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## Guide to the Heinz A. Lowenstam Papers, 1935-1993

Archives

California Institute of Technology  
Pasadena, California

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### Descriptive Summary

**Title:** Heinz A. Lowenstam Papers,

**Date (inclusive):** 1935-1993

**Creator:** Lowenstam, Heinz A.

**Extent:** Linear feet: 1.5

**Repository:** California Institute of Technology. Archives.

Pasadena, California 91125

**Language:** English

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[Identification of item, Box and file number], Heinz A. Lowenstam Papers, Archives, California Institute of Technology.

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### **Biographical Sketch**

Heinz A. Lowenstam was born on October 9, 1912, in Upper Silesia, Germany. He was educated at the University of Frankfurt and began his graduate work in geology and paleontology at the University of Munich just at the time of Hitler's rise to power.

In 1935, he declared his intention of conducting his Ph.D. field research in Palestine, to the dismay of his pro-Nazi department chairman. After spending 18 months studying the geology of the Eastern Nazareth Mountains, he returned to Germany to learn that a new law prohibited the awarding of doctorates to Jews.

In 1937, Lowenstam emigrated to the U.S., where he was accepted at the University of Chicago. After receiving his Ph.D. in 1939, he went to work as a paleontologist for the Illinois State Museum. During World War II, he did oil and coal research for the military. Subsequently, he joined the geochemistry faculty of the University of Chicago, where he worked with Harold Urey on the temperature of ancient oceans (paleothermometry).

Lowenstam joined the geology faculty at Caltech in 1952 with the title professor of paleoecology. During his years at Caltech, Lowenstam traveled widely and conducted research in a variety of fields, including the geology of the Midwestern U.S.A. and the geology of the Middle East, invertebrate paleontology and prehistoric ecology. He became celebrated for his discoveries in biomineralization--that living organisms manufacture substances such as the iron-containing mineral magnetite within their bodies. Lowenstam first encountered this phenomenon in the chiton, a sea creature that had "iron teeth." He is also renowned for his pioneering research on coral reefs and their influence on biologic processes in the geologic record.

--Charlotte E. Erwin

--June 1994

--rev. March 1995

### **Scope and Content**

The Papers of Heinz A. Lowenstam were given to the Caltech Archives by the Division of Geology. The Steven Weiner correspondence was supplemented by Lillian Weitzner.

The papers represent only a small portion of Lowenstam's scientific legacy. Of special interest are the field notebooks from Lowenstam's doctoral research in Palestine. Written in German, they systematically record his mapping of the Eastern Nazareth Mountains and other geologic formations of the region.

A small amount of correspondence, mostly from the late 1970s, 1980s, and early 1990s, is included in the collection along with some biographical data.

Finally, there are guides, maps and notes by Lowenstam on some of his many field trips, both in California and elsewhere.

Researchers should also consult the Caltech oral history interview conducted with Lowenstam in 1988.

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**SECTION I: CORRESPONDENCE**

Box Box 1,	<b>Academy of Sciences, USSR 1983</b>
Folder 1.1	
Folder 1.2	<b>Brack, André 1982-83</b>
Folder 1.3	<b>Caltech: Geology Division and misc. correspondence 1974-92</b>
Folder 1.4	<b>A-G misc. 1962-93</b>
Folder 1.5	<b>H-M misc. 1965-92</b>
Folder 1.6	<b>Newman, William A. 1990-93</b>
Folder 1.7	<b>N-R misc. 1978-93</b>
Folder 1.8	<b>Weiner, Steven 1982-93</b>
Folder 1.9	<b>S-Z misc. 1949-93 and unidentified</b>

**SECTION II: BIOGRAPHICAL AND MISCELLANEOUS**

Box Box 1,	<b>Biographical miscellany and photos</b>
Folder 1.10	
Folder 1.11	<b>Stephens, Mike: thesis (incomplete)</b>
Folder 1.12	<b>Writings on Nautilus and misc.</b>
Folder 1.13	<b>Travel expense reports 1990-91</b>

## SECTION III: FIELD WORK

## Field Notebooks

- Box Box 2,  
Folder 2.1      **1930s (10 notebooks):**  
                  **I. Kartierung des Nazarethgebirges [Mapping of the Nazareth Mountains] Winter 1935-36 Dec. 1935-[?]**
- Folder 2.2      **II. Kartierung Nazarethgebirge, Mt. Tabor Winter 1935-36 13 Jan. 1936-[?]**  
**III. Nazareth-Erheina (etc.) Winter 1935-36 7 Feb. 1936-[?]; with loose papers**  
**I.-II.-III. [one notebook] 24 Dec. 1935-[?]**
- Folder 2.3      **IV. [one notebook] 13 Jan. 1936-[?]**  
**V. Palästina 1935/36 (Dead Sea, etc.; dated further 11 Mar.-4 Apr 1936)**  
**VI. Palästina [Sejara?] (11 Apr.-3 Mar. 1936)**  
**VII. Palästina: Jerusalem, Hebrew University (beg. 9 June 1936)**  
**VIII. Palästina 1936 (beg. 30 June 1936, goes into July) [Untitled] (beg. 4 Mar. 1936)**
- Folder 2.4      **1940s [one notebook]:**  
**[Untitled] (beg. 31 Dec. 1941)**
- Folder 2.5      **1950s [6 notebooks]:**  
**Southwest Pacific Trip, May 21-July (1950)**  
**(Southwest Pacific Trip?) Palau, June 15 [1950]**  
**Travel to Europe and Africa (beg. 26 July 1950)**  
**Florida, Dec. 26, 1951**  
**Field Trip, Oct. 20, 1951**  
**Corona del Mar, April 7, 1954; Florida May 20, 1954**
- Folder 2.6      **1960s [3 notebooks]:**  
**Barbados, Nov. 12-26, 1960**  
**Barbados, River Bay, Feb. 19, 1967**  
**Barbados, River Bay, Feb. 13-Mar 2, 1967**
- Folder 2.7      **1970s [3 notebooks]:**  
**Puget Sound, Aug. 1975**  
**(Pacific region) Nov. 1976-Jan. 1977**  
**Japan and Philippines 1977**
- Folder 2.8      **Undated [2 notebooks]:**  
**Notes for "Impact of Life"**  
**(1940s?) Notes in English, referring to Bermuda and other places**
- Folder 2.9      **Field trip guides and maps**
- Box Box 3,  
Folder 3.1      **Baja California**
- Folder 3.2      **Los Angeles**
- Folder 3.3      **New York State**
- Folder 3.4      **Washington State [map only]**
- Folder 3.5      **White-Inyo Mountains, California**
- Folder 3.6      **Notes, misc.**