

OCEANOGRAPHY

Split Bottom Lowers Seas

► THE OCEAN BOTTOM has opened up during the last 20,000,000 years, swallowing billions of gallons of water and lowering the level of the oceans at least 1,500 feet.

Huge cracks cutting across ocean bottoms have slowly, though steadily, been widening since Miocene time leaving a gap for the ocean waters to fill in. The huge fissures (rift zones) were formed on top of ridges thrusting upward from the ocean deeps.

Available data show that the rift zones probably widened about 90 miles, dropping the ocean level about 1,500 feet, Dr. John D. Weaver of the University of Puerto Rico's Institute of Caribbean Studies, Mayaguez, reports in *Nature*, 190:1186, 1961. A rift zone near Iceland is now widening about 20 feet a mile every 1,000 years, the scientist states.

The earth is constantly expanding, opening up new rifts and widening older ones as part of its "growing pains," Dr. Weaver reports.

Distinct terraces on Caribbean islands that match those on the South American coast provide evidence of former ocean bottom left high and dry when the water receded. It is very unlikely that the similar levels of these marine terraces are merely accidental, he emphasized.

Many scientists believe the movement of the huge underwater blocks of rock are caused by warm currents circulating within the rock masses underlying the soft veneer of ocean bottom sediments. The heat, caused by radioactivity, probably formed the Mid-Atlantic Ridge whose backbone divides the Atlantic Ocean bottom.

• *Science News Letter*, 80:23 July 8, 1961

ARCHAEOLOGY

Early Living Sites Found

► ONCE SETTLED living places indicating the stage between hunting and agricultural life of prehistoric man have been found in Iran by a team of U. S. scientists.

Articles discarded at these "village" sites by men living from about 100,000 to 5,000 years ago were found by Dr. Robert J. Braidwood, anthropologist of the University of Chicago, Dr. Bruce Howe, archaeologist at the Peabody Museum, Harvard University, and Dr. Charles A. Reed, zoologist at the University of Illinois, Chicago.

The three scientists spent a year in the Zagros Mountains of Iran looking for the earliest evidence of the time and place when man first began producing his own food,

instead of relying solely on hunting, fishing and gathering.

The team found much evidence to suggest that sometime between 15,000 and 8,000 years ago the swing to farming and village living took place. At one small, low mound called Asiab, believed dated between 11,000 and 9,000 years ago, the team made an exceptional find of coprolites, or fossil dung. If the coprolites are found to be human, as the scientists think they may be, they would show the diet of community members, who were then living a somewhat settled life, quite likely a stage leading to an agricultural society.

At another site, called Sarab, many ob-

jects, such as pottery, clay figurines and ground stone work, were found to resemble those from Jarmo, an ancient farming community in Iraqi Kurdistan.

Semi-pit structures used in Sarab may originally have been covered with reed roofs. Apparently this was not a permanent living place, and there is so far not any evidence of cereals such as wheat or barley.

However, many animal bones and other evidence suggest the domestication of goats in this community believed to have been lived in about 9,000 to 8,000 years ago.

The scientists, who have just begun evaluating their finds, report their work in *Science*, 133:2008, 1961.

• *Science News Letter*, 80:23 July 8, 1961

MINERALOGY

Rare Mineral Found In Man-made Diamonds

► A RARE MINERAL occurring naturally only in meteor craters has been discovered in a man-made diamond.

Coesite, a quartz mineral that forms under tremendous pressures, was found trapped within a diamond created artificially in the General Electric Laboratories, Schenectady, N. Y. A high-pressure shock wave, probably equal to that which formed the mineral when a meteor slammed into the earth, created the coesite in the laboratory diamond experiment.

"Some X-ray photographs of natural diamonds indicate the possible presence of coesite," Dr. H. Judith Milledge, University College chemist, London, reported in *Nature*, 190:1181, 1961. "If substantiated, this would represent the first natural occurrence of coesite except in meteor craters."

The identification of coesite in artificial diamonds strongly supports the geological view that the quartz sometimes found in natural diamonds had to be formed after the diamond crystallized.

• *Science News Letter*, 80:23 July 8, 1961

ARCHAEOLOGY

Smithsonian Opens Hall Of North American Relics

► A MODERNIZED HALL of North American archaeology that gives a better display of the Smithsonian Institution's ancient treasures has been opened in Washington, D. C.

The hall contains exhibits and specimens from the Southwest, California and Alaska, including silver and other metal trade goods, glass beads and bottles used by Indians. Material from Indian mines and quarries, such as obsidian, flint and turquoise, as well as a map that locates the mining sites are included.

A second hall to supplement the one now open is scheduled for completion in about a year. In this hall, material from the eastern United States, the Southeast, including Florida, and the Great Plains states will be displayed, including the methods and objectives of archaeology.

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WOOD-CARVED MASKS—Exhibit case, designed by Anthony Distefano, holds masks from an Aleut burial cave (Alaska) as part of the new hall of North American Archaeology at the Smithsonian Institution.