of the adult females was found to be in the vicinity of 100 per cent. under certain conditions. Immersion and dusting with the bacterial spores fruits previously sprayed with water appeared to offer more promise than spraying alone.

Within a few days after the infection the pygidia of the scale often become distorted. Evolution of gas and a more or less general browning of the insect often occur simultaneously. Vegetative cells of the bacterium, as well as its spores, can be observed in the contents of the general cavity. Saprophytic fungi frequently invade the diseased or dead insect.

A detailed article containing experimental data has been submitted to *Phytopathology*.

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PRO AND CON EVOLUTION IN CONTEMPORARY GERMANY

THE attacks on evolution, discussed under the above heading in SCIENCE, 93: 40, 41, have been also contradicted in two articles of the German monthly *Der Biologe* (year 9, fasc. 12, December, 1940, which was received here in May, 1941).

The first of those articles, by the geneticist, F. Schwanitz (*l.c.*, pp. 407–413), bearing the title "Ein Kreuzzug gegen die Abstammungslehre" ("A Crusade against Evolution"), deals with the "Sonderheft" (4/5, vol. 37, April/May 1940) of "Natur und Kultur," particularly with Otto Muck's essays, which are harshly refuted and stripped of any scientific significance.

The second article, entitled "Immer wieder: Abstammung oder Schöpfung?" ("Again and again: Evolution or Creation?"), by Chr. von Krogh (*l.c.*, pp. 414–417), who recently[1] participated in the German scientific discussion on "Menschwerdung" (origin of man), deals chiefly with an anti-evolutionary pamphlet of H. Frieling,[2] one of the contributors to the aforementioned special publication. Von Krogh rejects it for both scientific and philosophical reasons, claiming that Nordic man always believed in unity of body and soul, whereas dualism is assigned to Eastern conception of life.

OTTO HAAS

THE AMERICAN MUSEUM
OF NATURAL HISTORY

CARL FRIEDRICH GAUSS'S DESCENDANTS IN AMERICA

GAUSS, who is probably one of the four greatest mathematicians who ever lived, was twice married. By his first wife he had two sons (Joseph, 1806–73, and Louis), and by his second also two sons (Eugene, 1811–96, and Wilhelm, 1813–79). Louis died in childhood. Joseph was an engineer, and in 1836 and 1837 he was sent by his government to the United States to study railway construction in the New World. Eugene came to the United States in 1831 and enlisted as a private in the U. S. Army for five years. In 1840 he settled in St. Charles, Mo., married, and had a family of seven children. His younger brother Wilhelm came to this country in 1837, immediately after his marriage to a niece on his mother's side of the astronomer Bessel. For about a score of years he was engaged in farming in Missouri. Thereafter he entered the wholesale shoe business in St. Louis, in which he continued until his death. Of his eight children six were living in 1899. In January, 1935, one of these children, Joseph H. Gauss, was still living, and dean of the Brookes Bible Institute of St. Louis. Other descendants are in Colorado and California. Most of the information given above, and much more, may be found in *C. F. Gauss und die Seinen. Festschrift zu seinem 150. Geburtstage,* herausgegeben von H. Mack, Braunschweig, 1927, and in two articles by Professor Cajori: (a) "Carl Friedrich Gauss and His Children," SCIENCE, n.s., v. 9, 1899, pp. 697–704; and (b) "Gauss and His American Descendants," *Popular Science Monthly,* v. 81, 1912, pp. 105–114.

This supplies information requested by a correspondent, Sir Joseph Larmor, in your issue for May 30, page 523.

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SCIENTIFIC BOOKS

MATHEMATICS

Gap and Density Theorems. By NORMAN LEVINSON. American Mathematical Society Colloquium Publications. Vol. 26. New York, 1940. viii + 244 pages. $4.00.

ONE of the fundamental properties of the system of trigonometric functions (cos nx, sin nx), or of the equivalent system of exponential functions (e^{inx}), is the property of closure. It is precisely this property that makes them so important in problems of expansions of arbitrary functions in Fourier series. The natural question under what conditions this property is enjoyed by a more general system of functions ($e^{i\lambda_n x}$), has interested several earlier writers, among whom the name of G. D. Birkhoff should be mentioned. Several important problems in this direction were

[1] *Zeitschr. ges. Naturw.*, pp. 105–112, 1940.
[2] "Herkunft und Weg des Menschen. Abstammung oder Schöpfung?" Klett, Stuttgart, 1940 (113 pp.).