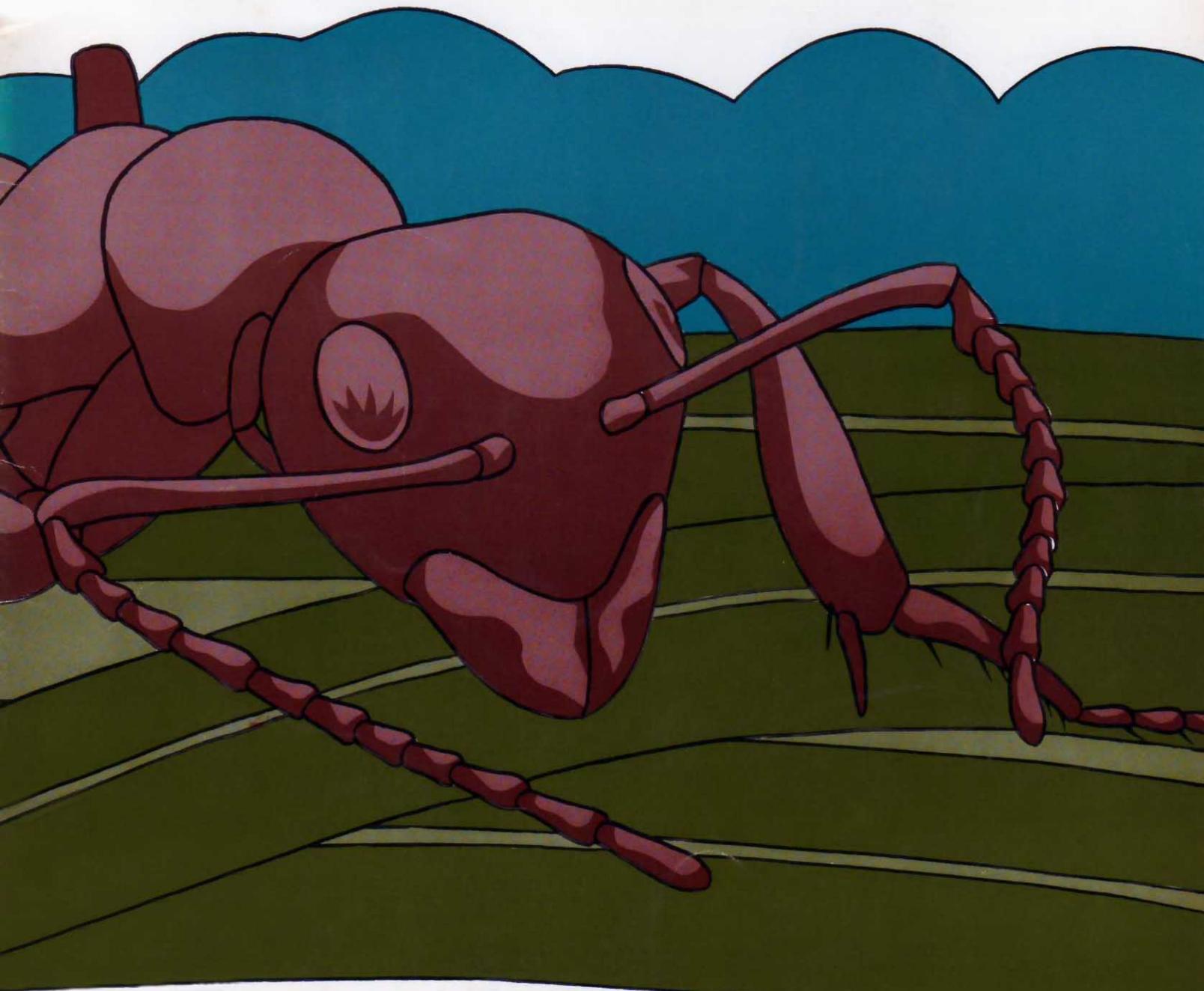


ROM

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EDU-COLOUR BOOK 702

INSECTS



Drawings by Julian Mulock

Insects hop, crawl, buzz, and flutter their way through our world every day, yet we seldom notice them. Some are pretty small, it's true — among the tiniest animals we can see with the naked eye. But some of them are bigger than you think. For instance, the common North American silk moths have wingspans of 10–15 cm (3.9–5.9 in.), the Giant Water Bug is about 6 cm (2.4 in.) long, and some praying mantises are up to 8 cm (3.2 in.) long. Even larger species live in tropical countries. And some insects, especially butterflies and beetles, are among the most beautiful and brightly coloured animals in the world. If you haven't noticed them yet, you're missing something.

Insects have been around on earth about 350 million years, much longer than humans. There were already lots of kinds of insects flying, swimming, and burrowing along when the dinosaurs arrived on the scene. Not only did insects outlast the dinosaurs, but there seem to be more kinds of them alive today than ever before. Over 3/4 million species of insects are known to science, at least three times as many as of all the other kinds of animals put together. And that's not all — scientists think that there may still be a million new kinds of insects left to discover in less well-explored parts of the world. The age we live in might truly be called "The Age of the Insects".

How can you start watching insects? Well, you shouldn't have far to go. Insects live in your back yard and in the nearest park or vacant lot. They are even more abundant in the fields, woodlands, streams, and lakes of the countryside. You'll see them feeding on flowers, munching on leaves, hiding under stones, tunnelling through the soil, and dancing over the water, each species with its own special and important place in the natural world. Insects serve as food for fish, birds, amphibians, mammals, and lots of other kinds of animals. They eat vegetation, converting it into high-energy animal food, they parasitize each other, and they serve as homes for a host of smaller creatures. Insects convert dead plants and animals back into the essential nutrients of life, and they till the soil, keeping it suitable for plant growth. In fact, it is hard to imagine how the rest of the living world could survive if suddenly the insects were prevented from doing their many important tasks in the environment.

Next time you see a butterfly, a grasshopper, or a beetle, think about this. That insect has a fascinating life of its own. And it just might be one of the most interesting and important kinds of animals in your life too.

David Barr

Insects are pictured in this book in the approximate order of their evolutionary history. The Latin names consist of Order and Family designations only.

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100 Queen's Park, Toronto, Ontario, Canada M5S 2C6

ISBN 0-88854-204-6

Printed and bound in Canada by the Alger Press Limited
Reprinted 1979

ROM Edu-Colour Books are distributed in the U.S.A. by

Pendragon House, Inc.

2595 East Bayshore Road, Palo Alto, California 94303

and

Pendragon House of Connecticut, Inc.

P.O. Box 255, Old Mystic, Connecticut 06372

and in the United Kingdom by

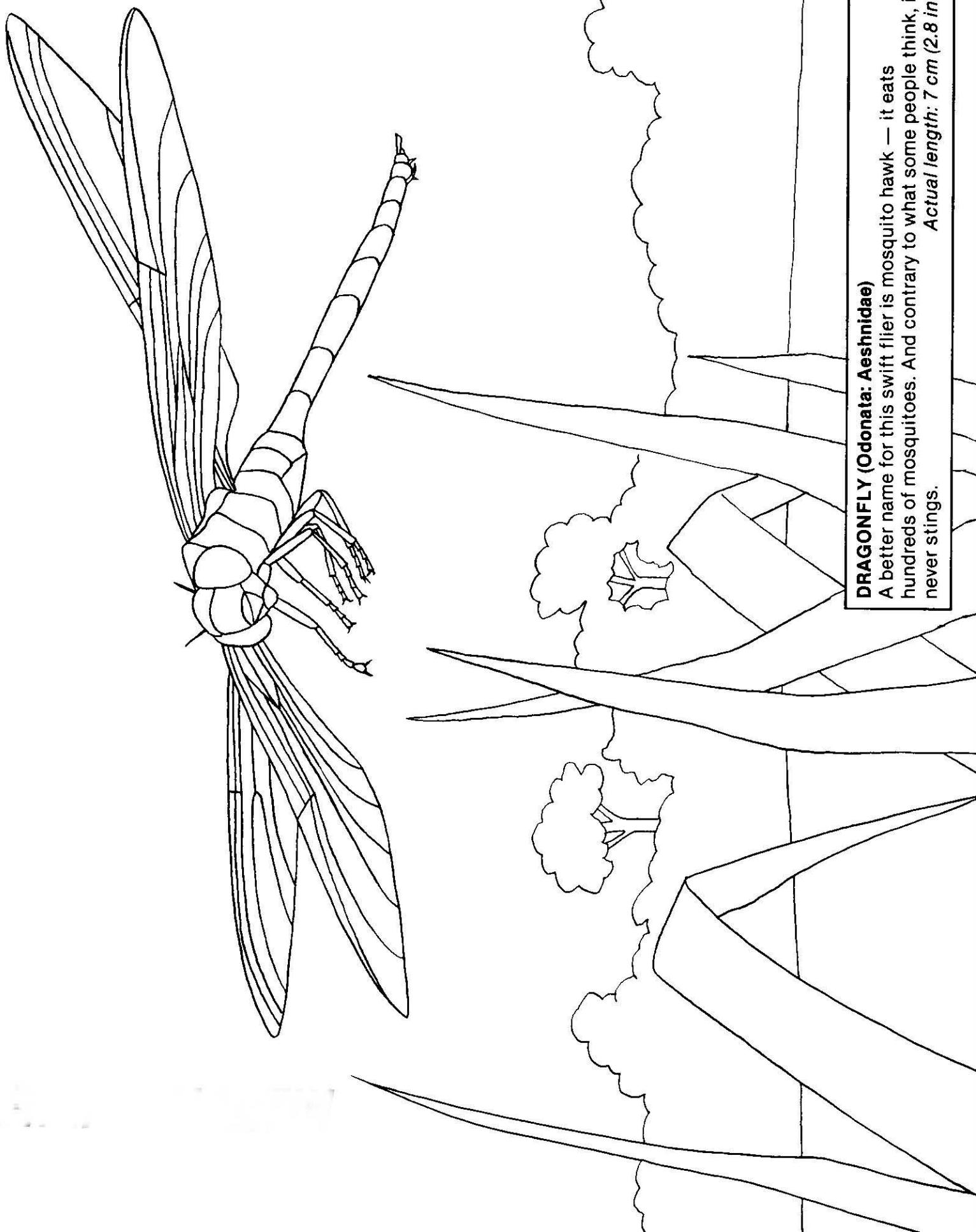
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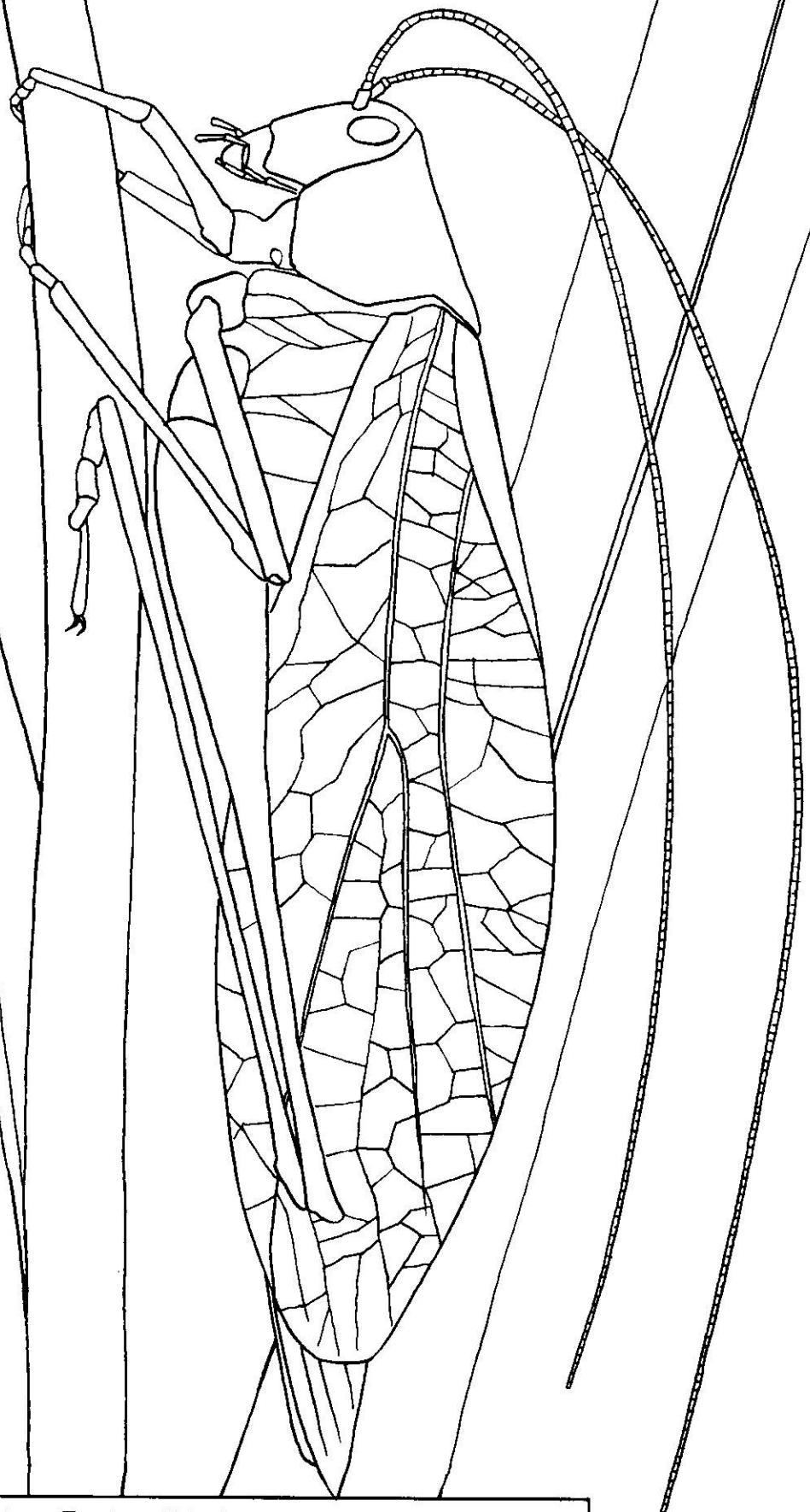
Lizard Town, South of Helston, Cornwall TR12 7PG

DRAGONFLY (Odonata: Aeshnidae)

A better name for this swift flier is mosquito hawk — it eats hundreds of mosquitoes. And contrary to what some people think, it never stings.

Actual length: 7 cm (2.8 in.)

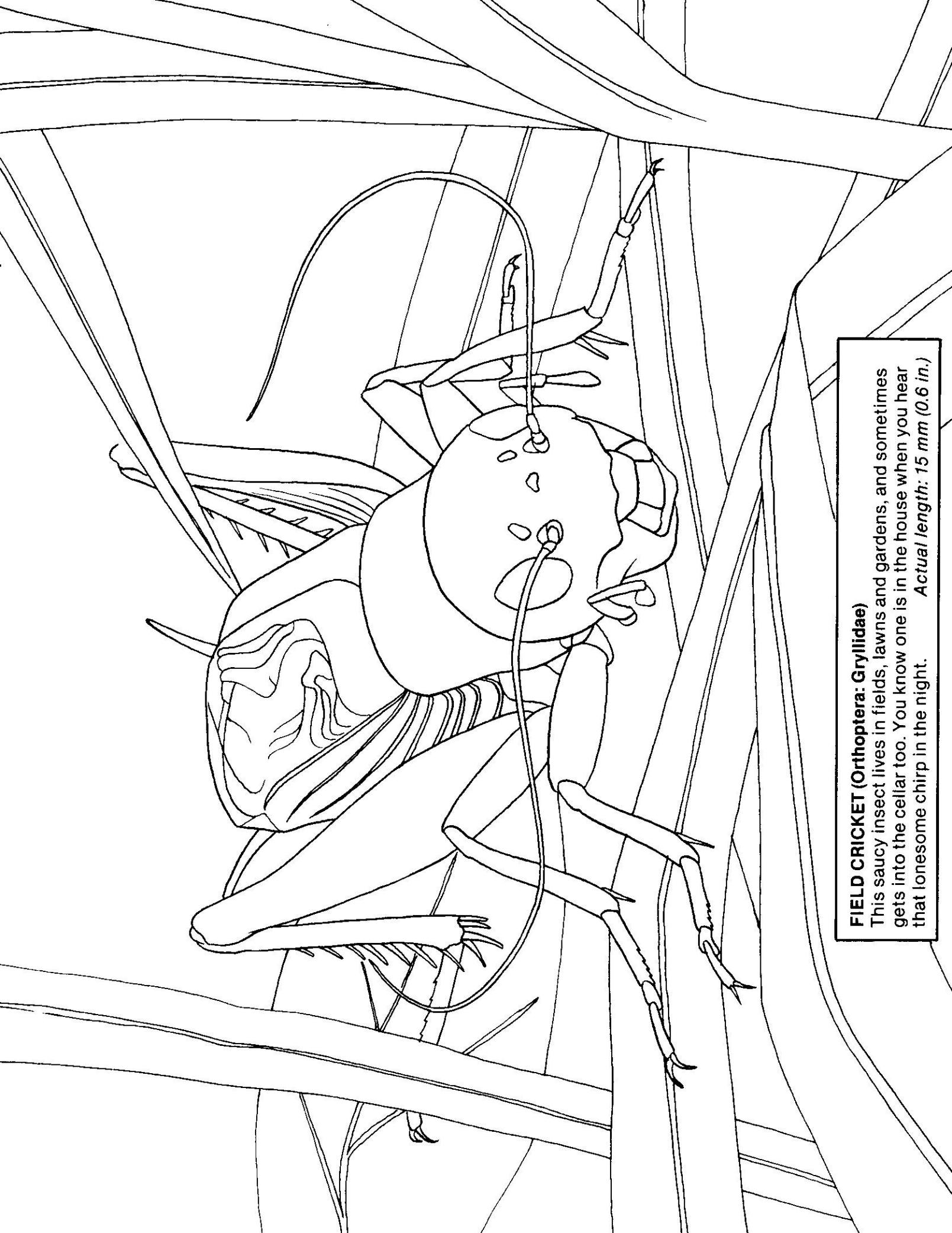




KATYDID (Orthoptera: Tettigoniidae)

Like a grasshopper with very long antennae, the katydid lives in grass and low bushes and feeds on leaves. At night the male becomes a master musician, serenading all with his song of love.

Actual length: 4 cm (1.6 in.)



FIELD CRICKET (Orthoptera: Gryllidae)

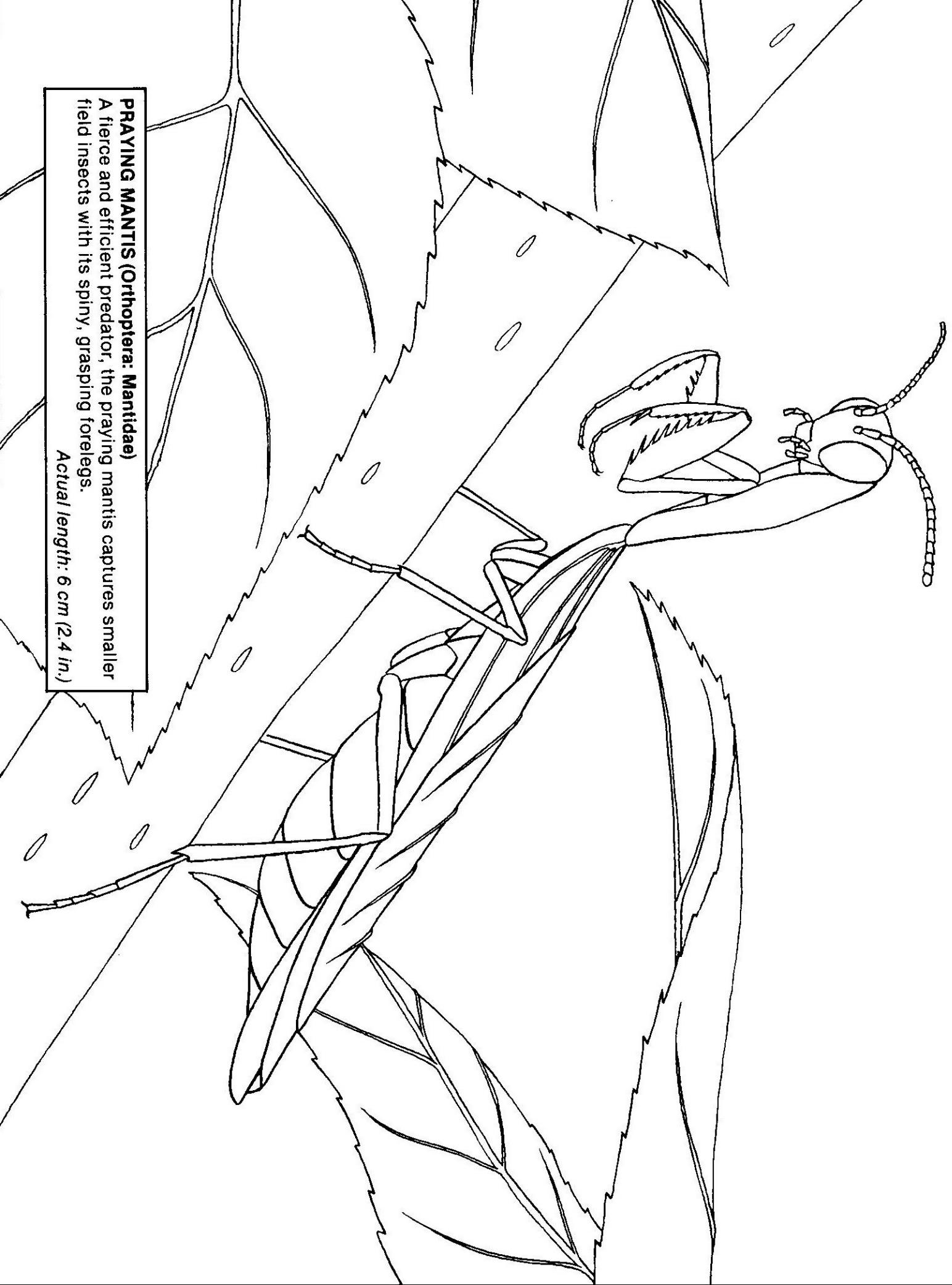
This saucy insect lives in fields, lawns and gardens, and sometimes gets into the cellar too. You know one is in the house when you hear that lonesome chirp in the night.

Actual length: 15 mm (0.6 in.)

PRAYING MANTIS (*Orthoptera: Mantidae*)

A fierce and efficient predator, the praying mantis captures smaller field insects with its spiny, grasping forelegs.

Actual length: 6 cm (2.4 in.)

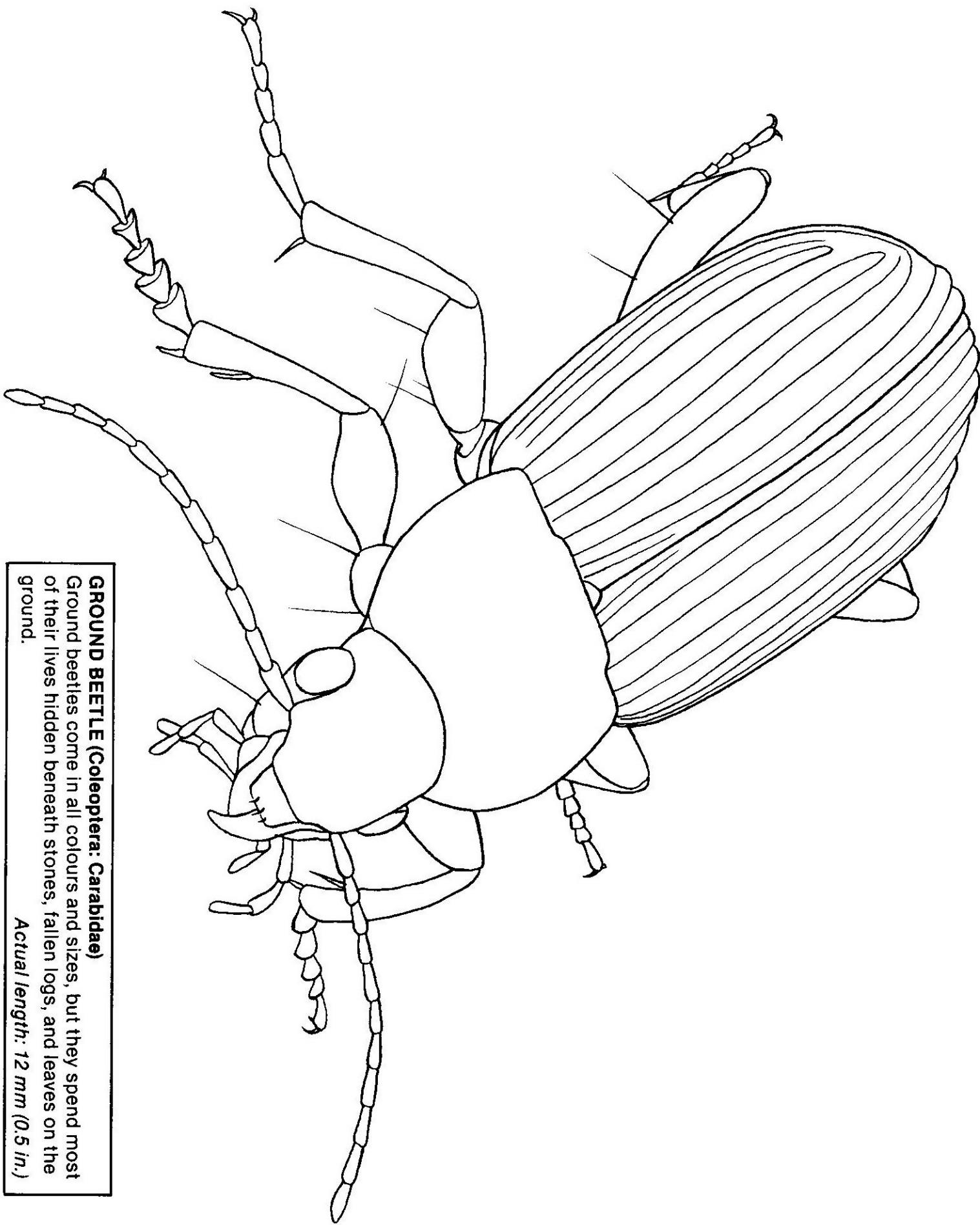




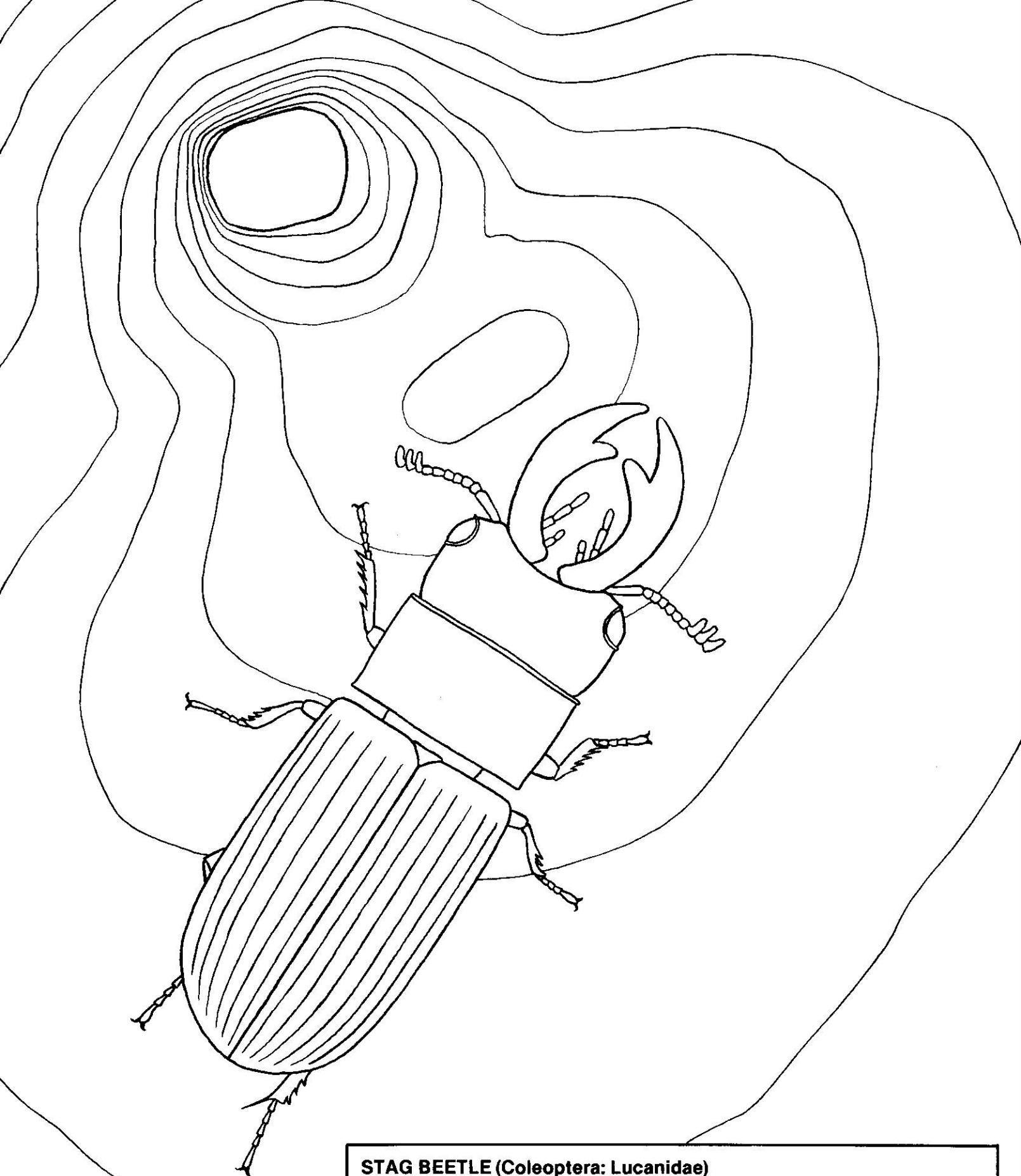
GIANT WATER BUG (Hemiptera: Belostomatidae)

This strong pond swimmer is one of our largest native insects. It can fly too, and at night may be attracted to bright lights.

Actual length: 6 cm (2.4 in.)



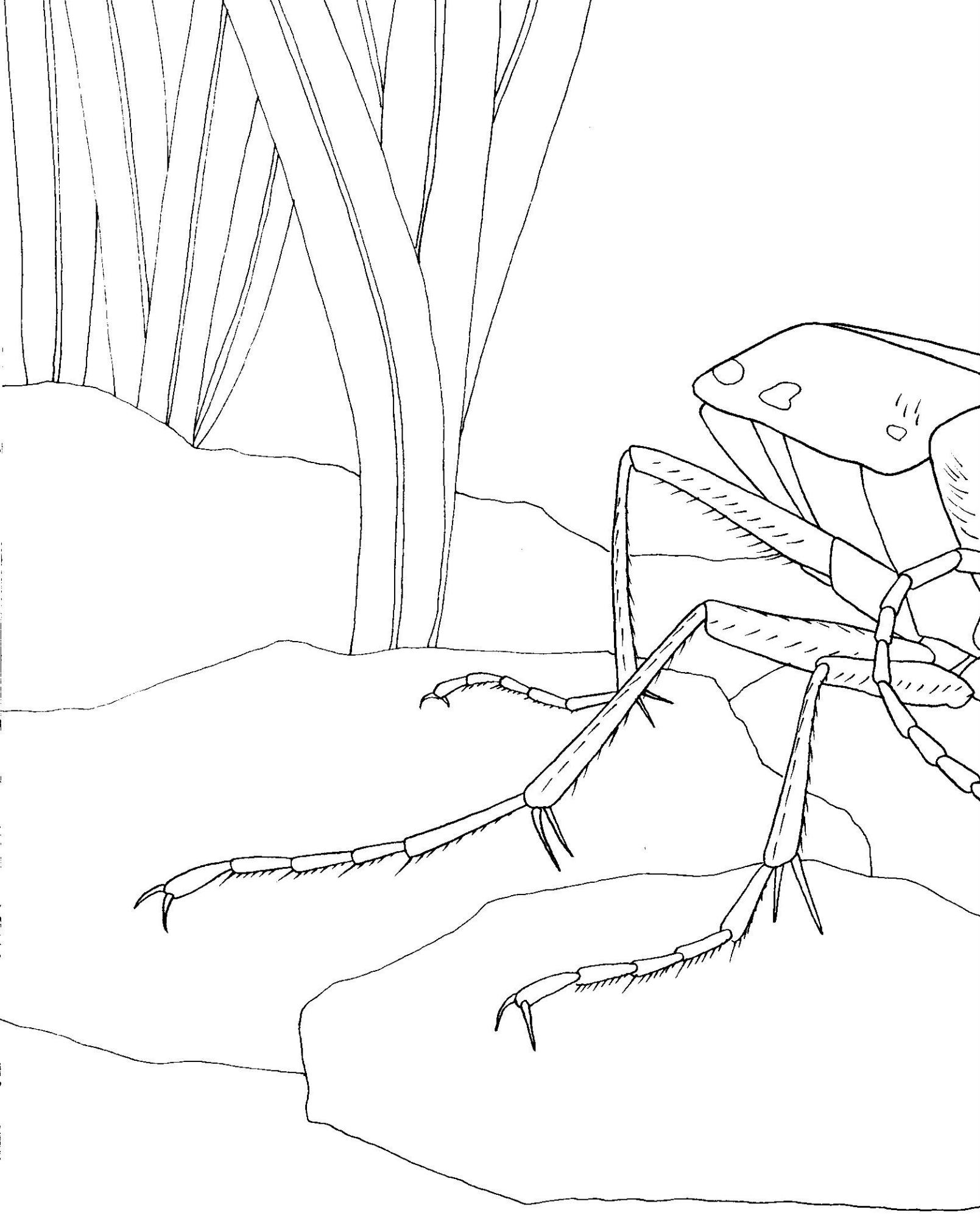
GROUND BEETLE (*Coleoptera: Carabidae*)
Ground beetles come in all colours and sizes, but they spend most
of their lives hidden beneath stones, fallen logs, and leaves on the
ground.
Actual length: 12 mm (0.5 in.)



STAG BEETLE (Coleoptera: Lucanidae)

In spite of its fearsome jaws, the stag beetle is a harmless sap feeder living in wooded areas. Don't worry, it won't pinch!

Actual length: 2 cm (0.8 in.)





TIGER BEETLE (Coleoptera: Cicindelidae)

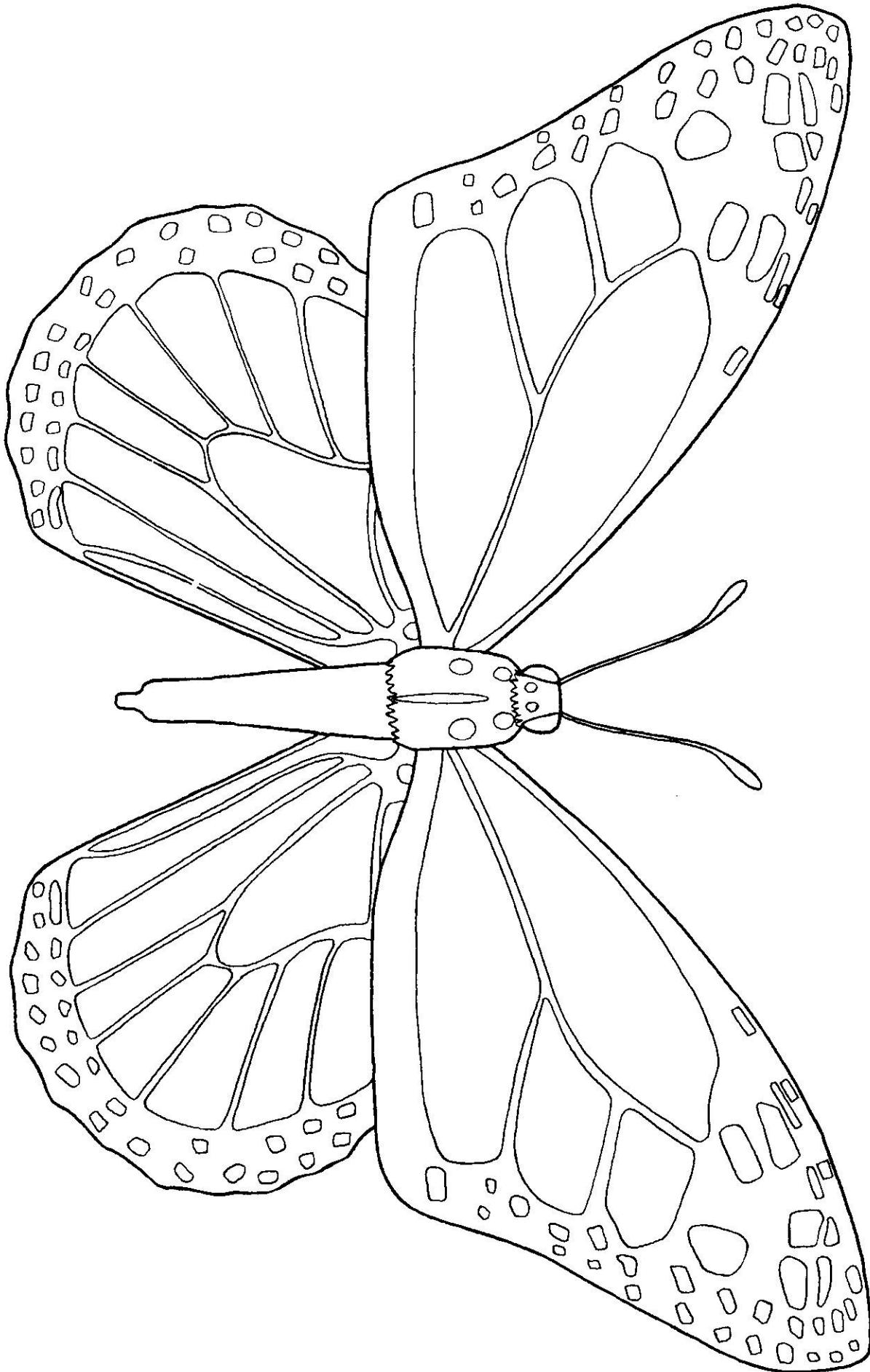
Like the larger animal it's named for, the tiger beetle is a fierce hunter. With long sharp jaws and lightning speed, it is the terror of its own tiny woodland world.

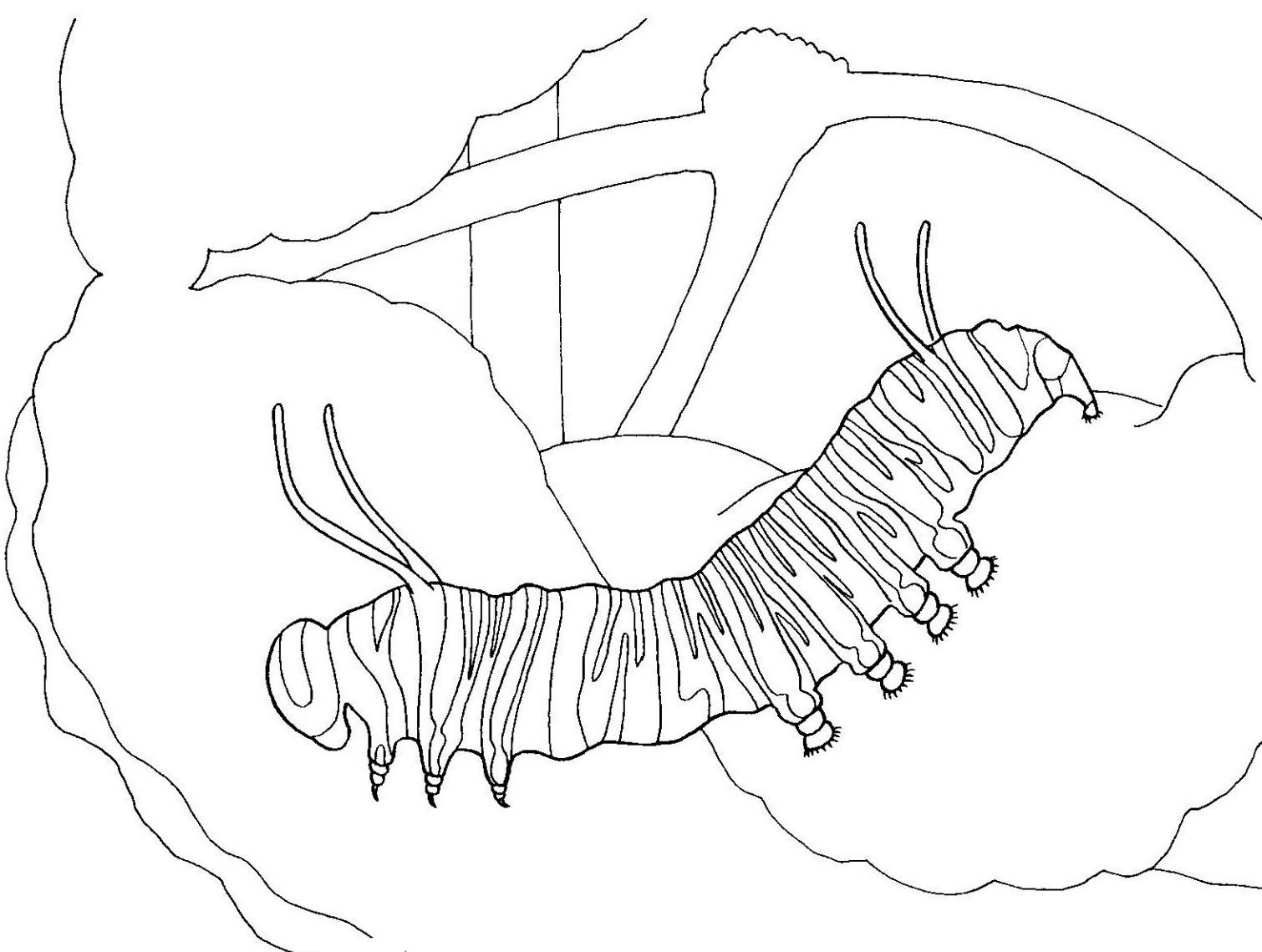
Actual length: 12 mm (0.5 in.)

MONARCH BUTTERFLY (Lepidoptera: Danaidae)

The bright orange "King Billy" is one of our most familiar butterflies. At the end of the summer its large velvety wings carry it hundreds of miles south in an annual migration.

Wingspan: 8 cm (3.2 in.)

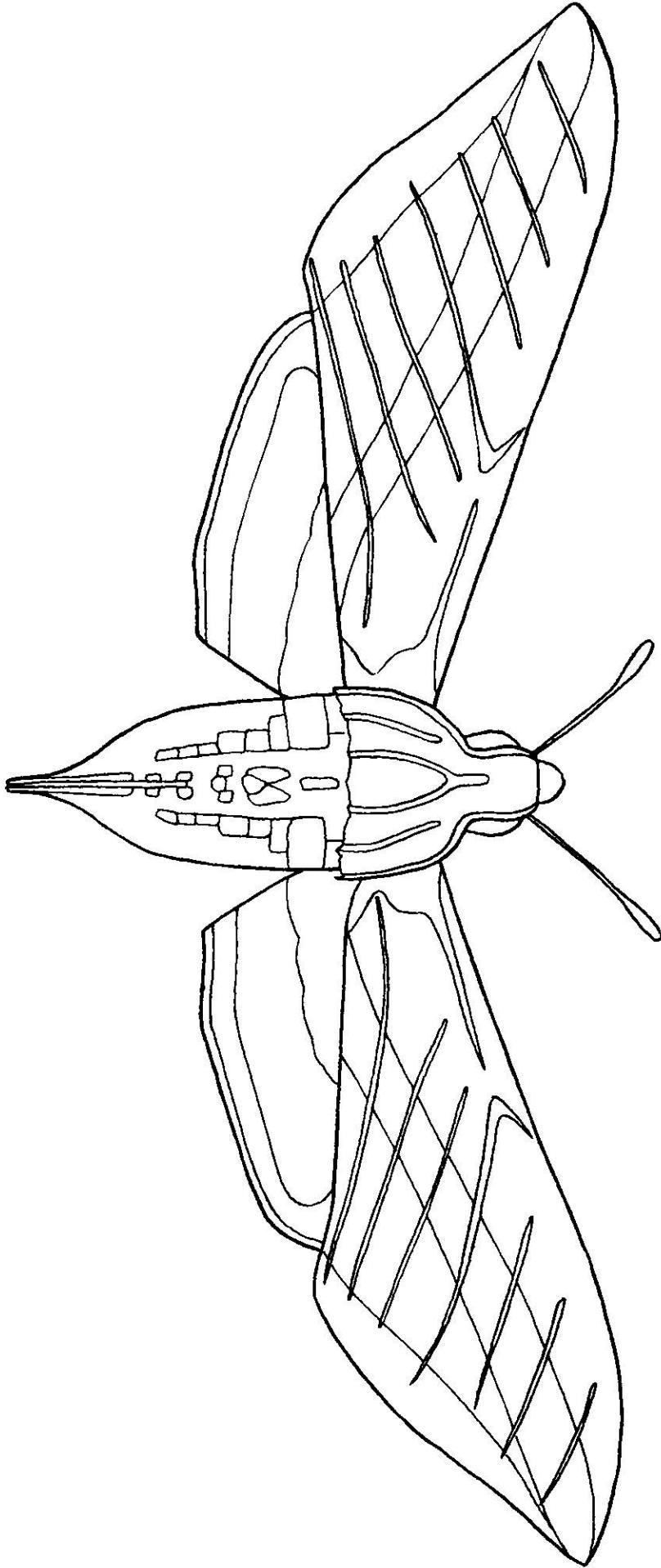




MONARCH CATERPILLAR (Lepidoptera: Danaidae)

This boldly striped caterpillar eats milkweed leaves. After it has eaten enough, it turns into the Monarch Butterfly.

Actual length: 5 cm (2.0 in.)



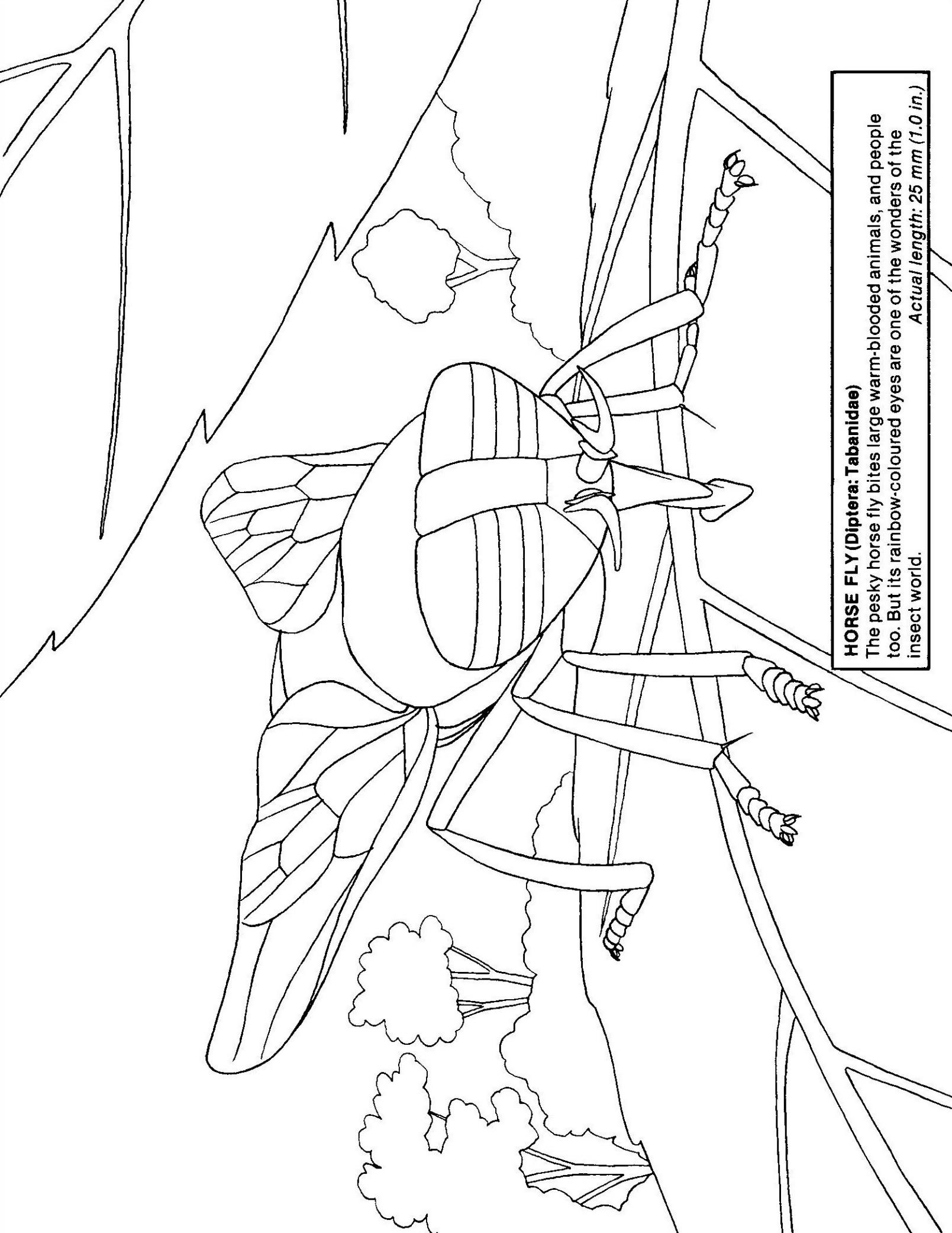
WHITE-LINED SPHINX MOTH (*Lepidoptera: Sphingidae*)

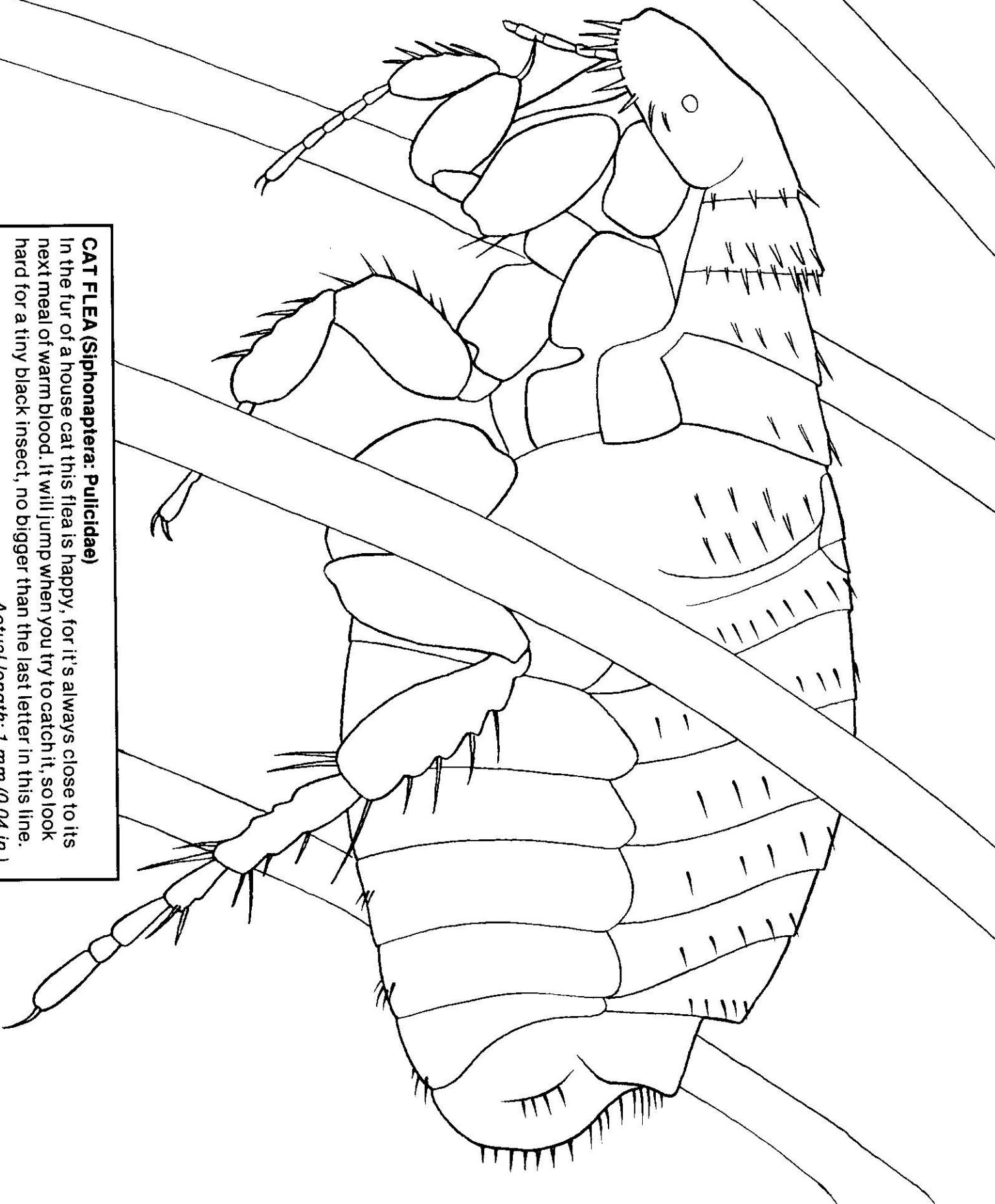
Sphinx moths are agile fliers and can often be seen in the evening, hovering in front of a flower to suck nectar like a hummingbird.

Wingspan: 7 cm (2.8 in.)

HORSE FLY (Diptera: Tabanidae)

The pesky horse fly bites large warm-blooded animals, and people too. But its rainbow-coloured eyes are one of the wonders of the insect world. Actual length: 25 mm (1.0 in.)

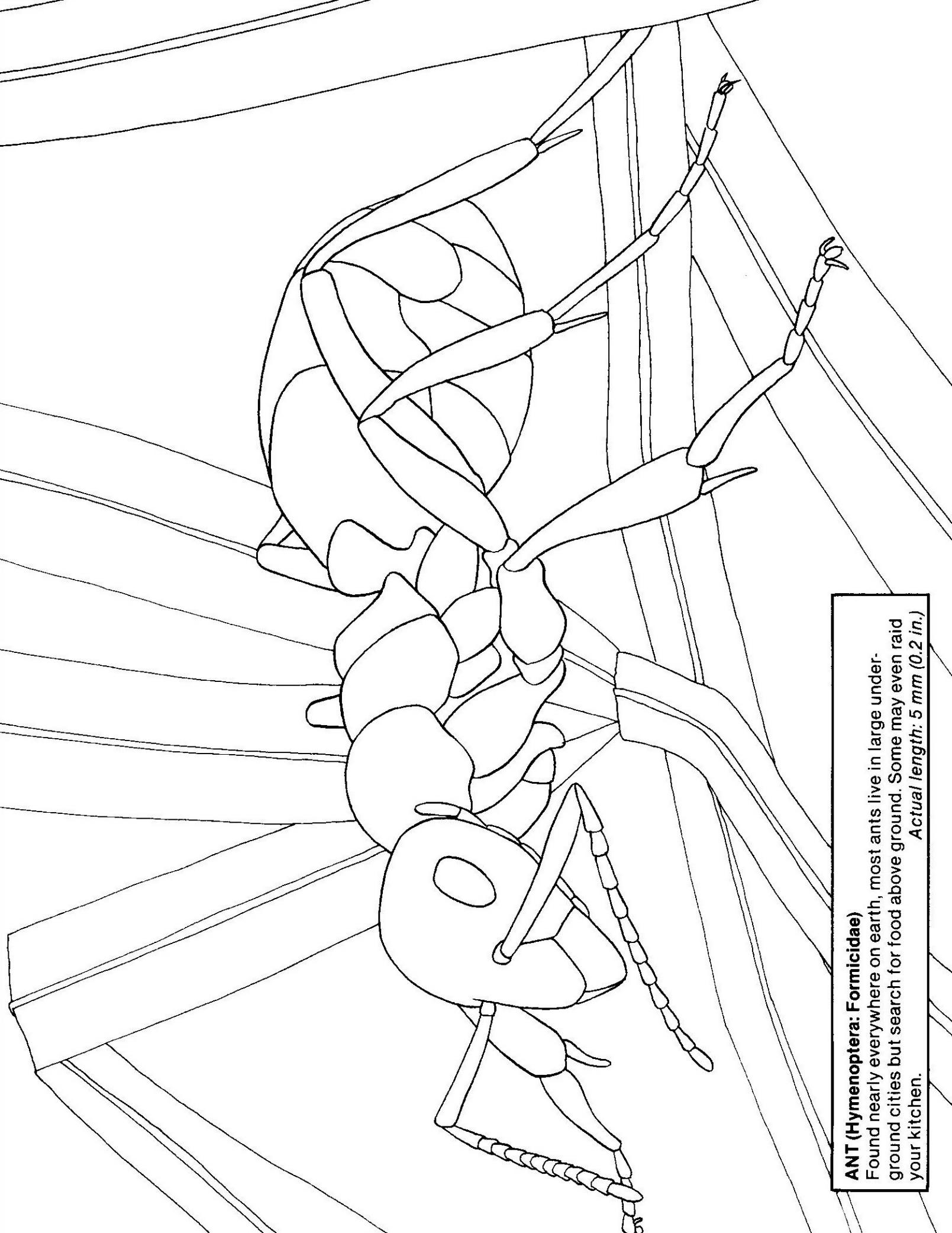




CAT FLEA (*Siphonaptera: Pulicidae*)

In the fur of a house cat this flea is happy, for it's always close to its next meal of warm blood. It will jump when you try to catch it, so look hard for a tiny black insect, no bigger than the last letter in this line.

Actual length: 1 mm (0.04 in.)



ANT (Hymenoptera: Formicidae)

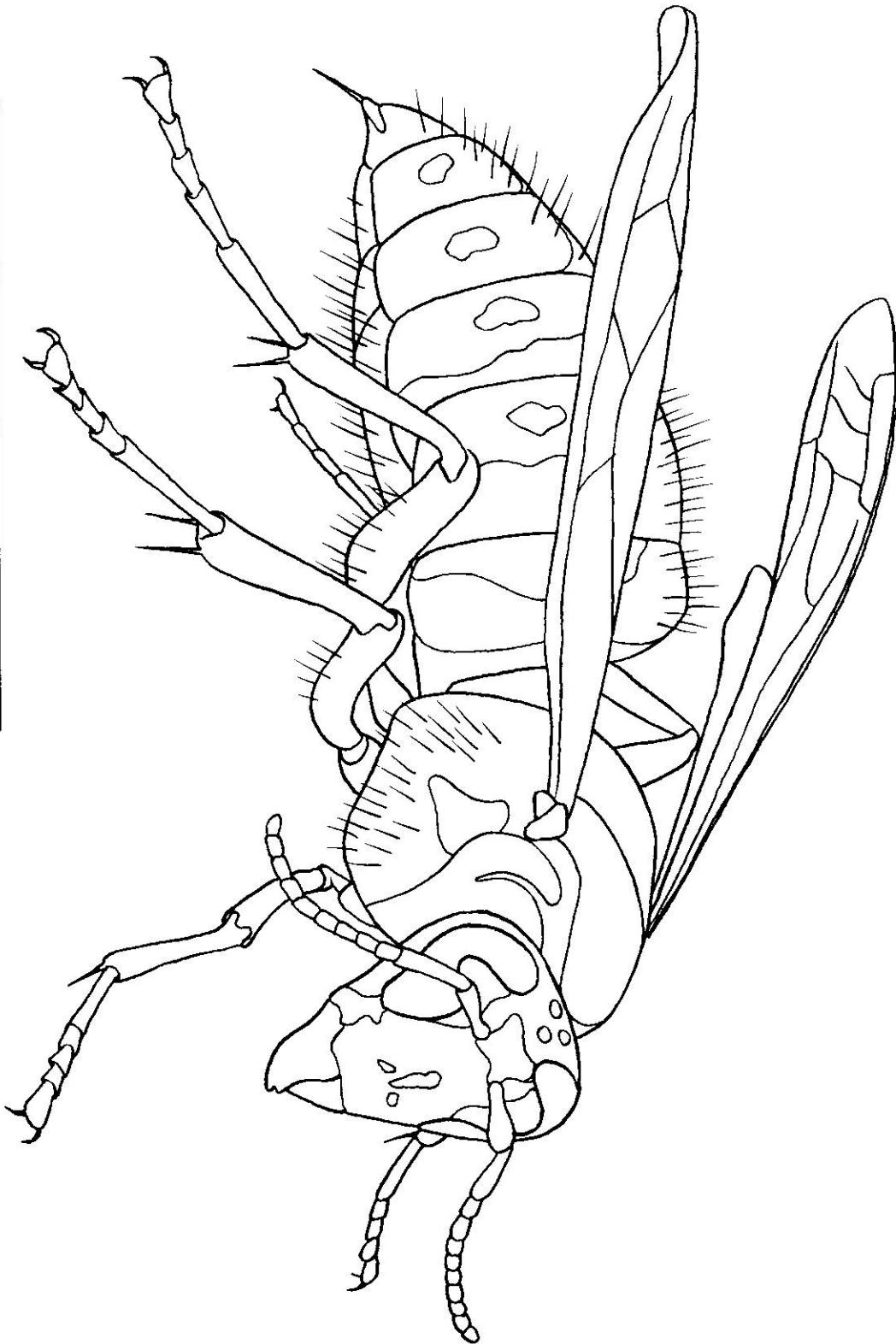
Found nearly everywhere on earth, most ants live in large underground cities but search for food above ground. Some may even raid your kitchen.

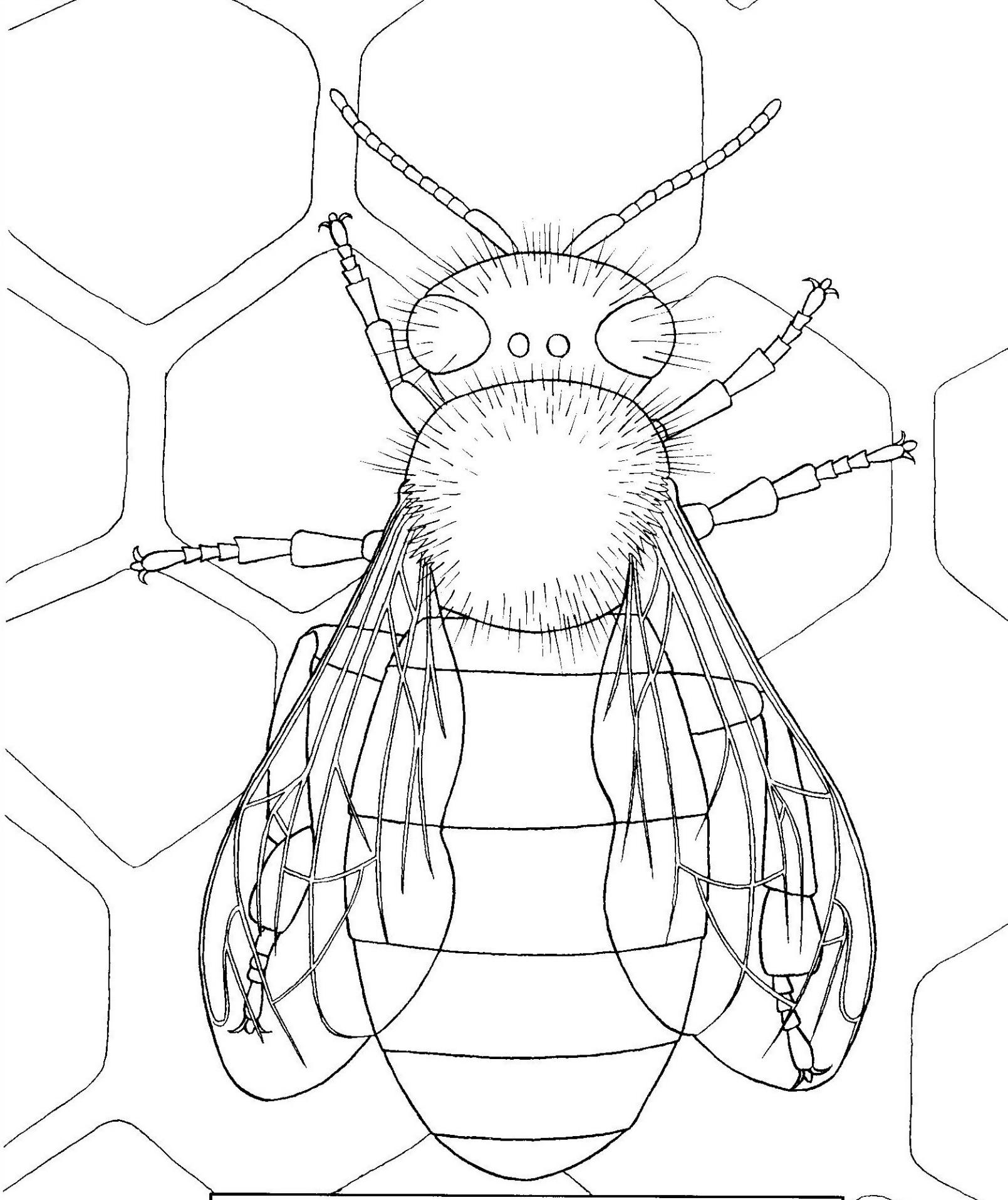
Actual length: 5 mm (0.2 in.)

YELLOWJACKET WASP (Hymenoptera: Vespidae)

When it's out looking for sweets or dead insects to eat, the yellowjacket is too busy to bother people. But don't go too close to its paper nest, or you're sure to learn that wasps can sting.

Actual length: 15 mm (0.6 in.)





HONEY BEE (Hymenoptera: Apidae)

Man's sweetest insect friends, honey bees collect nectar from flowers and make honey. They seldom sting unless you disturb the beehive.

Actual length: 12 mm (0.5 in.)

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