

I also searched the Little Barrier Island for tuataras, but in vain. The large quantities of feral pigs living upon that island may easily account for their absence. There are also none on the Hen and the Guano Islands. Most frequently they were found by me on the large western Chicken Island. I believe that they are still more abundant on the smaller islands; however, although I tried repeatedly to land on them, the heavy surf would not allow me to do so.

ART. XL.—On some new and undescribed Species of New Zealand Insects, of the Orders Orthoptera and Coleoptera. By W. COLENSO, F.L.S.

[Read before the Hawke's Bay Philosophical Institute, 8th November, 1880.]

ORTHOPTERA.

Fam. MANTIDÆ. Genus *Mantis*.

Mantis novæ-zealandiæ, n. sp.

Pronotum five lines long, anterior end widest, ridged down the middle, minutely tuberculated all over in scattered dots, punctulate, punctures translucent when viewed between eye and light, side-margins rough finely sub-serrulate, edge straight sloping gradually to mesonotum. *Anterior pair of legs*: trochanter very slightly serrulate at margins; femur two rows of spines of irregular lengths, inner row small and closely set, outer four only large and distant, a large purple oval or kidney-shaped spot central within; tibia two rows of spines, regular, ending in one very long curved one at base; tarsus long; *costæ* of the *anterior wings* (elytra), one to each, run longitudinally parallel with and near the outer margin, with transverse flexuose nerves branching inwardly and diagonally from it, wholly filled up between them with fine anastomosing veinlets; *elytra* semi-transparent; *posterior wings* much smaller and very membranous; wings extending far beyond base of abdomen; *abdomen* thick smooth. *Antennæ* short, $3\frac{1}{2}$ lines long; *eyes* large, two small protuberances (? stemmata) between horns and just behind them: total length from head to posterior edge of elytra $1\frac{1}{2}$ inches: length of *nympha* $1\frac{1}{2}$ inches. *Colour* (of both states nearly alike), mostly light emerald green; underneath, about mouth and thorax, and inside of fore-legs pale lemon; outside of legs and head (above) dark orange; a dark purple reniform spot on inside of each fore femur.

Hab.—Scinde Island, Napier, on trees (*nympha* state only), 1878–1879, Mr. J. A. Rearden; *imago* state (one specimen), 1880, Mr. J. D. Ormond.

This species has pretty close affinity with the European species *M. religiosa*, but it is very much smaller, with shorter horns, and less spiny and narrower fore-legs, etc.

During the summer of 1878–1879 I had several living specimens of this insect in its *nympha* state; some of them I sent to the Colonial Museum in spirits. I kept them alive for some time, although I did not succeed in finding out their natural food; one of them, however, shed its skin. I had long been on the look-out for a New Zealand species of *Mantis*, as we had known from Dieffenbach's work on New Zealand (vol. ii., p. 280), that some eggs, or egg cases, of a species of *Mantis* had been taken to England by Dr. Sinclair nearly forty years ago, and I was consequently much gratified on receiving the perfect insect.

Fam. PHASMIDÆ. Genus *Bacillus*.

Bacillus sylvaticus, n. sp.

General colour dirty yellowish-grey, abdomen darker; *pronotum*, *mesonotum*, and *metanotum* slightly spiny with a few small low spines; three longitudinal rows of large distant spines on *pronotum*, 3–4 in each row; *prosternum*, *mesosternum*, and *metasternum* very spiny with long sharp spines; all spines blackish pointed; a close row of fine sharp spines runs along side ridges of *mesothorax* and *metathorax*; *abdomen* below with two rows of spines from anterior end to end of the sixth segment, which are tolerably large at the anterior end; above smooth or very slightly and sparingly muricated; fourth, fifth, and sixth *segments* dilated on sides at posterior ends, the sixth the most so; *anal appendages* produced, broad; *anus* very large; anterior pair of *coxæ* slightly tubercled, others smooth, or roughish, wrinkled; *anterior pair of femora* angular, regularly crenulated on upper edge, and distantly muricated on both upper and lower edges; *middle and posterior pair of femora* with 2–3 small scattered spines; *posterior and middle tibiæ and tarsi* slightly crested at bases, those of *tibiæ* twin and very small; all *tarsi* slightly pubescent; *vertex* slightly tubercled, smooth between the eyes and under throat; *antennæ* slightly pubescent, black-jointed, muticous, $1\frac{1}{4}$ inch long; length of body $5\frac{1}{4}$ inches.

Hab.—On trees, forests, Hampden, Hawke's Bay, 1879.

This species has affinity with *B. horridus*, nevertheless it differs considerably.

A peculiarity of one of my specimens is worth noticing, *viz.*, that it has evidently lost one of its middle legs; and now a much smaller one, perfect, though not one-third of the size of the other, was being developed.

Fam. LOCUSTIDÆ. Genus *Hemideina*.

Hemideina gigantea, n. sp.

Colour: head, thorax, femora, two fore pairs of *tibiæ* and *tarsi*, red-brown; *pronotum* a darker and very rich red-brown, slightly punctured with whitish spots; *abdomen* (dorsal) smoky light-ochre with transverse symmetrical dark-brown (raw umber) bands at edges of all the segments,

widest in the middle and decurrent centrally beginning at the mesonotum; sides of abdomen deep black-brown; ventral segments throughout blotched with black-brown in three irregular and wide longitudinal lines; posterior tibiæ, tarsi, and spines, with the ovipositor, piceous; *tibiæ* quadrangular, *anterior pair* with ten spines in two inner rows; *middle pair*, fourteen spines in three rows; and *posterior pair* with seventeen spines in four rows (three of them alternately bearing five spines each), the outer row being very long and acute, increasing in length downwards, the lowest spine at the base of tibia 4 lines long; *femora, anterior, and middle pairs* smooth and spineless; *posterior pair* each having two longitudinal rows of spines, eight in a row, on the inner side, regularly marked on the outside with transverse wavy light lines; *coxæ* each armed with a single spine, those of *anterior pair* long and sharp, of *posterior* short and very obtuse; four joints of *tarsi* cushioned, each with a prominent broad transverse pad, besides *pulvilli*; last joint of *tarsi* the longest; terminal spines, or hooks, of *tarsi* large, long, and falcate; *ovipositor* curved upwards, blades slightly concave, thin, and elliptical at apex; four long stout acute spines above, two on each side of anus; *posterior femur* $1\frac{1}{2}$ inch long, *tibia* 2 inches long, *tarsus* 1 inch long; *maxillary palpi* stout, long, and largely clavate; *labrum* very broad and obtuse; *eyes* broadly elliptic and very prominent; *antennæ* light reddish-brown, annulate, $7\frac{1}{2}$ inches long, distant at base; rings of horns smaller and finer than in the much smaller species (*infra*) *H. spelunca*: size, body without appendages 4 inches long, and very bulky.

Hab.—In a small low wood behind Paihia, Bay of Islands; 1839.

This species is bigger every way than *H. heteracantha*, with which species, however, it has close affinity. It is also much more spiny, and differs greatly in colour, etc. It is a very fine and handsome insect.

It has a little semi-public history, which may be here very briefly given. It has been seen and admired by Dr. Dieffenbach, Dr. Sir Joseph Hooker (and the other officers of that Antarctic expedition), Dr. Sinclair, Lady Franklin, the several early French and American naturalists who had visited New Zealand, etc., etc.

It was long supposed (from the publication of Dr. Dieffenbach's work on New Zealand in 1843) to be identical with *Deinacrida heteracantha* of that work (vol. ii., p. 180), and, if so, should have been the type (being the old original specimen); but a close examination of *late years* served to show their respective and great differences. This specimen remained packed up in the box in which it was brought away from the Bay of Islands, from 1843 to 1864! It was, however, exhibited at the New Zealand Exhibition* at Dunedin in 1865, as *Deinacrida gigantea*, Col.; and although it has been

* *Vide Jurors' Reports*, p. 254.

now forty-two years in spirits, its colours are unaltered. It is still in its original clear glass bottle with the liquid clear and pure: but the ground-glass stopper having become firmly fixed, and not choosing to run the risk of injuring the specimen (which, as far as I know, is unique), I have given some of its measurements as approximate only,—but they were carefully taken and are very nearly quite correct, at all events within a line or two.

Hemideina spelunca, n. sp.

Colour: body beneath light ochreous; pronotum, both anterior and posterior edges broadly banded with black, mesonotum and metanotum also having a black band close to posterior margin, but all the thoracic and abdominal segments have a narrow white line on all their dorsal posterior and side edges; abdomen above brownish, dirty raw umber at the base; posterior femora (upper parts only) light reddish-brown, transversely and closely banded with finely waved and regular lines of a darker brown, in three longitudinal and separate rows, the markings all different in each row; middle and anterior femora (upper part only) ochreous; tibiæ and lower parts of femora banded with black and white rings (resembling porcupine quills in miniature); tarsi light straw colour, translucent: *posterior pair of legs*; femur $1\frac{1}{4}$ inch long, with one row of seven very small distant spines on the inner edge; tibia $1\frac{1}{2}$ inch long, slightly hairy, with two rows of fine close spines, 35–40 in a row, on two inner edges, sulcated between the rows, at base of tibia two long and villous white spines; tarsus 4-jointed, 8 lines long, smooth, translucent, finely and thickly pubescent, with a single small spine at the base of each joint, joint nearest to the tibia the longest (as long as the other three taken together: *middle pair of legs*; femur 9 lines long, naked; tibia 10 lines long, with four rows of small spines, five in each row; tarsus 7 lines long, spineless: *anterior pair*; femur $10\frac{1}{2}$ lines long, with a row of six small spines; tibia 11 lines long, with a row of four small spines; tarsus 8 lines long, spineless, slightly villous and translucent; two long spine-shaped *processes*, each 4 lines long, at end of abdomen near anus, one on each side, whitish, finely ciliated with long flexuose patent ciliæ, 1–2 lines long; *head* rather small, narrower than pronotum, and scarcely appearing before it; maxillary *palpi* long and slender, slightly clavate; *eyes* rather large, semi-lunar, at base of antennæ and nearly behind them, gibbous edge towards thorax; *antennæ* thick at base and close together, 8 inches long, articulated, light reddish-brown but darker at articulations, very setaceous, each bearing a row of short obtuse spines on the outer edge in the middle for nearly one-third of its length, spines irregular in size and position, some being near, one on each articulation, some more distant, with 2–3 vacant articulations between, spines always at anterior end of joint, rings of its horns coarser than in the large species (*supra*) *H. gigantea*; *body* without appendages, $1\frac{1}{2}$ inch long.

Hab.—In dark underground caves near the head of the Manawatu river, in the "Forty mile bush," 1879.

This peculiar and very interesting animal, (of which I regret to say I have but one whole specimen), inhabits in great numbers those small caves which are difficult of access; there they hop and spring about like shrimps, and having such excessively long and fine horns and legs, it is a very difficult matter to secure a perfect specimen; of course the necessity of having a candle burning when in those dark recesses, greatly increases the difficulty. I am indebted to Mr. J. W. Thomson, of Norsewood, for this specimen here described, who captured the insect there, together with some others, which, however, were unfortunately much crushed and broken. The brightness of its colours when fresh, particularly of its black-and-white ringed legs, their excessive tenuity, and the extreme length of its fine setaceous horns, all tend to give this creature an elegant and graceful appearance; in this respect widely differing from the other known species of this genus.

COLEOPTERA.

Fam. CURCULIONIDÆ. Genus *Scolopterus*.

Scolopterus submetallicus, n. sp.

General colour black-green, very glossy, femora purple-black, legs piceous; elytra punctured coarsely in lines on back, faintly on sides; head smooth; shoulder-spines straight, acute; posterior femora large, armed with a large acute tooth near base; pulvilli bordered with white. Length $4\frac{1}{4}$ lines.

Hab.—Forests near head of Manawatu river, 1880.

This specimen flew down from a high tree, and alighted on the sleeve of my coat. As a species it ranks near to *S. tetracanthus*.

Genus *Rhyncodes*.

Rhyncodes weberi, n. sp.

Insect villous; general colour reddish-brown intermixed with grey, and mottled with small greyish-white blotches on elytra; pronotum brown, finely punctulate; elytra, five black shining longitudinal lines slightly and closely tuberculated in small raised dots, parallel with five black smooth lines, outer edge stout, black, glossy, strongly and regularly marked with small transverse riblets running inwards at right-angles; abdomen beneath black glossy, with a few short scattered hairs, and three broad longitudinal rows of mottled hairs; femora, and sides (shoulders) of pronotum, black, glossy, and slightly punctulate; a small tuft of reddish hairs at bases of femora; coxæ densely villous; tibiæ and tarsi very hairy; pulvilli very large, broadly orbicular-obcordate; antennæ stout, serrated, hairy throughout and coarsely ciliated, nearly as long as the rostrum; head and rostrum very hairy, with red-brown hairs. Length, including rostrum, 15 lines.

Hab.—Hawke's Bay; C. H. Weber, Esq., 1878.

A species near to *R. ursus*, but much larger.

Rhynçodes rubipunctatus, n. sp.

Insect wholly covered with very short whitish-grey down, finely and thickly speckled with light-red, which (below especially) assumes a flattish semi-scaly appearance, each minute speck of reddish down or hair showing a regular circumscribed shape; *pronotum* dotted profusely and finely with black raised irregular dots, and bearing two semi-lunate and two smaller brown spots; *elytra* extending sharply over abdomen, with 12–14 longitudinal sub-striated rows of black raised shining dots, mottled with 2–3 small brownish markings in a line with those on pronotum; *abdomen* below with three fine transverse black lines near anus; *head* between eyes and base of rostrum coarsely dotted with raised brown dots; *eyes* large; *rostrum* jet-black, smooth; *antennæ* as long as rostrum and slightly hairy. Length, including rostrum, 9 lines.

Hab.—Hawke's Bay, Patangata; captured by Mr. G. W. Tiffen, 1880.

Another specimen, taken in the same neighbourhood by Mr. Winkelmann, bit its captor's hand pretty sharply through his handkerchief, causing it to bleed.

ART. XLI.—*Descriptions of New Shells.*

By T. W. KIRK, Assistant in the Colonial Museum.

[Read before the Wellington Philosophical Society, 21st January, 1882.]

THE three species mentioned below all possess a deep notch at the anterior end of the columella, which at once distinguishes them from *Euchelus*, the columella of which has only a "small tooth in front." It thus becomes necessary to create a new genus for the reception of the New Zealand species.

Professor Hutton, to whom I have dedicated the new genus, informs me that while in Sydney he examined a series of specimens representing the various species of *Euchelus*, but in no instance could anything approaching a notch be discovered.

HUTTONIA, gen. nov.

Shell moderate; turbinated, sub-globose; perforate or imperforate; columella with a deep notch at the anterior end. Outer lip thickened and crenated internally.

H. bella.

Euchelus bellus, Hutton; Cat. Marine Moll., p. 37.

H. iricolor, sp. nov.

Shell *imperforate*; larger, spire more prominent, and granulated ribs much coarser than in *H. bella*.