VOL. 22
NO. 8

NATURE NOTES

1985

From the Gould League of Victoria.

MAGIC 10

THIS IS A CHECKLIST FOR YOUR BUSHLAND
BACKYARD
SCHOOLGROUND
OR OTHER AREAS WITHIN YOUR
LOCAL COMMUNITY.

IS YOUR SPECIAL PLACE A 100 POINT WILDLIFE LIVING AREA ?

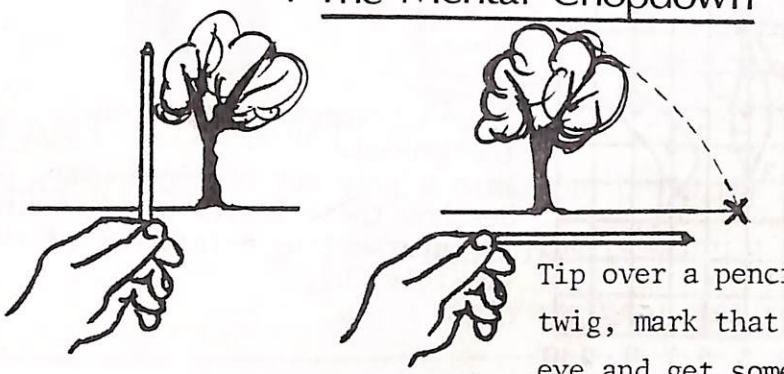
LET'S FIND OUT BY LOOKING AT ANY 10M × 10M SECTION OF AREA.

FIRSTLY, WE WILL NEED TO FIND OUT MORE INFORMATION.

PLEASE TURN THE PAGE!

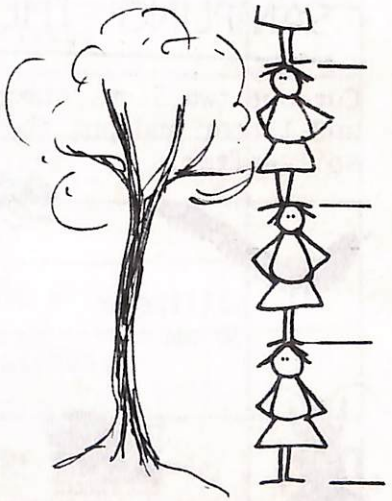
TREE MEASURING

1 The Mental Chopdown



Tip over a pencil or straight twig, mark that spot with your eye and get somebody to pace out the distance.

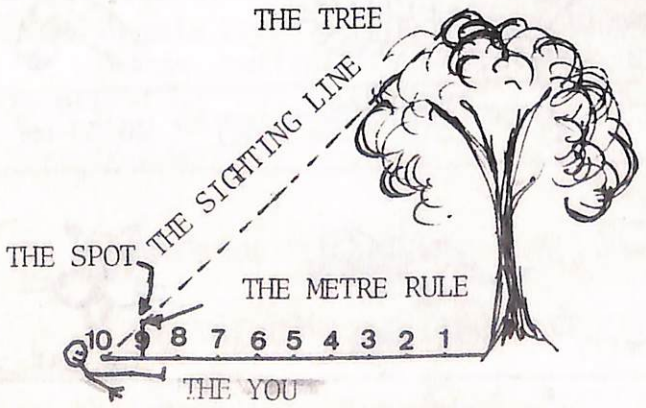
2 The People Ruler Method



- How many Julies make a tree?

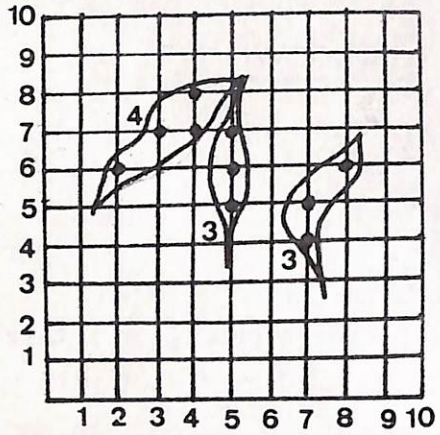
- Get Julie to stand by a tree.
- Use your pencil as a sighter.
- Measure Julie.

3 The Proportional Rule



Pace out 10 metres.
Put a 1 metre rule at No. 9.
Lie down at No. 10 and sight the top of the tree.
Mark this spot on the rule.
Multiply this figure by 10.

GROUND COVER MEASURING



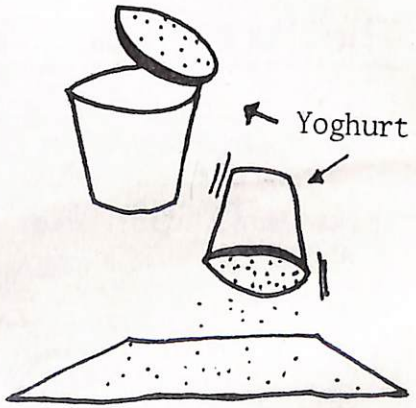
Drop a transparent grid on the ground.
Make a grid out of lunch wrap.
See how these leaves are covering 10 intersecting points out of the possible 100.

SAMPLING THE SOIL

Cut out two 5 cm. cubes of soil and litter and put them in your soil sifter.

millipede
30 mm

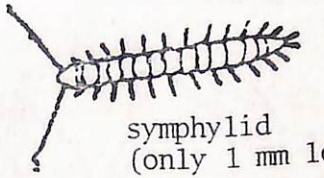
ant 5-20mm



Now shake it onto a white cloth and count all the animals.

earwig 25mm

slater 15mm



symphylid
(only 1 mm long)

beetle grub
20-30 mm

BUSH PESTS

Blackberry

Bone seed

Tom Cat

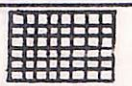
MAGIC 10

PLANT & ANIMAL CHECKLIST

GIVE A SCORE OUT OF 10 FOR EACH ITEM

(A 9 METRE TREE IS WORTH 9 POINTS)

ADD 1 POINT FOR EACH PEST YOU REMOVE!

1 Native tree at least 10 metres high.	
10 Trees or shrubs between 2 and 5 metres.	
10 Small shrubs less than 1 metre high.	
10 Cracks or hollows to shelter wildlife.	
10% Bark, twig or leaf cover.	
10 Species of birds during a 10 minute watch.	
10 Signs of wildlife (droppings, scratches, tracks, skulls, cocoons).	
5 Species of soil animals in 2 litter samples. 	
10 Animals cross a 10m. line in 10 minutes (birds, butterflies, ants, dogs, grasshoppers.)	
1 Pool of water within 10 metres of your boundary.	
DID YOU MAKE 100 ??? SCORE	

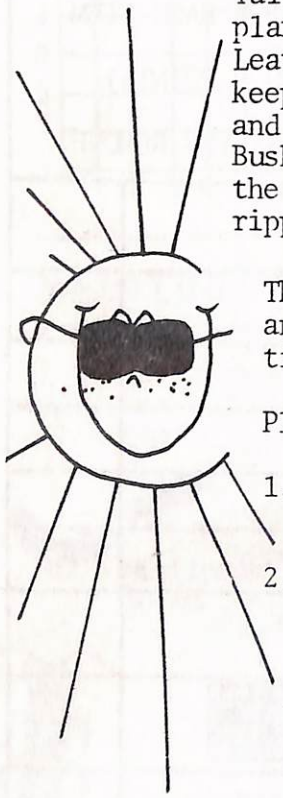
WHY NOT PLANT THE DIFFERENCE !!!!!

PLANT ADAPTATIONS

What does this mean? _____

_____

Plants tend to live in communities.



Tall trees provide shade for smaller plants and shelter for animals. Leaves drop, and this mulches the surface, keeping the ground cooler, while insects and fungus help the decay process. Bushes under the trees also help to keep the ground cooler and prevent winds from ripping through.

The climate in Australia changes dramatically and plants must survive for long periods of time without water.

Plants can conserve water by

1. ROOT ADAPTATION - developing deep roots to reach underground water streams.

2. LEAF ADAPTATION - most of the water lost from plants is through the leaves.
   - . reduce size
   - . hang vertically with narrow edge to the sun
   - . become hard and rigid (not soft and fleshy)
   - . wax on leaf surface
   - . fold to reduce surface area

3. PLANT ADAPTATION
   - . become rounded to keep the ground cool around the roots
   - . delay flowering
   - . drop leaves almost continuously which provides litter on the ground to reduce water loss from the soil
   - . drop all leaves in times of drought

FIRES

Some plants are able to protect themselves from total destruction during fires by...

- . protective bark - thick so that the heart of tree is not burnt
  - lightly coloured bark to reflect the heat
- . ability to regrow from roots and limbs
- . well protected seed that is able to survive fires.

Many plants protect their seed in cones or capsules which release the seed after a fire.

POLLINATION

Flowers on plants need to be pollinated to produce seeds. Usually a flower is pollinated from another plant of the same kind.

pto.

FIND EXAMPLES

OF LEAVES

WHICH MAY

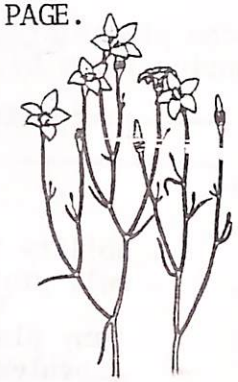
HAVE

BEEN ADAPTED.

draw WHAT YOU FIND

POLLINATION

FROM PREVIOUS PAGE.



WIND POLLINATION
Grasses are pollinated by wind.
Where are the seeds positioned on grasses? _____

_____

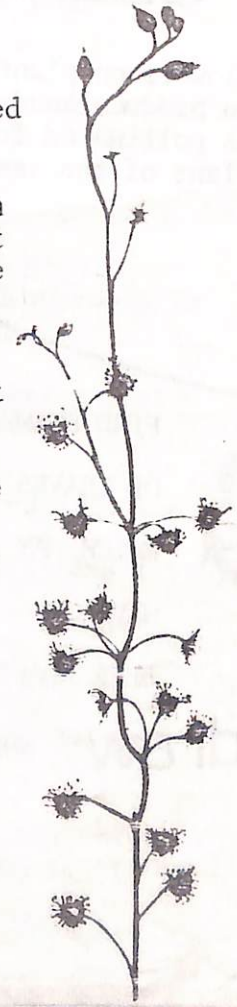
_____

Why is this? _____

_____

_____

INSECT POLLINATION
The flowers attract the particular insect desired (e.g. bees, flies, moths, butterflies, wasps, mosquitoes),and then 'reward' the insect with nectar. The nectar is usually positioned in such a way that in order to reach it, the insect must touch the stamens, collecting pollen in the process.



he insect is attracted to the plant in different ays.

1. COLOUR OF FLOWERS - white, yellow and blue flowers are usually pollinated by insects.
   White by moths and butterflies.
   Yellow and blue by bees.

2. SCENT OF FLOWERS - Why do you think some flowers produce a nice smell ? _____

   _____

   Flowers pollinated by flies often have an unpleasant smell to people.
   Flowers pollinated by bees usually have a sweet smell.

3. OTHER ATTRACTANTS - dots, bright colour or scent can be used to lure an insect to the right spot.

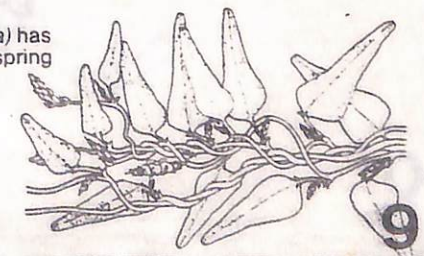
4. ANIMAL POLLINATED PLANTS - Birds are usually attracted to red or orange flowers.
   Birds attracted to flowers have long curved beaks to reach deep into the flowers.
   Some animals such as sugar gliders also pollinate some flowers.

PLANT ADAPTATION SEARCH WORD

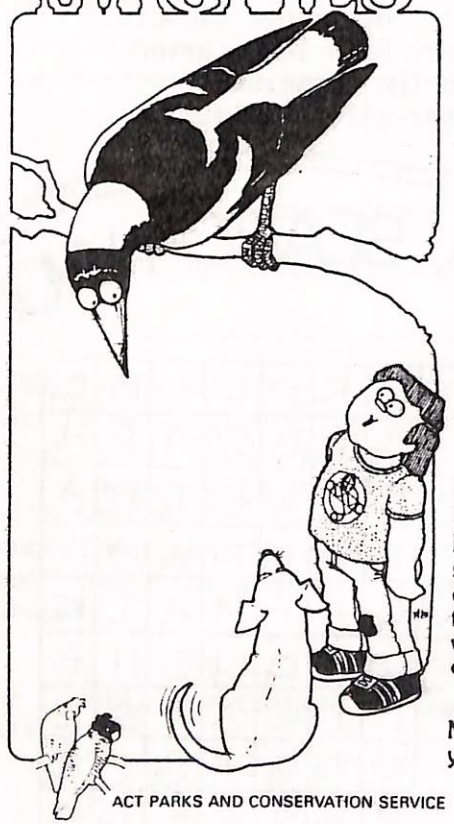
B	U	T	T	E	R	F	L	I	E	S
I	N	S	E	C	T	S	C	A	P	H
R	F	U	F	L	O	W	E	R	M	A
D	I	R	T	R	E	E	T	W	O	D
S	R	V	V	C	L	I	M	A	T	E
H	E	I	F	U	N	G	U	S	H	B
E	S	V	F	L	I	E	S	P	S	E
L	E	A	V	E	S	S	T	S	I	E
T	P	L	I	M	B	S	E	E	D	S
E	M	O	S	Q	U	I	T	O	E	S
R	O	O	T	S	U	N	X	A	P	D

CLIMATE
SHADE
SHELTER
LEAVES
INSECTS
FUNGUS
SURVIVAL
ROOTS
LIMBS
FIRES
SEEDS
FLOWER
TREE
BEES
FLIES
MOTHS
BUTTERFLIES
WASPS
MOSQUITOES
BIRDS
SUN
DIRT

False sarsaparilla *(Hardenbergia violacea)* has vivid purple flowers in spring



Living with MAGPIES



ACT PARKS AND CONSERVATION SERVICE

The magpie is a common bird of suburban gardens and parks, where it can be seen searching for soil-dwelling animals, garden pests and other insects and food scraps. A favourite food is the scarab grub which damages lawns. The magpie's carolling song makes a pleasant contribution to the morning bird chorus in Canberra and it is one of our most cheerful local bird species.

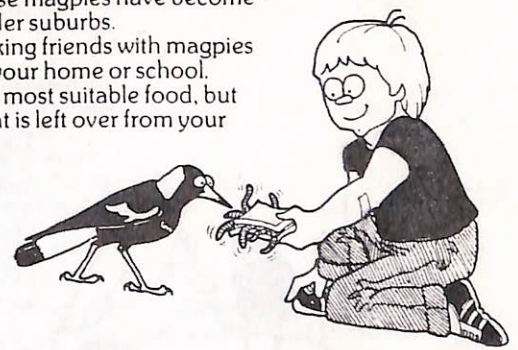
For most of the year magpies form associations called tribes and in the spring form breeding pairs. In September or October the female builds a nest from sticks and lines it with soft fur and grass. Two or three eggs are laid and the young magpies hatch after about twenty days incubation. The parent birds remain busy with the task of feeding the young until they are old enough to leave the nest about four weeks later.

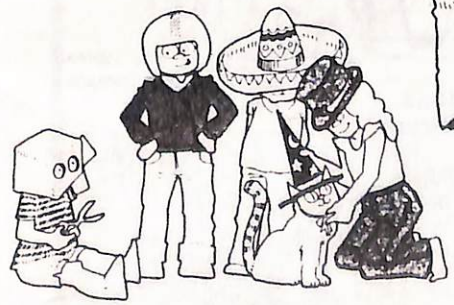
Magpies gather food, build their nest and raise their young within a limited area known as a territory. When there are eggs or young in the nest the adult birds show great concern for their offspring and defend this territory from other magpies and intruders including hawks, cats and people, which they believe mistakenly in some cases are trying to harm them.

Nesting magpies defend their territory by swooping upon the intruder, beating their wings, clacking their beaks and occasionally pecking. Some people throw stones and sticks at magpies but this only provokes the magpies into defending their territory more vigorously. This in turn annoys many people and they want the offending bird/s destroyed or removed. If this is done the eggs fail to hatch or the young die of starvation and exposure and often other magpies will occupy the empty territory and build a new nest. If the nest only is removed the eggs and young birds are destroyed and the adult birds commonly build another nest and the problem continues.

Because destroying the nest only results in extending the period during which magpies swoop intruders, it is more sensible to learn to live with and make friends with them and overcome the problem in this way. Rangers have found that magpie swooping is most common in newly developed suburbs and less frequent in the older suburbs. This is probably because magpies have become accustomed to people in the older suburbs.

One of the simplest ways of making friends with magpies is to feed those which live near your home or school. Worms, meat and bread are the most suitable food, but they will eat almost anything that is left over from your own home cooking. Get to know individual birds in your neighbourhood and study their habits throughout the year. With practice it is possible to recognise many individual birds on the basis of colour patterns and other physical characteristics.

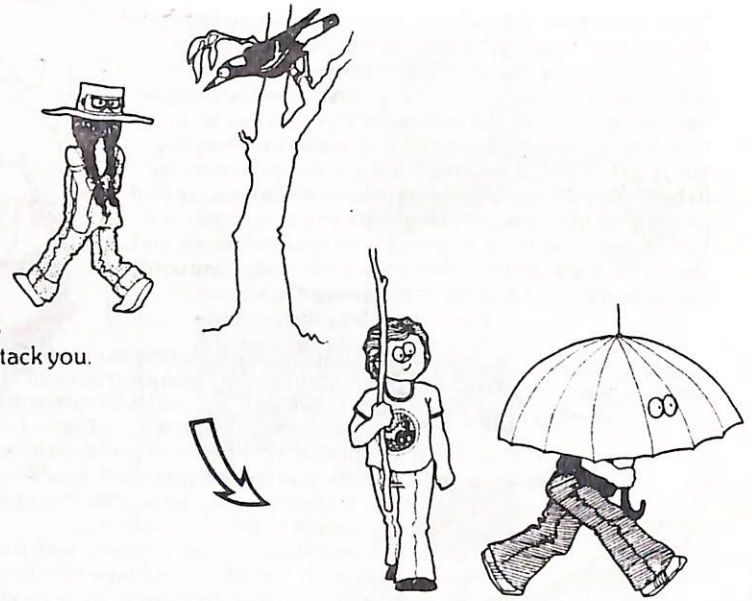




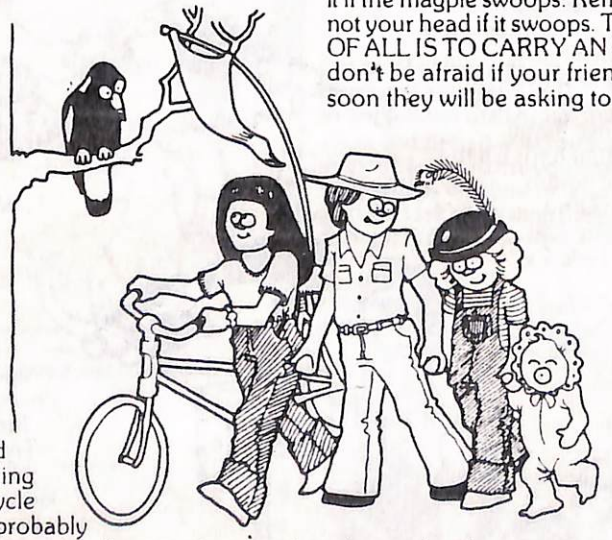
When magpies persist in swooping there are a number of measures which can be taken to protect people and deter further swoops. Try avoiding the area where you know magpies are swooping. Make a temporary sign to inform other people.

Wear a hard hat; a bicycle helmet or skateboard helmet is the best but any sort of hat will prevent the birds from making actual contact. Try making a fun hat from cardboard or an old ice-cream container.

Magpies are less likely to swoop if you look at them. If you are swooped, try and watch the magpie and at the same time move away from the area quickly *and safely*. Draw or sew a pair of big eyes on the back of your hat. The magpie probably will think you are watching it and may not attack you.

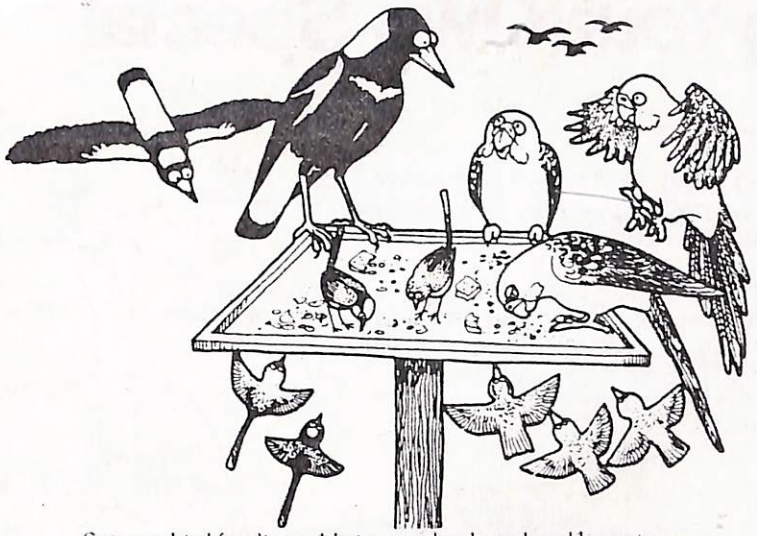


Carry a stick or branch above your head but don't swing it if the magpie swoops. Remember it will hit the stick and not your head if it swoops. THE BEST PROTECTION OF ALL IS TO CARRY AN OPEN UMBRELLA and don't be afraid if your friends laugh at you — pretty soon they will be asking to borrow your umbrella.



If you are swooped when riding your bicycle you will probably be trying to watch the magpie rather than the road and this can lead to an accident. If possible wheel your bicycle rather than ride it through the magpie's territory. Remember to wear your hat or attach a tall safety flag to your bicycle. Do not stop if you are swooped. You are still in the magpie's territory and therefore it will keep swooping you. Walk quickly and safely (don't run, you may trip and fall), until you are out of the magpie's territory.

Older children should escort smaller children through areas where magpies are known to swoop.

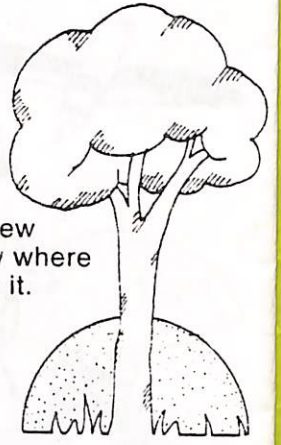


Set up a bird feeding table in your backyard and learn to enjoy regular company of magpies and other birds which come to visit. A platform made from wood or metal, mounted on a pole or fence, in an open area where cats cannot sneak up on feeding birds, is most suitable. Place food scraps and parrot seed mixes on the table every day and you will soon have a flock of regular customers. Birds which feed regularly will soon learn to recognise you as a friend and will not swoop you or your neighbours.

Maybe you know of other ways to make friends with magpies or to protect yourself from them. If you would like to tell other people then write to:

The Director
ACT Parks and Conservation Service
Department of Territories and Local Government
G.P.O. Box 158
Canberra ACT 2601

Planting Your Own Special TREE

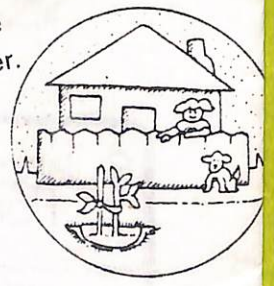


A tree is a living thing, that grows just as we grow; it develops as we develop, it may even get sick much the same as we get sick.

It isn't difficult to grow a tree if you follow a few simple rules, but first of all you need to know where to get one, and where you are going to plant it.

It is not necessary to plant your special trees in your own garden. You could plant it at school, in the local park, in the nature strip, on a farm or even in the forest. Before you plant talk with your parents and your teacher about the best place for planting. They will help you choose a place that gives enough space for your tree to grow.

Plant your special tree very carefully so that it can send its roots into the soil and its leaves into the air and be ready to start growing in the warm weather.

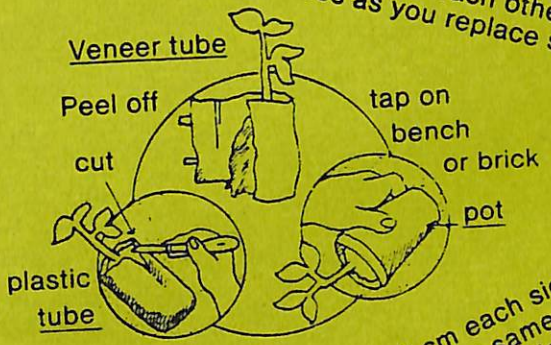


The evening before planting water your special tree in its container by filling the container to the brim. Do this three times to make sure your trees roots have had a good drink.

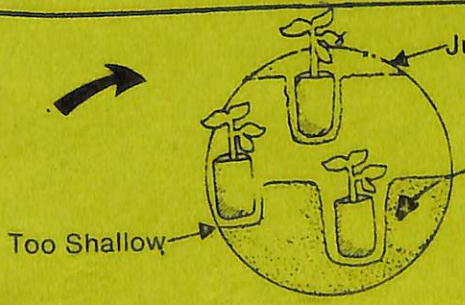
Before you plant your tree, make sure the soil is well dug ove and broken up; a grown up may help if the soil is too hard for yo to dig. It may also be necessary to water the ground if it seems little dry. Dig the ground at least 20cms deep.

In the centre of the dug ground make a hole at least as deep as your special trees container so that your tree can be planted in a shallow dish to collect rain water.

Remove the plant from its container carefully, do not pull it out, and be careful not to break the soil surrounding the roots. Gently set the plant in the prepared hole and replace some of the soil around the plant, then firm the soil down with the tips of your fingers, so that the roots and soil come into contact with each other. Break any lumps of soil into small pieces as you replace soil in the hole.



Hammer into the ground, about 15 cm each side of the tree, two stakes which should be at least the same size as the tree. Young seedlings may not need to be tied to the stakes at this stage of growth, but will need to be tied up to protect Plants over 40cm in height will need to be later on. them from the wind. Use two pieces of mum's panty hose and tie loosely around the trunk to make sure your tree has room to grow.



Thankyou to the State Schools Nursery and the Natural Resources Conservation League for this information!

Your newly planted tree should be well watered in so that all air pockets surrounding the roots are removed. About half of one bucket of water is plenty for seedlings.

Your own special tree should be watered once more, about a week after planting, and since you will be visiting it often, why not keep a diary about it; find out what its name means, the place where it came from, and lots of other things about it. Will it flower? What colour? Take a series of photographs at different stages of its growth. Make a drawing or a painting of it which you can hang in your room.

Find out how all the insects, birds and other animals which may visit your own special tree can help the tree. What changes happen through the seasons of the year?

Don't forget to keep all weeds away from your tree and to protect it from frost during its first winter.

State Schools' Nursery
ARTHUR STREET, OAKLEIGH 3166
PHONE 568 1958, 568 2231,

NATURAL RESOURCES CONSERVATION LEAGUE
593 Springvale Road,
SPRINGVALE SOUTH 3171
PHONE 546 9086, 546 4740

You could purchase your tree from these two places - They have a lot of information for you too!

Healesville Sanctuary Education Service
P.O. BOX 248 HEALESVILLE 3777 Ph. (059) 62 3422

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