in large measure that the lay members of our board have been chosen. They are in better position to judge regarding the incidence of science upon human welfare than the scientific members of the board, who are perhaps too closely involved in scientific activities.

I have all confidence that in the years to come the National Science Fund will fulfil a needed service both to those of philanthropic intent and to the scientists, and through these two groups to the welfare of mankind.

# OBITUARY

## CHARLES BRANCH WILSON

**October 20, 1861–August 18, 1941**

THE unexpected, yet quiet passing of Dr. Charles Branch Wilson, of Westfield, Massachusetts, in the early hours of the eighteenth of August was a profound shock to all of us who knew him personally and a grievous loss to the science of marine biology that we shall probably not see made good in our lifetime, and perhaps not in several lifetimes to come.

In his comprehensive knowledge of the free-swimming marine and parasitic copepods, which comprised his more specialized field of study, Dr. Wilson was without a peer. He was one of the last of that outstanding, more or less contemporary group of the great monographers of the marine copepods which included such famous men as George Stewart Brady, James Dwight Dana, Wilhelm Giesbrecht, George Ossian Sars and Thomas and Andrew Scott (father and son, respectively).

From 1896 to 1932 Dr. Wilson was head of the science department of the State Teachers College at Westfield, where he carried on many of his researches. It is to the everlasting credit of the college and those connected with its administration that he was permitted to continue in his laboratory there from the time of his retirement in 1932 until his death. Without those congenial and studious surroundings of which he was so intimate a part perhaps the three great works of his later, retired years, still in manuscript form, but complete and now awaiting publication at the U. S. National Museum and the Carnegie Institution of Washington, might never have been accomplished.

The first of these manuscripts, and perhaps the most important in Dr. Wilson's own opinion, deals with the copepods of the marine plankton taken on the last cruise of the ill-fated non-magnetic yacht, *Carnegie*. This report, which was submitted for publication several years ago, for the first time in the history of oceanography gives the directly comparable results of simultaneous three-level tows made in all oceans with identical gear, accompanied by full station data, including temperature, salinity, density, phosphates and hydrogen ion concentration. In his painstaking tabulation of the species of copepods in every haul and their abundance at each of the three levels investigated, involving the microscopic inspection of many thousands of individual copepods, Dr. Wilson has made available a biologic record of a group of organisms of highest importance in the economy of the seas such as has never been achieved by any marine expedition.

The second of these manuscripts completes the study of the last remaining unidentified parasitic copepods in the national collections, describing 6 new genera and 15 new species. Through the almost unaided efforts of Dr. Wilson, the National Museum now possesses the most comprehensive collection of parasitic copepods in the world.

The third and last of these manuscripts sets forth the results of his study of the copepods of the plankton and dredged material amassed during the greater part of the useful life of the former U. S. Fisheries Steamer *Albatross*. In time this covers nearly a quarter of a century, from 1887, when the *Albatross* made her memorable passage from the Atlantic to the Pacific by way of the Straits of Magellan, to 1910, which marked the close of the three-year *Albatross* Philippine Expedition. This monumental report makes important additions to the records of distribution of 469 species of copepods, describes 32 new species, and describes the hitherto unknown opposite sex of twenty-eight.

Dr. Wilson was active to the very eve of his death. Scarcely twenty-four hours before his passing I had the great pleasure of visiting him. At that time he went over with me some of the work that he was engaged in at the moment, pointing out some of the high lights in these manuscripts and showing me his very complete notes and records of the known species of copepods and the incomparable library of copepod literature that he had built up in the course of a busy lifetime.

Just five days later it became my sad duty to represent the Smithsonian Institution at his funeral. Had I not gone to Westfield for that ceremony I might never have learned how universally well known and beloved Dr. Wilson was by all the townspeople and by all those who ever attended his classes at the college, how varied his interests, how full his life and how much he furthered, and I may say fathered, the educational and social life of the community in which he spent the greater part of his life. His service as a member of the school committee was the longest in the town's annals. He was a devoted churchman,

having given long-to-be-remembered lay sermons or lectures, and was a founder of the town's Get-together Club. He was a most able bowler and a proficient golfer in his day, and was keenly interested in basketball, baseball and, in fact, all outdoor sports. One is amazed to learn that he had time for all these things in addition to his many researches which have given Westfield and its State Teachers College an enviable reputation as a scientific center.

Nine different countries have published one or more of his scientific writings, which comprise not less than 85 titles. Besides copepods, his publications include the results of original researches on the embryology of amphibia, sipunculid and nemertean worms; life histories and economic importance of dragon-flies, damsel-flies, aquatic hemiptera and coleoptera, and freshwater mussels; as well as the results of various biological surveys made chiefly by the U. S. Bureau of Fisheries (now Fish and Wildlife Service) and several school texts and outlines.

Never hurried, he accomplished a prodigious amount of work, and all of it showed evidence of most meticulous care. His manuscripts required as little editorial attention as any ever to be submitted to the National Museum for publication. In this connection, Dr. S. F. Hildebrand recalls an incident at the time when Dr. Robert C. Coker was director of the U. S. Fisheries Station at Fairport, Iowa. On receipt of a manuscript from Dr. Wilson, Dr. Coker called the staff together, in order to show them the manuscript as an example of how a report should be written and how a manuscript should be prepared for publication, so well and beautifully was it done.

Dr. Wilson was one of the most valued scientific collaborators on the rolls of the National Museum. He bequeathed to the museum his library of copepod literature, which is perhaps the most complete of its kind in the world, together with his correspondingly complete card catalogue of copepod names in literature and references to the species dealt with by each author represented in his library.

WALDO L. SCHMITT

U. S. NATIONAL MUSEUM

# SCIENTIFIC EVENTS

## CHEMICAL RESEARCH ACTIVITY

A DECREASE of twelve per cent. in the world's recorded chemical research activity for the first half of 1941 as compared with the first half of 1940 is reported by Professor E. J. Crane, of the Ohio State University, editor of *Chemical Abstracts,* to the American Chemical Society.

The United States produces even in peacetime more than a quarter of the world's output of scientific and technical papers announcing new chemical information. It has as yet shown no noticeable decrease in the publication of the results of research for peacetime purposes.

Although the effects of the present warfare between Germany and the Soviet Republic are not reflected in the figures, the U.S.S.R., like the United States, up to the present has more than held its own. The British and German scientific and technical periodicals, in which a good many chemical papers of the peaceful-purpose type are still being published, average about half their regular size with rather wide variation among individual journals.

Abstracts gathered by systematic examination of more than 3,500 scientific, technical or trade journals published in thirty-one languages and obtained from all corners of the earth, and of the patent literature, number approximately 65,000 in a normal year. The twelve per cent. decrease in the past year may be compared with a drop of ten per cent. in abstracts of papers published in 1940 from the number for 1939. Professor Crane points out:

The reporting of research activity naturally lags behind performance so that war effects will no doubt become increasingly evident. Even so, a decrease of not more than one fifth in peaceful chemical research activity the world over can be safely predicted for war-torn 1941 from the output of the virtually peaceful year 1939. Is that not somewhat surprising?

There has probably not been a great deal of falling off in chemical research considered on the basis of total accomplishment the world over. In such conquered spots as France and Poland there is little or no opportunity or incentive for research. On the other hand, research activity conducted for national purposes and not reflected by publication is obviously in high gear in the countries still at war and in those preparing for the possibility of warfare.

Wide-awake nations recognize the value of their scientific men and they are not putting them in the field. Even so, so-called "all-out" warfare and preparedness, with so many important nations involved, has come very far from killing off chemical research for peaceful purposes. American scientific periodicals remain "fat." Paper shortage is no doubt a factor in the reduction of European journals.

## ALASKAN EXPEDITION OF THE AMERICAN MUSEUM OF NATURAL HISTORY

DR. HARRY L. SHAPIRO, associate curator of physical anthropology of the American Museum of Natural History, has returned after working during the summer at Point Hope, Alaska.