

The development of limbs took place during the Devonian period, when the climate and lack of available food supply on land did not favor terrestrial vertebrate life. The beginning of actual life on land did not occur until the Upper Carboniferous period, very probably during late Pennsylvanian time, when the world climate and the evolution of insects made available the supply of animal food necessary for the existence of terrestrial vertebrates.—W. L. S., JR.

AEC Technical Films

The Atomic Energy Commission has announced that the 45 technical-level, professional motion pictures first screened last September in Geneva at the Second International Conference on the Peaceful Uses of Atomic Energy are available for loan and sale. The 16mm films, most of which are in color, cover major nuclear applications and research activities.

The Geneva films, in general too technical for lay audiences or secondary-school students, bring the total of professional-level, technical films available at the commission's Washington film library to 71 titles, and at 10 field libraries to 63 titles. The Washington and field libraries also have about 70 other less technical films appropriate and available for loan to junior and senior high schools, service and fraternal organizations, industry, and other private and governmental audiences of laymen.

Inquiries for information on loan and sale of the Geneva films to foreign users may be directed to the Public Information Service, U.S. Atomic Energy Commission, Washington 25, D.C. All films are now available in English for sale to foreign applicants and shortly will be available for sale in French, Spanish, or Russian. An overseas loan program is being arranged through the United States Information Agency and its overseas posts, and also through the commission offices in London, Brussels, Paris, Tokyo, and Buenos Aires.

U.K. Atomic Information

In order to make atomic information more easily available, the United Kingdom Atomic Energy Authority has decided to make fuller use of microphotography. The effect of this will be to make all nonsecret reports that have been prepared since 1947 readily obtainable. Complete sets are also being presented to a number of other countries and to certain international agencies. In addition to this, the Authority is increasing its facilities for supplying reports in conventional form as they are prepared. Details of the new methods follow.

Effective 16 February, a large number

of unclassified and declassified reports, which have hitherto been obtainable only on loan from AEA libraries, will be available in micro form. These may be purchased from Micro Methods Ltd., of East Ardsley, Wakefield, Yorks, England. Micro Methods will provide a list of available reports on request.

In addition, paper copies of all currently issued unclassified AEA reports may now be obtained against a running account from the Library, Atomic Energy Research Establishment, Harwell, Didcot, Berks. Subscribers may order all reports issued or those in any of 19 categories, such as biology and medicine, geology and mineralogy, instruments, and so forth.

Robot Seismographic Station

The United States has successfully operated a robot seismographic station that could prove useful in policing an international atomic test ban, the Commerce Department has disclosed.

The station, near Tucson, Ariz., automatically records earth tremors and transmits the information by radio to the Coast and Geodetic Survey's Tucson magnetic observatory, 15 miles away.

The Commerce Department described the station as "among the most sensitive in the United States." It said that "it has detected many earthquakes that would otherwise have been missed."

The successful development of an unmanned seismographic station illustrates one possible method for restoring the dependability of a proposed inspection system for monitoring an atomic test ban, particularly in the detecting and identifying of underground explosions, Commerce Department officials believe.

College Enrollment

Opening fall enrollment of degree-credit students (full-time and part-time) in the fall of 1958 registered its seventh consecutive annual rise, reaching an all-time peak. The total degree-credit enrollment in the fall of 1958 came to 3,258,556—a rise of 190,139, or 6.2 percent, above the figure for the fall of 1957. First-time degree-credit students increased to 781,075—a rise of 51,350, or 7.0 percent. These figures are from the U.S. Office of Education's circular on the 13th annual survey of opening (fall) enrollment in institutions of higher education.

The data for the publication were collected, verified, and compiled in 6 weeks from the time the questionnaire was originally mailed. Usable responses were received from 1897 of the 1903 institutions addressed, a response rate of 99.7 percent.

Role of Director of Defense Research and Engineering

In a directive instrumenting an aspect of the Department of Defense Reorganization Act of 1958, Neil McElroy, Secretary of Defense, has defined the role of the Director of Defense Research and Engineering. This position, now filled by Herbert York, supersedes the old position of Assistant Secretary for Defense (Research and Engineering).

Under the new regulation, the director will supervise all research and engineering activities in the Department of Defense. This would include such major units as the Advanced Research Projects Agency and the Weapons Systems Evaluation Group. The director will have explicit authority to "approve, modify or disapprove programs and projects of the military departments and other Department of Defense agencies." In addition, the director will serve as the principal adviser and staff assistant to the Secretary of Defense in the following fields: scientific and technical matters; basic and applied research; research, development, test and evaluation of weapons, weapons systems, and defense material; and design and engineering for suitability, productivity, reliability, maintainability, and materials conservation.

News Briefs

Last month Britain signed an agreement with the six-nation European Atomic Energy Community for cooperation in the peaceful uses of atomic energy. In signing for Britain, Selwyn Lloyd, the Foreign Secretary, said the pact provided a comprehensive framework through which practical cooperation could take place not only between Britain and the community but also between institutions and industrial concerns in the two areas. The 10-year agreement provides for the exchange of unclassified information between Britain's Atomic Energy Authority and the European Community's Commission.

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Three Soviet scientists arrived in Washington on 11 February to start a 30-day survey of U.S. research developments in physiology and pharmacology of the nervous system. Late in 1958, an American neurological mission of six scientists went to the U.S.S.R. to make a similar study and will confer with the Soviet delegation during their stay in this country.

The members of the Soviet group are Sergey Viktorovich Anichov, professor, head of the department of pharmacology, Sanitary-Hygiene Medical Institute at Leningrad, and spokesman for pharmacology achievements in the U.S.S.R.;

Vladimir Sergeyevich Rusinov, head, department of physiology and pathology of the nervous system, Institute of Neurosurgery of the U.S.S.R. Academy of Medical Sciences; and Vasily Vasil'yevich Zakusov, director of the Institute of Pharmacology and Chemotherapy of the U.S.S.R. Academy of Medical Sciences.

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Federal funds totaling \$6 million were allocated in February by U.S. Commissioner of Education Lawrence G. Dertthick to 1227 colleges and universities in all 49 states, the District of Columbia, Hawaii, and Puerto Rico for the establishment of National Defense Student Loan Programs. With the allocation of these funds, the total amount thus far appropriated for student loans, all nine basic programs authorized by the National Defense Education Act are now in operation. The act was signed by President Eisenhower last September.

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The British Museum passed its 200th anniversary on 15 January. There was no celebration, and the museum staff carried on as usual, cataloging its daily inflow of 1500 publications to be added to the library's some 6 million books.

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A "Report to the Nation" summarizing the progress made during the past 10 years against heart and blood vessel diseases was delivered in Washington on 19 February by the American Heart Association and the National Heart Institute. The report took the form of a review of advances in the cardiovascular field by six eminent physicians and scientists: Howard B. Sprague, Boston; Paul Dudley White, Boston; Irvine H. Page, Cleveland; Robert W. Wilkins, Boston; Michael E. DeBaKey, Houston; and Robert W. Berliner, Bethesda, Md.

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The fourth annual Thomas Alva Edison Foundation Awards for Children's Books included the following in science: *Science in Your Own Back Yard*, by Elizabeth K. Cooper (Harcourt Brace & Co.), as the best children's science book; and *Elements of the Universe*, by Glenn T. Seaborg and Evans G. Valens (E. P. Dutton & Co.), as the best science book for youth. Each winning author received a prize of \$250 and the winning publishers received an Edison scroll.

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The British Atomic Energy Authority plans to build a research station exclusively devoted to the study of thermonuclear power. It will probably be situated near the central atomic research station at Harwell, 50 miles west of London. The original intention was to carry out advanced thermonuclear studies in Winfrith, a deserted rural area 125 miles southwest of London where atomic power specialists already are investigat-

ing high-temperature, uranium-burning reactors. Apparently this plan has been abandoned. It is reported that atomic scientists are unwilling to work at Winfrith.

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The track of Russia's Sputnik II, or Earth Satellite 1957 Beta, between 1 April 1958 and 14 April 1958, the day of its disintegration, is traced in an Air Force report just released through the Office of Technical Services, U.S. Department of Commerce.

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A total of 142 secondary schools, both public and private, in the 49 states are offering courses in the Russian language to about 2400 students, according to a recent survey. There are more than 28,000 secondary schools in the nation, enrolling over 8 million students. The study was made by the National Information Center on the Status of Russian in United States Secondary Schools, located at Brooklyn College. The center was established last May as a result of a conference sponsored by the Modern Language Association of America.

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The Indian Institute of Science, Bangalore, India, is celebrating its Golden Jubilee in 1959. The President of India opened the anniversary year at an inaugural function in February. The institute, the first of its kind to be established in India, has been a pioneer in advanced instruction and research in pure as well as applied sciences.

Grants, Fellowships, and Awards

Bio-sciences. The Sloan-Kettering Division of Cornell University Graduate School of Medical Sciences, New York, has announced a limited number of new special fellowships for study toward the Ph.D. degree in biology, biochemistry, or biophysics. These fellowships are primarily intended for recent baccalaureates, although candidates with some graduate training may also apply. The program is designed to develop scientists of unusual promise for original investigative work in the above fields. Students will have special opportunity to become acquainted with varied phases of the broad research program of the Sloan-Kettering Institute. Each fellowship includes full tuition and fees and a stipend of \$3000 per annum. For details, write to the Office of the Director, Sloan-Kettering Division, Cornell University Graduate School of Medical Sciences, 410 E. 68th St., New York 21, N.Y.

NATO postdoctoral. The Department of State and the National Science Foundation have announced that the foundation has agreed to administer the selection of United States recipients of fellowships in a program recently estab-

lished by the North Atlantic Treaty Organization. The new NATO program will provide post-doctoral fellowships in science for citizens of the NATO countries. The awards are designed to encourage further study in the sciences abroad. For this year, 20 fellowships will be given to United States citizens.

Awards will be made in the mathematical, physical, and engineering sciences, medical and biological sciences, including anthropology and psychology (excluding clinical psychology); and in selected social science fields. Included, as well, are interdisciplinary fields which overlap two or more scientific disciplines.

In view of the sponsorship and objective of the program, recipients are expected, in nearly all cases, to study abroad in a country that is a member of the NATO community. However, awards are not entirely restricted to study in a NATO country, and consideration will be given to those planning study elsewhere.

Evaluation and selection of candidates will be solely on the basis of ability. Applications will be evaluated for the National Science Foundation by panels of scientists appointed by and meeting under the auspices of the National Academy of Sciences-National Research Council.

Stipends for NATO fellowships will be \$4500 for the full year and \$3375 for the academic year. Limited round-trip travel and dependency allowances will be provided.

Applications and detailed information may be obtained from the Fellowship Office, National Academy of Sciences-National Research Council, 2101 Constitution Ave., N.W., Washington 25, D.C. Fellowship applications must be received by the NAS-NRC by 30 March. Awards will be announced on 12 May.

Social work. Students attending any approved graduate professional school of social work that offers a medical social field work placement are eligible for scholarships provided by the National Foundation. The student must be accepted for admission by a school accredited by the Council on Social Work Education but may file application for a scholarship pending acceptance for admission to the school. Deadline for filing applications is 1 April. The student must have the intention of including the medical social field work placement in his educational program and of completing his study for the master's degree. Scholarships are ordinarily offered for the final year of the graduate program, but a few scholarships are awarded to well-qualified students for both years.

Applicants must be citizens of the United States or have filed a petition for naturalization. The age limit is 38.

Scholarships awards are based on the