Inverloch dinosaurs break new ground

THE INVERLOCH dinosaur excavation is underway at Flat Rocks and, with many exciting discoveries being made each day, is set to break new ground in Australian palaeontology.

Ms Lesley Kool, a researcher from the Palaeontology department at Monash University who is leading the excavation, explains that the project will also put Australia on the map in the science of palaeontology.

"Australia has such a meagre collection of dinosaur bones that we have to rely on the northern hemisphere which have evolved differently. That is the frustrating part. We have got nothing to compare with. It's like pioneering," she says.

But the frustration does not override the excitement. Palaeontology is not just a hobby. It is an addiction and it shows on the faces of all those present at the dig. Everyone involved has an intrinsic interest in the science of palaeontology.

Ms Kool reflects the collective excitement of the group.

"We just don't know what the next rock will expose. These fossils have been trapped in the rock all these millions of years and we are the first people to see them. It's very exciting. We could be looking at something new," she says.

Ms Kool explains the most common fossil come across in the Inverloch area is that of the Hypsilophodont, meaning high crowned tooth.

However, amongst several dozen small bones, the most exciting find during the first week of excavation was a 1.5 centimetre Theropod tooth. The Theropod, which existed during the early Cretaceous period 120 million years ago, was a small meat eating dinosaur that used to run on two legs.

"It really makes us believe we are going to find part of a skull or even a jaw," said Ms Kool on site at the dig and unable to contain her excitement.

According to Ms Kool the tooth of an Ankylosaur was discovered near the same site in 1993. The team are hoping to find some evidence of these creatures as it was originally thought that they did not inhabit these parts.

The discovery of teeth is quite desirable as, Ms Kool explains, the tooth is the most diagnostic part of the dinosaur. The ornamentation of the tooth reveals whether the dinosaur was a plant or meat eater and subsequently of what species.

The site being excavated is infact an ancient river bed that is only accessible at low tide which unfortunately limits the working hours for the excavation team.

The rock extracted in the dig reveals many different types of ancient matter, emphasising the importance of knowing what to look for. Ms Kool explains that shape, colour and texture are the criteria and that dinosaur fossils actually appear as a chocolate, spongey matter.

Ms Kool also explains that because of the nature of the channel, bones were washed into the stream, dumped and finally fossilised. Although much of the fossilised matter within the rock is infact turtle shell, the team are discovering multitudes of relevant matter.

According to Ms Kool, for every 100 specimens of fossil found, 10 are scientifically important. Watching the excavation process however, one has to wonder how the fossils are removed so that they remain identifiable. Chisels, hammers and industrial angle grinders are the tools of the trade which result in only one bone in every hundred being removed in one piece. Ms Kool said that fossils were usually extracted in at least two pieces.

"It's not a problem as long as we have got all the bone," she said.

When asked how the professionals reconstructed these delicate pieces, Ms Kool, very matter of fact, said "Superglue. It's the best for glueing bones back together."

Ms Kool estimates that approximately 300 to 400 fossils will be discovered by the completion of he project and transferred to Monash University in Clayton where Ms Kool will spend the remainder of the year carrying out the intricate procedure of removing the fossils from the rock and cataloguing them.

"Often it is just a cross section and you have got no idea what it is but you just see it opening up like a flower. To me, that is the most exciting part," she said.

Ms Kool assures that the works carried out at Flat Rocks are environmentally friendly.

"We are very environmentally aware of any disturbance to the ecosystem and the tide cleans up after us," she explains.

A permit had to be obtained by the Department of Conservation and Lands before the excavation could commence.

The team of excavationists are also involved in an education program for children which incorporates visiting schools with casts of fossils and inviting classes to view the excavation site and try their hand at finding fossils.

"Few children are infact aware of the existence of dinosaurs in Victoria," says Ms Kool.

Mr Mike Cleeland from Phillip Island, whose prospecting has led to the invaluable discovery of sites such as the Flat Rocks excavation, on behalf of the team invites members of the public to visit the excavation site.

Mr Cleeland explains that the more locals that know about the site, the more chance there is of developing local pride and subsequently protecting the site from vandalism.

Although the exacting task of excavation is restricted to experienced workers, interested people are invited to help out on any of the open days to be held during February.

On Saturday, February 12 at 5.00pm a Fossil Hunt will be held at Eagle's Nest. Interested people should meet at the carpark on the Coast Road to catch the evening low tide.

On Sunday, February 20 at 12.00 noon a Fossil Hunt will be held at the Kilcunda foreshore and Railway Bridge area. Meet on the beach opposite Kilcunda township.

There will be no cost to join in any of these events. Tides will be suitable, but cancellation may occur in extremely bad whether.

There will be no digging on any of these days; only surface prospecting of the likely localities. Any bones found will be removed and taken to the Museum on the day and a cast or copy will be made and given to the lucky finder.