

BIOLOGY—GENERAL SCIENCE

# Geneticist Named President Of American Association

**Dr. A. F. Blakeslee, Carnegie Institution Scientist, Made Possible New Plants Through Use of Colchicine**

LARGER and better fruits and vegetables will soon be on the dinner tables of America as the result of the experimental evolution research that has been done by the new president of the American Association for the Advancement of Science, Dr. A. F. Blakeslee. For years he has studied the chromosomes, the tiny particles within the cells that carry heredity, and as a by-product of this intensive exploration he developed a means of producing new plants that promises large economic results.

Working at the famous Department of Genetics of the Carnegie Institution of Washington located at Cold Spring Harbor, Long Island, New York, a research center that he now directs, Dr. Blakeslee has used within the last two years a chemical called colchicine, obtained from the autumn flowering crocus, to create in the laboratory new species of plants that nature has never known.

His original experiments were done on the jimson weed, but the methods developed are now being used on tobacco, pears, peaches, lettuce, berries, and flowers. Several new kinds of flowers are expected to be available to gardeners and

florists this year as a result of the application by other scientists of methods worked out by Dr. Blakeslee.

The chemical treatment with colchicine causes a doubling of the chromosomes of a plant. This makes it possible for a desirable plant to be crossed with another and produce fertile offspring. The improved plant produced breeds true, that is, perpetuates its own kind faithfully, a trait necessary for commercial growing in garden, field and hot-house. Heretofore when an extraordinary plant was created in nature or experimentally it was only infrequently possible to so capture the desirable qualities in the germ plasm as to perpetuate the desirable novelty.

Dr. Blakeslee has recently found that colchicine, applied to leaves, stems and seeds as a water solution or salve, can also eliminate chromosomes as well as double them. This allows a juggling of the hereditary characteristics of plants in such a way that to a large extent plants can be designed, like a new kind of skyscraper, and then built to order.

*Science News Letter, January 6, 1940*



**GRAFTED**

*The U. S. Department of Agriculture station at Beltsville, Md., is one of many centers where research is being pushed on the effects of colchicine first explored by Dr. Blakeslee. Here a colchicine-altered peach twig has been cut off, grafted onto a peach root, and is being set out to grow eventually into a full-sized peach tree of a new variety.*

MATHEMATICS

## Mathematicians Think of Everything As Rubber

TOPOLOGY, which you won't find defined in the ordinary dictionary, was on the tip of mathematical tongues at the Columbus science meetings. This new geometry is as popular with the mathematicians as exploration of the atom is with physicists.

To those who are used to Euclidean geometry such as taught in school, this relatively new branch of mathematics, bulking large in the science meetings, will seem strange.

As explained on behalf of the American Mathematical Society by Prof. G. Baley Price of the University of Kansas, you must think of all sorts of objects in the Land of Topology as made of rubber. It is not necessary to keep the distance between each two points unchanged when two figures are compared. It is expected that the two figures will be stretched and distorted in any manner so long as they are not torn or glued together in new places. Any two

## • Must Carry On the Torch

*Dr. A. F. Blakeslee, Carnegie Institution geneticist, newly elected president of the American Association for the Advancement of Science, prepared at the request of Science Service this inaugural statement to his fellow scientists and to the public.*

"American science needs no message from one who has been elected president of the American Association for the Advancement of Science. In this country as in other lands, science has developed along with the development of freedom of thought in many lines of human interest.

"Science is advanced by an army of many soldiers, who cannot work entirely alone. Consciously or unconsciously each is influenced by the most recent investigations of his contemporaries, such as are reported at meetings of the American Association for the Advancement of Science, and each, in his incursions into the unknown, is guided by the discoveries of the past.

"The duty of science, now as always, is to blaze trails through the forest of ignorance, to make the unknown known. Society can aid in this campaign against ignorance by seeing to it that freedom of thought and its expression is maintained, since only with such freedom can truth most successfully be sought.

"Science knows no bounds of nationality or creed. In these days, when freedom of thought is threatened in many places, American science has an especial duty to carry on the torch which has been passed down to us from other hands and other ages and to offer what aid we may to our science brothers in other lands where conditions for work are less friendly."