

GEOPHYSICS

High-Transpiration Plants One Means to Abate Floods

Studies at U. S. Department of Agriculture's
Arlington Farm Yield New Data on Evaporation

TO ABATE floods, encourage vegetation with a high rate of transpiration, or water loss through its leaves, was one recommendation offered before the meeting of the American Geophysical Union in Washington by Dr. C. W. Thornthwaite and Benjamin Holzman of the U. S. Soil Conservation Service.

This recommendation is one of the practical applications of studies now being made of evaporation rates from soil and transpiration rates from plants, by scientists of the Soil Conservation Service. It has hitherto been impossible to obtain anything like a direct measurement of such escape of water into the air, but the new method, now in use for about a year, obtains usable data by measuring two factors (1) the air moisture above the area under examination, (2) the rate at which the turbulent air currents near the ground carry off this moisture.

Winter, in the region around Washington, is a time of soil-moisture storage, the studies showed. Evaporation losses to the air in June were five times as great as in January. Precipitation in winter, however, is nearly as great as in summer and in addition may be stored on the ground in the form of snow.

Science News Letter, May 4, 1940

Trigger for Earthquakes

THERE is a connection between the seasonal distribution of heavy earthquakes and the seasonal shifts in baro-

metric pressures, Prof. Herman Landsberg of Pennsylvania State College told the Geophysical Union. He traced two curves, for the decade 1921-1930, one showing seasonal changes in barometric pressure in Northern and Southern Hemispheres, the other the seasonal variation of heavy quakes. There was a remarkably close fit of peaks and valleys between the two curves.

It has been known for some time that air masses are shifted to the south across the equator in the spring of the Northern Hemisphere, and in the opposite direction in the fall. The changes in loading of the earth's crust by the shift in weight of these "invisible mountains" are sufficient, Dr. Landsberg held, to have a trigger effect on earthquake forces already built up in the rocks and awaiting only a last straw of some kind to set them off.

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ANTHROPOLOGY

Death for Girl to See Boy Minus His Hat in Jungle Isle

ASOUTH SEA island tribe which requires its young men to wear basket-shaped hats from the time of puberty until marriage, and forbids girls to see the boys without their hats on pain of death, was reported by Dr. Douglas L. Oliver, Harvard anthropologist, returned from a two-year stay on tropical Bougainville, of the Solomon Islands.



LEST SHE DIE

Dr. Oliver obtained measurements of more than 2,000 native blacks in the jungle interior of Bougainville, anthropologically important as part of the mysterious ethnic "black spot" of Oceanic. The extremely dark peoples of Bougainville and a few nearby islands are surrounded by a people having very different physical characteristics, including lighter skins, and also an entirely different language base.

The largest series of physical measurements ever made in Melanesia, Dr. Oliver's data are expected to go far toward answering the question whether these Negro peoples are the descendants of the original inhabitants of Melanesia, going back thousands of years before the coming of the Austronesians, now found in the coastal districts.

For fifteen months Dr. Oliver and his wife lived in a grass hut in a village of the Siwai in the Bougainville jungle, thirty miles from the coastal mission station. As background for the intensive work here, the Olivers also traveled for four months through the 120-mile-long island, visiting each major division of the population of 50,000.

Near the Siwai villages, in the jungle, Dr. Oliver found stone monoliths, set up by human beings, hundreds, perhaps thousands of years ago, and so ancient that the ritual purpose has long since been forgotten. Natives believe they were set up by demons.

For twenty years, since the beginning of the British mandate, headhunting has been outlawed in Bougainville, and now the natives rely on elaborate sorcery

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