Northern Territory Government

DEPARTMENT OF
NATURAL RESOURCES, ENVIRONMENT, THE ARTS AND SPORT

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MAGNT Farewells Geologist on Last Fossil Excavation

The recent annual fossil excavation at the Alcoota Scientific Reserve, located 105 kilometres north east of Alice Springs, was the last excavation for the Museum and Art Gallery of the Northern Territory (MAGNT) Curator of Geology, Dr Dirk Megirian.

MAGNT Director Anna Malgorzewicz said Dirk Megirian passed away after a long battle with cancer in July 2009.

“Dirk had worked as the Museum’s Geologist since 1985 and his research on fossils, particularly the extinct megafauna of the Northern Territory, is the lasting legacy of a great scientist,” Ms Malgorzewicz said.

Joining Dr Megirian on the recent Alcoota excavation was a number of scientific and technical staff from MAGNT, including MAGNT Taxidermist Jared Archibald.

“It was wonderful to have Dirk out in the field with us, at a site that he was instrumental in setting up and studying for over two decades,” Mr Archibald said.

“Dirk’s passing was a very sad time for all of us, but he was at a place that he loved, and had the opportunity to spend time with friends and colleagues who visited during the field season.”

Mr Archibald said the Alcoota fossil site holds the remains of thousands of individual animals in a massive jumble of bone, with the Alcoota fossil beds producing some of the best, most diverse, and most complete representatives of larger extinct animals such as species of ‘marsupial rhinos’ *(diprotodontids),* ‘marsupial tapirs’ *(palorchestids)*, and giant flightless geese *(dromornithids).*

Also present at the site are remains of crocodiles, ‘marsupial wolves’ *(thylacines),* ‘marsupial lions’ *(thylacoleonids),* kangaroos, emus, turtles, goannas and flamingos.

“Alcoota is one of four known vertebrate fossil sites from the Cenozoic Era (the ‘Age of Mammals’) in the Northern Territory and because of its importance is protected as a Heritage Place within a scientific reserve,” Mr Archibald said.

“The site provides a unique insight into Australia’s terrestrial fauna during the Late Miocene, the interval from about nine to five million years ago.

“During this time there was a marked transition from assemblages dominated by large-bodied, quadripedal (animals that walk on four legs) browsing marsupials and giant flightless birds, to assemblages dominated by kangaroos.

“The Alcoota deposits offer scientists an insight into the nature and timing of these events, and the evolution of Australia’s unique fauna.”

Mr Archibald said the fossils are no easy task to extract as they occur in loose clay sediments and are highly fractured due to expansion and contraction over millions of years.

“The sheer density of fossils means that almost every bone has to be unravelled from those around it without causing damage, so fossils have to be fully consolidated in situ before they can be moved, which is a painstaking and time consuming process,” he said.

MAGNT conducts an annual excavation of four to six weeks during the cooler winter months which has added many specimens to the MAGNT collection, with this year’s excavation taking place throughout July 2009.

Mr Archibald said that while Dr Dirk Megirian was at the Alcoota site he was able to observe the discovery and extraction of a large and very complete crocodile skull.

“It’s hoped that this skull, once fully prepared, will reveal long–held secrets regarding crocodilian evolution in Australia which will be a great tribute to Dirk’s many years of research in this field.”

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Media Note – for more information contact Jared Archibald on 8999 8292

Images:
Dr Dirk Megirian, Alcoota Fossil Site 2009

Staff, volunteers and students excavating in main pit, Alcoota Fossil Site

Crocodile Skull (top), Plaisiodon (large herbivorous marsupial) skull (lower left), Hadronomus (kangaroo) tibia emerging from the sediment

Extracted skull of fossil crocodilian – *Baru darrowi*

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Department of Natural Resources, Environment, The Arts and Sport
Anne Marshall Ph. 8999 4730
www.nt.gov.au/nreta