

NATURE NOTES

Vol. 15. No. 5.



Special Edition: SURVIVAL

EDITORIAL.

If you became lost in the bush, either on a camping holiday with mum and dad or as the result of becoming separated from a school excursion, could you survive? - find enough food, water and so on. You only have to notice the number of times newspapers and television stations report that a child or group of children have been reported missing in bush country—even adults have been lost. Bush walking and orienteering have become popular in recent years. Some fore-thought before leaving on tours and camps is advisable for a safe return home.

This issue of Nature Notes deals with what we consider fundamental "things to do" when you realize that you are lost. In no way do we suggest that what we say is all there is to know - but at least we are trying to present you with a starting point. It would be a most useful idea to discuss the issues raised in this magazine as class work activities - whether through classroom discussion or preferably by practising some of the suggested survival ideas.

I'm sure that you and your class will be able to come up with other survival skills. We at Nature Notes would like to hear about them. I had asked Mrs Prohasky, (who has written many articles for us, and does such excellent drawings for Nature Notes) to write a two page article on survival, but from her research, we found the topic to be such a vast one, that we decided to devote the whole magazine to the subject. Hence the reason for this issue.

We trust that you will follow up the work put forward in this issue. It is beaut fun to go on exciting camps and tours - some thought to survival before you leave should be seen as an essential part of camp/tour planning.



SURVIVAL

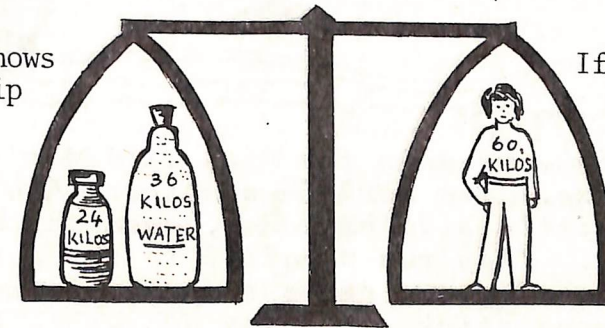
Let us imagine that one day you went on a hike out into the bush for the afternoon, without food or water, and you suddenly realized that you were seriously lost you are faced with the necessity to SURVIVE. What would you do? Do you know what we must have in order to survive? The first is WATER, the second is FOOD, then PROTECTION AGAINST THE ENVIRONMENT.

WATER

These instructions for water are given for the time when you may be lost and you are not near a stream, lake or river.

The human body is composed of 60 per cent of water. The amount is considerable, but the loss of even quite small quantities of water can have serious effects unless it can be replaced. Remember that you can live for several weeks without food, but without WATER your chances are reduced to days. The higher the temperature - the fewer the days.

This diagram shows the relationship between body and water weight.



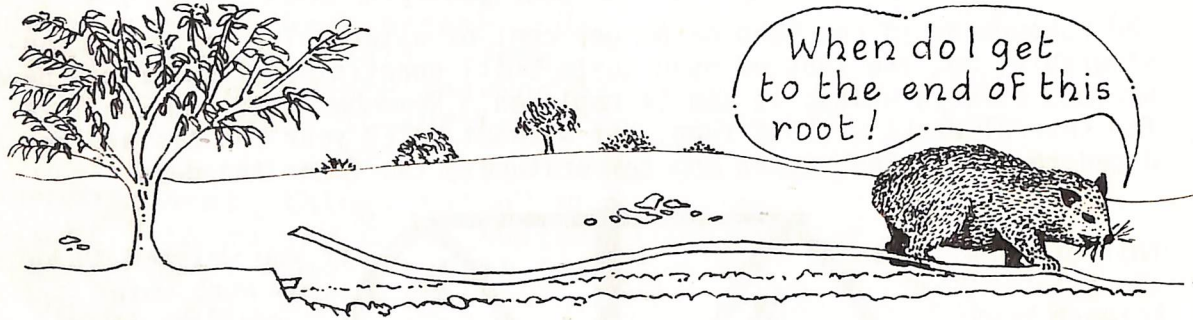
If you weighed 30.kg how much water would be in your body.

In temperate climates the loss of water from the body is approximately 2.5 litres per day. This must be replaced daily. You must always put your need for water before your need for food. You should remain calm, keeping your movements slow, and without rushing. Keep your clothes on, if it is hot stay in the shade - to conserve water loss through perspiration.

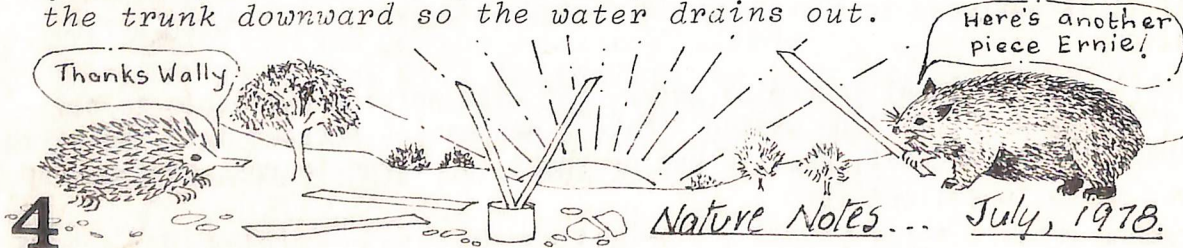
RAIN is the ideal source of water, but with nothing available to collect it in, a lot will be wasted. Make a depression scraped into the earth, lined with a raincoat, plastic bag or sheet, or large leaves, or even cup your hands to collect it.

LOST IN...

If you are lost in scrub country and have a knife, if not find a strong sharp stone, look around to see if there is a ridge slightly higher than the surrounding country. Walk to it, when you reach the highest point look right around, shielding your eyes from the glare with your hand, and look for water trees. Look for the largest healthiest clump of water-yielding mallee, a needle bush bigger than usual, a banksia or any other tree whose roots will give water. If the bush or tree is small, a heavy push against the trunk will crack the ground above a root. Dig in one of these places about 60 cm out from the trunk, the roots are found from a few centimetres down to 30 cm deep. You will find the type of root that gives water.



They are not thick, usually the size of a man's wrist down to thumb size. The bark is smoother than other roots, with no little side branches, even in thickness and not tapering. They run parallel to the surface of the soil. Make a slanting cut right through the root, lever it up with a strong stick. You may get up to 6 metres or more before you come to the place where the main root branches into smaller roots at the end. Cut the root into lengths about 45 cm long. (The slanting cuts give a quicker flow). Each piece is placed with the part nearest the trunk downward so the water drains out.



Scrub Country.

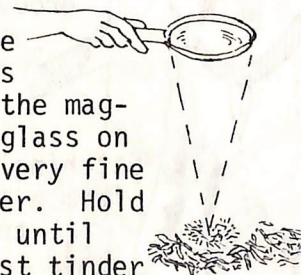
If you don't have a container use a curved piece of bark, or cup your hand under it to catch the drops as they come out. You may get a little extra water blowing with your mouth over the top end. All this will take a lot of time and effort, but you will get sufficient water to survive. Sunrise is the best time to get water, because the tree has been collecting water through the night and the roots are full. The middle of the day is the worst time to collect water from roots. The pores of water roots are visible, and all water roots are the same colour. You won't get any water from bigger roots that have a dark core and a thin outer layer of sapwood.

DO NOT DRINK WATER FROM ROOTS THAT HAVE A MILKY COLOURED JUICE, A BITTER TASTE, OR IF IT BURNS THE TONGUE.

If you have a plastic bag with you, without any holes, or several bags, this simple method of getting water is worth while. Gather as much foliage as possible together on the end of a branch and tie it tightly with some strong material, perhaps a piece of your shirt, strong grass or vine, so that no water vapour can get out. Shake the bag every so often and the water will run to the bottom corner. Leave the bag on for a few hours and you will be surprised at the amount of clear water you have collected.

Fire from a magnifying glass.

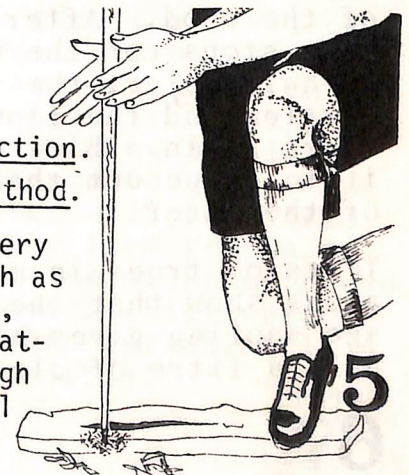
Focus the sun's rays through the magnifying glass on to some very fine dry tinder. Hold it still until the finest tinder is smoking freely. Blow gently until you produce a flame.



FIRE WITHOUT MATCHES

Lighting fire by friction.
The hand twirling method.

You will need some very fine dry tinder (such as finely shredded bark, paper, fine cotton material). Gather enough small twigs and small dry pieces of wood.



In eucalypt forests it is the trunk of the tree which yields water not the roots. Choose a sapling which is tall, vigorous-looking, has lots of leaves with a diameter of about 12 cm at the bottom. Cut it off, using a strong sharp stone, close to the ground and again just below the side branches at the top using a slanting cut.

This will of course be very hard to do if you haven't a knife or an axe, but if you have the sharp edged stone to hack away at the tree trunk you will eventually get through it. You have plenty of time to do it, so have a rest every few minutes. To obtain water it must be turned upside down. Wedge the bottom of the tree in the fork of another tree, the smaller end, that is the end nearest the top of the sapling downwards. Support it in some way on a fallen log or branch, use any container you might have or cup your hand to catch the drops of water.

If you have chosen the right species of tree, beads of water will soon appear on the cut surface of the wood. After the flow stops cut the trunk in half reject the thicker portion and the flow will start again. Blow down it to force out the last of the water.

Tests of trees in many areas show that the average sapling gives at least half a litre of clear water.

6



Draining water from a sapling.

LOST IN



A 3 to 4 metre sapling should give up to a litre of clear almost tasteless water. As in scrub country, the best results are obtained at sunrise.

In South Australia water can be obtained from the trunks of saplings of red-gum, manna-gum, stringybark, and a few other species.

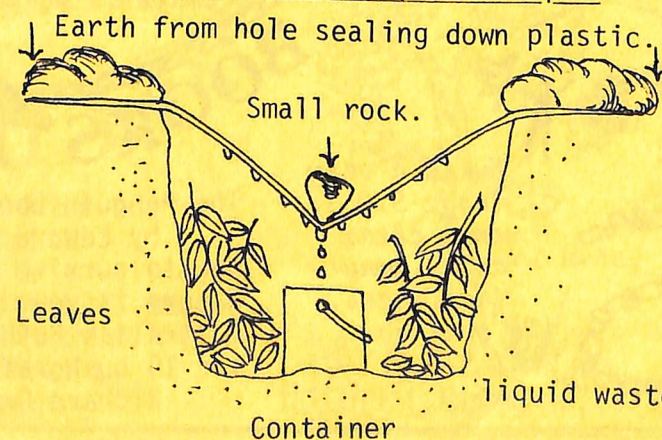
In Victoria it runs from the trunks of saplings of many species of trees, also on the forests that go from Gippsland through to New South Wales and Queensland to the top of Cape York.

In the far north of Western Australia very few trees and shrubs will yield water from their roots, nearly all the saplings will yield water from their trunks.

You will not obtain water from saplings of any tree that shows clearly defined annual growth rings when it is cut. It comes only from those trees that are of sapwood all the way though.

A FOREST

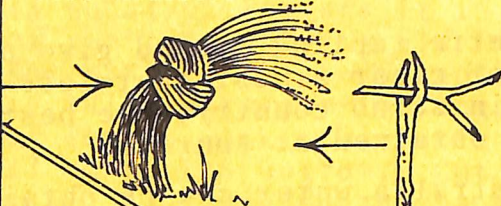
Plastic covered evaporation pit.



Along our northern coastline there are very large belts of mangroves. Scattered through the tangled mangroves are small pieces of ground a foot or two higher than the level of the tides. Growing on these are tea trees that have a slim trunk, the leaves bearing a slight resemblance to gum trees. Mangroves will not yield any water from trunks or roots. The milky mangrove gives out a thick white juice when cut; which is a deadly poison.

7

Trail markers.



Which way to Wally's house?



Never go into the bush alone. Always tell someone where you are going. Never go without your survival kit. See page 13

This shelter is only partly covered by a few branches to show you how to make the frame.

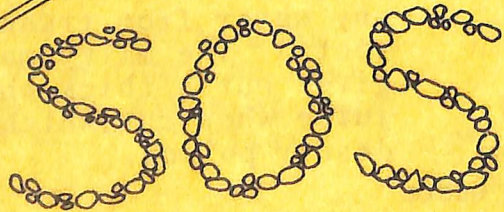


Bed of thick leaves and grass.

Large fallen tree.

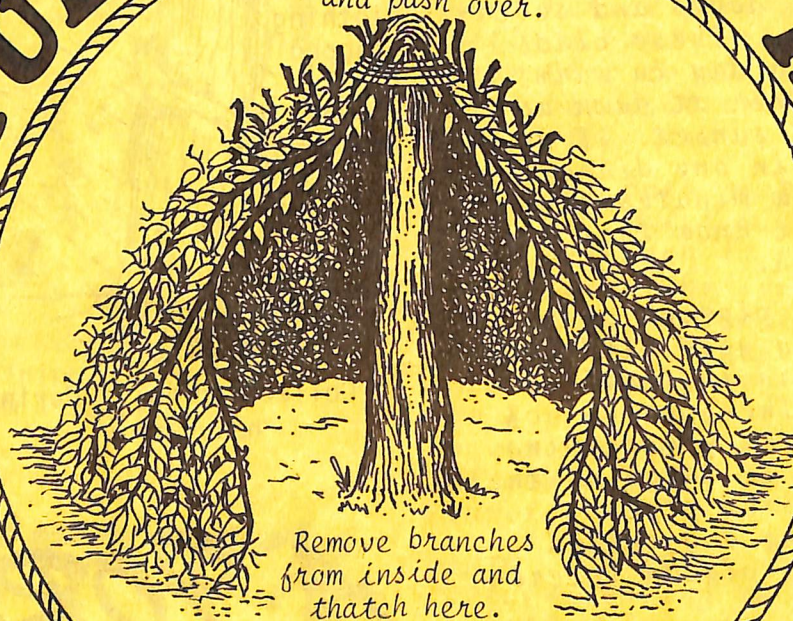


Build a very large S.O.S. in a clear area, away from trees. (Do you know what S.O.S. means.)



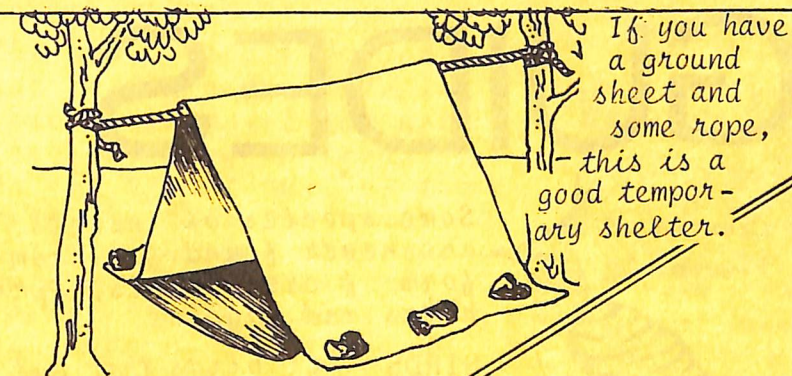
USEFUL SURVIVAL HINTS

Partially cut through trunk and push over.

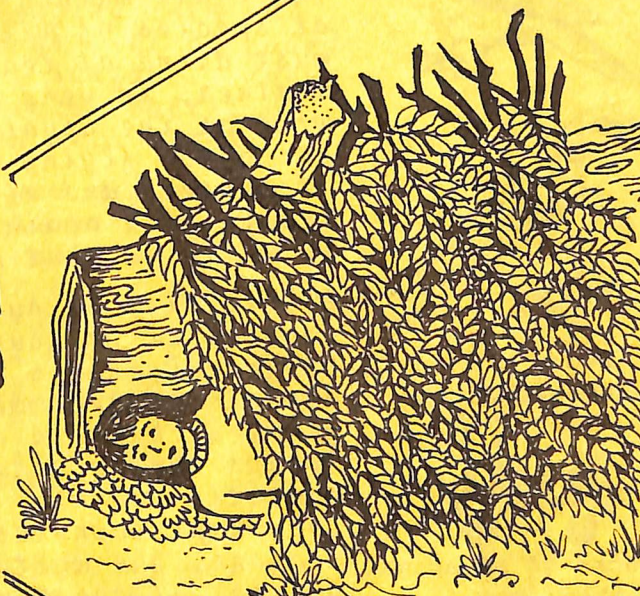


Remove branches from inside and thatch here.

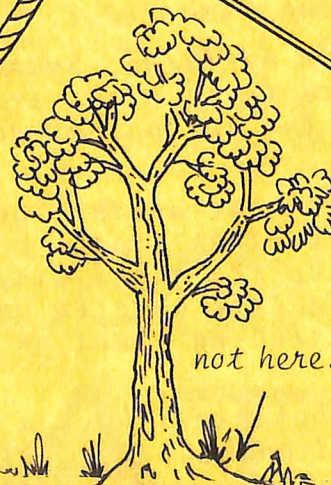
A quickly made shelter from a small (3 metres high) tree.



If you have a ground sheet and some rope, this is a good temporary shelter.



Build this shelter so as the wind is blowing onto the 'fallen tree' side.



Make your fire here.

not here.

not here.

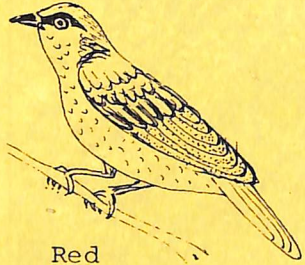
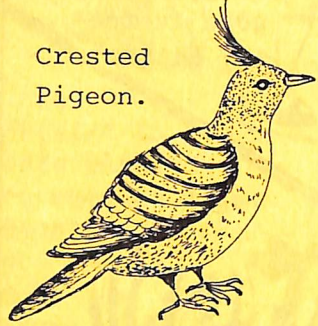


The Penguin book of the bush by Edward Kynaston.
How to survive by Brian Hildreth.
Nature is your guide by H. Gatty.
Australian Bushcraft by M. Plate.
The 10 bushcraft books by Richard Graves.

Nature Notes July, 1978.

GUIDES TO

Crested
Pigeon.



Red
Browed Finch.



Tracks of an animal
earth digger.



Tracks of a ground
feeding bird.



Tracks of animals
which have cloven
10 hoofs.

Some species of insects, animals and birds are never found far from water, in the form of creek pools, springs, soaks, rock holes and lagoons.

BIRDS All birds that eat seeds need water. These are mainly finches, doves and several species of wild pigeon. These birds must drink at least once a day in warm weather, in very hot weather at dawn as well as the usual time of sunset. If you see birds flying quickly in one direction at sunset, and after a few minutes flying slowly back again you will know that there is water in that direction.

A full list of Australian pigeons and doves will be found in any good bird book: Neville Carley's "What bird is that" is especially recommended. The species of greatest help to you is the bronze wing (phaps chalcoptera) it is as large as the domestic pigeon. The crested pigeon (cyclops lophotes), of the dry inland regions, the white-quilled pigeon (ptero-phassa) of the Kimberleys.

Children from Adelaide, Sydney and Melbourne can see these birds in captivity by visiting the Zoological gardens in their state.

ANIMAL TRACKS are another guide to water. If you notice other tracks converge on them you have taken the right direction. Remember that cattle usually drop their dung after drinking - not on the way to water.

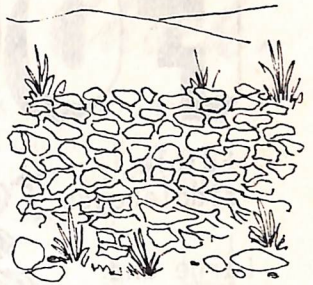
FROGS The aborigines have a good standby in times of drought; frogs of the Cyclorana genus fill themselves with water, they

burrow down into the mud, wriggle around until they have made little cells into the clay. There they hibernate until the next flood rain. They are not easy to find. First you must find the lowest part of the hollow, that is where the last pool was. Estimate where the shoreline was when the water would have been when the water was about 45 cm deep; stamp on the ground at this place. Feeble croaking underground will show you the places where the frogs have buried themselves. Digging them out will be hard work. The frogs will be found from 22cm to 60 cm from the surface. they will be about as big as cricket balls; because they are so distended with water.

INSECTS Bees need water, you may be sure there is water within a reasonable distance, even although it may be a small amount. Mason bees (the insects that build with mud) are found in tropical and sub-tropical areas, are a sure sign that water is very close, because they need to collect mud from a place that is always wet. Watch their movements, and if you can find their source of mud and dig down, you will find a water supply.

ANTS are never far from water, if you see a column leaving and entering a fallen tree or a hollow in a tree there is a possibility that water is present. Use a handkerchief firmly tied into a ball on to a long stick and dip it into the hollow to test for water. If there is water leave it in the tree until it is saturated, then draw out.

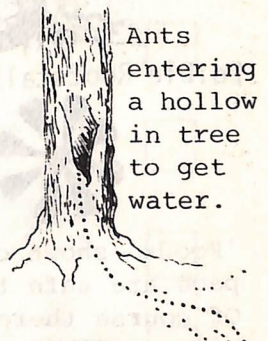
REPTILES Most are independent to a large extent on water. they get what they need from dew and the flesh of their prey.



"Dried out" water
hole.



Frog hibernating
in mud.



Ants
entering
a hollow
in tree
to get
water.



Lizard.

WATER. 11

FOOD

It has been said that we can use anything that animals or birds eat. This is not correct. As a general rule "red" colouring of any sort in wild food in tropical and semi-tropical areas serves as a warning sign that these plants should not be eaten. In cooler climates (temperate) such as Victoria, black berries and wild raspberry are safe to eat providing you are sure that is what they are. Do not eat any kind of fungi unless you are positive it is a mushroom.

Edible fiddleheads.

Large and small tree ferns.

edible pith.

Edible pollen

Edible shoots.

Edible Seeds.

Edible Leaves.

Pigface.

Cat Tail

Bamboo.

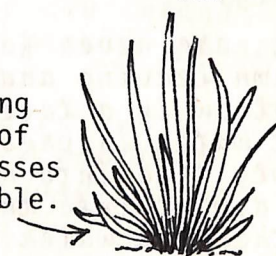
Birds eggs.

Edible Rootstalk.



Fringed lily.

The young leaves of all grasses are edible.



Nearly all species of this type have edible roots.



All seaweed is edible.

Your 'SURVIVAL' Check.

Place a tick in the box as you add these items to your survival kit. Are all these items essential? Could you leave any item out of your survival kit? Can you add any further items?

* a whistle


☐

* tomahawk

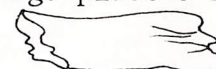

☐

* compass

-make sure that you know how to use it.


☐

* large plastic bags (no holes)


☐

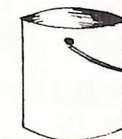
* 2 pieces of strong plastic about 1 m. square


☐

* bandaids


☐

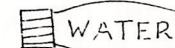
* a 'billy' for cooking


☐

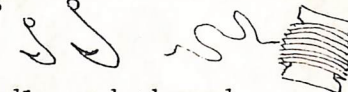
* mug


☐

* container filled with water


☐

* 5-6 m. of fishing line WITH hooks


☐

* a needle and thread


☐

* knife, fork and spoon


☐

* waterproof coat, hat, boots


☐

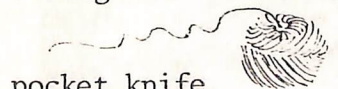
* WOOLLEN jumper, gloves


☐

* salt


☐

* strong hank of string


☐

* pocket knife


☐

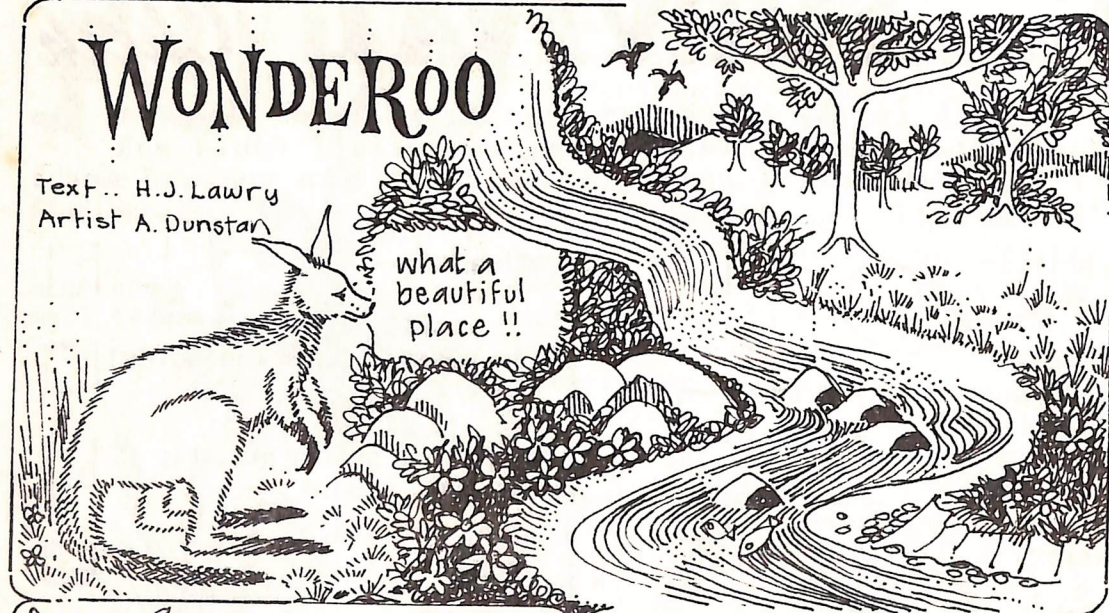
* first aid kit


☐

'Foods' shown on this page are safe to eat. Of course there is a wider variety. According to Brian Hildreth in How to Survive, anything that tastes bitter, burns the tongue or tastes like almonds is poisonous. See pages 153 and 154 for his food edibility test.

WONDEROO

Text... H.J. Lawry
Artist A. Dunstan



What a beautiful place!!



This will be my special place I shall come back one day when I feel sad and it will cheer me up just to be here...

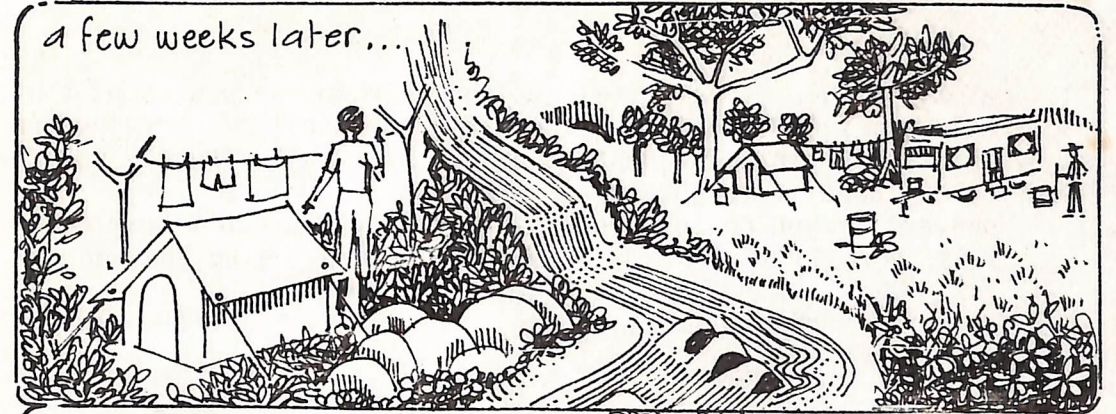
Wonderoo hops off to solve some more crimes but, little does he know what is in store for his special place...

This looks a good spot for a camp!



Yes perfect!

a few weeks later...



Some months later...



Some years later...



YUK!



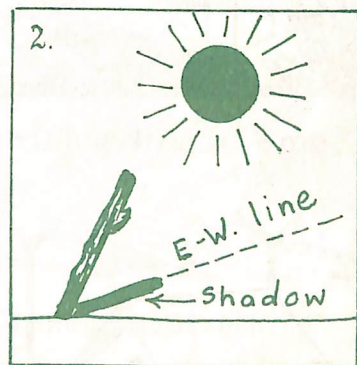
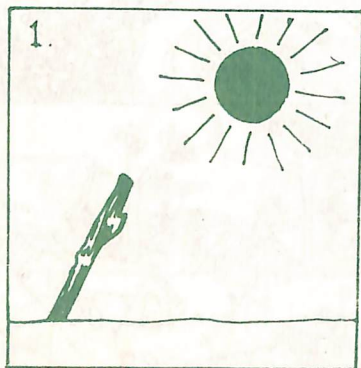
SOB!
How could people destroy something so beautiful!

Remember this little story when you visit the bush or our National Parks girls and boys. The bush is not yours you know, it is ours.

How to find North without a Compass.

As you may realize it is not always possible to carry a compass with you at all times, BUT you should get into the habit of carrying one every time you go into the bush on a hike or a walk. The day may come when you may need it to survive in the bush.

However, if you do lose your bearings and you don't have a compass, here is a simple way to find North by using the Sun.



A straight stick, sharpened at one end is pushed into the ground pointing at the Sun so that no shadow is cast.

After about 20 minutes, the stick should cast a short shadow. This shadow runs in a EAST-WEST direction.

IMPORTANT: The Sun always "moves" in a westerly direction, so you must work out which way is East and which way is West. Also it is necessary to know that when you face NORTH, that East is on your right and West is on your left.

If you do get lost, CONSIDER every move you make CAREFULLY and always leave a trail for someone to find.

▲
THINGS TO DO.....

1. Try this direction finder out for yourself at school.
2. Does the Sun really "move"? What does then? What things we take for granted are caused by this movement?
3. What are some other ways of finding North? If you do some work on this, send it along to NATURE NOTES. The best one will receive a book award.