

## Skull Promises Geological Upset

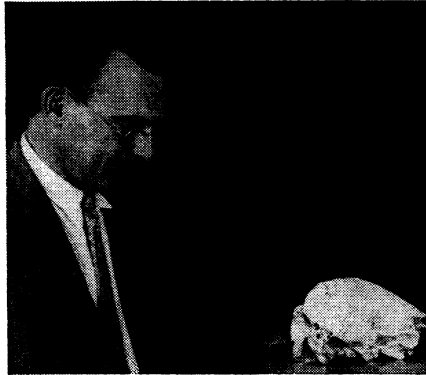
*Palæontology*

Radical changes in our ideas of the course of events in recent geological time—say the last half million years or so—may be brought about by the discovery in Utah of the unfossilized skull of an extinct camel, with a bit of dried flesh still clinging to the bone. The relatively fresh condition of the specimen argues that its one-time possessor died only a few centuries or millenia ago; present ideas hold that this particular sort of camel became extinct a half-million years ago. If this camel really died so long ago, the bone should have been largely or wholly replaced by stone, and there should have been no flesh on it at all.

The find was reported by Prof. Alfred S. Romer of the University of Chicago. The skull was sent to him by Prof. A. L. Mathews of the University of Utah for examination.

Prof. Romer's first guess was that it might be a relic of a herd of dromedaries imported into the Southwest during the 1870's, as an experiment which terminated unsuccessfully. But a critical examination of its anatomical details showed many points of close resemblance to the skulls of very ancient extinct American camels, and marked differences from those of existing Asiatic and African forms. In his opinion the animal belonged to the genus *Camelops*, which is supposed to have been extinct for at least half a million years.

The skull was found by two high school boys of Fillmore, Utah, while exploring a lava cave some twenty miles southwest of their home. Two hundred feet back in the cavern they found the camel's bones buried under several feet of fine dry windblown deposit. This region has scanty rainfall, but is not a real desert. The riddle of the camel's preservation is



PROF. ROMER with the cranium of the extinct camel from Utah. Shreds of dried flesh clinging to the bone may force radical changes in palæontological doctrine.

thus heightened, for while flesh becomes dried and mummified in a complete desert, it is subject to decay where there is even a little moisture.

Prof. Romer's tentative answer to the riddle is not that the skull has remained unfossilized, yet undestroyed, for half a million years, but that the species did not become extinct then, surviving instead until comparatively recent times.

Such an answer, he points out, would also help to settle the conflict over the antiquity of man in America. Many scientists refuse to accept as authentic the occasional finds made on this continent of stone or bone implements associated with the remains of animals supposed to have been extinct for hundreds of thousands of years. Prof. Romer states that other recently discovered remains of camels, lions and other animals in the West also hint at a longer survival of these extinct beasts than has hitherto been supposed.

The new-looking cranium is not entirely without scientific precedent.

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## Potato-Tomato Gives Double Crop

*Agriculture*

A "good graft" (not of the political variety) which anyone may try, and which will reward a little patience with a double crop, is described in a recent bulletin of the Missouri Botanical Garden. It consists of a tomato vine grafted on a potato stock, which yields tomato fruits above and potato tubers below. The graft is fairly easy to make, it is stated, requiring no more skill than is needed for a similar operation on an apple twig. Apparently the first one on

record was made over a century ago by an amateur scientist named De Tchudi, who reported his experiments to the Horticultural Institute at Fromont in France.

Neither partner in this double plant body seems to have any influence on the other. The tomatoes are like those of sister plants grown on their own roots, and the potatoes differ in no way from those grown in the ordinary way from other eyes cut from the same parent tuber.

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## Insects Need Vitamins

*Physiology*

While new facts about the vitamins necessary for the health and happiness of the human race come to light nearly every day, entomologists have been endeavoring to find which, if any, vitamins are needed to keep up the health and morale of the insect world.

The subject of the investigation into insect vitamin lore selected by Dr. Charles H. Richardson, of the U. S. Bureau of Entomology, was the Mediterranean flour moth, a well known pest of the flour mills that passes most of its existence gorging on flour. Since the wheat kernel from which flour is made is an important source of vitamins A and B it was thought that this would be a good type of insect with which to obtain a quantitative check-up on the proportion of vitamins necessary for insect welfare.

In whole wheat flour the larvæ of the moths lived and flourished happily but in the same kind of flour from which a substance believed to be vitamin A was extracted by chloroform, relatively few larvæ developed into full grown moths. In highly milled flour, from which much of the growth-promoting vitamin B is removed by the processes of manufacture, the growth rate was also poor. With the addition, however, of small quantities of yeast, a rich source of vitamin B, the number of larvæ that reached maturity increased.

According to these results obtained by Dr. Richardson, the reaction of the flour moth toward vitamins A and B checks very well with the requirements of laboratory animals and human beings. Further studies on this problem with other insects, the entomologist pointed out, will be of great interest from the point of view of comparison of insect physiology with that of higher animals. Practically it will affect the control of insect pests since any factor that might render poisoned bait for harmful insects more attractive would assume great economic importance.

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The Royal Danish research ship, Dana, has begun a two years' cruise around the world to study oceanography.

The largest collection of medical books in the world is at the Surgeon General's Library at Washington, D. C.