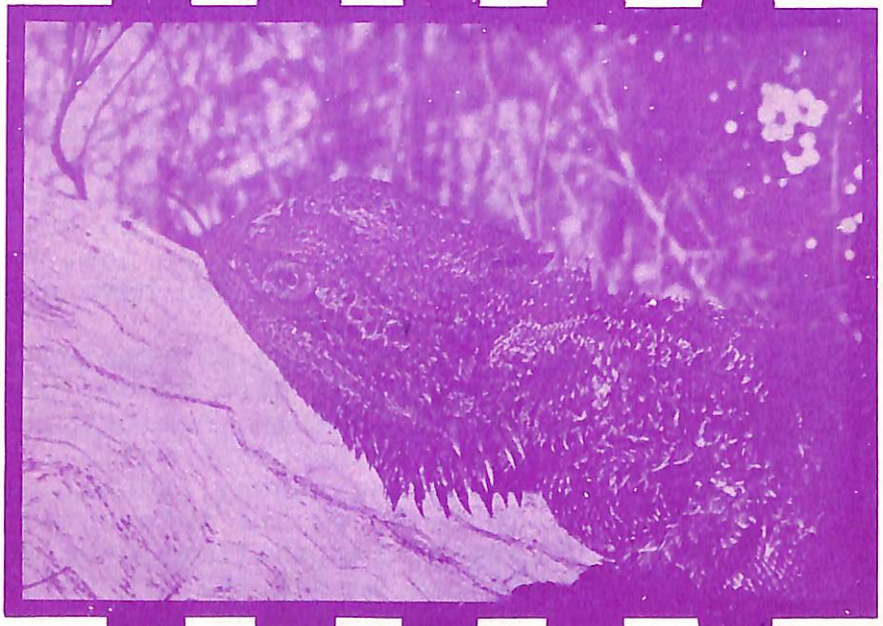
nature notes



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Contents

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Cover Photo:

F. Rogers.

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Drawings:

Mrs. Hensler
Mrs. Sharpin

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Category B.

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Editorial

Dear Girls and Boys,

This month I would like you to think about Nature Notes for 1972. There will be some changes in it, and we hope that by this we will be able to bring to you an even better magazine.

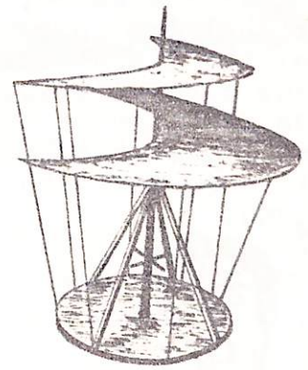
First of all, we want to change the name, and I would like some of your suggestions about this. The reason we are changing the name is that we want the magazine to expand from pure Nature Study to Natural Science. You see, as well as encouraging protection of Australian animals and plants, we want to look at the environment in general. So now, we need a new name. Do you have any suggestions?

We are now interested in everything: bird study, plant classification, ecology, insect life, fauna conservation, movement, energy, school gardens. In fact, we are interested in everything that may come to our notice as our day proceeds. And so, we must find a new name, and it is going to be hard to find one. Please write to us and let us have your ideas.

Best wishes,
I. H. Legg,
Editor.

Flight.

SINCE TIME BEGAN, Man has looked at the birds with envious eyes wondering if he, too, would be able to fly one day.



As you know, success did not come quickly as it is just under three hundred years ago that Leonardo da Vinci was able to design a flying machine using bird wings for models. He was the first person to study the flight of birds scientifically.

BIRDS IN FLIGHT

There are so many observations you can make about our feathered friends; and for the moment here are just a few.

Can you name the birds that belong to each of these groups?

(a) Those that hover and land gently as if parachuting.

(b) Those that dart here and there and maneuver quickly.

(c) Those that glide with long narrow wings.

(d) Those that fly short distances only.

(e) Those that fly in formation.

(f) Those that have short, broad wings for quick take-offs.

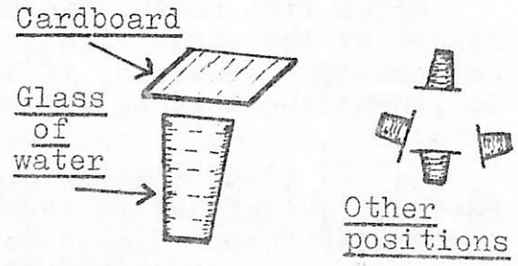
Can you find o t the names of any aeroplanes that have been named after a bird? What is the likeness? Select one and make a sketch of the bird and the plane.

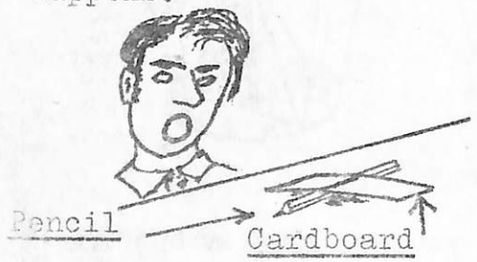
FLIGHT: (Continued)

HOW DO BIRDS FLY? Some experiments for you to try.

1. Obtain a glass of water and a piece of card. When you fill the glass, make sure that the water level is at the rim of it.

Now carefully lift the glass and turn it upside down. Try some other positions. Talk about what happens.



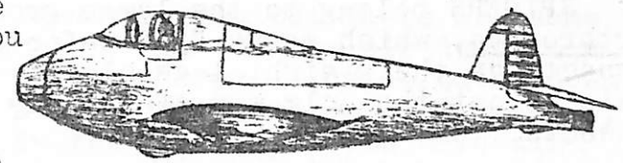


2. For this one you need a strip of cartridge paper and a pencil or ruler. Arrange the paper and pencil as shown. Now take a deep breath and blow over the top of the paper. What happens? Talk about the reason for this.

A Spectacular Landing! Is this bird doing all the things an aeroplane does?

After performing these experiments and talking about them in class, you are well on the way to explaining how birds and aeroplanes fly.

And now, here are some talking points that you can use in classroom discussions:



The First British Jet-plane

Are chickens born with wings or do they grow later?

Can hens fly?

Why don't they fly out of the fowl yard?

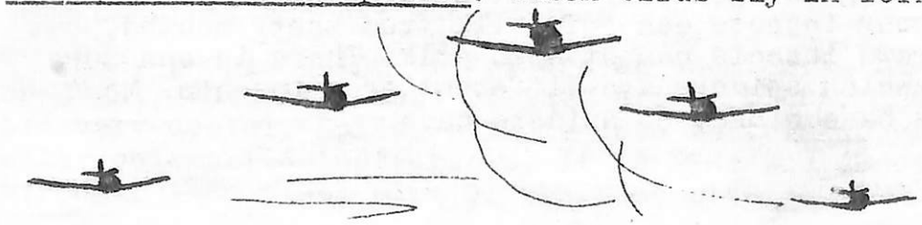
We know that birds flap their wings up and down. But what happens on the upstroke and on the downstroke?

* * * * * * * *

Ed. Did you know you can have a lot of fun using your old toy cars and a balloon? You will also need some Sellotape and a paper clip. Be sure that the car wheels move very easily. Blow up the balloon. Put the paper clip on the balloon stem. You see this will hold the air inside the balloon until you are ready to use it as power.

Now if you use Sellotape to fix the balloon to the car you are ready to go. Would you say that this is using the idea of jet-power or rocket-power? You might like to try it on a toy boat in your bath or swimming pool.

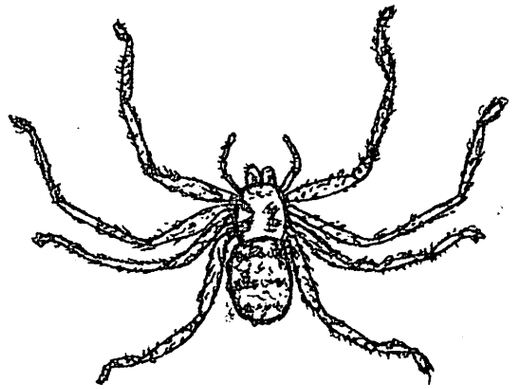
A Formation of Aeroplanes. Which birds fly in formation?



Spiders

SPIDERS belong to the large group of phylum Arthropoda, which means "joint-footed". They are not insects as their eight legs clearly show. Of course, this is not the only way of telling spiders from insects.

A spider's body is divided into two parts, 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.



Huntsman spider
Sometimes mistakenly called "Tarantula".
Family: Sparrasidae

They are not considered dangerous to man, but a large one could probably give a painful bite. They are mainly found on large tree-trunks.

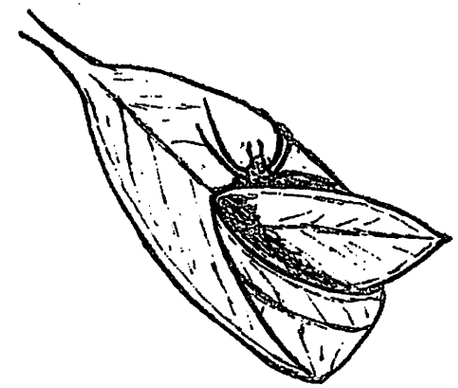
At each side of a spider's small mouth there is a poison fang. At each side too, there is a small "feeler-leg" or pedipalp. Most spiders have spinnerets. Many young insects can spin silk from their mouths, but full-grown insects cannot spin silk. There is one more way in which spiders are different from 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 in 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 babies inside the egg case. At times, little spiders turn cannibal and eat one another.



Leaf-spider and its home.
Family: Phonognatha

When you find one in the garden, notice how it cleverly combines the Wheel Web with a disguised shelter for the spider at the centre.

Curling and binding the leaf with silk forms a narrow tubular hiding place.

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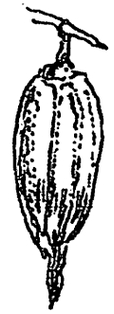
Many people think of spiders as enemies to be killed on sight. Actually, most of them are harmless, and some are very useful. Spider silk is used in telescopes and other scientific instruments. It is fine and smooth and stronger than steel wire of the same size.

Things to Look For

Which of these case-moths have you found lately?

Saunders

Lictor



Ribbed

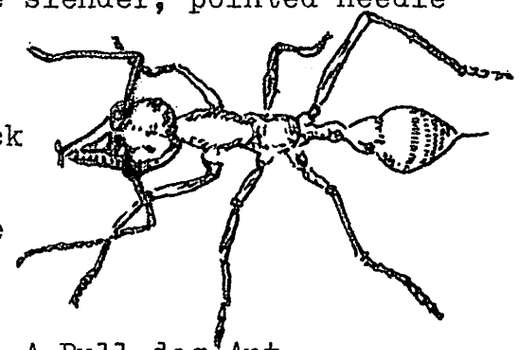
Huebner's or Leaf

A bull-dog ant often finds us before we find it. It lives in a nest in the ground. The nest is often built at the base of a tree-trunk.

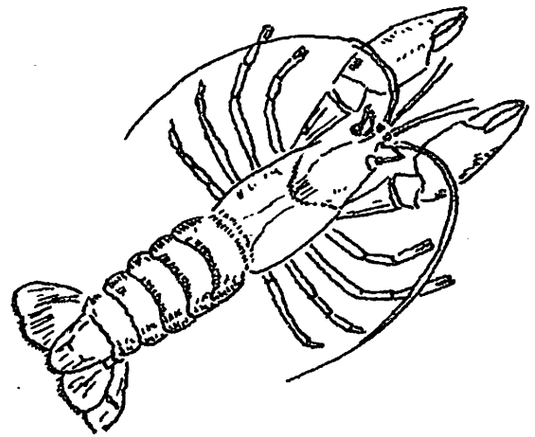
Did you know that the Australian Bull-dog Ants are among the most primitive of the world's ants? You see they are closely related to species which we have found as fossils.

Bull-dog ants don't bite, they sting. The sting is in the end of the abdomen. The slender, pointed needle of the sting is connected to a gland in the abdomen which secretes formic acid.

Do not be misled by a black and yellow ant about half an inch long. You will notice that this one can jump - hence its name: Jumping-Jack. These are fierce ants, and their sting is very painful.



A Bull-dog Ant.



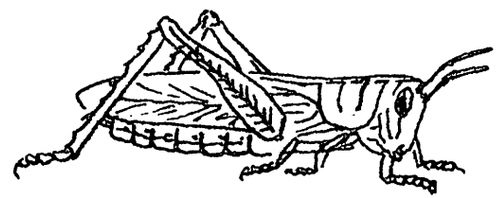
The Common Freshwater Crayfish

When you are exploring the ground for wildlife in the paddocks or the bush, you may come across a hole in the ground with a heap of earth around it.

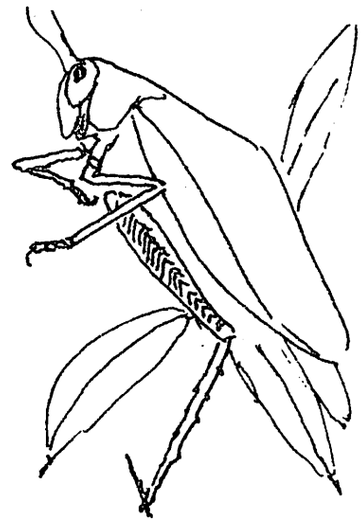
If the hole happens to be near some running or standing fresh water, or just happens to be in a low-lying wet place, the chances are it is the home of a fresh-water crayfish or yabbie.

Actually, as long as the gills are kept moist, these animals can travel long distances to new dam sites.

GRASSHOPPERS or LOCUSTS are in the news. Which areas of Australia are being affected by them?
If you look closely at a grasshopper you can learn a lot about insects in general, because they are large and easy to handle.
You may care to investigate what effects the large-scale poisoning of grasshoppers has on wildlife: for example, on the Ibis.



Common Grasshopper



The Katydid or Gum-leaf Grasshopper is often hard to find because of his good camouflage.

On Tour.

Here is some more news from Mr. Delacca on his tour of Eastern Australia:

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MOST VICTORIAN GIRLS AND BOYS will, I suspect, not have heard of the Warrumbungles. Neither had I until a few months ago. On hearing this strange name, such was the fascination of it that I determined to have a close look on my holiday trip.

The Warrumbungle Range is a knot of strange spires, domes, mesas left behind as a great pile of debris from some fairly "recent" (13 million years ago) volcanic eruption. It is situated just west from Coonabarabran in North-central New South Wales. 'Warrumbungle' is an Aboriginal word meaning 'Land of Twisted Mountains'. How true! And what a unique mountain range we found it!

The highest peaks reach 4,000 feet and several of them have fascinating names like: The Breadknife, Belougery Spire and Bluff Mountain; these rise stark and vertical for thousands of feet. Our favourite was The Breadknife.

During the Volcanic Era, a huge crack in the region was plugged with a hard rock called trachyte. The surrounding softer rock has been worn away, leaving a high, long and very narrow knife-edge of exposed rock: hence its name.

But enough of the mountains, my words cannot do them justice; you will have to come and see them for yourself.

What else can you expect to see when you come to this area? While tramping round the National Park we saw new (to us anyway) native animals and plants. Alongside the old friends in kangaroos and wallabies we saw feeding at close range the black wallaroo - the "kangaroo with a white apron".

Black Wallaroo

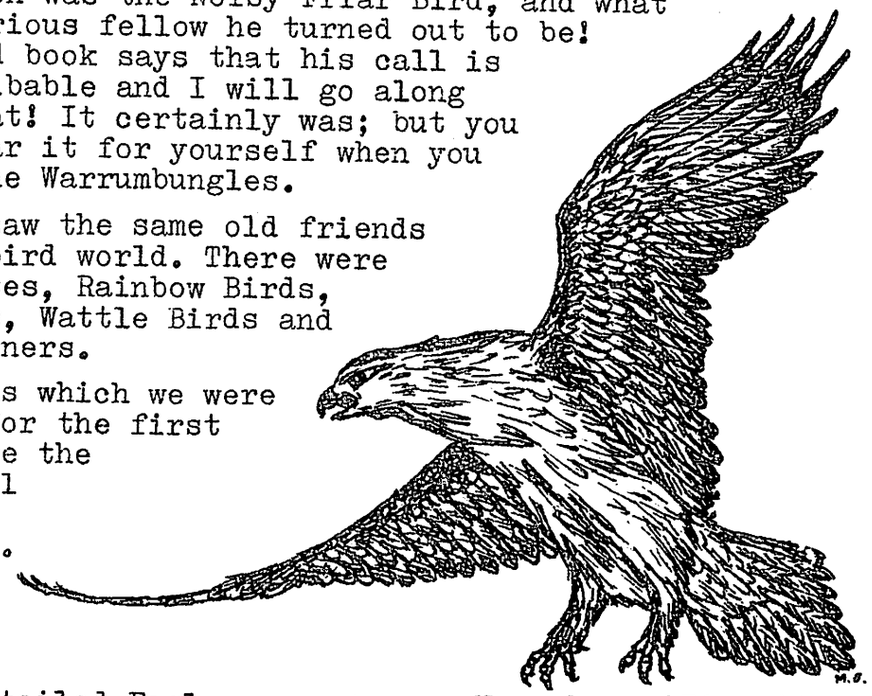
SOARING MAJESTICALLY overhead were many wedge-tails. We were fortunate enough to see one, in a sudden-death swoop, snatch up a well grown rabbit.

Other birds of prey were the Pied Butcher Birds and many Hawks and Kestrels. While we were hiking high in the ranges young Sue noticed that we were being followed - by a pair of cheeky Currawongs no less! We quickly tumbled to their plan and soon Sue and Paul were feeding them by hand with pieces of our biscuit supply.

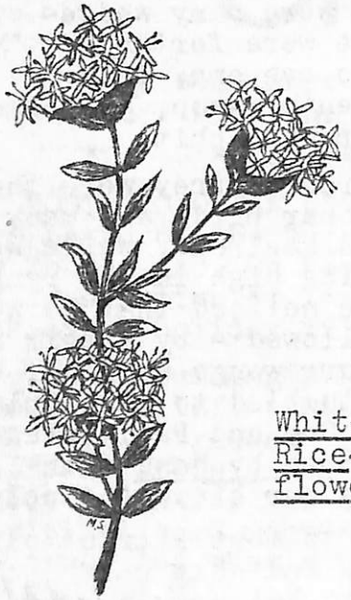
The bird to most attract our attention was the Noisy Friar Bird, and what an hilarious fellow he turned out to be! The good book says that his call is indescribable and I will go along with that! It certainly was; but you will hear it for yourself when you visit the Warrumbungles.

We saw the same old friends in the bird world. There were Pardalotes, Rainbow Birds, Mudlarks, Wattle Birds and Noisy Miners.

Birds which we were seeing for the first time were the beautiful Rainbow Lorikeet.



Wedge-tailed Eagle



White Rice-flower

Kestrel

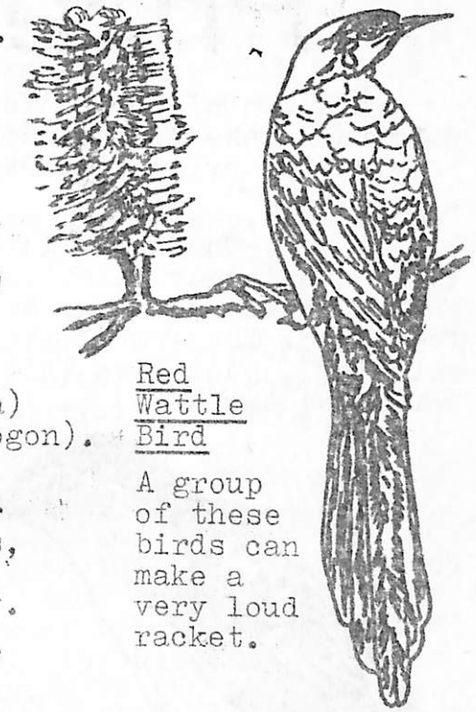
The Rainbow Lorikeet we were to see again at Currumbin, where they may be fed. And of course we saw the Orange-winged Sitellas.

Let us not forget the reptiles and plants. There seemed to be a lizard on every rock in the sun, and another lizard underneath every one. The one which fascinated us most was the Barking Gecko. He was not amused at being disturbed and let us know in no uncertain manner with his strange "barking".

Noisy Friar Bird

Of course, there were also many bearded dragons and skinks to be seen. Although Geckoes appear to be delicate and fragile, they are tough enough to survive in Australia's deserts.

Lastly, I would like to say something about the flora. Being springtime, the hills and valleys were a blaze of colour. We saw the yellow of the wattle with the prickly armata and the smoky-leaved cultriformis well to the fore. Other plants we found were: the sarsparilla (Hardenbergia) with its brilliant purple, the Eggs and Bacon (Daviesia and Dillwynnia), the white Rice Flower (Pimelia) and the Bearded Heath (Leucopogon).



Red Wattle Bird

A group of these birds can make a very loud racket.

These and many other species we found growing under the Mugga Ironbark, Bloodwoods, Casuarinas and Snowgums. All these with the unique Blackboy.

So girls and boys, for the most exciting holiday ever, take Mum and Dad to the Warrumbungles next springtime. If you do, you will hate leaving to come home, just as we did.

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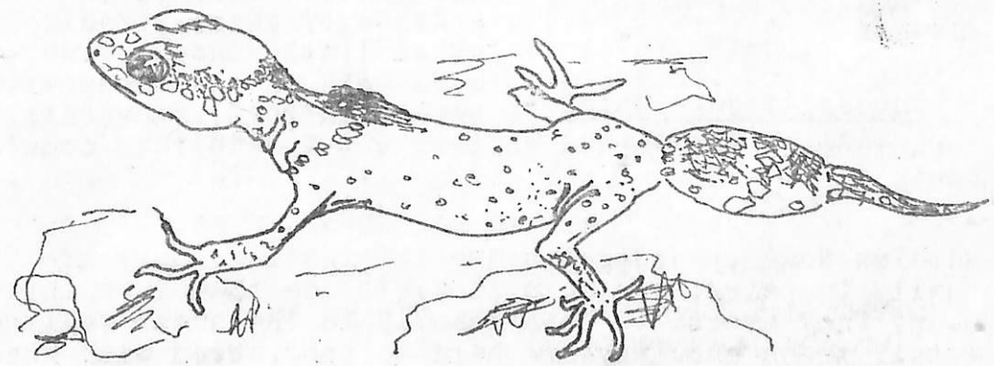
The Barking Gecko

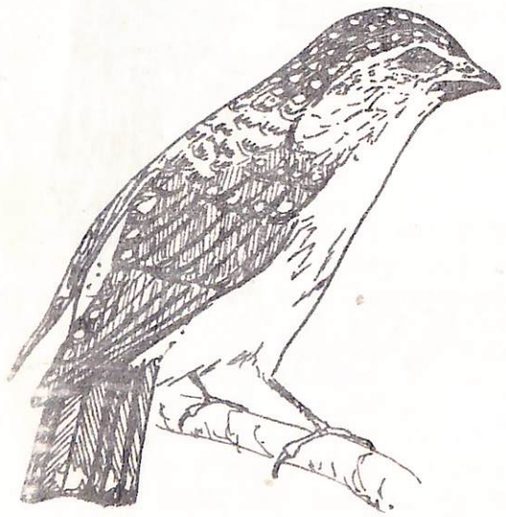


Prize Letter

This month's prize letter goes to Susan Delacca of Blackburn Lake Primary School. Very soon she will receive her prize of a Periwinkle Nature book.

Dear Editor,

On Sunday lots and lots of new birds came to the next-door neighbour's trees. At first I thought they were honeyeaters. Mummy crept up to about 3 feet from them. They were making a peculiar sound of "click-clicking", just like knitting needles. We heard them before we saw them.



The Spotted Pardalote

The birds were very tiny, and when we got our binoculars we could see that they were mainly grey in colour with a bright yellow stripe on the side of their heads. They also had black and white spots on the head and wings. They had a yellowish-orange chin and breast.

In the bird book we found that they were pardalotes or diamond birds. We saw some of these up in the Little Desert a few years ago. These birds were after little insects and were only in the trees with borers in them. I haven't seen them in the garden before, but I hope they come again.

* * * * * * * *

Ed. Yes Susan, pardalotes are interesting. They are usually in pairs; you were lucky to see them in a large group. They are to be seen usually in the outer foliage of tall trees and they are hard to spot, even with good binoculars. These birds are useful to man. They enjoy a varied diet of insects such as scale-insects, thrips, lerps, spiders and moths. Pardalotes seem to prefer to be sealed in from the weather when they are in their nests. They will excavate a tunnel in a soft bank and place a nest of bark-fibres at the end of it. Or the nest may be a dome-shaped construction set very high in the fork of a tree.

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CROSSWORD CLUES:

Across.

1. Cayley returned to England with a vast collection of ..... of birds from Australia. 8. Pollinating insect. 9. Thus. 10. Hard-stoned fruit yielding oil. 11. Deciduous tree. 13. Old English (init.). 15. Reptiles. 18. That is (abbrev.). 19. Evening. 20. Pronoun. 22. South Australia. 23. Preposition. 25. Relieve from pain. 26. Part of the diet of the Ring-tail Possum. 28. The whole amount. 30. Plant which grows from a corm. 34. Incline head. 35. Titles. 36. Preposition. 37. Indefinite article. 38. Protective colouring. 42. Street (abbrev.). 43. Celestial body. 44. Oily substance from animals.

Down.

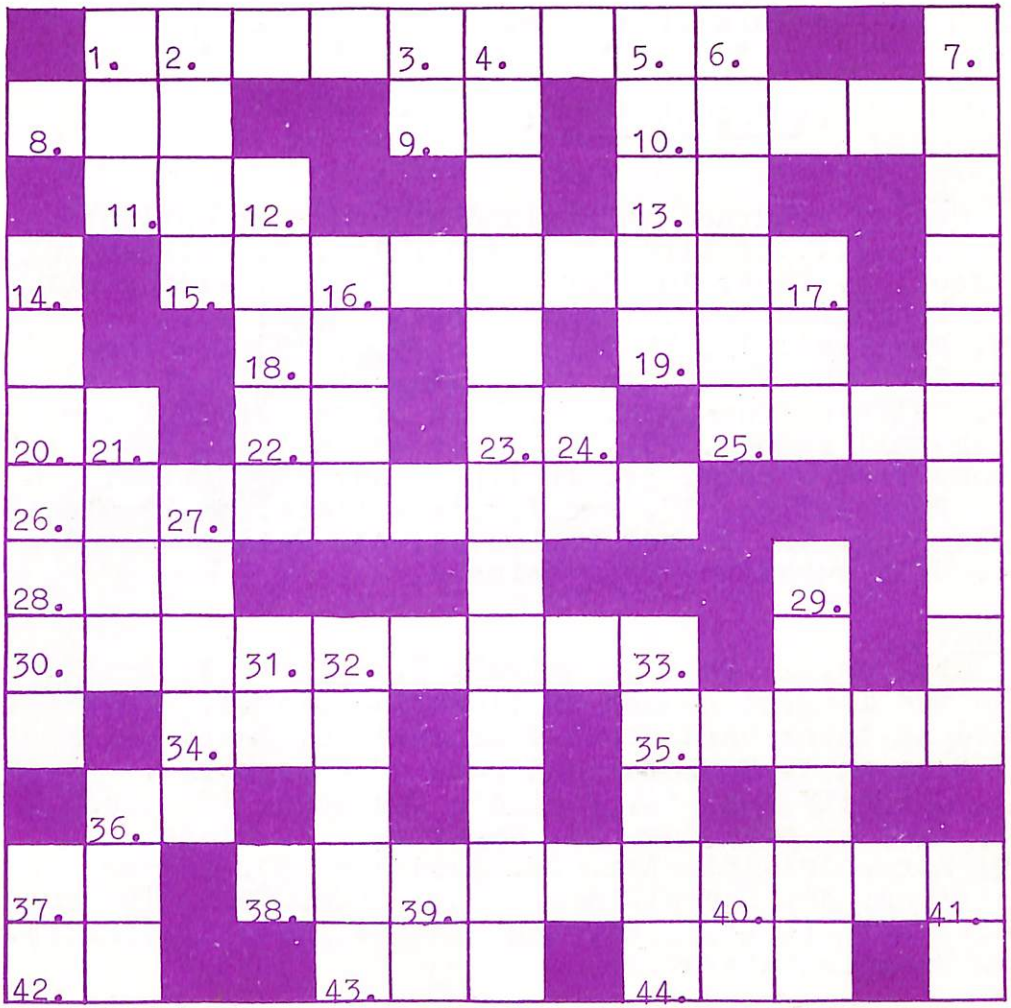
1. Observe. 2. Skin of animal. 3. Exists. 4. Smaller of the two largest groups of flowering plants. (You will need to think hard about this one!) 5. Snare. 6. Part of a garment. 7. Botanical name of paperbarks. 12. Slightly wet. 14. A bird's feathers. 17. Ocean. 21. Part of a window. 24. Negative. 27. Slope. 29. Marsupial. 31. Act. 32. Thoughts. 33. Powder for sniffing. 36. Social insect. 37. Like. 39. Melbourne University (init.). 40. Legislative Assembly (init.). 41. Example (abbrev.).

Crossword compiled by:

Meryl and Hartley Tobin.

Ed. This crossword should keep you busy for a while; if you can solve it within an hour, you are a real Nature expert!

Crossword.



The clues for this crossword are on page 15.