

**Norman Levi Bowen Papers, 1907-1980
(Bulk 1907-1955)**



**Carnegie Institution of Washington
Geophysical Laboratory Archives
Washington, DC**

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Norman Levi Bowen Papers, 1907-1980 (Bulk 1907-1955)

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Introduction

Abstract: This collection consists of the personal papers of Norman Levi Bowen. Bowen revolutionized experimental petrology and is considered to be the greatest petrologist of the 20th century. He worked as a geologist for the Carnegie Institution of Washington Geophysical Laboratory from 1912-1937 and again from 1947 until his death in 1956.

Extent: 4 linear feet: 6 document boxes, 1 flat storage box, 1 flat oversize folder.

Acquisition: The materials in this collection were donated by H.S. Yoder, Jr. in October 1995, ostensibly received from Bowen's family members.

Access Restrictions: There are no access restrictions to this collection.

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Preferred Citation: Norman Levi Bowen Papers, 1907-1980, Geophysical Laboratory, Carnegie Institution of Washington, D.C.

Processing: Processing completed by Jennifer Snyder in March 2004. Original order was not maintained in the processing of this collection. News clippings were photocopied onto archival paper. Many of the photographs were removed from the H.S. Yoder, Jr. Papers and placed in this collection as they, presumably, came from the Bowen family. Please see the collection file for more information on their removal. An addition of twenty-one laboratory notebooks was processed by Mary Ferranti in January 2018.

This collection was processed through the generous support of the National Historical Publications and Records Commission.

N.L. Bowen Biographical Sketch

Normal Levi Bowen may well be considered the greatest petrologist of the 20th century. Bowen "revolutionized experimental petrology and our understanding of mineral crystallization. Beginning geology students are familiar with his "reaction series" depicting how different minerals crystallize under varying pressures and temperatures." (Chamot)

Bowen was born in Kingston, Ontario June 21, 1887. After completing his university entrance exam, Bowen joined the Ontario Bureau of Mines geological mapping party to earn money and see the country. When he returned, he changed his intended course of study from teaching to geology. He graduated with a B.S. from the Queen's University School of Mining, Kingston, Ontario in 1909. In 1910, Bowen applied for a position as a research student at the Geophysical Laboratory of the Carnegie Institution of Washington (CIW). In 1912, after receiving his Ph.D.

from the Massachusetts Institute of Technology, he accepted a position at the Laboratory. In 1928 he published his seminal work *The Evolution of the Igneous Rocks*. After 25 years of service, Bowen left the Geophysical Laboratory for a teaching position at the University of Chicago. Ten years later, he returned to the Laboratory where he remained until his retirement in 1952. After two years in “retirement,” he returned as a Research Associate until his death.

Bowen married Mary Lamont, on October 3, 1911. They had one daughter, Catherine B. Orne. He died September 11, 1956.

The Norman L. Bowen Award, given annually, was established by the American Geophysical Union for outstanding contributions to volcanology, geochemistry or petrology.

Scope and Content

This collection consists of the personal papers of Norman L. Bowen and serves to illuminate his professional life while he was an employee of the Carnegie Institution of Washington.

Arrangement

This collection consists of six document boxes, and one oversize flat box. The materials are arranged in 5 series.

Series 1: Correspondence, 1910-1954

Series 2: Collected Works, 1909-1955

Series 3: Personal Papers, 1907-1955, n.d.

Series 4: Other Publications, 1928-1980, n.d.

Series 5: Laboratory Notebooks, 1914, 1917, n.d.

Series 1: Correspondence, 1910-1954

This series consists of Bowen’s professional correspondence. The subjects of the letters may vary from his research projects to personnel matters. His official correspondence with the Director of the Geophysical Laboratory can be found in his official personnel file held in the personnel office records. Some of the correspondence found here may duplicate what is in the personnel file.

Series 2: Collected Works, 1909-1955

This series is 3 volumes of Bowen’s collected papers as collected by the Geophysical Laboratory. The volumes were inscribed to the Bowen’s grandson; a photo of N.L. Bowen is pasted inside the cover of volume one.

Series 3: Personal Papers, 1907-1955, n.d.

This series contains the diplomas, honorary degrees, awards, and certificates Bowen received over his lifetime, including his diploma from Yale and materials relating to the Bakhuis-Roozeboom Medal which he was given in October 1954. There are also a few photographs of his family, and Bowen in the field and in group portraits.

Series 4: Other Publications, 1928-1980, n.d.

This series is made up of other publications which Bowen authored and publications in which he is mentioned or is the primary subject. Both the 1928 and 1956 editions of his seminal work *The Evolution of the Igneous Rocks* are found in this series.

Series 5: Laboratory Notebooks, 1914, 1917, n.d.

This series consists of laboratory notebooks Bowen created during his employment at Carnegie's Geophysical Laboratory. The notebooks document a number of Bowen's experimental studies including his investigations into the order of crystallization of the common silicate minerals from a magma. The folder titles in this series are transcribed from the front cover of the notebooks as inscribed by Bowen.

Folder Listing

	<u>Box</u>	<u>Folder</u>
Series 1: Correspondence, 1910-1954		
Correspondence with R. B. Sosman [re: Devitrification paper and employment], 1918-1920	1	1
Correspondence: 1910, 1912-1913, 1915-1918		2
Correspondence: 1919-1921, 1923		3
Correspondence: 1925-1931, 1933		4
Correspondence: 1936-1942		5
Correspondence: 1943-1945		6
Correspondence: 1946-1949		7
Correspondence: 1950-1954		8
Series 2: Collected Works, 1909-1955		
Volume 1: Publications [photograph of Bowen glued inside front cover with an inscription to the Bowen's grandson.], 1909-1924	2	1
Volume 2: Publications, 1925-1937	3	1
Volume 3: Publications, 1937-1955	3	2
Series 3: Personal Papers, 1907-1955, n.d.		
Diplomas, honorary degrees, and certificates, 1907, 1909, 1912, 1935-1937, 1947, 1952, 1954	Map Case drawer 9	
Certificates, 1913, 1914, 1921, 1938	5	1
Yale University Honorary Doctorate, 1951		2
Materials relating to Bakhuis-Roozeboom Medal presentation, 30 October 1954		3
Photographs [Family photographs, personal photographs, portraits], 1952, 1955, n.d.	4	1
Photographs [Mainly Bowen pictured with colleagues in group photographs.], 1939, 1941, 1952, 1955, n.d.		2
Miscellaneous [nameplate and poem], n.d.		3
News Articles, 1929, 1935, 1936, 1938, 1941, 1949, 1950, 1954, n.d.	5	4

	<u>Box</u>	<u>Folder</u>
Series 4: Other Publications, 1928-1980, n.d.		
Biographical Memoir, 1980	4	4
The Evolution of the Igneous Rocks, 1928		5
Notes on the Harvard Anniversary Tercentenary, 1936		6
“Petrology and Silicate Technology” [reprint of article], 1943		7
The 250 th Anniversary of Yale University, 1952		8
The Evolution of the Igneous Rocks [new edition], 1956		9
Geology at the University of Chicago, 1963		10
Speech: “Experiment As An Aid to the Understanding of the Natural World,” n.d.		11

Series 5: Laboratory Notebooks, 1914, 1917, n.d.

CaSiO ₃ - MgSiO ₃	6	1
Cpsn of Neph[elite]		1
Diffusion II – Density of Hawaiian Lava		1
Kaliophilite		1
Ne – Ab		2
Ne – An, II		2
Ne – An, Calculation of Mixtures		2
Ne – An, Excess SiO ₂		2
Ne – Si – Di		2
NH ₄ NO ₃		3
NH ₄ NO ₃ , II		3
Optical Glass		3
Optical Glass, Spencer Lens Company		3
Plagioclases		3
Plagioclase – Diopside and Diffusion		3
Sinking Crystals		3
Behavior of Inclusions	7	1
Diffusion Evaluations		2
Heat Effects		3
Heat Flow Calculations		4
Optical Glass		5

Subject Terms

Topics: Geology
 Petrology
 Rocks, Igneous

Occupation: Geologists

Corporate Names: Carnegie Institution of Washington. Geophysical Laboratory

Forms: Correspondence
 Collected works
 Books
 Diplomas
 Certificates
 Photographs
 Laboratory Notebooks

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Related Collections

Hatten Schuyler Yoder Papers [unprocessed], Geophysical Laboratory, Carnegie Institution of Washington, D.C.