genera and species which will be issued by the Department of Micropaleontology of the American Museum of Natural History.

The books are printed on sturdy paper. Their pages will need to be strong if they are to withstand the constant wear which such indispensable reference volumes are sure to receive at the hands of biologists and paleontologists for many years to come.

B. F. HOWELL

PRINCETON UNIVERSITY

SOCIETIES AND MEETINGS

THE TEXAS ACADEMY OF SCIENCE

ON Saturday, November 9, the Texas Academy of Science closed its three-day annual meeting held at the Plaza Hotel, San Antonio. The Texas Federation of Nature Clubs (Dr. Leo T. Murray, of Baylor University, *president*) and the Texas Wildlife Federation (Dr. Walter P. Taylor, of A. and M. College, regional representative, *chairman*) were cooperating organizations. The meetings included fifteen technical sessions, two public general sessions, three business sessions, six luncheons and special dinners and the annual dinner beside the business, technical and social sessions of the Collegiate and Junior Divisions of the Academy. An estimation of attendance places the number of separate individuals who were present at one time or another at well over one thousand.

Speakers following the Thursday dinner were: Colonel H. A. Finch, U. S. A., on the "Science of National Defense," and Dr. Robert Montgomery, of the University of Texas, on "The Effect of Monopolies on Our National Defense Program."

Following the Friday dinner Dean Oscar A. Ullrich, of Southwestern University, president of the academy, presented his presidential address, "The Adolescence of Social Science." He was followed by L. B. Kingman, of the Federal Bureau of Investigation, who spoke on "The Science of Crime Detection."

The Collegiate division of the academy, which consists of student chapters in the various colleges of the state, held three scientific, a business and a luncheon session during Friday and Saturday. About 100 division members attended.

The Junior division, consisting of high-school chapters throughout the state, presents its main program at the regional spring meetings. This is necessitated by the large area of the state. At the annual meeting only officers' conferences, prize and outstanding papers sent in from the preceding regional meetings, and local papers participate. However, twenty-three papers and a division breakfast appeared on the program.

Local colleges, museums and learned societies of San Antonio all participated in forwarding the plans for the meeting and in contributing to success.

There developed a strong movement, in the interests of forwarding some special plans to be announced definitely later, for maintaining a continuity of 1940 plans through 1941, and Drs. O. A. Ullrich, of Southwestern University, Frederick A. Burt, of A. and M. College, Otto O. Watts, of Hardin-Simmons University, and S. W. Bilsing, of A. and M., who served respectively as president, secretary, treasurer, and representative to the council of the A. A. A. S., will continue in their offices until the time of the next annual meeting. Over 100 new members were elected to membership, and 29 members of one or more years standing were by vote transferred to the list of fellows.

FREDERICK A. BURT,
Secretary

REPORTS

DEFERMENT FROM MILITARY SERVICE OF SCIENTIFIC MEN

THE question of deferment from military service of selected men in six scientific fields in industry and educational institutions is the subject of a report in answer to a request of Clarence A. Dykstra, director of the Selective Service System. It is signed by Dr. Isaiah Bowman, president of the Johns Hopkins University, and Dr. Frank B. Jewett, president of the National Academy of Sciences. The report was prepared under the auspices of the National Academy of Sciences and the Subcommittee on Military Affairs of the National Committee on Education and Defense, created jointly by the American Council on Education and the National Education Association.

The report follows:

Both because your letter asks for a prompt reply and because the entire structure of the defense program is not yet sufficiently developed to indicate the full extent to which scientific personnel should be exempted temporarily or permanently from military service, it is impossible at this time to express an opinion as to the whole field of fundamental and applied science.

All that this statement attempts to do therefore is to cover those fields of science in which the conditions seem clearly to indicate the general course that should be pursued in the best interests of the national defense program. As to the other fields of science, supplementary statements may be issued as soon as they can be more thoroughly studied from the standpoint of general procedure. Individual cases for deferment un-

doubtedly exist in all of them at the present time and more will develop as the defense program expands.

Experience of every nation engaged in the World War and the conditions under which the present conflict in Europe is being waged point directly to the necessity for proper employment of scientific personnel and of those competent to train such personnel, to a continuous supply of newly trained personnel, and to the penalties incident to assigning them in large numbers to purely military service where others without their special training can function equally well.

At the moment, the fields of science in which the present and prospective personnel situation in relation to the needs of the defense program clearly require careful consideration of requests for deferment by both university presidents and heads of industrial laboratories are as follows:

Medicine, dentistry and pharmacy.

Biology, bacteriology and any other branch of biological science which bears directly upon problems of medicine or the public health, safety or interest.

Chemistry.

Physics.

Geology and geophysics, including such specialized fields as meteorology, hydrology and cartography.

Engineering, including civil, electrical, chemical, mechanical, agricultural, sanitary and mining.

You request advice which will be of assistance both to university presidents and heads of industrial laboratories. Their problems of deferment are similar although not identical. The college and university is concerned both with the training of men and in the conduct of fundamental research. The industrial laboratory is concerned primarily only with the conduct of research.

So far as college and university presidents alone are concerned, questions of deferment of both students and faculty are involved in all six fields.

In the training function, the institutions vary as to the extent of specialization in the areas above. Recommendations for deferment should be made for students only in those fields in which the institution is adequately equipped both in personnel and facilities to provide an adequate and comprehensive educational program.

Until July 1, 1941, the situation as to students in science, both undergraduate and graduate, appears to present no immediate problem in view of (4f) of "Selective Training and Service Act of 1940." If further deferment beyond July 1, 1941, for students (particularly graduate) is made possible it may present no special problem.

An exception requiring immediate determination for permanent exemption of students from military field service until after graduation may exist in certain fields, *e.g.*, medicine, dentistry and pharmacy, where there will be large demand for trained men in both the military and civil sectors, and where, because of the character of the training required, a deficiency of supply of qualified personnel can not be made up by intensive specialized training.

Deferment should be requested for advanced undergraduate and graduate students who, in the judgment of the college and university administrators, will be specially qualified to contribute to the defense program if permitted to complete all or a major part of their study before entering the military establishment or a defense industry, or who are required to replenish a depleted instructional staff. Such requests should be on an individual basis and only for those in good standing, majoring in the respective field, and who have completed at least two years of college.

In all six fields university presidents should request deferment of members of the teaching staff who in their judgment are essential properly to maintain the efficiency of the institution in the continuous training of students necessary in the operation of the defense program or in the effective conduct of research and development problems assigned to the institution in connection therewith.

The industrial laboratory and some graduate schools employ trained personnel often in group or team operations which require not only highly skilled individual scientists and engineers but likewise men accustomed to working together in close cooperation. Subtraction of a single key man from such a group may seriously handicap or even substantially destroy the efficiency of the group to function.

The problem of the industrial and university research laboratory concerned with a present or prospective defense program is not only one of retaining an adequate number of highly trained research men, engineers and skilled technicians but also one of maintaining the integrity of research and development teams. This is because industrial research and development is a coordinated group activity.

Research directors should request deferment of highly qualified men whose training and experience are such that their withdrawal will cripple the ability of the laboratory to function effectively in the defense program.

In addition to trained scientists and engineers, the industrial and university laboratory is largely dependent on skilled craftsmen, such as draftsmen, instrument makers, etc. Request for deferment of skilled men in these categories is indicated unless they can be replaced.

FOR THE NATIONAL ACADEMY OF SCIENCES,
FRANK B. JEWETT, *President*
FOR THE SUBCOMMITTEE ON MILITARY AFFAIRS,
ISAIAH BOWMAN, *Chairman*