

3. "General Requirement of the Graduate School," Dr. C. M. Jackson.

4. "The Thesis Requirement," Dr. J. B. Johnston; Dr. A. H. Logan.

5. "Methods of Graduate Instruction," Dr. E. P. Lyon.

#### *Evening Session*

6. Symposium on special requirements for the degree of doctor of science in various medical specialties (including desirable pre-requisites).

(a) "Medicine," Dr. L. G. Rowntree; Dr. H. S. Plummer.

(b) "Pediatrics," Dr. J. P. Sedgwick.

(c) "Surgery," Dr. J. E. Moore; Dr. E. M. Beckman.

(d) "Obstetrics," Dr. J. C. Litzenberg.

(e) "Eye, Ear, Nose and Throat," Dr. F. C. Todd; Dr. Carl Fisher.

(f) "Nervous and Mental Diseases," Dr. A. S. Hamilton.

(g) "Pathology and Bacteriology," Dr. L. B. Wilson; Dr. H. E. Robertson.

A stenographic record of the proceedings was kept and will perhaps be printed. If not, several copies will be available for the perusal of those interested in the development of graduate clinical instruction.

THE Forestry Club at the New York State College of Forestry at Syracuse University is giving for the season of 1915-16 the following lectures:

December 16—"The Story of the Forest," by Frederick E. Clements, chief, department of botany, University of Minnesota, and state botanist of Minnesota.

January 13—"The Development of a Forest Service for Minnesota," by William T. Cox, state forester of Minnesota.

January 18—"Close Utilization of the Products of the Forest," by W. R. Brown, of the Berlin Mills Co., Berlin, N. H.

January 27—"The Birth of a Forest Policy," by B. E. Fernow, dean, faculty of forest, University of Toronto, Toronto, Canada.

February 3—"Forestry and the Business Development of the Country," by Elmer E. Hole, editor, *American Lumberman*, Chicago, Ill.

February 17—"A Better Place to Live," by Frank A. Waugh, chief, department of horticulture, Massachusetts Agricultural College, Amherst, Mass.

February 24—"Forestry in New York," by James S. Whipple, former forest, fish and game commissioner of the state of New York, Salamanca, N. Y.

March 2—"The Vegetation of the United States as Influenced by Glacial Action," by Henry C. Cowles, of the University of Chicago.

March 9—"Modern Forest Utilization," by R. S. Kellogg, secretary, National Lumber Manufacturers Association, Chicago, Ill.

March 23—"State-wide Fire Protection for the Woodlots and Forests of New Hampshire," by E. C. Hirst, state forester of New Hampshire.

March 30—"Combating Insects of the Orchard and Forest in New York State," by George G. Atwood, chief, bureau of horticulture, New York State Department of Agriculture, Albany, N. Y.

April 6—"Shade-tree Work in Buffalo," by Harry B. Filer, city forester of Buffalo, N. Y.

THE following lectures are scheduled to be given before the Franklin Institute in Philadelphia:

March 23—"Recent Developments in Electrical Apparatus," by Harold Pender.

March 30—"Some Problems in Physical Metallurgy at the Bureau of Standards," by George K. Burgess.

April 6—"Use of Powdered Coal in Metallurgical Processes," by C. J. Gadd.

April 13—"Heat Measurements as Related to the Industries," by Charles W. Waidner.

April 19—"Scientific Research in Relation to the Industries," by Charles P. Steinmetz.

A BEQUEST of \$25,000 has been made to the Cleveland Medical Library by the will of Dr. Benjamin L. Millikin, former dean and senior professor of ophthalmology of the Western Reserve Medical School.

#### UNIVERSITY AND EDUCATIONAL NEWS

THE wills of the late Edith and Walter Scull, niece and nephew of David Scull, for many years a manager of Haverford College, give \$100,000 to the college.

THE trustees of Columbia University, at their last meeting, decided to admit women to the medical school as soon as the equipment made the step practicable.

AT Harvard University assistant professors have been appointed as follows: Grinnell

Jones, S.B. (Vanderbilt), chemistry; Elliott G. Brackett, M.D. (Harvard), orthopedic surgery, and Frederick H. Verhoeff, Ph.B. (Yale), ophthalmological research.

DR. OTTO DIELS, of Berlin, has been called to the chair of chemistry at Kiel. Dr. R. Pohl, docent in Berlin, has been called to an associate professorship of physics at Göttingen.

## DISCUSSION AND CORRESPONDENCE

### DID SPENCER ANTICIPATE DARWIN?

IN his book, entitled "The First Principles of Evolution," Mr. S. Herbert in speaking of Herbert Spencer says:

Not only was he the first independently to adopt the evolutionary principle as a means of the solution of various problems of matter and mind, actually anticipating Darwin's discovery by a few years—a fact very little known by the general public—but he gradually elaborated a complete theory of evolution, comprising in one great formula the law of all existence.<sup>1</sup>

This statement, except the latter part of it, may hardly be said to be in conformity with the facts. When we remember the eminent services of Lamarck in the application of the evolutionary principle in his "Philosophie Zoologique" published in 1809, and subsequently (1815) in his "Histoire Naturelle des Animaux sans Vertèbres," it seems hardly fair to ascribe priority to Spencer in the adoption of the evolutionary principle, or even in adopting it "as a means for the solution of various problems of matter and mind"; and so far as Spencer anticipating Darwin is concerned, it is certainly incorrect, if by Darwin's discovery we understand, as most people do, the principle of natural selection.

It is true, of course, that as early as 1852, seven years prior to the publication of the "Origin of Species," Spencer presented with a clearness not since surpassed, the evolutionary hypothesis; and that in 1855 he published his "Psychology," which assumed the correct-

ness of the broad evolutionary doctrine. But evolution and Darwin's discovery, as of course Mr. Herbert well knows, are quite different things.

In his autobiography, Vol. II., p. 56, Mr. Spencer says:

Up to that time (1859) or rather up to the time in which the Linnean Society had become known to me, I held that the sole cause of organic evolution is the inheritance of functionally produced modification. "The Origin of Species" made it clear to me that I was wrong; and that the larger part of the facts can not be due to any such cause.

In an essay on "Transcendental Physiology," first published in 1857, Spencer used the following language:

Various facts show that acquired peculiarities resulting from the adaptation of constitution to conditions, are transmissible to offspring. Such acquired peculiarities consist of differences of structure of composition in one or more of the tissues. This is to say, of the aggregate of similar organic units composing a germ, the group going to the formation of a particular tissue will take on the special character which the adaptation of that tissue to new circumstances had produced in the parents. We know this to be a general law of organic modifications. Further, it is the *only* law of organic modifications of which we have any evidence.<sup>2</sup>

Spencer himself instances this passage as showing the stage of his thought at that time concerning the factors of evolution. It will be observed that there is not the slightest hint of natural selection.

Again in his "Principles of Biology," Vol. I., p. 530, Mr. Spencer uses for the first time the phrase "survival of the fittest," as a substitute for "natural selection." In a footnote he explains why he sometimes uses the phrase "natural selection" after he had suggested the expression "survival of the fittest," and this expression had been approved by Wallace as a substitute for the other. He says:

The disuse of Dr. Darwin's phrase would have seemed like an endeavor to keep out of sight my own indebtedness to him and the indebtedness of

<sup>1</sup> Herbert, S., "The First Principles of Evolution," p. 4, London, 1913.

<sup>2</sup> Spencer, H., "Essays," Vol. I., p. 91.