

BUSH NEWS

from the Natural Areas of Kedron Brook & Environs

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GreenBrook Association

THE PREHISTORY OF AUSTRALIA (Part 1)

To understand the prehistory of Australia requires a change of scale. The continent of Australia was formed when it broke away from Gondwana about 50 million years ago (50 MYA). How can we begin to comprehend such a long time?

In one sense it is not so long. Animal life evolved 570 MYA, on a planet believed to be 4500 million years old. Dinosaurs lived for a whole 140 million years, dying out just before Australia set sail to the north.

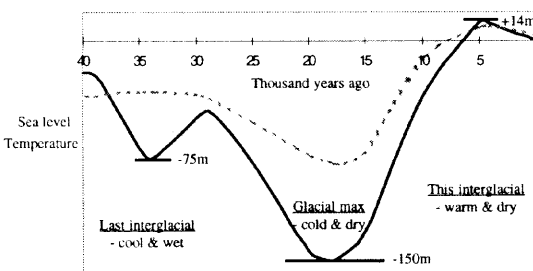
The separation of Australia had global significance in that it set the scene for a cold ocean current to flow around Antarctica. Previously ocean currents had flowed north-south, keeping temperatures around the globe reasonably constant.

The vegetation on Gondwana reflected this mild climate, so that the Australia of 50 MYA was "a well vegetated land with diverse forest communities forming a mosaic over much of the land". Rainforests were common, and the families of many plants which we are familiar with today were already present, including those of the banksias, lillypillys, eucalypts, tea-trees and casuarinas.

South America split from Gondwana about 40 MYA, and the opening of the Drake Passage

finally allowed the circum-polar current, which today operates as a huge refrigeration engine, to begin. The effect was immediate, with the first glaciers appearing on West Antarctica by 38 MYA. The sea level dropped 125m.

Australia was sheltered to some degree from the cooling in Antarctica because of its drift north into warmer latitudes. But it got colder still. The East Antarctica ice cap formed 13 MYA, and the West Antarctica ice cap 6 MYA.



This interglacial is more severe than any experienced previously

Cooling intensified when the Panama Isthmus between North and South America formed 5 MYA. This interrupted the flow of warm equatorial waters and set the world on course for the first Ice Age in 300 million years.

The northern ice cap formed 2.4 MYA, and that is generally considered to be not only the start of the current Ice Age but also the trigger for the evolution of Man. The origin of the genus *Homo* is dated at this time.

The Ice Age has so far consisted of 17 glacial maximums. Between them were warmer interglacials, of which our present period is an example.

For the most part, the dry landscape and the tough vegetation which we associate with Australia is a product of this Ice Age, and particularly of the time since the very last glacial maximum which peaked at 18000 years ago.

The last glacial maximum was absolutely devastating for Australia. The country became extremely dry. So much water was locked up in ice that sea levels dropped 130m lower than present. Two thirds of the continent was covered by dunes (the current figure is 40%), and forests were restricted to a small strip along the eastern seaboard; a mere 15% of the land.

The present interglacial is the driest ever, with droughts a constant feature of the environment. This has had a marked effect on the Australian vegetation. One group of trees, because of their peculiar drought-resistant characteristics, has come to totally dominate the wetter portions of the land. Prior to the last glacial peak eucalypts were less numerous than other trees in most localities.

It is probable that most of the 500+ species of gums in Australia have evolved in the last 10000 years. It is also probable that

many of the animals that live in their hollows, such as our parrots, have also diversified in very recent times.

There is one other aspect which is particularly interesting. The Aborigines were in Australia at least 65000 years ago, and perhaps as long as 140000 years ago. Certainly they were well established at the time of the last glacial maximum.

So they were also present during this last phase when Australia's vegetation changed so much. What did they contribute to this change?

The role of the Aborigines in shaping our vegetation, and the effect of the last glacial maximum on the way of life of the Aborigines, will be explored in the next issue.



Space has prevented the inclusion of references. They are available on request.

Frank Box

UPDATE ON TURKEYS

Scrub turkeys continue to wander around Alderley and the Grange.

One male made several attempts to build a mound in a property to the south of Raymond Rd. After a number of battles with the resident male the turkey finally gave up and moved on. They can be difficult to live with.

However it seems that one pair (and there must have been at least one pair) did succeed, with reports of a young turkey at the top of Blandford St.

Where did they breed?

THE LORIKEET SPECTACLE

The flying fox fly-off from Sparkes Hill is undoubtedly our greatest local natural spectacle.

And a close second must be the rainbow lorikeet roosting colony at Chermshire Shopping Centre. Each night on dusk thousands of them gather in the trees either side of the main Gympie Rd entrance and in a group of trees over the road on the northern side of the centre.



For some reason these birds seem to prefer roosting where there is plenty of light around.

Also intriguing is the number of crows that roost with them. While not as many as the lorikeets, their number must run into the hundreds. The two seem an odd combination, and it is well that they have both chosen such an out-of-the-way place; the din that they make is overwhelming.

Doxiadis

MILESTONES

Consultants for:

- *Organisational Change*
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Contact: Jeni Neary

Ph-3856 4771 Fax-3856 4702

MAKE A CONTRIBUTION

The bandicoot is the only ground-dwelling marsupial that lives in Grange Forest Park.

Since 1989 we have been concentrating on trying to re-establish an understorey in which these animals can camp during the day. An understorey would also remove the bare look of parts of the park and reduce erosion.

Progress has been slow, but there are signs that we are finally starting to see some results. If you would like to help, our next working bees are on:

19 April / 17 May / 19 July

Meet at the Blandford St entrance to Grange Forest Park.

Bob Devine

PLANT OF THE MONTH

Prumnopitys ladei - 'Black Pine'

The leaves on this small tree are small, flat, bright green and look distinctly primeval.

It is a slow growing plant to 3m with a similar spread, and tolerates full sun to full shade. It must be well-drained. It would be delightful as an infill plant under trees.

Available from Perrotts Nursery, Elkhorn St, Enoggera

