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FOUR NEW DIPTERA FROM AUSTRALIA

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Descriptions of four new species of flies from Australia are presented herewith. The Rutiliæ have been segregated as undescribed for several years but the opportunity of preparing the diagnoses has not presented itself until now. The types of the new species are in The American Museum of Natural History.

CHLOROPIDÆ

While in Australia in 1928, Professor T. D. A. Cockerell, in company with Mr. Rayment, collected a small fly which was associated with a species of *Halictus*. The insect proves to be an undescribed species belonging to the genus *Ephydroscinis* Malloch, erected in 1924.

Ephydroscinis raymenti, new species

Differs from *australis* Malloch in having a large, rectangular brown spot on the middle of the wing, blackish antennæ, etc. Length, 2.25 mm.

FEMALE.—Face and anterior half of cheeks yellow in ground color, thickly whitish pollinose, the cheeks with a row of black bristly hairs. Occiput black, densely cinereous white pollinose. Front blackish, broadly reddish in front and with the middle of the triangle reddish; the triangle bears brownish-red pollen which leaves the broad lateral borders and a spot enclosing the ocellar triangle black, the ocellar triangle itself brownish pollinose. Frontal triangle with two pairs of bristly hairs anteriorly; three pairs of orbitals; ocellars long and divergent. Antennæ blackish. Palpi pale yellow.

Mesonotum rather shining brown, in the middle in front of the suture with a rectangular cinereous spot which is narrowly divided by a brown vitta; posteriorly broadly cinereous with a posteriorly tapering median brown vitta, the cinereous color extending broadly onto the sides of the scutellum; humeri and pleura cinereous white; notopleura brownish yellow. Four pairs of dorsocentral bristles, one in front of the suture. Scutellum with two pairs of marginal bristles.

Legs long, black, thinly cinereous pollinose; tarsi brown; coxæ densely cinereous white pollinose.

Wings tinged with brown, the median brown spot extending from the costa almost to the fifth vein, the portion in the apex of the discal cell isolated, leaving the posterior cross-vein bordered with subhyaline; veins dark brown; alula milky white, large. Squamæ yellowish. Halteres with whitish-yellow knob.

Abdomen shining brown, the basal two segments thickly gray pollinose, the tip of the fifth segment and upper border of the two following (ovipositoral) segments, pale yellow. Hair black and inconspicuous except on the posterior of the segments toward the sides where there are some very weak bristles. Sternites thinly gray pollinose.

HOLOTYPE.—Female, Sandringham, Victoria, Australia, (Rayment and Cockerell), found with *Halictus raymenti* Cockerell, visiting its burrows on the high ground near the sea.

TACHINIDÆ

Rutilia pallens, new species

Related to *formosa* Desvoidy, but the legs are reddish, the wings lack the brown sub-basal spot, etc. Length, 13 mm.

MALE.—Head reddish yellow; occiput bright green, cinereous pollinose, the cheeks with green reflections; face and sides of front with cinereous yellow pollen; front brownish at the vertex, at its narrowest point not wider than the distance separating the posterior ocelli; frontal vitta reddish, ferruginous on upper half. Frontal pile and the occipital cilia black, the pile of the face, cheeks and occiput yellow. Facial carina very broad; antennæ separated by a distance about equal to the length of the second antennal segment; third antennal segment orange; arista brown, pubescent. The distance from the tip of the antennæ to the oral margin is greater than the antennal length. Palpi reddish yellow, yellow pilose.

Thorax light green; pale yellow pilose; mesonotum behind the suture black pilose except in the middle and without distinct vittæ. Scutellum obscure reddish beneath the green color; hair black; the sides below the bristles yellow pilose. Acrosticals, 2-2; dorsocentrals, 2-4; sternopleurals, 1-1; four pairs of marginal scutellars, the apical pair cruciate, and a row of finer submarginals. Prosternum entirely bare.

Legs reddish; black-haired, the basal two-thirds of the posterior surface of the femora with yellow pile.

Wings cinereous hyaline; pale orange basally and along the veins on the basal half. Squamæ and the pile on their inner edge pale orange.

Abdomen translucent reddish yellow with green reflections and a rather narrow median green vitta which widens basally. First and second segments without bristles, third with marginal row, the fourth with fine bristles on the apical half and not at all emarginate apically. Hair black, fine and yellow on the venter, except laterally. Genitalia brownish red; lobes of fifth sternite black.

HOLOTYPE.—Male, New South Wales, (Williston Collection).

Rutilia formosina, new species

Differs from *formosa* Desvoidy in having black pile on the pleura and prosternum and from *imperialis* Guérin in having yellow pile on the parafacials and cheeks. Length, 4 mm.

MALE.—Head pale orange; occiput green, thickly white pollinose along the orbits, the cheeks with green tinge and thinner whitish pollen. Front fully twice the width of ocellar triangle, black pilose, the bristles fine and obsolete above; para-

frontals green on upper fifth. Pile of face, cheeks and occiput yellow; occipital cilia black. Antennæ little more than one-third as long as the face, separated from each other by more than the length of the third segment; arista reddish brown. Palpi reddish, black-haired.

Thorax bright green, the mesonotum with four slender, abbreviated, blackish vittæ, the outer pair interrupted at the suture; inside the humeri a large, thinly white pollinose spot visible from posterior view. Pile brown; black on the prosternum and scutellum. Acrosticals, 0-1; dorsocentrals, 0-2; sternopleurals, 0-1. Four pairs of marginal scutellars, the apical pair decussate, and two or three submarginals on either side.

Legs black or brown, black pilose; posterior tibiæ evenly ciliate.

Wings cinereous hyaline, with the usual sub-basal spot and base of costal cell brown. Squamæ brownish gray, the squamal ridge brown pilose.

Abdomen bright green, a narrow median vitta blackish; a narrow apical fascia on the first segment and about the apical fourth of the second and third, bronze-brown. Basal segments without bristles; third with row of short, rather stout, erect apicals, the fourth with fine bristle-like hair. Venter wholly black-haired.

HOLOTYPE.—Male, Australia.

Rutilia corona, new species

Differs from *formosa* Desvoidy in the yellow pilose cheeks, wholly reddish antennæ, etc. Length, 13 to 14 mm.

MALE.—Head reddish yellow in ground color, the occiput green above the lower level of the eyes; pollen ochreous yellow, on the occiput grayish. Hair black, yellow on the cheeks and sometimes on most of the parafacials. Frontal and vertical bristles weak; occipital cilia black, the pile bright reddish yellow. Cheeks without metallic green reflections. Palpi pale orange; proboscis black. Antennæ pale orange, not extending half-way to the oral margin; third segment twice as long as the second; arista brown. Frontal vitta dull orange; no ocellar bristles. The parafacials are wholly haired.

Thorax bright blue-green, with violaceous reflections in some lights; mesonotum with four cupreous vittæ bordered with violaceous, none of them reaching the posterior border, the median pair sometimes united for most of their length. Pile abundant, brownish, on the pleura and scutellum, black. A single pair of weak, prescutellar acrosticals and two or three pairs of weak dorsocentrals on the posterior fifth of the mesonotum; five or six pairs of marginal scutellars, the apical pair more or less cruciate; a single sternopleural. Prosternum with black hair on the sides.

Legs brown or black, the femora basally and the anterior coxæ, reddish brown; hair black.

Wings cinereous hyaline, with sub-basal brown spot. Squamæ whitish. Knobs of halteres brown.

Abdomen bright green to coppery green, with a narrow median vitta and apical two-fifths of the third segment blackish; posterior borders of first and second segments broadly cupreous. Fourth segment gently emarginate at the apex. Hair black, appressed on basal three segments; first and second segments without bristles, the third and fourth each with a row of fine marginals, the fourth with scattered, very fine discals.

Types.—Holotype, male, and two male paratypes, New South Wales, from the Henry Edwards Collection.

The species of *Rutilia* related to *formosa* may be separated by the key which follows. All but *pallens* have the prosternum haired laterally.

1. Pleura and prosternum with black hair.....2.
Pleura and prosternum with yellow pile, or bare.....4.
2. Parafacials and cheeks with black pile.....*imperialis* Guérin.
Cheeks, and usually the parafacials, yellow pilose.....3.
3. Pile of parafacials rather long and coarse, and usually mostly black.
corona Curran.
Pile of parafacials short and fine, yellowish in color.....*formosina* Curran.
4. Legs black; wings with brown spot basally.....*formosa* Desvoidy.
Legs reddish yellow; wings luteous basally, without brown spot.
pallens Curran.