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## XIX

## EXPEDITION OF THE CALIFORNIA ACADEMY OF SCIENCES TO THE GULF OF CALIFORNIA IN $1921^{1}$

THE MELYRIDÆ (Lesser Flower Beetles)
BY

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The melyrid fauna of Lower California and adjacent islands is undoubtedly much larger than the present small list of species indicates. The collection considered in this paper is an humble beginning toward the study of the species. It should be the collector's first thought when taking the Melyridæ to note the food plant ; to determine in the course of his work whether each species feeds on a single species of plant or on more than one ; if the latter, under what conditions. Up to the present time only 18 species are known from the region above mentioned. The following eight new species are described at the present time:

1. Trichochrous collaris Blaisdell, new species

Small species. Form oblong, very slightly more than twice as long as wide. Color luteo-testaceous; vertex, occipital region, metasternum and side pieces, abdomen, scutellum and metanotum, a median pronotal vitta scarcely attaining base of apex, terminal joint of the labial and

[^0]maxillary palpi, and tip of mandibles, black; mesosternum more or less black. Pubescence cinereous, moderately dense but not hiding the surface; coarser and subsquamiform on the elytra, finer and linear on head and pronotum; pronotal fimbrix moderate in length and spacing.

Head about as long as wide, distinctly narrower than pronotum at middle, front almost plane between the eyes, finely and sparsely punctate, slightly shining. Antennæ moderately stout, slightly compressed; second joint subglobular, third obconical and a little longer than wide, fourth about as long as wide, fifth distinctly wider than the contiguous joints, and with the sixth and seventh prominent anteriorly, eighth less prominent, ninth and tenth transverse and prominent anteriorly, eleventh suboval and about a half longer than wide.
Pronotum about a fourth wider than long, strongly convex from side to side, rather strongly declivous at the angles; apex truncate in circular arc; apical angle rounded and finely serrulate; sides rather strongly arcuate, slightly sinuate before the apical angles, slightly oblique and convergent to angles at base; basal angles rounded or represented by a minute denticle; base broadly arcuate; disk finely, sparsely and feebly punctate, surface very slightly subasperate laterally.

Elytra oblong, base feebly sinuate; sides parallel, feebly arcuate in posterior third, apices rather evenly rounded into the sutural margin; disk evenly convex, rather suddenly declivous at sides in basal half; humeri evenly rounded; punctures small, separated by a distance equal to twice their diameter; surface very finely rugulose.

Abdomen rather thickly cinereo-pubescent. Legs relatively rather stout. Described from four specimens.

Length (type) 2 mm . ; width 1 mm .
Type: Male, No. 1306, and allotype, female, No. 1307, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 10, 1921, at Guaymas, Sonora, Mexico. Two paratypes in author's collection.

In the female allotype the abdomen is more or less pale laterally and apically; the fifth ventral segment is rounded at apex. In the male the fifth and genital segments are pale, the former truncate and feebly longitudinally impressed at middle of apex.

This species is closely related to T. exiguus Casey, but is a little more robust, the elytral pubescence a little coarser and denser and the punctures denser and larger. A set of six specimens of exiguus, collected near Phoenix, Arizona, is before me.

## 2. Trichochrous gratus Blaisdell, new species

Form small, oblong-oval, moderately convex, about twice as long as wide. Color black, shining, feebly subæneous; legs clear rufous, antennæ slightly darker rufous, last three joints more or less piceous; mouth parts pale. Pubescence abundant, rather short, decumbent, not intermixed with erect hairs, uniform in distribution and argenteo-cinereous in color. Lateral pronotal fringe moderate in length, regular and almost close-set; lateral elytral fringe slightly longer and regular.

Head about as long as wide, slightly wider across the eyes than the pronotal apex; front nearly plane, scarcely convex and just the least irregular; punctures and pubescence sparse, the former scarcely discernible from the minute reticulations of the surface; feebly tumescent just behind the middle of the epistoma, the latter glabrous and impunctate. Antennæ stout, last three or four joints slightly larger, forming a feebly differentiated club which is not compressed; not noticeably serrate; joints not in the least elongate, fifth triangular and slightly prominent anteriorly; in the female joints 2-8 are rather slender, with the club better defined.
Pronotum about a third wider than long, evenly convex, slightly widest behind the middle; apex feebly arcuate in circular arc; base broadly and distinctly arcuate; sides rather strongly arcuate in basal half and thence feebly so to apex; angles rounded, the basal broadly so; disk finely and sparsely punctate, feebly reticulato-punctate in lateral thirds; centrally the surface is microscopically reticulate.

Elytra less than twice as long as wide, oblong, moderately convex from side to side, humeri feebly prominent and rounded; disk finely punctate, punctures separated by a distance equal to about three times their diameter, surface finely rugulose. Body finely punctate beneath. Legs moderate.
Male: Narrower and parallel; antennæ stouter; fifth ventral feebly rounded at apex, slightly flattened on surface. Female: Broader, slightly ovate; antennæ less stout basally ; fifth ventral segment arcuately rounded, extreme apex slightly less so.

Length (types) 2.1-2.5 mm.; width .9-1 mm.
Agua Verde, May 26, 1921, E. P. Van Duzee, three examples; Marquer Bay, Carmen Island, May 23, 1921, J. C. Chamberlin, three specimens.

Type: Male, No. 1308, and allotype, female, No. 1309, Mus. Calif. Acad. Sci., collected May 26, 1921, by E. P. Van Duzee, at Agua Verde, Lower California. Paratypes in Academy collection and in that of the author.
T. gratus belongs to Casey's group of species, in which the body is clothed with subdecumbent hairs without trace of erect setæ. It evidently falls near prudens and indigens in Casey's table. In prudens the elytral pubescence is rather coarse; in
gratus it is fine and the upper surface of the body is finely reticulate, the pronotal sides distinctly so. T. indigens Casey occurs as far south as San Diego; my series from there was taken from the blossoms of the Mid-day-bloomer (Mesembryanthemum equilaterale Haworth) growing along the ocean beach at Coronado. It is a larger species than gratus; the antennæ are serrate internally throughout, and the pronotal and elytral fringes much shorter. In gratus the much shorter antennæ are stouter and not serrate internally. The term anteriorly or internally, when applied to the antennæ, depends on the position, whether it is extended laterally or anteriorly and parallel to the median sagittal plane of the body.

## 3. Trichochrous squamiger Blaisdell, new species

Form oblong, slightly narrowed anteriorly, about twice as long as wide; size small. Color black; legs pale rufous, antennæ similar in color basally and blackish distally; mouth-parts pale, mandibles and palpi black at tip; elytral apical margins more or less rufous. Pubescence coarse, closely recumbent, subsquamiform, dense, nearly hiding the body surface and cinereous in color; hairs rather finer on head and pronotum, also fine and moderately abundant on the body beneath. Pronotal lateral fringe short, regular and rather close-set; elytral fringe slightly longer, quite even. Both fringes pale in color.

Head slightly transverse, muzzle very short. Eyes relatively large and the facets rather strongly convex; sculpturing hidden by the pubescence. Antennæ rather long, extending beyond the pronotal base, moderately compressed, scarcely incrassate ; second joint globular, third subcylindrical, fourth, fifth and sixth feebly serrate anteriorly, fifth widest; seventh slightly stout and feebly transversely oval, tenth slightly larger and ob-long-triangular, eleventh obovate and about as long as the preceding two taken together.

Pronotum feebly transverse, about a third wider than long, evenly convex from side to side; apex truncate in almost circular arc; sides rather evenly and strongly arcuate as viewed from the side; apical angles obtusely rounded; base broadly arcuate, continuously so with the broadly rounded basal angles; disk finely punctured, sides scabrous, sculpturing more or less hidden by the pubescence.

Elytra oblong, rather less than twice as long as wide; sides parallel, humeri not in the least prominent and rounded; base slightly emarginate, apex moderately broadly rounded; disk rather evenly rounded at the sides, feebly convex on the dorsum; punctures fine, surface very nearly hidden by the squamiform pubescence.

Abdomen very finely and densely punctate. Legs rather slender. Fifth ventral segment feebly sinuate at apex in the male.

Length 1.6 mm . ; width .7 mm .
Type: Male, No. 1310, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 22, 1921, at Puerto Ballandra, Carmen Island, Gulf of California.

This small and very neat species should be easily recognized by its bicolored elytra and the coarse subsquamiform pubescence of the elytra. T. squamiger is related to apicalis Casey and should follow it in the list of species; apicalis is much stouter. Described from the unique type.

## 4. Trichochrous tortugensis Blaisdell, new species

Form oblong-ovate, slightly narrowed anteriorly, moderately convex. Color black; femora, antennæ and mouth-parts piceous; tibiæ and tarsi pale rufo-testaceous; elytral borders behind the middle more or less feebly rufous. Pubescence pale throughout, hair-like, recumbent, finer on the head and pronotum, not dense and only partly hiding the body surface. Pronotal fringe moderately stout; that of the elytra a little longer and gradually diminishing in length from humerus to apex. Hairs finer, longer and denser on the abdomen.

Head subquadrate, muzzle short; front quite plane, finely punctate, sculpturing obscured by the pubescence. Eyes moderate in size, convexity and prominence. Antennæ moderate in length, not extending to the pronotal base, slender; fifth joint triangular, subacutely angulate anteriorly, wider than the fourth and sixth, the latter smaller than those that follow, ninth and tenth feebly transverse, eleventh pointed-obovate and about equal in length to the preceding two joints taken together.

Pronotum about a fourth to a third wider than long, evenly convex, quite strongly declivous at the sides; apex truncate; sides rather strongly arcuate, slightly less so and feebly convergent anteriorly; apical angles not broadly rounded; base broadly arcuate; basal angles broadly rounded and continuously so with the sides and base; disk rather finely and moderately densely punctate, rather dull in luster and feebly scabrous, especially at the sides.
Elytra about twice as long as wide, sides diverging slightly posteriorly and widest behind the middle, apex broadly rounded; base very feebly emarginate, humeri not prominent and rounded; disk finely punctate, punctures separated by a distance equal to two to four times their diameter; surface slightly irregular from rugulosity; somewhat depressed on the dorsum and rather strongly rounded into the deflexed sides. Abdomen finely punctate. Legs moderately slender.
Male: Oblong-oval, smaller and more parallel; fifth ventral segment truncate at apex. Female: Oblong-ovate, larger; fifth ventral broadly rounded at apex.

Length (female type) 2.5 mm . ; width 1.1 mm .
Four specimens, Tortuga Island, May 11, J. C. Chamberlin; Gonzales Bay, April 29, E. P. Van Duzee.

Type: Female, No. 1311, Mus. Calif. Acad. Sci., collected May 11, 1921, by J. C. Chamberlin, on Tortuga Island, Gulf of California.
T. tortugensis in some way resembles squamiger, but the antennæ and femora are more or less piceous and the pubescence hair-like. In squamiger the pubescence is dense and squamiform and the legs are rufous throughout. The rufous tinge of the elytral apices in tortugensis appears to vary for the males are unicolorous. Both males are more or less rubbed and on that account neither is designated an allotype.

## 5. Trichochrous frigidus Blaisdell, new species

Form oblong-oval, slightly widest posteriorly; moderately strongly convex; about $21 / 2$ times longer than wide. Color black, shining; femora more or less nigro-piceous; tibiæ, tarsi and femoral apices ferruginous; mouth-parts and antennæ more or less pale, the latter blackish distally and at base. Pubescence sparse, rather inconspicuous, dual in character and flavo-fuscous in color; erect, scarcely longer than the semi-recumbent hairs and somewhat ashy on the apical declivity; semi-recumbent hairs cinereous in the scutellar region, and on the deflexed sides of the elytra and scattered along the suture; on the head and pronotal disk the hairs are finer and flavescent in color; lateral pronotal and elytral fringes pale and not close-set. On the body beneath the hairs are short, soft and moderately sparse.

Head moderate, about as long as wide, front not impressed, although the surface is slightly irregular; punctures very sparse along the median area, rather more abundant laterally; width across the eyes about equal to that of the pronotal apex. Eyes moderate in size and prominence. Antennæ moderately short and scarcely extending to the basal third of the pronotum; joints five to 11 slightly increasing in width and very slightly compressed; second joint globular, third obconical and less than twice as long as wide, fourth subtriangular, fifth triangular, sixth to tenth asymmetrical and slightly transverse, eleventh obovate, about a half longer than wide and obtuse at apex.
Pronotum slightly transverse and widest just behind the middle, quite strongly and evenly convex from side to side; apex truncate in almost circular arc; apical angles rather broadly rounded; sides rather strongly arcuate in basal two-thirds, less so and slightly convergent anteriorly; base broadly arcuate and continuously so with the sides; disk sparsely and not coarsely punctate, punctures separated by a distance equal to two to four times their diameter, slightly denser near the lateral margin, intervening surface smooth.
Elytra oblong-oval, sides slightly divergent from the base and broadly arcuate in apical two-thirds, continuously so with the broadly rounded apex, apical margin slightly serrulate; humeri not prominent and rounded; base slightly emarginate; disk rather strongly rounded laterally, slightly less convex on the dorsum and very gradually declivous posteriorly; punctures rather coarse, feebly impressed, separated by a distance equal
to two or three times their diameter, surface feebly rugulose. Abdomen finely and rather abundantly punctate; prosternum impunctate. Legs rather slender.
Female: Fifth ventral segment rather broadly rounded at apex.
Length 3 mm .; width 1.2 mm .
Type: Female, No. 1312, Mus. Calif. Acad. Sci., collected April 10, 1921, by E. P. Van Duzee, at Guaymas, Sonora, Mexico.
T. frigidus belongs to Casey's second division; erect setæ plentiful, lateral pronotal fringe regular, apical pronotal angles not prominent, pronotum feebly transverse, sides almost evenly arcuate, legs bicolored. The pubescence is rather unevenly distributed on the elytra and in this last character it differs from pruinosus Casey. It is quite different from anything heretofore described. Described from the unique type.

## 6. Trichochrous loretensis Blaisdell, new species

Form oblong-oval, slightly more than twice as long as wide, moderately convex. Color black, surface slightly shining; antennæ and palpi rufous, more or less piceous distally; legs rufo-testaceous, genital segment more or less pale in the male; mandibles pale at base. Pubescence moderately long, abundant, luteo-cinereous, somewhat silvery; consisting of longer, more or less erect and shorter, decumbent hairs; longer hairs on head and pronotum blackish, paler at the sides of the latter and not forming a regular fringe; on the elytra less erect, not very evident on the disk and posteriorly, but more distinct at the sides and forming a rather long and irregular fringe.
Head moderate in size, front not impressed, sparsely and finely punctate, epistomal region impunctate, labrum pale. Eyes moderate in size and prominence. Antennæ moderate in stoutness, compressed and extending to the basal fourth of the pronotum, bristling with pale setæ and increasing very gradually and slightly in width toward apex, feebly serrate anteriorly; second joint subglobular, third obconical, fourth subtriangular, fifth triangular and slightly larger and a little wider than the contiguous joints, $6-10$ subequal in size, subtriangular, eleventh about twice as long as wide and narrowed toward apex.
Pronotum about a fourth wider than long, rather strongly and evenly convex from side to side, more strongly so anteriorly, widest just behind the middle; apex truncate in circular arc; apical angles obtusely rounded; sides rather strongly arcuate in basal two-thirds, less so and convergent anteriorly; basal angles broadly rounded into the sides and base, the latter broadly and evenly arcuate; disk finely punctate, punctures separated by a distance equal to two or three times their diameter.
Elytra oblong, less than twice as long as wide, moderately strongly convex, slightly flattened on dorsum, apex somewhat parabolically rounded; disk punctate as on pronotum, surface slightly scabrous. Ab-
domen very finely punctate; black except apical margin of fifth segment. Legs moderate in stoutness.

Male: Narrower; fifth ventral segment broadly truncate; genital segment somewhat feebly impressed along median line. Female: Broader, slightly more robust, less parallel ; antennæ shorter and less robust; fifth ventral broadly rounded at apex.

Length (types) 3.1-3.3 mm. ; width $1.2-1.5 \mathrm{~mm}$.
Loreto, May 19, 1921, 21 specimens taken on Sebastiana. Concepcion Bay, June 17, one male.
Type: Male, No. 1313, and allotype, female, No. 1314, Mus. Calif. Acad. Sci., collected May 19, 1921, by E. P. Van Duzee, at Loreto, Lower California. Paratypes in collection of the Academy and in that of the author.
T. loretensis, according to Casey's table, falls near hirtellus Casey which it resembles in having sides of pronotum converging anteriorly, but it differs from that species in the uniform coloration of the elytra and in many details. A series of the latter species is before me which was collected at Indio and Coachella, California. Casey mentions two males from Arizona.

## 7. Trichochrous francisquitus Blaisdell, new species

Form oblong-oval, slightly narrowed anteriorly, about $21 / 4$ times longer than wide, moderately convex. Color black; legs rufous; antennæ fuscous, more or less rufous at base. Pubescence not dense, not hiding the body surface, cinereo-plumbeous in color. Hairs nearly recumbent and rather less than moderate in length, with numerous longer, erect stiff and black setæ on the head, pronotum and elytra, those on the latter intermixed with pale erect hairs, all rather longer and more bristling at the sides; those of the pronotal side margins pale and intermixed with darker ones and not forming a regular fringe; elytral fringe pale, quite regular, rather long, very gradually diminishing in length toward apex and not very closely placed. On the under surface of the body the hairs are nearly recumbent, pale, finer and not very long; shorter on the legs.

Head moderate in size, slightly transverse; front nearly plane, feebly and longitudinally bi-impressed, punctures moderately close, rather small and distinct. Antennæ short and stout, moderately compressed, very gradually increased in width distally, joints 5-10 transverse, eleventh triangulo-obovate, about a fourth longer than wide. Eyes moderately large and convex.

Pronotum about a half wider than long, a little narrower than the elytral base; base and apex broadly and rather feebly arcuate; sides evenly and somewhat strongly arcuate and continuously so with the broadly rounded angles; base about a fourth wider than the apex; disk
evenly and moderately convex from side to side, very sparsely punctate, punctures small and rather more abundant laterally.

Elytra oblong, sides parallel, less than twice as long as wide, very moderately convex on the dorsum, more strongly rounded laterally, rather abruptly deflexed at sides in basal half and slightly inflexed; humeri rounded and slightly prominent; punctures fine, separated by a distance equal to two or three times their diameter; surface somewhat transversely wrinkled and microscopically subreticulate. Abdomen finely and rather densely punctate.

Length 4 mm . ; width 1.8 mm .
Type: Female, No. 1315, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 10, 1921, at San Francisquito Bay, Lower California.
$T$. francisquitus is to be placed with those species in which the hairs of the lateral margins of the pronotum do not form a regular fringe, pubescence uniform in distribution and mainly pale in color, body unicolorous, general color black, legs red and therefore, according to Casey's table, related to crinifer and loretensis, but differing from the latter in the larger size, sparser pubescence and short, stout antennæ. Described from the unique type.

## 8. Dasytastes sparsus Blaisdell, new species

Form oblong-ovate, rather depressed on the elytral disk. Color black; legs piceo-ferruginous, antennæ and palpi of the same color. Surface feebly shining. Pubescence pale, very short and sparse, inconspicuous and of the same length throughout; pronotal and elytral fringes absent.

Head slightly transverse, muzzle short; front flat and finely granulate. Eyes moderate. Antennæ rather slender, eleventh joint slightly widest, tenth feebly transverse, joints sixth to the ninth subequal and about as long as wide, fourth and fifth subtriangular, the latter slightly wider than the contiguous joints.

Pronotum widest at basal third, about as long as wide, strongly convex ; apex feebly arcuate, rounding into the sides, the latter feebly serrulate and moderately arcuate posteriorly, less so and convergent anteriorly; base broadly arcuate; basal angles represented by a denticle; disk rather finely but not densely punctate, punctures separated by a distance equal to two or three times their diameter.

Elytra oblong-oval, very feebly convex on the disk; base truncate, humeri rather prominent, but not broadly rounded; sides slightly divergent posteriorly; apex broadly rounded, the margin feebly serrulate; punctures about the same size as those of the pronotum, surface rather transversely rugulose, extreme base smooth between the punctures and slightly impressed within the humeri. Scutellum slightly transverse and oblong. Finely and sparsely punctate beneath. Legs very slender. Fifth ventral segment rounded at apex.

Length 2 mm .; width .8 mm .
Type: Female, No. 1316, Mus. Calif. Acad. Sci., collected by J. C. Chamberlin, June 27, 1921, at Angeles Bay, Lower California.

In sparsus the pronotal sides are rather strongly deflexed and when viewed from the side appear quite strongly and evenly rounded from apex to base. D. sparsus differs from all of the described American species. It should precede remissus Casey in our lists with the following synoptic characters: Head small, pronotum deflexed at the sides and not explanate; legs ferruginous throughout and very slender. Described from the unique type.

The following synoptic statement of characters will aid in identifying the species of Trichochrous known to occur on the mainland of Lower California, on the islands to the west in the Pacific Ocean and those to the east in the Gulf of California; and in the adjacent Sonoran region of Mexico:

## SYNOPTIC TABLE

Body clothed with recumbent pubescence without intermixed erect setæ; lateral pronotal fringe distinct and regular. 1
Body clothed with recumbent pubescence, with erect setæ on the upper surface; pronotal fringe even and distinct
6
Body clothed with recumbent pubescence, with erect setæ on the the upper surface; without a regular or close-set fringe at sides of the pronotum 7

1. Legs unicolorous ............................................................ 2
Legs bicolored . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 5
2. Body black . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 3
Body more or less pale throughout; elytral pubescence coarse and subsquamiform; small species.............................. collaris, n.sp.
3. Elytra bicolored

Elytra not bicolored, usually feebly subæneous; pubescence not dense and hair-like; pronotal sides evenly and strongly arcuate with the angles; disk reticulato-punctate laterally; legs pale ........................................................ gratus, n.sp.
4. Elytra more or less broadly pale flavo-testaceous at the lateral and apical margins; legs pale.........................nvergens Lec.
Elytra faintly rufous at apical margin; pubescence dense and cinereous; elytral hairs coarse and lanceolately squamiform; very small species; antennæ short, legs pale....squamiger, n. sp.
5. Form slender and subcylindrical; elytra black; basal angles of pronotum very distinct
fulvotarsis Bland.
Form oblong-ovate; elytral apices sometimes slightly rufous;pronotal sides rather strongly arcuate; basal angles very6. Legs and antennæ rufous; pubescence dense; pronotal diskstrongly asperato-punctate ....................brevicornis Lec.
7. Pubescence of the elytra uniform in distribution ..... 9
Pubescence of elytra uneven in distribution ..... 8
8. Pubescence pale with blackish hairs in a broad pronotal vitta and in a broad, well defined stripe on each elytron not attaining the apex ; erect setæ pale; legs rufous.

$\qquad$
.varius Casey.
Pubescence for the most part flavo-fuscous, sparse and ratherinconspicuous; erect hairs scarcely longer than the semirecum-bent hairs; hairs cinereous in the scutellar region, on the de-flexed sides of the elytra and along the suture; femora black-ish; tibix, tarsi and femoral apices ferruginous; surfaceshining, with a very feeble metallic tinge........frigidus, n.sp.
9. Legs black ..... 10
Legs pale ..... 11
10. Form oblong-oval; pubescence dense, long and coarse; erect setæ mostly black and bristling .sordidus Lec. Form subcylindrical, rather narrow and convex; pubescence sparse, especially on the pronotum, moderately long, intermixed with moderately numerous long erect and black setæ; pronotal disk not rugose at the sides. ..... squalidus Lec.
11. Elytra of uniform color throughout. ..... 12
Elytra paler at apical margin ..... 15
12. Elytra black throughout ..... 13
Elytra pale rufous throughout; head and thorax black; legs

13. Larger species; erect setæ longer and black; legs pale14
Smaller species ; erect setæ pale...................loretensis, n.sp.14. Form elongate, rather narrow, convex; pronotum parallel; bodyhighly polished; legs bright rufo-ferruginous....lucidus Casey
Form oblong-oval ; pronotum moderately strongly, evenly arcuate at the sides, angles broadly rounded; long blackish setæ intermixed with paler ones on the elytra; legs pale.
$\qquad$
15. Elytral recumbent pubescence dense; legs, antennæ and labrum pale; coriaceous hind margins of the abdominal segments and tip of fifth pale hirtellus Lec.
Thrichochrous antennatus Motsch. is given by Dr. Horn as occurring on the peninsula of Lower California. It is common in the vicinity of San Francisco, California, but in the vicinity of San Diego it is replaced by indigens Casey and does not occur in Lower California. The species so referred by Dr. Horn may very possibly be one of those described above as gratus or tortugensis.

## LIST OF SPECIES

## With notes on distribution

1. Asydates explanatus Casey. 2 specimens.

Puerto Refugio, May first.
2. Trichochrous collaris, n. sp. 4 specimens. Guaymas, Mexico, April 10.
3. Trichochrous gratus, n. sp. 8 specimens.

Agua Verde, Lower California, May 26; Marquer Bay, Carmen Island, May 23.
4. Trichochrous convergens Lec.

Utah; Arizona; Margarita Island.
5. Trichochrous fulvotarsis Bland.

Oregon ? (Horn) ; Ft. Yuma, California; Calmalli Mines.
6. Trichochrous squamiger, n. sp. 1 specimen.

Puerto Ballandra, Carmen Island, May 22.
7. Trichochrous tortugensis, n. sp. 4 specimens.

Tortuga Island, May 11; Gonzales Bay, April 29.
8. Trichochrous brevicornis Lec.

Southern California; Calamajuet.
9. Trichochrous frigidus, n. sp. 1 specimen.

Guaymas, Mexico, April 10.
10. Trichochrous sordidus Lec.

Southern California; San Esteban and Magdalena Islands.
11. Trichochrous squalidus Lec. (Syn. tejonicus Lec.)

Fort Tejon, California, southward to San Julio.
12. Trichochrous rufipennis Lec. 1 specimen.

Gila, Arizona; San Francisquito Bay, May 10.
13. Trichochrous loretensis, n. sp. 1 specimen.

Loreto, Lower California, May 19.
14. Trichochrous lucidus Casey.

Lower California; Guadalupe Island.
15. Trichochrous varius Casey. 5 specimens.

Benson, Arizona; Guaymas, Mexico ; Mulegé, Lower California.
16. Trichochrous francisquitus, n. sp. 1 specimen.

San Francisquito Bay, May 10.
17. Trichochrous hirtellus Lec.

Arizona; Cape San Lucas, Lower California.
18. Dasytastes sparsus, n. sp. 1 specimen.

Angeles Bay, June 27.


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[^0]:    ${ }^{1}$ A map showing all the islands, etc., visited by this Expedition will be found in Vol. XII, No. 6, of these Proceedings, copies of which can be supplied at nominal cost.

