

the U. S. Naval Medical School, the U. S. Department of Agriculture Library, the Bureau of the Census, the Works Progress Administration, the Library of Congress and other agencies.

Organized as a corporation "not for profit" but for educational, literary and scientific purposes, the American Documentation Institute resulted from a meeting attended by delegates from national councils, societies, and other organizations in Washington on March 13.

The officers and board of trustees are: Watson Davis, Science Service, President; Robert C. Binkley, Western Reserve University, Vice-President; Solon J. Buck, National Archives, Treasurer; James Thayer Gerould, Princeton University; Ludvig Hektoen, National Research Council; Anne Shively, Secretary.

The functions of Science Service's Documentation Division were taken over by the American Documentation Institute on July 1. These consist of the Biblofilm Service, the Auxiliary Publication Service and related activities.

Biblofilm Service has been operated in the Library of the U. S. Department of Agriculture since November, 1934, and it has copied many thousands of pages of literature on microfilm for research workers. Arrangements have been made to extend Biblofilm Service to the Library of Congress and the Army Medical Library, also in Washington, D. C., in the fall when new microfilm cameras will be available.

The design and development of microphotographic apparatus carried on by Science Service with the cooperation of the Chemical Foundation, U. S. Navy, Bureau of the Census, Works Progress Administration, etc., has been largely completed and is now capable of being left in commercial hands. The American Documentation Institute will not engage in the sale and manufacture of apparatus, but will cooperate with all manufacturers and commercial concerns so far as practicable.

Supplementing the immediate operating and informational functions of the American Documentation Institute, there are research and development functions contemplated for the future. When facilities permit, investigations are planned upon the application of microphotographic techniques to bibliographical problems, involving selection from microfilm. This is a long-time project requiring much inquiry. There should be a continuing exploration into the methods and materials that enter into documentation, such as photographic methods and techniques, optics, psychological aspects, classifications, etc.

Many of the operations and projects have been described in documents issued for the information of those interested.

The address of the American Documentation Institute is Offices of Science

GEOLOGY

Core Samples of Sea Bottom Sought on Voyage of Atlantis

THE NEXT voyage of the ketch Atlantis of the Woods Hole Oceanographic Institution will take cores from the ocean bottom that should disclose new knowledge of the world's prehistoric weather back to Ice Age days and beyond.

A new and special core-sampling device that is exploded by a charge of 155 m.m. howitzer cannon powder, and drives a core-boring mechanism into the sediment of the ocean bottom will be carried. The core-sampler's inventor, Dr. Charles S. Piggot of the Geophysical Laboratory of the Carnegie Institution of Washington, will be along as guest scientist for the cruise.

The itinerary of the voyage has not been settled definitely but one proposal has been to go from Woods Hole to the Gulf Stream and follow the great ocean current southward to the Virginia Capes. Then the Atlantis would turn westward to the continental shelf off the Atlantic coast and follow it north to Woods Hole, passing the under-ocean canyons that slice through the shelf in this territory.

Dr. Piggot's under water "gun" has already been used in ocean bottom studies in mid-Atlantic. For the coming cruise he has improved his previous mechanisms and will "stand by," as far as possible, to allow other scientists to learn to use the equipment.

The coming voyage will follow the present cruise of the Atlantis on which the ocean's bottom is being investigated in another way. Artificial, tiny vibration waves are now being set up in the mud on the ocean's bottom by exploding charges and the time of transmission of these waves to microphones laid on the floor of the sea is measured.

This technique uses vibration waves that are really artificial, small earthquake shock waves.

The waves start from the point of origin and go through the mud, cover-

ing the floor, to the solid rock at the bottom. There, a part of the wave is reflected and detected by the watertight microphones.

The speed of transmission of the waves can be used to disclose, in some detail, the thickness of the muddy bottom.

The experiments on the coming voyage will pierce the mud covering of the ocean floor. It has been found that these deposits contain the remains of prehistoric marine animals, layers disclosing great changes in the earth's climate including the great Ice Age, and also evidences of vast volcanic action at some time in the past, probably in Iceland.

Science News Letter, August 14, 1937



SAMPLING

Seamen raise the sampling gun that takes cores from the ocean bottom in mid-Atlantic to give scientists the records of a million-year-old past.