

ruary. The trucks will be equipped with cameras and blinds and modern sound-recording equipment so that the voices as well as the actions and appearance of the bird can be recorded on films and preserved for posterity.

Birds that will be studied on this expedition include the ivory-billed woodpecker, the sandhill crane, the limpkin or crying bird, the trumpeter swan, the lesser prairie chicken, the golden eagle and perhaps the whooping crane, rarest of all North American birds and also the largest.

No attempt will be made to collect or disturb in any way these rare species, while every effort and all modern equipment will be utilized in order to bring back permanent records on films of their environment, their habits, their songs, their calls and their companions, so that a habitat group can be set up in the Cornell Museum.

A. R. Brand and P. P. Kellogg are experts in sound recording, and Mr. Brand has recently published a book of bird songs illustrated with phonograph records taken from his films of birds singing in their natural habitats. Professor Allen is known not only for his research studies of birds and game and his popular bird books, but as a camera expert. George Sutton, author and explorer, and one of the leading bird artists of the country, on this expedition will make color sketches of birds from life, so that such evanescent characteristics as color of eyes and bills, which fades soon after death, will be more accurately preserved than has been hitherto possible.

The exact route of the expedition has not yet been worked out in detail, but it is expected that the start will be made in Florida and Louisiana, from which the most recent reports of ivory-billed woodpeckers have come—thence to Texas, Oklahoma, Colorado and Wyoming.

Efforts will be made to record not only the voices of the rarest birds, but also those of the commonest songsters. This has never been done, and Mr. Brand is anxious to get them all transferred to phonograph records, where they will be available to any one interested, and will be valuable adjuncts to all natural history teaching.

EXHIBITION AND PUBLICATIONS AT THE CARNEGIE INSTITUTION OF WASHINGTON

An exhibition representing results of the research activities of the Carnegie Institution of Washington was held on December 14, 15, 16 and 17. A list of these exhibits is given below.

The Physical Basis of Heredity:

- a. The relation between characters, genes and chromosomes: Dr. T. H. Morgan, research associate, and Dr. C. B. Bridges.

- b. The nature of the gene: Department of Genetics.
- c. Chromosome structure and chromosome behavior during the development of the embryo: Department of Embryology.

Developmental Changes within a Single Hereditary Pattern: Dr. Hugh H. Darby.

Improved Embryological Methods:
Department of Embryology.

The Significance of Leaf Pigments:
Division of Plant Biology.

A Simplified Respiration Apparatus for the Rapid Determination of Human Basal Metabolism:
Nutrition Laboratory.

Explorations in Middle America:

- a. Pottery from Guatemala.
- b. The Maya altar from Quirigua.
- c. Newly discovered cities in Campeche.
Division of Historical Research.

Daily Changes in the Compass Direction:
Department of Terrestrial Magnetism.

The Distances of the Stars:

- a. Direct measurement of distance.
- b. Spectroscopic method.
- c. Stellar systems and receding nebulae.
Mount Wilson Observatory.

The Silicates of Ferrous Iron:
Geophysical Laboratory.

Publications

In addition to the exhibits a program of public lectures was given by members of the institute. These were:

December 15: "The Pigments of Leaves," H. A. Spoehr.

"The Silicates of Ferrous Iron," J. F. Schairer.

December 16: "The Physical Basis of Heredity," C. B. Bridges.

"A Simplified Respiration Apparatus for the Rapid Determination of Human Basal Metabolism," F. G. Benedict.

"Uaxactun, the Oldest Maya City," A. V. Kidder.

December 17: "The Distances of the Stars," R. F. Sanford.

"The Daily Changes in Compass Direction," A. G. McNish.

THE ANNUAL MEETING OF THE AMERICAN PHYSICAL SOCIETY AND THE SECTION OF PHYSICS

THE thirty-sixth annual meeting (the 196th regular meeting) of the American Physical Society will be held at Pittsburgh on December 27, 28 and 29, in affiliation with Section B—Physics—of the American Association for the Advancement of Science. The general business session will be at 2 o'clock on Thursday afternoon, December 27, at the Carnegie Institute of Technology, after which Professor R. W. Wood, vice-president of the society, will deliver an address on "Some Unusual Optical Problems."