Nature Notes

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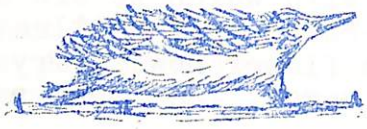

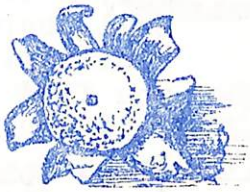

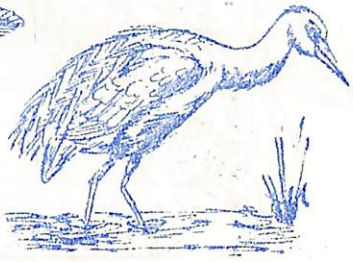

Dear Girls and Boys,

As the Head Teacher of a small country school, I had to organise the removal of a pine tree which had developed a dangerous lean. Next day I received a note from an old farmer in the district who was concerned that this tree might be the first of many to be removed from the school ground. In the note the old man explained that he and his brother had been among the first pupils at the school and that they had planted the two beautiful trees which grew either side of the drive way. These trees had an obvious sentimental value to this man apart from the decorative and useful purpose they served at the school. It seems a pity that it is usually only the first pupils at a school who are given the chance to plant trees in the school ground.

If each child had the chance to plant a tree somewhere and to care for it, I do not think that the acts of vandalism we see in parks and gardens would be so common.

H. TOBIN
District Organizer
V.S.S.H.S.

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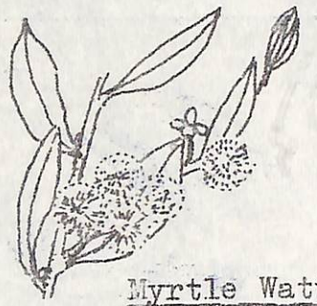
Name _____ Grade _____

Things to Look for



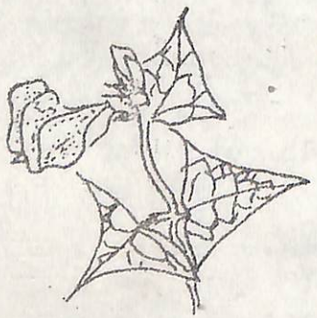
Myrtle Wattle
Acacia myrtifolia.

* September is the month when we expect to find acacias in flower. Myrtle wattle is found over much of Victoria. Usually there are only 2 to 4 flowers to make the ball shape with which we are so familiar. What other wattles can you find in flower now? Try to find their names. (See back page).

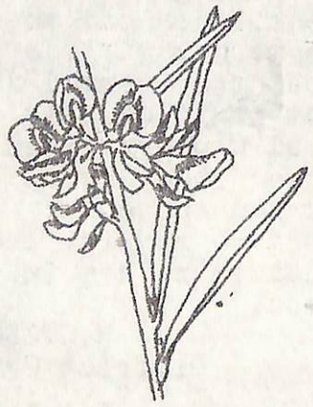
* The Common Flat-pea is very common still on many parts of the bush-land that we may find near Ringwood. It gets its name from the large flat pods which appear in summer.

There are many other plants with pea-shaped flowers. Which ones can you find?

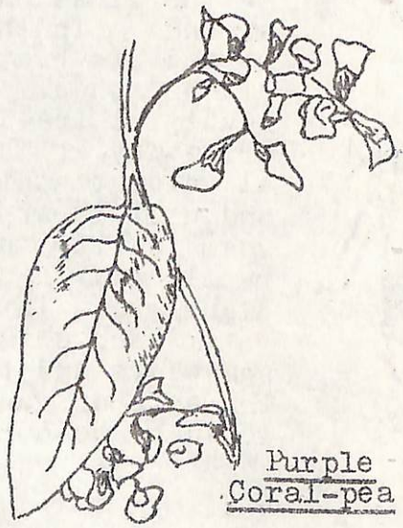
Dillwynia
cinerescens



Common Flat-pea
Platylobium
obtusangulum



Twiggy Bitter-pea
Daviesia virgata



Purple
Coral-pea

Hardenbergia
violacea

September.

* With the coming of spring many insect eggs hatch out and we find many caterpillars and grubs on the leaves and branches of trees.

What is the earliest spring time you have found the gum emperor moth?

Gum-emperor
caterpillar.

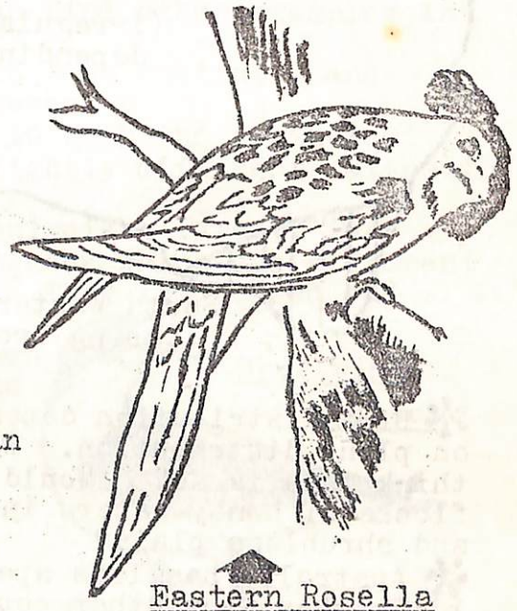
* Have you found these shaped insect eggs on stalks? They could belong to a Lacewing - which is also called a Golden-eye. Can you discover why?

Stalked eggs

Lacewing

* Now is the time to watch the birds in their search for nesting sites. You may be lucky to see some birds actually building.

Sometimes there is a real battle between some birds over the best nesting site. Parrots need to clean out hollows of trees before they begin the laying of eggs.

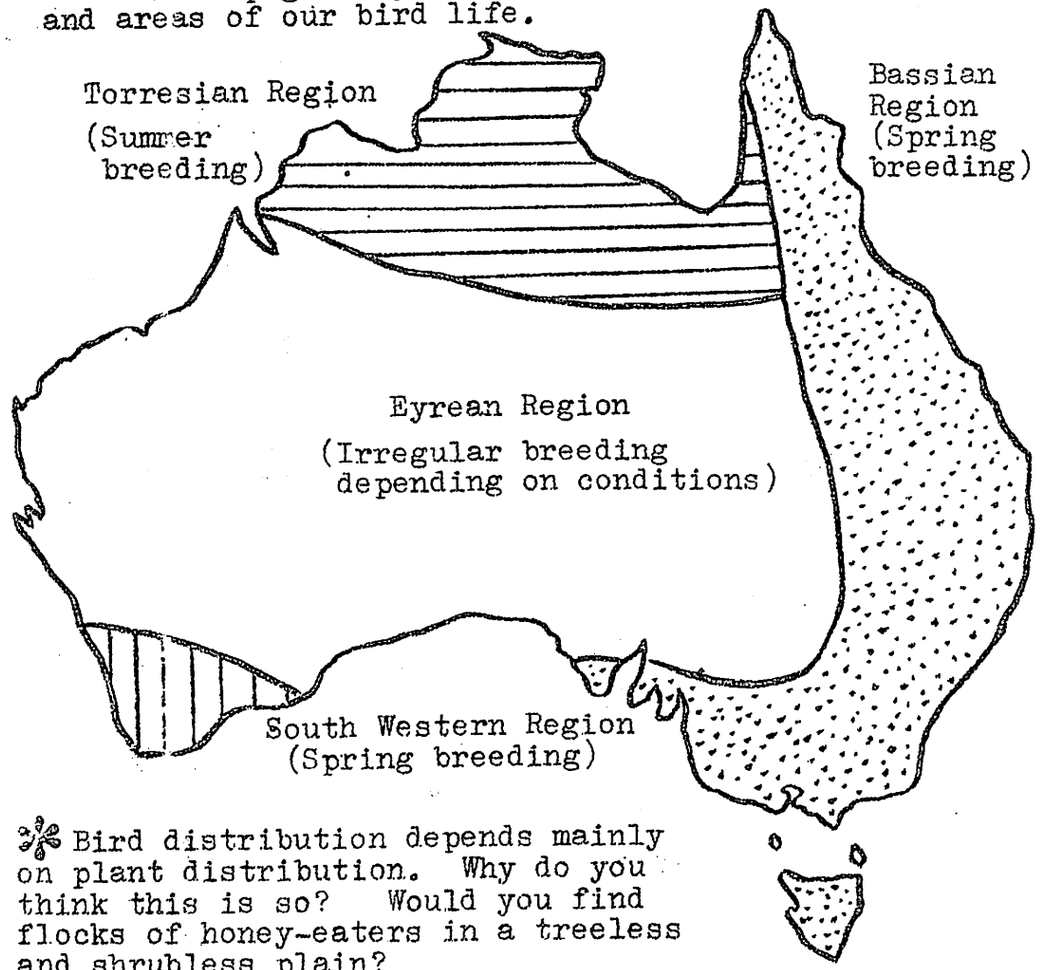


Eastern Rosella

BIRD NOTES

* Did you know that 532 species of birds breed in Australia, although over 600 species are found here?

This map gives you an idea of the breeding seasons and areas of our bird life.



* Bird distribution depends mainly on plant distribution. Why do you think this is so? Would you find flocks of honey-eaters in a treeless and shrubless plain?

* Australia has less species of birds than many other countries, e.g. South America has 2,700

species, while New Guinea has 568. However there is mutual colonizing between New Guinea and Australia. e.g. Spur-wing plover.

66% of Australian birds are sedentary i.e. they stay in the same small area throughout their lives.

8% are north-south migrants.

24% are nomads - These follow water, blossom etc.

Some birds are altitudinal migrants i.e. go up to the mountains in spring and move to plains in autumn.

See if you can name birds belonging to each of these groups.

* Nullabor Plain

The plain was once the bed of an ancient sea and extends for some 600 miles around our Southern coastline and for up to 150 miles inland. Its foundation is mainly soft limestone up to 900 feet thick covered by a thin layer of soil, which is dotted by saltbush and blue bush, which are practically the only plants that will grow on it.

Some birds find this huge plain a barrier while others do not. E.g. zebra finches; nankeen kestrel.

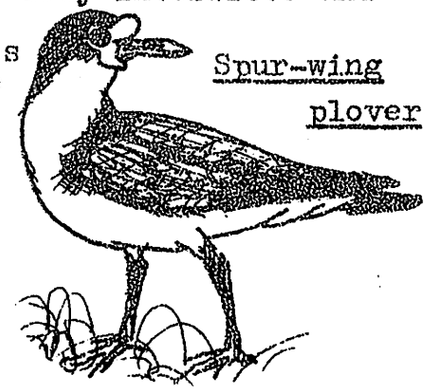
Which of these examples cross the Nullabor and which do not? See if you can find other examples in Cayley's "What Bird is That?"

Some birds appear in South West Australia and Eastern Australia and not between.

Of the birds that appear in both the south-west and eastern areas some are slightly different, although really the same species.

Some examples are the Twentyeight Parrot, Port Lincoln Parrot and Mallee Ringneck which are different members of the same species. They interbreed and have similar habits.

In Victoria our two magpies are known to interbreed in the area of the Great Dividing Range where the two species converge. See what you can discover about birds by observation and research.



Spur-wing plover

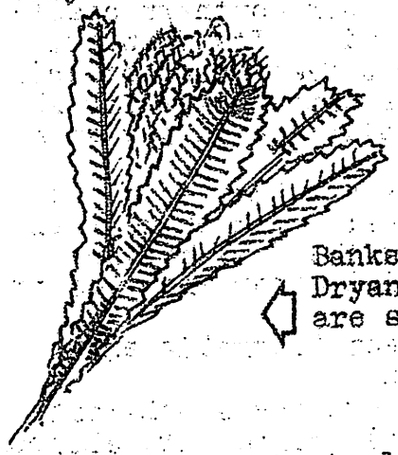
* * *

How Plants Protect

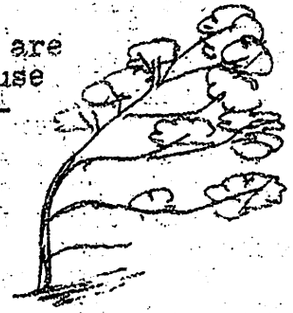
Because plants must stay in the one place there is great need for them to be able to look after themselves.

Against the wind.

If plants, particularly trees are exposed to strong winds they grow more on one side than another. Sometimes because of the drying effect of the winds plants have developed hard stiff leaves which do not move very much.



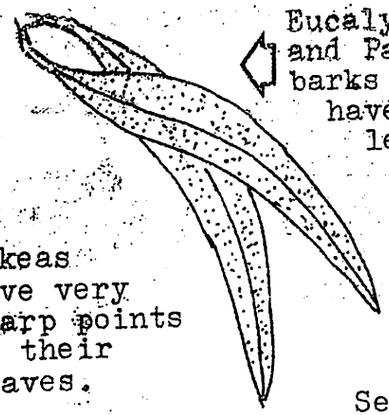
Banksia and Dryandra leaves are stiff and hard.



Some gum trees are bent over because of the prevailing winds.

Protection against plant-eating animals.

Hakeas have very sharp points to their leaves.



Eucalypts and Paper barks often have oily leaves.

Flannel Flowers have furry leaves making them unpleasant for many animals.

Themselves * * * * * * * *

Protection against excessive loss of water.

Because Australia has a great many arid areas, the Australian plants have had to adapt themselves to harsh condtions. Some plants in these areas have a very sshort life, growing after a good rain, flowering and dropping their seed in a matter of weeks, or a few months

Mulga
Acacia aneura

Acacias have changed their leaf-stalks to act like leaves but with fewer holes for moisture to escape. These leaf-like appendages are called phyllodes.

Some Acacias have no leaves or phyllodes at all, except when very young.

Spiny Wattle
Acacia spinescens

The She-okes are a group of plants, able to withstand long periods with little rain. It is fun trying to find the leaves of the Casuarinas. What other plants can you discover that have leaves like these?

Many Gum and Hakea nuts are very woody in these dry areas so that when they drop and are buried it takes many years before the seed is ready to grow. This makes sure that there is always some seed in the soil ready to grow.

Protection against poor light.

Dusky Coral-pea

These areas are usually very wet with many plants trying to reach the light. Some achieve this by growing very tall, others have twining stems to carry the leaves up high, still others grow as parasites across the top of other plants. When next you make an excursion into the garden or the bush, look carefully and try to place the plants in groups like we have done here.

The Food Chain.

Bacteria

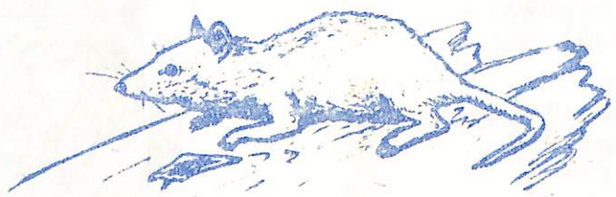
Land plants absorb elements from the soil and use the solar energy of the sun to combine these elements into organic compounds. By eating these plants a herbivore (grasshopper) can make use of the compounds. A carnivore (Antechinus marsupial mouse) which feeds on the grasshopper is now able to make use of these compounds. Likewise a large carnivore (Tiger Cat) which feeds on the marsupial mouse and a scavenger (Wedge-tailed Eagle) which feeds on the Tiger Cat are both making use of the same compounds. On death, the body of the eagle is decomposed by bacteria and the elements return to the soil.

Imagine what happens to the cycle when man eliminates the insectivorous mammals and birds.

If we look at the situation we can say there are no "good" animals and no "bad" - no "useful" and no "useless". Like Man, all creatures live by exploiting natural resources and some inevitably conflict with Man's occupations. Conservation means that there should be a balance between the requirements of all these creatures.

Wedge-tailed Eagle

Grasshopper



Marsupial Mouse

Tiger Cat

LETTER BOX

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

Dear Girls and Boys,

This month our letter box is rather empty, but I hope you will change this next month. Write and tell me about all the wonderful things you saw in your holidays. Spring is a very good season for observing nature so I hope to hear from you soon.

Good Observing,
THE EDITOR. ● ● ● ● ● ● ●

Our first letter comes from David Beggs, Yarra Valley C. of E. School, Ringwood.

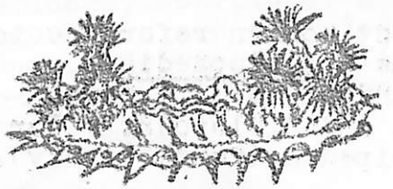
One day when I was climbing a tree I noticed that it was covered in Chinese Junks. When I was nearly at the top of the tree, I noticed an enormous nest. Could the Chinese Junks have any link with the nest?

It had a little hole, about 1½ inches in diameter, in the side and it was about 2 feet high and about 9 inches in width. Quite often two white Doves used to perch outside our house on the telegraph wires. The doves have not come for some time and when I had a look at the nest I found it had been messed up. Could it have been a dove's nest?

ED. First question s first David! From your letter I doubt that there was any link between the nest and the Chinese Junks as you call them. Their correct name is the caterpillar of the cup moth. Not hard to tell why they are called 'cup moth' when you see their cocoon (See next page). These caterpillars

are a great pest in our forests as their main food is the leaves of eucalypts, which often look like a bushfire has been through after these caterpillars have passed. Fortunately for our forests the tree creeper (a little brown bird often seen perching on the tree trunk) is very fond of the pupal stage of the cup moth and the much-maligned raven is very partial to the caterpillar itself. Once I saw a plague of "Chinese Junks" being decimated by huge flocks of ravens. I have never seen so many birds of the same species in the one area before. And what a noise!! - Here again we see "The Balance of Nature".

In answer to your second question, I doubt that the nest was a dove's as their nest is usually a very flimsy affair.



Cup-moth Caterpillar.

The cocoon - like a cup.

Peta Benson, 6B, Ringwood East S.S. writes -

During the holidays I saw two kookaburras flying around. One kept banging into the window. I fed them and they became more tame.

ED. Kookaburras often have this habit of banging into windows. Perhaps they think their reflection is another kookaburra.

Watch out for an article on Kookaburras in a later edition of Nature Notes.

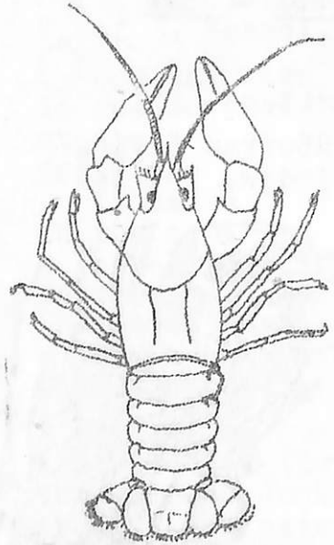
■ ■ ■ ■ ■ ■ "Old Jack"

arthropoda

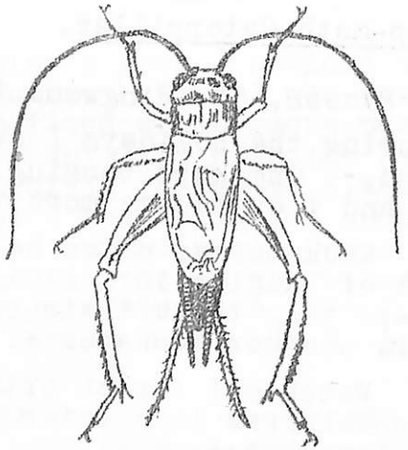
* The animal kingdom is divided into a number of groups, some very small, many similar in size and one extremely large - in fact, larger than all the others put together. This large group is called ARTHROPODA or sometimes, "joint-footed" animals. It is not the only group with animals having jointed feet but it is the only group called Arthropoda.

The question we are going to look at in this article is, "What animals belong to Arthropoda?" To help answer this we shall look at some of the main subdivisions of Arthropoda.

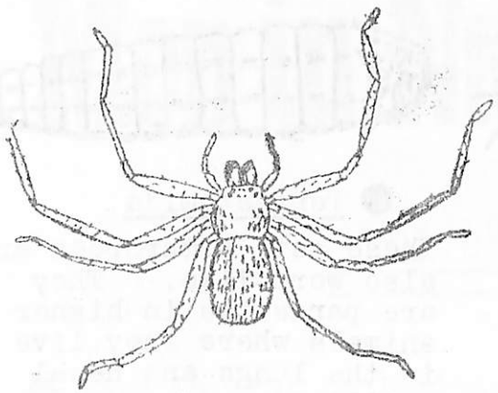
For further information the best common reference to the animals mentioned below is the Encyclopaedia Britannica. Look up Arthropoda and all of the names underlined below except Chilopoda and Diplopoda. For these look up millipedes and centipedes (respectively).



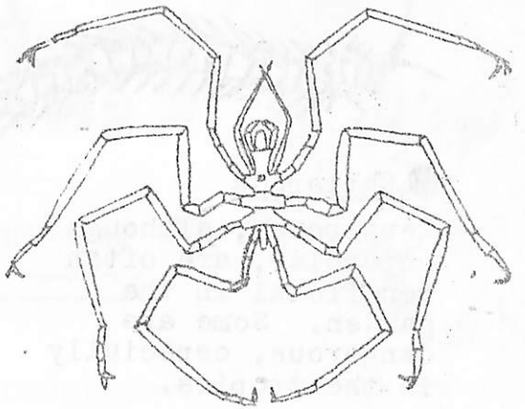
● Crustacea
This includes crabs, yabbies, crayfish, shrimps and slaters.



● Insecta
This largest group of arthropods is important because so many are either friends or enemies of man.

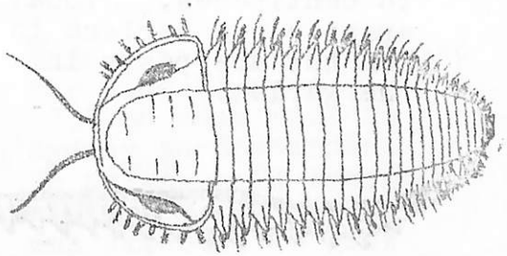


● Arachnida
Spiders, scorpions, mites and ticks are included here. Some are beneficial others are quite dangerous.



● Pycnogonida
Sea spiders are fairly common, living among the seaweed. Our local species are about one inch across.

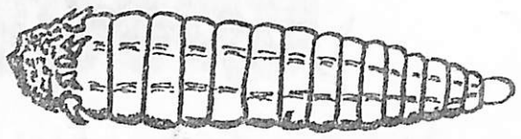
● Xiphosura
King crabs are sometimes included with spiders. They live in shallow waters in some parts of the world, but not in Australia.



● Trilobita
Fossil arthropods which lived in the sea many millions of years ago. Often only a few inches long, some are more than two feet.

● Chilopoda

Centipedes, although unpopular, are often beneficial in the garden. Some are dangerous, especially in the tropics.

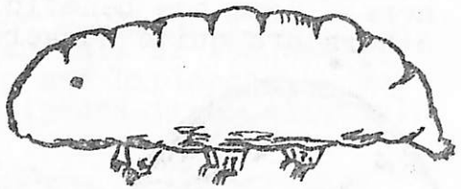


● Pentastomida

These soft arthropods are also worm-like. They are parasites in higher animals where they live in the lungs and nasal cavities.

● Diplopoda

Millipedes are related to centipedes. Local apecies are harless to man but are pests in the garden.



● Tardigrada

Water bears are tiny creatures with soft bodies. They live amongst moss or in water. It is not certain whether they are really arthropods.

● Onychophora

Peripatus is a boderline animal between the worms and arthropods. It is found in damp mountain forests.

Men in Nature

ALLAN CUNNINGHAM

★ Born in 1791 in London, Cunningham began work in a lawyer's office. His chief wish was to be a botanist and after a successful botanical expedition to Brazil he arrived in Australia in 1816.

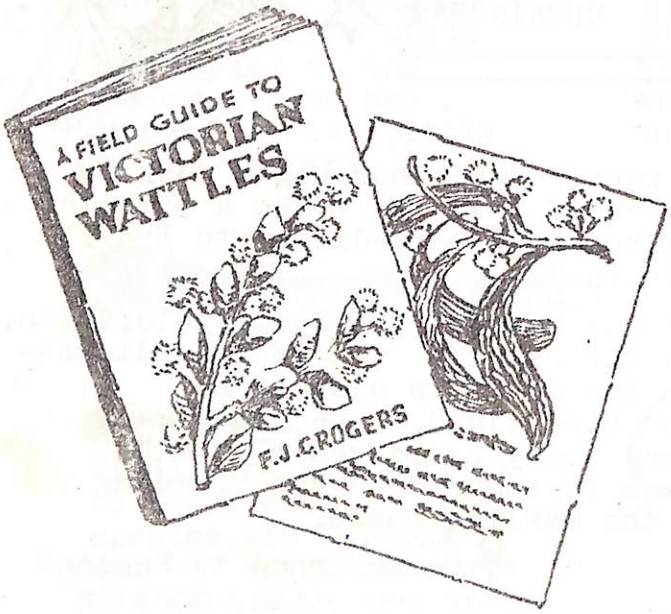
★ Cunningham carried out several trips of exploration, both inland and around our coasts. In 1827 he discovered the Darling Downs and so it is claimed he "fathered" the State of Queensland. He named many rivers and mountains and today he is remembered by Cunningham's Gap, a pass through the Great Dividing Range on the route to the Darling Downs.

★ He returned to England for some time, then in 1837 he came back to Sydney as Government Botanist. He resigned that post because he was expected to grow vegetables. He died in 1839.

Many plants bear his name. Here is one plant which grows in Queensland.

★ Crotolaria Cunninghamii
"Bird Flower"
Grows in moist tropical conditions.

Nature News



Just published, this book will give pupils and teachers an easy reference with beautiful illustrations and clear text on the Victorian Species of Wattles. It fills a long-standing need for an aid to identification of this very large family of trees and shrubs.

Available at all leading booksellers. $1.75.

* * * * * *

ARTICLES IN THIS ISSUE

Answers Vol. 5 No. 5 (Cover) from top to bottom, left to right 1. Darter, 2. Dugong, 3. Dotterel, 4. Dogfish, 5. Tasmanian Devil.

NEXT ISSUE due at Depots on WEDNESDAY 2nd. OCTOBER.