

# SCIENCE

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## THE CORAL REEFS OF TUTUILA, SAMOA

<i>The Coral Reefs of Tutuila, Samoa:</i> PROFESSOR W. M. DAVIS.....	559
<i>A Novel Magneto-optical Effect:</i> DR. ELIHU THOMSON .....	565
<i>Edward Bennett Rosa:</i> DR. S. W. STRATTON.	569
<i>Scientific Events:—</i>	
<i>The Harpswell Laboratory; Presentation to Dr. Frederick Belding Power; Medallion of the Wisconsin Academy of Sciences.....</i>	569
<i>Scientific Notes and News.....</i>	571
<i>University and Educational News.....</i>	573
<i>Discussion and Correspondence:—</i>	
<i>Newton's Corpuscular Theory of Light: DR. J. M. SCHAEFERLE. German Surtaxes on Scientific Publications: DR. C. STUART GAGER .....</i>	574
<i>Quotations:—</i>	
<i>Centenary of the French Academy of Medicine .....</i>	575
<i>Special Articles:—</i>	
<i>Resistance to Stem Rust in Kanred Wheat: RUTH F. ALLEN.....</i>	575
<i>The Rochester Meeting of the American Chemical Society: DR. CHARLES L. PARSONS...</i>	576

THE preparation of a detailed chart—not yet published—of Tutuila, Samoa, by the U. S. Hydrographic Office, and the studies made by various scientific specialists invited to the island by Dr. A. G. Mayor, director of the department of marine biology of the Carnegie Institution of Washington, have added greatly to the knowledge of that remote possession of ours in recent years. The chart, on a scale of about 1 : 50,000, shows the mountainous volcanic island to be surrounded by an extensive submarine bank, from one to three miles wide, somewhat shallower near its inner and outer margins than along an intermediate belt, where soundings of 60 fathoms occur. The shallower parts of the bank are interpreted as submerged fringing and barrier reefs, which are supposed to rest on a wave-cut platform now lying between 60 and 70 fathoms below sea level by reason of island subsidence. The present shores of the island are embayed and are bordered by well developed fringing reefs.

Dr. Mayor's latest Carnegie report contains a condensed statement by R. T. Chamberlin, entitled "The geological interpretation of the coral reefs of Tutuila, Samoa," the result of three weeks' observation there in July, 1920, from which the following extracts are taken:

The island of Tutuila is a volcanic pile whose slopes have been attacked by the sea until a broad wave-cut platform, 2 miles in width, has come to surround the island. This broad shelf of planation, originally cut in the volcanic rocks not far below the sea level, now lies at least (though probably not much more than) 400 feet below sea-level. . . . On the outer margin of the wave-cut platform, corals commenced to build a barrier reef, while a fringing reef grew outward from the shore. . . . Subsequently the island became progressively submerged. . . . Tutuila, therefore,