



forest management note

Note No. 7

Northern Forest Research Centre

Edmonton, Alberta

1981 FORECAST FOR THE FOREST TENT CATERPILLAR IN THE PRAIRIE PROVINCES

The current forest tent caterpillar (*Malacosoma disstria* Hbn.) epidemic, which began in the prairie provinces in 1971, collapsed in Manitoba in 1979 but continues to expand in Alberta and Saskatchewan. In these two provinces, moderate to severe defoliation of trembling aspen caused primarily by the forest tent caterpillar, was mapped over an estimated 200 000 km² in 1980 (Fig. 1). The large aspen tortrix (*Choristoneura conflictana* (Wlk.)) and the Bruce spanworm (*Operophtera bruceata* (Hulst)) contributed significantly to the defoliation in some areas. Although trembling aspen is the preferred host of this pest, most other deciduous trees are susceptible to attack when larval populations are high.

Egg-band surveys were conducted across the prairie provinces in late 1980 in order to predict the severity of defoliation that might occur in 1981. The surveys were a cooperative effort by the Canadian Forestry Service, Parks Canada, Manitoba Department of Natural Resources, and the cities of Saskatoon and Prince Albert.

In Manitoba the only area where significant defoliation occurred in 1980 was in Turtle Mountain Provincial Park. Egg-band counts were low in the Max Lake area, and light defoliation is anticipated for there in 1981. Moderate to severe defoliation may recur in the Adam Lake area.

A general decline in caterpillar populations is indicated for central Saskatchewan. Zero to low egg-band

counts were recorded at all sample plots located within an area bounded by Tweedsmuir, Big River, Green Lake, Alticane, Hague, St. Louis, and Shellbrook; reduced defoliation is predicted for this area in 1981. Scattered moderate to severe defoliation is again anticipated for many of the remaining areas such as Waskesieu, Northside, Prince Albert, Smeaton, Nipawin, Tisdale, Clair, Humboldt, St. Breiux, Saskatoon, Biggar, North Battleford, Lloydminster, Glaslyn, Meadow Lake, and Pierceland.

Infestations in Alberta are expected to continue in 1981 with the same intensity and distribution as in 1980.

These predictions forecast the maximum levels of defoliation that might occur with normal weather conditions and larval development. Natural control factors such as adverse weather conditions, parasites, and diseases could reduce overwintering populations. Post-hatch population assessments should be made in the spring in order to assess the necessity of major control programs.

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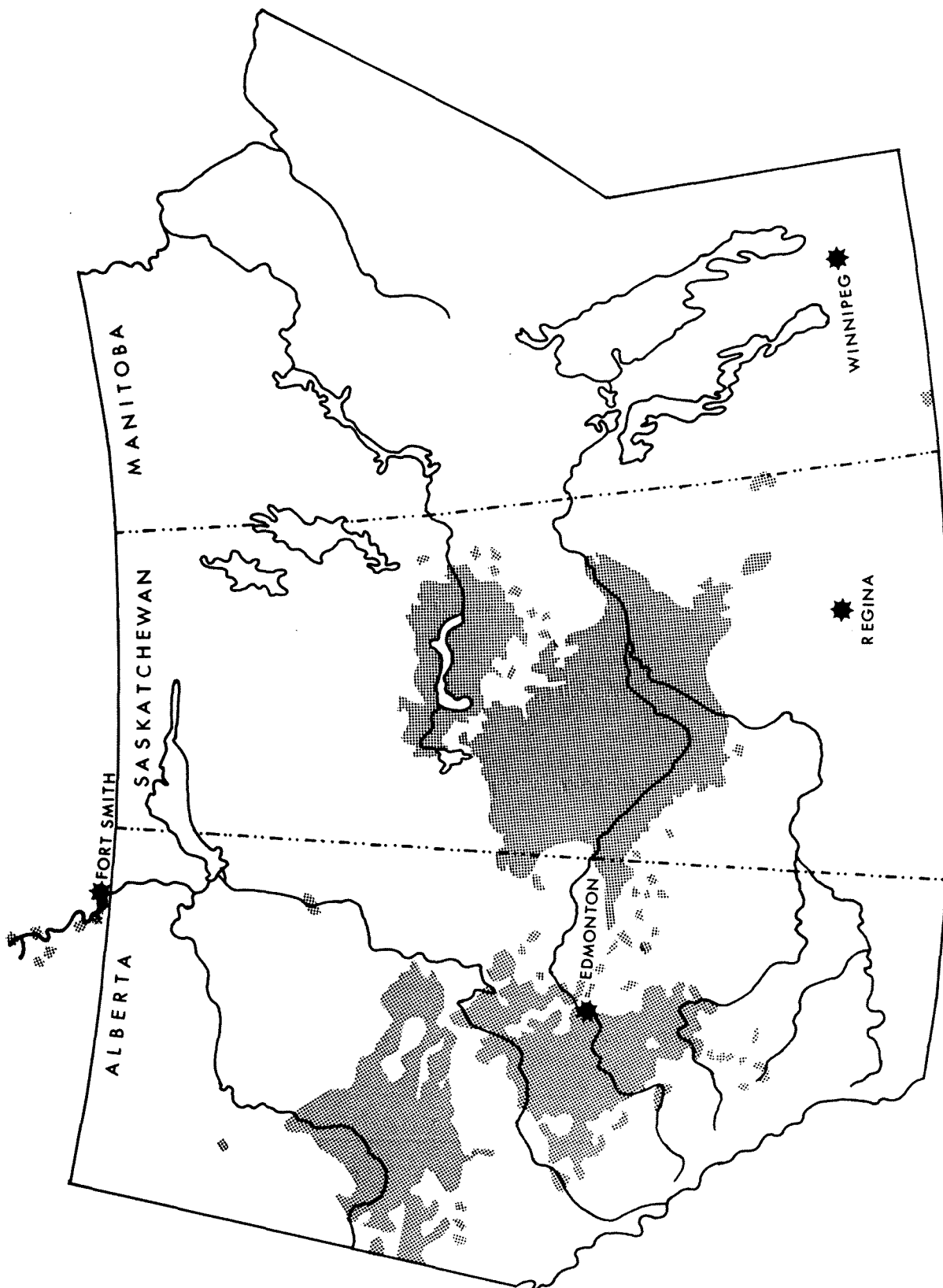


Figure 1. Distribution in 1980 of moderate to severe defoliation of trembling aspen caused primarily by the forest tent caterpillar and in some areas by the large aspen tortrix and the Bruce spanworm.