A new dinosaur species, Pachyrhinosaur lakustai, unveiled from Pipestone Creek, Alberta, Canada

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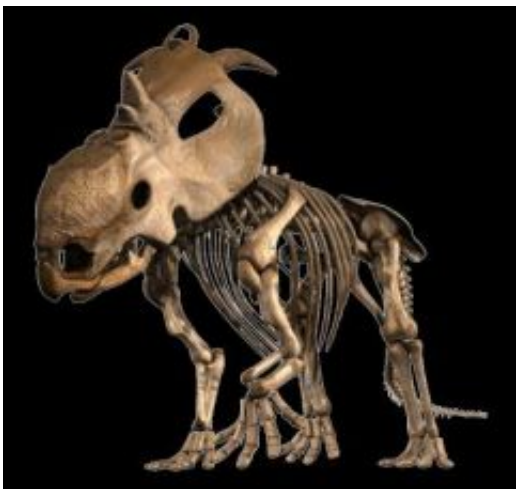

A 3-D computer rendering of the skeleton of Pachyrhinosaur lakustai. Credit: Pipestone Creek Dinosaur Project

The fossils revealed a herd of dinosaurs that perished in a catastrophic event 72.5 million years ago. The animals are characterized by a bony frill on the back of the skull ornamented with smaller horns. They also had large bony structures above their nose and eyes which lends them their name: Pachyrhinosaurus (thick-nosed lizard). These structures probably supported horns of keratin.

According to Dr. Philip Currie, renowned palaeontologist and Canada

Research Chair of Dinosaur Palaeobiology from the University of Alberta who was involved in the excavation, Northwest Alberta was not previously known for dinosaur material. It wasn't until the 1970s when Al Lakusta's excavations and studies in the area led the Royal Tyrrell Museum to begin excavation of the bone bed. The naming of the new species, Pachyrhinosaur lakustai , honors Lakusta, now retired Grande Prairie science teacher.

"The density of the Pipestone Creek bonebed is exceptional and surpasses many of Alberta's other ceratopsian bonebed sites. The preservation of the material is outstanding and was easy to collect. The number of bones, from all age groups, made complex investigations possible regarding behaviour and growth patterns."

The site contains fossils from young and old individuals, allowing researchers to describe individual variations and growth patterns, investigate the possibility of sexual dimorphism, and hypothesize on a herding lifestyle.

With this new species, added Currie, researchers will now have more data to give us a better understanding of the ancient life and ecosystems in northwestern Alberta 73 million years ago.

Currie, along with Wann Langston, Jr., and Darren H. Tanke, has published a monograph entitled "A New Horned Dinosaur from an Upper Cretaceous Bone Bed in Alberta", published by NRC Press.

According to Jack O'Toole, Chair of the Pipestone Creek Dinosaur Project, Currie's research and publication puts the region on centre stage in the scientific community.

"Ongoing cooperation between Grande Prairie Regional College, the Royal Tyrrell Museum and the University of Alberta has uncovered

many additional sites and fossils in our region," he explains. "Thanks to continued research, we now have a better understanding of the geology of the area as well. The communities of northwestern Alberta are excited to have such a unique resource. "

The Pipestone Creek Dinosaur Project is developing these resources as the northern part of an overall provincial network of palaeontological sites, to present them as a world-class tourism, education, and research centre that benefits local communities, the Province and Canada.

Andrew Neuman, Executive Director of the Royal Tyrrell Museum of Palaeontology, explained the importance of the site. "The excavations at Pipestone Creek provide us with many rewards. Working on a previously unknown site that is abundant in dinosaur material shows how rich the entire province of Alberta is in palaeontological resources."

Source: University of Alberta

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