search Defense Society, and the president and honorary treasurer of the association, Sir Thomas Barlow and Dr. Hale White, have joined the committee of the society. It is hoped that in the coming years there will hardly be any need for disputes with antivivisection societies, and that the society's best opportunities for usefulness will be found in wide, non-aggressive educational work.

WE learn from *Nature* that the pensions granted during the past year by the British government include the following: Mrs. Charlton Bastian, in consideration of the services to science of her late husband, Dr. Charlton Bastian, and of her straitened circumstances, £100; Mrs. Minchin, in consideration of the scientific work of her late husband, Professor E. A. Minchin, and of her straitened circumstances, £75; Mrs. Albert Günther, in consideration of the scientific work of her late husband, Dr. Albert Günther, and of his distinguished services to the British Museum as keeper of zoology, £70; and Mrs. Roland Trimen, in consideration of the eminent services of her late husband to biological science, and of her straitened circumstances, £75.

UNIVERSITY AND EDUCATIONAL NEWS

THE will of Mrs. Robert W. Bingham, wife of Judge Robert Bingham, of Louisville, Ky., a graduate of the University of North Carolina, gives to the University of North Carolina $75,000 a year for the establishment of professorships and ultimately a capital sum producing this amount. The professorships are to be known as Kenan professorships, in memoriam of Mrs. Bingham's father, William R. Kenan, and her uncles, Thomas S. Kenan and James Graham Kenan, graduates of the university. The value of this bequest to the University of North Carolina is more than a million and a half dollars.

FRANCIS A. THOMSON has resigned from the faculty of the State College of Washington to accept the deanship of the school of mines at the University of Idaho, Moscow, Idaho.

DR. WALLACE BUTTRICK, member of the executive committee of the Rockefeller Foundation and director of its China Medical Board, is in England on the invitation of a department of the British government to confer with educators and officials in Great Britain concerning public education.

AT the University of Chicago the following promotions from associate professorships to professorships have been made: Basil C. H. Harvey, of the department of anatomy; Horatio Hackett Newman, of the department of zoology; J. Paul Goode, of the department of geography; Walter Sheldon Tower, of the department of geography. From an assistant professorship to an associate professorship: Arthur C. Lunn, of the department of mathematics.

AT the New Hampshire College A. W. Richardson, of the University of Maine, has been appointed assistant professor in charge of the poultry department to succeed R. V. Mitchell, and G. A. Minges, of Iowa State College, has been appointed instructor in chemistry. The chemistry department has lost two members owing to the war: Professor G. A. Perley has been granted leave of absence for the period of the war and is serving as first lieutenant in the division of chemical engineering, U. S. Army, and Arnold J. Grant has gone to the second Plattsburg Camp.

DISCUSSION AND CORRESPONDENCE

THE PUBLICATION OF SCIENTIFIC RESEARCH

TO THE EDITOR OF SCIENCE: A matter in which there is a considerable divergence between the practise of different laboratories is that of the method of publication of their results. A number of laboratories publish their own bulletins, either as separate papers or as periodical volumes. Others publish in the scientific and technical press, either in one or two journals or in a number of different journals according to the subjects dealt with.

Naturally, the best method of publication will depend to some extent on the nature of the work published and the character of the laboratory. In the case of a purely technical laboratory publishing a large number of papers dealing with one special, technical subject,

the method of publishing separate bulletins mailed directly to a selected list of those interested may be quite satisfactory, but if the publications of a laboratory cover a large range of subjects it would seem to be preferable to publish each paper in the journal which deals with the department of science most akin to that of the subject dealt with. If this is not done, there is a grave danger that the paper may be missed by the abstract journals and may fall out of sight altogether, while in any case the publication of single bulletins throws a heavy burden on any investigator engaged in compiling a bibliography of a subject.

In this laboratory we have confined the publication of our scientific communications to the recognized technical and scientific journals, and I find that our first fifty communications have been published in no less than seventeen different journals, twenty-eight being published in journals relating to some branch of physics, five in chemical journals, and seventeen in photographic publications.

Since it is an advantage for all the papers issued from one laboratory, which, naturally, have a common interest, to be available in some collected form, we issue periodically bulletins containing abridgments of all our scientific papers, the second volume of these bulletins containing the papers published during 1915 and 1916 being now ready.

It would be of interest to learn the views of others interested in this question as to the relative advantages of the issue of separate bulletins as compared with publication in the current press.

C. E. K. Mees

Research Laboratory,
Eastman Kodak Company

POPULAR SCIENCE

Unwarranted deductions have been drawn in a recent popularization of science by one of our eminent paleontologists, Dr. H. F. Osborn, not however in his own field, but in a special field apparently unfamiliar to him. Lest others may be misled into thinking that the deductions are based on good evidence, may I be permitted space to call attention to them.

Dr. C. D. Walcott has recently reported[1] the discovery in an Algonkian limestone of fossils having appearances and associations which give valid reasons, though not positive proof, for thinking them to be bacteria. The finding of these fossils in a limestone rock in association with fossil algæ as well as other related facts lends support to his previous suggestion[2] that this limestone was probably partially deposited by bacterial action in a manner similar to that described by G. H. Drew[3] as taking place to-day in the tropical waters about the Bahamas. A reference back to the article by Drew shows that the bacterium which he found causing the deposition of $CaCO_3$ is a denitrifier which he has named *Bacterium calcis*. It is an organism similar to other denitrifiers, possessing the power to reduce nitrates to nitrites with the later disappearance of the nitrite accompanied by the formation of ammonia and a gas which, from the few simple tests made, was in all probability free nitrogen. Like other denitrifiers, this organism was found to possess the power of utilizing organic carbon in the form of sugars and even possessed the power of secreting ectoenzymes capable of liquefying organic nitrogen compounds like gelatin. The precipitation of the calcium carbonate is explained as due to the increase in the concentration of CO_3 ions caused by the advent of $(NH_4)_2CO_3$, which is partially ionized into NH_4 and CO_3 ions.

If the validity of the evidence that the fossils found are bacterial in nature is admitted, and it is assumed that the particular fossils in question are of the organisms which were instrumental in having caused the deposit of limestone, then the deduction might be drawn that these fossils are those of denitrifying bacteria. The fact that Dr. Walcott refrained from making this deduction is quite probably due to the fact that he had a feeling that it would be based on too many "ifs."

Turning now to the article by Dr. Osborn[4]

[1] *Proc. Nat. Acad. Sci.*, 1: 256–257, 1915.

[2] *Smiths. Misc. Coll.*, 64: 76–156, 1914.

[3] Papers from Tortugas Lab., 5: 8–45, 1914, Pub. 182, Carn. Inst. Wash.

[4] *Sci. Monthly*, 3: 289–307, 1916.