Extolled by LeConte as the "founder of American geology," and by McGee as the "founder of American stratigraphy," said by Dana to be the man without whom "the geological history of the North American continent could not have been written," Hall's present biographer concludes that he "was in truth the apostle of historical geology." Much praise is due Dr. Clarke for the lively way in which he sets Hall—and many of his contemporaries—before us in these pages. The task was a great one, attended with peculiar difficulties, and its accomplishment reflects high credit upon the author. The paleontologic sun rose in New York in 1836, and its warmth still radiates from the Empire State throughout the North American continent!

CHARLES SCHUCHERT

SPECIAL ARTICLES

THE SYNTHESIS OF FULL COLORATION IN PHLOX

IN the issue of *Genetics* for March, 1920, the writer published facts bearing on the color of the flower blade in *Phlox Drummondii.* Certain F_1 purples that were full-colored and self-colored appeared as the progeny of two plants whose blades were a clear white. These F_1 purples, when self-pollinated, gave rise to an F_2 group comprising several types of corolla. A bluing factor in heterozygous condition in the F_1 individuals doubled the number of F_2 colored sorts. Ignoring the differences caused by this factor there were in the F_2 group the following general types (illustrated in colors in Plate 1 in *Genetics,* Vol. 5):

1. Showy full-colored purple or rose type resembling the F_1. The color is evenly suffused over the blade, *i. e.,* the blade is self-colored.

2. A lighter type whose color is bright pinkish or light purplish. This kind also has its color uniformly suffused over the blade.

3. Dusky type whose dull magenta color is merely stippled on to the blade giving the flower the appearance of a dusty or dirty-looking white.

4. Pure white-bladed type.

Proceeding to the F_3 generation it was found that the lighter uniformly colored Type 2 never gave rise to duskies (Type 3) on inbreeding, nor did the duskies ever contain plants of Type 2 among their offspring. Moreover, neither of these two types, on self-pollination, ever produced Type 1. The deep-colored F_2 plants of Type 1 were capable of throwing out Types 2 and 3 besides repeating themselves. Such analysis led to the hypothesis that full or deep coloration in *Phlox* must be due to the presence together of the second and third types, or rather to the genes for these two types, which are not allemorphic.

During the past year this hypothesis was tested out by the actual putting together, through hybridization, of Types 2 and 3. In all, seven matings of Types 2 and 3 were made yielding 59 offspring and from every crossing the progeny were both full-colored and self-colored.

Type 2 + Type 3 = Type 1.

This synthesis supplements and confirms the author's earlier work on the genetic relationship of color types in *Phlox Drummondii.*

J. P. KELLY

PENNSYLVANIA STATE COLLEGE

THE PROPOSED FEDERATION OF BIOLOGICAL SOCIETIES

A CONFERENCE of officers of a number of biological societies was held in Toronto on December 27, 1921, to discuss the feasibility of closer cooperation among these societies. This conference was the outgrowth of two somewhat informal meetings in Chicago, the first in December, 1920, upon the initiative of the secretary of the American Society of Naturalists, the second in April, 1921, at the instance of the officers of the American Society of Zoologists and of the Botanical Society of America. At the request of those in attendance at the second conference the call for the Toronto meeting was issued by the Division of Biology and Agriculture of the National Research Council. The discussion of the Toronto conference was in a measure directed in accordance with a program arranged by the chairman of the Division