

A REVIEW OF RECORDS OF SPIDER BITES ON HUMANS IN NEW ZEALAND
INCLUDING SOME PREVIOUSLY UNPUBLISHED RECORDS

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The serious effects of the bite of the Katipo spider (Latrodectus katipo Powell) are well known. Hornabrook (1951) gives a detailed historical review and the Department of Health publishes periodic statistical information in their publications (see references). In the period 1967-76 there were 23 cases of hospitalisation following katipo bites. During the same period there were a further 14 cases of hospital admissions following bites by other spiders (usually unidentified). The potential importance of the red-back spider (L. hasselti Thorell) as a danger to humans if it becomes established in New Zealand is well documented. (Sutherland and Trinca, 1978.)

Most spiders possess poison glands and are capable of biting humans provided their chelicerae are sufficiently powerful to penetrate human skin but because of behavioural patterns, some spiders will not bite anything other than insects caught in their webs. There are however, a few recorded instances in New Zealand of spiders, other than katipo, biting humans with significant effect. (Myers, 1927, Chamberlain, 1947 in Watt, 1971) These were:

Diplocephalus blattea Urquhart (Theridiidae)
Hexathele hochsteteri Ausserer
Porrhothele antipodiana Walckenaer (Dipluridae)
Ixeuticus subfasciatus (syn. I. martius) Simon (Desiidae)
Cambridgea foliata Koch (Stiphidiidae)

In addition, Watt describes the effects of bites on himself by a Miturga sp. (Clubionidae) and Dysdera crocata Koch (Dysderidae). Forster and Forster (1973) add Araneus pustulosus Walckenaer and A. transmarina syn. A. browni (Araneidae). More recently Sunde (1980) describes four cases from the Auckland region of bites from Lampona cylindrata Koch (Gnaphosidae).

Recent submissions to the Plant Health Diagnostic Stations at Auckland, Levin and Lincoln have confirmed the aggressiveness of some of the above species and have provided a few additional records as follows:

- (1) Chiracanthium stratioticum Koch (Clubionidae)
On 26 January 1979 a 2½ year old boy was admitted to the Christchurch hospital overnight following a bite on the hand. The boy was said to be playing with spider webbing when the spider rushed out and bit him. The bite was initially painful and part of the hand swelled up. A number of species of this genus are known overseas to inflict painful bites with severe effects. (R R Forster, pers.com). Another Clubionid, a Miturga sp. has been recorded twice in New Zealand, inflicting bites. In contrast the native Uliodon sp (Clubionidae) was recorded as biting a man at Wanganui on 12 September 1982 with no apparent effect.

- (2) Unidentified Salticidae
In Auckland on 27 March 1979 a person (age and sex unknown) was bitten, resulting in swelling and pustules around site of bite.
- (3) Trite sp (Salticidae)
At Dannevirke on 12 April 1983 a woman was bitten on the leg resulting in swelling and pain. Ebeling (1975) records one case of a bite by a Salticid in the United States.
- (4) Steatoda sp. (Theridiidae)
Since 1981 there have been three records from the Auckland area of minor but painful bites.

In addition further records are available from species already known to bite:

- (1) Araneus pustulosus (Araneidae)
Five records have been received including two when a significant effect was caused. Overseas cases of bites are recorded from the USA from an Araneus sp. (Ebeling, 1975) and from Australia from A. transmarius (Southcott 1973).
- (2) Dysdera crocata (Dysderidae.)
There are four records of bites including one from Auckland where a man was bitten resulting in swelling and severe pain. Cook (1965) states that "Dysdera is one of the few spiders that will attack rather than retreat from molestation. This aggressiveness combined with the imposing size of the Chelicerae, has given Dysdera an undeserved reputation". Mascord (1970) states that several severe bites have been recorded from this species in Australia.
- (3) Lampona cylindrata (Gnaphosidae)
A further record occurred in Auckland on 10 May 1983 when 2 members of a family were bitten. Symptoms were said to be diarrhoea, severe itching, reddening and swelling of the body. This spider has also been responsible for severe bites in Australia (Mascord, 1970).

Another case of a bite from a Miturga sp. was obtained from an article in Treeline (1981) which describes a female school teacher being bitten when she was on Mt Fyffe near Kaikoura. The symptoms were described as dizziness and nausea and she was hospitalised for four hours.

The dangers from spider bites in New Zealand can be put in perspective by comparison with Australia. Two deaths from katipo bites were reported in New Zealand in the eighteenth century. Both records are second hand and the deaths occurred many years prior to the dates of the reports. (Hornabrook, 1951). As far as can be ascertained (Department of Health, Occasional paper 19, 1982) no other deaths from spider bites have been recorded in NZ. By contrast, in Australia, Atrax robustus Cambridge (Sydney funnel web spider) has been responsible of 10 deaths up to 1970. No specific antivenenes are available against this spider (Mascord, 1970).. The reback spider (L.hasselti) was responsible for 13 deaths up to 1959 in Australia. An antivenom to this spider has now been produced and has prevented further deaths. Mascord also records severe bites from Australian spiders not established in NZ, including A. formidabilis Rainbow (tree funnel web spider),

Selenocosmia crassipes (Bird eating spider). The violin spider (Loxosceles reclusa) Gertsch, which has recently become established in Australia, has been responsible for many unpleasant bites in the USA (Ebeling, 1975).

It is interesting to note that Ixeuticus robustus Koch which is established in parts of the North Island has not been associated with biting records in NZ although it has been responsible for severe bites in Australia. (Mascord, 1970)

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