

The most important application of this discovery lies in the treatment of cancer. It is being tested in several London hospitals with very encouraging results. Sir Arthur Keith has further suggested that it may be of value in the treatment of acromegaly or gigantism, which is due to abnormal functioning of the pituitary gland.

The effect of the extract was first observed on rats and rabbits, then on

water cress. At the suggestion of Prof. Julian S. Huxley it was tried on the axolotl, a form of salamander. In all these cases the growth-retarding effect has been very marked. Treated rabbits have remained at about half the size of their untreated brothers and sisters. The germination of water cress seeds is entirely stopped by a 20 per cent. solution of the extract.

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BOTANY

Cheesecloth Saving Rare Plant On Rim of Hawaiian Volcano

ONE OF THE MOST interesting plants in the world, the Haleakala Silversword, once abundant in its limited area, has now become so scarce that botanists of the U. S. National Park Service cover every specimen of it that comes into bloom with cheesecloth to protect it from insect enemies that would otherwise destroy its seeds.

The Haleakala Silversword, as its name implies, grows only on the rim and in the crater of Haleakala, a great dormant volcano in that portion of the Hawaii National Park located on the island of Maui, one of the Hawaiian Islands. It belongs to the great Composite family of plants.

Beautiful Silvery Sphere

When young the plant, known to Hawaiians as "pohinahina" or "ahinahina" from their word for "gray," is a beautiful silvery sphere of incurved linear leaves. The silvery coloring is caused by the dense covering of hair which repels some of the penetrating rays of the sun and also guards the plants from too rapid loss of moisture. When it attains a diameter of about two feet, the great silvery ball shoots up a magnificent cluster of flowering heads to a height of from three to six feet.

Probably the very abundance of the silversword not so many years ago is the main cause of its scarcity now. Before the area was made a national park no effort was made to conserve a plant which grew in such profusion. So the silver balls were pulled and sent rolling down the rim to present a spectacle something resembling the rolling of giant snowballs, or they were ruthlessly gathered for shipment to the Orient for use as ornaments.

According to Otto Degener, botanist of the Hawaii National Park, in one place where a garden of silversword ten acres in extent grew in the nineties of the last century, not one plant could be found 30 years later.

The silversword generally flowers but once, dying after the maturing of its fruit. It is therefore important that the blossoms be protected, to give the seeds a chance to mature. Perhaps the worst enemy the plants have, now that the National Park Service is protecting them from the vandalism of man, is the tyrpetid fly, which lays its eggs in the seed pods. The larvae, maturing, feed upon the seeds.

So the Park Service is extending its care of the plants, now wrapping their blooms in cheesecloth to give them a chance to mature.

The silversword chose a fitting habitat when it selected Haleakala, one of the largest dormant volcanoes in the world and known to have erupted less than two hundred years ago. In its great crater, with an area of nineteen square miles, could be placed an entire city.

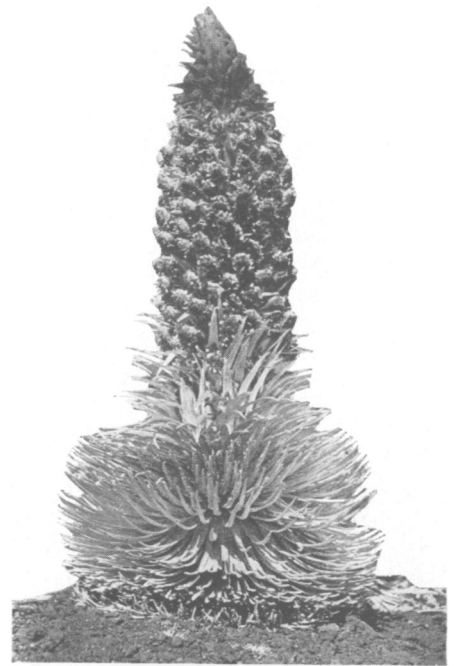
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ENGINEERING

Test Auto Measures Power Output While in Motion

A UNIQUE gasoline-electric automobile for measuring whether one kind of highway requires more power of a vehicle than another is being tested at the Iowa Engineering Experiment Station at Ames, Raymond G. Paustian, Jr., engineer, has reported to the Highway Research Board of the National Research Council.

The vehicle is a remodeled automo-



HALEAKALA'S SILVERSWORD

bile of a standard make. The transmission was stripped out and in its place an electric generator and a motor were installed, Mr. Paustian said. The gasoline motor drives the generator, which drives the motor, which in turn runs the car. Since power to the wheels comes directly from the electric motor, it can be measured by metering the electrical input to the motor. Losses in the motor and in the transmission of power through the differential to the rear wheels are accounted for by a laboratory calibration on a drum dynamometer.

Power measurements are now being made on level concrete roads, Mr. Paustian explained, in order to perfect the operation of the car. Instruments are read not by making notations with pencil and pad but by taking photographs of the faces of the meters. With a motion picture camera readings can be taken exactly at ten-foot intervals even though the car is traveling sixty miles an hour.

"During the coming year a series of extensive investigations with this equipment will be undertaken," Mr. Paustian said. "Measurement of the resistance of concrete, brick, gravel, earth and other roadway surfaces at low and high vehicle speeds is the problem of primary interest. A measurement of the power requirements of highway grades will also be undertaken and will be correlated with a study of gasoline consumption when the car travels over different grades on various types of roadway surfaces."

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