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CANADA

# PEST REPORT

Pacific Forest Research Centre • 505 West Burnside Rd • Victoria, B.C. • V8Z 1M5

December 10, 1979.

## CONE AND SEED PESTS

### PRINCE RUPERT AND PRINCE GEORGE FOREST REGIONS

1979

Don Doidge and Peter Koot

As in most of northern British Columbia, there was a very heavy cone crop on Sitka and white spruce trees in the Prince Rupert and Prince George Forest regions in 1979. Cones were collected at 19 locations in the Prince Rupert Region and examined in the field for spruce cone rust, Chrysomyxa pirolata, and at the Pacific Forest Research Centre for insect damage. Rust infection causes premature opening of the cones and abnormal germination of the seed, thus rendering them unsuitable for collecting. A combination of the rust and attack by the spruce cone borer, Hylemya anthracina, and the spruce seedworm, Laspeyresia youngana, rendered cones at 12 of the areas unsuitable for collecting (attached table and maps).

Cones were not collected in the Prince George Region but it is expected the same pests were present.

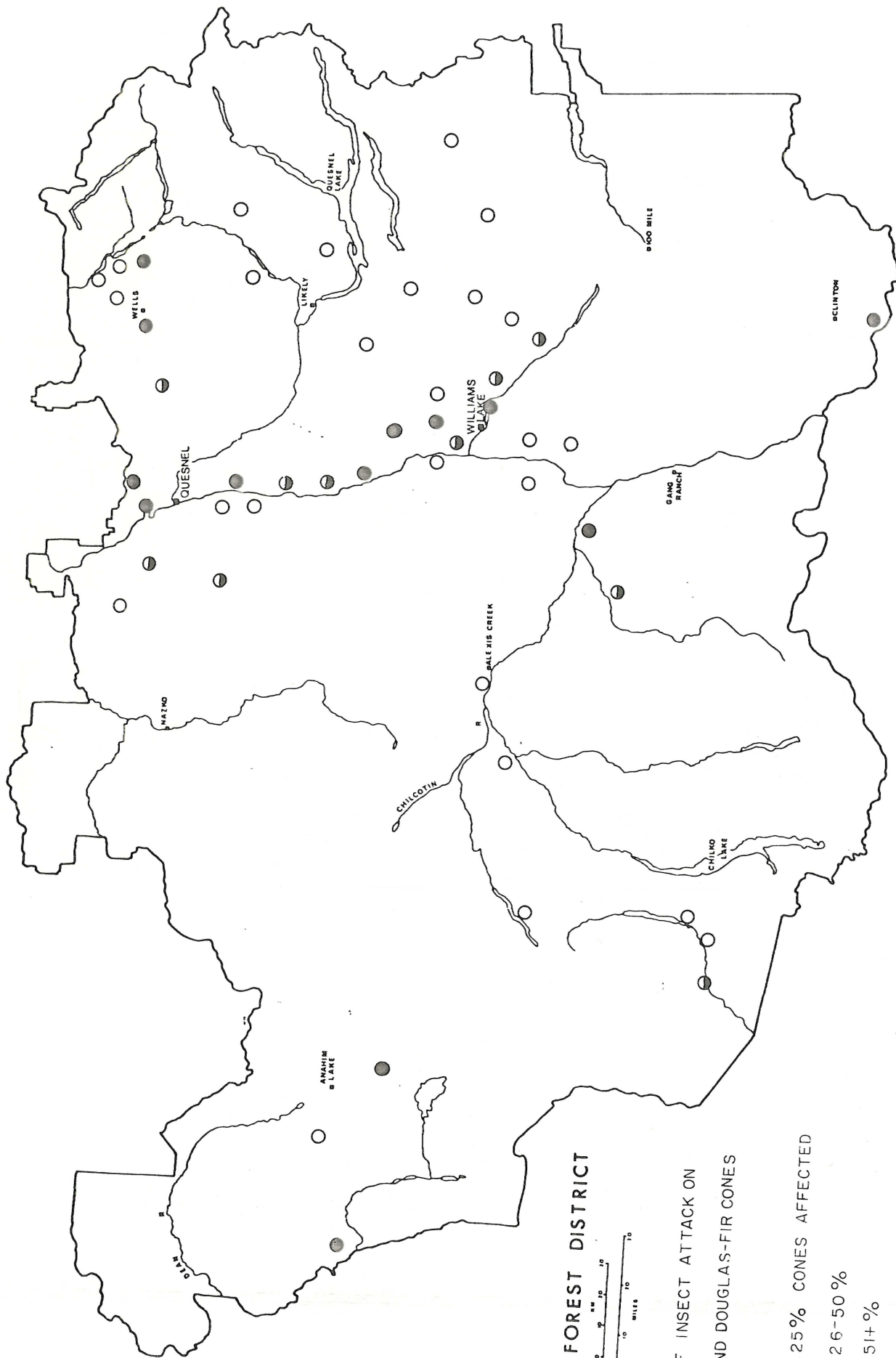
Evaluation of pest attack in white and Sitka spruce  
cones in the Prince Rupert Region in 1979.

| Location             | Tree species | % cones with rust <sup>1/</sup> | % non-diseased cones attacked by insects <sup>2/</sup> | % seed destroyed by insects <sup>2/</sup> | Area suitable for collecting <sup>3/</sup> |
|----------------------|--------------|---------------------------------|--|---|--|
| Houston              | WS           | 46                              | 80   | 56  | no   |
| Nadina R             | "            | 4                               | 60   | 48  | no   |
| Wistaria             | "            | 1                               | 55   | 63  | no   |
| Glacier Gulch        | "            | 27                              | 2  | 15  | yes  |
| Smithers-Bridge      | "            | 37                              | 50   | 23  | no   |
| Hudson Bay Mtn       | "            | 4                               | 55   | 54  | no   |
| McDonell L           | "            | 14                              | 25   | 31  | yes  |
| Topley Landing       | "            | 3                               | 100  | 72  | no   |
| Granisle Rd.         | "            | 3                               | 50   | 39  | yes  |
| Telkwa R             | "            | 8                               | 10   | 6   | yes  |
| Byman Cr             | "            | 53                              | 25   | 17  | no   |
| Smithers Landing Rd. | "            | 2                               | 80   | 77  | no   |
| W. side Kispiox R    | "            | 41                              | 5  | 8   | yes  |
| Kispiox              | "            | 54                              | 25   | 16  | no   |
| Kispiox R Ford       | "            | 77                              | 0  | 0   | no   |
| Km 35 Kispiox FDR    | "            | 72                              | 10   | 15  | no   |
| Km 40 W-Smithers     | "            | 68                              | 5  | 4   | no   |
| Skidegate            | sS           | 0                               | 5  | 4   | yes  |
| Aiyansh              | sS           | 0                               | 35   | 26  | yes  |

<sup>1/</sup> Based on 100 cones examined in each area.

<sup>2/</sup> Based on 20 cones examined in each area.

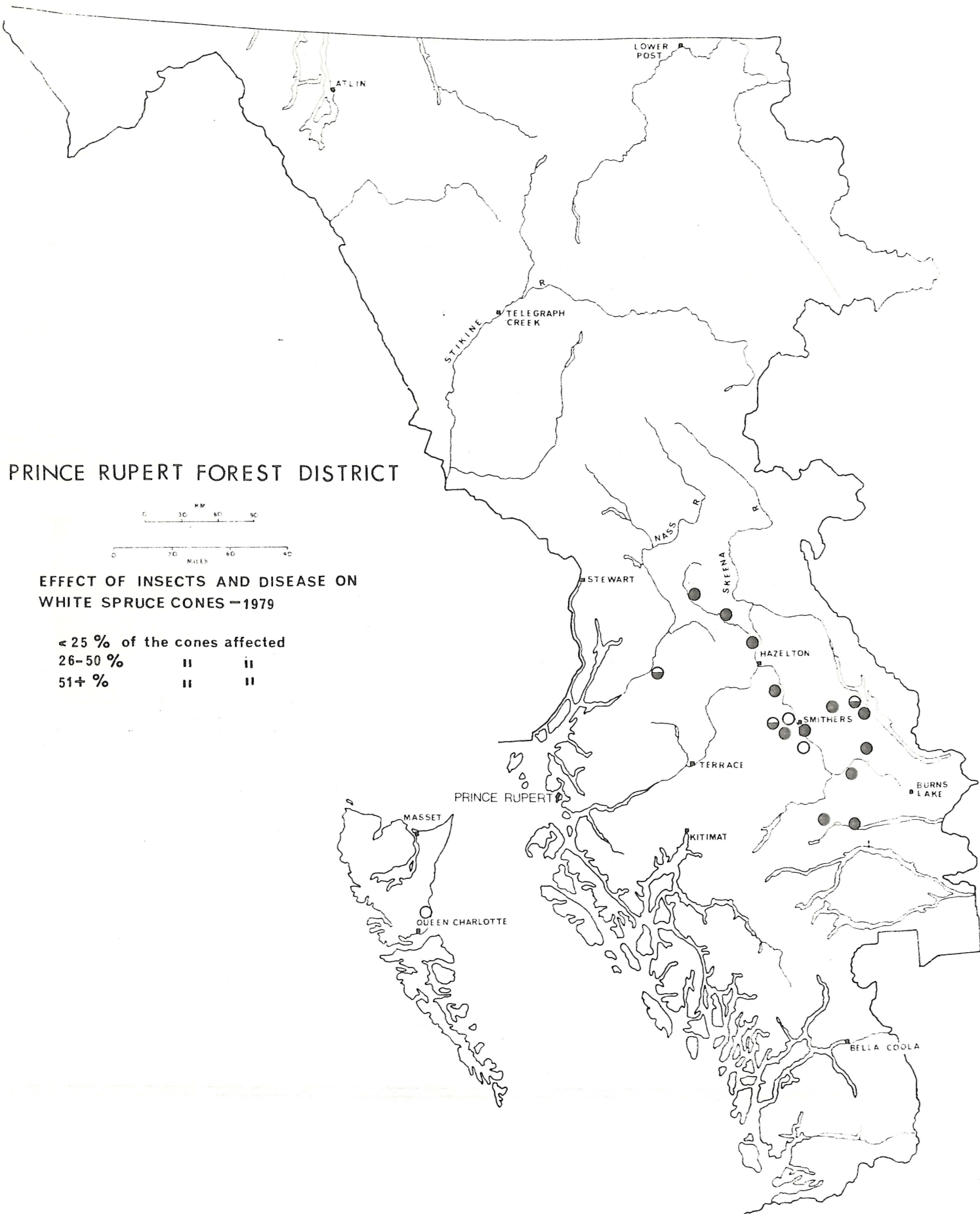
<sup>3/</sup> Not suitable when more than 50% of the cones affected.



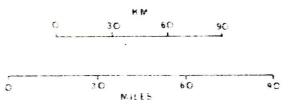
**CARIBOO FOREST DISTRICT**

EFFECT OF INSECT ATTACK ON  
 SPRUCE AND DOUGLAS-FIR CONES

- < 25% CONES AFFECTED
- ◐ 26-50%
- 51+%



PRINCE RUPERT FOREST DISTRICT



EFFECT OF INSECTS AND DISEASE ON WHITE SPRUCE CONES - 1979

- < 25 % of the cones affected
- 26-50 %        ||        ||
- 51+ %           ||        ||