News of Science

Yerkes Laboratories

Operation of the Yerkes Laboratories of Primate Biology at Orange Park, Fla., has been transferred from Yale University to Emory University. Research will be continued under the auspices of Emory, with the same primary emphasis on the behavioral sciences. An international reputation has been built by the Yerkes Laboratories for studies of the chimpanzee growth and development, sex, and comparative psychology. The station's long-term scientific records are unique.

Investigations have shown that the chimpanzee most nearly approaches man in emotional responses. Because of the work at Orange Park, more is said to be known about the animal than is known about any other animal except the white rat.

Grants in support of continued research total almost $700,000, to be administered over periods varying from 1 year to 5 years. About $170,000 will be available for the coming year. Research is supported by the Ford, Rockefeller, and Carnegie foundations, the National Science Foundation, the Atomic Energy Commission, the National Research Council, and the National Institute of Mental Health.

The laboratories were established in New Haven in 1924 and moved to Florida in 1930. Yale is giving up the laboratories chiefly because of their distance from New Haven and of difficulties in coordinating the work of scientists in Orange Park with the organization of the Yale faculty. Emory was selected for the transfer because of its outstanding research programs in the basic sciences, biology, psychology, and other areas.

The 182-acre facility can accommodate 60 chimpanzees. Research at the laboratories has contributed to the development of the prefrontal lobotomy in treatment of insanity, and the Yerkes center was the home of the celebrated Viki, the subject of an experiment in rearing a chimpanzee in a human environment. Viki was raised in the home of a scientist. Other research has included investigations of sex behavior, learning, and effects of radiation. More than 400 research papers from study at the laboratories have been published in scientific journals.

Henry Nissen, director of the laboratories, will continue as director under the new sponsorship. The same board of scientific directors will continue to serve. It consists of Leonard Carmichael of the Smithsonian Institution, chairman, and George W. Corner, Rockefeller Institute of Medical Research; C. N. H. Long, former dean of the School of Medicine, Yale; J. Lawrence Pool, Columbia University; William H. Taliaferro, University of Chicago; Karl S. Lashley and Frederick L. Hisaw, Harvard University; and Nissen, ex-officio member. The laboratories are chartered as a nonprofit corporation under the Florida laws, and new officers of the corporation will be named later by the Emory board of trustees.

The late Prof. Robert M. Yerkes, a noted psychobiologist, started the unusual project in New Haven under the name, "Laboratories of Comparative Psychobiology." Need for a warmer climate for the animals resulted in the move to Orange Park, when the name was changed to "Yale Laboratories of Primate Biology." In 1942, one year after Yerkes retired, the name was changed to "Yerkes Laboratories" in his honor. Although the property was held by Yale, Harvard joined in operation of the center in 1942. Harvard's Dr. Lashley became director in 1942, and upon his retirement in 1955, Nissen was named to the post.

Paper Permanency: Labeled Sulfur Tests

It is well known that paper of good quality and high alpha cellulose content can be kept intact for several centuries. However, even good quality paper can become brittle at the edges. It has been pointed out that this may be because portions of the paper in old documents and books have been attacked by a strong acid. Since analysis of such old paper revealed a high sulfate content, it was assumed that sulfuric acid from the atmosphere was responsible for this deterioration. The concentration of sulfur dioxide in industrial atmospheres is of the order of 0.5 part per million; it is supposed that catalysts in paper accelerate the conversion of this sulfur dioxide to sulfuric acid.

By exposing paper under damp conditions to atmospheres containing about 0.5 percent sulfur dioxide, (10,000 times that of many industrial atmospheres), W. H. Langwell measured the increase in sulfur in the paper by extracting it with water and precipitating it as barium sulfate. F. L. Hudson and W. D. Milner have described a far more sensitive method, using sulfur-35 [*Nature* **179**, 590 (15 Sept. 1956)]. With their technique and under Langwell's experimental conditions, it was possible to detect the uptake of sulfur dioxide after a 2-hour exposure; after 24 hours it could be determined that the papers tested fell in general into the order already established by chemical means.

All papers were exposed to atmosphere before counting to allow gaseous sulfur dioxide to diffuse out. A steady counting rate was obtained after 4 hours.

Labeled paper samples, after exposure to sulfur dioxide under both wet and dry conditions, were placed between x-ray films for 3 weeks and then developed. The radioautographs showed some general uptake of sulfur, but they also showed random distribution of intense black spots with dark areas spreading from them. Next the paper was developed with acid potassium ferrocyanide, and it was found that the dark areas correspond to iron and in some cases to bronze spots in the paper. The take-up of sulfur dioxide is therefore partly general and partly localized.—K. L.-H.

National Library of Medicine

The Armed Forces Medical Library was transferred on 1 Oct. to the Public Health Service, Department of Health, Education, and Welfare. The National Library of Medicine Act, signed by President Eisenhower on 3 Aug., establishes a National Library of Medicine in the Public Health Service "to assist the advancement of medical and related sciences and to aid the dissemination and exchange of scientific and other information important to the progress of medicine and to public health." The Armed Forces Medical Library will form the nucleus of the National Library, which is to be headed by Col. Frank B. Rogers, director of the Armed Forces Medical Library.

The Armed Forces Medical Library was founded in 1836 as the Library of the Surgeon General's Office, U.S. Army. It contains almost a million volumes, representing literature on medicine, dentistry, pharmacy, and allied sciences in all languages and of all times. Its books