

DR. J. FRANK DANIEL, instructor in zoology in the University of Michigan, has been appointed to a newly-established instructorship in comparative anatomy in the University of California.

PROFESSOR JACOB WESTLUND has been promoted to a full professorship of mathematics at Purdue University.

At the University of Kansas Drs. C. H. Ashton and J. N. Van der Vries have been promoted from assistant professorships to associate professorships of mathematics. Dr. U. G. Mitchell, of Princeton University, and Drs. Arthur Pitcher and M. B. White, of the University of Chicago, have been appointed assistant professors of mathematics.

MR. A. E. FINDLAY, has been appointed to a newly instituted lectureship in applied chemistry at Sheffield.

As successor of Professor Verworn, Professor Jensen, of Breslau, has been called to Göttingen as professor of physiology.

DISCUSSION AND CORRESPONDENCE

A SUGGESTION AS TO THE CARE OF TYPES

EVERY student of zoology or botany is aware of the immense importance of types, the original specimens upon which new names have been based. At the present time such types are scattered over the country, in public and private collections, and many of them are likely to be destroyed or lost. Many, though in safe custody, are in such out-of-the-way places that it is practically impossible to gain access to them.

I do not believe that any naturalist who has visited many museums can be satisfied with the care usually taken of types. On the contrary, it would be easy for any one with much experience to write an article in the best "muck-raking" style, describing some of the things he has seen. Possibly such an article might do good, but nobody is willing to write it. At the same time, something ought to be done. It occurs to me that a possible way to mend matters would be for the American As-

sociation to appoint a committee to investigate and report. This committee, of perhaps six members, should be permanent, and should have enough funds placed at its disposal to enable its subcommittees of two or three to visit all the principal institutions in which types are preserved. In the course of a few years it would be possible to report the exact conditions found, and certain museums could be designated as fit places for the preservation of types. Neither the association nor its committee could force anybody to do anything, except through the pressure of scientific public opinion, but this would doubtless in many cases be sufficient.

A few general principles might be enunciated, for example:

1. A type is, from its nature, in some sense the property of the scientific world. Thus, every one would consider it a criminal act to purchase and then willingly destroy a type. It must be considered reprehensible to permit types to exist where they are in serious danger of being destroyed, and, in particular, steps should be taken to prevent the sale of types to miscellaneous unknown collectors after the death of the original owner.

2. Every institution possessing types should publish a complete list of those in its custody, and subsequently annual lists of additions. It can then be held strictly accountable for their care, and students can ascertain where the types are to be seen.

3. No types should ever be loaned out, and, especially, they should never be sent through the mails. Experience shows that institutions which profess to have a rule against the loaning of types can not be trusted to keep it. I regret to say that I have in the past occasionally loaned types to reliable students and institutions, and have found it extremely difficult to get them back. It may be necessary some day to publish a few explicit statements under this head.

It is impossible to absolutely safeguard types in all instances. It must be recognized that *some* risks, under existing circumstances, are unavoidable. For example, I have at this moment in my custody considerable collec-

tions of bees from the British and Berlin Museums. When I have finished working on them there will be more than a hundred types of new species, and all of these must go back to London and Berlin by express. Owing especially to the carelessness of custom-house officials, there is a genuine enough risk of damage. These very collections were injured on the way here, because the officials in New York unpacked them, and repacked them carelessly, so that the sides of the insect-boxes rested against those of the outer cases. Nevertheless, it seems that the whole transaction is worth while. The damage, if any, will not be great, and the museums in question will be enriched by a large amount of type material.

My own collection of bees, containing hundreds of types, is in a good but not fire-proof building. When I die, it is intended to transfer it to the National Museum. Some years ago I sent most of my types to Philadelphia and Washington, where they now are. Recently, I have refused to part with any, concluding that the material is safer and more useful in my own custody, where it is continually being studied. There is some risk here, but with apparently adequate compensating advantages.

In the case of the types which I have loaned, it may be plausibly argued that I should not take the risk of having them returned by mail or express. I am so far convinced by this that some of them, which are in trustworthy institutions, will be permitted to stay where they are. Others, now in private hands, may be placed in such institutions. One word may be added concerning the purchase of types by institutions. The natural outcome of the work of the proposed committee will be to make it more or less obligatory for students to leave their type material to the larger museums. Many will do this in any case. Unfortunately, these museums will usually take every advantage of this condition, and will either expect to receive the material gratis, or pay as little as possible for it. Naturalists are commonly ill-provided with convertible riches, and often

their collections, the work of their lives, are their most valuable assets. It is not fair that they should be virtually compelled (as in a number of actual cases I could cite) to give them away to the public, without any pretense of an adequate return. Possibly a special type fund might be raised to meet this condition, but there might be some danger that if describing became too profitable (through the sale of types) it would become commercialized, with results awful to contemplate! This difficulty could be overcome, no doubt, by keeping the prices at an optimum which would avoid both extremes, and by the vigorous condemnation of reckless work. Prices might also vary according to the character of the work represented by the collections.

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UNIVERSITY OF COLORADO,
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MEDICAL EDUCATION

TO THE EDITOR OF SCIENCE: The teaching of medicine in the United States is notoriously antiquated, ill-organized and open to commercial influences. To most doctors concerned for the future the publication of "Bulletin No. IV." of the Carnegie Foundation for Teaching is an occasion of importance and the precursor of great things. It is a pity then that the editor of the *New York State Journal of Medicine* should have conceived such a distaste for the authoritative style of the writer of the bulletin as to limit his praise to an acknowledgment in ten words that "much useful information and valuable criticism" are contained in it, and to abuse it in four columns.

Mr. Flexner's conclusions are hardest for the editor to accept because presented with vigor and finality. But this is as it should be: a work for the reform of established abuses can not proceed with apology or hesitation. If the author observe fairly and judge impartially, he must drive home his conclusions with all the weight that conviction can give them—and this is what the bulletin does. There are many who have a direct interest