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FILE REPORT NOR-Y-51

R. A. Blauel (1973)

THE ACCURACY OF MAIN STEM ATROPELLIS CANKER COUNTS MADE
ON STANDING PINE.

Northern Forest Research Centre
Environment Canada
Edmonton

The Accuracy of Main Stem Atropellis Canker Counts Made on Standing Pine

by R. A. Blauel

Cankers on 10 infected standing lodgepole pine trees were counted from the ground by four individuals familiar with Atropellis piniphila canker disease symptoms.

The trees were then felled and examined to determine the actual number of cankers present. The results of the examinations are recorded in the following chart.

<u>Tree number</u>	<u>Standing tree canker count</u>				<u>Average per tree</u>	<u>Felled tree canker count</u>	
	<u>Stem cankers</u>					<u>Stem cankers</u>	<u>Average error</u>
	<u>Observer</u>						
A	B	C	D				
1	6	6	8	9	7.25	15	50%
2	13	9	15	18	11.25	22	50%
3	11	10	13	22	14.0	33	50%
4	8	7	9	16	10.0	11	10%
5	6	6	7	14	8.25	17	50%
6	3	4	4	5	4.0	4	0
7	6	4	9	13	8.0	13	38%
8	8	6	8	18	10.0	16	37%
9	5	8	4	9	6.5	13	50%
10	2	2	2	2	2.0	3	33%

It is of special note that:

- 1) No "incipient cankers" (those which had not as yet broken through the outer bark, Hopkins 1963) were recorded.
- 2) Individual error in stem canker counts ranged from -9 (-69.9%) to +5 (+45%) per tree.
- 3) Total average error for the 10 trees was 36.4%.

In conclusion, counts of main stem Atropellis cankers made from the ground on standing infected pine are judged to be very inaccurate, thus invalidating this procedure as a means of determining the intensity fluctuations of the disease.

Literature Cited

- Hopkins, J.C. 1963. Atropellis canker of lodgepole pine: etiology, symptoms, and canker development rates. Can. J. Bot. 41: pp 1535-1545.