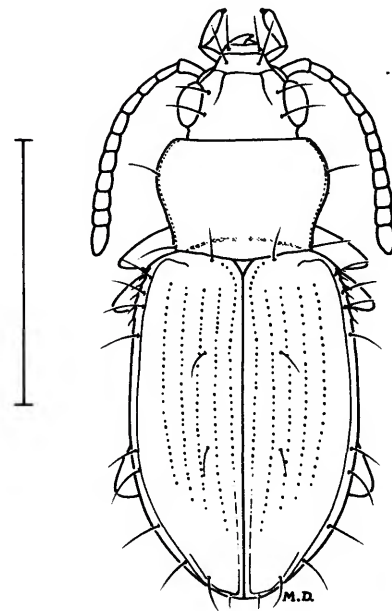
26



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28



29

FIGURES 26-29.—Dorsal outline with setae of *Pericompsus* species: 26, *P. reticulatus* male, Upper Rupununi River, Guyana; 27, *P. metallicus* male, Rio Caraguata, Brazil; 28, *P. dynastes* male holotype, 12.0 kilometers south of Calabozo, Venezuela; 29, *P. immaculatus* male, 18.0 miles east of Paso del Toro, Mexico.

"February-March." None of these specimens were teneral.

ETYMOLOGY.—Latin adjective, *reticulatus*, meaning "netlike," referring to the nearly isodiametric reticulation of the elytra.

LOCALITY RECORDS (Figure 36).—I have seen seven specimens from the following localities:

SOUTH AMERICA: BRAZIL: Ceara State, Fortaleza (MCZ, USNM). GUYANA: Upper Rupununi River (MCZ, USNM).

11. *Pericompsus brasiliensis* (Sahlberg), new combination

FIGURES 25, 31, 37

Trechus brasiliensis Sahlberg, 1844:513. [Lectotype, here selected, a male, in UZMH. Type-locality: Not given by Sahlberg, but the specimen is labeled "Brasilia," thus herewith designated.]

Tachys aeneopiceus Bates, 1871b:268. [Lectotype, here selected, a male, in MNHP. Three paralectotypes labeled by me in MNHP. New synonymy. Type-locality: Rio Tapajos, Brazil.]

Tachys duplex Bates, 1884:289. [Lectotype, here selected, a male, in BMNH. Five paralectotypes in BMNH and four in MNHP labeled by me. New synonymy. Type-locality: San Geronimo, Guatemala.]

Tachys decastichus Bates, 1891:261. [Lectotype, here selected, a female, in BMNH. Two paralectotypes in BMNH and two in MNHP labeled by me. New synonymy. Type-locality: Teapa, Tabasco, Mexico.]

DESCRIPTION.—*Form* (Figure 25): Broad and depressed with wide head, transverse pronotum, and rather squared elytra, compared with members of the ephippiatus group.

Color: Venter piceous, appendages testaceous except infuscated antennal articles 4–11; dorsum various (see below).

Head: Narrower across eyes than width of pronotum; frontal furrows deeply impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 25): Broadly transverse, sides shallowly sinuate in basal half; base slightly arcuate at middle; hind angles acute; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 5 punctate interneurs; punctures small and separated longitudinally by about their own diameter in basal half, contiguous in apical half before effaced at apical sixth, row 1 entire though less impressed apically, interneurs 6

and 7 effaced externally throughout; interneur 8 well impressed throughout, not foveate; humeral margin rounded and somewhat concave to level of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy Eo-1a, 2a, 3a, 4c, 5a, 6a, 7, 8b and Ed-1, 3a, 5b, 7b, 8; plica long and well developed externally.

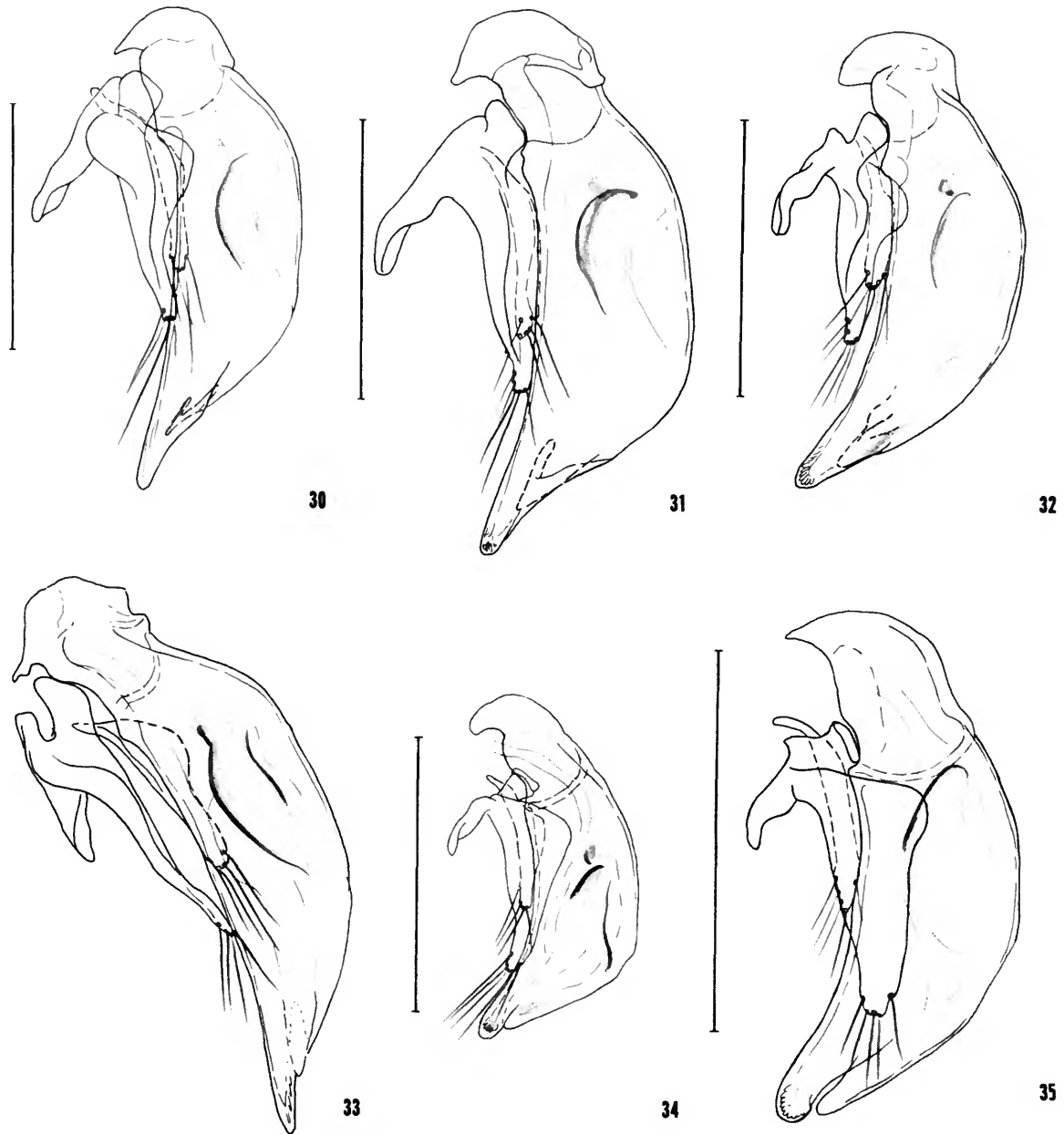
Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 31) (4 examined); female as in ephippiatus group (6 examined).

Size: Length, 2.40–2.76 mm; width, 1.08–1.16 mm; 10 specimens measured.

VARIATION.—The form and size is rather uniform, but the dorsal coloration is quite variable in a north to south direction. The Mexican samples are very dark; the forebody is almost metallic black and the elytral disc is dark piceous, while laterally each elytron is dark rufous or piceous. The Chiriqui sample is about the same as the Mexican ones except that the elytron laterally is more rufous. The Canal Zone samples are of two general types. Two specimens fit the Chiriqui color pattern and two specimens from Gatun Locks (plus a single individual from Colombia) have the forebody rufopiceous, the elytral disc (intervals 1–3) rufous, intervals 4 and 5 rufopiceous, and the elytra laterally rufotestaceous. None of the rufous specimens are males. One of two specimens from Venezuela was teneral when collected and the color is not comparable; the other specimen is all piceous. Three specimens from Bolivia each have a piceous forebody and rufescent elytra, while three Amazon Basin specimens are colored similarly to the pale ones from Gatun Locks, Canal Zone. The trend, from north to south, is one of depigmentation, especially of the elytra.

NATURAL HISTORY.—Specimens were collected in January, February, March, April, May, June, and September; one February specimen from Brazil was teneral. My wife and I collected several specimens running on muddy margins of rain puddles near the Rio Fonseca in Panama. These beetles were in the company of *Pericompsus reichei*. The Ancon specimen was collected at "electric light" and one Villahermosa, Mexico, specimen was collected at "black light." The wings are fully developed and no doubt functional. Ball and Whitehead collected a long series of these beetles at the edge of a marsh east of Escarcega, Mexico.



FIGURES 30-35.—Male genitalia, left lateral aspect: 30, *P. reticulatus*, Fortaleza, Brazil; 31, *P. brasiliensis*, Rio Fonseca, Panama; 32, *P. metallicus*, Buenos Aires, Argentina; 33, *P. dynastes*, Calobozo, Venezuela; 34, *P. commotes*, Calobozo, Venezuela; 35, *P. immaculatus*, Rio Frio, Colombia.

DISTRIBUTION.—The range of this species extends throughout most of the Neotropical Region from 20° N latitude to about 15° S latitude. It probably does not occur along the west coast of South America.

LOCALITY RECORDS (Figure 37).—I have seen 58 specimens from the following localities:

MEXICO: CAMPECHE: 31.8 miles east of Escarcega (UASM, USNM). TABASCO: Teapa (BMNH, MHNP); 59.4 miles southeast of Villahermosa (UASM).

CENTRAL AMERICA: GUATEMALA: Baja Verapaz Department, San Jeronimo about 10 kilometers southeast of Salama at 15°08'N, 90°11'W (BMNH, MHNP). PANAMA: Canal Zone, Ancon (USNM), Gatun Locks (MCZ), Taberilla at 9°10'N, 79°48'W (USNM); Chiriqui Province, Rio Fonseca at Pan-American Highway (UASM, USNM).

SOUTH AMERICA: BRAZIL: Amazonas State, Benjamin Constant (MCZ), Igarape-Marianil 2.4 kilometers northeast of Manaus (MCZ); Ceara State, Fortaleza (MCZ); Distrito Federal, Brasilia (UZMH); Para State, Rio Tapajos (MHNP), Santarem (MCZ). COLOMBIA: Magdalena Department, Sevilla (MCZ). VENEZUELA: Guarico State, 12.0 kilometers south of Calobozo (USNM); Mongas State, Barrancas on Lower Orinoco River (MCZ).

12. *Pericompsus metallicus* Bates

FIGURES 27, 32, 46

Pericompsus metallicus Bates, 1871a:246. [Lectotype, here selected, a male, in MHNP. One paralectotype also labeled by me in MHNP. Type-locality: "Rio Janeiro," Brazil.]

Tachys mendocinus Jensen-Haarup, 1910:553. [Lectotype, here selected, a male, in ZMC. Five paralectotypes also labeled by me in ZMC. New synonymy. Type-locality: Mendoza Province, Argentina.]

Leiotachys humeralis Jeannel, 1962:615. [Holotype, a female, in MHNP. New synonymy. Type-locality: Central Chile.]

DESCRIPTION.—*Form* (Figure 27): Similar to *P. brasiliensis*, but easily distinguished from members of that species by the presence of a sixth row of punctures on the elytron.

Color: Venter mostly piceous; forebody dorsally darker than elytra, both rufopiceous.

Head: Narrower across eyes than pronotum; frontal furrows deeply impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 27): Broadly transverse; sides shallowly sinuate in basal half; base slightly lobed medially; hind angles acute, slightly prominent, side margins slightly reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately small and separated longi-

tudinally by about their own diameter; rows 2–6 effaced in apical third, row 1 entire, striate at apical third, interneur 7 effaced externally throughout; interneur 8 well impressed throughout, not foveate; humeral margin rounded and nearly straight to level of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 32) (9 examined); female characteristic of ephippiatus group (examined).

Size: Length, 2.20–2.60 mm; width, 0.92–1.08 mm; 10 specimens measured.

VARIATION.—The width of the pronotum varies within population samples relative to the width of head and elytra.

NATURAL HISTORY.—Specimens were collected from January through June and in September and December. No dated specimen was teneral.

DISTRIBUTION.—The range of this species extends from 4° N latitude to 35° S latitude in South America. Most specimens have been collected adjacent to the Tropic of Capricorn, with two disjunct sites farther north also yielding specimens.

LOCALITY RECORDS (Figure 46).—I have seen 52 specimens from the following localities:

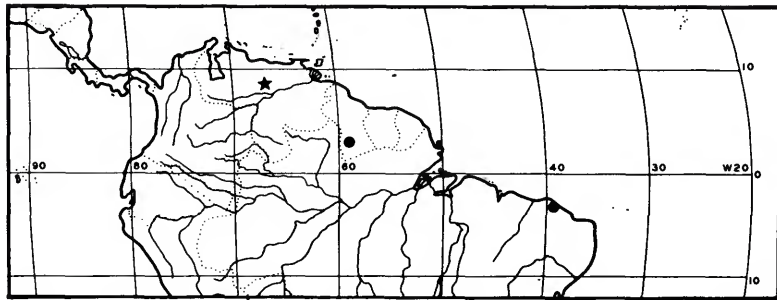
SOUTH AMERICA: ARGENTINA: (MCZ); Buenos Aires Province, Buenos Aires (KWCo), Isla de Santiago near La Plata (MCZ), San Fernando (USNM); Mendoza Province (ZMC), Cerro Quada (USNM); Salta Province, Salta (USNM); San Jaun Province, Jachal (JNeg); Santiago del Estero Province, Anatuya (USNM); Province unknown, "Cap ?ferspuerto" (USNM). BOLIVIA: Santa Cruz Department, Cambeiti (USNM), El Cidral about 100 kilometers northeast of Santa Cruz (MCZ), Los Huesos (USNM). BRAZIL: Mato Grosso State, Corumba (MCZ, USNM), Rio Caraguata (MCZ, USNM); Pernaumbuco State, Palmares (USNM); Rio de Janeiro State, Rio de Janeiro (MHNP). CHILE: "Central Chile" (MHNP). COLOMBIA: Huila Department, Villavieja (CAS). PARAGUAY: Amambay Department (MCZ). URUGUAY: Montevideo Department, Montevideo (USNM).

13. *Pericompsus dynastes*, new species

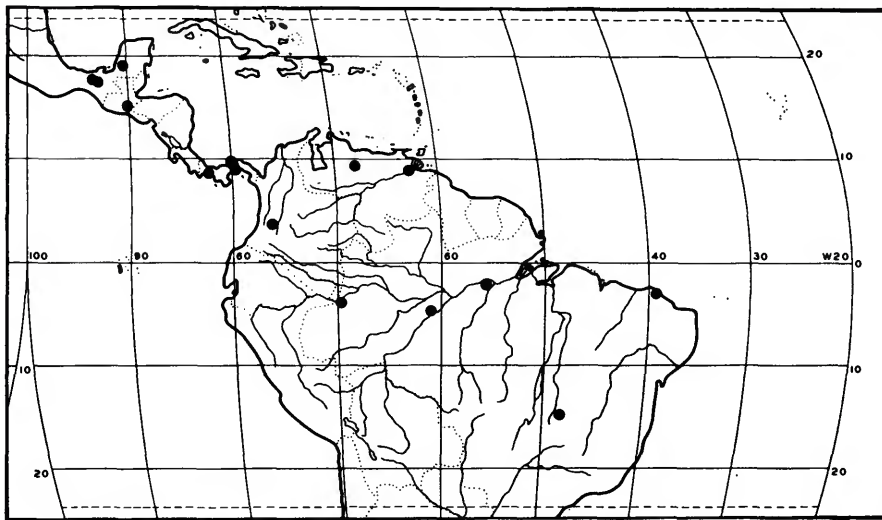
FIGURES 28, 33, 36

TYPE-LOCALITY.—Twelve kilometers south of Calabozo, Estacion Biologica de Los Llanos, Guarico State, Venezuela.

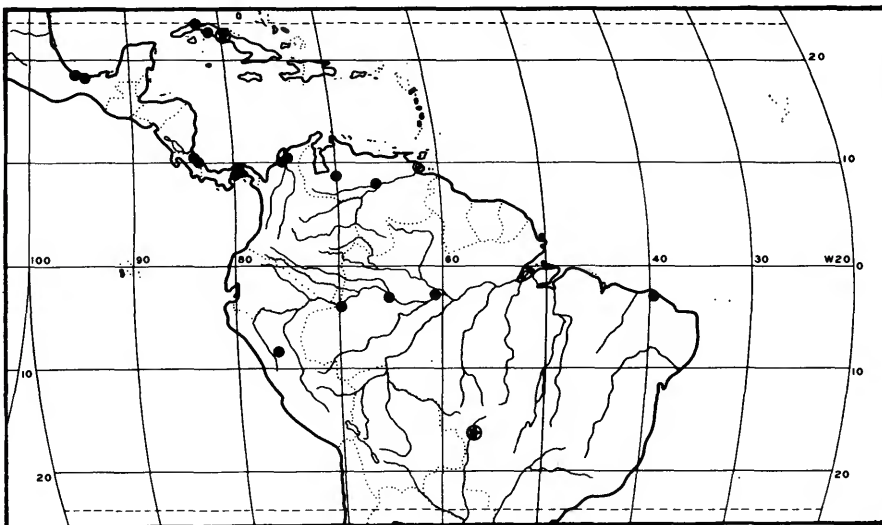
TYPE-SPECIMEN.—The unique holotype male is



36



37



38

FIGURES 36-38.—Distribution maps: 36, *P. reticulatus* (circle), *P. dynastes* (star); 37, *P. brasiliensis*; 38, *P. immaculatus*.

in USNM. It was collected by P. and P. Spangler in 1969.

DESCRIPTION.—*Form* (Figure 28): Similar to *P. brasiliensis*, except broader and more robust. Easily distinguished from members of other species in the group by the overall piceous coloration, body form, and infuscated antennal articles 4–11.

Color: Shiny piceous, appendages testaceous except infuscated antenna articles 4–11.

Head: Much narrower across eyes than width of pronotum; frontal furrows deeply impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 28): Very broadly transverse, sides shallowly sinuate in basal half; base slightly arcuate at middle; hind angles about right; side margins not reflexed; disc moderately strongly convex.

Elytra: Each elytron with 5 punctate interneurs; punctures small and separated longitudinally by about twice their own diameter or more; rows 2–5 effaced in apical third, row 1 entire and striate in apical third, interneurs 6 and 7 effaced externally throughout, interneur 8 well impressed throughout, not foveate; humeral margin rounded and slightly concave to level of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 33) (1 examined); female unknown.

Size: Length, 2.76 mm; width, 1.12 mm; 1 specimen measured.

NATURAL HISTORY.—The single specimen was collected in February; it was not teneral. It was collected in a black light trap and the flight wings are fully developed. It is probable that it flew into the trap.

ETYMOLOGY.—Greek noun, *dynastes*, meaning "ruler," referring to the large robust size of these beetles relative to that of others in the species group.

LOCALITY RECORDS (Figure 36).—I have seen only the type-specimen from 12.0 kilometers south of Calabozo, Guarico State, Venezuela.

14. *Pericompsus immaculatus* Bates

FIGURES 29, 35, 38

Pericompsus immaculatus Bates, 1871:246. [Lectotype, here

selected, a female, in MHNP. Two paralectotypes also labeled by me in MHNP. Type-locality: "Ega" (Tefé), Amazonas, Brazil.]

DESCRIPTION.—*Form* (Figure 29): Similar to *P. brasiliensis*, but easily distinguished from members of that species by the paler color including the noninfuscated distal antennal articles and the rufescent dorsal color, by the subcordate rather than transverse pronotum, and by the smaller size.

Color: Rufous, elytral cloud and antennal articles 3–5 slightly darker, appendages testaceous.

Head: Much narrower across eyes than pronotum; frontal furrows moderately impressed and evenly arcuate to posterior margin of eye; eyes moderately large and prominent.

Pronotum (Figure 29): Broadly subcordate, sides moderately sinuate in basal half; base slightly lobed at middle; hind angles about right; side margins not reflexed; disc moderately strongly convex.

Elytra: Each elytron with 5 punctate interneurs; punctures moderately large and separated longitudinally by about their own diameter; rows 2–5 effaced in basal third, row 1 entire though less impressed apically, interneurs 6 and 7 effaced externally throughout, interneur 8 well impressed throughout, not foveate; humeral margin rounded and slightly concave to level of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 35) (8 examined); female characteristic of ephippiatus group (2 examined).

Size: Length, 1.84–2.64 mm; width, 0.80–1.00 mm; 10 specimens measured.

VARIATION.—A very constant species throughout a large range. Its presence on the island of Cuba and its occurrence along sea beaches indicates great vagility and probable gene flow between remote populations.

NATURAL HISTORY.—Specimens were collected in all months of the year; teneral specimens were collected in March, May, August, and September. Several specimens were collected at light. The wings are fully developed; thus, the beetles are probably capable of flight. George and Kay Ball collected a long series on the sea beach in Veracruz, and other specimen labels indicate proximity to oceans.

DISTRIBUTION.—The range of this species extends from the Caribbean to the southern Amazonian Basin. Its occurrence in Cuba indicates high vagility; hence it can be expected to be found anywhere in the Neotropical Region north of 20° S latitude.

LOCALITY RECORDS (Figure 38).—I have seen 123 specimens from the following localities:

CARIBBEAN: CUBA: Cayamas (MCZ, UASM, USNM); Havana (USNM); Soledad, Cienfuegos (MCZ, USNM).

MEXICO: VERACRUZ: 18.0 miles east of Paso del Toro (UASM, USNM); Tyes Zapotes (USNM).

CENTRAL AMERICA: COSTA RICA: Hamburg Farm, Reventazon (USNM); Port Limon (MCZ). HONDURAS: 5.0 miles east of Choluteca (USNM). PANAMA: Canal Zone, Albrook Forest in Fort Clayton (RTAI), Ancon (USNM), Fort Kobbe, Pacific area (USNM).

SOUTH AMERICA: BRAZIL: Amazonas State, Amazonas River at Benjamin Constant (MCZ), Amazonas River at Parana da Eva (CNC), Ega (MHNP); Ceara State, Fortaleza (MCZ); Mato Grosso State, Rio Caraguata (MCZ). COLOMBIA: Magdalena Department, Avacataca (MCZ, USNM), Rio Frio (MCZ, USNM). PERU: Loreto Department, San Jorge, about 40 miles west of Pucallpa (CAS). VENEZUELA: Guarico State, 12.0 kilometers south of Calabozo at Estacion Biologica de Los Llanos (USNM); Portuguesa State, Guanare (CAS).

15. *Pericompsus commotes*, new species

FIGURES 34, 39, 54

TYPE-LOCALITY.—Twelve kilometers south of Calabozo at Estacion Biologica de Los Llanos, Guarico State, Venezuela.

TYPE-SPECIMENS.—The holotype male and allotype, plus one paratype are in USNM. All were collected by P. and P. Spangler in 1969.

DESCRIPTION.—*Form* (Figure 39): Similar to *P. brasiliensis*, except pronotum proportionately broader and total size smaller. Easily distinguished from members of other species in the group by the broad pronotum and coloration.

Color: Forebody, venter, and elytral cloud shiny rufous, appendages and margins of elytra testaceous.

Head: Narrower across eyes than width of pronotum; frontal furrows shallowly impressed, extended to level of mid-eye; eyes large and prominent.

Pronotum (Figure 39): Broadly transverse, sides narrowed but not sinuate in basal half; base slightly arcuate at middle; hind angles obtuse; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 5 punctate interneurs, punctures moderately small and separated longi-

tudinally by about their own diameter; row 2–5 effaced in apical half, row 1 entire and striate in apical half, interneurs 6 and 7 effaced externally throughout, interneur 8 well impressed throughout, not foveate; humeral margin rounded to base of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Micosculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 34) (1 examined); female not dissected.

Size: Length, 2.20–2.28 mm; width, 0.88–0.92 mm; 3 specimens measured.

VARIATION.—The small sample available is quite homogeneous.

NATURAL HISTORY.—Specimens were collected in February; none were teneral. All specimens seen were collected in a black-light trap and the flight wings are fully developed. It is probable that these beetles are capable of flight.

ETYMOLOGY.—Greek noun, *kommotes*, meaning “embellisher” or “beautifier,” in reference to the coloration of these beetles.

LOCALITY RECORDS (Figure 54).—I have seen three specimens, all from Estacion Biologica de Los Llanos, Guarico State, Venezuela.

16. *Pericompsus bilbo*, new species

FIGURES 40, 43, 54

TYPE-LOCALITY.—Guanare, Portuguesa State, Venezuela.

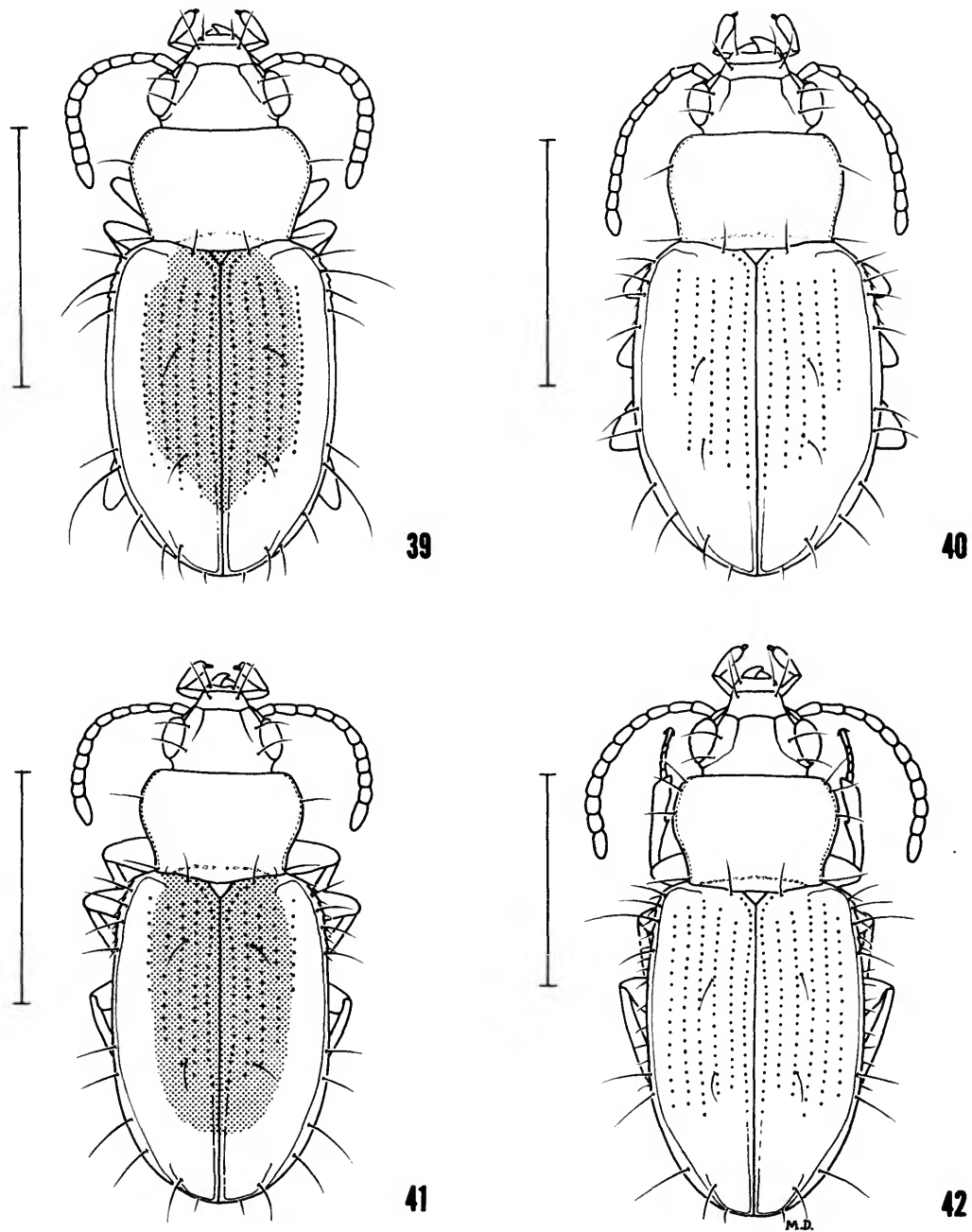
TYPE-SPECIMENS.—The holotype male and allotype are in CAS. Both were collected by B. Malkin in 1957. One paratype from the same locality is in USNM.

DESCRIPTION.—*Form* (Figure 40): Most similar to *P. jeppeseni*, but not so convex. Easily distinguished from members of that species by the rufopiceous coloration, the almost obtuse hind angles of the pronotum, and the lack of a punctate interneur 6 on the elytron.

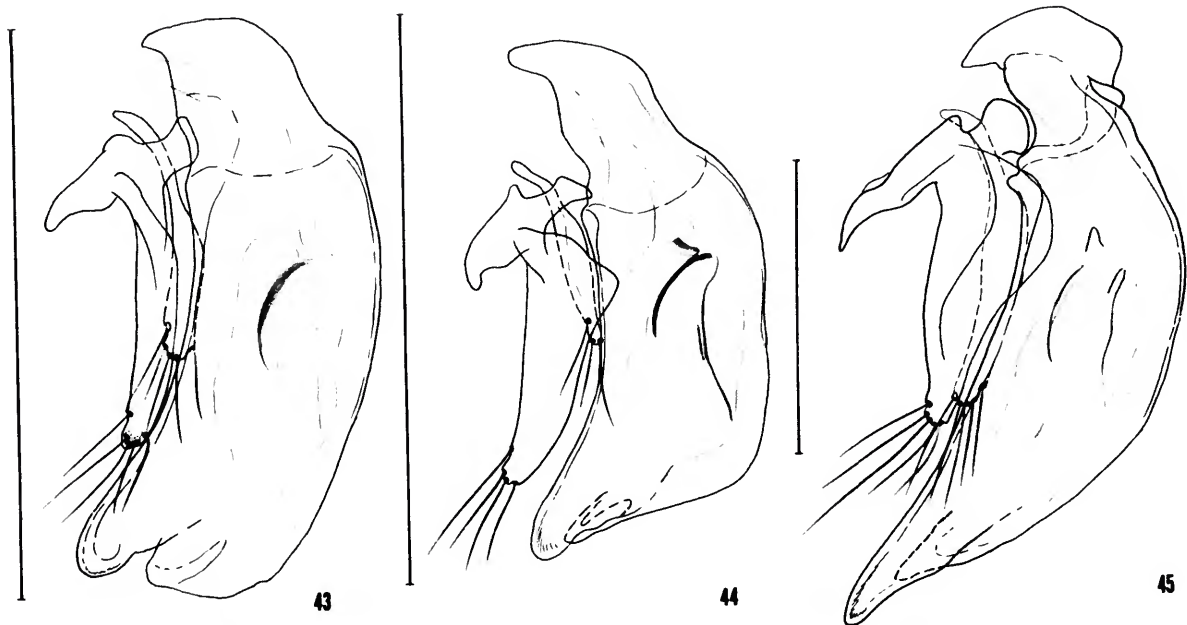
Color: Shiny rufopiceous, appendages testaceous.

Head: Narrower across eyes than width of pronotum; frontal furrows deeply impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 40): Broadly transverse, sides very shallowly sinuate in basal half; base slightly



FIGURES 39-42.—Dorsal outline with setae of *Pericompsus* species: 39, *P. commotes* female allotype, 12.0 kilometers south of Calabozo, Venezuela; 40, *P. bilbo* male holotype, Guanaro, Venezuela; 41, *P. leucocareus* male, Cuitlahuac, Mexico; 42, *P. crossarchon* female holotype, Rio Caraguata, Brazil.



FIGURES 43-45.—Male genitalia, left lateral aspect: 43, *P. bilbo*, Guanaro, Venezuela; 44, *P. leucocareus*, Cuitlahuac, Mexico; 45, *P. crossodomus*, Tucuman, Argentina.



FIGURE 46.—Distribution map of *P. metallicus*.

arcuate at middle; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 5 punctate interneurs; punctures moderately large, separated longitudinally

by their own diameter or more; rows 2-5 effaced apically, row 1 entire, though less impressed apically, interneurs 6 and 7 effaced externally throughout, interneur 8 well impressed throughout, not foveate; humeral margin rounded and nearly straight to level of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 43) (1 examined); female not dissected.

Size: Length, 2.20-2.28 mm; width, 0.96-1.04 mm; 3 specimens measured.

VARIATION.—The small sample available is quite homogeneous.

NATURAL HISTORY.—Specimens were collected in September; none were teneral.

ETYMOLOGY.—The noun, *bilbo*, refers to Tolkien's hobbit character in *Lord of the Rings*. These beetles are short and robust much like Bilbo.

LOCALITY RECORDS (Figure 54).—I have seen three specimens all from Guanare, Portuguesa State, Venezuela.

17. *Pericompsus leucocareus*, new species

FIGURES 41, 44, 54

TYPE-LOCALITY.—Fortin de las Flores, Veracruz, Mexico.

TYPE-SPECIMENS.—The holotype male and allotype are in USNM. Both were collected by D. R. Whitehead in 1963. Twenty-seven paratypes are listed below.

DESCRIPTION.—*Form* (Figure 41): Similar to *P. immaculatus* except pronotum wider and elytra slightly longer and narrower, but easily distinguished from members of that species by the larger, more coarse punctuation of the elytra.

Color: Forebody and sides of elytra shiny rufotestaceous, venter and elytral cloud infuscated, appendages testaceous.

Head: Much narrower across eyes than width of pronotum; frontal furrows well impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 41): Broadly transverse, sides shallowly sinuate in basal half; base slightly lobed at middle; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 5 punctate interneurs; punctures large and coarse, separated longitudinally by about their own diameter; rows 2-5 effaced in apical third, row 5 effaced in apical two-thirds, interneurs 6 and 7 entirely effaced externally, row 1 entire though less impressed apically, interneur 8 well impressed throughout, not foveate; humeral margin rounded and nearly straight to level of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 54) (3 examined); female characteristic of *ephippiatus* group (1 examined).

Size: Length, 2.20-2.48 mm; width, 0.84-1.04 mm; 10 specimens measured.

VARIATION.—With the exception of one "normal" specimen, those collected in Michoacan are darker than average, especially the forebody.

NATURAL HISTORY.—Specimens were collected in June, July, August, and October; none were teneral. Several specimens were collected at black light. The flight wings are fully developed; thus, it is prob-

able that these beetles fly. One specimen from Tamaulipas is labeled "palm forest."

ETYMOLOGY.—Greek adjective, *leukos*, meaning "white," and noun, *karenon*, meaning "top of the head," referring to my friend and colleague and the collector of the types, D. R. Whitehead.

DISTRIBUTION.—The range of this species extends from mid-Mexico to El Salvador and appears to be most abundant around the Transverse Volcanic Belt of mid-Mexico at lower elevations.

LOCALITY RECORDS (Figure 54).—I have seen 29 specimens from the following localities:

CENTRAL AMERICA: EL SALVADOR: Lake Hopango (USNM). MEXICO: MEXICO: Tejupilco to Temascaltepec (MCZ). MICHOACAN: 5.0 kilometers east of Morelia (RTBc); 5.0 kilometers west of Ciudad Hidalgo (MCZ). SAN LUIS POTOSI: 1.8 miles north of El Naranjo (UASM). TAMAU-LIPAS: 1.4 miles southeast of Chamal (UASM). VERACRUZ: Cuitlahuac (MCZ, UASM, USNM); Fortin de las Flores (UASM).

18. *Pericompsus crossarchon*, new species

FIGURES 42, 54

TYPE-LOCALITY.—Rio Caraguata, Mato Grosso State, Brazil.

TYPE-SPECIMEN.—The unique female holotype is in MCZ. It was collected by F. Plaumann in 1953.

DESCRIPTION.—*Form* (Figure 42): Similar to *P. brasiliensis*, but easily distinguished from members of that species by the presence of a punctate interneur 6 on each elytron and the presence of long setae on the elytral margin.

Color: Forebody and venter piceous, elytra rufescent with slightly darker elytral cloud; appendages, except infuscated antennal articles 2-4, testaceous.

Head: Across eyes much narrower than width of pronotum; frontal furrows well impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 42): Broadly subcordate, sides moderately strongly sinuate in basal half; base slightly arcuate at middle; hind angles slightly obtuse; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large, separated longitudinally by at least their own diameter; rows 2-6 effaced in apical third, row 1 striate apically; inter-

neur 7 effaced externally throughout; interneur 8 well impressed throughout, and bifoveate just posterior to Eo4c; fovea small, subequal in diameter to width of elytral explanation; humeral margin rounded and somewhat concave to level of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate in basal fourth, setose throughout its length, setae longer than width of explanation; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male unknown; female not dissected.

Size: Length, 2.60 mm; width, 1.16 mm; the type measured.

NATURAL HISTORY.—The single specimen was collected in March; it was not teneral.

ETYMOLOGY.—Greek masculine noun, *krossos*, meaning "fringe," and Greek masculine noun, *archon*, meaning "king," referring to the large size of these beetles and the fringe of setae on the elytral margin.

LOCALITY RECORDS (Figure 54).—I have seen only the type, from Rio Caraguata, Mato Grosso State, Brazil.

19. *Pericompsus crossodmos*, new species

FIGURES 45, 47, 54

TYPE-LOCALITY.—San Fernando, Argentina.

TYPE-SPECIMENS.—The holotype male and allotype are in USNM. Both were collected by J. Daguerre in 1963. Fourteen paratypes are listed below.

DESCRIPTION.—*Form* (Figure 47): Similar to *P. brasiliensis*, but easily distinguished from members of that species by the small, feebly prominent eyes and accessory setae of the pronotum, as well as the fringe of long setae on the elytral margins.

Color: Forebody and venter piceous, shiny; elytra rufopiceous; antennal articles 2–11 and palpi infuscated; appendages testaceous.

Head: Narrower across eyes than pronotum; frontal furrows well impressed and evenly arcuate to posterior margin of eye; eye small and feebly prominent.

Pronotum (Figure 47): Transverse, sides shallowly sinuate in basal half; base slightly arcuate at middle; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and separated longitudinally by about their own diameter; rows 2–6 effaced at apical third, row 1 entire, though less impressed apically, interneur 7 effaced externally throughout, interneur 8 well impressed throughout, not foveate; humeral margin rounded and slightly concave to level of interneur 4, not connected to base of 4; side margin narrowly explanate, moderately coarsely serrate in basal fourth, setose throughout, setae longer than width of elytral explanation; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 45) (2 specimens); female not dissected.

Size: Length, 2.12–2.68 mm; width, 1.00–1.16 mm; 10 specimens measured.

VARIATION.—The elytra vary in color, but are always paler than the forebody. The width of the pronotum also varies within population samples in relation to width of head and elytra.

NATURAL HISTORY.—Unknown.

ETYMOLOGY.—Greek masculine noun, *krossos*, meaning "fringe," and Greek masculine noun, *dmos*, meaning "slave taken in war," referring to the smaller size than members of *P. crossarchon*, but still with an elytral fringe.

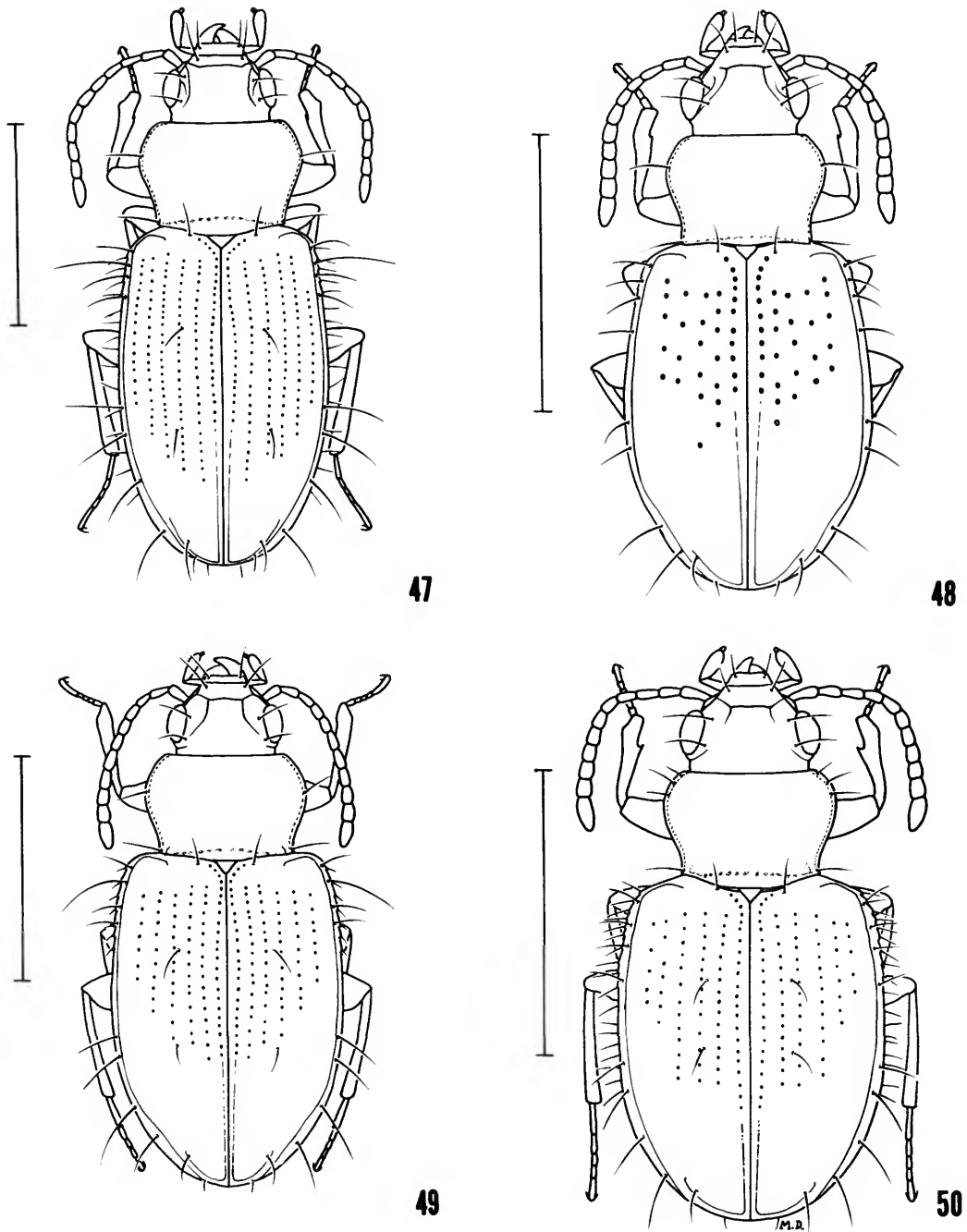
DISTRIBUTION.—The range of this species extends from the subtropical humid areas south of the Brazilian Highlands to the Mediterranean-like areas east of the southern Andes, between 20° S latitude and 35° S latitude.

LOCALITY RECORDS (Figure 54).—I have seen 16 specimens from the following localities:

SOUTH AMERICA: ARGENTINA: Buenos Aires Province, Buenos Aires (MCZ), Martinez (CAS), Palermo (MCZ), San Fernando (USNM); Entre Rios Province, La Paz (MCZ); Jujuy Province, Escuela Region Santa Catalina at Llarallol (MCZ); Tucuman Province, San Miguel de Tucuman (JNeg). **BRAZIL:** Rio Grande do Sul State, Pelotas (USNM).

The *gongylus* group

The single species representing this group is known only from Campeche, Mexico. It is peculiar in body form in that it is highly convex and short, with a narrow head and pronotum. The small number of punctures on the elytron is also peculiar to the subgenus.



FIGURES 47-50.—Dorsal outline with setae of *Pericompsus* species: 47, *P. crossodmos* female paratype, San Fernando, Argentina; 48, *P. gongylus* female holotype, Edzna, Mexico; 49, *P. jeppeseni* male lectotype, Province Mendoza, Argentina; 50, *P. tolype* female paratype, Santa Catarina, Brazil.

20. *Pericompsus gongylus*, new species

FIGURES 48, 55

TYPE-LOCALITY.—Edzna, Campeche, Mexico.

TYPE-SPECIMENS.—The holotype female is in USNM. It was collected by G. E. Ball and D. R. Whitehead in 1966. One female paratype from the same locality is in UASM.

DESCRIPTION.—*Form* (Figure 48): Short and convex, with a narrow forebody. Easily recognized from all other members of *Pericompsus* by body form and sparse elytral punctation.

Color: Shiny rufous, elytron laterally at middle piceous.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows deep, linearly foveate, ended on midfrons; eyes large and prominent.

Pronotum (Figure 48): Subcordate, sides moderately sinuate in basal half; base slightly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures large and coarse; separated longitudinally by several times their own diameter; rows 2–6 effaced in apical half, row 1 striate apically; interneur 7 effaced externally throughout; interneur 8 well impressed throughout and foveate at anterior third; fovea small, subequal in diameter to width of elytral explanation; humeral margin rounded, abruptly angulate to apex, not connected to base of interneur 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male unknown; female characteristic of *ephippiatus* group (2 examined).

Size: Length, 1.98–2.08 mm; width, 0.88–0.92 mm; 2 specimens measured.

VARIATION.—The two specimens seen are quite homogeneous.

NATURAL HISTORY.—Specimens were collected in April; neither was teneral. The beetles were "treaded" from a marsh.

ETYMOLOGY.—Greek adjective, *gongylos*, meaning "round," hence "ball," referring to my friend and mentor George E. Ball, who also collected the types. The name has a double meaning as these beetles are short and convex.

LOCALITY RECORDS (Figure 55).—I have seen only two specimens from Edzna, Campeche, Mexico.

The *jeppeseni* group

The members of the *jeppeseni* group are characterized by their short, stout body form and the presence of small, nearly perforate, fovea in interneur 8 at the basal fourth near seta Eo4c.

One member of this group is similar to some members of the *australis* group, *metallicus* group, and *hirsutus* group in the presence of the elytral fringe and accessory pronotal setae.

There are two species presently representing this group with a combined range extending from Venezuela south to northern Argentina.

21. *Pericompsus jeppeseni* (Jensen-Haarup), new combination

FIGURES 49, 51, 56

Tachys jeppeseni Jensen-Haarup, 1910:553. [Lectotype, here selected, a female, in ZMC. Four paralectotypes also labeled by me in ZMC. Type-locality: Mendoza Province, Argentina.]

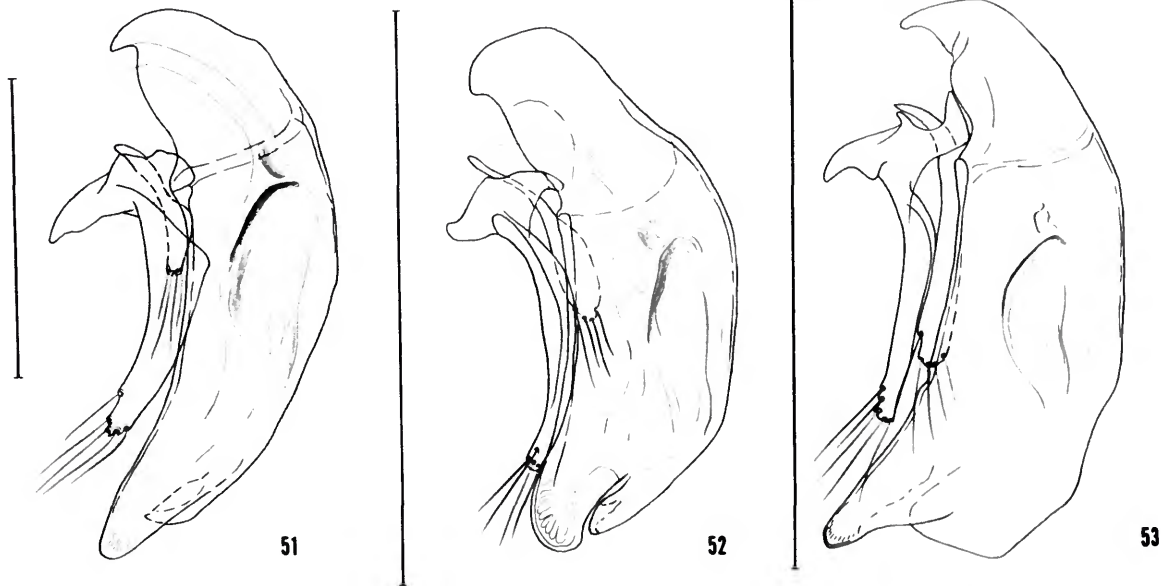
DESCRIPTION.—*Form* (Figure 49): Short and robust, pronotum and elytra strongly convex. Easily distinguished from members of all other species of the subgenus by the body form, the bright red coloration, and the coarse elytral punctation.

Color: Shiny rufous; apex of elytron paler; appendages testaceous.

Head: Much narrower across eyes than width of pronotum; frontal furrows well impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 49): Broadly transverse, sides shallowly sinuate in basal half; base narrowly lobed at middle; hind angles acute, slightly denticulate; side margins not reflexed; disc strongly convex.

Elytra: Each elytron with 6 punctate interneurs; punctures large and coarse, separated longitudinally by their own diameter or more; rows 2–5 effaced in apical third, row 6 short, effaced in apical two-thirds, row 1 entire though less impressed apically, interneur 7 effaced externally throughout; interneur 8 well impressed and foveate at basal fourth; fovea small, about equal in diameter to width of elytral



FIGURES 51-53.—Male genitalia, left lateral aspect: 51, *P. jeppeseni*, Anatuya, Argentina; 52, *P. tolype*, Calobozo, Venezuela; 53, *P. univittatus*, Province Mendoza, Argentina.



FIGURE 54.—Distribution map: *P. commotes* (circle), *P. bilbo* (star), *P. leucocareus* (box), *P. crossodmos* (box with closed circle), *P. crossarchon* (box with open circle).

expansion; humeral margin rounded and about straight to level of interneur 4, not connected to base of interneur 4; side margin narrowly explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. brasiliensis*; plica short and well developed.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 51) (2 examined) with right paramere very short; female not dissected.

Size: Length, 2.08–2.36 mm; width, 1.00–1.08 mm; 10 specimens measured.

VARIATION.—The small samples available are quite homogeneous.

NATURAL HISTORY.—Specimens were collected in November, February, and April; one November specimen was teneral.

LOCALITY RECORDS (Figure 56).—I have seen 23 specimens from the following localities:

SOUTH AMERICA: ARGENTINA: Cordoba Province, Obispo Trejo (USNM); Mendoza Province (ZMC); Santiago del Estero Province, Anatuya (MCZ, UASM, USNM).

22. *Pericompsus tolype*, new species

FIGURES 50, 52, 57

TYPE-LOCALITY.—Twelve kilometers south of Calabozo, Estacion Biologica de Los Llanos Venezuela.

TYPE-SPECIMENS.—The holotype male is in USNM. It was collected by P. and P. Spangler in 1969. Eleven paratypes are listed below.

DESCRIPTION.—*Form* (Figure 50): Similar to *P. jeppeseni*, but easily distinguished from members of that species by the long setae on the elytral margin and the accessory setae of the abdominal sterna III–IV.

Color: Shiny rufotestaceous, head and elytral cloud slightly more rufous, appendages testaceous.

Head: Across eyes narrower than width of pronotum; frontal furrows well impressed, short and linear to middle of frons; eyes large and prominent.

Pronotum (Figure 50): Broadly subcordate, sides strongly sinuate in basal half; base broadly lobed; hind angles about right; side margins narrowly reflexed in basal half; disc moderately convex.

Elytra: Each elytron with 5 punctate interneurs; punctures moderately large and coarse, separated longitudinally by twice their own diameter or more, except row 1, where they are more closely arranged;

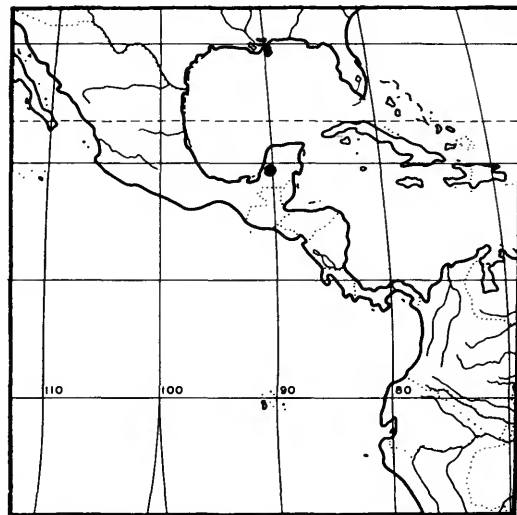


FIGURE 55.—Distribution map of *P. gongylus*.

rows 2–5 effaced apically, row 1 entire though less impressed apically, interneurs 6 and 7 effaced externally throughout, interneur 8 well impressed throughout, foveate at basal third; fovea small, subequal in diameter to width of elytral explanation; humeral margin evenly rounded to level of interneur 4, not connected to base of 4; side margin narrowly explanate, coarsely serrate in basal fourth, setose along entire margin; chaetotaxy as in *P. brasiliensis*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 52) (2 examined); female characteristic of *ephippiatus* group (1 examined).

Size: Length, 2.04–2.40 mm; width, 0.92–1.08 mm; 10 specimens measured.

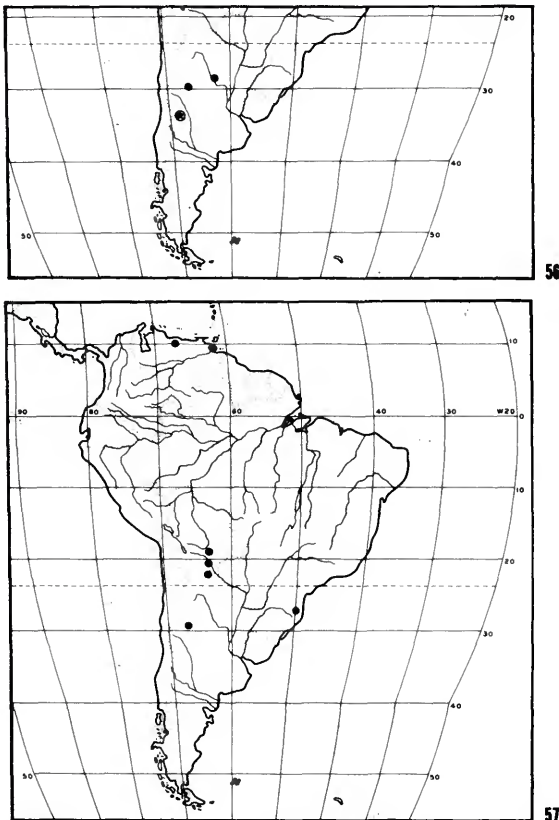
VARIATION.—The small samples available are quite homogeneous.

NATURAL HISTORY.—Specimens were collected in February, March, June, September, October, and November; none were teneral.

ETYMOLOGY.—Greek feminine noun, *tolype*, meaning a “ball of yarn,” referring to the form of these beetles as well as their fringe of setae on the elytral margin.

LOCALITY RECORDS (Figure 57).—I have seen 12 specimens from the following localities:

SOUTH AMERICA: ARGENTINA: La Rioja Province, El Quemado (USNM); Salta Province, Tartagal (USNM).
BOLIVIA: Santa Cruz Department, Tatarenda (USNM); Tarija Department, Villa Montes on Rio Pilcomayo



FIGURES 56-57.—Distribution maps: 56, *P. jeppeseni*; 57, *P. tolype*.

(USNM); Department Unknown, "Boyube to Yacuiba" (USNM), "Guairui" (USNM). BRAZIL: Santa Catarina State, Nova Teutonia (JNeg, MCZ). VENEZUELA: Guarico State Estacion Biologica de Los Llanos, 12.0 kilometers south of Calabozo (USNM).

Subgenus *Pericompso*, sensu stricto

DESCRIPTION.—Form various, generally subcylindrical rather than depressed, in some species quite robust. Easily distinguished from members of the other *Pericompso* subgenera by the presence of a large, nearly perforate, fovea at or near the middle of interneur 8.

Color: Testaceous to almost black, forebody usually contrasting with elytra or elytral pattern, appendages testaceous or with some parts infuscated or white.

Head: As described for genus except eyes glabrous, sparsely setiferous, or pubescent, ocular

bulge posterior to eye glabrous, frons with two or three supraorbital setae per eye, middle of frons glabrous, furrows various.

Prothorax: Prosternum glabrous; pronotum with lateral margins beaded or bead partially effaced, margins with one, two, or more pairs of setae, basal transverse impression strongly punctate, punctures stretched longitudinally and separated by sharp carinae, base lobed at middle, hind angles various.

Mesothorax: Elytral interneurs punctate, striate, or striate-punctate, interneur 8 subsulcate throughout and foveate at or near middle, also foveate or bifoveate at basal fourth, humeral margin rounded or angulate to level of interneur 4; chaetotaxy various.

Metathorax: Flight wings fully developed.

Abdomen: Sterna III to V each with one pair of paramedial ambulatory setae, sternum VI in female with two pairs of setae arranged in a straight row across sternum, female also with short accessory setae on sternum VI, male with a single pair of long setae on VI.

Size: Length, 1.88–3.72 mm; width, 0.81–1.48 mm.

ETYMOLOGY.—Greek adjective, *peri*, meaning "very," and *kompso*, meaning "elegant" or "pretty," referring to the beautiful coloration and pattern of these beetles.

DISTRIBUTION.—The combined ranges of the species of this group extend from Massachusetts and California in the United States to middle Argentina and Chile in South America. Several species occur on the major Caribbean islands.

The *univittatus* group

The members of the *univittatus* group are characterized by the presence of the following: seven entire and well-impressed punctate interneurs on each elytron; long and rather narrow, subdepressed form; and pale testaceous color.

There is only one species presently representing this group with a poorly known range. Specimens are recorded from "Mendoza Province, Argentina" and "Chile pampas."

23. *Pericompso univittatus* (Jensen-Haarup), new combination

FIGURES 53, 58, 72

Tachys univittatus Jensen-Haarup, 1910:553. [Lectotype, here selected, a female, in ZMC. One female paralectotype also

labeled by me in ZMC. Type-locality: Province Mendoza, Argentina.]

Leptotachys pallidus Jeannel, 1962:616. [Holotype, a male, in MHNP. New synonymy. Type-locality: Southern Chile (Pampas).]

DESCRIPTION.—*Form* (Figure 58): Elongate and narrow, depressed, and resembling members of *Tachys* sensu stricto more than other species of *Pericompsus*. Easily distinguished from all other *Pericompsus* sensu stricto by the presence on each elytron of seven well-impressed punctate interneurs.

Color: Testaceous, elytra near suture rufotestaceous.

Head: Narrower across eyes than width of pronotum; frontal furrows shallowly impressed and evenly arcuate, each extended to posterior margin of eye; eyes moderately large and slightly prominent.

Pronotum (Figure 58): Subcordate, sides strongly sinuate and constricted in basal half; base broadly lobed; hind angles slightly obtuse; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 7 punctate interneurs; punctures moderately small and more or less connected by a stria impression, all rows entire though shallower at apex; interneur 8 foveate just anterior to middle, fovea small, subequal in diameter to posterior fovea of humeral group; humeral margin moderately rounded at base, not connected to base of interneur 4; side margins narrowly explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Shallowly impressed, nearly isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 53) (1 examined); female not dissected.

Size: Length, 2.28–2.44 mm; width, 0.80–0.88 mm; 3 specimens measured.

NATURAL HISTORY.—Unknown.

LOCALITY RECORDS (Figure 72).—I have seen only two specimens, one from Mendoza Province, Argentina, and the other from Pampas of southern Chile.

The *ephippiatus* group

The members of the *ephippiatus* group are characterized by overall habitus similarities and the presence of two setigerous pores in the third elytral interval, that is Ed-3a, 5b. The internal sac of the

male genitalia is similar in all species of this group. This is also true for the styli of the female genitalia. Externally, the members of the *ephippiatus* group are characterized by the following combination of characteristics: large, prominent eyes; convex pronotum with two pairs of lateral setae, a coarsely punctate posterior transverse impression, a short sharp carina medial to each hind angle; elytra with five or six punctate interneurs, a deeply impressed interneur 8 (interneur 7 totally effaced externally) with a large, near the middle, fovea and one sub-humeral fovea, and a chaetotaxy formula of Eo-1a, 2a, 3a, 5a, 6a, 7, 8b and Ed-1, 3a, 5b, 7b, 8. The flight wings are fully developed on all members of all species.

Besides the combination above, most members of the species of this group have bicolored or tricolored elytra.

There are 32 species presently representing this group, with a combined range extending from the northeastern United States through Arizona to Argentina.

24. *Pericompsus ephippiatus* (Say)

FIGURES 59, 66, 73

Bembidium ephippiatum Say, 1834:439. [Type lost. Neotype designated by Lindroth and Freitag (1969:338) in MCZ. Type-locality: Indiana.]

Tachys ephippiatus (Say).—LeConte 1848:468.

Pericompsus ephippiatus (Say).—LeConte 1851:191.

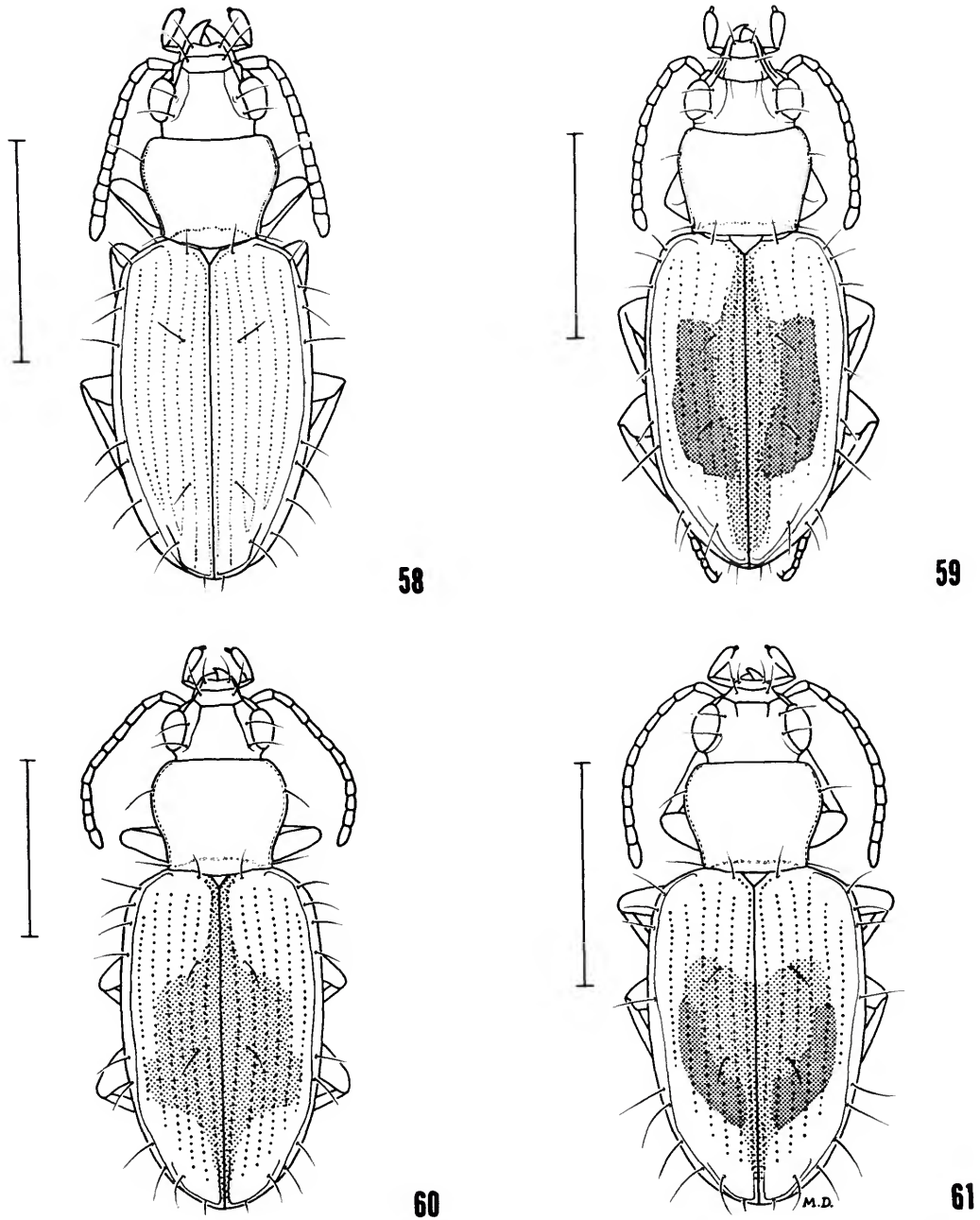
DESCRIPTION.—*Form* (Figure 59): Moderately elongate and narrow; head and prothorax much narrower than elytra; dorsum barely convex; elytra narrowed apically. Easily recognized in the United States by the absence of microsculpture; for Mexico see the key.

Color: Shiny testaceous; middle of venter rufous; elytral cloud shape various (see below), pale rufous to piceous.

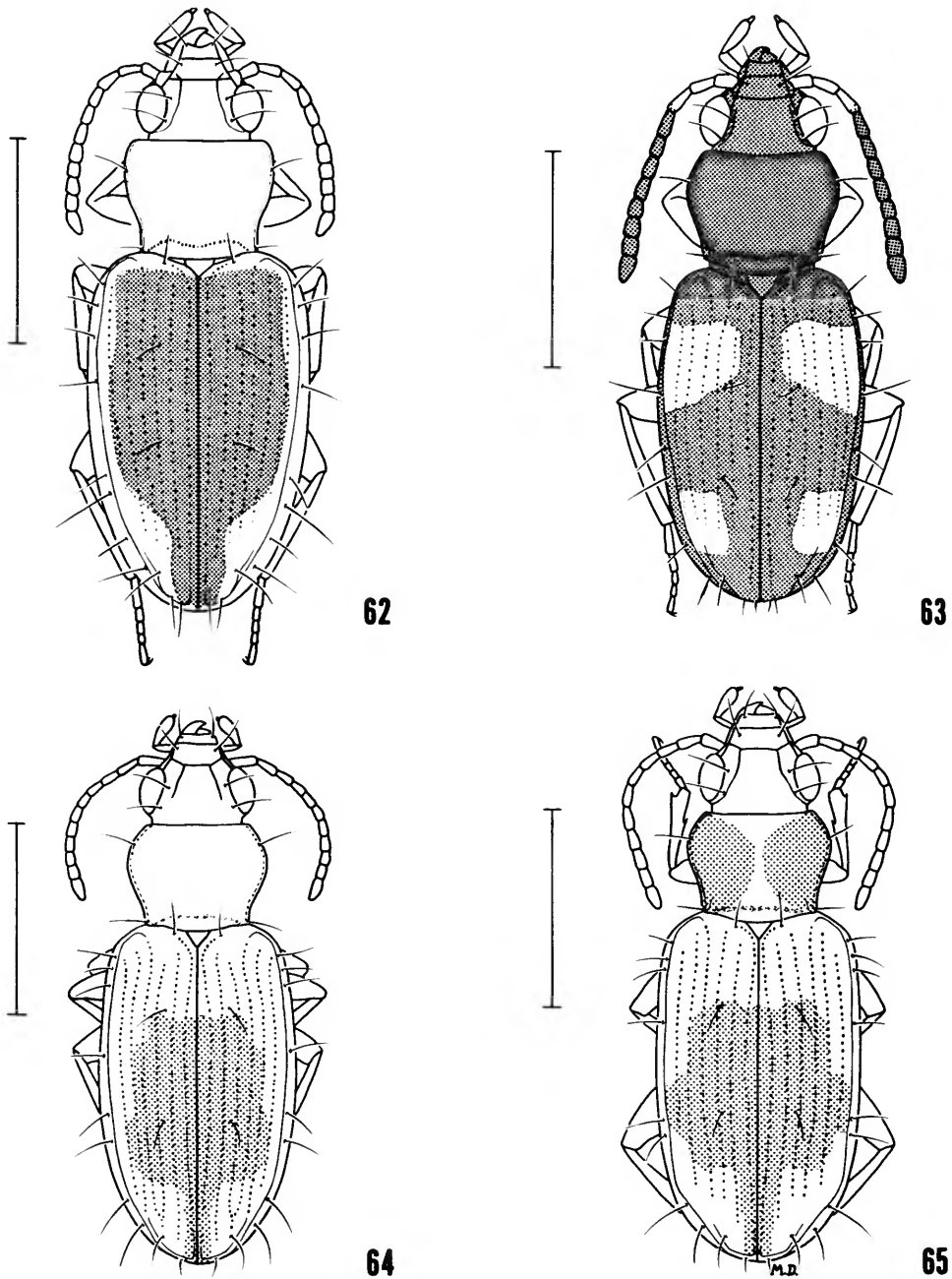
Head: Narrower across eyes than pronotum, frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 59): Subcordate, sides shallowly sinuate in basal half; base broadly lobed; hind angles acute, prominent; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures contiguous and more or less striate; rows



FIGURES 58-61.—Dorsal outline with setae of *Pericompsus* species: 58, *P. univittatus* female lectotype, Province Mendoza, Argentina; 59, *P. ephippiatus* female, 32.5 miles east of Comitán, Mexico; 60, *P. sagma* female paratype, Paso Cano, Mexico; 61, *P. leechi* male holotype, 5.0 miles south of Río Santiago Ferry, Mexico.

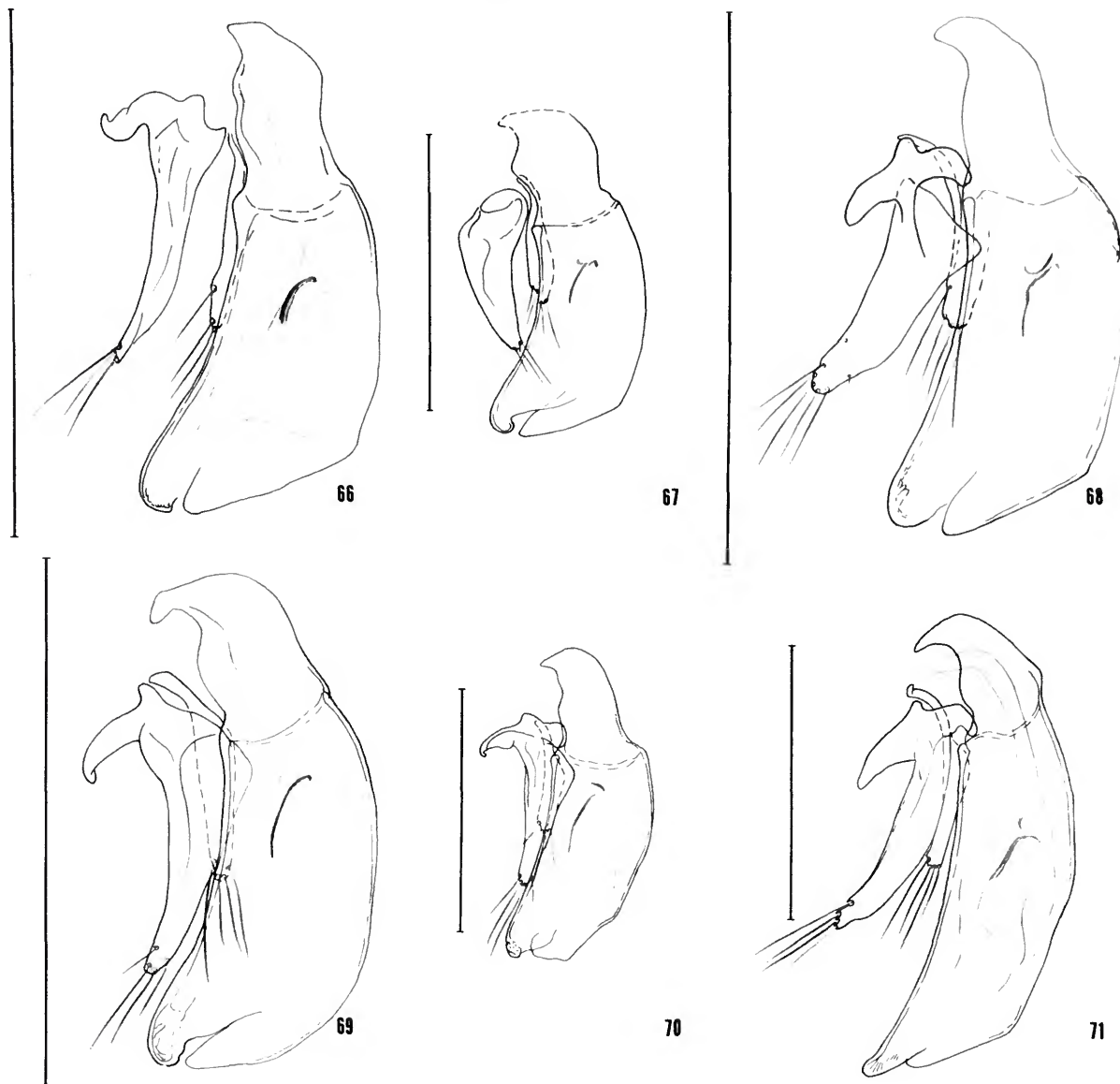


FIGURES 62-65.—Dorsal outline with setae of *Pericompsus* species: 62, *P. pauli* female, San Salvador, El Salvador; 63, *P. reichei* male, San Albeto, Colombia; 64, *P. laetulus* male, 10.0 miles west of Tucson, Arizona; 65, *P. longulus* female, Lago Zumpango, Mexico.

1-5 less impressed apically, 6 effaced apically; interneur 7 effaced externally throughout, in some specimens seen as a shadow through transparent cuticle; interneur 8 well impressed and foveate just anterior to middle; fovea large, slightly wider than elytral explanation; humeral margin strongly

rounded at base, not connected with base of interneur 4; side margins moderately explanate, minutely serrate-setulose in basal fourth; chaetotaxy Eo-1a, 2a, 3a, 4e, 5a, 6a, 7, 8b and Ed-1, 3a, 5b, 7b, 8; plica long and well developed externally.

Microsculpture: Mostly effaced except near scutel-



FIGURES 66-71.—Male genitalia, left dorsal aspect: 66, *P. ephippiatus*, Illinois; 67, *P. leechi*, 5.0 miles south of Rio Santiago Ferry, Mexico; 68, *P. sagna*, Manzanillo, Mexico; 69, *P. pauli*, near Pijijiapan, Mexico; 70, *P. nevermanni*, Hamburg Farm, Costa Rica; 71, *P. reichei*, 10.0 miles west of Liberia, Costa Rica.

lum and in frontal furrows, where it consists of large transverse reticulation.

Genitalia: Male (Figure 66) (10 examined); female (2 examined).

Size: Length, 2.32–3.00 mm; width, 1.00–1.20 mm; 10 specimens measured.

VARIATION.—This is a constant species in regard to form and size, although I saw a few very small individuals (2.32 mm). The elytral cloud is various, always present, but ranging from two small isolated spots—one on each elytron—at the apical third (rare) to one, large, central, piceous to rufous cloud extended from base to apex along the suture and not reaching the lateral margins. These variations occur within population samples.

NATURAL HISTORY.—Several specimens were collected at “black-light.” The flight wings are long; therefore, there is little doubt the beetles are capable of flight. Specimens were collected in Mexico in June through September and January, March, and November. For the United States, specimens are recorded only from the warmer months, May to October. Teneral specimens from Louisiana, Texas, and Guerrero, Mexico, were collected in July. The habitat is riparian. My wife La Verne and I collected members of this species running on wet sandy clay flats along the Republican River near Scandia, Kansas, where there was little or no vegetation.

DISTRIBUTION.—The range of this well-collected species extends from Massachusetts to Kansas, south through Texas as far as Honduras. It does not occur on the west coast of the continent north of Jalisco.

LOCALITY RECORDS (Figure 73).—I have seen 287 specimens from the following localities:

UNITED STATES: ALABAMA: Dallas County, Selma (MCZ, USNM); Mobile County, Mobile (MCZ); Tuscaloosa County, Tuscaloosa (UASM). ARKANSAS: Hempstead County, Hope (MCZ). DISTRICT OF COLUMBIA: (USNM). FLORIDA: Alachua County, Gainesville (USNM); Highlands County, Highlands Hammock State Park (USNM). ILLINOIS: Randolph County, Fort Chartres (MCZ), Fort Chartres Landing (USNM); Saint Clair County, Cahokia (MCZ). IOWA: Des Moines County, Burlington (MCZ); Henry County, Mount Pleasant (MCZ); Johnson County, Iowa City (USNM). KANSAS: Cloud County, Concordia on Republican River (UASM); Douglas County, Lawrence (MCZ); Republic County, Scandia on Republican River (USNM); Shawnee County, Topeka (USNM). KENTUCKY: Rowan County, Morehead (CNC). LOUISIANA: Caddo Parish, Shreveport (USNM); East Baton Rouge Parish,

Baton Rouge (USNM); Jefferson Parish, Harahan (MCZ); Madison Parish, Tallulah (MCZ); Saint Helena Parish, Greensburg (RTA1); Parish unknown, Bay Sara (USNM). MARYLAND: Baltimore County, Baltimore (USNM); Montgomery County, Cabin John (USNM); County unknown, Chapel Point (USNM). MASSACHUSETTS: Franklin County, Northfield (MCZ); Hampden County, Springfield (MCZ). MISSISSIPPI: (MCZ); Adams County, Natchez (USNM). MISSOURI: Boone County, Easley (USNM); Saint Louis County, Creve Coeur Lake (MCZ); Saint Louis (MCZ, UMon); County unknown, “C. Mo.” (USNM). NEW JERSEY: Essex County, Orange (USNM); Gloucester County, Woodbury (MCZ). OHIO: (USNM). OKLAHOMA: Creek County, Sapulpa (USNM). PENNSYLVANIA: Allegheny County, (MCZ); Montgomery County, Arcola (MCZ); Pike County, Milford (MCZ, USNM). SOUTH CAROLINA: (MCZ); Charleston County, Charleston (UASM); Oconee County, Clemson College (USNM). TEXAS: Bexar County, San Antonio (USNM); Carerón County, Brownsville (USNM); Cherokee County, Jacksonville (USNM); Colorado County, Columbus (MCZ); La Salle County, Cotulla (USNM); Val Verde County, Del Rio (MCZ), Devils River (USNM). VIRGINIA: Fairfax County, Clifton (USNM); Lee County, Pennington Gap (USNM); Mecklenburg County, Roanoke River at Route 1 (MCZ); Spotsylvania County, Fredricksburg (USNM).

MEXICO: CHIAPAS: 32.5 miles east of Comitán on Route 190 (UASM); 38.0 miles southeast of Comitán along Rio Grijalva at Puente de Chamic (RTBe); junction of Routes 190 and 195 (CNC). GUERRERO: 20.4 miles north of Chilpancingo on Route 95 (UASM). JALISCO: Cihuatlan on Route 110 (UASM). OAXACA: 9.9 miles north of Pochutla on Route 175 (UASM); Rio Atoyac near Juchatengo (UASM); Tapanatepec (JNeg); 72.5 miles south of Valle Nacional on Rio Grande (UASM). SAN LUIS POTOSÍ: 6.0 kilometers west of Ciudad del Maíz (MCZ); El Naranjo on Rio El Salto (CAS).
CENTRAL AMERICA: GUATEMALA: Los Amates (USNM). HONDURAS: Rio Humuya northwest of Comayagua (USNM).

25. *Pericompsus sagma*, new species

FIGURES 60, 68, 74

TYPE-LOCALITY.—Coyuca de Benitez, Guerrero, Mexico.

TYPE-SPECIMENS.—The holotype male and allotype are in USNM. Both were collected by G. E. Ball and D. R. Whitehead in 1965. Eight paratypes are listed below.

DESCRIPTION.—*Form* (Figure 60): Moderately elongate and narrow, narrower than *P. ephippiatus*; most similar to that species, but easily distinguished by the midelytral position of the fovea of interneur 8.

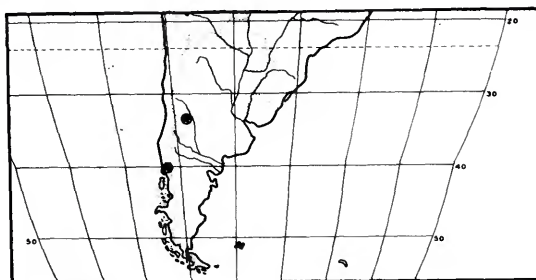


FIGURE 72.—Distribution map of *P. univittatus*.

Color: Shiny testaceous, middle of venter rufous, elytral cloud (Figure 60) and most of sutural interval piceous.

Head: Slightly narrower across eyes than pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 60): Subcordate, sides very shallowly sinuate in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures contiguous, thus interneurs more or less striate; rows 1 and 2 entire, rows 3–6 effaced at apical sixth; interneur 7 effaced externally throughout; interneur 8 well impressed, and foveate just

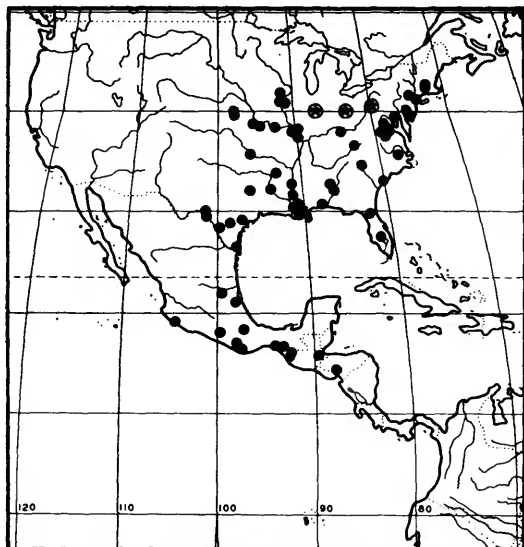


FIGURE 73.—Distribution map of *P. ephippiatus*.

anterior to middle; fovea moderately large, subequal in diameter to width of elytral explanation; humeral margin strongly rounded, almost angulate, at base, not connected with base of interneur 4; side margin minutely setulose (not serrate at 50X) in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Effaced, even from frons.

Genitalia: Male (Figure 68) (3 examined); female not dissected.

Size: Length, 2.12–3.16 mm; width, 0.84–1.20 mm; 10 specimens measured.

VARIATION.—The striking variation in size (see above) is the only nonconstant feature I have observed on the few specimens available for study.

NATURAL HISTORY.—No exact record of capture is available except one specimen from near Manzanillo, Colima, taken at light by Ball, Leech, and me. The area was near the sea in a cutover Palm Forest. Other specimens are labeled "Rio" and presumably were collected near water. The elevation range recorded is sea level to 488 meters. Specimens were collected in March, April, August, and December; none were teneral.

ETYMOLOGY.—Greek noun, *sagma*, meaning "pack-saddle," in reference to the saddle-shaped spot on the elytra.

LOCALITY RECORDS (Figure 74).—I have seen 10 specimens from the following localities:

MEXICO: CHIAPAS: Puente Pijijiapan near Pijijiapan on Route 200 (UASM); Rio Chiapas near Tuxtla Gutierrez on Route 190 (UASM). COLIMA: 12.8 miles east of Manzanillo (UASM). GUERRERO: Coyuca de Benitez (UASM, USNM). VERACRUZ: Rio Papaloapan at Paso Cano (CAS, USNM).

26. *Pericompsus leechi*, new species

FIGURES 61, 67, 74

TYPE-LOCALITY.—Five miles south of Rio Grande de Santiago Ferry, Nayarit, Mexico.

TYPE-SPECIMENS.—The unique holotype male is in CAS. It was collected by H. B. Leech in 1948.

DESCRIPTION.—**Form** (Figure 61): Very similar to *P. ephippiatus*, but easily distinguished by the very large midfovea of interneur 8.

Color: Shiny testaceous, midventer and elytral cloud rufous; elytral cloud with lateral piceous spots.

Head: Across eyes subequal to width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 61): Subcordate, sides shallowly sinuate in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and contiguous, more or less striate; rows 2–6 effaced in apical sixth, row 1 entire though less impressed apically, interneur 7 effaced externally throughout; interneur 8 well impressed, and foveate at middle; fovea very large, larger in diameter than width of elytral explanation; humeral margin strongly rounded at base of interneur 4; side margins moderately explanate, minutely setulose (not serrate) in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Mostly effaced except on frontal furrows, where it consists of isodiametric reticulation.

Genitalia: Male (Figure 67, the type); female unknown.

Size: Length, 2.48 mm; width, 0.96 mm; the type.

NATURAL HISTORY.—The type was collected in November; it was not teneral.

ETYMOLOGY.—The genitive patronym, *leechi*, honors my friend and the friend of every coleopterist using California Academy of Sciences material, Hugh B. Leech.

LOCALITY RECORDS (Figure 74).—I have seen only the type from 5.0 miles south of Rio Grande de Santiago Ferry, Nayarit, Mexico.

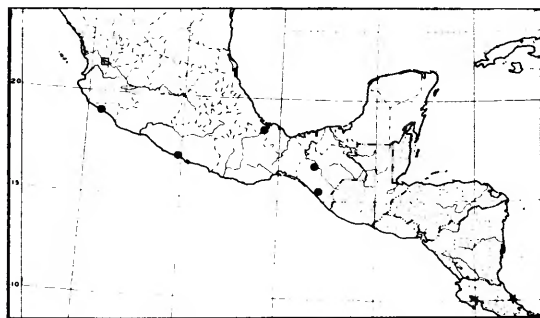


FIGURE 74.—Distribution map: *P. sagma* (circles), *P. nevermanni* (star), *P. leechi* (square).

27. *Pericompsus pauli*, new species

FIGURES 62, 69, 75

TYPE-LOCALITY.—Near Pijijiapan, Chiapas, Mexico.

TYPE-SPECIMEN.—The holotype male is in USNM. It was collected by P. J. Spangler in 1965. Five paratypes are listed below.

DESCRIPTION.—*Form* (Figure 62): Similar to *P. histriionellus*, but easily distinguished from that species by the shape of the elytral cloud, the less convex pronotum, and the more anteriorly positioned midfovea of interneur 8.

Color: Shiny testaceous, elytral cloud rufopiceous.

Head: Slightly narrower across eyes than pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 62): Subcordate, sides moderately sinuate in basal half; base broadly lobed; hind angles slightly obtuse; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and coarse, separated longitudinally by their own diameter or slightly more; rows 2 to 5 effaced apically, row 1 entire; interneur 7 effaced externally throughout, interneur 8 well impressed, and foveate just anterior to middle; fovea moderately large, about as wide as elytral explanation; humeral margin strongly rounded at base, not connected with base of interneur 4; side margins moderately explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Effaced from most of dorsal surface except shallowly impressed isodiametric reticulation on scutellum and anterior edge of pronotum.

Genitalia: Male (Figure 69) (1 examined); female characteristic of species group (1 examined).

Size: Length, 2.28–2.96 mm; width, 0.92–1.08 mm; 5 specimens measured.

VARIATION.—The two samples available are quite homogeneous.

NATURAL HISTORY.—The type was collected at black-light in July along a small gravelly stream (Spangler, per. comm.), and it is fully winged.

ETYMOLOGY.—The genitive patronym, *pauli*, honors that indefatigable collector of aquatic and riparian beetles, Paul J. Spangler, who collected the type of this species.

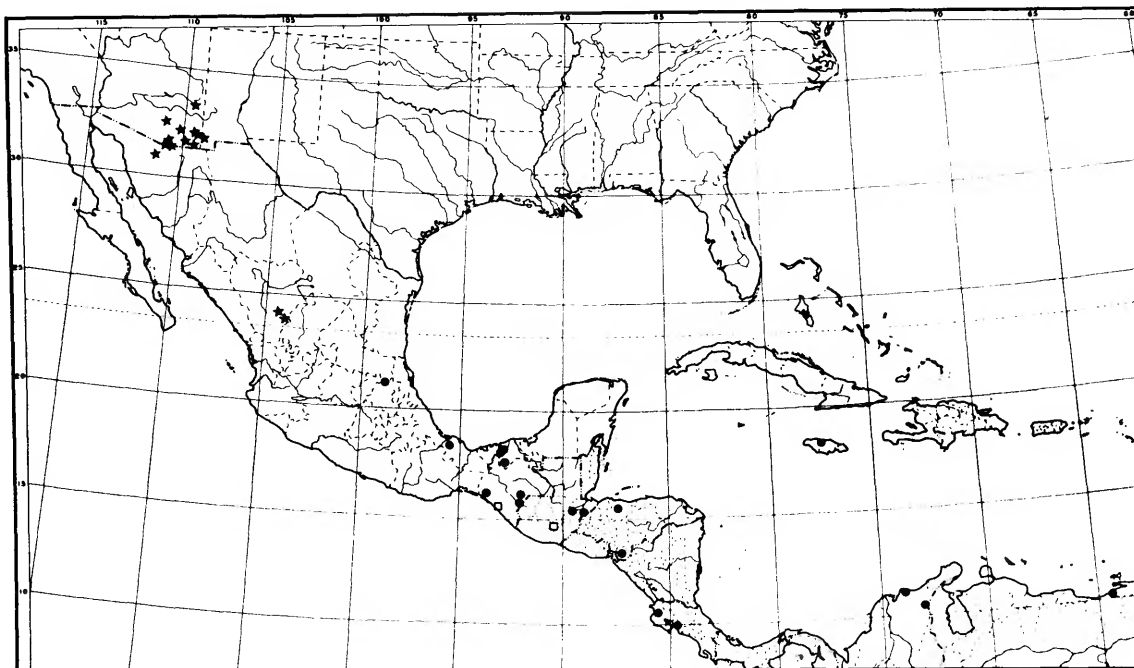


FIGURE 75.—Distribution map: *P. pauli* (squares), *P. reichei* (circles), *P. laetulus* (stars).

LOCALITY RECORDS (Figure 75).—I have seen six specimens from the following localities:

MEXICO: CHIAPAS: Near Pijijiapan (USNM).

CENTRAL AMERICA: EL SALVADOR: San Salvador (JNeg, USNM).

**28. *Pericompsus nevermanni* (Darlington),
new status**

FIGURES 1, 70, 74

Tachys nevermanni Darlington, 1934:160. [Holotype male in MCZ. Type-locality: Hamburg Farm, near Port Limon, Costa Rica.]

Tachys (Pericompsus) nevermanni Darlington, 1934:160.

DESCRIPTION.—*Form* (Figure 1): Moderately elongate and narrow with medially constricted elytra. Easily distinguished from all other *Pericompsus* members by the huge fovea of interneur 8.

Color: Shiny testaceous, midventer rufous, elytral cloud rufopiceous, appendages testaceous.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows short and deeply impressed, not prolonged posteriorly beyond mid-eye level; eyes medium sized and prominent.

Pronotum (Figure 1): Nearly quadrate, sides shallowly sinuate in basal half; base lobed at middle; hind angles acute, slightly prominent; side margins beaded, not reflexed; disc slightly convex.

Elytra: Each elytron with 6 punctate interneurs; punctures small and separated longitudinally by about their own diameter; all rows effaced in apical third, interneur 7 effaced externally throughout, interneur 8 well impressed, sulcate, and foveate just posterior to middle; fovea huge, wider than elytral explanation; humeral margin angulate at base, not connected with base of interneur 4; side margins narrowly explanate, not serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Moderately impressed, nearly isodiametric reticulation on frons, pronotum, and elytra.

Genitalia: Male (Figure 70) (3 examined); female characteristic of *ephippiatus* group (1 examined).

Size: Length, 2.32–2.80 mm; width, 0.96–1.12 mm; 10 specimens measured.

NATURAL HISTORY.—Specimens were collected in February, March, May, and July; several, but not

all, March specimens were teneral. One specimen was collected at light. The flight wings of all specimens are fully developed; thus, the beetles probably fly. Nevermann collected these beetles "auf Sandbank."

LOCALITY RECORDS (Figure 74).—I have seen 22 specimens, all paratypes (MCZ, USNM), from Hamburg Farm near Port Limón, Costa Rica.

29. *Pericompsus reichei* (Putzeys)

FIGURES 63, 71, 75

Bembidium reichei Putzeys, 1846:415. [Lectotype, here selected, sex undetermined because of poor condition, in IRSNB. Type-locality: Cumana, Venezuela.]

Pericompsus reichei (Putzeys). Schaum 1860:202.

Tachys cribellatus Bates, 1882:143. [Lectotype, here selected, sex undetermined, in MHNP. New synonymy. Type-locality: Mexico.]

Pericompsus sticticus Bates, 1882:146. [Lectotype, here selected, a male, in BMNH. Ten paralectotypes also labeled by me, 8 in BMNH, 2 in MHNP. New synonymy. Type-locality: Panzos, Paso Antonio, Guatemala.]

Pericompsus quadrillum Bates, 1884:290 (not Schaum). [Lectotype, here selected, a female in BMNH. Fourteen paralectotypes also labeled by me, 10 in BMNH, 4 in MHNP. Already considered a local variety (Bates, 1891:261). Type-locality: Teapa, Tabasco, Mexico.]

Tachys mexicanus Csiki 1928:187. [New name for *Pericompsus quadrillum* Bates (not Schaum).]

DESCRIPTION.—*Form* (Figure 63): Moderately elongate and narrow with more or less parallel-sided elytra. Easily distinguished from all members of the subgenus by the piceous body color and 4 white elytral spots.

Color: Dull piceous, appendages and elytral spots pale testaceous, distal antennal articles infuscated.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows moderately impressed and evenly arcuate to posterior margin of eye; eyes medium sized and prominent.

Pronotum (Figure 63): Quadrate-subcordate, sides moderately sinuate in basal half; base broadly lobed at middle; hind angles acute, slightly prominent; side margins narrowly reflexed; disc slightly convex.

Elytra: Each elytron with 6 punctate interneurs striate in part; punctures moderately large, separated longitudinally by less than their own diameter; rows 1–3 less impressed apically, rows 4–6 effaced apically, interneur 7 effaced externally throughout, interneur 8 well impressed and foveate

just anterior to middle; fovea small, subequal to posterior fovea of humeral series; humeral margin strongly angulate at base, connected with base of interneur 4; side margins narrowly explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Well-impressed, nearly isodiametric reticulation on dorsal surface.

Genitalia: Male (Figure 71) (8 examined); female characteristic of *ephippiatus* group (2 examined).

Size: Length, 2.16–2.80 mm; width, 0.84–1.08 mm; 10 specimens measured.

VARIATION.—The size of the elytral spots varies within population samples.

NATURAL HISTORY.—Specimens were collected in April through July; one July specimen was teneral. Several specimens were collected at "black-light." The flight wings are fully developed; thus, the beetles probably fly. My wife LaVerne and I collected these beetles running on fine-grained sand margins of rainwater pools above the Rio Fonseca in Panama. The beetles were also hiding beneath half-buried twigs and branches and in grass roots near the pools. The single specimen from Jamaica indicates the species can cross water gaps in some manner; however, the establishment of the species on Jamaica is unconfirmed.

DISTRIBUTION.—The range of this species extends from mid-Mexico through Central America to the north coast of South America. One specimen has been collected recently (1962) on the island of Jamaica.

LOCALITY RECORDS (Figure 75).—I have seen 181 specimens from the following localities:

CARIBBEAN: JAMAICA: Trelawny Parish, Martha Brae near Falmouth (USNM).

MEXICO: CHIAPAS: 32.5 miles east of Comitán on Route 190 (UASM); Puente de Chamic, 38.0 miles southeast of Comitán on Rio Grijalva (RTBe); 18.6 miles southeast of Tonala on Route 200 (UASM). SAN LUIS POTOSI: Tamazunchale-Quinta Chilla (UASM, USNM). TABASCO: San Jaun Bautista (MCZ, USNM); Teapa (BMNH, MHNP). VERACRUZ: Paso Cano on Rio Papuloapam (CAS).

CENTRAL AMERICA: COSTA RICA: 9.0 miles west of Esparta (USNM); 10.0 miles northwest of Liberia (MCZ, UASM, USNM). GUATEMALA: Los Amates (MCZ); Panzos at Paso Antonio (BMNH, MHNP). HONDURAS: 5.0 miles east of Choluteca (USNM); Lancetilla (MCZ). PANAMA: Puerto Armuelles (MCZ).

SOUTH AMERICA: COLOMBIA: Magdalena Department, Rio Frio (MCZ, USNM); Rio Cesar at San Albete Inclupalva (JNeg). VENEZUELA: Sucre State, Cumana (IRSNB).

30. *Pericompsus laetulus* LeConte

FIGURES 64, 75, 80

Pericompsus laetulus LeConte, 1851:192. [Lectotype, here selected, a female, in MCZ, number 5588. Type-locality: Valley of the Gila River, near Pima, Arizona.]

DESCRIPTION.—*Form* (Figure 64): More elongate, narrow, and parallel sided than *P. ephippiatus*. Similar to members of *P. longulus*, but without the infuscated pronotum. Easily distinguished from the other United States species by the presence of non-granulate isodiametric microsculpture on the dorsal surface.

Color: Rufotestaceous, midventer and elytral cloud rufopiceous, appendages testaceous.

Head: Across eyes narrower than width of pronotum; frontal furrows well impressed and evenly arcuate, each extended to posterior margin of eye; eyes medium sized and prominent.

Pronotum (Figure 64): Broadly subcordate, sides moderately sinuate in basal half; base broadly lobed; hind angles about right; side margins narrowly reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures more or less contiguous, especially in apical two-thirds striate; rows 1–5 entire though less impressed apically, row 6 effaced at apical sixth, interneur 7 effaced externally throughout; interneur 8 well impressed and foveate just anterior to middle; fovea small, subequal in diameter to diameter of posterior fovea of humeral group; humeral margin angulate at base, carinate, connected to carinate base of interneur 4; side margins moderately explanate, minutely setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Well-impressed, nearly isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 80) (6 examined); female characteristic of species group (1 examined).

Size: Length, 2.60–3.08 mm; width, 0.96–1.12 mm; 10 specimens measured.

VARIATION.—Some specimens have a narrower pronotum than average. This variation occurs within population samples.

NATURAL HISTORY.—Specimens were collected in January and from June through September; teneral specimens were collected in August and September. It is probable that the larvae are active in June and July, the hottest months of summer, but also

the wettest. Data from labels indicate an elevation range of 1281 to 1647 meters. Also, many records indicate specimens are collected at light, the individuals are fully winged, therefore these beetles are probably capable of flight.

DISTRIBUTION.—Available records indicate two disjunct areas where these beetles occur (Figure 75), with a wide gap in between. The gap occurs in the desert region of northern Mexico, an area which has not been well collected; therefore, the gap may be artificial.

LOCALITY RECORDS (Figure 75).—I have seen 83 specimens from the following localities:

UNITED STATES: ARIZONA: (MCZ); Cochise County, Benson (CAS), Douglas (MCZ, USNM), Guadalupe (USNM), Portal (MCZ), 5.0 miles west of Portal (USNM), San Pedro at Fairbanks (CAS); Graham County, Valley of the Gila River near Pima (MCZ); Pima County, Santa Rita Mountains (CAS), 10.0 miles west of Tucson (MDru, USNM); Santa Cruz County, Calabasas Canyon (UASM), Madera Canyon at Bog Springs Campground (USNM), Nogales (MCZ, USNM). NEW MEXICO: Hidalgo County, Cienega Lake, about 15 miles north of Rodeo (CAS).

MEXICO: DURANGO: Durango (USNM); 4.2 miles west of Vicente Guerrero on Route 45 (UASM). SONORA: Saric (CAS).

31. *Pericompsus longulus* Bates

FIGURES 65, 81, 87

Pericompsus longulus Bates, 1878:601. [Lectotype, here selected, a male, in MHNP. One paralectotype also labeled by me in MHNP. Type-locality: "Mexico, near the Capitol" as mentioned by Bates; herewith restricted to the State of Mexico, Lago Zumpango, near San Juan Zitlattepec.]

DESCRIPTION.—*Form* (Figure 65): more elongate, narrow, and parallel sided than *P. ephippiatus*. Easily distinguished from all other members of the subgenus by body form and infuscated pronotum.

Color: Forebody dorsum rufopiceous, venter piceous, elytra and appendages testaceous, elytral cloud piceous.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows deeply impressed, evenly arcuate to posterior margin of eye; eyes medium sized and prominent.

Pronotum (Figure 65): Transverse, sides sinuate in basal half; base slightly lobed at middle; hind angles about right; side margins moderately reflexed; disc slightly convex.

Elytra: Each elytron with 6 punctate interneurs; punctures medium sized, coarsely impressed, separated longitudinally by less than their own diameter; rows 2–6 effaced apically, row 1 entire, though less impressed apically, interneur 7 effaced externally throughout; interneur 8 well impressed and foveate just anterior to middle; fovea small, subequal in diameter to posterior fovea of humeral series; humeral margin strongly rounded at base, almost angulate, not quite connected to base of interneur 4; side margins minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Feebly impressed, slightly transverse reticulation on entire dorsum.

Genitalia: Male (Figure 81) (2 examined); female characteristic of *ephippiatus* group (1 examined).

Size: Length, 2.68–3.00 mm; width, 1.00–1.16 mm; 10 specimens measured.

VARIATION.—The small samples available are quite homogeneous.

NATURAL HISTORY.—Specimens were collected in May, June, and December; none were teneral. One specimen was collected at “black-light.” The flight wings are fully developed; thus, the beetles probably fly. All specimens seen were found at higher elevations on the Mexican “Altiplano” or in Oaxaca at 1700 meters elevation or higher, or in the Transverse Volcanic belt at 2300 meters. Ball and Whitehead collected these beetles on the shores of one of the eight playa-like lakes near San Juan Zitlaltepec.

LOCALITY RECORDS (Figure 87).—I have seen 21 specimens from the following localities:

MEXICO: DISTRITO FEDERAL: Creek at Lomas de Chapultepec (MCZ). DURANGO: 10.0 miles west of Durango (CNC, USNM). MEXICO: Lago Zumpango, near San Juan Zitlaltepec (UASM, USNM); San Martin (USNM). OXACA: Oaxaca (USNM).

32. *Pericompso silicis*, new species

FIGURES 76, 86, 89

TYPE-LOCALITY.—Rio Humuya, northwest Comayagua, Honduras.

TYPE-SPECIMENS.—The holotype female is in USNM. It was collected by O. S. Flint in 1967. Three paratypes are listed below.

DESCRIPTION.—*Form* (Figure 76): Similar to *P. longulus*, but easily distinguished from that species

by the more extensive elytral cloud and the narrower pronotal explanations.

Color: Rufous, venter piceous at middle, elytral cloud piceous, outlined with testaceous, appendages testaceous.

Head: Across eyes narrower than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 76): Broadly subcordate, sides moderately sinuate in basal half; base broadly lobed; hind angles about right; side margins narrowly reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and coarse, separated longitudinally by about their own diameter, all rows entire, though less impressed apically, interneur 7 effaced throughout, interneur 8 well impressed, and foveate just anterior to middle; fovea moderately large, subequal in diameter to width of elytral explanation; humeral margin strongly rounded, almost angulate, at base, not connected to base of interneur 4; side margin moderately explanate, moderately serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Shallowly impressed isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 86) (1 examined); female not dissected.

Size: Length, 2.60–2.88 mm; width, 1.04–1.16 mm; 4 specimens measured.

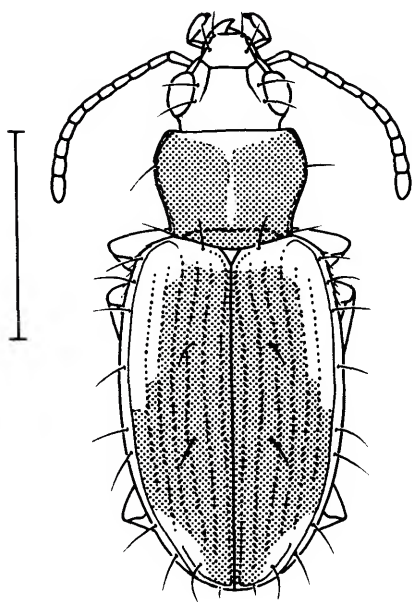
VARIATION.—The small sample available is quite homogeneous.

NATURAL HISTORY.—Specimens were collected in May and August; none were teneral. Nevermann's specimen from Costa Rica is labeled “in lampshade.” The specimen is fully winged; therefore, it probably flew to light.

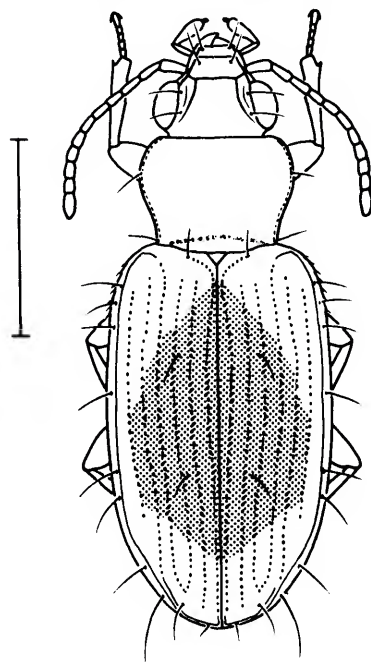
ETYMOLOGY.—Latin genitive from *silex*, any “hard stone” or “flint,” in honor of my colleague and collector of the type of this species, Oliver S. Flint.

LOCALITY RECORDS (Figure 89).—I have seen four specimens from the following localities:

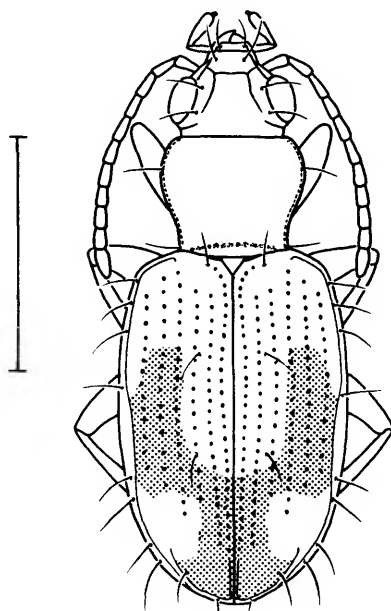
CENTRAL AMERICA: COSTA RICA: San Jose (USNM). HONDURAS: Rio Humuya northwest of Comayagua (USNM). SOUTH AMERICA: BRAZIL: Mato Grosso State, Mato Grosso (MCZ). COLOMBIA: Cundinamarca Department, Rio Magdalena at Bogota (MCZ).



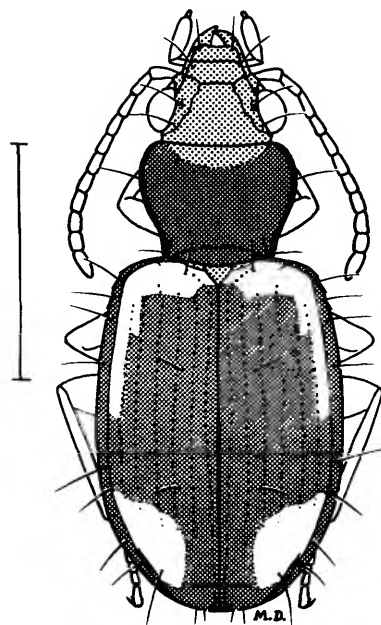
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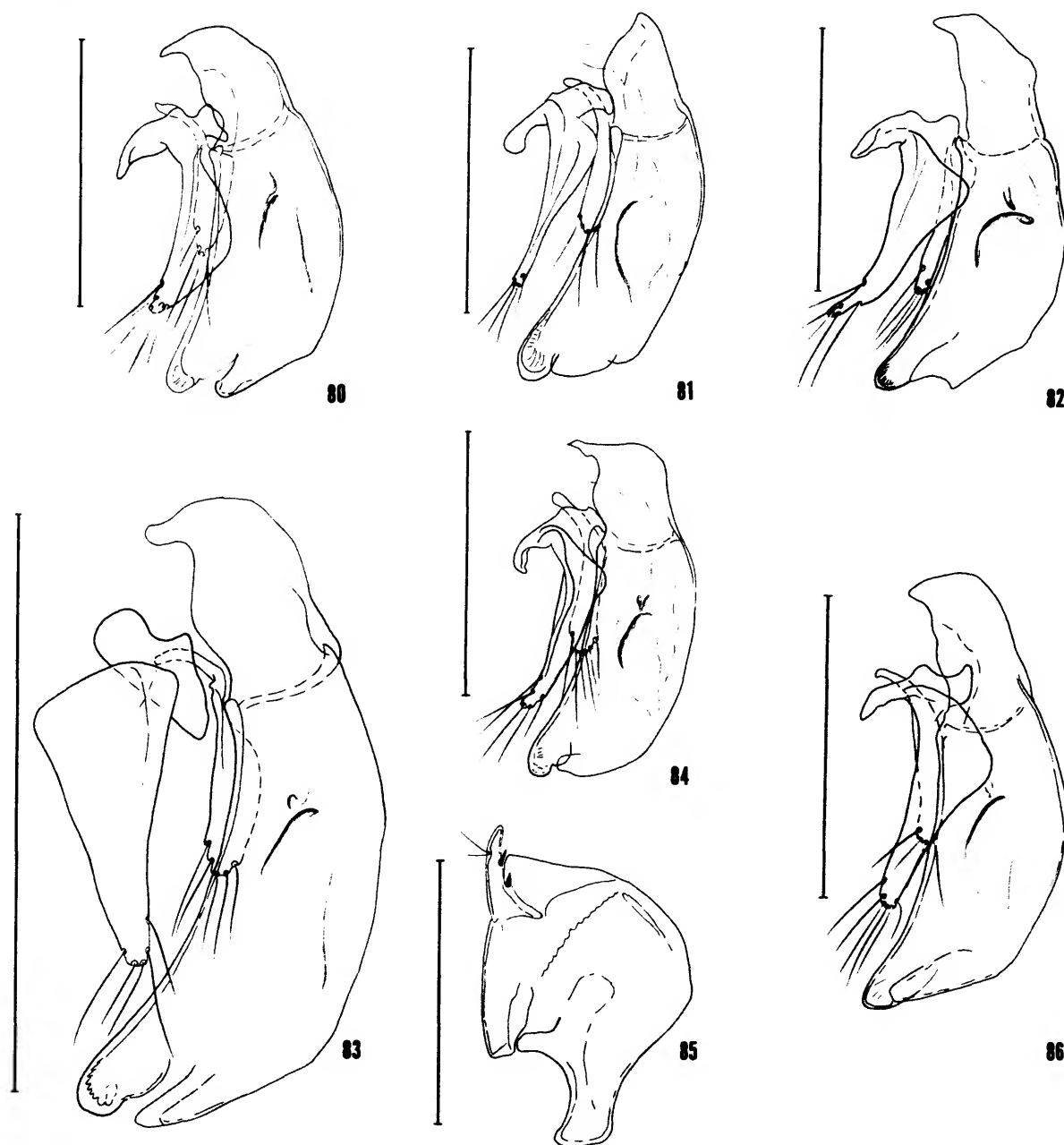


78



79

FIGURES 76-79.—Dorsal outline with setae of *Pericompsus* species: 76, *P. silicis* male paratype, San Jose, Costa Rica; 77, *P. tlaloc* female paratype, Puente Caquixtle, Mexico; 78, *P. gracilior* male, Guazapa, El Salvador; 79, *P. jamcubanus* female paratype, Morant Bay, Jamaica.



FIGURES 80-86.—Genitalia of *Pericompsus* species. Male, left lateral aspect: 80, *P. laetulus*, Benson, Arizona; 81, *P. longulus*, Lomas de Chapultepec, Mexico; 82, *P. jamcubanus*, Imias, Cuba; 83, *P. tlaloc*, Rio San Lorenzo, Mexico; 84, *P. gracilior*, Vera Cruz, Mexico; 86, *P. sicilis*, San Jose, Costa Rica. Female, right half of ventral aspect: 85, *P. gracilior*, Vera Cruz, Mexico.

33. *Pericompsus tlaloc*, new species

FIGURES 77, 83, 88

TYPE-LOCALITY.—Rio San Lorenzo, 30.6 miles south of Culiacan on Route 15, Sinaloa, Mexico.

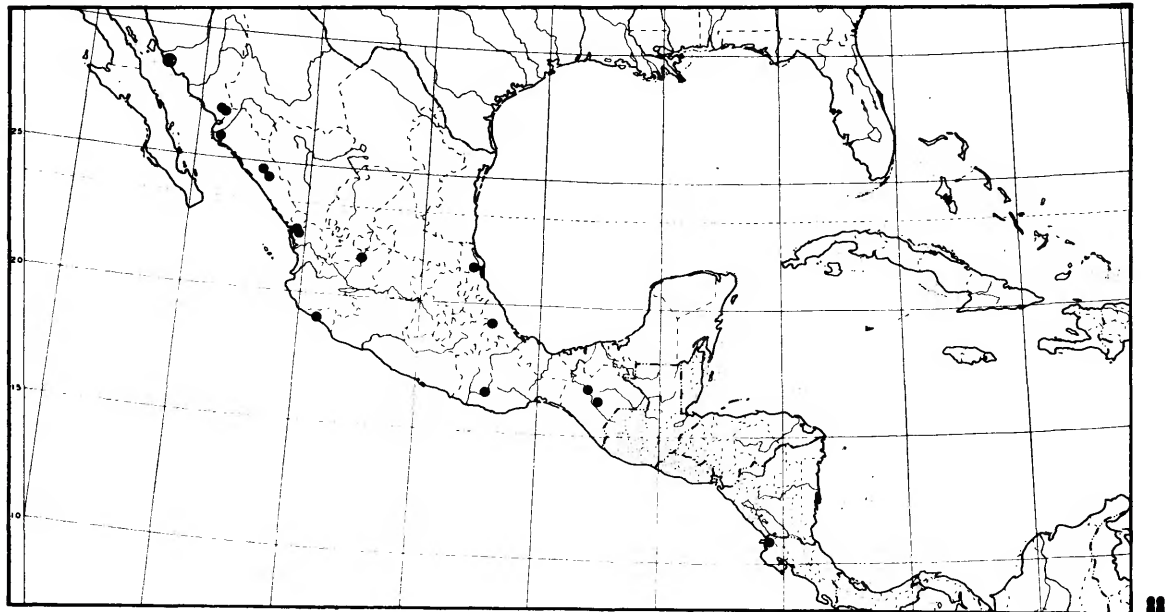
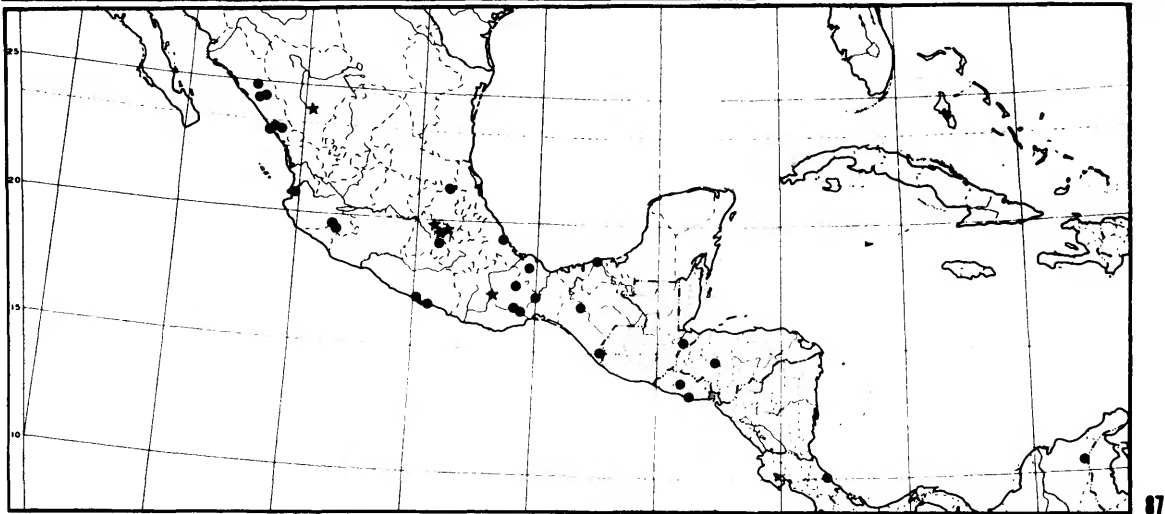
TYPE-SPECIMENS.—The holotype male and allotype are in the USNM. Both were collected by G. E. Ball, T. L. Erwin, and R. E. Leech in 1967. Forty-eight paratypes are listed below.

DESCRIPTION.—*Form* (Figure 77): Similar to *P.*

laetulus, but distinguishable from that species by the coarser punctation of the interneurs, the more midelytra location of the midfovea of interneur 8, and by the more robust elytra.

Color: Testaceous, venter of hind body piceous, elytral cloud (Figure 77) rufopiceous, outer antennal articles dusky or infuscated.

Head: Much narrower across eyes than width of pronotum; frontal furrows deeply impressed and evenly arcuate, each extended to posterior margin



FIGURES 87-88.—Distribution maps: 87, *P. gracilior* (circles), *P. longulus* (stars); 88, *P. tlaloc*.

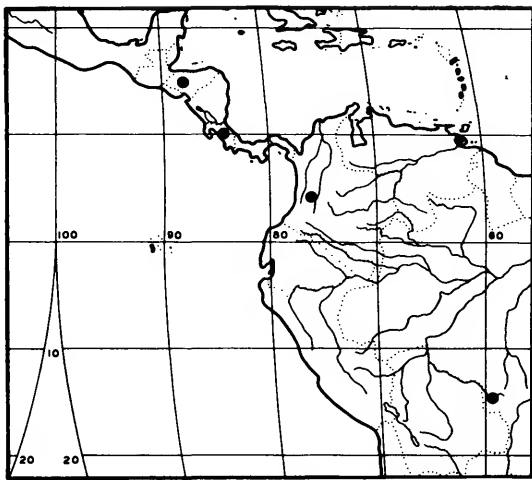


FIGURE 89.—Distribution map of *P. silicis*.

of eye; eyes very large and prominent.

Pronotum (Figure 77): Broadly subcordate, sides abruptly sinuate near hind angles; base broadly lobed; hind angles about right; side margins narrowly reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large, coarse, and separated longitudinally by about their own diameter; rows 1 to 5 entire, row 6 effaced at extreme apex; interneur 7 effaced externally throughout; interneur 8 well impressed, and foveate just anterior to middle; fovea small, narrower in diameter than width of elytral explanation; humeral margin strongly rounded, almost angulate, and connected with carinate base of interneur 4; side margins moderately explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Entire dorsal surface with deeply impressed, almost granulate, isodiametric reticulation.

Genitalia: Male (Figure 83) (4 examined); female characteristic of species group (3 examined).

Size: Length, 2.40–3.08 mm; width, 0.92–1.12 mm; 10 specimens measured.

VARIATION.—This is a highly variable species and should be critically studied when more material is available. Three specimens, all females, from Zacatecas are very large, with an expanded and darkly pigmented elytral cloud; another female

from Jalisco perfectly matches this pattern. All four specimens have large robust elytra. A single male specimen from Oaxaca is rather small, with a reduced elytral cloud compared with the above specimens. The rest of the specimens, all from coastal localities from Colima to Sonora, are more homogeneous in size, but tend to display differently shaped elytral clouds. The specimens from San Luis Potosi, Chiapas, and Veracruz are slightly more elongate, and have a narrower pronotum.

NATURAL HISTORY.—Several specimens were collected at “black-light.” The flight wings are long; therefore, the beetles are probably capable of flight. Specimens were collected in all months except February, May, and December; none were teneral. The recorded elevation ranges from sea level in Colima to 1652 meters in Jalisco. Ball, Leech, and I collected several specimens from beneath stones and gravel along the Rio San Lorenzo in Sinaloa. There was virtually no vegetation along the broad gravel bars. The beetles were made active by splashing water on the gravel.

ETYMOLOGY.—*Tlaloc*, meaning the “god of rain and thunder” in early Teotihuacan and Nahuatl-Toltec cultures of central Mexico, in reference to the riparian habitat of this species.

DISTRIBUTION.—The range of this species extends from the western deserts of northern Mexico through the tropical regions of Mexico south to Costa Rica. The distribution overlaps that of *P. gracilior* almost exactly and both species have been taken together on the Rio San Lorenzo in Sinaloa.

LOCALITY RECORDS (Figure 88).—I have seen 50 specimens from the following localities:

MEXICO: CHIAPAS: El Chorreadero, 5.5 miles east of Chiapa de Corzo (UASM); 32.5 miles east Comitan on Route 190 (UASM, USNM). COLIMA: 12.8 miles east of Manzanillo (UASM). JALISCO: Puente Caquixtla on Route 45, 9.7 miles east of Encarnacion de Diaz (UASM). NAYARIT: Rio Acaponeta on Route 15, 2.4 miles south of Acaponeta (USNM); 5.0 miles south of Acaponeta (CAS, USNM). OAXACA: Rio Atoyac near Juchatengo (UASM). SAN LUIS POTOSI: 3.6 miles west El Naranjo on Route 180 (UASM). SINALOA: Los Mochis (CAS); 26.0 miles north of Pericos (CAS, USNM); Rio San Lorenzo on Route 15, 30.6 miles south of Culiacan (BMNH, MCZ, UASM, USNM). SONORA: Alamos (CAS, USNM); 8.0 miles southeast of Alamos (GRNo, USNM); San Carlos Bay (CAS). VERACRUZ: Cordoba (CAS).

CENTRAL AMERICA: COSTA RICA: 10.0 miles northwest of Liberia (USNM).

34. *Pericompsus gracilior* (Bates), new combination

FIGURES 78, 84, 85, 87

Tachys gracilior Bates, 1884:289. [Lectotype, here selected, a female, in MHNP. One paralectotype also labeled by me in MHNP. Type-locality: Yauatepec, Morelos, Mexico (Bates misspelled Yauatepec as Yantepec).]

Pericompsus oculaticauda Casey, 1918:172. [Lectotype, here selected, a female, in USNM. New synonymy. Type-locality: Frontera, Tabasco, Mexico.]

DESCRIPTION.—*Form* (Figure 78): Similar to *P. ephippiatus*, except pronotum and elytra more convex; elytra also relatively shorter.

Color: Shiny testaceous or ferruginous, mid-venter rufous, pronotal and elytral pattern various (see below).

Head: Across eyes subequal to width of pronotum; frontal furrows strongly impressed anteriorly, less so near eye, evenly arcuate to posterior margin of eye; eyes medium sized and prominent.

Pronotum (Figure 78): Subcordate, sides sinuate in basal half; base slightly lobed at middle; hind angles acute, prominent; side margins not reflexed, almost effaced in middle, disc moderately convex.

Elytra: Each elytron with 5 or 6 punctate interneurs; punctures coarsely impressed, separated longitudinally by at least their own diameter; rows 1–5 extended to apical third, row 6 (if present) shorter, interneur 7 effaced externally throughout, interneur 8 well impressed and foveate just posterior to middle; fovea large, slightly wider than elytral explanation; humeral margin rounded at base, not connected to base of interneur 4; side margins moderately explanate, not serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 84) (5 examined); female (Figure 85) characteristic of genus (1 examined).

Size: Length, 2.16–2.92 mm; width, 0.88–1.16 mm; 10 specimens measured.

VARIATION.—This is a highly variable species with apparently definite geographic forms in the material at hand. Although I saw numerous individuals, I hesitate to designate subspecific names at this time because of lack of numerous locality samples from critical areas.

The color pattern of the elytra and pronotum is slightly variable within population samples and is possibly due to age of the individual. However,

the examples from Costa Rica are all very dark piceous on the sides of the pronotum and the disc of the elytra. Throughout the rest of the range, the pronotum is testaceous and the elytral disc is rufous, margined posteriorly and laterally with piceous spots.

The side margins of the pronotum medially are almost effaced in some Oaxacan specimens (17.7 miles west of El Camaron). This same sample has only five punctate interneurs on the elytron. One other specimen from Rio Atenquique shares this latter character state. However, numerous individuals from throughout the range of the species have one to three punctures representing the sixth interneur. The character state is apparently undergoing change from interneur 6 present to absent.

The three presently recognizable morphs discussed above are here designated respectively the "darkly-pigmented morph" of Costa Rica, the "5-interneur morph" of Oaxaca, Morelos, and Jalisco, and the common widespread "6-interneur morph." Should subspecific ranking be necessary later, the "5-interneur morph" is typical. Casey's name (see above) refers to the more common widespread "6-interneur morph."

NATURAL HISTORY.—Specimens were collected in all months except September through November; none seen were teneral. Several specimens from Costa Rica were collected at light. The flight wings are fully developed; thus, it is probable these beetles fly. Nevermann collected these beetles, "auf Sandbank"; Ball and Whitehead found them along rivers, P. J. and P. M. Spangler collected them at night (at light or with flashlight) on the sandy lake shore of Lake Ilopango, El Salvador; and Ball, Leech, and I found them under stones along the sandy river courses of Rio Malatengo and Rio Lorenzo in Mexico.

DISTRIBUTION.—The range of this species extends from the northernmost reaches of the tropical belt on the west coast of Mexico south to Colombia. The distribution overlaps that of *P. tlaloc* almost exactly, and both species were collected together on the Rio San Lorenzo in Sinaloa.

LOCALITY RECORDS (Figure 87).—I have seen 184 specimens from the following localities:

MEXICO: CHIAPAS: Puente Coaten near Tapachula on Route 200 (UASM); Rio Chiapa near Tuxtla-Gutierrez on Route 190 (UASM). DISTRITO FEDERAL: Coatlan del Rio (JNeg). GUERRERO: Acapulco (MCZ); Rio Papagayo 24.8 miles east

of Acapulco on Route 200 (UASM). JALISCO: Junction Rio Ameca and Route 200 near Puerto Vallarta (UASM, USNM); Atenquique (CAS); Rio Atenquique 4.0 miles south of Atenquique (UASM). MORELOS: Yauatepec (MHNP). OAXACA: 17.7 miles west of El Camaron on Route 190 (UASM, USNM); 25.0 miles east of El Camaron on Route 190 (UASM); Rio Malatengo, 11.1 miles north of Matias Romero on Route 185 (UASM); Rio Valle Nacional at Valle Nacional (UASM). SAN LUIS POTOSI: Tamazunchale-Quinta Chilla (UASM). SINALOA: Culiacan (USNM); 30.6 miles south of Culiacan along Rio San Lorenzo on Route 15 (UASM); Mazatlan (CAS); Rio del Presidio at Villa Union (UASM). TABASCO: Frontera (USNM). VERACRUZ: Rio Papaloapan at Paso Cano (CAS); Veracruz (MCZ, USNM).

CENTRAL AMERICA: COSTA RICA: Hamburg Farm at Reventazon (MCZ, USNM); Rio Vieja (USNM). EL SALVADOR: Guazapa (JNeg); Lake Ilopango (MCZ, UASM, USNM). GUATEMALA: Los Amates (USNM). HONDURAS: Rio Humuya northwest of Camayagua (USNM). SOUTH AMERICA: COLOMBIA: Magdalena Department, Rio Cesar at San Albete Indupalua (JNeg).

35. *Pericompsus jamcubanus*, new species

FIGURES 79, 82, 104

TYPE-LOCALITY.—Soledad (Cienfuegos), Cuba.

TYPE-SPECIMENS.—The holotype male and allotype are in MCZ. Both were collected by P. J. Darlington, Jr. in 1934. Sixty-nine paratypes are listed below.

DESCRIPTION.—*Form* (Figure 79): Similar to *P. philipi* except pronotum shorter and more cordate. Easily distinguished from members of the other Antillian species by the elytral pattern and piceous pronotum.

Color: Venter, pronotum at least at sides, and elytral cloud piceous; head rufous, appendages testaceous.

Head: Across eyes about subequal to width of pronotum; frontal furrows moderately impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 79): Subcordate, sides moderately sinuate in basal half; base lobed at middle; hind angles about right; side margins not reflexed; disc moderately strongly convex.

Elytra: Each elytron with 6 punctate interneurs; punctures medium sized and separated longitudinally by twice or more their own diameter; rows 2–6 effaced in apical third, row 1 entire though less impressed and striate apically, interneur 7

effaced externally throughout; interneur 8 well impressed throughout and foveate just anterior to middle; fovea small, subequal in diameter to width of elytral explanation; humeral margin strongly rounded at base, to level of interneur 4, not connected to 4; side margins moderately explanate, moderately serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Very shallowly impressed, nearly isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 82) (2 examined); female characteristic of *ephippiatus* group (2 examined).

Size: Length, 2.08–2.76 mm; width, 0.80–1.08 mm; 10 specimens measured.

ARIATION.—Five specimens, two from Soledad and three from Cauto River, have the pronotum testaceous rather than piceous; three of these are teneral and generally pale overall. The other two specimens have the pronotum dark rufous laterally.

NATURAL HISTORY.—Specimens were collected in January, April, May, June through August, and October through December. Teneral specimens were collected in August and December. Darlington recorded habitats on some labels as follows: "Shady cover, bank Arimao River," "Gravel bar, Arimao River," and "mud, Arimao River." The species is, no doubt, riparian.

ETYMOLOGY.—The barbaric adjective name, *jamcubanus*, is a combination of "Jamaica" and "Cuba," referring to the dwelling place of members of this species.

DISTRIBUTION.—The range of this species is confined to the islands of Cuba and Jamaica.

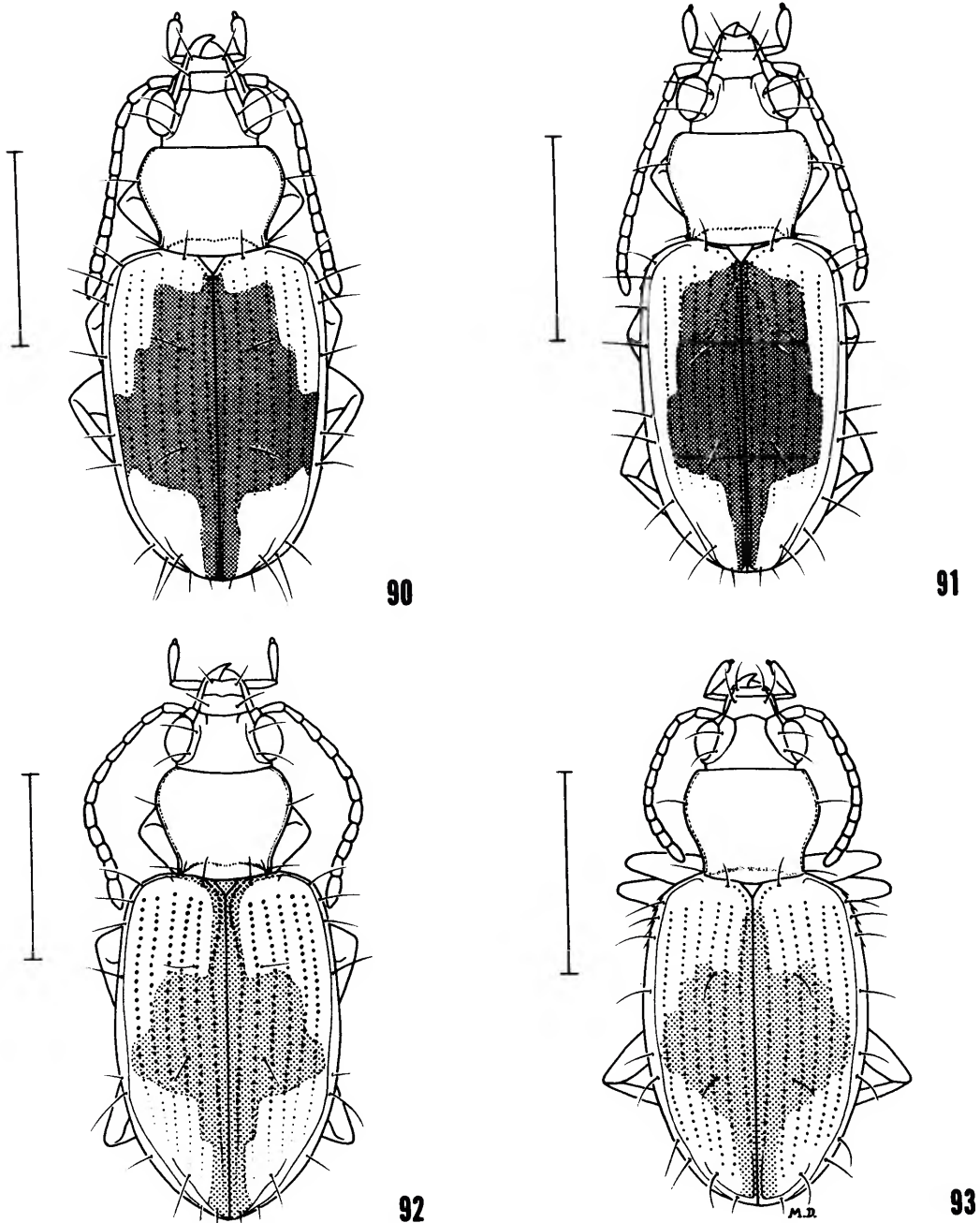
LOCALITY RECORDS (Figure 104).—I have seen 71 specimens from the following localities:

CARIBBEAN: CUBA: Cauto River at Cauto El Cristo (MCZ, USNM); Cayamas (USNM); Imias (MCZ); Maisi (MCZ); San Blas and vicinity of Trinidad Mountains (MCZ); Soledad-Cienfuegos (MCZ, USNM); 5.0 miles east of Soledad-Cienfuegos (MCZ); 10.0 miles east of Soledad-Cienfuegos (MCZ); Trinidad Mountains (MCZ). JAMAICA: (USNM); Rio Cobre 5.0 miles north of Spanish Town (MCZ, USNM).

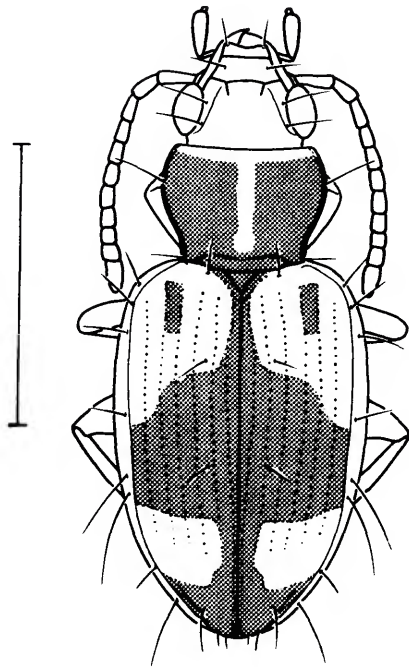
36. *Pericompsus elegantulus* (Laferte), new combination

FIGURES 90, 98, 104

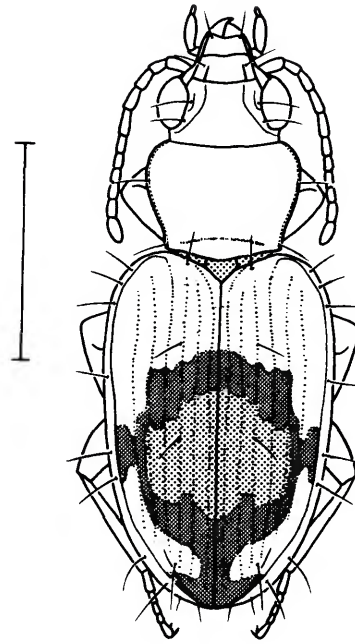
Tachys elegantulus Laferte, 1841:46. [Lectotype, here selected, a male, in MHNP. Type-locality: Not given previously,



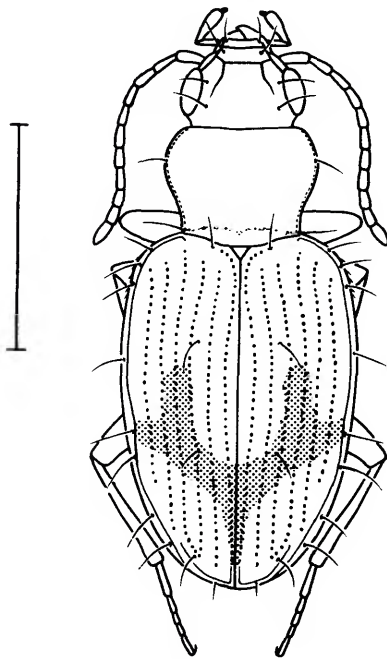
FIGURES 90-93.—Dorsal outline with setae of *Pericompsus* species: 90, *P. elegantulus* female, Rio Anasco, Puerto Rico; 91, *P. morantensis* female paratype, Morant Bay, Jamaica; 92, *P. philipi* male, Ennery, Haiti; 93, *P. prionomus* female holotype, Barro Colorado Island, Canal Zone.



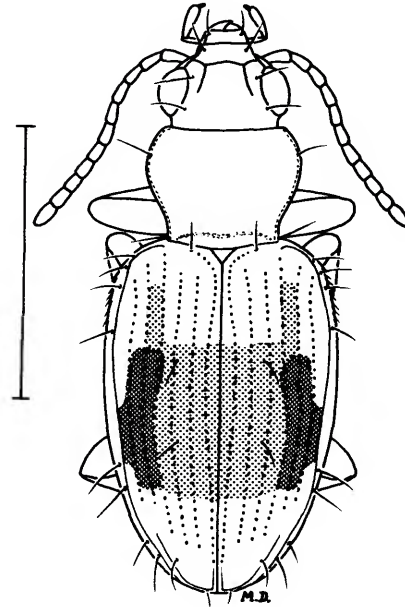
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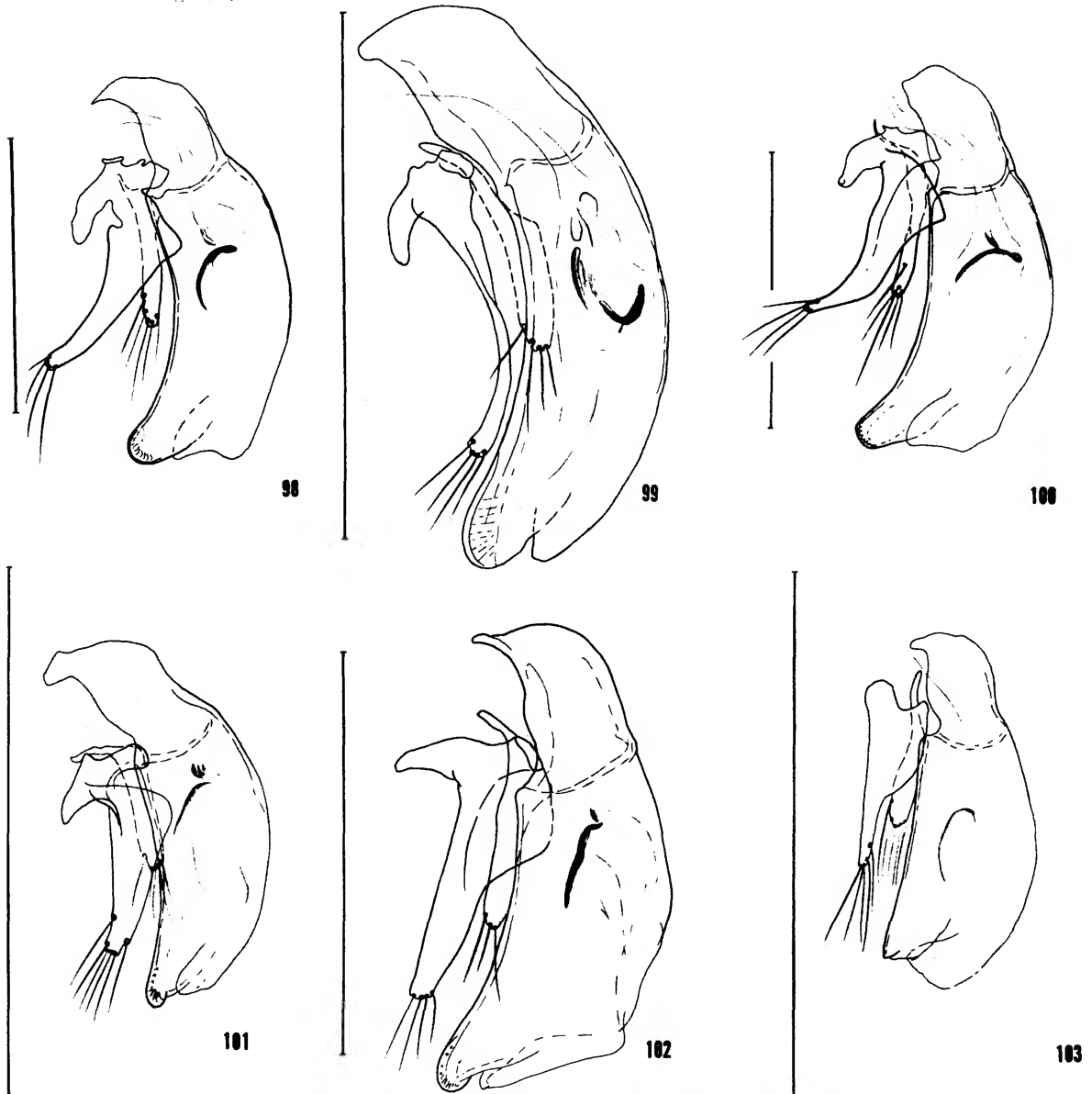
FIGURES 94-97.—Dorsal outline with setae of *Pericompsus* species: 94, *P. histrionellus* female, Rio Frio, Colombia; 95, *P. circuliiformis* female, Colliguay, Chile; 96, *P. andinus* female lectotype, Province Mendoza, Argentina; 97, *P. nonandinus* male holotype, Mato Grosso, Brazil.

herewith designated as Rio Anasco north of Mayaguez, Puerto Rico.]

Pericompsus blandulus Schaum, 1859:202. [Lectotype, here selected, a female, in HUB. New synonymy. Type-locality: Puerto Rico.]

DESCRIPTION.—*Form* (Figure 90): Similar to *P. pegasus*, but elytral punctation much finer and discal markings more expanded.

Color: Shiny testaceous, midventer piceous, elytral cloud piceous, appendages testaceous.



FIGURES 98-103.—Male genitalia, left lateral aspect: 98, *P. elegantulus*, Rio Anasco, Puerto Rico; 99, *P. morantensis*, Morant Bay, Jamaica; 100, *P. philipi*, 25.0 kilometers south of Puerto Plata, Dominican Republic; 101, *P. circuliiformis*, Concon, Chile; 102, *P. histrionellus*, Rio Frio, Colombia; 103, *P. andinus*, Province Mendoza, Argentina.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows moderately impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 90): Subcordate, sides moderately sinuate in basal half; base lobed at middle; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures small, separated longitudinally by about their own diameter; rows 2–6 effaced in apical third, row 1 entire though less impressed apically, interneur 7 effaced externally throughout; interneur 8 well impressed and foveate just anterior to middle; fovea large, slightly wider than elytral explanation; humeral margin rounded at base, not connected to base of interneur 4; side margins moderately explanate, moderately serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Nearly effaced from dorsal surface of forebody, more impressed on elytra, and consisting of transversely stretched reticulations.

Genitalia: Male (Figure 98) (1 examined); female not dissected.

Size: Length, 2.08–2.86 mm; width, 0.92–1.16 mm; 7 specimens measured.

VARIATION.—The small samples available are quite homogeneous.

NATURAL HISTORY.—Specimens were collected in April, August, and October; none were teneral.

LOCALITY RECORDS (Figure 104): I have seen eight specimens from the following localities:

CARIBBEAN: PUERTO RICO: (MHNP); Ciales (USNM); Coamo Springs (USNM); Rio Anasco north of Mayagüez (USNM).

NOTE.—Since the status of Laferte's varietal name, *Tachys elegantulus*, is confused in past literature, I add this note of explanation. *Tachys elegantulus* was originally an MS name of Klug; the type bears the label "elegantulus Klug, in litt." Laferte (1841) published a paper describing 10 new species of Carabidae (and a new buprestid species) from Texas. In his description of *Tachys pulchellus* (from Texas) on page 46, he mentions other species, using Klug's MS names, and partially describes these species. Klug never published the names; therefore, Laferte's descriptions, using Klug's names, are valid and must be considered as first

published.

The fact that the names were included in descriptions of Texas species led subsequent authors to think this was the type-locality (Laferte did not give one for *T. elegantulus* but did for *T. concinnus*, see his page 47). LeConte (1848), Hayward (1900), and Casey (1918) all regarded Laferte's name *T. elegantulus* as synonymous with *Tachys* (= *Pericompsus*) *ephippiatus* Say, as that was the only similar form known to occur in Texas (evidently none of them saw the type). Laferte, in fact, regarded *T. elegantulus* as a variety of *T. ephippiatus* on his page 47. However, Laferte's specimen agrees perfectly with specimens from Puerto Rico and I regard this as its place of origin, and therefore its name as a senior synonym of *Pericompsus blandulus* Schaum (of which the type agrees perfectly).

37. *Pericompsus morantensis*, new species

FIGURES 91, 99, 104

TYPE-LOCALITY.—Morant Bay, Jamaica.

TYPE-SPECIMENS.—The holotype male and allotype are in USNM. Both were collected by E. A. Chapin and R. E. Blackwelder in 1937. Eight paratypes are listed below.

DESCRIPTION.—*Form* (Figure 91): Similar to *P. longulus* without the broad pronotum of that species. Easily distinguished from members of other Antillian species by the elytral cloud, which does not reach the lateral margin medially.

Color: Venter, elytral cloud, and dorsum of forebody rufopiceous, head slightly paler than pronotum; appendages and elytral margins testaceous.

Head: Narrower across eyes than width of pronotum; frontal furrows well impressed and evenly arcuate to posterior margin of eye; eyes moderately large and prominent.

Pronotum (Figure 91): Moderately broadly subcordate, sides sinuate in basal half; base strongly lobed at middle; hind angles slightly acute, slightly prominent; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and separated longitudinally by about their own diameter; rows 2–6 effaced in apical third, row 2 slightly longer than 3–6, row 1 entire, though less impressed, and

interneur 1 striate in apical third, interneur 7 effaced externally throughout, interneur 8 well impressed throughout and foveate just anterior to middle; fovea moderately large, larger in diameter than width of elytral explanation; humeral margin rounded at base to level of interneur 4, not connected to base of 4; side margins moderately explanate, minutely setulose in basal fourth, not serrate; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Very lightly impressed, nearly isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 99) (1 examined); female not dissected.

Size: Length, 2.32–2.88 mm; width, 0.88–1.00 mm; 10 specimens measured.

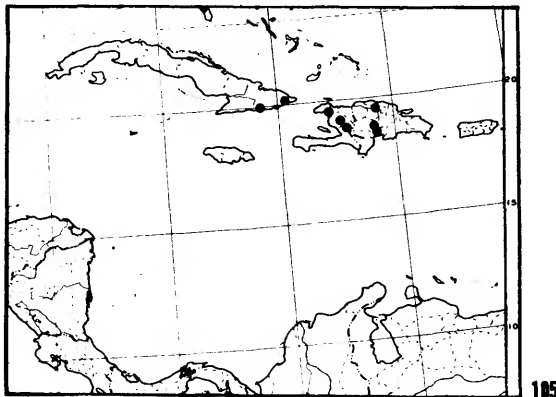
VARIATION.—The small samples available are quite homogeneous.

NATURAL HISTORY.—Specimens were collected in February and September; none were teneral. Darlington recorded one specimen from "Swamps."

ETYMOLOGY.—The adjective name, *morantensis*, refers to the type-locality of this species, Morant Bay, Jamaica.



104



105

FIGURES 104–105.—Distribution maps: 104, *P. jamcubanus* (circles), *P. elegantulus* (stars), *P. morantensis* (squares); 105, *P. philipi* (circles), *P. prionomus* (star).

LOCALITY RECORDS (Figure 104).—I have seen 10 specimens from the following localities:

CARIBBEAN: DOMINICAN REPUBLIC: Damian (MCZ). HAITI: Swamps north of Dessaline (MCZ). JAMAICA: Gutters (USNM); Morant Bay (MCZ, USNM).

38. *Pericompsus philipi*, new species

FIGURES 92, 100, 105

TYPE-LOCALITY.—Ennery, Haiti, Hispaniola.

TYPE-SPECIMENS.—The holotype male and allotype are in MCZ. Both were collected by P. J. Darlington, Jr., in 1934. Thirty-eight paratypes are listed below.

DESCRIPTION.—*Form* (Figure 92): Narrower than *P. elegantulus*, with a small and less pigmented elytral cloud. Easily distinguished from members of other Antillian species by the elytral pattern.

Color: Shiny testaceous, midventer and elytral cloud piceous, appendages pale testaceous.

Head: Across eyes about subequal to width of pronotum; frontal furrows moderately impressed and evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 92): Narrowly subcordate, sides shallowly sinuate in basal half; base moderately lobed at middle; hind angles slightly acute; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large, separated longitudinally by about their own diameter; rows 2–6 effaced in apical third, row 1 entire and striate in apical third, interneur 7 effaced externally throughout; interneur 8 well impressed throughout and foveate just anterior to middle; fovea small, less in diameter than width of elytral explanation; humeral margin rounded at base to level of interneur 4, not connected to 4; side margins narrowly explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 100) (2 examined); female characteristic of *ephippiatus* group (3 examined).

Size: Length, 2.28–2.76 mm; width, 0.92–1.12 mm; 10 specimens measured.

VARIATION.—Two of the three specimens seen from Cuba have the sides of the pronotum slightly

infuscated. In all other respects they agree with typical Hispaniola specimens.

NATURAL HISTORY.—Specimens were collected in June through October; one July specimen was teneral.

ETYMOLOGY.—The genitive patronym, *philipi*, honors my friend and mentor who collected the types of this species, Philip J. Darlington, Jr.

DISTRIBUTION.—The range of this species is confined to the island of Hispaniola and the easternmost portion of Cuba. Since the number of specimens found in Cuba is small, the establishment of the species on the island is doubtful. The specimens may represent annual wind drift.

LOCALITY RECORDS (Figure 105).—I have seen 37 specimens from the following localities:

CARIBBEAN: CUBA: Oriente Province, Imias (MCZ), Honogolosongo (MCZ). DOMINICAN REPUBLIC: Constanza (MCZ); 25.5 kilometers south of Puerto Plata (MCZ, USNM); Rio Yaque de Sur, about 25 miles from mouth (MCZ). HAITI: Camp Perrin (MCZ); Damien (MCZ, USNM); Ennery (MCZ, USNM); Plaine de l'Artibonite (MCZ, USNM).

39. *Pericompsus prionomus*, new species

FIGURES 93, 105

TYPE-LOCALITY.—Barro Colorado Island, Canal Zone, Panama.

TYPE-SPECIMEN.—The unique holotype female is in MCZ. It was collected by M. Bates in 1935.

DESCRIPTION.—*Form* (Figure 93): Similar to *P. pegasus*, but easily distinguished from members of that species by the nearly contiguous punctures of the elytral interneurs.

Color: Shiny testaceous, middle of venter rufous, elytral cloud piceous.

Head: Across eyes subequal to width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 93): Narrowly subcordate, sides sinuate and constricted in basal half; base broadly lobed; hind angles slightly obtuse, sharp, side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures small, separated longitudinally by their own diameter or less; rows 2–6 effaced at apical sixth, row 1 shallower apically, interneur 7 effaced externally throughout; interneur 8 well impressed, and foveate just anterior to middle; fovea large,

subequal in diameter to width of elytral explanation; humeral margin moderately rounded at base, not connected with base of interneur 4; side margins moderately explanate, moderately coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

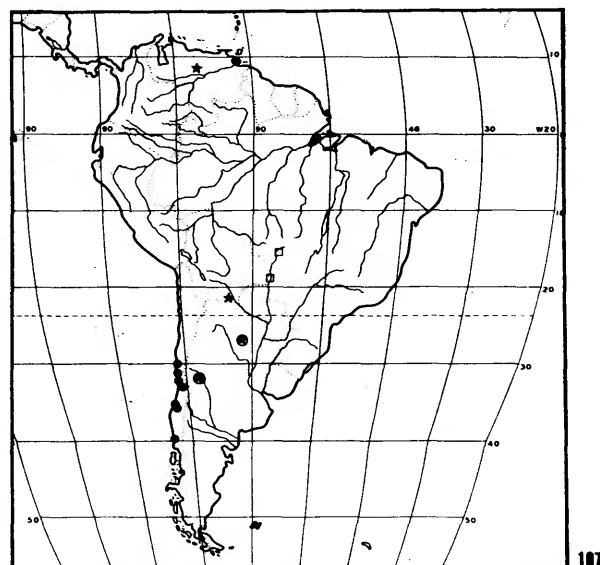
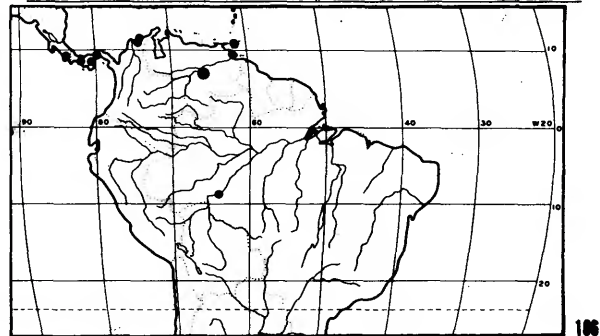
Microsculpture: Mostly effaced except on scutellum and in frontal furrows.

Genitalia: Male unknown; female not dissected.

Size: Length, 2.72 mm; width, 1.16 mm; the type measured.

NATURAL HISTORY.—The single specimen was collected in January; it was not teneral.

ETYMOLOGY.—Greek noun, *prion*, meaning "saw" (serrate) and, *omos*, meaning "shoulder," referring



FIGURES 106–107—Distribution maps: 106, *P. histrionellus*; 107, *P. circuliiformis* (circles), *P. nonandinus* (squares), *P. amygdalis* (stars), *P. andinus* (circled stars).

to the coarsely serrate humeral margin of the elytron.

LOCALITY RECORDS (Figure 105).—I have seen only the type from Barro Colorado Island, Canal Zone, Panama.

40. *Pericompsus histrionellus* Bates

FIGURES 94, 102, 106

Pericompsus histrionellus Bates, 1884:290. [Lectotype, here selected, a male, in BMNH. Seven paralectotypes labeled by me, 5 in BMNH, 2 in MHNP. Type-locality: Los Remedios, Panama.]

DESCRIPTION.—*Form* (Figure 94): Shorter and more robust than *P. ephippiatus* and with a smaller, more convex pronotum; most similar to *P. jamaicanus* except elytra more strongly microsculptured and discal cloud smaller.

Color: Various (see below); appendages pale testaceous.

Head: Across eyes subequal to width of pronotum; frontal furrows well impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 94): Subcordate, sides moderately sinuate in basal half; base broadly lobed; hind angles acute, almost right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures separated longitudinally by their own diameter or less, not quite contiguous; rows 1 and 2 entire to apex; rows 3 to 6 effaced at apical third; interneur 7 effaced externally throughout, interneur 8 well impressed, and foveate at middle; fovea large, twice as wide as elytral explanation; humeral margin sharply rounded (almost angulate) at base, not connected with base of interneur 4; side margins moderately explanate, minutely serrate-setulose in basal fourth; humeral fovea 4 large, about half the size of midfovea, humeral foveae 1 to 3 smaller; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Well-impressed, slightly transverse reticulation; more nearly isodiametric on frons.

Genitalia: Male (Figure 102) (2 examined); female characteristic of species group (1 examined).

Size: Length, 1.88–2.56 mm; width, 0.80–1.04 mm; 10 specimens measured.

VARIATION.—In a very large sample from the Rio Frio in Colombia, the following color variation occurs: pronotum pale, infuscated at sides, or totally infuscated; elytron with isolated piceous spot at base of interval 5, or all of interval 5 piceous. The color intensity and size of the discal cloud of the elytra also varies. All combinations of the above variations occur in this sample. Body proportions and size are quite constant.

NATURAL HISTORY.—Most specimens were collected along rivers; thus, this species is apparently riparian. R. T. Allen collected one individual at light in Costa Rica. Since the beetles are fully winged, presumably they are good flyers. Specimens were collected in February, April, May, and August. A few of those collected in February were teneral.

DISTRIBUTION.—The range of this species extends from Costa Rica south to the western portions of the Amazon Basin. Most specimens have been collected proximal to the Caribbean.

LOCALITY RECORDS (Figure 106).—I have seen 66 specimens from the following localities:

CARIBBEAN: TRINIDAD ISLANDS: Saint George County, Saint Augustine (MCZ).

CENTRAL AMERICA: COSTA RICA: Palmar Sur (RTA1). PANAMA: Canal Zone (USNM); Los Remedios (BMNH, MHNP, USNM); San Pablo (USNM); Puerto Armuelles (MCZ).

SOUTH AMERICA: BRAZIL: Rondonia Territory, Rio Madeira at Porto Velho (USNM). COLOMBIA: Magdalena Department, Aracataca (MCZ), Rio Frio (MCZ, USNM). VENEZUELA: (HUB).

41. *Pericompsus circuliiformis* (Solier)

FIGURES 95, 101, 107

Bembidium circuliiforme Solier, 1849:165. [Lectotype, here selected, a male, in MHNP. Type-locality: Valdivia, Chile.] *Pericompsus circuliiforme* (Solier).—Bates 1871:247.

DESCRIPTION.—*Form* (Figure 95): More robust than *P. ephippiatus*, especially the broader elytra, which are also less narrowed apically. The rufous elytral cloud outlined in piceous plus the shallowly impressed dorsal microsculpture are diagnostic.

Color: Shiny testaceous, middle of venter and prosternal process darkly infuscated, elytral cloud rufous, outlined in piceous, appendages pale except antennal articles 4 to 10, which are slightly infuscated.

Head: Narrower across eyes than width of pronotum; frontal furrows moderately to strongly impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 95): Subcordate, sides moderately sinuate in basal half; base broadly lobed; hind angles acute, nearly right angles, prominent; side margins not reflexed, disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures contiguous and more or less striate; all rows entire, though less impressed apically; interneur 7 effaced externally throughout, interneur 8 well impressed, and foveate just anterior to middle; fovea moderately large, subequal in diameter to width of elytral explanation; humeral margin strongly rounded at base, not quite connected with base of interneur 4; side margins moderately explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Shallowly impressed, nearly isodiametric reticulation over entire dorsal surface, deeply impressed on frons.

Genitalia: Male (Figure 101) (1 examined); female not dissected.

Size: Length, 2.36–2.76 mm; width, 1.00–1.12 mm; 6 specimens measured.

VARIATION.—The few specimens available for study show slight variation in the intensity of piceous pigmentation around the rufous elytral cloud.

NATURAL HISTORY.—Ross and Michelbacher collected two specimens under beached kelp at Concon, Chile, during December. December is the only month I have seen recorded for this species.

DISTRIBUTION.—The range of this species is confined to coastal regions in mid-Chile between 30° S and 40° S latitude.

LOCALITY RECORDS (Figure 107).—I have seen seven specimens from the following localities:

SOUTH AMERICA: CHILE: (MCZ, USNM); Nuble Province, Colliguay (MCZ), 40.0 kilometers east of San Carlos (CAS); Valparaiso Province, Concon (CAS, USNM).

Note: Solier (1849) recorded these beetles from Valdivia Province at Valdivia, Coquimbo Province at Coquimbo and Illapel, and in Santiago Province at Santiago.

42. *Pericompsus andinus* (Jensen-Haarup), new combination

FIGURES 96, 103, 107

Tachys andinus Jensen-Haarup, 1910:554. [Lectotype, here selected, a female, in ZMC. Four paralectotypes labeled by me in ZMC. Type-locality: Mendoza Province, Argentina.]

DESCRIPTION.—*Form* (Figure 96): Similar to *P. circuliformis*, but distinguished from members of that species by the color pattern of the elytral disc and the more posterior position of the middle fovea of interneur 8.

Color: Pale testaceous throughout except for pale rufous elytral cloud and its infuscated posterior border, and the pale rufous midventer.

Head: Narrower across eyes than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 96): Subcordate, sides shallowly sinuate in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures contiguous and more or less striate; rows 1 to 5 less impressed apically, row 6 effaced apically; interneur 7 effaced externally throughout; interneur 8 well impressed, and foveate at middle, fovea large, subequal in diameter to width of elytral explanation; humeral margin strongly rounded, almost angulate at base, not connected with base of interneur 4; side margins minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Well-impressed, nearly isodiametric reticulation over entire dorsal surface.

Genitalia: Male (Figure 103) (1 examined); female not dissected.

Size: Length, 2.52–2.56 mm; width, 1.08 mm; 2 specimens measured.

VARIATION.—I have seen too few good specimens to assess variation.

NATURAL HISTORY.—Unknown.

LOCALITY RECORDS (Figure 107).—I have seen 25 specimens from the following localities:

SOUTH AMERICA: ARGENTINA: Mendoza Province, (ZMC); Santiago del Estero Province (USNM).

43. *Pericompsus nonandinus*, new species

FIGURES 97, 107, 112

TYPE-LOCALITY.—Cuiaba, Mato Grosso, Brazil.

TYPE-SPECIMENS.—The holotype male is in MCZ. Two paratypes are listed below.

DESCRIPTION.—*Form* (Figure 97): Similar to *P. histrionellus*, but easily distinguished from members of that species by the more strongly cordate pronotum, the more deeply impressed dorsal microsculpture, and the smaller midfovea of interneur 8.

Color: Testaceous, midventer and elytral cloud rufous; elytral cloud laterally with small piceous spots.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 97): Strongly subcordate, sides sinuate and constricted in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures small and contiguous, more or less striate; rows 1–4 entire but very shallow apically, rows 5–6 effaced in apical sixth, interneur 7 effaced externally throughout; interneur 8 well impressed, and foveate at middle; fovea moderately large, subequal in diameter to width of elytral explanation; humeral margin strongly rounded, almost angulate, at base, feebly connected to base of interneur 4; side margins moderately explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Strongly impressed isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 112) (2 examined); female unknown.

Size: Length, 2.04–2.28 mm; width, 0.88–0.92 mm; 3 specimens measured.

VARIATION.—The small sample is quite homogeneous.

NATURAL HISTORY.—Unknown.

ETYMOLOGY.—Latin adjectives, *non*, meaning “not,” and, *andinus*, meaning “near the Andes Mountains,” refer both to the fact that these beetles are not *P. andinus*, a closely related species, and that they do not live near the Andes Mountains.

LOCALITY RECORDS (Figure 107).—I have seen three specimens from the following localities:

SOUTH AMERICA: BRAZIL: Mato Grosso State, Cuiaba (MCZ), Corumba (USNM).

44. *Pericompsus amygdali*, new species

FIGURES 107, 108

TYPE-LOCALITY.—Twelve kilometers south of Calabozo, Guarico Province, Venezuela.

TYPE-SPECIMENS.—The holotype female and a paratype are in USNM and were collected by P. J. and P. M. Spangler in 1969. Another paratype is listed below.

DESCRIPTION.—*Form* (Figure 108): Similar to *P. tlaloc*, but easily distinguished from members of that species by the smaller and contiguous punctures of the elytral interneurs and by the distinctly bicolored elytral cloud.

Color: Testaceous, midventer and elytral cloud rufous; elytral cloud bordered laterally and apico-medially with piceous spots.

Head: Across eyes much narrower than width of pronotum; frontal furrows strongly impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

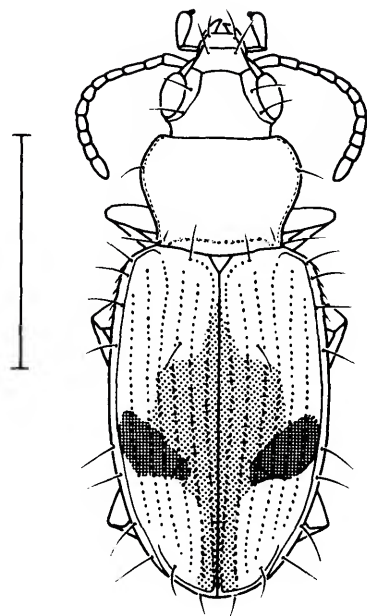
Pronotum (Figure 108): Broadly subcordate, sides moderately sinuate in basal half; base broadly lobed; hind angles about right; side margins narrowly reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures small and contiguous, more or less striate; rows 2–6 effaced in apical sixth, interneur 7 effaced externally throughout, interneur 8 well impressed, and foveate just anterior to middle, fovea large, slightly larger in diameter than width of elytral explanation; humeral margin strongly rounded, almost angulate, at base, and feebly connected to base of interneur 4; side margins moderately explanate, moderately serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

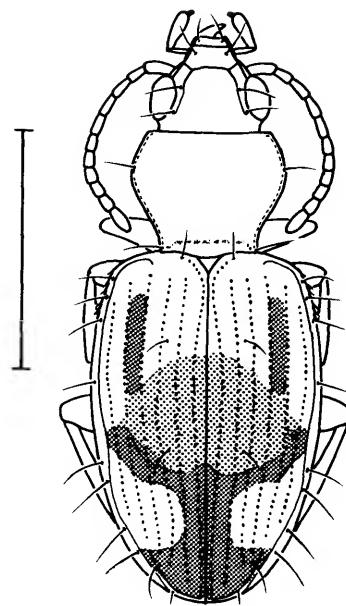
Microsculpture: Well-impressed, nearly granulate, isodiametric reticulation on entire dorsal surface.

Genitalia: Male unknown, female not dissected.

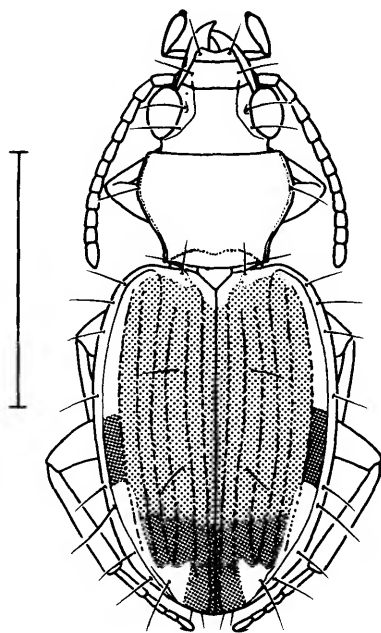
Size: Length, 2.48–2.68 mm; width, 1.00–1.08 mm; 3 specimens measured.



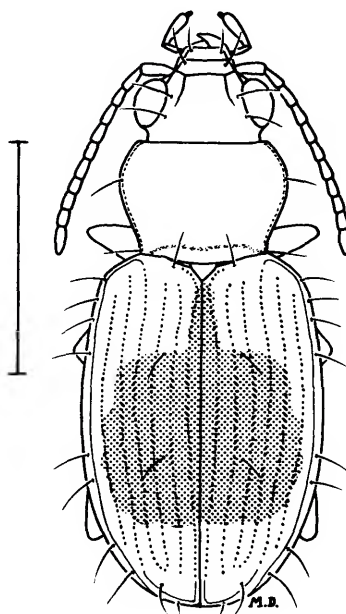
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111

FIGURES 108-111.—Dorsal outline with setae of *Pericompsus* species: 108, *P. amygdali* female paratype, Calobozo, Venezuela; 109, *P. callicalymma* female paratype, Corumba, Brazil; 110, *P. tetraphalarus* female holotype, El Cidral, Bolivia; 111, *P. subincisus* female holotype, Santa Isabel, Brazil.

VARIATION.—The specimen from Bolivia has much darker elytral pigment.

NATURAL HISTORY.—Specimens were collected in October and February; none were teneral. The Spanglers (per. comm.) indicated that those from Venezuela were collected at black-light trap. The flight wings are long and, presumably, the beetles fly.

ETYMOLOGY.—The Greek name, *amygdalos*, meaning "almond tree," refers to the classical myth wherein Phyllis, a Thracian princess, changes herself into an almond tree. The name of this species is in honor of one of the collectors of the types, Phyllis M. Spangler.

LOCALITY RECORDS (Figure 107).—I have seen three specimens from the following localities:

SOUTH AMERICA: BOLIVIA: Tarija Department, Palmer Grande near Yacuiba (USNM). **VENEZUELA:** Guarico Province, 12.0 kilometers south of Calabozo at Estacion Biologica de Los Llanos (USNM).

45. *Pericompsus callicalymma*, new species

FIGURES 109, 114, 118

TYPE-LOCALITY.—Buenos Aires, Argentina.

TYPE-SPECIMENS.—The holotype male and allotype are in MCZ. Both were collected by R. Thaxter in October 1905. Twelve paratypes are listed below.

DESCRIPTION.—*Form* (Figure 109): Similar to *P. tlaloc*, but easily distinguished from members of that species by the finer punctation of the interneurs and the piceous outline of the elytral cloud.

Color: Ferruginous, venter piceous except rufous apical abdominal segment; elytral cloud rufous outlined in piceous, appendages testaceous.

Head: Narrower across eyes than width of pronotum; frontal furrows deeply impressed, each evenly arcuate to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 109): Broadly subcordate, sides moderately sinuate in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures small and contiguous, more or less striate; rows 1-5 less impressed apically though entire, row 6 effaced at extreme apex; interneur 7 effaced externally throughout; interneur 8 well impressed, and foveate just anterior to middle; fovea small,

subequal to width of elytral explanation; humeral margin strongly rounded at base, not connected with base of interneur 4; side margins moderately explanate; minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica well developed externally.

Microsculpture: Deeply impressed, almost granulate, isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 114) (2 examined); female characteristic of species group (1 examined).

Size: Length, 2.48-2.92 mm; width, 1.00-1.20 mm; 8 specimens measured.

VARIATION.—Except size, I have noted very little variation in the small sample on hand.

NATURAL HISTORY.—All dated specimens were collected in October; none were teneral.

ETYMOLOGY.—Greek noun, *kalymma*, meaning "covering," and Greek adjective, *kalos*, meaning "beautiful," refer to the very pretty elytra.

LOCALITY RECORDS (Figure 118).—I have seen 14 specimens from the following localities:

SOUTH AMERICA: ARGENTINA: Buenos Aires Province, Buenos Aires (MCZ, USNM), Punta Lara (USNM), Rosas (USNM). **BRAZIL:** Mato Grosso State, Mato Grosso (MCZ).

46. *Pericompsus tetraphalarus*, new species

FIGURES 110, 118

TYPE-LOCALITY.—El Cidral, about 100 kilometers northeast of Santa Cruz, Bolivia.

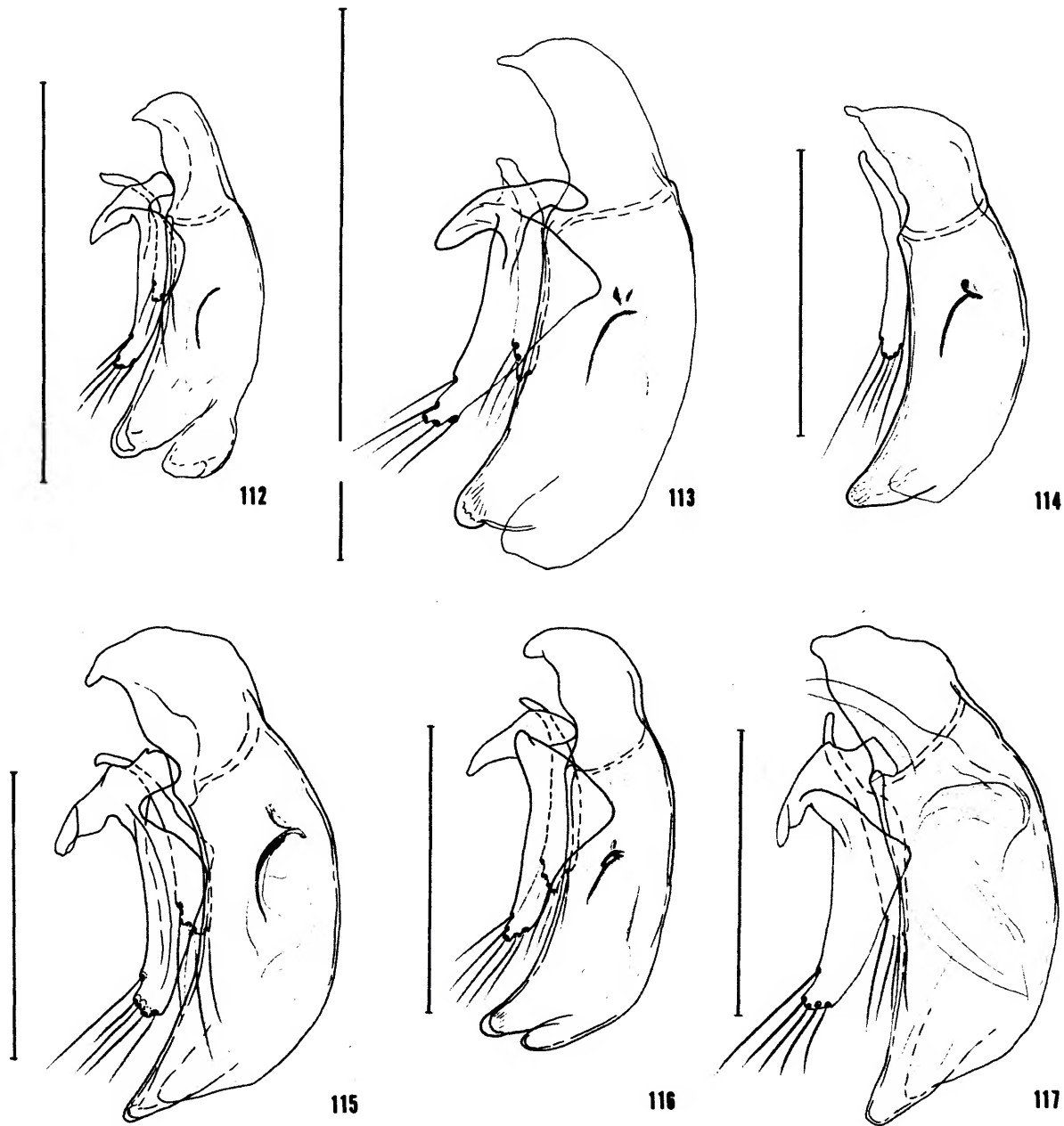
TYPE-SPECIMEN.—The unique holotype female is in MCZ. It was collected by R. Golbach in 1962.

DESCRIPTION.—*Form* (Figure 110): Similar to *P. histrionellus*, but easily distinguished from members of that species by the well-impressed microsculpture, white elytral spots, and the infuscated tibial base.

Color: Rufotestaceous, venter rufous at middle, elytral cloud rufous, outlined in part with piceous and in part with white, appendages testaceous except piceous base of tibiae.

Head: Across eyes subequal to width of pronotum; frontal furrows well impressed and evenly arcuate, each extended to posterior margin of eye; eyes very large and prominent.

Pronotum (Figure 110): Strongly subcordate, sides sinuate and strongly constricted in basal half;



FIGURES 112-117.—Male genitalia, left lateral aspect: 112, *P. nonandinus*, Cuiaba, Brazil; 113, *P. jucundus*, Venezuela; 114, *P. calicalymma*, Buenos Aires, Argentina (left paramere not shown); 115, *P. citellaris*, 47.0 kilometers south of Trujillo, Peru; 116, *P. acon*, Rio Beni, Bolivia; 117, *P. pegasus*, Rio Beni, Bolivia.



FIGURE 118.—Distribution map: *P. calicalymma* (circles), *P. tetraphalarus* (star), *P. subincisus* (squared circle), *P. eubotharus* (square), *P. jucundus* (circled star).

base broadly lobed; hind angles acute, prominent; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures contiguous and more or less striate; all rows entire, well impressed throughout, interneur 8 well impressed, and foveate just anterior to middle; fovea large, slightly wider than elytral explanation; humeral margin strongly rounded, almost angulate at base, feebly connected to base of interneur 4; side margins broadly explanate, minutely setulose (not serrate) in basal fourth; plica long and well developed externally.

Microsculpture: Strongly impressed isodiametric reticulation over entire dorsal surface.

Genitalia: Male unknown; female not dissected.

Size: Length, 2.36 mm; width, 1.00 mm, the type measured.

NATURAL HISTORY.—The single known specimen was collected in January; it was not teneral.

ETYMOLOGY.—Greek adjectives *tetra*, meaning “four,” and *phalaros*, meaning “white-spotted,” refer to the four white spots on the elytra.

LOCALITY RECORDS (Figure 118).—I have only seen the type from El Cidral, about 100 kilometers northeast of Santa Cruz, Bolivia.

47. *Pericompsus subincisus*, new species

FIGURES 111, 118

TYPE-LOCALITY.—Rio Araguaia, Santa Isabel, Mato Grosso, Brazil.

TYPE-SPECIMENS.—The holotype female is in CAS. It was collected by B. Malkin in 1957. One paratype is listed below.

DESCRIPTION.—*Form* (Figure 111): Similar to *P. clitellaris* except pronotum narrower at base. Easily distinguished from members of all species of the subgroup by the well-engraved punctate-striate interneurs.

Color: Rufotestaceous; midventer, elytral cloud, side margin of elytra, palpi, and antennal articles 5–11 piceous or darkly infuscated, legs testaceous.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows well impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 111): Broadly subcordate, sides shallowly sinuate in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures very small, contiguous, and striate; all rows entire, though less impressed apically, interneur 7 effaced externally throughout, interneur 8 well impressed and foveate at middle; fovea small, smaller in diameter than width of elytral explanation; humeral margin strongly rounded at base, almost angulate, connected to base of interneur 4; side margins narrowly explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Strongly impressed isodiametric reticulation on pronotum and frons, slightly more transversely stretched on elytra.

Genitalia: Male unknown; female not dissected.

Size: Length, 2.52–2.60 mm; width, 0.88–1.04 mm; 2 specimens measured.

VARIATION.—The paratype is a much smaller specimen with a narrower pronotum, but it agrees in all characteristics with the holotype.

NATURAL HISTORY.—Both specimens were collected in July; neither was teneral.

ETYMOLOGY.—The Latin adjective name, *subincisus*, refers to the similarity between the elytra of the members of this species and those of *P. incisus*.

LOCALITY RECORDS (Figure 118).—I have seen only the types from the following locality:

SOUTH AMERICA: BRAZIL: Mato Grosso State, Rio Araguaia, Santa Isabel (CAS) and the paratype from Goias State, Rio Araguaia, Ilha do Bananal, which is across the river from the type-locality.

48. *Pericompsus eubothrus*, new species

FIGURES 118, 120

TYPE-LOCALITY.—Rio Araguaia, Santa Isabel, Mato Grosso, Brazil.

TYPE-SPECIMEN.—The unique holotype female is in CAS. It was collected by B. Malkin in 1957.

DESCRIPTION.—*Form* (Figure 120): Similar to *P. subincisis*, except pronotum more constricted behind. Easily distinguished from all members of the subgroup, except *P. subincisis*, by the well-engraved micropunctate, striate interneurs; distinguished from the similar *P. subincisis* by the very large midfovea of interneur 8.

Color: Rufotestaceous, elytral cloud slightly darker, appendages testaceous.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 120): Subcordate, sides strongly sinuate and constricted in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 well-impressed micropunctate, striate interneurs; punctures small and contiguous, all rows well impressed to apex, interneur 7 effaced externally throughout; interneur 8 well impressed and foveate at middle; fovea large, subequal in diameter to width of elytral explanation; humeral margin strongly rounded, almost angulate, at base, feebly connected to base of interneur 4; side margins broadly explanate, moderately serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Well-impressed, nearly isodiametric reticulation on entire dorsal surface.

Genitalia: Male unknown; female not dissected.

Size: Length, 2.32 mm; width, 0.96 mm; the type measured.

NATURAL HISTORY.—The type was collected in August and it was not teneral.

ETYMOLOGY.—Greek adjective, *eu*, meaning "good," and Greek noun, *bothros*, meaning "pit," refer to the large fovea of interneur 8.

LOCALITY RECORDS (Figure 118).—I have seen only the type from Rio Araguaia, Santa Isabel, Mato Grosso, Brazil.

49. *Pericompsus jucundus* Schaum

FIGURES 113, 118, 121

Pericompsus jucundus Schaum, 1859:202. [Lectotype, here selected, a female, in HUB. Type-locality: Venezuela.]

DESCRIPTION.—*Form* (Figure 121): Similar to *P. circuliformis*, but distinguished from members of that species and *P. andinus* by the larger more separated punctures of the elytral interneurs and by the very small midfovea of interneur 8.

Color: Pale testaceous throughout except for the poorly defined pale rufous elytral cloud.

Head: Subequal across eyes to width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 121): Subcordate, sides shallowly sinuate in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and separated longitudinally by about their own diameter, at least in basal half, closer together in apical half; all rows less impressed apically; interneur 7 effaced externally throughout; interneur 8 well impressed, and foveate at middle; fovea moderately small, slightly narrower in diameter than elytral explanation; humeral margin strongly rounded at base, not connected with base of interneur 4; side margins moderately explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Shallowly impressed (almost effaced), nearly isodiametric reticulation on entire dorsal surface, deeper on frons.

Genitalia: Male (Figure 113) (1 examined); female characteristic of species group (1 examined).

Size: Length, 2.52 mm; width, 1.04 mm; 1 specimen measured.

VARIATION.—I have seen too few specimens to assess variation.

NATURAL HISTORY.—Unknown.

LOCALITY RECORDS (Figure 118).—I have seen three specimens, all labeled "Venezuela" (HUB).

50. *Pericompsus alcimus*, new species

FIGURES 119, 122, 125

TYPE-LOCALITY.—El Cidral, about 100 kilometers northeast of Santa Cruz, Bolivia.

TYPE-SPECIMENS.—The holotype male and allotype are in MCZ. Both were collected by R. Golbach in January 1962. Thirty-six paratypes from various localities are listed below.

DESCRIPTION.—*Form* (Figure 122): Similar to *P. pegasus*, but easily distinguished from that species by the contiguous punctures of the elytral interneurs, by the larger discal cloud, and by the more deeply impressed elytral microsculpture.

Color: Rufotestaceous; venter piceous, except paler abdominal segments IV–VI; elytral cloud rufous, with or without lateral piceous spots on intervals 6 and 7; appendages testaceous.

Head: Narrower across eyes than pronotum; frontal furrows well impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 122): Subcordate, sides strongly



FIGURE 119.—Distribution map of *P. alcimus*.

sinuate in basal half; base broadly lobed; hind angles acute, prominent; side margins very narrowly reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate-striate interneurs; punctures large and coarse anteriorly, smaller posteriorly, contiguous and more or less striate; rows 2–6 effaced in apical sixth, row 1 entire but finer at apex; interneur 7 effaced externally throughout; interneur 8 well impressed, and foveate just anterior to middle; fovea large, subequal in diameter to width of elytral explanation; humeral margin strongly rounded, almost angulate, at base, almost connected to base of interneur 4; side margins moderately explanate, moderately strongly serrate-setulose in basal fourth; chaetotaxy as in *P. ehippiatus*; plica long and well developed externally.

Microsculpture: Moderately impressed, nearly isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 125) (3 examined); female characteristic of species group (3 examined).

Size: Length, 2.60–3.00 mm; width, 1.08–1.28 mm; 10 specimens measured.

VARIATION.—The samples available are quite homogeneous with the exception of the elytral cloud. Laterally, in intervals 6 and 7, in some specimens there is a piceous spot contrasting with the rufous cloud, while in other specimens of the same population these spots are absent.

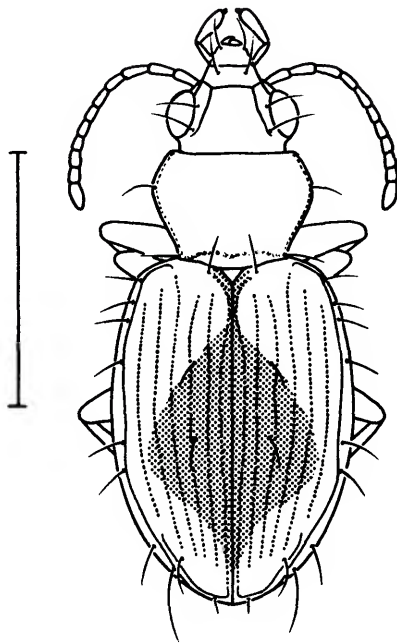
NATURAL HISTORY.—One specimen was collected at a "trap-light." The flight wings are long; thus, the beetles probably fly. Specimens were collected in January and August; the August specimen from Peru was teneral.

ETYMOLOGY.—Greek adjective, *alkimos*, meaning "stout," refers to the robust form of members of this species.

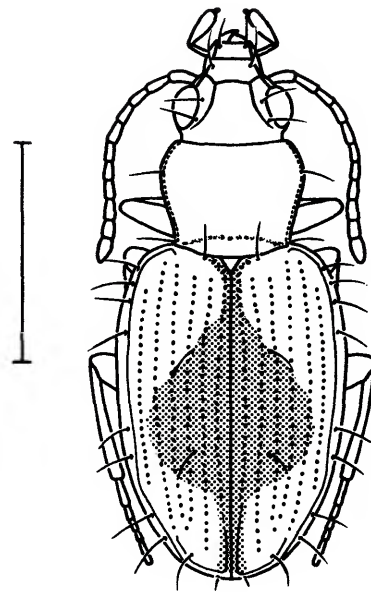
DISTRIBUTION.—The range of this species is correlated with the range of steppe and savannah on the eastern flank of the Andes adjacent to 20° S latitude.

LOCALITY RECORDS (Figure 119).—I have seen 14 specimens from the following localities:

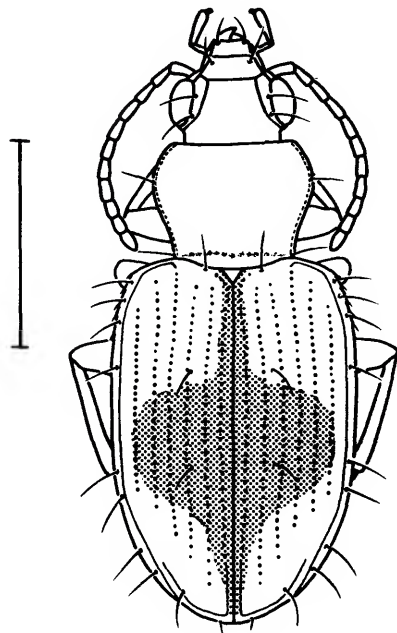
SOUTH AMERICA: ARGENTINA: Formosa Province, El Desmonte (USNM); Salta Province, Desmonte River (USNM), Salta (USNM); Santiago del Estero Province, Anatuya (USNM). BOLIVIA: Santa Cruz Department, El Cidral about 100 kilometers northeast of Santa Cruz (MCZ, UASM, USNM), 60.0 miles north of Santa Cruz at Saavedra Experiment Station (USNM). PARAGUAY: Boqueron Department, Ballivian (USNM). PERU: Madre de Dios Department, Avispas (MCZ).



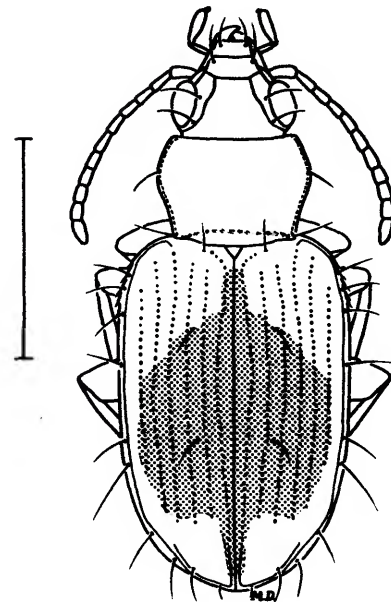
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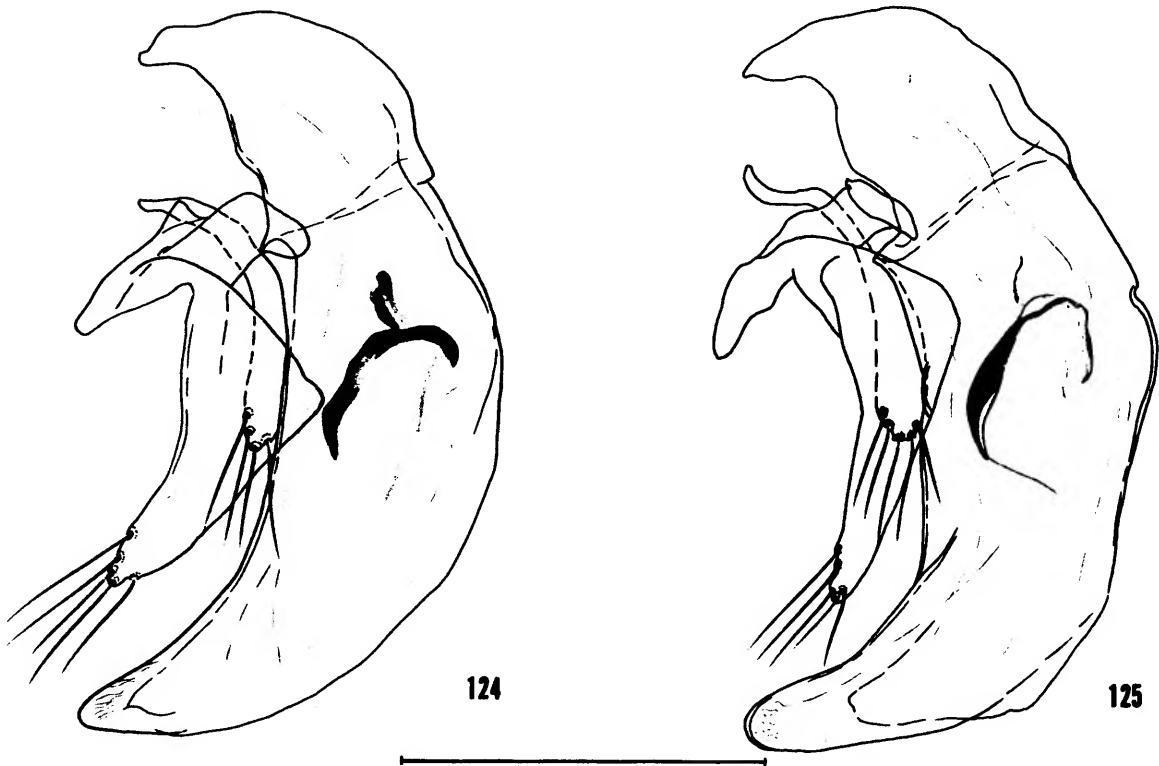


122



123

FIGURES 120-123.—Dorsal outline with setae of *Pericompsus* species: 120, *P. cubothus* female holotype, Santa Isabel, Brazil; 121, *P. jucundus* female, Venezuela; 122, *P. alcimus* male paratype, Anatuya, Argentina; 123, *P. clitellaris* male, 47.0 kilometers south of Trujillo, Peru.



FIGURES 124-125.—Male genitalia, left lateral aspect: 124, *P. alcimus*, El Desmonte, Argentina; 125, *P. alcimus*, El Cidral, Bolivia. (Note variation of apex.)

51. *Pericompsus clitellaris* (Erichson)

FIGURES 115, 123, 130

Bembidium clitellare Erichson, 1847:73. [Lectotype, here designated, a female, in HUB. Type-locality: Peru as originally given by Erichson, but herewith restricted to 47.0 kilometers south of Trujillo, Peru.]

Pericompsus clitellare (Erichson).—Schaum, 1860:202.

DESCRIPTION.—*Form* (Figure 123): Similar to *P. callicalymma*, but easily recognized by the very broad base of the pronotum and the more separated punctures of the elytral interneurs.

Color: Dorsal forebody testaceous or rufopiceous, venter piceous, elytra testaceous with piceous elytral cloud, appendages testaceous.

Head: Narrower across eyes than width of pronotum; frontal furrows well impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 123): Subcordate-transverse, sides shallowly sinuate in basal half; base narrowly

lobed; hind angles acute, prominent; side margins narrowly reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and separated longitudinally by about their own diameter; rows 2-6 effaced externally throughout; interneur 8 well impressed, and foveate just anterior to middle; fovea small, less in diameter than width of elytral explanation; humeral margin angulate at base, not quite connected to base of interneur 4; side margins moderately serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*, plica long and well developed externally.

Microsculpture: Moderately shallowly impressed, nearly isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 115) (2 examined); female characteristic of species group (2 examined).

Size: Length, 2.84-2.96 mm; width, 1.12-1.24 mm; 8 specimens measured.

VARIATION.—The sample available is very homo-

geneous, except for the color of forebody, which varies from testaceous to rufopiceous.

NATURAL HISTORY.—The samples available were collected in January and March; one specimen was teneral in both samples.

LOCALITY RECORDS (Figure 130).—I have seen 12 specimens from the following localities:

SOUTH AMERICA: ECUADOR: El Oro Province, 9.0 miles south of Santa Rosa at El Oro (CAS). PERU: (HUB); La Libertad Department, 47.0 kilometers south of Trujillo (CAS, USNM).

52. *Pericompsus pegasus*, new species

FIGURES 117, 126, 130

TYPE-LOCALITY.—Rio Beni, Huachi, Bolivia.

TYPE-SPECIMENS.—The holotype male and allotype are in USNM. Both were collected by W. M. Mann on the Mulford Biological Expedition of 1921–1922. Eight paratypes are listed below.

DESCRIPTION.—*Form* (Figure 126): Robust with very narrow forebody. Easily distinguished from members of all other *Pericompsus* by the form and large coarse elytral punctation.

Color: Shiny testaceous, midventer rufous, elytral cloud piceous, appendages testaceous.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows moderately impressed and evenly arcuate to posterior margin of eye; eyes medium sized and prominent.

Pronotum (Figure 126): Subcordate, sides sinuate in basal half; base slightly lobed at middle; hind angles acute, slightly prominent; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate interneurs; punctures large and coarse, separated longitudinally by less than their own diameter; rows 2–6 effaced in apical third, row 1 entire though less impressed apically, interneur 7 effaced throughout; interneur 8 deeply impressed and foveate just anterior to middle; fovea small, only slightly larger in diameter than posterior fovea of humeral series; humeral margin strongly rounded at base, not connected to base of interneur 4; side margins moderately explanate, coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male (Figure 117) (2 examined);

female characteristic of *ephippiatus* group (1 examined).

Size: Length, 2.96–3.12 mm; width, 1.24–1.32 mm; 10 specimens measured.

VARIATION.—The small samples available are quite homogeneous.

NATURAL HISTORY.—Specimens were collected in August and September; none were teneral, although some were not yet fully colored.

ETYMOLOGY.—Green noun, *pegasos*, the “winged horse” of the Muses, refers to the large size and the saddle-like elytral pattern on this winged species of beetles.

LOCALITY RECORDS (Figure 130).—I have seen nine specimens from the following localities:

SOUTH AMERICA: BOLIVIA: La Paz Department, Rio Beni at San Miguel de Huachi (MCZ, USNM); Department Unknown, Rio Colorado (USNM), “Sta. Helena” (USNM).

53. *Pericompsus micropegasus*, new species

FIGURES 127, 130

TYPE-LOCALITY.—Cosincho Region, Beni Province, Bolivia.

TYPE-SPECIMENS.—The holotype female is in USNM. It and the one paratype were collected by G. L. Harrington (no date).

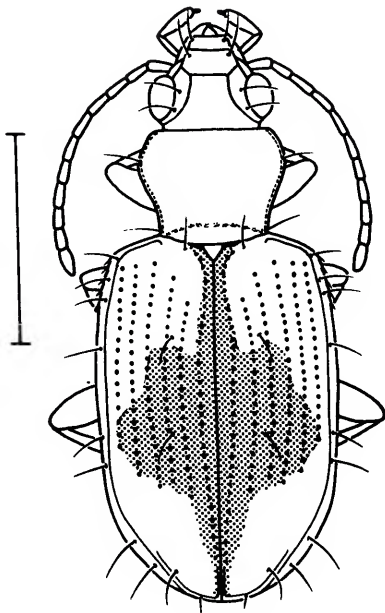
DESCRIPTION.—*Form* (Figure 127): Similar to *P. pegasus*, but easily distinguished from members of that species by the smooth elytral margin, the flatter eyes, and broader elytral cloud.

Color: Rufotestaceous, midventer and elytral cloud rufous, appendages testaceous.

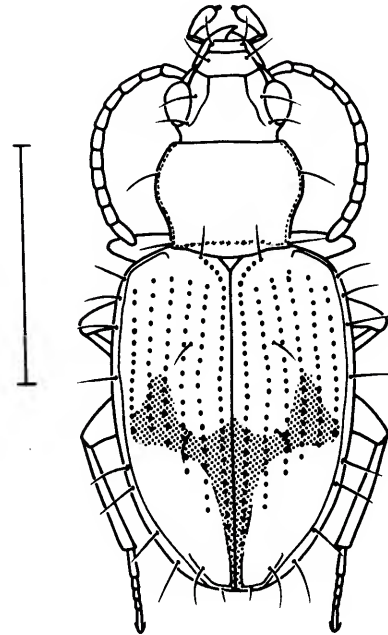
Head: Across eyes slightly narrower than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 127): Subcordate, sides sinuate and moderately constricted in basal half; base broadly lobed; hind angles about right; side margins narrowly reflexed in basal half; disc moderately convex.

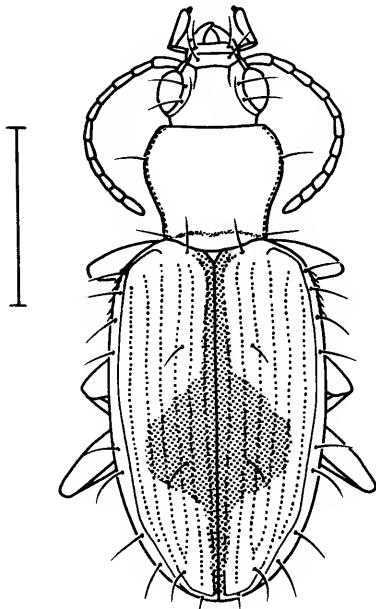
Elytra: Each elytron with 6 punctate interneurs; punctures large and coarse, separated longitudinally by at least their own diameter; rows 2–6 effaced in apical third, row 1 entire and well impressed throughout, interneur 7 effaced externally throughout, interneur 8 well impressed and foveate at middle; fovea large, slightly wider than width of elytral



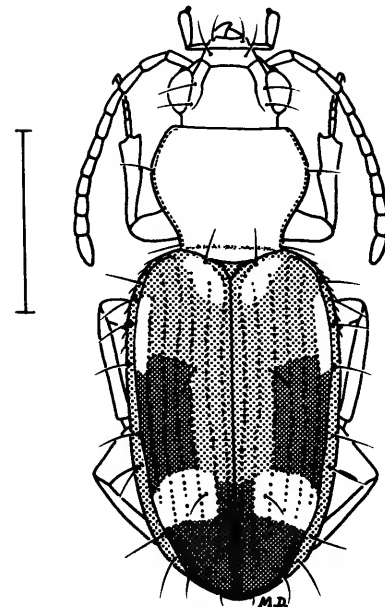
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128



129

FIGURES 126-129.—Dorsal outline with setae of *Pericompsus* species: 126, *P. pegasus* male holotype, Rio Beni, Bolivia; 127, *P. micropegasus* male paratype, Rio Beni, Bolivia; 128, *P. acon* female paratype, Rio Beni, Bolivia; 129, *P. anassa* female paratype, Tucuman, Argentina.

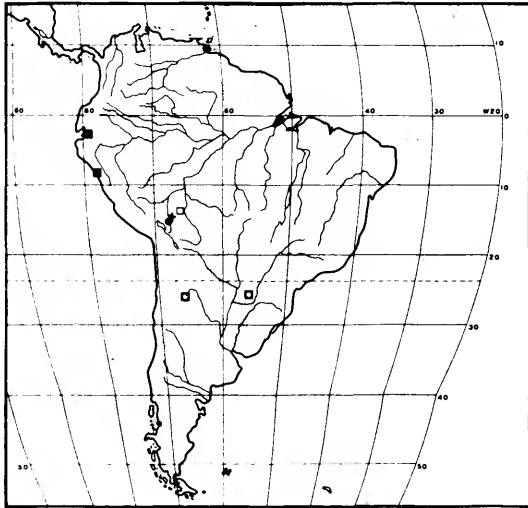


FIGURE 130.—Distribution map: *P. clitellaris* (squared solid circle), *P. pegasus* (circle), *P. micropegasus* (square), *P. acon* (star), *P. anassa* (squared open circle).

explanation; humeral margin strongly rounded at base, not connected to base of interneur 4; side margins moderately explanate, apparently not setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface.

Genitalia: Male unknown; female not dissected.

Size: Length, 2.40 mm; width, 1.00 mm; 2 specimens measured.

NATURAL HISTORY.—Unknown.

ETYMOLOGY.—Greek nouns, *mikros*, meaning “small,” and *pegasos*, meaning “the winged horse” of the Muses, refer to the smaller, but similar, form of these beetles to members of *P. pegasus*.

LOCALITY RECORDS (Figure 130).—I have seen only the types from Cosincho Region, Beni Province, Bolivia.

54. *Pericompsus acon*, new species

FIGURES 116, 128, 130

TYPE-LOCALITY.—Rio Beni, San Miguel de Huachi, Bolivia.

TYPE-SPECIMENS.—The holotype male and allotype are in USNM. Both were collected on the Mulford Biological Expedition of 1921–1922. Six paratypes are listed below.

DESCRIPTION.—*Form* (Figure 128): Similar to *P. ephippiatus*, but easily distinguished from members of that species by the well-developed dorsal microsculpture and the contiguous punctures of the elytral interneurs.

Color: Testaceous, venter rufous at middle, elytral cloud and sutural intervals piceous, appendages testaceous.

Head: Across eyes subequal to width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 128): Barely subcordate, sides shallowly sinuate in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc moderately convex.

Elytra: Each elytron with 6 punctate-striate interneurs, punctures contiguous and striate; rows 1–6 entire, though less impressed apically, interneur 7 effaced externally throughout interneur 8 well impressed, and foveate well anterior to middle; fovea moderately large, subequal to width of elytral explanation; humeral margin about evenly rounded at base, not connected to base of interneur 4; side margins narrowly reflexed, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Moderately strongly impressed, nearly isodiametric reticulation over entire dorsal surface.

Genitalia: Male (Figure 116) (1 examined); female characteristic of species group (2 examined).

Size: Length, 2.68–3.04 mm; width, 1.04–1.24 mm; 8 specimens measured.

VARIATION.—The small sample available is very homogeneous.

NATURAL HISTORY.—All specimens seen were collected in September; two of these were subterminal.

ETYMOLOGY.—Greek masculine noun, *akon*, meaning “javelin” or “dart,” refers to the elongate and narrow form of members of this species.

LOCALITY RECORDS (Figure 130).—I have seen only the type-series from Rio Beni, San Miguel de Huachi, Bolivia (CAS, MCZ, UASM, USNM).

55. *Pericompsus anassa*, new species

FIGURES 129, 130

TYPE-LOCALITY.—Villarrica, Paraguay.

TYPE-SPECIMENS.—The holotype female is in

MCZ. It was collected by F. Schade in 1940. Two female paratypes are listed below.

DESCRIPTION.—*Form* (Figure 129): Large and robust, the most spectacular species of the genus. The tricolored elytra and greatly enlarged prothorax make members of this species easily recognized from all others.

Color: Rufotestaceous, venter rufous at middle, elytral cloud rufous; each elytron with white scutellar, lateral-subhumeral, and subapicolateral spots and lateral and apical piceous spots; appendages pale testaceous except infuscated articles 5–11 of antennae.

Head: Much narrower across eyes than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 129): Strongly subcordate, sides sinuate and constricted in basal half; base broadly lobed; hind angles slightly obtuse; side margins not reflexed; disc strongly convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and coarse in basal half, shallower apically; rows 2–6 effaced at apical third, row 1 entire but much shallower apically, interneur 7 effaced externally throughout, interneur 8 well impressed, and foveate well before middle near apical third; fovea moderately large, subequal to width of elytral explanation; humeral margin abruptly angulate at base, not connected with base of interneur 4; side margins moderately coarsely serrate-setulose in basal third; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Shallowly impressed, nearly isodiametric reticulation over entire dorsal surface.

Genitalia: Male unknown, female characteristic of *ephippiatus* group (2 examined).

Size: Length, 3.28–3.64 mm; width, 1.28–1.36 mm; 3 specimens measured.

VARIATION.—The small sample is quite homogeneous.

NATURAL HISTORY.—Specimens were collected in January and March; none were teneral.

ETYMOLOGY.—Greek feminine noun, *anassa*, meaning “queen,” refers to the stately color and form of these spectacular beetles.

LOCALITY RECORDS (Figure 130).—I have seen three specimens from the following localities:

SOUTH AMERICA: ARGENTINA: Tucuman Province, San Miguel de Tucuman (JNeg). PARAGUAY: Guaira Department, Villarrica (MCZ).

The *sellatus* group

The members of the *sellatus* group are characterized by their unique habitus. The margins of the elytra and pronotum are broadly explanate and reflexed. The dorsal surface is dull and rough due to coarsely granulate isodiametric reticulation. The eyes are densely pubescent.

There is only one species presently representing this group. It is confined to western Arizona as far as is known. The “California” records are probably along the west bank of the Colorado River across from Yuma.

56. *Pericompsus sellatus* LeConte

FIGURES 131, 133, 134

Pericompsus sellatus LeConte, 1851:191. [Lectotype, here designated, a female, MCZ. type number 5587. Type-locality: Colorado River as originally given by LeConte, herewith restricted to Yuma, Arizona.]

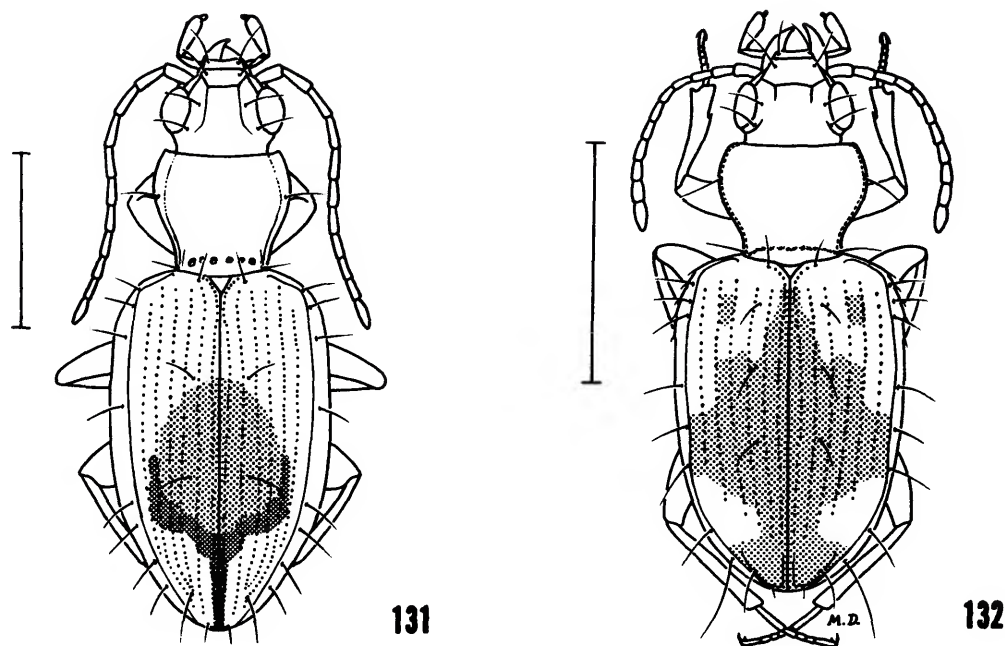
DESCRIPTION.—*Form* (Figure 131): Elongate and broad, with broadly explanate sides on the pronotum and elytra, and immediately distinguished from members of all other *Pericompsus* species on form.

Color: Testaceous, midventer and elytral cloud rufous, lateroapical margin of cloud piceous.

Head: Across eyes wider than width of pronotum; depressed; frontal furrows well impressed, prolonged linearly onto vertex; eyes large and prominent, densely pubescent.

Pronotum (Figure 131): Subcordate, sides sinuate and constricted in basal half; base broadly lobed; hind angles acute, prominent; side margins broadly reflexed, disc quite flat; anterior pair of setigerous pores set at medial edge of explanation.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and almost contiguous; rows 1–6 entire, interneur 7 effaced externally throughout; interneur 8 well impressed and foveate just anterior to middle; fovea small, smaller in diameter than width of elytral explanation; posterior fovea of humeral group large, as large as midfovea; humeral margin abruptly angulate at



FIGURES 131-132.—Dorsal outline with setae of *Pericompsus* species: 131, *P. sellatus* male, California; 132, *P. centroplagiatus* male, Villa Montes, Bolivia.

base, not connected to base of interneur 4; side margins broadly reflexed, minutely setulose-serrate in basal fourth; chaetotaxy as in *P. ehippiatus*; plica long and well developed externally.

Microsculpture: Strongly granulate, nearly isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 133) (2 examined); female as in *P. ehippiatus* (1 examined).

Size: Length, 3.16–3.72 mm; width, 1.16–1.48 mm; 10 specimens measured.

VARIATION.—Except for size and color intensity of the elytral cloud, the members of this species are quite homogeneous.

NATURAL HISTORY.—I have not seen any newly collected specimens of this species. None of the old labels indicate habitat. Specimens were collected in January, March, and August. The two teneral specimens seen were not date-labeled. Because of the granulate microsculpture common to other halophilus carabid beetles and general distribution, I suspect this species lives near saline water holes or on alkaline river banks in the deserts of the

southwest.

LOCALITY RECORDS (Figure 134).—I have seen 27 specimens from the following localities:

UNITED STATES: ARIZONA: Maricopa County, Phoenix (MCZ); Pima County, Tucson (USNM); Yuma County, Yuma (MCZ), Fort Yuma (MCZ); County unknown, East Bridge (USNM), Riverside (USNM). CALIFORNIA: (MCZ, USNM).

The *centroplagiatus* group

The members of the *centroplagiatus* group are characterized by their subpedunculate form and trisetose third interval of the elytron. As in the *punctipennis* group, *brasiliensis* group, and *jep-peseni* group, some members of the *centroplagiatus* group have become plurisetose along the elytral margin and anterolateral margins of pronotum.

There are presently five species representing the *centroplagiatus* group, with a combined range extending from about 26° S latitude in Brazil and Argentina to about 9° N latitude in Colombia.

57. *Pericompsus centroplagiatus* (Putzeys)

FIGURES 132, 139, 144

Bembidium centroplagiatum Putzeys, 1846:415. [Lectotype, here designated, a female, in MHNP. Type-locality: Cumana Venezuela.]

Pericompsus centroplagiatum (Putzeys).—Schaum 1860:202.

Pericompsus simplex Bates, 1871:246. [Lectotype, here designated, a male, in MHNP. New synonymy. Type-locality: St. Catharine, Brazil.]

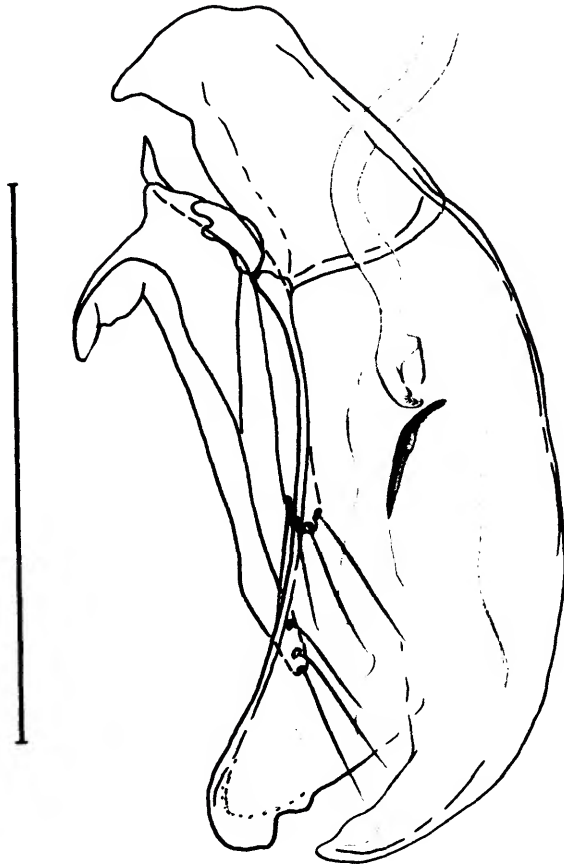


FIGURE 133.—Male genitalia, left lateral aspect, of *P. sellatus*, Fort Yuma, Arizona.

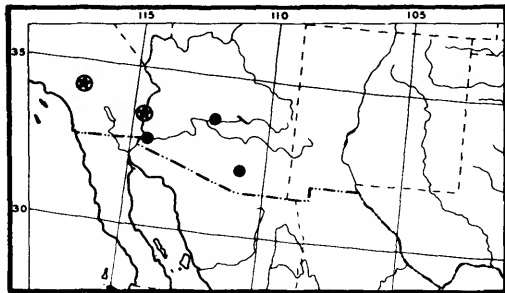


FIGURE 134.—Distribution map of *P. sellatus*.

DESCRIPTION.—*Form* (Figure 132): Short, robust, similar to many members of *ephippiatus* group. The constriction of the prothorax posteriorly gives the body a pedunculate appearance.

Color: Shiny testaceous; midventer, elytral cloud, and subhumeral spots rufous, cloud more rufopiceous laterally.

Head: Narrower across eyes than width of pronotum; frontal furrows well impressed and evenly arcuate, each extended to posterior margin of eye; eyes medium sized, slightly prominent.

Pronotum (Figure 132): Strongly subcordate, sides sinuate and strongly constricted in basal half; base broadly lobed; hind angles about right; side margins not reflexed; disc strongly convex.

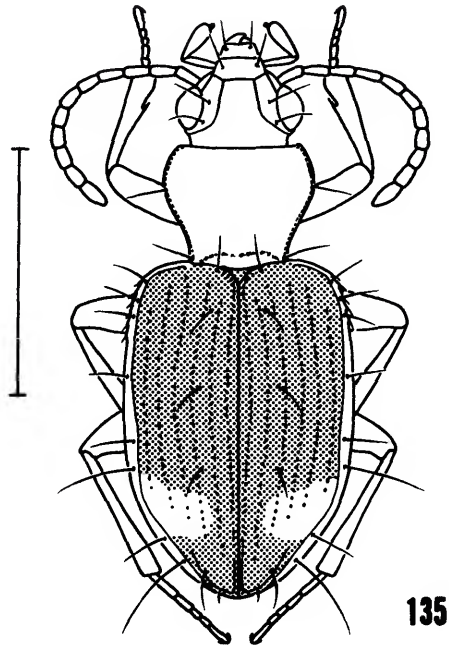
Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and coarse, separated longitudinally by at least their own diameter; rows 2–6 effaced at apical third, row 1 entire, interneur 7 effaced externally throughout, interneur 8 well impressed and foveate just posterior to middle; fovea very large, as wide in diameter as width of elytral explanation; humeral margin strongly rounded, almost angulate at base, not connected to base of interneur 4; side margins strongly explanate, moderately coarsely serrate-setulose in basal fourth; chaetotaxy Eo–1a, 2a, 3a, 4d, 5a, 6a, 7, 8b and Ed–1, 3a, 4, 5b, 7b, 8; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface except scutellum, which has shallowly impressed isodiametric reticulation.

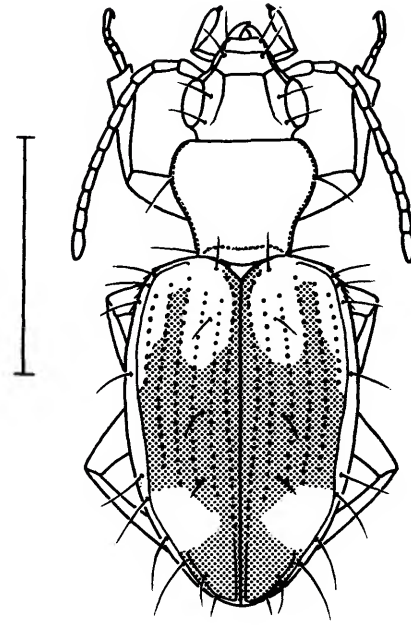
Genitalia: Male (Figure 139) (2 examined); female not dissected.

Size: Length, 2.32–2.56 mm; width, 1.00–1.12 mm; 6 specimens measured.

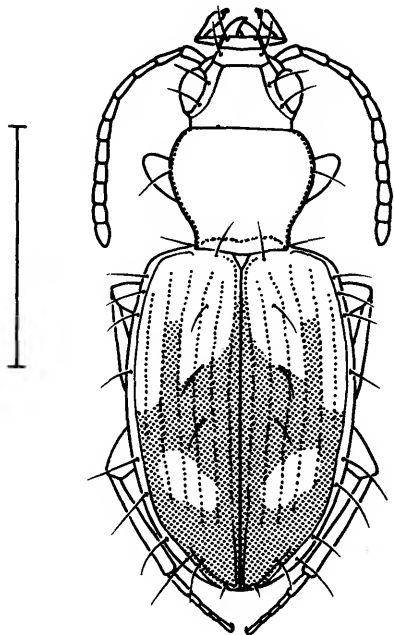
VARIATION.—The subhumeral spots are connected to the elytral cloud in two specimens, one from Argentina and one from Bolivia. The others in the small sample at hand have these spots isolated.



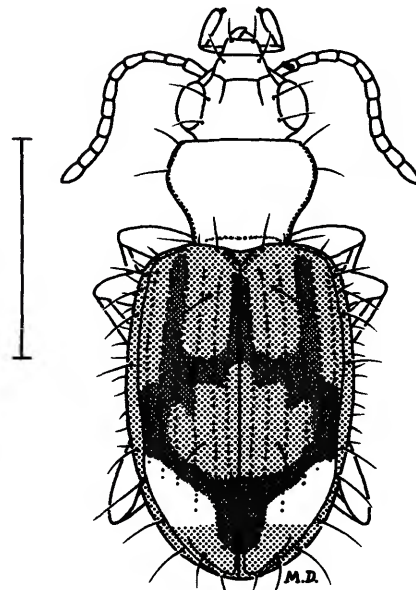
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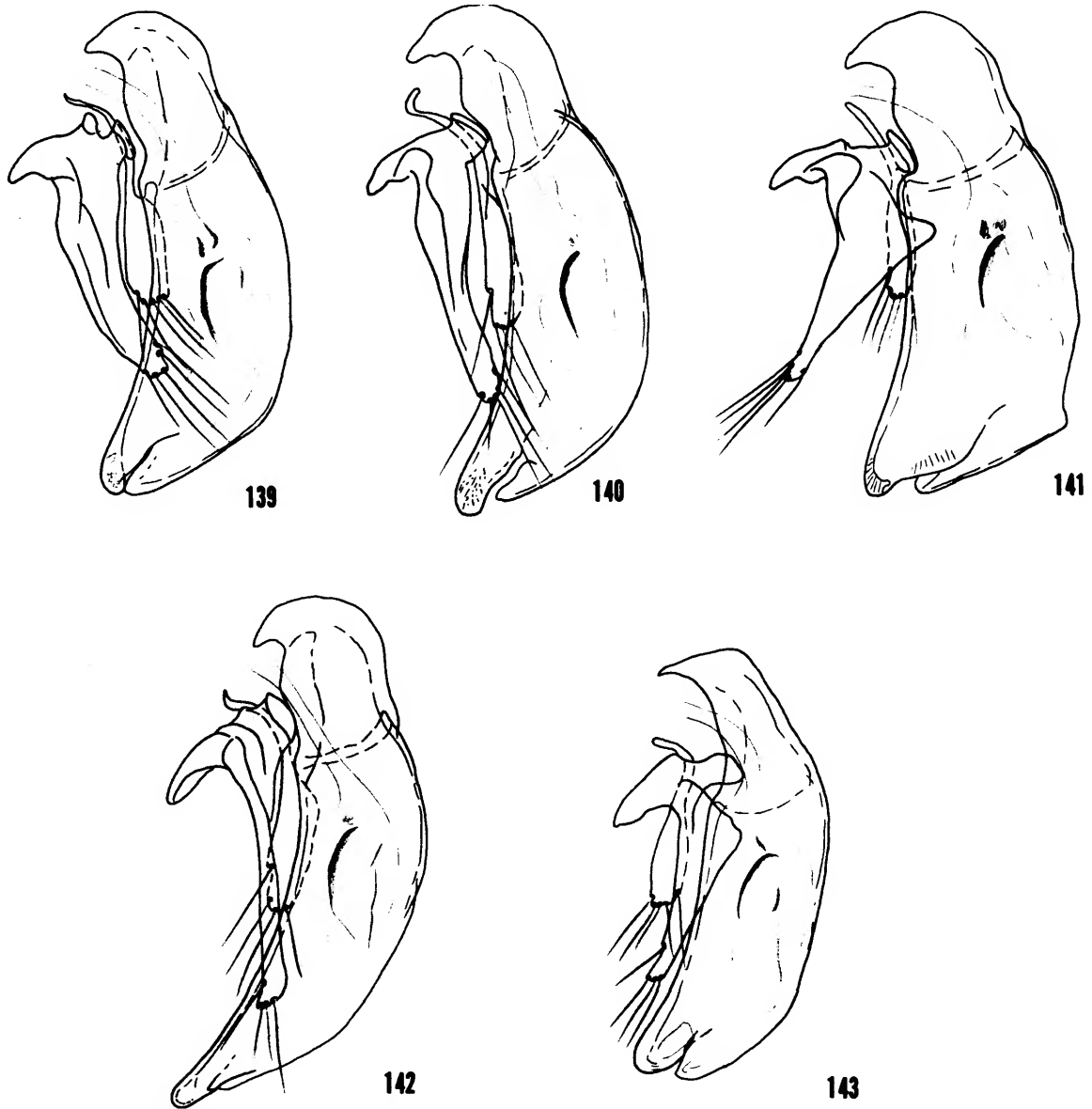
FIGURES 135-138.—Dorsal outline with setae of *Pericompsus* species: 134, *P. picticornis* male, Nova Teutonia, Brazil; 136, *P. diabalius* female paratype, San Alberto, Colombia; 137, *P. stenocitharus* female allotype, Mbovero, Paraguay; 138, *P. crossotus* female paratype, Rio Caraguata, Brazil.

Similar variation occurs between individuals of *P. histrionellus*.

NATURAL HISTORY.—Specimens were collected in January, February, April, June, and November; none were teneral.

LOCALITY RECORDS (Figure 144).—I have seen nine specimens from the following localities:

SOUTH AMERICA: ARGENTINA: Salta Province, Embarcacion (USNM), Tartagal (USNM). **BOLIVIA:** Santa Cruz Department, El Cidral, about 100 kilometers northeast of Santa



FIGURES 139-143.—Male genitalia, left lateral aspect: 139, *P. centroplagiatus*, Embarcacion, Argentina; 140, *P. picticornis*, Rio Janeiro, Brazil; 141, *P. diabalius*, Rio Frio, Colombia; 142, *P. stenocitharus*, Mbovero, Paraguay; 143, *P. crossotus*, Paraguay.

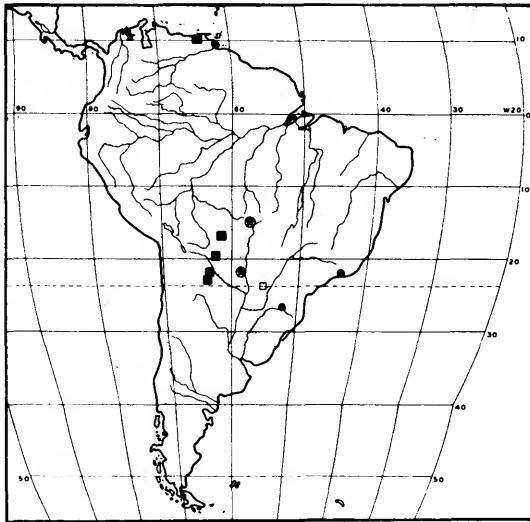


FIGURE 144.—Distribution map: *P. picticornis* (circles), *P. diabalius* (stars), *P. stenocitharus* (square), *P. centroplagiatus* (squared circle), *P. crossotus* (circled star).

Cruz (MCZ), Tiguipa (USNM); Department unknown, Villa Montes to Boyuibe (USNM). BRAZIL: State unknown, St. Catharine (MHNP). VENEZUELA: Sucre State, Cumana (MHNP).

58. *Pericompsus picticornis* Bates

FIGURES 134, 140, 144

Pericompsus picticornis Bates, 1871:245. [Lectotype, here selected, a male, in MHNP. Three paralectotypes also labeled by me in MHNP. Type-locality: Rio Janeiro, Brazil.]

DESCRIPTION.—*Form* (Figure 134): Similar to *P. centroplagiatus* except elytra more attenuated apically. Easily distinguished from members of that species by the tricolored antennae.

Color: Shiny rufotestaceous, midventer and elytral cloud rufous, antennal articles 4–6 infuscated, articles 7–11 pale testaceous.

Head: Across eyes subequal in width to pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes moderately large and prominent.

Pronotum (Figure 134): Strongly subcordate, sides sinuate and strongly constricted in basal half; base broadly lobed; hind angles about right; side margins not reflexed, disc moderately convex.

Elytra: Each elytron with 6 punctate-striate interneurons; punctures small and contiguous and more or less striate; rows 2–6 effaced in apical third, row

1 entire, though less impressed apically, interneur 7 effaced externally throughout, interneur 8 well impressed and foveate at middle; fovea large, subequal in diameter to width of elytral explanation; humeral margins abruptly angulate at base, not connected to base of interneur 4; side margins strongly explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. centroplagiatus*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface except scutellum, which has shallowly impressed isodiametric reticulation.

Genitalia: Male (Figure 140) (3 examined); female not dissected.

Size: Length, 2.16–2.52 mm; width, 0.96–1.04 mm; 10 specimens measured.

VARIATION.—The large series from Nova Teutonia displays considerable variation in elytral form, from rather robust to narrowly attenuated apically. The larger specimens are more robust, the smaller ones more attenuated, although every degree is present in the sample at hand.

NATURAL HISTORY.—Specimens were collected March, April, September, and November. One April specimen was teneral.

LOCALITY RECORDS (Figure 144).—I have seen 95 specimens from the following localities:

SOUTH AMERICA: BRAZIL: Rio de Janeiro State, Rio Janeiro (BMNH, MNHP, USNM); Santa Catarina State, Nova Teutonia (CAS, JNeg, MCZ, UASM, USNM).

59. *Pericompsus diabalius*, new species

FIGURES 136, 141, 144

TYPE-LOCALITY.—Rio Frio, Magdalena, Colombia.

TYPE-SPECIMENS.—The holotype male and allotype are in MCZ. They were collected by P. J. Darlington, Jr., in 1928. Five paratypes are listed below.

DESCRIPTION.—*Form* (Figure 136): Similar to the apically attenuated forms of *P. picticornis*, but easily distinguished from all species of the group by the lack of laterobasal setigerous pores on the pronotum and by the very large posterior elytral fovea of the humeral group.

Color: Shiny rufotestaceous, midventer and elytral cloud rufous as well as anterior portion of

elytral interval 5; antennal articles 7–11 white, rest of antennae and appendages testaceous.

Head: Across eyes subequal to width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes moderately large and prominent.

Pronotum (Figure 136): Strongly subcordate, sides sinuate and strongly constricted in basal half; base broadly lobed; hind angles about right; side margins not reflexed, bead almost effaced basally; disc strongly convex; laterobasal setigerous pore absent.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and coarse, separated longitudinally by twice their own diameter or more; rows 2–6 effaced at apical third, row 1 entire, though shallower apically, interneur 7 effaced externally throughout, interneur 8 well impressed and foveate at middle; fovea large, wider in diameter than width of elytral explanation, posterior fovea of humeral group nearly as large; humeral margin abruptly angulate at base, not connected to base of interneur 4; side margins strongly explanate, moderately serrate-setulose in basal fourth; chaetotaxy as in *P. centroplagiatus*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface except scutellum, which has isodiametric reticulation.

Genitalia: Male (Figure 141) (2 examined); female not dissected.

Size: Length, 2.28–2.56 mm; width, 1.00–1.12 mm; 7 specimens measured.

VARIATION.—The small sample available is quite homogeneous.

NATURAL HISTORY.—Specimens were collected in February, April, and November; none were teneral.

ETYMOLOGY.—Greek adjectives, *di*, meaning “two,” and *balios*, meaning “spotted,” referring to the two pale spots near the apex of the elytra.

LOCALITY RECORDS (Figure 144).—I have seen seven specimens from the following localities:

SOUTH AMERICA: COLOMBIA: Magdalena Department, Rio Frio (MCZ, USNM), Rio Cesar at San Albete Indupalva (JNeg).

60. *Pericompsus stenocitharus*, new species

FIGURES 137, 142, 144

TYPE-LOCALITY.—Arroyo Guazu, Mbovero, Paraguay.

TYPE-SPECIMENS.—The holotype male and allotype are in MCZ. Three paratypes are listed below.

DESCRIPTION.—*Form* (Figure 137): Similar to *P. centroplagiatus*, except pronotum more constricted basally. Easily distinguished from all members of the group by the small contiguous punctures of the elytral interneurs, and the strongly microsculptured elytra.

Color: Rufotestaceous, midventer and elytral cloud rufous; antennal articles 7–11 almost white, rest of antennae and appendages testaceous.

Head: Across eyes subequal to width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes moderately large and prominent.

Pronotum (Figure 137): Strongly subcordate, narrow, sides strongly sinuate and constricted in basal half; base broadly lobed; hind angles acute, prominent; side margins not reflexed; disc strongly convex.

Elytra: Each elytron with 6 punctate interneurs; punctures small and contiguous and more or less striate; rows 2–6 effaced in apical third, row 1 entire, though less impressed apically, interneur 7 effaced externally throughout; interneur 8 well impressed and foveate at middle; fovea large, subequal in width to width of elytral explanation; humeral margin strongly rounded at base, not connected to base of interneur 4; side margins strongly explanate, moderately coarsely serrate-setulose in basal fourth; chaetotaxy as in *P. centroplagiatus*; plica long and well developed externally.

Microsculpture: Moderately impressed, nearly isodiametric reticulation on elytra and anterior margin of pronotum; nearly effaced from frons and pronotal disc.

Genitalia: Male (Figure 142) (2 examined); female characteristic of group (1 examined).

Size: Length, 2.24–2.48 mm; width, 1.00–1.04 mm; 4 specimens measured.

VARIATION.—The small sample available is quite homogeneous.

NATURAL HISTORY.—Specimens were collected in May; one was teneral.

ETYMOLOGY.—Greek adjective, *stenos*, meaning “narrow,” and noun *kitharos*, meaning “thorax,” refer to the basally constricted prothorax.

LOCALITY RECORDS (Figure 144).—I have seen only the type-series from Arroyo Guazu, Mbovero, Paraguay (MCZ, USNM).

61. *Pericompsus crossotus*, new species

FIGURES 138, 143, 144

TYPE-LOCALITY.—Rio Caraguata, Mato Grosso, Brazil.

TYPE-SPECIMENS.—The holotype female is in MCZ. It was collected by F. Plaumann in 1953. Three paratypes are listed below.

DESCRIPTION.—*Form* (Figure 138): Similar to *P. centroplagiatus*, but easily distinguished from members of that species and all others of the group by the three lateral pairs of setigerous pores on the pronotum, as well as the fringe of long setae of the elytral margin.

Color: Shiny testaceous, midventer and elytral cloud rufous, cloud outlined in piceous; appendages pale testaceous.

Head: Across eyes slightly narrower than width of pronotum; frontal furrows well impressed and evenly arcuate, each extended to posterior margin of eye; eyes moderately large and prominent.

Pronotum (Figure 143): Strongly subcordate, sides sinuate and strongly constricted in basal half; base broadly lobed; hind angles acute, slightly prominent; side margins not reflexed; disc moderately convex; three lateral pairs of setigerous pores present.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and coarse, separated longitudinally by their own diameter or more; rows 2–6 effaced in apical fourth, row 1 entire, though less impressed apically, interneur 7 effaced externally throughout; interneur 8 well impressed and foveate at middle; fovea large, wider in diameter than width of elytral explanation; humeral margin strongly rounded at base, not connected to base of interneur 4; side margins strongly explanate, minutely serrate in basal fourth, strongly setose to apical third, setae longer than width of elytra; chaetotaxy as in *P. centroplagiatus*; plica long and well developed externally.

Microsculpture: Effaced from dorsal surface except scutellum, which has isodiametric reticulation.

Genitalia: Male (Figure 143). (1 examined); female not dissected.

Size: Length, 2.40–2.56 mm; width, 1.04–1.08 mm; 4 specimens measured.

VARIATION.—The small sample available is quite homogeneous.

NATURAL HISTORY.—Specimens were collected in March; none were teneral.

ETYMOLOGY.—Greek adjective, *krossotos*, meaning “fringe,” refers to the setose fringe on the elytral margin.

LOCALITY RECORDS (Figure 144).—I have seen four specimens from the following localities:

SOUTH AMERICA: BRAZIL: Mato Grosso State, Rio Caraguata (MCZ, USNM). PARAGUAY: (MCZ).

The *hirsutus* group

The members of the *hirsutus* group are characterized by the presence on the elytra of numerous long setae arranged in rows along the intervals. As in members of the preceding group, some members of the *hirsutus* group have acquired accessory setae along the elytral margin, pronotal margin, and in this group on the top of the head. Two species of this group have members with three supraorbital setae per eye, a rare condition in carabid beetles. Only one other group of tachyines is known to have three supraorbital setae and that is a special Neotropical group of *Polyderis*.

The *hirsutus* group is presently represented by three species with a combined range extending from about 23° S latitude in Brazil to about 3° S latitude, also in Brazil.

62. *Pericompsus hirsutus* Schaum

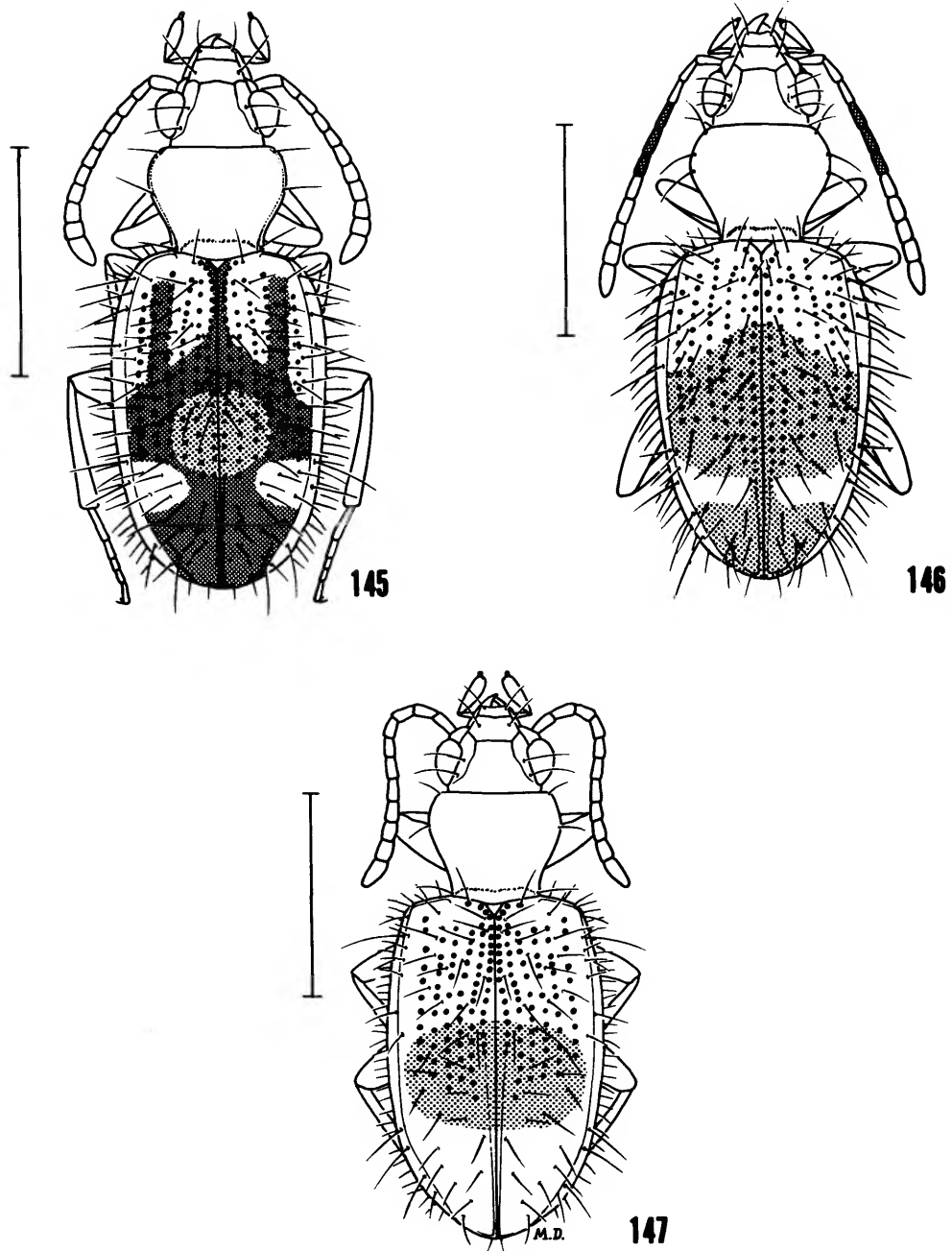
FIGURES 145, 148, 150

Pericompsus hirsutus Schaum, 1863:88. [Lectotype, here selected, a male, in HUB. Type-locality: “Rio Janeiro,” Brazil.]

DESCRIPTION.—*Form* (Figure 145): Short; forebody narrow, narrower than elytra, subpedunculate; elytra slightly inflated, with broad marginal explanations, highly convex.

Color: Rufotestaceous, shiny; midventer and elytral cloud rufous; tibial bases, margins of elytral cloud, and elytral apices infuscated; appendages testaceous, except almost white articles 7–11 of antennae.

Head: Across eyes slightly narrower than width of pronotum; two supraorbital setae per eye; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.



FIGURES 145-147.—Dorsal outline with setae of *Pericompsus* species: 145, *P. hirsutus* female, Fortaleza, Brazil; 146, *P. polychaetus* female holotype, Rio Beni, Bolivia; 147, *P. grossepunctatus* female, Rio Janeiro, Brazil.

Pronotum (Figure 145): Strongly subcordate, sides sinuate and strongly constricted in basal half; base broadly lobed; hind angles acute, prominent; side margins not reflexed, each with three setigerous pores; disc strongly convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and coarse and separated longitudinally by twice their own diameter or more; all rows effaced at apical third; intervals plurisetose; interneur 7 effaced externally throughout; interneur 8 well impressed and foveate at middle; fovea very large, twice as large in diameter as width of the elytral explanation; humeral margin strongly rounded at base, not connected to base of

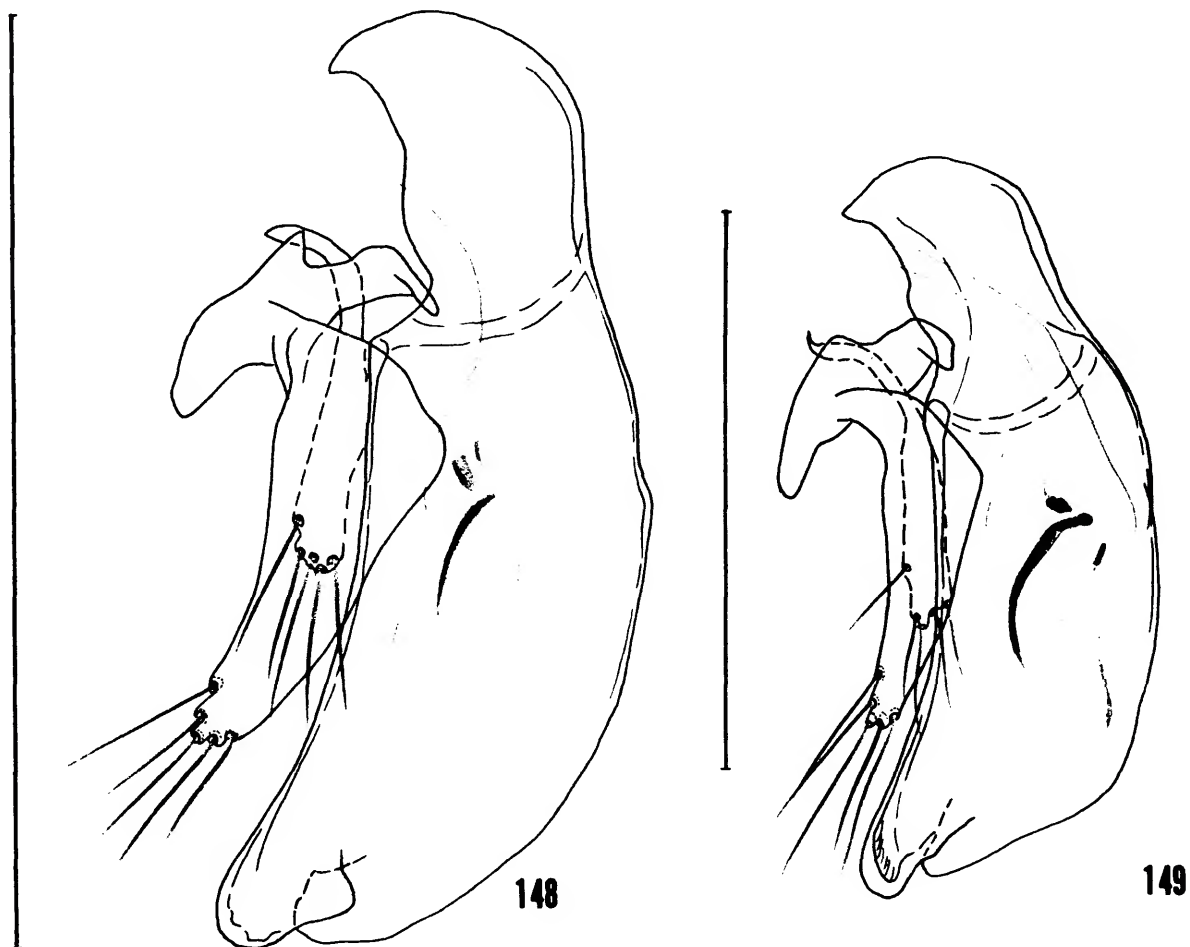
interneur 4; side margins setose from base to apex, setae twice or more as long as width of elytral explanation, side margin serrate in basal fourth; chaetotaxy Eo-1a, 2a, 3a, 4d, 5a, 6a, 7, 8b, and Ed-1, disc plurisetose, 7b, 8; plica short and well developed externally.

Microsculpture: Mostly effaced except at extreme elytral base, where it is isodiametric reticulation.

Genitalia: Male (Figure 148) (1 examined); female as in *ephippiatus* group (12 examined).

Size: Length, 2.12-2.68 mm; width, 0.92-1.08 mm; 10 specimens measured.

VARIATION.—The shape and colors of the elytral cloud are somewhat variable. In some specimens,



FIGURES 148-149.—Male genitalia, left lateral aspect: 148, *P. hirsutus*, Fortaleza, Brazil; 149, *P. grossepunctatus*, Rio Janeiro, Brazil.

the base of elytral interval 5 is piceous from the elytral cloud to nearly the base of the elytron. In others, this interval has an isolated spot near the humerus; yet in others the interval is testaceous anterior to the cloud. The same color patterns are found in *P. elegantulus* (see above). The variation described above occurs in one population sample.

NATURAL HISTORY.—Specimens were collected in March, April, and October; none were teneral. One specimen is labeled "at light"; the specimens are fully winged and, presumably, fly.

LOCALITY RECORDS (Figure 150).—I have seen 156 specimens from the following localities:

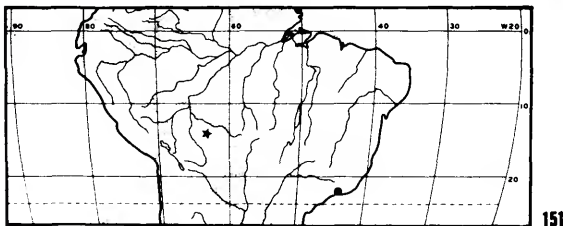
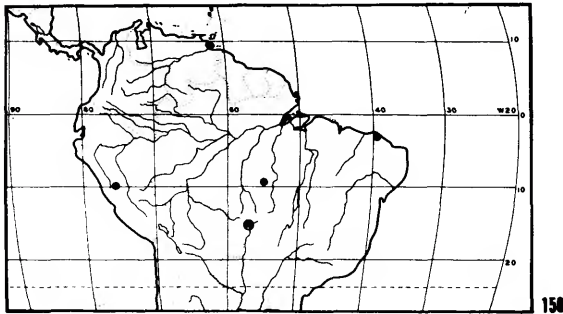
SOUTH AMERICA: BRAZIL: Ceara State, Fortaleza (CAS, BMNH, MCZ, MHNP, UASM, USNM); Mato Grosso State, "Jacare P. N. Xingu" (USNM), Rio Caraguata (MCZ, USNM); Rio de Janeiro State, Rio Janeiro (HUB). **PERU:** Loreto Department, Yurac, 67.0 miles east of Tingo Maria (CAS).

63. *Pericompsus polychaetus*, new species

FIGURES 146, 151

TYPE-LOCALITY.—Rio Beni, Huachi, Bolivia.

TYPE-SPECIMENS.—The unique holotype female is in USNM. It was collected by the Mulford Biological Expedition of 1921–1922.



FIGURES 150–151.—Distribution maps: 150, *P. hirsutus*; 151, *P. grossepunctatus* (circle), *P. polychaetus* (star).

DESCRIPTION.—**Form** (Figure 146): Similar to *P. hirsutus*, but easily distinguished from all members of the subgenus by the presence of five pairs of lateral setigerous pores on the pronotum.

Color: Shiny rufotestaceous, midventer and elytral cloud rufous, appendages except white antennal articles 7–11 testaceous.

Head: Across eyes subequal to width of pronotum; three supraorbital setae per eye; frontal furrows short, deep, almost foveate; eyes large and prominent.

Pronotum (Figure 146): Strongly subcordate, sides sinuate and strongly constricted in basal half; base broadly lobed; hind angles about right; side margins not reflexed, bead almost effaced, each side with five setigerous pores; disc strongly convex.

Elytra: Each elytron with 6 punctate interneurs; punctures very large and coarse, separated longitudinally by at least their own diameter; rows 2–6 effaced at apical third, row 1 striate in apical third, interneur 7 effaced externally throughout, intervals plurisetose, interneur 8 well impressed and foveate at middle; fovea large, slightly larger in diameter than width of elytral explanation; humeral margin strongly angulate at base, not connected to base of interneur 4; side margins setose from base to apex, setae twice or more as long as width of elytral explanation, side margin not serrate in basal fourth; chaetotaxy as in *P. hirsutus*; plica short and well developed externally.

Microsculpture: Effaced from entire dorsal surface.

Genitalia: Male unknown; female not dissected.

Size: Length, 2.72 mm; width, 1.12 mm; the type measured.

NATURAL HISTORY.—The single specimen was collected in August.

ETYMOLOGY.—Greek adjective, *polys*, meaning "many," and noun *chaite*, meaning "hairs," refer to the accessory setae of the pronotum, head, and elytra.

LOCALITY RECORDS (Figure 151).—I have seen only the type, from Rio Beni, Huachi, Bolivia.

64. *Pericompsus grossepunctatus* Bates

FIGURES 147, 149, 151

Pericompsus grossepunctatus Bates, 1871:245. [Lectotype, here selected, a male, in MHNP. Type-locality: "Rio Janeiro," Brazil.]

DESCRIPTION.—*Form* (Figure 147): Of forebody similar to *P. hirsutus*, but elytra much more inflated and elytral explanation much narrower. Easily distinguished from members of that species by the presence of three supraorbital setigerous pores per eye, from members of the following species by the concolorous antennae.

Color: Shiny rufous, apex of elytron and appendages testaceous.

Head: Across eyes subequal to width of pronotum; three supraorbital setae per eye; frontal furrows moderately deep, linear, extended to midfrons; frons depressed; eyes large and prominent.

Pronotum (Figure 147): Strongly subcordate, sides sinuate and constricted in basal half; base broadly lobed; hind angles about right; side margins not reflexed; bead almost effaced, each side with four setigerous pores; disc strongly convex.

Elytra: Each elytron with 6 punctate interneurs; punctures moderately large and coarse; and separated longitudinally by twice their own diameter or more; rows 2–6 effaced at apical third, row 1 entire and striate in apical third, interneur 7 effaced externally throughout; interneur 8 well impressed and foveate just before middle; fovea large, slightly larger in diameter than width of elytral explanation; humeral margin strongly rounded at base, not connected to base of interneur 4; side margins setose from base to apex, setae slightly longer than width of elytral explanation, side margin not serrate; chaetotaxy as in *P. hirsutus*; plica long and well developed externally.

Microsculpture: Effaced from entire dorsal surface.

Genitalia: Male (Figure 149) (1 examined); female not dissected.

Size: Length, 2.76–2.88 mm; width, 1.12–1.24 mm; 4 specimens measured.

VARIATION.—The small sample available is quite homogeneous.

NATURAL HISTORY.—Unknown.

LOCALITY RECORDS (Figure 151).—I have seen six specimens, all from the type-locality, "Rio Janeiro," Brazil (BMNH, MHNP).

The *incisus* group

The members of the *incisus* group are characterized by the bicarinate elytral intervals and angulate humeral angle. Each interval, laterally and medi-

ally, is carinate to a varying degree in different species; thus the adjacent punctate interneur is located in a trough.

There are four species presently representing this group, with a combined range extending from 28° S latitude in Argentina to about 10° N latitude in Venezuela.

65. *Pericompsus incisus* Bates

FIGURES 152, 156, 159

Pericompsus incisus Bates, 1871:246. [Lectotype, here selected, a female, in MHNP. Two paralectotypes labeled by me in MNHP. Type-locality: Santarem, Brazil.]

DESCRIPTION.—*Form* (Figure 152): Broad and subdepressed; head narrower than the broadly transverse pronotum; humerus strongly angulate.

Color: Testaceous, midventer piceous, elytral cloud infuscated.

Head: Narrower across eyes than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 152): Transverse, sides shallowly sinuate in basal half; base narrowly lobed; hind angles about right; side margins very narrowly reflexed; disc moderately convex.

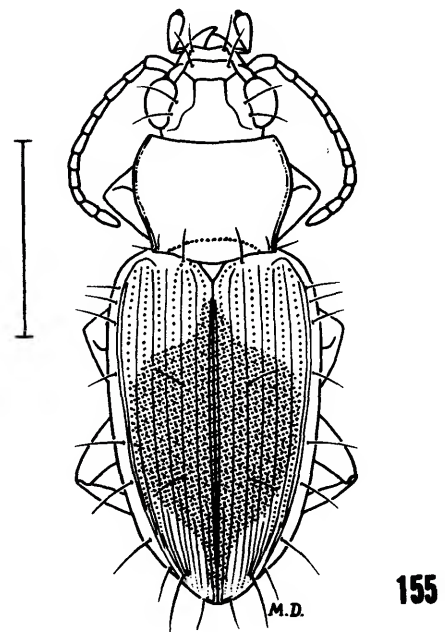
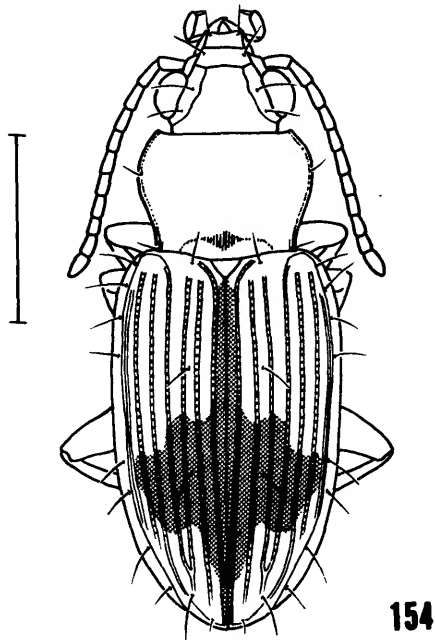
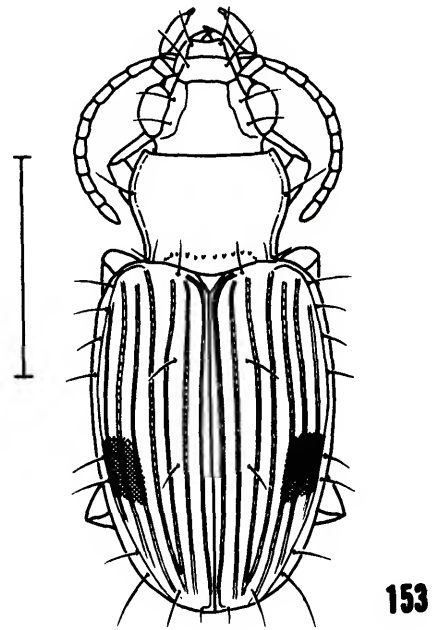
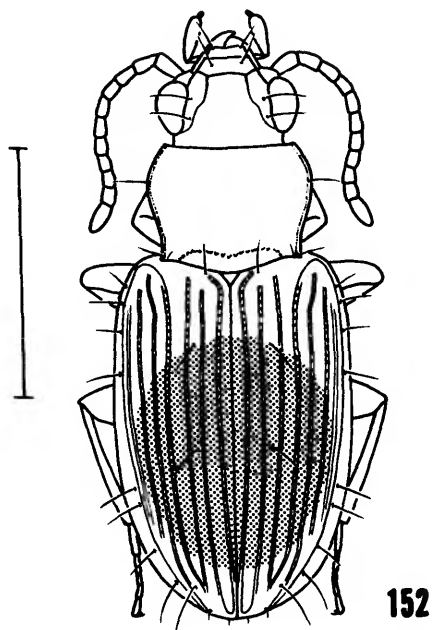
Elytra: Each elytron with 6 punctate-striate interneurs; punctures contiguous and striate; each interval concave, more deeply so laterally, thus interneur subcostate to apical sixth; interneur 7 a sharp carina extended to apical third, interval 7 concave, interneur 8 well impressed and foveate at middle; fovea small, subequal to posterior fovea in humeral group; humeral margin strongly angulate at base, connected to carinate base of interneur 4; side margins narrowly explanate, moderately coarsely serrate-setulose in basal fourth, chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Strongly impressed nearly isodiametric reticulation on entire dorsal surface, almost granulate on pronotum.

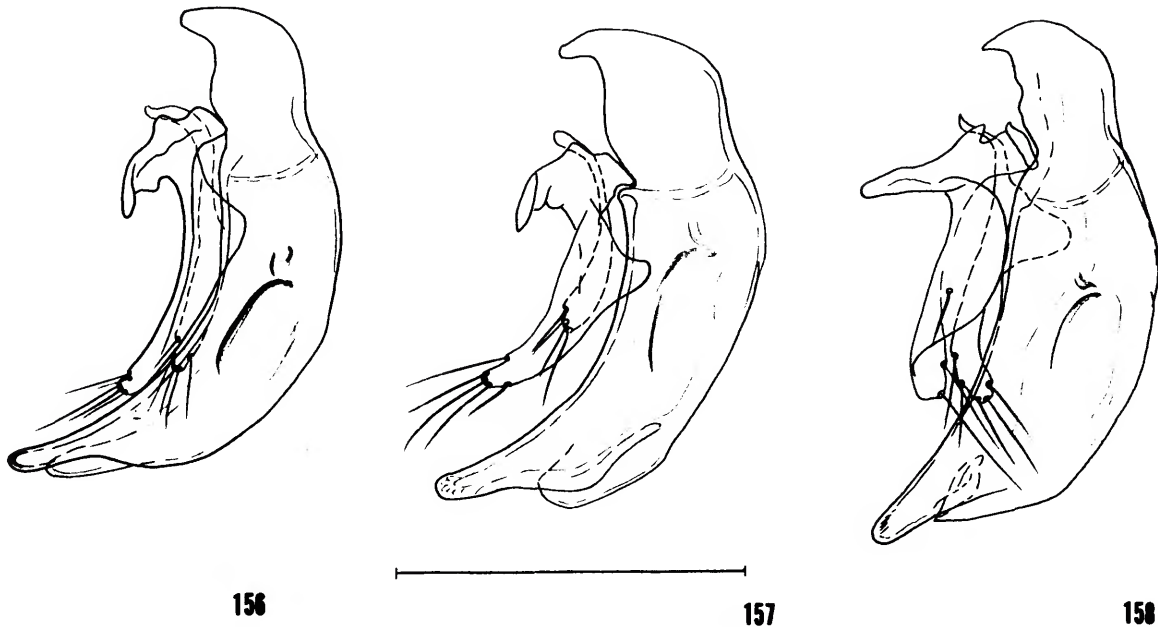
Genitalia: Male (Figure 156) (1 examined); female not dissected.

Size: Length, 2.20–2.56 mm; width, 0.84–1.04 mm; 7 specimens measured.

VARIATION.—The specimens from Mato Grosso have the venter of the prothorax piceous and the



FIGURES 152-155.—Dorsal outline with setae of *Pericompsus* species: 152, *P. incisus* male, Rio Curua, Brazil; 153, *P. concinnus* female, Fortaleza, Brazil; 154, *P. rorschachinus* female holotype, Avipas, Peru; 155, *P. carinatus* female holotype, Santa Isabel, Brazil.



FIGURES 156-158.—Male genitalia, left lateral aspect: 156, *P. incisus*, Rio Curua, Brazil; 157, *P. concinnus*, Fortaleza, Brazil; 158, *P. rorschachinus*, Rio Beni, Bolivia.

specimens from Curua River have it testaceous. Other than this the samples are quite homogeneous.

NATURAL HISTORY.—Specimens were collected in May and July; two of the May specimens were slightly teneral.

DISTRIBUTION (Figure 159).—I have seen 10 specimens from the following localities:

SOUTH AMERICA: BRAZIL: Mato Grosso State, Rio Araguaia at Santa Isabel (CAS, USNM); Para State, Rio Curua, east of Santarem (MCZ), Santarem (MHNP).

66. *Pericompsus concinnus* (Laferte), new combination

FIGURES 153, 157, 160

Tachys concinnus Laferte, 1841:47. [Lectotype, here designated, a male, in MHNP. Type-locality: Colombia, as originally given by Laferte, herewith restricted to eastern Colombia along the Orinoco River, on the basis of the label on the type, "Orenogue."]

Tachys sulcatus Putzeys, 1846:411. [Lectotype, here designated, a male, in IRSN. Two paralectotypes also labeled by me in IRSN. New synonymy. Type-locality: Cumana, Sucre State, Venezuela.]

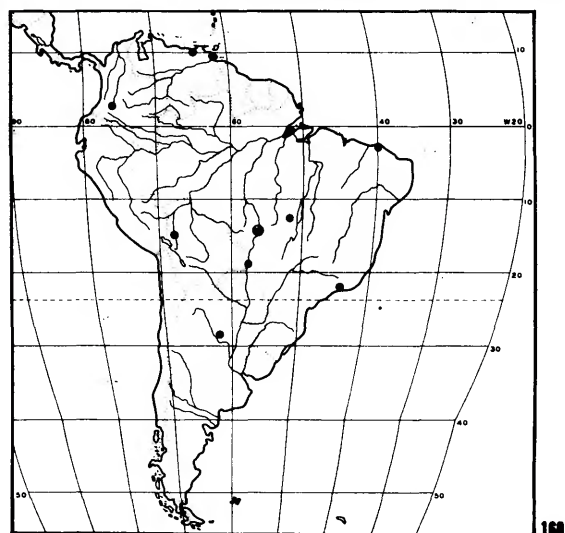
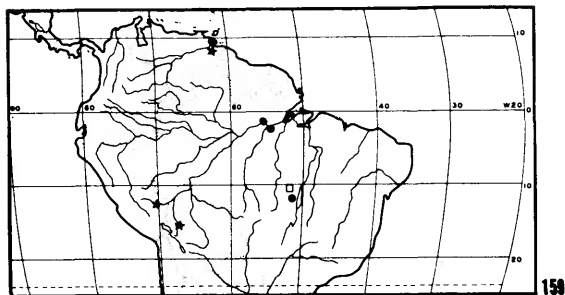
DESCRIPTION.—*Form* (Figure 153): Narrower than *P. incisus*, but easily distinguished from other members of the group by the rugose pronotum.

Color: Testaceous, midventer and elytral cloud rufopiceous, elytral cloud margined lateroapically with piceous spots.

Head: Narrower across eyes than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent; frons rugose.

Pronotum (Figure 153): Broadly subcordate, sides moderately sinuate in basal half; base narrowly lobed; hind angles acute, prominent; side margins moderately reflexed; disc moderately convex, rugose.

Elytra: Each elytron with 7 punctate-striate interneurs; punctures small, contiguous, and striate; each interval concave, more deeply so laterally, thus interneurs subcostate to apical sixth, convex in apical sixth, interneur 8 well impressed and foveate just anterior to middle; fovea small, slightly smaller in diameter than width of elytral explanation; humeral margin strongly rounded at base, feebly



FIGURES 159-160.—Distribution maps: 159, *P. incisus* (circles), *P. rorschachinus* (stars), *P. carinatus* (square); 160, *P. concinus*.

connected to base of interneur 4; side margins moderately explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Strongly impressed, nearly isodiametric reticulation on entire dorsal surface, granulate on head and pronotum.

Genitalia: Male (Figure 157) (3 examined); female characteristic of *ephippiatus* group (2 examined).

Size: Length 2.52–2.84 mm; width, 1.04–1.20 mm; 10 specimens measured.

VARIATION.—The punctuation of interneur 7 varies in number and contiguousness. This variation occurs between specimens and even between elytra on the same individual. The presence of interneur

7 in *Pericompsus* is so rare that a study of its variability in large series should shed light on its loss in most members of the genus.

NATURAL HISTORY.—Specimens were collected in March, April, August, and November. The March, April, August, and November specimens were teneral.

DISTRIBUTION.—The range of this species extends throughout most of South America from 10° N to nearly 30° S latitude, although it is uncommon in collections.

LOCALITY RECORDS (Figure 160).—I have seen 17 specimens from the following localities:

SOUTH AMERICA: ARGENTINA: Santiago del Estero Province, Anatura (USNM). BOLIVIA: La Paz Department, Rio Beni at San Miguel de Huachi (USNM). BRAZIL: Ceara State, Fortaleza (MCZ, USNM); Mato Grosso State, Corumba (MCZ), Rio Araguaia at Santa Isabel (CAS), Rio Caraguata (MCZ, USNM); Rio de Janeiro State, Rio Janeiro (BMNH). COLOMBIA: Huila Department, Villavieja (CAS). VENEZUELA: Sucre State, Cumana (IRSN).

67. *Pericompsus rorschachinus*, new species

FIGURES 154, 158, 159

TYPE-LOCALITY.—Avispas, Madre de Dios Department, Peru.

TYPE-SPECIMENS.—The holotype female is in MCZ. It was collected by L. E. Peña in 1962. Three paratypes are listed below.

DESCRIPTION.—**Form** (Figure 154): Similar to *P. incisus*, but with more elongate and apically attenuated elytra. Easily distinguished from the preceding two species by the shape of the elytral cloud.

Color: Testaceous, midventer and elytral cloud piceous.

Head: Narrower across eyes than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 154): Transverse, sides shallowly sinuate in basal half; base narrowly lobed; hind angles about right; side margins narrowly reflexed; disc moderately convex.

Elytra: Each elytron with 7 punctate-striate interneurs; punctures contiguous and striate; each interval concave to apex, more so laterally, thus interneurs subcostate, interneur 8 well impressed and foveate well anterior to middle; fovea small,

subequal in diameter to width of elytral explanation; humeral margin strongly rounded at base, almost angulate, feebly connected to base of interneur 4; side margins moderately explanate, minutely serrate-setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Strongly impressed, nearly isodiametric reticulation on entire dorsal surface.

Genitalia: Male (Figure 158) (1 examined); female characteristic of *ephippiatus* group (1 examined).

Size: Length, 2.78–3.00 mm; width, 1.04–1.20 mm; 4 specimens measured.

VARIATION.—The specimen from Rio Beni has shorter, less attenuated elytra than the others, but agrees in all other respects.

NATURAL HISTORY.—Specimens were collected in March, September, and November; the March specimen was teneral.

ETYMOLOGY.—The adjective name, *rorschachinus*, refers to the psychologists' Rorschach or "inkblot" test. The elytral pattern on these beetles resembles an inkblot.

DISTRIBUTION (Figure 159).—I have seen four specimens from the following localities:

SOUTH AMERICA: BOLIVIA: La Paz Department, Rio Beni at San Miguel de Huachi (USNM). **PERU**: Madre de Dios Department, Avispas (MCZ, USNM). **VENEZUELA**: Monagas State, "Lower Orinoco at Barrancas" (USNM).

Note: The label data with "Lower Orinoco . . ." also has "Brazil"; however, the locality is in Venezuela.

68. *Pericompsus carinatus*, new species

FIGURES 155, 159

TYPE-LOCALITY.—Rio Araguaia at Santa Isabel, Mato Grosso, Brazil.

TYPE-SPECIMENS.—The holotype female and one paratype (teneral male) are in CAS. Both were collected by B. Malkin in 1957.

DESCRIPTION.—*Form* (Figure 155): Similar to *P. rorschachinus*, but easily distinguished from all members of the *incisus* group by the multicarinate elytra and acutely angulate humeral base.

Color: Testaceous, elytral cloud slightly infuscated.

Head: Narrower across eyes than width of pronotum; frontal furrows moderately impressed and evenly arcuate, each extended to posterior margin of eye; eyes large and prominent.

Pronotum (Figure 155): Large and nearly quadrate, sides shallowly sinuate in basal half; base narrowly lobed; hind angles about right; side margins narrowly reflexed; disc moderately convex and rugose.

Elytra: Each elytron with 7 punctate-striate interneurs; punctures contiguous and striate; each interval deeply concave, thus interneurs carinate to apex, interneur 8 well impressed and foveate well anterior to middle; fovea small, smaller in diameter than width of elytral explanation; humeral margin acutely angulate at base, concave anteriorly and connected to carinate base of interneur 4; side margins moderately explanate, minutely setulose in basal fourth; chaetotaxy as in *P. ephippiatus*; plica long and well developed externally.

Microsculpture: Moderately impressed nearly isodiametric reticulation on entire dorsal surface, granulate on head and pronotum.

Genitalia: Not studied.

Size: Length, 2.76–2.96 mm; width, 0.96–1.20 mm; 2 types measured.

VARIATION.—The sample is too small to meaningfully assess variation.

NATURAL HISTORY.—The types were collected in July, one was very teneral and the other was sub-teneral.

ETYMOLOGY.—Latin adjective, *carina*, meaning "keeled" or "ridged," refers to the appearance of the elytra of these beetles.

LOCALITY RECORDS (Figure 159).—I have seen only the two types from Rio Araguaia at Santa Isabel, Mato Grosso, Brazil.

Natural History

The species of *Pericompsus* are riparian inhabitants, or are at least hygrophilus. All available records indicate proximity to streams, rivers, or (in Australia) wet places away from the actual river edge. The few records of substrate preference are sterile gravel bars, wet sandy clay, "swampy ground," and sandbanks. From these data and some morphological similarities (elytral structure) I think it is probable that this group of Tachyina

is one of the tropical ecological replacement groups of Nearctic riparian *Bembidion*. The other dominant tropical riparian group is commonly referred to as Genus *Tachyura* in North America. This group is very common in the Oriental Region and probably replaces *Bembidion* there. Although somewhat overlapping, the general ranges of *Pericompso* species and *Tachyura* species are separated at their center. Beyond these centers to the north and to the south, in the more temperate areas of the world, *Bembidion* has its amphitropical centers. Aside from observations on the very common adults in the riparian situation, little is now known about the life history or ecological ranges of these riparian species.

There are many records of *Pericompso* species collected at lights, especially "black-light," and at light traps. With the exception of two Australian species whose members are wing-dimorphic (*P. punctipennis*) or wing-short (*P. olliffi*), all *Pericompso* members are fully winged. Therefore, it is quite probable that these beetles are highly vagile. This probability is supported further by the large ranges of many species and by the fact that numerous island species are presently extant. In certain instances, specimens of species common only to one island have been collected at the proximate margin of the nearest adjacent island, indicating transport across water gaps. The occurrence of *P. immaculatus* near or on the beaches of Vera Cruz and Costa Rica and on the western flank of Cuba indicates recent crossings of large water gaps. Methods of transport across these gaps by *Pericompso* species could be via air or rafting. These small beetles' powers of flight would certainly take them high enough to be caught up in seaward wind currents. And since *P. immaculatus* lives on sea beaches they must be somewhat salt tolerant, thus capable of rafting.

I have seen several teneral adult beetles in the material studied. These teneral adults, when properly labeled by collectors, are good indicators as to when immature stages might be found and studied. However, since most *Pericompso* species are represented by such scanty material, only tentative generalizations can be made at this time. It appears that the adult beetles are present in the fauna throughout the year. In the more temperate areas of the range of *Pericompso*, teneral adults were found only during the spring and summer months

(Australia—October, November, and January; United States—May through October). However, the pattern for the Neotropical Region where the majority of species exist is very complex, and I believe that it is due to available moisture in different geographical areas. The evidence for this and a detailed analysis will be presented in another part when all Tachyina can be discussed together.

Evolutionary and Zoogeographic Considerations

The members of *Pericompso* comprise a group of generally derived Tachyina. These beetles share several apomorphic character states including the following: oblique tibial apex on the anterior tibiae, bifoveate mentum, reduced number of elytral interneurs (except one derived and two primitive species), well-defined elytral pattern (most species), peculiar ligule of the male genitalia, and foveate interneur 8 (most species). Some of the generally primitive (plesiomorphic) character states

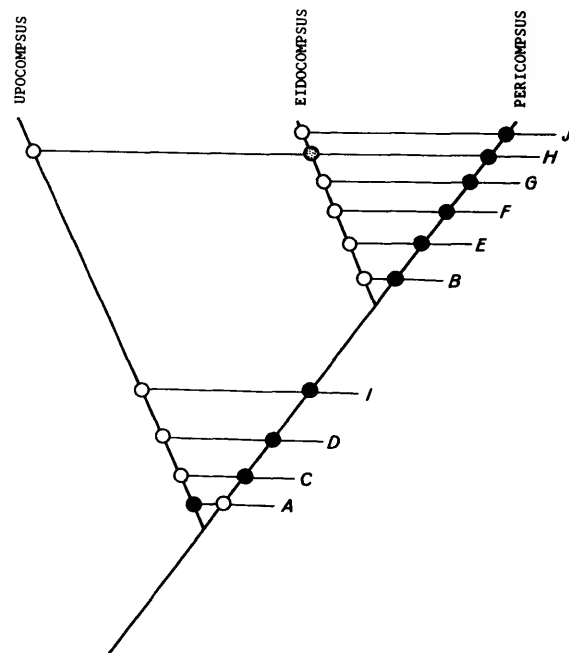


FIGURE 161.—Hypothetical phylogeny for the subgenera of *Pericompso*, based on the character states outlined in Table I. Solid circles represent apomorphic states; open circles represent plesiomorphic states; stippled circle represents an intermediate stage of a transformation series (morphocline).

TABLE 1.—Plesiomorphic and apomorphic conditions of some character states in *Pericompsus* species

| Character | Character state | |
|-----------------------------------|-------------------------|--------------------------|
| | Plesiomorphic | Apomorphic |
| Head | | |
| ocular bulge | glabrous | setiferous |
| Pronotum | | |
| basal transverse impression | punctate | carinate |
| Prosternum | | |
| median portion | setiferous | glabrous |
| Elytron | | |
| interneur 8 | serial punctures | absent |
| interneur 8 | nonfoveate | foveate near middle |
| Eo4 | position d | position e |
| disc | nonpatterned | maculate |
| Abdomen | | |
| female sternum V | pubescent | glabrous |
| Genitalia | | |
| male aedeagus | Type I, e.g., figure 12 | Type II, e.g., figure 30 |
| Form | | |
| general body | depressed | subcylindrical |

retained by some or all members of *Pericompsus* are the following: male with probasitarsus of anterior tarsi dilated and subspiniform and with modified setae beneath; female with four long setae arranged in a transverse row across sternum VI; some abdominal sterna with accessory setae (members of *Upocompsus* and *Ediocompsus* only); recurrent groove of elytra simple; presence of only isodiametric (or nearly so) reticulation. With these character states in mind, Figure 161 shows what I think happened to the ancestral *Pericompsus* lineage. I reflect the changes in the ancestral lineage in a subgeneric and species group classification as outlined in the checklist.

There are three major lines of evolution occurring in the external and genitalic forms of extant *Pericompsus* species.

The Australian *Upocompsus* group are the most

primitive (Figure 3) of the *Pericompsus*. They are mostly riparian or at least subhygrophilus and they are the only *Pericompsus* group in which wing reduction occurs (2 species). Species are distributed in both the south temperate and tropical climes of Australia, from northern Queensland to Tasmania. The *Upocompsus* species undoubtedly have been isolated from the New World groups for some time. Whether the disjunction occurred in the northern part of the world or in the southern part of the world is not known at this time. When all *Tachyina* species have been studied, perhaps some hypotheses may be offered.

The Neotropical *Eidocompsus* group (Figure 25) are the least specialized (in regard to studied character states) of the two New World groups. For the most part this small group exhibits intermediate character states between Australian *Upocompsus* and New World *Pericompsus* sensu stricto. *Ediocompsus* species are riparian or sea beach inhabitants and some are highly vagile. Even so, these beetles are confined to tropical regions in the New World.

The New World *Pericompsus* (sensu stricto) group are the most specialized (Figure 1) species of the genus. There are more species in this group than the other two groups and some of the species are quite variable. This variability indicates to me that active change or evolution is occurring in the group and that the group is still actively speciating rather than declining. *Pericompsus* (sensu stricto) species are riparian or subhygrophilus and highly vagile. They are distributed in North Temperate, Neotropical, and South Temperate climes at elevations from sea level to 2300 meters. They are a dominant member of the lowland tropical riparian community.

All of the above subgeneric groups consist of one or more species groups. These groups are characterized in the taxonomic section. Their relationships will be further discussed in another part where all *Tachyina* groups can be compared.

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