Equisetaceæ. When we regard these rapid advances, and truly estimate the influence they bring to bear upon morphological theory, we must surely congratulate ourselves on being devotees to a science which is very actively alive.

But at the same time the detached cynic may find in the methods of plant morphologists, or still more sometimes in their want of method, food for much critical remark. And if he put his finger upon one mental process which more than another has introduced discord, it would, I think, be 'assumption.' It may be that our science is not worse than others in this respect; but I am very sure that arguments based upon ill-founded assumption have put back the progress of morphology more than anything else in our discussions. Any one can find examples for himself in the literature; some of us in our own writings. It remains for us who tread the difficult path of morphological theory to beware lest we neglect those warnings with which its course is so plentifully strewn; for it is just as much the duty of a scientific man to avoid blurring the issues for others by faulty argument, as it is to attempt to make clear to them what he himself believes to have been obscure.

F. O. Bower.

University of Glasgow.

## SCIENTIFIC BOOKS.

*The Belgian Antarctic Expedition. Resultats du Voyage du S. Y. Belgica en 1897, 1898, 1899, Zoologie. Nématodes libres.* Dr. J. G. de Man. April 15, 1904; 51 pp., 4to, pl. i–xi. *Bryozoa,* by A. W. Waters. February 15, 1904; 114 pp., 4to, pl. i–ix.

The report on the free nematodes considers four fresh-water forms truly Antarctic, and six marine species collected in the Magellanic region, of which, however, one had been originally described from South Georgia. Three of the Antarctic forms are new, one being supposed to belong to a new subgenus (*Plectoides*); the other form, a *Dorylaimus,* is too young for determination. The other three belong to the genera *Mononchus* and *Plectus.* This little group has a special interest in being the first known fluviatile forms from the Antarctic continent. All the species are treated at great length and profusely illustrated.

We learn from Water's report that 86 species of Antarctic bryozoa were collected; on one occasion 55 species were obtained at one haul of the tangles. Eleven others from the extralimital subantarctic waters are also considered.

Of the 86 species and varieties of Antarctic origin 57 are new, many of which are very closely related to already known northern forms.

Of the Chilostomata only seven are known from the northern hemisphere, all of which are also known in the fossil state. Three species are cosmopolitan and also Arctic. But little support is given to the 'bipolar' theory by the Bryozoa considered in this paper. The specimens of *Hornera lichenoides,* long since reported as brought from the Antarctic by Sir James Ross, there is much reason to believe did not come from that region, as they agree with Arctic and do not agree with Antarctic specimens of that genus. *Orthopora, Cellarinella* and *Systenopora* are described as new genera, all of which are Antarctic. A new species of *Alcyonidium* and seven new *Cyclostomata,* with seven others previously known, and one indeterminate, complete the enumeration.

W. H. Dall.

Smithsonian Institution.

## SCIENTIFIC JOURNALS AND ARTICLES.

In the *Botanical Gazette,* for September, M. A. Chrysler has written upon 'The development of the central cylinder of Araceæ and Liliaceæ,' developing in these groups the recent stelar theories and reaching the general phylogenetic conclusion that monocotyledons are derived from dicotyledonous ancestors.—D. S. Johnson has given an account of 'The development and relationships of Monoclea,' a Jamaican liverwort.—W. C. Coker has writ-

ten a brief account of 'The Spores of Certain Coniferæ,' describing certain features of the male gametophyte and the megaspore.—G. J. Peirce has published a preliminary notice of 'Artificial parasitism,' giving an account of his experiments in growing a pea on a plant of horse bean, the pea blossoming and setting seed.—Albert C. Herre records the remarkable growth of the thallus of *Ramalina reticulata*.

PROFESSOR BURTON-OPITZ, of Columbia University, has undertaken the charge of the abstracts of American publications on the relations of medicine and chemistry for the *Biochemische Centralblatt*. Authors are requested to send him reprints.

## SOCIETIES AND ACADEMIES.

### CLEMSON COLLEGE SCIENCE CLUB.

THE first regular meeting of the club for the year was held on September 29, at 8 P. M., in the lecture room of the Electrical Laboratory of Clemson College. Professor W. M. Riggs discussed 'Recent Advances in Electrical Engineering.' Dr. R. N. Brackett presented a paper on 'The Present status of the Nitrogen Problem.'

HAVEN METCALF,
*Secretary.*

## DISCUSSION AND CORRESPONDENCE.

### VARIÆ AUCTORITATIS.

TO THE EDITOR OF SCIENCE: In looking over the numbers of SCIENCE on my return from my summer's work in the Rocky Mountains I find in your issue for August 12 a communication from Dr. C. R. Eastman entitled 'Variæ Auctoritatis,' in which he complains of the carelessness of scientific writers in citing ancient authorities, and brings me in at the head of his list of offenders quoted.

While agreeing with Professor Eastman in the general principle laid down by him, his remarks with reference to me seem to flavor of a certain disingenuousness.

He refers to my paper on 'The Theories of Ore-deposition Historically Considered,' in which, on page 2, I am made to say that 'It is said that as early as Origenes, 600 B. C., etc.,' whereas Origenes flourished about 200 A. D. Dr. Eastman very courteously pointed out this error in a personal letter to me in June last, and in reply I stated that this was something that had escaped my notice in proof-reading, and that the sentence should have read, 'Thus it is said by Origenes that as early as 600 B. C., etc., etc.,' at the same time referring him to my authority, Professor K. von Zittel, who, on page 3 of his 'History of Geology and Paleontology' says, 'Origenes reports of Xenophanes of Colophon that he had observed sea shells on mountains, etc., etc.'

With regard to his second criticism, I am unwilling to admit any error in my words as published. In opening my section on the 'Scientific Period' I remark that 'Up to this time (the close of the eighteenth century) even the name geology had hardly been recognized, natural history or mineralogy being the title usually given to works that treated of it.' Later, in speaking of De Saussure's work I say, 'He also appears to have been the first to use the name geology for *his* science.' Dr. Eastman says that my statement is incorrect, inasmuch as Richard de Bury spoke of Geologia as the 'earthly science' in 1344. That this learned prelate, or some other philosophical writer of an even earlier date, may have used the word does not disprove the correctness of my statement that De Saussure was the first (geologist) to use this term for *his* science. My statement does not necessarily imply that he was the first man who ever used the word, and I should have considered it a useless waste of time to have searched all ancient literature to find out by whom it was first used, for I do not feel at all sure that de Bury is entitled to that credit.

S. F. EMMONS.

### THE SWALLOWING OF STONES BY SEALS.

TO THE EDITOR OF SCIENCE: So far as I am aware no satisfactory reason has been advanced for the swallowing of stones by seals, and this statement may probably be extended to other animals. They are not taken in for ballast, for the empty seals keep down as easily as the others; they are not swallowed for the purpose of grinding up food, for they occur in the stomachs of nursing pups; they are not