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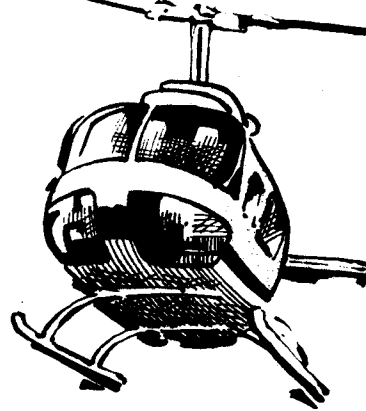


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Forest Insect and Disease Conditions

Yukon Territory - 1981

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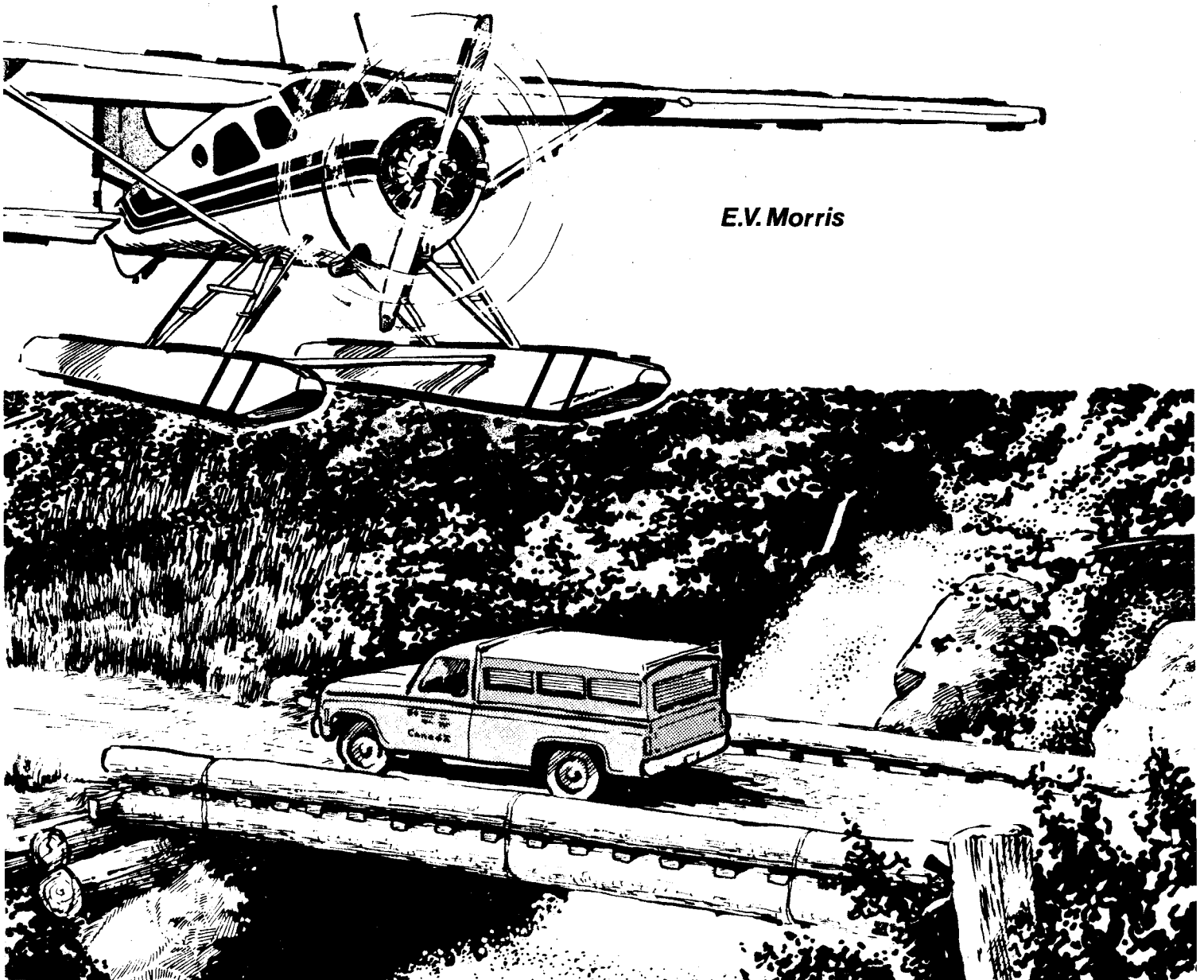


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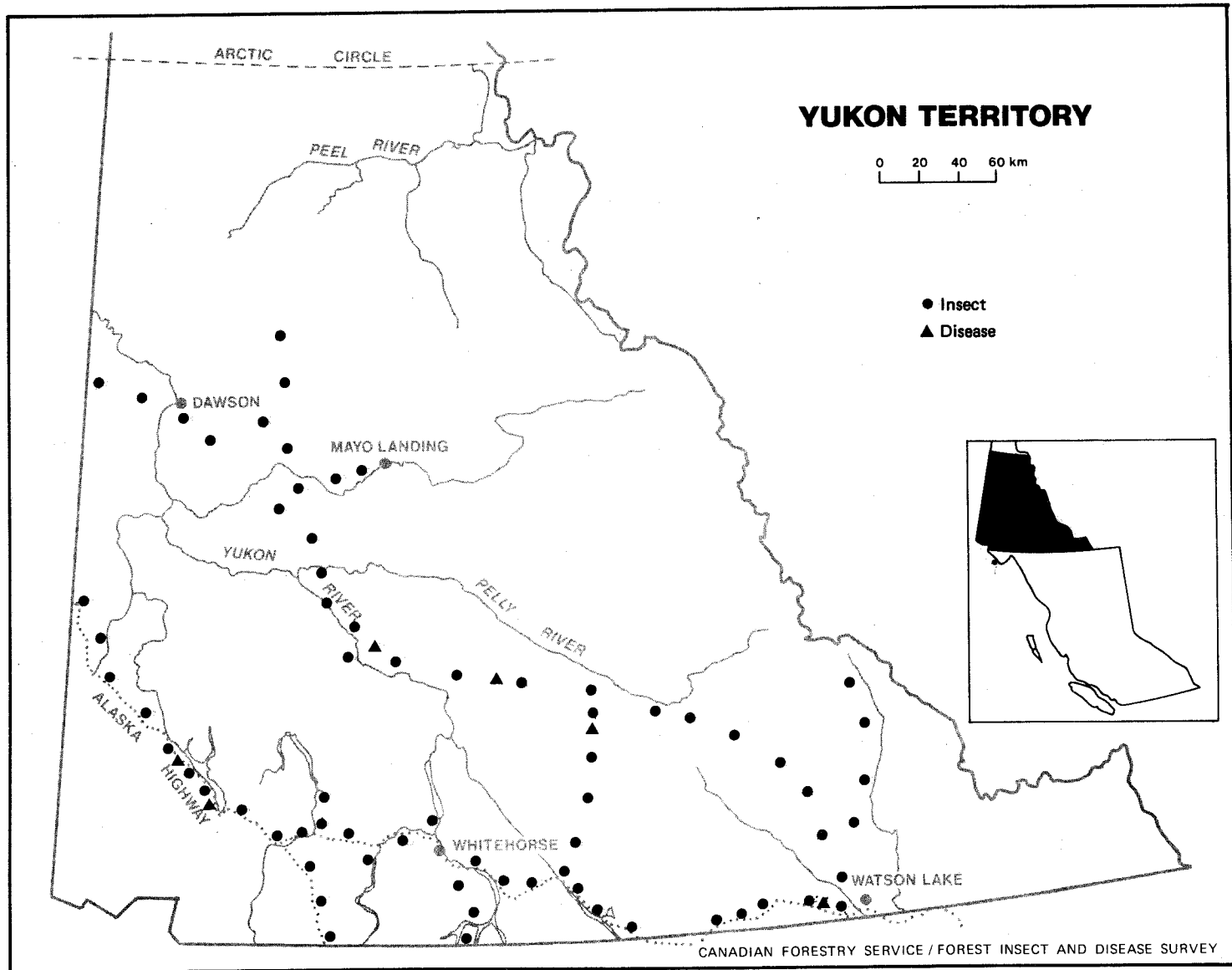
SUMMARY

This report outlines the status of forest insect and disease conditions in the Yukon for 1981, emphasizing pests capable of sudden damaging outbreaks and lists them by importance by host.

The most noteworthy insect damage was the defoliation of trembling aspen by the large aspen tortrix in the Aishihik River, Beaver and Dawson creeks, Little Salmon and Little Atlin lake areas. Spruce beetle attacks killed single and small groups of white spruce trees at 12 localities where trees were under stress as a result of damage by road salt, road construction, development or flood damage. Lodgepole pine needle cast conspicuously discolored the previous years needles of pine stands along Highways 1 and 9 and within and around the Takhini Nursery. Salt damage to white and black spruce was prevalent along main highways. Winter drying of lodgepole pine and spruce was evident along Kluane Lake from Burwash Landing to Beaver Creek and along Little Atlin Lake.

The 1981 field survey commenced on June 22 and was completed July 6. The survey consisted of monitoring pest populations at 50 permanent sample plots (Map 1) and the examination of forest nursery trees and large aspen tortrix infestations.

Yukon Forest Service personnel were contacted at Watson Lake, Teslin, Whitehorse, Haines Junction, Beaver Creek, Carmacks and Ross River, to discuss pest problems in their respective Districts.



Map 1
Collection Locations
1981

Locations Where One or More Insect or Disease Samples Were Collected

TREMBLING ASPEN PESTS

Large aspen tortrix, Choristoneura conflictana

Defoliation of trembling aspen stands was recorded in areas of 50 to 1 000 hectares at 13 locations with severe defoliation over 50 000 hectares at Teslin Lake, Aishihik River, Snag Road, Dawson City, Little Salmon Lake and Little Atlin Lake. At Aishihik River, where stands have been defoliated for several years, an estimated 8% of the trees have been killed on 500 hectares and 30% of the living trees have top and branch dieback.

Larval collections from Aishihik River and Snag Airport reared at the Pacific Forest Research Centre showed a high incidence of parasitism by the parasitic wasp Glypta sp.

Large numbers of tortrix moths were noted in the vicinity of Snag Airport, indicating continuing infestations in this area. At other areas, larval and pupal populations indicate that infestations will continue in 1982.

Trembling aspen mortality

Mortality of mature and immature aspen stands is common in a number of areas including Whitehorse, Haines Junction, Beaver Creek and along the Alaska Highway from the Beaver Creek area to the Alaska Border. Areas where up to 30% mortality occurred ranged from less than one hectare to more than five hectares. The first sign of mortality was top and branch dieback. There is no identifiable cause but the mortality could be attributed to climatic factors such as drought or winter injury.

Aspen leaf and shoot blight, Venturia sp.

Foliage of trembling aspen was lightly infected at five locations along the South Canol Highway between Ross River and Quiet Lake. Areas one to five hectares in size had 40% of the leaves infected on 10% of the stems.

SPRUCE PESTS

Spruce beetle, Dendroctonus rufipennis

Partial attacks and pitchouts were common on an estimated 300 white spruce trees that had been damaged by road salt, road construction, park development and flooding at widespread locations. Some of the more noteworthy areas were Teslin Lake, Mendenhall Creek, Aishihik River, Marshall Creek, Stewart Crossing, Carmacks, Frances Lake, Frances and Hyland rivers. At Frances and Hyland rivers there were successful 1980

attacks on 25 mature trees, also in Marshall Creek area where 10 trees were infested. These beetle populations could present a hazard to adjacent areas of mature stands. Engraver beetles, Ips spp., were usually found in association with 1980 spruce beetle attack trees, but elsewhere there was little evidence of successful 1980 attacks, by either spruce beetle or engraver beetles.

Red ring rot, Fomes pini and a brown cubical trunk rot, Polyporus sulphureus

An estimated 10% of the mature white and black spruce within and adjacent to campsites at Horseshoe Bay and Congdon Creek along Kluane Lake were infected by both heart rots. At Horseshoe Bay an estimated 10% of the infected trees were removed on one hectare to reduce the danger of trees falling on campsites. Crown symptoms on the standing trees indicate that at least another 10% of the trees were infected, however infections were less severe at Congdon Creek.

Spruce broom rust, Chrysomyxa arctostaphyli

Witches' broom infections were common in at least 20% of the white and black spruce stands throughout areas examined. Severe infections recorded at Teslin Lake, Aishihik River, Haines Junction to Beaver Creek and from Ross River south to Quiet Lake. The severest infections have resulted in poor tree form, reduced increment, top and branch dieback and tree mortality.

Salt damage

Exposure of roadside regeneration and mature white spruce, black spruce, lodgepole pine and deciduous trees from calcium chloride application to road surfaces resulted in heavy needle loss, top and branch dieback, and mortality of white and black spruce killed by unidentified secondary bark beetle attacks.

Foliage burn and needle loss was heaviest to white and black spruce within six metres bordering the highway and was most visible at Champagne, Kluane Lake to Beaver Creek, Stewart Crossing to Carmacks, Carmacks to Faro and Whitehorse to Carcross.

PINE PESTS

Lodgepole pine needle cast, Lophodermella concolor

The needle cast infection severely infected and discolored the 1980 needles of immature and mature lodgepole pine in many areas of the Territory, causing premature needle loss. The severest damage recorded was along the Alaska Highway from km 1 054 to 1 085 where 50% of the

foliage was affected on up to 50% of the trees; Highway 9, km 529 to 530, and within and around the Takhini Nursery.

Rabbit Damage

Rabbit feeding severely damaged lodgepole pine, trembling aspen and balsam poplar in overstocked regeneration stands at Snag, Carmacks, Highway 9, km 544 to 554; Ross River, Whitehorse to Carcross and Takhini Nursery. Rabbits completely girdled the lodgepole pine on the lower bole resulting in the death of the trees. The trembling aspen and balsam poplar have sent up sucker growth below the girdling resulting in multiple stemmed trees. Native and exotic conifers and deciduous trees at Takhini Nursery have suffered similar damage for the past several years.

Winter drying

Winter drying was evident along Kluane Lake at Gladstone Creek, Kluane Lake to Beaver Creek, from Beaver Creek to the Alaska Border and along Little Atlin Lake. Lodgepole pine was the most severely damaged with the 1980 and older foliage discolored and light damage to the 1981 buds. Branch and top dieback and light tree mortality was evident at Muncho Lake in British Columbia where winter-drying had occurred for several years.

LARCH PESTS

Larch budmoth, Zeiraphera sp.

No evidence of budmoth defoliation was observed in eastern larch stands along the Highland River where infestations were recorded in 1975-1977. Only single larvae were collected in routine sampling throughout the Territory and do not present a potential hazard in 1982.

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