EXPLANATION OF PLATE XV.

SKULLS OF ANCIENT MAORI DOGS.

The upper and middle figures are crania from the sandhills at the mouth of the Shag River, Otago. They were found associated with moa-bones.

The lower figure is a cranium from the sandhills north of Waimarama, Hawke's Bay.

The figures are reduced about one-half.

ART. XIX.—*On a Collection of Insects from the Chatham Islands, with Descriptions of Three New Species.*

By Captain F. W. HUTTON, Curator of the Canterbury Museum, Christchurch.

[*Read before the Philosophical Institute of Canterbury, 1st September, 1897.*]

So little is known about the insect fauna of the Chatham Islands that a list of a small collection made by Mr. J. J. Fougère on the main island will not be unacceptable. This collection was contained in a bottle of methylated spirits, and, in consequence, many of the specimens were in bad condition, especially the *Diptera;* but in most cases they were sufficiently well preserved for identification. The bottle contained no *Lepidoptera.*

COLEOPTERA.

Anchomenus submetallicus, White, Voy. "Erebus" and "Terror," Insects, p. 2 (*Colpodes*); Broun, Man. Coleopt. N.Z., p. 24.

Colymbetes rufimanus, White, Voy. "Erebus" and "Terror," Insects, p. 6; Broun, Man. Coleopt. N.Z., p. 74.

Staphylinus oculatus, Fabricius, Ent. Syst., ii., p. 521; Broun, Man. Coleopt. N.Z., p. 107.

Sternaulax zealandicus, Marseul; Broun, Man. Coleopt. N.Z., p. 162.

This insect seems to agree with New Zealand specimens, but as the fore tibiæ are broken off I cannot make a complete comparison. It is, however, much smaller, being only 5 mm. in length.

Leperina wakefieldi, Sharp, Ent. Mon. Mag., Jan., 1877; Broun, Man. Coleopt. N.Z., p. 179.

The length varies from 14–9 mm.

Rhytinotus squamulosus, Broun, Man. Coleopt. N.Z., p. 204.

A curious species, easily recognised. The genus must not be confounded with *Rhytinota*, of Eschsch (1831).

Diagrypnodes wakefieldi, Waterhouse, Trans. Ent. Soc. London, 1876; Broun, Man. Coleopt. N.Z., p. 217.

Ceratognathus helotoides, Thomson, Ann. Soc. Ent. France, ser. 4, vol. 2; Broun, Man. Coleopt. N.Z., p. 254.

The length of this species is from 11–9½ mm.

Aphodius granarius, Linnæus.

A European species, which has also been introduced into Canterbury.

Lacon murinus, Linnæus.

Another European species, but one which I have never seen in New Zealand.

Thoramus obscurus, Sharp, Ann. Mag. Nat. Hist., 1877; Broun, Man. Coleopt. N.Z., p. 281.

Thoramus lævithorax, White, Voy. "Erebus" and "Terror," Insects, p. 7 (*Elater*), pl. 1, fig. 10; Broun, Man. Coleopt. N.Z., p. 282.

Mecastrus convexus, Sharp, Ann. Mag. Nat. Hist., 1877; Broun, Man. Coleopt. N.Z., p. 293.

Monocrepidius subrufus, Broun, Man. Coleopt. N.Z., p. 294.

I am not sure about the identification of this species, as the body is not nude, but clothed with scattered pale hairs, and the depression on the thorax is not divided by a line. There are eight impressed lines on each elytron, and the colour varies from dark castaneous to reddish-brown. Length, 8 mm.

Phymatophœa electa, Pascoe, Ann. Mag. Nat. Hist., 1876; Broun, Man. Coleopt. N.Z., p. 334.

Cilibe pascoei, Bates, Ann. Mag. Nat. Hist., 1873; Broun, Man. Coleopt. N.Z., p. 372.

Several specimens. Length, 14–11 mm.; width, 8–5½ mm.

Sessinia strigipennis, White, Voy. "Erebus" and "Terror," Insects, p. 12 (*Dryops*); Broun, Man. Coleopt. N.Z., p. 420.

Thelyphassa diaphana, Pascoe, Ann. Mag. Nat. Hist., 1876; Broun, Man. Coleopt. N.Z., p. 422.

One example, which is smaller than the type, being only 10 mm. in length.

Otiorhynchus sulcatus, Fabricius.

A European species, which has also been introduced into Canterbury. It is often injurious to vines, strawberries, &c.

Psepholax sulcatus, White, Voy. "Erebus" and "Terror," Insects, p. 15, pl. 3, fig. 1; Broun, Man. Coleopt. N.Z., p. 479.

Psepholax femoratus, Broun, Man. Coleopt. N.Z., p. 481.

Aldonus hylobioides, White, Voy. "Erebus" and "Terror," Insects, p. 16, pl. 3, fig. 9; Broun, Man. Coleopt. N.Z., p. 483.

White mentions that in Captain Parry's collection there is a small specimen not half the size of the type, and differing somewhat from it in marking, having a waved black line on the side of each elytron. In this collection from Chatham Islands there is also a great difference in the size of the specimens. In three the length is 12 mm., in another it is 10 mm., in another 9 mm., and in another only 7 mm. I can see no difference in colour, and there are no black marks on the elytra.

Acalles fougeri, species nova.

Subovate, black, covered with scales, except a median band on the thorax and elytra. The scales on each border of the nude band are black, those on the sides of the thorax and elytra and on the legs pale-yellowish white, variegated with black.

Length (without rostrum), 8–10 mm. Apparently allied to *A. pascoei*, but easily recognised by its colours.

The *antennæ* are piceous, inserted at about one-fourth from the apex of the rostrum; the scape is slightly curved and clavate, it reaches nearly to the eyes; the first two joints of the funiculus are about as long as the other five together, the club ovate. Rostrum black, moderately curved, the front strongly punctate. Eyes moderate, ovate. *Head* covered with black scales except a spot over each eye and a mark on the forehead, which are pale dirty yellow. *Thorax* longer than broad, the front constricted, the non-constricted portion slightly transverse; the base not much sinuated; the nude middle portion smooth; the sides covered with pale-yellowish scales, among which are some dark ones forming three indeterminate longitudinal lines. *Scutellum* invisible. *Elytra* ovate, without any shoulders, broader than the thorax, their apices much bent down; very coarsely pitted in longitudinal rows, the interstices finely granulated; two rows of pits on the nude portion of each elytron and about five more rows which are covered with scales. The scales on the sides of the elytra are pale-yellowish, with dark scales in the pits. *Abdomen* with the first two abdominal sterna very broad, the next two very narrow; all clothed with pale scales. *Legs* robust, covered with pale scales and transverse bands of fuscous scales on the femora and tibiæ; tarsi black.

The type is in the Canterbury Museum, Christchurch.

Platypus apicalis, White, Voy. "Erebus" and "Terror," Insects, p. 18; Broun, Man. Coleopt. N.Z., p. 541.

Xuthodes punctipennis, Pascoe, Ann. Mag. Nat. Hist., 1875; Broun, Man. Coleopt. N.Z., p 580.

Xuthodes divergens, Broun, Man. Coleopt. N.Z., p. 581.

I have not been able to compare this insect with a specimen from New Zealand. The punctation of the elytra resembles that of *X. punctipennis*.

Zorion minutum, Fabricius, Syst. Ent., p. 192; Broun, Man. Coleopt. N.Z., p. 584.

Xylotoles costatus, Pascoe, Ann. Mag. Nat. Hist., 1875; Broun, Man. Coleopt. N.Z., p. 599.

Tetrorea cilipes, White, Voy. "Erebus" and "Terror," Insects, p. 21, pl. 4, fig. 9; Broun, Man. Coleopt. N.Z., p. 609.

Hybolasius trigonellaris, species nova.

Dark testaceous, clothed with yellowish hairs, each elytron having, near the centre, a triangular piceous mark, the apices of which nearly meet on the suture. Length, 5½–6 mm.

The first joint of the *antennæ* is thick and rather shorter than either the third or the fourth, which are nearly equal; the other seven are much shorter and gradually decreasing in length, their apices are fuscous. *Head* with the antennal elevations large, the vertex punctate and with a narrow impressed line down the centre. *Thorax* finely punctate, the lateral and dorsal tubercles low and rounded. *Elytra* coarsely punctate on the basal half, a few scattered white setæ near the costal margin; an acute compressed basal tubercle on each. *Legs* long, fuscous, except the outsides of the femora, which are testaceous.

This species differs from *H. wakefieldi* in its colours and in the thoracic dorsal tubercles not being transverse. The type is in the Canterbury Museum, Christchurch.

Coccinella 11-punctata, Linnæus.

A European species, which has also been introduced into New Zealand, and is now very abundant.

Hymenoptera.

Pison morosus, Smith, Cat. Hymenoptera in Brit. Mus., part 4, p. 317; Hutton, Cat. Hymenoptera of N.Z., p. 103.

Ichneumon insidiator, Smith, Trans. Entomological Soc. of London, 1876, p. 476; Hutton, Cat. Hymenoptera of N.Z., p. 119.

Ichneumon sollicitorius, Fabricius, Syst. Ent., 1774, p. 332; Hutton, Cat. Hymenoptera of N.Z., p. 120.

Paniscus ephippiatus, Smith, Trans. Entomological Soc. of London, 1876, p. 478; Hutton, Cat. Hymenoptera of N.Z., p. 126.

DIPTERA.

Dilophus nigrostigma, Walker, Cat. Diptera in British Museum, p. 121 (*Bibio*); Hutton, Cat. Diptera of N.Z., p. 18.

Saropogon discus, Walker, Cat. Diptera in British Museum, p. 358 (*Dasypogon*); Hutton, Cat. Diptera of N.Z., p. 26.

Odontomyia australiensis, Schiner, Reise der "Novara," Diptera, p. 59; Hutton, Cat. Diptera of N.Z., p. 38.

Clitellaria amyris, Walker (?), Cat. Diptera in British Museum, p. 535 (*Odontomyia*); Hutton, Cat. Diptera of N.Z., p. 39.

The scutellum is black bordered with yellow, and not yellow, as in Walker's description, but New Zealand specimens are the same.

Helophilus trilineatus, Fabricius (?), White, Voy. "Erebus" and "Terror," Insects, pl. 7, fig. 19; Hutton, Cat. Diptera of N.Z., p. 41.

The small variety, which is also found in New Zealand. The Chatham Islands specimens have the hairs on the abdomen bright golden-yellow, and may be distinct.

Mallota ineptus, Walker, Cat. Diptera in Brit. Mus., p. 608 (*Helophilus*); Hutton, Cat. Diptera of N.Z., p. 41.

Syrphus novæ-zealandiæ, Macquart, Dip. Exotiques, supp. v., p. 115; Hutton, Cat. Diptera of N.Z., p. 44.

Calliphora aureopunctata, Macquart, Dip. Exotiques, supp. v., p. 130; Hutton, Cat. Diptera of N.Z., p. 59.

Sarcophoga læmica, White, Voy. "Erebus" and "Terror," Insects, pl. 7, fig. 18; Hutton, Cat. Diptera of N.Z., p. 62.

HEMIPTERA.

Rhopalimorpha ignota, species nova.

Like *R. obscura*, but without any smooth band on the head and pronotum. Length, 9 mm.; breadth, 4½ mm. Oval; ochraceous; shining; sparsely but deeply punctured with black on the head, pronotum, scutellum, and basal portion of the elytra. A narrow smooth line on the scutellum, but none on the pronotum or head. Antennæ ochraceous, darker towards the tips; the second joint rather shorter than the third. Nervures of the membranous portion of the elytra brown. Legs ochraceous. Abdomen margined below with red. The type is in the Canterbury Museum, Christchurch.

Melampsalta cruentata, Fabricius, Syst. Ent., 680 (*Tettigonia*).

Philænus trimaculatus, White, Voy. "Erebus" and "Terror," Insects, pl. 7, fig. 10.

ORTHOPTERA.

Periplaneta undulivitta, Walker, Cat. Blattidæ in British Museum, p. 144.

Anisolabis littorea, White, Voy. "Erebus" and "Terror," Insects, pl. 6, figs. 4, 5 (*Forficula*).

ODONATA.

Somatochlora smithii, White, Voy. "Erebus" and "Terror," Insects, pl. 6, fig. 2 (*Cordulia*).

Lestes colensonis, White, Voy. "Erebus" and "Terror," Insects, pl. 6, fig. 3 (*Agrion*).

Xanthagrion sobrinum, McLachlan, Ann. Mag. Nat. Hist., 1873 (*Telebasis*); Trans. N.Z., Inst., vol. vi., Appendix, p. xciii.

ART. XX.—*The* Phasmidæ *of New Zealand.*

By Captain HUTTON, F.R.S., Curator of the Canterbury Museum.

[*Read before the Philosophical Institute of Canterbury, 3rd November, 1897.*]

THE *Phasmidæ*, known also as "stick-insects" and "leaf-insects," have their head-quarters in the Malay Archipelago, but are spread over all the warm parts of the earth, including Polynesia, as far as Hawaii, Samoa, and Tonga. They are not favourites with collectors, because they take up a large amount of space in the cabinet, and consequently large collections for comparison are not available. Also, they are apt to lose one or more of their legs, which are redeveloped, but of a smaller size, and generally destitute of spines. There are other difficulties connected with their study. None of the New Zealand species have either wings or ocelli, and immature forms can only be distinguished by the imperfect development of their sexual appendages and by their softer integument; while the immature form is known, in some cases, to differ in colour from the adult. Also, the males are comparatively rare, and differ from the females in being more slender and often less spiny than the females. Indeed, the spines on the body and legs are generally variable in both sexes, and the