

FOREST INSECT AND DISEASE CONDITIONS 1974

YUKON TERRITORY

by



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INTRODUCTION

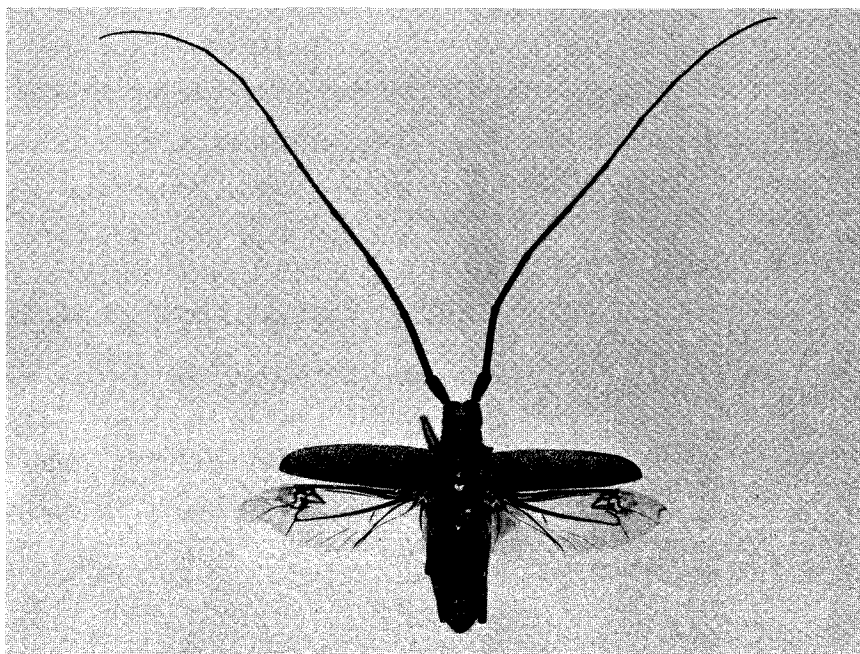
This report outlines the status of forest insect and disease conditions in the Yukon Territory for 1974.

Field work was done during the period of optimum insect activity from mid-June to early July, and covered much of the readily accessible areas. Contact was made with the Yukon Forest Service personnel at headquarters and most of the ranger stations. Forest pest conditions reported by public and private cooperators were particularly valuable in the interpretation of the general pest situation and in gauging population trends.

The larch budmoth lightly defoliated eastern larch north of Watson Lake. Other than that, numbers of larval defoliators in field collections were low. Wood borers degraded logs stock-piled at Watson Lake.

Common tree diseases in the Yukon were the spruce broom rust, spruce needle rusts, and the terminal dieback of black and white spruce.

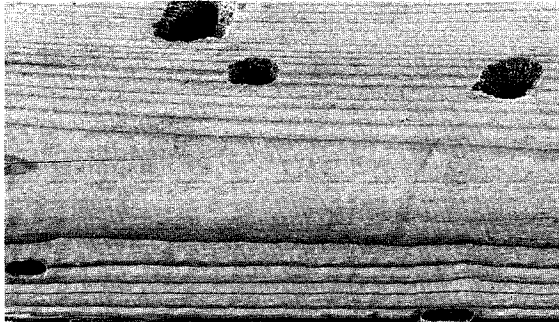
WOOD BORERS



Roundheaded wood borer
Monochamus adult.

Wood borers were prevalent in the Yukon Territory in 1974. Roundheaded and flatheaded wood borers damaged decked logs at a Watson Lake mill. There was an average of 20 roundheaded wood borer entrance holes per square foot in some logs. Borers were also present in the logs at Teslin; however, the damage was light.

Earlier surveys have shown that the most frequently destructive wood borers in logs, in the Yukon, are the roundheaded or long-horned wood-boring beetles. This family contains a number of economically important species but most of the damage has been attributed to two groups of "sawyer beetles", *Monochamus* spp. and *Tetropium* spp. The larvae of these groups spend several weeks feeding in and under the bark, then some time



Roundheaded wood borer larva
and damaged lumber.

after mid-June they penetrate the wood to complete their feeding and development. *Monochamus* spp. are large beetles with antennae longer than their bodies. Their larvae burrow two or three inches into the sapwood, filling their galleries, as they advance, with packed shreds of wood. The *Tetropium* spp. are small beetles whose larvae penetrate less than two inches into the sapwood. These borers are frequently a problem in spruce lumber that has not been satisfactorily kiln-treated.

Freshly cut logs left in the woods or in decks in the mill-yard during the summer are vulnerable to borer attack. Therefore, the best preventive measure is utilization of the logs shortly after felling.

Water misting for log protection from borers should be investigated where logs are to be left in a deck throughout the summer.

LARCH BUDMOTH larvae were collected in all eastern larch stands. However, defoliation was observed only on several acres of eastern larch 30 miles (48 km) north of Watson Lake. Though foliage discoloration may be evident, this budmoth is not likely to cause severe growth loss or any tree mortality.

Small numbers of galls caused by a SPRUCE GALL APHID, *Pineus* spp., were prevalent on the foliage of most of the white spruce between Whitehorse and Beaver Creek. The heaviest infestation was found between Ross River and Frances Lake where, by early July, galls were present on 25% of the current foliage in small patches of white spruce reproduction.

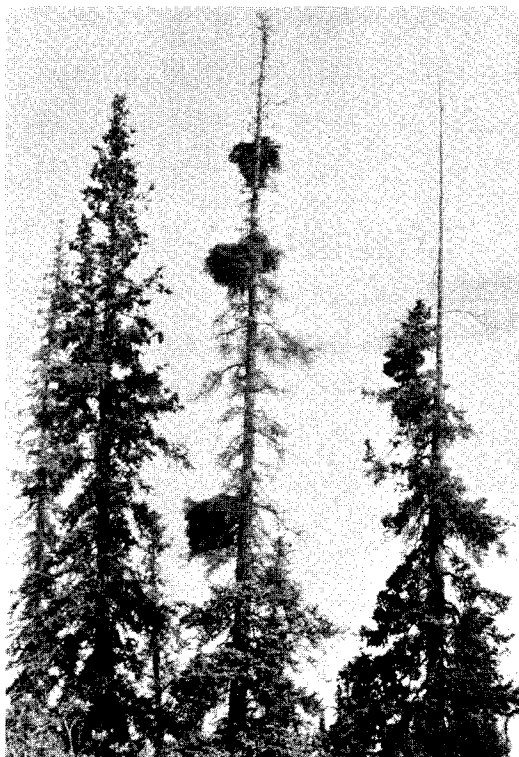
Gall aphids reduce growth of young spruce reproduction, and often kill the galled portion of the new growth.



Galls on spruce branch.

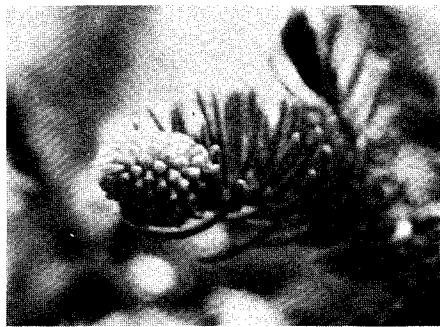
INSECTS AND MITES OF MINOR SIGNIFICANCE

| Causal agent | Host | Locality | Remarks |
|---------------------------------------------------------|-------------------------------|--------------------------------------------------------|---------------------------------------------------------------|
| <i>Acleris gloverana</i> Blackheaded budworm | White spruce | Mi.22 Dempster Hwy., Carmacks | Defoliator. Low populations. |
| <i>Choristoneura conflictana</i> Large aspen tortrix | Trembling aspen | Bonanza Creek | Defoliator. Low population. |
| <i>Choristoneura fumiferana</i> Spruce budworm | White spruce | Throughout Yukon | Defoliator. Low population. |
| <i>Chrysomelidae</i> Leaf beetles | Trembling aspen | Carmacks | Defoliator. Low population. |
| <i>Dendroctonus rufipennis</i> Spruce beetle | Spruce | Throughout Yukon | No attacked living trees, nor broods in windfall found. |
| <i>Epirrita</i> sp. A looper | White spruce | Haines Jct. | Defoliator. Low population. |
| <i>Pikonema</i> spp. Spruce sawflies | White spruce | Dempster Hwy., Pelly Crossing, Carmacks | Defoliator. Low populations. |
| <i>Zeiraphera destitutana</i> Spruce budmoth | White spruce, black spruce | Mi.10 Dempster Hwy., Ross River, Frances Lake | Defoliator. Low populations. |
| <i>Aceria parapopuli</i> A mite | Trembling aspen | Faro, Whitehorse | Gall-causing mite. All age classes affected. |



A SPRUCE BROOM RUST caused by *Chrysomyxa arctostaphyli*, was common throughout most of the Yukon. Intensity ranged from light to moderate in localized areas with heavy infection at Aishihik Lake, where it was associated with deformity and spike tops. In addition to current and continuing growth loss, tree mortality can occur, either from the rust or from fungi which frequently follow the death of the brooms.

TERMINAL DIEBACK OF SPRUCE - An unknown causal agent was killing spruce terminals. Black spruce was the more common host, but several white spruce had dead tops near the Snag airfield. On an area behind the Midnite Dome at Dawson, up to 25% of the black spruce had dead tops. Other areas with scattered dead tops were: Mile 340 on Highway 9, Mile 150 on Highway 2, and Mile 3 on the Dempster Highway.



A SPRUCE NEEDLE RUST, *Chrysomyxa woroninii*, was prevalent on spruce at Kluane Lake, Beaver Creek, and the Dempster Highway. At Dawson's Midnite Dome, individual white spruce trees had up to 40% of the buds infected.

Chrysomyxa woroninii infected shoot.



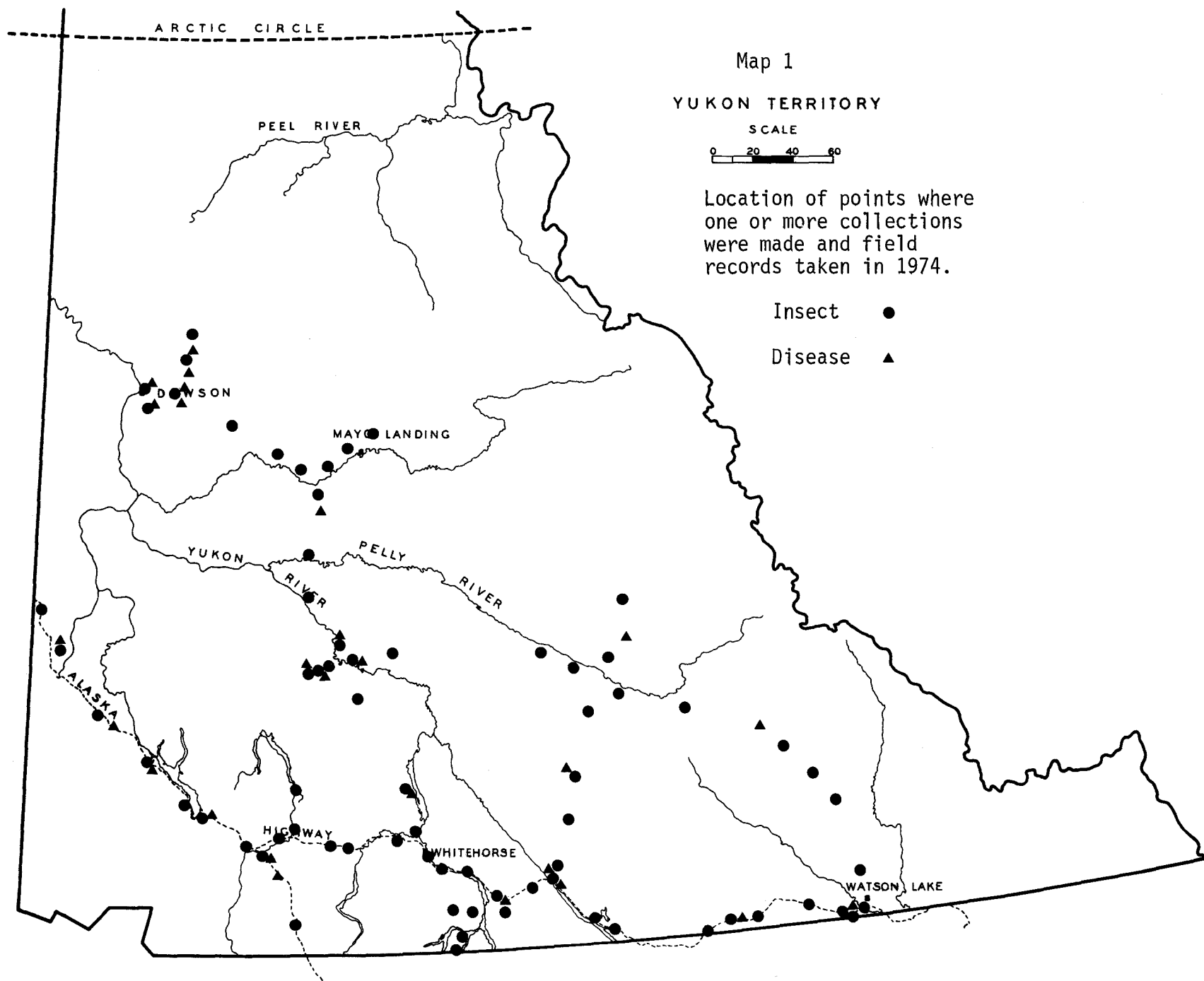
Lodgepole pine
damaged by rabbits.

RODENT DAMAGE - Rabbit damage was generally light except for small, severely affected areas of lodgepole pine near Takhini Nursery. Here, leaders on advanced regeneration had been chewed down to the winter snow level, leaving small patches of almost branchless stems.

Porcupines had girdled individual trees throughout the lodgepole pine range, causing scattered dead tops and dead trees.

OTHER NOTEWORTHY DISEASES

| Causal agent | Host | Locality | Remarks |
|------------------------------------|----------------------------|--------------------------------------------------|--------------------------------------------------------------------------|
| <i>Chrysomyxa ledi</i> | White spruce | Carmacks | Needle rust on spruce. |
| <i>Chrysomyxa ledicola</i> | <i>Ledum</i> sp. | Throughout | Needle rust on spruce. |
| <i>Cronartium comandrae</i> | Lodgepole pine | Host range | Stem rust, low levels. Several severe pockets at Mi.870 Alaska Hwy. |
| <i>Endocronartium harknessii</i> | Lodgepole pine | Watson Lake | Stem rust, light. |
| <i>Lirula macrospora</i> | White spruce, Black spruce | Mi.828 Alaska Hwy., Kluane Lake, Mi.60 Canol Rd. | Spruce needle blight. Individual trees at Kluane Lake severely infected. |
| <i>Potebniamyces balsamicola</i> | Alpine fir | Mi.716 Alaska Hwy. | Top-killing canker. Scattered trees infected. |
| <i>Pucciniastrum goeppertianum</i> | Alpine fir | Watson Lake to Johnson Crossing | Needle rust, light. Heavy on individual trees. |
| <i>Pseudomonas syringae</i> | Balsam poplar | Dawson | Virus on climatically weakened host. |
| Winter drying | Lodgepole pine | Mi.890 Alaska Hwy., Little Salmon Lake | Small acreage, good recovery. |



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 |

DISTRICTS

| 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 |