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## **Guide to the S.I.O. Subject Files Records, 1890-1981**

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### Collection number: AC 6

Scripps Institution of Oceanography Library

University of California, San Diego  
La Jolla, California

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Date Completed:

Revised, March 1995

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#### Descriptive Summary

**Title:** S.I.O. Subject Files Records,

**Date (inclusive):** 1890-1981

**Collection number:** AC 6

**Creator:** Scripps Institution of Oceanography

**Size:** 35 li. ft.

**Repository:** Scripps Institution of Oceanography Library

University of California, San Diego

La Jolla, California

**Shelf location:** For current information on the location of these materials, please consult the online catalog.

**Language:** English.

#### Access

Collection is open for research. Please contact the Scripps Institution of Oceanography Library (<http://libraries.ucsd.edu/locations/sio/>) for a detailed inventory of items within the collection.

#### Restrictions

Student and personnel records are restricted in accordance with law and university policy.

#### Preferred Citation

[Identification of item], S.I.O. Subject Files Records, AC 6, Scripps Institution of Oceanography Library, University of California, San Diego.

#### Provenance

Some original correspondence, photographs and other primary source material documenting the history of the Scripps Institution of Oceanography was collected from time to time by members of the Library staff and catalogued into the Library's special collections as early as the 1940's when Ruth Ragan served as Librarian. In 1961, Helen Hill Raitt, wife of Professor Russell Watson Raitt and long a member of the Scripps community, used this material as she prepared three

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lectures on the history of the Institution. Mrs. Raitt "was alarmed to find that ... cartons of random letters and reports of unlabeled photographs and building specifications were giving way before a deluge of new acquisitions in the battle for library space." Mrs. Raitt and several other members of the community tried to "impress some order" on this material, but unfortunately, no further description of the material or its arrangement remains.

Mrs. Raitt's lectures on the early history of Scripps were well received, and she decided to prepare a history of Scripps, which was published in 1967. During the course of Mrs. Raitt's research for the book, a significant quantity of early files was found, and a number of persons associated with Scripps donated manuscript material documenting its early history. Unfortunately, no accession records or donor files were kept documenting what material was received and who donated it. Mrs. Raitt's correspondence, however, does give us some information on the growth of the Archives during this period. Mrs. Raitt conducted interviews with many people associated with Scripps during its formative years. These included Mrs. Francis B. Sumner, Ruth Ragan and Edna Watson Bailey, among many others. Dr. Bailey was William Emerson Ritter's literary executor and held Dr. Ritter's correspondence and other papers. After their interview, Dr. Bailey gave Mrs. Raitt that portion of the Ritter Papers which concerned Dr. Ritter's directorship at Scripps. In a similar fashion, Mrs. Raitt received some letters of Erik Gustav Moberg from his widow. These collections were added to the Archives, together with files documenting the directorships of Thomas Wayland Vaughan and Harald Ulrik Sverdrup which Mrs. Raitt located in Ritter Hall.

Mrs. Raitt's work was continued by Elizabeth Noble Shor, who was asked to write a second volume of the history of the Institution by director William A. Nierenberg in 1972. Mrs. Shor is the wife of Dr. George G. Shor, Associate Director of the Institution, and had assisted Dr. Carl Leavitt Hubbs and Mrs. Hubbs in the care of the Hubbs Library and the Hubbs Papers from 1962 to 1976. Mrs. Shor served as Archivist at Scripps from 1973 to 1981. During this period, she conducted research for her book and gathered archival and manuscript material documenting the history of the Institution.

Mrs. Shor secured a number of collections for the Archives. She located thirty-three linear feet of material, the directorial files of Roger Revelle, and other early records, in Ritter Hall and added these to the Archives. The voluminous Carl Leavitt Hubbs Papers were added to the Archives in 1979. Walter Munk donated several folders of his papers concerning Carl Eckart to the Archives. In June, 1977, sixty-four folders of files documenting Scripps expeditions were sent to the Archives by the Ships Scheduling Office. Files documenting several buildings on the Scripps campus were donated by the UCSD Office of Architects and Engineers. Correspondence and a few account books of S.I.O. Business Manager Wesley Clarence Crandall were found by Mrs. Shor and added to the collection. The Conrad Limbaugh Papers were given to Carl Leavitt Hubbs by the Limbaugh Family. Dr. Hubbs transferred them to the Archives in 1979. Mrs. Alison Raitt Guest brought her mother's papers to the Archives from Mrs. Raitt's home after her death in 1976. When the Alpha Helix program was concluded in 1980, the files of the Program Office and files concerning the Program in the Ships Scheduling Office were sent to the Archives. Dr. Fred Noel Spiess gave his records as a member of the Special Committee on Non-Senate Academic Ranks to the Archives in 1979. The files of Winfred Emory Allen were transferred to the Archives from storage at the Institute of Marine Resources in 1981. The Sumner Family donated Francis Bertody Sumner's photographs, and Thomas Wayland Vaughan's daughter donated some of his papers and photographs to the Archives.

Rather than transferring a complete series of files, several S.I.O. offices transferred non-current files to the Archives in small units. The Director's Office, for instance, transferred several boxes of non-current files to the Archives during the period 1973-1981. Similarly, the non-current biographical files of the Academic Personnel Office were transferred to the Archives between 1973 and 1976. The Public Affairs Office transferred their non-current biographical and subject files to the Archives from time to time, often sending individual boxes.

The Archives acquired unsolicited items or folders from a variety of persons and offices. Some of this material was received through the campus mail and did not include a note indicating where it had come from. Material was received in this manner from the Marine Physical Laboratory, the Physiological Research Laboratory, the Institute of Geophysics and Planetary Physics, the S.I.O. Library, the Marine Life Research Program, Marine Facilities and even from several UCSD administrative offices. There is little information on how, when and from whom such files were received.

As the original order of files received by the Archives had been disturbed, and as no information on provenance was recorded, Mrs. Shor found the records of the Institution to be in poor order and devised a plan to organize the archival and manuscript material in the Archives into two large artificial files: the Biographical Files and the Subject Files. In addition to these files, photographs were placed in subject and chronological order in a set of looseleaf notebooks.

Mrs. Shor began to construct the biographical and subject files by sorting the earliest records of the Institution. The William Emerson Ritter Papers were sorted into incoming correspondence (alphabetical) and outgoing (chronological). File folders labelled with the names of "anyone who had been a staff member (or student) of Scripps" were established, and correspondence to, from or about an individual were filed into that folder, regardless of the provenance of the item. The remaining Ritter correspondence was filed in the biographical files under Ritter's name.

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In this manner, Mrs. Shor sorted the records of directors Ritter, Vaughan and Sverdrup and additional material as it was received in the Archives. However, many items did not readily fit into the biographical files, so Mrs. Shor established the subject files.

The subject files are divided into two units, the S.I.O. series and the Non-S.I.O. series under "U.S. Navy -Office of Naval Research" is largely drawn from the personal papers of Roger Revelle and his official correspondence as Director of Scripps. Within these two major units, Mrs. Shor established broad subject headings, followed by sub-headings as needed. For instance, "Buildings and Property" and "Campus Development" were established as broad subject headings. Later, these two headings were combined and sub-headings, such as the names of individual buildings, were established. Subject folders were arranged alphabetically by heading, and the chronologically. There is one exception, folders under the broad heading "Ships" are arranged alphabetically by ship name. Items within folders are arranged chronologically.

In 1977, Mrs. Shor described her method of sorting material received by the Archives into subject folders:

"[The Subject files] require preliminary sorting of the folders into subject category, establishing new subjects as required, considerable cross-referencing, rearranging sheets within each folder, and finally interleaving this material into already established files."

### **Arrangement and Processing**

The arrangement of the Subject Files was devised by Mrs. Elizabeth Noble Shor, S.I.O. Archivist, 1973-1981.

The Subject Files are arranged into two large units: S.I.O. files and Non-S.I.O. files. Within these two sections, folders are arranged alphabetically. Folders bearing identical folder headings are generally arranged chronologically. There is one exception to this rule. Material filed into the broad subject heading "Ships" is arranged alphabetically by ship name. Material filed into the broad category "Expeditions" was originally arranged alphabetically, but has been rearranged chronologically by expedition date. Items within folders are arranged chronologically.

Originally, the Subject Files included published material as well as manuscript and archival material. If a full citation was available for a published item, it was removed from the file and replaced with a separation sheet during processing. Published items separated from the files have been cataloged into the Archives reference collection.

Oversize material, such as architectural plans, have been removed from the Subject Files, listed on a separation sheet, and placed in oversized storage.

Folders were replaced with acid-free folders and folder headings were transcribed on to the acid-free folders. Rusting paper fasteners were removed or replaced with rust-proof staples. Acidified items and fragile items have been either encapsulated in mylar or photocopied on acid-free bond paper. The collection was removed from filing cabinets and placed in acid-free boxes. Folders and boxes were numbered.

A preliminary folder list was then generated. A list of subject cross-references were generated from Ms. Shor's card file of the collection.

As the Subject Files include archival records from many individuals associated with the Institution, no biography or administrative history was written as these would necessarily encompass the entire history of the Institution.

### **Scope and Content Note**

The S.I.O Subject Files consist of 35 linear feet of material in 28 boxes. The files include both manuscript and archival material dated 1890-1981, but the bulk of the collection includes material which documents the period 1930-1970. Although the files consist overwhelmingly of material documenting the history of the Scripps Institution of Oceanography, they also include material pertinent to the history of oceanography in the twentieth century.

The Subject Files are divided into two series entitled "S.I.O." and "Non-S.I.O." Material in the "S.I.O." series comprises the bulk of the collection (30 linear feet). Both series contain material created or received by Scripps offices and personnel and concern activities undertaken at Scripps or elsewhere by Scripps personnel. The "Non-S.I.O." series, however, largely concerns relationship of the Institution with outside groups, such as the American Miscellaneous Society, the U.S. Navy and the National Science Foundation. The "Non-S.I.O." series also includes material concerning Scripps participation in national and international programs such as the International Geophysical Year and the International Indian Ocean Expedition.

The Subject Files include large groups of files documenting Scripps budgets and property, conferences and symposia, expeditions, staff, contracts and research, and ships.

### **BUDGET**

There are 85 folders of material (approximately 1.5 linear feet) filed under "Budget." This includes material dated 1910-1974, but the bulk is dated 1918-1948. Material in these folders includes formal budgetary documents, calculations, summaries of accounts, memoranda and notes. Scripps did little formal budgetary planning before 1912 when it joined the University of California. Until 1947, the University required the Institution to submit biennial budgetary requests. After that date, budgetary requests were submitted annually.

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## **BUILDINGS AND PROPERTY**

There are 110 folders of material (approximately 2 linear feet) arranged under the heading "Buildings and Property." This includes correspondence, maps, reports, specifications, blueprints and plans, bills, accounts and notes documenting buildings and property improvements planned and/or constructed on the Scripps campus or for Scripps. The section also includes a few folders on general campus improvements (e.g. access roads, telephone system installation). Although material in the section largely documents plans for construction of buildings, there is also material on space planning, long range campus planning, and the utilization of existing buildings.

There are fourteen folders under the heading "Conferences" and six folders under the heading "Symposia" which document conferences and symposia held on the Scripps campus and/or organized by the Institution of its personnel.

## **EXPEDITIONS**

There are 285 folders of material (approximately 5 linear feet) filed under the heading, "Expeditions." This material includes correspondence, schedules, tracks, maps, expedition planning proposals, proposals from scientists concerning their participation in expeditions, lists of crew and expedition participants, reports, summaries, ships logs and a few diaries of persons who participated in expeditions. This material concerns expeditions in which S.I.O. scientists participated. Most of the expeditions included in this section were planned and executed by Scripps. Material filed in the "Expeditions" section was largely drawn from the files of the Ship Scheduling Office and therefore includes more information on expedition planning than expedition results. Information in the "expedition" section is complemented by material filed under "Marine Facilities" and material filed under "Ships".

## **CONTRACTS AND RESEARCH**

There are sixteen folders filed under the heading "Contracts" and fifty-seven folders filed under the heading "Research." Both sections include correspondence, copies of contracts and research summaries. However, material filed under "Contracts" concerns specific S.I.O. contracts while material filed under "Research" concerns broad areas of research pursued by scientists at Scripps with internal support or support from one or more outside agencies. Other material on research at Scripps can be found filed directly under the name of the unit conducting the research (e.g. Marine Life Research Program) or under a subject heading (e.g. Submarine Geology).

## **SHIPS**

There are 243 folders of material (approximately five linear feet) filed under the heading "Ships." This material includes correspondence, specifications, plans, contracts, memoranda, ship operations data, maintenance logs and other items documenting vessels and platforms owned, chartered by, operated by, or otherwise affiliated with the Scripps Institution. The "ships" section also includes material on ship design. For instance, there are folders concerning the U.S. Navy, Naval Ship Engineering Center design AGOR or T-AGOR. AGOR was not a specific ship but rather a design for a series of ships built by the Navy. The R/V Thomas Washington and the R/V Melville are AGOR design ships. Additional information on Scripps vessels and marine operations can be found among folders entitled "Marine Facilities" and among folders documenting the work of the Marine Operations Committee under the name of the Committee and under the heading "S.I.O. Staff Council, Committees."

## **PERSONNEL**

There are fifteen folders of material concerning Scripps personnel filed under the heading "Staff Lists." This material includes aggregate data on S.I.O. personnel and lists of staff which include names, character of work, title and/or department, name of spouse, home address, phone number, date hired, and salary. These lists were generated by a variety of offices, including the Academic Affairs office and the S.I.O. Staff Council. A list dated 1953 also gives a brief biography of staff members. In addition to material filed under the heading "Staff Lists," there is a small quantity of personnel material filed under "Research, American Petroleum Institute, Project 51" in box 17. The "Marine Facilities" section also includes lists of crew members.

## **1890-1910**

The collection includes approximately 20 folders of material dated before 1911. There are ten folders of material documenting the Marine Biological Association of San Diego which was formed in 1903 and served as the governing body of the station which was to become the Scripps Institution. There is one folder under the heading "Ships" which includes a document entitled, "Soundings off San Diego, Albatross, 1904." There is one folder on the station's budget in 1910, and there are several folders under the heading "Buildings and Property" concerning the station during this period. One of the buildings and property folders concerns the laboratory at La Jolla Cove, 1905-1910, the location of the station before the current campus site was acquired. There are folders on the construction of the Scripps Building in 1909 and the construction of the seawall on the Scripps campus. There are several folders under the heading "History" which consist largely of published essays on the history of the Institution but also include some notes and photocopies of original material relevant to the history of Scripps which are housed at other repositories.

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The "Ships" section of the Subject Files includes several folders of material on the first ships used by Scripps. There is one folder documenting the lease of the launch Elsie which consists of a contract between the owner of the launch and William Emerson Ritter, first director of the Scripps Institution. The Elsie was used for oceanographic work by Ritter and his associates at San Pedro in 1901. There are four folders pertinent to the yacht Loma owned by Edward Willis Scripps. Mr. Scripps first loaned and later donated the yacht to the station during the period 1904-1906. The files include correspondence and financial records concerning the Loma, and the yacht's during a trip to San Clemente in July, 1905. There are three folders of material relevant to the R/V Alexander Agassiz, a yawl built for the marine biological station in 1907. These folders include correspondence regarding the acquisition of the vessel and its use, a bill of sale dated 1912, and notes by Helen Hill Raitt on the ship.

#### **1911-1920**

The Subject Files include some fifteen folders of material documenting the history of Scripps during the period 1911-1920. These include five folders of material on the budget, two general folders of material on buildings and property, a folder of building record cards, a folder on the construction of cottages at Scripps, three folders of correspondence and other material on the construction of the Library-Museum and a folder on the construction of the S.I.O. pier in 1916. Scripps scientists have conducted measurements and undertaken observations from the pier since 1917. These observations include temperature, comments on marine life, notes on wind conditions and other phenomena. Folders under the heading "Pier" concern pier observations and other work conducted on the pier. Material concerning the construction of the pier is filed under "Buildings and Property, Pier."

#### **1921-1930**

There are approximately two dozen folders in the Subject Files documenting the history of Scripps during the period 1921-1930. These include a folder under "Administration" on the administrative organization of the Institution in 1924, a folder on the Advisory Board at Scripps dated 1926-1929, a folder of correspondence concerning the Aquarium-Museum dated c1925, a folder concerning automobiles owned by the Institution, six folders concerning the campus budget, and fourteen folders under "Buildings and Property" concerning the development of the Scripps campus during the 1920's. The development of the campus during this period was largely sponsored by Ellen Browning Scripps.

#### **ERIK GUSTAF MOBERG**

The "Ships" section of the Subject Files includes several folders documenting the work of Erik Gustaf Moberg, a chemical oceanographer at the Scripps Institution who was in charge of all boat work. The general ships section includes several essays by Moberg: one dated in 1929 on the research vessel Carnegie, two others written the same year containing Moberg's recommendations for work to be conducted at sea, and an essay dated 1931 entitled, "Boat and Program for Oceanographic Investigations."

#### **SCRIPPS RESERVE**

Box 24 of the Subject Files includes a folder labelled "University of California Natural Land and Water Reserve System." (f15) This folder contains correspondence exchanged by Scripps Director Thomas Wayland Vaughan, Percy Barnhart and others with California state legislators during an effort to have the beach at the Institution declared a biological reserve and property of the University. No abalone or lobster catches were to be allowed on the property. In 1929, a bill was introduced into the Legislature by William E. Harper defining the reserve. It was approved by the governor and enacted on August 14, 1929.

#### **R/V SCRIPPS**

The "Ships" section also includes five folders on the R/V Scripps, a purse seiner acquired by the Institution in 1925. This material includes correspondence, financial records, records of maintenance and other papers concerning the ship.

#### **1931-1940**

The collection includes more than a box of material (1.25 linear feet) concerning events at Scripps during the period 1931-1940. This includes one folder on the Advisory Board, thirteen folders on the budget, and eighteen folders on buildings and property. The buildings and property folders include campus maps, a folder on the campus master plan of 1930, folders on cottages, the Library-Museum, Machine Shop, pier and seawall, the Scripps Building and the tennis courts. A folder under "Ceremonies" concerns the 1938-1940 Charter Day festivities, an annual celebration of the University's establishment in 1868. Course outlines dated 1936+ are filed under that heading. These include only some course outlines, and do not reflect the entire curriculum of the Institution.

Material pertinent to the Gulf of California expeditions of 1939 and 1940 is filed under "Expeditions." Cores and sediment samples collected on these expeditions were analyzed in the Scripps Sediments Laboratory which was established in 1935. There are two folders of memoranda, reports and equipment requests filed under "Marine Sediments Division" in box 14 which concern the Laboratory. This material documents the work of Roger Randall Dougan Revelle, Richard Howell Fleming, Erik Moberg and others in the Sediments Laboratory.

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## **OCEANOGRAPHIC INSTRUMENTATION**

Folders entitled "Inventory of Equipment and Property" include material dated 1930-1947. The inventory documents not only equipment purchased by the Institution, but also lists equipment designed and fabricated at Scripps during the period. Additional information on instruments designed and/or fabricated for use at Scripps can be found under the heading "Special Developments." Folders under this heading contain correspondence and other material dated 1949-1968 which documents the Scripps unit which designed and built equipment and instruments for use at the Institution. There are also folders of material on particular instruments designed at Scripps under the general heading, "Equipment." Three folders concerning a magnetometer are filed under "Marine Physical Laboratory" and include material from 1952-1959. Folders containing material pertinent to the Floating Instrument Platform (FLIP) and the Remote Underwater Manipulator (RUM) are filed under "Ships."

There are ten folders in the "Research" section pertinent to research conducted at Scripps during the period 1921-1940. Three concern research sponsored by the U.S. Bureau of Commercial Fisheries on South Pacific fisheries and on pilchard fisheries during the late 1930's and early 1940's. Six folders document research conducted by W. Forest Whedon on fouling organisms during the period 1936-1941 which was supported by the U.S. Navy Bureau of Construction and Repair.

### **WPA**

There are several folders in the Non-S.I.O. series of the Subject Files dated during the 1930's and entitled "U.S. Works Progress Administration." These include correspondence, proposals, requisitions and other records describing work undertaken at Scripps or for Scripps with the sponsorship of the WPA. In 1935, one team of WPA workers painted and repaired twenty Scripps buildings and the pier. Another team of workers constructed curbs, drains and ditches to improve road drainage and prevent soil erosion on campus. In May, 1936, Scripps prepared a narrative report on WPA Project 691, written by Erik Moberg, which describes laboratory, clerical, translating, library, drafting, photography, carpentry, and boat work undertaken by WPA personnel in the Sediments Laboratory.

A memorandum dated December 26, 1939, describes a WPA project in the field of physical oceanography. From 1936-1939, WPA Project 165-03-6309 was conducted at Long Beach under joint Scripps and U.S. Hydrographic Office supervision. Project workers evaluated and codified data on ocean temperatures and currents.

### **1941-1945**

More than a foot of material in the S.I.O. Subject Files documents the period 1941-1945. This includes one folder on automobiles and sixteen folders on buildings and property, including a copy of the campus master plan dated 1945, several folders on cottages, and a folder on the Library-Museum. It is disappointing to note that there is only one folder under "Contracts" on National Defense Research Committee sponsored work at Scripps.

Scripps undertook no collecting expeditions during the war and there is no material in the "Expeditions" section relevant to this period. However, folders entitled, "Research, U.S. Fish and Wildlife Service, Pilchard Fisheries," (Mox 16, f23+) includes information on cruises of the R/V E.W. Scripps during the period 1940-1941. These cruises were taken off the coast of California near the Channel Islands to collect pilchard eggs and larvae and hydrographic, zooplankton and salinity data.

There are many other folders in the "Research" section pertinent to research conducted at Scripps during the war years. There are several folders documenting kelp research conducted by Scripps with the support of the Kelco Company and the U.S. Fish and Wildlife Service. Additional post-war correspondence concerning kelp research can be found under the heading, "Marine Botany." There are eight folders of correspondence, reports and other papers documenting surface current, drift, salinity and temperature studies conducted by Scripps during the war, one folder dated 1944 on a study of the Afternoon Effect, and one folder dated that same year documenting research on waves in shallow water conducted jointly by S.I.O., the Woods Hole Oceanographic Institution and the U.S. Navy Bureau of Ships.

### **UCDWR**

It is disappointing to note that the Subject Files include only seven folders documenting the work of the University of California Division of War Research. The paucity of material on UCDWR is largely due to the fact that the central UCDWR files were apparently shipped to a federal records center and lost after the war. Material gathered from other offices which documents the work of individual scientists at the UCDWR is filed under the name of the individual in the Biographical Files. For instance, papers documenting Martin Wiggo Johnson's research on snapping shrimp for the UCDWR are filed under his name in the Biographical Files. A small amount of additional material concerning the UCDWR is located among the records of the Marine Physical Laboratory in the Scripps Archives.

### **1946-1950**

The period 1946-1950 was a period of great expansion at the Scripps Institution, both of its campus and its programs. The Subject Files include several feet of material documenting events during this period. Fundamental changes in the administrative organization of the Institution are reflected in a folder entitled, "Administration, S.I.O. Organization, 1946-1949," in box 1. These changes were largely made by directors Carl Eckart and Roger Revelle. The "Administration"

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section of the Subject Files includes a folder of correspondence and other papers generated by the Search Committee appointed to find a new director after Harald Ulrik Sverdrup's retirement in 1947.

#### **MARINE PHYSICAL LABORATORY and MARINE LIFE RESEARCH PROGRAM**

Several new and important laboratories, programs and administrative units were founded during the post-war years. These included the Marine Physical Laboratory, which grew out of the UCDWR in 1946, the Marine Life Research Program which studied the depleted *Sardinops sagax*, or Pacific sardine, with generous funds provided by the State and the fishing industry, the Marine Vertebrates Division which was created in 1948, and the Marine Invertebrates Division created that same year. Subject Files include significant quantities of correspondence, reports and other papers documenting the establishment and work of these units. The collection also includes one folder of correspondence documenting the work of the Marine Biochemistry Program at Scripps during the post-war period, and two folders on marine botany at Scripps.

#### **SUBMARINE GEOLOGY**

Box 23 of the Subject Files holds five folders labelled, "Submarine Geology" which include material dated 1948-1953. This consists largely of correspondence and memoranda generated by Francis Parker Shepard which complements correspondence filed under his name in the Biographical Files. The material describes research by Shepard, Douglas Lamar Inman and others on submarine geology, support for research at Scripps from the American Petroleum Institute, use of underwater cameras, corers and other instruments. The correspondence also includes some discussion of wave action and currents. Several letters discuss Shepard's monograph, *Submarine Geology*. Material documenting Shepard's early work on sediments can be found in folders entitled "Marine Sediments Division."

The expansion of Scripps programs during the post-war period led to a concomitant expansion of the Institution's library which is documented in five folders under the heading, "Library."

#### **MARINE FACILITIES AND EXPANSION OF FLEET**

During the immediate post-war period, plans were formulated for several large and significant expeditions and the Institution also moved to expand its fleet. In 1947, Scripps acquired the R/V *Crest*, formerly a harbor minesweeper. In 1948, the R/V *Horizon*, formerly a Navy owned ocean tug, was added to the fleet. That same year, the purse seiner R/V *Paolina-T* was purchased with Navy funds for the Institution. Correspondence documenting the acquisition, condition and use of these ships is included in the Subject Files. Scripps established Marine Facilities in 1948 to superintend the fleet and coordinate the services of crew and maintenance staff. Boxes 11, 12 and 13 contain correspondence, memoranda, schedules, summaries of operations, financial records, crew lists and other material documenting the work of Marine Facilities. Folders filed under "Marine Facilities, Ships, Accounting Data for Costs, Summary Operations and Memos to Accounting, Ship Operations" in box 12 provide excellent documentation of the actual movements of the Scripps fleet. These folders supplement material filed in the "Expeditions" section. Crew lists and crew salary lists filed under "Marine Facilities" in boxes 12 and 13 compliment other lists of Scripps personnel filed under "Staff Lists."

#### **RADIO STATION WWD**

The Subject Files also include 22 folders of material documenting Radio Station WWD during the period 1946-1972 in box 16. With the post-war expansion of the Scripps fleet, the Institution required an expanded radio communication network. When the Bureau of Commercial Fisheries phased out one of their stations in 1949, Scripps acquired the authorization to establish Marine Communications and Ocean Data Station WWD in San Diego. The "Radio Station WWD: folders in the Subject Files include a history of the station written in 1965, correspondence, reports, Federal Communications Commission forms, and copies of radio messages received from the Scripps fleet.

#### **CONSERVATION**

Folder 16 in box 24 contains material dated 1944-1954, 1956, 1964-1969 and 1972 under the heading, "University of California Natural Land and Water Reserves." Material in this folder dated 1944-1949 concerns the conservation of wildlife in the Mission Bay area. Material dated 1948 concerns an addition to point 207 of the "Rules and Regulations Relating to Navigable waters in the United States." restricting anchorage and fishing in the vicinity of the Scripps pier. Material dated 1951-1954, 1956 and 1964 concerns a proffered gift of marshland in the Mission Bay area from Mrs. Oscar J. Kendall and Mr. A.A. Frost to the University of California. The marshland was offered to the University to protect it from commercial development.

#### **LOYALTY OATH**

In February, 1950, the Regents of the University of California required all faculty members to sign a loyalty oath. This sparked a controversy throughout the University system, including debate in the Academic Senate and discussion among the faculty of the Scripps Institution. The Subject Files include six folders of material on the controversy dated 1950. This material includes memoranda, petitions, correspondence, notes, resolutions of the Academic Senate, committee reports and other papers largely reflecting the activities and views of the Scripps community, but also including documents reflecting the attitudes of University of California faculty and administrators at other campuses. The folder entitled, "Loyalty

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Oath, Notes by Roger Revelle, c1950," (box 11, f34) includes Dr. Revelle's notes on committee meetings, notes on objections to the oath, statements on the oath, and memoranda of meetings and telephone conversations concerning the controversy.

### **OPERATION CROSSROADS**

During the post-war period, Scripps conducted and participated in several expeditions of great scientific importance. The "Expedition" section of the Subject Files includes eight folders on Operation Crossroads, 1946-1953, the first U.S. atomic test which was conducted at Bikini Atoll. The "Expeditions" section also contains four folders of material on the Bikini resurvey of 1947-1948 which evaluated the environmental impact of the Crossroads test a year after it was conducted. Both the original Crossroads test and the Bikini resurvey were conducted by the federal government, but both included scientists from the Scripps Institution of Oceanography as observers or scientific team participants working under government supervision.

Roger Revelle, then serving the Navy as head of the geophysics branch of the Office of Naval Research, organized and led the oceanographic and geophysical component of Operation Crossroads. In 1947, he led a second team to resurvey Bikini. Revelle had long been associated with the Scripps Institution, first as a student, then as an instructor, and two years after his return from service in the Navy, as Director of the Institution. The folders on Operation Crossroads and the Bikini resurvey under "Expeditions" consist largely of Revelle's correspondence and the correspondence of other Scripps scientists who participated in these expeditions.

### **MIDPAC**

The "Expeditions" section also includes thirteen folders of material on the MIDPAC expedition of 1950, renowned for its exploration of the central and eastern Pacific, for the discovery of the Mid-Pacific mountain range, and for the measurement of heat flow through the ocean floor. The folders include correspondence and radio cables, schedules of operations, the log of the expedition, and papers concerning a MIDPAC/Capricorn reunion held in 1975.

### **U.S. NAVY**

The Non-S.I.O. series of the Subject Files includes almost a full box (1.25 linear feet) of material filed under the heading, "U.S. Navy." There are 11 folders of material pertinent to the Navy Hydrograph Office for the period 1945-1962, 21 folders of material pertinent to the Office of Naval Research during and just after the second world war, and five folders of material concerning the U.S. Navy Oceanographic office which succeeded the Hydrographic Office in 1962. Revelle is credited with planning and initiating the organization of the oceanographic section of the Hydrographic office and participating in the establishment of the Office of Naval Research. These files document the fruitful post-war relationship between the Navy and the Scripps Institution. They consist of correspondence, proposals, research reports, memoranda and other material largely documenting research conducted at Scripps with Navy support.

### **1951-1955**

The Subject Files include over one hundred folders of material documenting the history of the Scripps Institution during the period 1951-1955. Again, these files reflect the post-war expansion of Scripps. There is one folder on the Administrative Advisory Council which was established in 1951 under Chapter IX, Article 3(c) of the Standing Orders and Bylaws of the Regents of the University of California. The Administrative Advisory Council at Scripps was established by Director Revelle, who chaired the Council, to assist him in the administration of the Institution. The folder contains memoranda, correspondence, minutes and other records documenting the work of the Council. Although this folder includes material dated 1951, there is no material documenting the work of the Council from 1952 until 1954.

### **ADMINISTRATIVE ADVISORY COUNCIL**

The Subject Files include one folder of material under "Administration" pertinent to Faculty Meetings dated 1949 and 1954+. There are also 15 folders concerning the Scripps budget during the period 1951-1955. The "Buildings and Property" section includes three folders on the development of the campus during this period. One concerns a lunchroom, planned but never built. One concerns the Scripps Machine Shop, and one contains an inventory of space needs at the Institution which was conducted in 1954.

### **CONFERENCES**

Several important conferences were held at the Scripps Institution during the early 1950's. There is one folder under "Conferences" which includes correspondence, notes, memoranda and other material documenting the California Cooperative Oceanic Fisheries Investigations (CalCOFI) Sardine Conferences held during the 1940's and early 1950's. The 1951 University Charter Day celebration at Scripps included the dedication of the Thomas Wayland Vaughan Aquarium Museum and a conference entitled "The Position of the Scripps Institution of Oceanography in the University, State and Nation." Speakers included Roger Revelle, Claude Ephraim ZoBell, Norris Watson Rakestraw, Carl Henry Eckart, Carl Leavitt Hubbs, Francis Shepard, Robert Gordon Sproul and Detlev Wulf Bronk. The Subject Files include invitations, correspondence and a transcript of the conference. One folder of material filed under "Symposium" describes a 1952 symposium on

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oceanographic instrumentation which was held at Scripps. The fifth and sixth annual meetings of the Pacific Tuna Conference were held at Scripps in 1954 and 1955. Correspondence about and programs of these conferences are included in the Subject Files.

There are three folders entitled, "Descriptive Oceanography" and dated 1950-1953 in box 6 of the Subject Files. This material was originally drawn from a folder in the central files of the Office of the Director. It includes correspondence, memoranda and other papers concerning the Marine Life Research Program, meteorological research undertaken with the support of the U.S. Weather Bureau, and material concerning the California Cooperative Oceanic Fisheries Investigation.

#### **INSTITUTE OF MARINE RESOURCES**

There are four folders in the Subject Files which concern the Institute of Marine Resources (IMR), a University of California institute founded at the urging of Roger Revelle and other scientists in 1951 to foster research on fisheries and other marine resources. The "Research" section of the Subject Files includes several folders specifically concerning IMR projects. There is one folder entitled, "Studies of Marine Fisheries in Peru, 1954-1955" which documents research conducted under IMR auspices.

There are six folders under "Research" on American Petroleum Institute Project 51 which was administered by IMR from 1954-1957. API Project 51 was initiated in 1951 and directed by Francis Parker Shepard to study the sedimentary formations of the coastal waters of the Gulf of Mexico. Five of the six API folders concern project personnel. Six folders under the heading "Scripps Tuna Oceanography Research (STOR)" document the STOR program which began in 1957 and was administered by IMR from 1963 until 1971. The STOR program was terminated in 1973.

Additional information on the formation and work of the Institute of Marine Resources can be found among the papers of Roger Revelle and Carl Leavitt Hubbs at the Archives. The Archives also holds the official records of the IMR Office of the Director for the period 1950-1970. These records document the directorships of Milner Bailey Schaefer and John Dove Isaacs. The Milner Bailey Schaefer Papers, also housed at the Scripps Archives, include material documenting his work at IMR.

The "Research" section of the Subject Files includes documentation of other projects undertaken at Scripps during the early 1950's. There are seven folders documenting research on the movement of nearshore material, This research was conducted by Francis Shepard, Douglas Inman and others with the support of the Beach Erosion Board. There are three folders of material on Limnoria and other woodboring organisms, seven folders on air-sea boundary research, one folder on surface water waves, and one folder on long period ocean wave research.

There are six folders of material filed under "Waves and Currents," in box 27. This material consists largely of correspondence dated July, 1950-1956 which was originally filed in the Central Files of the S.I.O. Office of the Director. The correspondence is arranged chronologically and consists of carbon copies of letters from Scripps scientists, mainly Walter Heinrich Munk, and letters received by Scripps scientists concerning theories and research on the dynamics of waves and currents and the optical properties of the sea surface. The folders also include a few letters which discuss the University of California Institute of Geophysics and the International Geophysical Year.

#### **CAPRICORN**

The "Expeditions" section of the Subject Files include folders describing expeditions undertaken in the early 1950's. These include Northern Holiday, Shellback, Capricorn, Transpac, Norpac and Eastropic. The Capricorn Expedition is significant in part because it was the first expedition that carried scuba divers. The "Expedition" files under Capricorn include Willard Bascom's essay, "Diving During Capricorn Expedition, 1953." Additional material on diving during this and other expeditions can be found under the general heading "Diving," which includes material dated 1947+.

#### **MARINE BIOLOGY PROGRAM ROCKEFELLER FOUNDATION**

There are two folders in Subject Files on the Marine Biology Program dated 1952-1958. In 1953, the Scripps Institution applied to the Rockefeller Foundation for funds to support the program and enlarge the marine biology faculty. Rockefeller granted the Institution more than one million dollars the following year. These files include correspondence, a copy of the 1953 Scripps proposal, minutes of the Committee on Rockefeller Grant Faculty Appointments and other papers concerning the marine biology program, curriculum and faculty. Additional material concerning the Rockefeller Foundation grant and the marine biology program at Scripps can be found in the Carl Leavitt Hubbs Papers at the Scripps Archives.

#### **1956-1960**

There are approximately two boxes of material (2.5 linear feet) in Subject Files which document the period 1956-1960. This material includes only three folders pertinent to the Scripps budget. Although the Subject Files include folders documenting Scripps budgets up to 1958, there is a gap in the files between 1958 and 1960. There is one folder of budgetary material dated 1961, but no material on Institution budgets from 1962-1971. The Subject Files include five folders on Conferences held at Scripps during this period. These include material on the Conference on Marine Corrosion and Fouling Problems, 1956, the Eastern Pacific Oceanic Conference of 1956-1957, the New Research Methods in Hydrology conference of 1957,

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and the Recent Research in Climatology conference held that same year.

During the period 1956-1960, several important buildings were constructed on the Scripps campus including Sumner Auditorium, Sverdrup Hall, and a new wing added to Ritter Hall. Unfortunately, the Subject Files do not include material documenting these buildings. There are, however, folders concerning a lunchroom planned but never constructed, and the Scripps Research Shop which was completed in 1960.

The Subject Files include 28 folders of material on Scripps expeditions undertaken during the period 1956-1960 under "Expeditions." These include material on the Chinook, Acapulco Geological Expedition, Equapac, SCOPE (Scripps Cooperative Oceanic Productivity Expedition), SIGRE (Scripps Institute of Geophysics Revillagigedo Expedition), Mukluk, Downwind, and Vermillion Sea expeditions.

#### **SCRIPPS ISLAND**

The Subject Files include several folders of material under "Island Research Facility", which document an idea first proposed in the 1950's to construct an island-like port and laboratory facility offshore near the Scripps campus. The facility was variously referred to as Scripps Island, the Offshore Research Facility, and the Experimental Inshore Oceanographic Facility. Although several plans for the island were made and discussed during the 1970's, the facility was never built. Material in these folders includes correspondence, renderings, and budgetary material largely drawn from the records of the S.I.O. Office of the Director generated by William Aaron Nierenberg and his staff.

#### **INTERNATIONAL GEOPHYSICAL YEAR**

The Non-S.I.O. series of the Subject Files include more than one hundred and twenty folders including material dated between 1955 and 1960. There are forty-four folders of material concerning the International Geophysical Year. These were drawn almost entirely from Roger Revelle's personal papers and his records as S.I.O. Director. Like many of his colleagues, Revelle was extremely interested in plans for the IGY and was active on several committees which planned events for the year. He served as a member of the United States National Committee-International Geophysical Year Technical Panel on Oceanography and its Technical Panel on Geomagnetism. He also served as Chairman of the USNC-IGY Equatorial Committee. The IGY material in the Non-S.I.O. series includes sixteen general folders containing correspondence, meeting minutes, program plans and other documents dated 1955-1960. The files include sixteen additional folders documenting the work of the Comité Spécial du Conseil International des Unions Scientifique, Année Géophysique Internationale (CSAGI). These folders include correspondence, information on IGY program plans in many nations arranged alphabetically by the name of each country, and an annotated copy of the CSAGI Guide to IGY data centers dated 1957.

#### **INTERNATIONAL OCEANOGRAPHIC CONGRESS**

The Non-S.I.O. series also includes one folder of correspondence and a copy of the program for the first International Oceanographic Congress held at the United Nations in 1959. Again, material in this folder was drawn from material generated by Roger Revelle who helped organize and served as the president of the Congress. The Scripps Archives also holds tape recordings of some of the Congress sessions.

#### **INTERNATIONAL INDIAN OCEAN EXPEDITION**

The Non-S.I.O. series includes twelve folders of material on the International Indian Ocean Expedition in box 25. This ambitious program was administered by a Special Committee on Oceanic Research (SCOR) of the International Council of Scientific Unions, organized by Roger Revelle in 1957. SCOR recommended that ships from many countries study the Indian Ocean, which was described as the "largest unknown area on earth." The Subject Files include copies of programs and prospectus, planning summaries and reports including several recommendations, drafts and reports on United States participation in the Expedition. The Subject Files include four folders of correspondence concerning the Expedition dated 1960-1967. The correspondence consists largely of copies of letters exchanged by Expedition program planners and sent to Roger Revelle. There is also correspondence and memoranda concerning the participation of the Scripps Institution in the Expedition.

In addition to the material on the Expedition filed within the Non-S.I.O. series of the Subject Files, the "Expeditions" section of the Subject Files includes material on three Scripps expeditions which were part of the International Indian Ocean Expedition effort. There are seven folders relevant to the Monsoon Expedition of August, 1960 to March, 1961. There are nine folders of material relevant to Lusiad Expedition, conducted May, 1962 to August, 1963. There are three folders concerning Dodo Expedition, April-December, 1964.

#### **1961-1965**

There are approximately four boxes (5 linear feet) of material documenting the history of the Scripps Institution during the period 1961-1965. These include nine folders on a major administrative reorganization of Scripps dated 1960-1966 (box 1, f6-14). A reorganization of the Institution was first proposed by Roger Revelle in 1960. While certain functions of the Business Office were consolidated that year, the real reorganization of the Institution did not begin until 1961. In September of that year, Assistant Director Jeffery Dean Frautschy announced that the Divisions of Marine Resources,

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Marine Geophysics and Marine Geology and Geochemistry would cease to exist and be replaced by a Division of Oceanography and a Division of Earth Sciences. The reorganization raised questions about the formal definitions of divisions, departments, research programs and laboratories at Scripps and the relationship of these units to the newly formed University of California, San Diego.

#### **ADMINISTRATIVE REORGANIZATION**

From 1938 to 1961, graduate education was conducted at Scripps under the general supervision of the Graduate Dean at the University of California, Los Angeles. In July, 1961, the San Diego Division of the University Senate was formed with a Graduate Council established as one of its committees. A separate Graduate Division for San Diego with its own dean was established at the same time. From that date, general supervision of graduate education conducted at Scripps passed from UCLA to UCSD. The transition raised some serious questions about the relationship of the Scripps Institution to graduate education at the University.

The folders on the reorganization include memoranda, notes on budgetary and personnel matters, minutes of the Committee on Educational Policy, minutes of the Ad Hoc Committee on the Proper Relationship of S.I.O. and Graduate Education, and correspondence exchanged by acting S.I.O. Director Fred Noel Spiess, UCSD Chancellor Herbert Frank York and University Vice President Harry R. Wellman. Material dated 1965-1966 consists largely of correspondence and memoranda exchanged by newly appointed Director William Nierenberg and the chancellor of UCSD concerning efforts to strengthen and better coordinate graduate education at Scripps.

#### **S.I.O. STAFF COUNCIL**

The S.I.O. Staff Council was formed with the adoption of by-laws on January 12, 1960 to constitute a forum for its members, advise administration on the opinions of its members, and to aid the administration. The membership originally consisted of permanent academic appointees, but membership has been expanded over the years to include certain technical staff and others. The Director of the Scripps Institution serves as ex officio chair of the Staff Council. Other officers are elected by the membership. An executive committee is appointed by the Staff Council's Committee on Committees. The Committee on Committees, consisting of elected members and the Director ex officio, is empowered to create and dissolve standing committees and recommend the appointment of members of standing committees to the Director.

The council has at least two regular meetings annually. Special meetings may be called by Council officers or upon request by ten members of Staff Council.

The Subject Files include 15 folders of material dated 1960-1980 on Staff Council. This material includes minutes of Council and its standing committees, committee reports, memoranda and correspondence concerning Council and/or generated by the Executive Committee, Council agenda, bylaws, bylaw revisions, meeting announcements and letters of committee appointment. Unfortunately, the folders do not include full sets of minutes for the Council, nor do they include full sets of minutes for Council standing committees. In fact, the folders do not include any material pertinent to Council business in 1961 and include only by-laws documenting the work of the Council in 1960.

Additional material concerning the Staff Council can be found filed under the names of individual Staff Council standing committees. For instance, the Subject Files include five folders of material filed directly under the heading "Marine Operations Committee," a Staff Council standing committee.

#### **AIRPLANE DC 3**

The Subject Files include fourteen folders labelled, "Airplane DC3" in box 1. These folders include correspondence, specifications, drafts of agreements and other papers dated 1962-1973 which document the gift of a DC 3 aircraft to the University for the use of the Scripps Institution. During the 1970's, Scripps leased the aircraft to outside agencies. Correspondence and leases documenting the lease of the aircraft are also included among this material.

#### **ALPHA HELIX PROGRAM**

There are twenty-six folders of material documenting the Alpha Helix Program filed in box 1 under "Alpha Helix." This program was supported by a grant from the National Science Foundation which allowed Scripps to operate a new vessel, the R/V Alpha Helix, and undertake a series of expeditions during the period 1961-1973. The folders include minutes of the Alpha Helix Program Advisory Board, correspondence, cruise reports, budgetary material, ship time requests and research proposals received from scientists who wished to participate in the Program. This material was largely drawn from the files of the S.I.O. Office of the Director and records of James Lawrence Faughn in the Ship Scheduling Office. A few additional items relevant to the Alpha Helix Program are filed under "Physiological Research Laboratory," the unit which administered the Program.

There are fourteen folders of material on expeditions undertaken as part of the Alpha Helix Program under "Expeditions" in the Subject Files. This material includes correspondence, ships logs, notes and other papers documenting the Billabong Expedition to the Great Barrier Reef in 1966, the Amazon Expedition of 1967, the Bering Sea expedition of 1968, the New Guinea Expedition of 1969, and the Antarctic Expedition of 1970-1971. This material was largely drawn from the files of the

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S.I.O. Ship Scheduling Office.

There are only two folders under "Ships" concerning the R/V Alpha Helix. These consist mainly of correspondence dated 1960-1967. There is also one folder concerning the dedication of the R/V Alpha Helix filed under "Ceremonies." Additional information about the vessel, the Alpha Helix expeditions and the Alpha Helix Program can be found among the records of the S.I.O. Alpha Helix Program Office, housed at the Scripps Archives.

#### **CARL ECKART BUILDING (LIBRARY)**

There are fifteen folders under the heading "Buildings and Property," which document buildings planned and/or constructed during the period 1961-1965. Nine of these folders concern planning and construction of the Carl Eckart Building, the new S.I.O. Library, which was completed in 1976. Folders on the library include specifications and blue prints, as well as correspondence and memoranda. There is one folder of material on the Experimental Aquarium which contains material dated 1963-1964. This material actually concerns an addition to the Experimental Aquarium which was completed in 1965.

#### **PHYSIOLOGICAL RESEARCH LAB**

There is one folder under "Buildings and Property" on the Physiological Research Laboratory. There are three folders under the heading "Physiological Research Laboratory" which concern the program and work of the Laboratory. One folder entitled "Neurobiology Facility, 1970" includes a report detailing the history of the Facility which was created in 1965 and was briefly a part of the Physiological Research Laboratory. Additional material on the Laboratory building and program can be found among the records of the S.I.O. Office of the Director (Nierenberg) housed in the S.I.O. Archives.

#### **INSTITUTE OF GEOPHYSICS AND PLANETARY PHYSICS**

There is one folder under "Institute of Geophysics and Planetary Physics" which concerns the IGPP administrative program and one folder on the IGPP building under "Buildings and Property." Additional material on IGPP can be found among the Walter Heinrich Munk Papers, under Dr. Munk's name in the S.I.O. Biographical Files, and under IGPP among the papers of the Office of the Director (Nierenberg). These collections are housed at the Scripps Archives. A large quantity of IGPP records, including Dr. Munk's files as Director and records generated by the IGPP Business Office remain in storage at IGPP. This material includes extensive files on support for, design, construction and dedication of the IGPP building, on IGPP grants and contracts, on research conducted by the Institute and its budget. The Archivist can provide a preliminary folder list for this material.

#### **NAGA EXPEDITION**

Scripps undertook several large and important expeditions during the period 1961-1965. There are twenty-four folders of material under "Expeditions" which concern the Naga expedition dated 1959-1961. Naga explored the Gulf of Thailand and the South China Sea with the cooperation of the governments of Thailand and the Republic of Vietnam. The material includes correspondence, reports, tracks, charts and other material documenting this expedition. Much of the material under Naga was generated by James Faughn, the project officer for the expedition.

The "Expeditions" section also includes documentation of three Scripps expeditions undertaken as part of the International Indian Ocean Expedition. These are Monsoon, Lusiad, and Dodo. There is also one folder of material on Japanyon, an expedition undertaken by Francis Shepard and others in 1961 to explore submarine canyons off the coast of Japan. There is one folder of material on the Hilo Expedition to Hawaii in 1962, an expedition undertaken to find a site for Mohole drilling. Additional information on Project Mohole can be found in a folder entitled , "American Miscellaneous Society," in the Non-S.I.O. series.

The Scripps fleet was expanded during the period 1961-1965. There are eight folders of material on the R/V Alexander Agassiz (II). This vessel was acquired as a surplus property by the Scripps Institution in 1962. The Agassiz folders include the vessel's specifications. There is one folder of material on the R/V Oconostota, an ocean tug acquired by Scripps that same year, mainly to tow the Floating Instrument Platform (FLIP). FLIP was designed by the Marine Physical Laboratory and constructed in 1962. The platform is documented in five folders of correspondence, memoranda, and other papers in the "Ships" section. From 1963 to the 1970's, Scripps leased several diving saucers which were used by Scripps scientists to explore and film the ocean bottom in the San Diego area. There are four folders of material in the "Ships" section documenting the use of the saucers. This includes partial logs of diving saucer dives which list dive dates, locations and participants. Additional information on the use of the diving saucer can be found among the Francis Parker Shepard and Edward William Fager Papers at the Scripps Archives.

Scripps first leased and then purchased the R/V Ellen B. Scripps in 1965. There are five folders of material documenting this vessel in the "Ships" section. There are twenty-one folders of material under "Ships" documenting the R/V Thomas Washington which was acquired that same year. A folder on the dedication of the R/V Washington is filed under "Ceremonies." There is one folder under "Gifts" concerning the yacht Nereus, which was offered to Scripps in 1962 but was not added to the Scripps fleet.

#### **1966-1970**

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There are over one hundred folders of material in the Subject Files documenting the period under the "Budget," "Contract" or "Research" sections. There are thirteen folders of material generated during this period filed under "Buildings and Property." Eight folders concern the Camp Elliot land on what is now the campus of UCSD.

#### **ELLIOT LAND OF UCSD CAMPUS**

In 1961, the University of California applied to the U.S. Department of Health, Education and Welfare for surplus property at Camp Elliot, an abandoned military facility located northeast of the Scripps campus. The University received a grant of 506 acres of Elliot land from the federal government in 1964. Material filed under "Buildings and Property, Elliot Campus (UCSD)" documents this transfer and University plans for the development of the site. Material under this heading dated 1968-1972 includes administrative memoranda, correspondence and reports, minutes and other papers collected or generated by the S.I.O. Office of the Director. In 1968, the Department of Health, Education and Welfare requested the return of some of the Camp Elliot acreage as it had not been developed. This led to several meetings of the University's Committee for Camp Elliot and plans for the immediate development of the site. The 1968-1972 material documents these events and plans.

#### **MOUNT SOLEDAD**

The "Buildings and Property" section includes one folder on a long range plan for the Scripps campus developed in 1967 and one folder on improvements made in 1966 to the road and entrance to the Scripps campus. There are also three folders pertinent to Mount Soledad. The Soledad material includes memoranda, correspondence and other material documenting plans for the use and development of land and a building on Mount Soledad which was acquired by the Scripps Institution in 1965. The material includes a copy of a proposal submitted by Scripps to the National Science Foundation in 1967 for funds to develop the property and use it as the site of the S.I.O. Radiocarbon and Tritium Laboratory, directed by Hans Eduard Suess. The property also housed the Oceanic Environmental Laboratory directed by Theodore Robert Folsom. Material filed under "Buildings and Property, Mount Soledad" dated 1968 concerns an effort made by the Scripps Institution to acquire the Navy owned signal station property on Mount Soledad.

There are two folders of material under the heading "Conferences" dated 1966-1970. One consists of an invitation to "The Ocean, 1968: A New World," a conference held at Scripps in February, 1968. The other consists of an invitation and program for "Man's Chemical Invasion of the Ocean: An Inquiry," a conference held at Scripps in February, 1969. There is also a small amount of material concerning the celebration of the University's centennial under "Symposiums, Centennial Symposium, 1968" in box 24.

#### **DSDP**

There are three folders in box 6 concerning the Deep Sea Drilling Project. DSDP was established in July, 1966 with a 12.6 million dollar contract from the National Science Foundation and quartered at Scripps. The contract was for eighteen months, but was extended with an additional award of \$22.2 million from NSF in 1969. The material in these folders includes brochures, press releases, reports, memoranda and a small amount of correspondence concerning the Project. The bulk of the records documenting the project, however, are current and remain in the Deep Sea Drilling Project office.

#### **ZETES**

There are seventy-five folders of material under the heading "Expeditions" which document expeditions undertaken by the Scripps Institution during the period 1966-1970. Five of these folders concern Zetes Expedition, undertaken January-August, 1966, with the R/V Argo. The R/V Argo travelled to Alaska and Japan to conduct a wide range of oceanographic studies, including research on heat flow from the sea floor, biochemical activity of bacteria at great depths, structure of the water column and other topics. Material on this expedition includes correspondence, maps, radio cables and press releases. There is material documenting Dr. Claude ZoBell's work as chief scientist on Leg IV of Zetes, called Deepac X. During this leg, Zobell and his colleagues collected microbiological samples from great depths using new coring devices.

#### **EASTROPAC**

There are eight folders of material on the Alpha Helix Program Billabong Expedition to the Great Barrier Reef. There are two folders of material on Eastropac Expedition (January 1967 -April 1968) which investigated the oceanography of the eastern tropical Pacific Ocean as part of a cooperative program to study the region which was initiated by the Eastern Pacific Oceanic Congress (EPOC). Material on Eastropac includes expedition proposals and plans, memoranda and radio cables. Additional information on EPOC can be found among the Joseph Lee Reid Papers at the Scripps Archives.

#### **NOVA**

There are seven folders of material on Nova Expedition (April-December, 1967) which undertook investigations of the geology, geophysics and geochemistry of the southwestern Pacific with support from the National Science Foundation and the Office of Naval Research. This material includes correspondence, memoranda, personnel lists, maps and radio cables pertinent to the expedition.

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## **CIRCE**

There are five folders concerning Circe Expedition (March, 1968-March, 1969), a circumnavigation of the world which explored the western Pacific, Indian and southern Atlantic oceans with support from the National Science Foundation and the Office of Naval Research. During this expedition, participants studied bottom topography, magnetic patterns, heat flow, sediments and variations of the earth's magnetic field near the equator. Data pertinent to the sea floor spreading theory was collected. The expedition used a seagoing computer and a satellite navigation system, which was unique at that time. The material in these folders includes correspondence and memoranda, itineraries, maps, lists of personnel, radio cables, press releases and a brochure of the expedition.

The Subject Files include thirteen folders of material dated 1966-1970 on ships. There is one folder of material which includes items relating to the design of a vessel to replace the R/V Horizon. Another folder concerns plans for a 65 foot research vessel. There are folders on the chartered vessels Defiance and Fisherette, one folder on the Oceaneer and Wando River, one folder on the Valkyrien and three folders on the Glomar Challenger. The material on the R/V Glomar Challenger is dated 1968-1969. This vessel was used for drilling operations of the Deep Sea Drilling Project.

## **VISITORS**

Several distinguished persons visited the Scripps Institution during the late 1960's. Folders filed under "Visitors" document the September, 1966 visit of T.S. Vice President Hubert H. Humphrey, the November, 1967 visit of Crown Prince Vong Savang and Princess Manilay of Laos, the October, 1969 visit of U.S. Vice President Spiro Agnew, and the November, 1969 visit of Francois Ortoli, French Minister of Industrial Development and Scientific Research.

## **1971-1981**

There are approximately 120 folders of material in the Subject Files pertinent to the period 1971-1981. Only four folders concern the Scripps budget during this period and these concentrate on the 1971/1972 budget. There are five folders pertinent to the period under "Buildings and Property." These include a copy of a report by Blaylock-Willis and Associated entitled, "Earthquake Resistance of Selected Structures of the University of California, San Diego." This report was written in 1972. There is one folder on the Marine Biology Research and Instruction Building completed in 1977. A folder including information on the dedication of this building and the Carl Eckart Building is filed under "Ceremonies, Building Dedications, Marine Biology." There are three folders of material concerning the Scripps Building dated 1977-1981. This material largely concerns the renovation of the building. there is one folder under the heading "Ceremonies" which documents the dedication of the Scripps Satellite Oceanography Facility in 1979. Additional information on the Facility can be found under "Remote Sensing Facility" in the Subject Files. This folder contains a copy of the April, 1978 S.I.O. proposal submitted to the National Science Foundation requesting funds to develop the Facility.

The Subject Files include two documents prepared by Elizabeth Noble Shor during this period. One is a history of the Aquarium Museum filed under "Aquarium-Museum" which was written in 1981. The second document is an inventory of paintings, sculpture, and other art work prepared by Mrs. Shor in July, 1980. The inventory lists the title, artist, location and other information for each work of art.

## **GEOSECS**

In 1968, an advisory council composed of scientists at the Lamont-Doherty Geological Observatory, the Massachusetts Institute of Technology, the Oregon State University, the Rosenstiel School for Marine and Atmospheric Science at the University of Miami, the Scripps Institution of Oceanography, and the Woods Hole Oceanographic Institution was convened to direct an international program to investigate the geochemistry of a large section of the ocean. This study became known as the Geochemical Ocean Sections Study (GEOSECS), and it was supported by funds from the National Science Foundation International Decade of Ocean Exploration program. Several large expeditions were planned by the advisory council, including an expedition to the Bering Sea and near Antarctica. This expedition became known as Pacific GEOSECS (August 1973 -April 1974). It utilized the Scripps vessel R/V Melville and was directed by Scripps scientists.

There are two folders in the Subject Files which include material documenting the GEOSECS program and the Pacific GEOSECS expedition. One folder of material is filed under the heading "GEOSECS," the other folder of material is filed under "Expeditions, Pacific GEOSCES." Both of these folders are in box 10 and both include correspondence, memoranda, expedition planning documents, press releases and other material on the GEOSECS program and Pacific GEOSECS expedition.

The Subject Files include one folder of material on the Geological Data Center under that heading. The Center was formed on July 1, 1970 to collect, process and index significant geological data collected by Scripps vessels. The S.I.O. Subject Files include two documents concerning the Center. The other reports on the status of the computer data processing and retrieval system at the Center. Both documents are dated 1971.

## **NORPAX**

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The Subject Files include two folders of material on the North Pacific experiment (NORPAX). This long-term cooperative program was created with funds from the Office of Naval Research and the National Science Foundation International Decade of Ocean Exploration program to investigate changes in the upper waters of the north Pacific Ocean, their interactions with the atmosphere and the effect of these on the weather and ocean environment. NORPAX participants include Scripps Institution of Oceanography, the University of Hawaii, UCLA, Oregon State University, the University of Alaska, Texas A & M University, the U.S. Navy, and General Dynamics Corporation. NORPAX was an outgrowth of the Scripps North Pacific Study.

Material on NORPAX includes a copy of L.R. Glosten & Associates technical specifications for an interim NORPAX support ship, memoranda, minutes of NORPAX ship technical discussions and other material concerning planning for a NORPAX ship which was never constructed. This material is filed under "North Pacific Experiment (NORPAX)" and concerns the period 1972 to 1973. Additional material on the planned NORPAX vessel can be found under "Ships, NORPAX."

#### **MARINE OPERATIONS COMMITTEE**

The Subject Files include five folders of material on the Marine Operations Committee filed under the Committee's name. The Marine Operations Committee was established as a S.I.O. Staff Council standing committee in 1960, when Staff Council was created. However, the Committee actually pre-dated the Staff Council. Unfortunately, the Subject Files do not include materials documenting the early work of the Committee. The "Marine Operations Committee" folders include minutes of meetings, memoranda, and a small amount of correspondence on ships, ship operations, and ship operating funds. The folders also include a copy of the June, 1976 S.I.O. proposal to the National Science Foundation for ship operations support. Additional reports and minutes of meetings, memoranda, and a small amount of correspondence on ships, ship operations, and ship operating funds. The folders also include a copy of the June, 1976 S.I.O. proposal to the National Science Foundation for ship operations support. Additional reports and minutes of the Marine Operations Committee can be found among "S.I.O. Staff Council, Minutes and Reports of Committees" folders in box 23 of the Subject Files.

#### **R/V NEW HORIZON**

Files under "Ships" during this period include material on the NORPAX vessel mentioned above, on the Utility Boat and on the R/V New Horizon. In 1969, S.I.O. sought funding from the National Science Foundation to build a 170 foot, 300 ton vessel. Funding was not obtained from NSF, but in 1977, Scripps received over three million dollars from the California State Public Works Board to finance the construction of a vessel to replace the R/V Alexander Agassiz (II). An S.I.O. committee was appointed to oversee the design of the vessel which was based on a study made in the 1960's by Maxwell Silverman, an S.I.O. research engineer. Rudolph F. Matzer and Associates of Jacksonville, Florida were named as the naval architects for the vessel. The ship was built by Atlantic Marine Inc. of Jacksonville and completed in 1978. It was named the R/V New Horizon and was dedicated on January 25, 1979 at Nimitz Marine Facility. The Subject Files include 15 folders of material on the New Horizon. Fourteen of these contain daily and weekly construction reports on the vessel dated 1977-1978. The remaining folder includes drawings, correspondence, committee reports and memoranda documenting the planning and construction of the vessel.

#### **VISITORS**

The Subject Files include several folders under "Visitors" documenting distinguished visitors who came to the Scripps Institution during the 1970's. There are five folders of material documenting the 1975 visit of Emperor Hirohito of Japan. There is one folder of material documenting a visit from a group of scientists from the Peoples' Republic of China in 1975. One folder documents a 1978 visit of a marine science delegation from the People's Republic of China.

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