

be interpreted to mean an increase in permeability. Finally, the treatment of the egg of *purpuratus* with a hypertonic solution may precede the artificial membrane formation by one or two days. According to Lillie's hypothesis, NaCN should diminish the permeability of the egg. Direct observations by Wasteneys and myself have shown that NaCN does not influence its permeability.

The reversion of the induction of development is clearly the outcome of the suppression of the developmental changes in the egg by NaCN or by chloralhydrate. During this period of rest the cortical layer may return permanently to a condition resembling that of the normal resting egg. Since fertilization by sperm, artificial membrane formation, and destruction of the egg by cytolysis, all raise the rate of the oxidations in the egg of *purpuratus* by the same amount, the clue to the explanation of the phenomena of reversibility may possibly be found in those conditions of the cortical layer which have to do with the increase in the rate of oxidations after membrane formation.

JACQUES LOEB

THE ROCKEFELLER INSTITUTE
FOR MEDICAL RESEARCH,
NEW YORK

SOCIETIES AND ACADEMIES

BIOLOGICAL SOCIETY OF WASHINGTON

THE 414th regular meeting was held in the assembly hall of the Cosmos Club, October 18, 1913, with former President L. O. Howard in the chair and 61 persons present.

The program consisted of three communications:

I. *The Federal Migratory Bird Regulations and their Assistance in the Conservation of Bird Life in America*: T. S. PALMER.

The speaker outlined briefly the history of the Weeks-McLean bill, approved March 4, 1913, and of the adoption of regulations for its enforcement which have been promulgated by the Department of Agriculture under proclamation of the President dated October 1, 1913. Maps of the winter and breeding ranges of some of the species of birds affected were shown, together with another showing the division of the country into two zones. Reasons were given for the exceptions in certain states to the general closed season. In general the

beneficial effects upon the bird life of the country expected as a result of the enforcement of the federal law were pointed out.

Hugh Smith and Col. Joseph H. Acklen took part in the discussion which followed.

II. *The Breeding of the Loggerhead Turtle*: W. P. HAY.

The communication was accompanied by lantern slides. It was an account of observations of the habits and reproduction of the diamond-backed terrapin and the loggerhead turtle made at Beaufort, North Carolina. This place is near the northern limit of the distribution of the loggerhead turtle and the speaker was of the opinion that normally in this latitude few of the eggs of the species are left to hatch and that the young from those that may hatch all perish with the first cold weather.

III. *The First Year's Results in Breeding Some Bahama Shells (Cerion) on the Florida Keys*: PAUL BARTSCH.

A former communication by the speaker gave an account of the transfer of two races of *Cerion* from the Bahamas to various Florida Keys. The present paper was an account of observations of the condition of the new colonies at the end of the first year. In general they have prospered and in several localities have reproduced young.

The 515th meeting was held in the hall of the Cosmos Club, November 1, 1913, with President E. W. Nelson in the chair and about 50 members present.

Under the heading "Brief Notes and Exhibition of Specimens," C. Dwight Marsh related an observation in Montana of a noise made by a bull snake (*Pituophis sayi*) which was in close imitation of that made by a rattlesnake. The sounds were made by the respiratory organs and were observed by a number of persons.

The regular program follows.

A. D. Hopkins spoke of Depredations by Forest Insects and their Control. He gave a brief historical sketch of early insect invasions of forests and of the means adopted to combat the pests. The greater part of the paper was devoted to depredations of which the author had personal knowledge. The efficacy of modern methods was pointed out, especially the control work undertaken by the Bureau of Entomology in collaboration with the United States Forest Service. These have been generally adopted by large private holders of timber lands and much saving of valuable timber has resulted.

Paul Bartsch gave an account of the results of dredging for mollusks at Chincoteague, Virginia. In two days collecting eleven new species were found. The speaker gave an account of some personal experiences and observations on the island. He was followed by W. P. Hay, who also spoke of his experiences during a visit to Chincoteague and gave some interesting historical notes of the place.

D. E. LANTZ,

Recording Secretary

ANTHROPOLOGICAL SOCIETY OF WASHINGTON

A SPECIAL meeting of the society was held, October 28, in the National Museum building at 4:30 o'clock.

Dr. Aleš Hrdlička addressed the Society, his subject being "The Results of the Speaker's Recent Trip to Peru; with Remarks on the Anthropological Problems of Peru"; illustrated with lantern slides. In 1910 Dr. Hrdlička made a brief exploratory trip in Peru, which resulted in the acquisition of some valuable data and of important skeletal collections. The opportunity to extend the investigations came during the early part of the current year, in connection with the preparation of the anthropological exhibits for the Panama-California Exposition at San Diego; and as a consequence three busy months were spent on the Peruvian coast and in certain parts of the mountain region of Peru, in exploration of the ruined cities and ancient cemeteries. The principal objects of the trip were, first, the mapping out as far as possible of the anthropological distribution of the prehistoric Peruvian, more particularly the coast people; second, the determination of the physical type of the important Nasca group of people, which represent one of the highest American cultures; third, further inquiry as to man's antiquity on the west coast of South America, and fourth, the extension of the speaker's researches on pre-Columbian pathology. The conclusions to which the speaker was formerly led were in the main corroborated. In regard to the mountain regions much remains to be determined in the future. As to the pathology of the native Peruvian before contact with whites, the main work can perhaps be now regarded as done, or nearly so, although individual variation in different morbid processes seems inexhaustible, and much in this line remains to be secured by future exploration. The ground covered was extensive and the skeletal material examined was enormous, the selections alone filling over thirty boxes. No excavation was practised, attention being restricted, on the coast, to

the bones covering the surface of ancient cemeteries, exploited by the peons, and to burial caves and houses in the mountains.

Since the speaker's trip to Peru three years ago, a change for the worse was observed in the state of preservation of the ancient remains. Also, where formerly there were seemingly inexhaustible quantities of skeletal material there is now a dearth of it. No such collection as that made in 1910, when the speaker gathered 3,400 important crania, will ever again be possible from these regions. The major part of the old population of the coast region belongs to the brachycephalic type intimately related to the Maya-Zapotec type in the north. Wherever they lived, these people of the Peruvian coast were wont to practise, more or less, the antero-posterior head deformation. Everywhere along the coast there are evidences of more or less admixture with a more oblong-headed element closely related to the Aztec and Algonquin types of North America. As among the North American Pueblos, nowhere was the aboriginal Peruvian population at any time as great as the relatively numerous cemeteries or ruins might lead one at first to suppose, for these burial grounds and ruins date from different, although not far distant, periods.

The work now done, while to some extent establishing a foundation, is merely a fair beginning. Similar investigations and collections by the anthropologist are urgently needed in the important districts of Piura, Eten and Moquegua, on the coast; in the western sierras from the neighborhood and latitude of Quito to those of Arequipa; and in the eastern highlands from Tiahuanaco to Moyobamba. The most important problems that await solution are (1) the derivation of the Peruvians; (2) the time of their advent into the country; (3) the extension and exact physical characteristics of the Aymara and Quechua, and (4) the genetic relations of the Peruvian to the Argentinian and Chilean aborigines. Besides this there remains to be established in many places the correlation of culture with the physical type of the people. The speaker repeats what he said in a former report, that, due to the lack of scientific supervision of a great majority of the excavations practised in Peru to the present time, the archeological collections from that country are made up of little more than curiosities which it is in most instances impossible to refer either to any definite tribe or period.

DANIEL FOLKMAR,
Secretary