

## Marker 99...

Don't eat Nardoo!



Remember the 'unusual fern' on the front cover of this booklet? Look for it around the pond. Nardoo is a fern that produces leaves that look like a large four-leafed clover.

But be careful! If you eat the spores from this plant, you might end up like explorers Burke and Wills! Find out what happened to them!

## Marker 102.5

Where's Wolly? Why?



\_\_\_\_\_



Is the cage to keep the tree in or the people out? This is one way to conserve our rare and endangered species.



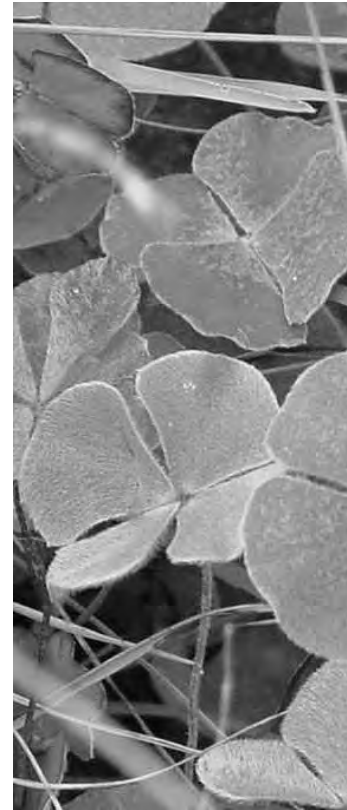
The Wollemi Pine (*Wollemia nobilis*) was discovered in 1994 in a deep gorge in the Blue Mountains area.

Pollen from this plant is known from two-million-year-old fossils but until this discovery, it was thought to be extinct. There are only about forty mature specimens left in the wild.

Follow the Main Path down through the Rainforest Gully. Look for some ways that plants obtain as much light as they can in order to grow.



# BOTANICAL BRAINTEASERS



*Nardoo — find out more about this unusual fern later!!*

There are lots of questions in this booklet and of course your aim is to answer them. They aren't all that easy, though!

Don't despair! Sometimes there is more than one correct answer for each question, and we give you lots of clues. The clues are marked like this:



There is also lots of interesting information that is marked like this:



Write your thoughts where you see this:



Botanical Brainteasers takes you along the main pebblecrete path but you may wish to go down minor paths for short distances. The Main Path has **Markers** (black numbers on a grey background) spaced 10 metres apart, starting at the footbridge near the café.

You begin at **Marker 9** by the Ellis Rowan Building.

Here are some rules you need to keep in mind

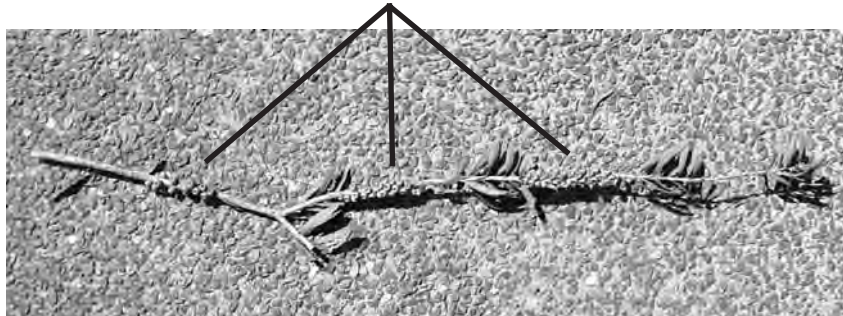


Australian Government

Australian National Botanic Gardens

Marker 9...

How old do you think the bottlebrush at Marker 9 might be?



\_\_\_\_\_



The bottlebrush (*Callistemon*) usually takes three years before it flowers. It then flowers each year, producing clumps of hard, woody fruits which look like small gum nuts.

You can see the older ones back along the stem from the tip.

Markers 17.2 to 21...

Choose your favourite bark. Why is it your favourite?  
What do you think these plants have in common?



\_\_\_\_\_



This family of plants is called Myrtaceae and contains many species. There is certainly a lot of variation between the barks of these plants!



Did you spot any of these?

But they do have something in common. Look for the fruits.

Marker 59.5...

Can you find a leaf?

Walk up the dirt path about 10 metres to the tap. Look carefully at the *Allocasuarina nana* plants and try to work out where the leaves are.



\_\_\_\_\_

REMEMBER!



The leaves aren't green, but you can find them spaced along the green stems. (Was it actually a stem that you chose?) If you had a magnifying lens you would see crowns fit for a king or queen. They are the tops of the leaves, which are otherwise joined to the stem.



When you get to the Eucalypt Lawn you might like to take a break. Check out the Ducrou Pavilion and its patterned floor, or the different barks on the many eucalypt trees. Then move on to the next challenge.

Marker 91...

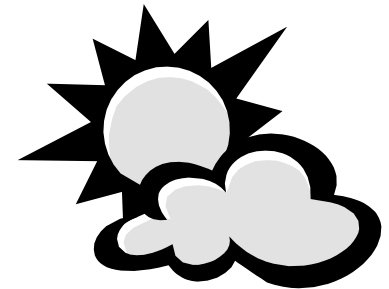
What's the time?



\_\_\_\_\_



Up from Marker 91 is a sundial. Can you use the sundial to measure the time? Read all about it, then without looking at your watch, calculate the correct time for today.



Marker 49...



Which *Banksia* fruits do you think hold the mature seed?



\_\_\_\_\_



Look carefully at the *Banksia* fruits. Do they all look the same?

Do you think a bushfire would do any damage to seed in a closed fruit? Why do you think this?



\_\_\_\_\_



Markers 54 to 55...

Mark the location of your favourite plant on the map.



First, work out where you are on the map. Then look across and down to the creek to see a range of plants which can be found in and around the Sydney region. Look around you and decide which kind of plant is your favourite. Mark its location with an x on your map.

As you walk up the path, see if you can find any flowers that have their flower parts arranged in threes or sixes.

Can you find any that have them arranged in fours or fives?

54



Marker 24...

How old do you think the tallest grass tree might be?



\_\_\_\_\_



Grass trees can grow to be very old! Many grow about one centimetre a year.



Marker 25...

How many new Gynea Lily plants might you get from a clump?



\_\_\_\_\_



Remember — you can't dig it up to find the answer! You have to estimate. Try the nearest clump.



Gynea Lilies produce seed from their spectacular tall flowers, but they also produce offshoots from the base of the parent plant. Each offshoot forms a separate plant that can be divided from the clump.

Marker 27...

How many plants do you think you could grow from seeds in a single waratah fruit?



\_\_\_\_\_



Find a fruit which has already opened and dispersed its seeds. There may be clues inside.



The Waratah (*Telopea speciosissima*) flower is the floral emblem for NSW.

Marker 33...

Find a lignotuber on a mallee gum.



A short distance along the gravel path is a *Eucalyptus* tree. It is one of a special group of eucalypts that has many trunks growing from a large woody base which is called a lignotuber.

Circle it on the diagram.

REMEMBER!



Markers 34 to 37...

How many different leaf forms can you find here along the path?



\_\_\_\_\_

--	--	--

Grevilleas have a wide variety of leaf forms. You might like to draw 3 that interest you. Look closely to see the detail.



\_\_\_\_\_



Find a flower that looks like these. Write its name here.



\_\_\_\_\_

Marker 49 (just past)

How high must a vine climb?



\_\_\_\_\_



*Pandorea* usually lives in dense rainforests where little direct sunlight can penetrate. It must have light to make food, however, so that it can grow. But instead of growing a thick trunk, vines twine high around other plants so the leaves can get enough light. Can you see the *Pandorea* foliage in the crown of the gum tree?



If this tree were in a rainforest, estimate how high the canopy would be.