

Arachnoidism As Applied To New Zealand Spiders

A PRELIMINARY NOTE.

By G. CHAMBERLAIN.

Arachnoidism is a medical term meaning "the condition produced by the bite of poisonous spiders." Early records of supposed spider bites were centred around a spider of the family Lycosidæ found in Europe. The stories told of tarantism and the ceremonial dance used as a cure are so well known that no purpose can be served by repeating them here. The most remarkable feature of arachnoidism is its limitation to the spiders of one widely distributed sub-family, the Latrodectinæ. Two genera of this sub-family, *Dipæna* Thorell, 1870, and *Latrodectus* Walckenaer, 1805, are represented in New Zealand fauna. The bites of spiders not classified in this sub-family are generally thought to produce no more than temporary inconvenience. Such opinion is not based on recorded facts, but is more an indication of our ignorance of the subject of Arachnoidism as a whole. Of later years much has been recorded on this subject. The purpose of the present note is to place on record brief comments on cases of spider-bite that have come under the notice of the author.

In New Zealand a large number of cases have been reported in the daily newspapers. In the majority of these there is considerable doubt as to the class of animal that delivered the bite. In very few instances is the spider actually seen, and in fewer still is it captured and identified. In each of the records below the specimen was taken and preserved for study. In three of the cases the spider was forwarded by the victim to the Auckland Institute and Museum, and now rests in the Museum collection.

Latrodectus spp.

Arachnoidism in which the well-known "Katipo" was the accused, is not considered at this time. It is hoped to deal fully with the effects of a bite from this spider at some later date.

Dipœna blattea (Urquhart, 1885).

Two cases are known to the author in which this spider has delivered a bite to a human being. In the first case the spider became entrapped in the shirt front of the victim. The bite was located on the lower portion of the chest. The symptoms which followed the bite are best described in the words of the victim:—

"About ten minutes afterwards a violent itching occurred around the bite and spread all over my body. This became so distressing that I got into a bath of water. By this time my body looked as though I had been sun-bathing, and been rather badly sunburnt, while a sort of heat rash broke out all over me and my head felt as though I was in the throes of a cold. This condition lasted for an hour or so, and then gradually decreased. . . ."

In the second case the symptoms following the bite were described by the attending medical practitioner as jaundice accompanied by local motor paralysis. The bite was located on the upper third of the left thigh.

Hexathele hochstetteri Ausserer, 1871.

The bite was located on the back of the right hand. Two punctures were visible, about three-sixteenths of an inch apart. A swelling of the hand commenced in half-an-hour and reached a maximum in one to two hours. Slight irritation occurred for the first two hours. The site of the punctures was tender to the touch for some six to eight hours, after which the condition rapidly returned to normal.

Porrhothele antipodiana (Walckenaer, 1837).

A previous record was published by Myers (*N.Z. J. Sci. Tech.*, 9, 129, 1927). In a further case of a bite by this species there was slight bleeding at the two punctures. These punctures were situated on the thigh directly over the femoral artery, and were about one-quarter of an inch apart. Rapid swelling followed the bite, which in about an hour was surrounded by an edematous area some two inches in diameter. Surface irritation caused some discomfort for the first two hours. The patient developed a fever (temperature 102° F., pulse 92) twelve hours later. Medical attention was sought, and an intravenous injection of an opiate was given. No further notes were made at the time, but it is known that a septic sore developed at the site of the punctures. The patient had fully recovered at the end of three weeks.

Desis marina (Hector, 1877).

An instance is known of a dog receiving a bite from this species. The spider pierced the soft skin between the toes of a foreleg. The foot swelled and appeared to be paralysed for some twelve hours. It is possible that this species may be able to bite humans and cause some inconvenience.

Ixeuticus subfasciatus (Simon, 1899).

It is difficult for this species to penetrate the human skin. When it does succeed in biting there is very little pain, and there are no after effects.

Cambridgea foliata (L. Koch, 1873).

The two punctures were on the left thigh about midway between the hip and knee joints. Only slight pain was felt at the bite, and no symptoms appeared for about six hours. At this time an intense itching

developed, and a swelling commenced at the site of the punctures. At the end of the third day the swelling covered an area roughly seven inches in diameter, and was causing considerable pain. Vesication was observed at the site of the punctures, consisting of a lymph-filled blister about half an inch in diameter, and surrounded by a narrow erythematous area. The application of tincture of iodine appeared to increase the irritation. On the fourth day the swelling began to subside. A scar tissue formed under the blister, and the upper layer of skin sloughed. At the end of a week the condition of the patient had returned to normal.

This same species has been observed to bite and kill a specimen of *Zosterops lateralis* (Latham) that had become entangled in its web. It is interesting to note that although the spider attacked and killed the bird it immediately cut the victim from its web and let it fall to the ground.