

Swarthmore, Pa. - No extensive program for observing Mars is contemplated at the Sproul Observatory, according to Dr. John A. Miller, director. Some drawings and photographs of the planet will be made at the time of its closest approach in August.

READING REFERENCE - Gregory, Sir Richard. The Vault of Heaven. New York, E. P. Dutton & Company, 1923.

GRAFTED POTATOES GROW LIKE FRUIT

Grafting, a procedure quite common in tree culture, has been applied to vegetables and flowers by a French botanist who has by this method increased the size and yield, created new species, prolonged the life of plants and intensified the perfume of flowers.

Prof. Lucien Daniel of the University of Rennes has performed grafting operations on cabbage, lettuce, beans, potatoes, tomatoes and various flowers. Other botanists who have examined his results concede that the fantastic experiments made by Prof. Daniel hold much practical promise for the market gardener.

One of the first attempts made by Prof. Daniel was to graft the black Belgian bean on a large white Soissons bean. From this combination plant he obtained seeds of an entirely new variety of beans which has remained fixed.

He took a bitter variety of cabbage unfit for food but which resists frosts and grafted on it a variety that has a good flavor but succumbs easily to cold. The seeds of the hybrid yielded a new variety that tastes good and resists cold.

Some of his most sensational grafts were made on the family Solanaceae to which belong such useful plants as potatoes, tomatoes, tobacco, and egg plant. He grafted sections of egg plant on tomato vines. First the grafts produced the regular ovoid egg plant fruit and later on the same branch yielded other fruit resembling that of tomatoes. Finally a true hybrid, round in shape, was obtained.

Prof. Daniel has also grafted tomato branches and bella donna on potato vine and potato stems on egg plants and tomato vines. Potatoes, of course, are simply swollen stems or tubers which develop underground. He was curious as to what would happen when he grafted a potato stem on another plant. Would tubers continue to be produced? Yes, they were, but not underground. Large beautiful tubers hung from the branches like fruit.

These aerial tubers when planted yielded a new kind of underground potatoes which were more resistant and developed more quickly than those of which they were the offspring.

A still more fantastic discovery was the finding, among these second-generation hybrids, of three plants which bore both aerial and subterranean tubers at the same time. These tubers being harvested and planted yielded a stable new variety rather late in developing but delicious in flavor, extra large in size and very hardy.

One of the most recent experiments is the double grafting of belladonna and

tomato. Upon a tomato stem, a sprig of belladonna was grafted and then upon the latter again a tomato stem. It was found that the belladonna plant had by this operation lost its property of producing atropin poison which is normally found in all parts of the belladonna plant.

A series of experiments with chrysanthemums and other flowers showed that grafting caused flowers in many instances to yield a more pungent perfume, a fact of great importance to the perfume manufacturers of South France. Numerous trials with other plants are now being made of which the results have not yet been announced.

READING REFERENCE - Ganong, W. F. The Living Plant. New York, Henry Holt & Company, 1913.

SCIENTISTS OBSERVE ARMY OF CENTIPEDES ON THE MARCH

The migration of a vast army of "thousand-leggers", marching through the desert, is the unique sight reported in "Science" by Professors J. M. Thuringer and O. B. Jacobson of the University of Oklahoma.

They were driving through a desert stretch in New Mexico, devoid of vegetation or even of large rocks, when they observed small black objects along their path. At first they paid no attention to them, but when they became so numerous that the wheels of their Ford ran over one every yard they stopped long enough to examine them. They found that they were large centipedes, all apparently moving in the same direction. What these crawling beasts were doing in this desert place, where they came from, why they left their old home, and what they expected to find in a new one were questions the two scientists did not stop to ask.

"We thought of possible mishaps to our 'Lizzy'", they report, "the thirsty radiator and perhaps a forced stay in this most uninviting, inhospitable environment, and drove on. Fully ten more minutes were consumed in driving through this sea of centipedes, and countless victims remained behind in our tracks. We breathed a sigh of relief when the scattered outposts were reached and the burning sands alone reflected the heat of the brilliant desert sun."

Migrations of butterflies and other insects have been observed many times, but little or nothing is known about mass travel on the part of lower forms of life like centipedes.

WAVES IN STEEL CAUSE TURBINE WRECKS

Why steam turbines commit suicide has been discovered by General Electric Company engineers at Schnectady, New York. Ever since the war, mysterious failures and breakdowns in new-type turbines of high power and speed have been puzzling steam technicians. Apparently the most expert and careful calculations on the part of the designing engineers, and the most exact inspection of materials, were powerless to prevent pieces from flying out of the rim, and then, like monkey-wrenches in the works, playing hob with the internal machinery in general,

The investigation has shown that this suicidal tendency has been due to excess