

Calif. utility stumbles on 1.4M years old fossils

September 21 2010, By GILLIAN FLACCUS , Associated Press Writer

(AP) -- A utility company preparing to build a new substation in an arid canyon southeast of Los Angeles has stumbled on a trove of animal fossils dating back 1.4 million years that researchers say will fill in blanks in Southern California's history.

The well-preserved cache contains nearly 1,500 bone fragments, including a giant cat that was the ancestor of the saber-toothed tiger, ground sloths the size of a modern-day grizzly bear, two types of camels and more than 1,200 bones from small rodents. Other finds include a new species of deer, horse and possibly llama, researchers affiliated with the project said.

Workers doing grading for the substation also uncovered signs of plant life that indicate birch, pine, sycamore, marsh reeds and oak trees once grew in the area that is now dry and sparsely vegetated.

The fossils representing 35 species have all been removed from the site and will be on display at the Western Science Center in nearby Hemet starting next year.

The bones are about 1 million years older than those found in the famous La Brea Tar Pits in Los Angeles, said Rick Greenwood, a microbiologist who also is director of corporate environment health and safety for the utility, Southern California Edison.

"If you step back, this is just a huge find," he said. "Everyone talks about

the La Brea Tar Pits, but I think this is going to be much larger in terms of its scientific value to the research community."

Greenwood continued: "Some of the things I personally find fascinating are the prehistoric camels and llamas and horses and deer. I don't think most people even have the concept that those types of animals were roaming around here more than a million years ago."

San Diego Museum of Natural History paleontologist Tom Demere said the fossil trove cannot be directly compared to the La Brea Tar Pits because they contain different species and shed light on different eras. Nevertheless, he said the collection could advance scientists' understanding of life in Southern California 1.4 million years ago.

"We have a fuzzy view of what this time period was like in terms of mammal evolution," Demere said. "A discovery like this - when they're all found together and in a whole range of sizes - could really be an important contribution."

The fossils were found in San Timoteo Canyon in a part of the ancient river valley about 85 miles southeast of Los Angeles. The region is now arid and dusty and shadowed by the San Bernardino Mountains to the north, but it was lush more than a million years ago, said Philippe Lapin, an archaeologist for the utility.

The dig started last fall and wrapped up this summer. Southern California Edison spokeswoman Lauren Bartlett said the substation project is moving forward, with completion expected in mid-2011.

Paleontologists studying the dig site believe so many skeletons were preserved because a muddy lake bed or marsh may have trapped animals that came to drink there. Some animals who became stuck may have fallen prey to others, while some died because they were unable to free

themselves.

All the bones have been dated to the Irvingtonian period, which spanned 1.8 million to 300,000 years ago. The bones found in Riverside County were dated by observing the layers of sediment they were found in and fall at about 1.4 million years ago, experts said.

Fossils from this period have been dug up from dozens of sites around California, some more well-preserved than others.

Scientists say the new trove will add important information to what is already known - particularly if it turns out several new species were found.

Researchers discover new species all the time, but uncovering so many from a single excavation site is rare, said paleontologist Jere Lipps of the University of California, Berkeley, who was not part of the find.

"If they really are new species, that strikes me as something that would be pretty important," Lipps said.

Lapin, the scientist supervising the fossils' recovery, said the large number of rodent bones found at the site will also tell paleontologists more about how the environment changed during the era.

Because rodents have shorter life cycles, they evolve more quickly to adapt to changes in climate and food sources. By studying the animals' teeth, scientists can learn more about how their diet was changing as the climate shifted, he said.

Their presence also indicates the area was moist and lush at the time, he said.

"It's going to paint a comprehensive picture of what was going on in the area," Lapin said. "The species that we're finding haven't been found before, or they're very rare, and some of them that we're finding are more complete than what's on record now."

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