

Dr. Curtis drew attention to the irritation of the mucous membrane of the bladder and urethra caused by drinking too freely of cocoanut milk. Dr. Gies, in answer to a question, stated that the food content of the cocoanut is small.

'The significance of Carbohydrates in Muscle,' by Frederic S. Lee and C. C. Harrold.

This work is a continuation of the senior author's study of the nature and causes of muscle fatigue. Of the two supposed causes of fatigue, loss of substance necessary to contraction and poisoning by so-called fatigue products, the present work deals with the former. It is well known that the drug phlorhizin causes the removal of the carbohydrates from an organism to which it is administered. The authors find that it induces decided evidences of fatigue in the muscles of fasting cats. A well phlorhizinized muscle is comparable to a normal muscle in the late stages of fatigue. This effect seems to be due, not to a specific action of the drug on the protoplasm of the muscle cells, but to the loss of carbohydrate from the muscle. This conclusion is rendered probable by the fact that when an animal has been put well under the influence of phlorhizin, the administration of sugar (dextrose) counteracts the effect of the drug, removes the evidences of fatigue and restores the muscle. It seems probable that the loss of carbohydrate is an important factor in the early stages of muscle fatigue.

Incidentally some observations on rigor mortis have been made. A muscle well under the influence of phlorhizin may begin to go into rigor five minutes after death and rigor is complete very early. This confirms the conclusions of others that there is a close connection between rigor and carbohydrate. A muscle irrigated with dextrose is capable of giving fully as many contractions as, or even more than, a normal muscle without dextrose.

The election of sectional officers resulted in the appointment of Professor C. L. Bristol, of the New York University, as Chairman, and Professor F. E. Lloyd, of Teachers College, as Secretary for the ensuing year.

F. E. LLOYD,
Secretary.

TORREY BOTANICAL CLUB.

At the meeting of Wednesday, April 25, 1900, the paper of the evening was by Mr. David Griffiths, 'Some Saprophytic Fungi.' Mr. Griffiths described the mechanical devices employed by the genera of the Pyrenomycetes for the distribution of their spores. The genera described with reference to this point were *Podospora*, *Sordaria*, *Deletschia*, and *Sporomia*.

In *Podospora* the ascus elongates to the apex of the perithecium, where it is ruptured and the spores are scattered.

The genus *Sordaria* distributes its spores in the same manner but with a definite point at which the ascus ruptures.

The methods of ejection in the case of the other two genera, are very similar, except in the details of the rupture of the internal membrane of the ascus; here the membrane elongates instead of the ascus itself.

The meeting of Tuesday, May 5, 1900, was held in the lecture hall of the Museum building at the New York Botanical Garden, with a lecture by Dr. M. A. Howe, on 'The Hepaticæ.' The term *Hepaticæ* was used in a restricted sense, excluding the Anthocerotales.

After a few introductory remarks in regard to the position occupied by the *Hepaticæ* in the vegetable kingdom, the speaker reviewed the life-history of a few of the typical forms, the principal details of structure being exhibited by aid of lantern slides. The slides also showed the habit characters of various local species and of some from the Pacific coast.

Though the *Hepaticæ* are on the whole inconspicuous, and attract little attention except from the botanical specialist, they are nevertheless extremely diversified in structure and often very beautiful in form. Their chief interest, however, to the naturalist lies in the fact that many of them throw light upon questions concerning the evolution of the plant world. The first plants, without doubt were purely aquatic in habit of life. The *Hepaticæ*, though favoring moist situations as a class, range from species which are wholly aquatic to those which have become adapted to quite arid conditions.

As a group they may be considered to be the lowest of the chlorophyll-bearing land plants.

J. K. SMALL,
Sec'y Pro. Tem.