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a desert place

Natural beauty
through preservation

Condors

Throughout the summer, the Sentinel is publishing its popular "A Desert Place" columns from 1987. The columns were provided by members of the Cave Creek Improvement Association's Desert Awareness Committee.

By **BOBBIE WEINGARD**

In April 1983, with the permission of the National Park Service, a team consisting of photographers, archeologists, skilled boatmen and rock climbers under-took an exploration of caves in the Grand Canyon.

A 450- to 700-foot thick formation of redwall limestone extending nearly the entire length of the canyon promised to contain hundreds of caverns. Finding remains of "Gymnogyps Californianus," California's Condor, was a special interest.

Since the Grand Canyon offers superb conditions for condors who prefer to nest in remote caves close to water, it has been suggested as a relocation site for living California Condors.

Deep inside one of the caves lay a complete condor skull.

Not only was the beak intact, it even retained some dry skin — perfect material for radio carbon dating. This was the only site in North America to boast a complete bird skull.

With the recent development of the tandem accelerator, scientists can register accurate radio carbon dates using only 1 to 3 grams of material (rather than 50 to 100 grams), precisely dating many fossil birds. The complete skull was dated at more than 12,000 years old.

In another cave, after excavating a large pack rat midden, bones of at least five condors were found.

Because the bones were complete and still attached to each other at the joints with abundant eggshell and feather fragments, it is believed the cave was used by the condors for nesting.

In addition, bones of now extinct

camels, mountain goats and bison of the Pleistocene epoch, ending more than 10,000 years ago, were found. It is believed these carcasses formed the bulk of the condor's diet.

Since the carbon dates of 11,000 and 12,000 years old coincide with the disappearance of the megafauna, such as mountain goats, sloths, horses and camels from the Grand Canyon, it is wondered why the condors did not become completely extinct.

It was thought that condors, relying on mammal carcasses for food, were doomed with the Pleistocene.

However, it is proposed that toward the end of the Pleistocene, coastal condors shifted their diet to aquatic animals. Condors have been known to feed on beached carcasses of seals and whales.

Only a coastal race of the condor survived because of its proximity to a new food source or adaptation to this new diet, therefore explaining the predominantly coastal distribution of condors within the past two centuries.

If the condors were coastal birds at that time, how do we explain the historical sightings of condors in Arizona and Utah in the late 1800s?

It is thought that the large herds of sheep, horses and cattle introduced in the west in the 1700s took the place of the extinct Pleistocene megafauna.

Condors were probably driven to their current shrunken range in California by settlers who hunted and used poison to protect their herds from predators. Major factors in the condors' downfall have been man's attempt to kill predators such as coyotes. Filling carcasses with poison and lead causes lead-poisoning when scavenged and ingested by the birds.

Only a captive breeding program stands between the condors and extinction.

Fewer than 30 of these large vultures remain, with most of them in zoos.