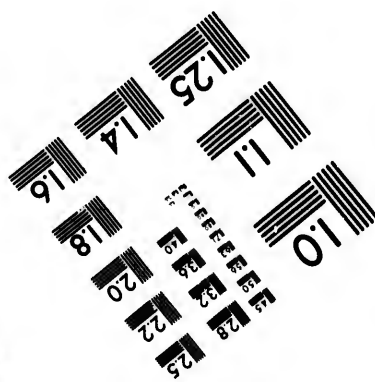
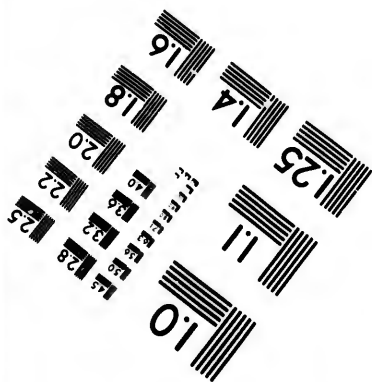
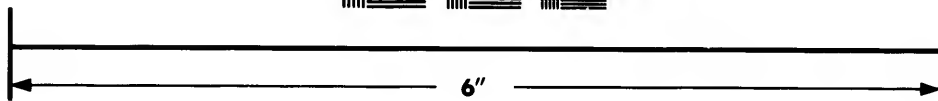
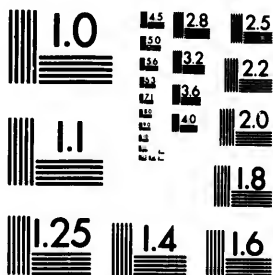


**IMAGE EVALUATION
TEST TARGET (MT-3)**



**Photographic
Sciences
Corporation**

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

2.4
2.6
2.5
2.2
2.0
1.8

**CIHM/ICMH
Microfiche
Series.**

**CIHM/ICMH
Collection de
microfiches.**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

10

© 1982

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- | | |
|--|--|
| <input type="checkbox"/> Coloured covers/
Couverture de couleur | <input type="checkbox"/> Coloured pages/
Pages de couleur |
| <input type="checkbox"/> Covers damaged/
Couverture endommagée | <input type="checkbox"/> Pages damaged/
Pages endommagées |
| <input type="checkbox"/> Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> Pages restored and/or laminated/
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> Cover title missing/
Le titre de couverture manque | <input checked="" type="checkbox"/> Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> Coloured maps/
Cartes géographiques en couleur | <input type="checkbox"/> Pages detached/
Pages détachées |
| <input type="checkbox"/> Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> Showthrough/
Transparence |
| <input type="checkbox"/> Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur | <input type="checkbox"/> Quality of print varies/
Qualité inégale de l'impression |
| <input checked="" type="checkbox"/> Bound with other material/
Relié avec d'autres documents | <input type="checkbox"/> Includes supplementary material/
Comprend du matériel supplémentaire |
| <input type="checkbox"/> Tight binding may cause shadows or distortion
along interior margin/
La reliure serrée peut causer de l'ombre ou de la
distortion le long de la marge intérieure | <input type="checkbox"/> Only edition available/
Seule édition disponible |
| <input type="checkbox"/> Blank leaves added during restoration may
appear within the text. Whenever possible, these
have been omitted from filming/
Il se peut que certaines pages blanches ajoutées
lors d'une restauration apparaissent dans le texte,
mais, lorsque cela était possible, ces pages n'ont
pas été filmées. | <input type="checkbox"/> Pages wholly or partially obscured by errata
slips, tissues, etc., have been refilmed to
ensure the best possible image/
Les pages totalement ou partiellement
obscurcies par un feuillet d'errata, une pelure,
etc., ont été filmées à nouveau de façon à
obtenir la meilleure image possible. |
| <input type="checkbox"/> Additional comments:/
Commentaires supplémentaires: | |

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	15X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

The copy filmed here has been reproduced thanks to the generosity of:

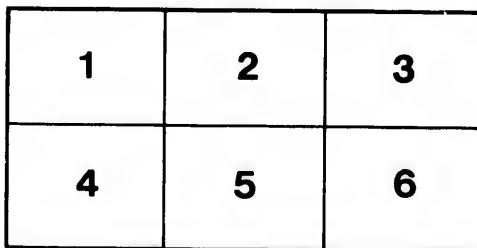
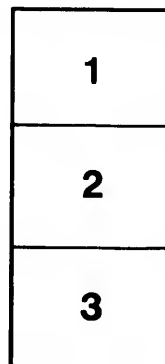
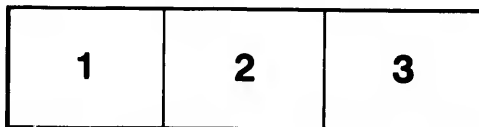
Entomology Research Library
Agriculture Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol → (meaning "CONTINUED"), or the symbol ▼ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

Bibliothèque de recherche entomologique
Agriculture Canada

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole → signifie "A SUIVRE", le symbole ▼ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

ails
du
odifier
une
nage

rata
,
elure,
à

2X

NI

1896
8

SMITHSONIAN INSTITUTION.
UNITED STATES NATIONAL MUSEUM.

NEW SPECIES OF NORTH AMERICAN COLEOP-
TERA OF THE FAMILY SCARABÆIDÆ.

BY

MARTIN L. LINELL,
Aid, Department of Insects.

From the Proceedings of the United States National Museum, Vol. XVIII, pages 721-731.

[No. 1096.]

Linell's

WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1896.

N

ca
we
scr
fou
in
de

nu
oth
Na
Br

th
er
em
sl
si
pr
de
ir
su
th
di
M
M

NEW SPECIES OF NORTH AMERICAN COLEOPTERA OF
THE FAMILY SCARABÆIDÆ.

By MARTIN L. LINELL,
Aid, Department of Insects.

IN rearranging the U. S. National Museum collection of North American Coleoptera of the family Scarabæidæ, a certain number of forms were met with among the recent accessions that evidently are undescribed and should be put on record as additions to our fauna. It was found necessary to erect a new genus for some small species occurring in the Southwest. A few notes have also been added on previously described species.

PINOTUS COLONICUS, Say.

A species widely distributed in Mexico, which differs from *P. carolinus*, Linnæus, by male having two tubercles on the front, one above the other, should be added to our Texan fauna. A specimen is in the National Museum collection, taken by Prof. C. H. Tyler Townsend in Brownsville, Texas, September 5, 1895.

PSAMMODIUS SCHWARZI, new species.

Oblong, parallel, convex, shining reddish brown; vertex, disk of thorax, and sometimes sutural region of elytra, piceous. Head moderately coarsely asperate; vertex smooth. Clypeus broadly and deeply emarginate, without teeth; sides broadly rounded; genæ obtuse, slightly prominent. Thorax wider than long, not narrowed in front; sides arcuate, the margin indistinctly crenulate; anterior angles slightly prominent, obtuse; posterior rounded; base slightly arcuate, with very deep marginal line; disk convex, sparsely and finely punctate, with an irregular group of coarse punctures (from 8 to 15) each side, and a small round fovea near the front angles. Elytra as wide at base as the thorax; humeri obtuse; sides nearly parallel; disk deeply striate, striae distinctly, somewhat crenately punctured; intervals convex, smooth. Mesosternum opaque, densely punctulate, carinate between the coxæ. Metasternum smooth, polished, flattened and longitudinally impressed

at middle. Abdomen nearly smooth, with a few coarse punctures at the sides, the last segments with strongly crenate basal margin. Femora equally incrassate, smooth. Anterior tibiae strongly tridentate; posterior moderately stout, expanded at tip, with three rows of small asperate tubercles but no oblique ridges. The posterior tarsi nearly as long as the tibia; the joints decreasing in thickness; the first one hardly wider toward apex, angular but not compressed, slightly arcuate, fully as long as the three following together which are subequal in length, a little longer than thick, constricted at base; last joint as long as third and fourth together.

Length, 3.6 mm. Seven examples from Jacksonville, Florida (collected by Mr. William H. Ashmead), are in the collection of Hubbard and Schwarz, two of which these gentlemen have presented to the National Museum.

Types.—No. 559, U.S.N.M.

This species has more strictly the generic characters of *Pleurophorus* in the hind tarsi, but must be placed near *Psammodyus bidens*, Horn, as the nearest ally in our fauna. It has the same shape as this species, but is slightly larger and lighter in color.

APHODIUS COQUILLETTI, new species.

Shining ferruginous, with lateral and basal margin of thorax and elytral suture narrowly black; tibiae and base of tarsi infusate. Head convex, finely punctate, without tubercles or clypeal ridge. Clypeus slightly rugose, concave at middle; margin broadly emarginate, with a strong acute tooth each side; sides irregularly arcuate, strongly fimbriate; genae prominent, subangulate. Thorax with the sides fimbriate, broadly explanate, foveate near the obtuse hind angles; base distinctly margined, arcuate at middle, emarginate each side at the angles; disk convex, finely, not very densely, punctate; explanate sides coarsely, rugosely punctate. Elytra glabrous, fimbriate at margin; humeri obtuse; striae fine, vaguely punctate; intervals minutely rugose, with coarse, irregularly biseriata punctures. Ventral surface finely pubescent, sparsely punctate. Anterior tibiae smooth in front, very strongly tridentate, not crenulate above; spur slender, curvate; first tarsal joint very short. Posterior femora sparsely punctate; tibiae with unequal spinules, the first tarsal joint not longer than the two following together.

This species belongs to Group I of Dr. Horn and resembles *A. militaris*, LeConte, but is larger and has the sides of thorax distinctly explanate and the posterior angles are distinct, although obtuse. It differs from *A. rudis*, LeConte, in having distinct basal margin of thorax and different punctuation.

Length, 6.5 mm. One example, Los Angeles, California, collected by Mr. D. W. Coquillett.

Type.—No. 560, U.S.N.M.

OCHODÆUS MANDIBULARIS, new species.

Oval, pale ferruginous. Mentum elongate, convex, only impressed at apex. Prosternum short, mandibles strongly but obtusely angulated on exterior margin just before middle. Clypeus with rounded, simple margin; at base with a strong acute horn; frontal suture indistinct. Front sparsely, moderately, finely punctate, not rugose; vertex without ridge. Thorax densely punctato granulate, a round impression at side and median line impressed at basal half. Elytra striate; striæ punctate; intervals feebly convex, punctate; sutural angles obtuse. Ventral surface sparsely punctate. Femora simple; hind tibiæ slender, strongly fimbriate; first tarsal joint as long as the three following, slender, slightly curvate.

Length, 7 mm. One example, collected July 19 at Winslow, Arizona (Wickham).

Type.—No. 561, U.S.N.M.

Resembles *O. frontalis*, LeConte, in form and color, but is larger and distinct by the arcuate clypeus, the dentate mandibles, the strong frontal horn, situated higher up on the front than the small clypeal tubercle in *O. frontalis*, and the total absence of vertical carina. I have seen an exactly similar specimen from Las Cruces, New Mexico, in the collection of Messrs. Hubbard and Schwarz.

BRADYCINETUS MINOR, new species.

Dark ferruginous; head, margins of thorax and elytra, suture, tibiæ and tarsi darker. It differs from *B. hornii*, Rivers, in possessing a larger antennal club; clypeus and front more narrow in proportion to their length, the former with margin less rounded, subangulate at the sides; thorax more shining, somewhat more sparsely punctate; scutellum more narrow and smooth; elytral striæ distinctly more coarsely, less closely punctate; intervals narrow, convex. Hind tibiæ, spurs, carinæ of head and thorax, the form and lateral margin of the latter exactly as in the female of *B. hornii*. Middle tarsi with first joint as long as the two following together (in *B. hornii*, as the three following).

Length, 7.5 mm. One female collected by Mr. E. A. Schwarz at San Diego, Texas, May 26, 1895.

Type.—No. 562, U.S.N.M.

Bolboceras furtus and *B. tumefactus* of our lists have the eyes completely and broadly divided and should not be congeneric with *B. lazarus*, Fabricius.

GYMNOPTYGE, new genus.

(Group *Dichelonychini*.)

Mouth parts, ventral segments, and coxæ of same structure as in *Dichelonycha*. Elytra short; humeral umbone prominent; base conjointly, broadly emarginate; side margins expanded vertically or

broadly lobed at basal half, strongly convergent posteriorly; apices separately rounded. Wings ample (in all three species). Propygidium entirely exposed. Body short, in front narrowed more or less strongly. Abdomen gibbous. Legs, and especially tarsi and claws, less elongate. Posterior tibiae short and stout, with an oblique spinous ridge behind middle on the exterior side, and lower edge serrate and spinous.

Type.—*G. hopliaformis*, new species.

GYMNOPYGE HOPLIÆFORMIS, new species.

Oval, strongly narrowed in front, brownish testaceous, head and thorax piceous, hirsute with whitish hairs, longer on ventral surface; long, appressed, white hairs on sides of abdomen and propygidium. Antennæ 9-jointed, ferruginous; club black. Head rugosely punctate; clypens short, separated by a straight impressed suture; margin strongly reflexed, truncate in front; side angles rounded. Thorax strongly convex, broader than long, emarginate at apex; sides obtusely subangulate just behind the middle; hind angles very obtuse; base arcuate; disk coarsely but not densely punctate, a long hair arising from each puncture. Scutellum broad, rounded, punctate. Elytra rugosely punctate and hairy; sutural stria somewhat distinct and traces of three or four more striae on the disk. Propygidium finely punctate, densely covered with long appressed white hairs; pygidium convex, shining, sparsely punctate at base, smooth at apex. Ventral surface sparsely and finely punctate. Metasternum at sides more coarsely punctate. Front tibiae with upper tooth obsolete; hind tibiae very stout, asperately punctate and coarsely serrate on the inferior margin; tarsi short, claws moderately long.

Length, 5 to 6 mm. Numerous examples collected by Mr. D. W. Coquillett in Mohave Desert, Kern County and Los Angeles County, California. An individual from San Diego is entirely black, but does not differ otherwise.

Type.—No. 563, U.S.N.M.

GYMNOPYGE PYGMÆA, new species.

Elongate oval, sparsely hirsute, narrowed in front, pale ferruginous. Antennal club black. Head piceous, thorax infuscate. Antennæ 8-jointed; claws of posterior tarsi short; anterior tibiae distinctly tridentate. Elytra sparsely, irregularly subseriately punctate.

Length, 5 mm. Two examples, southwestern Utah. (From Charles Palm, of New York.)

Types.—No. 564, U.S.N.M.

GYMNOPYGE COQUILLETTI, new species.

Oval, hirsute, narrowed in front, pale ferruginous. Antennal club and head piceous, tarsi slightly infuscate. Differs from *G. hopliaformis* in larger size, more elongate form, head cribrate with indistinct clypeal

suture, anterior tibiae tridentate, antennae 8-jointed, scutellum more narrow, not transverse, and hind tibiae hardly as stout. Elytra subrugosely punctate, with faint traces of striae.

Length, 7 mm. One example, Colorado Desert, San Diego County, California, collected by Mr. D. W. Coquillett.

Type.—No. 565, U.S.N.M.

DIPLLOTAXIS RUFA, new species.

Ovate, slightly broader behind, rufoferruginous, shining; glabrous above. Front and clypeus convex, cribrately punctate; the latter subrectangular, truncate, margin narrow, but distinctly reflexed. Antennae testaceous, 10 jointed, club as long as the funicle. Thorax one-half broader than long, narrowed in front, coarsely, moderately closely punctate; sides obtusely subangulate at middle, slightly sinuate before and behind; angles acute; impressions at the angles feeble. Scutellum sparsely punctate. Elytra coarsely, but not very densely, punctate; striae regular at the sides; punctures confused on the intervals; costae with a series of minute punctures. Pygidium and ventral surface coarsely punctate, the punctures with short hairs. Legs setose, femora sparsely, moderately coarsely punctate; tibiae, especially of the posterior legs, roughly punctate; the anterior tibiae with upper tooth very small, the others strong, acute; the anterior tarsi moderately long; the middle tarsi very long and the posterior tarsi short, with basal joint incrassate, roughened; claws cleft, the inferior part broader, with recurved apex.

Length, 9 mm. Three examples, Georgiana, Florida.

Types.—No. 566, U.S.N.M.

This species resembles *D. subcostata*, Blanchard, in the form of thorax, but is smaller, has the thorax less constricted and more coarsely punctured, and the convex cribrate head with truncate clypeus is entirely different.

Note.—In comparing the original descriptions, I have come to the conclusion that *Diplotaxis castanea*, Burmeister, is identical with *D. subcostata*, Blanchard, *D. georgiae*, Blanchard, with *D. liberta*, Germar, and *corpulenta*, Burmeister, with *D. tristis*, Kirby. The last-mentioned names in each case have the priority.

LACHNOSTERNA ELONGATA, new species.

(Group *Ephelida*, Horn.)

Very elongate, cylindrical, finely and sparsely pubescent; rufotestaceous, moderately shining. Head as broad as anterior margin of thorax, infusate, convex, densely and coarsely punctate, with margin moderately reflexed, distinctly emarginate. Antennae 10-jointed. Thorax rather short, evenly convex, finely and densely punctate; sides strongly arcuate and narrowed in front, parallel behind; anterior angles obtuse, posterior rectangular. Elytra subopaque, finely and densely, somewhat

rugosely punctate, discal costae feeble. Pygidium very convex, longer than broad, narrowed toward apex, rather coarsely, not densely punctate. Metasternum sparsely hairy, finely, not densely punctate. Claws with a feeble subbasal tooth.

Male.—Antennal club slightly longer than the stem. Abdomen slightly flattened; penultimate segment broadly emarginate, with the margin at middle depressed, slightly roughened; last segment truncate, vaguely concave, sparsely granulate. Fixed tibial spur very short; outer long, lunecolate. Claspers symmetrical, deeply bifid, the outer branch short, lateral, the inner branch long, straight, with a strong tooth toward apex on inner side.

Length, 16 mm. Two male examples, Florida, accession 23153 (from Charles Palm of New York).

Types.—No. 567, U.S.N.M.

LACHNOSTERNA PARVA, new species.

(Group *Ephelida*, Horn.)

Very elongate, cylindrical, dark brown, shining, glabrous above. Head piceous, short, moderately broad, deeply and sparsely punctate; clypeus short, concave, sparsely punctate, with margin moderately reflexed, feebly emarginate. Antennae 10-jointed. Thorax short, evenly convex, sparsely and not coarsely punctate; lateral margins parallel behind, strongly rounded in front; anterior angles obtuse, posterior rectangular. Elytra rather coarsely, rugosely punctate; discal costae very feeble. Pygidium narrowed toward apex, as long as broad, densely, moderately coarsely, punctate, smoother at apex. Metasternum densely and finely punctate, with long hairs. Abdomen sparsely and finely punctate. Claws with a small acute tooth before the middle.

Male.—Antennal club longer than the stem. Abdomen flattened along the middle; penultimate segment asperately rugose, broadly emarginate, obliquely plicate each side; last segment deeply concave at middle, with an elevated cusp each side near the margin within the concavity. Fixed spur very short, nearly atrophied; outer spur long, slender. Claspers symmetrical, short, undivided; apices triangular, obtusely pointed, grooved on the outside.

Length, 12 mm. Two male examples (accession 23853) from Mr. Charles Palm, of New York.

Types.—No. 568, U.S.N.M.

This species resembles *L. boops*, Horn, in size, color, and form, but has entirely different structural characters.

LACHNOSTERNA ALPINA, Schwarz, MSS.

(Group *Fusca-Fraterna*, Horn.)

Ovate, robust, broader behind, rufocastaneous, shining. Head small, slightly convex, piceous, moderately densely and finely punctate; clypeus flat, rather densely, not coarsely punctate; distinctly emar-

ginate; margin narrowly reflexed. Thorax short, broadest at base; sides broadly rounded, serrate and sparsely ciliate; apex much wider than the head; anterior angles slightly produced: punctuation evenly distributed, moderately closely placed, rather fine; punctures feebly umbilicate. Scutellum sparsely and finely punctate. Elytra not fimbriate, finely, not closely punctate, transversely rugose near the suture and behind the humeral umbones. Pygidium transverse, sparsely and finely punctate. Metasternum very densely punctulate, with long, dense, yellow hairs. Abdomen sparsely and obsoletely punctulate. Posterior tibiae slender, with very feeble ridges. Claws strongly curved; tooth submedian, small, acute. Last joint of maxillary palpi fusiform, not impressed.

Male.—Antennal club nearly as long as the stem. Abdomen flattened at middle; penultimate segment with a strong areolate ridge, distant from apical margin; last segment with a cupuliform, smooth fovea. Fixed spur spatulate, about half as long as the slender exterior spur. The claspers recall those of *L. dubia*, Smith, but are much smaller and less twisted.

This species resembles *L. errans*, but has a different clypeus, much finer punctuation, nonfimbriate elytral margin, slender tibiae and different sexual characters. (Note on habits, see Schwarz.¹)

Length, about 18 mm.

I have examined four male examples, collected near Alta, Utah, at an elevation of 9,000 to 11,000 feet, by Messrs. E. A. Schwarz and H. G. Hubbard. One has been presented to the National Museum by these gentlemen.

Type.—No. 569, U.S.N.M.

LACHNOSTERNA GRANDIOR, new species.

(Group *fusca-rugosa*, Horn.)

Robust, ovate, depressed above, rufocastaneous, shining. Head broad, very densely punctate; clypeus (as in *L. barda*, Horn) flat, densely punctate, deeply emarginate; margin narrowly but distinctly reflexed. Antennae 10-jointed. Thorax very short and broad, slightly narrowed behind, coarsely and densely, but not confluent, punctate; punctures umbilicate; median line smooth; side margins serrate, subangulate at middle and convergent in front; anterior angles subobtusely. Elytra finely punctate, slightly rugose; sutural and marginal costae well defined, the others obsolete. Pygidium rounded, sparsely, vaguely punctate. Metasternum densely punctate, with long, moderately dense hairs. Abdomen sparsely and finely punctulate. Claws with a strong median tooth. Last joint of maxillary palpi fusiform, not impressed.

Male.—Antennal club as long as the stem. Abdomen flattened at middle; penultimate segment broadly emarginate, with a strongly elevated rugulose, areolate ridge, behind which is a deep, broad excavation.

¹Proc. Ent. Soc. Wash., 11, p. 242.

tion; last segment broadly concave. Fixed spur triangular, acute; exterior spur one-half longer, slender. The claspers are unsymmetrical, highly developed, associating the species with the *hornii-rugosa* group, but they are still more twisted than in any previously described species.

Length, 25 mm.

Type.—No. 570, U.S.N.M. One example, Shreveport, Louisiana; collected by F. W. Mally.

This species, the largest *Lachnosterna* in our fauna, resembles in form *L. quadrata*, Smith, but is much larger, has different clypeus and punctation, but thorax particularly distinguishes them, being subangulate and crenulate in *L. grandior*.

LACHNOSTERNA RUGOSIOIDES, new species.

(Group *fusca-rugosa*, Horn.)

Oblong, broader behind, moderately robust, rufocastaneous, shining. Antennæ 9-jointed. Clypeus densely and coarsely punctate, acutely emarginate; margin narrowly reflexed. Front somewhat less densely, coarsely punctate. Thorax widest at middle, obtusely angulate at sides, narrowed at base, more obliquely narrowed in front; margin slightly crenulate, sparsely ciliate; disk convex, moderately closely, coarsely punctate; punctures umbilicate; the median line and small spaces on each side smooth. Elytra finely punctate, rugulose; discal costæ obsolete. Pygidium longer than in *L. rugosa*, convex, very shining, sparsely and finely punctate. Metasternum densely punctate, with sparse short hairs. Abdomen sparsely, obsoletely punctulate. Claws very strongly curved, with a strong median tooth.

Male.—Antennal club very short. Abdomen flattened at middle; penultimate segment with a straight, acutely elevated, overhanging, transverse ridge at middle, and the posterior margin broadly and deeply concave; last segment concave, asperately granulate; fixed spur very long, slender, fully equal in length to the exterior spur. Claspers after the type of *L. rugosa*, but differently twisted, and the extreme apices prolonged, acute, and recurved.

Length, 18 mm. One example, collected by myself on Long Island, New York.

Type.—No. 571, U.S.N.M.

This species resembles superficially a small *L. rugosa*, but is abundantly distinct by the characters above.

LACHNOSTERNA MINOR, new species.

(Group *balia*, Horn.)

Oblong, slightly broader behind, glabrous above, rufotestaceous, shining; head and thorax darker. Clypeus acutely, but not deeply, emarginate, moderately closely, not coarsely, punctate; margin rather narrowly reflexed. Front more densely punctate. Antennæ 9-jointed. Thorax convex, narrowed in front; sides regularly arcuate from base,

not crenate; disk moderately closely and coarsely, somewhat irregularly, punctate; basal channel distinct at the sides. Elytra alutaceous, slightly rugulose; punctures finer and more closely placed than those of thorax. Pygidium sparsely and finely punctulate. Metasternum finely and densely punctulate, with long yellow hair. Abdomen sparsely punctulate at the sides; punctures with short hairs. Claws arcuate, with a strong median tooth. Last joint of maxillary palpi fusiform, not impressed.

Male.—Antennal club as long as the stem. Abdomen longitudinally concave; penultimate segment with a deep semicircular fovea, each side of which is an oblique elevated cusp; last segment with an impressed line at middle. Fixed spur nearly half the length of the exterior one, strongly curvate. Claspers with the apices long, slender, acute, strongly curvate, simple on the right, and with a strong inferior basal hook on the left.

Length, 13 mm. One example collected by Mr. F. F. Crevecoeur, Osage, Kansas.

Type.—No. 572, U.S.N.M.

What Professor Smith¹ figures as *Lachnosterna fraterna*, female, is the female of *L. nova*, Smith. The real female of *L. fraterna* has the pubic process furcate at apex, after the manner of *L. bipartita*, but not quite as deeply.

A male of *Lachnosterna diffinis*, Blanchard, collected by Miss Etta Braly at Fayetteville, Arkansas, has the antennæ 10-jointed.

PHYTALUS CAVIFRONS, new species.

Male.—Elongate, cylindrical, shining, pale rufotestaceous. Head darker in color, broad; eyes large; front convex, moderately coarsely, not densely punctate; clypeal suture strongly biarcuate, very deeply impressed from eye to eye; clypens concave, sparsely punctate; margin broadly reflexed, rounded at the sides, slightly emarginate at middle. Antennæ 10-jointed, second joint globose, third, fourth, and fifth cylindrical; sixth and seventh transverse; club as long as the funicle. Last joint of maxillary palpi large, flattened above, subtruncate at apex. Thorax a little more than twice as wide as long, a little narrowed in front; sides arcuate at middle, not crenulate; base without impressions, finely margined; disk convex, regularly, sparsely, rather finely punctate. Elytra slightly wider than thorax, sparsely and finely punctate; sutural costa well marked; discal costa distinct, smooth; submarginal obliterated. Pygidium convex, sparsely, vaguely punctate. Prothorax beneath sparsely, not deeply, punctate. Metasternum very sparsely clothed with short hairs, sparsely punctate at middle, a little more densely at sides. Abdomen convex, very sparsely hairy, almost smooth at middle, sparsely punctulate at sides; last segment with a cupuliform fovea. Legs long and slender, anterior tibiae

¹Proc. U. S. Nat. Mus., XI, pl. LV, fig. 43.

obtusely tridentate, upper tooth small, apical tooth in the axis of the tibia, obtuse at apex. Posterior femora compressed; tibiæ with an oblique fine acute ridge at middle, furnished with long, slender, not closely set spines; basal ridge very short, with two or three small spines; apex squarely truncate exteriorly, with a dense row of fine spines; spurs movable, obtuse at apex; the exterior one somewhat longer. Tarsi, especially on the front legs, much longer than the tibiæ, clothed beneath with dense, long, somewhat stiff hairs. Claws subequally cleft, inferior part a little broader and oblique at apex.

Length, 12 mm. Two examples, collected May 24, 1895, by C. H. Tyler Townsend, at Brownsville, Texas.

Types.—No. 573, U.S.N.M.

Female.—Differs from the male described above as follows: Color darker ferruginous, infuscate on head and thorax, punctuation distinctly coarser throughout, clypeus less concave, coarsely and densely punctate. Antennal club slightly shorter. Pygidium longer, gibbose at middle. Last ventral convex, submarginate at apex. Legs shorter and stouter; anterior tibiæ with upper tooth stronger, apical tooth obliquely truncate and notched at apex; posterior tibial spurs longer, more lanceolate.

One example, collected June 11, at Brownsville, Texas, by Prof. C. H. Tyler Townsend.

Type.—No. 574, U.S.N.M.

LISTROCHELUS PULCHER, new species.

Male.—Ovate, distinctly broader behind, dark rufocastaneous, densely covered with a silvery-gray coat, except the head, disk of thorax, humeral umbones, apex of pygidium and legs; clothed with sparse, short hairs in the punctures. Front flat, densely and coarsely, not confluent punctate; clypeal suture finely impressed, bisinuate; clypeus concave, less densely punctate; margin semicircularly rounded and broadly reflexed. Antennæ ferruginous, 10-jointed; club longer than the funicle. Thorax nearly twice broader than long, narrower at apex, convex, shining on the glabrous median part, regularly, moderately densely, not coarsely, punctate; sides regularly arcuate, feebly serrate and fimbriate with long hairs; angles obtuse. Elytra moderately coarsely, sparsely punctate; costæ obsolete; margin sparsely fimbriate. Pygidium convex, sparsely punctulate, subtruncate at apex. Metasternum and the coxæ clothed with long, dense, yellowish white hairs. Abdomen sparsely and finely punctulate; second and third segments slightly concave at middle, fourth with a median transverse gibbosity, longitudinally strigose; fifth gibbous at base, on the sides with two or three oblique elevated carinae, strongly constricted on apical half; sixth short, transversely constricted, with sparse hair-bearing punctures; apical margin ciliate. Legs moderately stout, sparsely bristly; anterior tibiæ strongly tridentate. Posterior tibiæ scarcely fimbriate.

Spurs rather slender, outer broader and longer, with pellucid margin. Posterior tarsi longer than the tibia; first joint stout, constricted at base. Claws pectinate along a double margin; outer anterior claw with a strong tooth near the apex.

Length, 17 mm. One example, collected by C. M. Porter, in Skidmore, Texas, April 2, 1895.

Type.—No. 575, U.S.N.M.

Female.—Form, size, and sculpture of the male, but differs as follows: Antennal club slightly shorter. Thorax with a median white line at base. Pygidium flat, deeply, longitudinally channeled before apex, with coarse setigerous punctures at and near the margin. Abdomen very convex, broadly glabrous and polished along the middle; fifth segment constricted at the sides, with a round gibbosity at middle near apical margin and with a transverse row of setigerous punctures behind the gibbosity, interrupted at middle; sixth very short, coarsely punctate. Anterior and middle claws with a strong tooth near apex and coarsely serrate at base. Posterior claws dissimilar, the inner without tooth, pectinate, the outer like the anterior claws.

One example, from Texas, in collection of Mr. H. Ulke.

This species differs from *L. mucoreus*, LeConte, by its color, broader form, distinctly broader thorax, more concave and rounded clypeus, and the sexual characters of abdomen and pygidium.

