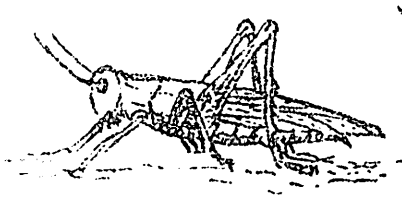
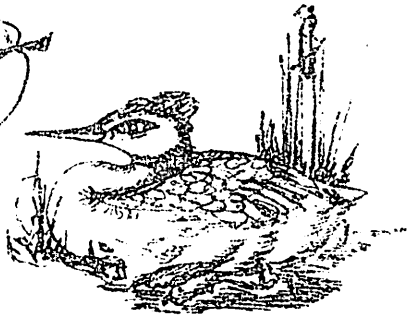
Nature Notes

Ringwood Inspectorate Vol 5 No 3 '68 Price: 5c each

Registered at GPO, Melbourne : : for transmission by post as a periodical





Dear Boys and Girls,

You must be proud of your, little publication, "Nature Notes", which has become so well known throughout the eastern suburbs of Melbourne. No doubt you find the sketches and the notes each month of very great interest; do you find them helpful, too, during your searches for information on science subjects?

Do you ever think of the many hours of long and patient work that several teachers must put into the preparation, printing, and mailing of your useful little booklet?

I have watched the growth in size and circulation of "Nature Notes" for more than four years, and can only praise very highly its excellent style and usefulness. Will you talk to Mum, Dad and Teacher about it, and discuss how it may be made even more interesting?

Have you seen some of the man-made satellites in the sky lately? Have you seen the other satellites that were there millions of years before man knew how to send a rocket into orbit? One sometimes looks like a thin slice of peach, and sometimes like a big round orange. Have you seen it? Why not write to "Nature Notes" about it? I'll be interested in your observations.

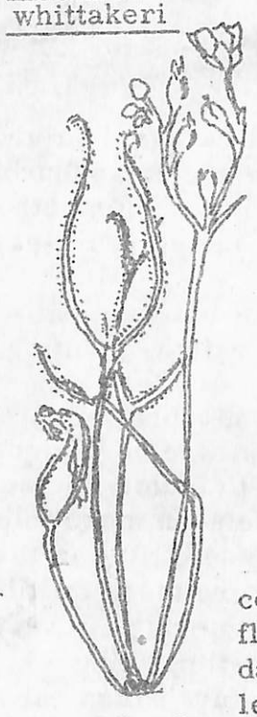
H. W. HOPKINS
Staff Inspector.

Name _____ Grade _____

Things to Look for

Drosera auriculata Errienellam

Scented Sundew
Drosera whittakeri



Forked Sundew
Drosera binata

Pale Sundew Drosera peltata

Most girls and boys are familiar with the sticky leaves and shiny five-petalled flowers of the Sundews. Their scientific name "Drosera" means "dewy" as their unusual leaves are covered with fine hairs sticky on their ends.

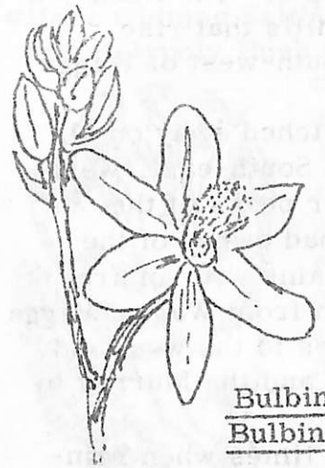
- In Victoria we have nine species and in all of Australia over sixty odd.
- While it is possible to find Sundews over most of Victoria, they do tend to be on ground that is rather damp in winter. One species is restricted to our alpine areas but with good observing we should find several others in and around our home or school.
- Scented Sundew often has reddish leaves and white flowers which open on warm sunny days.
- Errienellam is perhaps the commonest around Ringwood with the flower only opening on a warm bright day. Sometimes the basal rosette of leaves is present, sometimes absent. A similar species is Pale Sundew but this has a hairy calyx - the covering of the petals in the bud.
- Common Scarlet Sundew has a flat rosette of leaves and a small red flower.

NOVEMBER.

- Many of the lilies will have reappeared. Count the number of parts to each flower.
- Fringe Lilies are not very common, perhaps you may find some with their purplish-brown fringed flowers on slender stalks. If you look very closely you may discover the twining fringe lily. It is a slender stem which will twist around other plants, even grass if it has a chance.

The Chocolate Lily is more common so do not confuse it with the Fringe Lily.

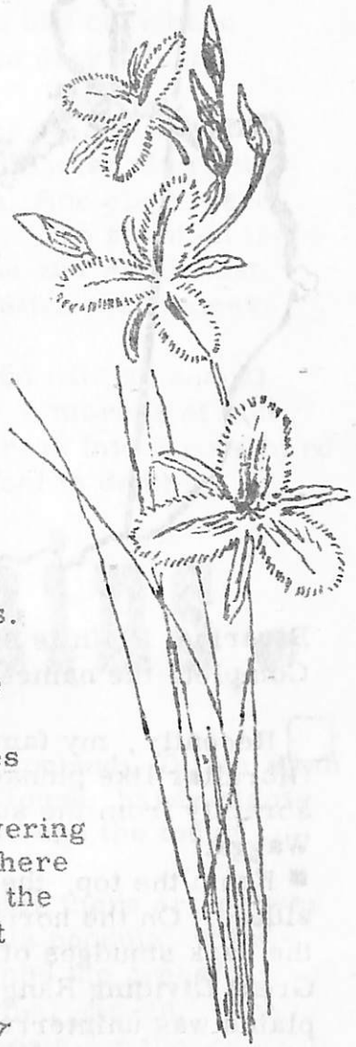
- Milkmaids have the flower-stalks all from the one spot. This flower arrangement is called an umbel. Now look at its scientific name. I think it is a very good one because it explains this very well.
- Bulbine Lily has many large yellow flowers. It is often in large groups. If we look carefully at the stamens we find that they are all bearded.



Bulbine bulbosa
Bulbine Lily

- It is usual for the lilies to have a bulb under the ground so that after flowering when the leaves wither there is a reserve of food for the plant to grow again next year.

Burchardia umbellata
Milkmaids



Fringe Lilies
Thysanotus tuberosus

The

Riverine Plain is shaded.
Complete the names of towns shown.

Recently, my family and I climbed to the top of "The Rock", a Gibraltar like pinnacle in a hogback range of hills that rise abruptly from the surrounding plains to the south-west of Wagga Wagga.

■ From the top, the vast Riverine Plains stretched away on all sides. On the horizon, to the North-east and South-east, were the dark smudges of the hilly slopes and higher peaks of the Great Dividing Range, but to the west, the broad sweep of the plains was uninterrupted. These Riverine Plains with an area of approximately fifteen million acres, stretch from Wagga Wagga in the East to Balranald, several hundred miles to the west and are bounded by the Lachlan River in the North and the Murray to the south.

■ It was during the last million years or so in times when rainfalls in the area has been much heavier than at present, that

the ancestral rivers of the Murray and Murrumbidgee and their distributaries had spread out billions of tons of sediments, eroded from the eastern highlands, over what had once been the floor of an immense ocean basin. These deep alluvial sediments form the Riverine Plains of today.

■ In the east and along the rivers and streams, the sands and gravels formed lighter, loamy soils, but in the west where the flows were slow across very gentle gradients, fine clays were deposited to form extensive black soil plains. To stand on these almost treeless plains of the western Riverina and watch heat mirages shimmering on the horizon, is to realise the vastness of the Australian inland.

■ When it rains, for this is a semi-arid region with an annual rainfall of 15" per annum, the plains become a morass of gluey mud. When they dry, the soils shrink and crack into a rock hard crazy pavement or form sink-holes up to a foot in depth.

Riverine Plains.

■ Here Oldman Saltbush, Bladder Saltbush, Cottonbush, Dillon Bush and Rolypoly Bush are the dominant plants - tough, hardy plants that revel in the heavy soils and the tough conditions.

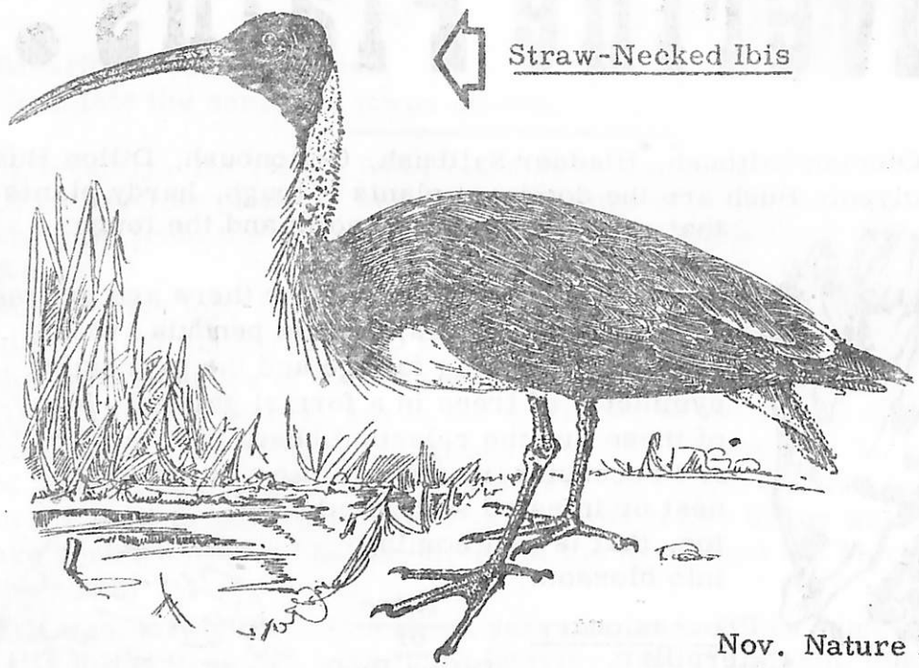
■ Where the soils are lighter there are groves of Borees or Myalls, Acacia pendula, with ashgreen drooping foliage and the graceful symmetry of trees in a formal garden. Many of these are the reluctant hosts for the Bagmoth or Processionary Caterpillar with its baglike nest or infested with mistletoe, that is just coming into blossom.

Processionary Caterpillar.

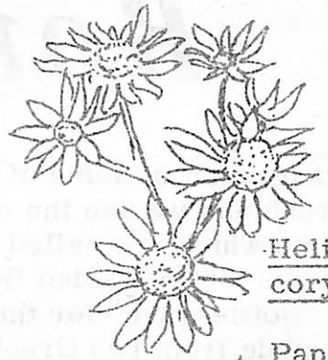
Nitre or Dillon Bush

● Along the creeks and backswamps, there are blackbox or swampbox in blossom, crowded with honeyeaters and parrots. On and around the sandhills that mark the course of ancient prior streams, there are Murray pines, bulloak, greybox and needlewood, all of which are sure signposts of lighter soils. The Needlewood, growing sometimes as a bushy shrub and at others as a medium sized tree, with thin, twisted trunk and sparse needle-like and sharp leaves, was once a source of water for aborigines, who placed one end of its spongy roots in a slow fire and drew drinking water off from the other.

On the hummocks of cotton bush and rolypoly, cheeky white-faced chats perch above their nests safe within the spiky recesses of the plant, and Brown Song-Larks, trilling a challenge to every intruder, hang upon the wind. White-faced herons are lonely fishermen along the table drains and along the creeks Eastern Swamp Hens strut with white tail spot bobbing, water-coots hide in the reeds and ducks dabble. High above skeins of Ibis scribble scrawls of changing flight patterns in the sky.



Straw-Necked Ibis



Helipterum corymbiflorum

☆ Paper Sunray

Blue-bell ☆ Wahlenbergia

Helipterum variable

Pussy-tails ☆ Ptilotus spathulatus

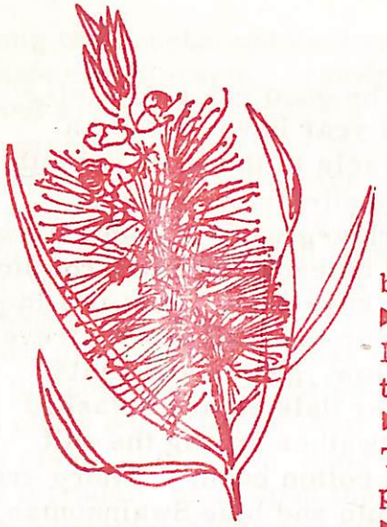
The good rains of winter this year have brought a miracle to these so recently drought-stricken plains. Barley-grass, Marshmallow and blue-blossomed Crowsfoot are knee-high. But it's the colour that catches your eye. Yellow, golden and white paper daisies are splashed in swathes among the salt and cotton bush. There are purple and blue Swainsonias, dainty Bluebells, creamy and delicate Cotula buttons, yellow Goodenias, Billybuttons, tiny woolly-heads, delicate Vanilla Lilies, tall Native Hollyhock and probably the most beautiful of all, the jewel-like, Crystal or Icicle Plant, it's dewy beads glistening in spring sunshine.

● Those of you who have not seen these plains at their best, have missed a beauty which, though so different to the fern-shaded gullies and dimpling mountain pools, contains within it the real essence of this land of ours .....

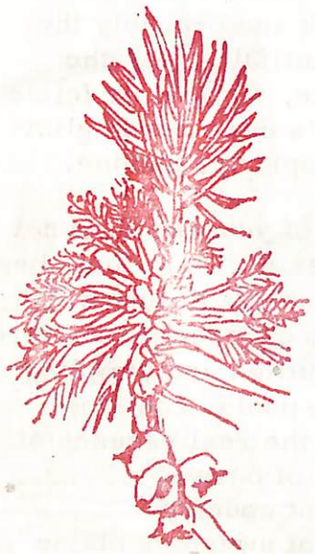
"a sunburnt country
A land of sweeping plains".

● ● ● ● ● ● ● ●

Bottlebrushes



Bottlebrush
or
Callistemon



Calothamnus
One sided
Bottlebrush

▶The flower arrangement of some of our Australian plants is often compared with those bristles of a bottle-cleaning brush and we use the common name "Bottlebrush" for a number of them.

▶ Some of the plants which are called "Bottlebrush" are Melaleuca - better called Paperbark or Honey-Myrtle; Calothamnus - One - sided Bottlebrush or "Net-Bush"; Beaufortia and Callistemon. I like to keep the name "Bottlebrush" for the Callistemon.

▶ Callistemon is made from two Greek words "kallos" meaning beauty and "stemon" meaning stamen. This is a very good name because the showy part of the flower is the stamens. There are five small petals to each flower but we need to look carefully to see them.

▶ The flowers are grouped together to make a spike at or near the end of the branches. It is not uncommon for leaves to begin to grow out the top of the Bottlebrush before the flowers are properly out.

▶ There are about twenty species of Callistemon throughout Australia. They are shrubs or small trees with rather tough leaves and often papery bark. Now is a good time to look for Callistemons in the bush, or in gardens because they are very adaptable and grow well in badly drained or well-drained positions.

▶ What colours do you find? * * There are white, pink, yellow, green, red and purple.

To help us to distinguish Callistemon from other plants we need to look very closely. If we have a small hand lens we can have a lot of fun.

▶ As we mentioned before the stamens are the showy part. In Callistemon they are free to their point of attachment, but in Melaleucas, Calothamnus and Beaufortia the stamens are joined for some distance.

If we look at a new flower of Callistemon we may find the five sepals, which are soon shed; but in Kunzea the sepals persist; they may even be found on the old seed capsules.

▶ The seed capsules of Callistemon are retained on the shrub for a number of years except in a few species.

▶ You may like to try growing some plants from seed. Take several seed capsules from a shrub and place them in an envelope or container so that the seeds will come out of the capsules as they dry. You will have fun looking after your seedlings as there are so many and you may have some to give to your friends for them to grow in their gardens. ● ● ● ●

Flower of
Calothamnus

Flower of
Melaleuca

Flower of
Callistemon

Fruit of
Callistemon

Gravel
Bottlebrush
Beaufortia spars

SPIDERS

Spiders belong to the large group of phylum Arthropoda, which means "joint-footed". They are not insects as their eight legs clearly show. This is not the only way of telling spiders from insects. A spider's body is divided into two regions, while an insect has three. Most of the insects have two big eyes which are made up of many little eyes. Many of them have simple eyes, too; but spiders have only simple eyes. As a rule they have eight, and the pattern or arrangement of their eyes is used to place spiders into groups. Insects have jaws; spiders do not. A spider has to have food soft enough to be sucked up. At each side of a spider's small mouth there is a poison fang. At each side too, there is a "feeler-leg" or pedipalp. Most spiders have spinnerets. Many young insects can spin silk from their mouths, but full-grown insects cannot spin silk. There is one more way in which spiders are different from insects. Most insects have wings; no spiders have.

● There are thousands of kinds of spiders. They differ greatly in size, and we can find them in almost any area for they are scattered far and wide over the earth.

● Most spiders are land animals. But there are some water spiders. One water spider carries air down to a silken sac under the water so that it can breathe down there, for all spiders are air breathers. They do not, however all breathe the same way. Some have air tubes inside their bodies, some have book lungs, air sacs filled with thin flaps of skin. Many spiders have both air tubes and book lungs.

● Spiders eat only the juice of living animals. Insects are the commonest spider food.

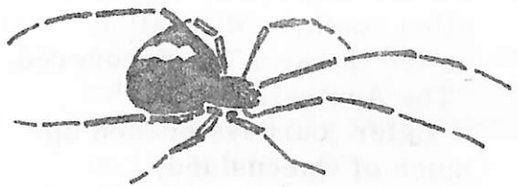
● All spiders come from eggs. A female spider may lay more than a thousand eggs at a time. As a rule she spins a silken case for them. When little spiders hatch they look like full-grown spiders except that they are smaller and very pale. There is never any food for the baby spiders inside the egg case. At times little spiders turn cannibal and eat one another.

● Many people think of spiders as enemies to be killed on sight. Actually most of them are harmless, and some are very useful. Spider silk is used in telescopes and other scientific instruments. It is fine and smooth and is stronger than steel wire of the same size. Some spiders kill harmful insects. There are poisonous spiders but they are few.

* * * * * * * * * *

* 1. Spiders do not come into houses . True False
* 2. Spiders are true insects. True False
* 3. Spiders have compound eyes. True False
* 4. Spiders have feelers. True False
* 5. All spiders spin webs. True False
* 6. Spiders have .....legs.
* 7. The back part of the spider's body is called .....
* 8. Spiders spin silken threads with (their feet, their abdomen, spinnerets).
* 9. Spiders live mainly on .....
*10. The bite of the .....spider is poisonous.

* * * * * * * * *



A Red-back Spider

The bite of this spider is poisonous.

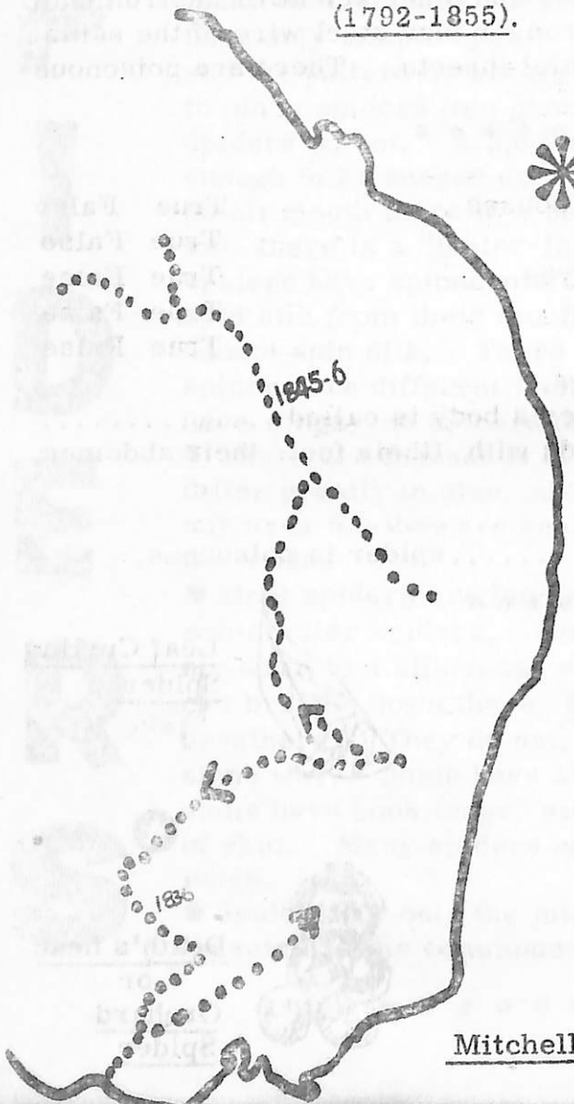
Leaf Curling Spider

Death's head or Orchard Spider

Men in Nature

MAJOR SIR THOMAS MITCHELL

(1792-1855).



Mitchell's Journeys.

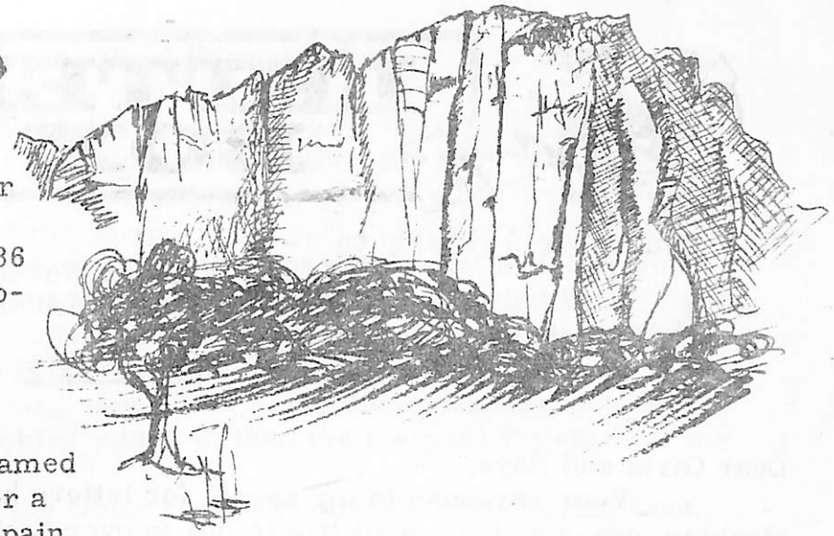
From his earliest childhood, Mitchell wanted to be a soldier. In 1826 he was promoted to the rank of major.

- The next year he was appointed as Deputy Surveyor General of New South Wales and as such carried out several journeys of exploration.
- On June 14th. 1836 he and his party of 23 men crossed the Murray River and travelled south. Mitchell called the area he discovered, "The Australia Felix."

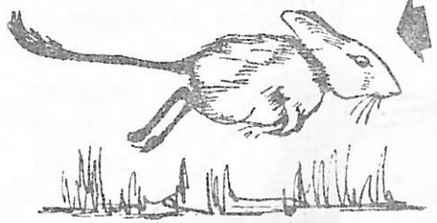
Later journeys opened up much of Queensland.

- He was knighted in 1837 and died in 1855 after a lifetime of service to the colony.

- Mount Arapiles is a huge rock outcrop in the Wimmera near Natimuk. On July 23rd. 1836 Mitchell climbed it and saw 27 different lakes on the surface of the plains. He named the mount after a small hill in Spain where his brother had met his death at the Battle of Salamanca some years before.



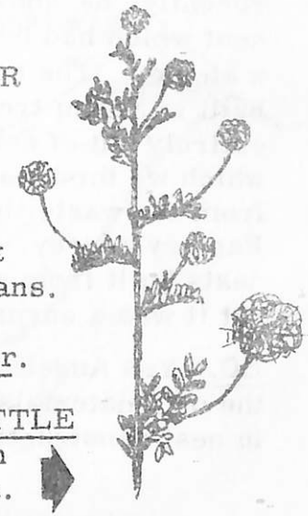
MITCHELL'S HOPPING MOUSE



- This tiny creature has a body length of three inches. Mitchell discovered this mouse in the desert surroundings of Reedy Plains in South Australia. It is now considered very rare.

FOLLOW UP.

1. A cockatoo once carried the name of MAJOR MITCHELL COCKATOO. It is now called .....
2. Mitchell was surprised to meet some settlers at Portland. Who were they?
3. Mitchell and his party spent a freezing night on the top of .....in the Grampians.
4. What does "Felix" mean?
5. Find some details about Mitchell's character.



MITCHELL WATTLE

- Grows well in the Wimmera.

LETTER BOX

Send your letters to :-
Editor, 'Nature Notes',
S.S. No. 4860, BLACKBURN LAKE
Florence Street,
NUNAWADING. 3131.

Dear Girls and Boys,

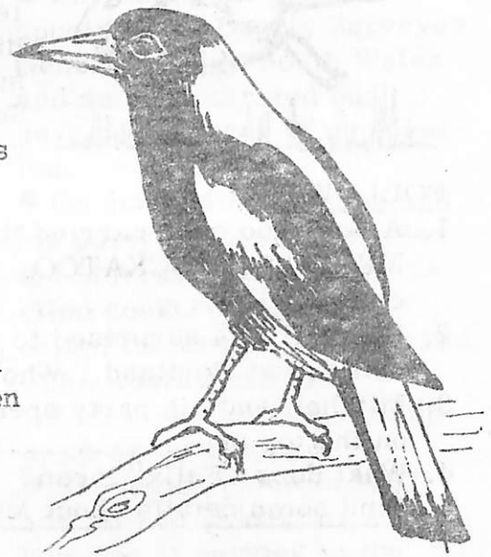
Your response to my appeal for letters has been very pleasing indeed and our mail bag is full to over flowing so we will print as many as space permits. Thank you for your efforts.

L. J. DELACCA
Editor.

Our first letter for November comes from Angela Collie, Grade 2 of Forest Hill S.S.

When I was visiting my Grandpa recently, he showed me a magpie's nest which had been blown down in a storm. The nest had been built in a gum tree and was made entirely out of coloured wires which we think had been taken from the waste tip at an Electrical Factory nearby. Grandpa has seen nests built from wire on farms - but it was a surprise in Box Hill.

ED. Yes Angela it is amazing the odd materials some birds use in nest construction.



White Backed Magpie.

Rosemary Munro 5B of Fawkner North writes a very newsy letter about her travels .....

I thought all koalas could only eat one sort of leaf but did you know that the Queensland koalas are grey and can eat twenty different kinds of leaves and that those from New South Wales can eat two kinds.

We went up there in the holidays to Moffat's Beach where there were some very noisy birds that we called Black Faced Honeyeaters, which the locals called leatherheads. They fed in the banksia tree right next to us.

Every morning about 5.30 a.m. the kookaburras woke us, then the whip bird joined in then the magpies finished off the concert.

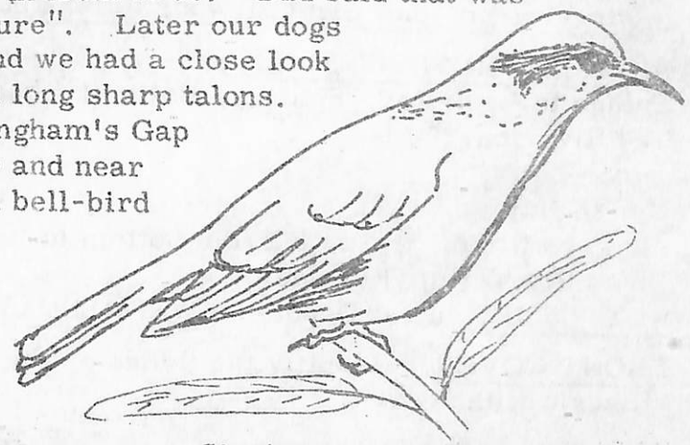
We passed the Glass House Mountains that Captain Cook named where there were many pineapple, sugar cane and banana farms. Did you know that bananas and pineapples have to be grown on hills?

While we were travelling through the other mountains we saw all sorts of beautiful parrots, lorikeets and cockatiels feeding by the side of the road, while on the plains in New South Wales we saw rosellas, parakeets and hundreds of galahs.

One afternoon at Narrendera a hawk swooped down and caught a finch right in front of us. Dad said that was "The Balance of Nature". Later our dogs found a dead hawk and we had a close look at its cruel beak and long sharp talons.

We crossed Cunningham's Gap (Sept. Nature Notes) and near the crest we heard a bell-bird singing.

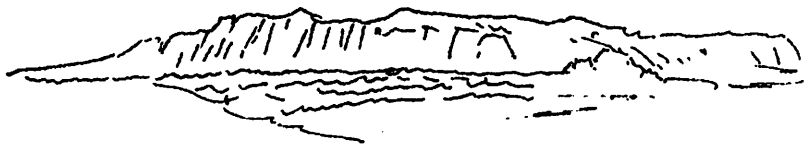
ED. Some good observing here Rosemary, keep it up.



Singing or
Black Faced Honeyeater.

LETTER BOX *continued.*

Peter Longstaff, Grade 6A Blackburn Lake S.S. writes,
In the September holidays we visited the Grampians which are situated in the Central West of Victoria. These majestic mountains consist of four parallel ranges of sandstone. The fifty mile radius of the Grampians is the habitat of up to 600 specimens of plant life, plus a wide variety of native fauna.



While we were at the Grampians we went for many hikes looking for plants usually with success. The most common flowers we saw were many shades of Heath, blue and pink Caladenia, Snake Orchid, Love Creeper and many Grevilleas, Banksias, Melaleucas and Eucalypts.

The Grampians were discovered by Major Sir Thomas Mitchell in 1836 and named thus because of their similarity to the beautiful Grampians of Scotland. (See "Men in Nature").

ED. Yes Peter the Grampians are certainly one of Victoria's best beauty spots, and in spring time particularly are most suitable for the study of native flora.

Sorry we couldn't print all your letters but more next month.

ARTICLES IN THIS ISSUE.

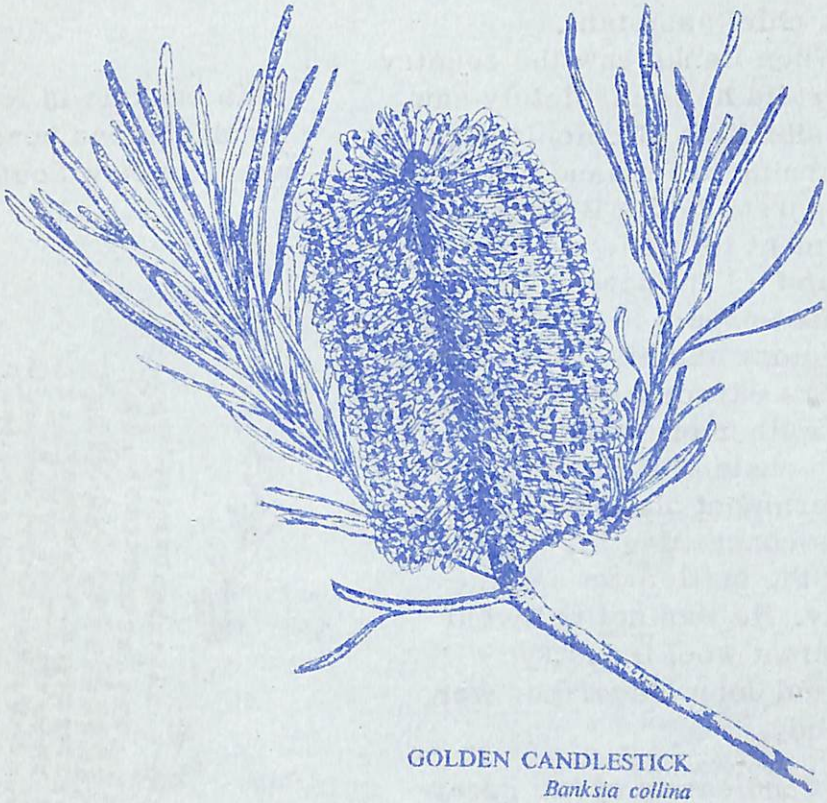
Things to Look For; Spiders, Bottlebrushes	F. J. C. Rogers.
The Riverine Plains	Mr. J. A. Stevenson (Deniliquin)
Men in Nature	G. White.

Answers to Vol. 5, No. 8 From bottom to top left to right, Fungus, Flea, Fly, Frog, Flounder.

NEXT ISSUE due at Depots on WEDNESDAY 4th. DECEMBER.

FRONT COVER. Identify the things on the front cover. They all begin with "G".

About Australian Plants



GOLDEN CANDLESTICK
Banksia collina

prepared by F. J. C. Rogers, of the
SOCIETY FOR GROWING AUSTRALIAN PLANTS.

BANKSIA

SUPPLEMENT to 'Nature Notes', Vol. 5, No. 9, November, 1968

SIR JOSEPH BANKS

BANKSIAS honour the name of Sir Joseph Banks. It was Banks who travelled with Captain Cook when the east coast of Australia was first discovered. He was with the expedition as a botanist and Dr. Solander was his chief assistant.

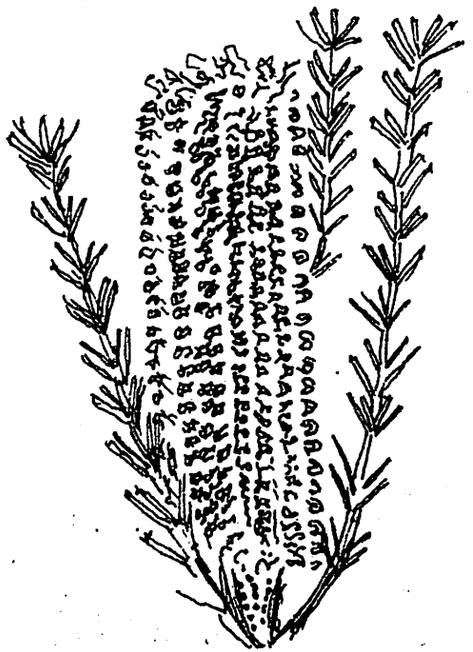
When Banks saw the country of Australia he immediately saw the possibilities of colonization. On returning to England he helped persuade the British Government to settle the new found land - "an ideal prison"!

His support in the settling of the colony and his interest in its affairs earned him the title of the "Father of Australia". He was constantly advising the the government about action to be taken concerning the improvement of the settlement and the economy. He was not in favour of the infant wool industry; so, he and John Macarthur were not friends.

An indication of his greatness as a scientist can be shown in the fact that he was President of the Royal Society from 1788 until his death in 1820. His period of leadership of the Society was one of the greatest of all times.

oooOOOooo

This banksia is found in the sandstone coastal areas of New South Wales.



Banksia ericifolia

VICTORIAN BANKSIAS

There are six banksias native to Victoria:-

1. Banksia integrifolia --

integri = whole: folia = leaf

Known as Coast Banksia, this plant is common around the sea coast. There is a small patch of these plants on the top of the Grampians. It is usually a tree.

The flower is pale yellow and is usually in bloom in autumn, although an odd bloom may be found any time during the year. The knotty woody fruit appears when the flower dies and in each knot there are two winged seeds.

2. Banksia marginata

Commonly called Silver Banksia this plant grows widely in Victoria. Growing to about 8 to 10 feet, its leaves are dark above and "silver" (or white) beneath. Flowering from summer to spring, but chiefly in autumn, the plant is a favourite with the honeyeaters. It is easy to grow from cuttings.

3. Banksia ornata

The Desert Banksia is found in the drier areas of the Victorian Mallee. Many birds and mammals feed from its yellow flowers.

The aborigines made an alcoholic drink from the flowers by placing the flowers in water for a few days. One tribe called the plant "Warrick"; hence Warracknabeal in the mallee area.

4. Banksia spinulosa

Growing from 8 to 12 feet high the plant is commonly called the Hairpin Banksia.

The flower spikes vary in colour and can grow to quite a length. Nevertheless, you will easily recognize the 'hairpins'.

5. Banksia serrata

Usually found in poor coastal sandy areas in Eastern Victoria, it is known as the Saw-leaf Banksia. The leaves are boldly serrated.

The flower produces a good deal of nectar which sometimes ferments: thus intoxicating the honeyeaters which come to the plants for food.

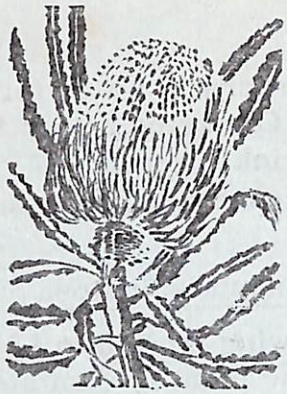
6. Banksia caneii

This is a recently discovered and named species.

oooOOOooo

How many of these plants can you find?

Find some banksia seed and try to grow it. Keep a record.



There are many banksias growing in other states.

This is Banksia prionotes which comes from the north of Perth, in Western Australia. It needs a hot climate and well-drained sandy soil.

*** Visit the Maranoa Gardens at Balwyn. How many Banksias can you find?

ACTIVITIES for you TO TRY

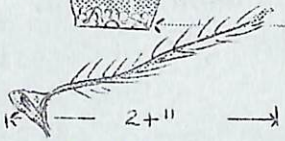
1. Grow a banksia from a cutting:-

Make a pot .....

coarse sand and peat moss (about 50/50).

crock or screenings

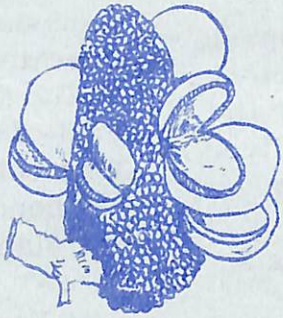
Make a heel cutting ...



**Then carefully remove the lower third of the leaves on the stem. Don't damage the bark, so use a razor blade.

Bury the cutting to the trimmed distance, water well, then place the pot in a spot where there is no wind and midday sun. Keep moist. Soon the cutting will strike.

Good luck!



*2. Make a banksia man:-

Use clay, pipe cleaners, paint and scrap materials to 'make' a banksia-man from the fruit of the tree.

3. The Five dollar note:-

A picture of Joseph Banks is on the back of the $5 note. How many different animals and plants can you name? Why should Banks be chosen to be represented on our money?

4. Find as many places, animals and plants named by or after Banks. (See 'Nature Notes' Vol. 5 No. 1, page 14)