

NEW SPECIES OF HEMIPTERA COLLECTED BY THE
 TEMPLETON CROCKER EXPEDITION TO
 THE SOLOMON ISLANDS IN 1933

BY EDWARD P. VAN DUZEE¹

PLATASPIDÆ

Brachyplatys nitidiceps Van Duzee, new species

Closely related to *obscurus* Montd. from New Guinea; deep polished black; head smooth, polished, eyes bright vermilion red; a submarginal line on the sides of the pronotum anteriorly, base of costa and abdominal margins yellowish; antennæ, rostrum, tibiæ and tarsi ochraceous. Length 6 mm.

Head short, almost truncate before, one-half as long as wide between the eyes, five-eighths as wide as pronotum across the humeri, its surface smooth and polished, without visible punctures or rugæ; cheeks valvate, disk depressed; ocelli small, red, distance between them one-half greater than that to the eye. Pronotum short, its length three-eighths its humeral width, sides but moderately arcuate the humeri but little prominent; punctures obsolete or nearly so. Scutellum transverse, the ratio of length to width as 11:18, one-sixth wider posteriorly; punctures very small, distant, subobsolete, becoming quite so on base and on the lateral areas, especially posteriorly; apex deeply excavated as usual in the males of this genus. Antennal segments as 9:3:10:10:11. Rostrum attaining apex of hind coxæ. Ostiolar orifices small, their distance from coxæ twice that from sides of the metapleuræ, canal narrow, polished, black, flat, with carinate margins, slightly widened and curved anteriorly at apex which attains margin of the opaque area. Venter polished, impunctate, with very feeble transverse rugæ; segment VI produced anteriorly in a sharp triangle to apical margin of IV, V being cut through at center. Genital segment truncate at apex, when extended nearly quadrangular if viewed from below, the side margins but little thickened apically; fringe of pale hair on the basal fovea forming two hooks, their common median stalk slender, not thickened as in *subaneus*.

Color deep polished black, eyes vermilion red; a submarginal line on pronotum before the humeri, reproduced below, a short vitta on base of elytra, a suggestion of a submarginal line about the apex of the scutellum, an eroded vitta on abdominal margin, a nearly obsolete point behind the stigmata on segments II, III, and IV, and rostrum, pale yellowish; antennæ dusky yellow,

¹ This posthumous article has been prepared by the editor from the unpublished manuscripts of the late E. P. Van Duzee. At the time of his death Mr. Van Duzee was in the midst of a general study of the entire Hemipterous fauna of the Solomon Islands.

segment I piceous, pale at extreme apex; femora piceous black; tibiæ and tarsi dusky ochraceous; tip of claws black; whole sternal and pectoral region opaque plumbeous-gray, the outer angle of metapleura only polished black, the acetabula piceous to pale; base of head beneath with a yellowish spot either side the rostral canal; a very faint castaneous mark discernible on base of scutellum above elytral sinus.

Holotype, male, No. 5125, Calif. Acad. Sci., Ent., and one male paratype, taken by Maurice Willows at Uras Cove, Malaita Island, Solomon Islands, May 28, 1933. This species pertains to section "a" in Stål's synopsis (Enum. Hemipt., V, p. 7, 1876), which includes *deplanatus* Erich. from the Philippine Islands and *obscurus* Montandon from New Guinea. It can be distinguished from *deplanatus* at once by its nearly impunctate surface. It is much nearer *obscurus* but the puncturation of the scutellum is different, the head wants the feeble rugæ, the color markings are much reduced, a character undoubtedly subject to variation, and there are other differences as indicated in the above description. With our present limited knowledge of this group I believe it best to consider it as a distinct species but the study of material from other islands may lead us to place it as a subspecies of *obscurus*.

PENTATOMIDÆ

Vitellus ensifer Van Duzee, new species

Apparently closely allied to *pungens* Montr. from the island of Woodlark but differing distinctly in the form of the metasternal carina; pale greenish olivaceous, humeral spines rather short, obtuse, slightly recurved. Length 11 mm.

Head as long before the eyes as wide between them, broadly sinuate either side, subangularly narrowed anteriorly; tylus scarcely exceeding the cheeks, surface impunctate, transversely wrinkled. Pronotum more than three times as wide across the humeri as long; anterior submargin sulcate, carrying a single row of large confluent punctures that become irregular at the anterior angle; callosities impunctate, the rest of the surface coarsely, sparsely punctate; sides straight, calloused, humeri forming a short nearly terete blunt spine; hind margin deeply sinuate, the posterior angles prominent, rounded. Scutellum as long as broad at base, apex sharply angled above the depressed surface which forms a broadly rounded plate beneath the inner angle of the elytra, disk sparsely, coarsely punctate, the sides

more finely so, frenum occupying five-sevenths the length of the scutellum. Elytral punctures coarse and discolored on claval region, fine and closer on corium; membrane hyaline. Rostrum long, segment I slightly surpassing the bucculæ, II a little longer than III (25::30), IV equal to III. Bucculæ widest and obtusely angled anteriorly, their margins sinuate. Prosternal lamina attaining apex of first rostral segment, its apex obtusely triangular; its margin broadly sinuate, distally cleft for the reception of the ventral tubercle. Segments I to V of connexivum each armed with a small tooth, VI with an acutely triangular black-tipped spine. Genital segment sinuate next the prominent lateral angles, with a small median notch; styles linear with an almost knob-like apex that very nearly attains the outer angle of the segment; venter and margin of pleural pieces impunctate, polished. Ostiolar canal long.

Color greenish testaceous; antennæ apically, and tip of humeral spines and the genital segment slightly infuscated; apex of rostrum and tips of the claws black; ocelli red.

Holotype, a unique male, No. 5126, Calif. Acad. Sci., Ent., taken by Maurice Willows at the northwest end of Bellona Island, June 22, 1933. This insect comes nearest to *pungens* but the shape of the mesosternal lamina will at once distinguish it.

COREIDÆ

Amblypelta costalis Van Duzee, new species

Pale testaceous-yellow, pronotum posteriorly, scutellum and elytra pale castaneous brown, costa lineate with whitish and black. Length 14 mm.

Head shorter than pronotum as 36::50, nearly horizontal, ocelli placed midway between median line of vertex and eyes, bucculæ as long as dorsal width of head between antennal sockets, highest anteriorly. Rostrum attaining middle of ventral II, segment I attaining margin of prosternum, II as long as I, III shortest, IV longest. Anterior margin of prosternum feebly sinuate, mesosternum feebly sulcate. Antennæ a little longer than the entire body, the segments as 65:80:55:68, I slightly thicker apically, feebly triquetrous. Pronotum wider across the humeri than long, 8::5; humeri short-spinose; posterior submargin with an abbreviated transverse ruga. Scutellum as long as wide, truncate at extreme apex. Venter feebly sulcate at base. Legs slender, unarmed. Pronotum, scutellum, elytra and pectus closely, coarsely punctate, head obsoletely punctate, venter shagreened.

Color pale testaceous-yellow, ocelli and eyes reddish; antennal I with tip and an obscure line above blackish, II and III narrowly black at apex, IV blackish with nearly its basal half croceous, the incisure black; basal two-thirds of costa narrowly whitish, limited within by a broader black vitta; membrane fuliginous; extreme tip of scutellum and of the rostrum and tarsal claws black; tibiæ and tarsi clothed with pale hairs; minute plates at apex of femora black.

Genital segment of male with a broad, shallow sinus; plicæ of sixth ventral of female broadly arcuate, the fissure behind this plicæ subacute, attaining the plicæ.

Holotype, male, No. 5127, and allotype, female, No. 5128, Calif. Acad. Sci., Ent., and five male paratypes taken by Maurice Willows, Jr., June 22, 1933, at the northwest end of Bellona Island, Solomon Islands. Larger than either *bilineata* Stål or *nitida* Stål².

LYGÆIDÆ

Scopiasstes lepidus ventralis Van Duzee, new subspecies

Agrees with Horvath's description (Ann. Mus. Nat. Hung., 12:631, 1914) in all structural details. Color rufofulvous, eyes black, antennals II and III, posterior lobe of pronotum, elytra, hind margins of propleura, and the meso and metapleura and usually the scutellum infuscated or piceous; antennals IV fulvous or more or less infuscated, scutellum rufous in one specimen, apical two segments of rostrum black; tibiæ and tarsi sometimes tinged with fuscous. Length 8 mm.

Holotype, female, No. 5129, Calif. Acad. Sci., Ent., and two female paratypes taken June 23, 1933, at the northwest end of Bellona Island, Solomon Islands.

This can hardly be considered specifically distinct from *lepidus*, from the same island group, but here the venter is entirely rufo-fulvous, the ostiolar orifices are reddish and the apex of the clypeus is not black. The depth of infuscation on the pronotum, scutellum, elytra, etc. varies from fulvous to piceous but is scarcely blue-black. It is conceivable that this is merely a color form that might be found in a single brood but the chances are that it is a local variation developed on a different island. Dr. Horvath does not state on which island his material was taken.

² *Amblypelta gallegonis* Lever (Ann. Mag. Nat. Hist., (10) 17:324, 1936) is not available for comparison but was described from the Solomon Islands and may be identical with the above. Editor.

Nysius villicus Van Duzee, new species

Allied to *ericæ* but with the sides of the pronotum straight and the antennæ more slender. Length, 4 mm.

Head strongly punctured, produced between the eyes about as in *ericæ*; black, the pale vittæ on clypeus and on each side of it much obscured, especially in male; basal spot small but obvious; cheeks with a pale mark below eyes; bucculæ shorter than in *ericæ*, not attaining base of head, their margins feebly arcuate. Antennæ thinner than in *ericæ*; segments in the male as 6:15:13:15; pale tinged with fulvous; IV slightly infuscated, I black above, II blackish at base and apex, III very narrowly so. Pronotum black or blackish, anterior margin obscurely and six longitudinal vittæ on posterior lobe more or less distinctly fulvous, the hind margin with a median pale mark as in *ericæ*. Scutellum polished, black, its extreme tip only pale. Base of elytra parallel for about basal fourth, then moderately expanded, nearly parallel beyond the middle; whitish hyaline, the nervures more or less infuscated, the apical margin with three blackish marks that rarely become connected. Legs pale yellowish with numerous black points that are larger beneath, tips of tarsi infuscated. Body beneath black, the bucculæ and acetabula whitish; metapleura moderately excavated; expanded dorsal and ventral flaps whitish; margins of the pro- and mesopleuræ obscurely fulvous. Rostrum attaining hind coxæ, segment I barely exceeding bucculæ in male, a little larger in female. Venter black, the sides and a subapical discal spot yellowish fulvous, more extended in the female.

Holotype, male, No. 5130, allotype, female, No. 5131, Calif. Acad. Sci., Ent., and three male and three female paratypes taken at the Tal Lagoon on Malaita Island, Solomon Islands, May 30, 1933. One male and three females taken at Mohawk Bay, Matema Island, in the Santa Cruz group have the sides of the scutellum paler and the membrane longitudinally vittate with fuscous but with so little material I would not feel justified in assigning them even subspecific rank. More material from adjacent islands should be studied.

Nysius femoratus Van Duzee, new species

Aspect of *villicus* but differing in the black polished femora and first antennal segment. Length, 3 mm.

Eyes large; head across eyes nearly as wide as basal width of pronotum, 18::22; dull fulvous brown, median line anteriorly and a broad lateral vitta next the eyes and beneath black; bucculæ low, not quite reaching to base of head, slightly lower posteriorly, narrowly pale. Rostrum attaining hind coxæ, segment I hardly surpassing bucculæ. Antennæ rather short, segment I strongly incrassate for this genus; relative lengths of segments as 6:13:10:12; sides rectilinear, about one-fifth wider at humeri than anteriorly, 22::15; brownish fulvous, black anteriorly with median vitta and a mark behind each eye pale; posteriorly black sending a median vitta and another either side to connect with anterior black area; humeri polished black; scutellum black, the extreme tip of smooth median line pale. Elytra whitish hyaline, a spot on inner angle of clavus connecting with the commissure and about three vittæ on the corium and radial vein in part fuscous; membrane hyaline, a median vitta widened behind fuscous. Beneath black with anterior margin and a lateral spot on propleura, ostiolar orifice, and some marks exterior to it fulvous brown; posterior metapleural margin narrow, the exterior angle whitish; disk of venter with a pale spot posteriorly. Legs pale testaceous yellowish, the femora, except at apex, black, polished, tips of tarsi infuscated. Whole surface, elytra excepted, polished, coarsely punctate, clothed in part with very minute pale hairs.

Holotype, a unique female, No. 5132, Calif. Acad. Sci., Ent., taken on Anuda Island, just east of the Santa Cruz Islands, July 15, 1933.

Orthæa oculata Van Duzee, new species

Belonging to Stål's subgenus *Diplonotus*, section "ss" with the posterior lobe of the pronotum strongly punctate, the anterior lobe shorter than in *nigriceps* Dallas; castaneous-brown, head black, corium with a large rounded preapical pale spot, legs pale, antennal IV largely white. Length, 6 mm.

Head produced, longer than in *nigriceps*; polished, with minute golden hairs laterally before the antennæ; a little narrower than the anterior pronotal lobe, 18::21. Pronotum two-thirds as long as humeral width; anterior lobe as long as posterior, its length about one-half its basal width, 10::21, but moderately elevated, with a median band of shallow punctures, otherwise impunctate; collum strongly distinguished, with a single row of punctures; incised line shallow; posterior lobe strongly punctured, with a median line and the humeri smooth. Scutellum strongly punctate, with the usual Y slightly prominent, smooth. Elytra coarsely punctate, the median area nearly smooth, nervures prominent;

costa narrowly reflexed, its edge minutely serrate. Antennæ long, segment I passing tylus by one-half its length; segments as 12:18:21:24. Rostrum attaining hind coxæ. Anterior femora less incrassate than in *nigriceps*, with one subapical spine and two or three setaceous papillæ.

Color dark chestnut brown; head polished, black; tip of tylus paler; neck under the collum ochraceous either side; hind lobe of pronotum with an ochraceous vitta each side of the median line; reflexed elytral costa, veins more or less, base of corium, a small spot near inner angle and a large rounded one before apex ochraceous or whitish; legs, including coxæ, entirely pale yellowish; antennæ castaneous, narrow apex of segments II and III brown, IV white, the narrow base and apical third brown; beneath black, venter dark brown, rostrum pale. Superior surface nude, except for minute golden pubescence on head anteriorly and portions of antennæ.

Holotype, female, No. 5133, Calif. Acad. Sci., Ent., and one female paratype, taken at Uras Cove, Malaita Island, Solomon Islands, May 28, 1933. In the type the ocular pale spot at apex of corium is very conspicuous, less so on the paratype.

Dieuches finitimus Van Duzee, new species

In Stål's key (Enum. Hemipt., IV, p. 161, 1874) this species runs to *atricornis* Stål but is evidently distinct; black, becoming piceous on the legs and antennæ; pronotum and elytra with yellowish markings. Length, 7 mm.

Head about as in *consanguineous*, opaque, impunctate. Antennal segments as 16:30:30:30; segment I exceeding tylus by one-half its length. Segment I of rostrum attaining apex of head. Pronotum nearly as long as its basal width, laminate margins strongly reflexed, scarcely attaining the humeral angles; transverse depression deep; anterior lobe moderately convex, impunctate either side of the middle, finely punctate laterally; posterior lobe coarsely punctate. Median area of corium mostly smooth. Anterior femora moderately incrassate with a percurrent double row of short teeth; anterior tibiæ widened apically with a few small teeth.

Color black, becoming dark castaneous on head and piceous or brown on feet and antennæ; median line and two spots either side on hind lobe of pronotum, two discal points on scutellum, a short basal vitta on clavus, a short line on radial vein, a basal line on subcosta, an oblique spot or vitta before apex of corium, and a marginal spot on fourth and fifth connexival segments yellowish; narrow expanded costa to beyond middle and reflexed margin of

pronotum white, the latter becoming black over humeri, base of intermediate and hind femora whitish; intermediate tibiæ and tarsi, anterior at base, antennal I, base and apex of II, and base of III and IV paler brown or yellowish; membrane black.

Holotype, male, No. 5134, Calif. Acad. Sci., Ent., a unique taken at Kungava Bay, Rennell Island, Solomon Islands, June 16, 1933. In this species the transverse black elytral band is much obscured by the blackish shade of the elytra.

REDUVIDÆ

Euagoras crockeri Van Duzee, new species

Size and aspect of *asseda* Stål but paler, rufo-fulvous; posterior lobe of head anteriorly and sometimes anterior lobe as far as base of antennæ more or less clouded with fuscous, at times becoming black; antennæ fuscous or almost black, segment I longer than head, pronotum, and scutellum together, with a very broad obscure pale annulus before middle and a white subapical annulus as wide as width of anterior lobe of pronotum, segment II one-third as long as I with an obscure paler median annulus, III and IV fuscous, III shorter than I, IV longer. Extreme tip of rostrum darker. Anterior tubercles of pronotum subacuate, directed outward; humeral spines long, directed outward and backward, mostly black; disk between these spines often with a black spot; clavus and inner margin of corium black; membrane fuscous, paler exteriorly; meso and metapleura and sides of ventrals IV and V with a large black spot; tips of femora, tibiæ, and tarsi black. The specimens from San Christoval Island differ in having the legs paler, the tibiæ and tarsi sometimes scarcely enfumed, the anterior femora usually with a black line, the posterior with two narrow fuscous annuli, one subapical, the other median. These also usually want the blackish discal spot on the pronotum. Length, 15 mm.

Holotype, male, No. 5135, and allotype, female, No. 5136, Calif. Acad. Sci., Ent., taken June 22, 1933, by Maurice Willows at the northwest end of Bellona Island; six paratypes and one nymph, same data; one male paratype, wanting the black thoracic spot, taken May 20, Kau Kau Plantation, Guadalcanar Island, by Mr. Willows. Six adults and one nymph from Star Harbor, San Christoval Island, July 1-3, differ only in the color of the legs but this character varies so that the legs may be entirely pale. In the typical form of this species the dark head and black knees are conspicuous characters.

CERCOPIDÆ

Genus CLOVIA Stål

This genus is represented in the Solomon Islands by a group of species characterized by a transverse median elytral vitta, usually more or less oblique, at least on the corium, and by an oblique, or almost longitudinal, apical vitta from behind the middle of the costa, toward but not attaining the apex of the elytra, this last usually broken into two maculæ of varying size and shape. In most of the species known to me the pronotum and vertex are transversely banded. This group of species is largely represented in New Guinea and adjacent island groups. The genus is found in Africa and over much of Oceanica, at least as far north as the Philippines. A good idea of this group, showing the form and pattern of marking, can be had by turning to the *Records of the Indian Museum*, Vol. III, plate 10, figure 9 (*moresbyensis* Distant) or the *Genera Insectorum*, fasc. 143, plate 2, figure 4 (*caput-ranæ* LeGuillon). The five species here described are closely, minutely punctate above, each puncture with a short pale hair. The following key will help to separate these species.

1. Apical pale vitta of corium entire as in *caput-ranæ*.....
.....*fraternus* n. sp.
- . Apical vitta of corium broken into two spots.....2
2. Larger (11.5 mm.); head, pronotum and scutellum black, non-vittate; median elytral vitta transverse.....*lugubris* n. sp.
- . Smaller (5-9 mm.) head and pronotum transversely vittate...3
3. Head and pronotum pale yellow vittate with brown; scutellum and base of clavus to the transverse vitta also pale.....
.....*clitellaria* n. sp.
- . Scutellum and base of clavus black or dark brown.....4
4. Median elytral vitta strongly oblique, with the broken apical vitta much reduced.....*crockeri* n. sp.
- . Median elytral vitta heavier, transverse on clavus, deflected posteriorly on corium; apical vitta forming two broad longitudinal vittæ, the costal acuminate posteriorly.....*sera* n. sp.

Clovio fraternus Van Duzee, new species

Near *antoni* and *formosula* Schmidt. Dark brown; vertex pale croceous with median and subapical vittæ; pronotum with one croceous vitta and an entire oblique apical vitta. Length, 7.5 mm.

Vertex a little shorter than broad between eyes (4::5), more produced than in the other species here described; pale yellow with a broad brown vitta between anterior angles of eyes and a shorter one on superior aspect of front; anterior edge slenderly black. Pronotum brown, darker posteriorly, with a complete bright croceous transverse vitta before middle, hind margin deeply excavated before scutellum, the latter dark brown. Elytra brown, becoming black medianly. Median vitta transverse on clavus, becoming moderately oblique and contracted to an obtuse point on corium and attaining middle of costal area; apical vitta entire, beginning behind middle of costa, running narrow and straight to beyond middle of corium, its apex broader and bent posteriorly. Face dark brown with a pale median vitta, broad on front and covering most of clypeus; base of front with a bright croceous vitta that passes under eyes, widens on propleura and fades out on mesopleura, this vitta bordered with black which becomes deep polished black behind eyes; base of femora, tibiæ and tarsi more or less embrowned. Male genital segment a little more than twice as long as its median width, narrowed to an obtuse apex.

Holotype, male, No. 5137, Calif. Acad. Sci., Ent., taken on the Island of Santa Catalina, Solomon Islands, July 2, 1933, by Maurice Willows. This insect pertains to the group represented by *caput-ranæ*, and seems to find its nearest relatives in *antoni* Schmidt and *formosula* Schmidt. From *antoni* it differs by the immaculate scutellum, in the median vitta not attaining the costa, and in the different genital characters. From *formosula* it differs in the shorter vertex, the longer median elytral vitta and the shorter and broader genital segment of the male.

Clovio clitellaria Van Duzee, new species

Apparently allied to *polita* Schmidt. Elytra ovate, the costa strongly arcuate; pale yellowish, two transverse bands on the vertex, three on the pronotum and much of the elytra blackish; whole of the surface above closely minutely punctate and clothed with short pale hairs. Length, 10 mm.

Vertex flat, one-half broader between eyes than long, obtusely angled at apex; a broad black band crossing at anterior angle of eyes, before which is a shorter brown band on reflexed base of front. Pronotum pale yellow with median and apical black bands, the latero-posterior and posterior margins narrowly black. Scutellum pale yellow. Elytra blackish fuscous with the following pale yellow areas: base of clavus to apex of scutellum, omitting slender

scutellar margin, a broad transverse band just beyond, scarcely attaining costa and sometimes connected with claval saddle, narrowed from radius to claval suture; apical oblique band broken into two subequal spots; apical submargin of elytra marked by a ferruginous band which includes the apical one-third of the clavus where it is most pronounced. Beneath pale yellow becoming somewhat testaceous on front and legs with the following black markings: a slender polished line on base of front, a broken longitudinal vitta behind eyes and another crossing pro- and mesopleuræ, apex of rostrum, tarsi above, tips of tibial spines and tibiæ more or less, embrowned; frontal striæ slightly darkened; female oviduct and tips of the male plates also blackened. Tergum apparently largely black. Wings hyaline with fuscous veins. Prothoracic epipleura distinctly wrinkled transversely to eyes. Extreme tip of scutellum blackened. Male plates parallel, truncate at apex, one-half longer than wide; valve square at apex, as long as broad.

Holotype, male, No. 5138, and allotype, female, No. 5139, Calif. Acad. Sci., Ent., taken at Mohawk Bay, Matema Island, Santa Cruz group, July 10, 1933, and three paratypes taken on Nupani Island, Santa Cruz group, May 8, 1933, by Maurice Willows. One male taken on Guadalcanar Island, Solomon Islands, in December, 1920, by J. August Kusche differs in having the elytra browner, the ferruginous apex of the clavus extended broadly onto the corium, the basal "saddle" of the clavus smaller, the oblique yellow apical spots larger and the pronotum anteriorly longitudinally rugose.

Clovia crockeri Van Duzee, new species

Pale yellow beneath, fuscous brown above with three pale transverse vittæ on the vertex, one on the pronotum, an abbreviated oblique median vitta and two subapical spots placed obliquely on the corium. Length, 8.5-10 mm., averaging smaller than *clitellaria*.

Vertex shorter than in *clitellaria*, its length three-fifths its width between the eyes. More finely punctured above than in *clitellaria*, the punctures becoming fine transverse rugæ on scutellum and partially so on pronotum posteriorly; pronotum anteriorly with a slender but distinct longitudinal carina which in some individuals may become more or less obsolete. Color fuscous brown above, vertex, a transverse vitta before middle of pronotum, a transversely oblique subinterrupted elytral vitta at apex of scutellum running from radial vein almost to commissure and angled at claval suture, and two subapical spots, whitish; vertex

with a median transverse vitta and a shorter one on reflexed base of front, brown. Front pale ferruginous with paler lateral striæ; basal margin of front black, bordered below by a pale vitta which extends back along sides of pleuræ. Legs testaceous-yellow, more or less embrowned, especially on tibiæ exteriorly and on tarsi; disk of sternum and venter pale yellow. Tergum, at least laterally, black. Prothoracic epipleuræ very narrow and smooth.

Holotype, male, No. 5140, and allotype, female, No. 5141, Calif. Acad. Sci., Ent., taken at Star Harbor, San Christoval Island, Solomon Islands, July 1, 1933, (holotype) and July 3, 1933 (allotype) by Maurice Willows. Paratypes, one female taken with the allotype and another taken at Mohawk Bay, Matema Island, Santa Cruz group, July 8, 1933. These paratypes are slightly larger than the types. The pale brown color, narrow shorter and more oblique median vitta, and the smaller subapical spots will most readily distinguish this species. The vestiture and punctation, except as noted, is similar in the species here described. In the present species the male genital segment is shorter and narrower at apex than in *clitellaria*.

Clovia sera Van Duzee, new species

Size and aspect of *crockeri* but more heavily marked with pale, the median elytral vitta transverse across the clavus, the apical vittæ heavier. Length, 9 mm.

Vertex slightly shorter than its width between eyes, polished black; disk with a blackish band between eyes and a shorter one before this, crossing reflexed base of front. Pronotum, scutellum and elytra blackish fuscous; pronotum with a transverse croceous vitta about its own width behind anterior margin. Elytra with a whitish vitta behind apex of scutellum, transverse across clavus, then oblique, terminating on radial nervure; posterior vitta in form of two elongated spots, the outer lying on costa, its inner margin following radial nervure along which it is produced to a point posteriorly and is as long as width of corium; inner spot forming a longitudinal vitta as long as greatest width of elytron and directed toward elytral apex; an indefinite costal area opposite transverse vitta and inner margin behind that vitta to near apex of corium more or less tinged with brown, and with a similar mark against costa exterior to apical vitta. Front and beneath honey yellow; base of front with a concentric pale vitta; tip of rostrum, a lateral vitta next the coxæ, tibiæ exteriorly and tarsi mostly, black; connexivum and apparently tergum black, polished.

Holotype, male, No. 5142, Mus. Calif. Acad. Sci., Ent., taken at Uras Cove, Malaita Island, Solomon Islands, May 28, 1933, by Maurice Willows. This species is near *crockeri* but the markings are broader, the transverse band becoming oblique only as it approaches the radial nervure. The pale color on the vertex and pronotum is more of a croceous and the male genital segment is much longer, more as in *clitellaria*.

Clovia lugubris Van Duzee, new species

A large black species, pale beneath, elytra with the usual pale vitta and a castaneous vitta about the apical margin. Length, 11.5 mm.

Vertex bluntly angled, distinctly broader between eyes than long (7:5); reflexed base of front more coarsely punctured than rest of upper surface. Above black; short impressed line behind eyes pale as in allied species. Pronotum with a very slender median carina on anterior one-third. Median transverse vitta of elytra whitish, but slightly oblique, terminating on radial nervure; apical spots small, the costal spot one-half its width from costal margin; apical spot about three times as long as costal; apical margin with a castaneous vitta from a little behind transverse vitta almost to apex, the margin slenderly black. Beneath pale yellowish, legs and front more croceous becoming castaneous on front; base of front with a polished pale vitta that is carried back broadly onto mesopleura and is bordered with black. Tibiæ exteriorly, tarsi and female oviduct black.

Holotype, a unique female, No. 5143, Calif. Acad. Sci., Ent., taken at Tal Lagoon, Malaita Island, Solomon Islands, May 29, 1933, by Maurice Willows. This species is quite distinct in its larger size, black color, short nearly straight median vitta and small apical spots on the elytra.

FULGORIDÆ

Bennaria venosa Van Duzee, new species

Pale testaceous, the elytra whitish with fuscous veins. Length, 7 mm. to tip of elytra.

Vertex transverse, its median length one-half its anterior width, hind margin angularly emarginate, surface somewhat depressed, sides carinate, median line slenderly impressed. Front a little more than twice as long as its greatest width, 21:9, sides

strongly, obliquely elevated, median carina wanting; clypeus narrow, longer than front, median carina prominent; antennal segment II twice as long as wide. Pronotum one-fourth longer than anterior width of vertex; lateral carinæ sharp, median obsolete. Mesonotum tricarinate, the median slender. Elytra nearly three times as long as wide, 14:5, subcostal and inner claval veins weak, others heavy, all obscure close to base. Abdominal appendages two-thirds the length of anterior femora. Male plates as long as pygofer, approximate only at middle; their sides nearly parallel beyond middle, somewhat expanded at their rounded apex.

Color yellowish testaceous, tinged with brown on head, mesonotum, and coxæ, with some white bloom in places beneath; carinæ of head slenderly edged with brown; wings opaque whitish with brown nervures; pale apical margin closely transversely crenulate.

Holotype, male, No. 5144, Calif. Acad. Sci., Ent., a unique taken on the northwest end of Bellona Island, Solomon Islands, June 21, 1933. The articulated and apparently moveable abdominal appendages are a most remarkable feature of this genus and of *Benna* Walker. The type of this genus was described from the Philippines and is characterized by a round black spot near the inner angle of the elytra. The genus seems to differ from *Benna* principally in wanting a median carina on the front.

Ricania sigillata Van Duzee, new species

Form and general aspect of *pulverosa* but pale brown with a smaller stigmal spot; elytra with an apical black point and obscurely liturate with paler. Length of body, 5 mm., expanse, 17 mm.

Head broad as in *Euricania tristicula*; vertex seven times as wide as its median length, without a median carina; front subvertical above, tricarinate basally; subapical transverse carina not attaining elevated marginal carinæ; clypeus ecarinate; pronotum three times as long as vertex, its median carina abbreviated anteriorly; mesonotum tricarinate, the lateral forked anteriorly as in related species, not attaining margin posteriorly, anteriorly meeting median near pronotal margin. Elytra short triangular, the apical margin equal to claval suture; costal membrane nearly twice as wide as costal areole; radial and subradial nervures straight, parallel, forking from basal cell; costal membrane with about twenty transverse veins to stigma, two obvious lines of transverse veins, anterior to the basal of these transverse lines the two arcuate folds are distinct on disk.

Color brown, beneath and legs pale; margins of basal two genital sclerites marked with a deep black calloused line; elytra brown liturate with transverse pale lines or veins basally; costal membrane and clavus paler, the femora with two fuscous clouds before stigma; white stigmal spot small and obscured distally where it connects with a white mark and is followed by a black longitudinal mark; apex with a round black point anterior to which is a larger polished fuscous spot; wings dusky hyaline, darker at apex, veins fuscous.

Holotype, a unique female, No. 5145, Calif. Acad. Sci., Ent., taken by Mr. Willows at Uras Cove, Malaita Island, Solomon Islands, May 23, 1933. This species runs to *fumosa* in Melichar's key of 1898 but is quite distinct.

Ricania corusca Van Duzee, new species

Size of *pulverosa* but with broader elytra; uniformly polished fuscous brown with a small white stigmal spot. Length to tip of abdomen, 5 mm.; expanse, 16 mm.

Head broad as in *tristicula*; median length of vertex one-seventh its width, no median carina; front transverse, its sides elevated, broadly arcuate; discal carinae complete, connecting with subapical transverse carina, prominent basally, becoming evanescent apically; median compartment longitudinally obscurely striate; clypeus ecarinate. Pro- and mesonotum as in *sigillata*. Elytra a little longer than wide (12::10); costal membrane but little broader than costal areole; radial vein forking some distance from basal areole, the two forks running about parallel to stigma; costal and apical margins with a row of short stiff hairs, each set in a black dot; transverse nervures few but forming two subapical lines.

Color yellowish brown; pro- and mesonotum blackish fuscous, tinged with castaneous between lateral carinae; tergal segments with a pale vitta near base of each segment; under surface and legs pale, the femora and a large tumid area on mesopleura brown; elytra deep fuscous hyaline, polished, with a metallic purplish black reflection in certain lights, more noticeable toward apical margin; costa with a small oblique white mark at stigma; costal vein reddish, base of radial vein pale; a polished black spot indicated before apex of elytra; wings whitish hyaline, narrow, pale brown, becoming slightly enfumed toward apex.

Holotype, a unique female, No. 5146, Calif. Acad. Sci., Ent., taken by Maurice Willows on Santa Catalina Island, Solomon Islands, July 2, 1933.

- Acarina, 106.
Acmæodera angelica Fall, 14.
connexa LeC., 14.
hepburni LeC., 75.
latiflava Fall, 75.
plagiaticauda Horn, 13.
sexnotata Van Dyke, 14.
Agrion æquabile (Say), 118.
Æolothripidae, 97.
Æolothrips fasciatus (L.), 77.
kuwanii Moul., 77.
Æshna californica (C.), 113.
constricta Say, 114.
interrupta Walker, 114.
multicolor Hagen, 113.
palmata Hagen, 114.
umbrosa Walker, 113.
Aleyrodidae, 29.
Amblypelta costalis V. D., 180.
gallegonis Lever, 181.
Amphiagrion saucium (B.), 119.
Anaphothrips, 77.
Anax junius (Drury), 113.
Ankothrips, Crawf., 97.
æqualis Moul., 102, 105.
diffRACTUS Hood, 101, 105.
fissidens (Trybom), 101, 105.
gracilis Moul., 77, 101, 105.
Ankothrips mavromoustakisi Pr., 102, 105.
niezabitowskii (Shille), 102, 104.
notabilis Bailey, 102.
robustus Crawf., 101, 104.
vandykei Moul., 101, 105.
yuccæ Moul., 77, 101, 105.
Anomiopsyllus congruens S., 17.
Anoploclera instabilis (H.), 76.
scapularis Van Dyke, 76.
Anthalia atratus Coq., 6.
sycophantor Melander, 6.
Anthepiscopus drapetoides W., 5.
flavipilosus Coq., 6.
stentor Melander, 6.
Anthonomus gracilipes Z., 70.
pumilus Montr., 70.
Anystis agilis Banks, 30.
Aphididae, 57.
Aphis lupini Gill., 76.
Apoidea, 138.
Arachnida, 30, 106.
Argia agrioides Calv., 119.
alberta Kennedy, 119.
emma Kennedy, 119.
rita Kennedy, 119.
vivida Hagen, 119.
Atheropsylla Stewart n. g., 18.
bakeri, Stewart, 19.
Atrichopleura scapuliferus B., 5.
Atyphloceras felix J., ♀, 22.
longipalpus Stew., 21.
Bailey, S. F., Ankothrips, 97.
Cocoon-spinning Thysanoptera, 77.
Beer, F. M., Buprestidae of southwestern Oregon, 13.
Bembicidae, 92.
Bembix comata Park, 16, 92.
Beutenmülleri Fox, 16, 93.
Bennaria venosa Van D., 190.
Bequaert, J., Calligaster, 124.
Bohart and MacSwain, Chrysidids parasitic on Bembicids, 92.
Conopid parasite of Megachile, 91.
Physocephala affinis parasitic on *Bembix comata*, 16.
Bohart, R. M., *Leptochilus*, 81.
Boyer, L. B., *Hoplina*, 11, 96.
Brachyplatys nitidiceps V. D., 178.
Britton, W. E., obituary, 12.
Buprestidae, 13, 75.
California Academy of Sciences, collections, 149-151.
Calligaster williamsi Beq., 124.
Capitophorus braggii (G.), 30.
Carabus tædatus Fabr., 95.
bicolor Walker, 95.
vancouvericus Csiki, 95.
Centris californica Timb., 139.
cockerelli Fox, 138.
hoffmanseggiae Ckll., 138.
pallida Fox, 138.
rhodoleuca Ckll., 138.
rhodomelas Timb., 139.
rhodopus Ckll., 138.
tiburoniensis Ckll., 138.
Cerambycidae, 32, 76, 135.
Cercopidae, 186.
Chamberlin, R. V., paper by, 4.
New Chilopods, 49.
Chapman, R. N., obituary, 12.
Chilopoda, 4, 49.
Chrysididae, 92.
Chrysobothris calcarata C., 13.
cyarella Horn, 15.
dolata Horn, 16.
quadrilineata LeC., 75.
Chrysotus xanthocal H. & K., 110.
Cicindelidae, 79, 143.
Cicindela w. amargosæ Dahl., 79.
plutonica Csy., 80.