

TWO SPECIES OF KATIPO SPIDERS

Identified in

"The Katipo spider bite statistics (1960-1969)"

A preliminary note.

E.R. McCutcheon

17 Woodleigh Street, New Plymouth

Three species of spiders belonging to the genus *Latrodectus* (Araneae: Theridiidae) are present in New Zealand. Two of these species, *L. katipo* and *L. atritus*, are endemic whilst the third, *L. hasselti*, the notorious Australian red-back spider is an undesirable recent immigrant, first recorded in 1981.

The potency of the venom following their bite is potentially dangerous to man and lethal to some. *L. hasselti* is one of the most highly toxic of all venomous creatures on earth, the venom a presynaptic neurotoxin and contains latrotoxin, a protein similarly virulent to *Clostridium botulinum* (Sutherland (1990) *in litt.*)

Latrodectus hasselti is responsible for at least 500 envenomations annually in Australia and there are reported cases in New Zealand.

The Commonwealth Serum Laboratory in Melbourne has developed a specific antivenene from *L. hasselti* which has been available since 1956 in all Australian states and New Zealand. It is also effective against the two endemic New Zealand species. This antivenene has facilitated recovery and prevented further deaths.

Spiders of the genus *Latrodectus* are all poisonous and for this reason are of great medical importance. It not surprising therefore that the black katipo spider, *L. atritus*, of the northern half of the North Island of New Zealand has been identified with *L. katipo* in the spider bite statistics. Wright (1864) *in litt.* describes the case of a patient who had been bitten on the shoulder at Mechanics Bay in Auckland by *L. atritus*, the only species at that time likely to have been implicated, and the resulting almost fatal syncope on the floor in his surgery. Wright also recorded a fatal bite from Waihi Beach and reported two other bites from the same coast in the Bay of Plenty, *L. atritus* being the only species found there. A few years ago, a man was found unconscious on Ohope Beach and was reported as having been bitten by a katipo. The black katipos on this beach are now reported as having been destroyed (method not known). Whakatane hospital have had no cases of bites reported for 10 years. Bites have been recorded in other coastal areas of the North Island but because of the only recent recognition of *L. atritus* as a separate species, it cannot be determined if this was the culprit.

Unlike the ubiquitous red-back, the katipo is a sand-dependent species and during the summer months, I have often observed the female adjusting her egg sacs to the warmth of the sand.

When I was in Melbourne in June, 1975, *L. hasselti* was found guarding her egg sacs in amongst old tin cans and stones. When several of these egg sacs were opened, the eggs were found to be in perfect condition. Further study was intimidated by the discovery of a small snake.

Latrodectus hasselti is now firmly established in the New Plymouth area and because both endemic species are present on north Taranaki beaches, careful monitoring of the area should be carried out. The wet conditions of the North Taranaki area eminently suitable for its establishment.

Over a 10 year period (1960-69, 15 females and 18 males were reported to have been bitten by either *L. katipo* or *L. atritus*. Ages of those individuals affected ranged from 2 years and 6 months to 70 and the average hospital stay was 3 days. In most cases the spider involved was identified.

ACKNOWLEDGEMENTS

I am grateful to the Health Statistical Service for information on katipo bites; Dr R.R. Forster for his helpful comments; Dr L. Forster for confirmation of species and Dr S. Sutherland, Australian Correspondence.

REFERENCES

Sutherland, S.K. 1990: Chemistry and pharmacology notes (venoms). Commonwealth Serum Laboratories, Australia.

Wright, F.W. 1864: On the katipo, a poisonous spider of New Zealand. *Trans. N.Z. Inst.* 2:81-84.