

OCEANOGRAPHY

Chart Cyclone-Like Eddy

Birth of large, anti-clockwise eddy in Gulf Stream charted. Equivalent to "formation of cyclone in the westerlies at high altitudes."

► THE BIRTH of a large, anti-clockwise eddy in the Gulf Stream has been charted by scientists. This is equivalent to the "formation of a cyclone in the westerlies at high altitudes," states Dr. Columbus O'D. Iselin of the Woods Holes Oceanographic Institution, Woods Hole, Mass.

The Gulf Stream and jet streams high in the atmosphere have several features in common, as pointed out by Dr. C.G. Rossby, University of Chicago meteorologist. First found during the last war, these jet streams have considerable influence on our weather, and are regularly considered by Weather Bureau forecasters in making their predictions. At 20,000 to 30,000 feet above the earth, the jet streams race along at 150 or more miles per hour.

More information about these jet streams would enable pilots to take advantage of the powerful winds on long east-west flights. Scientists can learn more about the jet streams by studying the Gulf Stream, which is much handier and easier to investigate.

Dr. Iselin estimates that the sorts of changes that take place in one day in

the atmospheric jets require a week or more in the Gulf Stream. Thus even a slow ship can follow the development of an individual feature, such as an eddy. Balloons radioing jet stream observations back to earth can now follow only the general features of the jet streams.

For both the jet streams and the Gulf Stream, the stream remains constant for much longer than present knowledge can account for. There seems to be a preferred width and a preferred velocity to the streams' currents, the energy having been acquired well upstream from the point where the jet begins to develop.

In both cases it appears that physical obstructions are the reason that the extreme meanders develop, Dr. Iselin states in a report on the Gulf Stream survey in the TRANSACTIONS OF THE NEW YORK ACADEMY OF SCIENCES (Dec., 1950). The cause of the meandering seems to be located well down stream from the area where the meanders first begin to form, he concludes.

The Gulf Stream survey was made in cooperation with the U. S. Navy's Hydrographic Office in Washington, D. C.

Science News Letter, June 2, 1951

PHYSICS

Yo-Yo Teaches Physics

► THE YO-YO, popular children's toy, is being used by a physics professor to help teach his classes some of the basic principles of mechanics. This is the branch of physics dealing with the laws followed by all moving bodies.

The simplest, most usual motion of a Yo-Yo is that of throwing or letting it drop down its twisted string. It will rotate about its axis, or "sleep," in a loop at the bottom of the string until a sharp pull causes the top to roll itself and the string back into the operator's hand.

A discussion of this down-and-up motion brings out nearly all of the elementary ideas about translation, or straight-line, and rotational motion, Dr. Irving J. Kofsky, of Syracuse University, points out. The sleeping Yo-Yo also illustrates two other principles: its rotational momentum prevents the string from unwinding, so that it acts as an extremely simple gyroscope, and certain vibrations, showing resonance, are set up in the string.

Dr. Kofsky concludes his classroom demonstration with the following trick:

The top is thrown down as sharply as possible, and while it sleeps, the string is released from the finger to which it is attached. As it is released, the top of the string is grasped between the thumb and index finger of the left hand, palm down.

A sharp slap on the back of the left hand and release of the string as soon as the sleeping Yo-Yo has caught causes the top to fly up the string, and now, spinning more slowly, to reach a level several feet above his head, with the string all wound up. Dr. Kofsky then catches the Yo-Yo in a coat pocket on the way down.

Science News Letter, June 2, 1951

ZOOLOGY

Rare Hawaiian Seal Arrives on Mainland

► THE FIRST Hawaiian monk seal to reach the American mainland is now on exhibit at the San Diego, Calif., Zoo after an air journey from Honolulu.

Now exceedingly rare, this species is represented in captivity by only one other specimen in the Honolulu Zoo, whose director, Paul L. Breese, captured both animals. So abundant once were these animals in the Hawaiian leeward islands that sealers slaughtered thousands during the past century.

The San Diego Zoo seal is a nursing pup, dark brown above, paler on the sides, and almost white beneath. It is three feet long but when it grows up Ken Stott, Jr., general curator of the Zoo, expects it will reach a length of six or seven feet.

Science News Letter, June 2, 1951

MEDICINE

Find New, Life-Saving Use for Cortisone

► AN "EARLY and urgent report" of a new potentially life-saving use for cortisone is made by Dr. Joseph Freeman of Mount Sinai Hospital, New York, to the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION (May 26).

Seven patients threatened with suffocation because of swelling of the voice box in the throat were relieved of the dangerous swelling within 11 to 24 hours by "full doses" of cortisone, Dr. Freeman reports.

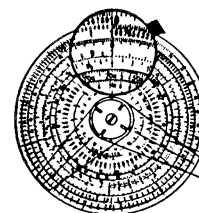
In two of the patients the swelling followed a course of protracted radiation treatment for cancer of the larynx. In four the condition was due to croup. In the seventh the swelling was due to an abscess that formed after a foreign body got in his throat. This patient had been given antibiotics, or so-called mold remedies, for 36 hours previously without effect.

Science News Letter, June 2, 1951

The ear of the *deer* is superior to that of the hunter in hearing faint sounds, largely because its outer ear is movable and can be turned to the best position to pick up a sound.

Chestnuts do well in some parts of California and this state is the largest American producer of these nuts since the extermination of all eastern chestnut trees by blight a few decades ago.

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