

## THE IDENTITY OF THE BLACK-WIDOW SPIDER IN BRITISH COLUMBIA

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The genus *Latrodectus* Walckenaer comprises the "Black-Widow" spiders of the United States, though each part of the world where these spiders occur has its own name for them. An abstract of a paper by Levi (1959) as it pertains to the black-widows of this Province, is presented here.

These poisonous spiders are notoriously difficult taxonomically and considerable confusion has arisen from physiological observations on specimens of uncertain determination. All widespread species show variation, and representatives of this genus from neighboring colonies may differ greatly in color or structure. Since the female genitalia and the palpi of the male are required for identification, it is necessary to have large collections of both sexes, especially since the shape of the palpus may be considerably changed after use in transmitting sperm to the female. Immatures cannot be identified with certainty. Fortunately Levi had enormous collections to work over, from large areas of all the continents.

The extreme variation in these spiders is shown by the fact that at least 43 species have been named in the genus; Levi reduces them to six. To illustrate one of the most remarkable characteristics of the genus *Latrodectus*, I shall touch on the very wide and discontinuous occurrence of the six species.

*Latrodectus geometricus* C. L. Koch is a cosmopolitan species reported from the southern United States, especially Florida; the West Indies; Colombia in South America; Saudi Arabia; Kenya, Zanzibar, Madagascar and Capetown; some of the East Indian Islands; Australia; and Spain.

*Latrodectus mactans* (Fabricius), *The Black-Widow Spider*, is practically world-wide, being reported from the warm areas of all the continents; it has at least 46 synonyms and 5 subspecies and the name *mactans* has been attached to a range of other species. It occurs in warmer parts of the United States but northward only as far as Oregon. It does not occur in Canada and has not been reported in Japan or most of China.

The Canadian species is *Latrodectus curacaviensis* (Müller) 1776, which was described from a female from Curacao in the Lesser Antilles. It has at least 16 synonyms, and in Canada has been called *mactans*. Levi describes its distribution as "the Americas from southern Canada to Patagonia including Galapagos Islands but apparently is absent in Mexico, Central America and Greater Antilles, and is more common in the temperate regions of north and south America. The greater number of *curacaviensis* specimens from northern, compared to southern United States, may be due to the comparative rarity of black-widows (*mactans*) in the northern states. The extreme commonness of *L. mactans* in the southern states probably discourages collectors from picking up black-widows." It occurs in 30 States of the Union, from those just south of the 49th parallel to Florida and New Mexico. In Canada, it has been collected in Ontario from Bruce Co., Dyer Bay; Lambton Co., near Oakdale; Norfolk Co., Delhi; in Alberta from Medicine Hat; in British Columbia from Kamloops — many collections; Cascade, Wellington, Vernon, Vancouver by Nathan Banks; Summerland and Victoria—many collections. To these can be added the Gulf Islands and Lillooet, where a

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citizen reported it to me in January, 1961 as "occurring in thousands." I have found it on the Douglas Lake Ranch, in the Nicola area, and in Vancouver.

The dorsal abdominal patterns vary considerably, from coal black near the Pacific coast, to nearly white or very pale, with 6 black bars, in the Argentine. The largest males occur in Florida and the largest females in the Pacific States; the smallest males and females are in the Argentine.

Levi gives the habitat of *L. curacaviensis* as trees and shrubs in Florida, where *L. mactans* lives on the ground. In the northern States *curacaviensis* is found in fields and woods underneath logs and stones, usually away from human habitations. In the Nicola area I found its webs abundant in dark areas of horse stables, and in the Kamloops area at 3000 ft. (which seems to be locally its altitudinal limit), in little-used cabins, high on the walls. In Vancouver, I found it in the crawl space under a small house and in a basement at ground level.

The next 3 species are rare. *Latrodectus pallidus* O. P. Cambridge, from the Plains of Jordan in Palestine, differs from *mactans* only in habits and physiology, in its food, the location of its webs, the time of oviposition, the thermal death point and the degree of toxicity of its venom; morphologically, it is similar to *mactans*.

*Latrodectus hystrix* Simon is found only in Aden and the Yemen, and *Latrodectus dahli* Levi, n. sp., in Bushire, Iran.

This record of *Latrodectus* Walckenaer corrects my note on "The Black Widow Spider, *Latrodectes mactans* Fabr., in Vancouver" in Vol. 57 of our Proceedings, where the spelling was unfortunately taken from a volume on Medical Entomology, and now establishes our local spider as *Latrodectus curacaviensis* (Müller).

**Acknowledgment**

I am greatly indebted to Professor J. Adams for calling my attention to the article by Herbert W. Levi and for lending me his copy of the Journal in which it appeared.

**Reference**

Levi, H. W. The spider genus *Latrodectus* (Araneae, Theridiidae). Trans. Amer. Micros. Soc. 78: 7-42. 1959.

**EDITOR'S NOTE**

Readers and contributors will notice that the papers in this issue are in a new arrangement. This was suggested and discussed at the executive meeting of 9 March, 1961. Papers listed under Taxonomic and General have been scrutinized by one or usually more members of the Editorial Board; those listed under Economic have been subjected not only to scrutiny by three or more members of the Editorial Board, but also in some cases to competent outside referees in appropriate fields. The Board hopes that this policy will enhance the presentation and assure the quality of those important contributions,

without narrowing the scope of the Proceedings by excluding papers of general interest.

Contributors will be interested in the following quotations from the minutes of the executive meeting of 9 March, 1961:

"The cost of reprints to authors unsupported by an Institution was discussed. 'Unsupported' authors were defined as those whose reprints are not paid for by the Institute concerned. Such authors if ordering 100 reprints or more, would in future receive 50 of these free and the rest to be charged at the regular price. Such unsupported authors would also