

## GEOLOGY

# Oceans Still Growing

Atmosphere also may be constantly fed by hot volatile gases escaping from interior of earth. Ocean basins sinking, making room for more water.

► THE OCEANS and the atmosphere may still be growing, fed by volatile gases escaping from the earth's interior.

This is the startling new theory of one of the nation's top geologists, Dr. William W. Rubey of the U. S. Geological Survey. But don't look for a world-wide flood tomorrow. The process is extremely slow. It has been going on since the dawn of geologic history, Dr. Rubey suggests.

Dr. Rubey presented his new concept of the origin of the oceans in his address as retiring president of the Geological Society of America.

Minerals and fossils in ancient rocks show that the composition of sea water and atmosphere has varied only slightly since early geologic time, the scientist said.

Some materials in the earth's sediments, air and oceans are much too profuse to be explained simply by the weathering of rocks, he said. These include water, carbon, chlorine, nitrogen and sulfur. They are among the volatile elements which escape as molten rock from the earth's core rises and falls.

The relative amounts of these "excess" volatiles correspond closely enough to those in gases from volcanoes and hot springs, Dr. Rubey said, to suggest that the ocean and atmosphere may have come from such gases.

Older geologic theories make the earth originally a mass of molten or gaseous material. If this were true, Dr. Rubey said, the "excess volatiles" probably condensed from a primitive atmosphere.

But advancing knowledge in seismology and geochemistry, he said, "makes it increasingly difficult to retain the concept of an originally molten earth."

If the oceans and the air came from the interior of the earth, on the other hand, it would imply that their overall volume has grown steadily over the ages.

This is backed up by geologic evidence, Dr. Rubey said. The ocean basins have been progressively sinking, necessarily meaning a greater amount of water to fill them.

Science News Letter, November 25, 1950

## GEOLOGY

## Old Man River Is Real Dirt-Mover

► ENOUGH mud and ooze to build a dike five miles across and tall enough to reach the moon has been deposited in the Gulf of Mexico during the past 125,000,000 years, Dr. Grover E. Murray of Louisiana State University told the Geological Society of

America meeting in Washington.

This amount of sediment, amounting to 1,500,000 cubic miles with a weight of 15,620,000,000,000 tons was mostly removed from the surface of the central United States by rivers.

Science News Letter, November 25, 1950

## On This Week's Cover

► AMONG the most striking of all scientific photography is that of the geologist. The grooves and indentations shown on this week's cover of SCIENCE NEWS LETTER are not a close-up of a fossil, but a picture taken high in the sky, looking straight down at Zion National Park's majestic canyon in southwestern Utah. Dead center is a U-turn in the gorge called "Angel's Landing." To its right is the cup-like depression known as the "Great White Throne." Taken from this height (14,000 to 18,000 feet) the precipitous walls of the gorge are lost, but in their place is a sweeping panorama of the giant folds and water-cut canyons which make Zion Park a classic of geology. The photograph is part of a University of Illinois collection shown at the annual convention of the Geological Society of America in Washington by Dr. Harold R. Wanless, Illinois professor of geology.

Science News Letter, November 25, 1950

## AERONAUTICS

## Liferaft for Plane Crew Inflates Automatically

► "CIRCUS-TENT," a 20-man liferaft for the crewmen of a ditched plane, is automatically inflated by means of a line attached to the compressed gas tank in the thrown-out raft and hooked to the plane.

It is called a floating circus tent because of its appearance when in the water, particularly with its protecting canopy in position. The raft itself has no top or bottom, so it makes no difference which side is uppermost when it hits the water.

The raft is made of two rubberized nylon floatation tubes which resemble giant automobile inner tubes. The floor of the raft is between these tubes. Both sides are alike, and whichever one happens to be on the top is used for the passengers.

This new liferaft was developed in Dayton at the Wright-Patterson Air Force Base and 400 have been ordered from the Air Cruisers Company, Clifton, N. J. They are for use on planes of the Military Air Transport Service. The liferaft comes complete with canopy, radar reflector and accessory kit, all wrapped in a compact package three feet long and half that in width.

Particular features of the raft include its sturdiness and buoyancy. It can support more than 5,000 pounds without sinking and has survived tests in winds up to 60 miles an hour.

Science News Letter, November 25, 1950



**LIFE RAFT**—This 20-man floating refuge for downed airmen is dry and highly buoyant. The canopy, raised here to give ventilation, can also be lowered to keep out rain or sun.