efficacy, as we shall see, as well as a covenant. The long wars with the Canaanites and Baal worshippers were conflicts with phallicism, to the gross orgies of which the chosen people were always lapsing. All early Hebrew history shows that while man knows how to breed cattle, Jehovah could breed men, and it is a study of human heredity far more effective than Plato knew how to make it. The New Testament begins with the annunciation and conception from on high, and a nursery scene of moving bucolic power, while Islam hypostatizes only the former." And what strength is added to a eulogy of wrestling by the last clause of this sentence: "The very closeness of body to body, emphasizing flexor rather than extensor arm muscles, imparts to it a peculiar tone, gives it a vast variety of possible activities, developing many alternatives at every stage, and tempts to many undiscovered forms of mayhem." These two samples were taken practically at random, but one puzzling association so rings in the reviewer's ears that he must allow it a motor discharge. It concerns the psychology of prison life and is, "Not only men, but women fall* in a school-girl mash, but women can not organize or complot."

EDWARD L. THORNDIKE.
TEACHERS COLLEGE,
COLUMBIA UNIVERSITY.

SCIENTIFIC JOURNALS AND ARTICLES.

THE leading article in the *Journal of Comparative Neurology and Psychology* for June is 'An Enumeration of the Medullated Nerve Fibers in the Ventral Roots of the Spinal Nerves of Man,' by Charles E. Ingbert, a direct continuation of the same author's former enumeration of the dorsal root fibers of man. An extensive discussion of the areas of the cross-sections of each root, the number of fibers per square millimeter of the cross-sections and the relation between the dorsal and ventral roots is followed by figures and tabulations giving the data for each fascicle of each nerve root. There are 203,700 medullated nerve fibers in the ventral roots of the left side and 653,627 in the dorsal roots, these numbers being in the ratio of 1:3.2. In the white rat this ratio is 1:2.3 and in the frog 1:1.2, indicating that probably the relative sensory supply increases as we ascend in the zoological series.

* The actual text is *pall*, which to the reviewer makes a truer statement, but the context suggests the correction.

SOCIETIES AND ACADEMIES.

THE TORREY BOTANICAL CLUB.

THE meeting of May 10, 1904, was held in the library of the New York College of Pharmacy, Rev. L. H. Lighthipe presiding.

The first paper on the scientific program was by Dr. H. M. Richards, entitled, 'Notes on the Peat Bogs of Ireland.' The peat bogs have been variously estimated as covering from one fifth to one tenth of the surface of Ireland; probably the larger estimate is excessive.

Dr. Richard's observations at several points on the west coast including Donegal and Achill Island were given. The basis of the bogs is not always the same, but in some cases it is glacial gravel. The thickness of the peat varies from one or two feet to forty feet, but no exposures of more than twenty-five feet thickness were seen. On the slopes and hillsides the peat is thinner, but becomes accumulated in the lower situations so that the thickness of the bog does not necessarily show its age. Bogs have been known to burst, as in Sligo, in 1831, and to do considerable damage to houses below them.

The peat is mostly vegetable matter and yields very little ash. According to Lyell, its formation is supposed to be due to the low temperature preventing complete decomposition of the vegetable matter. Peat is not formed in warm countries and the additions to the beds are made in cold weather. In the bogs seen there was standing water only in the holes and ditches, but the soil was wet and soggy. Comparatively little of the bog oak is found. Some of the stumps are in place, showing that they are not driftwood carried into the bog. The dark color and hardness of the bog oak are said to be due to the action of a diatom, a *Melosira*, and the formation of bog iron ore is supposed to be due to the same

diatom. It was suggested that part of this action may be due as well to *Crenothrix*. There is little of vegetable remains except at the top of the bog. *Sphagnum* makes up a comparatively small part of the peat bog vegetation as seen in the localities mentioned, and sphagnum peat is not so highly prized for fuel. A small *Carex* seemed to be the principal peat forming plant. Two species of *Drosera* grow in profusion and the heather and ling thrive very well and contribute considerably to the peat. *Pteridium* and several small ferns are rather common. *Sphagnum* and many fresh-water algæ grow in the holes and ditches, and from such places West has made fine collections of algæ, especially desmids. Peat bog soil has been found to be very sterile and at least two years are required to reclaim it, the method including throwing it up and exposing it to the air, and the application of fertilizers and lime. The cause of this sterility is not clearly understood, and is, perhaps, due to the lack of some of the necessary mineral salts and to the fact that the nitrogenous materials may not be in the best available form for plant nutrition. Some of the reclaimed peat bogs are very fertile lands, but if neglected they quickly run back to their sterile condition. If cultivation ceases, the *Pteridium,* heather and carices come back in a few years.

The second paper of the evening was by Dr. Marshall A. Howe, under title of 'Remarks on some West Indian Marine Algæ.' The remarks were based chiefly upon specimens collected by the speaker in March and April of the present year on the Florida Keys and the Bahama Islands, supplemented by specimens from Bermuda and Porto Rico and also by some obtained on a previous visit to Key West. The discussion was confined to the families Caulerpaceæ and Codiaceæ, members of the order Siphonales and class Chlorophyceæ. The family Caulerpaceæ, according to the more recent writers, consists of the single genus *Caulerpa,* with probably sixty or more well-defined species, including plants of a great diversity of form and habit. Some of the earlier phycologists, impressed by these evident differences, suggested generic segregations, and it is probable that some of the proposed genera are as well limited as are many of the current genera among the Agaricaceæ. There is, however, not such an unwieldy number of species to afford an excuse for generic splitting as is the case with the agarics, and there is practically nothing but habit and external form to lay hold of in limiting species and attempting generic segregations. Specimens were shown illustrating the principal sectional or subgeneric groups.

The Codiaceæ were illustrated by specimens of *Codium, Avrainvillea, Penicillus, Rhipocephalus, Udotea* and *Halimeda.* The genera *Penicillus* and *Rhipocephalus* are especially well represented in the Bahama Islands. Four species of *Penicillus* and two of *Rhipocephalus* were shown, all of which were found growing within a mile radius in Bemini Harbor, Bahamas. One of these is supposed to be the species described from the Bahamas by Decaisne in 1842 as *Penicillus oblongus* and apparently not met with in the meantime. This species was transferred to the genus *Rhipocephalus* by Kuetzing. In reality it stands between the genera *Penicillus* and *Rhipocephalus* and weakens the distinction between them. It is easily a *Rhipocephalus* when it is young, but as it gets older becomes more like a *Penicillus* and might then be casually passed by as a form of the common *Penicillus capitatus.* The head, however, is usually more oblong than in that species, the branching of the threads of the brush is characteristic and the arrangement of the threads in the apical or younger part of the brush is always distinctive.

Among the species and forms of *Halimeda* exhibited was one from the Florida Keys which is soon to be described as a new species. This has been confused with *Halimeda Tuna* by both American and foreign students of the genus, but is readily distinguished from that and other described species by the fact that the surface of each cortical tube or 'cell' is drawn out into a strong spine.

William T. Horne,
Secretary pro tem.