

# Field Museum News

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## GIANT PANDA'S ANCESTORS TRACED TO NEBRASKA

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It is probable that no other living mammal has enjoyed so much popularity as has recently been accorded the giant panda. Popular interest does not exceed the scientific interest in this little-known animal. Within the past year, fossils have been found which provide much new information regarding the zoologic relationships and the ancestry of both the giant panda and its smaller cousin, the "ordinary" panda. Such a fossil specimen has recently been acquired by the Division of Paleontology of Field Museum.

The extinct form referred to is known only from two small fragments containing upper teeth and portions of two lower jaws. All of the known specimens are from the lower Miocene deposits of western Nebraska which establishes them as approximately 20,000,000 years old. The name *Cynarctoides* has been given to this long extinct creature.

*Cynarctoides* was a small animal only slightly larger than a mink, and must have closely resembled *Bassariscus*, the cacomistle or ring-tailed cat of the southwestern United States and Mexico. In fact, its dental characters are such that it must have been derived directly from *Bassariscus*. *Bassariscus* has long been recognized as the most primitive representative of the raccoon family, and its fossil record shows that it has changed but little in the last 25,000,000 years—thus it is a true "living fossil." *Cynarctoides* has characters which are intermediate between those of *Bassariscus* and the living pandas, suggesting that the pandas are derived originally from *Bassariscus* through *Cynarctoides*.

One of the puzzling characters of the giant panda, which previously seemed to bar it from the raccoon family, was the presence in the lower jaw of a third molar which is absent in all other members of the family. It is of great significance, then, that *Cynarctoides*, which is distinctly a member of the raccoon family, has this third lower molar as well as other characters which strongly suggest that this form is very near to the direct ancestor of the giant panda.

The available evidence indicates that the panda originally developed in North

America. During the lower part of the Pliocene epoch, or about 12,000,000 years ago, a route of migration was opened across the Bering Strait and it is probable that the ancestral pandas migrated to the Old World at this time to become established in their present habitat. In North America this branch of the raccoon family became extinct, but, fortunately for purposes of scientific research, their fossilized bones bear witness to their former existence in this country.



A Scene on the "Dig" in Colorado

One of the ancient pit houses excavated by Field Museum Archaeological Expedition to the Southwest. The width is about fifteen feet, the depth about six feet. The hole in the foreground was a firepit used by the prehistoric Basket Maker Indians who lived here some 1,300 years ago. In the rear is a tunnel which was used both as a ventilator and an entrance to the subterranean structure.

Simultaneously with the studies conducted on the fossil specimens, detailed anatomical studies have been proceeding at Field Museum on the modern species, as a result of the death a few months ago of Su-Lin, and the presentation by the Brookfield Zoo of her remains to Field Museum. Su-Lin was the first complete specimen to reach scientists for dissection and thorough anatomical study. This task is still in progress, and is being conducted by Mr. D. Dwight Davis, Assistant Curator of Anatomy and Osteology, and his associates.

## Expedition in Far Northwest

An expedition to collect semi-precious quartz, agate, chalcedony and similar minerals is working in Oregon and Washington for Field Museum. Dr. A. J. Walcott, a Chicago geologist at present attached to the Museum's Department of Geology under a special arrangement, is in charge of collecting. Dr. H. C. Dake, editor of a mineralogical magazine published at Portland, Oregon, is co-operating with the expedition.

## EXPEDITION TO SOUTHWEST FINDS ANOTHER PREHISTORIC VILLAGE

By CARL LLOYD

Staff Assistant, Field Museum Archaeological Expedition to the Southwest

This is a season of "firsts." In August the Field Museum Archaeological Expedition excavated the largest kiva or circular, ceremonial structure known in the Southwest—83 feet in diameter. Last month the expedition uncovered the largest Basket-

Maker site yet reported for Colorado. The extreme length of this new "dig" is more than 500 feet, and the width about 300 feet. Evidence of extreme antiquity is being uncovered daily in the slab-lined above-ground granaries, in the pit-houses of all-earth construction, and in the living quarters which had walls built of posts.

Surface indications of the site were so meager that an untrained person could walk over this wooded area without knowing that under his feet there had been a village formerly occupied by hundreds of Indians. The rains and snows of thirteen hundred winters and summers had toppled over the one story surface buildings, rotted the post-wall houses, and filled up the subterranean quarters (pit-houses) with dirt. Then a forest grew up

on and in the ruin, completely covering it.

Although the village is estimated to have been occupied about A.D. 600, an accurate date will not be known until dendrochronologists (tree-ring experts) have analyzed the ancient roof logs which have been recovered and made comparisons with a master chart.

To discover and uncover both the post-wall houses and pit-houses, the most painstaking technique and excavating experience are required. All that remains of these ancient post-wall houses is a series of holes where the posts once were set, and a dirt floor of a different color and hardness from the fill above.

The pit-houses have dirt floors and walls and are filled with wind-blown soil. Yet even after 1,300 years, this wind-blown fill is not annealed to the ancient walls, and patient troweling delineates the angular periphery.

The expedition, under the leadership of Dr. Paul S. Martin, Chief Curator of the Department of Anthropology, is sponsored by Mr. Stanley Field, President of the Museum.





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