The Space Handbook can be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C., for 60 cents.

"Giant" Fossil Man

During the past quarter of a century there have been repeated discoveries in Southeast Asia of very large fossil primate teeth of the Pleistocene epoch. These have been attributed to truly gigantic animals by some students. Von Koenigswald (1935, 1939) thought the huge teeth which he discovered in Hong Kong "drugstores" (= *Gigantopithecus*), Kwangsi Province being their probable provenance, belonged to a giant ape, whereas he regarded the two jaw fragments with teeth which he discovered at Sangiran, Java (= *Meganthropus*), as those of a giant protohominid. Weidenreich (1945, 1946) went even further, concluding that both *Gigantopithecus* and *Meganthropus* were not only giants but actually hominids on the line leading to true man. On the basis of tooth size, he estimated that the Javanese "giant" was much bigger than any living gorilla and that the Chinese "giant" was correspondingly bigger—one-and-one-half times as large as the gargantuan Javanese, and twice as large as a male gorilla. In this connection, it may be noted that adult male gorillas are known to attain a weight of 600 or more pounds. Weidenreich postulated, therefore, that the ancestors of man were giants—this standing in contrast to the general paleontological rule that ancestral forms tend to be smaller than their descendants. Pei (1957), referring to a recently discovered jaw with teeth from Luntsai Mountain in Kwangsi, South China, which is almost certainly a specimen of *Gigantopithecus,* reverted to von Koenigswald's idea of a giant ape which he estimated as having had a stature of "some 12 feet." Large-toothed forms, notably *Paranthropus crassidens,* also occur among the australopithecines; but no serious claims of gigantic body size have at yet been made for these South African hominids.

The crux of the problem involves the question of whether tooth-size is in any way indicative of body-size. Von Koenigswald, Weidenreich, and Pei have all assumed that there is a positive correlation; but of this they have had no proof. With this in mind, S. M. Garn and A. B. Lewis [*Am. Anthropologist,* **60**, 874 (Oct. 1958)] compared tooth size with stature among several groups of living men and between living men and certain other, fossil hominids (*Pithecanthropus; Sinanthropus;* and three australopithecines—*Paranthropus robustus, P. crassidens,* and *Plesianthropus*). They found little indication of a marked positive correlation between tooth size and body size in living men, even when allowance is made for nutritional differences. Evidently, therefore, these dimensions are effectively independent in various human races, as they are in pigs (Herre, 1951) and in various breeds of dogs (Starck, 1954). Moreover, it was found within a population that tooth size is unrelated to body size and therefore again nonpredictive. The tallest human populations actually possess teeth that are among the smallest. Similarly, the available data for the fossil hominid forms—for which stature was estimated from limb-bone fragments—fail to support the concept of a simple proportionality between size of teeth and size of body; instead, they reveal a negative relationship.

Thus, there is no indication that tooth size is a clue to body size in either *Homo sapiens* or nonsapient hominids and, consequently, no evidence to support the notion that the Chinese and Javanese megadonts were giants. Indeed, the authors conclude that if the australopithecines are any guide the ape from Luntsai Mountain had a stature of scarcely more than 5 feet. Garn and Lewis suggest that "it may well be that the forms with giant teeth, both from Africa and Asia, had the task of grinding nutrients and calories from tough and bulky vegetable material, but without the gastro-intestinal adaptations of herbivores." This might account for a disproportionately large dentition.—W.L.S., JR.

Films

Two new science films have been announced. The Peabody Museum of Harvard University has released "The Hunters," a 71-minute motion picture of anthropological interest. It is the first of a series of films on the South African Bushmen. The pictures were taken by the Peabody Museum of Harvard University–Smithsonian Institution Kalahari Expeditions, from 1950 through 1958. Arrangements can be made for either its purchase or rental, in color or black-and-white, by writing to Contemporary Films, Inc., 267 W. 25 St., New York 1. N.Y.

"Time," a new science film for classroom use, has been released by the Audio-Visual Center, Indiana University, Bloomington, Ind. Through live photography, models, and animation, the film portrays scientific time determination, timekeeping, standard time zones in the United States, Daylight Saving Time, Greenwich Time, and the International Date Line. Teachers of science, mathematics, and geography in grades five through nine will find the film useful in teaching units concerned with time. It can also be used in beginning astronomy courses in high schools and colleges.

Experimental College

An experimental college will be established by Wayne State University, Detroit, Mich., with the assistance of a $700,000 grant from the Ford Foundation. The grant will help finance the planning and initial evaluation of the college, which will open in September 1959. It is being formed to develop an improved program in general education. Clarence H. Faust, vice president in charge of the foundation's education program, commented: "During the past quarter of a century, there have been practically no new experimental institutions concerned with further development of undergraduate programs of general education."

The major innovation of the new college is that all students will be required to take work in the natural sciences, social sciences, and the humanities throughout their four undergraduate years. Within these areas, the customary division of subjects into academic courses will be largely discarded. Instead, traditional academic studies will be combined to form courses covering basic fields of knowledge. Training in English composition will be an integral part of all studies in the curriculum.

The college will also experiment with new arrangements for the better utilization of faculty time and for improvements in the conditions of learning. Courses will be taught through a combination of large lecture classes, small discussion groups, and independent study.

The college will stress independent study. In the senior year, students will participate in a colloquium (discussion-group course) in which they will pursue about half their studies without direct instruction from the faculty. Since the amount of time students spend on independent study will increase as they move through the program, instructional costs will be highest during the freshman year and lowest during the senior year—the reverse of the prevailing instructional-cost pattern.

The college will inaugurate its program with the freshman class to be admitted in the fall of 1959. As these students advance, the college will initiate other stages of its program. At the end of a 4-year period, it will be conducting a full college course and will have an estimated enrollment of about 1200 to 1500 students.

The total cost for the first 5½ years of the college is estimated at $2,645,000.

The balance of the funds required in addition to the foundation's grant will come from student fees and from appropriations by the state of Michigan.

News Briefs

The Educational Television and Radio Center will move its headquarters to New York in March, but the national organization will maintain its present offices in Ann Arbor for several phases of operations. The center is network headquarters for the country's educational TV stations. New York offices will be maintained at 10 Columbus Circle. Offices which will move include those of the president and the program, development, and public relations departments. The departments of business and legal affairs, distribution, and research will remain in Ann Arbor. Film distribution, now handled by the University of Illinois, will be transferred to Ann Arbor.

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The 2400-acre Chincoteague (Va.) Naval Air Station, which the Navy will close within a few months, will be transferred to the National Aeronautics and Space Administration. The NASA plans to make use of the station in connection with the expanding space program at the nearby Wallops Island Station. The staff of the Wallops Island Station, now totaling 90 scientists, engineers, and other employees, is expected to increase eventually to 250. Use of a portion of the Chincoteague facilities is expected to save the NASA an estimated $2.5 million in its launching-site construction program at Wallops Island.

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A preliminary assistance mission of the International Atomic Energy Agency left Vienna recently for a visit to Burma, Thailand, Indonesia, and Ceylon. The objective of the mission is to advise the IAEA on the needs of these countries and to indicate to the governments concerned how the agency can be of assistance. This is the first in a series of such missions planned for 1959.

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Launching facilities for the Titan intercontinental ballistic missile are under development at both Vandenberg Air Force Base in California and Lowry Air Force Base in Colorado. This information, long discussed unofficially, was recently formally confirmed by the Air Force. A typical Titan launching facility costs approximately $50 million.

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The American Council on Education embarked in November on a major program to encourage students to choose college teaching as a profession. Supported by a grant from the Ford Foundation, the council began free distribution of 175,000 copies of a booklet on *College Teaching as a Career.* In announcing the project to aid in the recruitment and training of teachers, Arthur S. Adams, president of ACE, said: "Most other professions and occupations have had organized campaigns of recruitment for many years. Colleges and universities, especially through their teaching staffs, must make similar efforts to secure their fair share of the ablest young men and women in the nation."

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A recurrence of poliomyelitis epidemics in 1958, the result of a sharp reduction in the use of Salk vaccine, was cited recently by Basil O'Connor, president of the National Foundation, as one of two major events in his review of the organization's 1958 health activities. In 1958 there was 43 percent more paralytic polio than there was in 1957.

The other major event in O'Connor's report was the expansion of the National Foundation, after 21 years of activity in poliomyelitis, into a broad new health program that includes birth defects and arthritis, in addition to poliomyelitis.

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Scientists in the News

Sir JOHN COCKCROFT, director of research of the United Kingdom Atomic Energy Authority, has been named the first head of Churchill College, which is being established at Cambridge University, at the suggestion of former Prime Minister Sir Winston Churchill, to produce highly trained scientists and technologists. Cockcroft, co-winner of the Nobel Prize in physics in 1951, will leave the Atomic Energy Authority sometime this year but will continue as a part-time consultant. He will be succeeded by Sir WILLIAM PENNY, head of weapon research for the AEA.

FRED L. SOPER, director of the Pan American Sanitary Bureau, Washington, D.C., was honored upon his retirement on 1 February with the establishment of the Fred L. Soper Lectures in international health. Bureau staff members will finance the lectures by donations to a special fund. The first lecture will be given this fall by Soper himself at Johns Hopkins University's School of Hygiene.

ELEANOR M. HUMPHREYS, who has been associated with the department of pathology of the University of Chicago since 1926, has been named professor emeritus and consultant. For 11 years prior to retirement Dr. Humphreys was in charge of surgical pathology. The American Medical Women's Association, in honoring Dr. Humphreys as the "Woman of the Year" for 1958, said that she had "excelled in one of the most responsible medical and teaching positions in the nation."

Serving first as an assistant in the department of pathology from 1926 to 1929, Dr. Humphreys became an instructor for 6 months and then served her internship at Albany Hospital, N.Y. She returned to the university as assistant professor in October 1931, the same year she received her medical degree from Rush Medical College of the University of Chicago. She served as assistant professor until 1942, when she was made associate professor. She became a full professor in 1950.

Dr. Humphreys got her B.A. degree at Smith College in 1917. She was a physiological chemist at Highland Hospital, Rochester, N.Y., for 1 year before she became a physiological chemist and bacteriologist in the Division of Laboratories of the New York State Department of Health, where she remained until 1923.

WILLIAM R. ANDERSON, commander of the nuclear submarine *Nautilus,* the vessel that completed the first voyage under the North Pole last August, has been awarded the Patron's Medal of the Royal Geographical Society.

Sir RAYMOND PRIESTLEY, one of the last survivors of the ill-fated South Pole expedition of Sir Robert Scott in 1912, received the society's Founder's Medal.

CHIEN-SHIUNG WU, professor of physics at Columbia University, has received the 1958 Research Corporation Award for her part in overthrowing the parity law. The $2500 award was presented at a banquet on 23 January in the Sheraton-East Hotel, New York.

CARROL W. DODGE, professor of biology at Washington University, has been appointed visiting professor in the new mycology department at the University of Recife, Brazil, where he will assist in establishing a mycology research center, library, and herbarium. He will be accompanied by Mrs. Dodge, who will be a visiting professor of chemistry at the same university.

ROBERT F. INGER, curator of amphibians and reptiles at the Chicago Natural History Museum, left on 8 February for a field trip in the Congo. Later he will do research work in European institutions.

LOUIS NIRENBERG, professor of mathematics at New York University's Institute of Mathematical Sciences, has received the American Mathematical Society's Bôcher Memorial Prize for outstanding contributions to mathematical analysis. It was presented at the society's