

Geomicrobiological Parameters Along the Antarctic Peninsula Shelf

CARL H. OPPENHEIMER
and DETLEF A. WARNKE

*Oceanographic Institute
Florida State University*

The objective of this program was to obtain information on the interrelationships of bacterial and other microbiological populations to the physiochemical properties of the water masses and the sediments. Shipboard observations were made in cooperation with the University of Miami because of common objectives and working procedures. Phleger cores and bottom grabs provided bacteriological and bottom specimens for data on patterns of sedimentation. Stations were occupied in water depths ranging from 25 to 1,800 fathoms. Successful inoculations were obtained from all stations which were sampled bacteriologically, but not at all sampled levels. Over 300 pounds of geological materials and cores were returned to the University.

Entomological Collections

J. LINSLEY GRESSITT

*Department of Entomology
Bernice P. Bishop Museum
and*

OLIVER S. FLINT, JR.

*Department of Entomology
Smithsonian Institution*

Entomological research was conducted by personnel from the Bernice P. Bishop Museum and the Smithsonian Institution. Smithsonian personnel picked over all the bird specimens for external parasites. Mallophaga (biting lice) were taken on 13 species (47 birds) and feather mites on 4 species. It was observed that birds taken on nesting sites were only rarely infected with lice, whereas those shot at sea were frequently heavily parasitized. Fine pumice grains were found in the feathers of two skuas shot at sea during passage through Lemaire Channel. In addition, plant materials and soil placed in Berlese funnels provided 56 species of Collembola and about seven species of Acarina. An estimated 15- to 20,000 arthropods were collected for the national collections. The Bishop Museum made an additional 125 collections from 17 land sorties, consisting of about 20 species with new observations on geographical ranges and ecological data.

Benthic Invertebrate Collections

DONALD F. SQUIRES and DAVID L. PAWSON

*Department of Invertebrate Zoology
Smithsonian Institution*

and

LARRY W. YEATER

*Department of Biological Science
Florida State University*

Benthic trawling was carried out by personnel of the Department of Invertebrate Zoology of the Smithsonian Institution in cooperation with a graduate student from the Department of Biology of Florida State University. The Smithsonian obtained scleractinian corals and holothurians. The Florida State zoologist sought octopus to obtain mesozoan parasites. Live corals were obtained at several stations. The corals were easily kept alive aboard ship for more than three weeks, permitting important observations on the reproductive behavior of three species of the genus *Flabellum* and one species of *Gardineria*. Breeding information was also obtained on the psolid holothurians, as well as valuable information on habitat, faunal associations, and commensalism. Approximately 500 gallons of samples of invertebrate specimens and fishes were collected in the course of the cruise, from which 145 gallons of specimens were selected. Live corals were successfully returned to the Smithsonian Institution. Twenty-three cephalopods were collected in the trawls; five of them proved to be infected.

Identification Guide to Antarctic Birds

GEORGE E. WATSON

*Museum of Natural History
Smithsonian Institution*

For the ornithological work of the Department of Vertebrate Zoology of the Smithsonian Institution, specimens and field observations were obtained for preparation of a manual on antarctic birds. Specimens were collected at 20 land localities, and a few additional specimens were secured at sea. In addition to 349 bird specimens, large samples of avian blood and stomach contents were preserved. Observational data included taped records of bird calls and visual, still, and cinerphotographic records. About 100 birds were banded. For a number of species collected, the specimens represent very valuable examples for the national collections of the Smithsonian Institution.