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Guide to the J Harlen Bretz Papers 1877-1996



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Descriptive Summary

Identifier	ICU.SPCL.BRETZ
Title	Bretz, J Harlen. Papers
Date	1877-1996
Size	19 linear feet (31 boxes)
Repository	Special Collections Research Center University of Chicago Library 1100 East 57th Street Chicago, Illinois 60637 U.S.A.

Abstract J Harlen Bretz (1882-1981), geologist. The papers include biographical and autobiographical documents, a journal of the Louise A. Boyd Expedition to East Greenland (1933), publications and correspondence related to Bretz' controversial theory of the channeled scablands of Washington, professional correspondence, field notes, offprints, and photographs.

Information on Use

Access

Series VI contains student grade reports to which access is restricted until 2027. The remainder of the collection is open for research.

Citation

When quoting material from this collection, the preferred citation is: Bretz, J Harlen. Papers, [Box #, Folder #], Special Collections Research Center, University of Chicago Library

Biographical Note

J Harlen Bretz was born in 1882 in Ionia County, Michigan. After receiving an A.B. from Albion College in 1905, he taught high school for several years in Seattle, Washington, where he began independent field work in the geology of the Puget Sound region. In 1911, Bretz entered the University of Chicago as a graduate fellow in geology, studying under Thomas C. Chamberlin, Rollin D. Salisbury, and Stuart Weller. Upon completing his Ph.D. in 1913, he accepted a position at the University of Washington as assistant professor of geology. One year later, at the invitation of Salisbury, he returned to the University of Chicago as an Instructor in Geology (1914-1915). Bretz spent the remainder of his career at Chicago as Assistant Professor (1915-1921), Associate Professor (1921-1926), and Professor of Geology (1926-1947).

Bretz' major contribution to geology was his study of the channeled scablands, a rugged, heavily scoured section of the Columbia plate in eastern Washington. Challenging the gradualist

uniformitarianism that had governed previous interpretations of the area, Bretz attributed the topography of the scablands to the action of a sudden, catastrophic flood brought on by the release of waters from glacial Lake Missoula. Bretz' theory was disputed by many leading authorities in Pleistocene geology and attracted particularly severe criticism from the U.S. Geological Survey at a meeting of the Geological Society of Washington, D.C. in 1927. Later studies by Bretz and others, however, contributed supporting evidence to the theory, and final confirmation was supplied by aerial photographs taken from orbiting satellites in the mid-1970's. By that time, the geological profession had reversed itself and embraced the theory it once rejected, hailing Bretz in publications and at conferences as a courageous empiricist vindicated by fact.

Bretz also made important advances in the geological study of limestone caves and karst landscapes. In 1930, geologist William Morris Davis had argued that caves were not formed above the water table, as was commonly supposed, but were instead the result of underground water circulating below the water table. Bretz' work on the caves of Missouri, begun in the late 1930's, furnished crucial evidence to support Davis' theory and went on to make substantial contributions to the description of limestone caverns and the analysis of the general erosional history of the Ozark Uplift.

Results of Bretz' field work in Washington, Missouri, Alberta, Greenland, Bermuda, and the Chicago region were published in numerous articles and a number of monographic studies, including *Glaciation of the Puget Sound Region* (1913), *Geology of the Chicago Region* (1939-1956), *Earth Sciences: Meteorology, Oceanography, Geology* (1940), *Caves of Missouri* (1956), and *Geomorphic History of the Ozarks of Missouri* (1965). Bretz also received two major professional awards, the Niel A. Miner Award of the National Association of Geology Teachers in 1959, and the Penrose Medal of the Geological Society of America in 1979. Bretz died in 1981 at his home in Homewood, Illinois, at the age of 98.

Scope Note

The papers of J Harlen Bretz comprise nineteen linear feet of material, including a Bretz family genealogy; Bretz' autobiography, *Memories*; a journal of the Louise A. Boyd Expedition to East Greenland (1933); publications and correspondence related to Bretz' controversial theory of the channeled scablands of Washington; professional correspondence; field notes; offprints; and photographs. The papers were presented to the Library in 1981 by Bretz' son and daughter, Rudolf C. Bretz and Rhoda Bretz Riley. The collection has been divided into six series.

Series I: Biographical

Material in this series has been divided into five subseries: General, Education, Departmental and Professional, Louise A. Boyd Expedition to East Greenland, 1933, and Channeled Scablands Controversy.

Most of the General sub-series is devoted to typescript and printed copies of Bretz' autobiography, *Memories*, which was issued in four parts from 1973 to 1975. Friends and colleagues responded warmly to Bretz' vigorous and occasionally ribald recollections of field work and campus life at the University of Chicago. This sub-series also includes a family genealogy compiled by Bretz in 1949; a Sears, Roebuck catalog containing the model for the Bretz house in Homewood; and a humorous 95th-birthday tribute by Rudolf Bretz asserting that Bretz was born Harley but changed his to J Harlen while at Albion College. Bretz recalled in *Memories*, Part II that the period after the J was dropped several years later at the insistence of Rollin Salisbury, who noted that it was not properly an abbreviation of any name.

The Education subseries consists of notes from courses and extracurricular activities that Bretz was a part of at Albion College from 1901 to 1905. It also contains memorabilia items from the Albion class of 1905.

The Departmental and Professional material consists of chronologically organized folders containing bibliographies of Bretz' publications; notes taken at a course given by Stuart Weller; letters from students; correspondence related to the Miner Award and Penrose Medal; and a tribute to Bretz' field pedagogy from M. King Hubbert. Bretz' remarks at his retirement dinner in 1947 are also worth noting in that they anticipate many of the themes developed later in the *Memories*, and include an admission by Bretz that he sometimes imitated the harsh classroom manner of his mentor, Salisbury.

The Louise A. Boyd Expedition to East Greenland in 1933 was financed and led by Louise Boyd, a wealthy amateur photographer, under the auspices of the American Geographical Society. Bretz joined the expedition as physiographer and published the results of his observations in "Physiographic Studies in East Greenland." This sub-series devoted to the expedition includes correspondence with Louise Boyd and Isaiah Bowman of the A.G.S.; short vignettes of wildlife and scenery; and Bretz' journal describing his personal experiences on the trip.

The controversy over the channeled scablands is documented in the fourth sub-series. Here can be found Bretz' outline for his 1927 lecture at the Cosmos Club; a U.S. Geological Survey booklet of 1973 incorporating Bretz' conclusions; articles by Victor R. Baker comparing Bretz' scablands to similarly channeled areas on the planet Mars; congratulations from friends and colleagues on Bretz' vindication; and two articles by Stephen Jay Gould summarizing the entire debate.

Series II: Correspondence

This series consists of alphabetically arranged professional correspondence. Topics reflected in the correspondence include Victor Baker's defense of Bretz' scablands theory; Bretz' dispute with William H. Hobbs over the interpretation of scablands topography; a proposal to John C. Merriam of the Carnegie Institution for possible grant support for scablands studies; discussion with Rollin Salisbury regarding a fellowship at the University of Chicago in 1911; and the editing and publication of *Earth Sciences* (1940) by John Wiley and Sons.

Series III: Field Notes

Field notes in this series have been arranged into two chronological sub-series. The first, Notebooks, consists of 78 small field notebooks or notebook fragments containing Bretz' manuscript notes on field work from 1905 to 1954. The early notebooks concentrate on Puget Sound glaciation and the formation of the channeled scablands, while later ones reflect his subsequent travels and research interests. A series of nine numbered notebooks from 1948 deals exclusively with Bretz' study of limestone caves in Missouri.

The second group of notes, Looseleaf Binders, consists of typescript field notes from 1916 to 1956 bound in 13 looseleaf binders with some additional disbound looseleaf material. In general, the binders contain notes for a particular year or group of years, although some are devoted largely to a single topic. A binder from 1928, for instance, contains reports on soil samples taken at various points in Washington and Oregon, while other binders have notes on such specific subjects as the Chicago region; Greenland; limestone caves in Arkansas, Missouri, Pennsylvania, Virginia, and other states; Grand Coulee; Alberta; Ozark peneplanation; and Bermuda. A final binder contains undated notes.

Series IV: Publications

This series contains offprints of Bretz' published work and occasional folders of related correspondence. The series is divided into four subseries: Caves and Karst Formations; Channeled Scablands; Glaciation; and Other Publications. Within each sub-series, offprints have been arranged in strict chronological order by date of publication.

Series V: Images, Artifacts, and Oversize

Photographs in this series have been separated into two subseries. The first contains images reflecting Bretz's career, personal life, and family history. Included are photos depicting Bretz with his family, portraits of Bretz family members and homes, and images from the field with colleagues and students. Three folders of photographs concern the Bretz Laboratory for Geomorphology and Sedimentation at Albion College and Bretz' donation of boulders for study

by geology students at his alma mater. Also included are images demonstrating his interest in double entendre signs, of which he had a large collection. Subseries 2 contains photos of sites that Bretz visited as part of his studies. Subseries 3 includes artifacts and oversize photographs, primarily documenting Bretz's education and family history, and two maps of geological features.

Series VI: Restricted, contains grade reports for courses taught by Bretz. Access to these files is restricted until 2027.

Related Resources

The following related resources are located in the Department of Special Collections:

Additional information on geology at the University of Chicago during Bretz' tenure on the faculty can be found in the President's Papers and the papers of Rollin D. Salisbury and Stuart Weller.

<http://www.lib.uchicago.edu/e/spcl/select.html>

Subject Headings

- Bretz, J Harlen, 1882-1981
- Caves
-
- Geology
- Geology, Washington (State)
-
-
-
- Columbia Plateau
- Greenland
- Geologists
- Photographs

INVENTORY

Series I: Biographical

Subseries 1: General

Box 1

Folder 1

Bretz family genealogy, 1949

Box 1

Folder 1a

Bretz family genealogy, edited, undated

Box 1

Folder 2

Bretz family genealogy, correspondence, 1950-1996

Box 1

Folder 3

Bretz family genealogy, related materials, 1913-1996

Box 1

Folder 3a

Diary, Volume I, June to July, 1899

Box 1

Folder 3b

Diary, Volume II, July to November 1899; March to April, 1900

Box 1

Folder 4

Memories, Part I; Some Recollections of a Geologist on Entering His 90th Year; typescript

Box 1

Folder 5

Memories, Part I; printed copy with correspondence tipped in, 1972

Box 1

Folder 6

Memories, Part I; second printed copy

Box 1

Folder 7

Memories, Part II: printed copy with correspondence tipped in, 1973

Box 1

Folder 8

Memories, Part II: second printed copy

Box 2

Folder 1

Memories, Part III; typescript

Box 2

Folder 2

Memories, Part III; printed copy

Box 2

Folder 3

Memories, Part III; second printed copy

Box 2

Folder 4

Memories, Part IV: Additional Albion Matter and Other Memories and Stories, 1975

Box 2

Folder 5

Memories, Part IV: Additional Albion Matter and Other Memories and Stories; second printed copy

Box 2

Folder 6

Reactions to Memories from friends

Box 2

Folder 7

Sears, Roebuck prefabricated house catalog, 1924 (including "The Verona," p. 84, model for JHB home)

Box 2

Folder 8

Datebook, 1929

Box 2

Folder 9

Fanny Bretz Garden Notebook, 1933-1946

Box 2

Folder 10

Fanny Bretz Garden Notebook, 1946-1955

Box 2

Folder 11

Miscellaneous autobiographical notes and reminiscences, 1976-1979 and undated

Box 2

Folder 12

"In Celebration," tribute to JHB by Rudolf Bretz, 1977

Box 2

Folder 13

With Jerry Vineyard, "J Harlen Bretz in Missouri," Missouri Speleology 19:3-4. October to December, 1979.

Box 2

Folder 14

Biographical clippings

Box 2

Folder 15

The Edward S. Curtis Indians catalog, "The North American Indian," undated

Subseries 2: Education

Box 2a

Folder 1

Albion College, Michigan 1901-1905

Box 2a

Folder 2

Memorabilia, Albion College, 1900-1905

Box 2a

Folder 3

Victorian Poets, Albion College, undated

Box 2a

Folder 4

YMCA, Albion College, Work, Thoughts and Expressions; Missionary Work, 1901-1905

Box 2a

Folder 5

Lakeside and Pontiac Notes, Albion College, 1901-1905

Box 2a

Folder 6

Bibliography of Altitudes, University of Chicago, undated

Subseries 3: Departmental and Professional

Box 2a

Folder 7

Julian D. Barksdale, Geology at the University of Washington, 1895-1973 (1974)

Box 2a

Folder 8

Bibliographies of JHB, 1907-1980

Box 2a

Folder 9

Invertebrate Paleontology (Geology 21-22), Autumn and Winter Quarters 1911-1912, Professor Stuart Weller, lecture and laboratory notes

Box 3

Folder 1-3

Letters from students in military service, 1942-1945

Box 3

Folder 4

Geological Society of America, annual meeting, December 1946, JHB general chairman

Box 3

Folder 5

"Memoirs," remarks at retirement dinner, 1947

Box 3

Folder 6

Tributes from colleagues, 1949-1965

Box 3

Folder 7

Department of Geology, social events, 1950-1951

Box 3

Folder 8

Niel A. Miner Award, National Association of Geology Teachers, 1959

Box 3

Folder 9

D. Jerome Fisher, The Seventy Years of the Department of Geology, University of Chicago, 1892-1961 (1963), annotated

Box 3

Folder 10

M. King Hubbert, "Bretz' Baraboo, Wisconsin, Field Course: An Example of Superb Scientific Pedagogy," address, 1966

Box 3

Folder 11

Seattle Times article on JHB and reactions, 1971

Box 3

Folder 12

Correspondence with M. King Hubbert regarding JHB professional biography, 1972

Box 4

Folder 1

Penrose Medal, Geological Society of America, arrangements for
• presentation, 1979

Box 4

Folder 2

Penrose Medal, Geological Society of America, citation

Box 4

Folder 3

Penrose Medal, Geological Society of America, congratulations

Box 4

Folder 4

Penrose Medal, Geological Society of America, congratulations

Subseries 4: Louise A. Boyd Expedition to East Greenland

Box 4

Folder 5

Correspondence, December 1932-October 1933

Box 4

Folder 6

Correspondence, January-June 1934

Box 4

Folder 7

Correspondence, July-December 1934

Box 4

Folder 8

Correspondence, January 1935-April 1937

Box 4

Folder 9

Reading notes on the geology of Greenland

Box 4

Folder 10

"Munchausen in Greenland," manuscript

Box 4

Folder 11

"Baron Bunyan in Greenland," typescript

Box 4

Folder 12

Journal, July-September 1933

Box 5

Folder 1

"Greenland: To and In and From," bound typescript journal, 1933

Box 5

Folder 2

Miscellaneous memorabilia

Box 5

Folder 3

“Physiographic Studies in East Greenland,” 1935

Subseries 5: Channeled Scablands Controversy

Box 5

Folder 4

Lecture before the Geological Society of Washington, D. C., Cosmos Club, 1927, outline

Box 5

Folder 5

Lecture before the Geological Society of Washington, related correspondence

Box 5

Folder 6

International Geological Congress excursion to the Channeled Scablands, correspondence, 1930-1933

Box 5

Folder 7

U.S. Geological Survey, *The Channeled Scablands of Eastern Washington: The Geologic Story of the Spokane Flood* (1973), annotated

Box 5

Folder 8

Geological Society of America, *Geological Excursions in the Pacific Northwest* (1977).

Box 6

Folder 1

Victor R. Baker, articles on catastrophic flooding on Mars and Earth, 1973-1978

Box 6

Folder 2

Richard B. Waitt, Jr., *Guidebook to Quaternary Geology of the Columbia, Wenatchee, Peshastin, and Upper Yakima Valleys, West-Central Washington* (1977)

Box 6

Folder 3

Victor R. Baker and Dag Nummedal, eds., *The Channeled Scabland* (1978), with other articles and letters of tribute tipped in

Box 6

Folder 4

Victor R. Baker and Dag Nummedal, reactions from friends and colleagues

Box 6

Folder 5

Stephen Jay Gould, “When the Unorthodox Prevails” and “The Great Scablands Debate,” with related correspondence, 1978

Series II: Correspondence

Box 6

Folder 6

Introduction to correspondence by JHB, 1978

Box 6

Folder 7

A, general
Box 6
Folder 8
B, general
Box 6
Folder 9
Baker, Victor R.
Box 6
Folder 10
Behre, Charles H., Jr.
Box 6
Folder 10a
Bretz, Rhoda (daughter), undated
Box 6
Folder 11
C, general
Box 6
Folder 11a
Carter, Rosalyn and Jimmy, 1980
Box 6
Folder 12
Chaney, Ralph W.
Box 6
Folder 12a
Composition and Structure of Scabland Gravel Deposits, 1952-1956
Box 6
Folder 12b
Controversy with Jack Hough, 1965
Box 6
Folder 13
Culver, Harold E.
Box 6
Folder 14
D, general
Box 6
Folder 15
E, general
Box 6
Folder 16
Ekblaw, George E.
Box 7
Folder 1
Encyclopaedia Britannica
Box 7
Folder 2
F, general

Box 7

Folder 3

Fenneman, Nevin M.

Box 7

Folder 4

Flint, Richard F.

Box 7

Folder 5

Freeman, Otis W.

Box 7

Folder 6

Fryxell, F. M.

Box 7

Folder 7

G, general

Box 7

Folder 8

Goldman, Marcus I.

Box 7

Folder 9

Goldsmith, Julian R.

Box 7

Folder 9a

Greenland Trip, 1933

Box 7

Folder 10

H, general

Box 7

Folder 11

Hay, Oliver P.

Box 7

Folder 12

Hill, C. L.

Box 7

Folder 13

Hobbs, William H.

Box 7

Folder 14

Hubbert, M. King

Box 7

Folder 15

I-J, general

Box 7

Folder 16

K, general

Box 7

Folder 17

Kay, George F.

Box 7

Folder 18

L, general

Box 7

Folder 18a

Lake Missoula, 1947-1970

Box 7

Folder 19

Lamey, Carl A.

Box 7

Folder 20

Landes, Henry

Box 7

Folder 21

Large, Thomas

Box 7

Folder 22

Lehman, S. W.

Box 7

Folder 23

Leighton, Morris M.

Box 7

Folder 24

Link, Theodore

Box 8

Folder 1

M, general

Box 8

Folder 2

McCann, Frank

Box 8

Folder 3

Madison, Hector T.

Box 8

Folder 4

Malott, Clyde A.

Box 8

Folder 4a

Meinzer, O.E., 1922

Box 8

Folder 5

Merriam, John C.

Box 8

Folder 5a

Meyerhoff, Howard A. (scabland visit by critics), 1931-1940

Box 8

Folder 6

N-O, general

Box 8

Folder 6a

Neff, George 1952-1955

Box 8

Folder 7

P, general

Box 8

Folder 8

Parks, Henry M.

Box 8

Folder 9

Q, general

Box 8

Folder 10

R, general

Box 8

Folder 11

Runner, Joseph L.

Box 8

Folder 12

S, general

Box 8

Folder 13

Salisbury, Rollin D.

Box 8

Folder 13a

Smith, Harold T.U. 1952-1955

Box 8

Folder 14

T, general

Box 8

Folder 15

Taylor, Lawrence D.

Box 8

Folder 16

Thomson, Francis A.

Box 8

Folder 17

Trowbridge, A. C.

Box 8

Folder 18

U-W, general

Box 8

Folder 18a

Valley Deposits West, 1930

Box 8

Folder 19

Waitt, Richard B., Jr.

Box 8

Folder 20

Watson, Russell

Box 8

Folder 21

Weaver, Charles E.

Box 9

Folder 1

Wentworth, Chester

Box 9

Folder 2

Wiley & Sons, John (includes Gerald Wendt), 1936-1939

Box 9

Folder 3

Wiley & Sons, John (includes Gerald Wendt), 1940-1945

Box 9

Folder 4

Williams, Ira

Box 9

Folder 5

Willis, Bailey

Box 9

Folder 6

Zahuranec, Bernard J.

Box 9

Folder 7

Unidentified

Series III: Field Notes

Subseries 1: Notebooks

Box 9

Folder 7a

Astronomy, News Clippings, 1900

Box 9

Folder 8

1905-1907

Box 9

Folder 9

1909

Box 9
Folder 10-13
1910-1914
Box 10
Folder 1-3
1910-1914
Box 10
Folder 4
1912
Box 10
Folder 5
1913
Box 10
Folder 6
1914
Box 10
Folder 7
1916
Box 10
Folder 8
1919
Box 11
Folder 1
1920, July-August
Box 11
Folder 2
1920, August-September
Box 11
Folder 3
1921
Box 11
Folder 4
1922
Box 11
Folder 5
1923
Box 11
Folder 6
1924
Box 11
Folder 7
1926
Box 11
Folder 8
1927, July-August
Box 11

Folder 9

1927, August-September

Box 11

Folder 10

1928

Box 11

Folder 11

1929

Box 11

Folder 12

1932

Box 12

Folder 1

1933

Box 12

Folder 2

1935

Box 12

Folder 3

1946

Box 12

Folder 4-8

1948

Box 12

Folder 9

1949

Box 12

Folder 10

1950

Box 12

Folder 11

1951

Box 12

Folder 12

1954

Box 12

Folder 13

Niagaran reefs, undated

Box 13

Folder 1

Wisconsin/Illinois, driftless vs. Ozarks, undated

Box 13

Folder 2

Miscellaneous, undated

Subseries 2: Looseleaf Binders

Box 13

Folder 3-8

Disbound notes, 1916-1920

Box 13

Folder 9

1922-1926

Box 14

Folder 1

1927

Box 14

Folder 2

1928

Box 14

Folder 3

Soil analyses, 1928

Box 15

Folder 1

1929

Box 15

Folder 2

1931-1932

Box 15

Folder 3

1933

Box 16

Folder 1

1935-1940

Box 16

Folder 2

1937

Box 16

Folder 3

1941

Box 17

Folder 1

1946

Box 17

Folder 2

Drawings, Filled Sink-Structures and Circled Deposits of Missouri, circa 1950

Box 17

Folder 3

Grand River Valley, 1950

Box 17

Folder 4

1952

Box 17

Folder 5

1956

Box 17

Folder 6

Illinois Caves and Ozark Geomorphic Literature, 1956

Box 18

Folder 1

Undated, Guadalupe, Pecos, Llano

Series IV: Publications

Subseries 1: Caves and Karst Formations

Box 18

Folder 2

Caves and Karst Formations

- "Solution Cavities in the Joliet Limestone of Northeastern Illinois," 1940
- "Vadose and Phreatic Features of Limestone Caverns," 1942
- "Carlsbad Caverns and Other Caves of the Guadalupe Block, New Mexico," *The Journal of Geology* 57:5, September 1949.

Box 18

Folder 3

"Origin of the Filled Sink-Structures and Circle Deposits of Missouri," 1950

Box 18

Folder 4

Caves and Karst Formations

- "Genetic Relations of Caves to Peneplains and Big Springs in the Ozarks," 1953
- "Caves of Phreatic Origin," *Scientia* 16:4, January 1954.
- "Cavern-Making in a Part of the Mexican Plateau," 1955
- "Origin of Bermuda Caves," 1960
- "Bermuda: A Partially Drowned, Late Mature Pleistocene Karst," 1960

Box 18

Folder 5

"Caves of Illinois," 1961

Subseries 2: Channeled Scablands

Box 18

Folder 6

Channeled Scablands

- "The Channeled Scablands of the Columbia Plateau," 1923
- "Glacial Drainage on the Columbia Plateau," 1923

Box 18

Folder 7

Channeled Scablands

- "The Age of the Spokane Glaciation," 1924
- "The Dalles Type of River channel," 1924

Box 18

Folder 8

“The Spokane Flood Beyond the Channeled Scablands,” 1925

Box 18

Folder 9

“Channeled Scabland and the Spokane Flood 1927 The Spokane

- Flood: A Reply,” 1927

Box 18

Folder 10

Channeled Scablands

- “Alternate Hypotheses for Channeled Scabland,” 1928 “
- “The Channeled Scabland of Eastern Washington,” 1928
- “Bars of Channeled Scabland,” 1928

Box 19

Folder 1

“Valley Deposits Immediately East of the Channeled Scabland of Washington,” 1929

Box 19

Folder 2

“Valley Deposits Immediately West of the Channeled Scabland,” 1930

Box 19

Folder 3

“The Channeled Scabland,” 1932

Box 19

Folder 4

“Channeled Scabland of Washington: New Data and Interpretations,” 1956

Box 19

Folder 5

“Washington’s Channeled Scabland,” 1959

Box 19

Folder 6

“The Lake Missoula Floods and the Channeled Scabland, 1969 Glaciation

Subseries 3: Glaciation

Box 19

Folder 7

Glaciation

- “Glacial Lakes of Puget Sound,” 1910
- “The Terminal Moraine of the Puget Sound Glacier,” 1911
- “The Satsop Formation of Oregon and Washington,” 1917
- “The Late Pleistocene Submergence in the Columbia Valley of Oregon and Washington,” 1919
- “The Juan de Fuca Lobe of Cordilleran Ice Sheet,” 1920

Box 19

Folder 8

“Keewatin End Moraines in Alberta, Canada,” 1943

Box 19

Folder 9

“Keewatin End Moraines in Alberta, Canada,” related correspondence

Box 19

Folder 10

Glaciation

- “Glacial Lake Merrimac,” 1950
- “Causes of the Glacial Lake Stages in Saginaw Basin, Michigan,” 1951
- “The Stages of Lake Chicago: Their Causes and Correlations,” 1951

Box 19

Folder 11

Glaciation

- “Glacial Grand River, Michigan,” 1953
- “Correlation of Glacial Lake Stages in the Huron-Erie and Michigan Basins,” 1966
- “Correlation of Glacial Lake Stages in the Huron-Erie and Michigan Basins,” related correspondence

Subseries 4: Other Publications

Box 19

Folder 12

Publications, 1924-1932

- “Modern Conceptions of Earth History,” 1924
- “The Origin of Man,” 1926
- “The United States During the Ice Age,” 1932

Box 19

Folder 13

“The Physiography of North America,” 1939

Box 20

Folder 1

“Geology of the Chicago Region,” Part I, 1939; Part II, 1955

Box 20

Folder 2

“Geology of the Chicago Region,” map supplement, 1943

Box 20

Folder 3

“Caliche in Southeastern New Mexico,” 1949

Box 20

Folder 4

“A High-Level Boulder Deposit East of the Laramie Range, Wyoming,” 1952

Box 20

Folder 5

Review of Kenneth Roberts, Henry Gross and His Dowsing Rod (1951), 1952

Box 20

Folder 6

Review of Kenneth Roberts, The Seventh Sense - A Sequel to “Henry Gross and His Dowsing Rod” (1953), 1954 Review of Kenneth Roberts, related correspondence

Box 20

Folder 7

“Dynamic Equilibrium and the Ozark Land Forms,” 1962 Review of Kenneth Roberts, related correspondence

Box 20

Folder 8

“An Open Letter Chiefly to Geologists Interested in the Pleistocene of the Midwest,” 1968 Review of Kenneth Roberts, related correspondence

Box 20

Folder 8a

H.F. Garner, “Rivers in the Making,” undated

Series V: Images, Artifacts, and Oversize

Subseries 1: Family and Personal Photographs

Box 20

Folder 9

Phillip Bretz stone house, Melmore, Ohio, undated

Box 20

Folder 10

Bretz family reunion, 1887

Box 20

Folder 11-12

Bretz family portraits

Box 20

Folder 13

J Harlen Bretz, childhood

Box 21

Folder 1

Boulder Strewn, J Harlen Bretz home

Box 21

Folder 2

J Harlen Bretz with colleagues

Box 21

Folder 3-4

Fieldwork, general

Box 21

Folder 5

Fieldwork, caves

Box 21

Folder 6

Devil’s Lake field course group, 1947

Box 21

Folder 7

Perry Farm Canyon field trip, undated

Box 21

Folder 8

Humorous

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Untitled Photograph of a Mountain, undated

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Photograph, Bretz and friends outside a cabin, undated

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Album, graduate portraits, Saranac High School, 1900

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“Brown Eyes,” a heart carved by J Harlen (Harley) Bretz for Fanny Challis, c. 1905

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Jacob Bretz and Philadelphia (Woolf) Bretz, Parents of Ephraim Bretz, small framed photograph, undated

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Marriage certificate, Oliver Bretz and Rhoda Howell, 1877

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