

Volcanic Ash Layers Found in Pacific

May 5, 1960

Millions of square miles of the floor of the Pacific Ocean may once have been paved with volcanic ash, according to research being conducted at The University of California's Scripps Institution of Oceanography.

The paving material was shot out of underwater volcanoes and distributed by ocean currents, says Henry W. Menard, Jr., Associate Professor of Geology at Scripps and the Institute of Marine Resources.

He bases his theory on the recovery by dredges of numerous slabs of the material, once ash, now consolidated as rock, throughout large areas of the Pacific and on photographs of the slabs on the sea floor.

A characteristic slab is one inch thick and five inches across, Menard says. None has been found resting on another. Menard believes that the layer was once continuous, but that it was broken up first by physical-chemical changes and then by worms and other bottom dwelling creatures hundreds of thousands of years ago.

The slabs bear a coating of manganese oxides an inch thick on their tops. Billions of tons of nickel and cobalt are associated with these vast manganese deposits. Rounded manganese nodules of more recent origin dot the areas between the slabs.

Menard is reporting his findings in Deep-Sea Research.