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## THE NATIONAL ACADEMY OF SCIENCES

### ABSTRACTS OF PAPERS PRESENTED AT THE WASHINGTON MEETING

At the annual meeting of the National Academy of Sciences, held in Washington, D. C., on April 23 and 24, the following papers were presented:

*Two large-fruited bud sports of Bartlett pear identified as tetraploids by pollen size:* J. L. CARTLEDGE, A. D. SHAMEL and A. F. BLAKESLEE. The paper presents the results of a joint study of two freak branches which arose as bud sports on otherwise typical trees of the Bartlett pear. The peculiar branches were characterized by broader leaves and by larger flowers and fruits than normally occur on this variety. They were described by the second author in 1931 in one of a series of publications on bud sports of various types which he had found of not uncommon occurrence on different kinds of fruit trees. A chance reading of this article suggested to the other authors that the cause of the increased size of these sports might be due to their being tetraploids (that is, having twice as many chromosomes as are usually present). Such tetraploid sport branches have been found

occasionally on jimson weeds. Since in these cases the doubling of chromosome number brings about similar increase in size of the parts affected, including pollen grains, it is possible to determine a tetraploid by merely looking at the pollen of one of its flowers without the tedious process involved in examining chromosomes. Flowers of the bud sports were sent from California, and both were found to have pollen grains of twice the volume of normals, a fact which indicates that they are tetraploids and have twice the number of chromosomes of normal Bartletts. A confirmation will be made by actual chromosome counts, but the use of pollen sizes to determine tetraploid mutations is a method which is available to any one with even a low power microscope and avoids the special technique necessary to chromosome study.

*A lethal for ascus abortion in Neurospora:* B. O. DODGE. Mutations or saltations observed in cultures of certain species of fungi following treatment with x-rays or ultra-violet light have been reported from time to time, but they have never been adequately tested out by the study of the progeny resulting from sexual reproduc-

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