

shrined in a glass case. Nothing could look more solid than a glyptodon with his low-hung body, spiky club tail and bone blanket. But that same animal represents thousands of bone pieces, painstakingly fixed in their proper places.

When dug up—paleontologists first catch their puzzles and then put them together—a glyptodon's fossil bones have an exasperating way of scattering. So, there is nothing to do except gather up the pieces and ship them back to the laboratory and there assemble the beast. The shell alone is made of thousands of little squarish monotonous pieces. Glyptodons were distant relatives of the modern armadillos. A well-grown glyptodon stood as high as an ox.

Scientific puzzlers have been known to put together a table full of bones and to get the wrong picture.

It was particularly easy to make mistakes with the old dinosaurs that lived so many million years before men inherited the earth. Nobody ever saw a dinosaur. Before the dinosaurian bones began to be unearthed, about a hundred years ago, no human being ever dreamed that such creatures had existed. Naturally enough, some of the early attempts at solving the dinosaurs

were funny, even funnier than the dinosaurs themselves really look.

There was the Iguanodon, for example. When the first set of Iguanodon bones was dug up, quite a few parts were missing and others were scattered.

Dr. Frederic A. Lucas of the American Museum of Natural History once described with a chuckle the laboratory adventures of that Iguanodon.

"Among the first of the remains found," he wrote, "were some sharp pointed bones not unlike small horns; so one was not unnaturally placed like the horn of a rhinoceros on the nose of the animal. Later it was found that this spine was really a thumb, and it was pointed out that to put his thumb to his nose was really an undignified gesture for so ancient an animal."

One of the longest animals ever assembled is the Diplodocus, a dinosaur 75 feet long. The pieces of this puzzle weighed almost two tons. They were shipped to the U. S. National Museum from the original home of the giant creature in Utah. The Diplodocus, with the appropriate, plodding name, lived about 150 million years ago.

To obtain the two tons of fossilized bones, the Museum had to carry off almost 50 tons of rock in which the bones were firmly embedded. Back in the

Museum laboratories began the task of chipping the rock off the bones.

To keep the long body of the puzzle beast from falling apart when set upright, a steel support had to be devised. That was a problem in itself. Altogether, the laboratory worked on that gigantic jig-saw dinosaur for seven years. It was finished and wheeled up to its place of honor in the hall of the dinosaurs in 1931.

The most jig-saw-like of all scientific puzzles are the broken dishes that have to be put together again. Some of these are found in a Humpty-Dumpty state of wreckage that would seem to defy human ingenuity. But where all the king's horses and all the king's men might fail, archaeologists have been known to work just a little longer and more ingeniously and to produce almost magic results. They can't always do it. But some of their successes are amazing.

Big water jars found in the ruins of Indian pueblos in the Southwest are often shattered in several hundred pieces when found. So are the big pottery bottles that the Incas of Peru used for carrying water. And so are vases from Greece and Egypt.

One yellow vase from Crete offered an interesting puzzle picture. There were 86 pieces to be assembled. When the piecework was done, there was a scene of the realistic writhings of two octopods on the curved surface.

Some of the most famous objects in museums are masterpieces of jig-saw art. Take the Portland Vase, sometimes referred to as the most famous vase in the world. This fragile glass vase was found in the sixteenth century. It was removed from a Roman tomb where it had lain sealed up since the third century A.D.

The graceful beauty of the vase, rescued from its dark resting place, was acclaimed. It was made, in cameo technique, of two layers of glass. The outer layer was opaque white. The layer beneath that was a deep soft blue. The artist had cut out the white layer, leaving a scene in white against the blue background.

In 1786, the Duke of Portland paid \$5,000 for the vase. In 1845, it was reposing in state in the British Museum when an insane man took it into his head to smash it into a hundred pieces. Today it is as beautiful as ever.

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NEUROLOGY

Scientists Study Goats That Become Rigid When Excited

GOATS so nervous that a shout causes them to become rigid and motionless were described to the members of the American Association of Anatomists.

Drs. Sam L. Clark, Frank H. Luten and Jessie T. Cutler of Vanderbilt University, Nashville, Tenn., rendered a scientific report on the nervous goats whose peculiar condition is evidently due to an inherited abnormality of the central nervous system.

The goats are so nervously constituted that excitement of any kind makes them perfectly rigid and they cannot move for a few moments. If they try to run, they fall down and for several minutes cannot bend their legs under themselves in order to get up. The condition is inherited. The rigidity may be brought on by a shout or other noise, by the goat's losing its balance in try-

ing to climb, or by any kind of excitement.

The strain of goats is found in Tennessee and northern Alabama. Similar goats were reported by a traveller in Palestine, Dr. Clark said.

According to local history, a man travelled through Tennessee late in the last century with four of these goats and a sacred cow of India. He needed money, so sold the goats, but took the cow with him. All the nervous goats of that part of the country are said to have descended from those four.

Dr. Clark and associates find that the condition is not due to any muscular ailment, nor could they find anything in the blood of these goats different from other goats. Giving them adrenalin excites them, but does not cause the rigidity.

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