named Le Fevre, about whom little is known. None of the professors of mathematics in our early universities can be compared favorably with the best of their contemporaries in Europe holding similar positions up to the latter half of the nineteenth century, when B. Peirce, of Harvard, began to make valuable contributions to the advancement of our subject.

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SCIENTIFIC LITERATURE

PROFESSOR VISSCHER'S article in SCIENCE of September 14 (p. 245) describes a difficult situation, but I think there are serious objections to his proposed remedy. I venture to call attention to a case in which it seems to me that the library difficulty has been fairly overcome. Economic entomology has in modern times developed to an enormous extent and has become exceedingly diversified. Works relating to it continually appear in many countries, in all sorts of languages, many for instance in Russian. If some agency would bring all these books and papers promptly to my desk on publication, I could not find time to read them, and in many cases, owing to the language, I could not read them at all. Many, perhaps most, are primarily intended for use in particular regions, or by particular classes of people, yet they usually contain something of broader interest. Now the Imperial Institute of Entomology, in London, produces monthly the *Review of Applied Entomology,* in two series, A. Agricultural, B. Medical and Veterinary. It is strictly up to date; thus I find the August, 1934, issue contains abstracts of articles received during June and July of the same year. The reviews or abstracts are sufficiently full to give an excellent idea of the work done, and usually include most of the matter of general interest. I have not rarely had the experience of reading an article, and not fully appreciating its significance until I read the abstract in the *Review.* In about two hours, each month, I am able to run over the whole field of current economic entomology, and note the matters which are of particular interest to me. Frequently I note discussions of broad biological interest, such as those on the carrying of insects by air currents, or those on the diverse forms of malaria mosquitoes. The cost is negligible; the price is to be raised next year, but even then it will be less than a dollar a month. The two prime features are (1) promptness and (2) well-written and sufficiently full reviews by people who know the subject.

When we consider how and why money is expended in this country, it seems ridiculous to complain about the cost of printing scientific papers. Institutions can send out costly expeditions, and yet declare they can not afford to pay for printing the results of the work of their staff. One of the best known and most highly esteemed scientific explorers in this country told me that he found it comparatively easy to raise money for an expedition, almost impossible to get it for publication, which is after all the result and purpose of the expedition. The whole situation depends on a wrong mental attitude and not on any real lack of power to accomplish what ought to be done. The lamentable consequence is that competent men will not spend their best years doing work of a comprehensive or fundamental character, not knowing how or whether it can be printed. I recently heard the story of one of the best entomological works produced in this country during the present century. The author had to put up $10,000 to get it published. Fortunately, the sales have been sufficient to repay the money, I presume without interest. But how many of us can afford to provide such a subsidy? The actual work on the book over many years brings of course no financial reward, nor was it expected to do so. Is it not conceivable that a more enlightened day will come when such an author will be considered a great public benefactor and will be relieved of all financial anxiety concerning publication?

Returning briefly to the problem of the reader and the library, what we especially need are good synopses which bring out the salient known facts and serve to guide the reader to the detailed literature. As examples of this type of work I think especially of two which have been published very lately. One is "The Classification of Insects: a Key to the Known Families of Insects and Other Terrestrial Arthropods," by C. T. Brues and A. L. Melander, published by the Museum of Comparative Zoology, Harvard, 1932. The other is "The Families and Genera of North American Diptera," by C. H. Curran, 1934. As time-savers and preventers of error, such works can hardly be overestimated, although, in the nature of things, they can not attain perfection. They enable the worker to review the field of his science and stimulate him to search for new facts which will add to or correct the record.

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PHOTODYNAMIC ACTION OF METHYLENE BLUE ON PLANT VIRUSES

PERDRAU and Todd,[1] studying the photodynamic action of methylene blue on nine animal viruses and on several strains of bacteriophage, found that the viruses of vaccinia, herpes, fowl-plague, louping-ill, Borna disease, Fujinami's tumor and canine distemper, as they exist in filtrates or other fluids devoid of

[1] *Proc. Roy. Soc.,* B, Vol. 112, pp. 277 to 287 and 288 to 297.