



U.S. Geological Survey

**FOSSIL OX**—Dr. Frank C. Whitmore Jr., vertebrate paleontologist, U.S. Geological Survey, holds a fossil skull of a musk ox collected from Big Bone Lick, Ky., a jackpot region for extinct fauna.

## ZOOLOGY

## Musk Ox Domesticated

► **THAT HUGE**, shaggy beast of the lonely icy Arctic regions, the musk ox, may soon officially enter the world of man and become domesticated.

A five-year grant has been awarded to the University of Alaska, College, by the W. K. Kellogg Foundation to investigate the suitability of the musk ox as a domestic animal in the far north.

The musk ox, which is actually not an ox but a near relation of antelopes and goats, used to roam across Siberia, the plains of Germany and France and parts of England and the United States. Now there is only a single species, *Ovibos moschatus*, which is now limited to northern Canada and Greenland.

Weighing from 500 to 900 pounds, these thick-coated mammals could serve as a source of food, believes Dr. John J. Teal Jr., administrator of the project.

Many woolen manufacturers are enthusiastic about the principal product of the musk ox, its underwool, which the Eskimos call "qiviut." The fiber is similar to that of cashmere but about twice as long and half as thick. It can be prepared with the same machines as those used for cashmere.

Each year an adult musk ox can produce about six pounds of "qiviut." Eight ounces are needed to make a sweater. When knitted into a garment the wool does not shrink, and it can be bleached or dyed any color.

Dr. Teal's experiment to domesticate the musk ox is now in its 12th year. Preliminary research has been carried out since 1954 with the Institute of Northern Agricultural Research upon a herd located in

## SPACE

## Weightlessness Unsolved

► **THE GEMINI-4** "long weekend" flight of astronauts Edward H. White and James A. McDivitt still leaves many questions unanswered about the effect on man of long periods of weightlessness.

The three Americans who go to the moon in an Apollo spacecraft five or six years from now will spend two weeks floating in space, and no one knows yet what their reactions will be.

While Major White was drifting outside of Gemini during his "space walk," Major McDivitt was also "drifting," even though he was firmly planted in his pilot's chair.

The longest period of actual weightlessness that scientists have been able to produce on earth is the 20-to-30-second flight "over the top" of a huge arc in a padded KC-135 aircraft. The pilot climbs steeply upward and then noses over into a dive, providing a precious few seconds of gravity-free experiment time, during which astronauts and test pilots float about in the plane just like astronauts in orbit.

The previous American space record for

weightless time in orbit was held by Gordon Cooper, who was launched on a 22-orbit, 34-hour flight on May 15, 1963. The world record was set exactly 30 days later by Soviet cosmonaut Valery Bykovsky, who circled the earth for just 54 minutes less than five days.

Though there are eight more Gemini flights before Project Apollo begins, the longest of them is the next one, GT-5, when Navy Lt. Charles Conrad Jr. will join "old timer" Gordon Cooper for a flight that could last as long as two weeks. After that, the remaining flights will be rendezvous practice missions, with the astronauts trying to "dock" with an unmanned Agena target vehicle.

The docking maneuver will be used twice during the Apollo flight, first just after injection into the earth-to-moon trajectory, and again when two of the astronauts rejoin the third in a lunar orbit after leaving the surface of the moon. None of the Gemini docking flights are scheduled for more than two or three days.

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## ARCHAEOLOGY

## Buffalo Once Roamed In Southern California

► **ANCIENT BUFFALO** bones have been discovered in southern California for the first time.

Unknown facts about California prehistory came to light as members of the archaeological survey of the University of California at Los Angeles probed for archaeological material in advance of freeway construction.

Excavation of the archaeological site, along what appears to have been a sluggish river that meandered through a marshy plain, yielded buffalo bones in association with arrowheads and tools of a prehistoric civilization. Preserved in a hard clay stratum four feet beneath the surface were hoof prints of buffalo and elk.

The prints are similar to those of present day buffalo and are the first such remains found in southern California in association with Indian artifacts. The evidence indicates that at about the time Columbus discovered America, Indians were hunting buffalo on the Los Angeles plains.

The site is located along the route of the Marina Freeway in Culver City. Excavation of the site was sponsored by the State Divisions of Highways and Beaches and Parks. It was part of a program by the two state agencies in which the university's archaeological survey is commissioned to retrieve archaeological material from the path of planned freeways.

Clue to the important archaeological find was furnished by a boyhood adventure of UCLA anthropology graduate student Chester King, who directed the field operations.

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Huntington Center, Vt. One bull raised in Vermont reached a record weight of 1,450 pounds.

The experiment at the University of Alaska is developing satisfactorily, Dr. Teal reported, and the animals have learned a daily routine of being weighed and led into stalls. They are becoming quite affectionate and playful with their herdsman.

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## PUBLIC HEALTH

## Drinking Man's Diet Linked to Quackery

► **THE SO-CALLED** drinking man's diet is a masterpiece of advertising but a masterpiece of deceit for the would-be weight loser, a representative of the American Medical Association said in Kansas City, Mo.

As a part of the low carbohydrate system of dieting, alcohol in almost unlimited quantities is permitted, but the diet restricts carbohydrates, not calories, Dr. Philip L. White, director of the AMA department of foods and nutrition, told a meeting of the Missouri Health Association.

"Protein, fat, carbohydrates and alcohol all contribute calories, and the only lasting way to lose pounds is to reduce the total caloric intake from all these sources," Dr. White explained.

Perhaps the worst feature of the diet, he said, is that it could be damaging to nutritional well-being if observed for very long. Dr. White blamed both health quacks and some reputable manufacturers for the American public's confusion over nutrition.

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