

Digging for dinosaurs

By Nardia Sullivan

MAJOR excavation works at Flat Rocks, near Inverloch, are unearthing the bone fragments of dinosaurs believed to have roamed the area 120 million years ago.

Over the past week, a team of palaeontologists have dug up an array of vertebrae, small limbs and teeth, connecting the area to the polar dinosaur.

The diggings for the fossil-containing rock at the lucrative coastal site are being led by Lesley Kool, a research assistant at Monash University

Melbourne. Lesley works for exploration coordinators Dr Tom Rich, who is the curator of vertebrate palaeontology at the Museum of Victoria, and his wife Patricia Vickers-Rich, a reader in earth sciences, ecology and evolutionary biology at Monash University.

The Museum of Victoria and Monash University have been working on the joint project to gain a better picture of prehistoric life in south-east Australia, for the past 15 years.

Alongside Lesley, chiselling away at the soft rock at Flat Rocks is a small crew of volun-

teers and Monash University science students.

Limited to working at low tide, the group has already found and categorised more than 75 bones.

"That does not include a lot of scrappy bone," Lesley said, explaining they have come across a lot of turtle fragment.

"This site was part of an ancient stream bed, inhabited by primitive short-neck turtles," she said looking over the site.

"We are finding a lot of them here."

Among the more significant discoveries at

the site, was a tooth dug up on the first morning on the job, Monday, January 31.

"The first morning we found our first bone," Lesley enthused, "a Hypsilophodontid tooth."

The Hypsilophodontid was a small plant-eating dinosaur.

"We were quite excited," Lesley said.

The quick success also emphasised the significance of the site, which was only discovered in 1990.

According to Dr Tom Rich, had the Inverloch site been discovered earlier, excavation work would never have been carried out at what is now known as Dinosaur Cove in the Otway Ranges.

He believes the Inverloch fossils to be 10 to 15 million years older than those at Dinosaur Cove, and much easier to extract.

Dr Rich expects about four times the amount of fossil to be collected in a month's work at Inverloch than was found over a much longer period at Dinosaur Cove.

TEETH

On Thursday morning, the tooth of a Theropod was also uncovered.

The small serrated tooth of the meat-eating dinosaur was found embedded in rock behind a piece of turtle plate.

"The serrated edge on the inside of the tooth says it was a meat eater," Lesley said pointing out the clearly grooved fossil.

"Their teeth were like serrated knives, enabling them to rip into flesh," she explained.

"It was a rip, pull and swallow motion."

Four separate Theropod teeth have been found at the site, giving palaeontologists the feeling jaw fragment is not far away.

"That will make it easier to identify the species," Lesley said.

The teeth of little

armoured dinosaurs, the Ankylosaur, and a small freshwater Plesiosaur, a creature about the size of a dolphin, have also been found.

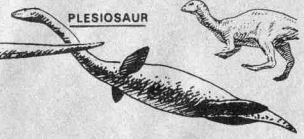
HYPsilOPHODONTID TYPE II



lific prospector of this area," Lesley said.

"Mike is a very important part of the crew. "As he lives in the area he is

sand had been swept from the shore platform. Left exposed on the surface was a scattering of about 20 bone scraps.



The team is looking for more evidence of both.

LIMBS

Talking to the "Star" at Flat Rocks, Lesley said, "So far we have found an assortment of dinosaur and turtle vertebrae, small limbs and teeth."

The most interesting limb bone found was a thigh bone, belonging to a small animal.

The bone was similar to another previously found at the site.

From the thigh bone, Lesley estimated the small prehistoric creature stood between 50 and 60cm tall and about a metre long.

A small piece of protruding bone indicates it had muscular legs.

"It was small, but very fast running," she said.

"Its pace was most likely its only defence against predators," Lesley concluded.

POLAR

All of these small fragments of bone are giving palaeontologists a greater insight into the dinosaurs that inhabited the area and how they survived for three months of darkness each year.

The goal of the 15-year long program has been to learn what vertebrates lived here so long ago and what the physical environment was like in the polar, yet not frigid, region of south-eastern Australia.

Australia then lay close to Antarctica. The country was more than 40 degrees closer to the South Pole than it is

able to check the rocks more often. He has uncovered some excellent finds," she said.

The Flat Rocks site was stumbled across in 1990 on a day when the

"That made us realise we had found something quite important," Lesley said. "It was very fortunate we found this site."

"And there are more waiting to be found," she assured.

Golden rules

THERE are three golden rules to follow if anyone finds what they believe to be a fossil.

1. Leave it there.
2. Remember where it is.

3. Report the find to the Inverloch rangers.

If it turns out to be a bone, the fossil will be added to the group's collection and the finder will be given a cast of the original.



Leading the diggings for dinosaur fossils at the Flat Rocks site, near Inverloch, is Monash University research assistant, Lesley Kool. She is pictured examining fossil-containing rock with Phillip Island prospector, Mike Cleeland.



ANKYLOSAUR

today, with the south-eastern region on the continent well inside the Antarctic Circle.

"These animals would have lived in darkness for three to four months every year," Lesley explained.

With no modern animals living in that same environment today, just how the prehistoric ecosystem functioned is a fascination that keeps Lesley and her colleagues searching.

THE SEARCH

A concerted effort in search of dinosaur fossils began along the South Gippsland coast in 1988, after finds around Eagles Nest and further west.

Among the prospectors is Mike Cleeland, from Phillip Island.

"Mike is the most pro-



The crew continues the search for bone fragments that will give them a greater insight into the polar dinosaur, which roamed the area 120 million years ago.