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GEOLOGY

Indian Ocean Floor May Have Sunk a Mile

► PARTS of the Eastern Indian Ocean floor may have sunk as much as a mile since the bottom rocks were formed some 30 million years ago.

Pieces of rock dredged up 12,000 feet from a submerged volcano indicate this ancient sinking, reported Celeste G. Engel, U.S. Geological Survey, Robert L. Fischer of Scripps Institution of Oceanography and A. E. J. Engel, University of California, all in La Jolla, Calif.

By dredging the flank of a large submerged volcano southwest of Sumatra, the scientists recovered basalt with tiny, almost spherical cavities about four-hundredths of an inch in diameter, they reported in *Science*, 150:605, 1965. Basalt is a dark gray or black fine-grained rock formed by volcanic or other hot geological action. Basalt extruded at this depth usually does not have cavities, the scientists reported, so the floor must have sunk since it was formed.

Although some change in depth would be due to addition of water to the ocean, the scientists believe that geological processes forming the undersea Indonesian Trench have caused the entire bordering sea floor to be depressed.

The basalt samples also contained a higher concentration of potassium and titanium and slightly lower amounts of silicon and calcium than the typical ocean rock of the sea mountain ridge.

The Indian Ocean floor is being dredged as part of the International Indian Ocean Expedition to study major geological features.

Recent oceanographic investigations undertaken by the expedition have clarified the ocean's patterns of both elongated and bifurcated faulted ridges, the large plateaus and irregular deeps and the texture of the deep-sea floor.

• *Science News Letter*, 88:308 November 13, 1965

GEOLOGY

First Water Survey Shows Australia Dry

► AUSTRALIA is the driest continent in the world, reveals the first survey of Australia's surface and underground water supply.

An average of only 18 inches of rain falls on Australia each year, 90% of which is lost through evaporation and plant transpiration, according to a report prepared by the Australian Water Resources Council.

Australia's total water resources amount to only one-tenth the water poured into the sea each year by the Amazon River. The report also showed that 71% of Australia's water is in the north, above a line which cuts the continent about 100 miles south of Brisbane, Queensland. The average annual discharge of all Australian rivers would cover about 280 million acres to a depth of a foot—40 million acre feet more than formerly estimated.

• *Science News Letter*, 88:308 November 13, 1965

Questions

ARCHAEOLOGY—How is the design of the bone plaque discovered in Sardis, Turkey, typical of the Scythians of South Russia? p. 309.

GEOLOGY—What evidence indicates that the Indian Ocean floor may have sunk as much as a mile? p. 308.

MEDICINE—What drug is preferred for penicillin-G-resistant staphylococcal meningitis? p. 307.

NATURE NOTE—To what class do the arrow worms belong? p. 318.

PHYSIOLOGY—What effect does oxygen deficiency during pregnancy have on offspring? p. 312.

PSYCHOLOGY—Why, possibly, may firstborn children react more strongly to an anxiety-producing situation than do their younger siblings? p. 311.

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