

a broad full face with spreading horns); pronotum thickish, shield-like, margined, both it and mesothorax very dark; abdomen slightly compressed, clouded; abdominal segments darker below, increasing in hue towards tip; oviduct large, very thick at base; 10 lines long, curved, brown almost piceous. Legs stout; femora with 2 (sub 3) rows of black coarse oblong spots on each side; hind femora with a row of large black spines on lower margin (which is also black), and 2 minute ones inside of the row; the 4 anterior femora smooth; 4 anterior tibiæ with 5 black spines on each side; hind tibiæ very stout, black, with 4 long black spines on the outer side and 5 on the inner side, the third and fourth of the inner ones very long ( $\frac{1}{2}$  in.) and sharp, and 2 small spines distant on the upper ridge; the posterior femora and tibiæ of about equal length—11 lines long; the anterior tibiæ with a pair of spines at the lower joint, upper side; the middle tibiæ with a single spine there; the posterior tibiæ with 2 pairs of spines ditto; tarsi piceous, almost black, slightly hairy; hairs short, patent; pulvilli thick, tumid, blackish, shining. Length of body 16 lines.

*Hab.* Found in firewood obtained from Forty-mile Bush, County of Waipawa, 1888; per Mr. A. Hamilton.

*Obs.* A peculiar species, differing from other described ones in its general very dark colour, extreme glossiness, having also a sub-metallic cupreous glow in several places, peculiar broad and coarse femoral markings, extra spines, remarkably thick and smooth tumid pulvilli, and hairy antennæ. I regret much the upper portions of the antennæ being wanting.

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ART. XVIII.—Notes on a peculiar *Chrysalis* of an unknown Species of Butterfly.

By W. COLENSO, F.R.S., F.L.S., &c.

[Read before the Hawke's Bay Philosophical Institute, 8th October, 1888.]

LEPIDOPTERA.

Section RHOPALOCERA.

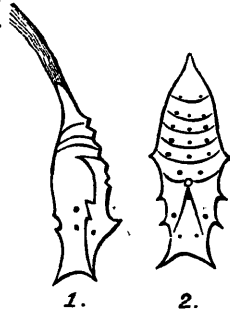
Fam. NYMPHALIDÆ.

IN the summer of 1887 (February), while botanising in the secluded forests and glens south of Dannevirke, I came upon a curious living chrysalis of a form hitherto unnoticed by me. It was attached to a branch of a species of *Galium*,\* a large

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\* *Galium triloba*, Col., sp. nov., "Trans. N.Z. Institute," vol. xx., p. 192. (I have since detected this curious species growing profusely prostrate in large beds.)

prostrate plant, and, believing it to be new, I carefully secured it and brought it to Napier. As I expected it would shortly emerge in its imago state, I took accurate notes of this chrysalis in its fresh and living state, also a drawing of it, which I now give. I failed, however, in seeing the perfect insect, as the chrysalis never developed, but lost its original colours and decayed. I suppose it must have received some bruising in carriage, &c., although I took every possible care, having also formerly reared perfect insects of *Pyrameis gonerilla*, *Danaïs berenice*, *Dasypoda selenophora*, and others. It may be, however, only the pupa state of one of our known New Zealand butterflies, and also known to our colonial lepidopterists, who will in that case immediately recognise it from my description. It was certainly both very peculiar in shape and richly adorned in colours.



1. Side view. 2. Front view. Chrysalis 10/12 inch long; slightly enlarged.

*Description*.—Chrysalis: Suspended by a stout web from its tail (none around the body), oblong (outline form), 10 lines long, 4 lines broad; somewhat sub-angular and rough, with many small muricate projections; colour olivaceous, smooth yet finely corrugated, glossy, with minute short wavy transverse black veins; the thorax and head having a semi-metallic glistening appearance, as if finely powdered with gold dust, with 6-8 large and more defined bright gold-like round spots on underside of thorax and head. Head broad, truncate and retuse almost bifid, acutely 2-horned at outer angles; sternum largely produced and very acute; tail produced, tip blackish,  $\frac{1}{2}$  line long, curved with a stout silken band 3 lines long; back flattish, with 4 small sharp points (2 pairs) near the centre and 2 larger on each side (edge of wings) nearly in the same lateral line, and 1 smaller on edge near fourth abdominal ring, and 5 blackish spiracle-like slits in a curved line from fourth abdominal ring to tip of tail; several fine longitudinal black lines running from each side of horn to the fifth and largest ring of abdomen, the outer pair of lines regularly studded their whole length with minute raised points; 3 large posterior black rings and 4 sub-obsolete anterior ones on abdomen underside; 8 pairs of acute points (feet) in 2 longitudinal lines, with 6 smaller central ones in a longitudinal line on abdominal rings; and a shining blackish disc with raised margin in centre of thorax under sternum.

*Obs*. This chrysalis somewhat resembles in form that of *Vanessa io*. Viewed in front its prominent sternum, &c., bears a likeness of the human face in ludicrous miniature. I

have ventured to classify it under the family of *Nymphalidæ*, from the fact of its only suspending itself by its tail. I am aware that the sub-family of *Libythæinæ* (Fam. *Erycinidæ*) does the same, but hitherto (as far as I know) none of this sub-family has been found in New Zealand.

Should any of our colonial lepidopterists, who may see this notice, be already acquainted with this form of pupa, and also with its perfect insect, I will thank him to inform me of it.

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ART. XIX.—*A few Notes on the Economy and Habits of one of our largest and handsomest New Zealand Butterflies* (*Pyrameis gonerilla*).

By W. COLENSO, F.R.S., F.L.S., &c.

[Read before the Hawke's Bay Philosophical Institute, 8th October, 1888.]

A FEW years ago, during my visits to our inland forests, I often had to pass close to a large shrubby *Urtica*,\* and I invariably saw several of our large and handsome butterfly, *Pyrameis gonerilla*, hovering over it or settled on it. The shrub itself was in a sheltered sunny nook; and on one day in particular in early spring I counted no less than seventeen of these beautiful creatures at one time so engaged about that shrub, which none of them seemed desirous of leaving. It was a truly lovely scene which I well remember. Spring's woodland harbinger, the large-flowered clematis (*C. indivisa*) was pretty well developed overhead, swinging and displaying its long wreaths of peerless and pendulous virgin-white tresses from the lofty trees up which it had climbed when young; around were the many beautiful and stately tree-ferns, while below the ground was thickly carpeted with that neat close-growing bedding plant, with small and regularly-formed emerald foliage, *Pratia angulata*, expanding thankfully its myriads of white and blue star-like blossoms to the morning sun, and so drinking in life. The sun, too, was shining brightly down from the deep concave of the dark-blue sky, rarely flecked by a passing cloud; while the melodious tuis (*Prothemadera novæ-zealandiæ*—parson-bird of the colonists), having had their breakfast of honey and nectar, were singing away joyfully and with good courage from their tiptop perches on the highest sprays, their dark and lustrous metallic plumage reflecting the rays of the sun. It is worthy of notice that this handsomest and highly melodious bird always selects the highest and bare spray of a tall tree for its music-stool,

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\* *U. ferox*, Forst., or a closely allied and undescribed species: *U. pungens*, MSS.