NATURE NOTES

Survival in the bush

VOL. 21. NO. 9. NOV. 1984

EDITORIAL

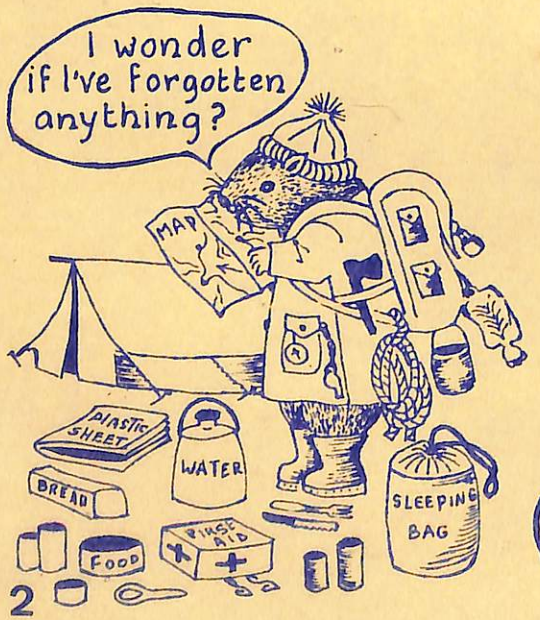
Dear Readers,

Well, Summer is on the way at last! We're all looking forward to the summer holidays. Some of you have already organized camping or touring holidays in the bush, or at the beach.

As part of your preparations, you could practise some of our hints for survival if you are lost or separated from the rest of your family or friends.

I would strongly advise you to make sure you have a checklist of essentials to take with you, such as the one we've printed on the opposite page. Perhaps your grade could discuss the possible uses of the items on the list.

We at Nature Notes are aware that we have not covered ALL there is to know about survival. You may like to read the books suggested in the centre page to discover other survival skills.



Whatever you choose to do, think seriously about planning for survival, in order to have a really enjoyable and relaxing holiday.

Happy Reading,

Rosalie Collie
Editor.

STOP PRESS: Have you noticed the extra pages? This is a BUMPER issue!

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* ☐
* *compass - make sure that you know how to use it.* ☐
* *matches....waterproof variety.* ☐
* *map/s of the area you intend to visit.* ☐
* *note book.* ☐
* *pen or pencil* ☐
* *magnifying glass* ☐
* *rope* ☐
* *strong hank of string* ☐
* *pocket knife* ☐
* *first aid kit* ☐
* *salt* ☐
* *tomahawk* ☐
* *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.* ☐

SURVIVAL

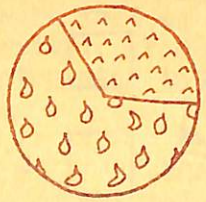
Let us imagine that one day you went on a hike out into the bush for the afternoon, without food or water, and you suddenly realized that you were seriously lost.... you are faced with the necessity to SURVIVE. What would you do? Do you know what we must have in order to survive? The first is WATER, 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 about 70 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 tissue and bones and water weight.



water.

tissues and bone.

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.

Water From Roots

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, sheilding your eyes from the glare with your hand, and look for water trees.

Look for the largest healthiest clump of water-yielding mallee gums, 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 the root. Dig in one of these places about 60cm. 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 throuch 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 cms. long. (The slanting cuts give a quicker flow.) Each piece is placed with the part nearest the trunk downward so the water drains out.

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.

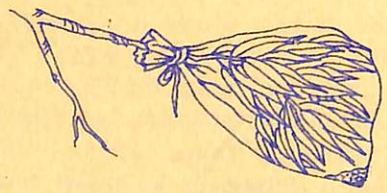
Sunrise is the best time to get water, because the tree has been collecting water through the night and the roots are full. The middle of the day is the worst time to collect water from roots. The pores of water roots are visible, and all water roots are the same colour. You won't get any water from 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.

Water From Leaves

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.

FIRE WITHOUT MATCHES

Focus the suns 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.

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.

Water from Tree Trunks

Draining water from a sapling.

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 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. A 3 to 4 metre sapling should give up to a litre of clear almost tasteless water.

Water trickling into bottle.

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

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

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.

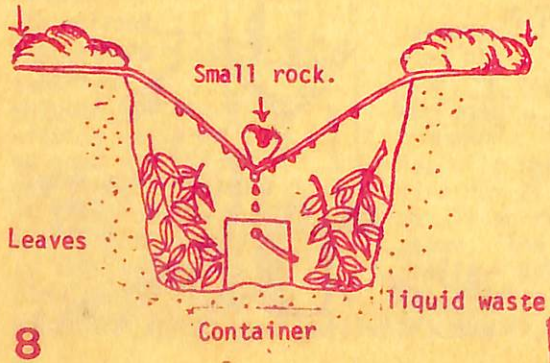
You will not obtain water from saplings of any tree that shows clearly defined annual growth rings when it is cut. It comes only from those trees that are of sapwood all the way through.

Collecting water during heavy rain.

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.

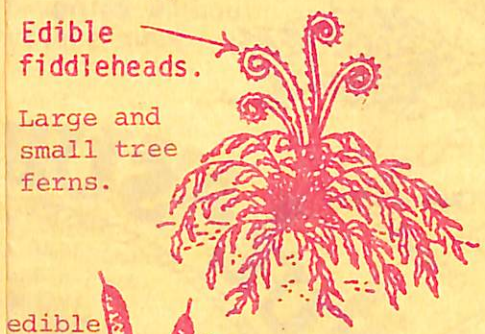
Plastic covered evaporation pit.

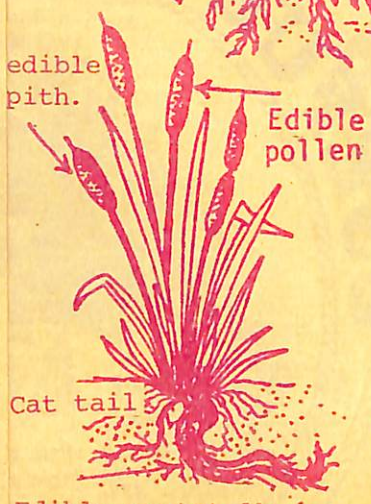


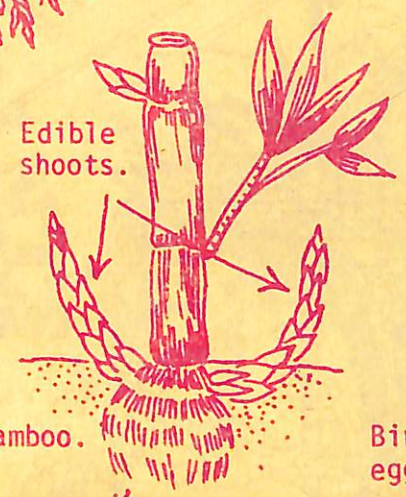
Danger

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.





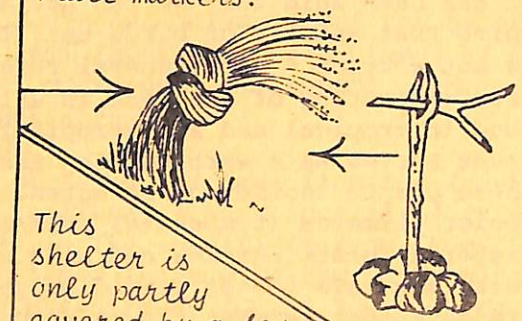


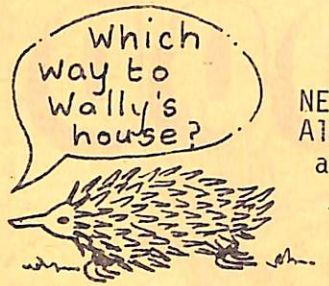
'Foods' shown on this page are safe to eat. Of course there is a wider variety. According to Brian Hildreth in How To Survive, anything that tastes bitter, burns the tongue, or tastes like almonds, is poisonous. See pages 153 and 154 for his food edibility test.

Nearly all species of this type have edible roots.

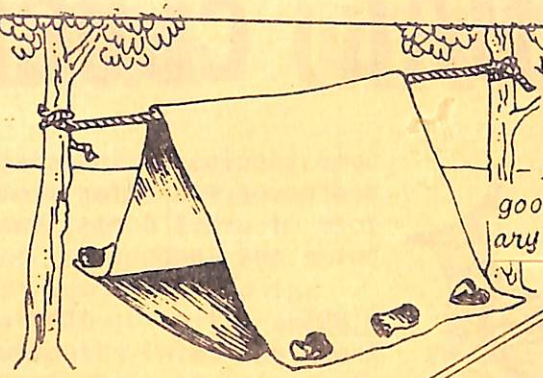
USEFUL SURVIVAL HINTS

Trail markers.



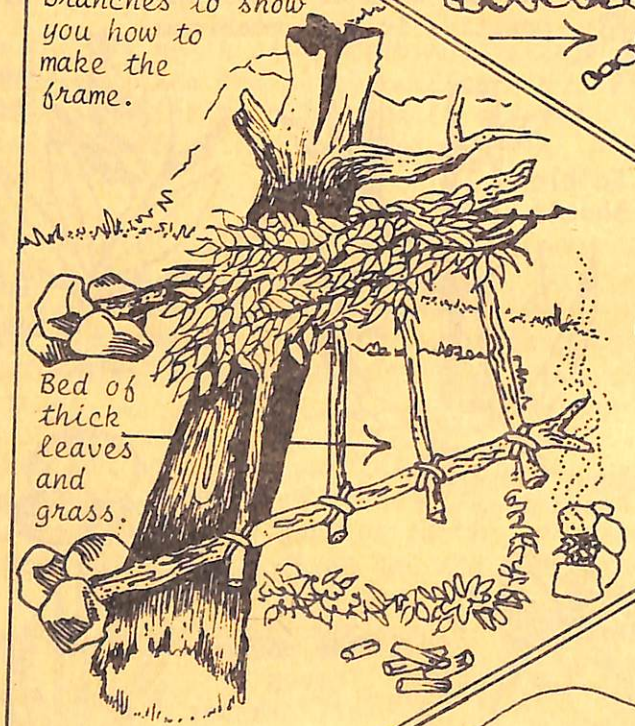


NEVER go into the bush alone. Always tell someone where you are going. Never go without your survival Kit. See page 3.



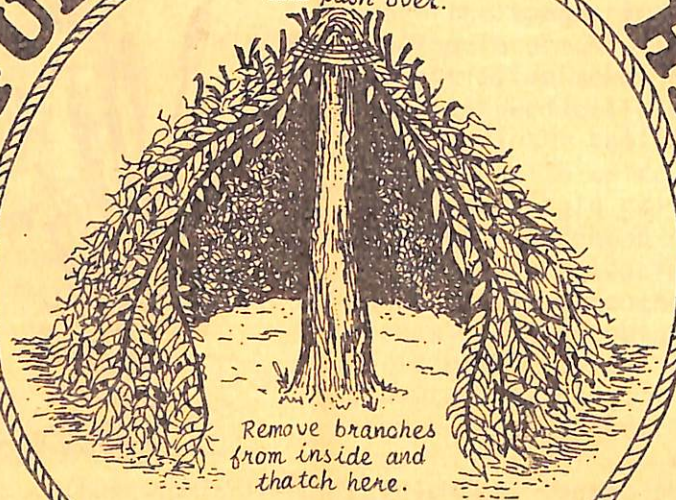
If you have a ground sheet and some rope, this is a good temporary shelter.

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

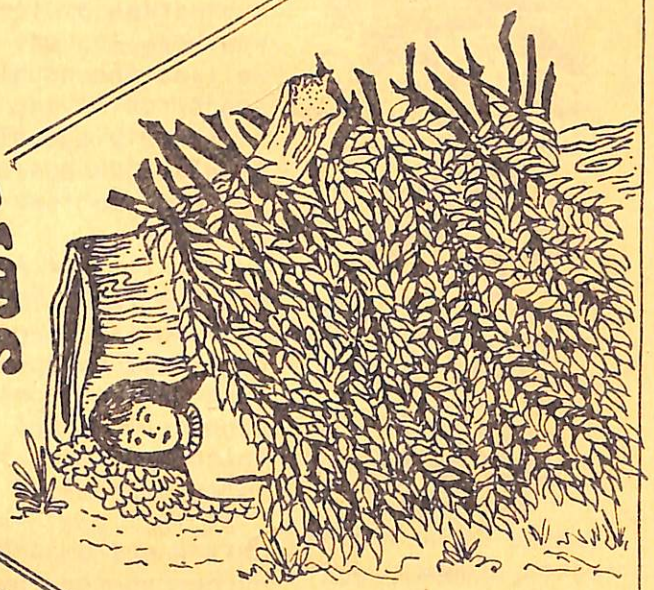


Bed of thick leaves and grass.

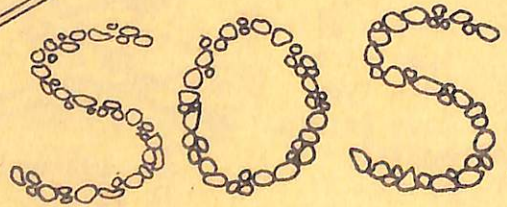
Large fallen tree.



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



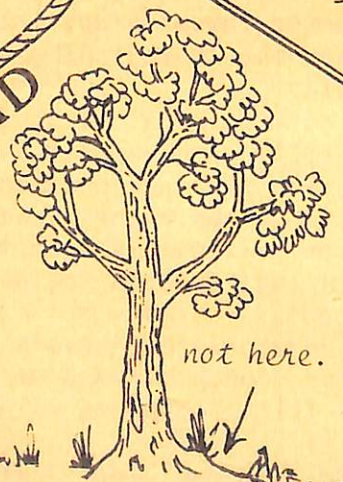
Build this shelter so as the wind is blowing onto the 'fallen tree' side.



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

BOOKS TO READ

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.



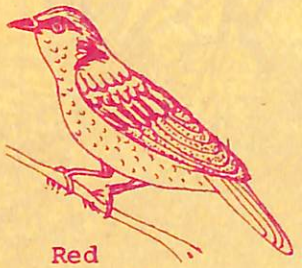
Make your fire here.

not here.

not here.

ANIMAL CLUES to FINDING WATER

Crested Pigeon.



Red Browed Finch.

Tracks of an animal earth digger.

Tracks of a ground feeding bird.

Tracks of animals which have cloven 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. The species of greatest help to you is the bronze wing, (phaps chalcoprera), it is as large as the domestic pigeon. The crested pigeon (ocyphaps lophotes), of the dry inland regions, the white -quilled pigeon, (pterophassa) of the Kimberleys.

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

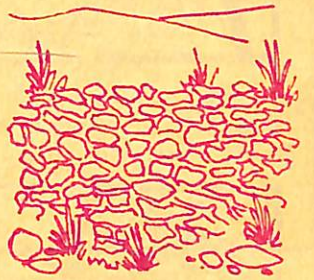
ANIMAL TRACKS: are another guide to water. If you notice other tracks converge on them you have taken the right direction. Remember that cattle usually drop their dung after drinking - not on the way to water.

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 shoreline was when the water would have been 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. They 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.

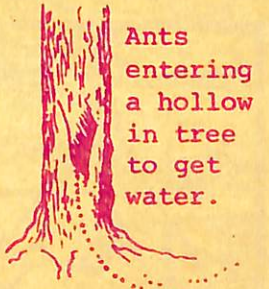
ANTS: are never far from water. If you see a column leaving and entering a fallen tree or a hollow in a tree, there is a possibility that water is present. Use a handkerchief firmly tied into a ball on to a long stick and dip it into the hollow to test for water. If there is water, leave it in the tree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

REPTILES: Most are independent to a large extent of 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.

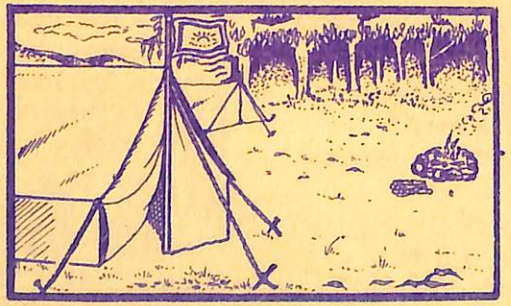
*Next time you are a dam, river or lake, try to identify the tracks.

CAMPFIRE RULES

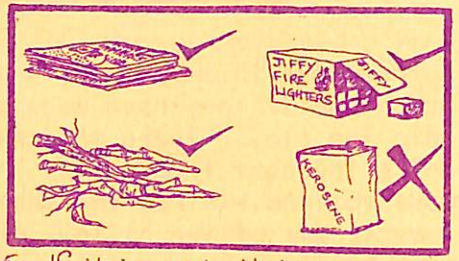
1. FIRST CHECK, is it a total fire-ban day? Are the conditions safe for fire-lighting?

2. If you are in a National Park or a Forest Commission area, is your fire going to be lit in a properly constructed fireplace?

3. Never build a fire too large. You may be better off with a stove.



4. Build the fire downwind of tents and preferably in a previously used fire-place.



5. If it is wet, it is important to be able to light a fire using paper, candles, solid fuel tablets or dry twigs. NEVER pour flammable liquid onto a fire.

6. Never leave a fire unattended.

7. Before going to bed make sure the fire is thoroughly extinguished.

8. When you leave the campsite, the ashes should feel cool.

BUSHFIRE RULES

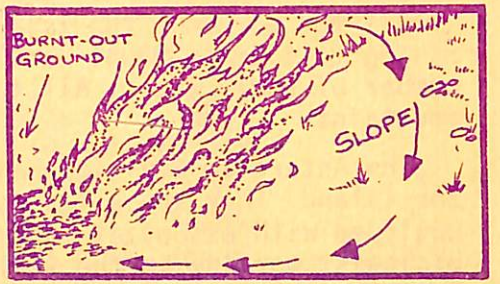
When you are travelling on foot and you become aware of the danger of bushfire, there are six basic rules.

1. DON'T PANIC. (Panic can cause you to behave oddly). Stay calm and try to think clearly.

2. Try to move on to cleared or already burned ground.

3. Do not run uphill or from a fire unless you know you are heading for a safe refuge.

REMEMBER - Radiant heat is the greatest killer in a bushfire!



4. Move across slope out of the path of the fire front and work your way down slope towards the back of the fire.

5. Don't attempt to run through flames unless you can see clearly behind them.

6. Use EVERY POSSIBLE MEANS to protect yourself from RADIATION. Cover yourself, using wheel ruts, depressions, large rocks or logs to give protection. Or take refuge in ponds, water courses or culverts.

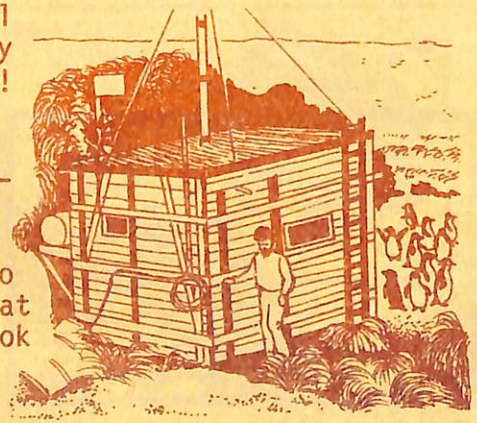
Wendy Wombat says,"We all enjoy the outdoors and the chance to hike, however a headwind while walking on the track can seem to turn flat ground into a hill." (Macquarie Island is one of the WINDIEST places on earth.) The ensuing struggle mixed with wet clothes and tired legs is enough to make anyone think of a warm bed and hot chocolate!

All the way down the island there is a mountainous plateau, rising to 430m at Mount Hamilton. It is flattish on top with a number of small lakes. All the tracks go along the top of the mountains.

The Antarctic Division has established 6 field huts around the island. They are all close by beaches at sea level.They are equipped with essential food and fuel and used by the resident biologist working in the field, and expeditioners "getting away from it all", for a few days.

MUCKIN' ABOUT

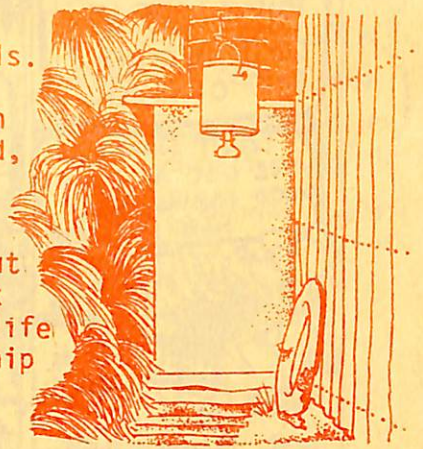
This one, at Lucitania Bay (see map Vol.21. No.2.) has been made out of a packing case! It is the smallest, with 2 beds. Others have up to 6 beds. You will see that there are plenty of noisy penguins to keep visitors company!



The walking tracks are clearly marked with snow poles. Wendy assures Wally that the markers are VERY necessary because to stray too far from them can get you into deep water - just like Wendy Wombat did last month! The ground may look grassy... but... it's very wet underneath.

Wendy says they ALWAYS take a survival kit with a Bivvy bag (small tent) compass, whistle, spare clothes, food, map, and aluminium survival suit. It is vital to keep to the schedule arranged before leaving the base

Once up on the plateau the cloud and mist may clear revealing different colors which outline the hills and streams nd lake shores.



All the huts have sturdy radio aerials. Expeditioners MUST keep in contact with the home base, the A.N.A.R.E. station on the isthmus at the top end of the island, each evening.

How's this for a nice C-O-L-D early morning shower! It's behind the field hut at Caroline Cove. Note the giant tussock grass growing up the slope and the old life buoy retrieved from a sealers sailing ship - perhaps wrecked on the rocks near the beach.

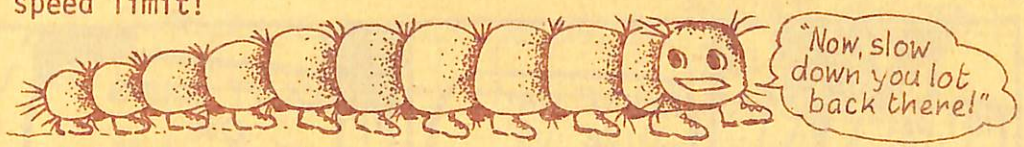
They have lots of clubs. For instance the "Hash House Harriers" is a runners club. A strong field of runners were seen recently

MACQUARIE Is.

By W. Prohasky

cavorting around the isthmus trying to dodge the huge elephant seals that sleep in piles amongst the tussock grass and on the grey sandy beach.

Then there is the "Caterpillars Club", where Sambo was disgraced and threatened with expulsion for EXCEEDING the prescribed speed limit!



A large and enthusiastic crowd were present for a practice search and rescue exercise on Wireless Hill recently. Bernie the cook, was the "volunteer" stretcher case complete with a very realistic looking broken leg. He was splinted, stretchered and transported back to the station very efficiently for some miracle surgery!

Andrew, the doctor, with helpers made regular visits to the Sooty Albatross colonies to monitor and measure the progress of the chicks. The mothers sat quietly in the nests waiting patiently for their chicks to be placed back in the nest. So trusting of humans-- isn't it a wonderful island, where the wildlife is so unafraid of us.

PAUL'S PAGE

INTRODUCING JACKO THE KOOKABURRA

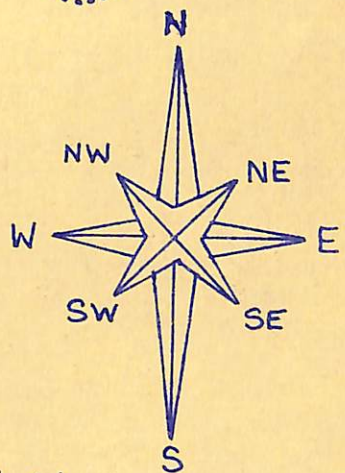
I S SE

S K W NW N NE N NW

P W NW W S W W NW E NE N

(R)	O	D	G	B	I	N	G	(H)	A	E
U	C	A	N	M	V	S	I	O	N	G
N	(B)	K	R	I	L	E	M	M	(G)	L
G	I	(C)	L	(B)	U	C	I	I	R	I
A	N	T	E	(C)	Y	(S)	W	N	I	D
P	(I)	H	C	W	H	Y	G	E	G	N
T	C	S	A	L	K	H	N	L	A	G
A	I	E	(Y)	A	P	I	T	O	F	E
(F)	K	(S)	I	T	R	G	O	S	H	(P)

Start each word at the circled letter. Move one space at a time in the direction of the compass bearings.



S E N N E S S SE

Y N N W N NW NW S

B E SE SW W SW E E SE NE N

WHAT PEOPLE DO IN NATIONAL PARKS

F NE NE N W N NW

C E NE NW W NW N

B NE SE SE SW E NE NE N

R E S SE

C L NE N N E E E

H E S E

G E S S W SE S

Swimming, Yachting, Bushwalking, Barbecues, Fishing, Rock Climbing, Cycling, Hang Gliding, Ice Skating, Photography.

ANSWERS

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 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.

HOW TO FIND NORTH WITHOUT A COMPASS.

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 an 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, 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.

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