To unite in a common organization persons interested in Antarctica

THE ANTARCTICAN SOCIETY

WASHINGTON, D.C.

Will hold an open meeting at 8 P.M.

TUESDAY, FEBRUARY 20, 1968

at the

NATIONAL ACADEMY OF SCIENCES
2101 Constitution Avenue, NW

Members, their families, and all persons
interested in Antarctica are invited.

PART I CAPTAIN LEWIS 0. SMITH, USN

will give an illustrated account of

OPERATION WINDMILL 1947-1948

In order to obtain supplementary ground control data for the aerial photography taken on OPERATION HIGH JUMP 1946-1947, the US Navy ice-breakers EDISTO and BURTON ISLAND used helicopters to field survey parties. As a Lieutenant Junior Grade in charge of the underwater demolition team, Smith assembled a rare collection of slides to document the highlights of OPERATION WINDMILL.

PART II ON THE ICE

The first public presentation of the National Science Foundation's newest thirty minute color film on the work of US scientists in Antarctica. Reports of preview audiences indicate that this is certain to be an award winning film.

Refreshments will be served in the Great Hall after the meeting.

FOR FURTHER INFORMATION
CONTACT CDR. R.K. McGregor, USN - Home Phone AC 202 337-4788
Office AC 202 OXford 63065

PAST PRESIDENTS

Carl R. EKLUND (Deceased)

Paul A. SIPLE, 3454 North Edison St., Arlington, Virginia 22207

David M. TYREE, Box 17, Port Haywood, Virginia 23138

Gordon CARTWRIGHT, U.S. Mission, Geneva, Switzerland

George R. TONEY, 4915 Redford Road, Bethesda, Maryland 20016

Morton J. RUBIN, 8910 Senecca Lane, Bethesda, Maryland 20034

THE ANTARCTICAN SOCIETY ANNUAL REPORT, 16 MAY 1967

Mr. President, Ladies and Gentlemen:

During the past year, members of the Society met on seven occasions, including the garden party and the annual meeting presently in progress. The garden party was held at the Belmont Estate in Elkridge, Maryland, where Society members and their families enjoyed a delightful picnic, and watched another version of Scott's Last Expedition on film. Thanks to the commendable effort of Mr. Robert Mason, and the generosity of the Smithsonian Institution, we are privileged to enjoy the Belmont surroundings once again this year.

The highlight of these meetings was the International Antarctic Day, which marked ten years of international scientific cooperation. The day was observed in several countries, and here in Washington the Society heard the Honorable Paul C. Daniels speak on the question "Does Science Contribute to World Peace?". The meeting was held on October 11 (1966), in the auditorium of the Natural History Museum, and an attractive exhibit was displayed in the halls leading to the auditorium.

On November 15 (1966), we met and heard Rear Admiral Richard B. Black reminisce over the U.S. Antarctic Service Expedition and show some slides and rare films and film strips of Antarctic exploration.

After a period of quiescence during the height of the Antarctic season, we resumed our activities on February 21 (1967) when we had a preview of the American Antarctic Mountaineering Expedition of 1966-67. The expedition was sponsored by the American Alpine Club and the National Geographic Society, coordinated by the National Science Foundation, and logistically supported by the U.S. Navy. Expedition members Dr. Samuel C. Silverstein and Mr. Charles Hollister presented an illustrated account of their climbs.

A month later, Mr. Harry S. Francis, Jr., of the Office of Antarctic Programs at NSF, gave an account of the Japanese Antarctic Research Expedition, 1965-66, which he accompanied aboard the icebreaker Fuji.

The Memorial lecture was delivered by Dr. J. Campbell Craddock on April 11. Dr. Craddock had led several University of Minnesota groups into West Antarctica for geological exploration, and his lecture outlined the general geology of the continent.

Concurrent with these public meetings, the Society's Board of Directors was actively attending to the Society's affairs and legal matters. The Board of Directors held six meetings and discussed and directed the activities of the

committees on Programs, Finance, Publicity, Education, and Local Affiliates.

Most of the time was occupied with the legal procedure governing the establishment of groups affiliated with the Antarctican Society. The brunt of this task was the work of Mr. Marshall Meyers, our legal counsel, whose voluntary services to the Society have been most appreciated. The Education committee drew up a form which was mailed twice to all members. The form requests data on the member's competence in an Antarctic subject, and his desire to lecture on that subject to academic and civic organizations. The response from the members so far has not been very satisfactory.

A more widely-felt activity of the Board was the publication of the newsy little "NOTES" about informal happenings in the Society. The Notes have been received with great enthusiasm, and the correspondence and comments from members were most encouraging.

This constitutes a resume of the Society's activities for the 1966-67 year. Mr. President, I request that the annual meeting approve this report for insertion in the files.

GEORGE A. DOUMANI
Secretary
The Antarctican Society

PROFESSOR CAMPBELL CRADDOCK'S RESUME' OF HIS MEMORIAL LECTURE 11 APRIL 1967

Geologic Studies in Antarctica

Since 1959 seven geologic research expeditions from the University of Minnesota have studied the geology of selected areas in West Antarctica. The central purpose of this work has been to establish the geologic structure of West Antarctica and its relationship to the older shield of East Antarctica. These studies, along with those of other geologists of several nations, may ultimately provide answers to some important questions of southern hemisphere geology. Is West Antarctica really continental, or is it merely an ice-covered archipelago of mainly volcanic composition? Does the circum-Pacific mobile belt—defined by folded strata, earthquakes, and active volcanoes—continue from South America across West Antarctica? Can the andesite line, a compositional boundary between the Pacific Ocean basin and the surrounding continents, be traced across West Antarctica? What have been the paleogeography and paleoclimate of Antarctica in the various geologic periods of the past? Does the geologic history of Antarctica strengthen or weaken the case for continental drift?

Most of the Minnesota studies have centered about the 90th meridian west in a band from Peter I Island south to the Thiel Mountains. Peter I Island is a Cenozoic basaltic volcano mantled by an extensive icecap. Thurston Island along the main coastline exposes Paleozoic gneiss intruded by Mesozoic plutonic rocks. The Jones Mountains consist of a basement complex of Mesozoic igneous rocks overlain uncomformably by late Cenozoic basaltic volcanics; striations and other markings on the unconformity surface suggest glaciation may have occurred here as early as the Miocene.

The Ellsworth Mountains are composed of a strongly folded sedimentary sequence of mainly Paleozoic age at least 12,000 meters thick; a rich Upper Cambrian fauna occurs near the middle of this section, and the Glossopteris flora has been found in the uppermost formation. The Pirrit Hills, the Nash Hills, and the Whit-more Mountains consist of deformed and metamorphosed sedimentary rocks intruded by Mesozoic granitic rocks. The Martin Hills are composed of slightly deformed and

metamorphosed sedimentary rocks and several badly altered intrusive bodies. Pagano Nunatak exposes a Mesozoic granitic pluton, but the nearby Hart Hills consist of tilted metasedimentary rocks and a strongly altered mafic intrusive mass.

The Stewart Hills are comprised of tightly folded metasedimentary rocks that were probably deformed during the early Paleozoic Ross Orogeny. Sedimentary rocks bearing stromatolites in the Thiel Mountains are cut by igneous plutons of late Precambrian and early Paleozoic age.

Along the Ruppert Coast in Marie Byrd Land Granitic rocks of probable Mesozoic age intrude both a sequence of deformed metasedimentary and metavolcanic rocks and a seemingly much older gneissic complex.

Much work remains to be completed on these extensive rock collections, but some preliminary conclusions may be drawn. A general contrast exists between ancient East Antarctica, consisting of a pre-Devonian basement complex overlain by sub-horizontal Phanerozoic strata, and younger West Antarctica, consisting of mainly Phanerozoic rocks which have undergone extensive tectonism and metamorphism. From both geological and geophysical evidence West Antarctica must be regarded as a continental area although the bedrock surface under a large part of it lies below sea level. The circum-Pacific belt of folded strata, plutonic intrusives, and young volcanoes extends along the seaward margin of West Antarctica, but the apparent absence of earthquakes is puzzling. Between this circum-Pacific belt and the Trans-antarctic Mountains on the edge of East Antarctica lies a new tectonic province, the Ellsworth Mountains fold belt, consisting of thick mainly Paleozoic strata that were deformed, metamorphosed, and intruded by granitic rocks during the early Mesozoic.

Many questions remain about Antarctic paleoclimates, but strong evidence has been found in several regions for extensive glaciation of the continent In late Paleozoic time. The striated surface in the Jones Mountains suggests the present icecap may have had its inception as long ago as 20m.y. in the past.

Geologic work in many parts of the continent during the past decade has established striking similarities between the geologic history of Antarctica and the other southern continents. Antarctica occupies a central position in most reconstructions of Gondwanaland, and these parallel geologic histories for the southern continents strengthen the case for continental drift.

(NOTE - Dr. Campbell Craddock is now Professor of Geology, The University of Wisconsin)

KUDOS KUDOS KUDOS

RALPH LENTON: This past summer Ralph led a scientific traverse, Operation BLUE TREK. Equipped with a ten year old Model 443 Tucker Sno-Cat and several motor toboggans the party travelled over the Greenland icecap from Camp Century, 77° 01' 03" North, 61° 08′ 33" West to Inge Lehmann Station at 77° 56′ 43" North, 39° 11′ West. The 17th Troop Carrier Squadron with their ski-equipped C-130A aircraft used both airlanded and airdrop techniques to resupply BLUE TREK.

WILLIAM H. LITTLEWOOD: Bill is now the Deputy Scientific Attache in Japan. His many friends can reach him at this address:

William H.
Littlewood
Deputy Scientific Attache
American Embassy
APO San Francisco 96503

WAYNE FISHER: The Antarctican Society's first secretary and treasurer is now the Consul General of the United States in London, Drop him a note at this address:

Wayne W. Fisher
American Embassy
Box 40, FPO New York 09510

CAPTAIN PAUL BAUER, USN (Ret): Paul, advisor to the ONR Oceanic Biology Program, received the Order of the Falcon from the Icelandic Ambassador on January 30, 1967 for his contributions to the research effort on the newly formed volcanic island of Surtsey off the coast of Iceland.

ANTARCTIC PHILATELY - POST IGY THE 5 DECEMBER 67 SOCIETY MEETING

Ralph Lenton and Tom Kelly illustrated their lectures with 35nm color slides of sample covers, stamps, and cancellations. Members and friends enjoyed viewing the extensive exhibits in the Great Hall of the National Academy of Sciences during the refreshment period after the lecture. We all appreciate the time and effort that Tom and Ralph put forth in making the slides and setting up the exhibits.

NEW EDITION OF INTRODUCTION TO ANTARCTICA

A completely revised edition of Introduction to Antarctica was issued in October 1967 by the U.S. Naval Support Force, Antarctica, The publication replaces one of the same title last reprinted in 1965 by the now disestablished U.S. Antarctic Projects Officer. In 52 pages and 109 illustrations, Introduction to Antarctica presents a general review of antarctic geography, climate, biology, and history.

Most of the publication is devoted to the history of Antarctica's discovery and exploration, with emphasis on United States activities. One chapter reviews the great voyages, treks, and flights of discovery; another summarizes the antarctic programs of the International Geophysical Year; and two chapters discuss antarctic activities from the end of the IGY to the present. In the last of the seven chapters, a view into Antarctica's future is ventured.

Although Introduction to Antarctica is intended for general use, the scholastic popularity of past editions has been considered in the preparation of the current edition. A list of suggested readings is appended, and sources of additional information and maps are cited.

The publication is available upon request to the Public Affairs Officer, U.S. Naval Support Force, Antarctica, Building 210, Washington Navy Yard, Washington, D.C. 20390. (From the November-December 1967 issue of THE ANTARCTIC JOURNAL OF THE UNITED STATES)

A THANK YOU NOTE

The treasurer wishes to express his appreciation to all members that have forwarded their dues for 1967-68.