Not for publication

DWARF MISTLETOE WORKSHOPS PLANNING AND EXECUTION

by
J. A. Baranyay and R. B. Smith

FOREST RESEARCH LABORATORY
CANADIAN FORESTRY SERVICE
VICTORIA, BRITISH COLUMBIA

INTERNAL REPORT BC-23

DEPARTMENT OF FISHERIES AND FORESTRY
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I. Introduction

Dissemination of research results by direct, personal approach has been used sporadically by Canadian Forestry Service (CFS) personnel in the B.C. Region. Topics that have received one- or two-day attention in the field include spruce and Douglas-fir bark beetles, ambrosia beetles, methods of container planting, and decay of alpine fir advanced regeneration. These workshops were successful in acquainting practicing foresters with research results, especially those directly related to forest management practices. Extension of this type of program to include other problems seemed justifiable.

During the past decade, research on the biology, epidemiology, distribution, impact and control of dwarf mistletoe has increased in western Canada. Published research results (Smith 1969, Baranyay and Safranyik 1970 and Baranyay 1970) and survey records indicate that dwarf mistletoe causes an estimated 150,000,000 cu ft volume loss annually in western hemlock and lodgepole pine stands of British Columbia. Results obtained by Hawksworth and Hinds (1964) on lodgepole pine and by other research workers on other hosts (Korstian and Long, 1922, Pearson 1950, Pierce 1960, Shea 1963 and 1964, Childs and Edgren 1967) indicate that dwarf mistletoe causes losses of comparable magnitude in the western United States.

Fire has been the most important agent in the destruction and establishment of forests in western Canada, acting as a major natural controlling agent of dwarf mistletoe. Because of greatly improved fire protection and widely-used selective wood-harvesting methods, optimal conditions for intensification of dwarf mistletoe have been created in

many instances. The result of these unnatural conditions is that the aggregate amount of damage at present is very great and is increasing steadily. Data are sufficient to show that preventative and remedial measures are feasible and necessary to lessen future losses.

Even though all the facts are not known about dwarf mistletoe, there is enough information pertinent to its prevention and control to warrant serious consideration by forest managers. We therefore recommended that a series of workshops be arranged for forest managers, foresters and technical staff, with supervisory responsibilities from government and industry. Our intention was to provide up-to-date information about dwarf mistletoe in British Columbia, its impact in the forest, and to recommend practical preventative measures to prevent its establishment in new forests.

The program that resulted was more ambitious than any conducted previously in this Region. This report has been prepared to describe the planning and execution of the program and to suggest ways by which future educational endeavours can be improved.

II. Initial Planning

A meeting chaired by D. R. Macdonald, Program Manager, Protection, was held on April 21, 1970 to formulate the basic design of the workshops. Other participants were A. C. Molnar, Head, Insect and Disease Survey, T. C. Jones, Regional Information Officer and ourselves (Baranyay and Smith), as the two Research Scientists involved in regional dwarf mistletoe research.

It was agreed that to increase participation the workshops would be one-day affairs at various locations throughout B.C. Selection of locations

had to satisfy two general criteria: a) be in the vicinity of a concentration of foresters, and b) be in an area where dwarf mistletoe problems existed so that a field demonstration was possible. On this basis the following tentative locations were selected: Prince George, Terrace, Kamloops, Nelson, Squamish and Cowichan Lake. In selecting tentative meeting dates we had to take into account the possible severity of the fire hazard, other meetings or workshops and the stage of the parasite exhibiting the most important signs and symptoms. Late August and early September was suggested for lodgepole pine and larch dwarf mistletoe areas, and late September or early October for hemlock dwarf mistletoe.

Workshops were planned to consist of a forenoon illustrated seminar with emphasis on the dwarf mistletoe species prevalent in each area. The seminars were planned to begin at 10:00 a.m. to allow time for out-of-town participants to drive to the meeting. Three hours were allocated to the seminar, including a 15-minute coffee break and approximately 20-25 minutes for questions and discussion at the end. The field demonstration was planned to follow directly after a no-host, group luncheon. During the field demonstration, the group was to be divided into two, one section led by Baranyay, and the other by Smith. In this way closer contact between participants and the group leader was expected.

It was decided that suitable halls should be rented for the seminar at each location by the CFS, but that transportation on field trips should be arranged by personal vehicles. Rental of busses was rejected because of the uncertain number of expected participants.

Macdonald agreed that before detailed planning and preparation he would write to appropriate B. C. Forest Service and industrial personnel announcing our intention and soliciting some indication of interest and participation in the proposed program.

The following deadlines were established:

April 30 - Baranyay - Smith: Mailing list for Macdonald's initial letter.

July 15 - Baranyay - Smith: Pre-workshop tour; hall rental, selection of field demonstration area, direct contact with forestry personnel.

July 25 - Baranyay - Smith: Prepare a background report on dwarf mistletoe.

August 1 - Baranyay - Jones - Smith: Prepare a mailing list, invitation and the final program, and mail along with the background report.

August 20 - Jones: Publicity on the workshops in the B.C. Lumberman, Truck Logger and in various local weekly and daily newspapers and, if possible, radio coverage.

III. Pre-Workshop Tour

Since the majority of the 27 persons contacted by Macdonald expressed interest and their support of the proposed workshops, we went ahead with planning as originally proposed. We left Victoria on the 9th of June for a 15-day trip to make necessary arrangements. At each workshop location the appropriate B. C. Forest Service District Forester and Forester-

in-charge of Management were contacted to clear the proposed date of the workshop, obtain information about suitable meeting halls and luncheon possibilities, obtain a list of industrial operators in the district, and help select those larger companies employing foresters to whom the program would be of interest. A few foresters employed by industrial companies were also contacted personally, and the number of possible participants was discussed.

In each location field demonstration sites were selected, route sketches were drawn and necessary mileage data recorded. The local Forest Insect and Disease Survey Technician aided in this work. The planned field routes of the two study groups were marked with plastic tape at a distance far enough apart to avoid interference with each other. In addition, some of the more interesting mistletoe signs and symptoms were marked to facilitate their location during the field demonstration.

After the two-week preparatory tour we had a firm basis to set exact dates and locations, draft the final program and start work on the details of our presentation. Two changes in locations were made as a result of the pre-workshop tour; Creston was selected in place of Nelson, and the University of British Columbia area instead of Squamish.

IV. Detailed Planning

1) Invitations

With the lists of operators obtained during the preparatory tour, Departmental mailing lists and lists from the Council of Forest Industries of British Columbia, companies and individuals

were selected to receive invitations. An invitation signed by the Regional Director, the final program (Appendix 1) and the background report entitled "Dwarf Mistletoe in British Columbia" (Smith and Baranyay 1970) were mailed on July 27. A self-addressed prepaid post card requesting information on the number of participants was enclosed. Return of the post card was requested by August 20. After the receipt of these cards, hall rental and luncheon reservations were confirmed.

2) Preparation of presentation

Since the organization and presentation of the workshop was a team effort, the responsibilities as well as the material to be presented were divided equally between ourselves. In sharing the subjects, the individual's research interest and experience was the major governing factor. On this basis the following arrangement was made:

Introduction	-	Baranyay
Hosts and Distribution	-	Baranyay
Detection - Signs and Symptoms	-	Baranyay
Biology	-	Smith
Impact - lodgepole pine	-	Baranyay
- larch		
Impact - hemlock	-	Smith
- Douglas fir		
Control - Biological	-	Smith
- Chemical		
- Silvicultural	-	Baranyay

The presentation was based largely on color transparencies for illustration, many of which were available from our collections made

during the past 8-10 years; but certain photographs had to be taken to complete the presentation or to replace poor slides. All black and white tables and graphs selected for illustration from our own or other publications were re-drawn by the regional draftsman in color according to advanced visual aid practices. All graphs and maps were photographed so that only transparencies were used to illustrate the presentation. Title transparencies were also prepared (Signs and Symptoms, etc.) to mark chapters and facilitate switching between speakers. When the approximately 130 transparencies were assembled, joint rehearsals were conducted to eliminate overlapping, check timing, and improve presentation by criticism of each other's delivery. A tape recorder was useful in order to recognize and correct unpleasant mannerisms. During the last rehearsals a few colleagues were asked to attend and criticize our presentation.

3) Handouts, signs and other aids

Handouts were prepared containing a "comment card", a sketch of the route from the luncheon site to the field demonstration area (Appendix 2), and summaries of the dwarf mistletoe of B.C., their hosts and resistant tree species, dwarf mistletoe control recommendations and selected references (Appendix 2). Thus we provided the most essential practical information in written form, eliminating the need for extensive note-taking by participants. The comment cards were circulated to allow participants to remark on the shortcomings of the presentation so that subsequent improvements could be made. Reprints of several publications on dwarf mistletoe were made available to interested participants.

A large, attractive lobby sign was prepared in color (Fig. 1) with exchangeable meeting room designations.

Fig. 1. Lobby sign with exchangeable meeting room designation.

Arrows were constructed to mark the routes to field demonstrations (Fig. 2). The arrowheads were exchangeable to indicate left or right turns, as needed.

Fig. 2. Field-route marking arrow. Hank Doerksen, B.C.F.S., Prince Rupert, decorated the arrow with mistletoe-infected branches.

A small, portable podium with a light was prepared for the speaker. Attendance sheets for each workshop were prepared, with the following headings: name, title, affiliation and address. Other items included extension cords, flashlight pointer, stick pointer, projector with remote control, and two spare bulbs and screen. A tape recorder was used to record the questions and discussions.

4) Publicity

The Regional Information Officer, T.C. Jones, wrote articles for the trade journals B.C. Lumberman and Truck Logger to be published in the August issue. These articles announced the workshops, reviewed the importance of the dwarf mistletoe problem, listed the program and extended an invitation to interested persons. News releases were sent to various local weekly and daily newspapers at each workshop location, with photographic illustrations for publication a few days prior to the workshop. Some clippings are included in Appendix 3.

Besides newspaper coverage, Smith had a ten-minute radio interview with C.B.C. for broadcast over the Provincial network. The interview was broadcast during the week of September 7. C.K.D.A. Radio Station, Victoria, prepared two voice tapes with Jones. The first, broadcast on August the 20th, covered the mistletoe problem and announced the upcoming workshops. The second announced the Cowichan Lake workshop and was broadcast on September 30, before the meeting.

V. Execution of Workshops

The workshops were conducted according to the previously discussed plans. N. G. Bauman, Forest Research Technician, joined the team

to handle the technical aspects (projection, tape recording, photography) of the program and to aid in other organizational chores. One full presentation and all question periods during the seminars were tape recorded. Local F. I. D. S. Technicians (Rangers) attended the workshops and aided in field demonstrations. Color and black and white group photographs were made in all cases (Fig. 3), and candid shots were taken throughout the afternoon (Fig. 4).

Fig. 3. Participants of the Workshop in Creston, B.C.

The two separate groups usually met at the end of the demonstration to discuss questions of common concern. Discussions were very informal and depended on questions from the group for success. In addition to a general interest in features of the biology of the parasite, some of the topics discussed were:

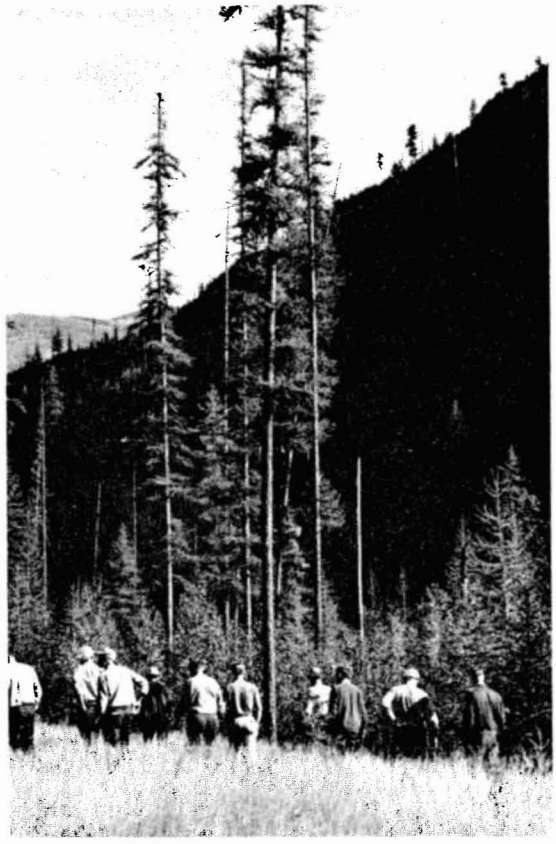

Fig. 4. Participants approaching a dwarf mistletoe infected larch stand during the field demonstration at Creston.

Prince George: Lowest age of infected trees; necessity of destroying all regeneration in an infected area; cost and effectiveness of drag scarifiers and drum choppers; effect of resistant species in mixed stands, and salvage of poor-site, heavily infected stands.

Terrace: Longevity of inactive (in terms of seed production) infections; reactivation of inactive infections; effectiveness of the 10-ft rule in dwarf mistletoe control, and methods of eradicating in-

fected advanced regeneration, e. g. slash burning, which is difficult to carry on in this area.

Kamloops: Salvaging infected stands; conflicts of suggested control measures with other interests, e. g. fisheries and agriculture (grazing), and productivity of infected versus healthy stands.

Creston: Problem of aesthetics when locating cutting boundaries at natural barriers to control dwarf mistletoe; leaving infected larch as seed trees, and clear-cutting infected lodgepole pine stands.

Vancouver: Treating areas missed during slash burns; combining elimination of residual infected trees with genetic improvement of seed source; size of residual hemlock that could be left with little risk of it already being infested, and effect of shorter rotations on impact of dwarf mistletoe.

Cowichan Lake: Manipulation of mixed stands to favor resistant species and suitability of some resistant species to various sites; introduction of resistant species; slash burning as a control, and thinning in infected stands.

VI. Cost of Workshops

Direct and indirect expenses were involved in the planning and execution of the workshops. The direct expenses were covered from dwarf mistletoe project funds and the indirect expenses from the operational budget of the Regional Laboratory. Direct expenses were the following:

Travel	-	$1,867.00
Transportation	-	500.00
Supplies	-	25.00
Rentals	-	85.00
	Total	$2,477.00

Man-days expended were as follows:

Research Scientists:

Pre-workshop tour	30
Workshops	26
Preparation	46
	102

Technicians:

Workshops	20
Photographic services	4
Drafting services	8
Preparation	6
	38

VII. Discussion and Conclusions

One hundred and forty-one foresters, woods managers, scientists and rangers from the B.C. Forest Service, forest industrial and consulting companies, universities and the Canadian Forestry Service participated in the six workshops. The attendance was lower than indicated on the returned registration cards (Table 1).

TABLE 1. Attendance at Workshops

Location of workshop	Date	Cards returned	Attendance	
			Indicated	Present
Prince George	Aug. 31	14	28	18
Terrace	Sept. 2	5	19	16
Kamloops	Sept. 4	12	16	20
Creston	Sept. 9	10	26	24
Vancouver	Sept. 29	18	46	30
Cowichan	Oct. 1	23	47	33
Total		82	182	141

It was concluded that the summer holidays affected the attendance before the Labor Day weekend, and ideal weather conditions for slash burning affected the two last workshops. Because of the fluctuation of attendance, a count was necessary in each case after opening the workshops to ascertain the number of persons attending the luncheon. It was helpful to have the third, more flexible member (Bauman) on the team to make phone calls, etc., without holding up the program. The luncheons caused some problems, but at the same time they gave us an opportunity to meet participants and leave as a group at the right time for field demonstrations.

Twenty-two comment cards were returned. Twelve praised the presentations, asking for others to cover additional important forest pests. Most persons commented on the good slides, easy-to-read charts and graphs. They were especially appreciative of our efforts to present loss figures in cu ft per acre.

Several participants found the room too dark to take notes during the seminar. They felt that a written outline of the main points of the seminar would have been worthwhile, or the provision of sufficient light for taking notes. Some found the seminar too long and asked for more discussion time. On at least one occasion the discussion period was limited because of a delayed start to accommodate late comers. While we did slant our presentation toward the problems of the particular location, a few persons felt that we should have confined the seminar entirely to local dwarf mistletoe problems. The comments were all well-taken and helped to make the workshops educational for us as well.

Recent invitations by the B. C. Institute of Technology and B.C.

Forest Service, Inventory Division, to repeat our seminar for their students and staff are indications that our efforts were fruitful. These additional seminars increased the total attendance to well over 250.

The effort to present workshops in some of the more remote areas was particularly well received. Foresters and their supporting staff welcomed the opportunity to talk with persons actively engaged in research, and to present some of the problems which they might encounter in applying our recommendations. Our written research results will have more meaning and impact for persons directly exposed to the problem. The workshops have created a greater awareness of dwarf mistletoe; however, only time will tell whether this will be followed by effective remedial measures.

VIII. Literature Cited

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APPENDIX 1

a. Invitation

b. Programme

c. Return card

CANADA

OUR FILE NO.
NOTRE DOSSIER Nº

YOUR FILE NO.
VOTRE DOSSIER Nº

DEPARTMENT OF FISHERIES AND FORESTRY
CANADIAN FORESTRY SERVICE

MINISTERE DES PÊCHES ET DES FORETS
LE SERVICE CANADIEN DES FORETS

FOREST RESEARCH LABORATORY
506 WEST BURNSIDE ROAD
VICTORIA, B.C.

July 27, 1970

An Invitation to Attend a Workshop

on Dwarf Mistletoe

The Canadian Forestry Service will present a series of field workshops, between August 31 to October 1, at Prince George, Terrace, Kamloops, Creston, Vancouver and Cowichan Lake, on how to prevent or reduce forest losses from dwarf mistletoe.

Research Scientists J.A. Baranyay and R.B. Smith will conduct morning seminars on the biology of dwarf mistletoes, their distributions, impact on the forest, and practical preventive and control measures, and will supervise field demonstrations in the afternoon. Emphasis will be given to the species prevalent in each area; ample time will be available for discussion.

Damage by dwarf mistletoes, in British Columbia, due to mortality, growth loss and lower quality products, exceeds 150 million cu ft per year. In lodgepole pine stands of the Cariboo, the annual loss is about 25 million cu ft.

The objective of the workshops will be to study these losses and to discuss practical preventive measures now available to prevent future losses.

Details of the workshops are given on the attached sheet. Arrangements have been made for a no-host luncheon at each location; prepayment is unnecessary. Transportation on field trips will be by personal vehicle.

The workshops have been designed for forest managers, foresters and technical staff with supervisory responsibilities.

Please indicate the number of persons expected to attend, and return the enclosed card before August 20.

G.P. Thomas
Regional Director

LOCATION AND DATE OF DWARF MISTLETOE WORKSHOPS [1/]

Location [2/]	Date	Seminar Meeting Place	No host luncheon Location	Cost $
Prince George	Aug. 31	Simon Fraser Inn Room 208	Simon Fraser Inn	2.00
Terrace	Sept. 2	Lakelse Hotel Large Sample Room	Lakelse Hotel	2.25
Kamloops	Sept. 4	B.C.F.S. District H.Q.	Canadian Inn Colounade Room	2.75
Creston	Sept. 9	The Downtowner Motel	Depo Restaurant Harvest Room	1.75
Vancouver	Sept. 29	Forest Products Lab. 6620 N.W. Marine Dr.	Ponderosa Pine, U.B.C.	2.00
Cowichan Lake	Oct. 1	B.C.F.S. Expt. Sta. Mesachie Lake	Expt. Sta. Dining Room	2.00

1/ Workshop seminars start at 10:00 a.m., luncheons at 1:00 p.m. and field trips at 2:00 p.m.

2/ Mistletoe species to be demonstrated on the field trips:

Lodgepole pine dwarf mistletoe	:	Prince George, Kamloops, Creston
Hemlock dwarf mistletoe	:	Terrace, Vancouver, Cowichan Lake
Larch dwarf mistletoe	:	Creston

CANADA
POSTAGE PAID
PORT PAYÉ

ON HER MAJESTY'S SERIVCE
SERVICE DE SA MAJESTÉ

FOREST RESEARCH LABORATORY
CANADIAN FORESTRY SERVICE
506 WEST BURNSIDE ROAD
VICTORIA, B.C.

ATTENTION: J.A. BARANYAY

NUMBER OF PERSONS FROM THIS ORGANIZATION ATTENDING
DWARF MISTLETOE WORKSHOP AT:

		MEETING	LUNCHEON
PRINCE GEORGE	Aug. 31	____	____
TERRACE	Sept. 2	____	____
KAMLOOPS	Sept. 4	____	____
CRESTON	Sept. 9	____	____
VANCOUVER	Sept. 29	____	____
COWICHAN LAKE	Oct. 1	____	____

NAME OF ORGANIZATION _____

APPENDIX 2

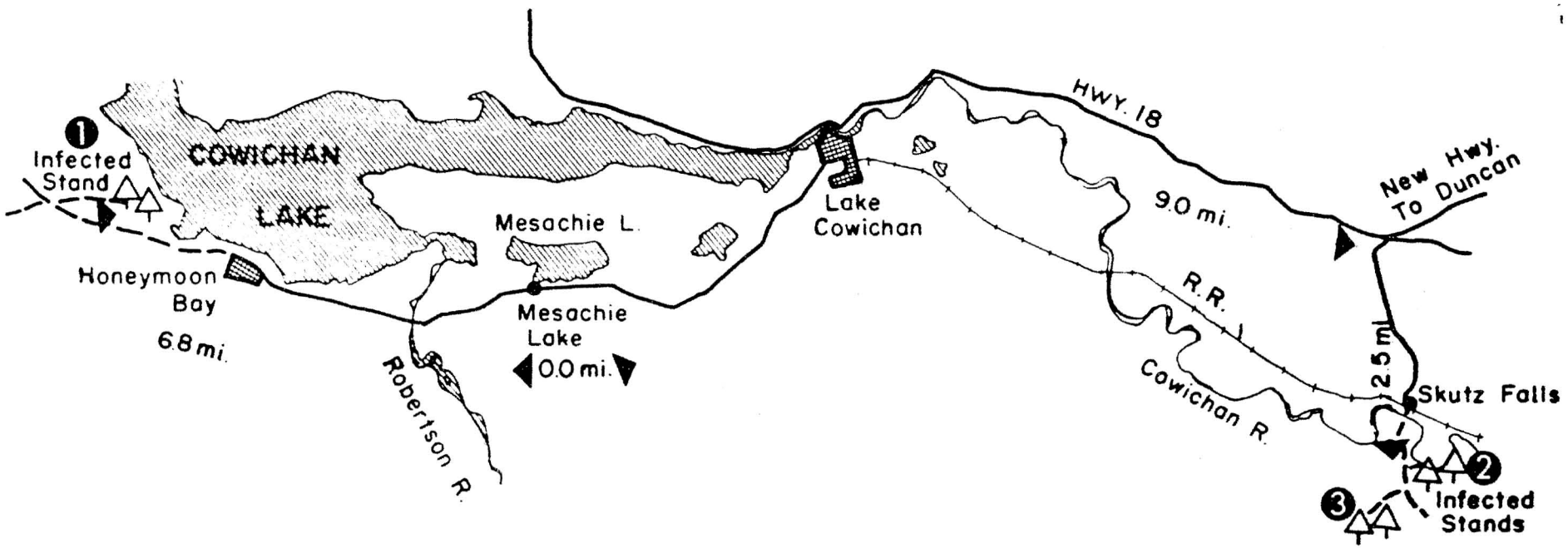
a. Location of mistletoe field demonstration

b. Dwarf mistletoes of B.C. and their hosts

c. Summary of dwarf mistletoe control recommendations

d. Selected references on dwarf mistletoe

Location of
Mistletoe Field Demonstration
Cowichan Lake, Oct. 1, 1970



Dwarf Mistletoes of B. C. and Their Hosts

Dwarf Mistletoe	Common name	Location	Natural hosts			Useful resistant species
			Major	Secondary	Minor[1]	
Arceuthobium americanum	Lodgepole pine dwarf mistletoe	Interior	Lodgepole pine	Ponderosa pine	White spruce Engelmann spruce	Douglas fir Alpine fir Western larch
Arceuthobium campylopodum f. tsugensis	Hemlock dwarf mistletoe	Coast	Western hemlock Mountain hemlock	Lodgepole pine (Shore pine)	Sitka spruce Grand fir Pacific silver fir Alpine fir White pine Engelmann spruce	Douglas fir Western red cedar
Arceuthobium campylopodum f. laricis	Larch dwarf mistletoe	Interior	Western larch Alpine larch	Lodgepole pine	Ponderosa pine White pine Engelmann spruce Alpine fir Grand fir	Douglas fir Western red cedar Western hemlock
Arceuthobium douglasii	Douglas fir dwarf mistletoe	Interior	Douglas fir		Grand fir Englemann spruce	Ponderosa pine Western larch Lodgepole pine

1/ These trees are only occasionally attacked or not severely damaged. If ecologically suited, they should be favored, along with resistant species, in areas where direct dwarf mistletoe control is not feasible. They are capable, however, of producing inoculum which can carry infection to major and secondary hosts.

Forest Research Lab., Victoria, B.C. Aug./70

SUMMARY OF DWARF MISTLETOE CONTROL RECOMMENDATIONS

Survey

Record the location and extent of dwarf mistletoe infected stands during timber cruising, cut-layout or logging operations to facilitate control.

Prevention

Adopt measures that prevent dwarf mistletoe from becoming established in regeneration after fire or logging.

In the coastal area where slash burning is widely used, logged-over areas with dwarf mistletoe-infected original stands should have priority for slash burning.

Check whether fire destroyed all infected trees, re-treat if necessary.

Locate future clear-cut borders along natural or man-made barriers to mistletoe or in healthy stands during cut-layout operations to avoid re-entry of dwarf mistletoe.

Cut infected bordering stands or plant 120-ft wide barrier strips by using resistant species before regeneration becomes established.

Sanitation

Age classes up to 15 years should have priority for treatment because it is in these classes that disease intensity is the lowest.

Survey and record recent burns and "clear-cut" areas with infected fire or logging residuals in Pl. Df. Lw, Hw. stands.

Remove merchantable infected residuals if present and destroy unmerchantable infected residuals. Thin and sanitize regeneration in a 75-ft

radius around a residual infected tree or in a 55-ft wide strip along infected stands or large residual groups.

Infected branches under 2 inches in diameter can be safely pruned if the dwarf mistletoe infection is not closer than 4 inches from the bole.

Two retreatments at 3-year intervals are generally necessary for success.

Infected old residual trees are recognized by their brooms. In infected young stands the presence of dwarf mistletoe plants is the best indicator of infection, and whether marking for thinning or selecting leave-trees at the time of cutting, the operation must be carried out when the mistletoe plants are obvious, during the non-winter months (optimal time, April and May for lodgepole pine and Douglas-fir mistletoe and August and September for hemlock and larch mistletoe).

To sanitize 16-40 years old Pl, Df and Lw stands all trees should be removed up to a distance of 50 ft from the infection center. An additional 40-ft strip should be thinned and sanitized.

In 16-40 years old, fully stocked hemlock stands, the best dwarf mistletoe suppression can be obtained by maintaining canopy closure. This way mistletoe seed production is eliminated by shading and trees growing in good sites may outgrow the parasite.

Salvage

Lightly infected stands are best held for logging to rotation age because loss would be minimal.

Stands with heavy infection will suffer large growth-losses by the time rotation age is attained. Early removal of such stands would be warranted to get the land back into maximum production.

Forest Research Laboratory
Victoria, B.C.

August, 1970

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Forest Research Laboratory
Victoria, B.C.

August, 1970

APPENDIX 3

a. Newspaper clippings

Colonist 30.9.70

Mesachie Lake Session

Mistletoe Stu
Warns of D

A one-day workshop dealing with aspects of a mistletoe problem in B.C. forests will be held Thursday in Mesachie Lake as part of a province-wide information campaign being conducted by the federal forestry department. Philosophy behind the workshops, which are directed ...ersons associated with the B.C. F... forest... to the... of th... be ... su...

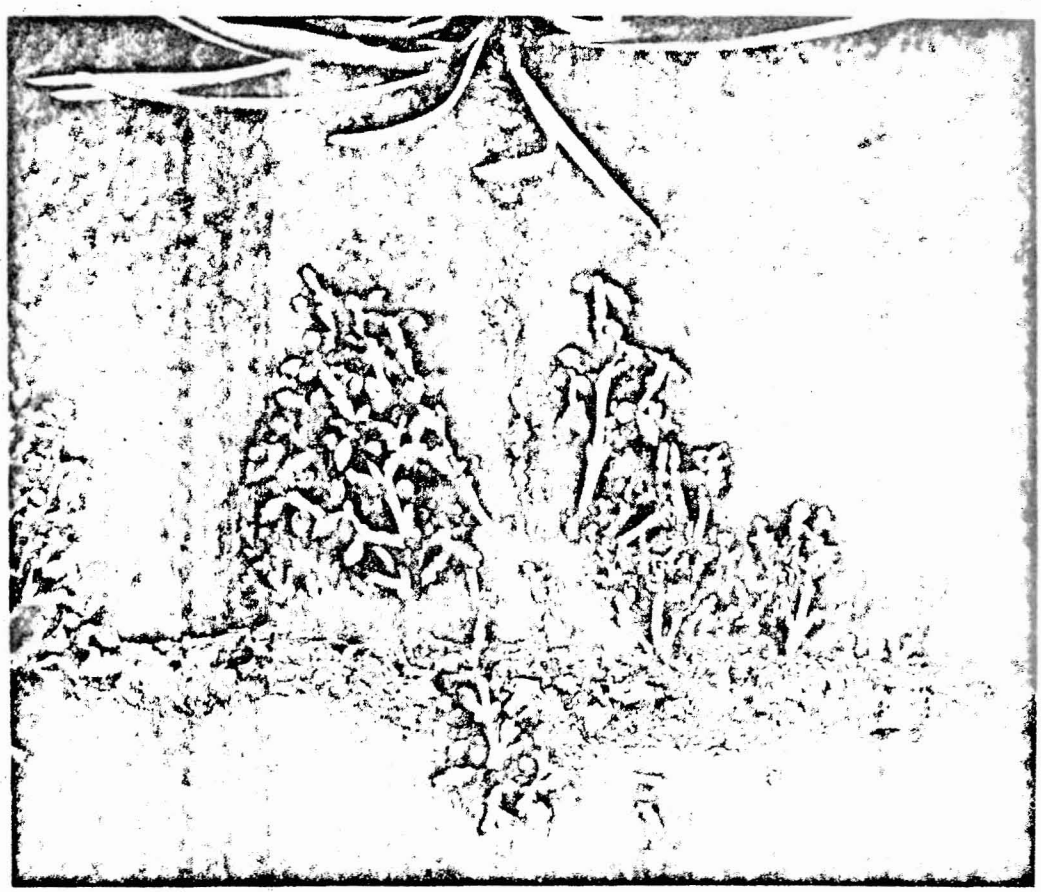
Kamloops Daily Sentinel
AUG 25 1970

Forestry planning workshop

Dwarf mistletoe, a million dollar parasite in British Columbia forests, will be the subject of a one day workshop to be held in Kamloops Sept. 4 by the Canadian Forestry Service.

Research scientists J. A. Baranyay and R. B. Smith of the Pacific Forest Research Laboratory in Victoria will conduct a morning seminar in the B.C.F.S. district headquarters on the biology of dwarf mistletoes, their distributions, impact on the forest, and practical preventive and control measures, and will supervise field demonstrations near Lac La Jeune in the afternoon.

"Damage by dwarf mistletoes, in British Columbia, due to mortality, growth loss and lower quality products, exceeds 150 million cubic feet per year," said Mr. Baranyay. "In lodgepole pine stands of the Cariboo, the annual loss is about 25 million cubic feet."



BRANCH OF A TREE infected by dwarf mistletoe, a tiny parasitic plant. The impact of this forest pest is estimated to exceed 150 million cubic feet of wood annually in British Columbia.

Lake Cowichan Workshop

Mistletoe Parasite Not the Kissing Kind

Dwarf mistletoe, a million dollar parasite in British Columbia forests, will be the subject of a one-day workshop being held in Lake Cowichan October 1, by the Canadian Forestry Service.

Research scientists J. A. Baranyay and R. B. Smith of the Forest Research Laboratory in Victoria will conduct a morning seminar in the Mesachie Lake Community Hall on the biology of dwarf mistletoes, their distributions, impact on the forest, and practical preventive and control measures, and will supervise field demonstrations west of town in the afternoon.

"Damage of dwarf mistletoes, in British Columbia, due to mortality, growth loss and lower quality products, exceeds 150 million cubic feet per year," said Mr. Baranyay, "Hemlock stands on Vancouver Island and other sections of coastal B.C. are heavily infected by this parasite.

The objective of the worksho... is to demonstrate damag... caused by dwarf mistletoe ... Vancouver Island and to discus... practical preventive measure... now available to prevent furthe... losses.

Mr. Baranyay said the worl... shop has been designed f... forest managers, foresters a... technical staff of the Briti... Columbia Forest Service a... the forest industry. There is ... charge and interested parti... are welcome to attend.