

AUSTRALIAN HYMENOPTERA CHALCIDOIDEA—III.*

The Family Elasmidæ, with Descriptions of New Species.

By A. A. GIRAULT.

INTRODUCTION.

THE family ELASMIDÆ is a small one, consisting but of two genera. Heretofore only a single member of the family had been recorded from Australia and I have not as yet succeeded in capturing it. The species is *Euryischia lestophoni* Howard, the only representative of the second genus of the family. This genus, in my opinion, is doubtfully elasmid since I have found an encyrtid genus in Australia with elasmid wings and caudal coxæ and characters of this sort may have led Ashmead to ally the genus with the ELASMIDÆ. However, neither the insect nor its original description is accessible to me, so that I must be content to accept Ashmead's conclusion.

The types are deposited in the Queensland Museum at Brisbane.

HYMENOPTERA CHALCIDOIDEA.

FAMILY ELASMIDÆ.

GENUS ELASMUS Westwood.

All in normal position. It is not certain that both sexes of all species have been correctly paired, since coloration alone was used for that purpose.

1. ELASMUS SERENUS new species.

Female:—Length, 2.0 mm.; usual in size for the genus.

Dull honey yellow, the tibiae, tarsi and the flagellum darker. Eyes dark red; a large black, rounded triangular area (apex caudad) on mesopleurum beneath the fore wing insertion but central (also, it is between the cephalic and

* Contribution No. 5, Entomological Laboratory, Sugar Experiment Stations, Mackay, Queensland.

intermediate coxæ but above them); base of abdomen above fuscous; exposed tips of valves of ovipositor black, a spot at base of ovipositor fuscous; dorsal edge of intermediate coxæ and the centre of the same edge in the caudal coxæ black; black spines on caudal tibiæ forming conspicuous sagittate areas, the lines crossing and recrossing; axillæ black; coxæ, femora and antennal scape lighter than the body; centre of the vertex black as is also the disk of the metathorax more obscurely; scutellum and postscutellum lemon-yellow, lighter than the dull honey-yellow of the body; occiput black; venation dull brown, the wings uniformly slightly brownish. Pronotum dark, especially at the meson cephalad.

Mesoscutum with dense black pubescence which lies close to the body, that is, it is not erect; the mesoscutellum, however, is naked with the exception of one much larger, black bristle at each corner, its surface very delicately roughened; head with black, stiff hairs and thimble punctures. Wings densely ciliate; the long, slender proximal tarsal joint slightly shorter than the combined lengths of the other three joints. Intermediate femora as much compressed as the posterior, the intermediate coxa, however, conical. Fore wings with short marginal fringes. Mesopleurum very finely lined; caudal coxæ polygonally lined. Parapsidal furrows absent. No strigil.

Antennæ 9-jointed*; 3 funicle joints, all long and slender, subequal, club 3-jointed, its basal joint longest, only slightly shorter than the distal joint of the funicle; distal club joint much shorter. The ring-joint is short.

(From a single specimen, $\frac{3}{8}$ -inch objective, 1-inch optic, Bausch and Lomb.)

Male:—Not known.

Described from a single female captured at Babinda, N.Q., by sweeping in a jungle, October 28, 1911. In the above description, mention was omitted of a small black dot just above insertion of cephalic coxa.

Habitat: Australia—Queensland (Babinda).

Type: No. Hy/1076, Queensland Museum, Brisbane, the above female mounted on a tag plus the head in xylol-balsam.

2. ELASMUS AUSTRALIENSIS new species.

Female:—Length, 2.00 mm.

Dark metallic green, the produced base of the abdomen beneath reddish, suffused with yellow; the distal half of the caudal coxæ yellowish white, the tarsi blackish or pale, the tibiæ pale, the black spines of the caudal tibiæ arranged as in the preceding species (*sorensus*); antennæ black, the scape lighter; vertex

* The antennæ are most probably 10-jointed in all of the species, the first ring-joint being overlooked.

yellow, excepting laterad before reaching the eye-margin on each side; ocelli ruby-red. Wings and venation colored as in *serenus*. Eyes garnet. Color of body with much purplish reflection. Intermediate coxa black along its upper edge; legs otherwise pale yellowish. Mesoscutum and caudal coxa polygonally lined, the femora also appearing to bear minute pin-punctures; it is pubescent; apex of abdomen stiffly hairy. Abdomen conic-ovate, the ovipositor not exerted. Head with thimble-punctures.

Antennae with the club more defined than in *serenus* where it is cylindrical; here, it is ovate; also, in this species the funicle joints are much shorter, not much longer than wide.

(From one specimen, the same magnification.)

Male:—Not known.

Described from a single specimen captured from the pane of a window in men's lodgings on a sugar farm near Nelson (Cairns District), N.Q., December 3, 1911. The half and half coloration of the caudal coxæ, the yellowish vertex, the metallic green of the general body color reflecting purple and the reddish yellow of the ventral base of the abdomen, taken together with the antennal characters mentioned, are the characteristics of the species.

Habitat: Australia—Queensland (Nelson).

Type: No. Hy/1077, Queensland Museum, Brisbane, the forementioned specimen mounted on a tag.

3. ELASMUS INSULARIS *new species*.

Female:—Length, 2.15 mm.

Head and thorax metallic green but the face yellow ventrad of the insertion of the antennae; abdomen reddish, black at extreme tip and just before tip crossed by a black stripe; eyes and ocelli garnet; scape, femora and tibiae pallid yellowish, the black spines of the caudal tibiae arranged as in the two preceding species, the coxæ also pale yellow; tarsi dusky. Antennae dusky. Base of abdomen above black. Venation dusky. Sides of thorax just above insertion of cephalic coxa whitish. Antennae as in *serenus* but the third funicle joint and the proximal joint of the club are shorter. Head with thimble-like punctures. Mesoscutum hairy.

(From one specimen, the same magnification.)

Male:—The same but the coloration of the abdomen is pale yellow and the head all black; the fourth funicle joint of the antennae is very long and slender. Antennae 10-jointed.

(From one specimen, similarly magnified.)

Described from one pair captured by sweeping in a forest on Double Island off the coast of North Queensland near Cairns (about fourteen miles north and about one mile west from the mainland), December 25, 1911. And a male captured by sweeping in a forest near Nelson, May 10, 1912. The male from Double Island had the basal half of the caudal coxae darker.

The pedicel of male antenna is larger than the first funicle joint; the first joint of the club (male) slightly longer than the second. The rami are not jointed but only apparently so.

Habitat: Australia—Double Island and Nelson, N.Q.

Types: No. Hy/1078, Queensland Museum, Brisbane, the forementioned specimens (2 ♂, 1 ♀ on tags), plus one balsam slide bearing an antenna from each of the males.

4. ELASMUS FORMOSUS new species.

Female:—Length, 2.25 mm.

Like *serenus* but the general coloration is deeper and brighter, orange-yellow and the large black area is not present in the middle of the mesopleurum; other markings also differ. Marked with black thus: The centre of the vertex, the axillae and tegulae, tip of the abdomen and valves of the ovipositor, the disk of the metanotum triangularly or quadrangularly, two spots in a longitudinal line on each side of (not upon) the scutellum, margins on each side of base of abdomen (very narrowly dorsal aspect) and a minute spot at base of abdomen, centrally, dorsal aspect. Pubescence, arrangement of the black hairs on the posterior tibiae, wings and antennae as in *serenus*. Dorsal half of the occiput black, excepting dorso-laterad.

(From one specimen, the same magnification.)

Male:—Not known.

Described from a single female specimen captured the same place and date as was *insularis*.

Habitat: Australia—Queensland (Nelson, N.Q.; Double Island, off the coast).

Type: No. Hy/1079, Queensland Museum, Brisbane, the above female mounted on a cardpoint or tag.

On October 9, 1912, a second ♀ by sweeping, forest, Nelson, N.Q.; the sides of the base of the abdomen were more broadly blackened, the tip of abdomen merely fuscous; the minute spot at the centre of base of abdomen absent; the caudal of the two spots on each side of scutellum surrounds the propodeal spiracle.

5. ELASMUS AQUILA new species.

Female:—Length, 2.20 mm.

Dark metallic green with æneous tinges, the distal half of the abdomen, including the valves of the ovipositor, black, the basal half (excepting a dusky portion at extreme base in the dorsal aspect) orange-yellow; oral area whitish;

antennae, coxae (excepting base of cephalic and all except extreme base of caudal), femora excepting proximal half and the tibiae pallid to pallid dusky, the tarsi dusky; black spines on caudal tibiae arranged as in the other species. Tips of antennae lighter. Antennae with the funicle and club joints short but the former longer than wide while the club joints are subquadrate. Intermediate coxae mostly black. Marginal cilia of fore wing somewhat shorter than in the preceding species. Head, vertex and mesoscutum with numerous thimble-like punctures. All of caudal femora black. Fore wings not hyaline but more or less obscurely irregularly infuscated. One or two faint dusky stripes across the abdomen just proximad of the black portion.

(From one specimen, the same magnification.)

Male.—The same but no dusky stripes on abdomen; antennae brown-black, the fourth funicle joint long and slender; flagellum feathery. Mandibles 5-dentate, the teeth gradually smaller inwardly.

Described from a single specimen of each sex captured by sweeping within and about the edges of a jungle near Yungaburra, N.Q., December 30, 1911 (female) and by sweeping miscellaneous vegetation, west bank of the Pioneer River, Mackay, Queensland, October 19, 1911; near jungle.

Habitat: Australia—Yungaburra and Mackay, Queensland.

Types: No. Hy/1080, Queensland Museum, Brisbane, the above male and female mounted separately on cardpoints, plus one slide bearing the head of the male.

6. *ELASMUS VICINUS* new species.

Male.—The same as female *aquila* but much smaller, measuring in length only 1.00 mm. Also its wings are perfectly hyaline and the cephalic coxa bears more blackish. The antennae bear a slender, conic-ovate club of which the third and distal joint is minute; the funicle is 4-jointed the first three joints small, each bearing a long, slender ramus; the fourth joint much longer, slender but comparatively short, subequal to the club; of the three ramose joints the distal is largest. The abdomen has less reddish yellow and is nearly all black.

(From a single specimen, the same magnification.)

Described from a single male specimen captured by sweeping in a jungle, Yungaburra, N.Q., December 30, 1911. Although captured with a female of *aquila* while the male of that species was captured at Mackay and in a somewhat different habitat, a mangrove swamp in a jungle, instead of a pure jungle, I believe this specimen must be distinct since it is so much smaller and has hyaline wings. It differs much in antennal structure from what I have designated as

the male of *aquila*, since the funicle above the branches consists of a single joint, which though slender is not half the length of that part of the funicle in the male of *aquila*.

Habitat: Australia—Yungaburra, Queensland.

Type: No. Hy/1081, Queensland Museum, Brisbane, the above specimen mounted on a tag, plus head and appendages on a slide in xylol-balsam.

7. **ELASMUS CYANEICOA** new species.

Male:—The same as the female of *aquila* but the caudal and intermediate coxæ are metallic bluish, the abdomen less reddish at base, more yellowish, the dusky stripes in the colored portion absent. The three branches of the antenna are very long, many-jointed and feathery with very fine, long hairs; the funicle above the branches is very long and appears to be indistinctly divided into several unequal joints, some of which are slender and much longer than the others. The fore wings are less infuscated. The antennal club is 3-jointed, the basal joint long, a third longer than the second joint, the distal joint a mere spur. Mandibles 6-dentate.

(From one specimen, the same magnification.)

Female:—Not known.

Described from a male captured at dusk by sweeping grass in a forest at Nelson, April 10, 1912.

Habitat: Australia—Nelson, N.Q.

Type: No. Hy/1082, Queensland Museum, Brisbane, the above specimen plus the head on a slide.

8. **ELASMUS IMPUDENS** new species.

Male:—Length, 1.70 mm.

Metallic green, very dark, the abdomen near base, narrowly, with a faint transverse band of orange; tarsi and antennæ brownish, the antennal club, the coxæ, the femora and much of all tibiae black; scape and pedicel black or dusky; wings hyaline. Distal tarsal joints darker. Caudal femora longitudinally ribbed. Head and mesoscutum with thimble-punctures. Cephalic tarsi paler; antennal funicle with a long fourth joint but which is not as long as that in *aquila*. Otherwise as in preceding species. Scutellum naked, finely polygonally lined.

(From one specimen, the same magnification.)

Female:—Not known.

Described from one male captured by sweeping the forested top of the hills near the coast, mainland, Double Island (near Cairns), N.Q., Australia, December 24, 1912. Characterised by the nearly wholly dark body.

Habitat: Australia—Double Island, Queensland.

Type: No. Hy/1083, Queensland Museum, Brisbane, the above male specimen mounted on a tag.

9. **ELASMUS MINOR** *new species.*

Male:—Length, 0.60 mm.; small for the genus.

The same as *vicinus* but the legs are all pale except the proximal half of the caudal coxa, the body is much smaller, the proximal half of the abdomen pale yellowish. Legs and antennae yellowish. Wings hyaline. The fourth joint of the antennal funicle is longer and more slender than in *vicinus* while at the same time the proximal club joint is longer, the two proximal joints of the club less equal than with *vicinus*. Otherwise as in preceding species.

(From a single specimen, similarly magnified.)

Female:—Not known.

Described from a single male captured by sweeping miscellaneous vegetation in a jungle growth along the west bank of the Pioneer River, Mackay, Queensland, October 19, 1911.

Habitat: Australia—Mackay, Queensland.

Type: No. Hy/1084, Queensland Museum, Brisbane, the above-mentioned specimen, mounted on a slide in xylol-balsam.

10. **ELASMUS NIGRISCUTELLUM** *new species.*

Female:—Length, 2.25 mm.

Ochreous yellow or yellow with a reddish tinge, the vertex, face, mesopostscutellum and the posterior border of the mesoscutum, rather broadly, contrasting bright lemon-yellow. Marked with black with a purplish lustre as follows: The mesoscutellum and axillae, a large rounded spot in the mesopleurum under the insertion of the fore wing, the centre of the vertex, the central black area, connecting broadly posteriorly with the occiput and narrowly laterally with each eye-margin, the disk of the metanotum, the base of the tegulae, a spot at base of abdomen in the middle and a transverse spot on each side of it; the dorsal edge of posterior coxa, the cephalic half of the occiput, the antennae, except

the pale yellow scape and the tarsi. Legs pallid yellow, the caudal tibiae with the usual arrangement of the black spines. Tip of abdomen black, including the valves of the ovipositor. Head with thimble-punctures, the vertex also finely, transversely lined; ocelli within the black central spot of vertex. First funicle joint much longer than pedicel, the second and third joints subequal, each slightly shorter than the first, the basal club joint the longest of the joints of the club. Otherwise as in *formosus*.

(From one specimen, similarly magnified.)

Male:—Not known.

Described from a single female specimen captured by sweeping miscellaneous trees, bushes and grasses on the forest-downs near Hughenden, Queensland, July 14, 1912.

Habitat: Australia—Hughenden, Queensland.

Type: None. The specimen was accidentally lost just after describing it.

11. *ELASMUS SPECIOSISSIMUS* new species.

Female:—Length, 2.23 mm.

Like *nigriscutellum* but the black markings more or less suffused with metallic greenish and differing in pattern as follows: The central black area of the vertex does not extend laterad narrowly to the eye-margins but its lateral margins are straight or nearly; the pronotum is lemon-yellow (besides the vertex, head, scutellum and portions of the scutum) excepting in a rounded area at cephalic margin in the median line; the broad caudal lemon-yellow border of the mesoscutum is emarginate, extends more narrowly also up the lateral margins, the posterior portion penetrating the metallic greenish black of the disk on each side of the meson in the shape of a broad, acute tooth; consequently, the blackish portion descends caudad along the meson in the shape of a blunt cone; the two areas have the appearance of being mortised into each other. The base of the abdomen is crossed dorsad by a moderately broad, continuous, metallic green stripe while the tip of the abdomen is black for a distance equal to a fourth, or nearly, of the abdomen's length, the blackness divided by a narrow transverse stripe of orange-yellow. Moreover, the black area in the centre of the mesopleurum is not isolated but continuous with the greenish black of the scutellum and involves a portion of the base of the enormous caudal coxæ. The legs are pallid yellowish with the black spines of the caudal tibia arranged as in the other species. Scape lemon-yellow, the rest of the antenna black. Dorsal half of

occiput black, except where invaded by the yellow of the vertex. Third funicle joint somewhat shorter than the second which is a fourth shorter than the long first joint. Head and thorax with umbilicate punctures. Wings more or less slightly infuscated. Eyes ovate, garnet.

(From one specimen, similarly magnified.)

Male:—Not known.

Described from a single female captured August 16, 1912, by sweeping foliage and grass in a forest, Nelson, N.Q.

Habitat: Queensland, Australia (Nelson near Cairns).

Type: No. Hy/1168, Queensland Museum, Brisbane, the above specimen, tagmounted (abdomen only; plus head in xylol-balsam).

12. *ELASMUS SPLENDIDUS* new species.

Female:—Length, 2.00 mm.

Dark metallic green, the abdomen in general yellowish. The abdomen, except disto-ventrad before tip where it is suffused with ochreous or reddish and excepting the black markings mentioned later, the ventral third of the occiput, an oblique subquadrate spot on the occipital margin of the vertex, laterad against each eye, one of its corners entering the metallic green occiput, the caudal coxa for the most part (but less bright), the entire face ventrad of the vertex, the antennal scape, the shoulder or the cephalo-lateral angle of the pronotum, the centre of the mesopostscutellum transversely and the middle of the lateral margins of the scutellum narrowly,* bright lemon-yellow; femora and tibiae pallid yellowish, the tarsus black in all the legs. Antennae, base of abdomen broadly, tip of abdomen and ovipositor black; (dorsal aspect) three rectangular (wider than long) brown-black spots on each side of the abdomen, forming a rectangle (longer than wide) in the middle of the dorsal aspect (proximo-distad), the spots at each edge, the caudal pair nearer to the blackness of the abdomen's base. Scrobes of antennae (ventro-cephalic aspect) forming a triangle with bevelled sides, the antennae inserted about in the middle of the face. Distal half of dorsal edge of posterior coxa black. Eyes garnet. Tegula pallid. Vertex with umbilicate punctures; mesoscutum densely hairy; scutellum polished but rather densely

* Also apparently extending caudad around the margin from both sides obscurely.

polygonally reticulated, its margin rimmed obtusely. Upper edge of posterior femur blackish. Venation pallid dusky, the wings hyaline, densely ciliated. Funicle joints all very much longer than the pedicel, the first joint longest of the flagellum, joints 2 and 3 subequal, each somewhat shorter than 1; club shorter than funicle, 3-jointed, its proximal joints longest; 2 ring-joints. Black spines of posterior tibiae as in the other species.

(From a single specimen, similarly magnified.)

Male:—Not known.

Described from a single female specimen, captured August 25, 1912 at Nelson, N.Q., by sweeping foliage and grasses in adjoining forest.

Habitat: Australia—Nelson (Cairns), N.Q.

Type: No. Hy/1164, Queensland Museum, Brisbane, the above-described female, cardmounted plus the head in xylol-balsam.

The first of the two ring-joints in this species is very short and thin but its presence appears not to be exceptional within the genus.

13. *ELASMUS CYANEUS* new species.

Female:—Length, 1.85 mm.

Whole body dark metallic blue, only the scape, knees and cephalic tibiae whitish; hence differing from all of the preceding twelve species in lacking any yellowish coloration on the head, thorax or abdomen and also in being metallic blue instead of metallic green, most of the legs colored like the body. Three basal joints of cephalic tarsus and funicle of antenna pallid suffused with dusky, the antennal club darker. Wings hyaline. Vertex and mesoscutum with umbilicate punctures, the latter densely hairy (the hairs black), the scutellum naked, finely polygonally reticulated as is also the metanotum. Distal abdominal segments similarly reticulated, the large basal segment smooth, about twice the length of the following segments. Black spines of posterior tibiae obscure. Funicle joints cylindrical ovate, subequal, stouter but not much longer than the pedicel, the club wider than the funicle, ovate, its basal joint forming nearly half. Antennae 10-jointed, there being two ring-joints the first of which is concealed and very thin and short. Mandibles 5-dentate, the two innermost (mesal) teeth minute, the two lateral ones acute and subequal. Club of antenna about as long as the distal two funicle joints.

• (From one specimen, similarly magnified.)

Male:—The same but a half smaller; fourth funicle joint subequal to the club, the rami extending only to basal club joint.

Described from a single female specimen captured at the same time and place as was the species *splendidus*. Also a male in a similar situation, October 9, 1912.

Habitat: Australia—Nelson (Cairns), N.Q.

Types: No. Hy/1165, Queensland Museum, Brisbane, the foredescribed female on a cardmount plus the head, its appendages and anterior legs in xylol-balsam, one slide; the above male on a slide.

14. ELASMUS FLAVIPOSTSCUTELLUM new species.

Female:—Length, 1.75 mm.

Somewhat like *insularis*, from which it may be distinguished at once by reason of the fact that the postscutellum of the thorax is lemon-yellow; also the head and thorax are wholly deep metallic green. Scape and legs pallid yellowish, the tarsi dark, the proximal half or less of the posterior femur metallic green. Base of abdomen rather broadly metallic greenish followed by a long intermediate portion which is orange yellowish and then a black distal portion about equal in length to the orange-yellow portion. Wings hyaline, their tegulae concolorous with the body. Antennae brownish. Black hairs on posterior tibiae as in *insularis*. Occiput dark metallic green. Head and scutum with umbilicate punctures. Mandibles 6-dentate, the two outer teeth large, subequal, the other four much smaller, gradatingly smaller mesad but all distinct.

Antennae 10-jointed, the first ring-joint concealed. Funicle 1 somewhat longer than 2 which is subequal to 3 or slightly longer; funicle 1 short, one and a half, or more or less, times longer than wide, the longest joint of the flagellum but not much longer than the two basal club joints which are subequal and each only slightly shorter than either of the distal two funicle joints, each about subequal in length to the pedicel.

(From a single specimen, similarly magnified.)

Male:—(See beyond.)

Described from a single female captured by sweeping foliage and grass in a forest, Nelson, N.Q., August 27, 1912.

Habitat: Australia—Nelson and Quingilli (Cairns), N.Q.

Types: No. Hy/1166, Queensland Museum, Brisbane, the above female mounted on a cardpoint plus the head and its appendages on a slide in xylol-balsam. And two headless males on a single card, with mounted head in balsam. Two cardmounts, two slides.

Later, in a forest at Quingilli, I captured the male, which is described herewith.

Male:—Like *cyaneicoxa* but the scape is dark only at the tip, the fourth funicle joint shorter in relation to the length of the club, the abdomen with a silvery white stripe across it along the distal half of the proximal half, the stripe separated from the base of the abdomen by a concolorous area equal to half of its width and the mandibles are but 5-dentate. General color metallic purple, the legs pallid excepting the black tarsi and the metallic greenish proximal half of the caudal coxa; base of abdomen metallic green. Antennae black excepting as noted. Intermediate coxa and base of cephalic coxae metallic purplish. Post-scutellum lemon-yellow, more plainly so at base. Length, 1.30 mm. September 13, 1912.

(From three specimens, the same magnification.)

15. *ELASMUS QUINGILLIENSIS* new species.

Female:—Length, 2.10 mm.

Like *serenus* but the spot on the mesopleurum is farther ventrad and connected more or less obscurely with the black tegula along the suture separating the two sclerites of the mesopleurum; the black spot in the centre of the vertex is metallic greenish and wider leaving less yellow between it and the eye-margin; there is a continuous, transverse stripe of black across the cephalic margin of the scutellum, moderate in width, not thin and suture-like; and more blackish on the pronotum and at base of abdomen where there is a moderately broad black stripe which is continuous. Abdomen orange reddish, the head and thorax pallid lemon-yellow, the legs paler; tarsi black. Pronotum metallic greenish black, excepting at caudal mesial margin and the caudo-lateral halves on each side. Axillae and tegulae black. Face yellow. Antennae black, excepting the scape. Tip of postscutellum black, the segment margined on each side of itself, in the propodeum, by black which forms a V-shaped black marking on the metathorax or propodeum. Tip of valves of the ovipositor, but not of the abdomen, black. Mesial portion of scutum triangularly and of the scutellum, suffused more or less with ochreous, on the scutellum forming oblique lines of lemon-yellow like parapsidal grooves and a more or less distinct rounded spot at the middle of each side. Caudal coxae and the femora blackish along the upper margin. Otherwise as in *serenus*. The ochreous area in the scutum is long and wedge-shaped, its apex at the caudal margin or near it.

(From one specimen, the same magnification.)

Male:—Unknown.

Described from a single female specimen captured by sweeping foliage and grass in a forest near Quingilli, N.Q., September 13, 1912.

Habitat: Australia—Quingilli on the Mulgrave River, Queensland.

Type: No. Hy/1167, Queensland Museum, Brisbane, the foregoing female on a card.

TABLE TO THE SPECIES OF *ELASMUS* WESTWOOD—AUSTRALIA.

MALES AND FEMALES.

1. Major color yellow or orange-yellow, without metallic coloration but marked with more or less lustrous black.
- (a.) Mesopleurum with a large, isolated, black area under insertion of fore wing.
- Body dull honey-yellow, the axillæ black; abdomen fuscous above at base; the large central black area of vertex reaching occipital margin but laterad with nearly straight margins; flagellum and tarsi dusky; tips of valves of ovipositor black; disk of metanotum obscurely black; scutellum and post-scutellum lemon-yellow. Occiput black *screnus* Girault.
- Body reddish yellow, the axillæ and scutellum purplish black; base of abdomen with a central black spot and a transverse spot on each side of the latter; tip of abdomen black; the central area of vertex with its lateral margins extended to the eye-margin and sloping caudad to occiput margin; post-scutellum, head and posterior border of scutum lemon-yellow; disk of metanotum black *nigriscutellum* Girault.
- (b.) Mesopleurum without a large isolated black area under insertion of fore wing.
- Body orange-yellow; tip of abdomen black and the tegulæ and axillæ, also the disk of the metanotum, two spots in a longitudinal line on each side of the scutellum, lateral margins of abdomen very narrowly and a minute spot in centre of abdomen at base *formosus* Girault.
2. Major color the same but marked with more or less metallic coloration.
- Like the preceding two species but differing in color pattern. Central area of vertex with straight lateral margins; pronotum lemon-yellow but with a large round metallic area cephalad at the meson. Mesoscutum with its lateral and caudal margins lemon-yellow, the metallic greenish black of the disk descending caudad at meson like a blunt cone. Base of abdomen with a metallic green stripe; tip of abdomen dark; dark area in centre of mesopleurum not isolated *speciosissimus* Girault.
- The same but like *screnus*, only the central area of vertex is metallic green and wider, the spot on mesopleurum narrowly connected with the tegula; axillæ and tegulæ black; see description *quingillienis* Girault.
3. Major color metallic green or purple, marked with yellow or orange and black.
- (a.) Centre of the vertex yellow.
- Dark metallic green; produced venter of abdomen near base reddish suffused with orange; basal half of caudal coxa metallic; legs nearly all pale yellow, the tarsi dark. Antennæ mostly all black *australienis* Girault.

- (b.) Occipital angles of vertex lemon-yellow on each side.

Abdomen yellowish except broadly at base and tip, where it is black and also excepting three rectangular black spots on each side in the dorsal aspect; ventral third of occiput, face, scape, shoulders, lateral and caudal margins of scutellum lemon-yellow. Tegula pallid *splendidus* Girault.

- (c.) Vertex wholly black.

- (1.) Legs nearly all pallid yellow, excepting coxae and tarsi.

Postscutellum concolorous.

Abdomen reddish, black at tip and extreme base; face yellowish below antennae; caudal coxa usually yellow, sometimes proximal half black; side of thorax dorsad of cephalic coxa whitish *insularis* Girault.

Abdomen at distal half black, reddish proximal half; proximal half of femora black or nearly; wings more or less dusky; funicle 4 in male much longer than the club *aquila* Girault.

Same, but smaller, the wings hyaline; funicle 4 in male short, subequal to club; abdomen nearly all black *vicinus* Girault.

Same as *aquila* but the coxae all metallic blue *cyaneicoxa* Girault.

Abdomen with proximal half pale yellow, distal half dark; only the proximal half of caudal coxa dark; very small *minor* Girault.

Postscutellum lemon-yellow.

Abdomen with base broadly metallic greenish, followed by a long intermediate portion which is orange yellowish and then a black distal portion about equal in length to the orange-yellow portion. Tegulae concolorous. Proximal half or less of posterior femur metallic greenish *flavipostscutellum* Girault.

- (2.) Legs nearly all dark except tips of tibiae.

Dark metallic green, the abdomen with a narrow orange band around its base; tarsi and funicle brownish; scape and pedicel black *impudens* Girault.

4. Entire color dark metallic blue.

Scape, knees and cephalic tibiae whitish, the rest of the legs concolorous with the body; funicle joints cylindrical ovate and subequal; proximal club joint forming nearly half of the club *cyaneus* Girault.

GENUS EURYISCHIA Howard.

1. EURYISCHIA LESTOPHONI Howard.

I have expressed an opinion concerning the systematic position of this species in the introduction. De Dalla Torre places the genus under his Chalcidarium Genera Sedis Incertae and gives the rhynchophorous *Lestophonus icerya* as host (the *Lestophonus* is a dipteran). Since the parasite is connected with the economic *Ecerya purchasi* Maskell, it most probably occurs in California and perhaps parts of Africa. In Australia it occurs in Victoria at least.