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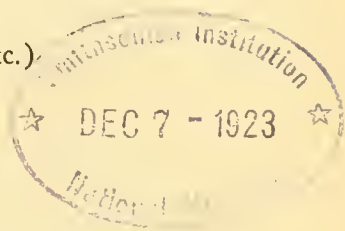
**EXPEDITION OF THE CALIFORNIA ACADEMY  
OF SCIENCES TO THE GULF OF  
CALIFORNIA IN 1921<sup>1</sup>**

THE HEMIPTERA (True Bugs, etc.)

BY

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In this paper are recorded all the Hemiptera, excepting the Coccidæ, taken by the 1921 expedition of the California Academy of Sciences to the islands of the Gulf of California. Two hundred and forty-six species and subspecies are here enumerated, of which 75 are described as new and five new genera are established. For further details regarding the localities mentioned and for the itinerary of the expedition the reader is referred to the account of the expedition by Mr. Joseph R. Slevin which precedes these papers.

Attention should be called to the fact that this work was done at the end of the dry season when insect life was at its lowest ebb, and the only Hemiptera obtainable were such individuals as had survived the vicissitudes of the dry season and the depredations of predacious birds and insects. The summer rains were just beginning as we approached Guaymas on the return home, and new forms were coming out in great numbers during our last two days' work at San Pedro Bay

<sup>1</sup>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.

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and San Carlos Bay, near Guaymas. Unless otherwise stated all insects recorded in this and other papers on the entomological results of this expedition were collected by myself.

### 1. *Pachycoris torridus* Scopoli

San Pedro Bay, Sonora. Found in great numbers on *Croton californica*. Most of these were mature but on a few plants a considerable percentage were still in the nymph stage. This series is very uniform, being about 12 mm. in length, of a polished blue-black color, with the 22 red spots found in the typical form as figured by Distant in the *Biologia*, Pl. 1, fig. 1. When teneral, these insects are of a bronze-brown, or even of a reddish, ground color.

### 2. *Camirus consocius* Uhler

Guaymas, April 11, one dead individual found under a stone in Guaymas Valley four miles north of the city. I can best distinguish this species by the carinate margin of the head which is nearly straight and becomes evanescent posteriorly, while in *porosus* it is percurrent and abruptly angled before the eye. This specimen wants the pale marks found in Arizona material, as do those of a series from Rio Balsas Gros, Mexico, received from Prof. H. F. Wickham.

### 3. *Sphærocoris punctellus* Stål

Taken on Ceralbo Island in great numbers on wild cotton. A few young were taken with the adults but most were mature. These show the same variation in markings as does *obliquus* but may be distinguished from that species by the shorter and more rounded head. A few were taken on the same plant at Puerto Ballandra, Carmen Island, May 22, but there most were immature. One from Carmen Island has the scutellum paler with a transverse spot across the base and two large contiguous, nearly round, spots on the posterior slope deep black, nearly as figured by Distant for *Homæmus proteus* on Pl. 2, fig. 4, of the *Biologia*. A similarly marked but paler individual is among the material from Ceralbo.

4. *Corimelæna cognata* Van Duzee

Agua Verde, May 26, taken in great numbers from plants of *Eucnide cordata* Kell. which had not yet become completely dry. Also taken in fewer numbers at San Carlos Bay, Sonora, Mulegé and La Paz on the peninsula and on the following islands: Angel de la Guardia (Pond Island Bay, June 30); San Lorenzo, May 9; San Francisco, May 30; and Espiritu Santo, May 31. I described this species from material taken at Kingston, Jamaica, in 1906. These specimens agree in every particular with the types now in my collection. It may be distinguished from *pulicarius* by the narrower head, stronger puncturation, oblique osteolar canal, usually pale apical margin of the scutellum and in having the inferior surface of the pronotal margins more strongly punctured and flatter, not deeply impressed.

5. *Æthus testudinatus* Uhler

Guaymas, April 7, one example.

6. *Æthus conformis* Uhler

Two females, Angeles Bay, May 5, Espiritu Santo, June 9. These agree in every particular with Uhler's description, but have the apex of the scutellum much broader and the puncturation different from Signoret's figure which probably represents a distinct species. One dead and mutilated male, evidently of this species, was taken under a stone at Guaymas, April 10.

6a. *Geotomus noctivagus* Van Duzee, new species

Black; longer and more parallel-sided than *parvulus*, but almost similarly punctured; length over twice the greatest width; head almost devoid of setæ. Length 3.3 to 3.7 mm.

Elongate, parallel-sided. Head shorter than in *parvulus*, regularly arcuated from the eyes; anterior margin slenderly reflexed, devoid of setæ; inferior setæ short; superior surface minutely, obscurely, punctured, leaving the basal area widely smooth and armed with the usual four erect setæ only, the posterior pair short; clypeal suture obscure, becoming obsolete posteriorly. Sides of pronotum parallel to beyond the middle; moderately arcuated anteriorly, slenderly reflexed, the mar-

ginal setæ very short; surface coarsely, shallowly, punctate, with a large vague smooth area either side, extended anteriorly so they nearly connect on the median line. Scutellum elongated, nearly flat, with a marginal row of close fine punctures, the disk coarsely shallowly punctured. Elytra more deeply punctured except on corium posteriorly; membrane white. Antennæ piceous brown, pale apically; segments II to III subequal, IV and V successively longer. Rostrum attaining middle of mesosternum; mesosternum opaque and slenderly carinate along the middle. Osteolar canal extended obliquely but becoming evanescent before attaining the anterior angle of the opaque area; lower surface obscurely punctured on sides of venter and anterior area of propleuræ. Legs black; tarsi pale.

Described from two examples taken at night on board ship in San Carlos Bay, July 8, whence they had flown from the shore, a half mile distant, attracted by the lights of the ship. This species apparently is allied to *crenatus* Signoret, but the head is shorter, the puncturation is coarser and more irregular, the smooth areas of the pronotum more extended and the form of the osteolar canal different.

*Type*: Male, No. 984, Mus. Calif. Acad. Sci., collected July 8, 1921, at San Carlos Bay, Sonora.

#### 7. *Platycarenum* sp.

Nearly mature young of a species of this genus, probably *clypeata*, were found abundantly on Palo San Juan at San Pedro Bay, July 7. Material taken at Guaymas, April 7, was scarcely half grown.

#### 8. *Brochymena tenebrosa* Walker

Taken at most all stations on mesquite and allied bushes and trees, *Lacodesmia* and palo blanco, Guaymas, April 7 to 9; San Esteban, April 20; Puerto Ballandra, Carmen Island, May 22; Agua Verde, May 26; San José Island, May 28, 29; Salinas Bay, Carmen Island, June 16; Tiburon Island, south end, July 4, 5. Some individuals have four or five teeth on latero-anterior margins of pronotum in place of the usual three.

#### 9. *Brochymena apiculata* Van Duzee, new species

Allied to *aculeata* Dist., but with a shorter head, armed with an acute spine on the margin before the eye, and a much shorter scutellum but little elevated at base. Length 11 mm.

Male: Head slightly broader at base of anteocular spine than long before the eyes; sides nearly parallel, armed before the eye with a sharp spine as long as apical width of tylus; subapical tooth as prominent as in *hadula* but placed further forward; lateral lobes scarcely surpassing the tylus. Pronotum more even than in *hadula* or *aculeata*; latero-anterior margins armed with about five long acute teeth, about as in *aculeata*, the humeral angles narrower with shorter teeth than in that species; anterior lobe with distinct median smooth line, the posterior coarsely nigro-punctate but not rugose. Scutellum scarcely longer than its basal width, sides very feebly excavated, apex rounded; base convex but not tumid, continued as a feeble median carina to apical fourth. Surface nearly smooth, nigro-punctate, the basal punctures arranged in about three vittæ either side of the middle. Elytral surface even, nigro-punctate, the punctures forming an obscure transverse vitta near the middle and another toward the apex, each indicated on the scutellar margin. Membrane and connexivum as in *hadula*. Anterior tibiæ but slightly expanded, about as in *aculeata*. Antennæ more slender than in either allied species, black with narrow pale base to each segment; II a sixth shorter than III. Venter pale testaceous, impunctate, wanting the black lateral vittæ found in allied species. Rostrum attaining middle of third segment of venter. Genital segment similar to that of *hadula* but the protruding claspers narrower and more acute.

Described from one male taken at San Pedro Bay, July 7. This species has a more even surface than *arborca* or either species with which it is compared and from any of which species it may be distinguished by the sharp spine before the eye.

*Type*: Male, No. 985, Mus. Calif. Acad. Sci., collected July 7, 1921, at San Pedro Bay, Sonora, Mexico.

#### 10. *Chlorochroa sayi* Stål

Las Animas Bay, May 8, two examples.

#### 11. *Thyanta perditor* Fabricius

Angeles Bay, June 26. Six specimens were taken from a bush of *Frankenia palmeri* on which they evidently had bred.

#### 12. *Thyanta casta* Stål

Angeles Bay, May 4; Escondido Bay, May 24; Puerto Ballandra, Carmen Island, May 21; Espiritu Santo Island, June 1. One example was taken at each locality. These agree in all characters and answer perfectly to Stål's description. They are smaller and less convex than appears to



have been the case with the specimen figured by Distant in the *Biologia*.

### 13. *Thyanta brevis* Van Duzee

Escondido Bay, June 14; Guadalupe Point, Concepcion Bay, June 17; Agua Verde, May 26; San Francisquito Bay, May 10. The individual from San Francisquito Bay is dark fuscous varied with pale but does not differ structurally. Such variation in color is common in all related species.

### 14. *Thyanta panda* Van Duzee, new species

Closely allied to *rugulosa* and *punctiventris*, differing by the shorter scutellum and longer osteolar canal. Length 6-8 mm.

Head as in *punctiventris*, deeply sinuated before the eyes, then parallel to the rounded apex. Segment III of antennæ three-fifths the length of II and subequal to IV. Pronotum one-third as long as wide, a little shorter than the head; carinate sides slightly sinuated, broadly produced below the subtuberculate humeri much as in *punctiventris*. Scutellum a little broader than long, sides nearly straight, apex rounded. Rostrum attaining hind coxæ. Osteolar canal broad at base, shallow, regularly tapering to an acute apex where it becomes almost merged with the surface of the pectus. Genital segment trisinuate, the claspers similar in shape to those of *rugulosa* but with the transverse apical member narrower, the exterior branch curved and blunt, not acute as in *rugulosa*. Puncturation of upper surface close and fine, much as in *brevis*.

Color clear green, yellowish on head, margins of pronotum and scutellum, almost uniform in life; beneath paler and tinged with yellow; mesosternum usually with a fuscous or black vitta either side; antennæ infuscated at apex; tibiæ and tarsi more or less blackish; membrane sometimes dotted. Some individuals are testaceous brown; nigro-punctate, these punctures forming a median vitta on the head and some irregular spots on pronotum and scutellum.

Described from five males and 10 females taken from *Heliotropium curassavicum* Linn., growing near the sea shore at Loreto, May 20. They were present in great numbers and both brown and green males were pairing with the green females.

*Type*: Male, No. 986, and *allotype*, female, No. 987, Mus. Calif. Acad. Sci., collected May 20, 1921, at Loreto, Lower California.

15. *Thyanta jugosa* Van Duzee, new species

Allied to *panda* but with greatly produced osteolar canal, a transverse ridge covering the callosities and a longer scutellum with a tumidly raised base. Length 6-7 mm.

Head longer and narrower at apex than in *panda*, narrower than in *rugulosa*; cheeks almost pointed at apex, slightly exceeding the tylus, their inner margins slightly sinuate, strongly sinuated exteriorly above the antennæ. Segment III of antennæ perceptibly shorter than II. Pronotum with a transverse raised area covering and connecting the callosities; sides still more strongly reflexed than in *rugulosa*. Scutellum slightly shorter than in *rugulosa*, longer than in *panda*; base elevated, with a strong transverse depression behind it, apex slightly reflexed, sub-angular. Dorsal surface roughly punctured. Osteolar canal very long and narrow, a little contracted near the middle. Male claspers short-triangular at apex, the sides nearly straight and apex fringed with soft hairs.

Color, green to testaceous brown, more or less varied with yellowish and fusco-punctate, at least in the darker examples, marked with a black point at inner angle of each callosity; connexivum with geminate fuscous or black spots at the incisures; membrane frequently sparsely dotted; beneath and legs pale with darker dots and punctures; mesosternal carina usually fuscous; ventral segments mostly with a row of fuscous points; femoral punctures forming an incomplete annulus at apical third; antennæ pale, impunctate, a little dusky at apex.

Described from five male and 12 female examples taken on Isla Raza, April 21. Other specimens that do not seem to differ specifically were taken as follows: Santa Inez Island, May 13; Isla Partida, April 22; Mejia Island, April 30; Angeles Bay, June 25, 26; Coyote Bay, Concepcion Bay, June 18; Ceralbo Island, June 8; San Carlos Bay, July 9; San Lorenzo Island, May 9; San Francisco Island, May 30. So far as recorded all were taken on *Atriplex barclayana*.

*Type*: Male, No. 988, and *allotype*, female, No. 989, Mus. Calif. Acad. Sci., collected April 21, 1921, at Isla Raza, Gulf of California.

16. *Murgantia munda* Stål

San Pedro Bay, July 7. Taken with young on Palo San Juan.

## PYLOPHORA Van Duzee, new genus

Allied most closely to *Bagrada* Stål, and pertaining to the division *Strachiaria* Stål (1872); oblong or somewhat ovate.

Head bluntly triangular, moderately declinate and arcuate in both diameters. Cheeks shorter than the tylus, scarcely approaching at apex; margins subsinuate and strongly reflexed; surface transversely rugose; vertex polished; eyes short-stylate; ocelli three times more distant from one another than from the eyes; bucculæ scarcely elevated. Antennæ as long as basal width of pronotum; segment I not reaching apex of head; II and III subequal. Rostrum attaining base of abdomen; mesosternum carinate. Pronotum, lateral margins reflexed, anterior scarcely calloused; surface punctured; callosities a sinuate polished line only. Scutellum nearly equilateral; frenum passing the middle; membrane with a few heavy veins; osteolar orifice very small, a mere opening between the intermediate and posterior acetabulæ, without a canal or exterior development of any kind, perhaps not functional. Venter impunctate or nearly so, without median sulcus; segment II simple. Tibiæ sulcate; segment I of hind tarsi thickened; nearly as long as II and III together.

Type of genus, *Pylophora insularis* Van Duzee, n. sp.

#### 17. *Pylophora insularis* Van Duzee, new species

Yellowish testaceous, coarsely sparsely nigro-punctate; membrane with six heavy simple nervures. Length 5 mm.

Male: Head impunctate, polished; inner margin of cheeks sinuated, not approaching at apex. Segment I of antennæ not attaining apex of cheeks; II and III subequal; IV longer than V. Pronotum short, flat, its length three-eighths its width; anterior and posterior margins parallel, the former without a collum, sides feebly sinuate; surface polished, with a very few large fuscous punctures, mostly in a line across the middle; callosities dark brown, sinuate. Scutellum narrow and rounded at apex, with a few large punctures. Elytra short and broad; costa expanded, surface coarsely but rather closely punctate; pectus with a few coarse, nearly obsolete punctures. Genital segment armed with two rounded hairy lobes either side; claspers slender, very acute and curved outward.

Color, pale yellowish testaceous, fusco-punctate, a little deeper on the head, scutellum and venter; antennæ fuscous, the segments very narrowly pale at base; I pale with a black subapical annulus; membrane pale fuliginous, veins heavy, fuscous; legs whitish, sparsely varied with fuscous; venter fusco-testaceous, the sutures and stigmatal slits fuscous.

Described from one male taken with immature individuals on *Atamisquaca emarginata* on San Esteban Island, April 19.

Type: Male, No. 990, Mus. Calif. Acad. Sci., collected April 19, 1921, at San Esteban Island, Gulf of California.

#### 18. *Pylophora punctata* Van Duzee, new species

Larger than *insularis*; closely, coarsely punctured; male claspers converging. Length 7 mm.



Male: Head about as in *insularis*, the inner line of cheeks slightly converging anteriorly; base of vertex very obscurely punctate. Segment II of antennæ decidedly shorter than III; pronotum, scutellum and elytra coarsely and closely punctured, apex of scutellum nearly impunctate; membrane with seven or eight strong nervures. Claspers converging and very acute.

Color as in *insularis* but appearing darker from the more numerous punctures; recurved margins of head and the antennæ often touched with metallic green; median line and sides of pronotum and the connexivum usually lemon-yellow. Sides of head and disk of venter marked with orange in some individuals. Female similar to male but often paler.

Described from seven male and nine female examples taken from Palo San Juan at Guadalupe Point, Concepcion Bay, June 17. A series of two males and three females were taken on *Atamisquaca emarginata* on Coronodos Island, May 18, which differ only in being smaller, in having the inner margins of the cheeks parallel, and in having the yellow markings deepened to orange.

*Type*: Male, No. 991, and *allotype*, female, No. 992, Mus. Calif. Acad. Sci., collected June 17, 1921, at Guadalupe Point, Concepcion Bay, Lower California.

19. *Dendrocoris contaminatus* Uhler

San Marcos Island, June 19; Guadalupe Point, Concepcion Bay, June 17. Here as elsewhere on creosote bush.

20. *Acanthocephala granulosa* Dallas

San Carlos Bay, Sonora; July 9, one example.

21. *Leptoglossus phyllopus* Linnæus

Guaymas, April 11, one example.

22. *Leptoglossus zonatus* Dallas

Angeles Bay, June 27; San José Island, June 10, one immature example.

23. *Narnia inornata* Distant

Guaymas, April 7, 13; Marquer Bay, Carmen Island, May 23, one example.

24. *Thasus gigas* Burmeister

Larvæ, evidently of this species, were found clustered on leaves of mesquite at La Paz, June 3.

25. *Mozena hector* Van Duzee, new species

Form and color much as in *Acanthocephala terminalis*, but larger with the humeral angles more prominent and the disk between them more convex; fuscous-brown, last three antennal segments and tarsi fulvous. Length 26 mm.; humeral width 9 mm.

Male: Head larger than in *lineolata*; segment I of antennæ distinctly longer than II, III scarcely longer than IV. Pronotum with humeral angles much less prominent than in *lineolata*, obtusely right-angled at apex, their anterior margins smooth, feebly arcuate; sides on anterior two-thirds nearly rectilinear, minutely denticulate on anterior one-third; disk moderately convex, finely punctured between vermiculate smooth lines; subbasal ridge as in *lineolata*. Rostrum attaining apex of anterior trochanters. Scutellum sparsely punctate, leaving the sides and much of the apical field smooth, the apex pale; margins of abdomen armed with sharp teeth as in *lineolata*. Beneath, mostly smooth, punctate on the propleura and about the coxæ; a few impressed spots on either side of venter in line with the stigmata. Femora much thickened with the usual double row of tubercles above and below; about two on inner line beneath larger; coxæ with a thick elbowed spine exteriorly, the trochanters with a stout blunt spine interiorly and an acute black apex below; tibiæ expanded and bent as in allied species with two large teeth and several smaller ones on apical half.

Color, fuscous brown; humeral angles, membrane and most of connexivum black. Segment I of antennæ, femora and hind tibiæ piceous; segments II to IV of antennæ and tarsi fulvous, the anterior and intermediate tibiæ darker. Beneath snuff brown with three large yellowish areas on either side of pectus.

Described from one male taken on mesquite at southern end of Tiburon Island. Both in color and form this insect recalls *Acanthocephala* but the generic characters are all those of *Mozena*.

*Type*: Male, No. 993, Mus. Calif. Acad. Sci., collected July 4, 1921, on southern end of Tiburon Island, Gulf of California.

26. *Mozena lineolata* Herrich-Schæffer

Not uncommon on mesquite; Puerto Ballandra, Carmen Island, May 22; Agua Verde, May 26; La Paz, June 4; Tiburon Island, July 4; San Pedro Bay, Sonora, July 7; Dan-

zante Island, June 15. Found resting on *Atriplex* bushes at Angeles Bay, May 5 to 7.

27. *Mozena rufula* Van Duzee, new species

Form nearly of *brunnicornis*, shorter with abdomen more depressed than in *lunata*; of an almost uniform ferruginous red. Length 19 mm.

Female: Head with a prominent pale tubercle next to the inner hind angle of the eye and an irregular smooth area before each ocellus. Pronotum sublunate; hind margin of humeri arcuate, finely serrate, their anterior margins rectilinear, their subspinose apex directed outward, the margins anteriorly with pale irregular nodules; surface closely, rugosely punctate, the region of the callosities nearly smooth. Corium sparsely, irregularly punctured. Hind femora with a double row of about eight stout teeth on apical half beneath and a double row of small tubercles above; tibiæ slightly expanded within, with a row of small teeth, two of which are larger. Basal segment of antennæ a third longer than II; III and IV subequal. Rostrum attaining rear line of anterior coxæ.

Color, nearly uniform ferruginous red; hind edge of humeri and posterior tibiæ blackish; clavus and inner apical field of corium whitish, the hind margins of the latter calloused and ivory white; a punctured whitish calloused area on the latero-posterior angles of the metapleura, sending a branch forward to above the osteolar orifice; membrane pale fuliginous.

Described from two females taken at San Pedro Bay, Sonora.

*Type*: Female, No. 994, Mus. Calif. Acad. Sci., collected July 7, 1921, at San Pedro Bay, Sonora, Mexico.

28. *Chariesterus cuspidatus* Distant

San Carlos Bay, Sonora, July 9, one example.

29. *Chelinidia tabulata* Burmeister

San Lorenzo Island, June 24, two examples taken on cholla cactus.

30. *Scolopocerus secundarius* Uhler

Concepcion Bay, June 18, one specimen taken at Coyote Cove by J. C. Chamberlin; Guaymas, April 13.

31. *Catorhintha guttula* Fabricius

Escondido Bay, May 24, June 14; San Marcos Island, June 19, J. C. Chamberlin, three examples.

32. *Catorhintha selector* Stål

Guaymas, April 11, three examples.

33. *Hyalymenus subinermis* Van Duzee, new species

Closely allied to *tarsatus* but readily distinguished by the obtuse humeral angles, the presence of a transverse vitta on the fourth ventral segment and by the characters of the hind legs and male genitalia. Length 14 mm.

Vertex transversely more convex than in *tarsatus*. Segment IV of antennæ about twice as long as I, in *tarsatus* distinctly still longer; humeral angles subacute, not prolonged in a spine; post-humeral tooth fully half as prominent as humeral; teeth on segments IV and VI of connexivum longer than those on III and V, both less spinose than in *tarsatus*. Hind femora with a single or double large tooth below, anterior to middle (sometimes wanting), and a broad plate-like keel before the apex, and between these a single small tubercle above and below, placed nearer the plate; apex of this plate grooved to receive the tibial plate, armed with a double row of small black tubercles, about two above and four below; before the apex of the femora a larger tooth with from one to three smaller ones. Hind tibiæ formed as in *tarsatus* but less abruptly expanded near base and apex, similarly crenate at middle. Rostrum attaining hind margin of intermediate coxæ. Sternum impunctate, medially clothed with short silvery white hairs, the metasternum not distinctly elevated as in *tarsatus*; osteolar canal thickened and curved anteriorly toward its obtuse apex; pectus with a broad, nearly smooth vitta, exterior to the coxæ, from base of rostrum to apical angle of metapleura, narrowly broken by the punctured base of each pleural area. In *tarsatus* this vitta is broadly broken by the punctured areas. Disk of venter smooth, ivory white, bordered by castaneous vittæ which broadly coalesce on base and apex of sixth segment, leaving a large oval subelliptical spot. Ventral genital plate strongly produced in a rounded lobe (broadly arcuated in *tarsatus*), clothed with rather long pale hairs; claspers flattish, their inner margins parallel and contiguous for nearly half their length to an oblong notch, the apical angle of which is emphasized by an almost tooth-like angle. In *tarsatus* these claspers are narrower, more convex, converging toward apex with but a feeble open notch within. Color as in pale forms of *tarsatus*, and probably similarly variable; tergum red.

Described from six males, four taken at Guaymas, April 10 and 11, one from San Carlos Bay, Sonora, July 8, and

one from San Nicolas Bay, Lower California, May 17. A larva, taken at Escondido Bay, evidently belongs here.

*Type*: Male, No. 995, Mus. Calif. Acad. Sci., collected April 11, 1921, at **Guaymas, Sonora, Mexico.**

34. *Harmostes angustatus* Van Duzee

Puerto Refugio, Angel de la Guardia Island, May 1, on *Hymenoclea*; Mejia Island, April 30; San Esteban Island, April 19; San Francisquito Bay, May 10; San Francisco Island, May 30, on *Parosela emoryi*.

35. *Harmostes croceus* Gibson

Agua Grande, Carmen Island, June 15, one example.

36. *Aufius impressicollis* Stål

San Marcos Island, June 19, one example.

37. *Corizus hyalinus* Fabricius

Guaymas, April 11; Angeles Bay, June 27; Pond Island Bay, Angel de la Guardia Island, July 1.

38. *Corizus sidæ* Fabricius

Mulegé, May 15; Guaymas, April 11.

39. *Corizus sidæ pictipes* Stål

Mulegé, May 15, one example.

40. *Corizus lateralis* Say

Guaymas, April 11; San Pedro Martir Island, April 18; Puerto Refugio, Angel de la Guardia Island, May 1, on *Eriogonum*.

41. *Corizus punctatus* Signoret

Angeles Bay, June 26, 27. Close to *C. validus* Uhler but differing in form of male claspers.



42. *Corizus parvicornis* Signoret

Guaymas, April 11, two examples.

43. *Jadera hæmatoloma* Herrich-Schæffer

Guaymas, April 13; Puerto Ballandra, Carmen Island, May 22; Coronados Island, May 18; Bay at south end of Tiburon Island, July 5.

44. *Jalysus perclavatus* Van Duzee

Mulegé, May 15, one pair; Tortuga Island, May 11, one young.

45. *Pronotacantha annulata* Uhler

Ildefonso Island, May 17, J. C. Chamberlin, two examples.

46. *Acanthophysa echinata* Uhler

San Lorenzo Island, May 9, I. M. Johnson, four examples. On *Passifolia*.

47. *Oncopeltus sanguinolentus* Van Duzee

Guaymas, April 6 to 15; San Pedro Bay, Sonora, July 7; Mulegé, May 14; Puerto Refugio, Angel de la Guardia Island, June 29; San Marcos Island, May 12; Puerto Ballandra, Carmen Island, May 22; Pond Island Bay, Angel de la Guardia Island, June 30; La Paz, June 3. Abundant everywhere on milkweeds. The extent of the black markings varies greatly as does the size and the dimensions of the membranal white spot.

48. *Oncopeltus gutta* Herrich-Schæffer

Mulegé, May 15, on purple milkweed; Guaymas, April 10 to 13, on red milkweed. All these specimens have the yellow on the pronotum in two oval spots as in *♂-maculatus*.

49. *Oncopeltus fasciatus* Dallas

Guaymas, April 11 to 15; Mulegé, May 15; Pond Island Bay, Angel de la Guardia Island, June 30.

50. *Lygæus ruficeps* Stål

San Carlos Bay, Sonora, July 9, two examples.

51. *Lygæus reclivatus* Say

Guaymas, April 11 to 15; Angeles Bay, June 25; Las Animas Bay, May 8; Pond Island Bay, Angel de la Guardia Island, June 30; Mulegé, May 14; La Paz, June 3.

52. *Lygæus melanopleurus* Uhler

Pond Island Bay, Angel de la Guardia Island, July 1; Palm Cañon, Angel de la Guardia Island, May 3; Loreto, May 20.

53. *Lygæus carnosulus* Van Duzee

Mulegé, May 15, one example.

54. *Lygæus facetus* Say

Puerto Refugio, Angel de la Guardia Island, May 1; one general example taken from dry rotten cactus by J. C. Chamberlin. At Guaymas, April 7, I took two nymphs that seem to belong here.

55. *Nysius californicus* Stål

San Marcos Island, June 19; San Pedro Bay, Sonora, July 7.

56. *Nysius ericæ minor* Uhler

Isla Raza, May 4, one example.

57. *Nysius strigosus* Uhler

Pond Island Bay, Angel de la Guardia Island, July 1.

58. *Geocoris pallens* Stål

South Santa Inez Island, May 13, taken in large numbers on a patch of mixed *Chenopodium* and *Atriplex*; Mulegé, May 15; Angeles Bay, June 27; San Pedro Martir Island,

April 18, on *Vaseyanthus insularis*. During the dry season these insects seem to congregate on any plant that remains more green and fresh.

59. *Geocoris pallens solutus* Montondon

Mejia Island, April 30; San Francisco Island, June 19, two examples.

60. *Geocoris sonoraensis* Van Duzee, new species

Allied to, and perhaps but a subspecies of *punctipes*. Head smooth, mostly pale; callosities pale, distinct; base of scutellum with transverse calloused areas and obscure carinate line, venter mostly pale on sides. Length 4 to 5 mm.

Structural characters mostly those of *punctipes*; impressed median line of vertex continued nearly to the base; callosities almost or quite attaining anterior lateral angles of pronotum; basal calloused areas of scutellum subtransverse, not extended down the sides, nearly connecting with an obscure median carinate line which becomes obsolete just before the apex.

Color as in *punctipes*, but rather paler and less tinged with fulvous; head entirely pale except for a black basal vitta which covers the posterior face of the eyes and invades the impressed area exterior to the ocelli; median impressed line on tylus more or less infuscated; pronotum entirely pale, punctured with black as in *punctipes* but wanting the curved black cloud on the callosities; scutellum pale with the black punctures segregated at base, along the middle and at apex, forming blackish clouds there, calloused areas more fulvous; venter pale, in male with the disk pale castaneous becoming blackish at base, this area bordered by a polished yellowish vitta, more or less obvious, the black lateral vitta of *punctipes* occasionally represented by a few blackish marks; in the female the disk is broadly darker. Otherwise about as in *punctipes*.

Described from numerous examples of both sexes taken as follows: South Santa Inez Island, May 13, on *Atriplex*; Mulegé, May 14, 15; Loreto, May 20; Agua Verde, May 26; San Marcos Island, June 19; Las Animas Bay, May 8.

*Type*: Male, No. 996, and *allotype*, female, No. 997, Mus. Calif. Acad. Sci., collected May 13, 1921, on **South Santa Inez Island, Gulf of California.**

61. *Isthmocoris imperialis* Distant

San Carlos Bay, Sonora, July 9. In the one example taken the pronotum is mostly black but having a median spot on the anterior margin and the humeri pale.

62. *Phlegyas annulicrus* Stål

San Carlos Bay, Sonora, three examples.

63. *Ligyrocoris nitidulus* Uhler

Palm Cañon, Angel de la Guardia Island, May 3, 1 example; San Marcos Island, May 12, two examples not fully pigmented.

64. *Ligyrocoris aurivillianus* Distant

Loreto, May 20, taken with young under mats of *Heliotropium* near the beach; Espiritu Santo Island, June 9, under a rotten cactus stem. The nine specimens taken are all much more deeply colored than described by Distant, being largely of a piceous black.

65. *Orthæa vincta* Say

San Carlos Bay, Sonora, July 9, six examples.

66. *Peritrechus fraternus* Uhler

Gonzales Bay, April 28, one example. This individual has the membrane mostly white-hyaline and the antennæ ferruginous with the apical segment dusky.

67. *Euryophthalmus cinctus* Herrich-Schæffer

Common and widely distributed on the islands; larvæ on mesquite and especially on the related *Laccodesmia*. San Marcos Island, May 12, June 19; Angeles Bay, May 7, June 26; San José Island, May 23, Mulegé, May 15; Concepcion Bay, June 17; Guaymas, April 7.

68. *Dysdercus mimus* Say

Guaymas, April 11, one example.

69. *Piesma cinerea* Say

Puerto Ballandra, Carmen Island, May 21, one example, taken on *Hyptis occidentata*, differs in no respect from material taken about Buffalo, N. Y.

70. *Corythucha morrilli* Osborn & Drake

Mulegé, May 15; San Marcos Island, June 19.

71. *Corythucha gossypii* Fabricius

San Carlos Bay, Sonora, July 9. Found breeding in immense numbers on Palo San Juan; Coronados Island, May 18, abundant on *Atamisquaea emarginata*; San Esteban Island, April 20.

72. *Corythucha hispida* Uhler

San Pedro Martir Island, April 18; abundant on *Abutilon*; Puerto Ballandra, Carmen Island, May 21; Tortuga Island, June 22.

73. *Dolichocysta obscura* Van Duzee, new species

Broad ovate, greatest width across elytra a fourth more than that of pronotum. Hood semicircularly rounded, arched, almost attaining apex of bucculae, quadriseriate on either side; membraneous sides of pronotum almost regularly arquate, biseriate anteriorly, subcoriaceous and punctate posteriorly; the three carinae uniseriate and sinuate medially, the median highest before the middle; costal area obscurely uniseriate, erect, the subcostal about six-seriate; bulbous elevation on elytra rounded, slightly flattened above, occupying three fourths of the median area and most of the width of the subcostal; costal membrane triseriate at base to uniseriate at apex. Segment III of antennae very slender, IV clavate and equal to I and II united. Rostrum hardly surpassing the prosternum; rostral groove parallel on mesosternum, abruptly doubled in width at middle coxae.

Color, pale brownish, varied with whitish and crossed by a darker band at base of hood and again behind elytral prominence; surface subopaque in places, with venation obscure; costal area and pronotal carinae with some black veins; clavate portion of segment IV of antennae embrowned; body black; femora castaneous. Length 2.75 mm. Described from the unique type.

*Type*: Female, No. 998, Mus. Calif. Acad. Sci., collected April 11, 1921, at Guaymas, Sonora.



74. *Calotingis knighti* Drake

Ceralbo, June 1. One example of this remarkable insect agrees in every respect with the description given by Drake.

75. *Gargaphia iridescens* Champion

San Marcos Island, May 12, one example.

76. *Gargaphia insularis* Van Duzee, new species

Allied to *opacula* Uhler and running to that species in Gibson's key. Length 3 mm.

Head blackish with a narrow white membraneous area below the eye; spines short, yellowish; bucculae mostly white; antennae fuscous brown; segments I and II and apex of IV black. Pronotum black; hood squarish, slightly wider than long and, with the carinae and pronotal sides, clothed with long whitish hairs; pronotal carinae as high as hood, obscurely uniseriate; paranota rounded, wider than the carinae, erect, with two rows of areolae, the basal easily overlooked; membraneous apex white. Elytra white, subopaque; costal area and sutural beyond tip of abdomen hyaline with large areoles and brown nervures; costal area biseriate, uniseriate at base and apex; subcostal triseriate; discoidal quadriseriate at widest part. Legs brown, tibiae paler. Body beneath black. Whole insect when mature covered with a white bloom which obscures some of the characters.

Described from 14 examples representing both sexes, taken on *Parosela emoryi* at Puerto Refugio, Angel de la Guardia Island, May 1. The broad hood, narrow rounded paranota, triseriate subcostal and quadriseriate discoidal areas will distinguish this species from *condensa* Gibson. The broader hood, lower and indistinctly areolate pronotal carinae, rounded paranota, and black pronotum will distinguish it from *carinata* Gibson. The shorter hood, black pronotum, erect broader paranota and higher carinae will distinguish it from *opacula* Uhler.

*Type*: Male, No. 999, *allotype*, female, No. 1000, Mus. Calif. Acad. Sci., collected May 1, 1921, on Angel de la Guardia Island, Gulf of California.

77. *Gargaphia gentilis* Van Duzee, new species

Allied to *iridescens* Champ., smaller, paler, with rounded paranota, smaller hood and shorter antennae. Length 3 mm.

Head black with the usual white subopaque margins and bucculae; spines long, testaceous; antennae yellowish; segments I and II except at base blackish, II as long as width of pronotum without the paranota. Pronotum black; hood formed as in *iridescens* but smaller and lower; carinae nearly as high as the hood, obscurely uniseriate; paranota rounded or scarcely subangulate, with two series of areoles and occasionally one or two additional areoles at widest part, together with the head and carinae clothed with long pale hairs; membranous apex soiled white. Elytra soiled white, all veins concolorous; costal area and most of subcostal hyaline; costal area regularly biseriate with a short third row at widest part; subcostal biseriate; discoidal quadriseriate. Legs yellowish. Body beneath castaneous or almost black, clothed as are the head and pronotum, with abundant yellowish white bloom.

The characters mentioned will distinguish this species from *iridescens*, especially the short second segment of antennae, which in *iridescens* is longer than the width of the pronotum including the paranota. *Gargaphia vanduzeei* Gibs. has the second antennal segment black, third nearly as long as in *iridescens*, pronotum pale, hood larger, broader posteriorly, costal area with larger areoles and no third row, and has a few fuscous veins as in *iridescens*.

Described from numerous examples, representing both sexes, taken on *Solanum hindsiana* at Puerto Ballandra, Carmen Island.

*Type:* Male, No. 1001, *allotype*, female, No. 1002, Mus. Calif. Acad. Sci., collected May 21, 1921, on Carmen Island, Gulf of California.

#### 78. *Teleonemia sororcula* Van Duzee, new species

Closely allied to *schwarzi*, darker in color with segment IV of antennae much shorter. Length 3 mm.

Antennae stout, reaching to middle of scutellum; segment I and II subequal, I thinner; IV hardly a third of III; segments II, III and IV closely set with long hooked hairs which are somewhat longer than in *schwarzi*. Pronotum as in *schwarzi*, the carinae slender and percurrent, the paranota not more prominent than the carinae. Costal area of elytra narrow as in *schwarzi*, uniseriate; subcostal obscurely biseriate, areoles of sutural area (membrane) large and milky, the apical ocellate. Ros-trum nearly attaining intermediate coxae. Color dark fuscous, becoming almost black on head and disk of pronotum; apical two thirds of tibiae whitish, tip of scutellum pale.

Described from three males and three females taken at Agua Verde, May 26.

*Type:* Male, No. 1003, and *allotype*, female, No. 1004, Mus. Calif. Acad. Sci., collected May 26, 1921, at **Agua Verde, Lower California.**

79. *Atheas tristis* Van Duzee, new species

Allied to *nigricornis* Champ., but differing in having a nearly uniseriate costal membrane. Length 2.3 mm.

Black, becoming more or less fuscous on elytra, paranota and costal area pale with fuscous veins. Antenniferous tubercles subacute; antennæ short and black as in *nigricornis*; segment I scarcely longer than II, IV nearly half of III. Narrow anterior margin of pronotum and paranota pale, the latter a little advanced and obtuse anteriorly, uniseriate; carinæ distinct, scarcely paler; triangular apical portion, like the elytra, paler or fuscous. Costal area of elytra uniseriate, briefly biseriate opposite apex of discoidal area; subcostal area regularly biseriate, the discoidal nearly attaining apex of abdomen. Legs and beneath black, the former sometimes fuscous; margin of bucculæ pale; mesosternal carinæ very feebly converging at middle. Black portion of body more or less pruinose. Differs from *fuscipes* and *nigricornis* in the uniseriate costal area and minor characters.

Described from numerous specimens, representing both sexes, taken on *Æschynomene nivea* at Coyote Bay, Concepcion Bay, June 18.

*Type:* Male, No. 1005, and *allotype*, female, No. 1006, Mus. Calif. Acad. Sci., collected June 18, 1921, at **Concepcion Bay, Lower California.**

80. *Phymata erosa severini* Handlirsch

Common everywhere; Loreto, May 19; Pond Island Bay, Angel de la Guardia Island, June 20; Puerto Ballandra, Carmen Island, May 22; Mejia Island, April 30, larvæ; Santa Cruz Island, May 27, larvæ; Coronados Island, May 18; San Francisquito Bay, June 23; Escondido Bay, May 24; Espiritu Santo Island, June 9; San Pedro Bay, Sonora, July 7; La Paz, June 5.

81. *Macrocephalus prehensilis* (Fabricius)

Guaymas, April 10; San Marcos Island, June 19; Escondido Bay, May 24.

82. *Ploiaria californica* Baker

One mutilated and immature specimen taken on San Marcos Island, June 19, seems to be of this species.

83. *Ploiariopsis sonoraensis* Van Duzee, new species

Allied to *megalops* Champ., and like that species in having the eyes large, filling the entire width of the head at the median notch, and segment II of the antennæ nearly as long as I; head unarmed above. Length to tip of elytra 6.5 mm.

Head formed as in *predator* Champ., without the tubercles found in *megalops*, but with the large eyes of that species. Segment II of antennæ a sixth shorter than I; IV a fourth longer than III; the hairs on I and II as long as thickness (not width) of femora I. Pronotum as in *megalops*; mesonotum scarcely sulcate, flattened, sides sharply carinate, hind margin and scutellum unarmed. Femora I with five longer spines (about half as long as width of femora) on outer row and three shorter ones between each pair; inner row very minute with one or two longer at base; trochanters bispinose; tibiæ I two thirds of femora as in *reticulata* Baker; tarsi attaining tip of trochanters.

Color, pale testaceous; head, median line and broad band either side on mesonotum dusky; abdomen infuscated; anterior femora varied with darker; antennæ and legs brownish, the incisures of the former narrowly pale; apex of femora and base of tibiæ on intermediate and posterior legs more broadly pale and including a faint darker annulus; hyaline apical half of elytra marmorate, with darker veins; apex of venter with a black mark.

Described from one male taken in a cavity at root of a dry and rotten *Cereus pringleyi* on San Diego Island, June 11. One larva taken on Isla Raza, April 21, and one on Espiritu Santo Island, June 9, seem to belong to this species.

*Type*: Male, No. 1007, Mus. Calif. Acad. Sci., collected June 11, 1921, on San Diego Island, Gulf of California.

84. *Oncocephalus erectus* Van Duzee, new species

Related to *nubilus* Van Duzee, but smaller and darker; fuscous, varied with paler; apical spine of scutellum, humeral and anterior angles of pronotum sanguinous; antennæ long-pilose. Length 14 mm.

Anteocular portion of head a little longer than its width at antennæ; flattened tubercles between antennæ longer than wide; tubercle behind antennal base bi-setose as in allied species. Segment I of antennæ scarcely longer than head; II almost three times I; II and lateral and

lower surfaces of I long-setose, the longer hairs as long as dorsal length of eye; III a little longer than IV. Anterior angles of pronotum produced in oblique truncate lobes; humeri produced outwardly, subspinose; anterior lobe sulcate posteriorly, posterior with two median diverging carinæ, becoming obsolete half way to hind margin. Apical spine of scutellum long, terete, up-turned and red. Ventral carina attaining apex of fifth segment, the posterior submargin of each segment with a few obsolete granules. Anterior femora with a nearly uniform row of eleven short teeth.

Color fuscous-brown, darker on scutellum and pronotum; eyes and ocellar elevation black; median line of vertex, antennal insertions and tubercles between them pale; base of pronotum with a pale area, with a smaller one near base of elytra; costal area pale including much of the membrane, each membranal areole with a vague darker cloud exteriorly, the nervures dark; wings whitish; legs pale, the femora with a broad apical and median annulus fuscous; knees pale; tibiæ with base, apex and median band fuscous; connexivum varied with ferruginous red; pleuræ piceous, the acetabulæ and broad hind margins of propleuræ pale. Described from the unique type.

*Type*: Male, No. 1008, Mus. Calif. Acad. Sci., collected May 4, 1921, at light, at **Angeles Bay, Lower California.**

#### 85. *Triatoma rubrofasciatum* De Geer

Isla Partida, June 25, in birds' nests among rocks, collected by Virgil Owen; Pond Island Bay, Angel de la Guardia Island, June 30, Virgil Owen; Pond Island, July 1, J. C. Chamberlin; Guadalupe Point, Concepcion Bay, June 17, J. C. Chamberlin. I also took the young in nests of field mice on Santa Catalina Island, Gulf of California, June 12.

#### 86. *Rasahus thoracicus* Stål

Guaymas, April 11, one example.

#### 87. *Apiomerus crassipes* Fabricius

San Francisco Island, May 30, one example.

#### 88. *Zelus (Diplocodus) lævicollis* Champion

Common and widely distributed. Mulegé, May 14, 15; Las Animas Bay, May 8; Pond Island Bay, Angel de la Guardia Island, July 1; Angeles Bay, June 25, 26; Guaymas, April 10, 11; Loreto, May 19, 20; Santa Inez Island, May 13; San Francisquito Bay, May 10; Escondido Bay, May 24;



San Marcos Island, June 19; Espiritu Santo Island, June 1. In most examples the corium has only the nervure pale at apex and the disk of the posterior lobe of the pronotum is pale.

89. *Zelus (Pindus) socius* Uhler

Isla Raza, April 21; Puerto Refugio, Angel de la Guardia Island, June 29; Guaymas, April 11.

90. *Pselliopus spinicollis* (Champion)

Puerto Refugio, Angel de la Guardia Island, May 1, one example.

91. *Fitchia spinosula* Stål

Guaymas, April 11.

92. *Sinea confusa* Caudell

San Carlos Bay, Sonora, July 9, one example.

93. *Sinea complexa* Caudell

Angeles Bay, June 25, 26; Mulegé, May 15.

94. *Sinea rileyi* Montondon

Guaymas, April 9; Marquer Bay, Carmen Island, May 23.

95. *Nabis ferus* Linnæus

Mulegé, May 14; South Santa Inez Island, May 13.

96. *Triphleps tristicolor* White

San Pedro Martir Island, April 18, on *Vaseyanthus insularis*; San Lorenzo Island, May 9; Mulegé, May 15; Santa Inez Island, May 13; Ceralbo Island, June 1, on *Conanthus*.

97. *Trigonotylus brevipes* Jakowlef

Guaymas, April 11; Mulegé, May 14, 15; San Carlos Bay, July 9, on fine grasses near water.

98. *Oncerometopus nigriclavus* Reuter

Mejia Island, April 10; a long series, mostly females and young, were taken from *Argythanus placeta* growing in a dry wash.

99. *Neurocolpus mexicanus* Distant

Guaymas, April 10; on acacia trees in great numbers, some immature.

100. *Phytocoris inops* Uhler

Guaymas, April 11; Loreto, May 19; Mejia Island, April 30; Angeles Bay, May 5; Escondido Bay, May 24. The Angeles Bay specimen is a female and may represent a distinct species.

101. *Phytocoris lenis* Van Duzee, new species

Closely allied to *inops*, a little smaller with the margin of the male pygofer unarmed. Length 4.5 mm.

Male: Vertex flat, depressed between the very prominent eyes, its width two-thirds that of the eye. Head short, produced before the eyes for a space about equal to the width of the eye at the insertion of the antennæ. Antennæ long; segment I a little longer than from front of head to apex of scutellum. Hind femora tapering from middle; hind tibiæ as long as corium and cuneus together. Sinistral clasper small, obliquely angled at base; tip not reaching the subacute apex of the ventral plate; dextral clasper about as long as the sinistral, passing apex of the segment; pygofer unarmed, wanting the dorsal tooth found in *inops*.

Colors as in *inops*, varied with fuscous and testaceous brown; inner margin of clavus, an angular spot covering apex of corium and external base of cuneus, whitish; membrane dotted as in *inops*, the vein and two marginal spots blackish; antennæ black, segment I dotted, II with base and median annulus (as wide as anterior femur) white, III and IV brown, base of III white; legs dotted as in *inops*, the hind femora blackish, dotted but hardly showing a subapical annulus, above with a broad median pale ray from base to beyond middle; chest blackish; coxæ, edges of acetabulæ and propleura whitish; sides of pronotum with a pale line behind the eyes; tibiæ black with three white bands, four on hind pair.

Female: Differs from male principally in having the vertex broader and fuller and the eyes smaller as is usual in allied species.

Described from one pair taken on mesquite at Agua Verde, May 26; one male from San José Island, May 28; one female

from San Marcos Island, May 12; and one female from Puerto Ballandra, Carmen Island, May 22.

*Type*: Male, No. 1009, and *allotype*, female, No. 1010, Mus. Calif. Acad. Sci., collected May 26, 1921, at **Agua Verde, Lower California.**

102. *Phytocoris pulchricollis* Van Duzee, new species

Elongate, cinerous, tinged with greenish on pronotum; head, scutellum and beneath fuscous, the former with white median line; antennæ annulate. Length 5 mm.

Male: Head produced for a space about equal to length of eye; vertex broad, moderately convex, nearly twice as wide as eye. Antennæ long and slender; segment I as long as head and pronotum together, a little thicker on basal half; II not quite twice as long as I; III a little shorter than II; IV longer than I. Pronotum twice wider than long, sides straight. Elytra parallel, two and a half times as long as together wide. Sinistral clasper small, appearing convex-triangular with a deep, rounded apical notch, its incurved apex concealed in situ; dextral clasper small, widened basally with an acute apex; pygofers unarmed but tumid above.

Color, cinerous with a slight tinge of greenish which is more pronounced on pronotum; head black, median line, apex of tylus and cheeks whitish; antennæ blackish, white-pubescent; segment I with three or four white dots above; II with an annulus close to base and another just beyond middle and about three dots between these, white; III with white basal annulus; pronotum with white median line, varied with fuscous anteriorly, with a discrete crenulate subbasal fuscous line; elytra more or less clouded with fuscous along inner and outer areas of corium and on claval nervure and apex of cuneus; tip of embolium and cuneus black; membrane white, closely irrorate with fuscous leaving two white marginal spots beyond tip of cuneus, veins fuscous at base, the inner vein continued as a fuscous line well toward apex of membrane; scutellum black with apex and small spot either side pale fulvous; mesosternum, pleuræ and venter largely fuscous; legs whitish, femora infuscated at apex; tibiæ dotted, the anterior blackish, biannulate with white; rostrum pale, attaining middle of venter. Whole surface rather densely clothed with soft white deciduous hairs intermixed with a few black ones.

Female differing by having the brown markings more extended.

Described from two males taken on San Marcos Island, May 12 and June 20; one pair from Puerto Ballandra, Carmen Island, May 21, 22, and a teneral female from Marquer Bay, Carmen Island, May 23.

*Type*: Male, No. 1011 (and *allotype*, female, No. 1012), Mus. Calif. Acad. Sci., collected June 19, 1921, on **San Mar-**

cos Island, Gulf of California. Allotype, female, No. 1012, collected May 22, 1921, at Puerto Ballandra, Carmen Island, Gulf of California.

103. *Phytocoris geniculatus* Van Duzee

Angeles Bay, May 5, on *Frankeria palmeri*; San Esteban Island, April 19, three immature specimens that apparently belong here.

104. *Phytocoris loretoensis* Van Duzee, new species

Aspect of *Compsocorocoris* Reuter; allied to *geniculatus*, a little shorter with the costa slightly more arcuate; cinerous-testaceous, varied and punctate with brown, with a pinkish aspect; pronotum discretely dotted. Length 5 mm.

Male: Vertex moderately convex, one half broader than the eye; front prominent; head short produced beyond the eyes for a space equal to their width. Segment I of antennæ a little shorter than the combined length of head and pronotum; II as long as from base of scutellum to tip of clavus; III equal to I. Pronotum two and a half times as wide as long, posterior submargin with four low, tumid elevations. Elytral costa feebly arcuate. Color testaceous gray, more or less tinged with pinkish; vertex and anterior lobe of pronotum yellowish with a few red marks and dots; posterior disk washed with fuscous with many discrete fuscous punctures each carrying a black hair; posterior submargin with a four-lobed fuscous vitta behind the nodular elevations. Scutellum with a few punctures and two black dots before the apex; elytra washed with pale rose and obviously punctate; costa and apex varied with fuscous, the latter with two black points on inner margin of cuneus; membrane white, sparsely irrorate with pale fuscous, forming a few clouds on margin, veins irrorate with red; antennæ obscurely dotted on segment I, II with two broad faint bands; beneath varied with rufous-brown, the mesosternum fuscous; sides of venter with an incomplete blackish vitta, beginning as a geminate line behind the eye; femora dotted with brown, anterior and intermediate tibiæ faintly triannulate, the posterior dotted. Surface with mixed black and white hairs.

Described from 12 females taken on *Lycium richii* at Loreto.

*Type:* Female, No. 1013, Mus. Calif. Acad. Sci., collected May 20, 1921, at Loreto, Lower California.

105. *Phytocoris vanduzeei* Reuter

Gonzales Bay, April 29. The one individual taken, a female, has the membrane almost entirely hyaline.

106. *Creontiades femoralis* Van Duzee

Abundant everywhere on Salicornia. Isla Raza, May 4, just reaching maturity; Loreto, May 20; Santa Inez Island, May 13; San Francisco Island, May 30. The red tints on the elytra are mostly wanting or are replaced by green, indicating perhaps a condition of immaturity.

## CALYPTODERA Van Duzee, new genus

Allied to *Charagochilus* with which it agrees in aspect and general characters except for the broad overlapping head. Head, pronotum and scutellum moderately polished, closely, obsoletely rastrate-punctate; the elytra subopaque, more deeply rastrate; whole surface irregularly white-pubescent with a few brown hairs intermixed. Head nearly vertical, broad and with the eyes overlapping the anterior angles of the pronotum, leaving the collum exposed for a short space at the middle; its width, when viewed from above, about three times its length and twice the length of the pronotum; when viewed from before its width is one fourth greater than its length; vertex transversely impressed before the complete basal carina; front moderately convex. Antennæ as long as body to base of cuneus; segment I attaining apex of head; II three times the length of I, III and IV subequal to I. Pronotum moderately convex; humeri prominent; antero-lateral margins rectilinear. Scutellum equilateral, strongly convex. Elytra broad and short; costa strongly arcuate; veins obsolete, cuneus abruptly declinate; membrane biareolate. Segment I of hind tarsi below twice the length of II and equal to III; orifices distinct; rostrum passing middle of venter. Genotype, *Calyptodera robusta* Van Duzee, n. sp.

107. *Calyptodera robusta* Van Duzee, new species

Yellowish testaceous; clypeus, except at sides, a large spot covering disk of vertex and including a pale median line and the sutures of the cheeks castaneous; an arcuate line above the base of the antennæ blackish; antennæ pale; pronotum mostly castaneous brown, edges, collum and an angular spot behind the callosities pale, region of the callosities otherwise castaneous; scutellum varied with brown; elytra brown with a large, vague pale costal area at base, another beyond the middle and a smaller one on the cuneus; membrane fuscous with many irregular whitish hyaline spots, the areoles castaneous brown, veins white at apex; beneath whitish; mesosternum blackish; margin of mesopleura croceus; sides and apex of venter and hind tibiæ with a few brown points, the femora with three or four blackish dots near apex; rostrum blackish at apex. Length 4 mm.

Described from two females beaten from a tree of *Sideroxylon leucophyllum* at Palm Cañon, Angel de la Guardia Island, May 3. This insect is so distinct it seems safe to describe it from one sex only. In Reuter's keys it runs to



Charagochilus and in mine of 1916, where Charagochilus is not included, it runs to Pæciloscytus, from both of which it is at once distinguished by the broad overlapping head.

*Type:* Female, No. 1014, Mus. Calif. Acad. Sci., collected May 3, 1921, on Angel de la Guardia Island, Gulf of California.

108. *Lygus hospitus sonoraensis* Van Duzee, new subspecies

Differs from Distant's description of *hospitus* in wanting the fuscous apex to segment II of antennæ and in possessing three pale spots on the membrane, one large median and a smaller round one either side beyond apex of cuneus. From *olivaceous* Reuter it differs in wanting the fuscous apex to segment II of antennæ, in having the pronotum pale anteriorly, in the maculate scutellum and in having a broader apical band on the corium and the cuneus dusky except at apex; frequently, also, the median area of the corium is castaneous brown. It is possible these all are local races, or subspecies, of one species. Frequently the scutellum in *sonoraensis* is castaneous with three pale spots. Length 4 mm.

Described from numerous examples taken on mesquite at the following localities: San Nicolas Bay, May 16; Agua Verde, May 26; Loreto, May 19; Concepcion Bay, June 17; Mulegé, May 15.

*Type:* Male, No. 1015, and *allotype*, female, No. 1016, Mus. Calif. Acad. Sci., collected May 16, 1921, at Agua Verde, Lower California.

109. *Cimatlan delicatum* Distant

Mulegé, May 14, one example. In this the pronotum is variegated with pale much as are the elytra.

TYLOCAPSUS Van Duzee, new genus

Aspect of Chius Dist., but pertaining to the Bryocorinæ. Elongate, parallel, subopaque, sparingly clothed with short hairs. Head cylindrical, vertical before; eyes small, placed at about middle of sides of head, leaving a neck as long as the eyes and as wide as anterior margin of pronotum; front tumid and rounded between the antennæ, overlapping base of clypeus; apex of head as seen from side subacute, exceeding the eyes by a space as great as the length of the eye; clypeus prom-

inent with deep incisures at base. Segment I of antennæ attaining apex of head, moderately incrassate; II twice the length of I; III two thirds of II; IV equal to I. Pronotum nearly flat, base broadly excavated, sides rectilinear collum narrow, discrete; humeri subacute; scutellum equilateral, moderately convex. Elytra parallel, exceeding abdomen by one third their length. Membrane uniareolate. Rostrum attaining intermediate coxæ; segment I reaching base of head. Tarsi nearly cylindrical, a little flattened at apex when immature. The produced cylindrical head, overhanging front, and short basal segment of antennæ will distinguish this from any allied genus. Genotype *Tylocapsus lopezi* Van Duzee, n. sp.

110. *Tylocapsus lopezi* Van Duzee, new species

Deep fuscous; antennæ except base, legs, abdomen and elytra whitish, the latter with clavus and large spot at apex fuscous. Length 2 mm.

Head and pronotum usually with a pale median line; segment I of antennæ deep black, remaining segments whitish; clavus and a large squarish spot on corium at claval tip fuscous, this spot reaching the costa narrowly; tip of cuneus fuscous; membrane pale fuscous, veins darker, margin with roundish clear spots at apex of cuneus; rostrum, legs and abdomen pale, the latter more or less widely black along middle and at apex; tips of tarsi darker; upper surface clothed with scattering pale hairs.

Described from numerous examples taken as follows: Agua Verde, May 26, on *Perityle robusta*; Tortuga Island, May 11; Pond Island Bay, Angel de la Guardia Island, July 1; San Francisco Island, May 30; Palm Cañon, Angel de la Guardia Island, May 3, on *Eucnide cordata*, mostly immature at that time. It affords me pleasure to name this interesting species after Señor Carlos Lopez, of the Mexican Museum, who was a member of our party and whose unfailing courtesy made the discomforts of the expedition seem much less annoying.

*Type*: Male, No. 1017 (and *allotype*, female, No. 1018, from Agua Verde), Mus. Calif. Acad. Sci., collected July 1, 1921, at Pond Island Bay, Angel de la Guardia Island, Gulf of California.

111. *Dicyphus disclusus* Van Duzee, new species

A small pale species with a round blackish spot before the apex of each elytron and a few dark marks on head, antennæ and scutellum. Length 2.5 mm.

Head polished; eyes smaller and vertex more convex than in *vestitus*; neck behind the eye a little less than diameter of eye; segment I of antennæ attaining apex of head; II scarcely three times I; III subequal to II; IV longer than I; sides of pronotum nearly rectilinear; callosities not so prominent as in allied species; elytra together a third as wide as long, subhyaline, surface clothed with scattering stiff white hairs. Color, creamy white; head with large discal spot above and broad base fuscous, or fuscous with a large spot against each eye and the cheeks pale; pronotum dusky on base and at tips of humeri; basal angles, sometimes divided, and median line on apical lobe of scutellum fuscous; elytra with a large round spot on corium opposite tip of clavus and almost touching costa and tip of cuneus fuscous; apical third of clavus faintly dotted with brown; membrane pale fuliginous with large pale spots beyond apex of cuneus; antennæ with segment I broadly, II near base and apex and III and IV faintly, smoky; tips of rostrum and tarsi brown; inferior margin of pronotum and apex of male abdomen at times embrowned.

Described from numerous specimens taken from *Solanum hindsianum* on San Lorenzo Island, May 9.

*Type*: Male, No. 1019, and *allotype*, female, No. 1020, Mus. Calif. Acad. Sci., collected May 9, 1921, on San Lorenzo Island, Gulf of California.

#### 112. *Dicyphus diffractus* Van Duzee, new species

Allied to *disclusus* but paler and wanting the round elytral spots and the dark markings of the head. Length 2.5 mm.

Head narrower than in *disclusus*, the vertex more produced between the antennæ and exceeding the clypeus, the suture very deep. Segment I of antennæ longer; II scarcely more than twice I; III a little shorter than II; IV equal to I. Color, testaceous white; segment I of antennæ fuscous when mature; clypeus and vertex more embrowned; pronotum pale brownish, whitish along either side and less obviously so on the median line, callosities tinged with yellow. Scutellum dusky with pale median line; elytra subhyaline, apical half of clavus irrorate with pale brown, its scutellar and commissural margins slenderly fuscous; corium sparsely irrorate within, forming a small dusky spot at inner apical angle; posterior margin of cuneus at tip embrowned; membrane faintly smoky, with brown nervures and whitish spot at apex of cuneus; tip of rostrum and tarsal claws fuscous.

Described from one male and three female examples taken at Puerto Ballandra, Carmen Island. This species seems to connect *Dicyphus* with *Engytatus*, having the head shorter behind the eye than in *Dicyphus*.

*Type*: Male, No. 1021, and *allotype*, female, No. 1022, Mus. Calif. Acad. Sci., collected May 21, 1921, at Puerto Ballandra, Carmen Island, Gulf of California.

113. *Engytatus geniculatus* Reuter

Guaymas, April 11, one male. This species was described from Texas and has been reported from Florida. I have taken it at San Diego, Calif. Dr. Reuter fails to mention a remarkable male character, the ventral aspect of the genital segment being greatly produced and divided into two long curved horns.

114. *Lopidea eremita* Van Duzee, new species

Form and aspect of *hirta* Van D., but with male claspers approaching those of *occidentalis* Van D.; broad oval, dark reddish becoming black on head and pronotum, costal area clearer red. Length 5.5 mm.

Surface opaque, dull, sparsely clothed with short stiff black hairs which become pale in places; costa greatly arquated, broadly explanate. Pronotum narrow anteriorly, sides nearly rectilinear, collum little produced between the callosities. Base of vertex deeply impressed. Segment II of antennæ a seventh shorter than basal width of pronotum; vertex and clypeus more prominent than in *nigridca*. Sinistral male clasper as seen in situ broad, the apex hidden under the base of the dextral; dextral still broader near the base, bent at right angle across the apex of the genital segment, the transverse portion very long, tapering to a subacute apex which passes the sinistral side of the pygofer. In *occidentalis* this clasper is as long but much broader, and the sinistral clasper is also broader.

Color above, black or nearly so; elytra dusky sanguineous with the costa broadly brighter red, or in the male with the elytra mostly red; membrane pale fuliginous, veins red to fuscous; collum in part and a large triangular spot on the vertex against each eye pale yellow; antennæ and legs black; beneath pale yellowish varied with fuscous, especially on sternum and disk of venter; male genitalia dull croceous; cheeks pale.

Described from two male and three female examples taken on palo tinto (uña de gato) on Monserrate Island, May 25.

*Type:* Male, No. 1023, and *allotype*, female, No. 1024, Mus. Calif. Acad. Sci., collected May 25, on **Monserrate Island, Gulf of California.**

115. *Hadronema infans* Van Duzee

Puerto Refugio, Angel de la Guardia Island, May 1, on *Parosela emoryi*.

116. *Orthotylus vigilax* Van Duzee, new species

A small green species with large eyes, narrow vertex and short antennæ. Length 3 mm.

Male: Head short, transverse, with eyes twice wider than long; vertex much narrower than width of an eye, depressed, basal carina obtuse, obsolete at middle; front, viewed from above, scarcely advanced before the eyes; antennæ rather short and stout; segment I attaining apex of head; II three times as long as I; III shorter than II. Pronotum twice as wide as long, strongly, roundly, narrowed anteriorly; sides carinate, feebly sinuate before the subacute humeral angles. Rostrum attaining middle of mesosternum. Sinistral clasper very small, apex curved, acuminate; dextral very slender, curved over to meet the sinistral.

Color, pale dull yellowish green, deeper on the marginal veins of the elytra and membranal nervures, becoming yellowish on the head, anterior lobe of pronotum, antennæ, legs and beneath; tip of rostrum and tarsal claws black; surface clothed with scattering pale hairs. Described from the unique type.

*Type*: Male, No. 1025, Mus. Calif. Acad. Sci., collected May 20, 1921, at Loreto, Lower California.

117. *Parthenicus candidus* Van Duzee

Puerto Ballandra, Carmen Island, May 21, one example taken on a mint-like plant.

118. *Parthenicus mundus* Van Duzee, new species

Allied to *candidus*, but more testaceous with the hind femora closely fusco-punctate and the antennæ immaculate except for a single annulus on segment I. Length 3.5 mm.

Testaceous, slightly tinged with pink, clothed with long white deciduous hairs, with a cluster of black scales on base of scutellum and at apex of clavus; vertex tinged with fulvous; sutures of cheeks sanguineous; pronotum with a few sanguineous dots and four or five are on the membranal veins, the membrane faintly enfumed and coarsely fusco-punctate; antennæ brownish testaceous with a narrow ciliate sanguineous annulus at apical third of segment I; beneath fusco-sanguineous, paler on base of venter; coxæ and legs whitish, femora sanguino-punctate, the points on the posterior pair darker and subconfluent; tibiæ with large dots at base of the bristles; tarsi yellowish, claws black. Dextral male clasper long, slender, curved, armed dorsally with about four long bristles; sinistral clasper small as seen in situ, scarcely reaching end of segment. In *candidus* the sinistral clasper is broader and acuminate at apex.



Described from four male and six female examples taken as follows: Agua Verde, May 26; Angeles Bay, May 5; Santa Cruz Island, May 27; San Lorenzo Island, May 9; San Francisquito Bay, May 10, all on *Atriplex*. The female from San Lorenzo Island is whitish with markings nearly obsolete and is apparently immature.

*Type*: Male, No. 1026, and *allotype*, female, No. 1027, Mus. Calif. Acad. Sci., collected May 26, 1921, at **Agua Verde, Lower California.**

#### 119. *Parthenicus psalloides* Reuter

San Lorenzo Island, May 9; Mejia Island, April 30.

#### 120. *Parthenicus percroceus* Van Duzee, new species

Small, ovate, uniformly reddish croceus, membrane deep fuliginous with small clear spot at tip of cuneus. Length 2.7 mm.

Head with eyes two thirds the greatest width of pronotum; sides of pronotum gently arcuated; elytral costa quite regularly arcuated, the membrane slightly exceeding the tip of the abdomen. Color almost uniformly croceus-red, touched with sanguineous on the scutellum, base of elytra and cuneus; membrane deep smoky with a hyaline mark at apex of cuneus, the nervures sanguineous at apex; antennæ and legs paler, the tibiæ minutely dotted at base of spines; claws black; Rostrum attaining middle of venter, tipped with black; tibial spines longer than width of tibia; surface sparsely clothed with long pale hairs with black scales on commissure of corium and inner margin of cuneus.

Described from four females taken on creosote bush at Guadalupe Point, Concepcion Bay, June 17, and one female from Salinas Bay, Carmen Island, June 16. This species is proportionately broader and more oval in outline than our other described species, with somewhat the aspect of a miniature *Oncotylus* but the connivent arolia and saltatorial hind femora place it here.

*Type*: Female, No. 1028, Mus. Calif. Acad. Sci., collected June 17, 1921, at **Guadalupe Point, Concepcion Bay, Lower California.**

#### 121. *Parthenicus picicollis* Van Duzee

San Francisquito Bay, May 10, one example.



122. *Parthenicus ruber* Van Duzee

Agua Verde, May 26, one example.

123. *Oncotylus biguttulatus* Uhler

San Pedro Martir Island, April 18, numbers taken, with their young, on a vine of *Vaseyanthus insularis* growing in the shade of a giant cactus, well up toward the highest point of the island. Although closely mimicking a *Psallus* in form and marking it has the prosternal xyphus distinctly margined and is an undoubted *Oncotylus*. I took one specimen of this species at Mussey's, near San Diego, California, April 11, 1914, which differs from the present examples and from the types of the species in no way except in being larger and more heavily marked.

124. *Oncotylus nuperus* Van Duzee, new species

Aspect of *guttatipes*, a little smaller and having the dotting on the legs nearly obsolete and the tibial spines pale; pale green with minute pale pubescence. Length 4 mm.

Oblong-ovate, moderately polished, clothed with minute pale hairs which become brownish on the cuneus and costa. Head three fifths the humeral width of pronotum, nearly vertical; vertex and front together convex; surpassing the eye for a space about equal to width of eye. Antennæ reaching the tip of corium; segment I passing apex of head; II four times the length of I, a little shorter than width of pronotum; III three fourths of II; IV one half of III. Pronotum transverse, its length nearly one half its width; sides strongly oblique, the anterior angles much rounded; Elytra short, the tip of abdomen reaching midway from tip of corium to apex of membrane. Legs and antennæ minutely white pubescent; tibial bristles weak and pale. Male claspers very small and obscure.

Color pale green, tinged with yellow on head and becoming whitish on elytra; antennæ and legs pale, the former testaceous toward apex; femora faintly dotted with brown; tibiæ with small dots at base of the bristles; tarsal claws black.

Described from 12 examples taken on *Salicornia* on San Francisco Island, May 30. A larger series, taken on *Salicornia* at Tepoca Bay, April 25, differ in being a little smaller and more testaceous in color, possibly not fully pigmented; three from Santa Inez Island, May 13, are similar to those from Tepoca Bay. In my own collection is a considerable

series taken by me at Pueblo and Grand Junction, Colorado, in July, 1900, that are a little larger than the type and more yellowish in color but apparently not distinct.

*Type:* Male, No. 1029, and *allotype*, female, No. 1030, Mus. Calif. Acad. Sci., collected May 30, on **San Francisco Island, Gulf of California.**

#### 125. *Psallus flora* Van Duzee, new species

Of a clear lemon-yellow with a black dot on margin of membrane, the antennæ white dotted with black. Length 3.5 mm.

*Male:* Form of *guttulosus* nearly, broader and more ovate than *juniperi* and its allies. Head three fifths the basal width of pronotum; vertex broad, slightly convex, a half wider than an eye; front and clypeus together feebly arcuated, exceeding the eye for a space equal to the median width of the eye. Antennæ short, as long as the elytra to middle of cuneus; segment I attaining apex of head; II as stout as I, three fourths as long as basal width of pronotum; III one half of II; IV one half of III. Pronotum broader anteriorly than in allied species, sides rectilinear, anterior angles scarcely rounded. Elytral costa gently arcuated, abdomen passing apex of cuneus. Rostrum attaining intermediate coxæ. Claspers much as in allied species, the dextral rather large and obtuse at tip.

Color, deep lemon-yellow or almost golden at times, beneath with femora paler; antennæ, coxæ, tibiæ and tarsi whitish; segment I of antennæ with a black bristle and dot at apical third; II, III and IV with base narrowly fuscous; II with two geminate dots above; inner angles of cuneus with small clusters of black hairs; membrane faintly fuliginous, with a broad hyaline area across at apex of cuneus, divided by a black marginal spot connected by a slender line to apex of the nervures; these nervures yellow at apex, fuscous and clouded exteriorly; tibiæ with stout black spines set in minute black points; tarsi tipped with black; hind femora faintly, irregularly dotted with brown at apex, these dots showing only in fully mature individuals. Surface sparsely clothed with fuscous hairs.

Described from numbers of both sexes taken at Mulegé, May 14, on the yellow flowers of *Wislizenia refracta*, the color of which they match exactly. It is a beautiful species and very distinct by its bright yellow color.

*Type:* Male, No. 1031, and *allotype*, female, No. 1032, Mus. Calif. Acad. Sci., collected May 14, 1921, at **Mulegé, Lower California.**

126. *Psallus seriatus* Reuter

Monserrate, June 13, one example. This individual agrees with a series taken at San Diego, Calif., and answers perfectly to Reuter's description except that the tibiæ are distinctly nigro-punctate at base of spines, at least on basal one third. The sinistral clasper of the male is produced in an acute spine either side the base of the channel for the reception of the ædeagus.

127. *Psallus aspersus* Van Duzee, new species

Aspect of *sulphureus* and *pantherinus* but smaller, with the membrane dotted uniformly with the elytra; form ovate-oblong. Length 2.5 to 3 mm.

Male: Head broader, eyes larger and pronotum shorter than in *sulphureus*, more as in *pantherinus*; produced before the eyes for a space less than the width of the eye. Pronotum twice as long as broad, its apical width two thirds its basal. Elytral costa moderately arcuated. Rostrum attaining apex of hind coxæ. Segment I of antennæ scarcely passing apex of head; II as long as basal width of pronotum; III about one half of II; IV equal to I. Sinistral clasper small; dorsal basal angle forming a short tooth, apical angle obtuse, broadly rounded (in *pantherinus* this clasper is long with each dorsal angle produced in a curved horn); dextral clasper broad with its apex truncate.

Color, pale greenish gray, becoming somewhat fulvous gray on pronotum and scutellum and testaceous-brown on the head; upper surface thickly dotted with rather large fuscous points which become smaller on the pronotum, scutellum and costal region of the elytra; head undotted; membrane milky hyaline, the dots somewhat confluent near its apex and more sparse at base, the veins pale; femora strongly dotted apically, especially on hind pair; tibiæ strongly dotted at base of the pale bristles; tarsal claws black; antennæ pale testaceous, immaculate except for a black dot near apex of segment I; upper surface in fresh specimens thickly clothed with long pale hairs. The female differs as usual in having the eyes smaller and segment II of antennæ thinner. It has the base of the oviduct black.

Described from 19 examples taken on Ceralbo Island, June 6, 7; two from Monserrate Island, May 25; one from Puerto Ballandra, Carmen Island, May 21; one from San José Island, May 29; one from Agua Verde, May 26; and one from Santa Catalina Island, June 12, all taken on palo tinto. The closely, regularly dotted upper surface will distinguish this species.

*Type:* Male, No. 1033, and *allotype*, female, No. 1034, Mus. Calif. Acad. Sci., collected June 6, 1921, on Ceralbo Island, Gulf of California.

128. *Psallus gregalis* Van Duzee, new species

Aspect of *seriatus* somewhat, much smaller, paler and less narrowed anteriorly; whitish and pale pubescent, very faintly dotted. Length 2.3 mm.

Male: Head short, nearly vertical, with the eyes three fourths the basal width of pronotum, viewed from above twice wider than long; produced below the eye for a space equal to greatest width of eye. Pronotum short, more than twice wider than long, sides rectilinear, anterior angles briefly rounded. Segment I of antennæ just passing apex of head; II nearly as long as basal width of pronotum; III one half of II; IV two thirds of III; abdomen reaching to tip of cuneus. Sinistral clasper ovate, unarmed above; dextral elongate, acuminate, just passing apex of genital segment.

Color, whitish, white pubescent above; pronotum anteriorly tinged with yellow; tergum yellowish, the color showing through the subhyaline elytra; elytra very faintly dotted with brown, especially on costal half; membrane whitish hyaline, the dots larger and irregular toward apex, veins white; face and femora tinged with testaceous, the apex of hind femora very faintly dotted; tibiæ with minute black points at base of the white bristles; tarsi testaceous-white, claws black; antennæ immaculate. Some individuals, perhaps immature, are quite strongly tinged with green. Females paler with segment II of antennæ shorter.

Described from numerous specimens, mostly females, beaten from a tree of *Sideroxylon leucophyllum* in Palm Cañon, Angel de la Guardia Island, May 3.

*Type:* Male, No. 1035, and *allotype*, female, No. 1036, Mus. Calif. Acad. Sci., collected May 3, 1921, in Palm Cañon, Angel de la Guardia Island, Gulf of California.

129. *Psallus lemniscatus* Van Duzee, new species

Closely allied to *gregalis*, base of scutellum and a knot-like mark at inner angle of corium croceus. Length 2.6 mm.

Male: Head more oblique and pronotum more narrowed and longer than in *gregalis*, making the insect look more narrowed anteriorly. Segment II of antennæ as long as basal width of pronotum. Sinistral clasper small; dextral larger, a little longer than wide, abruptly bent and narrowed before the oblique, superiorly acuminate apex.

Color, soiled white, tinged with green on pronotum; anterior lobe of pronotum and head more or less inclined to fulvous as is the scutel-

lum; base of scutellum and a mark on commissural margin of corium croceous; elytra minutely and obscurely dotted with croceous; apical margin of cuneus with a few black scales; membrane whitish hyaline or very faintly, uniformly fuliginous, its veins whitish; apex of hind femora very minutely speckled with brown, the tibiae with small brown dots at base of the white bristles; antennae becoming brownish toward apex. Upper surface clothed with soft white hairs.

Described from one male and three females taken on San Esteban Island, April 19, and one female taken at Angeles Bay, May 4.

*Type*: Male, No. 1037, and *allotype*, female, No. 1038, Mus. Calif. Acad. Sci., collected April 19, 1921, on San Esteban Island, Gulf of California.

### 130. *Psallus tuberculatus* Van Duzee, new species

Allied to *aspersus*, pale green without irrorations; membrane fusco-marmorate; male genital segment with a lateral tubercle. Length 3 mm.

Male: Head and pronotum short and broad as in *aspersus* and *gregalis* but narrower and more parallel-sided; head with eyes two thirds the basal width of pronotum; costal margins of elytra very feebly arcuated. Segment I of antennae very short but attaining apex of head; II as thick as I and as long as basal width of pronotum; III and IV together three fourths of II. Sinistral clasper broad and short, unarmed; dextral linear, curved, blunt at apex; dorsal margin of genital segment armed with an erect tubercle.

Color, pale green, clothed with minute white pubescence; base of scutellum and head tinged with dull fulvous; membrane confluent marmorate with fuscous, more so toward apex, the base mostly white-hyaline, nervures pale with a fuscous line at base of radial; femora dotted with fuscous nearly to their base; tibiae with small fuscous points at base of the brown bristles.

Described from five males taken on mesquite at San Nicolas Bay, May 16; three males and three females from Puerto Ballandra, Carmen Island, May 22, also from mesquite.

*Type*: Male, No. 1039, Mus. Calif. Acad. Sci., collected May 16, 1921, at San Nicolas Bay, Lower California. *Allotype*, female, No. 1040, collected May 22, 1921, at Puerto Ballandra, Carmen Island, Gulf of California.

### 131. *Plagiognathus pictipes* Van Duzee

Agua Verde, May 26, abundant on *Atriplex*; Escondido Bay, June 14.



132. *Sthenarus humeralis* Van Duzee, new species

Aspect of *Plagiognathus pictipes* Van D., but darker colored with the cheeks broader either side of the clypeus; testaceous, head and pronotum, humeri excepted, piceous; abdomen greenish; legs dotted. Length 3 mm.

Head broad, nearly vertical, three fourths the basal width of pronotum, twice broader than long; vertex and front but moderately convex; clypeus not prominent, depressed at base; cheeks broad; base of vertex sharp either side the middle but hardly carinate. Basal segment of antennæ short, just attaining apex of head; II in male as thick as I, almost as long as width of head with eyes; III and IV together longer than I. Pronotum short, scarcely longer than head; sides short, oblique; angles rounded; callosities oblique. Elytral costa quite strongly arcuate. Rostrum attaining hind coxæ. Male claspers small and obscure.

Color, testaceous brown; head, pronotum and scutellum piceous brown; apex of scutellum, humeral areas and propleuræ sometimes paler; abdomen more or less greenish; legs reddish, femora and tibiæ rather coarsely dotted with fuscous or black; tibial bristles black; membrane uniformly smoky, veins concolorous; antennæ more or less tinged with reddish, pale at apex. Upper surface clothed with deciduous white scales and fuscous hairs.

Described from numerous examples beaten from bushes of *Lycium richii* at Loreto.

*Type*: Male, No. 1041, and *allotype*, female, No. 1042, Mus. Calif. Acad. Sci., collected May 20, 1921, at Loreto, Lower California.

133. *Tuponia pallidicornis* Van Duzee, new species

Allied to *subnitida* Uhler, a little larger, more tinged with yellow, with antennæ concolorous. Length 3 mm.

Head even broader than in *subnitida*, the eyes approximated more closely to anterior angles of pronotum; the latter more than twice broader than long; humeri extended beyond line of eyes by half the width of the eye; sides armed with a long black seta and there is another on vertex against inner margin of eye; callosities prominent, forming an arc but scarcely connivent; elytral costa feebly arcuated. Antennæ long; segment II as long as width of head with eyes; III a third shorter than II; IV one half of III. Rostrum reaching tip of hind coxæ.

Color testaceous, tinged with fulvous on antennæ, head, pronotum, base of scutellum and legs; disk of pronotum infuscated; elytra pale testaceous, subhyaline, the membrane slightly, evenly infuscated, veins pale; segment I of antennæ deeper fulvous; tibiæ pale, dotted with black



at base of the black spines; tip of rostrum and tarsi black; disk of venter infuscated. Upper surface clothed with appressed white hairs and more erect fuscous ones. Described from the unique type.

*Type:* Female, No. 1043, Mus. Calif. Acad. Sci., collected May 16, 1921, at San Nicolas Bay, Lower California.

### 134. *Chlamydatus suavis* Reuter

Mulegé, May 15, one example.

### 135. *Excentricus mexicanus* Van Duzee, new species

Closely allied to *californicus*; smaller, antennæ less expanded and membrane without the large pale discal spot but with a second small spot beyond apex of cuneus. Length 2.5 mm.

Most characters as in *californicus*. Segments I and II of antennæ decidedly less expanded and the pronotum proportionately shorter. Color black, above rather closely invested with deciduous pale hairs and white tomentum; segments III and IV of antennæ pale gray, white at base; elytra tinged with brown, paler on costal base; cuneus with extreme tip and basal fracture whitish; commissure with paler point at apex of clavus; membrane uniformly pale fuscous with spot at apex of veins, a lunule against apex of cuneus and small submarginal transverse mark beyond, whitish; rostrum pale piceous, black at base; tibiæ soiled white, faintly triannulate with fuscous and base of hind pair also fuscous; tips of tibiæ and tarsi also brown; tibial bristles pale. Described from the unique type.

This species is sufficiently distinct to be described from a single female.

*Type:* Female, No. 1044, Mus. Calif. Acad. Sci., collected May 10, 1921, at San Francisquito Bay, Lower California.

### 136. *Rhinacloa forticornis* Reuter

San Francisquito Bay, May 10; San José Island, May 28; Isla Raza, April 21; Santa Inez Island, May 13; San Lorenzo Island, May 9; San Nicolas Bay, May 16, on mesquite; Agua Verde, May 26; Mejia Island, April 30; Palm Cañon, Angel de la Guardia Island, May 3; Guadalupe Point, Concepcion Bay, April 23; Mulegé, May 15; San Pedro Martir Island, April 18, on Brandegea. This species shows considerable variation in color of the upper surface and legs. It was

abundant everywhere on mesquite and was found on many other plants.

137. *Hydrometra lentipes* Champion

Escondido Bay, June 14, one example taken in company with *Buenoa carinata* by J. C. Chamberlin.

138. *Gerris orba* Stål

Escondido Bay, June 14, J. C. Chamberlin; Angeles Bay, May 7.

139. *Trepobates pictus* Herrich-Schæffer

Mulegé, May 14, common on the Rosalia River where it flows through the town and becomes practically a tidal river, the water there being brackish and rising and falling with the tides; only brachypterous forms were taken. On June 9 I took somewhat immature examples from a small pond fed by a spring on Espiritu Santo Island. All individuals taken were darker in color than those from western New York.

140. *Microvelia americana* Uhler

San Marcos Island, June 19, one example. Taken on a small pond. Differs from New York examples in being smaller and narrower with the body more compressed and the antennæ slightly longer.

141. *Microvelia paludicola* Champion

Mulegé, May 14. A few brachypterous examples taken apparently belong here.

142. *Rhagovelia distincta* Champion ?

Mulegé, May 14. Seven brachypterous females taken answer very closely to Champion's description except that they are without the metallic green color and the apical angles of the ultimate dorsal segment are produced in long acute spines above which is a still longer suberect spine which

forms the apex of the connexivum. All were taken on brackish water with *Trepobates pictus*.

143. *Merragata hebroides* White

San Marcos Island, June 19. Taken on damp stones and on the surface of the water in a small pool which was shaded a part of the day by a palm tree. These differ from California examples by being smaller and paler.

144. *Orthophrys mexicanus* Van Duzee, new species

Short, ovate, black varied with pale testaceous; ocelli distant; pronotum transverse. Length 3.5 mm.

Head nearly vertical; with the eyes wider than anterior margin of pronotum; surface closely punctate. Clypeus strongly incurved at apex; inner orbits of the eyes with three or four long setæ; ocelli equally distant from one another and from the eyes; inner margin of eyes scarcely sinuate posteriorly, slightly so medially next an elongated pit on margin of vertex; behind the eyes scarcely produced in a collum; eyes but slightly separated from the pronotal angles. Rostrum attaining fourth ventral segment. Pronotum transverse; anterior margin one fourth shorter than posterior; the length two fifths the width; sides rectilinear; base moderately arcuated over the base of the scutellum; callosities indistinct, forming a broad arc nearly attaining the middle of the hind margin, with a short, impressed, median transverse line anteriorly; surface closely evenly punctate. Scutellum as long as wide, acute at apex, closely punctate and lightly transversely impressed near the base. Elytra short, subbrachypterous, attaining apex of abdomen, coriaceous; costa strongly arcuated; membrane with four areolæ, the exterior a subequilateral triangle; surface setigerous-punctate. Segment III of tarsi slightly longer than II.

Color, black, moderately polished; apex of head pale; orbits in part, a spot either side on base of vertex, the anterior and lateral margins of pronotum, two dots on its hind margin and apex of scutellum, fulvous; elytra opaque, varied with fuscous and yellowish; a spot at inner angle of clavus, two on middle of corium (one costal), and two at apex of corium with line between them, yellowish; about three approximate spots on base of corium and one on clavus more whitish; veins mostly pale; membrane pale, opaque, heavily veined with fuscous; antennæ fuscous; segment I dark testaceous; prosternum and pleuræ mostly pale; legs brown, the tibiæ and tarsi more fuscous; apex of femora and tibiæ yellowish, the latter tipped with black; ventral segments and coxæ edged with paler.

Described from one female taken from under kelp on the beach at Puerto Refugio, Angel de la Guardia Island, June 29. This kelp was washed by the high tides when the speci-

men was taken. The genus *Orthophrys* was founded by Dr. Horvath on one species taken under stones between tides on the coast of Morocco. The present species differs from the type only in having the eyes scarcely sinuated, the head scarcely produced in a collum behind the eyes and the hind margin of the pronotum a little concave over the base of the scutellum.

*Type:* Female, No. 1045, Mus. Calif. Acad. Sci., collected June 29, 1921, on **Angel de la Guardia Island, Gulf of California.**

145. *Pentacora signoreti* Guerin

San Evaristo Bay, June 10; Mulegé, May 14; Loreto, May 19, on sea beach.

146. *Saldula sphacelata* Uhler

Gonzales Bay, April 29; Loreto, May 19, on sea beach; San José Island, June 10, on salt flats.

147. *Saldula interstitialis* Say

Guaymas, April 11, by irrigation ditch; Angeles Bay, May 5, by spring; Mulegé, May 14, along river bank; Loreto, May 19, on sand beach at mouth of river; San Marcos Island, June 19, about spring. This species occurred only where there was fresh water.

148. *Micranthia pusilla* Van Duzee

San Marcos Island, June 19, about water hole near spring.

149. *Buenoa carinata* Champion

Escondido Bay, June 14. Four adults and one nymph were taken by J. C. Chamberlin in a pool at about 1500 feet elevation among the mountains behind the bay. What seems to be the larval form of the same species was taken in a pool on Espiritu Santo Island, June 9.

150. *Ambrysus hybridus* Montondon

Mulegé, May 14. Common with young in Santa Rosalia River in the town where the water was made brackish by the high tides.

151. *Ranatra brevicollis* Montondon

Mulegé, May 14; San Evaristo Bay, June 10. These are immature and the determination is therefore uncertain but they differ in no respect from the young of this species taken about Oakland, California.

152. *Lethocerus annulipes* Herrich-Schæffer

Escondido Bay, June 14. Three examples with young of various instars were taken from a pool in the mountains west of the bay by J. C. Chamberlin.

153. *Gelastocoris variegatus* Guerin

Mulegé, May 14, one example with numerous young found by the Santa Rosalia River.

154. *Ochterus perbosci* Guerin

Mulegé, May 14, one example taken from the river with *Ambrysus hybridus*; San Marcos Island, June 18, one example taken in a pond by J. C. Chamberlin.

155. *Corixa* species

Three examples were taken from a pond near the well at El Candelerero, Espiritu Santo Island, June 9.

## HOMOPTERA

156. *Tibicen knighti* Davis

San Pedro Bay, Sonora, July 7; San Carlos Bay, Sonora, July 8, 9, not uncommon. They had a short, oft-repeated note and, not being especially wary, were not difficult to capture. This and the following four species were determined by Mr. W. T. Davis of New York.

157. *Tibicen ornea* Walker

San Carlos Bay, Sonora, July 8, one example. This was taken with *T. knighti* which it much resembles and was not recognized as distinct in the field.

158. *Cacama dissimilis* Distant

Ballanda Island, June 9, J. C. Chamberlin. Ballanda Island is a small island about a mile off the western shore of Espiritu Santo Island toward the northern end. This species was not uncommon on the main Island of Espiritu Santo but it was very wary and exceedingly difficult to capture.

159. *Cacama crepitans* Van Duzee

Espiritu Santo Island, May 31; San José Island, May 28.

160. *Okanagodes gracilis* Davis

Smith's Island, Angeles Bay, June 27, J. C. Chamberlin; Pond Island Bay, Angel de la Guardia Island, June 30, July 1. Song a faint sharp chirp like that of a house cricket, but fainter and audible about 75 feet. They usually rested on the bare rocks along the foot of the hills, or on some small weed growing among the rocks.

161. *Clastoptera lineatocollis* Stål

Las Animas Bay, May 8; La Paz, June 3; San Francisco Bay, June 23; Danzante Island, May 24; on Hoffnasteria.

162. *Clastoptera lineatocollis binotata* Ball

San Francisco Island, May 30, on *Houstonia*; Pond Island Bay, Angel de la Guardia Island, June 30; Puerto Refugio, Angel de la Guardia Island, June 29.

163. *Clastoptera lænata* Fowler

Ceralbo Island, June 6-8; San José Island, June 10.



164. *Stictocephala festina* Say

Mulegé, May 15; Angeles Bay, May 5.

165. *Micrutalis occidentalis* Goding

Ceralbo Island, June 8; San Nicolas Bay, May 16; Fresh-water Bay, Tiburon Island, April 23; Monserrate Island, June 13; Guaymas, April 9; Pond Island Bay, Angel de la Guardia Island, July 1; San Lorenzo Island, May 9, June 24; Espiritu Santo Island, June 9; Angeles Bay, May 5.

166. *Vanduzea albifrons* Fowler

Escondido Bay, May 24, one example.

167. *Vanduzea læta* Goding

Guaymas, April 9; Mulegé, May 15; Agua Verde, May 26.

168. *Enchenopa permutata* Van Duzee

Loreto, May 20; Ceralbo Island, June 7, on Lycium; San Nicolas Bay, May 16; Puerto Ballandra, Carmen Island, May 22.

169. *Enchenopa minans* Fairmaire

Espiritu Santo Island, May 31, one example.

170. *Leioscyta ferruginipennis testacea* Van Duzee

San Nicolas Bay, May 16; Loreto, May 20; Puerto Ballandra, Carmen Island, May 22.

171. *Hypsoprora simplex* Van Duzee, new species

Allied to *anatima* Fowl., but with the dorsal horn simple and the posterior process bisinuate. Length 5-6 mm., height 4-6 mm. (measured from base of metopidium).

Head as long as wide including eyes, apex truncate, sides sinuate below the eye. Dorsal process suberect, a little compressed laterally, wider and carinate at apex; two lateral carinæ obsolete, represented by rows of short spicules; above and below carinate, the dorsal carina con-

tinuous to apex of posterior process and denticulate; dorsal process, viewed from side, parallel on apical two thirds, that portion one third as wide as long; posterior process as wide as dorsal, passing apex of elytra, bisinuate above. Broad costal margin of corium and basal half of clavus and the nervures coriaceous and punctured.

Color, fusco-testaceous, more ferruginous on head, anterior margin of metopidium and beneath, the subhyaline areoles of elytra milky; tip of posterior process sometimes infuscated.

Described from three females: San Nicolas Bay, May 16; Salinas Bay, Carmen Island, June 16.

*Type:* Female, No. 1046, Mus. Calif. Acad. Sci., collected May 16, 1921, at San Nicolas Bay, Lower California.

#### 172. *Multareis planifrons* Van Duzee, new species

Allied to *cornutus*, but with the front flat, without the prominent lateral tubercle and with the dorsal hump rounded. Length 3.5 to 4 mm.

Face broad, feebly convex, almost even; tubercle below the eye minute, acute, pointing downward, the angle of the cheeks below the tubercle small, acute; surface coarsely obsolete punctate; supra-antennal ledge very feebly sinuate; clypeus less prominent than in *cornutus*. Dorsal prominence of pronotum tumidly convex, in the male sometimes showing indications of a horn either side the carinate median line; surface coarsely punctured, subrugose; posterior process, seen from side, deeply bisinuate, the median hump less abrupt than in *cornutus*. Elytra about as in *cornutus*; base coarsely punctate; apical two thirds very heavily, rugosely reticulate, the disk of the areolets subhyaline. Tibiæ distinctly broader than in *cornutus*.

Color, ferruginous, varied with yellowish; blackish beneath and white pruinose, in the males sometimes almost black; basal third of elytra with a broad yellowish vitta often followed by a blackish cloud; tibiæ with about three pale vittæ indicated.

Described from numerous examples taken on creosote bushes as follows: Gonzales Bay, April 29; Concepcion Bay, June 17; San Marcos Island, June 19; I have taken this species in abundance on creosote bushes at Palm Springs and Coachella, California. The smooth surface and even face will most readily distinguish it.

*Type:* Male, No. 1047, and *allotype*, female, No. 1048, Mus. Calif. Acad. Sci., collected June 17, 1921, at Coyote Bay, Concepcion Bay, Lower California.

173. *Multareis digitatus* Van Duzee, new species

Allied to *planifrons*, but smaller and more slender with the anterior pronotal hump higher and usually bifurcate. Length 3 to 4 mm.

Face plane as in *planifrons*, the tubercle at lower angle of eye wanting or very minute; outer angle of cheeks produced in a prominent tubercle, the supra-antennal ledge deeply sinuate as in *cornutus*; clypeus narrower than in either allied species. Anterior pronotal hump higher than in *planifrons*, usually produced in a bluntly conical vertical horn either side the carinate median line; posterior process more slender, broadly sinuated, as seen from the side with a long low prominence above apical half of clavus, its apex acute and a little depressed, not tuberculate as in the allied species. Elytra less strongly rugose at apex, the punctured basal portion less abruptly distinguished, the numerous areolets only subcoriaceous. Tibiæ distinctly flattened but not so wide as in the allied species.

Color, ferruginous yellow, darker on head and beneath, with a darker shade down the exterior face of the dorsal horns; pale area on base of elytra feebly indicated.

Described from one male and six females taken at Guadalupe Point, Concepcion Bay, June 17; Coyote Bay, Concepcion Bay, June 18; one female from Gonzales Bay, April 29; and one female from San Marcos Island, June 19. All were found on creosote bushes. I took paler, immature examples of this species at Palm Springs, California, May 18, 1917, and Prof. H. F. Wickham has sent me others from St. George, Utah.

*Type*: Male, No. 1049, and *allotype*, female, No. 1050, Mus. Calif. Acad. Sci., collected June 17, 1921, at **Guadalupe Point, Concepcion Bay, Lower California.**

174. *Tylocentrus quadricornis* Funkhauser

Guaymas, April 9, 10; San Carlos Bay, Sonora, July 9; San Pedro Bay, Sonora, July 7; Bay at south end of Tiburon Island, July 4, 5; Larvæ, apparently of this species, were taken on San Marcos Island, May 12. It lives on Mesquite.

175. *Platycentrus brevicornis* Van Duzee, new species

Smaller with shorter horns than *obtusicornis*. Length 5 to 6.5 mm. width across horns 4 mm.

Face about as in *acuticornis*; super antennal ledges moderately sinuate; angle under eye prominent, not acute. Viewed from before the

humeral angles are more acute than in *acuticornis*; horns directed upward and outward in a slight curve, obtuse at apex; viewed from above directed outward, flattened, about half as wide as long and lanceolate at apex; above these horns have two carinae, connecting before the tip, beneath they have one percurrent carina; posterior process longer and narrower than in *acuticornis*, tricarinate, with the apex acute; sides scarcely sinuated near base, in *acuticornis* wider and distinctly sinuated with one carina. Elytra subhyaline, nervures heavy, fuscous; immediate base blackish and punctate. Tibiæ flattened but scarcely expanded.

Color, castaneous brown in male, ferruginous brown in female, with a few pale calloused reticulations; when fresh more or less clothed with white tomentum; tibiæ biannulate with pale; elytra with a nearly obsolete pale vitta beyond the fuscous basal portion; exposed apical teeth of scutellum pale.

Described from a good series of both sexes taken on *Lacodesmus* on San Marcos Island, May 12; Puerto Ballandra, Carmen Island, May 22. I took one male and two females from palo blanco which differ in having the horns longer and the posterior process unicarinate. The species listed by me as *acuticornis* in my Catalogue seems to be that species although smaller than indicated by Stål. It has the horns longer and more erect than appears to be the case with *taurinus* Ball. These may all be forms of one variable species but the more slender posterior process with other minor characters would indicate specific distinction.

*Type*: Male, No. 1051, and *allotype*, female, No. 1052, Mus. Calif. Acad. Sci., collected May 12, 1921, on **San Marcos Island, Gulf of California.**

#### 176. *Tylopelta gibbera* Stål

Guaymas, April 11, one example.

#### 177. *Agallia tergata* Van Duzee, new species

Allied to *cinerea*; whitish, tinged with dull fulvous on head and scutellum; tergum black. Length 3 mm., width across elytra 1 1/3 mm.

Vertex about four times as broad as long, a little prominent at middle; pronotum slightly concave behind, very minutely striate; elytra but slightly exceeding the abdomen; front and clypeus broader than in *cinerea*. Last ventral segment of female deeply cleft from lateral angles almost to base, sides near the fundus interrupted by a subacute tooth, narrower and more pointed than in *lyrata* but otherwise very similar.

Valve of male short, transverse; plate long, cylindrical, a little narrower toward the upturned tip; pygofers broad, overlapping the plates at base.

Color, whitish, covered with a white bloom; head, anterior margin of pronotum and scutellum strongly tinged with dull fulvous; rostrum with a black median line; tergum black; venter sometimes marked with black basally; apex of female pygofers and suture of the male plates at times blackened; wings with fuscous nervures; claws black.

Described from eight examples taken on *Encelia* on Tortuga Island, May 11, and one from San Marcos Island, May 12. The immaculate yellowish white color above and form of the genitalia will distinguish this from any previously described species. The black tergum imparts a soiled appearance to the elytra.

*Type*: Female, No. 1053, and *allotype*, male, No. 1054, Mus. Calif. Acad. Sci., collected May 11, 1921, on Tortuga Island, Gulf of California.

178. *Idiocerus verticis* Say

La Paz, June 3; one immature female that seems to belong here.

179. *Bythoscopus robustus* Uhler

Loreto, May 20; Mulegé, May 15; San Marcos Island, June 19.

180. *Homalodisca liturata* Ball

Guaymas, April 9-11; Mulegé, May 15; Loreto, May 19; San Francisquito Bay, May 10; La Paz, June 5.

181. *Dræculacephala acuta* Walker

Mulegé, May 14; San Carlos Bay, July 9.

182. *Dræculacephala reticulata* Signoret

Mulegé, May 14.

183. *Gypona incita* Van Duzee, new species

Allied to *irrorata* Stål but with longer and more angled vertex. Length 10 mm.

Female: Pale testaceous brown, tinged with fulvous on vertex and scutellum and less strongly so on pronotum; two dots on base of vertex behind ocelli, basal margin of front, a few irregular marks on anterior submargin of pronotum and large basal angles of scutellum black; vertex with a few fuscous punctures and clouds next the eyes and along anterior margin; median line pale on basal two-thirds. Pronotum strongly, transversely rugose and fusco-irrorate; broad anterior and lateral margins irregularly striate and varied with fuscous or black, median line slenderly pale. Disk of scutellum faintly clouded. Elytral veins pale, bordered with fuscous punctures to near apex, the areoles marmorate with fuscous brown, darker toward apex. Wings brown with darker veins. Front and inner field of cheeks yellowish with faint striæ on front, its base blackish and deeply impressed; clypeus scarcely longer than wide, sides strongly arcuate; disk of loræ and clypeus touched with brown. Segment I of antennæ pale; II black, polished; seta brown. Beneath pallid, sides of pleuræ, apex of femora and exterior face of intermediate and hind tibiæ blackish; abdomen and hind tarsi tinged with red. Last ventral segment twice as long as preceding, trisinate at apex, median lobe broad, truncate, equalling lateral lobes.

In this species the vertex is distinctly more than half the length of the pronotum and about a sixth narrower, the ocelli are pale, placed obviously behind the middle of the vertex and at equal distances from median line and hind margin. It pertains to section LL of Spångberg. *Gypona atitlana* Fowler has a much narrower and more pointed head. Described from the unique type.

*Type:* Female, No. 1055, Mus. Calif. Acad. Sci., collected April 10, 1921, at Guaymas, Sonora, Mexico.

#### 184. *Gypona moneta* Van Duzee, new species

Related to *cinerea* Uhler, but narrower with longer head. Length 7 mm.

Female: Cinereous, tinged with yellow on head, pronotum and scutellum. Vertex flat, depressed before apex; two thirds as long as wide at anterior angles of eyes, obscurely rugose. Ocelli fulvous, as distant from one another as from eyes and a third more than from hind margin of vertex; hind edge with a black point just exterior to line of ocelli; front narrow, strongly convex as in *cinerea*, the antennal sockets distant from eyes; clypeus slightly narrowed before apex; cheeks strongly angled and sinuated below, dotted with black points. Pronotum yellowish anteriorly, cinereous and transversely striate and minutely fuscopunctate posteriorly, the hind edge with coarser black dots, confluent in places. Scutellum brownish, with minute, nearly obsolete, fuscous punctures and an obscure paler area either side the middle. Elytra whitish, areoles with a few blackish marks and bordered with fuscous punctures; usually with a large black spot on discal transverse vein of



corium; the costal areole yellowish, immaculate except for marginal punctures. Beneath varied with fuscous; venter obscurely dotted, with a black vitta either side; the genital segment strongly dotted. Pygofer with a short black median line, a slender dash beyond this and a similar one on each segment of connexivum. Femora dotted, with a subapical black annulus indicated; tibial spines ferruginous. Last ventral segment twice longer than preceding, trisinate, the median lobe equalling the sides and subtruncate.

Described from three females taken at San Carlos Bay. In the subgenus *Prairiana* this form is quite distinct by its long vertex, the black points on basal margin of pronotum, whitish elytra with yellowish costa and the black markings on the venter.

*Type:* Female, No. 1056, Mus. Calif. Acad. Sci., collected July 9, 1921, at San Carlos Bay, Sonora, Mexico.

#### 185. *Gypona candida* Van Duzee, new species

Pale yellowish white; elytra with ramose brown lines in the areoles. Length 7 mm.

Head sublunately rounded before. Vertex nearly twice as long on median line as next the eyes, sloping, not transversely depressed; passage to front obtuse, rounded; ocelli very large, blackish, placed half way between median line and eyes, a little before the middle; surface of vertex smooth, without striæ or punctures. Pronotum finely striate, anterior and lateral margins broadly smooth. Scutellum smooth. Elytra without reticulate venation but all areoles with sparse ramose brown lines. Front very broad, smooth, with lateral striæ nearly obsolete; sides of clypeus slightly arcuate. Last ventral segment of male three times as long as preceding, subconical, rounded at apex; plates twice longer than broad, larger than valve, surpassing apex of pygofers; styles slender, regularly tapering from base to the very acute, outwardly curving tips which lie just under the apices of the plates.

Color, nearly white, tinged with yellow on head and anterior margin of pronotum, and almost imperceptibly with green on elytra; two large dots on hind edge of vertex behind the ocelli and one on base of clavus black; two small fuscous dots on pronotum behind each eye; disk of pronotum sparsely, minutely dotted with brown; veins, ramose lines and a dash on base of membrane brown; abdomen light greenish yellow.

Described from two males taken at Puerto Ballandra, Carmen Island, May 21, on a mint-like plant. Among the species with short blunt head this may be distinguished by its white color and the conically produced last ventral segment of male.

*Type:* Male, No. 1057, Mus. Calif. Acad. Sci., collected May 21, 1921, at Puerto Ballandra, Carmen Island, Gulf of California.

186. *Gypona annulicornis* Van Duzee, new species

Apparently allied to *delicata* Fowler: Pale greenish, the elytra whitish with the veins and ramose lines in the areoles greenish; second antennal segment polished black. Length 8 mm.

Head subangularly rounded, compressed and foliaceous anteriorly with the edge reflexed; median length twice that at eye; transverse striae minute, becoming oblique between the ocelli; median incised line obsolete before apex; ocelli large, pink, placed midway from median line to eye and about equidistant from hind and front margins of vertex. Pronotum feebly striate; latero-anterior margins a little longer than latero-posterior. Front oval, moderately convex, scarcely striate; sides of clypeus rectilinear, parallel. Last ventral segment of male a little longer than preceding, truncate, the angles rounded; plates long, narrow, sides parallel, apex oblique, attaining apex of pygofers.

Color, pale yellowish green, varied with dark in places, the posterior disk of pronotum punctate with green; elytra whitish, the veins and ramose lines in all areoles greenish, the narrow costa and membrane whitish; beneath paler, the hind tibiae and cheeks greener; second antennal segment conspicuously polished black, seta brown; edge of head with a slender geminate brown line, making it appear canaliculate when seen from before.

The ramose green lines in the areoles give this species the aspect of *cana* but it is a true *Gypona* by Dr. Ball's arrangement of 1920. The clavus is somewhat thickened and obscurely punctate at base. The black antennal segment and form of the male plates are distinctive. Described from the unique type.

*Type*: Male, No. 1058, Mus. Calif. Acad. Sci., collected May 29, 1921, on San José Island, Gulf of California.

187. *Gypona angulata* Spångberg

Mulegé, May 15; San Carlos Bay, July 9.

188. *Spangbergiella mexicana* Baker

Mulegé, May 14, 15; San Carlos Bay, July 9.

189. *Aligia amœna* Van Duzee, new species

Aspect and size of *Phlepsioides utahnnus* Ball, paler with a shorter vertex. Length 4 mm.

Vertex a third wider than long, obtusely angulate before; surface depressed at base; anterior edge rounded to front; front twice longer than wide, quite regularly tapering to apex; clypeus widening from base to near apex. Last ventral segment of female broadly, subangularly but shallowly excavated. Male valve short, rounded; plates broad-triangular; on median suture nearly twice longer than valve.

Color, pale yellowish, sometimes tinged with fulvous next the eyes and on the scutellum and base of front; vertex with four dots on anterior submargin, a group of vermiculate lines either side on disk and two dots on hind edge, fuscous; median incised line on basal two thirds black; ocelli usually fuscous; pronotum whitish, minutely and sparsely inscribed with brown and showing five faint longitudinal lines; anterior submargin with a row of about eight brown points; basal angles of scutellum and short transverse impressed line and sometimes two dots at apex and two near base, blackish; elytra white; veins slender, brown, costa pinkish; areoles sparsely inscribed or dotted with brown; front yellow with base more dusky and median line usually pale, sometimes with an irrorate band between the antennæ and four dots on margin of cheeks fuscous; pleural pieces largely black; base of venter or a median vitta black; legs white, lightly dotted with brown; hind femora immaculate except for two or three setigerous points near their apex, and two subapical annuli; female oviduct and male plates with a brown line.

Described from numerous specimens taken as follows: Loreto, May 20, on *Lycium richii*; San Nicolas Bay, May 16; Ceralbo Island, June 7, on *Lycium richii*; Agua Verde, May 26, on *Lycium richii*. The pattern of marking on vertex etc. seems to be very similar in *Phlepsius utahnus* Ball but other characters are very distinct. At San Diego, California, I took what seems to be this same species. These specimens were, however, more clearly marked, with the vertex slightly more pointed.

*Type*: Female, No. 1059, and *allotype*, male, No. 1060, Mus. Calif. Acad. Sci., collected June 7, 1921, on **Ceralbo Island, Gulf of California.**

190. *Scaphoideus neglectus* Osborn

San Carlos Bay, Sonora, July 9.

191. *Scaphoideus consors* Uhler

Angeles Bay, May 4.

192. *Platymetopius hymenocleæ* Van Duzee, new species

Closely allied to *nigriviridis* Ball, but paler with strongly produced last ventral segment and white band across base of front. Length 4 mm.

Vertex longer than in *nigriviridis*, its width between the eyes two fifths the median length. Last ventral segment of female produced at middle for about a third its length beyond the lateral angles. Valve of male long and conically rounded at apex; plates long-triangular, about as long as valve and subacute at apex.

Color, of head pale yellow; vertex with broken, longitudinal, crenulate fuscous lines, omitting the median line and a broader one either side, the markings becoming obsolete posteriorly; face deeper yellow, apex of front with fuscous lineations carrying a broad transverse white band, connecting with tip of vertex by a slender longitudinal line and below with a segment of the angled pale line often seen in allied species; eyes castaneous. Pronotum whitish, tinged with green anteriorly, very faintly irrorate, with a pale longitudinal vitta behind the eye indicated; scutellum yellowish with darker basal angles. Elytra white with a broad fuscous vitta indicated along the outer margin of clavus and traces of vittæ on corium as in *nigriviridis*; apex of elytra faintly infuscated, with the edge white and white spots along the transverse veins, and about four or five oblique fuscous veins next the costa; inner angle with a small fuscous point; beneath pale yellow, base of venter blackish in female.

Described from one male and three female examples taken on *Hymenoclea salsola* at Puerto Refugio, Angel de la Guardia Island, May 1, and one male from the same plant on Mejia Island, April 30. The male genital characters seem to be about the same as those of *nigriviridis* and the color pattern is about the same except for the pale colors and white vittæ on base of front. The strongly produced female ventral segment indicates good specific distinction.

*Type:* Male, No. 1061, Mus. Calif. Acad. Sci., collected April 30, 1921, on Mejia Island, Gulf of California. Allotype, female, No. 1062, collected May 1, 1921, at Puerto Refugio, Angel de la Guardia Island, Gulf of California.

193. *Platymetopius torridus* Ball

Guadalupe Point, Concepcion Bay, June 17; San Marcos Island, June 19; Gonzales Bay, April 29, common on creosote bush. I have this same species from Kelso, San Bernardino Co., California. It is a good species, quite distinct from *brevis*.

194. *Platymetopius jocosus* Van Duzee, new species

Form and size of *torridus* nearly; dark red, elytra white with fuscous apex. Length 3.5 mm.

Vertex bluntly angled, as long as wide between the eyes, longitudinally depressed; front strongly transversely convex, sides nearly parallel to near apex, sutures indistinct; clypeus a little wider at apex. Last ventral segment of female briefly produced at middle. Elytral venation weak, about eight oblique veins in costal areole more distinct.

Color, dull dark red, scarcely mottled, paler on scutellum; elytra white, veins faintly lined with brown, reticulations nearly obsolete; costa touched with red; apex covered by an irrorate fuscous cloud reaching two thirds to the transverse veins; tergum largely black, the pleuræ partly infuscated.

The short vertex and very simple, striking coloration of this species will at once distinguish it. Described from the unique type.

*Type*: Female, No. 1063, Mus. Calif. Acad. Sci., collected June 8, 1921, on *Lacodesmia* on **Ceralbo Island, Gulf of California**.

195. *Platymetopius irroratus* Van Duzee

San Pedro Martir Island, April 18, abundant on vines of *Vaseyanthus insularis*; San José Island, May 28; Mulegé, May 15; Ceralbo Island, June 8.

196. *Platymetopius speciosus* Van Duzee, new species

Allied to *brevis*; strongly marked with black and white; elytra with base, a median annulus and apical spot white; scutellum partly orange; face pale yellow, irrorate between eyes. Length 3 mm.

Vertex nearly twice longer than wide between the eyes, apex a little sharper than a right angle; median line depressed. Last ventral segment of female broad triangular, slightly sinuated either side the blunt median point. Valve of male broadly rounded at apex, the triangular plates equalling the pygofers, obtuse at apex.

Color, vertex white; a broad angulate transverse black vitta just before the eyes, composed of approximate longitudinal lines; two minute dashes either side the apex and three longitudinal lines connecting them with the transverse vitta; base of vertex sometimes tinged with fuscous, with two minute black dots on hind edge. Pronotum black, irrorate with white, forming a transverse vitta between the eyes and a short longitudinal line behind the eyes. Scutellum fulvous or almost salmon



pink, basal angles and usually some dots near apex and median line at base black. Elytra ivory white, heavily inscribed with fuscous or black, when closed showing a trilobate basal vitta on clavus, large annulus on middle of commissure, a large angular spot at its apex and about six oval or round spots on disk, white; costa mostly white with ten or twelve oblique veins. Beneath deep black, sometimes with a blue bloom; face white, sparsely irrorate between the antennæ and at base; tibiæ and tarsi white, heavily dotted with black.

Described from one male and three female examples: Ceralbo Island, June 8; San José Island, May 29; Puerto Ballandra, Carmen Island, May 21; Espiritu Santo Island, May 31. This strikingly marked species is very distinct from anything previously known.

*Type:* Female, No. 1064, Mus. Calif. Acad. Sci., collected June 8, 1921, on **Ceralbo Island, Gulf of California**. *Allotype*, male, No. 1065, collected May 29, 1921, on San José Island, Gulf of California.

197. *Platymetopius scutellatus* Van Duzee, new species

Closely allied to *speciosus*, but without the large white markings on the elytra and with the scutellum conspicuously orange. Length 3 mm.

Vertex but slightly longer on median line than wide between the eyes, depressed before the tip which forms about a right angle; front narrow, sides almost rectilinear at apex, transversely less convex than in *speciosus*; clypeus slightly widened from near its base. Last ventral segment of female truncate and very feebly sinuate, the lateral angles and middle slightly produced. Valve of male distinctly but very obtusely angled, the valve subacute, about as in *speciosus*.

Color blackish fuscous; vertex yellowish, marked with fuscous as in *speciosus* but more diffusely; pronotum irrorate with white, with five longitudinal pale lines distinct; scutellum orange, basal angles, a mark before the apex and two dots near the base fuscous; elytra white with strong fuscous vermiculations, giving them a blackish aspect, round white spots large and conspicuous, especially two on the commissure; oblique costal veins somewhat obscured by the fuscous vermiculations; wings faintly smoky with heavy fuscous veins. Face pale ochre-yellow, minutely dusted with darker on the front and about the eyes, the median line obscurely paler; beneath and legs varied with paler; tibiæ largely pale, strongly dotted.

Described from one pair taken on *Laccodesmia* on San Marcos Island.

*Type:* Female, No. 1066, and *allotype*, male, No. 1067, Mus. Calif. Acad. Sci., collected May 12, 1921, on **San Marcos Island, Gulf of California**.



198. *Platymetopius analis* Van Duzee, new species

A small white species dotted with fuscous with yellow scutellum and fulvous head. Length 3.5 mm.

Vertex but slightly longer than wide between eyes, about right angled at the obtuse, upturned apex; front narrow as in *scutellatus*, a little narrower at apex; clypeus much widened at apex. Last ventral segment of female slightly produced either side of a small acute median notch, the lateral angles produced in a rounded lobe.

Color, head pale fulvous yellow, tinged with brown about eyes and becoming yellow at apex and on front and clypeus; outer area of cheeks and base of front with a few minute scattering brown dots; scutellum clear yellow, darkened at basal angles; pronotum and elytra white, irregularly dotted with small brown points; commissure with two pairs of black points beyond the clavus; beneath varied with white and yellow, with a few brown clouds about base of coxæ.

Described from one female taken on palo tinto (*Olneya tesota*) on Catalina Island.

*Type*: Female, No. 1068, Mus. Calif. Acad. Sci., collected June 12, 1921, on Catalina Island, Gulf of California.

199. *Deltocephalus flavicosta* Stål

Mulegé, May 14, 15; San Carlos Bay, Sonora, July 9. These are of the large pale form found in the West Indies and South America.

200. *Deltocephalus sonorus* Ball

Mulegé, May 15.

201. *Deltocephalus contrerasi* Van Duzee, new species

A large species strongly marked with fuscous brown and pale. Length 4 mm.

Vertex a third wider than long, obtusely angled at apex; surface flat, broadly rounded to front. Pronotum slightly longer than vertex. Elytra with several false veins, especially in clavus and toward apex of corium. Front moderately broad, rounded at base, the sides straight below antennæ, not incurved to base of clypeus; clypeus nearly twice longer than wide, scarcely wider at apex, sides straight. Ultimate ventral segment of female sinuately narrowed, with apical margin a little produced on middle; valve of male short-triangular; plates about three times as long as valve, acute and upturned at apex.

Color, vertex and anterior margin of pronotum brownish yellow, the former with abbreviated median incised line black; two oblique dashes at

apex and four oval spots on disk brownish, the posterior pair of spots oblique. Face brownish yellow; front with a few brown arcs at base and the suture below black. Pronotum gray, more or less tinged with yellow, with about five pale longitudinal lines indicated, and four blackish spots near anterior margin. Scutellum more or less fulvous; small basal angles, two dots near base and a cloud before apex brownish or black. Elytra fuscous, varied with paler and marked with vermiculate white veins, especially on clavus; on corium sometimes indicating two transverse vittæ, one near middle, the other at apex of clavus, the latter more obvious on costa; inner three apical areoles carrying large discal whitish hyaline spots. Pluræ and abdomen mostly black, margined with fulvous. Legs pale, anterior and intermediate femora with sub-apical annulus, the former black at base.

Described from 11 examples swept from grasses about a saltwater lagoon at Tepoca Bay, Sonora. I take pleasure in naming this large, clearly marked species for Señor Francisco Contreras, conchologist and director of the Mexican National Museum, and a most welcome addition to our small exploring party.

*Type:* Female, No. 1069, and *allotype*, male, No. 1070, Mus. Calif. Acad. Sci., collected April 25, 1921, at Tepoca Bay, Sonora, Mexico.

## 202. *Lonatura ventralis* Van Duzee, new species

Yellowish testaceous varied with brownish; venter of male deep black, female greatly attenuated behind. Length, male, 3 mm., female, 5 mm.

Vertex as long as wide between the eyes, about right-angled before; passage to front rounded; surface feebly convex; hind margin very feebly arcuated; front nearly as wide as long, base strongly angled, sides feebly convex below antennæ; clypeus long, slightly narrower at apex, sides straight. Pronotum shorter than vertex, covering most of scutellum and base of clytra. Elytra attaining middle of second tergal segment; venation prominent, irregular, entire costal margin occupied by a broad costal areole. Last ventral segment of female feebly trisinate, the median lobe short-triangular; pygofers exceeding last tergal segment by half their length and itself exceeded by the oviduct for a similar space. Valve of male small, triangular; plates narrowly triangular, their subacute apices equalling the pygofers.

Color, a dingy brownish or testaceous yellow; apex of vertex with a pair of brown oblique marks, behind these a pair of irregular spots and farther back a pair of oblique marks pale brown, these leave a branched median vitta bisected by the incised median line; pronotum with five pale longitudinal vittæ indicated; scutellum yellow; clytra dusky hyaline with pale nervures; tergum more yellow with five rows of pale obscure spots, the median row linear; front brown with arcs

and median line below pale and distinct; cheeks, loræ and clypeus somewhat clouded; venter deep black in male, edged with yellow, in female brownish with hind edge of segments pale.

Described from numerous examples taken on a fine grass (*Monanthoclea*) growing about a salt marsh on the point at Tepoca Bay.

*Type:* Female, No. 1071, and *allotype*, male, No. 1072, Mus. Calif. Acad. Sci., collected April 25, 1921, at **Tepoca Bay, Sonora, Mexico.**

### 203. *Lonatura nana* Van Duzee, new species

Differs from *minor* Van D. in its flatter and more pointed vertex and almost uniformly testaceous white color. Length 2.5 to 3 mm.

Vertex about a fourth wider between the eyes than long on median line, obtusely angled before but less rounded than in *minor*; disk more flattened with the passage to the front more rounded. Elytra short, attaining apex of fourth tergal segment in male, middle of third in female. Last ventral segment of female short, rounded; plates broad-triangular, sides rectilinear, apex equalling pygofers.

Color, testaceous-white tinged with yellow, especially on the head, the front pale fulvous with median line and arcs paler; two dots on base of vertex behind the ocelli and a pair of minute points at apex brown; apex of clypeus with a fuscous spot; antennal cavities, rostrum, ovipositor of female and the metasternum and base of abdomen black; subapical annulus on femora and tibial spines and dots pale brown.

Described from four male and 12 female examples swept from *Monanthoclea* on San Francisco Island. Any of the markings mentioned except the black ovipositor may be modified or wanting.

*Type:* Female, No. 1073, and *allotype*, male, No. 1074, Mus. Calif. Acad. Sci., collected May 30, 1921, on **San Francisco Island, Gulf of California.**

### 204. *Euscelis exitiosus* Uhler

Mulegé, May 14, 15. These, especially the males, are unusually dark, much as I found them in Jamaica.

### 205. *Euscelis bicolor* Van Duzee

San Carlos Bay, Sonora, July 9, three examples.

206. *Eutettix coronatus* Ball

Angeles Bay, May 5; Ceralbo Island, June 7. One male only shows the black marks on the vertex, pronotum and scutellum and the basal ones on the elytra. Those on the commissure at apex of clavus and two costal placed at either end of the postnodal areole seem to be persistent. I would consider this a distinct species.

207. *Eutettix tenellus* Baker

Isla Raza, April 21, abundant on *Atriplex*; Isla Raza, May 4, on *Salicornia*; Santa Inez Island, May 13, on *Atriplex* and *Chenopodium* where growing together rankly in masses; Ceralbo Island, June 7, on *Sesuvium*. Here they were larger and mostly pink in color, greatly resembling, although distinct from, *rubicundulus* Van Duzee from Jamaica.

208. *Eutettix pulchellus* Ball

Puerto Refugio, Angel de la Guardia Island, May 1, one male.

209. *Eutettix strictus* Ball

Loreto, May 19. The two females taken seem to agree very well with Dr. Ball's description but in one there is a pair of conspicuous black dots placed immediately above the ocelli, a similar pair occupying the outer angles of the pronotum behind the eyes, two minute brown points on the vertex anteriorly and two on the margins of the scutellum a little before the apex; in both there is a pair of pale brown spots on the commissure just before the apex of the claval nervures.

210. *Phlepsius superbus* Van Duzee

Guaymas, April 11, one female.

211. *Phlepsius docilis* Van Duzee, new species

Aspect of *truncatus*, but with more pointed vertex and narrower vertex and front. Length 5 mm.

Head wider than pronotum; vertex flat, subacutely angled before, its median length three fourths its basal width; pronotum a half longer than vertex, semicircularly rounded before; elytra rather narrow, about as in *truncatus*; ocelli large, fuscous, placed their own width from the eyes; front narrow, its width but little more than half the length, sides parallel above antennæ, regularly narrowing below to clypeus. Clypeus much widened below to its rounded apex. Last ventral segment of female very feebly arcuated across nearly its whole width.

Color, about as in *truncatus*; reticulations on vertex omitting the base, apex and median vitta; apex with a black dash either side, enclosing a pinkish apical spot, another pinkish spot at base either side of the short black incised median line; pronotum with five faint whitish longitudinal vittæ; scutellum scarcely marked; elytral reticulations rather close; commissural margin whitish with two pairs of inconspicuous white spots, ocellate with pink; face pale, faintly irrorate with a paler median vitta; outer edge of cheeks with a black point; last ventral segment with a blackish vitta, continued along the oviduct. Described from the unique type.

*Type:* Female, No. 1075, Mus. Calif. Acad. Sci., collected May 20, 1921, at Loreto, Lower California.

## 212. *Phlepsius argillaceus* Van Duzee, new species

Allied to *excultus*, narrow, with vertex longer and pronotum more produced between the eyes. Length 5 mm.

Male: Head a little narrower than pronotum; vertex a third wider than its median length, well produced in an obtuse right-angle; passage to front sharper than in *excultus*; eyes as long as width of vertex. Pronotum nearly twice as wide as its median length; strongly advanced but scarcely angled anteriorly; latero-anterior margins a little shorter than latero-posterior and continuing the curvature of the anterior margin with scarcely a break; transverse striæ obscure. Front flattened above, a half longer than broad; clypeus widened to the feebly emarginate apex. Genitalia about as in *excultus*. Valve broader, plates shorter and broader, about three times as long as valve; pygofers exceeding plates by length of valve.

Color dull clay yellow inscribed with brown; base of vertex and apex of scutellum nearly free; two spots near base of vertex, irregular clouds along outer margin of pronotum and intra-basal spots on scutellum pale fuscous; elytra evenly infuscated; transverse ulnar and apex of claval nervures black; whitish commissural vitta indistinct, broken by the two black claval nervures; face dark, irrorate with paler with a pale basal spot on apex of head. Described from the unique type.

*Type:* Male, No. 1076, Mus. Calif. Acad. Sci., collected June 14, 1921, at Escondido Bay, Lower California.



**213. *Acinopterus acuminatus* Van Duzee**

Isla Raza, April 21, May 4, on *Sesuvium*; Mulegé, May 15; Loreto, May 20; Puerto Ballandra, Carmen Island, May 21, 22; Ceralbo Island, June 7, on *Sesuvium*.

**214. *Acinopterus acuminatus viridis* Ball**

Puerto Refugio, Angel de la Guardia Island, May 1; Coronados Island, May 18, on *Atamisquaea emarginata*; Puerto Ballandra, Carmen Island, May 22; Marquer Bay, Carmen Island, May 22; Mulegé, May 14.

**215. *Neocoelidia pallida* Baker**

San Lorenzo Island, May 9, on *Houstonia*; Espiritu Santo Island, May 31; Puerto Ballandra, Carmen Island, May 21; Salinas Bay, Carmen Island, June 16; Escondido Bay, May 24; Loreto, May 19. These are of a stronger yellow color than are Californian specimens but do not seem to differ otherwise.

**216. *Protalebra scriptozona* Van Duzee, new species**

Allied to *brasiliensis*, but larger with shorter vertex; yellowish white, pronotum, basal and apical thirds of elytra milk white, inscribed with red, the median third greenish yellow. Length 3.5 mm.

Head very large, slightly wider than pronotum. Vertex rounding over almost from its base, widened apically, at base two thirds as wide as its median length, base subangularly but feebly emarginate; pronotum a fourth longer than vertex; hind margin broadly concave; venation of wing almost as in *brasiliensis*. Front strongly convex, broader than in *brasiliensis*, tapering rapidly to the narrow clypeus. Last ventral segment of female long, produced in an obtuse angle; plates of male small, abruptly tapering to long parallel points which form fully half the length of the valve.

Color, ivory white; vertex with a clear yellow transverse band, more or less evident; pronotum milk white; two large spots on anterior submargin, two smaller near humeral angles and a minute median point on hind margin orange; scutellum with three large orange spots placed at the angles, the extreme acuminate tip white; elytra milk-white with median third greenish yellow bordered either side with ivory white; the basal milk-white portion with about three irregular orange red spots, the apical third with orange red veins, apical margin quite broadly fuscous and a narrow broken fuscous line separates the milk-white from



the ivory-white portions; prosternum and abdomen black, the segments slenderly edged with yellow, in the female broadly whitish; ovipositor of female castaneous, the pygofer somewhat infuscated.

Described from one male from Puerto Ballandra, Carmen Island, May 21; one female from Ceralbo Island, June 8, and one female from Espiritu Santo Island, May 31.

*Type:* Female, No. 1077, Mus. Calif. Acad. Sci., collected June 8, 1921, on **Ceralbo Island, Gulf of California**. *Allotype*, male, No. 1078, collected May 21, 1921, at Puerto Ballandra, Carmen Island, Gulf of California.

217. *Empoasca viridescens* Walsh

San Pedro Martir Island, April 18; Mulegé, May 15.

218. *Empoasca alboscripta* Van Duzee

Mulegé, May 15.

219. *Scolopsella reticulata* Ball

Ceralbo Island, June 8; San Marcos Island, May 12, on *Laccodesmia* with young; Salinas Bay, Carmen Island, June 16, young; Bay at south end of Tiburon Island, July 5, small larvæ; Puerto Ballandra, Carmen Island, May 21, very small larvæ.

220. *Cyrpoptus nebeculosus* Stål

San Carlos Bay, Sonora, July 8, two examples.

221. *Ticida chamberlini* Van Duzee, new species

Size and aspect of *Orgerius rhyparus*, but with a short transverse vertex; testaceous brown varied with darker. Length 6 mm.

Greatest length of head two thirds its width across the eyes; vertex smooth, transverse, its median length one third its width; apical half raised nearly at right angles to the basal; base straight; anterior margin obtusely advanced; base of front reflexed and superior for a distance greater than length of vertex; median compartment of front smooth with heavy median and lateral carinæ; lateral compartments with two rows of variolæ which become four or five on the reflexed superior base; apex of head smooth, ecarinate, sides vertically raised above the

eyes; clypeus simple, tricarinate. Pronotum abruptly advanced between the eyes, with a high median carina; entire anterior edge of pronotum sharply carinate, surface deeply pitted. Scutellum twice as wide as long, sharply tricarinate, the basal areas pitted, the median compartment with a single pit behind the middle. Elytra short, transverse, oval, closely reticulate-veined; tergal segments with six to eight pits either side near hind margin. Rostrum surpassing abdomen by nearly the length of last segment; propleuræ with two rows of pits posteriorly.

Color, testaceous-brown, obscurely varied with darker; pits and elytra fuscous brown, the venation of the latter pale apically; clypeus tinged with ferruginous; beneath and legs pale, a subapical annulus on femora and base and narrow apex of tibiæ fuscous; spines of hind tibiæ and tarsi black.

Described from three females taken by Mr. J. C. Chamberlin; two at Palm Cañon, Angel de la Guardia Island, May 3, and one at Puerto Refugio, Angel de la Guardia Island, May 1.

*Type:* Female, No. 1079, Mus. Calif. Acad. Sci., collected May 1, 1921, at Puerto Refugio, Angel de la Guardia Island, Gulf of California.

#### 222. *Bothriocera tinealis* Burmeister

Escondido Bay, June 1, J. C. Chamberlin. This specimen is intermediate in color between the typical form and the pale variety *westwoodi*.

#### 223. *Oliarus excelsus* Fowler

Escondido Bay, May 24; San Lorenzo Island, May 9; Cer-albo Island, June 8; Palm Cañon, Angel de la Guardia Island, May 3. These agree very closely with Fowler's figure and brief description and undoubtedly pertain to that species.

#### 224. *Oliarus franciscanus* Stål

San Esteban Island, April 19; Santa Cruz Island, May 13; Gonzales Bay, April 29; Isla Raza, April 21; San Lorenzo Island, May 9; on Houstonia; San Marcos Island, June 19; Mulegé, May 15; San Francisco Island, May 30, on Salicornia; Escondido Bay, June 14.

## NYMPHOCIXIA Van Duzee, new genus

Allied to *Æcleus*, the vertex confused with the front, without a transverse carina, and extended at base so as to cover the middle of the pronotum, the mesonotum tricarinate.

Vertex narrow, nearly parallel, confounded with the front in a common convexity, its base produced back to cover the middle of the pronotum and feebly angularly emarginate; vertex, front and clypeus with three percurrent carinae, the lateral greatly elevated, vertical above, widely oblique below; front widened to apex, median ocellus distinct; carinae low on the clypeus. Eyes emarginate below. Antennae small, placed at the sinus of the eyes, segment II not longer than wide. Pronotum deeply angularly excavated behind; passing entirely under the shelving base of the vertex between lateral carinae; mesonotum tricarinate. Elytra longer than in *Æcleus*; nervures punctate, radial and ulnar contiguous at base but not fused, connected by a transverse vein; radial forked just beyond middle; outer ulnar forked nearer the transverse veins; stigma broad, the veins beyond it curved; hind tibiae unarmed. Type of genus, *Nymphocixia unipunctata* Van Duzee, n. sp.

This genus is really nearer to *Æclidius* than to *Æcleus* but the front has a median carina, the lateral carinae are much higher, the vertex is produced over the pronotum and the elytral venation is different.

225. *Nymphocixia unipunctata* Van Duzee, new species

Testaceous white varied with fuscous with a round black dot on sixth apical areole. Length 5 mm.

Head whitish, front fuscous when mature, the carinae whitish edged with brown; the carinae and hind margin of pronotum brown; mesonotum brown, tip white, carinae fuscous. Elytra whitish hyaline with fuscous nervures; a fuscous V rests on the transverse nervures, covering the areole between the two main branches of the ulnar nervure, with one end resting on the costal margin the other covering apex of clavus and sometimes clouding the entire outer claval area to its base; stigma black, surrounded by a yellowish cloud with a clearer oblique white vitta before it; apex beyond transverse nervures mostly fuscous with about five exterior areoles and a spot against the transverse nervures white; near the inner angle with a round black spot; nervures of wing brown; beneath and legs nearly white; abdomen mostly black; tips of tibial and tarsal spines black. Immature examples are paler or even fulvo-testaceous varied with white but all show the characteristic elytral markings.

Described from five male and nine female examples found resting on the foliage of *Avicennia nitida* growing about the lagoon at the pearl factory on Espiritu Santo Island. These bushes were growing with mangroves where they were surrounded by water at high tide.

*Type*: Male, No. 1080, and *allotype*, female, No. 1081, Mus. Calif. Acad. Sci., collected June 1, 1921, on Espiritu Santo Island, Gulf of California.

226. *Æclidius nanus* Van Duzee

Angeles Bay, June 27; San Lorenzo Island, May 9; Cer-albo Island, June 7, on *Lycium*; Tortuga Island, June 22. *Brixia fulgida* Van D. and *Brixia fuscus* Van D. from Jamaica belong to this genus.

227. *Æclidius fraternus* Van Duzee, new species

Allied to *fuscus* Van D., but darker colored with thicker antennæ. Length 5 mm.

Vertex and front a little wider than in *fuscus*, the carinate sides of the front broader and more sloping outward. Second antennal segment a half longer than thick, its thickness equal to greatest length of pronotum behind the eye. Rostrum attaining middle of fourth segment of venter. Pronotum short, either side of median carina as long as width of vertex. Mesonotum shorter than in *fuscus*, equal to width of head across the eyes. Elytra one third narrower than in the allied species.

Color, fusco-castaneous, the margins, tip and carinæ of mesonotum fulvous; carinæ of head white, broadly black before the eyes and slenderly edged with brown; pronotum brown, the carinæ broadly whitish; abdomen and body beneath varied with paler; legs fuscous; tibiæ paler, knees whitish; elytra and wings whitish hyaline, the nervures strong, fuscous, impunctate.

Described from one damaged male taken at San Carlos Bay.

*Type*: Male, No. 1082, Mus. Calif. Acad. Sci., collected July 9, 1921, at San Carlos Bay, Sonora, Mexico.

228. *Æcleus decens* Stål

Guaymas, April 11. The single example taken agrees entirely with Fowler's description and figure of *decens* but his figure of the male genital segment is purely diagrammatic and does not show the specific characters which are well brought out in the description.

229. *Æcleus monilipennis* Van Duzee, new species

Very close to *fulvidorsum* Ball, but with the elytral veins strongly dotted throughout and different male genitalia. Length 4.5 to 5 mm.

Dull fulvous; mesonotum sometimes marked with black; pronotum and legs more testaceous; elytra whitish hyaline, the margins distinctly and somewhat remotely dotted with black throughout, the marginal only pale, the apical marked with fuscous next the margin; commissure with two short fuscous lines. Abdomen largely black above and partly so below, especially in the male; clypeus with a fuscous cloud each side, and at times the basal suture may be dark. Scutellum with five carinæ, the intermediate sometimes obscure. Male genital segment deeply notched either side of a large subtriangular median tooth; styles twice as long as the median tooth, cut off square at apex, with its inner angle produced; anal tube scarcely surpassing the styles. In *fulvidorsum* the median tooth is more ligulate, the styles narrower with their apex less produced inwardly, the anal tube is longer and the elytral nervures punctate only at apex.

Described from numerous examples taken as follows: Ceralbo Island, June 7; Santa Cruz Island, May 27, on *Atriplex*; Angeles Bay, May 5, on *Atriplex*; San Esteban Island, April 19; Espiritu Santo Island, June 1; Mejia Island, April 30. This species was abundant everywhere on *Atriplex*. Often the body is thickly covered with a white bloom.

*Type*: Male, No. 1083, and *allotype*, female, No. 1084, Mus. Calif. Acad. Sci., collected June 7, 1921, on **Ceralbo Island, Gulf of California.**

### 230. *Myndus occidentalis* Van Duzee

Angeles Bay, May 4; Pond Island Bay, Angel de la Guardia Island, June 30, J. C. Chamberlin.

### 231. *Hysteropterum morum* Van Duzee, new species

Allied to *fowleri* (*montanus* Fowler), darker in color with more convex clypeus. Length 6 to 7 mm.

Vertex almost twice wider than long, parallel, its surface even, strongly elevated either side with margins acute and base carinate; front nearly flat, its greatest width three fifths its length; base deeply sinuately emarginate; its apex roundedly emarginate, widest near apex; tricarinate, the intermediate carina nearly rectilinear, evanescent above; clypeus convex, scarcely raised above plane of front; median carina obtuse, sides fusco-striate; surface clothed with short erect hairs. Pronotum a fourth longer than vertex, median carina nearly obsolete. Scutellum almost as long as head and pronotum together, tricarinate, the median acute. Elytra strongly bullate; nervures prominent; inner ulnar abruptly forked at one third its length; costa moderately angled; surface clothed with scattering short pale hairs, more conspicuous along the costa. Anal plate of female attaining ventral margin of genital segment, parallel, convex, clothed with rather long stiff pale hairs.



Color, blackish fuscous, varied with pale in places; orbits of eyes; basal nervure and extreme tip of clavus, a broad transverse band on disk of elytra before the middle and the costal region notably pale; disk of elytral areoles paler brown, dotted with fuscous; pronotum and scutellum with a paler lateral area either side, more or less obvious; legs clothed with pale hairs, the femora and tibiæ twice banded with pale; hind tibiæ with two stout black teeth.

Described from one female taken at the bay at southern end of Tiburon Island, July 5, and a male from my personal collection taken on the Rincon Mts., Arizona. This large blackish species has much the aspect of *Picumna ovatipennis* Walk. but is very distinct structurally.

*Type:* Female, No. 1085, Mus. Calif. Acad. Sci., collected July 5, 1921, at southern end of Tiburon Island, Gulf of California. *Allotype*, male, in author's collection.

### 232. *Hysteropterum bufo* Van Duzee, new species

Allied to *cornutum*, with a narrower front and longer pronotum. Length 3.5 to 4 mm.

Vertex short, its median length one fourth its width; anterior margin straight, posterior broadly arcuated; sides strongly elevated. Front short, a fourth longer than broad, sides feebly arcuated, more abruptly so at apex; disk with three parallel carinæ; base and apex broadly excavated, the latter more feebly. Clypeus convex, a little prominent beyond the plane of the front, apex abruptly inflexed, median carina obtuse. Pronotum over three times longer than vertex on median line, the median carina feeble. Scutellum shorter than pronotum, feebly uncarinate. Elytra a fourth longer than broad, strongly bullate; costa very obtusely angled; apex truncately rounded; inner claval vein strongly bullate, the commissure deeply concavely arcuated; veins prominent, inner ulnar forked at apical third; hind tibiæ with one strong tooth.

Color, most variable, grayish testaceous and fuscous, sometimes nearly black or varied with green on head and pronotum, usually with a paler area at apex of front; elytra entirely pale or brown with fuscous veins and dots in the areoles. Elytra, clypeus, legs and anal plate with short erect pale hairs.

Described from numerous examples taken on Lycium as follows: Ceralbo Island, June 7, 8; Puerto Ballandra, Carmen Island, May 21, 22; Loreto, May 20; San Pedro Bay, July 7. Both this species and *cornutum* have the hind tibiæ unispinose but they are apterous and it does not seem necessary to establish a new genus on the unispinose tibiæ alone.

*Type:* Male, No. 1086, and *allotype*, female, No. 1087, Mus. Calif. Acad. Sci., collected June 7, 1921, on Ceralbo Island, Gulf of California.



## EUTHISCIA Van Duzee, new genus

Aspect of *Mycterodus* but closely allied to *Thiscia* Stål. Impunctate. Vertex horizontal, conically produced, ecarinate, with the margins acute. Front occupying the entire face, ecarinate, convex, the sharply carinate sides joining the vertex close to the eyes; deeply excavated to receive the base of the clypeus. Clypeus long, straight, moderately convex transversely, ecarinate. Pronotum short, broadly rounded before, very feebly concavely arcuated behind, ecarinate or nearly so. Scutellum large, as long as broad, tricarinate. Elytra ample, vertical, somewhat bullate, enclosing the body and meeting below; venation about as in *Acanalonia* but with much less reticulation; wings rudimentary. Abdomen compressed. Hind tibiae unarmed.

This genus differs from *Thiscia* by the very broad smooth front, much simpler elytral venation and rudimentary wings. Type of genus *Euthiscia signata* Van Duzee, new species.

233. *Euthiscia signata* Van Duzee, new species

Testaceous white; head, pronotum, scutellum and clavus marked with brown, the inner margin of corium with a connecting black spot. Length 5 to 7 mm.

Vertex a third longer than wide, narrowly rounded at apex, flat, the margin acutely reflexed. Front as long as wide, viewed from the side forming a straight line with the clypeus, subcylindrical. Pronotum a third as long as vertex, lateral carinae indicated; lateral carinae of scutellum parallel, the median subobsolete. Elytra five eighths as wide as long; costa broadly rounded, subangulate below the bulla; apex truncate. Head, pronotum and scutellum pale brown, minutely irrorate with paler; clavus coarsely irrorate with fuscous, the veins blackish; this fuscous color covers the apical two thirds of the inner sutural area of the corium and at its inception invades the adjoining area in a semicircular spot; veins about the bullae touched with fuscous as well as the extreme apical margin; anterior and intermediate tibiae faintly irrorate with brown; tarsi brown.

Described from six examples. Espiritu Santo Island, May 31; Agua Verde, May 26; San Carlos Bay, July 8, 9. Two females are darker, leaving the dark dorsal markings obscure.

*Type*: Male, No. 1088, and *allotype*, female, No. 1089, Mus. Calif. Acad. Sci., collected May 31, 1921, on Espiritu Santo Island, Gulf of California.

234. *Euthiscia tuberculata* Van Duzee, new species

Smaller and shorter than *signata*, with six tuberculate elevations above, two on the vertex, two on pronotum and two on scutellum; elytra strongly angled. Length 3.5 to 4 mm.

Vertex as long as broad, obtusely angled before, nearly flat, a little elevated at base and apex, sides scarcely carinate before the eyes; opposite each eye raised in a blunt tubercle. Front slightly longer than wide, its greatest width just above antennæ; base subacutely produced and almost tuberculate below apex of vertex; basal suture of clypeus obsolete at middle; viewed from side the contour of front is nearly straight, a little depressed between the eyes; clypeus flat on disk, its sides angled or subcarinate at base. Posterior margin of pronotum practically straight, anterior raised in a tubercle either side behind inner angle of eyes, the median line obsoletely impressed as is the base of vertex. Scutellum with lateral carinæ elevated in prominent tubercles in line with those of the head and pronotum; median line obscurely impressed at base and subcarinate toward apex, the apex obtuse and callosed. Elytra but little longer than broad, scarcely exceeding the elevated apex of clavus; costa strongly angled in male and oblique to apical angle; in female broadly rounded almost from base. Wings reduced to a minute scale. Hind tibiæ unarmed.

Color, grayish brown varied with fuscous or black, forming a broad band on base of front and sides of head, pronotum and scutellum; elytral veins thick and discolored in places, especially along the commissural area; clypeus blackish, paler along middle, the basal suture black either side; anterior and intermediate legs irrorate with brown, the tibiæ brown on their inner face. In the female the dark markings are more extended, the upper surface being sometimes dark greenish or almost black. In these dark individuals there may be a large pale area about the elytral bullæ.

Described from numerous examples taken as follows: Palm Cañon, Angel de la Guardia Island, May 3, on *Sideroxylon*; San Marcos Island, May 12; San Francisco Island, May 30; Espiritu Santo Island, May 31; Ceralbo Island, June 6, 7; Marquer Bay, Carmen Island, May 23; Coronados Island, May 18; Monserrate Island, June 13; Guadalupe Point, Concepcion Bay, June 17; Angeles Bay, June 27. This differs from the type species of the genus by the short vertex, tuberculate dorsum and subcarinate sides of the clypeus.

*Type*: Male, No. 1090, Mus. Calif. Acad. Sci., collected June 27, 1921, at **Angeles Bay, Lower California**. *Allotype*, female, No. 1091, collected June 13, on Monserrate Island, Gulf of California.

### 235. *Acanalonia puella* Van Duzee new species

Closely allied to *virescens* Stål, the front with no trace of a median carina, elytra longer, parallel, and genital characters different. Length to tip of elytra 6.5 to 8 mm.

Vertex half as long as wide at base, anterior and posterior margins parallel, surface flat, sloping, passage to front broadly rounded. Front

a little broader than long; sides parallel, base prominent but not tumid, without carinæ. Pronotum as long as vertex, less deeply excavated behind than in *virescens* and with scutellum entirely ecarinate. Elytra more than twice longer than wide, parallel from basal third; apex rounded-truncate; venation weaker than in *virescens*. Last ventral segment of female truncate, parallel, with very slight median notch. In *virescens* this segment is triangularly produced and deeply notched at apex.

Color, yellowish green becoming a clear pale green on the elytra, the slender apical margin of elytra brown; wings white with brown nervures.

Described from one pair taken at Guaymas, April 10, and one male from San Carlos Bay, Sonora, July 9. This species is really much nearer to *clypeata* but the much smaller and flatter clypeus will at once distinguish it. It may be the "narrow form" of *virescens* mentioned by Fowler in the *Biologia*.

*Type*: Male, No. 1092, and *allotype*, female, No. 1093, Mus. Calif. Acad. Sci., collected April 10, 1921, at **Guaymas, Sonora, Mexico**.

### 236. *Cyarda subfalcata* Van Duzee, new species

Elongate, narrow, elytra subfalcate at apex; brown, varied with black. Length 6.5 to 9 mm.

Vertex nearly three times wider than long, nearly truncate, with a large angulate depressed area. Front a little wider than long, broadly depressed longitudinally, ecarinate; sides elevated, base rounded; clypeus broad, flat, scarcely carinate. Pronotum strongly lunate, anterior margin nearly attaining anterior line of eyes, posterior subangularly excavated; mesonotum flat above, obtusely bicarinate. Elytra three times longer than wide, somewhat bullate, widest just behind the bullæ, about a fourth narrower at apex of clavus, then slightly widened to the nearly vertical and slightly falcate tip; costal membrane closely set with heavy fuscous, slightly oblique veins; claval granules occupying basal half of inner areole; areoles of corium with very few transverse veins.

Color, fuscous brown becoming paler on vertex and front, and almost testaceous on the coxæ and legs; abdomen varied with pale; elytra pale brown with heavy fuscous veins. Fresh specimens are covered with a white bloom.

Described from 17 specimens taken as follows: Coronados Island, May 18; Ceralbo Island, June 7, on Lycium; Espiritu Santo Island, May 31; Las Animas Bay, May 8. This species superficially resembles *Cyarda acuminipennis* as figured by Melichar (pl. 7, fig. 12), but the apex of the elytra is wider, more deeply falcate and vertical, and it is a much

smaller insect. It certainly belongs to genus *Cyarda* of Stål but that may have to be separated from *Cyarda* of Walker under Kirkaldy's name *Gelastophanta*. This however cannot be done without a careful examination of *acuminipennis*.

*Type*: Male, No. 1094, and *allotype*, female, No. 1095, Mus. Calif. Acad. Sci., collected May 18, 1921, on **Coronados Island, Gulf of California**.

### 237. *Rhynchopteryx caudata* Van Duzee

Very common everywhere we worked. The following localities are represented in the material brought home: Tepoca Bay, April 23; Lagoon Cove, Angel de la Guardia Island, May 2; Ceralbo Island, June 6, 7; San José Island, June 10; San Francisco Island, May 30; San Esteban Island, April 19; San Carlos Bay, July 8; Escondido Bay, June 10; Monserrate Island, May 25, June 13; Salinas Bay, Carmen Island, June 16; San Marcos Island, June 19; bay at south end of Tiburon Island, July 4; Guadalupe Point, Concepcion Bay, June 17; San Francisquito Bay, June 10; San Pedro Bay, July 7. Those from San Francisco Island were taken on *Parosela divaricata cinerea*, the angular seeds of which they very closely resembled. I also took them on palo tinto and *Laccodesmia*. It is quite likely that this name will have to be sunk as a synonym of *Mistharnophantia sonora* Kirkaldy in spite of the fact that he says the vertex scarcely extends before the eyes while here it surpasses them by more than half its length, that the front is ecarinate while he states that it is "medianly keeled", and that the scutellum is distinctly tricarinate while he says "bicarinate". He also fails to mention the tail-like extension of the elytra, a very prominent character. The species is absolutely unrecognizable from Kirkaldy's description and I never would have thought of placing them together were it not that the Koebele collection contains specimens of *Rhynchopteryx caudata* bearing the Koebele number given by Kirkaldy for his *sonorana*. Until the synonymy is settled I use the name given by me which correctly places the species.

238. *Dascalia edax* Van Duzee, new species

Aspect of *Ormenis pruinosa*, but smaller, darker, with much simpler venation. Length 6 mm.

Vertex as in *pruinosa*, very short, transverse. Front a little broader than long; median carina barely indicated; surface depressed with sides a little elevated. Pronotum nearly three times as long as vertex, subangularly emarginate behind; disk depressed with median line feebly raised at times. Mesonotum flattened with lateral carinae scarcely indicated; moderately raised above plane of pronotum; apex reflexed. Elytra nearly three times as long as wide; margins parallel beyond the feeble bullæ; costal membrane wider than costal areole, fuscous with edge and transverse veins pale; claval granules filling basal half of inner areole; corium with a few granules just behind the bulla; nervures heavy at base, obscure toward apex, with very few transverse veins, forming, however, two series of broad apical areoles. Hind tibiæ bispinose.

Color, fuscous or almost black in male; apex of front paler; clypeus and beneath yellowish testaceous; commissural margin slenderly pale; costal membrane and region of claval suture and sometimes base of clavus, paler or ferruginous brown; cheeks and antennæ pale. Immature examples are much paler and occasionally the head is entirely pale in mature examples. When fresh they are covered with a white bloom.

Described from 109 examples taken as follows: San Marcos Island, May 12, June 19; Loreto, May 19; Coronados Island, May 18; Escondido Bay, June 14; Monserrate Island, June 13; San Diego Island, May 27; Puerto Ballandra, Carmen Island, May 22; Marquer Bay, Carmen Island, May 23; south end of Tiburon Island, July 5; Angeles Bay, June 27; Guadalupe Point, Concepcion Bay, June 17; San Francisco Island, May 30; San José Island, May 29; Puerto Refugio, Angel de la Guardia Island, May 1; San Lorenzo Island, May 9; Espiritu Santo Island, May 31; Palm Cañon, Angel de la Guardia Island, May 3; Ceralbo Island, June 8. Mostly taken on *Laccodesmia* and the related mesquite but also found on *Sideroxylon*, creosote bush, *Pertyle*, etc.

*Type*: Male, No. 1096, and *allotype*, female, No. 1097, Mus. Calif. Acad. Sci., collected May 12, 1921, on **San Marcos Island, Gulf of California.**

239. *Flatoides enotus* Van Duzee, new species

Aspect of and closely allied to *fuscus* Van D., but with longer vertex and flatter mesonotum; blackish fuscous marked with fulvous brown. Length 11 mm.



Vertex about as long as broad, abruptly constricted at about half its length before the eyes, the apex blunt conical; surface deeply impressed from near base, with an oval apical raised area in which is a broad median longitudinal furrow. Front twice longer than wide, widest at the antennæ; sides beyond front line of eyes broadly arcuated and obtusely carinate or calloused; apex very feebly concave; surface flat below, convex or subcylindric on apical half with an obscure longitudinal furrow. Clypeus large, flat, ecarinate. Pronotum flat, ecarinate, the truncate apex almost in line with front of eyes; sides anteriorly carinate and somewhat elevated; lateral portion with prominent tubercle behind the eyes; hind edge deeply angularly excavated; surface with an impressed point either side. Mesonotum flat, in same plane with pronotum, the lateral carinæ represented by a thick curved ridge. Elytra nearly three times as long as wide, broadest before the bulla; costal membrane very wide near base, sinuate opposite stigma; venation strong, confused behind middle, with one regular series of apical transverse veins continuing the costal membrane; claval granules few, following the veins on their basal half; costal membrane with a few pustules in two ill-defined series. Hind tibiæ bispinose.

Color, blackish fuscous; elytra pale yellowish brown with heavy fuscous venation; body and legs testaceous varied with fuscous brown; median line and two dashes either side on pronotum and three longitudinal vittæ on central field of mesonotum, fulvous; front pale, becoming blackish with a series of black points near either side.

Described from one female taken on San Esteban Island, on Burseæ bushes. With this were two pale immature females that certainly belong to this species. In life, this insect is covered with a whitish incrustation such as is frequently found in related forms.

*Type:* Female, No. 1098, Mus. Calif. Acad. Sci., collected April 19, 1921, on San Esteban Island, Gulf of California.

#### 240. *Stobæra concinna* Stål

Mulegé, May 15, abundant on *Ambrosia tenuifolia*.

#### 241. *Stobæra minuta* Osborn

Mejia Island, April 30; Puerto Refugio, Angel de la Guardia Island, May 1, on *Hymenoclea* at both places.

#### 242. *Liburnia* species

Mulegé, May 15, abundant on *Monanthoclea*; San Francisco Island, May 30, on same grass; San Carlos Bay, July 9, on grass about spring; Tepoca Bay, April 25, on *Monanthoclea*.



243. *Aphalara punctellus* Van Duzee, new species

Very small; pale yellowish, wings faintly smoky with numerous minute round clear points, quite regularly distributed; antennæ nine-segmented. Length 2 mm.

Vertex flat, moderately depressed, with an impression either side the median line, the lobes angularly rounded before, projecting but little before the frontal ocellus; cheeks forming an oblique rounded lobe either side the tumidly prominent clypeus; antennæ apparently nine-segmented; segment IX about two thirds the length of VIII and nearly connate with it. Male genital valve subcylindric when seen from side, rounded below and narrower at apex; forceps broad, pyriform, rounded at apex; anal valve ligulate, over four times as long as wide. Wings narrow, nearly parallel; venation normal for the genus; texture subopaque; color pale yellowish brown with numerous fairly uniform roundish hyaline dots; antennæ slightly infuscated.

Described from three males taken at San Nicolas Bay.

*Type*: Male, No. 1099, Mus. Calif. Acad. Sci., collected May 16, 1921, at **San Nicolas Bay, Lower California.**

244. *Aphalara mera* Van Duzee, new species

Small; clear light yellow; elytra hyaline, heavily maculated at apex; antennæ annulated. Length 2.5 mm.

Vertex sloping, slightly convex, nearly twice wider than long, with an impressed point either side the incised median line; lobes narrowed and rounded before; genæ sublunately convex, the tumid clypeus nearly filling the space between them. Antennæ ten-segmented, more than twice longer than width of head including the eyes. Male forceps oblong; anal valve formed much as in *pulchella*, the ventral lobe shorter and rounded at apex. Color a clear light fulvous yellow, becoming more whitish on legs and abdomen and testaceous on head; antennal segments annulated with black at apex, the annuli increasing in width from III. Wings hyaline, with a broad black concentric apical band carrying a clear marginal spot at center of each areole, that in the fourth bisecting the band; clavus with a black line at apex; pterostigma long and slender; tarsal claws black; tergum with black median vitta extending to the genital pieces.

Described from six males and 12 females taken at San Nicolas Bay, on *Atamisquæa emarginata*.

*Type*: Male, No. 1100, and *allotype*, female, No. 1101, Mus. Calif. Acad. Sci., collected May 16, at **San Nicolas Bay, Lower California.**

245. *Aphalara nupera* Van Duzee, new species

Straw-yellow; fore wings white, varied with fuscous. Length 2 mm.

Vertex barely twice wider than long, with a large fova either side of the incised median line; anterior margin produced in a rounded or almost conical prominence; clypens large, strongly produced in an erect conical process; mesonotum armed with a small tubercle either side behind the lateral pronotal tubercles; antennæ ten-segmented, nearly twice longer than width of head. Male forceps clavate, truncate at apex; anal valve with dorsal member truncate, ventral three times longer than dorsal, narrowed apically with tip rounded, the whole genitalia much as in Crawford's figure 172 (Bul. 85, U. S. Nat. Mus.). Color straw-yellow varied with a fulvous tint on head and thorax or with dull brownish in the male; abdomen in male largely black. Elytra whitish hyaline, marked with a transverse fuscous band a little before the apex; a large spot on middle of commissure and a small one on middle of costa; median field of disk dotted with fuscous flecks with a broad vitta of same at basal fourth, not reaching costa. In the female the colors and markings are paler.

Described from seven male and 18 female examples taken as follows: Angeles Bay, May 4; Gonzales Bay, April 29; Tepoca Bay, April 25.

*Type*: Male, No. 1102, and *allotype*, No. 1103, Mus. Calif. Acad. Sci., collected April 29, 1921, at **Gonzales Bay, Lower California**.

246. *Aphalara veaziei metzaria* Crawford

San Esteban Island, April 19, one female that seems to differ from material from the eastern states only in having the elytra sparsely but distinctly dotted almost to their base.