

# TREMBLING ASPEN

## *Bibliography*

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WINNIPEG MANITOBA  
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FORESTRY BRANCH MAY, 1968

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# TREMBLING ASPEN BIBLIOGRAPHY

by

J. M. Shoup, L. D. Nairn and R. H. M. Pratt

## INTRODUCTION

This is the second in a series of bibliographies to be prepared for the more common tree species in the Manitoba-Saskatchewan Region. The purpose of the bibliographies is to provide ready access to literature relating to various aspects of forestry including the ecology, silviculture, growth, entomology, pathology, and utilization of the tree species. The bibliographies should prove useful to the practicing forester as well as to the research forester.

The bibliography on trembling aspen (Populus tremuloides Michx.) is presented in two sections. The first is a subject listing by the Oxford System of Decimal Classification for Forestry, and the second an alphabetical listing. In addition, a synopsis of subject matter headings and their corresponding numerical assignment based upon the O.D.C. system for forestry is presented. The prime source for literature cited herein has been from Forestry Abstracts (published by Commonwealth Agricultural Bureaux, Farnham Royal, England). Additional material has been outlined from publications received by the Forestry Branch, Department of Forestry and Rural Development library in Winnipeg, Manitoba. The classification of all literature has been reviewed by the authors and, where necessary, reclassified into one or more subject categories. The bibliography is considered complete up to and including 1966 publications, however, many 1967 publications have been included.

At the time that this bibliography was in its final stages of preparation, the authors became aware of a somewhat similar publication on poplar by R. E. Farmer and J. S. McKnight<sup>1</sup>. This bibliography is

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1

Farmer, R. E. Jr. and J. S. McKnight. 1967. Populus: a bibliography of world literature 1854-1963. United States Dept. Agriculture, For. Serv., Southern For. Exp. Sta., Res. Pap. SO-27, 132 p.

highly recommended for those requiring a complete literature review of the genus Populus. The most complete study of trembling aspen in any one publication is found in the book by Graham et al<sup>1</sup>.

Revised bibliographies will be prepared frequently to ensure their usefulness. No doubt all past publications on trembling aspen are not included in this bibliography and the authors would appreciate hearing of any omissions so that they may be included in the first revision.

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1

Graham, S. A., R. P. Harrison, and C. E. Westell Jr. 1963. Aspens. Phoenix trees of the Great Lakes Region. Ann Arbor. The Univ. Mich. Press, 272 p.



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168 HISTOLOGY

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Mature stand of trembling aspen

181 SILVICULTURAL CHARACTERS OF TREES

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Typical bark of mature aspen

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Site preparation in aspen stand prior to planting

221 HIGH FOREST SYSTEMS

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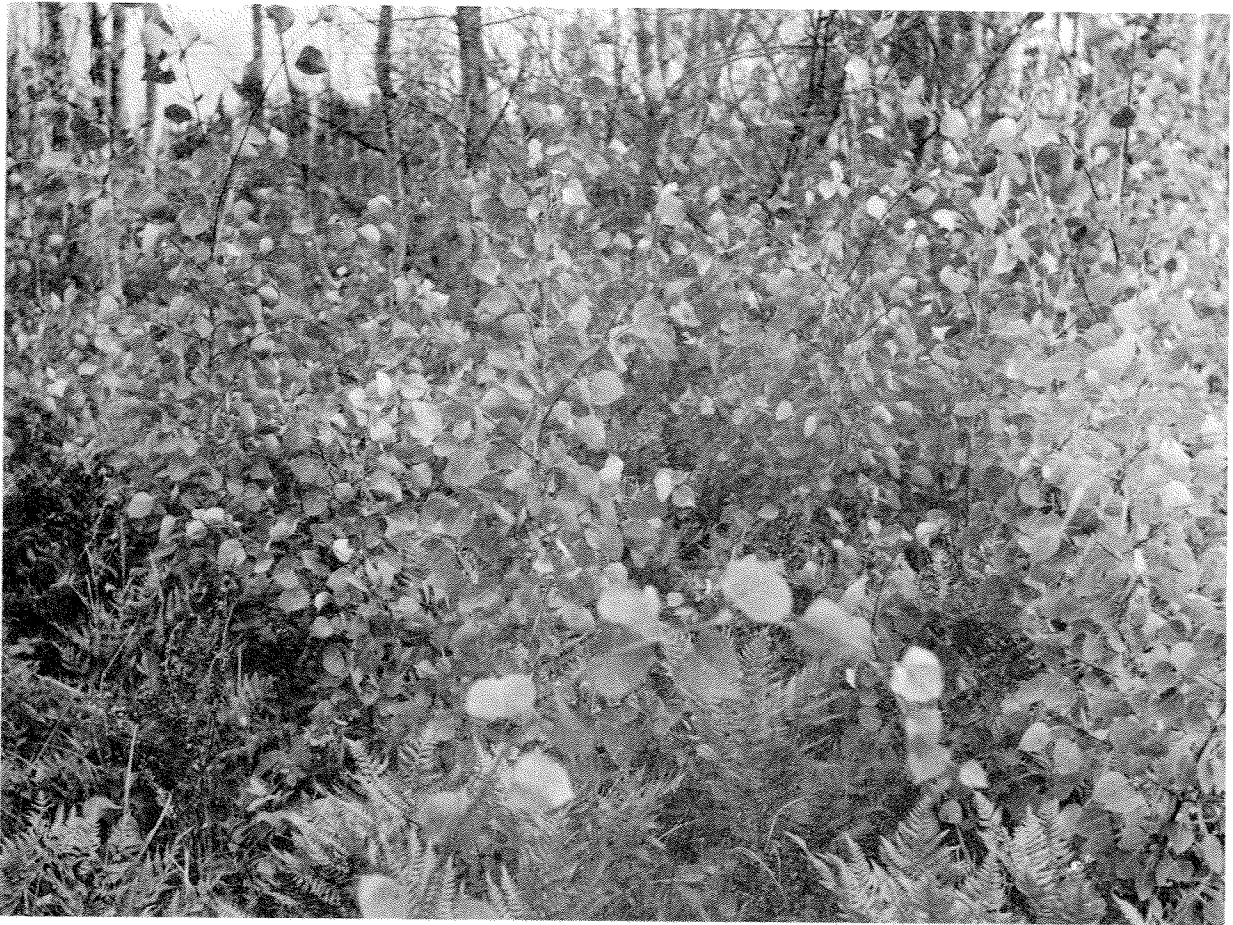
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231 NATURAL REGENERATION

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Natural regeneration of aspen from root suckers

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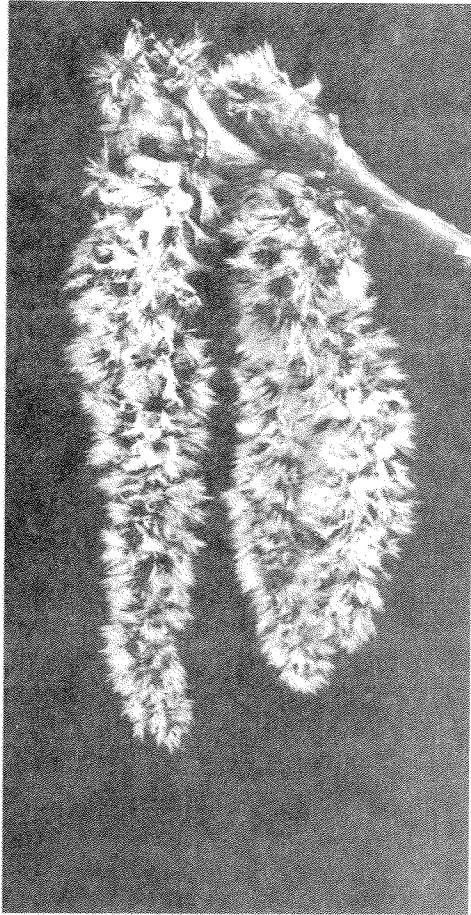
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232.2 PREPARATORY WORK AUXILIARY MEASURES

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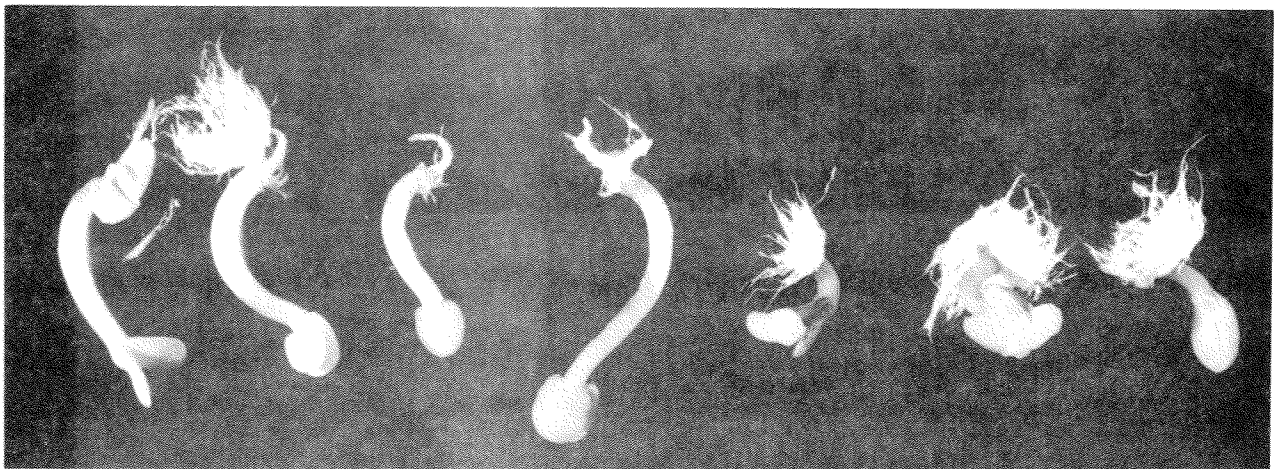
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232.328 VEGETATIVE PROPAGATION

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Male flowers on aspen catkins



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- 232.4 FORMATION OF STANDS BY PLANTING  
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- 233 AFFORESTATION (OF PARTICULAR TYPES OF LAND)  
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Natural and thinned stands of pole-size aspen

242 THINNINGS

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Aspen killed by aerial application of herbicide to release white spruce

243 OPENING OF THE CANOPY (INCREMENT FELLINGS, OVERHEAD RELEASE AND IMPROVEMENT FELLINGS)

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26 COMBINATION OF FORESTRY WITH AGRICULTURE AND PASTORAL HUSBANDRY  
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Plantation of poplar hybrids for park development

29 MISCELLANEOUS (SILVICULTURE)

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32 FELLINGS AND RELATED OPERATIONS

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33 DEGREE OF UTILIZATION AND WASTE

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36 TOOLS, MACHINES AND EQUIPMENT FOR FELLING AND RELATED OPERATIONS

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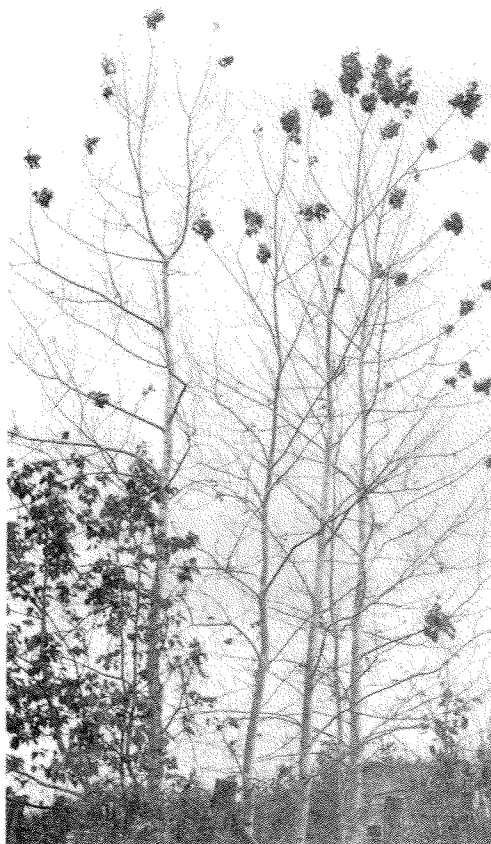
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Frost damage to aspen foliage



Lightening strike



Wind damage to pole size aspen

42 INJURIES FROM INORGANIC AGENCIES  
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435 BENEFITS OF FIRE CONTROL. INJURIOUS EFFECTS OF FIRE

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436 BENEFICIAL EFFECTS OF FIRE. USES OF FIRE IN SILVICULTURE AND OTHER FORMS OF HUSBANDRY

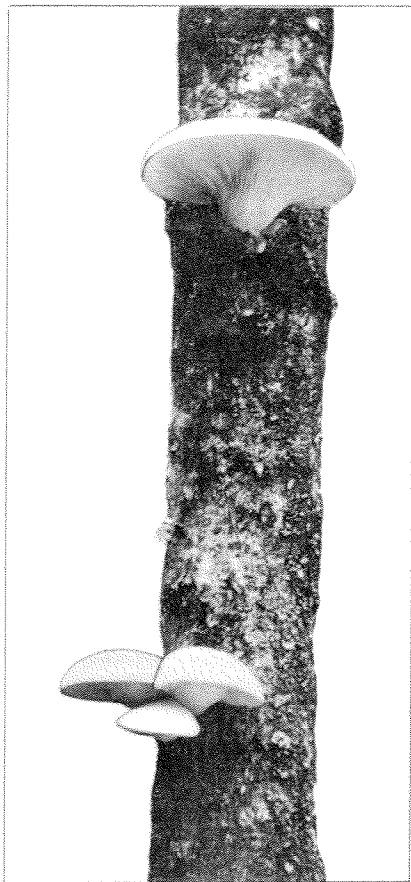
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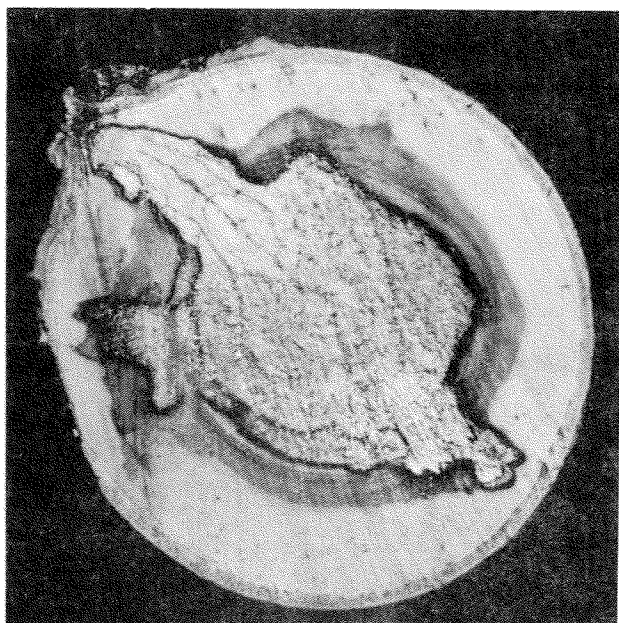
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Beaver clear-cut

451 DAMAGE BY MAMMALS

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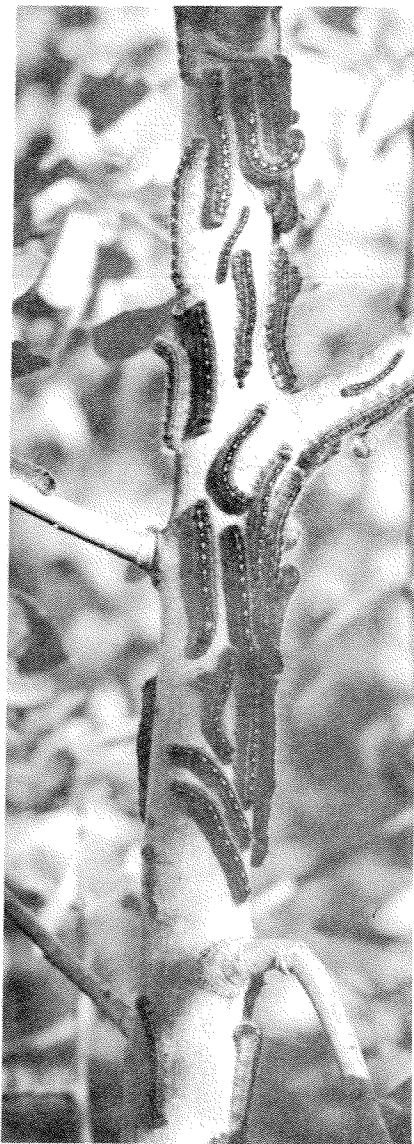
452 BIRDS

Christensen et al 1951, Packard 1942.

453 DAMAGE BY INSECTS

Anderson & Schmiede 1959, Baldwin 1949, Barker 1948, Barter & Brown 1949, Barter & Cameron 1955, Batzer et al 1954, Batzer & Waters 1956, Beckwith & Anderson 1956, Benoit 1965a, b, Blair et al 1955, Brammanis 1963, Brown 1962, 1966, Christensen et al 1951, Churchill et al 1964a, b, Condrashoff 1962, 1964, Condrashoff & Arrand 1962, Cottrell 1962, Craighead 1950, Day 1958, Drouin et al 1961, Duncan et al 1956, Duncan & Hodson 1958, Elliott & Wong 1966, Ewan 1960, Froelich et al 1955, Ghent 1958, Graham et al 1963, Graham & Harrison 1954, Graham & Mason 1958, Harrison 1959, 1960, Heller & Schmiede 1962, Henson 1954, 1958, Hildahl 1951, Hildahl & Reeks 1960,





Forest tent caterpillar larvae

Hodson 1941, Hofer 1920, Knight 1963, Kusch 1963, Lindquist 1963, Martineau & Monnier 1966, Nord et al 1965, Osgood 1963, Peterson 1947, Peterson & Worden 1963, Prentice 1951, 1952, 1954, 1955, 1962, 1963, Reeks & Smith 1956, Rose 1958, Rose & Smereka 1959a, b, Schmiede & Anderson 1958, 1960, Sippell 1962, Smereka 1965, Smereka & Lejeune 1953, Swaine 1918, Townes 1965, Turnock & Prentice 1950, Wickman 1963, Wong 1957, Wong et al 1963, Wong & McLeod 1965, Wong & Melvin 1967, Wong & Turnock 1959.

46

DAMAGE TO TREE GROWTH BY MAN

Packard 1942.



Migration of forest tent caterpillars following complete defoliation of an aspen stand.

5. FOREST MENSURATION, INCREMENT; DEVELOPMENT AND STRUCTURE OF STANDS, SURVEYING AND MAPPING

52 MEASUREMENTS OF THE STEM DIMENSIONS AND VOLUME OF TREES, STANDS, FOREST AND TIMBER

Bartoo & Hutnik 1962, Bonner 1966, Brace 1966, Buckman 1961, Gevorkiantz 1944, 1947, Gevorkiantz & Olson 1951, Gevorkiantz & Zehngraff 1943, Golding & Hall 1961, Haack 1963, Johnson et al 1930, Kabzems 1966, Kabzems & Senyk 1967, Kirby 1953, 1965, MacLeod 1952, 1954, Maini & Coupland 1964b, Morawski et al 1958, Peterson 1961, Robinove & Horton 1929, Stoehr 1954, 1955, U.S. Dept. Agriculture 1931c, 1948a, Valiquette 1964, Wallin 1958.

53 SPECIAL MEASUREMENTS OF TREES AND STANDS (CROWN DIMENSIONS, DENSITY, ETC.)

Bella & Jarvis 1967, Henson 1954, Steneker & Jarvis 1963, Strothmann & Heinselman 1957, Young et al 1964.

54 ASSESSMENT OF SITE QUALITY

Coile 1952, Duffie 1965, Gevorkiantz 1956, Graham et al 1963, Graham & Harrison 1955, Heinselman & Zasada 1955, Jamison 1963, Jarvis et al 1966, Johnson & Worthington 1963, Jones 1966, 1967, Kabzems & Senyk 1967, Kirby et al 1957, Kittredge & Gevorkiantz 1929, Lafond 1956, Losee 1954, MacLean & Bedell 1955, Meyer 1956, Mueller-Dombois 1964, Roe 1935, Sisam 1938, Stoeckeler 1948, 1956, 1960, Strothmann 1960, U.S. Dept. Agriculture 1935, Westveld 1952, Wilde & Paul 1959, Wilde & Pronin 1950, Wilde & Zicker 1948, Zahner & Crawford 1963.

55 AGE DETERMINATION

Ghent 1952, 1954, Kirby 1953, Lynn 1964, Maini & Coupland 1964b, Rose 1957.

561 INCREMENT IN HEIGHT, DIAMETER, BASAL AREA, FORM AND QUALITY

Bickerstaff 1946, Cayford 1957, Churchill et al 1964a, Dawning 1960, Duncan et al 1956, Duncan & Hodson 1958, Ghent 1952, Herman 1949, Jarvis et al 1966, Kirby et al 1957, Kozlowski & Winget 1962b, 1964, Martin 1965, Steneker 1964, 1967, Winget & Kozlowski 1965.

562 VOLUME INCREMENT

Allison 1958, Bella & Jarvis 1967, Bickerstaff 1946, Cayford 1957, Day 1958, Hubbard 1956, Jarvis 1960, Jarvis et al 1966, Kirby et al 1957, Lees 1963, Steneker 1964, 1967, Stoeckeler 1948, Tunstell 1945, Voigt et al 1957.

- 566     YIELD TABLES AND THEIR CONSTRUCTION
- Anderson 1936, Bulgrin et al 1966, Gregory & Haack 1965, Johnson 1957, Kirby 1962, Kirby et al 1957, Kittredge & Gevorkiantz 1929, MacLean & Bedell 1955, MacLeod & Blythe 1955, Plonski 1956, Zehngraft 1948.
- 567     STAND TABLES
- U.S. Dept. Agriculture 1933b.
- 568     OTHER MENSURATIONAL STUDIES OF STAND CONSTITUTION AND CHANGES THEREIN
- Cooley & Lord 1958, Kirby et al 1957.
- 58      SURVEYING AND MAPPING. AERIAL SURVEY
- Bonnor 1966, Heller & Schmiede 1962.
6.     FOREST MANAGEMENT
- Bush News 1959, Dickson 1909, Garland & Zasada 1948, Heinselman 1952, Reinke 1955, Timberman 1958, Weigle & Frothingham 1911, Zasada & Zehngraft 1948, Zehngraft 1949.
7.     MARKETING OF FOREST PRODUCTS
- Canada Dept. Industry 1967, Eades 1940, Horn 1954, Varlamov 1962, Zasada 1949.
8.     FOREST PRODUCTS AND THEIR UTILIZATION
- 81      WOOD AND BARK. STRUCTURE AND PROPERTIES
- Abramovitch et al 1963, Abramovitch & Micetich 1962, 1963, Baylis & Pepper 1958, Berlyn 1965b, Betts 1943, Brink 1954, Brown et al 1957, Brown & Valentine 1963, Browning & Bublitz 1953, Buchanan et al 1949, Buijtenen 1960, Busche 1960, Cantin 1965, Clausen et al 1949, Clermont 1961, Clermont & Bender 1958, Clermont & Schwartz 1951, 1952, Davis 1947, Davis & Evert 1965, Einspahr & Buijtenen 1961, Gerhards 1964, Haas & Kremers 1964a, Hale 1955, Harrocks 1960, Hossfeld & Kaufert 1957, Hughes 1965, Jagels 1963, Jenson & Davis 1953, Johnson 1947, Johnson et al 1930, Jones et al 1957, 1961, Jones & Wise 1952a, b, Kass 1965, Kaufert et al 1955, Kavanagh & Pepper 1955, Kennedy 1965, Kennedy & Smith 1959, Lamb 1967, Langhammer 1963, Marchessault et al 1963, Markwardt & Wilson 1935, Milks & Purves 1956, Mugg 1959, Paul 1956, 1962, 1963, Pearl 1957, Pearl & Beyer 1957, 1959, 1960a, b, 1962, 1963, Pearl & Busche 1960a, b, Pearl et al 1961, 1962a, Pearl & Harrocks 1961, Pepper et al 1951, 1959, Pepper & Hagerman 1954, Pepper & Siddiqueullah 1961, Pepper & Steck 1963, Perdue & Nieschlag 1962, Persson-Hüppel 1963, Ribi 1953,

Sacre 1963, Sacre & Evrard 1963, Sergeeva & Domburgs 1959, Simmonds et al 1953, Smith & Neish 1964, Sonley 1956, Springer 1961, Springer et al 1963, Stanek 1958, Stone 1956, Sultze 1957, U.S. Dept. Agriculture 1963, Valentine 1962, 1963, Wood Information Series Timber Commission Eastern Canada 1939, World Timbers 1966, Worster & Sugiyama 1962, Zinbo & Timell 1965.

82 CONVERSION SHAPING ASSEMBLY AND FINISHING OF WOOD

Haas & Kremers 1964b, Miller 1952.

83 TIMBER MANUFACTURING INDUSTRIES AND PRODUCTS

Bell & Jefferson 1953, Bulgrin et al 1966, Canada Dept. Industry 1967, Feihl 1958, Fernow 1917, Garland 1948, Gunderson 1949, Heebink 1962, Johnson et al 1930, Miller 1952, 1953, Panshin 1950, Rees 1947, Sands 1947, Sump 1947, Telford & Malcolm 1947, Zasada 1947.

84 PRESERVATION AND OTHER TREATMENTS TO IMPROVE THE PROPERTIES OF WOOD. DAMAGE BY BIOLOGICAL AGENCIES AND ITS CONTROL

Arsenault 1964, Atwell 1956, Behe 1962, 1964, Fritz 1954, Hossfeld et al 1957, Kaufert 1948, Kaufert et al 1955, Krzyzewski 1964, Merrill 1964, 1965, Merrill et al 1964, Merrill & French 1964a, b, c, Smith 1947, Trenk 1955.

85 "GRADING" OF WOOD AND WOOD PRODUCTS

Hinds 1963, Hughes 1965, Kemp 1957, 1959, Northern Hemlock and Manufacturers Association 1949, Northern Pine Manufacturers Association 1949, Oberg et al 1956, Terrell 1953, Wallin 1958, Zasada 1948.

86 PULP INDUSTRIES. CHEMICAL UTILIZATION OF WOOD. COMPOSITE MATERIALS MADE WHOLLY OR PARTLY OF WOOD MATTER

Anderson & Hrubesky 1949, Arsenault 1964, Atack & May 1962, Besley 1960, Brown & McGovern 1950a, b, Buchanan et al 1947, Buijtenen et al 1958a, b, Craig 1948, Diehm et al 1960, Dorland et al 1954, Foote & Parsons 1955, Garland 1949, Gardner & Einspahr 1964, Hossfeld et al 1943, Hyttinen et al 1947, 1960, Hyttinen & Schafer 1948, Keays 1967, Keller & McGovern 1949, Kingsbury et al 1946, Lea 1954, Legg & Hart 1960, Mackin 1948, March 1948, McGovern 1946, McGovern et al 1949, McGovern & Mackin 1950, Montano & Hossfeld 1951, Nikandrov 1962, Nihlen & McGovern 1943, Pearl & Beyer 1964, Quick 1956, Schafer 1947a, b, Schafer & Hyttinen 1950a, b, Schantz-Hansen 1945, Schuerch 1963, Simmonds & Hyttinen 1964, Springer et al 1963, Stone 1955, Stone & Forderreuther 1956, Stranks 1961, Timber of Canada 1959, Toole 1947, Trivedi et al 1948, Varlamov 1962.

89      OTHER ("MINOR") FOREST PRODUCTS

Faber 1960, Hossfeld & Hunter 1958, Keller 1950, Pearl 1963,  
Pearl & Darling 1959a, b, 1965, Pearl & Ester 1965

9.    FORESTS AND FORESTRY FROM THE NATIONAL POINT OF VIEW

Brown et al 1957, Campbell 1912, Canada Dept. Industry 1967,  
Chase 1947, Dickson 1909, Groff 1966, Northeastern Forest  
Tree Improvement Conference (Fifth) 1957, Zasada & Kluender  
1946, Zehngraff 1949.

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