the same value will be offered, open only to the alumni. These prizes are biennial and alternate annually. They are supported by funds in the hands of the Association of the Alumni and are to be given in perpetuity.

THE next meeting of the Association of American Universities will be held at the University of Chicago in November, 1911.

THE officers of Section D of the American Association have sent a notice to the members and others interested stating that the rapid advance in the navigation of the air during the past year has attracted serious attention to scientific aeronautics. The construction of dirigible balloons and flying machines is essentially a mechanical problem and as such merits consideration by Section D, especially since no engineering society has yet taken this action. Accordingly at the Minneapolis meeting, December 27–31, 1910, papers are invited relating to aerodynamics and other branches of aeronautics, and also discussing possible course of instruction in colleges and technical schools. Attention is also directed to the fact that some papers on the science of road building and related topics have been promised, and that others are desired to complete the program for a session of the section devoted to this subject.

THE third annual meeting of the Association of Official Seed Analysts was held at the Shoreham, Washington, D. C., on November 14 and 15. The following papers were presented:

Some Germination Studies of Seeds of Forage Plants—Dr. L. H. Pammel, Miss Charlotte M. King and Mr. H. S. Coe.

Germination Studies of the Seeds of the Umbelliferæ—Mr. Geo. T. Harrington.

Agricultural Value of Hard Seeds in Alfalfa and Clover—Professor H. L. Bolley.

Notes on the Morphology of Hard Seeds—Mr. Geo. T. Harrington.

The Essentials of Agricultural Seed Analysis—Mr. F. H. Hillman.

Seed Conditions in Indiana—Professor G. I. Christie.

At the business session a constitution was adopted and the following officers were elected:

President—Dr. E. H. Jenkins, of Connecticut.

Vice-president—Dr. L. H. Pammel, of Iowa.

Secretary—Mr. E. Brown, of Washington, D. C.

Additional members of the Executive Committee—Professor H. L. Bolley, of North Dakota, and Professor W. H. Barre, of South Carolina.

The president appointed the following committee and referees:

Committee on Seed Legislation—Dr. C. D. Woods, of Maine, chairman, and Dr. L. H. Pammel, of Iowa.

Referees: Sampling—Dr. C. D. Woods, of Maine. Purity—Professor H. Garman, of Kentucky. Germination—Mr. E. Brown, of Washington, D. C.

UNIVERSITY AND EDUCATIONAL NEWS

TRINITY COLLEGE, in Durham, N. C., will receive from Mr. Benjamin N. Duke, four new buildings which are designed to form a quadrangle on the campus. The Duke family has now given the institution almost a million and a half dollars.

CONCRETE foundations for the new horticultural building at the University of Wisconsin, which is to cost $60,000, are completed, and the work on the structure will be pushed as rapidly as weather conditions will permit. The new building will comprise a basement, two floors and an attic, and will furnish offices, class rooms and laboratories for the horticultural and plant pathology departments. It is to be a fire-proof structure of brick, trimmed in stone, with a tile roof.

THE collections of the chemical department of the University of Wisconsin, which have been recently brought together to form a museum in the corridors of the chemistry building, now include thirteen different departments of chemistry and its related branches.

THE officers of the department of physics of the University of Illinois gave a reception on Saturday evening, November 19, to the faculty of the university and their friends in the physics building. The building was in normal working condition and the instructors and students in the department were on hand to show visitors through the building and to explain apparatus and methods. The guest of honor was Professor Albert A. Michelson, of

the University of Chicago, president of the American Association for the Advancement of Science.

DISCUSSION AND CORRESPONDENCE

THE EFFECTS OF PARASITIC CASTRATION IN INSECTS

In his very interesting paper on the above subject published in the *Journal of Experimental Zoology*, for July, 1910, Professor W. M. Wheeler says (p. 419) that "Giard has given good reasons for supposing" that the dimorphism exhibited by the forcipes of male earwigs from the Farne Islands, Northumberland,[1] is due to "differences in the number of gregarines they harbor in their alimentary tract." The reference to Giard is *Comptes Rendus Acad. Sci.*, 1894, Vol. 118, p. 872.

> J'ai tout lieu de croire qu'une interprétation du même genre (referring to the changes brought about in *Carcinus* by the action of parasites) peut s'appliquer pour la distribution des longueurs des pinces des Forficules mâles. Il est possible, en effet, d'après la longueur de la pince, de prévoir qu'une Forficule mâle possède des Grégarines et qu'elle en possède une plus ou moins grande quantité.

We do not, however, feel justified in regarding this passage alone (and there is no further account by the French observer) as direct evidence that Giard had examined the intestine of *Forficula* for gregarines and found a correspondence between their presence and the differing states of the male secondary sexual characters. In this connection we may record our own observations made to resolve this debatable point. In 1907 we visited the Farne Islands and collected several thousand earwigs. Over fifty dimorphic males were carefully dissected and a large gregarine (presumably *Gregarina ovata*) was found to occur commonly in the alimentary canal. Examples were, however, contained indifferently in low males as well as high; in both they were sometimes absent and no correlation could be observed between the number of parasites in an individual and the length of its forceps. It may at the same time be mentioned that no difference in the development of the testes or other internal sexual organs could be detected in high and low males respectively.

[1] Bateson and Brindley, *Proc. Zool. Soc. London*, 1892, p. 585.

H. H. Brindley
F. A. Potts

Zoological Laboratory,
University of Cambridge,
October 20, 1910

MONO- AND DI-BASIC PHOSPHATES

Recently my attention has been directed to the confusion in the use of the terms "mono-" and "dibasic" as applied to the alkali salts of orthophosphoric acid. As certain authors make use of these terms without further qualification, it seems desirable to call attention to the conflicting use of these terms and to urge instead the use of more precise designations.

Orthophosphoric acid, H_3PO_4, is generally considered to be a tribasic acid. As salts of this acid, it seems only logical to call KH_2PO_4 dibasic, and K_2HPO_4 monobasic. In Merck's and some other catalogues, KH_2PO_4 is called monobasic, and K_2HPO_4 dibasic. These firms commonly send out their preparations labeled as follows: "Potassium phosphate—Dibasic," and "Potassium phosphate—Monobasic."

No further explanation appears on the label, and unless one happens to consult the catalogue (and this does not always explain) one is apt to get curious results in the use of these salts. The more serious difficulty appears, however, in the use—without other qualification—of the terms "mono-" and "di-basic phosphate" in literature. This is frequently the case in physiological and bacteriological papers. In discussion of the matter with a number of technical chemists it was evident that the conflicting use of these terms was not confined to biologists.

In view of the confusion resulting from the uncertain use of the terms "mono-" and "di-basic" as applied to the alkali phosphates, I would urge all workers—and chemical supply houses—to discontinue the use of these terms and to substitute more exact terms, such as primary, secondary and tertiary, respectively, for the salts KH_2PO_4, K_2HPO_4, K_3PO_4. It