

THE DECLINE OF THE PACIFIC TICK (*Ixodes pacificus* Cooley and Kohls) AT WEST VANCOUVER

J. D. GREGSON¹

The Pacific tick, *Ixodes pacificus* Cooley and Kohls, is one of three ticks familiar to man in British Columbia (1). The adults are relatively small; the female is about one-eighth of an inch long, with black legs and head and a reddish-brown body. The male, which is usually found with the female, is about half as long and is entirely black. Both sexes "quest" on low vegetation along woodland paths and at rocky exposures along the coast of southern British Columbia (2). They are present throughout the year but are most numerous during the wet winter months and reach a peak of activity during warm spring days.

Man and domestic animals are frequent hosts for the adults. The males, which do not become distended, feed repeatedly for short periods only and leave multiple bites. The females remain attached at one site

for a week or more, engorging slowly and turning dull blue-grey. During this period the flesh of the host may swell around the tick's mouthparts, giving rise to the fallacy that the tick burrows in. Because of its relatively long, barbed hypostome this tick is very difficult to remove and if it cannot be induced to release by irritating it with such fluids as kerosene, gasoline, or iodine, it usually has to be cut out. The bites may produce sudden and extensive swelling and cause ulcers that persist for many months (3).

Where the habitat of *I. pacificus* was close to urban areas, such as along the north shore of Burrard Inlet and English Bay, it was considered a pest of man and his pets for many years so that in 1940 this laboratory considered it advisable to conduct a survey. Return-stamped questionnaires were mailed in March to 210 persons residing at or between the communities of West Bay and Horseshoe Bay, their addresses hav-

¹Entomology Laboratory, Research Branch, Canada Department of Agriculture, Kamloops, British Columbia.

1. Are ticks a nuisance to you?	1940	1950	1960
Yes	63	31	8
No	37	69	90
2. Are ticks, in your opinion, becoming more numerous?			
Yes	65	10	4
No	8	48	79
3. Have you or your family had ticks attach to you?			
1-6 times?	43	30	30
Often	28	3	1
Never	28	37+	37+
4. Do you possess dogs or cats?			
Yes	84	67	57
5. Percentage of pets examined for ticks:			
Daily	60	36	10
Occasionally or weekly	20	38	25
Never	1	23	40+

ing been chosen randomly from a telephone directory. This survey was repeated in 1950 and 1960, with 700 and 260 questionnaires sent respectively. Many of the addresses in the last year were deliberately chosen from the earlier lists so that the information gained might be more relative. The returns were 38, 34, and 50 per cent of the mailings. The answers are given as percentages of the respective totals.

Of the residents replying in 1940, 44 per cent had lived at their address for more than ten years and were thus in a position to compare the relative abundance of ticks over the years. The comparable figures for 1950 and 1960 were 33 and 69 per cent. Eighteen 4-23 year residents replying in 1950 stated that the ticks had declined during the last 2-10 years. The same opinion was echoed in the 1960 returns, although by this time the pest had so declined that remarks on its absence were rather casual.

The period of tick activity was generally stated as being in the spring and to a lesser extent in the autumn. Some activity was noted during the summer but not during mid-winter.

Descriptions of the effects from the tick bites included: acute swelling of the arm; slow healing and painful festering sores with fever; large or hard and painful lumps; severe local inflammation; soreness for six months; fever; slight rash and headache.

Many ticks were removed with the aid of kerosene, iodine, turpentine, alcohol, hot needles, fire, and forceps. A surprising number were "unscrewed." One facetious resident removed his with a pick and shovel and another added that "a friend of ours had heard about the plague of ticks in West Vancouver, so she examined her dog and was horrified to find several ticks embedded in the animal's belly. She did not think it very odd that these lumps were arranged in two regular columns; it was only after she had inflicted considerable suffering on the dog that she ceased from trying to pry its nipples off!"

It would appear that the Pacific tick at West Vancouver reached a peak of activity about 1940 and subsequently declined to its present status as a pest of only minor concern. The reason for its decline is not known, but is probably related to the development of the district from brushland to a well maintained residential area.

During the last survey questionnaires were also sent to key personnel in other areas in the province suspected of harbouring *I. pacificus*. Returns have suggested its presence at Ganges, Nanaimo, Coquitlam, Agassiz, Wilson Creek, Sechelt, Pender Harbour, and Squamish, but not at Prince Rupert or Terrace. The most northerly record is from Ocean Falls (4).

References

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