

engineering and other university-level institutions. At a time of some shortage of industrial workers, more than 800,000 are each permitted two full months of study with all expenses paid."

"The superior student is regarded as a 'hero,' not as a 'grind.'"

"The government shows its deep commitment to higher education in many ways. Scholarships are large in amount and given to from 80 percent to 90 percent of the students so that virtually all of the superior men and women are able to attend. Salaries and perquisites for teaching and research personnel are among the highest in the nation with the consequence that scholarship attracts a very high percentage of the country's most able people."

Supporting the desire on the part of students for higher education is the government's willingness to pay the very high costs that are involved in money, in plant, and in human effort.

"The Minister of Education claims total plant development in the next five years for a resident student population of constant size will exceed one and one-half billion dollars."

"The state's investment in capital plant and equipment has been large and apparently will continue to be. At the most cautious appraisal of the ruble, at least \$200 million have been invested in during the last nine years and construction is still under way."

"Further evidence of the seriousness of Soviet commitment is found in the size and extensiveness of library collections. While a definitive appraisal ought to be undertaken by specialists, it would nevertheless appear that, judged by the most conservative standards and making ample allowance for variations in terminology, the Moscow University library collection is one of the largest in the world. Its new capacity of 12.5 million volumes may well be the largest."

"The University of Leningrad claims 4.5 million volumes, and the large polytechnical institute in the same city is said to receive over 600 foreign periodicals. A relatively small university in Georgia with 4300 full-time students boasts of more than 1.5 million volumes. The University of Middle Asia in Tashkent, established after the Revolution, has but 4000 full-time and 1000 correspondence students, but already has accumulated better than a million volumes."

The report ends its evaluation of the positive side of Soviet higher education with this statement:

"The Soviet Government and its people have dedicated themselves to higher education to a degree which must inspire their allies and give very serious pause to any nation which finds itself in a competitive position."

Grants, Fellowships, and Awards

Cardiovascular research. Applications by research investigators for support of studies to be developed during the fiscal year beginning 1 July 1959 are now being accepted by the American Heart Association. The deadline for research fellowship applications and established investigatorships is 15 September 1958, for grants-in-aid 1 November 1958. Applications may be made in the following categories:

Awards for established investigatorships are made for periods of up to 5 years, ranging from \$6500 to \$8500 yearly for independent investigators.

Advanced research fellowships are awarded for 1 or 2 years to postdoctoral applicants who are not qualified to conduct independent research. The stipends range from \$4600 to \$6500 annually.

Grants-in-aid are made to experienced investigators to help underwrite the costs of specified projects, such as expenses for equipment, technical assistance, and supplies.

Further information and application forms may be obtained from the Assistant Medical Director for Research, American Heart Association, 44 E. 23 St., New York 10, N.Y.

General. Applications for the regular postdoctoral fellowships of the National Science Foundation will be accepted through 2 September. Fellowships will be awarded in the mathematical, physical, medical, biological, engineering, and other science fields, including anthropology, psychology (other than clinical), geography, certain interdisciplinary fields, and selected social science fields. Candidates must be citizens of the United States with special aptitude for advanced training and must hold the doctoral degree or have the equivalent in training or experience. The stipend is \$3800 per year. A limited travel allowance, as well as tuition and fees will be paid. For further information and applications write to the National Academy of Sciences-National Research Council, 2101 Constitution Ave., N.W., Washington 25, D.C.

News Briefs

The Army has had its third success in recovering the nose cones of Jupiter missiles fired from Cape Canaveral Air Force test center. With the latest recovery of a full-sized cone, 17 July, the Army announced that a "satisfactory solution" had been found to the re-entry problem of such missiles. With the aid of a marker balloon, a small light, dye markers, and a radio transmitter, the cone was quickly found by Navy ships in the area and recovered by frogmen.

Nose cones, which shield a warhead

from the heat built up by impact with the earth's atmosphere, have been designed along two general lines, the "heat sink" and "ablation" approaches. The sink type concentrates and contains the heat in a thick copper shield while at the same time slowing the speed of descent by the utilization of shock waves. The ablation system, which is believed to be the one employed in the most recently recovered cone, depends on the gradual peeling or burning off of a number of layers of thin, nonmetallic substances on the outside of the cone.

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A trust fund to honor the late Gordon F. Ferris is being established at Stanford University. The purpose of the fund will be to promote interest and research in entomology by extending financial support to promising young students. Contributions may be made payable to the Gordon F. Ferris Memorial Fund and sent to: The General Secretary's Office, c/o Richard F. O'Brien, Stanford University, Stanford, Calif.

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The population of the world may rise to 4000 million or more by 1980 and to 6000 or 7000 million by the end of the century, according to a new United Nations study on future population trends. The mid-century world population is estimated at 2500 million. The report, entitled *The Future Growth of World Population*, was prepared by the Population Branch of the United Nations Bureau of Social Affairs.

Scientists in the News

SELMAN A. WAKSMAN will retire next month as director of the Rutgers University Institute of Microbiology, the organization at which he did his Nobel Prize winning work with antibiotics. He will be succeeded in that post by J. OLIVER LAMPEN, who is currently director of the division of biochemical research at the Squibb Institute for Medical Research.

Waksman, who was born in Russia, came to the United States in 1910 and entered Rutgers as an undergraduate a year later. He took his B.S. and M.S. there and his Ph.D. at the University of California. In 1918 he joined the faculty of Rutgers and has been a member of it in various capacities ever since.

The work which resulted in the discovery of streptomycin in 1943, the basis for the Nobel award, had its roots in the soil microbiology studies which Waksman began while he was a Rutgers undergraduate some 30 years before.

JAMES L. KASSNER, professor of chemistry at the University of Alabama School of Chemistry since 1929, has been appointed to the new Robert Ramsay