OUTLINE OF MATERIAL UBC FORESTRY COURSE

FOR DEAN ROLLER

COURSE: FORESTRY 350 (2) SILVICULTURE - Silvicultural Systems; intermediate cuttings; natural regeneration; applied silviculture in the various regions of North America
Text book: Hawley and Smith: " PRACTICE OF SILVICULTURE" 6th edition 1954. 3 lectures & 2-hour "laboratory" per week SPRING ONLY (FROM AFTER CHRISTMAS)

I) The course is required of all forestry and forest engineering students at the University of British Columbia

II.) The course outline roughly parallels the presentation in the textbook, but with emphasis wherever possible on local conditions and present day problems and attempted solutions in British Columbia, and with special reference to the Douglas fir region in southwest British Columbia and the Pacific Northwest of the U.S.A. However, as knowledge develops, more attention is being given to the problems of the interior, insofar as is possible in an introductory course.

III/ OUTLINE: FORESTRY 350:

1. The place of silviculture in forestry
   a) The Forest Geography of British Columbia with reference to the probable future intensity of permanent forest management and the importance of silviculture; Field trip to view the relief map at the P .N.E.(Exposition Grounds) in the B.C. building. Discussion on factors influencing the practice of silviculture in B.C.
   b) Economic basis for silviculture. Effect of large supplies of old growth timber, decadence, protection, accessibility, and markets. B.C.and Canada in relation to world timber and pulp markets and silvicultural implications . Need for much more silvical, ecological (soils, climate etc.) information on our species and forest types and forest geography. Probable trends with time (brief crystal gazing).

2. METHODS OF SILVICULTURE; Methods of cutting, use of fire, methods of logging ( as distinct from cutting (patterns) methods) , methods of brush disposal.

3. REGENERATION AND STAND CARE:

4. METHODS OF NATURAL REGENERATION ( ARTIFICIAL REGENERATION IS HANDLED IN A SEPARATE COURSE:- FORESTRY 355- SEEDING AND PLANTING)

5. CLEAR CUTTING SYSTEMS: Here the text is followed pretty closely to outline the major ideas. In explanation, the history of trends in coastal B.C. is used to illustrate transition from exploitative partial cutting;- high-grading choicest trees, to high-lead logging methods of exploitative and wasteful clearcutting, leaving large areas of logging residuals, high fire hazard etc. up to more modern types

of harvest cutting on the coast of B.C. These new ideas & practices include clear cutting in patches- or so called "staggered settings", and the thinning of the most progressive managers includes plans to try strip cutting in appropriate places.

6. SEED TREE SYSTEMS: Again treatment follows text with expansion to trace local conditions and applications and possible uses in various parts of the province, nation, or world.

7. SHELTERWOOD SYSTEMS: Same general treatment, although little application of this method can be illustrated in Canada or the Northwestern U.S.A. Suggested types and regions where the system may develop in the future. Attention called to wild forest conditions resembling shelterwood stand structures.

8. SELECTION SYSTEMS: Important concepts of rotation and cutting cycle relationships impinging on forest management and regulation course's have to be introduced here. Little refinement is attempted however in this course. Important distinguishing features between silvicultural system of selection and the "loggers choice", "high-grading" type of cutting locally known as "selective logging".

9. COPPICE SYSTEMS: Treated very briefly in an historical perspective, but importance in eastern Canada and U.S. deciduous farm wood-lots pointed out. Locally of very minor use in cascara culture, or in extremely local instances of less importance than commonly thought- in coast redwood of California.

10. INTERMEDIATE CUTTINGS: Text excellent on this and thinnings. Theory stressed. Present day interest in B.C. growing, but so far very little commercial thinning is feasible in B.C. Much interest and growth in knowledge however, especially in coastal Douglas fir - here and in Washington and northern Oregon.

(so called "thinnings")

11. THINNINGS: First cuttings of this sort applied now are combinations of improvement, salvage, and true "thinnings". Theoretical basis is very well covered in Hawley and Smith)

12. PRUNING: Little experience to date in B.C, mostly in Douglas fir. Some enthusiastic advocates. Others hold back because of uncertainty as to future log grade price margins, demand for clear lumber, plywood of surface grade etc.

13. METHODS OF CONTROLLING CUTTINGS. Only briefly covered.

14. APPLIED SILVICULTURE IN BRITISH COLUMBIA. Most of this is covered- or an attempt made-in the course of covering the subjects listed above. Some field trips are made ( or planned for the future.) The Green Timbers nursery is visited, as laboratory time is scheduled in this course but not in F. 355. An all day trip to Vancouver Island to see intensive management

F. 350 Outline continued.

experiments along silvicultural lines on holdings of Mac Millan Bloedel Co. near Nanaimo.
Field trips on Campus forest are also made, and increasingly we hope to use the University Forest at Haney for field trips as more demonstrations of applied silviculture are developed.

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III. List of prescribed text books etc.

a) The text is "PRACTICE OF SILVICULTURE" by Hawley and Smith

Most of the book is usually covered, although usually chapters 7,8,and 9 and sometimes others are omitted for lack of time. Chapters 8 and 9 are essantially dealt with in other regular courses, and chapter 7 (coppice) is covered in lecture.

b) Quite a little emphasis is placed on reproduction survey methods, although much of this may properly belong to forest mensuration. Research notes covering the general field are used for reference and samples are appended to this report. ( See papers by Allen, Griffith and Ker; Parker and Potter; and Dembicki.)

c) A list of(mimeographed) references on stocking is appended. ( no special importance is implied- need more of this sort of material however,)

d) Other standard references on silviculture in English which are recommended and available for student reference include:

Baker, F.S. 1934 Theory and Practice of Silviculture

_____ 1950 Principles of Silviculture

Troup,R.S. 1952 Silvicultural Systems

Cheyney, E.G. 1942 A merican Silvics and Silviculture

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In conclusion, if this does not give the professors what they need, please see me and I can loan much more reference material on Northwest silviculture in detail.
Further, I am appending samples of recent examinations given in the course of possible use as indicating the general scope of the course.

Sincerely,

Philip G. Haddock

PhilipG. Haddock
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