

ica" composed of Dr. A. J. Grout, Dr. Henry S. Conard, in charge of field botany and plant ecology at the Biological Laboratory and head of the department of botany at Grinnell College; Dr. G. E. Nichols, professor of botany and director of the Marsh Botanical Garden, Yale University, and Dr. O. E. Jennings, head of the department of botany, University of Pittsburgh. This summer Dr. Grout will represent the Biological Laboratory at the International Botanical Congress to be held at Cambridge, England. While abroad he will check up type specimens of American mosses located in European museums.

LEON M. ESTABROOK, of the foreign service of the U. S. Department of Agriculture, who for the last five years has been in charge of the World Census of Agriculture, with headquarters at Rome, has returned to Washington for a temporary assignment in the office of the Secretary of Agriculture. He will assist Dr. A. F. Woods, director of scientific work, in making arrangements with the Department of State and the Pan-American Union for the Inter-American Conference on Agriculture, Forestry and Animal Industry to be held at Washington from September 8 to 20. The conference is the outgrowth of recommendations of the Sixth International Conference of American States, held at Havana in 1928. Its purpose is to consider plant and animal production, and to develop plans for all phases of agricultural cooperation. Each nation in North, Central and South America will be asked to send an official delegate, as well as other delegates who are specialists in agricultural production and marketing. The conference will come one week ahead of the Sixth International Road Congress and it is expected that many of the delegates will attend both conferences. During the two years 1923-24 Mr. Estabrook was loaned by the Department of Agriculture to the Argentine Government to reorganize its service of agricultural economics and statistics. In the last five years in his work on the World Census of Agriculture, Mr. Estabrook visited the capitals and agricultural production centers of every country of the world with the exception of three.

UNDER the will of Mr. George de Arroyave Lopes, the executors have to hand over the residuary estate, estimated as being over £70,000, bequeathed to the Zoological Society of London, to be held by the society as the De Arroyave Fund. The income is to be applied for the upkeep and improvement of the Zoological Gardens and for the objects of the society. The society has had hitherto to depend almost entirely on the subscriptions of its fellows and on the fluctuating income from the gardens.

FIRMIN DESLOGE has made a gift of \$1,000,000 to St. Louis University for the erection of a hospital.

IN preparation for the celebration of the one hundredth anniversary of the founding of Lafayette College in 1932 the board of trustees has announced a campaign for \$3,500,000 for endowment and buildings. One million dollars has already been subscribed by three members of the board. John Markle, of New York, has given \$400,000, in addition to the \$500,000 for the John Markle Mining Engineering Hall, which was recently dedicated. Fred Morgan Kirby, of Wilkes-Barre, has given \$500,000 for the Kirby Hall of Civil Rights, which will be completed in May, and Thomas Fisher, of Philadelphia, chairman of the campaign committee, has given \$100,000 toward the building of dormitories and for endowment purposes.

A GIFT of the professional library of the late Dr. C. F. S. Tate to the School of Medicine of the University of Southern California and the recent acquisition of the large book collection of Dr. Charles W. Bryson have made possible the establishment of a separate medical library by the university medical school. According to an announcement by Dean William D. Cutter, the library will be housed for the present in two rooms in the basement of Bridge Hall, which are now being outfitted. The appointment of Miss Marguerite Campbell, formerly librarian of the Peking Union Medical School, Peking, China, and of the Boston Medical Library, as custodian was also announced. The library will be opened for use in a few weeks, with between four and five thousand volumes available for reference.

DISCUSSION

THE FUTURE OF TAXONOMY

I HAVE just received a statement from the secretary of the Zoological Society of London, calling attention to the inadequacy of the support given to the *Zoological Record* and hinting that unless conditions improve it may be necessary for the Zoological Society to abandon the enterprise. I use the *Record* almost

daily, and find it so essential for my work that I am greatly alarmed at the prospect of its discontinuance. In my own case this would not be so serious as in the case of a younger worker, with perhaps half a century of work ahead. To him it would mean, first of all, a great increase in the time consumed in bibliographical work; and secondly, reduced accuracy in his work, as he would certainly miss important publications.

What are the reasons for the present state of affairs? To some extent, I think, the competition of *Biological Abstracts* is responsible. The *Abstracts* covers a large field not dealt with by the *Zoological Record* and in this field is simply invaluable. But its zoological taxonomy appears to me to be not only very incomplete, but also from its manner of publication of comparatively little use. For my own work I find it practically useless. I understand that it was seriously considered that this part of the *Abstracts* might be dropped, and it seems to me that this should be done. As long as it is there, librarians and officials, and even heads of departments, will imagine that it covers the field adequately, and that the *Zoological Record* is unnecessary.

There is, however, a deeper and more important reason for the non-support of the *Record*. It is the lack of interest in taxonomy. For this, I believe, our graduate schools are largely responsible, and perhaps it is not too much to say that in certain respects the graduate school is an enemy of sound science. This is due to the system, not to any particular fault on the part of those who administer it. Consider what we have. A great and increasing number of candidates for the M.A. and Ph.D., together with other less popular degrees. They overrun the departments in the large institutions, and the problem for the professor is to find subjects which these people may study, and on which they can write an acceptable thesis, in one to three years. The actual time available is much less than this statement might suggest because these students have other things to do, and very commonly are employed in the teaching, often handling all the quiz sections and correcting all the examination papers. In this situation, what subjects of research may be profitably chosen? Those which (1) require little previous knowledge, and (2) involve no great breadth of view. It must not be necessary to accumulate a special collection or library, and it is very important that the student should not bother the professor too much. As a typical example, I think of a brilliant girl I know, who was set to cutting off the tails of salamanders, in order to find out whether (under laboratory conditions, certainly not in the wild!) they grew any faster without a tail to support.

I do not mean to say that most of these theses do not possess some value, at least for those doing the work, and it is true that occasionally an important taxonomic monograph, involving many years of study, is accepted for the Ph.D. But broadly speaking neither the spirit nor the methods are those of profound scientific research; and taxonomy, which re-

quires many years (if only that the worker may discover his own mistakes), is out of the question.

What have we left to rely on? We should expect and demand that the scientific departments of the government prepare monographic works on various groups, especially those of economic importance. Some very good work of this type has appeared, but I think not nearly enough. To be concrete, I do not see any valid reason why the Bureau of Entomology, with its really enormous appropriation and abundance of technicians of all sorts, has never given us a monograph of the Coccidae (scale insects and mealy-bugs).

Yet all that the governments can do is not enough, and it would be deplorable if the progress of science depended wholly on governmental agencies. There remains the amateur, the man of the type and spirit of Darwin and Wallace, who loves science and finds in it the means of satisfying the cravings of his mind, intellectual and emotional. It is the amateur who can rejoice in his slowly increasing collection, in the increments of his knowledge. Though he may spend only a few hours a week at his hobby, he becomes a learned man with the passage of time. When there are enough amateurs in a district, they form a society, a fellowship of the disciples.

There is no simple way to attain all these good things. But the first step is to desire them, and if we do that long enough and earnestly enough they will be realized in abundance.

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UNIVERSITY OF COLORADO,

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RECENT CRITICISMS CONCERNING MEIOSIS IN *DROSOPHILA MELANOGASTER*

For the past few years some rather strongly adverse criticisms have been made by E. C. Jeffrey, in which he claims that the meiotic divisions of *Drosophila melanogaster* are atypical, resembling those of certain species hybrids in plants, and that this fly is therefore also a species hybrid.

Nobody who has worked with *Drosophila melanogaster* has taken Jeffrey seriously in respect to his statements. Being eminent in paleobotany, his venture into a specialized field of animal cytology seems to be a long and daring step. Any one familiar with the elementary laws of genetics can readily perceive the inaccuracy of his assertions. I do not intend to answer him on his latest contribution in *SCIENCE* of December 13, 1929, but I do feel that the cytologic status of *Drosophila melanogaster* should be briefly submitted to those readers of *SCIENCE* who are not specially versed in cytology or genetics. Having followed Jeffrey's periodic attacks since 1925, I have no desire to enter into any controversy with him, and