would be at post-graduate level or its equivalent, research being undertaken by the staff and by selected students, attention being paid to technology as well as the science of aeronautics.

Affiliation to any university is not recommended; rather it is suggested that the college should collaborate closely with the universities, technical colleges, research establishments and industry.

The five main subjects recommended are: Aerodynamics; aircraft structures, engineering and design; aircraft equipment; engines and systems of propulsion, and production, administration and maintenance. There is also planned a department concerned with flight and operations, including full-scale experimental work and flight testing. The conditions of service of the tutorial staff would be comparable with those of a university staff. There would be no entrance examination, candidates being accepted on their merits, after interview.

THE JUNIOR ACADEMY OF SCIENCE OF WISCONSIN

THE University of Wisconsin, in cooperation with the Wisconsin Academy of Sciences, Arts and Letters, is establishing a Junior Academy of Science.

Dr. John W. Thomson, Jr., of the State Teachers College at Superior, has been appointed assistant professor of botany at the university. He will supervise the Junior Academy and will devote his time to the encouragement of scientific work at the pre-college level. The academy has appointed him chairman of its Committee on the Junior Academy, members of which will be high-school science teachers from various parts of the state.

Any student who belongs to a recognized science club in any high school in Wisconsin may become a member of the Junior Academy. It is expected that, for the time being, district meetings will be held among various state high schools. After the war it will meet annually at the same time and place as does the Wisconsin Academy of Sciences, Arts and Letters. The American Association for the Advancement of Science will grant two memberships annually to Wisconsin members in the academy.

FELLOWSHIPS OF THE TEXTILE RESEARCH INSTITUTE OF PRINCETON UNIVERSITY

FELLOWS of the Textile Research Institute of Princeton University now have the opportunity of working toward their doctor's degree at the university, so that it is expected that they will be able to meet the high standards required for admission to the Graduate School. Normally, as with other graduate students, the work for the Ph.D. degree will be completed in three years. Since Princeton does not admit women students the plan is to restrict fellowships to men—at least for the present.

Facilities and a qualified staff for the direction of advanced research will be provided at the institute building. Fellows are expected to devote the time not required in class work to the prosecution of fundamental research in one of the many fields dealing with textiles. Such studies will include investigation of the various physical and structural properties of natural and artificial fibers, of yarns and of cloth. Studies will also be made of the chemistry of fibers, of dyes and of dyeing. Other investigations will be directed toward the understanding and the control of the action of various organisms on textiles.

Contact with industry will be maintained by visits of the fellows to plants and by lectures at the institute by visitors from the industry and by the staff. It is anticipated that in problems of common interest there will be close cooperation with members of the faculty of the university.

The fellowship program is under the supervision of Professor Henry Eyring, acting director of fundamental research, the Textile Research Institute Laboratories, Princeton, N. J.

The fellowships pay $700 in addition to graduate student fees. This is in line with other fellowships at Princeton. The applicant should fill out the regular Princeton fellowship application in order that his qualifications for acceptance by the institute and by the university may be properly judged. This form may be obtained by writing to Professor Henry Eyring. The term started on November 1.

THE FOUNDATION FOR THE STUDY OF CYCLES

THE annual gold medal of the Foundation for the Study of Cycles, of which Edward R. Dewey is director, for the most valuable work on cycles published in 1943, was presented on November 24 to Henry Helm Clayton "for his monumental two-volume work, 'Solar Relations to Weather.'" In this study Mr. Clayton reprints the most important of his earlier papers and adds a new discussion of the problem of solar cycles and their possible effect upon the earth and its inhabitants.

In addition, the publications during 1943 of six investigators in other fields of cycle research are cited with honorable mention.

The presentation was made at the home of Mr. Clayton by Professor Ellsworth Huntington, of Yale University, chairman of the Committee on Awards.

Honorable mention for highly valuable publications on cycles during the year 1943 was made to the following:

To David M. Pratt, for a paper entitled "Analysis of Population Development in Daphnia at Different Tem-

peratures." (*Biol. Bull.*, v. 85, pp. 116–140, Oct., 1943.) This study provides a remarkable analysis of the mechanics by which an internal population cycle can be set up in a fresh water animal without any external cyclic variation.

To V. E. Shelford, who in 1943 published two papers dealing with cycles. One, written in collaboration with W. P. Flint, entitled "Populations of the Chinch Bug in the Upper Mississippi Valley from 1823 to 1940" (*Ecol.*, v. 24, pp. 435–455, Oct., 1943) is important particularly because it carries the history of the harmful insect back more than a century, and shows that the insect cycle is not due directly to any assignable climatic cause such as rainfall, humidity or temperature. On the other hand, it does show clearly that an increase in the number of chinch bugs is closely related to some unexplained stimulation which leads to a remarkable increase in the rate of reproduction. The problem of why this increase occurs is one of the most interesting in the whole realm of cyclic phenomena. It seems to occur not only in chinch bugs but in many other animals.

To Edward S. Deevey for his work, "Additional Pollen Analyses from Southern New England." (*Amer. Jour. Sci.*, v. 241, pp. 717–752, Dec., 1943.) This paper deals with the record of cycles preserved in the deposits of swamps and lakes, and discusses the philosophical implications of the field observations.

To Kirk Bryan and Claude C. Albritton for their paper, "Soil Phenomena as Evidences of Climatic Changes." (*Am. Jour. Sci.*, v. 241, pp. 469–490, Aug., 1943.) This discusses a method of studying climatic cycles which may prove to have wide significance, but which as yet has been only slightly developed.

To R. G. Green for the study, "Virulence of Tularemia as Related to Animal and Arthropod Hosts." (*Am. Jour. Hyg.*, 38: 262, 1943.) This has significance in connection with the effect of epidemics in reducing animal population after they have attained a high density. One of the interesting problems to be settled in the future is the relative importance of an increased rate of reproduction versus deaths from epidemics as the primary mechanism in the coming and going of cycles in animal population.

In addition to the works cited for 1943 attention is called to the remarkable study by Charles E. Elton, "Voles, Mice and Lemmings" (Clarendon Press, Oxford, 1942), which was not eligible for the 1943 awards because of an earlier publication date.

The members of the Committee of Awards as originally constituted are Dr. Charles Greeley Abbot, Smithsonian Institution; Dr. Harold Elmer Anthony, American Museum of Natural History, New York City; Professor Wesley Clair Mitchell, Columbia University; Professor V. C. Wyne-Edwards, McGill University, and Professor Ellsworth Huntington, Yale University, *chairman*.

AWARDS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

AT the sixty-fifth annual meeting on November 29 of the American Society of Mechanical Engineers Edward G. Budd, president of Budd Manufacturing Company of Philadelphia, received the Medal of the Society in recognition of his contributions to the development of the welded all-steel automobile body, his "pioneering development of the 'shotwelding' process and his work in the construction of the lightweight railroad passenger train."

Presentation of the Holley Medal for 1944 was made to Carl L. Norden, of New York, in recognition of "his invention and development of the Norden bomb sight and other valuable devices which should hasten the peace."

Earle Buckingham, professor of mechanical engineering at the Massachusetts Institute of Technology, was presented with the Worcester Reed Warner Medal. Ernest L. Robinson, engineer with the General Electric Company, received the Melville Prize Medal for original work. Dr. George W. Lewis, Washington, aeronautics authority, and Martin Goland, Jr., of the Curtiss-Wright Corporation, were awarded the Spirit of St. Louis Medal and the Spirit of St. Louis junior award, respectively.

Ralph Edward Flanders, president of the Federal Reserve Bank of Boston and president (on leave) of Jones and Lamson Machine Company, of Vermont, won the Hoover Medal, a joint award of the societies of Mechanical, Civil, Mining and Metallurgical and Electrical Engineers.

Honorary membership in the society was conferred on Dr. Charles M. Allen, professor of hydraulic engineering at the Worcester Polytechnic Institute; Major General Levin H. Campbell, Jr., chief of ordnance, United States Army; Gano Dunn, president of J. G. White Engineering Corporation; Rear Admiral Emory S. Land, chairman of the United States Maritime Commission, and Sir Standen Leonard Pearce, engineer-in-chief of the London Power Company, Westminster. Sir William Wiseman, of the British Embassy, accepted the honorary membership on Sir Standen's behalf.

SCIENTIFIC NOTES AND NEWS

THE first award of the Olney Medal of the American Association of Textile Chemists and Colorists was made on October 14 at the annual meeting of the association in Atlantic City, N. J., to Louis A. Olney, professor emeritus of textile chemistry and dyeing at the Lowell Textile Institute, for whom the medal was named. Dr. Olney is a past-president of the association and is chairman of its research committee. The