thick part, which terminates abruptly, spring two limbs, each 2½ inches in length, and of an average diameter of ⅛th inch. These appendages make the animal look most grotesque. At first sight, these limbs look as though two worms of smaller circumference were grafted on to an abnormally short and thick individual. At times they trail behind like two tails, or are gathered up, sometimes together, sometimes one is moved first, the body pushed slightly forward with that, then the other is used, and so on alternately. The anal aperture is situate immediately at the posterior end of the thick portion, and between these two limbs or tails. There is no aperture in the end of either limb, though there is a spot which at first sight gives the impression that an opening is present.

I have not yet examined it very critically, lest it should sustain damage and die before I was able to exhibit it to this meeting.

It is a species of *Acanthodrilis;* but the question arises: Is it only an abnormal form, or are they tolerably common? Probably they are far from rare, as Mr. Marshall, in forwarding it, says: "I send you one of those two-tailed bush-worms I spoke to you about;" thus implying that he had seen others. He has been asked to endeavour to procure more specimens, and to send any information in his possession regarding their habits, abundance, etc. Till this information is received I prefer to suspend further decision as to its specific value.

This note was written for a meeting called in October, and which lapsed for want of a quorum. The worm has since died; but, as no other specimens have yet been received, I hesitate to dissect this one, and until that is done I feel that the examination is necessarily incomplete.

DESCRIPTION OF PLATE VIb.

Fig. *a*. Double worm (*Acanthodrilis*), seen from above.
Fig. *b*. „ „ seen from below.

Art. VII.—*On* Ixodes maskellii, *a Parasite of the Albatross* (Diomedea exulans).

By T. W. Kirk.

[*Read before the Wellington Philosophical Society, 19th January,* 1886.]

I had intended in this short paper to include a number of species of parasitic insects lately obtained from young specimens of the Pencilled Albatross; but as I have been unable yet to identify several specimens, in consequence of th

difficulty experienced in obtaining works of reference, they will be retained for a future occasion, and your attention directed to a very large tick, two specimens of which were found with their claws so firmly imbedded in the neck of the bird as to render it impossible to remove them without the loss of some of their legs.

The genus to which this belongs is a very interesting one, for Mr. Murray tells us that their habits are at first herbivorous, that from the vegetation they find their way to the creatures on which they fix, and that when mature they avail themselves of every opportunity of fixing upon vertebrate animals, whose blood they suck instead of sap. It is very remarkable that these creatures should be at one time phytophagous and at another carnivorous. And it would seem that the usual special adaptation of structure to kind of food is absent; but Mr. Murray says that the anomaly is only apparent, and goes on to say that "carnivorous mammals are provided with different apparatus for obtaining their food from that of vegetable feeders; not on account of the different chemical constituents of their food, but on account of the different form in which it is presented to them for consumption and assimilation. If, for example, the food of both were presented to them in a liquid state, in the one case blood, and in the other juice of plants, we may be sure that the carnivorous canines in one case, and the vegetarian molars in the other, would be alike dispensed with, and both would be furnished with a sucking-up or pumping apparatus, which might be identical, if no speciality in the mode in which the liquid presented itself called for a difference. There might be a difference in the structure of their viscera, adapted to the character of the liquid food, but there is no reason why the external and oral structure should not be the same in both. This is what we find in all suctorial insects, bugs, gnats, Acari, etc. All are provided with a sucking apparatus constructed on a similar plan, which some use upon animals and others upon plants." I read recently that some insects—for instance, the London house-bug—feed indiscriminately upon the juice of plants and the blood of animals. The impossibility of the immense numbers of mosquitos that we meet with in the forests ever obtaining food if restricted to the blood of mammals has probably struck most of you. Is it not likely that they also are capable of living on a vegetarian diet, when no nice juicy specimen of humanity is forthcoming.

The insect to be noticed—viz., *Ixodes maskellii* (which I have ventured to name after Mr. Maskell, who described the only other species yet recorded from New Zealand)—is probably one of the largest of the genus, being, when alive, just under half an inch in length, excluding the rostrum; it is

elliptical, but with a pronounced lateral compression on the anterior third of the body, then gradually expanding again, the hinder third being slightly wider than the anterior. On the dorsal aspect two crescent-shaped shallow grooves rise from the posterior angles of the shield, and extend backwards for about one-third the length of the body, terminating in deep pits immediately opposite the lateral constrictions; from these pits two deep crescent-shaped grooves extend backwards, ceasing abruptly a short distance from the posterior margin. A straight medial depression, not so pronounced as the crescents, runs between them from the posterior margin for rather more than a third the length of the body. The pits are connected by a transverse line.

On the under-side, a deep and wide central groove starts at the posterior margin and runs for about one-fourth the length of the animal. Two equally deep and wide grooves commence in a line with the insertion of the third pair of legs, and run backwards, gradually widening till they reach the centre of the mesial groove, when they turn in rapidly, giving the inclosed space (from the third pair of legs to the posterior margin,) much the outline of a Florence flask. The rostrum, in addition to the spines possessed by all the members of the genus, appears to be armed on its under side with five lines of hard-pointed tubercles.

The body of the animal when alive is of a delicate French-grey colour; the shield on the head pale-brown; legs red, with white at the joints; rostrum same colour as the body.

It is generally supposed that a separate species of tick is appropriated to a particular species of animal. Although this appears to be usually the case it is not always so, as proved by the fact that in England the common species *I. erinaces* is found on rough herbage, in forests; and on dogs, cattle, foxes, and hedgehogs. A short time since I found on a large gull a tick exactly similar to the one from the Crested Penguin described about two years ago by Mr. Maskell.

Art. VIII.—*On the Occurrence of the English Scaly Lizard* (Zootoca vivipara) *in New Zealand.*

By T. W. Kirk.

[*Read before the Wellington Philosophical Society*, 30*th June*, 1886.]

In August of 1883 I had the pleasure of bringing under the notice of the Society two English butterflies—viz., the Red Admiral, or Alderman, and the Small Tortoiseshell, both of which were captured in the Wellington Botanic Gardens—and drew attention to the fact that the importation of plants and