

Attus bimaculosus. Plate XI., fig. 9.

The female was described in vol. xix., "Trans. N.Z. Inst." Owing to the description of the vulva having been inaccurate, a drawing of that organ, taken from a fresh example, captured on the summit of Ngongotaha, Rotorua, is given on Plate XI. Corpus vulvæ centrally produced into a tapering pendulous process; the concavity is only moderately depressed, of a yellowish colour; on the face is a light-brown, beaded, involute mark.

EXPLANATION OF PLATE XI.

- Fig. 1. *Linyphia rufoccephala*, sp. nov., vulva of female; a, inner view of male's palpus; b, outer.
 Fig. 2. *Linyphia lagenifera*, sp. nov., female.
 Fig. 3. *Theridium nigrofolium*, sp. nov., female.
 Fig. 4. *Theridium helveolum*, sp. nov., vulva.
 Fig. 5. *Theridium truncatum*, sp. nov., female, four times natural size.
 Fig. 6. *Epeira mulleola*, sp. nov.
 Fig. 7. *Epeira tri-tuberculata*, sp. nov., male.
 Fig. 8. *Epeira tri-tuberculata*, palpus.
 Fig. 9. *Attus bimaculosus*, vulva.
 Fig. 10. *Marpissa leucophæum*, sp. nov., falces, maxillæ, and labium of female.
 Fig. 11. *Marpissa leucophæum*, palpus of male.

ART. XVIII.—Notes on Rats.

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THE forests of New Zealand abound with rats; especially near the ocean and in the uninhabited wilds. I have found them in the North Island, but they are far more numerous in the West Coast sounds of the South Island. I have shot rats of various colours, such as yellowish-brown, piebald, silver-grey, brownish-grey, and black. The Wanderer rats (*Mus decumanus*) are in the majority. In 1884 I made an expedition to Dusky Sound, there I traversed many miles of country over which no human being had ever been before. At the altitude of 4,000 feet I found the rats very numerous, and in the winter, when the mountains were covered with snow, I found their tracks on it. But it is in Chalky Sound, where I am at present, that they have played on me the most devilish tricks, and are more numerous than in any other place I have been. I fed them on poisoned plaster of Paris and oatmeal, trapped and shot them; but as fast as I got rid of one lot another came. They made so much noise in the hut at night that I could scarcely sleep. They ran over us in bed, knocked articles down from the shelves, gnawed the provision cases, and made a dozen or more holes all

round the hut, which I filled every morning. They dug up and carried away potatoes which were planted in the garden. The bird-skins I had in a drying hut, hung on thin wires and well poisoned, but the rats climbed the rafters, jumped down on them, and spoiled several. I had skeletons hanging on a thin wire, 12 feet high and 20 feet long; for three weeks they tried in vain to walk the tight rope, and at last succeeded; then they wound their tails round the flax like an opossum, and slid down nearly 2 feet, when they gnawed the bones and spoiled the skeletons. I cut two tracks, one six miles long, from Landing Bay to Northport, and the other eight miles long up to the "Three Brothers." The first night we camped on the mountains the grass country was swarming with rats. They gnawed at our boots, though we had them with us in the tent; while we ate our supper by the fire, they came behind us and nibbled at the bones we placed for the dogs; but they amused me most by disturbing Mr. Rimmer (my companion); he sleeps so soundly that nothing wakes him, even when I fired the gun at the rats in the hut he did not hear it; but on the mountains they took a fancy for his hair, and he was awakened three times in one night by their biting it away. I should have thought they would have been afraid the first time they saw men, dogs, and fire. They are also very destructive to the birds. I have not found a single Rock Wren here, and have always noticed where the rats are numerous there are few birds. Those birds which live and breed near the ground have very little chance of preserving their species, since the rats eat their eggs and young. They destroy large birds as well as small. I had a number of Kakapos in a cage to send to Auckland, for the proposed preserve for native birds on the Little Barrier; the rats killed two and wounded others, by biting their throats and eating parts of their heads off. Nine years ago I had live Kakapos, which the Acclimatization Society in Christchurch permitted me to place in their large cages in the garden; the rats killed them, and ate the half of one away. The rats here prefer animal to vegetable food; there are plenty of *miro* and other berries on the ground, but they will not eat them. I often found in rocks, shells, birds' feathers and rats' dung, where the rats had been eating their prey. Between Landing Bay and Northport there is a large birch tree, undermined with many holes, which is the habitation of a large colony of rats. For 4 feet above the ground the bark of the tree is eaten off; round the tree there is no vegetation, and the stench is very bad. I never had in all my expeditions so hard a fight with rats as I have had in this. It has taken five months' shooting, poisoning, and trapping before they seemed to lessen at all. Now there are only two, and they are too shrewd to go in the trap, eat poison, or give me a chance to shoot them.
