No. II. The history of the second known reversed winter flounder is as follows: Late in October, 1943, Charles Sciarini, of the Borough of Queens, New York City, hooked this fish in Shinnecock Bay on the ocean side of Long Island. He recognized it as an "oddity," took it home and with good judgment put it in the refrigerator. In December, his father, Louis D. Sciarini, in some way, learned that I was interested in abnormal fishes, and called me on the telephone to say that he had a "left-handed" flounder that ought to be right-handed, and that he wanted to know about it. I explained and said that I wanted this fish badly. He then said that he would keep it frozen until he could send it in to me.

Some time in January, 1944, Charles Sciarini brought to me this fish, at that time the only extant specimen of a reversed *Pseudopleuronectes americanus* in any collection. And with it, for comparison, he brought a small normal specimen. But for the good judgment of father and son in keeping this fish frozen, this precious specimen would have been lost to science. After being in alcohol for about 21 months, it measures 6.4 inches in standard and 9 inches in total length, and 3.3 inches in depth (body only). Its weight is 4 ounces.

Specimen No. III. Our second fish was caught on June 10, 1945, by Fred Sterzenback, of Ridgewood, Brooklyn, N. Y., out of Freeport on the ocean side of Long Island. The fish was taken on a hook baited with a clam, and behaved like the other and normal flounders. After nearly 5 months in alcohol, it measures 9.4 inches in standard length and 11.4 over all, and is 4.5 inches deep (body only). Its weight is 9.5 ounces. Except for being reversed it, like the other reversed fish, is entirely normal in all other respects.

Our specimens are young fish. In waters contiguous to New York, the winter flounder is known to reach a length of 20 inches and a weight of 5 pounds, but the average is about 15 inches and 1.5 pounds for a good-sized fish.

In a postscript to my article, "Reversal in Flatfishes" (1935), I noted that, while that article was in press, two reversed ambicolorate halibuts, and two reversed flounders (summer and winter) had been received at the Museum, and that all these would presently be described. This was done for the two halibuts and for the summer flounder, but not for the winter flounder.

It being at that time the second known reversed fish of its species, and the easiest to describe, naturally should have been the first worked up. However, this was not done. And now this fish can not be found in the tank in which all abnormal fishes are kept, nor are any notes available.

How rare reversed specimens of *Pseudopleuronectes americanus* are may be gathered from the following statement from Dr. Daniel Merriman, Director, The Bingham Oceanographic Laboratory, New Haven, Conn.:

> During the detailed analyses of the Connecticut trawl fishery carried out by the staff of the Bingham Oceanographic Laboratory at Yale, in the last two years over 11,000 winter flounders have been examined for at least weight, length and sex, and frequently scales and otoliths have also been taken on these specimens. Approximately 3,000 more have had lengths and weights taken on them, and approximately 3,200 more have been tagged and measured. So far as we are aware, none of those fish have been reversed, and I think that it can be stated with reasonable assurance that had any of them been reversed we could hardly have failed to notice it. With the exception of the tagged individuals these fish were all examined in the laboratory where they came under the scrutiny of at least several members of the staff. Apart from all the above mentioned fish, we have handled countless thousands aboard the commercial fishing vessels, and have not noticed any reversed individuals. Of course the handling of fish in the field means that they were not subject to such close scrutiny as those that passed through our hands in the laboratory, but it seems to me that the conclusion that the incidence of reversed winter flounders is *extremely low* is inescapable.

With reference to the areas from which these winter flounders came, Dr. Merriman writes that:

> The vast majority of our catches came from the Block Island Sound area, a relatively small percentage came from Long Island Sound proper, and a still smaller lot from more distant localities such as the south side of Long Island and the Southern Rhode Island and Massachusetts coast.

The winter flounder is one of the flatfishes with the fewest known cases of reversal. On the other hand, the starry flounder, *Platichtys stellatus,* a right-sided cold-water species, of the north Pacific, has the greatest number of reversed individuals for any member of the order Heterosomata. Hubbs found the percentage of rights and lefts of this fish in California waters to be 50–50. In Alaskan waters 75 per cent. were lefts, while in Japan the fish was 100 per cent. left-handed. Why some flounders are reversed, and why there should be this great diversity of reversal in the starry flounder has not been explained so far as I know.

E. W. GUDGER
AMERICAN MUSEUM OF NATURAL HISTORY

AID FOR WAR-DAMAGED SCIENTIFIC LIBRARIES

THE appeal of O. W. C. Herre in the issue of SCIENCE for December 7 for aid in rebuilding the scien-

tific library of the Bureau of Science in the Philippines, which "the Japanese wantonly destroyed," suggests that there is an additional way in which libraries damaged by the aggressor nations could and should be repaired. Germany and Japan, to be sure, can not make adequate financial reparation, but their surviving scientific books and journals can replace at least some of those that they have destroyed in allied and "neutral" countries. The control that we now possess over the resources of these two countries should make it feasible to bring about this adjustment. Possibly this reparation in kind is already being arranged—if so, so much the better. If not, let us hope that it will be urged upon the allied governments by appropriate scientific organizations.

E. B. KRUMBHAAR
UNIVERSITY OF PENNSYLVANIA

OSTEOPATHY AND UNIVERSITY PRESIDENTS

To the Signatories to the Petition to President Truman for the Deferment of College Science Students

DEAR SIRS:

IN the November 16th issue of SCIENCE appears a letter signed by you and seven other educators appealing to President Truman to alter certain current Selective Service practices. Although I am in hearty sympathy with the motives which undoubtedly prompted your action, I am, nevertheless, impelled to protest vigorously about one element in your statement which casts a serious shadow over the entire document.

In the second paragraph you mention, as deserving deferment, students of "osteopathy" in the same general category with students in such recognized disciplines as medicine, dentistry, pharmacy and engineering. To do so stultifies the entire argument because no American university recognizes osteopathy as a scientifically based healing art, and there is no reason to believe that the biological science faculties of the institutions you represent consider the system of osteopathy to be other than a fraud upon a gullible public. The stupidity or cupidity of some Selective Service official in originally classing students of osteopathy with the others you have listed in granting deferment several years ago is not an adequate excuse for responsible officials of respectable institutions of learning to compound the error now. When university and college heads plead for special consideration for students in the various cults of this type our academic standards and ethics have fallen to a new low. Since when has expediency superseded principle in academic practice? And since when have the institutions you represent and administer given their academic blessing to medical cultism? If those universities, including California, Cincinnati, Cornell, New York University, Vanderbilt and Yale, among others, intend to promote osteopathy it is certainly time for American medical and other biological scientists to take stock of their position.

Actually I am confident that the unfortunate implications of the naming of osteopathic students in this way were not apparent to most of you. Nevertheless, the seriousness of its occurrence, even by inadvertence if such it was, can not be over-emphasized in a world in which the layman looks to science for miracles and can not distinguish between scientific fancy and fact because of an inadequacy of background information which, right or wrong, he looks to persons like yourselves to possess and use.

MAURICE B. VISSCHER
DEPARTMENT OF PHYSIOLOGY,
UNIVERSITY OF MINNESOTA

SCIENTIFIC BOOKS

THE NATURE OF SPECIES

Experimental Studies on the Nature of Species. II. Plant Evolution through Amphiploidy and Autoploidy with Examples from the Madiinae. By JENS CLAUSEN, DAVID D. KECK and WILLIAM M. HIESEY. Carnegie Institution of Washington Publ. 564. vii + 174 pp. 86 figs. 1945. Paper, $1.25, cloth, $2.00.

THE purpose of this valuable and stimulating contribution is the classification of polyploids in terms of the "biosystematic" categories already made familiar by the same authors: the ecotype, the ecospecies and the cenospecies. The origin and characteristics of three synthesized amphiploids are first described, one of which is found in nature. Then follows an examination of other polyploids and the classification proposed. This in turn is followed by discussions of the ecological characteristics of both autoploids and amphiploids and the course of evolution when polyploidy is involved.

The authors "propose to limit autoploidy to the multiplication of genomes within the limits of one ecospecies. By this definition, *autoploidy* applies to cases ranging from the homozygous individual with multiplied chromosome number, at one extreme, to the polyploid derivatives of a hybrid between subspecies or ecotypes of a species of the other. *Amphiploidy,* in contrast with autoploidy, is the addition of all the