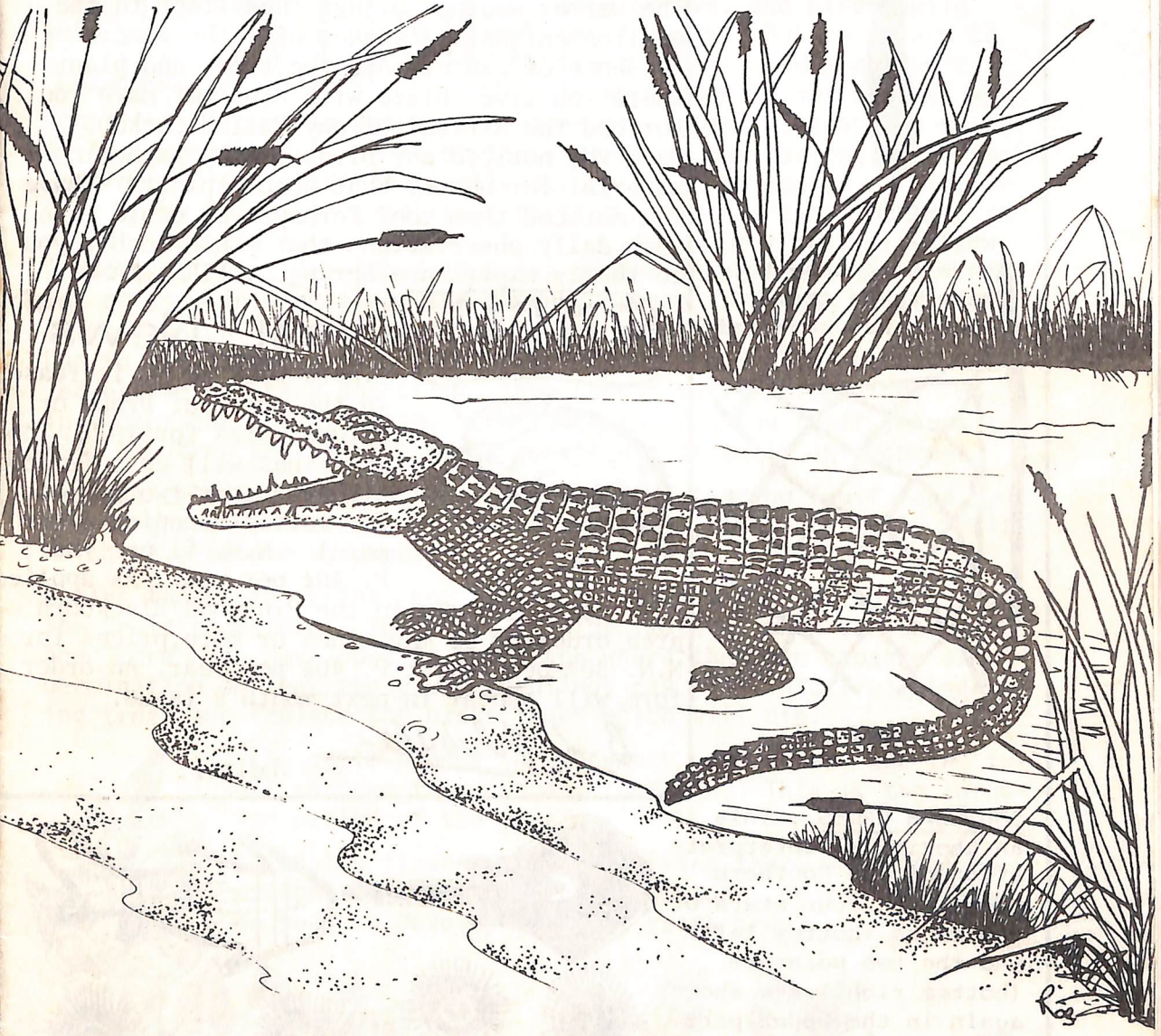
nature notes



A RINGWOOD INSPECTORATE PUBLICATION

Vol.14. No.7.

Registered for Posting as a Periodical
-Category B.

BELT

What materials would have been used to make these items of aboriginal handcraft?

NET

Editorial

Spring is a time when almost everything in nature appears to gain a sudden burst of energy. The warmer weather brings 'new life' to the environment as it 'shakes-off' the remaining evidence of winter. Are the trees and plants where you live ablaze with blossom? Have you noticed the arrival of any Pallid Cuckoos? Have you noticed any birds busily gathering material for nests? What about spiders - have you noticed them too? Perhaps you could make such daily observations that would enable you to really experience Spring....FIRST HAND.

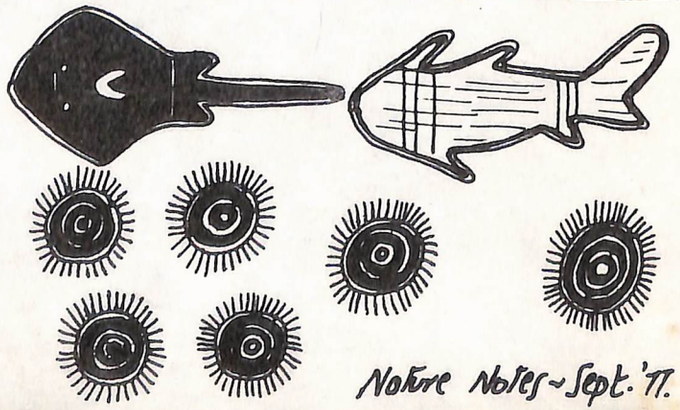
"Great News"

There will be NO increase in the price of Probe or Nature Notes for 1978. The magazines will cost $2 for either one or two copies. For multiple copies (3 or more) - N.N. $1 per year, P. 40¢ per year. As applied this year, schools in the Ringwood/Blackburn area ordering 50 magazines or more,prices for N.N. 80¢ per year ; P. 40¢ per year. An order form will appear in next month's issue.

B. L. Archibald

Editor.

SOUTHERN CROSS : This is an aboriginal interpretation of the Southern Cross. The four stars of the cross (bottom left) and the two pointers (bottom right) are shown again in the upper part of the diagram as a sting-ray being chased by a shark around the southern sky.



SPRING — AND APPLES

This is the time of the year when wattles are in bloom, fruit trees come into bloom, bees become active, and birds build there nests. But to return to fruit trees--- Why do apple trees flower in springtime? Why don't they flower in autumn or summer or winter? The apples we buy at the greengrocer's shop, or those grown in our gardens, have been developed from 'wild' (naturally occurring) crab apples. 'Crab in this sense refers to wild, sour tasting, original types of very small fruited apples.

These wild fruit developed in areas of the globe where there is a lot of snow in winter and the ground surface is frozen solid. A climate which does not encourage plant growth.

Due to the large surface area of the leaves, and also because the leaves are not hard and stiff, they cannot survive freezing. So, in winter the apples became accustomed to dropping their leaves to help the tree survive the harsh conditions of their environment.

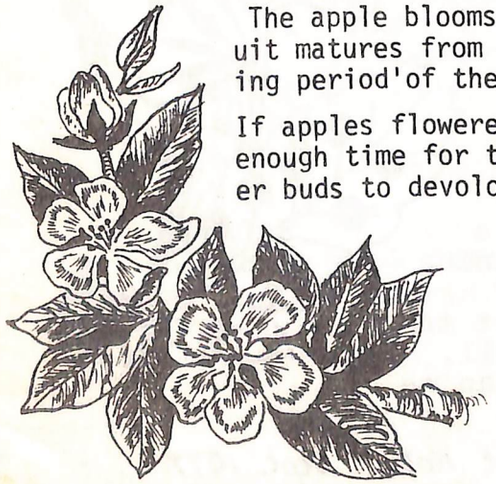
Man has selected the sweeter, more pleasant tasting fruit, and by breeding and further selection has developed the large tasty fruit which have become so popular.

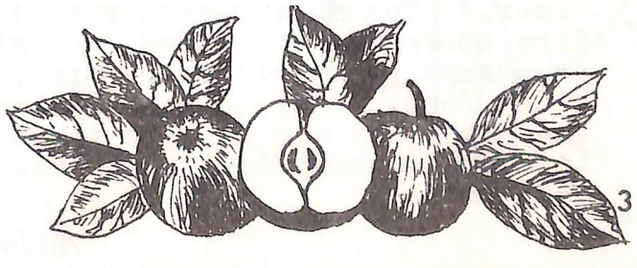
Apples flower in spring, but take until late summer or autumn for the fruit to mature. The fruit is ripe (mature) when the seeds in the 'core' are developed to the stage where they are capable of germinating so that the young seedlings can grow into fruit bearing trees and replace the older trees which will die.

The apple blooms in September or October, and the fruit matures from January to March. This is the 'growing period'of the year.

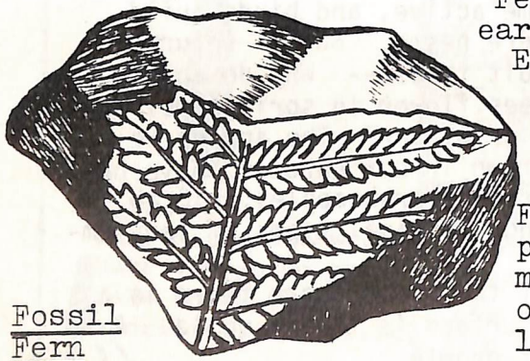
If apples flowered in late spring there would not be enough time for the fruit to mature, or for the flower buds to devolop for next years crop.

E.C.P.



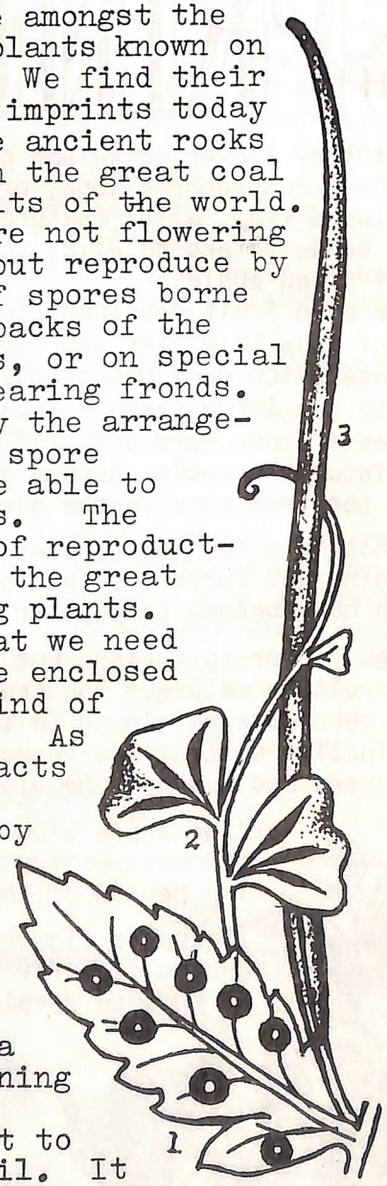


How Ferns Grow.



Fossil Fern Koonwarra Vic.

Ferns are amongst the earliest plants known on Earth. We find their fossil imprints today in the ancient rocks and in the great coal deposits of the world. Ferns are not flowering plants but reproduce by means of spores borne on the backs of the leaflets, or on special spore bearing fronds. It is by the arrangement of these leaflets, and of the spore capsules, called sori, that we are able to separate the various fern families. The ferns have an interesting method of reproduction that distinguishes them from the great families of flowering and seeding plants. The masses of spores, so find that we need a microscope to examine them, are enclosed in a capsule held tightly by a kind of elastic band around the outside. As the spores ripen this band contracts and finally snaps, releasing the spores which are well dispersed by the wind. Only a few however, will find places suitable for the growth of new fern plants. Spores are long lived and it may take years before conditions favourable for their development occur. You must remember that a fern spore is not a seed, containing an embryo plant with a supply of plant food, ready to send a shoot to the light and a root into the soil. It is a much more primitive thing, as we shall see.



Spore Capsule

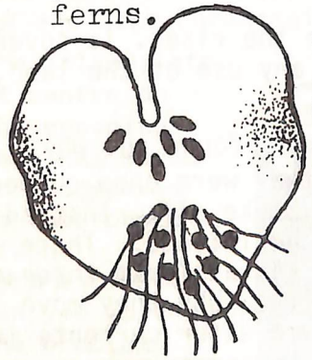
Releasing the Spores.

Growing Spore

It begins as a single cell that grows by the process of cell division until a tiny green leaflike scale, called the prothallus, takes shape, which attaches itself to the soil by fine rootlets. On the under side this scale develops male and female organs, corresponding to the ovaries and anthers of a flower. The female part, termed the archegonium, actually produces an egg, which is fertilised by sperm that swim across from the male part, the antheridium. It is from this fertilised egg that the baby fern grows, drawing its food for a time from the green prothallus, until it can form roots of its own. This process is called the Alternation of Generations.

It means, briefly, that the fern plant, as we know it, the Sporophyte generation, grows and sheds the spore. The spore must develop the prothallus, the Gametophyte generation, before it can produce the new fern.

Next time you are in a fern gully see if you can find the tiny prothallus amongst a cluster of little ferns.



Prothallus under side with organs

There are about 90 different ferns in this State and FERNS OF VICTORIA & TASMANIA by N.A.Wakefield is a good handbook for their recognition.

Some spore patterns on different ferns. 1. Shield Fern. 2. Necklace Fern. 3. Strap Fern.

Young Fern Plant

FLOATING ISLANDS

Floating Islands are an unusual phenomenon. They are not icebergs, nor are they like the reed beds found on lake Titicaca in South America. (What is important about Lake Titicaca?) They are found in the stony rises on the Princes Highway, near Colac. As you drive toward Camperdown from Colac, they are found 2 km past Pirron Yallock,(opposite the lake is the Koala Motel). The lake is nestled in amongst the "rises". These rises were caused by lava flows of a nearby volcano; Mt Porndon, hence the name Stony Rises.

All the ground in this area, and particularly in the rises, is covered with red sroria rocks. This severely limits any use of the land, other than for grazing.

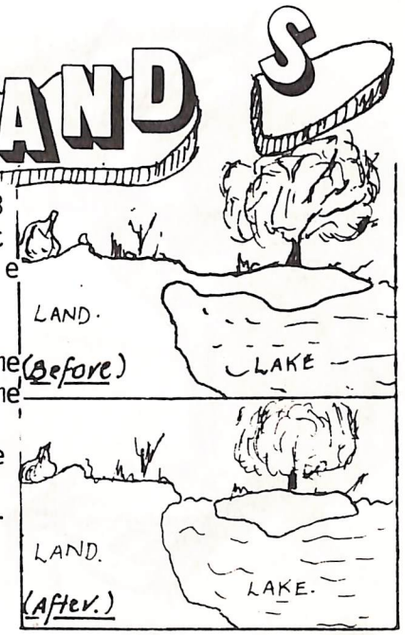
WHAT MAKES THE ISLANDS FLOAT? No-one has actually found out why they float, but they do. Some scientists think they were once connected to the land around the lake , and eventually broke off. Instead of sinking the land remained afloat and became the islands. There are 6 islands; two of which have trees on them, and at least three of these islands move, including one with trees on it! Why they move about no one knows. Maybe because of the wind, or water currents in the lake. Other suggestions include changes in temperature, or even changes in the barometic pressure.

ISLANDS FORETELL WEATHER ', One of the local Colac residents, Mr,F, Ward claims he can tell the weather by the positions of the islands on the lake. Many other nearby residents also claim that movements and positions of the islands indicate weather conditions for up to three days ahead. They even say it is more reliable than the weather

ANSWER TO THE PUZZLE ON PAGE 16:
~ 'Stone Masons & Pioneers.'

FLOATING ISLANDS

bureau! Mr Ward, who passes the lake up to 3 times a day, first noticed the movement about 14 years ago; - but he didn't tell many people Can you think why? If you happen to visit this area of Victoria, stop at the lake and have a look at this unusual feature. Take some photographs, then next time you pass take some more from the same positions. Compare your results. Do the islands really move? By the way, make sure you note where you take the first set from, so that you can take the second set from the exact same positions. Why? While down there, you may notice many kilometres of stone fences. Who built them? (Slaves, convicts, aborigines, stone masons, pioneers, or machines). You may be surprised? The fences are well over 100 years old and many are in perfect condition. These fences are even more remarkable when you consider that some of them were sunk 60 cm in the ground to make them rabbit proof.



Other spots of interest in this area are Lake Bullen Merri, Mt Leura, and Lake Purrumbbete at Camperdown, while at Colac, Lake Colac,red rock and Lake Corangamite.

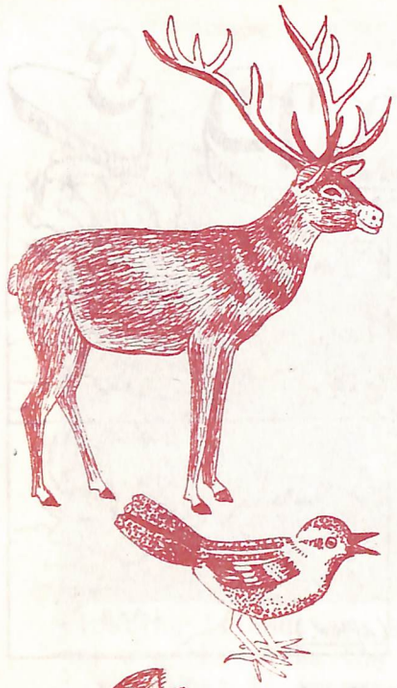
The Island,left of centre on the opposite page HAS moved when compared to this photograph.

★★★★★★★

Can you solve the problem about who built the fences mentioned in the article? See the 'tele-words puzzle on p.16.

C. Bull.

ARMOURED ANIMALS



The animal world abounds with the uniqueness of nature, but it is full of dangers. Every wild animal struggles to survive, for itself and its young.

Among the animals there are many who have built-in armour, usually a hard and tough covering to protect them. For instance, crocodiles, lizards, lobsters. The covering is of shell, heavy scales, bone, hairs that are like sharp quills, spikes and spines.

These are divided into three groups. The HERBIVORS - animals that feed on plants. CARNIVORES - animals that feed on flesh (that is other animals). OMNIVORES - animals that feed on other animals and plants. Do you know any other examples under these three headings?

Some animals are marked so they confuse the hunter. For instance the stumpy tailed lizard has a short tail that looks like its head. As a result the enemy does not know which end to attack.

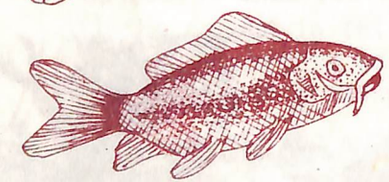
But of all the ways animals protect themselves, the most impressive is with armour. All the worlds animals are classified into a dozen or so large groups called PHYLA. Armoured animals are found in about half of this phyla. The number of animals with some form of armour is considerable.

Most animals are INVERTEBRATES - or without backbone. Many invertebrates have armour or some kind of outside skeleton, sometimes it is light and thin but tough.

The armour of back-boned animals is different. Can you think of any? Even some of the smallest and simplest of animals - those of only a single cell - have armour.

As billions of these animals die their shells pile up, forming thick layers of rock. From one kind of rock, made of NUMMULITES - (disc like shells), centuries ago, people built the pyramids in Egypt. (Armoured Animals - by H. S. Zim).

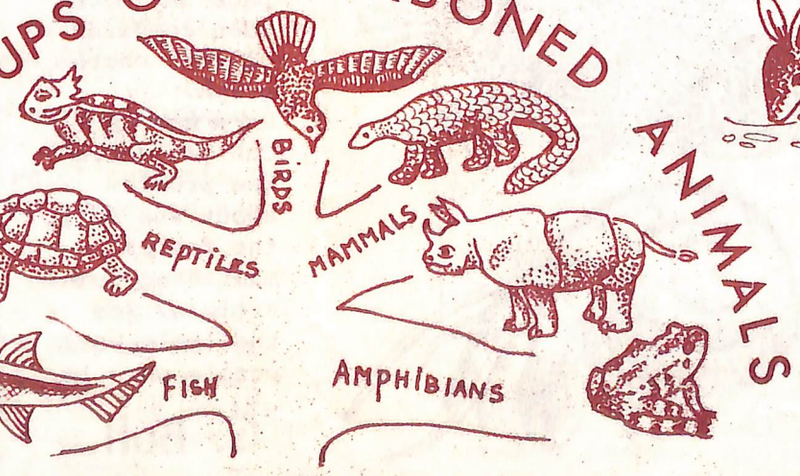
Another group, the armoured water animals are the CRUSTACEANS - with 25,000 differ-

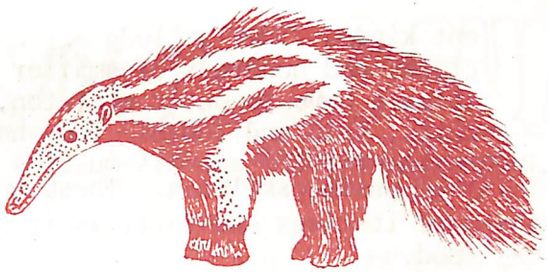


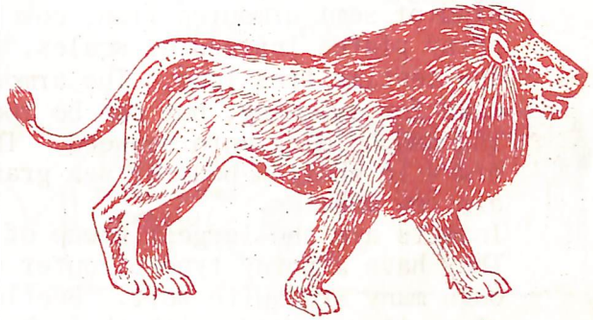
THE DEER, THE SPARROW, RABBIT, AND CARP ARE ALL HERBIVORS.

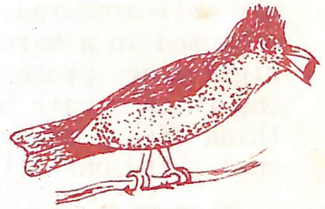
DIVING BEETLE

MAJOR GROUPS OF BACKBONED ANIMALS



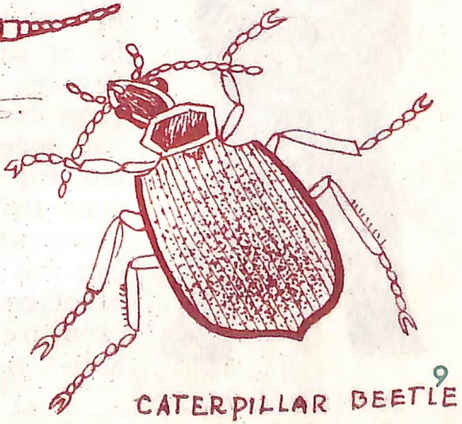






THE ANTEATER, THE LION AND THE FLYCATCHER ARE ALL CARNIVORES.

DO YOU KNOW WHAT ANIMAL THIS IS?

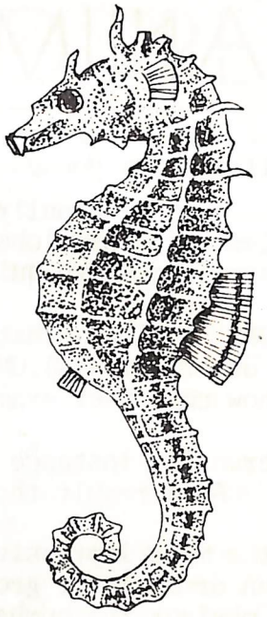


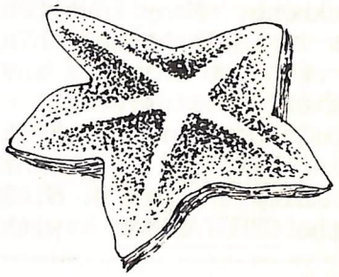
CATERPILLAR BEETLE

ent kinds. They include shrimps, lobsters, and crabs, and hundreds of smaller species. All these animals have an outer skeleton, like our fingernails, thin and tough. They have joints for movements; the animals muscles being attached to the outside skeleton. These muscles are used to move its legs and tail, as it swims and hunts for food.

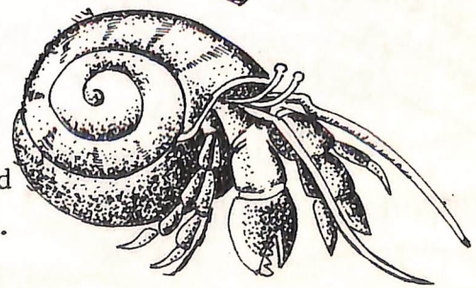
Sea horses are still somewhat of a mystery, a kind of semi-armoured fish, covered with thin horny plates instead of scales. they are only a few centime tres long. The armoured tail is not used for swimming, but can be looped for grasping and holding onto seaweed. The sea horse hides in shallow beds of sea grass, where there are few enemies.

Insects are the largest group of INVERTEBRATES. They have a horny type of outer skeleton, although many are quite soft. Beetles are particulaly well armoured, with their body, head and legs enclosed in a hard sheath. The first pair of rigid wings protects the beetles back. The second thinner pair being used for flight. Can you think of any other insects with external skeletons? Find out all you can about them.





Man too, has from earliest times, developed armour for protection, particularly for use in battles and wars. How far back in time can you trace this development? Your school or local library can be of value here. Perhaps even a classroom discussion. Has man developed his armour for the same purposes that the animals discussed here have? Can you compile a list of other armoured creatures not mentioned here? W. Prohasky.



WHAT GROUP DOES THIS BEAR BELONG TO?

The BORING CUP

GREAT DRAWINGS THIS MONTH BY W. PROHASKY AND R. CASSIDY.

Aboriginal Names in Common Use P.t.2

Last month Nature Notes told you about some of the aboriginal words used to name creatures of the Australian Bushland. We continue this month by talking about Aboriginal names for plants.

When city folk say 'up in the mulga' they mean 'in the outback country'. Mulga wood souvenirs are made from the MULGA, a kind of inland wattle tree. (Acacia aneura). Other acacias known by aboriginal names are WIRILDA, COOBA, BRIGALOW, NEALIE, WALLOWA and many more. Cootamundra Wattle takes its name from the district, 'cootamundra' meaning low-lying place.

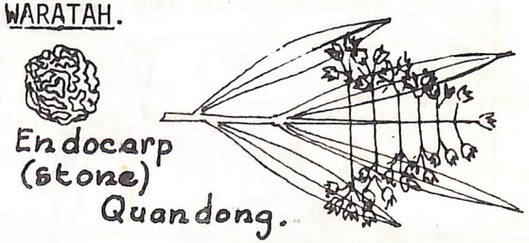
Acacia aneura

Many of our gum trees or eucalypts, too, retain names given them by the dark skinned people whose ancestors came to Australia more than 30,000 years ago. Some of the W.Aust. ones are well known here, such as JARRAH (good timbers), but others have names much used in W.A. like TUART, MARRI, ILLYARRIE, YATE, WANDOO, MORT, MARLOCK and many more. MOTTLECAH (Eucalyptus macrocarpa) is a small tree with the largest gum-nut of all. This name is preferred to 'Rose of the West'.

Mottlecah.

The actual size is 8c.m at the widest point.

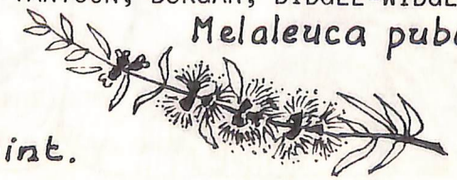
Mallee is an aboriginal name for several kinds of the smaller eucalypts that have given their name to Victoria's dry north western region. An aboriginal name for Mahogany Gum is BANGALAY.
The COOLABAH of 'Waltzing Matilda' fame is found in Central Australia as Eucalyptus Coolabah. 'Flour' from the spore cases of NARDOO, a kind of fern (Marsilia) was not nourishing enough to save Burke and Wills from dying of starvation. 'Wild cherry trees' EXOCARPUS' are called BALLART. A Sheoke (Casuarina cristata) is BELAH. The floral emblem for N.S.W. is the WARATAH.



Endocarp (stone)

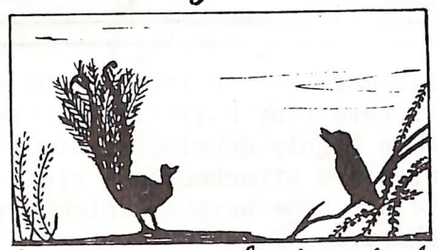
Quandong.

Try to find out what kinds of trees, shrubs or wildflowers are known by these aboriginal names:-
BOOBIALLA, GEEBUNG, WALLUM, CARBEEN, QUANDONG, BURRAWANG, BUT BUT, GYMEA, KANOOKA, BUNYA BUNYA, BERRIGAN, KARRALLA, BANYALLA, PITURI, MOONAH, TANTOON, BURGAN, BIDGEE-WIDGEE.



Melaleuca pubescens.

A Legend of the Kookaburra



A long time ago the lyre-bird used to say that no other bird could sing as well as he could.

So one day the bush birds met together to see if any could sing better than the lyre-bird

But as each one sang, the lyre-bird copied its song and sang it more sweetly than ever before.

Now the jackass, who could not sing, was amused to see everyone trying so hard to sing nicely.

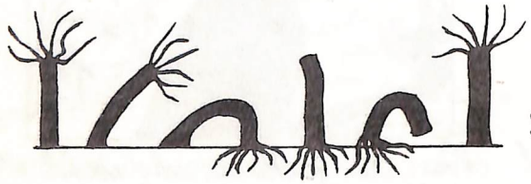
It all seemed so funny to him that at last he burst out laughing! Then the lyre-bird tried to copy his laugh, and this made the jackass laugh so loudly that at last the lyre-bird gave up

Even today the lyre-bird cannot laugh quite so heartily as the jackass; and when the jackass thinks of this he laughs so loudly and merrily that all the bush seems to ring with his happiness.

MOVEMENT

All living things move. Simple animals move by contraction and expansion of parts of their bodies. Others wave tiny hair-like coverings to move themselves through the water. More highly developed animals have muscles for movement. Where the muscles are attached to a rigid skeleton, movement cab be more rapid. Here are some ways in which animals move. See if you can discover any others..

LOOPING



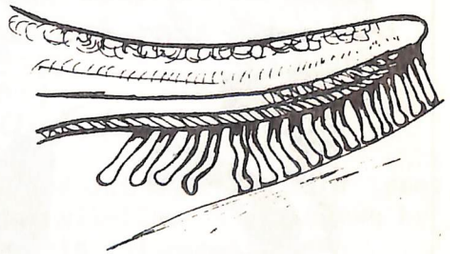
SOMERSAULTING

HYDRA..

The Hydra, a tiny freshwater animal, glides by contracting and expanding its foot. It swims by waving its tentacles; it can also loop and somersault.

STARFISH..

The arm of the Starfish has contractile or tube feet provided with suckers to 'hook and pull.'If a starfish should lose an arm it is able to grow another.

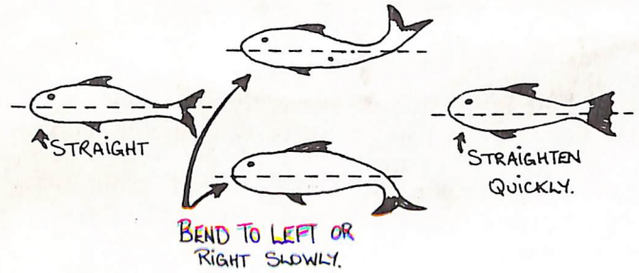


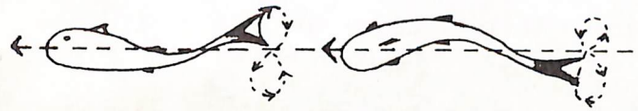
HOUSEFLY.

MOSQUITO.

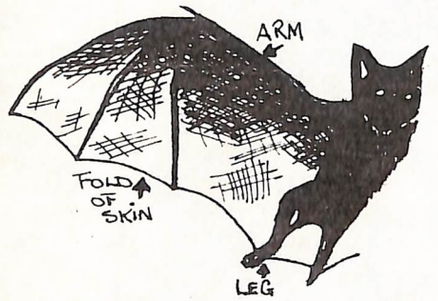
INSECTS..

Insects have jointed limbs for walking. They fly by a 'rowing' movement, Their wings are not limbs..and have no bones.





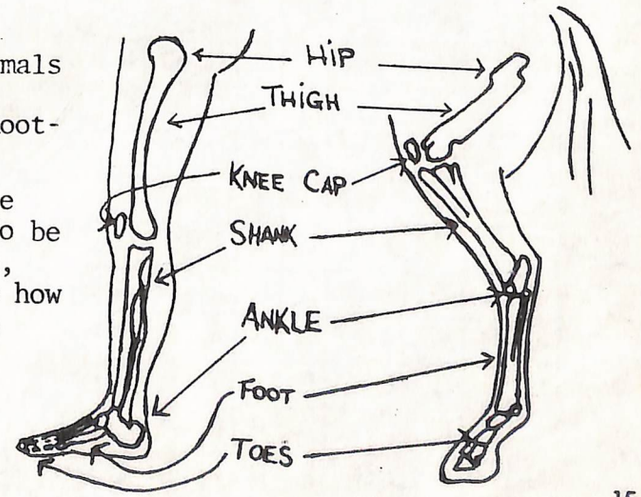
FISH swim by a 'sculling' movement of their tails, which make a figure of eight movement and move from side to side. Can you think of any aquatic creatures whose movements are not like this? Perhaps you could consider the movement of the Manta Ray, or the Eel, as your starting point.



BATS AND BIRDS. Fly by a 'rowing' movement. Their forearms make forward and downward strokes. Do you know how this movement is varied when birds come to land? Do bats have a similar 'stopping movement?

MAN and most four-footed animals walk by a 'poling' movement. The limbs are jointed for smoother movement.

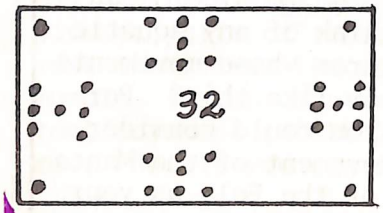
Why is it said that the horse walks on his 'third toe'? To be able to answer this question, you will need to investigate how the horse has developed with the passing of time.



Nature Notes ~ Sept. 1977.

ODDS & ENDS

HAVE YOU HEARD THIS ONE... Q. Did you hear about the cannibal who had chronic indigestion?
A. He kept on eating people who disagreed with him.



As the diagram shows, there are 32 tenants in Dr. Scratchley's flea dormitory. The doctor knows that whichever side of the room he counts, he'll find 9 fleas. This week, 4 fleas escaped. The others re-arranged themselves so the doctor could still count 9 along each wall. Draw the new diagram.

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

"Tele-Words."

When you cross out these 30 towns found in Victoria, 24 squares will be left. This will be the answer to the question about the fences. You can cross out in any direction .. up, down, diagonally, backwards and forwards.

Coragulac - Nareen Alvie Beeac Bookar Camperdown Cobden Colac Coleraine Digby Dartmoor Dreeite Drik Drik Greenwald Illawarra Illowa Kilarney Koroit Laang Panmure Lorne Lovat Penola Penola Garvoc Port Fairy Warrnambool Portland Simpson Timboon Yambuck

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