Staying Alive

By Liana Christensen

The man is slumped in a chair, tinny in hand, peering over his beer gut at the 'natives' dancing on the television screen. 'Ah,' he thinks to himself, 'If I was an Aborigine but knew what I know.' This cartoon by Rolf Heimann points up a certain smugness in our national character. Despite the fact that ninety per cent of us cling to the seaboard, living urban lifestyles on the thin strip of fertile land that affords such a luxury, we persist in thinking of ourselves as rugged, individualistic types. Bushies. Survivors.

This attitude probably does little harm in Earls Court. The image has certainly lined Paul Hogan's coffers. But take our friend from in front of his television, put him in a four-wheel drive vehicle armed with little more than machismo and the belief that bushcraft is his national birthright, and you have a recipe for disaster.

Fourteen people have died of dehydration in the outback since 1980. Many of them were Aborigines; of the rest, most were geologists, surveyors and the like. All people who might have been expected to 'know better'. The fatal mistake in most cases? — becoming blasé.

Overestimating your ability, and underestimating the power of the land.

The land does not have to be remote to be dangerous, either. Already this year there have been three children lost in two metropolitan national parks. By good fortune or good sense they survived, but it is not always the case.

We owe it to ourselves and our children to acquire the skills necessary to survive, particularly as increased leisure time and four-wheel drive vehicles allow us access to Burke and Wills territory. The following information will not make you an expert, but it will give you an awareness of the range of skills needed.

Of Drought and Flooding Rains

Life can be threatened in widely different ways, and each particular survival situation will require different knowledge. Some specific skills will be detailed later. The two most important skills, however, remain constant. Thorough planning and preparation **before** you begin your venture, whether that's a boating trip on the Swan River or an expedition down the Canning Stock Route, is imperative. As Sergeant O'Meagher, of the W.A. Police Force, says, 'It's too late trying to learn how to swim when you're drowning'. Sergeant O'Meagher's sentiments were echoed by every manual, and all the experts whose lives and livelihoods depend on a thoroughgoing knowledge of survival. Be prepared.

In fact it is tempting to believe that if this advice were heeded, the majority of life-threatening

situations could be avoided. Should you find yourself in such a situation, however, your attitude will very often make the difference between life and death. There are countless stories of people surviving beyond all rational explanation. The Commonwealth Government manual **Stay Alive** states:

> *But more important than food or water is the will to survive. A man stranded for eight days in the Arizona desert without food or water travelled 240 km in temperatures of up to 49° C.*
>
> *The loss of body fluid reduced his weight by twenty percent. He crawled the last 12 km. When doctors examined him they found his blood was so thick that he didn't even bleed from his cuts till he had drunk a lot of water. He had broken almost every rule of survival but he survived through sheer willpower.*

Attitude is a double-edged sword, however, and nothing can kill you quicker than panic. Warrant Officer Paul Richards, the man responsible for training the SAS squadron in survival, says that the majority of people who die in the outback die of thirst, and the tragic thing is that most of them panicked, and had neither the ingenuity nor the training to realise water sources were available to them. Panic must be avoided because it will freeze your ability to think when you need it most.

If you don't panic in the crucial first few days of a survival situation, it is likely you will have made appropriate preparations to ensure your basic needs are met, and you will be in a better position to weather the next mental onslaught: the temptation to give up. This is best countered by having a plan of action, and routines to follow, such as regular signalling patterns or digging for water in the evening. You must hold on to a sense of purposefulness.

Finally, overconfidence is a major killer. The person who knows enough to always carry water, may neglect to change it regularly, only to find out too late that the container had developed a leak. Not to mention that water needs frequent changing because it will go off, according to Vern Delgado, SAS trained Co-director of a local company which offers survival courses and human resource development to individuals and private companies. When Vern, a quietly spoken man, shows you his personal survival kit which fits into a rusty tin less than 8 cm square, you feel inclined to believe he knows what he is talking about. No matter how well you

It got you here, but will it get you home safely?

Lisa Ray

think you know the country, do not neglect basic preparations, or cease being mentally alert. The mark of the true expert is a certain humbleness, and the belief Vern's Co-Director, Peter Adamson, sums up as 'the more you learn, the more you realise there is to know'. Don't let familiarity breed contempt.

Prior Planning and Preparation

There are a number of elementary rules to follow. Whether you are on foot or in a vehicle you should always notify some authority of your route, and alternative route in case of trouble, as well as your estimated time of arrival. Call into the local police station, notify the national park ranger, or for short trips, a reliable family member or neighbour. If you run into trouble you will have the comfort of knowing that within a certain time, if you don't show up, somebody will come looking for you, and what's more they will have a reasonable idea of where to start looking. Don't neglect to notify people of your safe arrival.

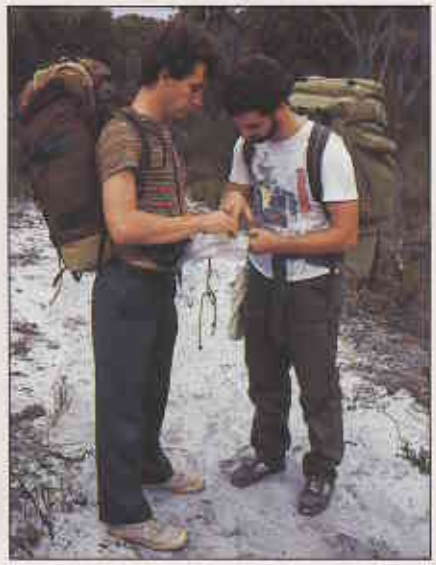
Another advantage of making regular contact with authorities is that they are likely to have up-to-date knowledge of local conditions, which is an important supplement to the information provided on the detailed maps which you should always take with you. The importance of local knowledge is emphasised, in a story told by Peter and Vern, of a group bushwalking in the south-west forests. Having looked at forestry maps to plan their water sources en route, they arrived at a place marked Permanent Water on the map only to find that the water was salty. Permanent water to a forester may mean water suitable for fighting bushfires. The moral: check your route and plan with the locals before you go.

On the other hand, Sgt. O'Meagher warns that you should be careful of using spoken directions, because they are very easily misinterpreted. If you have made the elementary mistake of not carrying a map, try to get a rough map drawn for you, with as many features as possible, as well as estimates of the distance between them. Keep referring to the map, and take notice of your surroundings, so that you can remain aware of your relative position.

Make sure you have adequate supplies for the type of country into which you are venturing. Of prime importance is your water supply. Allow ten litres per person per day when travelling in remote, arid regions. That is for personal consumption only. Additional water will be needed for the car radiator, washing and any other purpose. The water should be carried in several containers: if one leaks you do not lose your entire supply. Avoid leaks by choosing sturdy containers, then packing them securely, on a soft surface, away from washing water, fuel drums or other contaminants.

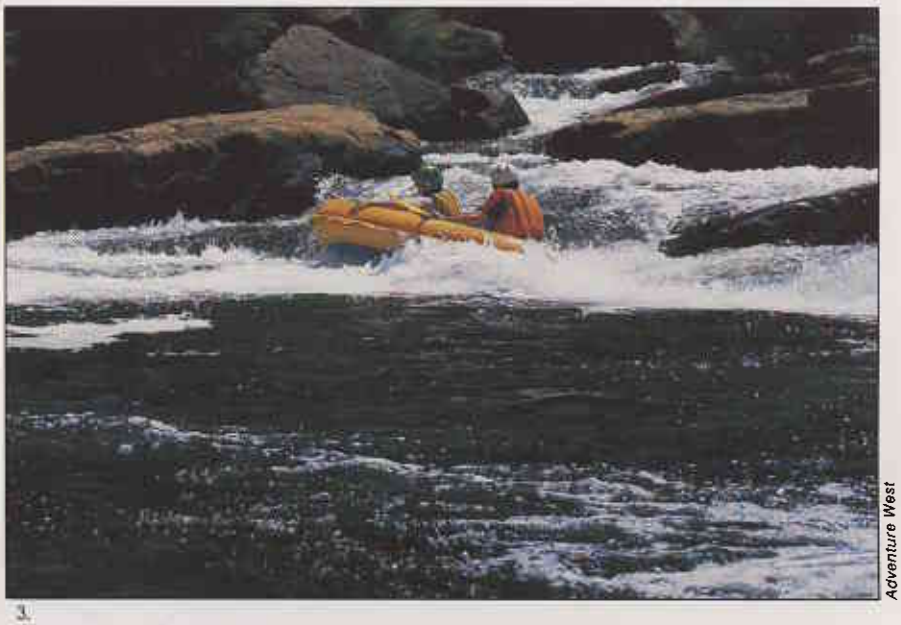
Adventure West

2.



Adventure West

4



Adventure West

3.

Hiking, canoeing, bushwalking: whatever the adventure, planning is vital. (2) wearing lifejackets to negotiate cold water pools in Hamersley Range gorges. (3) rafting, Collie River (4) checking the map, Nuyts wilderness.

Lisa Iley

Check that your vehicle is in top condition before you leave, and make sure you are carrying adequate spares. Include a tow rope, extra ignition keys, fan belt, radiator hose, ignition points, spark plugs, electrical wire, fuses, engine oil, brakefluid, extra spare tyre. The amount of extra fuel you need will vary according to the amount of kilometres between re-fuelling points. Plan carefully to make sure you have adequate supplies, and don't forget that your vehicle will use extra fuel negotiating rough terrain.

Four-wheel drive vehicles are essential for the really rough country, but if you are taking your two-wheel drive car off the beaten track it could be worthwhile having it fitted with a limited slip differential. Other fittings and fixtures that could be useful, according to the length and conditions of your proposed trip are bull bars, insect guards, sump and petrol tank guards.

The experts differ in their opinion about what tools are essential, so the following list is a yardstick only. Be guided by the type of country you plan to cover, and the distance from expert mechanical help, but include the basics as suggested by Jack Absalom in *Safe Outback Travel*:

Spanners, ring, flat and adjustable
Screwdrivers, one large, one small and one phillip head
Chisel
Hammer
Hacksaw blade
Points file
Nuts and bolts, one dozen assorted
Wire cutter
Feeler gauges
Pliers
Hand pump or engine pump
Tyre levers, one pair
Vulcanising clamp for repairing punctures
Vulcanising patches, a dozen
Valve key for removing valve from teat of tube
Pressure gauge for tyres
Shovel

If Worse Comes to Worst

Thorough preparation and prior knowledge will be your best aid in overcoming panic. The earlier you realise that a situation is becoming dangerous the sooner you can begin dealing with it. You have four basic physical requirements for survival: water, shelter, warmth and food (see boxes). Their relative importance depends on the type of environment you are in, and what resources are readily available to you. Food is likely to be the least important — it is possible to live for

Size up your situation, take stock of your resources: what is your most important need? water? shelter? what means have you got to hand to fulfil your basic needs? Stop and think, then make a plan.

Don't overlook the obvious. Your vehicle is a lot more adequate as a shelter than anything else you are likely to construct or come across in a remote desert. Never, ever leave your vehicle unless you know exactly where you are going, and how long it will take you to get there. Searchers will always locate a vehicle first, and if you have taken the precaution of notifying somebody of your general whereabouts, then your job is to stay alive until you are rescued.

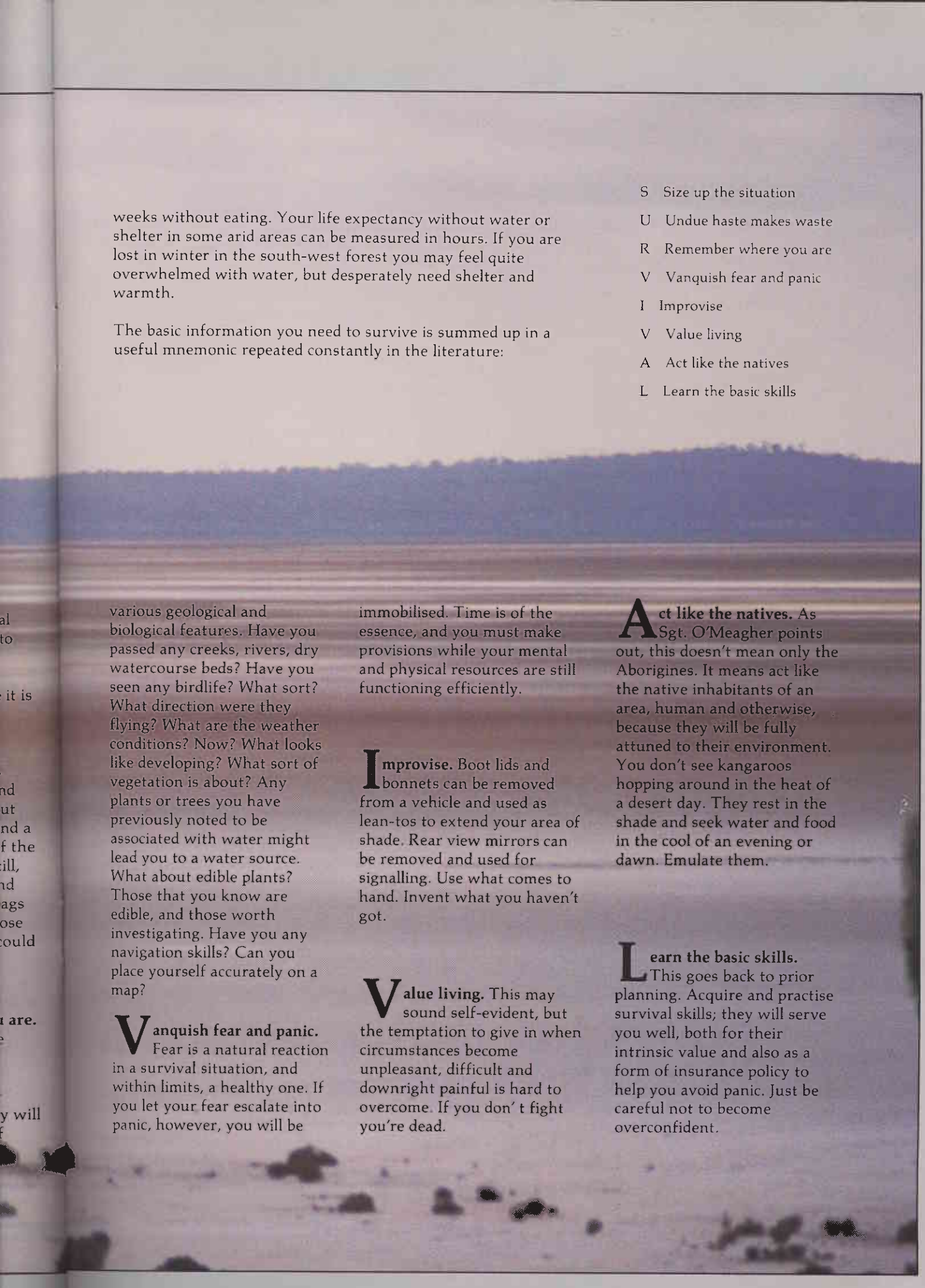
Undue haste makes waste, a harmless enough old proverb, takes on a new and sinister meaning in survival situations. It is important to decide and act quickly and rationally at the start of a survival situation, because it is then that you are at your strongest. Undue haste, however, will kill you, particularly when water is your prime need. If you find yourself completely without water resources, and expend a lot of energy in the heat of the day constructing a solar still, or even walking around and putting up transpiration bags to collect water, you will lose far more water than you could hope to gather.

Remember where you are. The best bushies are constantly observing the country they are passing through. Long before any problems might arise, they will automatically take note of

weeks without eating. Your life expectancy without water or shelter in some arid areas can be measured in hours. If you are lost in winter in the south-west forest you may feel quite overwhelmed with water, but desperately need shelter and warmth.

The basic information you need to survive is summed up in a useful mnemonic repeated constantly in the literature:

S Size up the situation
U Undue haste makes waste
R Remember where you are
V Vanquish fear and panic
I Improvise
V Value living
A Act like the natives
L Learn the basic skills



various geological and biological features. Have you passed any creeks, rivers, dry watercourse beds? Have you seen any birdlife? What sort? What direction were they flying? What are the weather conditions? Now? What looks like developing? What sort of vegetation is about? Any plants or trees you have previously noted to be associated with water might lead you to a water source. What about edible plants? Those that you know are edible, and those worth investigating. Have you any navigation skills? Can you place yourself accurately on a map?

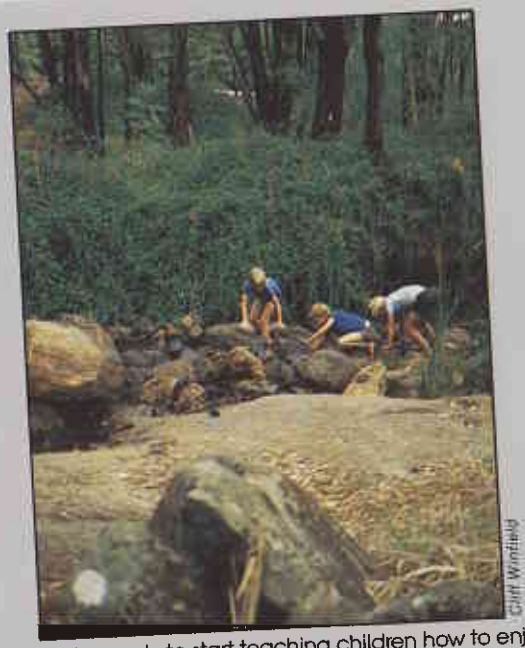
Vanquish fear and panic. Fear is a natural reaction in a survival situation, and within limits, a healthy one. If you let your fear escalate into panic, however, you will be immobilised. Time is of the essence, and you must make provisions while your mental and physical resources are still functioning efficiently.

Improvise. Boot lids and bonnets can be removed from a vehicle and used as lean-tos to extend your area of shade. Rear view mirrors can be removed and used for signalling. Use what comes to hand. Invent what you haven't got.

Value living. This may sound self-evident, but the temptation to give in when circumstances become unpleasant, difficult and downright painful is hard to overcome. If you don' t fight you're dead.

Act like the natives. As Sgt. O'Meagher points out, this doesn't mean only the Aborigines. It means act like the native inhabitants of an area, human and otherwise, because they will be fully attuned to their environment. You don't see kangaroos hopping around in the heat of a desert day. They rest in the shade and seek water and food in the cool of an evening or dawn. Emulate them.

Learn the basic skills. This goes back to prior planning. Acquire and practise survival skills; they will serve you well, both for their intrinsic value and also as a form of insurance policy to help you avoid panic. Just be careful not to become overconfident.



It is never too early to start teaching children how to enjoy and protect our native bushland and how to survive to enjoy it another day.

Children

These days we spend a lot of time protecting our children from urban dangers: traffic, strangers, backyard swimming pools. But there is an older threat to our children, one that has always been part of life in Australia, one epitomised in the classic Frederick McCubbin painting Little Boy Lost.

Sgt. O'Meagher is passionate about the subject, as only a policeman who has bashed his way through dense gullies in search of lost children can be. He recommends some standard procedures when taking children into or near bushland — even just on an afternoon's picnic or barbeque. Make sure each child has a hat. Red is a good colour, especially for the littlies. Nor does it hurt to equip them with a little, light rucksack with a water flask, jumper and whistle. Teach them to blow three short whistles, with a pause and repeat, if they get lost or frightened. Of course they will think it's great fun, and play around with them at first, but at least they will have some idea of what to do in an emergency.

Give them a few rules. When they first discover they are lost they should stop in the place they are, and wait for someone to find them. This is especially true for younger children. They can blow on their whistle or shout. If they stay in one place and don't wander, it will be much easier for family or searchers to find them. If older children have lost their bearings, tell them to head for the highest point they can find. (This also applies to adults). From this vantage point they may be able to re-orient themselves, and if not it will be easier for searchers to cover the high ground by air, rather than have the backbreak and the heartbreak of pushing through dense scrub and gullies on foot.

Introduce survival and environmental skills as a natural part of the camping experience. Rival Prof. Julius Sumner Miller for entertainment value: bring back a billy of water you've obtained by wiping your car windows with a clean rag and wringing it out into the billy. They may draw the line at drinking it when there are alternatives, but it is potable enough if you are dying of thirst.

The Guiding and Scouting movements provide some good basic training in bushcraft. Adolescents may also benefit from the Duke of Edinburgh award schemes.

Water

There are a number of ways to obtain water in an emergency, but you must always ensure that you do not lose more water than you gain. The water balance in your body is a trade-off between input and output. You lose water from your body by sweating, urinating, crying, vomiting, diarrhoea, breathing and talking. Attempt to lose as little water as possible, by avoiding or slowing down most of these functions. Stay in the shade, avoid moving in the heat of the day, keep talking to a minimum. Use sign language where possible. If you have no water do not eat, especially do not eat meat. Digestion uses a lot of water, and you are far more likely to die of dehydration than hunger.

Do not, on the other hand, make the mistake of severely rationing your water. It is false, fatal economy. Many people have died because they restricted their water intake, became dehydrated and irrational and made stupid mistakes. You must continually re-hydrate. A good rule of thumb is watch the colour of your urine; as soon as it becomes dark, you should drink. Never be tempted to drink saltwater or urine: both will severely deplete the water reserves left in your body.

Plastic bags and square sheets of heavy duty plastic can be enormously useful in obtaining water. Trees lose water to the atmosphere in a process called transpiration. If you secure a plastic bag around a bunch of leaves, you will collect the water that is transpired. Tie off the bottom part of the bag with a rubber band or string to allow the water through, but prevent contamination from falling leaves. You must drain the bags regularly or water production will stop. Beware of using this method on poisonous trees.

You can also collect transpired water by breaking off clumps of grass or small bushes and putting them inside the bag. This is an emergency procedure only, and tearing up vegetation under any other circumstances is strictly prohibited.

You are unlikely to get large quantities of water from desert vegetation, because it is adapted to the harsh, dry environment and restricts transpiration to a minimum. If you have been observant you may find other sources of water. There are windmills

and bores scattered throughout remote regions because stock needs water to survive. Where there are windmills and bores in current use, there will also eventually be people, sent out to ensure the stock are getting water. Take note, however, that it can sometimes be difficult, if not downright impossible to obtain water from a bore.

Animal tracks converging in one spot may also lead you to water. If you are lucky enough to find a waterhole in the desert do not camp right next to it. Set up at least 2 000 m away to avoid scaring stock and wild animals from their only water source.

Try digging in dry creek beds, especially at bends or where there is some sign of dampness. Do not do this in the heat of the day. Water can be extracted from sand or mud by soaking a rag and wringing it out into a container. Some tree roots will yield water if cut into lengths and drained into a container. Do not drink if the liquid tastes bitter. It is very important to avoid contaminated or poisonous water, because you cannot afford to lose water through vomiting or diarrhoea. The easiest way of sterilising water is with water purification tablets, obtainable at most camping supply stores. If you don't have these, iodine or Condy's Crystals from your first aid kit will do the trick. Failing all else, you can boil it for ten minutes. You may lose some water through evaporation, but it is better than getting sick.

If you are seriously interested in studying the procurement of water there is a book commissioned by the Commonwealth Defence Department called *Survival Water in Australia's Arid Lands* by B.L. Kavanagh. For most people, however, you will find enough information in a useful booklet issued free by the W.A. Police Department. Written by Sgt. O'Meagher, the booklet is called *Aids to Survival.*

Adventure West

Transpiration bag. The next step is to tie the bag above the weight to prevent leaves from contaminating the collected water.

Speaking of aids to survival, condoms can help you survive in more ways than one. Peter Adamson seriously recommends their inclusion in a good survival kit. They are small enough to be portable (it's no good having your 'survival kit' the size of a suitcase because you are not likely to carry it with you wherever you go) and they are extremely useful water containers capable of carrying about six and a half litres each.

A dry creekbed can be deceiving — and a lifesaver.

Adventure West

Food

Food is the least of your worries in a survival situation, but if you are well provided with water, warmth and shelter, it will be a comfort, and eventually, of course, a necessity.

Many people are squeamish about most forms of bush tucker, but a survival situation is no time for gustatory niceties. Peter Adamson suggests spinning out any supplies of food you might have by introducing bush tucker early. This will help your physiological and psychological adjustment.

What is 'bush tucker'? What springs to mind — visions of hunting kangaroos? Tracking wallabies? Forget it. According to Peter this is 'a male ego trip: man the hunter'. The animal food that you are most likely to catch is reptiles.

There are only three poisonous frogs in Australia, and in those cases it is the skins that are poisonous. So if you are dining on 'French cuisine' make sure you skin them first. Goanna is reputed to be fairly tasty. Even venomous snakes are edible, just cut of the head and part of the neck. All reptiles are oily, and should be cooked for a long time. In fact, most forms of bush tucker are much more appetising when cooked.

Other animal sources of food which may be less appealing are ants and grubs. Do not eat furry grubs or ones with black showing through their skin. They aren't necessarily poisonous, but those who have tried it conclude that maybe there are worse fates than dying.

There are many types of edible vegetation in Australia. An Australian Defence Department group studying the vegetation which formed a large part of the Aborigines' diet has produced some interesting results, including a native fig which is now rated as the highest source of vitamin C of any known food.

That there is plenty of edible vegetation is undisputed, the problem lies in knowing what it is. Make it your business to find out a few of the common edible plants in a region, what they look like and how to distinguish them from other plants. It is worthwhile to be cautious, even if you are reasonably sure. Peter Adamson warns of the ptifalls involved: 'people hear that waterlily bulbs are edible, which they are. But what they don't know is that there is another plant of a different biological family which is easily mistaken for a waterlily. It grows in the same areas as waterlilies and it is highly toxic'.

There are set steps to follow when you wish to test for a plant's edibility. First of all, break up a small piece and smell it. Don't eat it if it smells like peaches or almonds, which often indicate the presence of cyanide compounds. If it smells all right rub a small portion onto an area of sensitive skin (inside wrist, armpit, groin, back of knee) and wait at least 20 minutes to see if there is any reaction. If nothing happens, try briefly rubbing a small piece on the inside of the lip or top of the tongue. If you have an adverse reaction at any stage, put the plant aside for further testing. If it seems okay, try eating a very small portion, then wait for four hours for a negative reaction. After this you can try eating the plant in increasingly larger portions, waiting each time, until you are sure it is fully edible. Plants you have set aside might be made edible by cooking, or another part of the plant may be edible.

If you do have an adverse reaction after eating a plant, the best thing to do is 'dilute' it by immediately eating some food which you know is safe. That is another good reason for starting to eat bush tucker while you still have other supplies to mix it with.

A final word from Sgt. O'Meagher on the subject of food: 'Most animal, bird and plant life is protected and should only be used for food sources in emergencies. Should it be necessary to kill, only kill what is necessary for survival'.

Drying meat

Adventure West

Native figs (*ficus spp.*) are a good source of nutrition.

Adventure West

Shelter and Warmth

One of the best things you can take with you when camping or bushwalking is the space blanket. It is light, portable, and can be used for heating or cooling according to which side faces outward.

Do not forget that your vehicle is an excellent form of shelter.

If you are stuck without any manufactured shelter, you must rely on your wits and what is to hand. Forget elaborate designs, it is important to conserve your energy, and most bush shelters take more time to construct then you would imagine.

If you are lucky you can use some existing natural feature as part of your shelter: cave, hollow log, ridge. Perhaps the simplest construction is an Aboriginal design: find a group of bushes and tie the tops together. You can add extra thatching to this base.

When selecting a site for your shelter note the direction of prevailing winds and the proximity of water. It is a good idea to make your fire so that warmth is radiated into your shelter.

Warmth is really important. The desert which fries you in the daytime can freeze you at night. Hypothermia can kill just as effectively as hyperthermia.

Naturally, it is easiest to start a fire with waterproof matches or a lighter, but it is possible to do without either. Investigate your vehicle again. You can start a fire with the cigarette lighter applied to a petrol-soaked rag. Another way is to remove the battery, attach fine wire to both terminals and touch the ends of the wire together to produce a spark. Car batteries produce a highly volatile gas, so be extremely cautious when starting a fire, and make sure the battery is put away as soon as possible.

If you don't have a vehicle, a first aid kit could come in handy. Condy's Crystals ground together with sugar will produce a brief, intense flame. Be sure to have plenty of 'punk' (fine tinder) ready. Alternatively, Peter Adamson and Vern Delgado recommend holding steel wool over the negative terminals of a torch battery and brushing it against the positive terminal. The sparks produced should ignite the steel wool. This will be useless unless you have gathered sufficient punk.

Failing all else, it is, of course, possible to make fire in the aboriginal Australian/native American manner of rubbing two sticks together. The details of this method are found in most survival manuals, including *Aids to Survival*. It might be worth practising before the skill is required for survival.

Fire can be essential for survival, but it can also be life-threatening both to humans and the natural environment. It is illegal to light fires in national parks. Under most normal circumstances use gas or fuel stoves. Fire should only be used when strictly necessary, and it should be handled with great caution. As Peter and Vern say 'Any fool can light a fire, and the bigger the fool, the bigger the fire'.

Making rope. Pick strong, pliable reeds, draw them through hot coals briefly, then split them. Braided they can be used to secure shelters, make fishing lines etc.

Basic shelter in the South-West — n.b. fire reflecting into the shelter. The same style of shelter is home for a kuss-kuss hunter on Mt Numah in Bougainville (below).

LANDSCOPE

Volume 3 No. 1
Spring Edition/September 1987

Contents

Executive Editor: Sweton Stewart
Editor: Liana Christensen
Designer: Trish Ryder/Robyn Mundy

All maps by Department of Conservation and Land Management Mapping Section.

Offset plates by Photolitho-PM.

Typesetting by Printworks.

Printed in Western Australia by the Department of Services, State Printing Division. ISSN 0815-4465.

COVER PHOTO:
Stark silhouettes evoke the spirit of our remote regions. This photograph was taken near Quairading by Hans Versluis.

EDITORIAL

Public participation in land management sounds like a great idea: the community has a chance to study and comment upon the government's proposals. The scientists and managers can keep their fingers on the pulse of public demand. But sometimes good ideas are hard to put into practice.

Last April the Department of Conservation and Land Management released draft management plans for the south-west forest regions, and a draft timber strategy for W.A. The release of the plans was accompanied by a series of workshops and public meetings, and extensive media releases. Four hundred and thirty-five letters offering briefings and speakers were sent out. Ninety groups responded. Public comment on any aspect of the plans and the strategy was invited.

4070 responses were received. This included 3505 proformas (from 30 organisations) and 565 substantial submissions, some up to 200 pages in length. Many submissions endorsed the plans in their entirety; some rejected them out of hand; others suggested hundreds of minor changes.

How can so many, and such varied, views possibly be integrated simply and sensibly into a final plan? What weighting should be given to the views of different groups or individuals? Who decides what is 'right' when pure value judgements are to be made and values are in conflict? How should one resolve an issue when the views of a large section of the public are quite different from those of a small group of scientists working closely on the problem? These questions represent the sharp end of public participation. It's a relatively new game for W.A.'s land managers, and one in which the rules are still unwritten and ill-defined.

What is certain is that the Department's policy and planning staff have a big job ahead of them, and a job which must be done to the highest possible professional standard. It is important that the final plans for our south-west forests reflect the tremendous thought, effort and interest shown by the community; and it is essential that there are efficient mechanisms for public involvement in conservation and land management, because these processes will be the norm, not the exception in years ahead.

Published by Dr S. Shea, Executive Director, Department of Conservation and Land Management, 50 Hayman Road, Como, W.A. 6152.