

Submarine Valley and Ridge Discovered

Oceanography

A submarine "deep", or valley, extending down a mile and three quarters below the level of the surrounding ocean bottom, and a submarine ridge extending upwards nearly two miles, are the latest discoveries of the non-magnetic ship *Carnegie*. The vessel is now cruising in the south Pacific, under the command of Capt. J. P. Ault. On March 13, she arrived at Papeete, Tahiti, after a cruise from Callao, Peru. She left Papeete on March 20, bound for Apia, Western Samoa, where she was expected at the end of the month.

The deep was discovered on February 16 with the sonic depth finder, Dr. John A. Fleming, acting director of the Department of Terrestrial Magnetism of the Carnegie Institution and owners of the vessel, announced to Science Service. Within a distance of 50 miles the depth of the ocean changed from 2,700 meters to 5,400 meters and back to 4,100 meters, the drop being about a mile

and three quarters, and the greatest depth being about three and a third miles. Capt. Ault named the depression the Bauer deep, after Dr. Louis A. Bauer, director and organizer of the Department of Terrestrial Magnetism.

The submarine ridge was discovered on the voyage from Easter Island to Callao, northeast of the island of San Felix, which is off the west coast of Chile. Its position is approximately 80 degrees west longitude and 23 degrees south latitude. It extends about three thousand meters, or nearly two miles, above the surrounding ocean floor, and is a continuation of the ridge that forms the San Felix islands. It has been named the Merriam ridge, after Dr. John C. Merriam, president of the Carnegie Institution.

Two other uncharted ridges were discovered on the last voyage, and steep slopes were found off Tatakoto and Amanu Islands. A sample of

material from the ocean bottom in this region showed a few fragments of black lava with no trace of ooze, indicating recent volcanic origin.

The work done on this passage included: 63 determinations of magnetic declination and 17 of magnetic intensity and inclination; 17 ocean-stations at 15 of which bottom-samples were obtained; 206 soundings; 35 pilot-balloon flights, one of which was followed to a height of over 6 miles; 9 determinations of evaporation; 4 series of atmospheric-electric observations by eye-readings, each throughout 24 hours; and 23 complete 24 hour photographic electrograms of potential gradient.

Science News-Letter, April 6, 1929

Switzerland has one bicycle to every five inhabitants.

The Naskapi Indians of Labrador wear wooden goggles to protect their eyes from the glare of the snow.

Where Oil Comes from

Geology

A model of an oil field, showing how an oil well is drilled, how one already bored is pumped, and how the various strata of the earth between the surface and the oil deposit thousands of feet below are arranged, has just been placed on exhibition in the department of geology at Field Museum of Natural History, and is shown on our cover.

The model represents part of the oil field at Lawrenceville, Illinois. To insure accuracy in every detail, Henry W. Nichols, associate curator of geology, who supervised the construction of the model, went to Lawrenceville and made field studies and notes before the model was built.

The model shows the subterranean strata in which the oil was made by nature during thousands of years through the decomposition of fossils, and still lower the oilsands where the oil floats on salt water along a fold of the rock shaped like an inverted trough. Also represented is the space above the oil surface, filled with natural gas.

Science News-Letter, April 6, 1929

African elephants show a tendency to what might be called "right-handedness," since their right tusks are usually worn down by digging more than the left.

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SCIENCE NEWS-LETTER, The Weekly Summary of Current Science. Published by Science Service, Inc., the Institution for the Popularization of Science organized under the auspices of the National Academy of Sciences, the National Research Council and the American Association for the Advancement of Science.

Edited by Watson Davis.
Publication Office, 1918 Harford Ave., Baltimore, Md. Editorial and Executive Office, 21st and B Sts., N. W., Washington, D. C. Address all communications to Washington, D. C. Cable address: Scienservc, Washington.

Entered as second class matter October 1, 1926, at the postoffice at Baltimore, Md., under the act of March 3, 1879. Established in mimeographed form March 13, 1922. Title registered as trade-mark, U. S. Patent Office.

Subscription rate—\$5.00 a year postpaid. 15 cents a copy. Ten or more copies to same address, 5 cents a copy. Special reduced subscription rates are available to members of the American Association for the Advancement of Science.

Advertising rates furnished on application.

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