

to pervade these people. Our gifts and food, though highly valued, were received with little display of emotion. During the time we were with the clan seldom did even the suspicion of a smile cross their faces. They never once raised their voices in anger, fear or joy. They seemed to talk among themselves only when the necessity arose. Their life was indeed one of basic, joyless existence."

The tribe leads the most primitive life possible. The members wear few clothes, although the nights are very cold. They know nothing of agriculture or trapping and depend solely on hunting and food gathering for their food supply. At night the Phi Thong Luang do not sit around the camp fire telling folktales or stories of the day's happenings as many primitive groups do. The child has no toys and the adults do not engage in competitive sports.

All members of the group are suffering from malaria and yaws. The woman is particularly ill, and although the expedition treated her with modern drugs, her chances of survival are poor and the tribe seems destined for extinction.

New Associate Society of AAAS

The Society for Industrial and Applied Mathematics is a nonprofit corporation organized in April 1952 and is dedicated to the applications of mathematics. Formation of the society was first considered in late November 1951, and three general meetings were held in Philadelphia early in 1952. Speakers at these meetings were W. F. G. Swann, director of the Bartol Research Foundation; Mina Rees, presently dean of Hunter College, then director of the mathematical sciences division of the Office of Naval Research; and William E. Bradley, codirector of research, Philco Corporation. The enthusiastic response at these early meetings encouraged the organizers of the society to incorporate and to initiate plans for the next year.

Objectives of the society are (i) to further the application of mathematics to industry and science, (ii) to promote basic research in mathematics leading to new methods and techniques useful to industry and sciences, and (iii) to provide media for the exchange of information and ideas between mathematicians and other technical and scientific personnel.

Society activity includes section meetings, national meetings, and technical publications. There are two sections of the society in Pennsylvania, two in California, one in Massachusetts, one in Maryland, and one in New York. Other sections are being formed. Sections of the society sponsor meetings of local interest. The first national meeting of the

society took place in Pittsburgh in 1954 at the annual meetings of the American Mathematical Society and the Mathematical Association of America. An active program of national meetings is being planned for the future.

The society sponsors several publications. These include a monthly newsletter and a quarterly technical journal. In addition, a series of monographs is being planned. A recent issue of the newsletter included the full text of an important address by M. H. Trytten, director of the Office of Scientific Personnel—"Science and engineering in the U.S.S.R. and U.S.A.: a comparison and appraisal." The first monograph of the society is a report prepared by F. J. Weyl, director of the mathematical sciences division of the Office of Naval Research entitled "A survey of training and research in applied mathematics in the United States." This timely report was prepared for the National Research Council under contract with the National Science Foundation. It surveys the present areas of mathematical research in the United States and it presents the results of a questionnaire on mathematical training that was circulated to many of the large universities.

The journal of the society contains both research papers and expository papers, but the emphasis is largely on the latter. The editors require that accepted papers have clear presentation and good exposition. In every case it is intended that the papers be easily read by a large audience and that adequate background be given so that the paper is more readily understood. Many of the papers may be considered teaching papers.

National officers of the society are John W. Mauchly, Remington Rand UNIVAC Division, president; Thomas M. Southard, Numerical Analysis Research at the University of California at Los Angeles, vice president; John W. Tukey, Princeton University and Bell Telephone Laboratories, vice president; Donald B. Houghton, Franklin Institute Laboratories, secretary; and Robert Bickel, Drexel Institute of Technology, treasurer. I. E. Block, Burroughs Corporation, is director of the society's publications committee. George W. Patterson, University of Pennsylvania, represents the society in the division of mathematics of the National Research Council.

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New Calorimeter

A bunsen-type calorimeter that can accurately measure very small quantities of heat at room temperature has been devised by R. S. Jessup of the National

Bureau of Standards. Designed for investigating the basic thermodynamic properties of high polymers, this calorimeter is particularly suited to measurement of heats of reaction, heats of solution, and heats of mixing of polymeric and other substances.

This calorimeter is similar in principle to earlier bunsen-type calorimeters, but it has been modified to permit the use of diphenyl ether instead of water as the calorimetric substance. The use of diphenyl ether has two important advantages. First, the relatively large volume changes of diphenyl ether on freezing and melting provide a sensitivity more than 3 times that of the usual ice calorimeter. Small quantities of heat can thus be measured with greater accuracy. Second, diphenyl ether melts at 26.87°C. This means that observations can be made at room temperature, and the resulting data can be readily reduced to standard temperature at 25°C. Diphenyl ether has the further advantages of being quite stable and easily prepared in a state of high purity.

News Briefs

■ New figures on the size and shape of the earth show that its radius at the equator is 3,963.26 miles. This would make the earth's equatorial circumference about half a mile shorter than the accepted estimate of 24,902.39 miles. The new figures were presented by Bernard Chovitz and Irene Fischer of the Army Map Service in a paper submitted to the American Geophysical Union.

The scientists drew their conclusions from months of field work in Africa on an expedition led by David L. Mills of the map service in 1953 and 1954. They used a Univac computer to solve problems that would have taken 10 years without the machine.

■ Research workers at Camp Detrick, Frederick, Md., recently reported to the Society of American Bacteriologists that they have made vaccines that are effective in laboratory animals against several types of botulism bacteria.

■ Ira N. Gabrielson, president of the Wildlife Management Institute, Washington, will serve as chairman of the advisory committee for the Waterfowl Research Project of the Arctic Institute of North America. Albert M. Day, former director of the U.S. Fish and Wildlife Service, heads the 2-year fact-finding project, which began last June.

The purpose of the investigation is to study the programs and policies of all land and water-use agencies that directly or indirectly affect the breeding, protection, or perpetuation of migratory water-

fowl on the North American continent. Conservationists are concerned about the future of these birds, whose habitat is gradually decreasing owing to the encroachments of agriculture and industry.

■ A report to the Inter-American Economic and Social Council of the Organization of American States recommends the establishment of an Inter-American Institute of Oceanography in the Galapagos Islands. A special committee has suggested that the institute, in addition to serving as a base for marine-life studies, could function as a weather observatory. It is estimated that the institute's initial cost would be \$1 million and that from \$300,000 to \$350,000 would be required annually for maintenance.

The Galapagos are 500 miles west of the mainland of Ecuador and are administered by that country. The islands are overrun with giant turtles, some of which weigh as much as 400 pounds. Charles Darwin studied the flora and fauna of the islands in developing his theory of natural selection.

■ Seventeen of Great Britain's largest firms have established a fund of \$4 million to aid scientific education. Assistance will take the form of capital grants for the building, expansion, and equipment of science buildings in independent schools and in other schools lacking public funds. It will assist the teaching of pure and applied science and mathematics in secondary schools.

■ North Carolina State College has been chosen as the site for the records center of the National Science Foundation's National Register of Scientific and Technical Personnel.

■ India and Canada have signed an agreement under which Canada will help finance a nuclear reactor for India. Canada will contribute about \$7.5 million of the \$14-million cost.

Scientists in the News

JOHN VON NEUMANN, member of the U.S. Atomic Energy Commission, has received the Enrico Fermi award. This \$50,000 tax-free award was made in recognition of von Neumann's contributions both to the theory and to the design and construction of fast computing machines. Conferral of the award was recommended by the AEC General Advisory Committee and approved by the President.

RALPH D. LILLIE, medical director, U.S. Public Health Service, and

chief of the laboratory of pathology and histochemistry at the National Institute of Arthritis and Metabolic Diseases, left on 30 Apr. for South America. His trip is being made under the sponsorship of the Pan American Sanitary Bureau of the World Health Organization. He will visit medical schools in Lima, Santiago de Chile, Buenos Aires, Montevideo, São Paulo, Ribeirao Preto, and Rio de Janeiro. He has been invited to give short lecture courses in histochemistry in Buenos Aires and Montevideo and to present lectures at Santiago and São Paulo.

IAN TERVET, plant pathologist and operations director of the Biological Warfare Assessment Directorate at the Army Chemical Corps testing center of Dugway Proving Ground, Utah, has been named deputy for scientific activities at Dugway.

JOSEPH S. SMADEL has assumed the post of associate director of the National Institutes of Health. He was previously director of the division of communicable diseases and chief of the department of virus and rickettsial diseases at the Walter Reed Army Institute of Research.

JOHN G. SEELEY, professor of floriculture at the Pennsylvania State University has been appointed professor of floriculture and head of the department of floriculture and ornamental horticulture at Cornell University, effective 1 June. L. H. MACDANIELS, head of the department at Cornell since 1940, will retire on 30 June.

UGO FANO, chief of the nuclear physics section of the National Bureau of Standards, has been granted a Rockefeller Public Service award which will allow him to complete a book on quantum physics for nonphysicists. The award will also make it possible for Fano to accept an invitation to spend the 1956 academic year teaching at the University of Rome. He has been invited to lecture on subjects of his own choice, working in line with the university's program for developing peaceful applications of atomic energy. He plans to leave for Rome at the end of the summer.

GEORGE KELEMEN of the Harvard Medical School has been elected président général adjoint for the United States by the Haut-Colège International pour l'Etude Psychophysiologique et Psychopathologique des Langues, des Langues et de la Pensée, University of Paris, France, for the discipline of comparative anatomy and physiology of the larynx.

EDWIN PLOWDEN, chairman of the United Kingdom Atomic Energy Authority, visited atomic power reactor sites and development laboratories in the eastern United States this month as the guest of Lewis L. Strauss, chairman of the U.S. Atomic Energy Commission. Strauss visited British atomic energy research and development establishments last year.

NORBERT A. LANGE, a chemist and vice president of Handbook Publishers, Inc., Columbus, Ohio, has received the Ohio award of the Ohio chapter of the American Institute of Chemists. Lange is the publisher of *Handbook of Chemistry*.

WILLIAM B. TUCKER, chief of Medical Service at the Veterans Administration Hospital in Durham, N.C., and professor of medicine at Duke University, has been appointed director of the tuberculosis service in the VA Department of Medicine and Surgery in Washington, D.C. His appointment will become effective on 1 Sept.

DAVID E. LISTON, colonel (ret.), U.S. Army Medical Corps, has been appointed assistant director of the University of Texas M. D. Anderson Hospital and Tumor Institute. He fills the vacancy left by the retirement last September of ROY C. HEFLEBOWER, who will remain at the hospital as consultant on grants and special projects.

GEORGE K. DAVIS, head of the laboratory of animal nutrition at the University of Florida, has received the Florida award of the American Chemical Society for his work in trace-element nutrition. In 1943, radioisotope studies using radioactive cobalt were started by Davis and his coworkers, and the group gained the distinction of having carried out the first large animal studies using radioactive tracers.

HENRY F. SMYTH, Jr., administrative fellow, chemical hygiene fellowship, Mellon Institute, has received the 10th annual Donald E. Cummings award of the American Industrial Hygiene Association for his contribution to industrial hygiene. Smyth directs the industrial toxicology research for Mellon Institute and also for the Union Carbide and Carbon Corporation.

W. R. RHOADS, chief staff engineer of the Georgia Division of the Lockheed Aircraft Corporation, Marietta, Ga., has been appointed director of the nuclear aircraft test laboratories to be operated for the U.S. Air Force by Lockheed on a 16-square-mile tract near Dawsonville,