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OCEANOGRAPHY
U.S. Navy to "Listen" To Ocean Depths

➤ NOW THE U.S. NAVY is developing microphones that will enable it to listen for enemy submarines more than two miles below the ocean's surface.

The hydrophones will work under pressures of as much as 5,000 pounds per square inch. This will allow them to operate more than two miles down, in contrast to conventional hydrophones that can be submerged only a few hundred feet. The Navy plans on listening to all the sounds of the deep and recording them for detailed study, so that man-made noises can be detected and identified.

• Science News Letter, 83:222 April 6, 1963

FORESTRY
Depth of Lakes Told By Photo Measuring

➤ MANY a weary hiker, longing to refresh himself with a swim in a cool mountain pool has been held back by the fear of hitting rock bottom.

With a new method for measuring the depth of mountain lakes, scientists have come to such a hiker's rescue. The measurements show sportsmen and scientists whether lakes are deep enough for a dive or just shallow spots for wading.

The depth of mountain waters can be calculated on the basis of photographic measurement of the surrounding lake shores, Karl E. Moessner of the U.S. Forest Service Experiment Station, Ogden, Utah, told the American Society of Photogrammetry meeting in Washington, D. C.

Photogrammetry is depth perception with the camera instead of with the eyes. Overlapping aerial photographs of an area are taken. When projected on a screen, they give a three-dimensional model of the earth's surface.

The standard techniques of photogrammetry will not work for measuring the depth of lakes, Mr. Moessner told the meeting. Although the size and shape of the lakes can be measured, the water's distortion of light waves prevents photographic measurement of the lake bottom.

Techniques for estimating depth in shallow ocean areas are also not applicable because mountain lakes vary in clearness and in bottom type, he explained.

The new method is accurate and inexpensive. In the 20 lakes tested, the photo estimates of depth were statistically the same as estimates made by taking soundings, Mr. Moessner reported. The soundings cost ten times as much as the photo estimates.

The new method of measuring lake depths promises to be useful in recreational planning and land management studies.

• Science News Letter, 83:222 April 6, 1963

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