the evidence for their case, the more certainly does it lead away from the action they pressed on the government. Although protection may be dubious as a general principle, there are certain industries of little intrinsic economic importance, and yet vital to the national safety, because of the dependence of larger industries upon them. Are there any avocations more certainly "keys" to national prosperity than scientific research and the training of scientific workers? In these matters we must depend neither on Germany nor on any foreign country. If dependence exist at present, the administration of the acts should be tightened, not relaxed, until we become self-supporting. But the case is probably over-stated. Before the war scientific workers here and in the United States had got in the habit of using such chemicals as bacteriological stains and such forms of optical glass as microscopic lenses from one or two German makers, not because these were better than all others, but because they were standardized and all workers using them could easily compare their results. Convenience, not necessity, had led to a German monopoly. American bacteriologists are endeavoring to meet the state of affairs by agreeing on a reliable standard brand of each kind of stain and discouraging the use of variants. Similar action might be taken in this country not only with regard to stains, but to many other kinds of chemicals and of apparatus used in research. But we note with concern as further witness of the aloofness of the state from science, that the interpellations on this scientific question were addressed to the minister of transport, who undertook, apparently to the satisfaction of every one, to refer it to the president of the Board of Education. Is there not a Royal Society, at one time the natural adviser of the government on scientific matters?—*The London Times.*

SCIENTIFIC BOOKS

Studies on some Flagellates. E. PENARD. Proc. Acad. Nat. Sci. Phila., 1921, Part 1, Oct. 12. Idem, Etudes sur les Infusoires d'eau douce; Geneva, "1922" [1921].

The inadequacy of our knowledge of local protozoan faunas is emphasized by two recent papers by the veteran Swiss protozoologist, Penard, in which he describes, chiefly from two limited regions in the environs of Geneva, 7 new Flagellates and 148 new species of Ciliates, including 8 new genera. Central Europe has been more intensively studied faunistically than any other portion of the world, yet six years observation by one student has brought to light 155 new forms in groups which are the especial delight of the microscopist and which have been by no means neglected by the protozoologist. Faunistic data furnish material essential to the study of many far-reaching problems in ecology, in distribution, in geology, and especially in paleogeography. Yet it is evident, from such papers as Penard's, that our faunistic data for all regions are only fragmentary.

Many of Penard's papers, like those of Leidy, show an intimate and friendly companionship with these microscopic forms, being full of data as to behavior, structure and function being described together, conveying to the reader a vivid impression of the lives of these organisms and showing an interest on the part of the observer which is contagious. May it not be that laboratory zoology is to-day disproportionately emphasized in comparison with out of door studies? A broad knowledge of field natural history, combining taxonomic, faunistic and ecological studies and studies of behavior under natural environmental conditions, is essential to any adequate attack upon many problems, among which are some of the most interesting in the whole field of zoology. This is a type of work to which it is easy to introduce young students and it is one to which a fair proportion of them could well afford to devote their lives, for evidently our knowledge in this field is most inadequate. The field, while easy to enter, calls for the finest qualities of skill, accuracy, persistence and judgment. It commands a natural interest and it gives data of wide bearing.

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