

History of Population Fluctuations and Infestations of Important Forest Insects in the Yukon Territory

1952 ~ 1983



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HISTORY OF POPULATION FLUCTUATIONS
AND INFESTATIONS OF IMPORTANT
FOREST INSECTS IN THE
YUKON TERRITORY
1952-1983

C. Wood and J. Loranger
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INTRODUCTION

This report constitutes a history of some important pests of commercial forests in the Yukon Territory recorded by the Canadian Forestry Service, Forest Insect and Disease Survey, since 1952. The purpose of the report is to:

- identify those pests which have damaged forests in the past and which are capable of causing damage in the future.
- record the pattern of population fluctuations.
- identify forested areas where insect problems have commonly occurred.

A listing, partly annotated, of about 523 insect species and 312 disease organisms collected in the Yukon Territory, are listed in BC-X-169. "Annotated Checklist of Forest Insects and Disease of the Yukon Territory", 1978, available from the Pacific Forest Research Centre.

Annual surveys of forest pests in Yukon forests continue. Information on their status is compiled annually and Regional reports by the Forest Insect and Disease Survey are available from the Canadian Forestry Service, Pacific Forest Research Centre, Victoria, B.C.

History of Forest Insect and Disease Surveys in the Yukon Territory

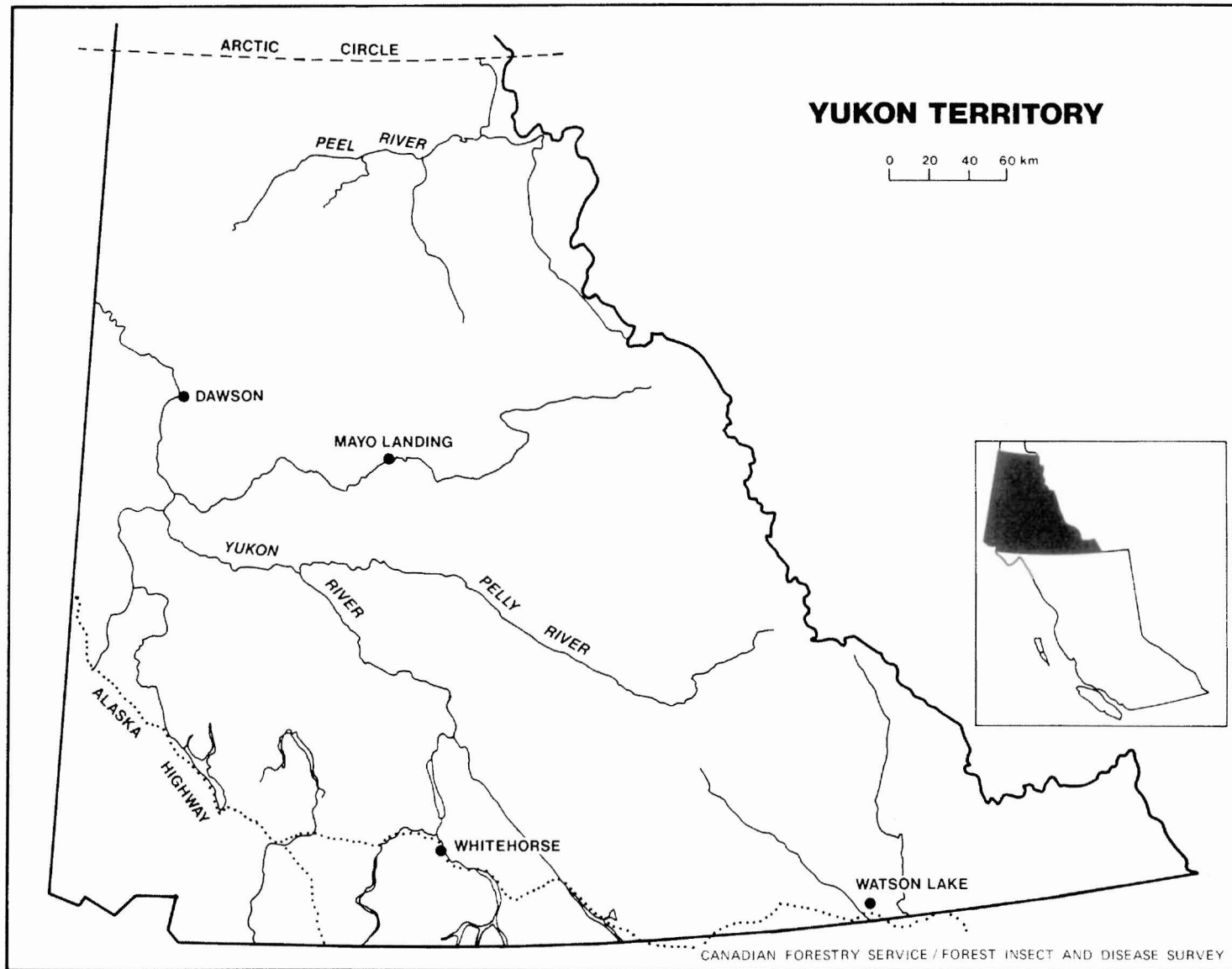
The first insect survey was for mosquitoes by an entomologist from Ottawa, in 1948.

Annual forest insect and disease detection surveys of the Yukon Territory by the Canadian Forestry Service, Forest Insect and Disease Survey (FIDS), began in 1952 working out of the Vernon, B.C. laboratory, and continued until 1965. From 1966 to 1972, the work was performed by the Northern Forest Research Centre, initially from Calgary, later from Edmonton. The survey was suspended in 1973 and the responsibility for the Yukon survey was returned to the Pacific Forest Research Centre in Victoria in 1974, and has continued annually thereafter.

Generally, from four to ten man-weeks during July and August of each year have been devoted to the Yukon Survey. While the practice has been to travel the roads to record tree damage and sample pest populations, much reliance is placed on confirmation of reports from local foresters. Aerial reconnaissance surveys have been used periodically. Yukon Forest Service offices were contacted at least once each year, as were the Parks Canada office at Kluane Park, and the Yukon Forest products mill at Watson Lake.

In general, pest activity has been low due to the rigorous climatic conditions of the Territory. Nevertheless, losses can be quite significant because of the slow replacement of increment loss and the long rotation period. The most damaging pest problem recorded to date in the Yukon was the spruce beetle outbreak during the late 1940's and early 1950's. During this period an estimated 31 million cubic feet of white spruce was killed on approximately 145 square miles north and south of Dezadeash Lake.

The more common damaging pests are described by host, year of pest damage and location. Many other potentially hazardous pests have been recovered from the Yukon but appreciable damage has not been detected.



SPRUCE PESTS

Spruce beetle, Dendroctonus rufipennis

Spruce beetle was the most damaging pest of white spruce in the Territory. Activity generally has been low except for the outbreak of the early 40's at Dezadeash Lake and an outbreak of lesser intensity in 1967 at the Aishihik power project.

Year	Remarks
1940's	Unconfirmed reports of up to 50% of the spruce killed in some valleys.
1952-53	Low populations at Mush Lake, 32 km west of the south end of Dezadeash Lake; in winter damaged trees throughout the southern portion of the Territory, and in healthy trees at Wolfe Creek.
1954-56	No damage recorded.
1957-58	Light damage along Watson Lake, Airport Road and low populations, Upper Laird west of Watson Lake, where five trees were attacked.
1959-62	Low populations; in 1961, small numbers of attacked trees occurred at Whitehorse and along the Alaska Highway.
1963	Populations increased with scattered patches of recently killed mature and over-mature white spruce along the Alaska Highway and adjacent roads throughout the Territory. One green (current) attack was found at km 1619 of the Alaska Highway.
1964	Populations declined with low populations at km 77, Haines Road and km 1553, Alaska Highway.
1965-75	Only incidence was in 1968 with low populations in the Kluane Lake area.
1976	Populations increased significantly in windfall but there was no evidence of tree mortality. Areas attacked: Ethel Lake (7 attacks per 464.5 cm ²), Albert Creek (4 attacks per 464.5 cm ²), at Marshall Creek (3 attacks per 464.5 cm ²), near Haines Junction, where there was extensive tree mortality in the 1940's.

Year	Remarks
1977	Populations in the Haines Junction area increased. In the Marshall Creek area, the average number of attacks per 0.1 m ² of bark increased to 10 from 6 in 1976. About 100 ha of white and black spruce weakened by flooding from the Aishihik power project canal attracted the beetle, with an average of 6.5 attacks per 0.1 m ² of bark. A mild winter in 1976-77 resulted in a successful overwintering.
1978	Very few recently killed trees were observed.
1979	Light attacks occurred between Haines Junction and Champagne, along the Aishihik River and adjacent to an area of recent blowdown near Little Fox Lake, north of Whitehorse.
1980	Attacks along the Aishihik River and at Haines Junction declined, with occasional roadside trees attacked along Kluane Lake, and 1979, partial attacks and pitchouts were noted adjacent to recent and old blowdown at the north end of Little Salmon Lake and at Quiet Lake.
1981	Partial attacks and pitchouts were common on an estimated 300 white spruce damaged by road salt, road construction, park development and flooding at widespread locations: Teslin Lake, Mendenhall Creek, Aishihik River, Marshall Creek, Steward Crossing, Carmacks, Frances Lake, Frances and Hyland rivers. At Frances and Hyland rivers there were successful 1980 attacks on 25 mature trees and in Marshall Creek, 10 trees were infested.
1982-83	Partial and unsuccessful attacks by spruce beetle were recorded on 150 mature standing white spruce, damaged by road construction, ditching and flooding at several locations from Teslin Lake to Johnson Crossing and from Carmacks to Ross River. At Frances and Hyland rivers, where 1980 attacks were recorded in 1981, stands could not be examined because of road closure. Broods developing in the standing timber posed a threat to adjacent susceptible mature spruce stands.

Spruce budworm, Choristoneura fumiferana

A pest of spruce and alpine fir, minor outbreaks have resulted in periodic light to moderate defoliation since 1952

Year	Remarks
1952-54	Light defoliation was widespread near Carcross and along the Alaska Highway near Upper Rancheria River; along the Haines Road from km 64 to km 96 defoliation affected 10-20% of the current years needles.
1955-59	Low numbers found in 1957 feeding in buds of white spruce and alpine fir north of Mayo, and a single larva collected at km 42, Marsh Lake Road.
1960-61	Trace defoliation occurred towards the western end of the Alaska Highway and on the Mayo Road. Seven empty pupal cases were collected at Haines Junction and one larva was collected near Carmacks. Populations increased in 1972. About 200 ha of mature and understorey spruce at km 1707, Alaska Highway, were lightly defoliated. Twenty larvae were collected from a single beating of a white spruce below Sheep Mountain.
1963-65	The infestation at km 1707 (Sheep Mountain) covered 200 ha and an estimated 30 to 50% of the new buds were infested. The Sheep mountain infestation persisted in 1964 with moderate defoliation and affected about 38% of the buds.
1966-1983	Since infestations collapsed in 1965, populations remained at low endemic levels up to and including 1983.

OTHER SPRUCE PESTS*

Pest	Location	Year	Damage
<u>Chrysomyxa</u> <u>arctostaphyli</u> (yellow witches broom)	Teslin, Haines Junct.	1955	top kill & mortality (range 2-36%).
		1975- 76	9% of trees infected. 14% of infected trees top killed and 8.5%
<u>Dryocoetes</u> <u>affaber</u> (Bark Beetle)	Aishihik Road, Mayo	1957	light
<u>Griselda</u> <u>radicana</u> (Spruce tip moth)	Aishihik Road, Mayo	1957	light
	Sheep Mountain, Alaska Highway, Mile 143.5, Haines Rd.	1962	light defoliation
Lepidoptera (Spruce tip miner)	Teslin Lake, Kluane section of Alaska Hwy.	1957	moderate to severe defoliation
Lepidoptera	Teslin, Haines Junct.	1958	light damage
<u>Pikonema</u> <u>alaskensis</u> (Yellow-headed sawfly)	Southern Yukon	1952	trace defoliation
	Alaska Hwy. to Whitehorse	1956	trace defoliation
	Haines Road	1957	light defoliation
	Mile 800, Alaska Hwy. Carmacks-Mayo Road	1960	light discoloration
	Champagne, Yukon	1961	light damage
	Yukon	1962	light damage to white spruce (some Sitka & black Spruce.)

* White spruce unless specified otherwise.

OTHER SPRUCE PESTS

Pest	Location	Year	Damage
<u>Pikonema</u> <u>dimmockii</u> (Green-headed sawfly)	Southern part of the Territory	1952	trace defoliation
	Aishihik Rd.	1957	light defoliation
		1960	light damage
	Mile 12, Dawson Rd.	1961	light defoliation
	Throughout the Territory	1962	light damage to white spruce (some on Sitka & black Spruce)
<u>Polygraphis</u> <u>rufipennis</u> (Four-eyed spruce beetle)	Carcross Rd.	1957	light girdling of branches on lower part of tree
	Annie Lk. Rd. & Carmacks Rd., Dawson	1960	light damage
<u>Rhabdophaga</u> <u>swainei</u> (Spruce gall midge)	Alaska Hwy. south of Whitehorse	1957	moderate to severe damage to bS and wS
		1958	light defoliation in
		1960	southern Yukon. Trace defoliation at Carmacks Rd.
<u>Semiothisa</u> <u>granitata</u> (Green spruce looper)	Mile 24, Dawson	1961	one larvae collected
	Mile 9, Dominion Cr.	1962	four larvae collected.
	Mile 682, Alaska Hwy.		
<u>Syngrapha</u> <u>Selecta</u> (a cutworm)	Watson Lake	1957	light defoliation
	Haines Junction	1960	trace defoliation
	Mile 19, Tagish Rd.	1961	trace defoliation
	Mile 53, Dawson Rd.	1962	light defoliation
<u>Zeiraphera</u> <u>fortunana</u> (Spruce tip moth)	Watson Lake to the Aishihik River	1957	light damage

PINE PESTS

Lodgepole pine beetle Dendroctonus murrayanae

Lodgepole pine beetle is found in overmature, injured, stressed trees, windfalls and in fresh stumps. It is usually non-aggressive but occasionally kills residual trees left after logging. It may take two or more generations to girdle and kill a tree. Trees can survive attacks.

Year	Remarks
1952	Low populations were evident throughout the Territory in root collars of dead or dying lodgepole pine, but were not recorded from 1953 to 1959.
1960-61	Lodgepole pine on the Annie Lake, McClintock River, and Canyon Mountain Roads were lightly attacked in 1960. Attacks continued in 1961 on the Annie Lake Road, on scattered lodgepole pine in the Whitehorse area and along McClintock River Road.
1962-67	Very little new damage was recorded, and populations remained very low along Annie Lake Road and the adjacent golf course.
1968	Populations were generally low throughout the Territory but tree mortality was recorded in a localized area near Teslin.
1969-75	Low populations were evident in weakened trees 116 km north of Johnson's Crossing in 1969 but declined throughout the Territory until 1975 when an undetermined number of lodgepole pine were attacked near Ethel Lake.
1976-83	There was no evidence of the pest in the Yukon.

Smaller western pine engraver Ips latidens

Year	Remarks
1960	Increased slightly in Annie Lake Road area and continued to infest lodgepole pine in the Whitehorse area and bordering McClintock River Road.
1962	Little damage to lodgepole pine along Annie Lake, McClintock River and Mayo roads even though population was expected to continue at a lower level.

Other* Pine Pests

Pest	Location	Year	Damage
Petrova spp. (Pitch nodule moth)	Watson Lake	1957	Moderate
Pissodes spp. (Lodgepole pine weevil)	Whitehorse km 16 Atlin Road	1959	Light in regen- eration; very low elsewhere.
	Annie Lake Road, km 3 Mayo Road	1962	Two larvae in regeneration
<u>Synanthedon</u> <u>Sequoiae</u> (Sequoia pitchmoth)	Haines Road	1957	Light

*Lodgepole pine unless otherwise specified.

FIR - SPRUCE PESTS

Blackheaded budworm, Acleris gloverana

Although not a serious problem of white spruce and alpine fir, it has at times lightly defoliated scattered small patches of trees throughout the Territory.

Year	Remarks
1952-57	Low populations, (5-10 larvae) collected throughout the Territory including Aishihik Road.
1958 -	Low populations on white spruce at Watson Lake, Whitehorse, Haines Junction, and Carmacks. An average of five larvae were collected per standard three tree beating sample, and adults and pupae were collected in mid-July near Carmacks. Very few were evident throughout the rest of the Yukon.
1959-62	Very few larvae collected or defoliation recorded; 3 larvae in Mayo area and 3 near Stewart River Crossing; 5 along the Carcross and Tagish Roads and at km 1675 Alaska Highway.
1963	White spruce were lightly defoliated at km 1674 Alaska Highway where larvae were collected. Throughout the rest of the Territory, single larvae were common.
1964	Populations declined in 1964. An average of 4 larvae were collected from beating samples throughout the Territory; the highest was 25, at km 346 Mayo Road.
1965-74	Populations remained at very low numbers.
1975	Populations increased 20% from Haines Junction north to Beaver Creek; along Highway #2 from Carmacks to Mayo and along the Dempster Highway from km 35 to km 294.
1976-79	Populations declined to only 12 positive samples which contained an average of 3.9 larvae compared to 22 samples and 7.4 larvae in 1975. The highest population was at the Liard River west of Watson Lake. The decline continued until 1979 when light defoliation occurred at Marshall Creek, Aishihik River and Haines Junction. An average of 10 larvae/sample were collected.
1980-83	Low populations.

LARCH PESTS

Larch budmoth, Zeiraphera improbana

Year	Remarks
1974	The first record of defoliation occurred when several hectares 48 km north of Watson Lake were defoliated.
1975	Populations increased and eastern larch stands were lightly defoliated throughout its range in the Yukon, with several small patches of moderate to severe defoliation at km 1808 Alaska Highway and along the Hyland River north to km 133 at the Cantung Road.
1976	Moderate to severe defoliation continued for the second year in the Frances and Hyland River valleys along Highway 10 and along Highway 9 from north of Watson Lake to km 160 and light defoliation to Finlayson Lake.
1977	Defoliation continued in the Hyland River Valley for the third consecutive year. Moderate to severe defoliation occurred along Highway 10 from km 80 to 128 where standard beating collections contained an average of 282 larvae. Light defoliation occurred from km 10 to 80, and along Highway 9 between Watson and Frances Lakes, where defoliation was most extensive in 1976.
1978	Populations declined in the Hyland River Valley and elsewhere, and only 12 larvae were collected in the previous outbreak areas. Cause of the collapse was not determined.
1979-83	Populations remained low and defoliation did not occur.

MULTI-HOST PESTS

Round-headed wood borer, Monochamus oregonensis

A wood borer which periodically attacks logs, resulting in degrade, etc.

Year	Remarks
1959-60	Damage not recorded but three beetles taken in flight on the Mayo - Dawson Road in 1960.
1961	Numerous adults on deck logs at Ewing's Mill site, km 351 Mayo Road and at Dawson and Watson Lake but damage not recorded.
1962	Fifty adults on log decks at Ewing's mill site, km 351 Mayo Road; a few adults in the Dawson area, but no damage.
1963-83	Few records of activity or damage to decked logs.

Engraver Beetles, Ips spp.

Year	Remarks
1951-59	Moderate populations infested white spruce at the McQuestor Ranch in 1951, and spruce and lodgepole pine in 1952. Populations declined in 1953 then in 1955 severely attacked logs in the 1952 affected area then declined in 1956. In 1951 and 1954 lodgepole pine at the sawmill at Minto were lightly affected. The decline since then has been due probably to improved sanitation practices.
1960-83	Damage was not recorded.

OTHER MULTI-HOST PESTS

PEST	HOST	LOCATION	YEAR	DAMAGE
<u>CONIFER PESTS</u>				
<u>Dendroctonus simplex</u> (Eastern larch beetle)	Larch	Km. 1096 Alaska Hwy		Low populations
<u>Griselda radicana</u> (Spruce tip moth)	White spruce, alpine fir	Aishihik Mayo, Kluane Lake	1957	light defoliation
		Over 500 ha on Sheep Mtn.	1962	light defoliation
<u>Itame sp.</u> (Spanworm)	Aspen, willow	Kluane Watson Lake	1957 1960	light damage trace
<u>Papilio rutulus</u> (Swallowtail butterfly)	Aspen, alder	Dawson City	1957	light damage
<u>Vespamima sequoiae</u> (Sequoia pitch moth)	Sitka Spruce Lodgepole Pine	Haines Rd.	1957	light damage
<u>Zeiraphera fortunana</u> (Spruce tip moth)	Alpine fir, white spruce	Watson Lake to Aishihik River	1957	light damage
<u>DECIDUOUS PESTS</u>				
<u>Eulype sp.</u> (Birch leaf-roller)	Birch, alder	Dawson City	1957 1958 1960	mod. defoliation Pop. decrease severe defoliation of alder Infestation collapsed
<u>Trichiosoma spp.</u> (sawfly)	alder, aspen	Kluane Lake	1957 1960 1961	light damage light damage light damage

CONE AND SEED PESTS

Spruce seed moth Laspeyresia youngana

This moth commonly infests spruce cones destroying both seeds and scales.

Year	Remarks
1952	Severe infestation of white spruce cones in the Lewes River Valley near Whitehorse.
1956	Severely infested cones at Whitehorse and km 1743 where 45% to 95% of the cones were infested.
1957-58	Moderate damage to Sitka and white spruce cones was evident along the Haines Road, and in 1958, along the Haines Road and at Aishihik Road, km 1392 - 1743 Alaska Highway and at Carcross.
1959-61	Infection levels increased to severe in white spruce cones between km 1395 and 1570 along the Alaska Highway and at Carcross where 42% of 150 cones were infested. Similar damage continued in 1960 in the same areas, at km's 1395, 1570, and at Carcross where 42% to 59% were infested. In 1961, 92% of the cones were damaged at km's 1395, 1570, and at Carcross.
1962-63	Damage declined to 55% at km's 1395 and 1570 and at Carcross, but increased to 75% at Carcross in 1963.
1964	Infestations at km's 1395, 1570, and at Carcross collapsed and seed moth damage was very low elsewhere in the Territory.
1965-68	Populations remained low in 1965-67 but in 1968, up to 67% of the white spruce cone crops at several locations throughout the Territory were infested.
1969-83	Light damage continued from 1969 to 1972 but declined to very low levels in 1973, and has remained very low to 1983.

A Cone Maggot - Pegohylemyia anthraema

Year	Remarks
1960	36% of 150 white spruce cones infested at four localities in the Territory.
1961	10% of 320 white spruce cones infested at four localities.
1962	25% of 320 white spruce cones infested at four locations.
1963	25% of the 160 cones collected at km 1571 Alaska Highway and 42% at km 1395 Alaska Highway infested.
1964-83	Not recorded.

DECIDUOUS TREE PESTS

Trembling aspen

Large aspen tortrix, Choristoneura conflictana

The large aspen tortrix is a major defoliator of aspen throughout the Territory. During epidemics, it feeds on other broad-leaved trees, often completely defoliating the host for several consecutive years. However, severely affected trees usually recover although some growth loss and branch and leader dieback occurs.

Year	Remarks
1958-63	The first record of defoliation by this pest was in 1958 when 162 ha, 4.8 km north of Carmacks were severely defoliated. The infestation continued in 1959 with severe defoliation over 200 km near Carmacks and light to moderate defoliation at km 1939, Alaska Highway.. The infestation north of Carmacks continued in 1960 over about the same 200 km and the infestation on the Alaska Highway at km 1939 increased slightly. The Carmack infestation declined in intensity to light defoliation in 1961 but the area expanded slightly from km 167 to km 172 on the Mayo Road. The infestation on the Alaska Highway collapsed. Light defoliation persisted in the Carmacks infestation in 1962 but in 1963 the infestation collapsed.
1964-67	Populations remained at low endemic levels.
1968	Light defoliation mixed with areas of severe occurred throughout most of the range of trembling aspen in the Territory. Severely defoliated aspen groves occurred in the Dezadeash Valley between Champagne and Haines Junction; 60 km southeast of Beaver Creek; near Fox Lake north of Whitehorse; Carmacks, Pelly Crossing, Stewart Crossing, Mayo, Elsa, McQueston to Dawson City and Frances Lake to Ross River.
1969-70	Populations declined significantly resulting in only light defoliation throughout the 1968 infested areas. They declined further in 1970 throughout the Territory, with only trace to light defoliation at widely scattered locations.
1971-74	Infestations collapsed and defoliation was not recorded and populations remained low until 1975.

Year	Remarks
1975-81	<p>Light defoliation of trembling aspen, balsam poplar and birch was widespread in 1975 with moderate defoliation at Carmacks-McQueston River and the lower portions of the Pelly River Valley. In 1976 light defoliation occurred in the McQueston River Valley. In 1977 at Carmacks, aspen was totally defoliated but by mid-July defoliated trees had refoliated to 40% of their normal foliage; light defoliation was evident at km 345 to 352 along Highway 2. Infestations continued in 1978 when trembling aspen were almost completely defoliated along the Alaska Highway from km 1534 to 1536, along Highway 3, Dawson-Stewart Crossing, from km 74 to 80, and along Highway 2 from km 224 to 226. In 1979 light defoliation occurred at Carmacks, Dawson City, McQueston and Mayo. Moderate and severe defoliation occurred in 1980 in patches of 200 to 1000 ha in stands along the Yukon River at Carmacks and from Stewart Crossing to McQueston, near Pelly Crossing and north of Mayo and light defoliation occurred west of Whitehorse, near Beaver Creek and Teslin. In 1981, about the sixth year of the infestation, trembling aspen stands were defoliated in 50 to 1000 hectare areas at 13 locations with severe defoliation over 50 000 hectares at Teslin Lake, Aishihik River, Snag Road, Dawson City, Little Salmon Lake and Little Aishihik Lake from Aishihik River. Populations at Snag Airport showed a high incidence of parasitism by the parasitic wasp <u>Glypta</u> sp.</p>
1982	<p>Light defoliation of trembling aspen stands, from 25 to 100 ha was recorded at 10 locations which had been severely defoliated in 1981. Near Teslin Lake, Aishihik, Snag Road, Dawson City, Little Salmon Lake and Little Atlin Lake, populations declined dramatically from more than 50 000 ha to small pockets of between 1-50 ha and only trace and light defoliation were recorded. At Aishihik River, where defoliation had been recorded since 1979, there was no new defoliation. The decline was attributed in part to larval parasites including a wasp <u>Glypta</u> sp. which was reared from larvae collected in the area in 1981. Winter mortality and a lack of host material were also factors in the decline.</p>
1983	<p>Trace to light defoliation occurred in localised 3 to 5 ha patches in the southwest region of the Territory, west of Teslin, southwest of Tagish towards Carcross, Aishihik River to Snag Airport and Haines Junction south along the Haines Road to the B.C./Alaska border.</p>

Aspen Leaf Miner Phyllocnistis populiella

Year	Remarks
1953-56	Common throughout territory and north to Mayo with light defoliation in the southern part of the territory in 1954 and 1955, and at low levels along the Alaska Highway and Carcross Road in 1956.
1957-63	Moderate infestations around Watson Lake to Cassiar Road in 1957 increased slightly in 1958 in the Watson Lake district, from the Yukon/B.C. border along the Alaska Highway to Little Rancheria River. Only trace defoliation was noticed throughout the rest of the district. Populations increased to moderate levels in the Watson Lake district in 1959 and appeared to be spreading westward along the Alaska Highway. The percentage of aspen leaf miner cocoons infested by unidentified parasites at two sample plots at Watson Lake and Rancheria averaged 29%. Infestations increased in 1960 at Watson Lake and Rancheria River and mortality of aspen leaf miner in cocoons due to parasites at Watson Lake and Rancheria increased to an average of 60%. In 1961, infestations decreased at Watson Lake and Rancheria River and parasitism of cocoons averaged 28%. Populations decreased sharply in 1962 at the Rancheria River and Watson Lake areas and cocoon parasitism declined to 20%.
1963-1965	Low populations throughout the territory.
1966-1970	Common throughout the Territory with moderate defoliation at km 1262, km 1854, and 129 km north of Watson Lake and severe along the Canol Road near Watson Lake and in the Beaver Creek region. High populations in 1967 at Beaver Creek and from a point 161 km west of Watson Lake east to the Beaver River and north to Frances Lake. In 1969, damage increased in the Watson Lake and Ross River areas but in the Beaver Creek area remained the same. Populations remained high in 1970.
1971-72	Populations declined with little activity recorded.
1973-83	No evidence of mining or discoloration of aspen leaves by the miner during routine annual surveys.

Aspen Leaf Blotch Miner, Lithocolletis sp.

Year	Remarks
1958	Moderate to severe defoliation of trembling aspen widespread from 10 kms west of Stewart Crossing on the Dawson Road and 8 km east on the Mayo Road. Light defoliation recorded along the highway between Carmacks and Stewart Crossing. Very few mined aspen leaves were seen elsewhere in the Territory.
1960-62	Prevalent on trembling aspen throughout Yukon, especially on the Carmacks-Mayo and Dawson Roads, where approx. 20% of leaves were infected. Common in 1961 and 1962 with light to moderate damage of trembling aspen throughout the territory affecting approximately 28% of the leaves.
1963-83	Not common in trembling aspen stands in the Territory.

An aspen leaf roller, Anacompsis niveopulvella

Year	Remarks
1960-62	Twenty nine larvae, inhabited 142 vacated leaf pupal cells of the large aspen tortrix; three gelechiids were dead. In 1961, two larvae were found in 16 vacated tortrix leaf pupal cells from the large aspen tortrix infestation north of Carmacks, by 1962 no larvae were found.
1982-83	Common in aspen tortrix infested aspen stands.

A Birch leaf-roller, Eulype sp.

Year	Remarks
1957-60	Moderate populations on birch and alder in the Dawson City area. Population southeast of Dawson City decreased in 1958 but continued to severely defoliate alder and white birch trees west of Dawson. Alder along the Alaska Highway from the Yukon/Alaska border to Kluane Lake. The infestation in the Dawson area collapsed in 1960; damage was not recorded.
1961-83	No evidence of the leaf roller.

OTHER DECIDUOUS TREE PESTS

PEST	HOST	COMMENTS	LOCATION	YEAR
<u>Actebia fennica</u> (Black army cutworm)	Fireweed, Spruce, alder	large nos. larvae small nos. larvae	km 1525 Al. Hwy Whitehorse	1961 1982
<u>Eucordylia atrupictella</u> (a looper)	Aspen	light defol. trace defol. trace defol.	Dawson City Carmacks Rd. Dawson Rd.	1957 1960
<u>Hydriomena renunciata</u> (A looper)	Alder	light defol.	Mayo and Kluane Lake	1957
<u>Itame spp.</u> (Spanworm)	Aspen, willow	light defol. trace defol.	Kluane Watson Lake	1957 1960
<u>Orgyia antiqua badia</u> (Rusty tussock moth)	Willow	light defol.	Haines Jct.	1957
<u>Papilio rutulus</u> (Tiger swallowtail butterfly)	Aspen, Alder	light defol.	Dawson City Haines Jct. Mayo	1957
<u>Platarctica (Parasemia) parthenos</u> (A black woolly bear)	Willow	light defol.	Watson Lake	1957
<u>Rheumaptera spp.</u> (A leaf-miner)	White birch	light damage low population	common Dawson Rd Km 72	1960 1961/62
<u>Smerinthus cerisyi</u> (Cerisyi sphinx moth)	Trembling aspen Black cottonwood	9 larvae on 7 collections	Whitehorse Mayo, Dawson Johnson's Crossing Minto, Carmacks Alaska Highway	1960 1962
<u>Trichiosoma spp</u> (A sawfly)	Alder, aspen willow	light defol.	Kluane Lake	1957 1960/61

Canada