

Oral Abstracts

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VENOMOUS SPIDERS IN THAILAND: NEW DISCOVERY AND PARADIGM SHIFT IN NETWORK AND COLLABORATIONS

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Objectives: To demonstrate that a recent series of events in Thailand over the past two years confirms discovery of two new spider species in Thailand, and further ongoing networking and collaborations between medical toxicologists, entomologists and spider collectors.

Methods: Review medical records, microscopic examination of spiders, and review of on scene spider surveys from within the community.

Results: Spider bites were not considered a significant public health problem in Thailand until July 2014, when a 36 year-old male patient died from secondary infection following a spider bite. Intensive media coverage over two weeks reported that the cause of death was directly from the spider toxins. Initial suspicion focused on *Loxoceles* spiders, given skin infection and preliminary microscopic demonstration of a 3-paired-eyes spider sent in for evaluation. This focus occurred despite entomological studies by medical toxicologists, entomologists and amateur spider collectors confirming the nontoxic spitting spider, and despite a thorough survey of the area concluding that no deadly spiders were found.

The media coverage raised fear and confusion among the general public and healthcare professionals. A significant increase in the number of consultations and hospital visits due to spider bites was observed. Since this event, a consultation network among relevant experts has been established, which has resulted in the visual identification of spiders within 1 hour of photos being received, and microscopic confirmation of spiders within one day of delivery.

Since the establishment of this network, we have identified *Latrodectus elegans* from a specimen brought in by a 51-year old woman who was bitten on her left thigh in a cassava field. She developed pain, numbness, perspiration and piloerection at the bite site which radiated to her feet and hands. She had high blood pressure (164/93 mmHg), fever (39 C) and swollen eyelids that was recovered within a day. Entomological studies, and a thorough survey of the cassava field and community, confirmed the discovery of *L. elegans* in Thailand. Recently, *Loxosceles rufescens* (the Mediterranean recluse spider) was discovered exclusively from Wang Pra cave in Kanchana Buri province. However, there is no reported spider bite case attributable to this type. It was hypothesized that they were introduced into the area during the World War II by Japanese military.

Conclusion: We reported the historical events that lead to the discovery of *Latrodectus elegans* and *Loxoceles rufescens*, and the establishment of network and collaborations among experts in the field of spiders in Thailand.