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Department of Biodiversity,
Conservation and Attractions

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FRED JACOBY PARK

NATURE TRAIL

This delightful setting has an interesting history. A century ago the property was originally owned by a Mr. Jecks, who developed it as a vineyard and also built a small cottage. It is thought that he planted the large, spreading English oak which is one of the oldest trees on this site.

In 1896 Mr. Jecks died and the property was then purchased by two brothers, Mathieson and Fred Jacoby, who named it "Portagabra".

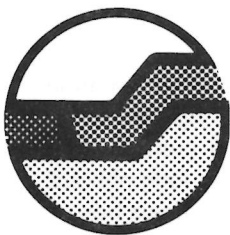
The partnership was dissolved in 1904 and Fred Jacoby then became sole owner. He developed the area into an orchard. Vegetables and daffodils also were grown. He later built the Goldfields Weir Hotel in a period when the area became a favourite picnic spot for railway patrons.

Mr. Jacoby died in 1954 and his daughter, Mrs. Elfreda Devenish, of Nedlands, presented the fourteen and a half hectares to the people of Western Australia. It is now maintained by the Forests Department as a memorial arboretum for the purposes of recreation and education.

Many of the eucalyptus, acacia and callitris species were planted in 1958, with subsequent major plantings in 1973.

The cottage fell into disrepair and was demolished in the early 1970s. As you walk this nature trail, see if you can find where Mr. Jecks built his cottage. Imagine what this beautiful valley was like then, in its natural state.

The children's play areas and toilets were provided in 1975 and 1976.



Conservation and
Land Management



This magnificent tree is thought to have been planted by Mr. Jecks in about 1870.

When measured in 1978 it had a girth at breast height of 4.5 m, with a height of 29 m and a crown spread of 30 m.

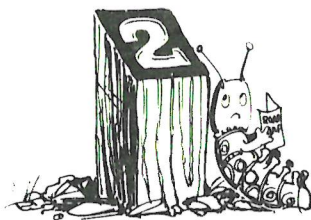
If trees had the power of speech, what wonderful stories this old oak could tell about the life of early settlers in these parts.

This tree is deciduous—dropping all its leaves during autumn and early winter. Now that you're here, have a good look at the leaves and see how they differ from the other trees nearby.

What is the fruit of the oak tree called?

1

From the oak tree sign, walk 17 m uphill to the lilac tree (*Melia azederach*), which is covered with lichens.



Lichen-covered tree

Note the rough bark covered with lichens. Lichen is made up of green algae, which makes the food and fungus which helps the algae cling to the tree. Two elementary plant forms are working together in order to survive. This type of relationship is called symbiosis.

What other plants are growing on this tree?

2

Walk past the water tap 55 m to the spotted trees.



The tree which is like a leopard

Most of you will have seen pictures of a leopard, a member of the cat family, which lives in Africa. It has a yellow coat with large dark spots. The trees in front of you are like leopards. Each tree has spots on its trunk—and like the leopard, it “cannot change its spots”.

They are spotted gums (*Eucalyptus maculata*).

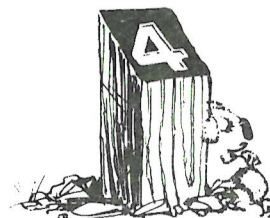
Do you know what causes the spots?

3

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Face uphill and walk 3 m.



Ribbon gum (*E. viminalis*)

Although more commonly known as manna gum, you will see, by looking up, why this species became known as ribbon gum. See all that bark up there hanging down in long ribbons! The leaves are real favourites of the koala bear.

Face down hill and walk 57 m to a group of deciduous trees.



Poplar tree (hybrid)

A tree often seen in pictures of Europe. It is fast-growing and used for the manufacture of matchsticks.

Pause for a moment while crossing the bridge and see how long the planks are.

Pace them out and see if you can work out their length in metres?

5a

When you stand in the middle of the bridge, look both ways at the gully.

Do you know what was the main thing which made the gully?

5b

What do we call it when soil is carried away by the forces of nature?

5c

Cross over the bridge, turn right on to roadway and walk 50 m, then stop and look around.



Tree shapes

There are many different tree shapes, as well as different colours of leaves and different colours and types of bark.

Round-topped trees have spreading crowns.

Horizontal trees have spreading branches and make excellent shade trees.

Pyramid trees may have branches to ground level. Others show distinct trunks.

Columnar trees stand tall like a straight column.

Weeping trees have foliage that hangs down.

How many differently shaped trees can you see in the park around you?

6a

What colours can you see in these trees?

6b

Like us, trees need air to live—in addition to their need for soil and water. Fortunately for us, they take in carbon dioxide and release oxygen which we need to live. At night this process slows down and reverses slightly.

What is the name of the substance in leaves which reacts under sunlight to produce food for the tree, oxygen and at the same time consume carbon dioxide?

6c Chloro

What is the name given to this process?

6d Photo

Continue another 85 m along the roadway.



The lemon tree with no lemons

On your right is a row of tall trees. These are the lemon trees which never bear lemons. You will be saying "that's silly—these aren't lemon trees"; but wait—go and crush a leaf between your fingers and then smell it. There may be



some leaves in a “smell box” under one of the trees. Now you know the answer. These are lemon-scented gums (*E. citriodora*). Look at its bark, leaves and buds for comparison with the tree at stop 8.

To help you recognise this tree when you see it again in this park, draw a leaf and answer the questions about the trunk.

Leaf drawing:

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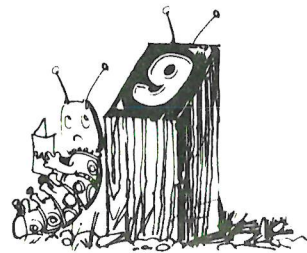
Continue 103 m along the roadway, over the drain, and at the blackbutt (*E. patens*) turn right and cross the footbridge to the playground.

Trunk:

7a Feel

7b Colour

Continue along the roadway 34 m.



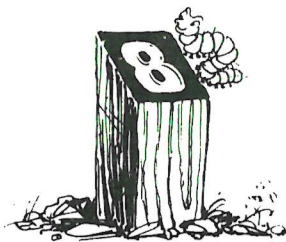
Cootamundra wattle (*Acacia baileyana*)

Look at these trees. When the first European settlers arrived here they used the long twigs of these trees to build their houses. They mixed them with mud and clay to make walls and roofs. This way of building was called “wattle and daub”, and so the trees were called wattle trees.

What is the colour of the wattle flower?

9

Can you find a piece of four-legged play equipment which resembles a sheep?



Swamp mahogany (*E. robusta*)

This robust tree will grow in most positions. Examine its bark, leaves and nuts. Compare them with those from the lemon-scented gum.

Write down the main differences:

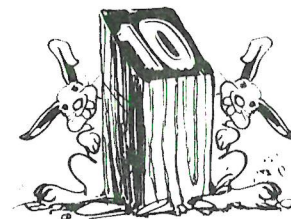
8

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The burl

The “sheep” is made of jarrah, which is one of the strongest timbers and is used for structural work. The large lumps on the timber are called burls. A burl to a tree is like a cancer, which is

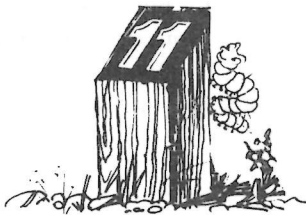


caused by physical damage, which often initiates multiplication of cells. A burl can also be caused by disease organisms such as fungi, bacteria and viruses. The burl weakens the tree considerably, but the burl itself is tough and very heat-resistant and is used for the manufacture of smoking pipes and decorative furniture.

Can you find another burl in the playground?

10

Stand at the sheep with the footbridge on your left and walk ahead 118 m to a group of light-barked trees on your right.



Drummond's gum
(*E. drummondii*)

This little-known Western Australian eucalypt is named after one of the state's earliest botanists, James Drummond, who collected many botanical specimens, particularly during the 1840s.

Have a look at the bark and you will find that it is smooth, white or grey in colour and rather powdery. Next, have a look at the fruits. They are almost round, but what is most noticeable is the four sharp triangular valves which point upwards around the crown.

Walk down the track in front of the Drummond's gums to the main drive, turn left and walk 52 m to the footpath on the right.



Paperbark tree
(*Melaleuca raphiophylla*)

Just down the track are some trees with pale white bark. The bark is hanging down in places. Feel the trunk and examine the bark which is

hanging loose. It reminds you of paper. When reading a book or newspaper do you ever think of the trees that go into making paper?

Do you know what the bark of the paperbark tree is used for today?

12

Continue on the track a further 52 m to the picnic table above the dam.



The sounds of nature

It is time for a rest. Sit at the table and listen to all the sounds that are around you. You may be able to hear the wind whispering in the trees, the calls of the birds, the sound of running water or the sound of a motor car.

How many different sounds can you hear?

13a

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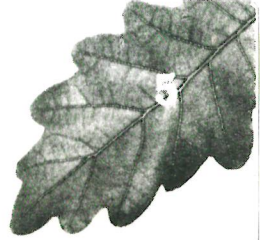
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Water is a very precious thing. Plants and animals need it to stay alive. When a lake, or even a pond, is formed, all kinds of living things begin to invade it and "grasp" what they can to keep themselves alive.

Look at the fierce competition for moisture around this dam.

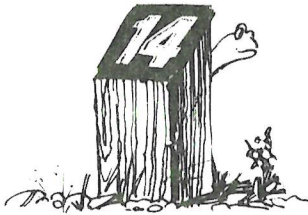
What do we call plants which grow wholly or partly under the water?

13b



At this stopping place you will find a river gum (*E. camaldulensis*) which is a good example of how a tree depends on soil and water. Look how the root of the tree bends downwards in search of moisture. The river gum is the most widespread of all eucalypts and is found in all mainland states. It grows naturally in areas with as little as 250 mm rainfall.

Face away from the dam and walk 21 m to a gnarled tree.



Kurrajong (*Brachychiton diversifolium*)

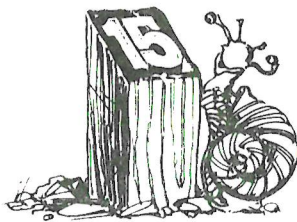
This eastern states tree's name originated from the Aboriginal word "currajon", meaning fibre-yielding plant. The bark fibres were used by Aboriginals for making nets.

Study the trunk and leaves and note the differences from other trees you have seen.

Do you know the name of a large Australian bird with a similar name?

14

Walk towards the fence, cross the bridge and main track and head for the flat rock table under a group of sugar gums (*E. cladocalyx*).



Rock table

Examine the rock.

Do you know what type of rock this is?

15

Cross the bridge and walk 40 m to some low trees.



Red flowering gum (*E. ficifolia*)

This is a widely cultivated ornamental flowering tree. Its flowers range in colour from pink to red and it is found naturally in a small area between Denmark and Walpole. Can you find any nuts? They are similar to, but smaller than, the common "honkey nuts" from the marri tree.

Continue over the track and up the bank for 85 m to some trees on the right.



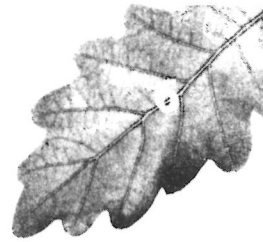
Gungurru (*E. caesia*)

Like most other trees, this one also has distinctive features. Look first at the size and shape of the tree. It is fairly small with weeping branches. The bark is smooth, red-brown in colour with a blue-grey or pale grey powdery surface on the leaves, and more particularly the branchlets, buds and fruits. The outer bark on the main stem decorticates (peels off) in curled strips.

What colour is beneath the shedding bark?

17

Continue 20 m to the light-barked tree.



**The powder tree:
Powderbark wandoo**
(*E. accedens*)

Rub the trunk with your finger—you can see the reason for the name. This tree and the wandoo (*E. wandoo*) are distinctive in that the timber as well as the bark, contains a high percentage of tannin. Until recent years a local company extracted chemicals from these species.

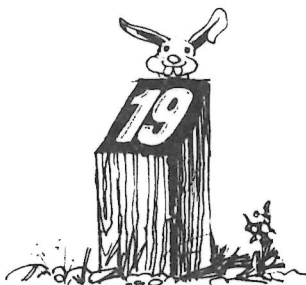
Look for the gum nuts of this tree and write down what you notice about them.

18

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Continue 45 m to silver-foliaged shrubs.



Mottlecah (*E. macrocarpa*)

Some of you may already know that the word eucalyptus means well covered. Because the mottlecah has such a large bud and flower (the largest of all eucalypts, with a flower up to 7 cm across) this well covered bud cap is more easily observed.

Continue 86 m to some bushy, flat-topped trees.



Bald Island Marlock (*E. lehmannii*)

These marlocks (sometimes called bushy yate) grow naturally in dense, low clusters on Bald Island off the coast near Albany.

It has an unusual bud, flower (pale green) and fruit or nut.

What do the fruits remind you of?

20

.....

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Walk 78 m across the track and past the lemon-scented gums.



Peppermint gum (*E. dives*)

Look at the bark, it is different from most of the others, because it stays on the trunk and is of a fine, interlaced texture. The leaves have a distinct peppermint smell and the oil dots can be seen if you hold one of them up to the light. Eucalyptus oil was one of Australia's first exports, back in 1788. The peppermint group of eucalypts comes from a wide-spread area of southeastern Australia, and should not be confused with the Western Australian peppermint (*Agonis flexuosa*) which is not a eucalypt, as you can see by its botanical name.

Face the old oak tree and walk downhill 15 m to the next group of trees.



Tuart
(*E. gomphocephala*)

This magnificent tree grows naturally along the coastal strip between Busselton and Moore River. In its natural state it is an indicator of limestone soils. Many of you would have passed through the lovely tuart forest at Ludlow, near Busselton.

Walk across to the spotted gums and look for the old telegraph pole.



Message tree

Now, at the end of this trail around Jacoby Park you can see this pole, which was once a tree. It has stood here for many years and until recently served man by carrying telephone messages between the forest office and the fire tower at Mount Gungin.

Perhaps there is a message here for us. Think how trees serve man in so many ways—while growing, and then again when cut down and put to various uses.



ANSWERS

- | | | |
|--|--|---|
| 1 Acorn. | Bark smooth,
white or faintly
bluish with a
powdery surface | Rough, persistent
(doesn't shed in
large patches),
red-brown and
thick. |
| 2 Rose, periwinkle and grass. | | |
| 3 The tree has dimples in the trunk and the bark in these dimples does not fall off at the same time as the rest of the bark. The older bark is a different colour, therefore makes the tree look spotted. | | |
| 4 — | | |
| 5a — | | |
| 5b The action of water carrying away the soil. | | |
| 5c Erosion. | | |
| 6a Shapes: | | |
| 6b — | | |
| 6c Chlorophyll. | | |
| 6d Photosynthesis. | | |
| 7a Smooth. | | |
| 7b White or faintly bluish. | | |
| 8 Differences between: | | |
| <i>E. citriodora</i> | <i>E. robusta</i> | |
| Leaves long,
narrow | Slightly shorter,
broader | |
| Nuts smaller
with enclosed
valves | Larger with level
or slightly enclosed
valves | |
| | 9 Yellow or golden yellow. | |
| | 10 Yes. | |
| | 11 — | |
| | 12 Bark for hanging baskets, bark paintings. | |
| | 13a Various sounds. | |
| | 13b Aquatic plants. | |
| | 14 Currawong. | |
| | 15 Granite. | |
| | 16 — | |
| | 17 Greenish or yellow-brown. | |
| | 18 They are very small. | |
| | 19 — | |
| | 20 A sea mine or mace (type of club). | |
| | 21 — | |
| | 22 — | |
| | 23 — | |