

Zealand bird is also clearly referable. The generic title adopted by Mr. Gould (*Phalacrocorax* of Brisson) appears to me more satisfactory than *Graculus*, about which there seems to be no finality. In Mr. G. R. Gray's first list (*App. to Dieff, N.Z.*, Vol. ii., p. 201) it was written *Graucalus*, and in his *Zoology of the Erebus and Terror*, Birds, p. 20, it was changed to *Gracalus*, and in his latest list (*Ibis*, 1862) it became *Graculus*, a term originally applied specifically by Linnæus to the green cormorant of Europe, *Pelecanus graculus* (*Syst. Nat.*, Vol. i., p. 217).

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NOTE TO ART. II.—BULLER'S LIST OF NEW ZEALAND LIZARDS.

Add,—12 b. *Naultinus lineatus*, sp. n., Gray. *Ann. and Mag. Nat. Hist.*, 1869, Vol. iii., p. 243.

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ART. X.—On *Latrodectus* (*Katipo*), the Poisonous Spider of New Zealand.

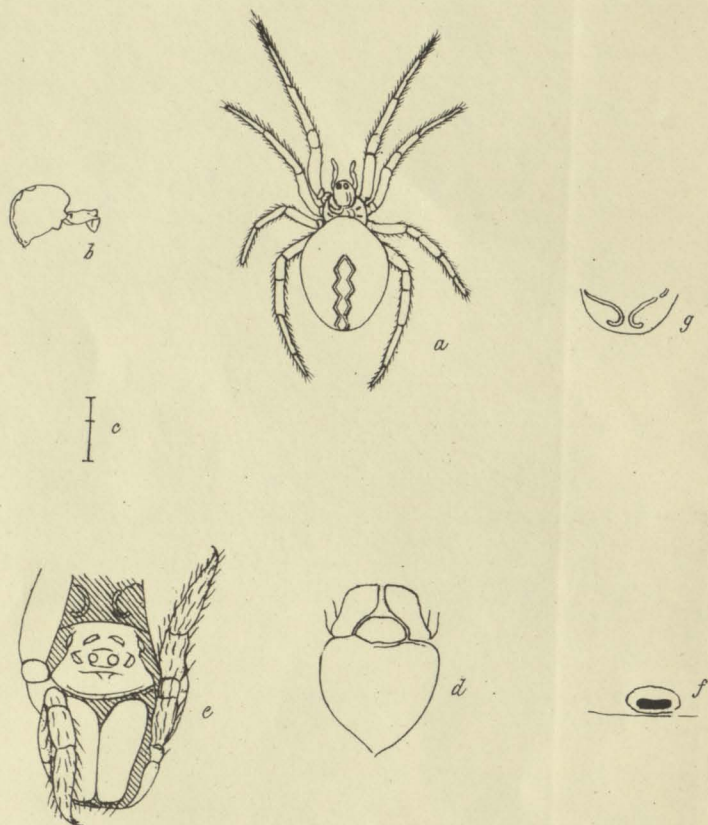
By LL. POWELL, M.R.C.S.St.A.

(With Illustrations.)

[Read before the Philosophical Institute of Canterbury, May 4, 1870.]

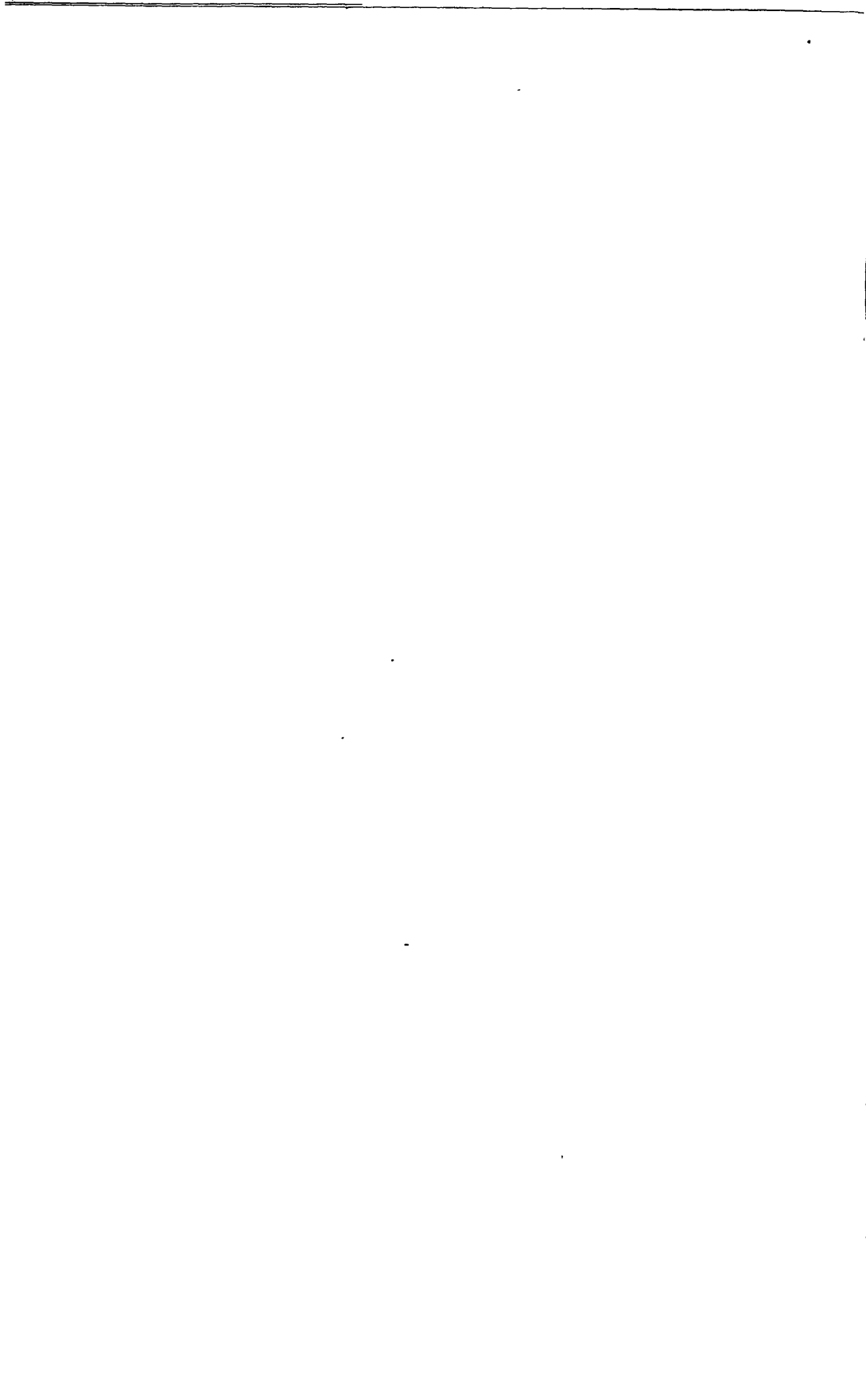
A COMMUNICATION was read before the Auckland Institute in October last, by F. W. Wight, Esq., L.M.P., on a case which came under his observation of the ill effects produced by the venomous bite of a spider, known to the natives under the name of the *Katipo*; he also related two or three cases recorded by other observers. Both in the local effect and the extreme prostration of vital power, there was great similarity to the injuries inflicted by venomous snakes, and in one case death is said to have followed after a considerable interval. The injurious effects of the bite are well known to the natives, and, according to Mr. Wright, they describe two kinds of *Katipo*, one black, the other black with red markings; the noxious properties of the former seem doubtful, but all agree that the red-spotted spider is highly poisonous.

Dr. Hochstetter says,—“As we were about to camp for dinner, we were cautioned by the natives against a small black spider with a stripe on its back, which they call *Katipo*. The spider is said to exist only here and about Otaki, on Cook's Strait, on the grass growing upon the sand-hills, and its bite to be so poisonous, that with sickly persons it has even caused speedy death. \* \* Ralph, in the *Journ. Proc. Lin. Soc.*, describes it as a real spider, of a very different appearance at different periods of its age; when full-grown it is black, with an orange-red stripe on its back. Ralph mentions also that he had put the spider together with a mouse, and that the latter died after eighteen



*LATRODACTUS* (*Kaitipo* ?)

- a.* Adult Female X 2½ diam. *b.* Profile. *c.* Real size.  
*d.* Labium, Maxilla, and Sternum.  
*e.* Front view of Cephalothorax showing arrangement  
of eyes, falcis, maxillae, &c. *f.* Vulva.  
*g.* Anterior aspect of abdomen.



hours in consequence of the spider bite."—(*Hochstetter's New Zealand*, p. 440.) I am sorry that I have not been able to obtain the volume of the Linnean Society's Transactions, containing Dr. Ralph's communication.

These spiders are tolerably numerous in the North, but rare in this Island. Dr. Haast, however, informs me that, according to the Maoris, Katipos have lately made their appearance in the sand-hills near Rangiora. On Friday last I received from Mr. Nottidge a spider which he found beneath a stone in the Maori Pa at Woodend, and which corresponded to the description of the Katipo, and on comparing it with a dried specimen given to Mr. Fereday as a Katipo, I found it to be of the same species. I have had no opportunity of testing its venomous properties, but I shall show in the sequel that there is very good reason for believing that it is truly poisonous. I am not aware that it has been scientifically described, or that it has received any specific name.

The following is a description of its affinities and characteristics:—

Fam.—THERIDIIDÆ. Gen.—LATRODECTUS.

Provisional specific appellation.—*Latrodectus Katipo*.

*Adult female*.—Length of body  $\frac{1}{3}$ -inch. Cephalothorax, broad posteriorly, constricted and somewhat produced anteriorly, flattened; caput, elevated and well defined, normal grooves fairly indicated; a transverse depression behind the caput; colour, a glossy black. Eyes, eight in number, tolerably equal in size, the anterior middle pair being slightly the smallest, arranged in two transverse rows of four each towards the anterior aspect of the elevated caput, very slightly curved forwards; eyes of anterior row distributed at equal distances, middle pair situated on a common projection directed anteriorly; external eyes situated on slight eminences directed downwards and outwards, posterior row more widely distributed than anterior row, at equal distances; middle pair sessile directed upwards and slightly outwards; external eyes on eminences directed outwards and slightly backwards; clypeus as deep as the width of the anterior row, divided by a transverse sulcus a little below the anterior eyes; lower division of clypeus tumid with a slight vertical median depression; the eyes shine with a pearly lustre, so that the posterior middle pair are plainly visible without magnification. Legs tolerably robust, of moderate length, the first pair are the longest, then the fourth, the third pair are the shortest but do not differ greatly from the second pair in length; colour black, the tarsus and metatarsus reddish, clothed with fine blackish hairs, especially the two posterior pairs; three claws, two of them pectinated. Palpi of moderate length, black and hairy like the legs, terminated by a single pectinated claw. Labium considerably broader than high, the free border forming nearly a continuous curve, slightly flattened anteriorly. Maxillæ moderately long, much inclined on the lip, convex transversely, inner

extremity pointed, inner border slightly convex above lip, concave towards lip; superior border truncated, forming an obtuse angle with external border, which slopes away to the insertion of the palpus. Maxillæ and labium brownish-black, sparsely clothed with fine brownish hairs. Sternum heart-shaped; black, and somewhat hairy, especially towards the border. Vulva, a simple transverse opening without appendages; palish-brown, situated on the summit of a mammillary protuberance. Falces vertical, rather small, terminating below at the upper surface of the maxillæ, which project slightly beyond them. Abdomen sub-globular, very convex above, overhanging the base of the cephalothorax, anus and spinnerets not visible from above, upper surface a rich glossy blue-black, thinly clothed with black hairs, anteriorly are two interrupted yellow lines, formed like notes of interrogation with the convexities opposed, these are not visible from above; from the mid-point of the upper surface to the anus runs a bright scarlet band with vandyked borders; it may be described as consisting of four confluent lozenge-shaped spots; there was a slight indication of a yellowish bordering to the stripe. Under surface of abdomen black, with an obscure red patch on either side of the vulva; a similar patch anteriorly to the spinnerets.

I have been thus particular in my description, because, amongst spiders, individuals of different species so closely resemble one another, that a very minute description is necessary to enable an observer to decide the species with certainty.

Now, with regard to the venomous attributes of this spider. It belongs to a genus which contains several species also reputed poisonous; thus Walckenaër says of the *Latrodectus malmignatus*, an allied species, common in Sardinia, Corsica, and parts of Italy,—“This species is certainly poisonous; its bite causes, they say in man, pain, lethargy, and sometimes fever. M. Liugi Totti, Physician to the Hospital of the Madeline at Volterra, in a long memoir which he has sent us, confirms all that has been written concerning the effects of this spider by Boccone, Heyder, Rossi and others; however, its mandibles are not very strong and it is not large (about half an inch in length).” Mr Abbot, (who was ignorant of what had been written in Europe concerning the *Latrodectus*) in his *Georgian Spiders*, says,—“Of three species (of *Latrodectus*) which he has figured, that their bite in America is undoubtedly venomous.” (*Walckenaër Histoire des Insectes Aptères*, pp. 643, 644.) The fact is extremely interesting, that in a genus of spiders containing comparatively a very small number of species, these species are so widely distributed over the world as to be found in Europe, America, and New Zealand, all being highly noxious, and all, with one or two doubtful exceptions, being black with red markings; for colour is of all characteristics the most variable, and most particularly so in spiders.

So much has been fabled concerning the bite of the tarantula, a spider of

the genus *Lycosa*, and it is so well known that the bite of the great majority of spiders is innocuous, that one feels inclined to doubt whether all these accounts of poisonous spiders are not greatly exaggerated; still, considering the independent sources of our knowledge, we cannot but conclude that many members of the genus *Latrodectus* are highly venomous.

In conclusion I may say, that it is very desirable that all cases of bites of supposed poisonous spiders should be carefully recorded, but only by eye witnesses. I shall be very glad to receive specimens to experiment with.

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ART. XI. — *On the Birds of New Zealand.* By T. H. POTTS.

(PART II.)\*

(With Illustrations.)

[Read before the Wellington Philosophical Society, June 25, September 17, and October 22; and before the Philosophical Institute of Canterbury, September 7, 1870.]

THE following additional Notes on some of our Birds are offered with a full sense of their want of completeness, which will be felt by those whose habits lead them to gaze on the face of nature. As a record of facts, they have been written at different times and places, for the most part amongst the birds themselves when the leisure hour permitted, in the cultivated garden, beneath the deep shadows of the leafy gully, on the wide expanse of the brown tussock-clad plain, by the rocky coast, or in the gloomy alpine valley.

It is yet possible to reach some secluded spots where the hanging branches of the virgin forests exhibit lovely forms and hues of glorious foliage in all their pristine beauty, still unscathed by fire or bushman's axe; where birds still flutter and carol through revolving seasons of a golden age; where the murderous guns, the stealthy cat, are alike unknown; where the bold confident curiosity of the birds surprises the human trespasser, and teaches him, in the plainest language, the story of the changes effected by the savage barbarity of man.

It is felt that some of the papers may be thought long and tedious; but in explanation, it may be stated that I have since last year met with Gray's *List of the Birds of New Zealand and the Adjacent Islands*, and Mr. Gould's *Handbook to the Birds of Australia*, and thought it desirable to comply as far as possible with a wish expressed in the latter work, and make the notes on the genera *Athene*, *Nestor*, etc., rather full. In the illustrations it will be observed that the majority of the nests figured are those of indigenous species; such a selection, it was thought, would be interesting.

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\* For Part I., see *Trans. N. Z. Inst.*, Vol. II., Art. VIII., p. 40.