XLVII.—A Revision of the Asilidæ of Australasia. By GERTRUDE RICARDO.

[Continued from p. 160.]

Dasypogon, Macquart.

Illiger's Magazine f. Ins. ii. p. 70 (1803).

The species from Australia and Tasmania not yet assigned to other genera from Dasypogon in sensu lato are the following:—

Dasypogon australis, Macq., Dipt. Exot. i. (2) p. 45 (1838).

Dasypogon albonotatus, Macq., l. c. Suppl. ii. p. 49 (1846). Dasypogon nigripennis, Macq., l. c. Suppl. iii. p. 180, pl. i. fig. 10

Dasypogon nigrinus, Macq., l. c. Suppl. iv. p. 66, pl. vi. fig. 9 (1849). Dasypogon carbo, Walker, Dipt. Saund. i. p. 87 (1851).

The type of this last is probably destroyed, not being in the Brit. Mus. Coll.

Dasypogon australis, Macq.

Type a female seen by me in the Paris Museum, 12.4.11. The head is gone, and Macquart makes no mention of it in his description; it is therefore impossible to assign it to any genus, apparently it will belong to the Dasypogon genus in sensu stricto. It should be easily recognized by the wings, which are brown on the fore border, by the absence of spines on fore tibiæ, and by the black abdomen, with broad reddish-yellow segmentations, the apex has spines; no ovipositor visible. Legs yellowish. Thorax black, shoulders reddish. Scutellum reddish, with long yellow bristles. The brown colouring on the wings extends along the fore border to the apex, as far as the posterior branch of fork of third vein, fills the first basal cell, the extreme base of the first posterior, and only touches the discal cell on its border; the fourth posterior cell is wide open, anal not quite closed.

Macquart gives the length as 6 lines.

From New S. Wales.

Dasypogon albonotatus, Macquart.

From Tasmania.

Described as having a long, slender, black abdomen, with white spots at sides of second to fifth segments. Face and forehead golden yellow. Beard and the plain moustache white. Legs red, the anterior tibiæ with a curved spine.

Wings hyaline, a little yellowish at base and on fore border, apex grey, fourth posterior cell closed.

Length 8 lines. 3.

Dasypogon nigripennis, Macquart.

Type is probably lost. From New S. Wales.

Described as black. Face white, with a black moustache confined to oral opening. Beard black. Palpi black with black hairs. Legs black, the fore tibiæ with a curved spine. Wings violet-black, centre of cells yellowish. In the figure of wing the fourth posterior cell is practically closed at border and anal cell closed. The figure of head shows the antennæ with the third joint about the length of the first two, with a short terminal style.

Dasypogon nigrinus, Macquart.

Type, a male, seen by me in Paris Museum, 12. 4. 11.

Furnished with a spine on the fore tibiæ and the abdomen is club-shaped, but the short antennæ seem to preclude it from belonging to the genus Brachyrrhopola or Codula. Face not very broad; no tubercle; moustache confined to oral opening, composed of yellow bristles; the face is covered with yellow tomentum. Palpi black with black hairs. Antennæ very short, the third joint conical, about as long as the first two together, the latter with black hairs, on the second a very strong black bristle is present. Thorax black (denuded). Abdomen black (denuded). Macquart states the first two segments are shining black, the fifth and sixth with testaceous segmentations; no pubescence is visible, but some white hairs at sides; genitalia large, protruding, but not club-shaped; underside reddish with white hairs. Legs red, stout, shining; femora largely black; tarsi black; bristles on legs black and yellow. Wings dark brown, hyaline at base, only the apices of the basal cells being brown; the fourth posterior cell is a little narrowed at the border; the anal half open; the small transverse vein is below the middle of discal cell; Macquart's figure of wing gives this incorrectly, and also makes the fourth posterior cell too narrow at border.

Length 10 mm. From Tasmania.

The species from New Guinea or other parts of the

Australian region are :-

Dasypogon occlusus, Meijere, Nova Guinea, v. Zool. p. 75 (1906), which the author suggests may be the same or nearly allied to, Stichopogon congressus, Wlk.

The Walker types of the following species described from unknown localities are not to be found in the Brit. Mus. Coll., viz. Dasypogon aphidnus, inserens, and occidens, and might well be deleted from the list of species.

SELIDOPOGON, Bezzi.

Zeitschr. Hymen. u. Dipt. ii. p. 192 (1902).

Fore tibiæ with a curved spine.

Selidopogon diadema, Fabr., a European species extending to Asia Minor, has a number of synonyms, among others Dasypogon punctatus, Fabr., which Macquart records as from New Holland, stating that a female he had seen was similar to the European specimens: see Dipt. Exot. Suppl. iii. p. 180, (1848). I have not seen any specimens of this species from Australia.

The genus extends through Europe, N. Africa, Asia Minor, and the American continent.

STICHOPOGON, LOEW.

Linn. Ent. ii. p. 499 (1847).

Stichopogon congressus, Walker.

Proc. Linn. Soc. London, v. p. 302 (1861) [Dasypogon]; Kertesz, Cat. Dipt. p. 127 [Dasypogon] (1909); Meijere, Nova Guinea, v. Zool. p. 75 (1906).

Stichopogon albicapillus, v. d. Wulp, Tyd. v. Entom. (2) vii. (xv.) p. 147 (1872); Kertesz, Cat. Dipt. p. 83 (1909). From New

Stichopogon scalaris, Bigot, Ann. Soc. Entom. France, (5) viii. p. 440 (1878). From Fiji Islands.

Type (3) from Tidore, Celebes, and a 2 from Sula Island.

See v. d. Wulp for description of this species.

DIOCTRIA, Meigen.

Illiger's Magaz. f. Ins. ii. p. 270 (1803). Methylla, Hansen, Fulnea oris Dipt. pp. 145 et 198 (1883).

The type of *D. claviventris*, Walker, from New Guinea, and *D. tasmanica*, Walker, from Tasmania, are both species of *Brachyrrhopola*, the latter being a synonym of *B. maculinevris*, Macq.

D. conopsoides, F., from Australia, was unknown to Wiedemann and Schiner. From the description it is impossible to ascertain what genus it belongs to; it would seem therefore best to expunge the name from list.

D. horsleyi, Walker, from unknown locality, is not a

species of *Dioctria*, though it bears a general resemblance to the genus and has a long third antennal joint; but the fore tibiæ are armed with a very distinct curved spine. It cannot belong to the genus *Cyrtophrys*, Loew, the *antennæ* having no apparent style. The *abdomen* is black, reddish at the apex.

LAPHRINÆ.

Table of Genera.

1. Fore tibiæ with a curved spine at apex	2.
Fore tibiæ with no curved spine at apex	3.
2. Blue-black species marked with white abdo-	
minal spots. Moustache usually reaching	
nearly to antennæ, tubercle distinct on face.	Thereutria, Loew.
Small species. Moustache confined to oral	
opening, no tubercle on face	Metalaphria, g. n.
3. Posterior transverse vein in a straight line, or	
almost so, with the vein closing discal cell	4.
Posterior transverse vein not so placed	6.
4. Third joint of antennæ notched at apex, usually	C
with a spine	Clariola, Kertesz.
Third joint of antennæ not notched	5.
5. Abdomen punctuate, third joint of antennæ	44 . 35
longer than the first two joints together	Atomosia, Macquart.
Abdomen hardly punctuate, the third joint	
three times as long as the first two joints together	Antonton
6. First posterior cell closed or very narrow.	Aphestia.
Abdomen bare	Nusa, Walker.
First posterior cell wide open or not very	Ivasa, vvalker.
narrow	7.
7. Moustache confined to oral opening. Head	and the state of the state of
orbicular, very much excised behind	Maira, Schiner.
Moustache not confined to oral opening. Head	azama, conner.
semicircular, not usually so much excised	
behind	Laphria, Meigen.
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THEREUTRIA, LOEW.

Progr. Realschule Meseritz, 1851, p. 20 (1851). Scandon, Walker, Ins. Saund., Dipt. i. p. 108 (1851).

This genus was formed by Loew for a new species from Australia, viz. Thereutria calcar, which Loew made the type of the genus. He separated the genus from Laphria by the presence of the curved spine on the fore tibiæ. It is as yet peculiar to the Australasian region. The species are distinguished by the blue-black abdomen often marked with white spots, by the blue-black legs, the tibiæ or femora often yellow, the latter usually stout, curved, the face with a prominent tubercle covered by the thick moustache, with often long hairs continued to the base of the antennæ, which

last have the third joint broad, longer than the first two joints together. Wings with the first and fourth posterior cells open, the anal cell closed.

The species as yet recorded in this genus are :-

Thereutria luctuosa, Macq., Dipt. Exot. i. (2) p. 155 [Dasypogon] (1838).

Thereutria amaracus, Walker, List Dipt. ii. p. 380 [Laphria] (1849) et vii. Suppl. 3, p. 559 [Laphria] (1855).—Ommatius ialmus, Walker, l. c. p. 479 et p. 759. Dasypogon diversicolor, Macq., Dipt. Exot. Suppl. iv. p. 368 (1849); Bigot, Ann. Soc. Ent. France, (5) viii. p. 219 (1878). Dasypogon aurifacies, Macq., l. c. p. 367, pl. vi. fig. 5. Thereutria calcar, Loew, Progr. Realschule Meseritz, 1851, p. 20 (1851). Scandon compacta, Walker, Ins. Saund., Dipt. i. p. 108, pl. iv. fig. 7 (1851), et List Dipt. vii. Suppl. 3, p. 563 (1855). Laphria diversipes, Macq., Dipt. Exot. Suppl. v. p. 73 (1855); Froggatt, Australian Insects, p. 295 (1907). Thereutria caligula, Bigot, Ann. Soc. Ent. France, (5) viii. p. 233 (1878). Dasypogon diversipes, Kirby, Ann. Mag. Nat. Hist. xiii. p. 458 (1884).

Thereutria pulchra, Schiner, Reise Novara, p. 169 (1868).

Thereutria luctuosa, Macquart.

Type, a male, seen in Paris Museum, 12.4.11, described by Macquart as from unknown locality: a label below gives "New Holland"; no doubt this is correct, as the genus, at any rate as yet, is peculiar to Australasia. It is a species of Thereutria distinguished from T. amaracus and T. pulchra by the wholly black legs and brown wings. A blue-black species. Abdomen with white spots at sides of segments 2-6. Face with white lines on each side, flat, hardly raised at oral opening. Moustache white. Antennæ gone, except the first two joints, which are black, with black pubescence. Wings brownish, the fourth posterior cell narrowed at border, the anal almost closed.

Thereutria amaracus, Walker.

Ommatius ialmus, Wlk.
Dasypogon diversicolor, Macq.
Dasypogon aurifacies, Macq.
Thereutria calcar, Loew.
Scandon compacta, Wlk.
Laphria diversipes, Macq.
Thereutria caligula, Bigot.
Dasypogon diversipes, Kirby.

Type (3) from Hunter River, New S. Wales, and other specimens from Burpengary, Queensland, and New S. Wales.

Two male specimens from New S. Wales (presented by J. Hunter) were described by Walker as *Ommatius ialmus*; in both the third joint of antennæ is wanting and Walker

made no mention of them in his description; they appear to me identical with the above. The type of Dasypogon aurifacies, Macquart, a male, was seen by me in the Paris Museum, 12. 4. 11, and is a species of Thereutria identical

with Thereutria amaracus, Walker.

The drawing of the wing by Macquart, pl. vi. fig. 5, is incorrect, the submarginal cell should be closed not open, and the small transverse vein is beyond the middle of the discal cell. Type has the moustache black, two female specimens with it have it yellow. Antennæ now wanting, except the first two joints, which are black with black pubescence. Legs reddish; the tibiæ pale yellow with black apices, the anterior pair with curved spine, no black stripe on the femora.

From New S. Wales.

Macquart's description precedes the one of *D. diversicolor*, which apparently is the same species. Bigot, who had the type before him, declared it to be a species of *Thereutria*.

Loew's species is no doubt identical, judging from the description. Scandon compacta was declared to be identical with it by Schiner; the type is not to hand. The type of Dasypogon diversipes, Kirby, is a female from Sidney, New S. Wales.

Laphria diversipes, Macq., was described from Sidney Island, Oceania, and is evidently the same as T. amaracus. Mr. Froggatt describes it as being a common insect about

Sidney, often taken on fences.

The specimen, a female, described by Bigot as T. caligula, appears to be an example of this species, as the only difference in the short description is the mention of the upper side of femora being black; in one of the specimens in the Brit. Mus. Coll. of T. amaracus there is a black stripe, very short however, beginning at the apex. Bigot gave

Australia as the locality.

The species may be identified by the almost wholly reddishyellow legs, the femora being testaceous, the tibiæ yellow, only their apices, the coxæ, and tarsi being black. Abdomen blue-black, with the typical white side spots on the second to fifth segments. Wings with the first posterior cell rather narrow, narrower at the border, the fourth open at border but narrowed, the anal cell closed at border; the males mentioned above have the moustache black, in the females it is yellow, otherwise males and females seem identical.

Thereutria pulchra, Schiner.

Described from one male specimen, from New S. Wales.

In Brit. Mus. Coll. six males from Burpengary, Queensland (Dr. T. L. Bancroft).

A black species, distinguished from T. amaracus by the wholly black femora, and the tibiæ are partly brassy yellow.

Length 14 mm.

Face covered with yellowish tomentum. Moustache of black bristles surrounding mouth, not reaching up the face, tubercle small. Antennæ with black hairs on the first two joints. Beard white. Palpi with black hairs. Forehead with greyish tomentum and black hairs, hind part of head with black pubescence. Thorax with the usual white shoulder-spots and markings and with black pubescence. Scutellum black, with grey tomentum and black pubescence. Abdomen dull black, hardly shining, the white side-spots are present on the second, third, and fourth segments, covered with white hairs; sides of abdomen with white and black hairs; underside black. Legs slender, the femora not swollen; coxæ and femora black, with long white pubescence on the former and a few scanty white hairs on the latter, thickest on the posterior pair; fore tibiæ blackish, a dull yellowish-red tinge on the apical two-thirds below, covered with fulvous pubescence which appears white above, the others are black, dull yellow on outer border, with dense white pubescence, on the black part it is black; tarsi black, the posterior pair with the first joint yellow; pubescence chiefly black; all bristles on the legs are black. Wings hyaline, veins brown, narrowly yellow on fore border; neuration as in Thereutria amaracus.

METALAPHRIA, gen. nov.

A genus next to *Thereutria*, having a curved spine to the fore tibiæ. Antennæ with no style, the third joint long cylindrical. Face with no tubercle and the moustache confined to the oral opening. Wings with the first posterior cell widely open, the fourth very narrow at the border, almost closed, the anal cell the same.

The only species in general appearance resembles a

Saropogon species.

Metalaphria australis, sp. n.

Type ♂, type ♀, from Upper Playford, Alexandria, N. Australia (W. Stalker), 1906.

A small species with a bluish-black abdomen, red at apex, with reddish-yellow legs and clear wings.

Length, 3 8 mm., ♀ 9 mm.

Male.—Face covered with pale golden-yellow tomentum. Moustache of fairly strong yellowish-white bristles round the oral opening. Palpi reddish yellow. Beard silvery white. Antennæ reddish yellow, the first two joints equal in length, with some short black pubescence and two stout bristles at apex of second joint; the third joint a little darker in colour, cylindrical, about one and a half times as long as the first two joints together. Forehead darker than face, with a few short black hairs and two black bristles on the ocelligerous tubercle; hind part of head with some bristly hairs, not at all excised behind. Thorax greenish brown, covered with yellowish-grey tomentum; a broad, brown, median stripe appears; beyond on each side three or more black short bristles are present, and on side of thorax just before the suture vellowish ones, and two longer weak ones beyond the base of wings; sides and breast with yellowishgrey tomentum. Scutellum same colour as thorax, armed with two vellowish bristles. Abdomen blue-black, shining and bare, the last two segments chiefly reddish; underside chiefly red. Legs reddish yellow, with some black bristles; hind femora almost bare, hardly incrassate. Wings clear; veins yellowish, the small transverse vein situated about the middle of the discal cell. Female is identical, the fourth posterior cell a little more open at border.

CLARIOLA, Kertesz.

Termes Füzetek, xxiv. pp. 404-406 (1901).

The author places this genus between Atomosia and Aphestia in Schiner's table (Verh. zool.-bot. Ges. Wien, xvi. p. 662, 1866), from both of which it is distinguished by the peculiar third joint of antennæ, which has on the upper side before the middle a small projection with a spine, and also by its Dioctria-like appearance. C. pulchra is a small species, only 5·3 mm. The three new species from Queensland now added to this genus are large robust flies, very much larger than C. pulchra, and the projection on the third antennal joint is placed beyond the middle of the joint, otherwise they seem to agree in all the characters given of the genus, though the thorn or spine is not visible in one species, even when examined under a strong lens and magnified 28 times, but minute hairs fringe the apex.

1. Abdomen black, pubescence chiefly reddish brown. Legs yellowish pulchra, Schiner. Abdomen and legs blackish, pubescence white. 2.

2. Moustache black and white. Abdomen with white-haired bands or spots on each segment.

Wings brownish, yellower at base albohired Moustache white. Abdomen with the white pubescence only at base and apex. Wings blackish nigrescent Moustache reddish yellow. Abdomen with the white pubescence on apex. Wings blackish auriface auriface

albohirta sp. n.

nigrescens, sp. n.

aurifacies, sp. n.

Clariola albohirta, sp. n.

Types (\$\display\$) from Northern Queensland, and another female from Dandenong Ranges, Victoria, in Mr. French's collection.

A handsome, large, black species with brown wings, black legs, and abdomen marked with white-haired bands.

Length 19 mm.

Face with grey tomentum, which is whiter at the sides. Moustache consists of strong black bristles and some fine black and yellow hairs intermixed, reaching to the antennæ, in the 9; in the male the moustache consists wholly of long silky yellow hairs; face with no perceptible tubercle; proboscis short, black; beard and hairs on under part of head white. Antennæ black, the first joint covered with grev tomentum in the 2, cylindrical, longer than the second joint, which in the female is broader, both with black pubescence; on the underside of the first joint is a strong black bristle, and another is visible on the upper side of the second joint; in the male the one on the first joint is wanting; the third joint longer than the first two joints together, with the small tooth on the upper side towards the apex; the small spine Kertesz speaks of is not visible. Forehead black, with some grey tomentum and black hairs and bristles, the hairs on back of head chiefly whitish. Thorax blue-black, covered with very short grey pubescence, strong black bristles on the sides posteriorly, the pubescence longer at base of thorax and on the scutellum, which is armed with weak yellowish and black bristles. Abdomen blue-black, stout, one width throughout, shining, finely punctuated; the first two segments with silvery white hairs on their posterior borders, forming well-marked white bands; the third and fourth segments with only a few white hairs on the side anteriorly; the fifth segment with almost a complete white-haired band (in the male quite complete), the sixth segment with a complete white band, these last two bands are situated on the anterior borders of the segments; the seventh segment almost covered with white pubescence; sides of abdomen with some black bristles and fine hairs;

underside black. Legs long, fairly stout, blue-black; the coxæ with brown tomentum and black hairs, some white hairs on the anterior and middle ones; the femora with black pubescence, on their upper sides some fine white pubescence, which is thickest on the hind pair and extends below, a few yellow bristles appear on these last; tibiæ with dense white pubescence and with black bristles, the hind pair with a few yellow ones; the tarsi with chiefly black pubescence and bristles, but some white pubescence and a yellow bristle on first joint of posterior tarsi. Wings tinged brown, the subcostal cell ending in a point, the anterior branch of the third vein curved, the cross-veins closing the discal and fourth posterior cell almost in a line. Halteres yellow.

Clariola nigrescens, & ♀, sp. n.

Type &, type ♀, and three other males from S. Queens-

land (Bancroft).

A black, robust, but smaller species than *C. albohirta*, to which it is closely allied; distinguished from it by the moustache being almost wholly white in both sexes, but chiefly by the white-haired bands of *abdomen* only being present on the first two segments, and the apex with white pubescence.

Length, ♂ 14 mm., ♀ 15 mm.

Face covered with whitish tomentum, yellower at the sides; moustache wholly whitish (3), white, the oral opening bordered with black bristly hairs (?); beard white. Antennæ black, the first joint with long white hairs below and a few short black ones above, the second joint with black hairs above and below and a black bristle on its upper side at apex (?), two in the male; the spine on the tooth on upper edge is here plainly perceptible. Forehead blackish, with yellowish-grey tomentum and white pubescence, a few black hairs intermixed, more numerous in the female. Back of head with white hairs. Thorax shining bluish black, with short white pubescence anteriorly, elsewhere black. The white bands on abdomen are situated on posterior borders of segments; abdomen convex, finely punctured, sides after the second segment with black hairs, the last two segments with white hairs. Legs blue-black, all the bristles black; the posterior tibiæ with a dense white fringe of hairs below, otherwise similar to those of C. albohirta. Wings blackish, paler at base and on posterior border; neuration as in C. albohirta.

Clariola aurifacies, ?, sp. n.

Type ? and another from Townsville, Queensland (F. P. Dodd), 29. iii. 1902; and a male and female from Mackay, Queensland (G. Turner).

A species distinguished from Clariola albohirta and Clariola pulchra by the golden-haired face and hind part of head, and

by the blackish wings.

Length 19 mm. The specimens from Mackay only 15

and 16 mm.

It differs from Clariola albohirta in the following particulars: -Face black, covered with bright golden tomentum and with the monstache reddish golden, thick, occupying the whole of the middle of face to base of antennæ. Beard same colour. Palpi small, black, with black hairs. Antennæ similar to those of C. albohirta, but the spine on the projection of the third joint is here visible and there are two bristles on the first joint. Forehead same colour as face. Hind part of head similar in colouring of pubescence to that of the face. Thorax shining, blue-black with very short yellowish-white pubescence, hardly visible to the naked eye, some black hairs on the posterior border, black bristles at the sides; sides and breast the same. Scutellum the same, bordered with black bristly hairs. Abdomen punctuated blackish with greenish reflections at the apex, the white pubescence is only visible on the last four segments, chiefly at the sides; pubescence on the dorsum black and short except at the apex, where it is whitish; sides with black pubescence; underside brownish. Legs with no white hairs on the coxe, no white pubescence is visible on the femora nor white bristles on these or on the tibiæ; the tarsi have dense white pubescence like the tibiæ, only the posterior pair with chiefly black pubescence and no yellow bristles. Wings blackish, a little lighter on the posterior border and apex, viewed against the light they appear brownish with clear spaces; the other female has lighter wings than the type; veins black; neuration as in C. albohirta, with the exception of the cross-veins not being exactly in a line, the one which closes the third posterior cell being a little above the other; the female has a short appendix.

The species from other parts of the Australasian region will include, besides *Clariola pulchra*, two of Walker's species placed under *Laphria*, viz. *Laphria complens*, type, from Celebes, and *Laphria obliquistriga*, also from Celebes.



Ricardo, Gertrude. 1912. "A revision of the Asilidae of Australasia [part]." *The Annals and magazine of natural history; zoology, botany, and geology* 10, 350–360.

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