SUPPLEMENT TO THE NOTE ON NECROBIOTIC RAYS[1]

IN his note on necrobiotic rays, due to the lack of space, the writer failed to express his thanks to the institutions and scientific men who were of assistance to him in his experiments, postponing these thanks until the appearance of his full paper. In view of the fact that this paper may not appear for a long time, the writer wishes to express his thanks at this time to the persons concerned.

The experiments on necrobiotic rays were begun at the Desert Sanatorium (Tucson, Arizona, in January, 1931), continued for about two months in the laboratory of the Biological Department of the California Institute of Technology (Pasadena, California), and then in the laboratories of the University of California (Berkeley, California), where they first succeeded. Accordingly, the writer wishes to express his thanks to Dr. Pinner and Dr. Davis, of the Desert Sanatorium, for their interest in his work and their valuable advice, to Dr. T. H. Morgan, of the California Institute of Technology, for making it possible for the writer to continue the experiments in the laboratory of the institute, to Professor Zaikovsky and Dr. Strong, of the same institute, for their interest in the writer's experiments, and their advice and help in carrying out these experiments, to Dr. Holman, of the department of botany of the University of California, for furnishing a dark room for the experiments, and to Dr. White, of the Department of Physics of the same university, for his advice and assistance.

The writer wishes to express his especial thanks to Professor V. M. Zaikovsky for his outstanding interest in the experiments on necrobiotic rays. It was he who drew the writer's attention to the possibility of an explanation of the protective effect of ultra-violet rays on protoplasm by a synthetical process which they may produce in the cell. He also suggested, after the failure of the writer to prove the presence of the rays by means of dry photographic plates, that the writer should use silver bromide emulsions for the same purpose. According to his order, the quartz tubes initially used in the experiments were made for the writer. He also constructed a special apparatus to photograph the rays. Professor Zaikovsky's advice was found to be very useful in the writer's experiments at the University of California, where the rays were first observed.

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SOME HUMAN EYE-SPOTS CLASSIFIED ZOOLOGICALLY

THIS note might have some slight interest to oculists and to entomologists. During the last few weeks my eyes have become very dim and I can no longer read. Awaiting the time for an operation, I have been interesting myself by watching my eye-spots—those fragile things that float before one's eyes, apparently in space. I have recognized three species of insects, two plainly, and the third rather dimly. The first would be *Pelecinus polyturator,* except for the fact that it has spotted wings and apparently the venation of a trypetid fly. Were it really an insect, I would call it *Pelecinoidea* (new genus) *trypetoidea* (new species). The second is the pupa of *Culex pipiens.* It has a very long abdomen and I can not see the anal flaps. But I can see the respiratory trumpets on the thorax and it is plainly Culicine—not Anopheline. Of the third I am not so sure. It looks like one of those curious parasites of ants that belongs near Orasema, species of which are so beautifully figured by Peter Cameron in the "Biologia Centrali-Americana," and by Wheeler in his well-known book on ants.

Other biologists who have misused their eyes (as I have) may amuse themselves by classifying their eye-spots. The entomologist should have no trouble. Perhaps the botanist can do something of the sort. The herpetologist should have no trouble. The bacteriologist will have difficulty for lack of culture media. The nematologist should, I think, be able to do a lot of imaginary work, but I can't imagine that the chemist or the mathematician can use this method of passing the time away.

L. O. HOWARD

WASHINGTON, D. C.
October 19, 1932

SCIENTIFIC BOOKS

Studies on the Variation, Distribution and Evolution of the Genus Partula. III. The Species Inhabiting Moorea. By HENRY EDWARD CRAMPTON. Carnegie Institution of Washington, Publication 410, 1932.

IT is well known that it was the existence of closely related but distinct species in the different islands of the Galapagos Group that first convinced Charles Darwin in 1835 that such species must have arisen by descent with modification from common ancestral species. Ever since that time the fauna and flora of oceanic islands have been favorite objects of investigation with students of organic evolution. The extraordinary interest which has been shown by naturalists

[1] SCIENCE, August 19, 1932.