

NOTES ON THE GENUS BRADYTUS STEPH. AND
DESCRIPTIONS OF THREE NEW SPECIES

(CARABIDAE, COLEOPTERA)¹

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In the treatment of the Tribe *Amarini* by Csiki ('30) the genera *Feronalius* Casey, *Curtonotus* Steph., *Stereocerus* Kirby, *Leironotus* Ganglb., *Leiocnemus* Zimm., *Bradytus* Steph., *Percosia* Zimm., *Celia* Zimm., and *Triaena* Leconte of the Leng Catalogue are reduced to subgenera of *Amara* Bon. All of these are rather well-defined groups of species and easily separated from each other. It would seem simpler to retain them as genera in dealing with our Nearctic fauna. The prothorax wider at the middle than at the base, the comparatively short oval body, the pubescence of the hind tibiae, the prosternal punctured areas and the structure and color of the antennae considered together will separate any species of *Bradytus* from species of other genera that show superficial similarities. No one of the listed characteristics is sufficient in itself to place all species in the proper genus and too great dependence on any one characteristic will lead to misidentification. For example there are two species that have no coarse pubescence on the hind tibiae of the males. There are several species that have no punctured area on the prosternum of the males and in several the prothorax is only slightly wider at the middle than at the base. However when all are considered together there is no question as to placement in the correct genus.

Hayward ('08) lists only six species of the genus. Casey ('18) discusses sixteen species and divides the genus into four groups. Group I (*exaratus*) with four species, Group II (*apricarius*) with one species and Group III (*glacialis*) with three species are adequately treated in Casey's paper and need no further consideration here. Group IV (*laticus*) in which Casey placed nine species has been enlarged by the description of three new species by Casey ('24) and by three species that will be described in the pages that follow. Perhaps a key to the fifteen species of the *laticus* group will be helpful in recognizing these species. Such a key is difficult to express in brief form because of the close similarities and duplication of structures in this group. A detailed tabulation of the characteristics given in the original descriptions indicates that the species are distinct. All but two of the species have been recognized in collections made in the areas from which they were originally described. *B. relictus* Casey and *B. aequalis* Casey, not yet so found, also seem to be good species as judged by the tabulation. *B. oregonus* Lec., now placed as a synonym of *B. laticus* Kby., may be distinct, but since it has not been recognized in western collections and since the original descriptions are very brief and non-committal in certain important respects, it is left as a synonym for the present. *B. aequalis* Casey from Chihuahua, Mexico has been included for comparison and may possibly be found north of the border. A table of all species of Nearctic *Bradytus* and a key to the *laticus* group follow.

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TABLE OF THE NEARCTIC SPECIES OF THE GENUS BRADYTUS STEPH.

GROUP I—*exartus* group

- B. gravidus* Casey 18-236
B. curtus Casey 18-236
B. exaratus Dejean 28-509
 = *furtivus* (Say) 34-429
B. stygialis Casey 18-237

GROUP II—*apricarius* group

- B. apricarius* (Payk.) 90-125

GROUP III—*glacialis* group

- B. nainensis* Casey 18-238
B. glacialis Mann. 53-135
B. putzeysi Horn 75-129

GROUP IV—*laticus* group

- B. schwarzi* Hayw. '08-42
 = *septentrionalis* Lec. 48-358
B. laticus Kby. 37-36
 = *hyperborea* Lec. 48-357
laevistriatus Putz. 66-262
 = *liber* Lec. 55-349
 = ? *oregonus* Lec. 55-349

GROUP IV—(Continued)

- B. humphreysi* Csy. 18-240
B. deceptus Csy. 18-241
B. specularis Csy. 18-241
B. spaldingi Csy. 24-48
B. relictus Csy. 18-242
B. obsolescens Csy. 18-242
B. maxwellianus Csiki 1930
 = *B. maxwelli* Csy. 24-49
B. vegasensis n. sp.
B. novellus n. sp.
B. neomexicanus Csy. 24-48
B. celianus n. sp.
B. aequalis Csy. 18-242 (Mexico)
B. immundus Csy. 18-243

KEY TO THE LATICUS GROUP OF THE GENUS BRADYTUS STEPH.

- 1a. Scutellar stria with an ocellate puncture *immundus* Csy.
 1b. Scutellar stria without an ocellate puncture 2
 2a. Body narrow and elongate, width approx. 3 mm *schwarzi* Hayw.
 2b. Body shorter and stouter, width over 3 mm 3
 3a. An obtuse carina at the posterior thoracic angles 4
 3b. No carina at the posterior thoracic angles 6
 4a. Elytral striae fine and very finely punctate, lateral series of ocellate punctures narrowly interrupted *deceptus* Csy.
 4b. Elytral striae strong, impressed and moderately coarsely punctate, lateral series of ocellate punctures widely interrupted 5
 5a. Head three-fifths as wide as the thorax. Prothorax two-fifths (male) and one-half (female) wider than long. Black and highly polished *laticus* Kby.
 5b. Head less than three-fifths as wide as the prothorax. Prothorax one-half wider than long in both sexes. Piceous black *humphreysi* Csy.
 6a. With an elongate patch of coarse pubescence on the inner side of the hind tibiae of the male 7
 6b. Posterior tibiae of the male without such pubescence 14
 7a. No scutellar stria; no punctured area on prosternum of the male 8
 7b. Scutellar stria and punctured area on prosternum of male present 9
 8a. Prosternal process between the coxae and the area between the gular sutures of the head distinctly sulcate *novellus* n. sp.
 8b. Prosternal process and gula not at all sulcate *vegasensis* n. sp.
 9a. Size 9 mm. and over. Inner basal foveae of thorax small, oval and deep with a few punctures; the outer foveae deep, oblique and impunctate *maxwellianus* Csiki
 9b. Size less than 8 mm., basal prothoracic foveae not as above 10
 10a. Scutellar stria fine and fragmented; prothorax impunctate dorsally *neomexicanus* Csy.
 10b. Scutellar stria entire, moderate to long. Prothorax punctured at least in the basal foveae 11
 11a. Prothorax sparsely punctured apically and basally *relictus* Csy.
 11b. Prothorax punctured basally only 12
 12a. Prothorax sparsely, finely punctate between the basal foveae; scutellar stria long and free *specularis* Csy.
 12b. Prothorax punctured in the basal foveae only; scutellar stria moderate 13
 13a. Elytral surface finely micro-reticulate, antennae much shorter than the head and thorax *obsolescens* Csy.
 13b. Elytral surface polished black, antennae almost reaching the base of the thorax, *spaldingi* Csy.
 14a. Basal foveae of the prothorax strongly impressed and closely, strongly punctate; elytral striae deep and punctate to behind the middle *celianus* n. sp.
 14b. Basal foveae of the prothorax shallow and sparsely punctate; elytral striae impressed but without obvious punctures *aequalis* Csy.

Bradytus novellus n. sp.

This insect is oblong-oval in shape and dark piceous black above. The under surface is polished dark ferruginous and the legs, palps, and antennae are entirely ferruginous. The mandibles are moderately striate on the inner portion of the upper surface; the setae on the margin of the labrum are very long; the frontal striae are short, deep and oblique; and the antennae are about the length of the head and thorax. The thorax is very convex, slightly wider at the middle than at the base and completely without punctures. The anterior and posterior impressions are obsolete and the median stria is very fine, abbreviated anteriorly but reaching the base posteriorly. The anterior margin is shallowly arcuately excavate and the anterior angles are bluntly rounded and not prominent. The posterior angles are a little more than right, blunt but not rounded. The posterior foveae are deep and impunctate, the inner foveae are linear and nearly reach the base and the external foveae are oblique. The base is margined, obsolete so medially. The elytral striae are fine but rather deep and impunctate with the seventh stria somewhat shallower than the rest. The scutellar stria is lacking. The intervals are slightly convex, more noticeably near the apex. The under surface of the body is impunctate except for a very few obsolete punctures on the anterior part of the meso-sternum. The prosternal process has a short sulcus between the coxae and there is a short well-impressed sulcus between the gular sutures on the under side of the head. There is no punctured area on the prosternum of the male. The male front tarsi are dilated as usual in the genus and the hind tibiae have the normal coarse pubescent area on the inner surface.

Length: 6.75 to 7.5 mm.

Holotype: Male; Davis Mts., (Ft. Davis), Texas; 9/VII/1911 J. W. Green, Coll.

Allotype: Female; same data.

Paratypes: 11 males, 7 females; same data.

I am indebted to Mr. J. W. Green of Easton, Pa. for turning this series of specimens to me for description. 7 male and 5 female paratypes are in his possession and the remainder in the collection of the author at present.

Bradytus vegasensis n. sp.

The body is convex oblong-oval and polished black above and beneath. The head is a little over half the width of the thorax, very smooth and impunctate. It has shallow linear striae, eyes moderately convex and antennae and palps ferruginous throughout. The thorax is five-sevenths as long as wide, very convex, widest at about the middle and narrowed very little posteriorly. The anterior margin is rather deeply arcuately excavate with the anterior angles bluntly rounded and more prominent than in most other species of the genus. The sides are finely and evenly margined and the posterior margin is transverse with the marginal bead interrupted medially. The anterior and posterior transverse impressions are obsolete, the median stria is very fine and abbreviated at both ends, and there is no trace of a carina near the posterior angles. The foveae are small, shallow and impunctate; the inner, linear and not reaching the base; the outer, short and oblique. The entire thorax is very convex and without trace of punctures on the upper surface. The prosternum is smooth and without the punctured area commonly found on males in this genus. The legs are dark ferruginous throughout and the front tarsi of the males are dilated moderately as is usual. The inner sides of the hind tibiae of the male have the normal coarse pubescence. The elytra are convex, slightly wider than the thorax, with narrow reflexed margins and a short distinct sinus. The striae are complete, distinct, very fine and completely impunctate. The scutellar stria is absent and the lateral series of ocellate punctures is very narrowly interrupted. The under surface of the body is impunctate except for a few obsolete punctures on the anterior half of the meso-sternum.

Length: 7. to 7.5 mm.

Holotype: Male; 6 mi. N. E. of Las Vegas, New Mexico; 18/V/1946. H. F. Strohecker, Coll.

Female unknown.

Paratypes: 2 Males; same data.

The author is indebted to Dr. H. F. Strohecker of the University of Miami, Coral Gables, Fla. for these specimens. One paratype is in the collection of Dr. Strohecker, the others, in possession of the author.

Bradytus celianus n. sp.

The body is oblong-oval, not strongly inflated, polished black above and beneath except that the posterior end of the abdomen and all the legs are rufous. The head, exclusive of the eyes, is slightly over one-half the width of the thorax. The eyes are prominent, the frontal strioles are fine, deep and linear. The entire antennae are rufous and extend slightly beyond the posterior margin of the thorax. The prothorax is five-sevenths as long as wide, widest at the middle, with the sides evenly arcuate and finely reflexed from apex to base. The basal angles are slightly greater than right, not rounded and not carinate. The apical margin of the prothorax is evenly arcuately excavate, five-sevenths as wide as the transverse margined base, and the anterior angles are very blunt and rounded. Both transverse impressions are obsolete; the apical incised line is broadly interrupted at the middle; the median stria is fine and abbreviated anteriorly; and the entire surface is convex, smooth and impunctate except for the basal foveae which are quite deeply impressed and rather closely and deeply punctate. Both foveae are rather broad and very similar in size and shape. The space between the outer foveae and the margins is very convex and the area between the inner foveae is impunctate. The elytra are slightly wider than the thorax and convex. Strial punctures are evident in the anterior half of the first six striae but become obsolete in the posterior half and are missing altogether in the seventh stria. The scutellar stria is moderate in length and is punctate. The lateral series of ocellate punctures is moderately widely interrupted. The intervals are slightly convex on the disk and become strongly so near the apex. The prosternum of the male has a small unimpressed oval area with a few very conspicuous punctures, the pro-episterna are impunctate, the mes-episterna are sparsely shallowly punctured, and the met-episterna are very obsoletely punctate. The front tarsi of the male are moderately dilated and the posterior tibiae of the male are devoid of pubescence on the inner surface. This latter trait allies this species with *B. aequalis* Casey from which it is very distinct in many other respects, however.

Length: 7.5 mm.

Holotype: Male; Jemez Mts., New Mexico, III/20. Jno. Woodgate, Collector.

Female unknown.

This specimen was sent by Mr. J. W. Green of Easton, Pa. who recognized it as unusual. The type is at present in the author's possession.

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