their host. With these facts in mind M. Roubaud experimented upon *Cordylobia*. He found that eggs placed directly upon the skin do not result in the infection of the animals. In the same way his experiments indicated that where eggs were swallowed by animals no infection followed. His experiments with a third method proved successful. Fifteen small larvæ were taken immediately upon the hatching of the eggs and were placed upon a light layer of sand in a large vessel. A guinea pig was shut up in the vessel for twenty hours and then taken out and placed in a wire cage. The result was that three days afterwards six tumors were found on the under side of the body, upon the muzzle and near the anus, each one containing a rapidly developing larva. His experiments indicate, therefore, that infestation is accomplished exclusively by the direct and active penetration of young larvæ hatched elsewhere. He followed day by day the evolution of the larva and describes the successive stages, which occupy only a week. He believes that Europeans are only accidental hosts of this parasite, but that with the natives who sleep on the ground the infection is naturally much more easy. The investigations were made in the laboratory at Bamako.

Of equal interest are the observations of Herbert von Pelser-Berensberg ("Societas entomologica," Vol. 26, p. 34, July 29, 1911) on *Cordylobia rodhaini* Gedoelst. It had been supposed that uncleanly habits led to infection, but it was found that those persons who bathed most frequently were most subject to infection and the inference was that the eggs were laid upon the exposed body. Keeping eggs under a watch-glass bound to his arm, von Pelser-Berensberg found that the newly hatched larvæ, while they gnawed the skin, did not succeed in penetrating. Later he solved the problem by direct observation. While bathing he noticed that certain flies were attracted to the clothing which he had spread out on bushes, in the sun, to dry off the perspiration. He found that these flies were *Cordylobia* and that they had glued about twenty eggs to his underclothing. As an experiment he continued to wear the clothing. Examination at the end of the first day showed that the eggs were intact, but on the second day they had hatched. Search with a lens upon the skin revealed some minute red spots and beneath these were the young larvæ, about .5 mm. long.

FREDERICK KNAB

THE NATIONAL ACADEMY OF SCIENCES

THE scientific program of the National Academy of Sciences, which met at Washington on April 16, 17 and 18, was as follows:

George E. Hale: "The New Tower Telescope of the Mount Wilson Solar Observatory."

W. W. Campbell: "Radial Velocities of 213 Brighter Class A Stars." "Radial Velocities of 190 Brighter Class F Stars." "Some Characteristics of Stellar Motions."

W. J. Humphreys (introduced by Cleveland Abbe): "Holes in the Air."

R. A. Harper: "The Organization of the Cell Colony in *Pediastrum*." (By title.)

D. H. Campbell: "On the Morphology and Systematic Position of *Calycularia radiculosa* (Sande Lac) Stephens." (By title.)

William Trelease: "A Revision of *Phoradendron*."

H. F. Osborn: "Biological Foundation of Bergson's 'Creative Evolution.'" (By title.)

E. S. Morse: "Biographical Memoir of C. O. Whitman." (By title.)

G. L. Goodale: "Biographical Memoir of Alexander Agassiz." (By title.)

By invitation of the Council—

Harvey Cushing: "Some Observations on the Functions of the Pituitary Body."

Jacques Loeb: "The Activation of the Animal Egg from the Physico-chemical Standpoint." (By title.)

J. A. Holmes: "The National Phases of the Mining Industry."

C. G. Abbot: "The Solar Radiation."

ANNUAL MEETING OF THE AMERICAN FEDERATION OF TEACHERS OF THE MATHEMATICAL AND THE NATURAL SCIENCES

THE American Federation of Teachers of the Mathematical and the Natural Sciences held its annual meeting at the New Willard Hotel in Washington on December 27.