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