BONES OF RARE FOSSIL SLOTH, FIRST NAMED BY THOMAS JEFFERSON, FOUND IN ILLINOIS

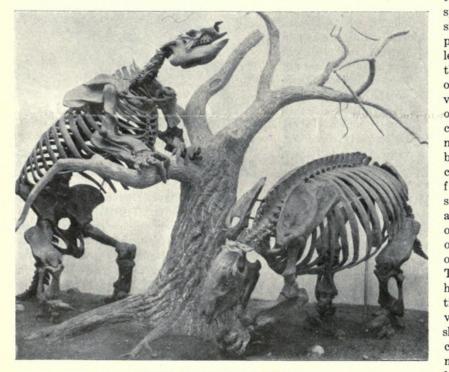
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In addition to being the third President of his country and a statesman whose stature has increased over the years, Thomas Jefferson was one of the foremost naturalists of his time. Actively concerned with promoting the sciences in the infant nation, he served for many years as president of the American Philosophical Society, a position comparable in the scientific world of the day to that of chief executive in the political. Jefferson was particularly interested in the bones of the large extinct mammals which were, and still are, to be found in the bog and cave deposits of the eastern part of the country, his activities in this field justly entitling him to be regarded as America's first paleontologist. His collection of these remains was an extensive one for those days, and was for a time deposited in a room of the White House.

In 1796 Jefferson received some large fossil bones, including an enormous claw, from a cave in what is now West Virginia. To these he gave the name of *Megalonyx*, meaning "Great Claw," supposing that he was dealing with "... an animal of the lion kind." It was his expressed belief that the beast might still be living in "... the immense country to the west and northwest." These conclusions were eminently reasonable, considering the state of knowledge of paleontology and geography at the time, but they were speedily disproved by the progress of research and exploration. Within a few years it was known that Megalonyx was a relative of the sloths, and the explorers of the west found no trace of it in their wanderings. Since 1796 additional fossil remains of Megalonyx have been found in various parts of the country, sufficient to give an adequate idea of the general form of the animal, although no complete skeleton has ever been found.

MOST COMPLETE ILLINOIS SPECIMEN

Finds of such animals in Illinois have been very few-some teeth near Alton, part of a vertebra near Charleston, a claw at Urbana, and a bone of the hand in the Galena region. Considerable interest was therefore aroused in the Museum when Mr. Forrest L. Boden, of London Mills, Illinois, sent in a letter, accompanied by drawings, describing some fossil bones which he had found near that town. It was immediately recognized from the drawings that the animal was a ground sloth, probably Megalonyx. The owner of the land on which the specimen was located, Professor Arnim D. Hummell, very kindly extended permission to excavate. Chief Preparator James H. Quinn and the writer therefore visited the locality in December. The bones occurred in a deposit of blue clay, underlain by gravel, exposed in the side of a gully developed in a pasture. The greater part of, if not the entire, skeleton had once been present, but unfortunately by the time the find was made most of it had eroded away. Excavation revealed a few bones, but these, together with the ones recovered by Mr. Boden, were far from sufficient to permit the mounting of a skeleton. Never-



South American Ground Sloths

Skeletons of Scelidodon, collected in Bolivia by the Marshall Field Paleontological Expedition (1927), as now exhibited in Ernest R. Graham Hall. The Illinois Megalonyx, subject of the accompanying article by Assistant Curator Bryan Patterson, was very similar to these animals in general appearance, but had a shorter, deeper head. Thomas Jefferson, who was eminent as a scientist as well as President of the United States, gave Megalonyx its name. theless the specimen, consisting of a good part of a hind leg, portions of the pelvis, bones of the forefoot, various elements of the vertebral column, and a molar tooth, is by far the most complete ever found in the state, and adds a few details to our knowledge of the anatomy of the animal. The Museum has on exhibition skeletons of various ground sloths from other countries, but none of this kind.

The blue clay in which the fossil was buried, as well as the gravel underlying it, appears to be an outwash deposit from the terminal moraines left by the glaciers of the Illinois glacial advance. This was the third of the four major glacial advances that covered a large part of North America during the Pleistocene or Glacial epoch, the time in geologic history preceding the Recent. Our sloth evidently lived, therefore, in the early part of the so-called Sangamon interglacial stage, the age of which may roughly be reckoned at about 200,000 years.

Megalonyx was about eleven feet long and some four feet high. In general appearance it was similar to other ground sloths, of which skeletons and restoration paintings are exhibited in Ernest R. Graham Hall. The head was small in proportion to the large and heavy body. The limbs terminated in exceedingly strong, clawed feet, so constructed that the animal walked on the knuckles of the forefoot and on the side of the hind foot. The tail was long and massive, serving as the third support of a tripod on which the animal could stand erect. Strictly vegetarian, Megalonyx and the other ground sloths used their claws primarily for digging up roots and tubers or for pulling down leafy branches, and only secondarily as defensive weapons.

CONTEMPORARY WITH EARLY MAN

The ground sloths were a rather successful group, their known history extending over a period of some twenty million years. Their actual history went back still further, but we have no record of their beginnings. Natives of South America, they made their way northward into what is now the United States in the Pliocene and Pleistocene epochs. The elevation of the Isthmus of Panama, which took place in the Pliocene, brought them into contact with new enemies but. although clumsy and slow moving, they were able to hold their own. Their size and thick hides assured their safety against all but the largest carnivores, and against these the adults at least were undoubtedly able to defend themselves successfully. When their great strength and sharp claws are taken into consideration, it becomes evident that an embrace from a sloth would have made a bear's hug look like child's play. They would have been quite helpless, however, against men armed with weapons and, since there is good evidence that they were contemporaneous with the early inhabitants of both North and South America, it is quite possible that man was a contributory if not a major factor in their extinction. The fact that sloth remains have been found with remains of the skin still adhering to the bones suggests that they survived until comparatively recent times. When Jefferson suspected that Megalonyx might still be living in the interior of the continent he may not have been wrong by more than a few thousand years.



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