

DISTRIBUTION AND HOSTS OF SOME HORNTAILS (*SIRICIDAE*) IN BRITISH COLUMBIA

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ABSTRACT

Locality records and coniferous hosts of seven species of Siricidae in the genera *Urocerus*, *Sirex* and *Xeris* are recorded for British Columbia. Six species were reared from western larch, five from alpine fir and only one or two from seven other hosts. The life cycle was one or two years and major emergence was between mid-July and early August.

Horntails are widely distributed in the coniferous forests of Canada, infesting conifers of low vigour, those damaged by fire or other agencies, and recently felled trees. Little is known of their life history, habits, hosts, and distribution in British Columbia. Adults are active during the summer and oviposit in the sapwood. The larvae feed in the wood and take one or more years to complete their development to the adult stage.

TABLE 1. Emergence period and length of life cycle of seven species of horntails from caged log sections of nine coniferous hosts, Vernon, B.C.

Host	Trees sampled, no.	Insect reared	1924 - 1930 and 1964 - 1966		
			Specimens, no.	Emergence period*	Life cycle, yr.
Western larch	24	<i>Sirex juvencus californicus</i> (Ashm.)	1	Aug 30	1
		<i>Urocerus albicornis</i> (F.)	8	Jun 21— Jul 15	2
		<i>U. gigas flavicornis</i> (L.)	1	Aug 10	1
		<i>U. californicus</i> Nort.	1	Jun 19	1
		<i>Xeris morrisoni</i> (Cr.)	1	Jul 25	1
		<i>X. spectrum</i> (L.)	6	Jul 13— Aug 30	1
Ponderosa pine	12	<i>S. j. californicus</i> (Ashm.)	4	Jul 13— Aug 25	2
Western white pine	11	<i>U. californicus</i> Nort.	2	Jul 11— 20	2
Lodgepole pine	19	<i>S. j. californicus</i> (Ashm.)	14	Aug 4— Sep 3	1
		<i>S. j. juvencus</i> (L.)	1	Aug 1	1
Alpine fir	15	<i>S. cyaneus</i> F.	13	Jul 15— Aug 15	2
		<i>S. j. juvencus</i> (L.)	3	Jul 17— Aug 15	2
		<i>U. californicus</i> Nort.	5	Jul 15— 22	2
		<i>U. albicornis</i> (F.)	2	Jul 22— 25	2
Alpine fir	30	<i>X. spectrum</i> (L.)	1	Jul 15	2
		<i>X. spectrum</i> (L.)	1	Sep 7	1
Douglas-fir	8	<i>U. albicornis</i> (F.)	2	Jul 15— 17	2
		<i>U. californicus</i> Nort.	6	Jul 17— 28	1
Western hemlock	15	<i>S. cyaneus</i> F.	24	Jul 15— Aug 1	2
White spruce	6	<i>U. albicornis</i> (F.)	1	—	—

*In some instances there are only one or two emergence records.

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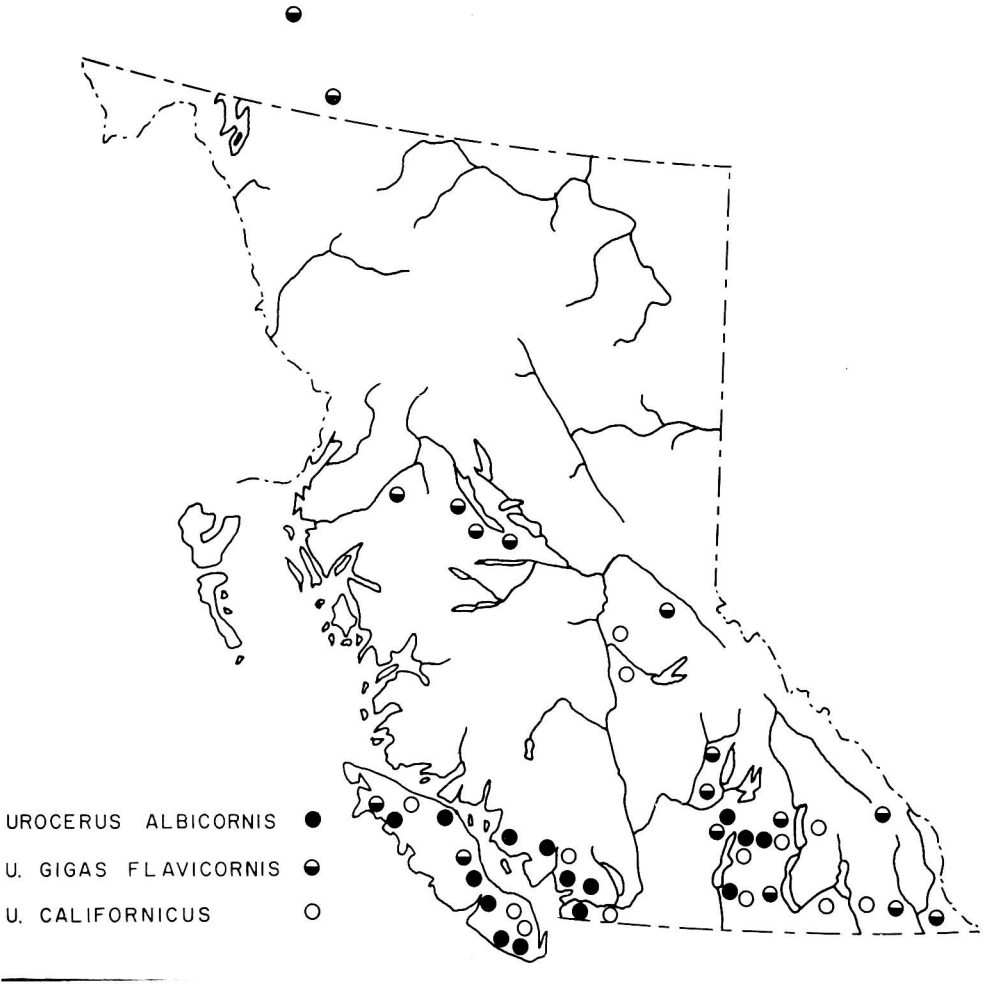


Fig. 1. Localities where *Urocerus* spp. have been collected in British Columbia.

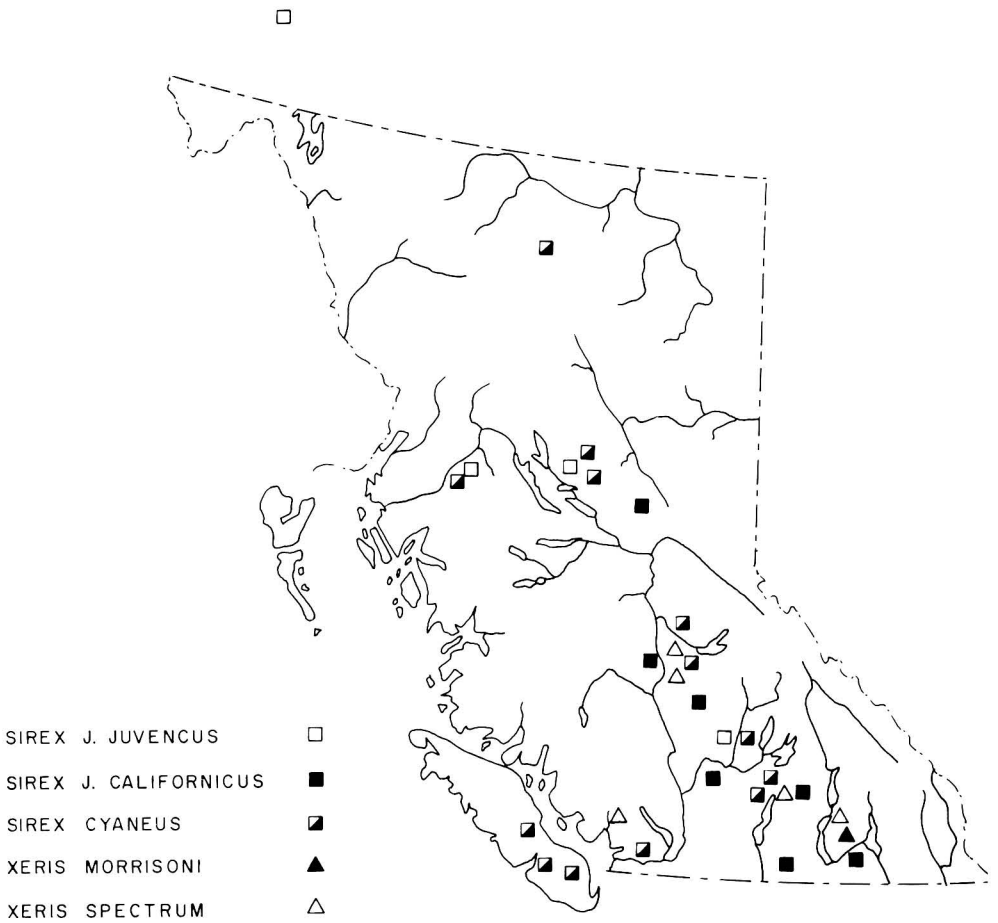


Fig. 2. Localities where *Sirex* spp. and *Xeris* spp. have been collected in British Columbia.

Host trees and emergence dates of horntails were obtained from wood-borer studies conducted by personnel of the Forest Entomology Laboratory at Vernon between 1924 and 1930 and from 1964 to 1966. In the latter study, trees of 11 species of conifers were felled in the spring at a number of localities in interior British Columbia. In the autumn of the year of felling, three 2-foot-long sections ranging from 8 to 16 inches in diameter were cut from the trees and placed in cages outdoors. Log sections were also taken from logging slash when the date of logging was known. Records were kept of the numbers of horntails and their emergence dates. Seven species were reared from log sections of nine species of conifers from interior British Columbia (Table 1). The greatest number emerged between mid-July and early August. The earliest was *Uro-*

cerus californicus emerging June 19 from western larch infested the previous summer at Heckman Creek, 40 miles east of Vernon; the latest was *Xeris spectrum* emerging September 7 from Douglas-fir infested the previous summer at Trinity Valley.

Locality records for seven species and one sub-species of horntails were obtained from Forest Insect and Disease Survey data from coastal and interior British Columbia, and from the special rearing projects (Figs. 1 and 2). More extensive sampling will be required to obtain the true range of most of these horntails.

Acknowledgements

The author is indebted to D. A. Ross for permission to use the data on siricids obtained from his wood-borer investigations during 1964 to 1966. The siricids were identified by H. E. Milliron, Entomology Research Institute, Ottawa and B. A. Sugden, Forest Entomology Laboratory, Vernon, B.C.

NOTE ON A SPRUCE BARK WEEVIL, *PISSODES ALASCENSIS* HOPKINS (COLEOPTERA: CURCULIONIDAE), IN BRITISH COLUMBIA

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ABSTRACT

Pissodes alascensis Hopkins ranges throughout interior British Columbia and into Yukon Territory. Spruces are preferred hosts. Weevils reared at 1,300 ft. elevation had a 1-year life cycle, but most of those reared at 4,000 ft. elevation had a 2-year life cycle. The latter passed the first winter in the larval stage in the inner bark and the second as callosities in pupal chambers in the wood. Emergence ranged from the end of May into September.

Pissodes alascensis was described by Hopkins (1911) from a type specimen collected near Koyukuk River, Alaska. He surmised that this species attacked spruce and ranged through Yukon Territory and interior British Columbia. This report gives information on hosts, emergence periods, life cycle and distribution in British Columbia. Sources of data include unpublished rearing records from experiments at Trinity Valley and

Lorna, B.C., in 1925-30, at Vernon, B.C., in 1965-66, and pinned specimens in the reference collection at the Forest Entomology Laboratory at Vernon.

In the period 1925-30, data on spruce bark weevils were obtained from experiments in which wood and bark-boring Coleoptera were reared in caged logs of Engelmann spruce, *Picea engelmanni* Parry. Emergence of *Pissodes alascensis* ranged from the end of May until September 21. Total emergence at Trinity Valley

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