Botanical Studies in West Antarctica

I. MACKENZIE LAMB

Farlow Reference Library and
Herbarium of Cryptogamic Botany
Harvard University

This long-term project is presently concerned with the laboratory study, preservation, and taxonomic treatment of terrestrial and marine plants collected earlier in the Antarctic Peninsula area. A 300-page manuscript, "Antarctic Lichens, II: the Genera *Buellia* and *Rinodina,*" was completed early in 1967 for publication in the British Antarctic Survey's Scientific Reports series. Preliminary work has been done towards a third report in this series.

Dr. R. Delépine, at the Laboratoire de Biologie Végétale Marine in Paris, is continuing the taxonomic study of the marine algae collected off the Antarctic Peninsula in 1964-1965. He is expected to come to Harvard in 1968 to prepare the final draft and supervise the preparation of illustrations for a manuscript on the iconography of antarctic marine algae. This work is expected to take about one year, and publication of the manuscript is scheduled for 1970.

Smithsonian Institution Participation in *Eltanin* Cruises

I. E. WALLEN

Office of Oceanography and Limnology
Smithsonian Institution

The Smithsonian Institution maintains an intermittent biological-collecting program for the U.S. Antarctic Research Program, provides field training for sorters in its Oceanographic Sorting Center, and advises on the field preparation of specimens and the kinds of collection data required by specialists. Recognizing that it is in the best interests of the National Science Foundation and the U.S. Government to provide a diverse collecting program, the Smithsonian sends personnel on *Eltanin* cruises when there is a shortage of biologists aboard to properly process the specimens to be collected.

During fiscal year 1967, two scientists and four technicians participated in *Eltanin* cruises to collect specimens for the Smithsonian. The Institution's objective on the cruises was to collect as many organisms as possible from the new areas visited by the ship. Bathypelagic fishes were collected for Dr. R. H. Gibbs, Jr., of the U.S. National Museum. A total of 46 midwater-trawling operations yielded 10,200 fishes representing 28 families. The most abundant groups were the Gonostomatidae, of which 98.1 percent belonged to the genus *Cyclothone.* The Myctophidae were second in abundance but first in frequency of occurrence.

Benthic sampling was carried out primarily to obtain echinoderms and brachiopods. Observations of living and dead organisms were made in various ways, including color photography, in order to record features which are not retained by the organisms when they are placed in preservatives. Seven samples were collected for lipid analysis by Texas A&M. Samples of rocks and manganese nodules were given to Florida State University.

Large numbers of the specimens collected are being made available to USARP scientists through the Smithsonian Oceanographic Sorting Center.

Systematics and Distribution of Antarctic Cephalopods

GILBERT L. VOSS

Institute of Marine Sciences
University of Miami

During the past year, studies of the systematics, distribution, and various other aspects of the biology of the antarctic cephalopod fauna have been continued by the principal investigator and his associates. Some indications of the areal, temporal, and vertical distribution of the midwater cephalopod fauna are beginning to emerge as a result of the completion of extensive studies by Clyde F. E. Roper of *Bathyteuthis abyssicola,* the most abundant squid in the collections. This species occurs throughout the Atlantic and Indian Oceans and the southern part of the Pacific Ocean. The distribution of the second most abundant species, *Crystalloteuthis glacialis,* contrasts strongly with that of *Bathyteuthis* in that it is restricted to waters south of the Antarctic Convergence. It is hoped that through the study of *Bathyteuthis* and *Crystalloteuthis* guidelines will be formed for the study of the less abundant members of the fauna.

New collections continue to add to our knowledge of the antarctic fauna. One of the most exciting discoveries of the program thus far has been the recent capture of the long-sought juveniles of the