

New Rubber Plant From Madagascar

Botany

A new species of rubber tree, hitherto unknown in this country and almost exterminated in its native land, has been brought back to Washington by Dr. Charles F. Swingle of the U. S. Department of Agriculture from Madagascar. The plant is one of the most remarkable rubber producers that has ever lived, in the ease with which the gum can be harvested. The rubber separates itself out from the latex on exposure to the air, according to Dr. Swingle, and no elaborate coagulation or smoking process is necessary. Years ago, when the natives of Madagascar were collecting rubber for the French, they would simply cut long gashes in the bark of the tree, and then go round next morning and peel out strips of rubber.

The difficulty about this primitive collecting was that it came during a time of high rubber prices, and the natives were encouraged into excessive and wholly unregulated exploitation. The result was that they killed the goose that laid the golden eggs, and in a few years there were no more of these rubber trees.

The fact that any of them survived at all is due, Dr. Swingle says, to the unique root system of the tree, which is unlike that of any other known

plant. It consists of chains of tuberous thickenings like sweet potatoes, strung together after the fashion of sausages. The tubers are storage organs for water, enabling the plant to survive in the desert, through a drought as long as six rainless years. With this system of underground life-insurance, the remnants of the rubber forest were able to survive the massacre, and to begin life over again for the species after the rubber hunters had gone away.

But so nearly completely had the species been wiped out that aside from the specimens now growing in a locked greenhouse in Washington there is not another living plant outside of Madagascar, and even dried herbarium specimens are rare. The U. S. National Herbarium does not have one.

With the assistance of Prof. Henri Humbert of the University of Algiers, a noted French botanist who is an expert on the plants of Madagascar, Dr. Swingle brought out his stock of living specimens of the plant. The species can be propagated from stem cuttings, but it is of slow growth, and it will require years before the stock can be increased to a point where commercial experiments can be undertaken.

Dr. Swingle states that the new plant is probably best adapted for cultivation in the Southwest. It can certainly survive the drought of that country; the question that needs to be determined now is its ability to withstand light frosts. If it is too tender for even such cold weather as comes to Southern Arizona, it can certainly be grown in Mexico, and may be destined for a share in the economic rehabilitation of that country. Its slow growth may make ordinary plantation methods unprofitable, but experiment may possibly demonstrate that it can grow faster under irrigation.

It is a member of the Euphorbia family, and is therefore related to the Para rubber tree, but more closely to the poinsettia, the Christmas thorn and a number of other milky-juiced ornamentals. It grows to be a small tree, though, like many other Euphorbias, it has almost no leaves. Dr. Swingle states that the largest specimens he saw were about twelve feet high and about five inches in trunk diameter, though trees a foot through and twenty feet high are reported. Its technical name is *Euphorbia Intisy*.

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Radio Fading Forecasts Weather

Physics—Meteorology

When the intensity of radio signals from station KDKA, as received at Morgantown, W. Va., falls after sunset, the next day brings clearing weather. Rising intensity of the signals in the evening means the coming of cloudiness or rain.

This has been determined by Dr. R. C. Colwell, of West Virginia University. With a recorder he made a series of curves showing how the intensity of the signals from KDKA, located in Pittsburgh, varied as sunset came on and darkness followed.

Forty curves made last autumn were used to make weather predictions. "Thirty-eight of these were correct," he said, "and the other two were nearly correct; the percentage of correctness being ninety-five. The weather forecast as published in the evening paper was correct for twenty-eight days, or seventy per cent. It should be noticed, however, that the radio forecast is for Morgantown only, while the other covers the whole state.

"The forty curves comprise three in September, twenty-five in October, and twelve in November, so that the radio intensity method of weather forecasting seems to be valid over a wide range of weather conditions and temperature changes. So far, however, it has only been applied to the one station and the one locality.

"As the high and low pressure areas of the weather cyclones sweep across the continent from west to east, they seem to be accompanied by some electric condition which affects radio reception. In all probability the low pressure areas reach Pittsburgh and Morgantown at the same time since these two cities are on the same meridian; similarly for the high-pressure areas. The inference may be drawn that high-pressure areas between two places on the same meridian will weaken the radio signals that night while low pressure areas have the opposite effect."

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Weather Service for Airmen

Meteorology

Further extension of Weather Bureau service to aviators is authorized in an item of \$350,000 in the Second Deficiency bill passed by the last Congress.

Eight new central Weather Bureau stations to receive reports from 37 Weather Bureau stations and 41 sub-stations, are contemplated, according to the U. S. Weather Bureau in Washington.

It is planned to give a 24-hour weather report service to air ports from points all along the air routes, and to include news of storms and winds which may have occurred to one side of the flying route. These, it is explained, may not have influenced the flying route up to the time of the report, but might influence it later.

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For the first time in almost 2,000 years, Hebrew characters now appear on coins of Palestine.