sure of the number of undestroyed specific combining regions, that is, of the remaining antibody activity. It is our opinion that methods such as the neutralization of toxin by antitoxin are more satisfactory than the precipitation reaction for following the destruction of antibody activity.

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GENERAL BIOLOGY

THE discussion of Report number 15, of the U. S. Office of Education, in a recent number of SCIENCE,[1] brings into contrast two points of view about "biology." Professor Alexander no doubt believes that biology is some sort of unit in the fields of knowledge. Biology has often been represented to be a subject similar to chemistry, with various aspects, to be sure, just as in the case of chemistry. All the discussion of general biology, as contrasted with other sciences, shows a fundamental misconception of its nature. The existence of the word "biology" does not mean that there is a well-unified science which can be so designated. Biology can not be set down beside chemistry, physics, mathematics, etc., as on an equal footing with them. The term which is correlative to "the biological sciences" is "the physical sciences." Would it be an improvement to the teaching of physics, chemistry, mathematics, meteorology, geology, astronomy, etc., to concoct an extraction of all of them, and present it as a preferred introduction to those fields?

Most of us from our own experience must believe that it is necessary to treat mathematics by itself, as perhaps the most fundamental science; and that the other physical sciences are best presented in major courses dealing with their own material in their own way. They do not neglect mathematics, but supplement it, and put it to use in innumerable ways. The biological sciences have long been sinned against, even by our highest bodies of scientists, by trying to coerce them into some kind of hodge-podge unit. It is an encouraging sign that the U. S. Office of Education has found courage to print the report of the committee. Too long have the courses in general biology been a fraud against the student. Botany is a unified subject, coordinate with chemistry. Zoology also is a unified subject coordinate with chemistry. Either of these life sciences has as many subdivisions of its material as are found in *Chemical Abstracts*, for instance.

A better day will dawn for the biological sciences when it is fully recognized that there is no such thing as a science called "biology," any more than there is a science known as "physical science." These expressions represent great groups of sciences, and it is no wiser to present "general biology" instead of botany and zoology, than to present "physical science" in lieu of mathematics, physics and chemistry. The general biologists have been fooling themselves and the world of education far too long.

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[1] SCIENCE, n. s., 99: 78–80, 1944.

APPEARANCE OF MENDEL'S PAPER IN AMERICAN LIBRARIES

THERE has been considerable interest among geneticists since the turn of the century in the "rediscovery" of Mendel's epoch-making studies of the laws of inheritance. Mendel's well-known paper, "Versuch Ueber Pflanzen Hybriden," was published in Volume 4 of the Naturforschender Verein, Brünn, Austria, in 1865. It would be interesting if we knew all the reading Mendel did of the writings on inheritance and also the contacts he made both personally and by letter with contemporary scholars interested in heredity. Morgan (SCIENCE, page 262, 1932) rightly places emphasis upon what had been learned as to the inheritance of characters in the pea by Goss and Knight 42 years before the above paper by Mendel was published. Naudin's studies also antedate Mendel's work by two years or so.

Mendel's paper apparently remained unknown to most of that group of European workers in near-by countries who would have best understood the significance of his results. It remained for the geneticists of a later generation to find and evaluate Mendel's work. Frequent mention has been made of the "rediscovery" of Mendel's paper in 1900 by deVries, Correns, Bateson and Tschermak. To the credit of American geneticists note should be made of the fact that L. H. Bailey included a reference to Mendel's work in a paper on cross breeding and hybridizing in 1892. DeVries learned of Mendel's work from this bibliography (see "Plant Breeding," by Bailey and Gilbert, page 155, 1915). Bailey was using the Harvard Library from 1881 to 1885 while working with Asa Gray but had learned of Mendel's work from reading Fooke rather than from seeing Mendel's paper direct.

Since one sometimes detects a slight note of reproach from American geneticists because European workers had overlooked Mendel's work for so long it occurred to the writer that it would be of interest to know when and where Mendel's paper might have been available in American libraries before 1900. To this end it was noted that in the second edition of the Union List of Serials (1943) 21 libraries list Volume 4 of the Brünn Society. Inquiry by letter to each of these libraries as to the date Volume 4 was available

for reference brought out the following rather surprising situation:

Academy of Natural Sciences of Philadelphia	1867
American Academy of Arts and Sciences, Boston	1867
Boston Society of Natural History	1867
U. S. Army Medical Library, Washington, D. C.	1871
Harvard University Library	1878
Yale University Library	1882
Library of Congress and Smithsonian Institution	1883
U. S. Department of Agriculture, Library	1896
New York Public Library	1897
Columbia University Library	1898

This list may not be complete and does not, of course, include possible personal copies which may have been sent at that time direct to individual American scientists.

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CONTINUATION OF THE PROGRAM OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

IN 1943, the writer published "An Index to the Opinions of the International Commission on Zoological Nomenclature."[1] Publication of the index was preceded by an extended correspondence (1934 to 1943) with the late Dr. Charles Wardell Stiles, formerly secretary of the commission, and officials of the Smithsonian Institution, which published Opinions 1 to 133. Typescript of the index was placed in the hands of the publishers early in March, 1943, and the material was in type when SCIENCE for July 2, 1943, carried the first note which had come to the writer's attention regarding continuation of the Opinions by the International Commission through its publication office in London.

In a letter from Mr. Francis Hemming, secretary of the commission, under date of January 4, 1944, the writer's attention was directed to certain statements in the introduction to the index which were held to contain "inaccurate and damaging statements regarding the position of the International Commission." The statements thus referred to included an honest, if possibly unsound, expression of doubt as to the possibility of future continuation of the programs of the congress and the commission because of factional difficulties which seemed to threaten effective operation of either the congress or its commission on nomenclature. Evidence to the contrary was not available at the time the manuscript was prepared.

It is now obvious that the obstacles to further cooperative effort were not insurmountable. The commission began an independent program of publication of additional opinions in 1939, and thanks to the industry and vision of the members of the commission, and especially its secretary, Mr. Hemming, "The Bulletin of Zoological Nomenclature" was established in 1943 as a clearing house on problems of zoological nomenclature.

The university library placed a standing order for both the *Bulletin* and the *Opinions* immediately upon receipt of information regarding their availability in July, 1943, but because of obvious transportation difficulties the first issues of the *Bulletin* were received in November and the first shipment of the *Opinions* came through in January.

Through the *Bulletin* it is a matter of record that beginning in 1939 an active program of publication of *Opinions* beyond the 133 incorporated in the index was well under way and that by October, 1943, *Opinions* 134 to 147 had been issued and eleven additional opinions rendered by the commissioners had not yet been given publication. However, knowledge of the existence of the *Bulletin* and of the start of the new volume of *Opinions* was not generally available to American zoologists until the July 2, 1943, issue of SCIENCE carried the memorandum by Dr. James E. Peters.

It is with the deepest appreciation that American zoologists view the continuation of the international cooperation in nomenclature. Any misleading statements which the writer may have made regarding cessation of such activity were unintentional reflections of personal opinion, inadvertently inaccurate because facts to the contrary were not available at the time the Index was prepared.

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SCIENTIFIC BOOKS

GARDEN ISLANDS

Garden Islands of the Great East. Collecting Seeds from the Philippines and Netherlands India in the Junk "Cheng Ho." By DAVID FAIRCHILD. 239 pp. Many illustrations. New York: Charles Scribner's Sons. 1943.

THE reviewer of David Fairchild's new book is somewhat in the position of one required to describe, in prose, the merits of a poem. It is impossible, in a brief account, to do justice to the excellence of the narrative and the interest of the topic. The Malay Archipelago of Wallace, in spite of all the changes due to man, still includes many islands, and parts of islands, in their original condition, full of new or little-known plants and animals. The Malay flora is extraordinarily rich in species of woody plants, and

[1] *Amer. Midland Nat.*, 30(1): 223–240.