

BOTANY

Plant Migration Laboratory

Volcanic explosion of San Benedicto, which wiped out plant life on tiny island, gave scientists a rare opportunity to study the extinction and regrowth of plants.

► THE VOLCANIC explosion of a tiny island off the coast of Mexico last year has given University of California botanists a unique chance to study the extinction and regrowth of plants.

By the explosion, nature has set up a rare experiment and using it, the Berkeley scientists hope to learn more precisely how plants come to be where they are, and how land plants migrate to oceanic islands.

The nature-made laboratory is San Benedicto, a three-mile-long island off the tip of Lower California, whose eruption last year erased virtually every vestige of life. (See SNL, Jan. 10, 1953, p. 20, and SNL, Sept. 27, 1952, p. 195.)

Dr. Herbert Mason, director of the University's herbarium, made a detailed study of the island's vegetation in 1925, plotting all existing plants. There were 11 different plant species, including coarse grasses about five feet tall, sedges and other bushy plants covering almost every square foot.

Dr. Mason recently accompanied a group of zoologists, geologists and oceanographers from Scripps Institution of Oceanography on a visit to the island.

He found that less than 200 plants had survived the explosion, and that only five of the 11 original species were represented. There were only two living specimens of one of the grasses.

A total absence of plant life would have provided an excellent control for Dr. Mason's studies. However, among the remaining plants were those endemic to the island and found nowhere else in the world.

Knowing what plants formerly existed on the island and what plants remained after the explosion, Dr. Mason will be able to study the various natural means of re-vegetation.

"San Benedicto's fate is only the second such occurrence of that nature recorded," Dr. Mason pointed out. "Krakatoa in Sunda

Strait, which erupted in 1886 and killed all vegetation and thousands of people, was the first. But botanists did not get to the island for three years after the catastrophe."

The scientist said that seeds of new plants appearing on San Benedicto will probably be carried in the wind or by birds or will be washed in by the sea.

"If the shores of the island become vegetated first," he said, "we will surmise that the seeds were washed in by the sea. If the highest points on San Benedicto—the cliffs and hilltops—are the first to support plant life, we can guess that the seeds were probably borne on the wind."

Science News Letter, January 23, 1954

TECHNOLOGY

Turpentine By-Products

► A CHEMICAL by-product of gum turpentine that can be used in the manufacture of synthetic rubber and plastics may help get the ailing gum turpentine industry back on its feet.

Research on new uses for turpentine has centered at the U. S. Department of Agriculture Naval Stores Station, Olustee, Fla. Hit by competition from petroleum derivatives, new chemical industries and the depletion of pine timber, the gum turpentine in-

dustry has declined from an annual production of 760,000 barrels 25 years ago to less than half that amount today.

Latest product of research is the development of a method of producing pinane hydroperoxide from turpentine by Dr. G. S. Fisher. Organic peroxides are suitable for use in a number of industrial processes, especially in the production of synthetic rubber, resins and plastics.

Science News Letter, January 23, 1954

Questions

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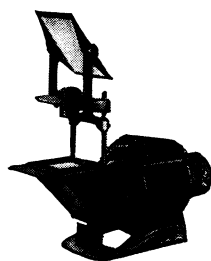
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