trition in a Changing World." The following day a series of papers on various aspects of nutrition is planned. There will be a dinner at 7 P.M., at which Dr. V. P. Sydenstricker, of the University of Georgia, will give an address on "War-time Nutrition in England." On Saturday morning a panel discussion will be led by Dr. Lydia J. Roberts, of the University of Chicago, on "Teaching Nutrition Material to Elementary School Children."

THE Society of Rheology and the Polytechnic Institute of Brooklyn will hold a joint research conference on "The Present State of the Kinetic Theory of Rubber Elasticity" on Saturday, April 3, at 10:30 A.M. at the institute. The program includes a paper by Dr. M. L. Huggins, of the Eastman Kodak Company Research Laboratory, Rochester, N. Y., on "Statistical Treatment of Long Chain Molecules," and by W. L. Wood, of the National Bureau of Standards, on "The Present Experimental Aspect of Rubber Elasticity." These papers will be discussed by authorities in the subjects.

THE Executive Board of the American Public Health Association announces that the association will sponsor a three-day Wartime Public Health Conference in New York City on October 12, 13 and 14. The seventy-second annual business meeting of the association will be held in connection with it. The program will be devoted exclusively to wartime emergency problems as they affect public health and the public health profession.

ACCORDING to the *Journal* of the American Medical Association the research prize of $500 of the American Urological Association will not be awarded this year and plans for the June meeting in St. Louis have been cancelled. The American Association for the Study of Goiter has postponed all meetings for the duration of the war. All officers will hold their positions until the next meeting of the association. The 1943 session of the American College of Chest Physicians has been cancelled.

The Times, London, reports that at a meeting of the Royal College of Surgeons of England, Dr. J. Newman Morris conveyed a message of greetings from the Royal Australasian College of Surgeons. In return the president handed to him, as a token of friendship to the sister college, a First Edition (1664) of Willis's Anatomy, the illustrations of which are by Sir Christopher Wren.

DISCUSSION

THE FUNDAMENTALS OF SALMON CONSERVATION[1]

THE conservation of the salmon fisheries is a matter of momentous importance in view of a promise of a real food shortage in the not too distant future. In addition to this we owe it to posterity to preserve the anadromous fishes since it is through these fishes that the vast oceanic plankton is in part made available, which is otherwise unavailable as food for man.

The most efficient conservation methods can be developed only through an understanding of the fundamental factors affecting the migratory movements of these fishes.

It has now been shown that salmon and certain other fishes do respond to a carbon dioxide tension gradient.[2,3,4] That there is more than a probability that there is a carbon dioxide tension gradient from the spawning streams to the oceanic feeding grounds has been demonstrated.[5] Powers and Clark[4] have shown that the brook trout and the rainbow trout not only respond to very slight carbon dioxide tension gradients but that these fishes respond to the carbon dioxide tension gradient through receptors located in the lateral line organs.

It now remains to put the culminating tests to the salmon themselves. This can be done by two simple methods. First, the gradient tank technique can be employed to determine the capacity of the adult salmon, with and without lateral line nerves bilaterally sectioned just distal to the gills, to respond to very slight carbon dioxide tension gradients. Second, as in the past homeward bound salmon could be tagged and liberated. The lateral line nerves could be bilaterally sectioned just distal to the gills of one out of each two salmon tagged. If the salmon do find their way back to their home stream through a response to a carbon dioxide tension gradient through receptors located in the lateral line organs, the salmon with lateral line nerves bilaterally sectioned should be less apt to find their home stream than those with their lateral line nerves intact. The only complicating factor that might be involved would be the gregarious habits of the salmon. Even then those with lateral line nerves bilaterally sectioned should be less apt to find schools and in turn would be more apt to be lost from schools than those with lateral line nerves intact.

Since the author will most likely never be permitted to carry out these tests himself, he is publishing these suggestions in the hope that these tests will be made

[1] Contribution No. 10, Department of Zoology and Entomology, University of Tennessee, Knoxville.

[2] V. E. Shelford and E. B. Powers, *Biol. Bull.*, 28: 315, 1915.

[3] E. B. Powers, *Publ. Puget Sound Biol. Sta.*, 22: 1, 1921.

[4] E. B. Powers and R. T. Clark, *Ecology*, 24: 100, 1943.

[5] E. B. Powers, *Ecology*, 22: 1, 1941.

by workers now in the field since there is a minimum of additional expense and effort involved.

EDWIN B. POWERS

UNIVERSITY OF TENNESSEE,
KNOXVILLE

A PLEA

THIS is a plea from one who likes, occasionally, to run as he reads. In wartime censorship is vital. In the days of 1918 "somewhere in France" became a familiar figure of speech. But the knowledge concealed by the title of a scientific paper such as "The Genus *Oochoristica* Lühe 1898" conceals nothing of value except from the wistful seeker after knowledge. Only after a study of such an article is he delighted or disappointed to learn that the aforesaid *Oochoristica* is taxonomic sanctuary for "forty-five valid species of tapeworms parasitic as adults in reptiles and mammals." This title confusion is being slowly clarified, but there is another which is much worse.

I have just read that a certain copepod in which I was interested was taken in two hauls, one in 11° 18′N, 78° 34′W, and the second 6° 32′N, 80° 04′W, but only detailed search through a footnote or time-consuming labor with an atlas and a pair of dividers reveals the important fact that the hauls were made in different oceans.

I have often wondered whether I am alone in abyssal ignorance of the relative positions of such localities as 40° 33′N, 74°W, and 40° 33′S, 74° E, or whether there are others who are grateful for the trouble I have always taken in adding to 39° 15′N, 72°W and 2° 59′N, 78° 11′W, the sub-titles, 125 miles S E of New York City, and Gorgona Island, Colombia, respectively.

WILLIAM BEEBE

NEW YORK ZOOLOGICAL SOCIETY

RUSSIAN NAMES

IN SCIENCE of February 19, p. 178, Professor Neugebauer gives a useful list of recent contributions to pure mathematics in Russia. This list could and should be extended to other contributions of value, printed periodically in the "Doklady" of the Soviet Academy. They are in excellent English (or French), and relate to physics, chemistry and all branches of natural history. However, the direct object of these few words is to call attention to the need of a definite rule in the transliteration of the Russian names. The faults in the list given in this respect are not those of the referent, but they are faults nevertheless and should be avoided in our publications.

The rules are simple enough. There is no "w" in the Russian alphabet, but only "v"; the letters "f" or "ff" never in Russian end a name, the terminal consonant being invariably "v"; and the "tsh" or "tch" is generally "č," with the exact sound of the "ch" in "cherry." As it is, the terminal "v" in the names quoted is given four times correctly, five times as "w" and four times as "ff"; while the "č" (now written thus not only in the Slavic languages but also in the German and occasionally even in the English) is given in most cases as the clumsy "tsh" or "tch."

As the use of the Russian names by American scientists may well be expected to go on increasing, it would seem only sensible to adapt definite and correct rules for their transliteration, even if the errors should come from Russia itself or from the authors. The latter I found endeavor often to conform to what seem to be the wishes of their English-speaking colleagues.

A. HRDLIČKA

SMITHSONIAN INSTITUTION,
WASHINGTON, D. C.

SPECIAL CORRESPONDENCE

THE WAR MANPOWER SITUATION IN PHYSICS

THIS statement should be read in connection with the item entitled "Suggestions from the Office of Scientific Personnel of the National Research Council" which appeared in the January 1 number of SCIENCE and which called attention to the need for recruiting teachers of physics from the ranks of other departments or from other sources. Only in this way can bidding among institutions be prevented, which would make more difficult the meeting of the shortage. In each department there must be a nucleus of regular teachers if it is to successfully assimilate the additional staff.

It is now possible to say definitely that, on the average, for every physicist engaged in college teaching in January of this year there must be at least one and one half teachers of physics recruited from other sources. This ratio is based on official information regarding presently available teachers of physics and the number of teachers needed adequately to take care of the urgent demands that will be made by the Army and Navy training programs, as well as what will remain of normal programs. In view of this situation, no institution has a right to recruit teachers of physics from any college which is at all likely to have a training unit or to have a sufficiently large enrolment of women, younger men and physically disqualified men to justify the continuance of the department. If, after the training programs are under way, any institution has a ratio of genuine to "ersatz" teachers of physics higher than one to one and one half, it will find itself open to severe criticism if any of the ex-