

Andrew Hutchinson fonds

Compiled by Ted Goshulak (1980)
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Fonds Description

Andrew Hutchinson fonds. – 1947-1965.

5.8 m of textual records and other materials.

Biographical Sketch

A.H. Hutchinson was born in York Mills, Ontario. He obtained his B.A. and M.A. in Education and Biology from McMaster University and Ph.D. from the University of Chicago (1915). Hutchinson came to the University of British Columbia in 1917 as assistant professor and acting head of the Department of Biology. Beginning in 1921, he served as head of the Department of Botany until 1939, when he became head of the reorganized Department of Biology and Botany. Hutchinson continued in this capacity until his retirement in 1954 although he remained as a special and honorary lecturer for another three years. Hutchinson was an active member of many professional societies and government advisory bodies, and was a member of the Royal Society of Canada. He participated in numerous university, church, and other community activities. His pioneering work in marine biology laid the foundations for UBC's Institute of Oceanography. He died in 1975.

Scope and Content

Fonds consists of course materials, correspondence, subject files, reports, clippings, printed material, and index cards, relating to Hutchinson's work with the UBC Department of Biology and Botany. The fonds reflects his research interests which included studies of conifers, forest ecology and tree genetics, particularly of the Douglas fir; to a limited extent his personal life is also documented. The fonds also includes approximately 3,600 photographic negatives and prints (most black and white, some in colour), 1,200 lantern slides, and some transparencies. The photographs are mainly microscopic images of plants and trees in British Columbia, Mexico, Cuba, Florida and South Africa in the early part of the twentieth century. There is also a photograph album accompanying Hutchinson's report *Grazing Lands in British Columbia*. Finally, there are a number of maps, charts, and diagrams, which are listed and stored separately.

Notes

Title based on the contents of the fonds.

Includes 3 photographic prints, 58 maps, charts, and diagrams, and 1 album with 57 photographs.

Inventory available. There is a separate listing of the fonds' maps, charts, and diagrams in the UBC Special Collections Map Inventory.

The album and photographs are managed and stored as part of Rare Books and Special Collections' [B.C. Historical Photograph Collections](#).

File List

Box 1

- 1-1 "Bryophytes - Mr. J.C. Dohert"
- 1-2 "Bryophytes - Notes"
- 1-3 "Physiology Notes - Plant Physics"
- 1-4 "Physiology Notes - Plant Chemistry"
- 1-5 "Physiology Notes - Growth Development"
- 1-6 "Evolution & Hereditary Notes"
- 1-7 "Cytology Notes"
- 1-8 "Fungi"
- 1-9 "Algae"

Box 2

- 2-1 "Spermatophytes - Notes"
- 2-2 "Pteridophytes - Notes"
- 2-3 "Flora - Local - Chicago"
- 2-4 "Local Flora - Chicago"
- 2-5 "History of Botany"
- 2-6 "Geographic Botany - Notes"
- 2-7 "Physiographic Ecology - Notes"
- 2-8 "Anatomy Ecological Notes"

Box 3

- 3-1 "Forestry Genetics - References: 1950-54" [Biology 331]
- 3-2 "Forest Genetics - Outlines: 1951-52" [Biology 331]
- 3-3 [Biology 430/431 - Genetics]
- 3-4 "Reports - Pulp & Paper Research Institute of Canada: 1956"
- 3-5 "Manuscript - Binary Relativity: August 1964"
- 3-6 [Committee on Forest Tree Breeding in Canada]
- 3-7 "The Unity of the Biophysical World..." (Presented for Consideration of the Interdisciplinary Committee of the American Institute of Biological Science)
- 3-8 [Correspondence re: Dr. Hutchinson's publications]
- 3-9 [Forest Genetics: A Report ...]
- 3-10 "Graph $(a+b)^4$: Multiple Factors"
- 3-11 [C. Heimburger - Report on Forest Tree Breeding in 1957]
- 3-12 [D.L. McMullen - Ambrosia Beetles and Their Control in B.C.]
- 3-13 "Forest Genetics - Class Reports: 1957"
- 3-14 "Douglas Fir - Open House Display: 1958"

Box 4

- 4-1 "Report - Evaluation of Tree Growth Through An Analysis of the Progenies..."
- 4-2 "Binary Series - Type II (Refer to Pyramid & Circle Charts)"
- 4-3 "Frequency Distribution of Types Within Polyzygous Population"
- 4-4 "Pascal's Triangle In Relation To Frequency Distribution of Genotypes"

- 4-5 "The Binary Principle of Life"
- 4-6 "Binary Codes As Related to Molecular Structure..."
- 4-7 "Height Growth (Seedling) Nutrient Sensitivity"
- 4-8 "Genetics of Climatic Tolerance in Relation to Genetic Variability..."
- 4-9 "Reference - Alvin Calvin"
- 4-10 "Mutation and Harmonic Progression"
- 4-11 "Integration of the Chord Indices and Midpoint Values..."
- 4-12 "Examples of the Binary Progression Series Relative to Chord Indices"
- 4-13 "A Comparison of the Circle, the Ellipse, the Hyperbole & the Parabola"
- 4-14 [Correspondence with U.B.C. President]
- 4-15 "Research Grants: 1956-57 (68-0090; 67-0524)"
- 4-16 "General Requisition Book (11 Dec. 1950 - 14 Aug. 1952)"
- 4-17 "Research Council - Requisition Book"
- 4-18 "Personal Mail - May 1954"
- 4-19 "Timre Orvos"
- 4-20 "Bookstore"
- 4-21 "Polygonal Presentation of Polyphase Phenomena"
- 4-22 [Miscellaneous]
- Box 5
- 5-1 "Factorial Scale"

- 5-2 "Committee on Forest Tree Breeding in Canada: 1960"
- 5-3 "The Binary Principle of Life"
- 5-4 "Research Polygonal Graphing"
- 5-5 "Erwin Schrödinger - What is Life?"
- 5-6 "What is Life? by Erwin Schrödinger (Notes)"
- 5-7 "Mutation and Genetic Progression" (Harmonic Progression)
- 5-8 "Acceleration Progression - Growth Curves"
- 5-9 "Rasner Horn Angles and Symmetry"
- 5-10 "Presidential Address - Royal Society of Canada - Flavelle Medal: 1949"
- 5-11 "Research"
- 5-12 "Polygonal Graphing"
- 5-13 "Binary Frequency Distribution"
- 5-14 "Papers: Orr-Ewing"
- 5-15 "C.E. Woolliams - The Role of Magnesium & Iron in the Formation of Chloroplasts & their Relation to Mitochondria"

- Box 6
 - 6-1 [Dept. of Biology and Botany Course Lists]
 - 6-2 [Hills: A Ready Reference to the Description of the Land of Ontario and its Productivity]
 - 6-3 [Catalogues related to Biology and Botany]
 - 6-4 [The Principles Involved in Polgenic Selection from Polyzgous Population of Douglas Fir]

- 6-5 "National Research Council - Accounts: 1957-58"
- 6-6 "Research Budget Statement - August 31,1958"
- 6-7 "The Cyto-Operative System Basic to the Binary Frequency Distribution of Multiple Factors - Polygenic Alleles"
- 6-8 [Forest Genetics & Forest Tree Improvement A Statement of Projects ... Initiated ... and Proposed...]
- 6-9 [National Research Council - Conferences & Meetings: 1957-61]
- 6-10 [The Orderly Progression of Adaptive Population ...]
- 6-11 [10th International Congress of Genetics, Montreal, 20-27 Aug. 1958]
- 6-12 "Forestry - Personnel & Correspondence: 1957"
- 6-13 [V.J. Krajina - Ecology of the Forests, of the Pacific Northwest]
- 6-14 "Gilles Bros. - 1958-59"
- 6-15 "Seed Sources Picea - 1960"
- 6-16 "Binary Phases & Logarithm 32"
- 6-17 "Correlation of Squares - Decimal & Binary"
- 6-18 "Seed Sources - Supplies - Requests: Receipts: 1960"
- Box 7
- 7-1 "Spruce Seed Sources: 1960"
- 7-2 "Cone Collection: 1959"
- 7-3 "The Binary System in Relation to Logic & Calculus..."
- 7-4 [Correspondence: Incoming & Outgoing]

- 7-5 "Western Plywood Co. Ltd."
- 7-6 [Author Cards]
- 7-7 [Chemistry and Engineering News - Annotated Bibliographies]
- 7-8 "ADP, ATP, AMP"
- 7-9 [Biosynthesis of Purine Nucleotides]
- 7-10 "Amino Acids - Lowy - Text: Organic Chemistry"
- 7-11 "Carbohydrate Metabolism - Nucleotide"
- 7-12 "Kelley, L. - Witt's Theory of Color"
- 7-13 "D.N.A."
- 7-14 "Electrophoresis"
- 7-15 "Nucleotides"
- 7-16 [Wieland, T. - RNA, DNA & Nucleotides]
- Box 8
- 8-1 "Paulina, L. - 'The Nature of the Chemical Bond: 1960'"
- 8-2 "Biosynthesis of Pentoses"
- 8-3 "Purines & Pyrimidines - Pauling and Davidson"
- 8-4 "Ribose & Deoxyribose"
- 8-5 "R.N.A."
- 8-6 "Purine - Finar, I.L."
- 8-7 "Tautomerism & Resonance"

- 8-8 "Theory & Terms"
- 8-9 "Comparisons re: Thymine to Adenine"
- 8-10 "Transforming Principles - Zamenhof"
- 8-11 "DNA Model Kit"
- 8-12 [Dept. of Agriculture - Directory: Laboratories & Staff]
- 8-13 [Canadian Fed. of Biological Societies - Program of the First Annual Meeting, 9-11 June 1958]
- 8-14 "National Research Council - Genetics"
- Box 9
- 9-1 "Forest Genetics - Newspaper Clippings"
- 9-2 [Botanical Congress Symposium - Papers & Correspondence: 1958-59]
- 9-3 "American Genetic Association"
- 9-4 [UBC Dept. of Buildings & Grounds, Campus Block Plan: 1956]
- 9-5 "C.M. Goethe - Genetics"
- 9-6 "Dr. V. Krajina: 1958"
- 9-7 [Correspondence: Incoming & Outgoing]
- 9-8 [Biology 331 - Forest Genetics: Final Exams, 1957-58]
- 9-9 "Orr-Ewing: Thesis, 1956"
- 910 "Students - Renshaw"
- 9-11 "Forest Genetics Research Foundation"
- 9-12 "Short Courses"

913 "Matriculation Outlines"

9-14 "Biology Exam Papers"

9-15 [Biology I - Lectures Notes]

Box 10

10-1 "Economic Botany - Lab Outlines & Exam Papers"

10-2 [Forest Botany for Returned Soldiers: 1918-19]

10-3 "Biology II"

10-4 "General Physiology"

10-5 "Biology I - Laboratory Outlines"

10-6 "Canadian Botanical Association: 1965"

10-7 "Royal Society of Canada: 1965"

10-8 "Forest Genetics - NRC Requisition Book"

10-9 "Pulp & Paper Research Institute of Canada"

10-10 "Summer 1961 Records - Section A"

10-11 "Recommendations - Dr. Lewis"

10-12 [Bibliography - Research at the Institute of Forest Genetics, 1927-61]

10-13 "Supplement - Summary of the Potential Progression..."

10-14 "Binary System"

Box 11

11-1 "Canadian Genetics Association"

- 11-2 "Biological Station, Nanaimo - Historical: 1958"
- 11-3 "Oceanography"
- 11-4 "Graduates: Bolotin - MSc.; Stark - PhD.: 1958"
- 11-5 "Faculty Association: 1958"
- 11-6 "Alumni Association: 1958"
- 11-7 "B.C. Academy of Science"
- 11-8 "Rotary Memorial Bursaries: 1958"
- 11-9 "Storer, Tracy I. - Society of Naturalists: 1958"
- 11-10 "Phycological - DeToni: Library & Herbarium: 1958"
- 11-11 "Dean Allen - Forestry: 1959"
- 11-12 "Addresses - Western Forest Genetics Association Members"
- 11-13 "Botanical Society of America"
- 11-14 "Royal Society of Canada"
- Box 12
- 12-1 [Report on Tree Improvement Work at the Acadia Forest Experiment Station, 1957-58]
- 12-2 "Karl Sax - Arnold Arboretum - Jamaica Plain, Mass."
- 12-3 "Sewage & Parks - City"
- 12-4 "Teachers Insurance and Annuity Association: 1954-57"
- 12-5 "Forest Disease"
- 12-6,7 "Fifth World Forestry Congress" [Seattle, WA: 29 Aug. - 10 Sept. 1960]"

12-8 "Fifth Pacific Science Congress: 1933 - Post-Congress Tour"

Box 13

13-1 "Manuscript Genetics: Progeny"

13-2 [Douglas Fir - Growth, Activity: 1959-62]

13-3 "Seed - Progeny Tests (Thunder Bay)"

13-4 "Tables of Analyses - Progeny Tests (Individual [female symbol] Parents - Wind Pollinated: 1956)"

13-5 "Nursery Data - D.Fir - Section A & B: 1957"

13-6 [Manning Seed Company]

13-7 "Seed Plots: 1958-59 (White Birch, Ash)"

13-8 "Selection & Use of the Phenotypic and Genotypic Products of the Dihybrid Cross Mendelian Type and Supplementary Type"

13-9 [Canadian Institute of Forestry - Vancouver Section]

13-10 [Institute of Forest Genetics, Placerville, CA]

13-11 [Committee on Patents & Patent Rights]

13-12 [American Society of Limnology & Oceanography - Pacific Section]

13-13 [Faculty Housing]

13-14 [Texas Forest Service - Suggested Research Problems for Graduate Students]

13-15 "Courses - Alan Orr-Ewing"

13-16 [Subject Matter Coding, Tree Breeding Bibliographical Punch-Card File]

Box 14

- 14-1 [Forest Tree Breeding & Genetics]
- 14-2 "For Dr. K.J. Roller"
- 14-3 "Dr. Allan Orr-Ewing"
- 14-4 "Maps of B.C. - re: Forest Genetics"
- 14-5 "Whitebottom Block - Cutting Permit: 1957"
- 14-6 "Academic Press: 1960"
- 14-7 "Dr. C. Syrach Larsen"
- 14-8 "Northeastern Forest Tree Improvement Conference"
- 14-9 "Rebrin Case"
- 14-10 "Research Councils - India (New Delhi)"
- 14-11 "Scientific American"
- 14-12 [Correspondence: Incoming & Outgoing]
- 14-13 "Irradiation Data"
- 14-14 [Biological Significance of Tyrosin-Melanin Pigments]

Box 15

- 15-1 "American Institute of Biological Sciences"
- 15-2 [Entomology Research Institute]
- 15-3 "Institute of Forest Research"
- 15-4 [An Annotated Directory to Canadian & Foreign Workers in Forest Genetics & Related Fields]

- 15-5 "Tree Disposition"
- 15-6 [Progressive Binary Relativity...]
- 15-7 "Fairview Baptist Church - Rev. George Harris"
- 15-8 [Fairview Baptist Church]
- 15-9 [Fairview Baptist Church Annual Reports: 1955-64]
- 15-10 "Church"
- 15-11 [Fairview Baptist Church - Membership]

Box 16

- 16-1 "Alfalfa - Notes (Magnifications)"
- 16-2 "Alfalfa - Chromosomes (Drawings)"
- 16-3 "Alfalfa - Helen Farley: Correspondence"
- 16-4 "Alfalfa - Separates"
- 16-5 "Alfalfa - Chromosome Reviews"
- 16-6 "Alfalfa - Sperms"
- 16-7 "Alfalfa - Parent Chromosomes"
- 16-8 "Alfalfa - Pollen Germination"
- 16-9 "Alfalfa - H 3rd (Copies arranged)"
- 16-10 [Alfalfa - Helen Farley]
- 16-11 "Research - 1962: Print 6"
- 16-12 "Phases of the Euchromatic Life Cycles of Bacillus Subtilis"

16-13 "Life Progressive Orderliness Based on the Binary Statistic of Genic Alleles"

16-14 "Published Papers on Hydrobiology by A.H. Hutchinson"

16-15 "Senior Members' Branch of Gamma Alpha (Chicago Chapter)"

Box 17

17-1 "Recent Trends in Biological Education..."

17-2 [Copies of Reports to the National Research Council]

17-3 [Handwritten manuscripts of articles]

17-4 [A.H. Hutchinson - Biographical Notes]

17-5 "Binary Research: 1963-64"

17-6 "Publication Notes"

17-7 "Ecological & Physiological Requirements of Some Forest Trees"

17-8 [Growth Features - Charts]

17-9 [Committee on Forest Tree Breeding in Canada]

17-10 [Committee on Forest Tree Breeding in Canada]

Box 18

18-1 "Genetics - Spruce"

18-2 "Hardiness"

18-3 "MacMillan's Recommendation (Forestry Commission)"

18-4 "J.D. Menzies - A New Blackrot of Apples"

18-5 "Polygonal Graphing of Ecological Data"

- 18-6 "The Plankton-Chemical-Physical Relationships of the Strait of Georgia Waters"
- 18-7 "Botanists"
- 18-8 "Botanists - Early Botanists of B.C."
- 18-9 "Binary Relativity of Biotic Processes"
- 18-10 "Preliminary Report on the Plankton Organisms of West Coast of Vancouver Island"
- 18-11 [Biological Board of Canada]
- 18-12 "Grazing Development Committee of B.C."
- 18-13 "The Forestry Committee of the B.C. Industrial & Scientific Research Council"
- 18-14 "Air Physiology"
- 18-15 "Statistics & Forest Genetics"
- 18-16 "Ecology - Forest Genetics"
- Box 19
- 19-1 "UBC Forest Reserve: 1947"
- 19-2 "Genetics Society of Canada"
- 19-3 "Longevity and Periodicity of Growth"
- 19-4 "Moorecroft Biological Station"
- 19-5 "UBC Library: Science Division - Translations"
- 19-6 "Progress Report - The Effect of Hormones & Irradiation on Growth"
- 19-7 "Growth Cycles in Trees & Their Modification by Ecological Factors"

- 19-8 "Hillary-Squash Technique"
- 19-9 "Evolution Through Co-operation"
- 19-10 "Growth - Development - Evolution"
- 19-11 "Growth Cycles"
- 19-12 "Polygonal Graphing - Ecological Data"
- 19-13 "Polygonal Graphing - Family Concept"
- 19-14 "Early Botanists II"
- 19-15 "Gracilaria - Uses"
- 19-16 "The Greatness of the Small in Life"
- 19-17 "B.C. Research Council - General"
- 19-18 [Proposed Survey of Plant Sociology & Ecology of B.C. ...]
- 19-19 "John Davidson - A Scottish Emigrant's Contribution to Canada"
- Box 20
- 20-1,2 "Nursery Records: August 1958 - June 1962"
- 20-3 [National Research Council - A.H. Hutchinson's research & related correspondence]
- 20-4 [Research Prints: 1962 Nos. 1-65]
- 20-5 [NRC Grant - V.J. Krajina]
- 20-6 [Notebook]

Box 21

Publications by A.H. Hutchinson

- 21-1 The Male Gametophyte of *Abies* [reprinted from *The Botanical Gazette*, Vol.LVII, No.1, February 1914].
On the Male Gametophyte of *Picea Canadensis* [reprinted from *The Botanical Gazette*, Vol.LIX, No.4, April 1915].
Gametophyte of *Pellia Epiphylla* [reprinted from *The Botanical Gazette*, Vol.LX, No.2, August 1915].
Fertilization in *Abies Balsamea* [reprinted from *The Botanical Gazette*, Vol.LX, No.6, December 1915].
Morphology of *Keteleeria Fortunei* [reprinted from *The Botanical Gazette*, Vol.LXIII, No.2, February 1917].
- 21-2 Limiting Factors in Relation to Specific Ranges of Tolerance of Forest Trees [reprinted from *The Botanical Gazette*, Vol.LXVI, No.6, Dec. 1918].
Embryogeny of *Abies* [reprinted from *The Botanical Gazette*, Vol. LMII, No.3, May 1924].
Evolution and the Bible [Vancouver, B.C.:1922].
A Bio-Hydrographical Investigation of the Sea Adjacent to the Fraser River Mouth [printed for the Royal Society of Canada, 1927].
A Bio-hydrographical investigation of the Sea Adjacent to the Fraser River Mouth [printed for the Royal Society of Canada, 1928].
Seasonal Variations in the Chemical and Physical Properties of the Waters of the Strait of Georgia in Relation to Phytoplankton [printed for the Royal Society of Canada, 1929].
- 21-3 The Specific Effects of Monochromatic Light on the Growth of *Paramecium* [printed for the National Research Council of Canada, May 1929].
The Specific Effects of Monochromatic Light on the Growth of Yeast [reprinted from the *Canadian Journal of Research*, Vol.2, 1930].
The Effect of Radiant Energy on Growth and Sporulation in *Colletotrichum Phomoides* [reprinted from the *Canadian Journal of Research*, Vol.3, 1930].
An Oceanographic Survey of the Strait of Georgia [Reprinted from *Contributions to Marine Biology*, Sept. 1930].
Specific Effect of Monochromatic Light Upon Plasmolysis in *Paramecium* [reprinted from the *Canadian Journal of Research*, Vol.4, 1931].
The Epithalassa of the Strait of Georgia [reprinted for the *Canadian Journal of Research*, Vol. 9, 1931].

- 21-4 The Effect of Radiant Energy on Diastase Activity [reprinted from the Canadian Journal of Research, Vol.9, 1933].
The Polygonal Presentation of Polyphase Phenomena [printed for the Royal Society of Canada, 1936].
Life's Processes: An Outline of a Course in Basic Biology, April 1940.
Polygonal Graphing of Ecological Data [reprinted from Ecology, Vol. 21, No.4, October 1940].
Seed Development in Medicago (Alfalfa) Hybrids 1. The Normal Ovule [reprinted from the Canadian Journal of Research, Vol. C, 1941].
- 21-5 Random Sampling, Planned Sampling, and Selective Sampling: As Applied to Forest Ecology and Silviculture [Transactions of the Royal Society of Canada, Section V, 1946].
Life's Progressive Orderliness Based on the Binary Statistic of Genic Alleles [Printed for the Royal Society of Canada, 1953].
Longevity and Periodicity of Growth [n.d.]

Stored Separately:

Report and album - Grazing Lands in British Columbia (by A.H.H.), together with photograph album containing 57 photographs (#27 missing).
Included with Rare Books and Special Collections' [B.C. Historical Photograph Collections](#) (BC 1456/83).

Map - "Oceanographic Survey of Georgia Strait, B.C." (6 copies), 1930. - Scale [1:789]. - [1930]. - 30 x 36 cm. Accompanied by related article of which A.H.H. was one of three authors.
Stored in Map Cabinet 8.

Map - "Profile of Grand Trunk Railway Main Line Winnipeg to Prince Rupert". - Scale [1:30] . - [1915]. - 40 x 154 cm. On the same sheet is contained "Profile of the National Transcontinental Railway from Moncton to Winnipeg". - Scale [1:30]. - [1915]. - 1 map ; 40 x 154 cm.
Stored in Map Cabinet 8.

Maps, charts and diagrams - 56 items.
See RBSC Map Inventory.

Photoprints - 3 30 x 25 cm BW prints of Fairview Baptist Church
Included with Rare Books and Special Collections' [B.C. Historical Photograph
Collections](#) (BC 1504/1-3).