

J. Edward Hoffmeister Papers

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Descriptive Summary

Languages: English

Contributing Institution: Special Collections & Archives, UC San Diego

9500 Gilman Drive

La Jolla 92093-0175

Title: J. Edward Hoffmeister Papers

Identifier/Call Number: MSS 0231

Physical Description: 5.5 Linear feet (8 archives boxes, 4 card file boxes, 1 flat box and 3 oversize items)

Date (inclusive): 1925-1982

Abstract: John Edward Hoffmeister (1899-1991) earned his degrees from Johns Hopkins University; an A.B. in chemistry in 1920 and a Ph.D. in geology in 1923. Field work in Tonga and Fiji in 1926, 1928, and 1934 formed the basis of his antecedent-platform theory of coral reef development in the 1930s. His primary collaborator was Harry S. Ladd. Hoffmeister was a professor of geology and an administrator at the University of Rochester from 1923 until 1964, and continued his work on corals during his retirement in Florida. The Papers span 1925-1982 with the bulk documenting the years 1926-1935. While there is no documentation of his work at the University of Rochester or his service during World War II, and little record of his Florida work, documentation of his Pacific expeditions in the 1920s and 1930s is quite rich. This early documentation includes numerous lantern slides and 16 mm films taken during his Pacific expeditions, along with personal and professional correspondence, field notebooks, diaries, and records of the Pacific Science Association's committee on coral reefs, and ephemera. Ephemera include geological specimens, a Fijian war club and two walking sticks.

Restrictions

Original film formats are restricted. Digital surrogates are available for viewing.

Scope and Content of Collection

In the early decades of the 20th century, when J. Edward Hoffmeister undertook his investigations of corals in the South Pacific, the "coral reef problem" was of great interest to scholars. At issue was a seeming paradox: the food and light conditions necessary to reef-forming corals are found only in relatively shallow water. Nevertheless, two common coral formations, atolls and barrier reefs, frequently occur far below the ocean's surface. Most of the proposed solutions to this problem have postulated a change in sea level relative to the reefs' foundation. Darwin theorized that the land beneath these kinds of corals sank, and the sea level correspondingly rose, as the reefs grew. Others, following the American geologist Reginald Daly's lead, proposed a more complicated scenario of glacial warming and coral growth. Since neither theory could, by itself, account for all observed forms of coral reefs, the debate continued.

On the basis of their field research in Tonga and Fiji, Hoffmeister and his colleague Harry Ladd argued that the growth of coral reefs required only the antecedent existence of a suitable submerged "platform" and that no change in sea level was necessary. Although this theory is now considered less persuasive than either Darwin or Daly's explanations, it has not been wholly discredited. The field notebooks, drawing books, lantern slides, diaries, and some of the correspondence in this collection provide a unique retrospect on the social, intellectual and physical circumstances that shaped Hoffmeister's thinking on the origins of coral reefs. The letters to and from Harry Ladd, W. A. Setchell and T. Wayland Vaughn, and the files on the international committee on the coral reefs of the Pacific, give a sense of some of the interests current among a broad community of geologists in the first half of this century.

In addition to their contribution to the history of geology, the Hoffmeister papers offer anthropologists rare documentary evidence of native life in Fiji and Tonga during the 1920s and 1930s. The collection includes hundreds of feet of 16mm black and white film covering feasts, dancing, rural and urban housing, and village scenes from the two island groups. Hoffmeister's letters to his wife and the diaries he kept during the second expedition are also useful sources of information about the islanders' daily lives.

The collection is limited to Hoffmeister's research on corals. His years as a professor of geology and dean at the University of Rochester are not covered here, nor is there any biographical material. His contributions to the Army-Navy Joint Task Force on Bikini Island are alluded to in correspondence, but there is no supporting evidence in this collection.

The collection is arranged in nine series: 1) FIRST EXPEDITION, EUA, TONGA, 1926, 2) SECOND EXPEDITION, TONGA, 1928, 3) THIRD EXPEDITION, FIJI AND LAU, 1934, 4) FILMS AND SLIDES, 5) CORRESPONDENCE, 6) WRITINGS, 7) SUBJECT FILES, 8) PHOTOGRAPHS AND NEGATIVES, and 9) ARTIFACTS AND GEOLOGICAL SPECIMENS.

Biography

John Edward Hoffmeister (1899-1991) was a professor of geology and an administrator at the University of Rochester from 1923 until 1964. His research focused on the development of coral reefs, based on field work he conducted in the Tongan

and Fijian islands in the late 1920s and early 1930s and off the coast of Florida during the 1960s and 1970s.

As a graduate student, Hoffmeister worked with T. Wayland Vaughn at the National Museum of Natural History. He was also a fellow of the Bishop Museum in Hawaii, 1921-1929, where he was invited to join the expedition of W.A. Setchell in 1926 to study geology in Eua, an island in the Tongan Group. Hoffmeister's second Pacific expedition was in 1928 with Harry Ladd, again in the Tongan Group. In 1934, he and Ladd made another joint expedition, this time to Fiji. During these expeditions, Hoffmeister made several films of island life and corresponded regularly with his family back home.

His researches on these expeditions resulted in twenty-five articles and included his articulation of the antecedent-platform theory of coral reef formation. This theory posed an alternative to Darwin's theory of subsidence which suggested that reefs have sunk with the subsidence of the sea floor. Hoffmeister's theory suggests that no change in sea level is necessary for understanding reef development.

During World War II, Hoffmeister's knowledge of the Pacific was put to use making bombing maps of the Pacific for the Army Map Service. He worked as a geologist for the United States Geological Survey in 1942-44 and, in 1946, consulted on the Bikini atom bomb test.

Following nearly forty years of service as an educator and administrator at the University of Rochester, Hoffmeister returned to field work on corals off the coast of Florida at the University of Miami's marine laboratory. His post-retirement period was productive, resulting in several publications, including a summary of his Florida work in a book for popular audiences, *LAND FROM THE SEA* (1974).

He was a fellow of the Geological Society of America, the Geological Association of Canada, and the Paleontological Society of America.

Publication Rights

Publication rights are held by the creator of the collection.

Preferred Citation

J. Edward Hoffmeister Papers, MSS 231. Special Collections & Archives, UC San Diego.

Acquisition Information

Acquired 1992.

Digital Content

The films from this collection have been digitized.

[Items available online](#)

Subjects and Indexing Terms

Coral reefs and islands -- Pacific Ocean

Coral reef -- Biology

Corals -- Fiji

Corals -- Tonga

Tonga -- Social life and customs

Tonga -- Description and travel

Fiji -- Social life and customs

Fiji -- Description and travel

Photographic prints -- 20th century

Diaries -- 20th century

Geology -- Tonga

Geology -- Fiji

Geologists -- Biography

Hoffmeister, J. Edward (John Edward), 1899-1991 -- Archives

Vaughan, Thomas Wayland, 1870-1952 -- Correspondence

Setchell, William Albert, 1864-1943 -- Correspondence

Ladd, Henry, 1895-1941 -- Correspondence

Hoffmeister, Ruth -- Correspondence

FIRST EXPEDITION: EUA, TONGA, 1926**Scope and Content of Series**

Series 1) FIRST EXPEDITION, EUA, TONGA, 1926

This series consists of correspondence and field notebooks. Nearly all of the general correspondence is from Professor W. A. Setchell, of the University of California, Berkeley, who hoped to include Hoffmeister in a research trip to Tonga. The letters, which address funding issues and travel arrangements, predate the expedition. Correspondence with Ruth Hoffmeister begins shipboard, with Hoffmeister en route to the Fijian port town of Suva, the Setchell group's first stop after leaving Hawaii. Hoffmeister's handwritten letters to his wife provide detailed descriptions of people, both Westerners and natives, and of places, including Suva and the islands of Tongatabu and Eua. Activities such as attending a local church service, collecting fossils, and pitching camp are fully--and sometimes wryly--recounted. The field notebooks contain handwritten, detailed technical descriptions of the locations and physical conditions of the coral specimens that Hoffmeister collected. Some entries also include more discursive comments on current or planned field activities. Most are not individually dated, but each notebook's cover page contains a date.

Box 1, Folder 1
Box 1, Folder 2
Box 1, Folder 3
Box 1, Folder 4
Box 1, Folder 5

Correspondence - General 1925 - 1926**Correspondence - Hoffmeister, Ruth 1926****Field notebooks - No. 1 1926 May-July****Field notebooks - No. 2 1926 July 8-July 31****Field notebooks - No. 3 1926 August 9-16****SECOND EXPEDITION: TONGA, 1928****Scope and Content of Series**

Series 2) SECOND EXPEDITION, TONGA and FIJI, 1928

This series contains Correspondence, Drawing Books, Field Notebooks, Photographs, and Publications. As with the first expedition, the letters in this series are mainly from W. A. Setchell and to Ruth Hoffmeister. This time, however, Setchell discusses substantive empirical issues regarding actual and theoretical reef formation, and Hoffmeister's letters to his wife contain relatively more intimacies and references to home and relatively fewer detailed descriptions of people, places, and field work. Neither of the two Drawing Books are dated or labeled, but the sketches of individual features of island topography correspond with some of the field notes, suggesting that the drawings were done on the second expedition. The Field Notebooks are similar in style and content to those done during the first expedition, except that they have fewer specimen lists and more reflections on the possible meanings of observed geological features. For example, in Notebook No. 5, Hoffmeister describes the course of water down a volcanic slope on Eua, and then notes a "very interesting physiographic feature" resulting from the action of the water on the underlying limestone. He speculates that what he is observing on Eua may also explain similar land features found on other islands. The five Photographs of Falcon Island document a trip Hoffmeister and his colleague Harry Ladd organized to a newly emerged volcanic island in the Tonga group. The publication include two works that arose directly out of the second expedition, a co-authored article on Falcon Island and a monograph on the geology of Eua. The interest the latter stimulated among Hoffmeister's colleagues is attested to by their letters.

Box 1, Folder 6
Box 1, Folder 7
Box 1, Folder 8-9
Box 2, Folder 1
Box 2, Folder 2
Box 2, Folder 3
Box 2, Folder 4
Box 2, Folder 5
Box 2, Folder 6
Box 2, Folder 7

Correspondence - General 1928 June-December**Correspondence - Hoffmeister, Ruth 1928 April-August****Drawing books, Vol. 1-2, Field maps undated****Field notebooks - No. 4 1928 April 21-May 9****Field notebooks - No. 5 1928 May 10-16 (?)****Field notebooks - Tongatabu 1928 May 17-24 (?)****Field notebooks - Vitilevu, Fiji 1928 July 3-August (?)****Photographs - Trip to Falcon Island 1928****Publications - "Falcon, the Pacific's Newest Island"****Publications - "Falcon Island," Hoffmeister, *American Journal of Science* 1929**

Box 2, Folder 8,
Oversize MC-050-02
Box 2, Folder 9
Box 2, Folder 10

Publications - "The Disappearing Island: 'Jack in the Box' Falcon and its Crater" 1929

Publications - *Geology of Eua, Tonga*, Hoffmeister 1932

Correspondence regarding *Geology of Eua, Tonga* 1932 - 1933

THIRD EXPEDITION: FIJI ISLANDS, 1934

Scope and Content of Series

Series 3) THIRD EXPEDITION, FIJI ISLANDS, 1934

This series includes Correspondence, Diaries, and Publications. The general correspondence includes a larger variety of correspondents than occurred with the previous two expeditions. Possible sources of funding for the research, selection of staff, and related issues predominate. The letters to Ruth Hoffmeister are more similar in tone to those written during the first expedition. There are colorful reports of island life and daily social and work-related activities. The contrast between Hoffmeister's routines in the relatively urban port of Suva and his daily existence in the more remote parts of the Lau island group is clear. The Diaries provide a vivid sense of the trials and triumphs of field research in a remote setting. Hoffmeister records his irritations--with the miserable weather, the voracious mosquitoes, the capricious mail delivery; but he notes his pleasures--telling nursery tales to the natives to ease the boredom of long evenings, talking over the implications of a day's fossil finds with Harry Ladd, tasting turtle eggs--as well. The diaries also record details of the physical attributes of the islands Hoffmeister visited and note some of the social and physical characteristics of the islanders. The most significant publication to emerge from this expedition was the book *Geology of Lau, Fiji*, co-authored with Harry Ladd.

Box 2, Folder 11
Box 2, Folder 12
Box 2, Folder 13
Box 2, Folder 14

Correspondence - General 1933 - 1934

Correspondence - Hoffmeister, Ruth 1934 February-June

Diaries - Vol. 1 1934 February 10-June 13

Diaries - Vol. 2 1934 June 14 (?) - 29

FILMS AND SLIDES

Scope and Content of Series

Series 4) FILMS AND SLIDES

Hoffmeister recorded on 16mm film scenes of daily village life and panoramic views of the islands he visited. Although few reels are dated, it is likely that some footage was taken on each of the three expeditions. The films are arranged in subseries by type of film and reel size: Black & White Film, 16mm, 7" Reels, and Black & White and Color Film, 16mm, 3.5" Reels. The series also includes several hundred Lantern Slides and two Mounted Slides. Some of the film footage is under- or overexposed and therefore difficult to interpret; one reel is broken in three places; and one reel is severely damaged by mold. Most of the film, however, is in good enough condition to view easily. The reel labeled "Prince of Tonga" is captioned and provides an excellent overview of the kinds of footage included in many of the other films. It was made in 1970, using segments from several different reels, to be presented as a gift to the Prince of Tonga. Overall, Hoffmeister seems to have recorded scenes and events he thought might be of interest to the general public. Examples include native dancing, some forms of which involve highly stylized movements conducted completely from a seated position; a feast; the preparation of tapa cloth; different types of housing; a village rugby game; and mail delivery. The Lantern Slides, in contrast, contain proportionately more images of interest to specialists. There are about 200 slides of corals and limestone formations and nearly a hundred of graphs, charts, and tables broadly related to the geology of reef formation in various parts of the world. The Mounted Slides are dated 1972 by the developer; the subjects are not identified.

Black & white 16mm film, 7" reels

Restrictions

Original films are restricted; please consult digitized versions.

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|-----------------|---|
| Box 3, Folder 1 | <p>Fiji and Tonga circa 1926-1928  http://library.ucsd.edu/dc/object/bb9762386d</p> <p>General note</p> <p>Footage includes dance, the making of tapa cloth, and scenes around Apia and Tin Can Island.</p> |
| Box 3, Folder 2 | <p>Fiji and Tonga</p> <p>General note</p> <p>Duplicate.</p> |
| Box 3, Folder 3 | <p>Fiji, Terraces of Eua circa 1934  http://library.ucsd.edu/dc/object/bb23561804</p> <p>General note</p> <p>Footage includes scenes of Viti Levu, the Navua River, and the preparation of Yaqona.</p> <p>Subjects and Indexing Terms</p> <p>Kava (Beverage)</p> <p>Fiji -- Description and travel</p> |
| Box 3, Folder 4 | <p>Fiji scenes circa 1934  http://library.ucsd.edu/dc/object/bb10592386</p> <p>General note</p> <p>Footage includes what may be Suva with footage from Tonga, Army, natural bridge.</p> |
| Box 3, Folder 5 | <p>People in Eua, Tonga circa 1926-1928  http://library.ucsd.edu/dc/object/bb4950056j</p> <p>General note</p> <p>Footage includes scenes of Apia and Tin Can Island with footage from Fiji and Tonga.</p> |
| Box 4, Folder 1 | <p>Tonga, Army, natural bridge circa 1926-1928 </p> <p>http://library.ucsd.edu/dc/object/bb36531180</p> <p>General note</p> <p>Footage includes Tongan military and horse racing club, and what may be Hufangalupe, a natural land bridge on the south coast of Tongatabu.</p> |
| Box 4, Folder 2 | <p>Eua, Tonga circa 1926-1928  http://library.ucsd.edu/dc/object/bb75098084</p> <p>General note</p> <p>Footage includes fruit bats, dancing, and food customs of Tongan villagers.</p> |
| Box 4, Folder 3 | <p>Eua, Tonga (landscape with cliffs) circa 1926-1928 </p> <p>http://library.ucsd.edu/dc/object/bb62469959</p> |
| Box 4, Folder 4 | <p>Scenes in Polynesia  http://library.ucsd.edu/dc/object/bb0103599m</p> <p>General note</p> <p>Footage includes what may be "tamure" dancing from the Cook Islands or French Polynesia.</p> |
| Box 4, Folder 5 | <p>Prince of Tonga 1928  http://library.ucsd.edu/dc/object/bb3994417s</p> <p>General note</p> <p>Footage includes Prince Viliami Tungi Mailefih, scenes around Eua, Nuku'alofa, Falcon Island, and a Tongan feast.</p> |
| Box 5, Folder 1 | <p>Prince of Tonga (duplicate print) 1928</p> <p>Prince of Tonga (picture negative)</p> <p>Prince of Tonga (original film, part camera reversal, part reversal print)</p> |
| Box 5, Folder 2 | |
| Box 5, Folder 3 | |
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Black & white and color 16mm film, 3.5" reels**Restrictions**

Original films are restricted; please consult digitized versions.

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| Box 5, Folder 4 | Fijian dancing  http://library.ucsd.edu/dc/object/bb7851106k |
| Box 5, Folder 5 | Fijian natives circa 1934  http://library.ucsd.edu/dc/object/bb6554167w
General note
Footage includes Fiji police force and what may be police escorting prisoners out of a jail building. |
| Box 6, Folder 1 | Fiji natives (unboxed) circa 1934  http://library.ucsd.edu/dc/object/bb9148049b
General note
Footage includes Fijians playing cricket and rugby, and the preparation of Yaqona. |
| Box 6, Folder 2 | Native dancing  http://library.ucsd.edu/dc/object/bb8806748g
General note
Footage includes what may be "tamure" dancing from the Cook Islands or French Polynesia with footage from Scenes in Tonga. |
| Box 6, Folder 3 | Scenes in Fiji circa 1934  http://library.ucsd.edu/dc/object/bb1400540n
General note
Footage includes scenes of coastal landscape, islanders doing laundry, and native-style sailing canoe. |
| Box 6, Folder 4 | Tonga circa 1928  http://library.ucsd.edu/dc/object/bb26974783
General note
Footage includes shots of Tongan coastline. |
| Box 6, Folder 5 | Mauna Loa in Eruption 1942  http://library.ucsd.edu/dc/object/bb5291356g
General note
Color film.
Restrictions
Original film is restricted; please consult digitized version. |
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Lantern slides - Negative file

- | | |
|-----------------|--|
| | Pacific Islands - Land/seascapes ... Vegetation |
| Box 6, Folder 6 | Bikini (ALS/M231/1-12) |
| Box 6, Folder 6 | Fiji (ALS/M231/13-22) |
| Box 6, Folder 6 | Hawaii (ALS/M231/23-29) |
| Box 6, Folder 6 | Tonga (ALS/M231/40-74) |
| Box 6, Folder 6 | Charts, figures, graphs, maps (ALS/M231/75-98) |
| Box 6, Folder 6 | Regional ethnography (ALS/M231/99 - 117) |
| Box 6, Folder 6 | Historical and literary figures (ALS/M231/118-133) |
| Box 6, Folder 6 | Florida - Land/seascapes ... Vegetation (ALS/M231/134-140) |
| Box 6, Folder 6 | Coral and limestone specimens (ALS/M231/134-140) |
| Box 6, Folder 6 | Charts, figures, graphs, maps (ALS/M231/183-206) |
| Box 6, Folder 6 | Unlabeled - Land/seascapes, reefs, rock formations, vegetation (ALS/M231/207-247) |
| Box 6, Folder 6 | Coral and Limestone specimens (ALS/M231/248-260) |
| Box 6, Folder 6 | Charts, figures, graphs, maps (ALS/M231/2561-299) |
| Box 6, Folder 6 | Miscellaneous (ALS/ M231/ 300-307) |
| Box 7, Folder 1 | Unlabeled mounted 35mm color slides 1972 |
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CORRESPONDENCE**Scope and Content of Series**

Series 5) CORRESPONDENCE

Includes General and Collected correspondence. The former consists of a single folder with letters from colleagues addressing issues related to Hoffmeister's and others' research on corals. The Collected Correspondence is dominated by letters to and from Hoffmeister's friend and frequent collaborator, Harry Ladd. Most of the letters concern the reef-related research the two men conducted jointly and individually. Although the specific topics they address change over the 50-year span covered by the correspondence, the warmth and good humor inherent in the exchanges remains constant.

Box 7, Folder 2
Box 7, Folder 3
Box 7, Folder 4-7
Box 7, Folder 8
Box 7, Folder 9
Box 7, Folder 10
Box 7, Folder 11

General 1927 - 1936**Ladd, Harry 1932 - 1944****1945 - 1949****1950s****1960s****1971 - 1982****Setchell, W.A. 1932 - 1939****WRITINGS****Scope and Content of Series**

Series 6) WRITINGS

This series contains reprints of all of Hoffmeister's published work, except those pieces grouped with the expeditions. There is also a draft of a speech he gave in 1972, when the Miami University Institute of Marine Sciences dedicated their new Laboratory for Comparative Sedimentology to T. Wayland Vaughn.

Box 7,
Folder 12-13
Box 8, Folder 1
Box 8, Folder 2

Reprints 1925 - 1940**Reprints 1941 - 1968****Draft of speech given at dedication of T. Wayland Vaughn Laboratory for Comparative Sedimentology, Miami University Institute of Marine Sciences, Fisher Island Station 1972 January 27****SUBJECT FILES****Scope and Content of Series**

Series 7) SUBJECT FILES

Papers related to the Pacific Science Association's committee on coral reefs of the Pacific. The third Pan Pacific Science Congress (1927) resolved that a "comprehensive plan" for the study of coral reefs be drawn up by an international committee composed of "biologists, oceanographers, and geologists." That international committee was originally headed by T. Wayland Vaughn, who asked each participating country to form its own national subcommittee, with the chair of the new sub-body to act as delegate to the international group. Vaughn passed the chairmanship of the American subcommittee on to Hoffmeister in 1935. The files in this collection consist exclusively of the materials Vaughn forwarded to Hoffmeister; papers that may have been generated during Hoffmeister's own tenure are not included.

Box 8, Folder 3-4

Pacific Science Association, International Committee on Oceanography. Coral Reefs of the Pacific**PHOTOGRAPHS AND NEGATIVES****Scope and Content of Series**

Series 8) PHOTOGRAPHS AND NEGATIVES

The photographs and negatives in this series are of coral and limestone specimens Hoffmeister collected during his career. There are proportionately more black and white contact sheets of pictures of Florida corals than of any other subjects.

Box 8, Folder 5

Australian deep sea corals 1933

Box 8, Folder 6

Florida corals 1962

Box 8, Folder 7

Loggerhead Key and Bird Key Reef Corals, Tortugas, Florida 1932

Box 8, Folder 8

Negatives, 35mm color film [corals] ca. 1960s

ARTIFACTS AND GEOLOGICAL SPECIMENS

Scope and Content of Series

Series 9) ARTIFACTS AND GEOLOGICAL SPECIMENS

A small box of types of foraminifera (in vials and on cross-sectional slides) Hoffmeister collected in Tonga, and three South Pacific artifacts (a war club and two walking sticks).

Box 8, Folder 9

Tonga foram (?) types -- specimens, vials, cross-sectional slides

Oversize TS-91

Tongan war club -- tree branch, c. 4 ft long, diameter c. 3", fine carving in bottom 12", suggesting handle

Oversize AB-27-F01

Walking stick - Approx. 3 ft. long, smooth-sided and slender

Oversize AB-27-F02

Walking stick - Approx 3 ft. long with burls

Oversize FB-235

Tapa cloth

General

Condition: fair to poor. Three specimens of printed cloth.

Oversize FB-235

Woven garment