

ENTOMOLOGY.—*Notes and descriptions of United States scarab beetles.*<sup>1</sup> LAWRENCE W. SAYLOR, U. S. Bureau of Biological Survey. (Communicated by EDWARD A. CHAPIN.)

Since it is probable that within the near future another supplement will be added to Leng's catalogue of the Coleoptera, I wish to bring to attention certain synonymy as well as additions to knowledge of southwestern scarabs.

*Phyllophaga (Phyllophaga) rossi*, n. sp.

Fig. 6

*Male*.—Oblong-oval, wider behind; above rufocastaneous and pilose; head and thorax shining, elytra slightly to moderately densely pruinose. Head with the clypeus transverse and flat, its apex truncate and angles rounded; disk with coarse, regularly placed punctures, not pilose; punctures of the front quite large, dense, contiguous, and scabrose, with long erect hair. Antenna 9-segmented, club testaceous and subequal to funicle in length. Thoracic disk with scattered and sparse, umbilicate punctures, each with a very long erect hair; these punctures on the apical half of the disk are nearly twice as large as those on the basal half; lateral margin coarsely crenate and with very long cilia; basal margin obsolete; front thoracic angles acute, hind angles obtusely angulate. Elytra with very fine and moderately dense punctures, without traces of striae except for the weakly indicated sutural striae; punctures with very small, procumbent hairs; there are longer and erect hairs scattered along the scutellar area and at the apex, the lateral margins also have a dense fringe of cilia. Pygidium convex, polished, with moderately dense, coarse, umbilicate punctures, at the sides and along the base the punctures are smaller and contiguous; disk with a moderately dense covering of small semierect hairs and also numerous very long erect hairs. Abdomen flattened, faintly concave at center and with sparse, fine punctures; fifth sternite somewhat rugose at middle and with much coarser punctures at sides, apical half varying from flat to slightly longitudinally sulcate; sixth sternite short, transversely impressed, basal margin slightly carinate, center of disk with a short longitudinal sulcus. All claws with a sharp median tooth, base hardly dilated. Hind tibial spurs free; first tarsal segment shorter than the second. Except for submarginal rows of ciliate punctures, the entire surface of the posterior femur is highly polished and impunctate. Length 12–13.5 mm. Width 6–7 mm.

The *holotype* and *paratypes* are from Patagonia, Ariz., and were collected in July 1937 by E. S. Ross. I take pleasure in naming the species after Mr. Ross, of the University of California, to whom I am indebted for many favors and specimens in the past. Two additional paratypes taken at the same time and place by M. A. Cazier also are in my collection. The type will be placed in the United States National Museum on permanent loan, and one paratype will be deposited in the collection of Dr. M. A. Sanderson, of Fayetteville, Ark.

This species runs to Group XV of Horn's tables, but it is not at all close to any of the included species, or to any other known from the United States. Its closest relative appears to be the Mexican *P. porodera* Bates, known from Guanajuato and Peras, but *P. rossi* differs from that species in many details among them the nonelevated and nonsinuate clypeal apex, the 9-segmented antennae, and the abdominal characters.

<sup>1</sup> Received April 25, 1939.

*Phyllophaga submucida* LeConte

*Phyllophaga submucida* LeConte, Journ. Acad. Nat. Sci. Philadelphia 3: 260. 1856.

I have three specimens of this species from Rancho La Golondrina, Rio Sabinas, Coahuila, Mexico, collected June 2, 1938, by Rollin H. Baker of College Station, Tex., and very kindly presented to me by him. Not previously recorded outside of the United States.

*Phyllophaga torta* LeConte

*Phyllophaga torta* LeConte, Journ. Acad. Nat. Sci. Philadelphia 3: 239. 1856.  
*Lachnosterna dampfi* Arrow, Ann. Mag. Nat. Hist., 11: 148. 1937. (New synonymy.)

G. J. Arrow, of the British Museum, has kindly compared Mexican and Texan examples of this species with the types of *P. dampfi* and reports that the two are the same. Thus the known range of *P. torta* is extended a good distance into Mexico, where it has not previously been recorded.

*Phyllophaga ignava* Horn

*Phyllophaga ignava* Horn, Trans. Amer. Ent. Soc. 15: 280. 1887.

I have a specimen of this species from Rancho La Golondrina, Rio Sabinas, Coahuila, Mexico, June 2, 1938, collected by R. H. Baker, and another from Nuevo Leon, Mexico, June. Not previously recorded from Mexico.

*Phyllophaga crinita* (Burmeister)

*Trichestes crinita* Burmeister, Hand. Ent. (2) 4: 359. 1855.

I have a good series of this species taken at Buena Vista, Coahuila, Mexico, July 7, 1938, by R. H. Baker, and also some from Monterrey. Recorded by Bates from Mexico.

*Phyllophaga vetula* Horn

*Phyllophaga vetula* Horn, Trans. Amer. Ent. Soc. 14: 274. 1887.  
*Lachnosterna longipilosa* Bates, Biol. Centr. Amer. (2) 2: 209. 1888. (New synonymy).

I have cotypes of Bates's species, and they are the same as *P. vetula*. The range of *P. vetula* is thus extended into Mexico, where the species has not been previously recorded.

*Phyllophaga lenis* Horn

*Phyllophaga lenis* Horn, Trans. Amer. Ent. Soc. 14: 287. 1887.  
*Lachnosterna anodentata* Bates, Biol. Centr. Amer. (2) 2: 208, 405. 1888. (New synonymy.)

I have compared cotypes of Bates's species with *lenis* and the two are the same.

*Phyllophaga fucata* Horn

*Phyllophaga fucata* Horn, Trans. Amer. Ent. Soc. 15: 278. 1887.  
*Phyllophaga linsleyi* Saylor, Pomona Journ. Ent. and Zool. 1936. (New synonymy.)

*Phyllophaga (Tostegoptera) lanceolata* (Say)

*Phyllophaga lanceolata* Say, Journ. Acad. Nat. Sci. Philadelphia 3: 242. 1824.  
*Phyllophaga lanceolata arizonae* Von Bloeker, Bull. Southern California Acad. Sci. 35: 4. 1936.

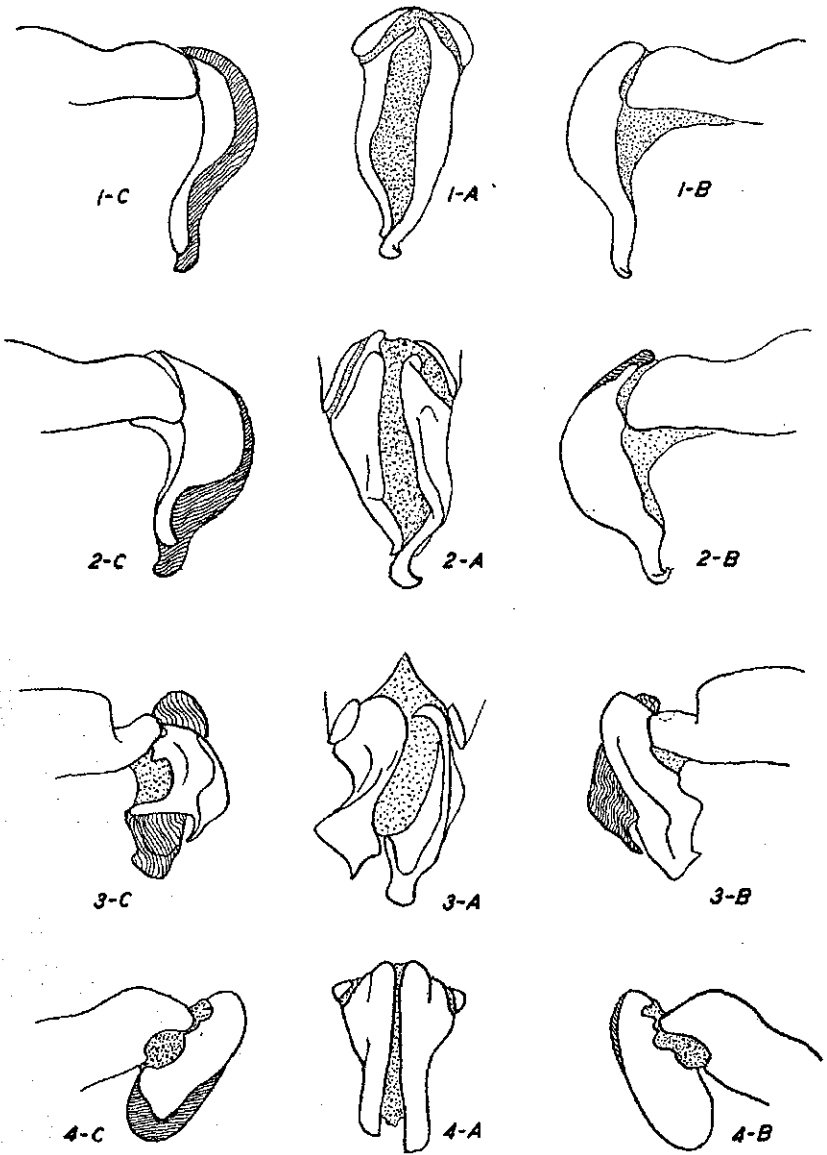


Fig. 1.—*Serica searli*, n. sp. Fig. 2.—*Serica alleni*, n. sp. Fig. 3.—*Serica mendota*, n. sp. Fig. 4.—*Serica cuyamaca*, n. sp. A, En face view of male genitalia; B, lateral view of same; C, same.

*Phyllophaga grisiana* Von Bloeker, l. c., p. 5.

*Phyllophaga cazieri* Von Bloeker, l. c., p. 6.

I have dissected paratypes of all of Von Bloeker's "species" and find that there is nothing to validate the names, even subspecifically. In Von Bloeker's description of *P. cazieri* he says: "The golden yellow scales and globosity of the female readily distinguish the species." It is well known that in species (e.g., *Thyce fieldi* Fall) ordinarily clothed with white scales the vestiture may frequently be yellow. This color variation, however, does not have subspecific or even racial significance. Variability in gibbosity of the female of any species having short or obsolete wings also must be recognized. Striking evidence of this and of the color variation may be seen in almost any large series of *P. lanceolata* even if collected at the same time and place. The male genitalia of all the forms described by Von Bloeker are exactly like those of *P. lanceolata*, as indeed his sketches show.

*Phyllophaga chippewa*, n. sp.

Fig. 5

*Male*.—Elongate-oval, slightly wider behind, above polished, nearly or quite glabrous. Clypeus and front very densely, somewhat coarsely punctate, clypeus flat, apex broadly and not deeply emarginate and hardly reflexed, angles broadly rounded. Antenna 10-segmented, club a little longer than the funicle. Punctuation and shape of thorax, clytra, and pygidium and abdominal characters exactly as in *P. knochi* Horn. Fixed spur of the hind tibia three-fifths as long as the free spur. Tarsal claw with the tooth long and sharp, slightly more apical in position than in *P. knochi*. Length 18 mm. Width 9 mm.

The unique male *type* bears the data: "Schley, Mimn., Chippewa National Forest, taken by L. W. Orr's collection crew on June 13, 1935 from Quaking Aspen (*Populus tremuloides*), Unit 1, Plot 3." The type was presented to the United States National Museum by R. H. Nagel and is deposited in that collection.

*P. chippewa* belongs in Horn's Group IX and is with difficulty separable externally from *P. knochi* Horn; the most obvious external difference between the two is the slightly more apical tarsal claw in the new species. The male genitalia are quite different, those of *chippewa* approaching closely the groups having bilaterally symmetrical claspers while *knochii* is representative of those species having strongly asymmetrical genitalia.

*Serica laguna* Saylor

*Serica laguna* Saylor, Pomona Journ. Ent. and Zool. 27(1): 1. 1935.

This species was described from a unique male, and I have since seen two males from Idyllwild, Riverside County, Calif., collected July 4, 1929.

*Serica elongatula* Horn

*Serica elongatula* Horn, Trans. Amer. Ent. Soc. 3: 77. 1870.

This species is one of the rarer forms of the genus; I have a goodly series collected by W. C. Reeves, at light, on May 26, 1937, at Independence, Inyo County, Calif. The fact that the species inhabits this semiarid region seldom visited by collectors may account for its rarity in collections.

*Dichelonyx vicina* Fall

*Dichelonyx vicina* Fall, Trans. Amer. Ent. Soc. 27: 291. 1901.

*Dichelonyx deserta* Hopping, Can. Ent. 63: 236. 1931. (New synonymy.)

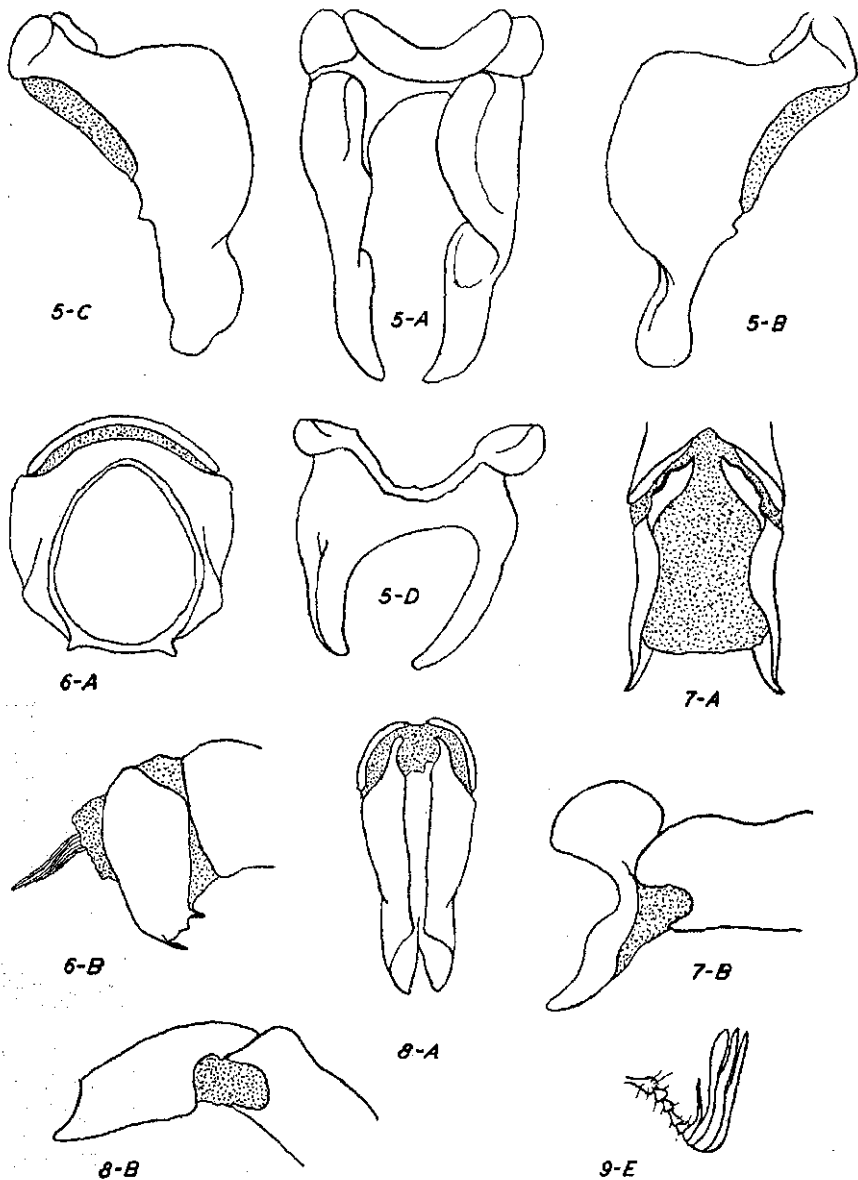


Fig. 5.—*Phyllophaga chippewa*, n. sp. Fig. 6.—*Phyllophaga rossi*, n. sp. Fig. 7.—*Serica chicosnsis*, n. sp. Fig. 8.—*Serica sandiegensis*, n. sp. Fig. 9.—*Serica mendota*, n. sp. A, En face view of male genitalia; B, lateral view of same; C, same; D, dorsal view of male genitalia; E, male antenna.

The examination of paratypes of both of Hopping's species indicates that *D. deserta* is a straight synonym of *vicina*; the dark hairs on the head that Hopping mentions in the description are white hairs that had been covered with grease, as degreasing showed.

*Dichelonyx vicina columbiana* Hopping

*Dichelonyx columbiana* Hopping, Can. Ent. 63: 236. 1931.

*D. columbiana* is probably valid as a northern subspecies of *D. vicina*, since it has more coppery reflections on the elytra and thus can usually be picked from a series of the typical form.

*Diplotaxis falli* Saylor

*Diplotaxis falli* Saylor, Pan-Pacific Ent. 11: 35. 1935.

This species was described from two males from Victorville, Calif. I have recently seen specimens from Coalinga, Calif., collected May 14 by M. A. Cazier and in his collection. Through Mr. Cazier's kindness I now have the female represented in my collection.

*Pachyplectrus laevis* LeConte

*Pachyplectrus laevis* LeConte, Trans. Amer. Ent. Soc. 5: 54. 1874.

I have two specimens of this rare and little-known species, both collected in Mason Valley, San Diego, Calif., on March 27. Early spring emergence may account in part for its apparent rarity.

*Serica alleni*, n. sp.

Fig. 2

*Male*.—Piceous to piceocastaneous, moderately shining, apparently glabrous above except for a few short elytral hairs. Clypeus with moderate to coarse, rugose punctures, clypeal suture hardly indicated; apex truncate, widely and shallowly emarginate, lateral margins entire. Front with coarse irregularly placed punctures, vertex impunctate. Antenna castaneous, club slightly longer than the funicle. Thorax moderately densely punctate, with a small median impunctate area. Elytra with coarse, irregularly placed punctures.

*Female*.—Slightly more robust, antennal club a little shorter, and abdomen strongly convex in lateral view, but otherwise similar to male. Length 8–9.5 mm. Width 5–5.5 mm.

The *holotype* male and *allotype* female are from Lake Arrowhead, Calif. (Saylor collection), collected by Paul Allen at light on June 30, 1932, and will be deposited on loan in the U. S. National Museum. Ten paratypes with the same data remain in the Saylor collection. The genitalia of *alleni* are close to *laguna* Saylor, but are distinct, and the body in the present species is more elongate and less coarsely punctate.

*Serica mendota*, n. sp.

Figs. 3 and 9

*Male*.—Piceocastaneous, elytra strongly pruinose, clypeus and elytra with a few scattered hairs. Clypeus polished, slightly tumid, disk smooth at sides of apex, center with coarse and dense punctures; apex truncate, with the center margin reflexed and (viewed from directly in front of the clypeus and on a plane with the clypeal surface) raised into a moderate peak, lateral angles rounded, the sides entire. Front pruinose, with moderately dense punctures. Antenna 9-segmented, testaceous, club of  $3\frac{1}{2}$  segments, the fifth segment produced inwardly into a short spine and the sixth segment produced into an antennal leaf a little more than one-half as long as the seventh;

segments 7-9 inclusive slightly longer than the entire antennal stem. Thoracic and elytral puncturation very fine but obscured by the pruinosity of the surface. Abdomen in lateral view somewhat flattened. Length 8-8.5 mm. Width 4-5 mm.

The *holotype* male, also numerous *paratypes*, are from "Mendota, Calif., collected by G. T. York on April 10, 1936, and May 1, 1937" and are in the United States National Museum. Designated *paratypes* are also in the Saylor collection.

This species is abundantly distinct from all other described species in our fauna by the 4-segmented antennal club, shape and puncturation of the clypeus, and the male genitalia.

*Serica chicoensis*, n. sp.

Fig. 7

*Male*.—Light buff-testaceous, head and thorax more brownish, surface faintly pruinose, glabrous except for a few scattered and inconspicuous short hairs on the elytra, sides of thorax, and clypeus. Clypeus tumid, densely and finely punctate, apex moderately sharply reflexed, lateral margins with a faint indication of a notch. Front finely, not densely punctate, vertex nearly impunctate. Antenna testaceous, club subequal to funicle. Thorax very finely and densely punctate, lateral margins ciliate. Elytra very sparsely and irregularly punctured between the lightly-impressed striae. Pygidium lemon-yellow, finely densely punctate, with short erect hair, and some longer intercalated hair before the apex. Length 7.5 mm. Width 4 mm.

The unique male *holotype* is in the United States National Museum and bears the data "Chico, California, collected June 24, 1937 by F. W. Turner." The genitalia are quite distinct from those of any described species of the genus.

*Serica sandiegensis*, n. sp.

Fig. 8

*Male*.—Elongate, piceocastaneous above, faintly shining and with a very light pruinose bloom, glabrous except for a few scattered hairs on the elytra. Antennal club subequal to funicle. Clypeus slightly tumid at middle, disk finely and very densely punctate; apex truncate, faintly, widely and shallowly emarginate at the center, the angles narrowly rounded, lateral margins entire. Front sparsely and somewhat regularly punctate. Thorax finely and entirely punctate. Elytra moderately densely punctate between the lightly impressed striae. Pygidium with short erect hair. Abdomen slightly convex in lateral view. Claws cleft, the lower tooth much the widest of the two. Length 7.5 mm. Width 4 mm.

The *holotype* male is from "San Diego, Calif., collected by Ricksecker" and is deposited in the Casey collection at the United States National Museum; a *paratype* male from "San Diego, Calif. (Saylor collection)" remains in my collection. The symmetrical genitalia are not closely allied to those of any other described species in the country. Two other specimens in the Saylor collection, a pair from "San Diego, Calif., El Monte Oaks," are apparently this species though possessing slight differences which make it seem advisable to leave them without type designation. In external characters they are somewhat different, since the color is light lemon-yellow, the clypeus is more acuminate apically and the lateral edge of the clypeus is slightly though distinctly notched. The color may have been in part due to their specimens being collected in alcohol, though this is doubtful; the lateral clypeal notches are known to be somewhat variable within a species. Larger series of these El Monte Oaks specimens may well indicate a closely allied

but distinct species based on the color and clypeal differences as well as the slightly different male genitalia.

*Serica searli*, n. sp.

Fig. 1

*Male*.—Piceocastaneous, robust, slightly shining, elytral apex slightly pruinose, dorsal surface apparently glabrous. Clypeus slightly tumid, disk with very dense and coarse punctures; lateral margins rounded and slightly notched near the angles; apex widely and very shallowly emarginate. Front with irregularly placed, somewhat dense punctures. Antennal club subequal to funicle. Thorax with coarse, dense punctures, those punctures of central basal area the most coarse and those areas near the hind angles the most densely punctate. Elytra with coarse, moderately dense punctures. Pygidium with dense and very coarse punctures in basal two-thirds, the punctures a little more fine apically.

*Female*.—Antennal club shorter than funicle, otherwise similar to male. Length 7.5–8 mm. Width 4.5–5 mm.

The *holotype* male and *allotype* female (Saylor collection) are from "Idyllwild, Riverside, County, Calif., collected April 28, 1928, by C. C. Searl" and will be deposited on loan in the United States National Museum. A male paratype from the same locality, collected on June 24, 1929, remains in the Saylor collection. *S. searli* is closest to *S. laguna* Saylor, but the male genitalia will readily separate the two.

*Serica cuyamaca*, n. sp.

Fig. 4

*Male*.—Dull piceocastaneous, with slight pruinose vestiture, the dorsal surface with sparse, erect, and scattered hair. Clypeus slightly tumid, very coarsely and rugosely punctate; lateral margins entire, apex moderately reflexed widely and shallowly emarginate, the angles rounded. Front opaque, with fine and moderately dense punctures. Antenna testaceous, club slightly longer than the funicle. Thorax with very fine, dense, and regularly placed punctures. Puncturation of elytra very fine, strial intervals impunctate or with a few scattered and fine punctures. Pygidium very finely, regularly, moderately densely punctate. Abdomen convex, with moderately dense, subprocumbent hairs.

*Female*.—Apparently the same in all essential characters as the male. Length 7–8.5 mm. Width 4–5 mm.

The *holotype* male and *allotype* female (Saylor collection) are from "Cuyamaca, San Diego County, collected by Albert Watson on July 13, 1934" and were presented to me by the collector; these types will be deposited on loan in the collections of the United States National Museum. A paratype with the same data remains in the Saylor collection. *S. watson* Saylor is the closest described relative of *S. cuyamaca*, and the two may be most readily separated through the male genital characters.