

Prince Rupert District 1974



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Forest Insect & Disease Conditions

PRINCE RUPERT DISTRICT

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IMPORTANT NOTICE

Pests and damage at low levels and of minor consequence are not mentioned herein, but the data on these and additional details on the important pests are recorded and preserved in the form of File Reports. Such reports and those relative to other districts in the Pacific Region are available on request by contacting:

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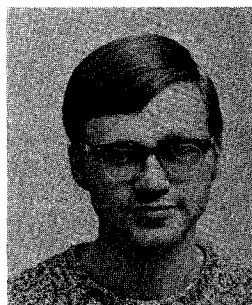
FOREST INSECT AND DISEASE CONDITIONS 1974

PRINCE RUPERT DISTRICT

by



Dick Andrews



Bob Erickson

Survey Rangers

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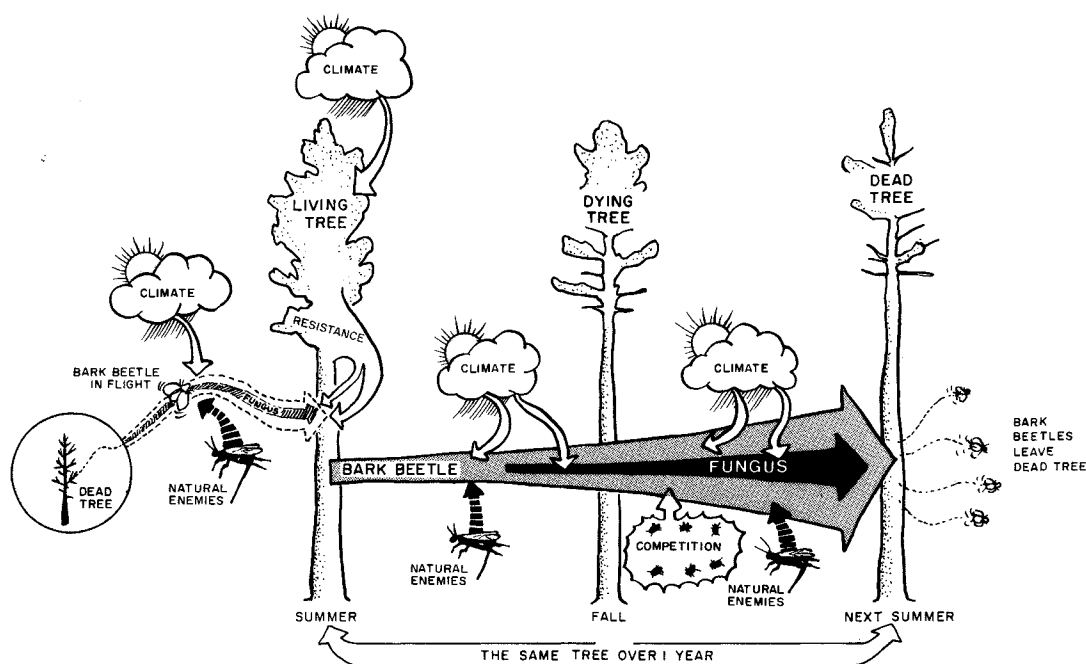
Ocean Falls

INTRODUCTION

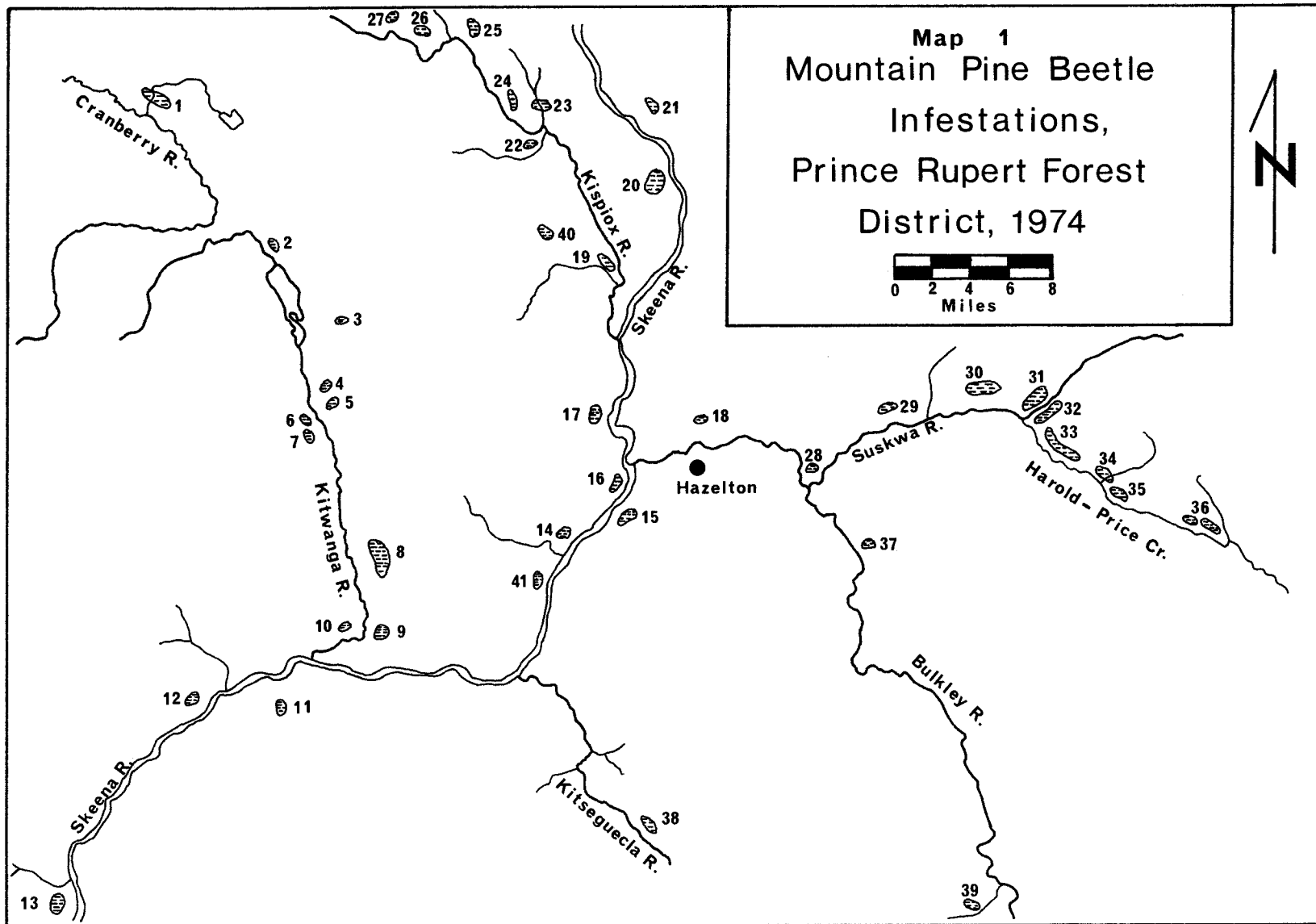
Mountain pine beetle and blackheaded budworm continued to cause extensive damage to forest stands in the Prince Rupert Forest District. Mountain pine beetle attacks on lodgepole pine ranged from Ritchie east to the Burns Lake area, with notable expansion in the areas between Houston and Kitwanga. Blackheaded budworm damage increased from 281,000 acres in 1973 to 316,000 acres in 1974. Populations were sporadic south of Ocean Falls but increased between Ocean Falls and Terrace. Black army cutworm infestations declined in conifer plantations in the interior portion of the District.

A shoot blight damaged advanced western hemlock regeneration from Kitimat to Nass River, and was found for the first time on western hemlock and Sitka spruce on the Queen Charlotte Islands. Other significant diseases in the District were: a spruce needle rust and a spruce needle cast, globose gall rust and a leaf and twig blight.

The 1974 special surveys for mountain pine beetle and western blackheaded budworm were conducted with the much valued co-operation of the British Columbia Forest Service, Eurocan Pulp and Paper Company Limited and Rayonier of Canada Limited.



The sanitation logging practices initiated in 1973 have significantly reduced the attacks in surrounding timber as compared to the unlogged areas. This practice should be continued wherever practicable. Forest managers are encouraged to make reference to the recently published guidelines on the "Management of Lodgepole Pine to Reduce Losses from the Mountain Pine Beetle" by L. Safranyik, et al. This report is the most advanced and complete account of mountain pine beetle, and provides the only known solutions for reducing losses in infestations of this magnitude.



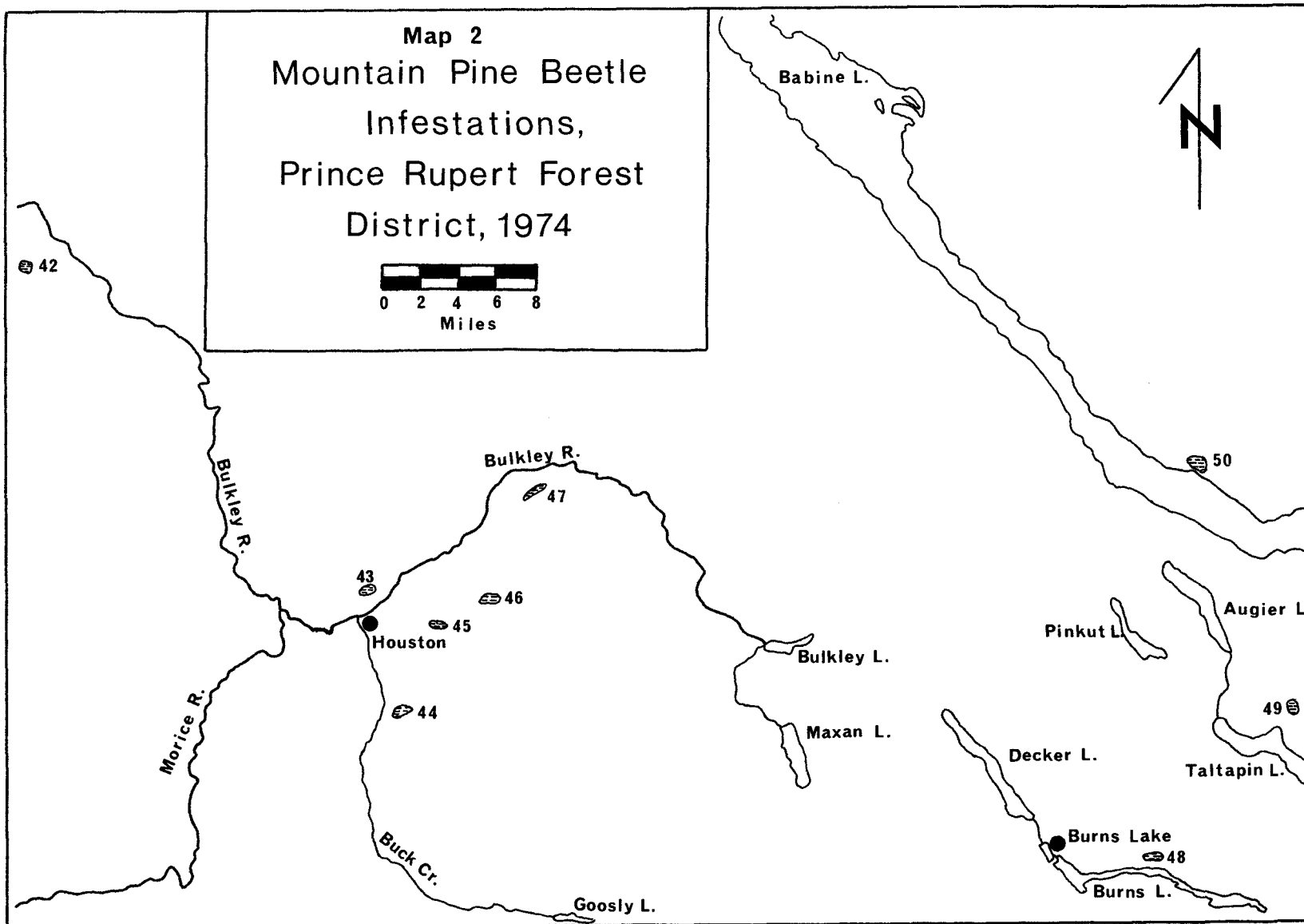


Table 1. Mountain pine beetle infestations,
Prince Rupert Forest District, 1974

Region	Infestation no.	Locality	Estimated acreage	No. of red-tops		
<u>Map No. 1</u> - Kitwanga	1	Weegett Cr	500	2,000		
	2	Kitwanga L	10	95		
	3	Moonlit Cr	5	30		
	4,5,6,7	Kitwancool	100	420		
	8	Radio Tower Hill	1,000	3,500		
	9,10	Kitwanga	25	300		
	11,12	Cedarvale	20	165		
	13	Ritchie	50	300		
	14	Burdick Cr	10	180		
	15	Seeley L	50	540		
	38	Kitseguecla R	30	300		
	41	Skeena R	70	560		
	Hazelton	16	Hazelton	25	110	
		17	Glen Vowell	20	100	
		18	Four Mile Mtn	2	20	
		19	Date Cr	30	290	
		20	Tenas Hill	50	250	
		21	Sterritt Cr	5	20	
		22	McCully Cr	5	90	
		23	Murder Cr	25	110	
		24	Sammon L	20	170	
		25	First Cabin	15	190	
		26	Kline L	40	500	
		27	Elizabeth L	10	90	
		28	Jct. Suskwa & Bulkley R	10	20	
		29	Eighteen Mile Cr	4	40	
		30	Natlan	80	1,000	
		31-36	Harold Price Cr	400	1,980	
		37	Sharpe Cr	10	30	
		40	Sunday L	30	130	
		Smithers	39	Dahlie Cr	20	100
			42	Goathorn Cr	40	800
	Houston		43	Mt. Harry Davis	10	60
			44	Bob Cr	30	500
			45	Dungate-Aitken Cr	150	500
	46		McKilligan Cr	100	400	
	47		Gilmore L	40	200	
	Burns Lake		48	Tintagel	50	250
			49	Taltapin L	1	10
			50	Boling Pt	200	750
	<u>Map No. 2</u> -					
Totals			3,292	17,100		
			(1,316 ha)			

SPRUCE BEETLE REMAINS LOW



Bottom land Sitka spruce along the Cranberry River, weakened by flooding, had been attacked by spruce beetles during the past two years. Between 200 and 300 trees were killed. Some smaller trees, bordering the flooded area, were attacked, but since there was almost total mortality of beetle progeny in all trees examined, the possibility of further attack in 1975 is unlikely.

BLACKHEADED BUDWORM EXPANDS IN NORTH COASTAL FORESTS

Since 1972, when above normal populations were encountered south of Ocean Falls, the budworm has spread northward in the coastal stands of the District. In 1973, 218,000 acres (88,000 ha) of western hemlock were defoliated from Calvert Island north to Kitimat. In 1974, defoliation was sporadic south of Ocean Falls but increased in intensity and extent between Ocean Falls and Kitimat and expanded into areas north of Kitimat to the Bell Irving River near Stewart. Similarly, on the Queen Charlotte Islands, there



was light to moderate defoliation in 1972 on Burnaby and Lyell islands. In 1973, there was defoliation again at these locations as well as at Tasu Sound and near Deena Creek near Skidegate Channel. During 1974, there was lighter defoliation on the southern islands and heavy defoliation at Deena Creek, light defoliation north of Queen Charlotte City

and Port Clements, moderate defoliation near Eden Lake and heavy defoliation on Kwaikans Island in Masset Inlet.

In the interior of the District, above normal populations were first noted in 1972 west of Babine Lake. In 1973, infestations occurred at Fort Babine, Ootsa Lake, and near Morice and Nadina lakes. In 1974, light to moderate populations persisted at Babine and Nadina lakes, and epidemic numbers of larvae were collected at Ganowka Creek, Hudson Bay Mountain and Byman Creek.

Over 316,000 acres (127,000 ha) of defoliation, caused by black-headed budworm feeding, were mapped on western hemlock, alpine fir and white spruce in the Prince Rupert District (Map 3).

In the fall of 1974, an egg survey was made at 24 locations from the Skeena River south to Gamsby River and on the Queen Charlotte Islands. Based on the number of overwintering eggs and amount of defoliation, the hazard for 1975 has been predicted (Table 2). Predictions for 1975 defoliation are based on the premise that the majority of the eggs will hatch successfully and the larvae will survive.

The history of black-headed budworm in the Prince Rupert District has been of periodic infestations lasting from one to four years, starting in the south and extending northward. The current infestation began in 1972 south of Ocean Falls, extended north to Douglas Channel and Moresby Island in 1973, and to Graham Island, Portland Canal and Bell-Irving River in 1974. Should the outbreak behave as in the past, one can expect some very noticeable decline in 1975. In any event, defoliation in 1975 is expected to decrease south of Kitimat along the Mainland coast and south of Skidegate Channel. In the Interior, populations may continue at Hudson Bay Mountain, Byman Creek and Ganowka Creek, although in reduced numbers.



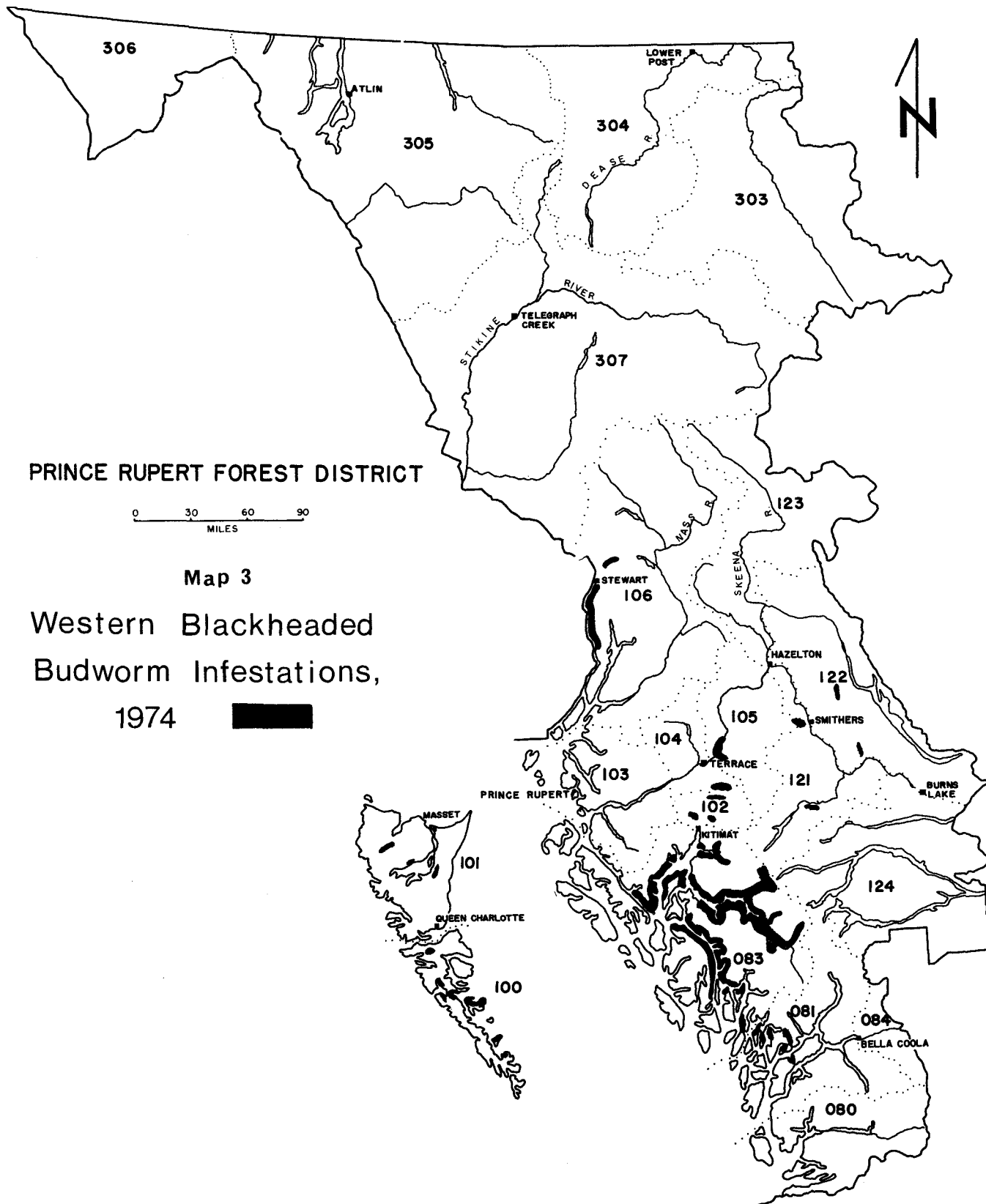


Table 2. Blackheaded budworm infestations,
Prince Rupert Forest District, 1974

Location	Avg no. eggs per 18" branch		% total defoliation		Predicted defoliation for 1975
	1973	1974	1973	1974	
Dahl Cr	42	4	18	30	light
Emsley Cove	7	18	23	10	light
Foch Lagoon	22	2	7	23	light
Kildala Arm	54	2	12	30	light
Kiltuish Inlet	15	2	49	28	light
Kemano R	140	2	43	43	light
Chief Mathews Bay	30	2	67	45	light
Gamsby R	56	0	36	42	light
Kitlope L	9	0	29	25	light
Deena Cr (heavy area)	24	4	59	79	light
*Deena Cr (light area)	-	21	light	52	light
*Takelly Cove	-	1	moderate	32	light
*Sedgewick Bay	-	1	light	40	light
*Burnaby Narrows	-	1	moderate	25	light
*Crescent Inlet	-	10	light	21	light
*Masset Inlet	-	59	nil	20	moderate
*Kwaikans I	-	29	nil	95	moderate
*Kumdis Cr (south)	-	79	nil	40	heavy
*Kumdis Cr (north)	-	102	nil	25	heavy
*Chindemash Cr	-	3	nil	23	light
*Kleanza Cr	-	13	nil	25	light
*Copper R	-	27	nil	30	moderate

* No egg samples in 1973. Defoliation estimates from aerial surveys.

BLACK ARMY CUTWORM
severely defoliated newly
planted conifer seedlings
and ground cover plants
and shrubs in the
interior portion of the
District in 1973.

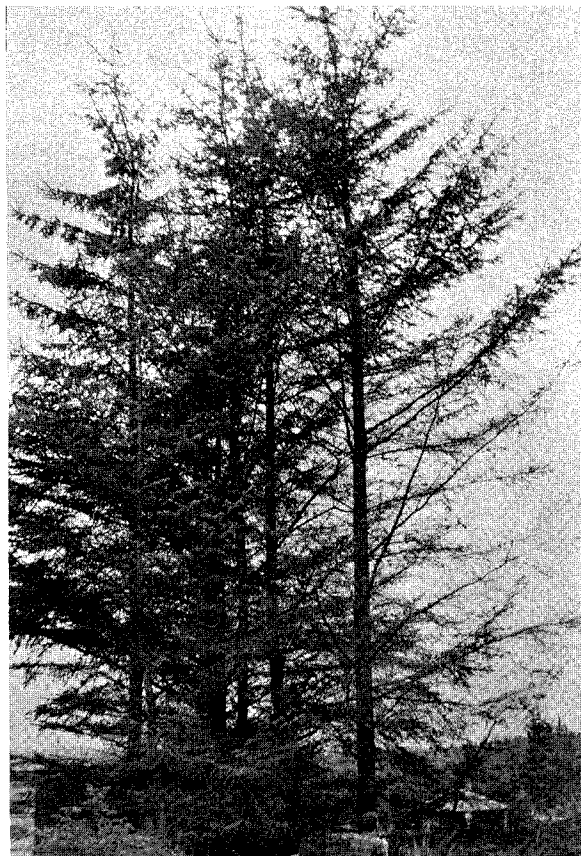
In 1974, light feeding on
herbaceous plants was
noted at Chapman Lake,
Luno Creek, Knockholt,
Andrew Bay and Burdick
Creek in the Interior,
and near Onion Lake in the
coastal forest. Damage
to planted seedlings was
negligible.

Populations of the
black army cutworm will
probably remain low
in 1975.



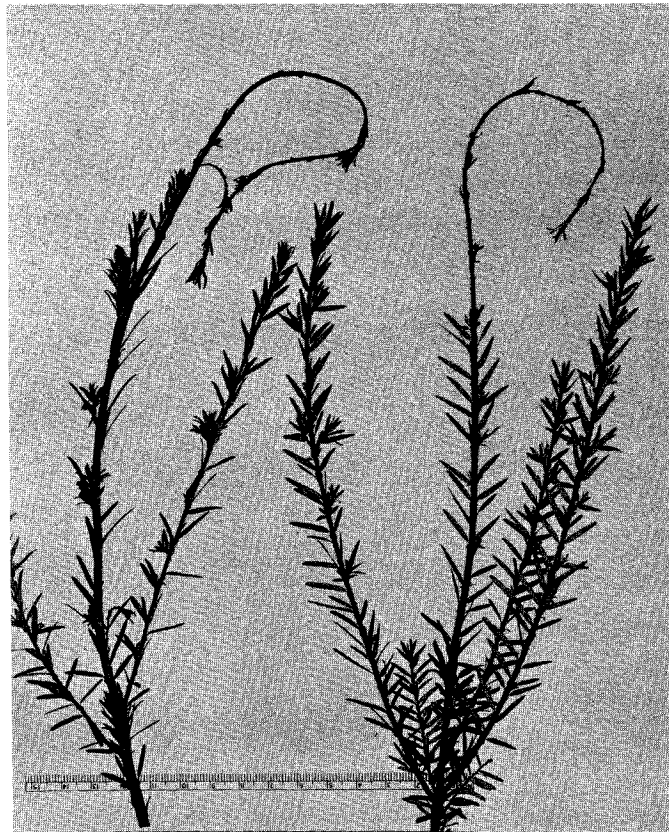
GREEN SPRUCE APHID
defoliated shoreline Sitka
spruce from Sandspit to
Alliford Bay on Moresby Island,
along Skidegate Inlet between
Queen Charlotte City and
Skidegate Mission, Tlell to
Port Clements and near
Juskatla.

Single and scattered
groups of trees were 50 - 80%
defoliated.



A WILLOW AND BIRCH LEAF MINER caused extensive browning of foliage on willow, birch and, in some areas, poplar, from Kitwanga Lake to Kitwanga and from Skeena Crossing southwest along the Skeena to Oliver Creek.

A SHOOT BLIGHT caused moderate tip wilting of western hemlock for the third year from the Nass River to Kitimat.



Blighted western hemlock and Sitka spruce, suspected of infection by this fungus, were collected for the first time on the Queen Charlotte Islands from Sandspit to Juskatla.

GLOBOSE GALL RUST infected from 30 to 50% of the lodgepole pine trees near Co-op Lake, east of Burns Lake. The dense 10-15-year-old stand regenerated after a fire.

SPRUCE NEEDLE CAST infected Sitka spruce from Cedarvale to Terrace and in Carlson and Cooper Inlets. On the Queen Charlotte Islands, infection occurred on Sitka spruce from Cumshewa Inlet to Sandspit and along the south coast of Graham Island.

LEAF AND TWIG BLIGHT OF POPLAR caused heavy browning and moderate to heavy defoliation of trembling aspen from Weegett Creek to Kitwanga Lake, and black cottonwood on islands in the Skeena River from Terrace to Kwinitza.

LARGE-SPORED SPRUCE RUST was heavy on 20 acres of bog-site Sitka spruce near Port Clements. Ninety per cent of the foliage on the regeneration-sized trees was infected.

SPRUCE NEEDLE RUST was found in the interior portion of the District at Kisgegas and Robinson Lake. There was light infection at the Fisheries Fence on Babine River and moderate infection along the Stikine River.

CURRENT STATUS OF FOREST PESTS IN PACIFIC REGION

P E S T	D I S T R I C T S		
	PRINCE RUPERT	PRINCE GEORGE	VANCOUVER
MOUNTAIN PINE BEETLE	epidemic, Houston, Hazelton, Kitwanga	light populations	Klinaklini R, Anderson L and Fraser R
SPRUCE BEETLE	small infestation along Cranberry R	trace at Bowron R and Wendle Cr	not found
DOUGLAS-FIR BEETLE	not found	light at Bear L	scattered light patches on Vancouver Island
WESTERN BLACK- HEADED BUDWORM	epidemic, increased in most areas	moderate increase at Pine Pass and McLeod L	collapsed
SPRUCE BUDWORM, ONE-YEAR-CYCLE	trace at Kitimat	epidemic in Liard R area	epidemic in Lillooet and Fraser valleys
SPRUCE BUDWORM, TWO-YEAR-CYCLE	light popula- tions near Bell-Irving R	light populations	not found
DOUGLAS-FIR TUSSOCK MOTH	not found	not found	not found
WESTERN HEMLOCK LOOPER	light in coastal stands	light, decreased	light populations
FALSE HEMLOCK LOOPER	not found	not found	not found
BLACK ARMY CUTWORM	populations in Interior decreased	localized outbreaks	not found
FOREST TENT CATERPILLAR	common near Kitimat	epidemic east of Prince George	localized in a few areas
LARCH CASEBEARER	not found	not found	not found
DWARF MISTLETOE	widespread on Hw and P1	southern areas on P1	widespread on Hw
WINTER DAMAGE	moderate on Sw in Bulkley Va	McBride, east	extensive on P1 at Klinaklini R

D I S T R I C T S			
CARIBOO	KAMLOOPS	NELSON	YUKON
increased on Pl at Cariboo L, Riske Cr, Klinaklini R	epidemic in Okanagan Valley	epidemic in E & W Kootenays, 30,000 Pl killed	not found
trace at Quesnel L	general collapse	light, few current windfall infested	not found
increased, Fraser R, Meldrum Cr - Dog Cr	light increase in west, scattered occurrence	light, few red-tops recorded in East Kootenay	no host
light population Wingdam	generally light population	increase at Upper Arrow L	trace
Kelly L, light population	epidemic in Lillooet area	increase at Trout L in stands of Hw	trace
epidemic in interior wet belt	moderate defoliation at Lempriere Cr	population collapsed at White R	not found
not found	increased in Kamloops area	trace near Cascade	no host
not found	population increased in North Thompson	collapsed in wet belt forests W Kootenay	not found
not found	outbreaks expanded to 14,000 acres (5,600 ha)	trace near Windermere L	no host
not found	declined, North Thompson	epidemic in Golden area expanded	not found
scattered patches only, Macalister to Quesnel	collapsed in Raft R area	infestation near Golden	not found
no host	light population in Okanagan Va	infestations declined	not found
general on Pl in Chilcotin area	severe in localized areas	widespread on Pl, Lw	not found
general, 40,000 acres (16,000 ha)	severe in North Thompson Va	Kootenay L from Wynndel to Boswell	light, M.890, Alaska Hwy., Little Salmon L

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