

The Wonderland of Nature

**Writing and Drawings by
Nuri Mass, MA**



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Editors: M. Taylor and M. Morrow

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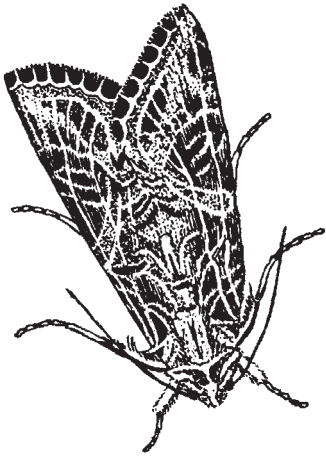
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Designed and Produced in Australia
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To
dearest Gray,
with all our love —

Jess

Chris

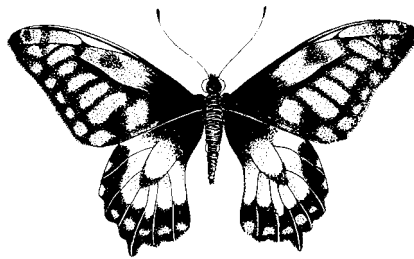
auri

Long ago, a little girl named Alice fell asleep — and, in her magical dream, she walked through a looking-glass into Wonderland. Today, we know that Wonderland is all around us every moment of our lives, and that we can pass into it, wide awake, whenever we like — through a magnifying glass.

Editors Note:

We believe “The Wonderland of Nature” is an Australian children's classic. Nuri Mass broke new ground by showing the wonders of Australian (rather than British or American) plants, insects, and small sea creatures to Australian children. She used story telling and humour to make scientific concepts enjoyable and understandable for children. She won a commendation from the Children's Book Council of Australia.

“The Wonderland of Nature” was first published in 1964. This new edition is true to the original version, except with updated measurements to metric. For updated scientific information on the topics covered in “The Wonderland of Nature”, see the web links in the companion CD “The Wonderland of Nature Journal”.



Other material by Downunder Literature includes:

The Wonderland of Nature Journal CD

A complimentary Nature Study notebook on a PDF; this includes journal pages with illustrations by Nuri Mass to colour and label. Page references to The Wonderland of Nature. Areas for writing, drawing and recording field observations. Nature study suggestions, and links to related websites. Home and School editions available.

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Before we begin, I should like you to meet . . .



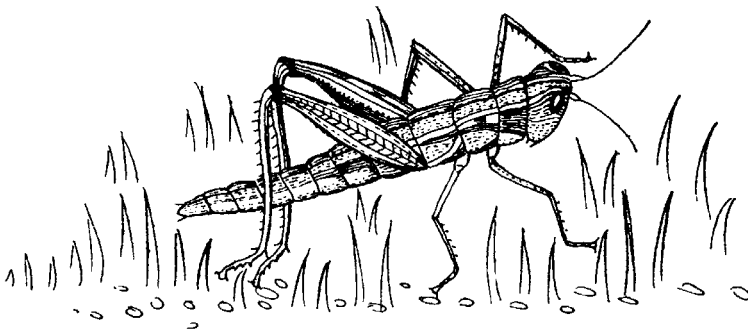
CHRIS and TESS . . .

who have explored the Wonderland of Nature with me,
and found new treasures in it day by day.

They have enjoyed every exciting moment of it. They
have searched, and observed, and asked all of the
questions that most other children would ask.

In short, I couldn't have done without them in the
writing of this book.

Insects

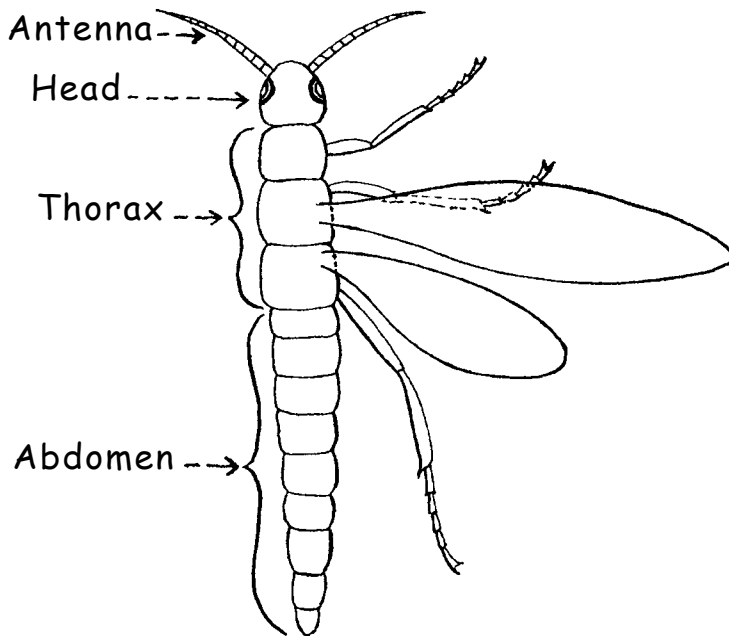


What Makes an Insect an Insect?

IT is possible that there are more insects on this Earth than all the other animals put together, so we really should know something about them, shouldn't we? And the first thing to know is, what makes them insects instead of something else?

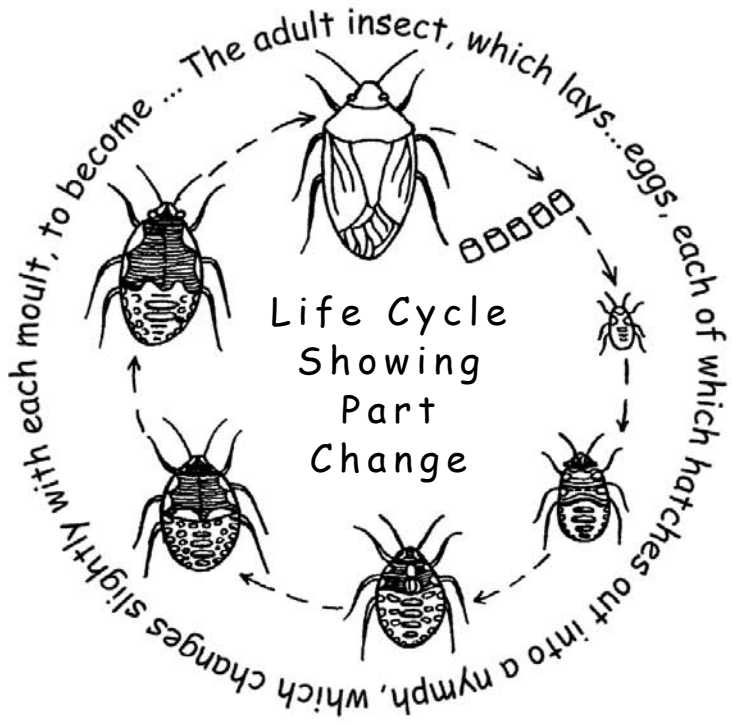
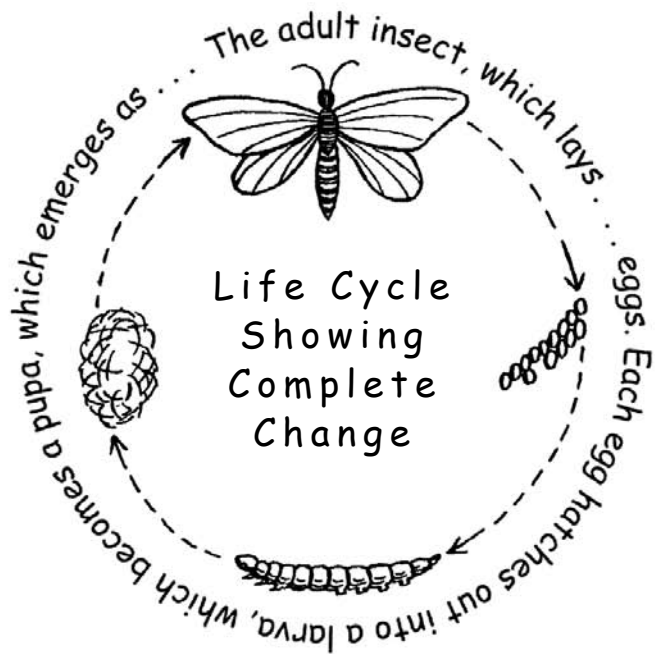
First, an insect always has six legs.

Next, an insect's body has three parts to it — head, chest (or thorax) and abdomen. Mostly these three parts show out quite clearly, but sometimes there doesn't seem to be much difference between them at all.



Next, an insect has two feelers (or antennae) on its head — very sensitive, like the antenna of your TV set. Also, most insects have wings at some stage during their life histories. These are always attached to the thorax — the same as the legs. Mostly there are four wings, but the large fly family have only two.

Some groups of insects have wings that are smooth, papery and transparent, with lovely patterns of veins showing clearly.



But the wings of moths and butterflies are covered with tiny scales, and sometimes they have soft silky hairs on them, too.

Then, there is something funny about an insect's skin. Even though it may seem to be soft, it isn't. It is quite hard, and cannot grow as the animal inside it does. So of course, there keeps coming a time when it is too small. Then it splits open, and the insect wedges out of it, in a new, larger skin. This is called moulting, and insects moult their skins quite a number of times before they are fully grown.

Another thing about an insect's growth is that it often brings about great changes — and all of these, taken together, are called its life cycle. Insects like moths, butterflies and beetles change completely during their lives. They start off as eggs. Each of these hatches out into a caterpillar (which is called the larva). When the caterpillar has had enough to eat, it folds itself away out of sight and nobody sees what it is up to for a while. Sometimes it makes a little case for itself, called a cocoon or chrysalis — other times it just curls up under the ground somewhere, without any covering — and at this stage, it is called a pupa.

A pupa does not eat, and many people think that it is resting. Well it is, too, in a way, but *while* it rests, Nature is busy making great changes in it, so that when it wakens again at last, and comes out into the open, it is a moth, butterfly, beetle, fly, wasp, or some such, which lays eggs to begin the life cycle all over again.

But insects do not always change completely in this way. Some — like bugs, mantids and grasshoppers — change only partly. Again, they start off as eggs, but out of each egg that hatches comes a tiny creature that looks *rather* like what it will be when it grows up. As it grows and moults, it often changes the colour or pattern of its skin, until at last it is full grown — and all the time it is doing this, it is called a nymph.

Then of course, there are a few insects, like the silverfish, that do not change at all. They come out of their eggs as tiny versions of what they will be like when they are grown up. Look at a baby silverfish under a magnifying glass, and you will see a grown-up silverfish.

Now, if you read on, you will learn about some of the insects that you meet most often in bush and gardens.

Ladybird, Ladybird, Don't Fly Away!

WHEN Chris and Tess first saw a certain kind of little grub running around on a plant covered with aphids, and stopping to eat a few now and then, they didn't think for a moment that it had anything to do with ladybirds.

But then, on the back of a leaf, they found another of these grubs, looking the same as the first one, but behaving differently. Its little brown-and-orange body was bent over into a hoop, and it was so still that it reminded us of caterpillars when they turn into pupae. And that's exactly what was happening — it was becoming a pupa.

We decided to watch this one, and see what would happen.

Soon it had become a perfect little dome, with dark spots arranged in a pretty pattern — and so it remained for a few days quite still, on the back of its leaf.

Then, one morning, its outer skin broke open, and out walked a very shiny, pale-yellow ladybird, with no markings at all. But gradually its colour changed to bright orange, and the tiny black patches appeared that we all know so well.

Chris touched it gently, and it rose up in a little flight, showing the pretty gauzy wings that lay protected underneath its black-and-orange ones. It didn't go far, though, because — the same as the little grub that it used to be — it was very interested in a branch covered with aphids. So it soon came back and got really busy amongst them, for an aphid is a ladybird's favourite dish.

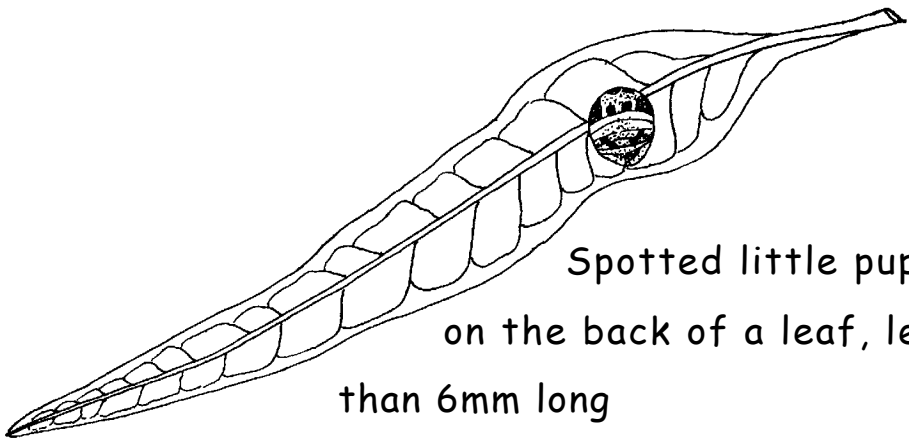
People often destroy ladybirds, thinking that they are eating their plants — but in reality, they are one of the best friends a garden could have. Only one of their many different kinds is a plant eater — the one with twenty-eight spots on its back. The others eat only those bad little creatures known as “blight”, which ruin plants by swarming all over them and sucking out their juices.

So, instead of reciting that old rhyme, “Ladybird, ladybird, fly away home, Your house is on fire and your children are gone,” we should sing,

Ladybird, ladybird, don't fly away!
Our plants need a friend, and would like you to stay.
And *we* like you, too, with your colours so bright.
Welcome, dear ladybird — gay little mite!



Greedy little aphid -
eater, dark brown and orange,
and less than 12mm long



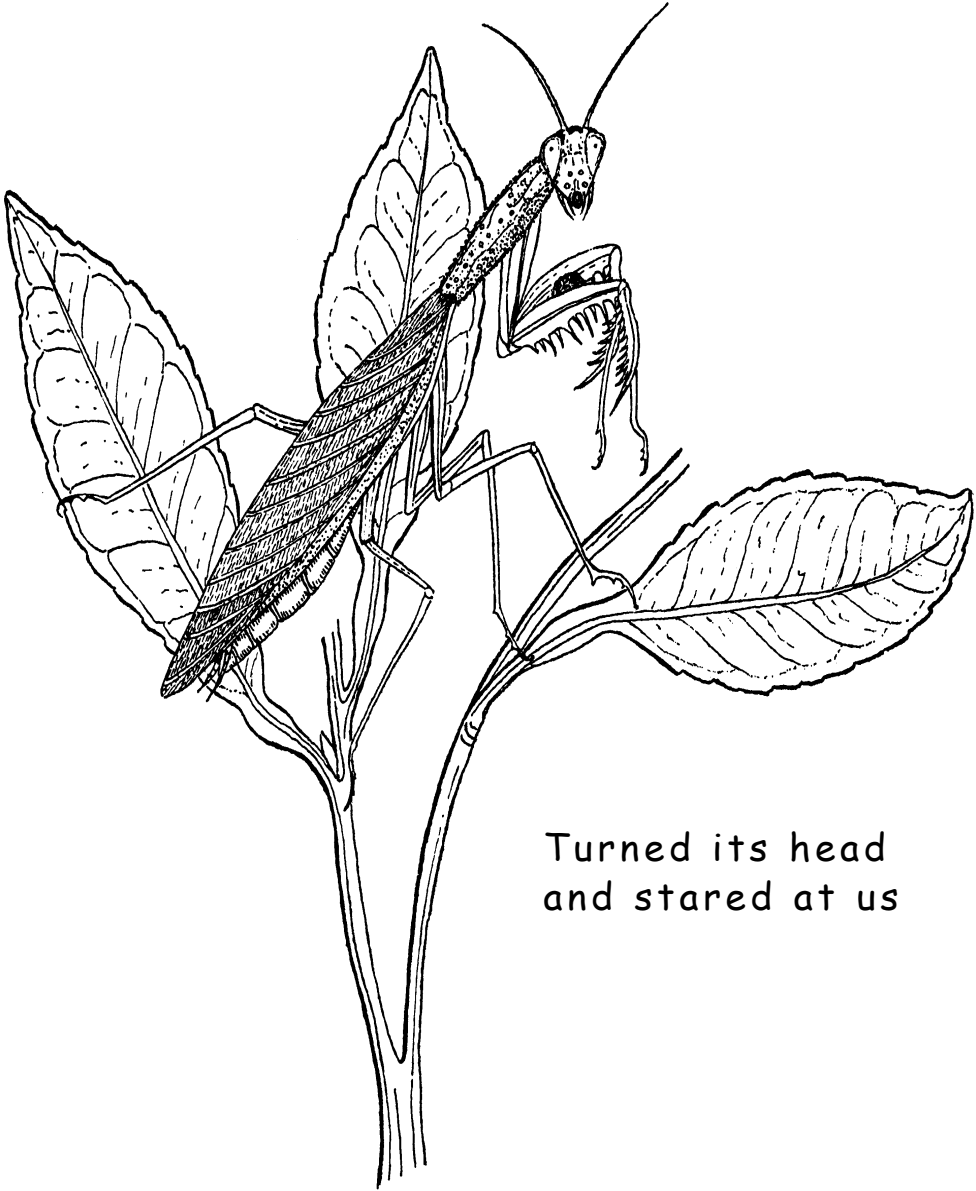
Spotted little pupa
on the back of a leaf, less
than 6mm long



A few hours after it emerged
from its pupal "sleep" — flame-
coloured, with black marks



A little "visitor"—
yellow and black



Turned its head
and stared at us