chair is to be nominated for election by the council by an expert board, of which Sir Wm. Osler is chairman.

AT the request of the federal government a free course in wireless telegraphy will be given at Bowdoin College. Professor Charles C. Hutchings and Professor Rhys D. Evans are to be in charge of the course.

DR. RAYMOND PEARL, biologist in the Maine Agricultural Experiment Station, and at present at the head of the statistical department of the United States Food Administration, has been appointed head of the department of biometry and vital statistics in the new school of hygiene and public health of the Johns Hopkins University.

DR. PHILIP A. SHAFFER, of Washington University, has been called to the national service. He has been succeeded by Dr. A. Canby Robinson, associate professor of medicine.

MR. ANDREW BOSS has been appointed vice-director of the Minnesota Experiment Station in addition to his present duties.

DR. C. H. SHATTUCK, recently head of the department of forestry at the University of Idaho, has accepted an appointment as professor of forestry in the University of California.

DISCUSSION AND CORRESPONDENCE

A SUGGESTION TO MORPHOLOGISTS AND OTHERS

IN the course of a year I look over a good many zoological papers on different topics outside of my own work—papers on genetics or the many aspects of embryology or ecology —and I am impressed with a general carelessness which exists among the writers on one point which probably seems unimportant to many of them but which to me seems of very considerable moment. The point is that very few of them give the name of the taxonomist who identified the species with which they have been working, nor do they indicate the preservation of typical material of the adult form so that the specific identification can be tested at any time.

Confusion has already resulted from this lack, and more will come. In many cases very great uncertainty exists as to the exact species with which the writer was working. If I were to write a paper in which the name of a beetle was given, my accuracy would be attested by the fact that I inserted, in parenthesis, "Determined by Schwarz" or "by Casey" or "by Fall," or, if it were a Protozoan, the same thing would happen if I inserted in parenthesis "Determined by Calkins," or, if it were a cactus, "Determined by Rose" or "by Trelease," or if it were a fly, "Determined by Knab" or "by Aldrich" or "by Johnson" or "by Malloch" or "by Parker" or "by Townsend." Such a statement as this would at once set at rest any question of accuracy, and would at the same time indicate the probable place at which representative specimens could be found in case of accident to the author of the paper or in case he should not himself preserve such material.

I have never done any embryological work, and in the recent work on chromosomes and the like I do not know how important it is that specific identification should be made of the forms studied; it may be entirely unimportant, if the genus is all right. But knowing, for example, that there are more than fifty species of *Drosophila* in the United States, it gives me an idea of inexactness when I see so many of these recent genetic papers, having to do with this genus, in which no species is mentioned. The writers seem to be entirely indifferent on this point.

Beginning with Howard Ayres's well-known paper "On the Development of *Œcanthus niveus* and its Parasite Teleas," in which he writes in one place of teleas as "a parasitic Ichneumon fly" and in another as one of the "Pteromalidæ," a paper which was awarded the Walker Prize for 1883, and concerning which it must be said that no true teleas has ever been reared from *Œcanthus* eggs,[1] and extending down to the present day, hundreds

[1] It is quite possible that the parasite which Ayres had was *Polynema bifasciatipenne* Girault, a species belonging to an entirely different family —the Mymaridæ.—L. O. H.

of papers have been published with almost equal lack of precise and attested knowledge of the identity of the form treated.

Of course some workers are more careful than others. E. B. Wilson seems to me to be a man who wishes to know exactly what he is working with. The same may be said for J. T. Patterson and for S. I. Kornhauser and others, but on the whole I think that this suggestion is worth while and I hope that it will appeal to many.

L. O. HOWARD

SCIENTIFIC BOOKS

The Anatomy of Woody Plants. By EDWARD CHARLES JEFFREY. University of Chicago Press, Chicago. October, 1917. With 306 illustrations. Pp. x + 478. Price $4.

This work, by the well-known professor of plant morphology in Harvard University, has been expected with much interest. The expression in the Preface, "Woody or so-called vascular plants," suggests that the two terms are synonymous, and, as a matter of fact, herbaceous forms are by no means neglected, though special prominence is given to the woody types, in accordance with the author's belief in their primitive nature.

Great stress is laid throughout on the supposed "Canons of Comparative Anatomy" formulated in Chapter XVII. It is even stated in the Preface that "any conclusions not in harmony with them have ordinarily not been considered" (with certain exceptions). This at once indicates the highly deductive character of the treatment, though the word "induction" is often used. The book, in fact, is essentially an able exposition of the views of Professor Jeffrey and his school; it will therefore be read with the most advantage by those who are in a position to read critically.

The general plan of the book is as follows: After a short chapter on the cell, we come to the tissue-systems. Next follows a chapter on wood in general, succeeded by four on the secondary wood and one on the phloem. The epidermis and the fundamental tissues occupy Chapters IX. and X. Then we have a chapter on the definitions of the organs, succeeded by three on the root, stem and leaf, respectively. Then follow two chapters, which it is a welcome surprise to find in an anatomical textbook, on the microsporangium, and on the megasporangium and seed. We then arrive at the important Chapter XVII., which lays down the author's "Canons of Comparative Anatomy." The arrangement of the next twelve chapters is systematic, from the Lycopodiales to the Monocotyledons. Chapter XXX. is an anatomical structure and climatic evolution; Chapter XXXI. treats of the evolutionary principles exhibited by the Compositae, and the last chapter is devoted to anatomical technique. The arrangement involves a certain amount of repetition, which, however, serves to bring out the points on which the author desires to lay special stress.

In defining the tissue-systems the author returns to Sachs's old divisions, the epidermal, fibrovascular and fundamental systems. The stele, so prominent as an anatomical unit in the work of the last quarter of a century, thus disappears; it is rarely mentioned and is not to be found in the index. This striking reversion in terminology is intimately connected with the author's theory that the pith is of common origin with the cortex and so does not belong to the central cylinder.

Much attention is given to the wood (especially the secondary wood) as this is the tissue for which the best fossil evidence is available; The libriform fibers are derived from tracheides, not from parenchyma as Strasburger held. Evidence is given also for the origin of xylem-parenchyma and of the so-called medullary rays from tracheides, and some excellent new figures of Lepidodendroid structure are furnished, in support of this view.

The statement (p. 49 and elsewhere) that tangential pits are absent in Palæozoic woods, is erroneous; they have long been described in *Pitys antiqua* and also occur in *Mesoxylon multirame* and doubtless in other species. In Chapter VII. there is an excellent comparative account of xylem-vessels in Gnetales and Angiosperms.