



A New Family Tree

► THE CITRUS FAMILY has had its pedigree revised and brought up to date by a veteran Department of Agriculture botanist, Dr. Walter T. Swingle. Results of his studies, which are expected to be of considerable use to breeders developing new hybrids and to orchardists seeking hardier stocks for grafting, will be published soon in monograph form by the University of California Press, as part of a series of major scientific publications in celebration of the seventy-fifth anniversary of the founding of the University of California. Dr. Swingle's monograph constitutes the first complete re-examination of the citrus family tree since 1824.

Under the new arrangement, the family consists of 33 genera, only one of which, the genus *Citrus* itself, is extensively cultivated for its wide variety of edible fruits. However, any one of the 32 other Cinderella sisters in the group might, if managed correctly, assist in producing valuable new hybrids, or

offer hardy roots on which present varieties of citrus fruits may be grafted. Furthermore, though these others do not at present produce edible fruits, some of them have good possibilities as ornamentals.

The citrus family has a curious geographic distribution. Its principal area stretches from Indomalaysia southeastward as far as Fiji. There are also a number of genera in Africa; none elsewhere in the Old World, and none at all native to the Western Hemisphere.

In working out the relationships of the many species in the family, Dr. Swingle made use of a radical new method of study. Ordinarily, a botanist studying pressed herbarium specimens examines the dried flowers whole, usually after picking one off and soaking it in water. This inevitably destroys a piece of the specimen; and often when there is only one specimen to be had, the herbarium curators are reluctant to let it go for this purpose.

Dr. Swingle, using a procedure pioneered in World War I days by a noted Swedish botanist at Uppsala, embedded single flowers or buds in paraffin and sliced them into transparently thin specimens for examination under the microscope. One specimen was thus multiplied into scores. The method also facilitated far more accurate and critical examination of anatomical details than was possible under the older procedure.

Since 1935, when he began his work on the reclassification of the citrus family, Dr. Swingle has accumulated more than a quarter-million such microscope-slide specimens, each keyed to connect it up with the original pressed plant on a herbarium sheet somewhere in one of the world's great museums or universities. The whole quarter-million can be packed in a box of only three cubic feet capacity—a matter of some importance if bombproof storage becomes necessary.

Science News Letter, February 20, 1943

GENERAL SCIENCE

Award Honorable Mentions In Science Talent Search

► HONORABLE mentions to 187 boys and 73 girls in the Second Annual Science Talent Search have been announced by Science Clubs of America, bringing to 300 the high school seniors cited in this nation-wide selection of youth who have scientific ability.

The 260 awarded honorable mentions are located in 41 states and the

● RADIO

Saturday, February 27, 1:30 p.m., EWT

"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

M. L. Wilson, Assistant Director in charge of Nutrition, Office of Defense Health and Welfare Service, will speak on "Nutrition in Wartime." This will be broadcast from the Science Talent Institute of the second Science Talent Search held in Washington.

District of Columbia. They were chosen from among some 15,000 entrants, 3,481 of whom completed the science aptitude examination, submitted recommendations and scholarship records and wrote essays.

Forty entrants had already been announced as winners of trips to a five-day Science Talent Search in Washington, where they will compete for \$11,000 in Westinghouse science scholarships.

All of those selected for honors will be recommended as students of unusual ability to scholarship-awarding colleges and universities.

As the result of the First Annual Talent Search conducted last year, many of those awarded honorable mention at that time received scholarship offers from colleges and universities.

The Science Talent Search is made possible financially by the Westinghouse Electric & Manufacturing Company and is conducted by Science Clubs of America, one of the activities of Science Service.

Interested persons may obtain the names of those who received honorable mention by writing to *Science Service*.

Science News Letter, February 20, 1943

A few quarts of *fire-retardant* solution applied to household furnishings and clothing will lessen the fire hazard and not injure the textiles.

BOOKS

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