ical, electrical, civil and chemical engineers into specialists in aircraft design. Initial enrolment will be approximately 160 students, with the prospect of increases in the future as the companies expand their organizations to handle defense orders from the government. An additional order for Curtiss-Wright planes to be built in Buffalo and St. Louis plants at the cost of $94,000,000 was announced recently while Dean Hollister was in Buffalo making final arrangements to start the training course.

Facing the prospect of a considerable expansion in their organizations, officials of the aircraft companies decided several months ago that it would be desirable to promote members of the present staffs if a way could be found to qualify them for more responsible positions. Most of the expansion in personnel could then take place in the lower grades. "A spontaneous solution to the problem appeared," according to the personnel director of one of the companies, "when Dean Hollister came to Buffalo to learn what Cornell University could do to help the aviation industry in national defense." The companies are supporting the program by offering inducements to qualified employees to take the work and by cooperating with the Cornell faculty in preparing courses of maximum practical benefit to those enrolled.

Among the first contingent of professors to leave Ithaca for Buffalo are Dr. Millard V. Barton, of the Sibley School of Mechanical Engineering, and Dr. Harold V. Hawkins, of the School of Civil Engineering. Their courses will cover the action of external forces on an airplane in flight, stresses in monocoque structures, properties of airplane materials and related technical subjects. Classes will run throughout the year, meeting four nights a week.

The Cornell plan, designed to fill a specific need in the nation's educational program as related to defense, was prepared in cooperation with Dr. Studebaker, U. S. Commissioner of Education, and Dr. Lewis Wilson, of the Office of Education in Albany, both of whom have given it their enthusiastic support.

FELLOWSHIPS IN THE MEDICAL SCIENCES OF THE NATIONAL RESEARCH COUNCIL

FELLOWSHIPS in the medical sciences, similar to those which have been administered by the Medical Fellowship Board of the National Research Council since 1922, will again be available for the year beginning on July 1. These fellowships, supported by grants from the Rockefeller Foundation to the National Research Council, are designed to provide opportunities for training and experience in research in all branches of medical science. They are open to citizens of the United States or Canada who possess an M.D. or a Ph.D. degree, and are intended for recent graduates who are not yet professionally established.

In addition to these fellowships the Medical Fellowship Board announces two new groups of research fellowships, made available through a grant from the National Foundation for Infantile Paralysis, Inc. The first group, open to applicants who hold either the Ph.D. or M.D. degree, is for the purpose of providing opportunities for special training and experience in the study of filtrable viruses. The second group, open only to graduates in medicine who have completed one or more years of hospital experience in clinical surgery and are planning a career in orthopedic surgery, is designed to provide opportunities for training and research in those basic medical sciences which will be of particular value in furthering progress in the field of orthopedic surgery.

Fellows will be appointed at a meeting of the Medical Fellowship Board about March 1. Applications to receive consideration at this meeting must be filed on or before January 1. Appointments may begin on any date determined by the board.

For further particulars, address the Secretary of the Medical Fellowship Board, National Research Council, 2101 Constitution Avenue, Washington, D. C.

THE MIDWEST WILDLIFE CONFERENCE

THE sixth annual Midwest Wildlife Conference will be held at Urbana on November 14, 15 and 16. Under the direction of T. H. Frison, chief of the Illinois Natural History Survey, which this year sponsors the conference, a program is being formulated that includes as speakers well-known wildlife technicians and zoologists from the East as well as from the Midwest.

The meeting will open with a general session in which Rudolf Bennitt, of the University of Missouri, will lead a panel discussion on the unification of conservation practices. Participating in the panel will be Aldo Leopold, of the University of Wisconsin; Charles G. Sauers, of the Forest Preserve District of Cook County, and other conservationists. The panel will be followed by two sessions running concurrently, one on fish and the other on waterfowl, upland game and furbearers. Special clinics on deer and prairie chicken are planned.

On the program for the second day are three concurrent sessions, one on fish, one on waterfowl and a third on upland game and furbearers. New features of the conference are two sessions of a non-technical nature, one for waterfowl hunters and the other for fishermen and upland game hunters, at which wildlife technicians will speak informally and answer questions put to them by the attending sportsmen.

Chairmen of the sessions include Ira N. Gabrielson, director, U. S. Fish and Wildlife Service; Walter H. Chute, director, John G. Shedd Aquarium, Chicago; Warren W. Chase, regional director, U. S. Soil Conservation Service; Arthur D. Hasler, department of zoology, University of Wisconsin, and Miles D. Pirnie, director, Kellogg Bird Sanctuary, Battle Creek, Michigan. H. H. Bennett, director of the U. S. Soil Conservation Service, will address the conference at the annual banquet on November 14.

As already reported in SCIENCE the Natural Resources Building, the new home of the Illinois Natural History Survey and the Geological Survey, on the south campus of the university, will be dedicated on November 15. The Geological Survey is sponsoring a conference on coal, oil, gas and industrial minerals, and will join the Natural History Survey in the dedication ceremonies. Participating will be representatives of the Federal and State Governments, through which construction funds were provided, and of cooperating universities, research institutions and industrial organizations. The dedication address of Dr. Isaiah Bowman, president of the Johns Hopkins University, will be followed by a reception in the new building and by a banquet in the evening.

Originating at Urbana in 1935, the Midwest Wildlife Conference has annually since that time assumed increased importance among wildlife technicians of the central part of the country. States usually represented, in addition to Illinois, are Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio and Wisconsin. This year, Kansas and Oklahoma will send wildlife technicians to take part in the special clinic on prairie chickens planned for November 14.

AWARD OF THE WILLIAM H. NICHOLS MEDAL OF THE NEW YORK SECTION OF THE AMERICAN CHEMICAL SOCIETY

DR. LINUS PAULING, head of the division of chemistry and chemical engineering of the California Institute of Technology, has been awarded the William H. Nichols Medal for 1941 of the New York Section of the American Chemical Society, according to an announcement made by Professor Arthur W. Hixson, of Columbia University, chairman of the medal jury.

Dr. Pauling is cited "for his distinguished and pioneer work on the application of quantum mechanics to chemistry and on the size and shape of chemical molecules." The presentation will be made at a dinner of the section on March 7, at which time he will deliver the annual address of the Nichols medallist. The official statement by the jury giving the grounds for which the award was made reads:

Dr. Pauling has profoundly influenced the whole of chemical thought. His study of "The Nature of the Chemical Bond," appearing last year, was acclaimed by critics as the most valuable work on molecular structures in relation to chemistry published for a number of years. It excited more interest and enthusiasm than any treatise on a specialized topic in chemistry since Gilbert N. Lewis and Merle Randall, of the University of California, published their "Thermodynamics" in 1923.

Dr. Pauling has pioneered in applying quantum mechanics to chemistry. He has done much to explain the manner in which atoms are linked together to form molecules and why certain atoms react and combine differently under different circumstances. His contributions have been technical as well as theoretical. He has developed methods of testing conclusions drawn from theoretical study, and means of measuring the size and shape of molecules.

Because of the chemical rules which have been formulated by Dr. Pauling, chemists are able to predict the reaction of certain molecules under various conditions. His work applies equally to organic, biological and inorganic chemistry. He has shed light on the shape and activity of the protein molecule. By using actual experimentation to check his theoretical explanations of the manner in which atoms in the protein molecule must combine, Dr. Pauling has eliminated a number of hypotheses concerning the shape of the molecule.

It was Dr. Pauling who discovered that a radius of activity could be assigned to each atom; that is, there is a definite amount of space "filled" by each atom with its force. Adjacent carbon and oxygen atoms are therefore usually at a set, determinable distance apart. When this distance varies it is an indication of some force exerting influence. Dr. Pauling has originated methods of accounting for such forces and consequently of explaining in part some of the erratic properties of atoms.

Dr. Pauling has been responsible for the application of the resonance phenomenon to chemistry. This phenomenon accounts for the attraction and repulsion that atoms have for one another, and also in part for the manner in which atoms bind together to form molecules. It aids in explaining valence bonds, the links between atoms.

SCIENTIFIC NOTES AND NEWS

DR. JAMES EWING, emeritus professor of pathology at the Cornell University Medical School and formerly director of Memorial Hospital for the treatment of cancer and allied diseases, was presented with the fourth Clement Cleveland Medal of the New York City Cancer Committee at a dinner given on October 30 in the National Arts Club. The medal was awarded for "outstanding work during the year in the campaign to control cancer."

FOR his article entitled "The Surface of the Nearest