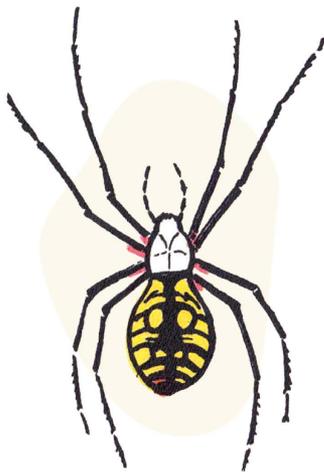


THE GOOD AND THE BEAUTIFUL



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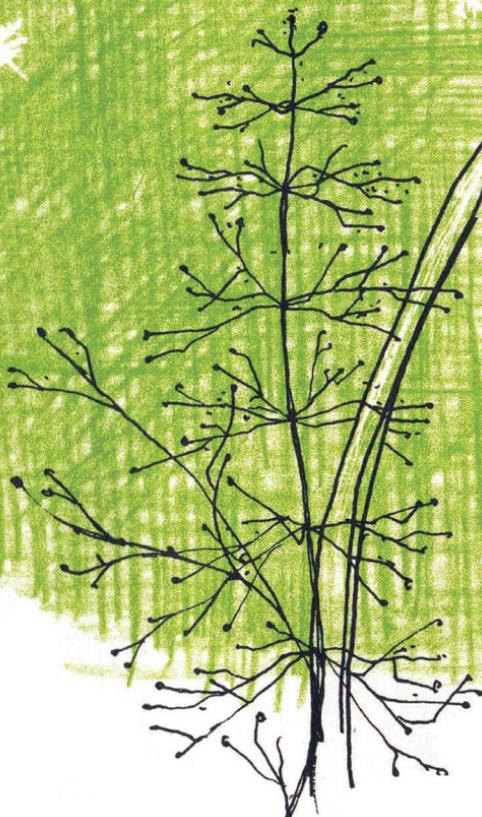
by Mary Adrian, Marion W. Marcher, and Paul McCutcheon Sears

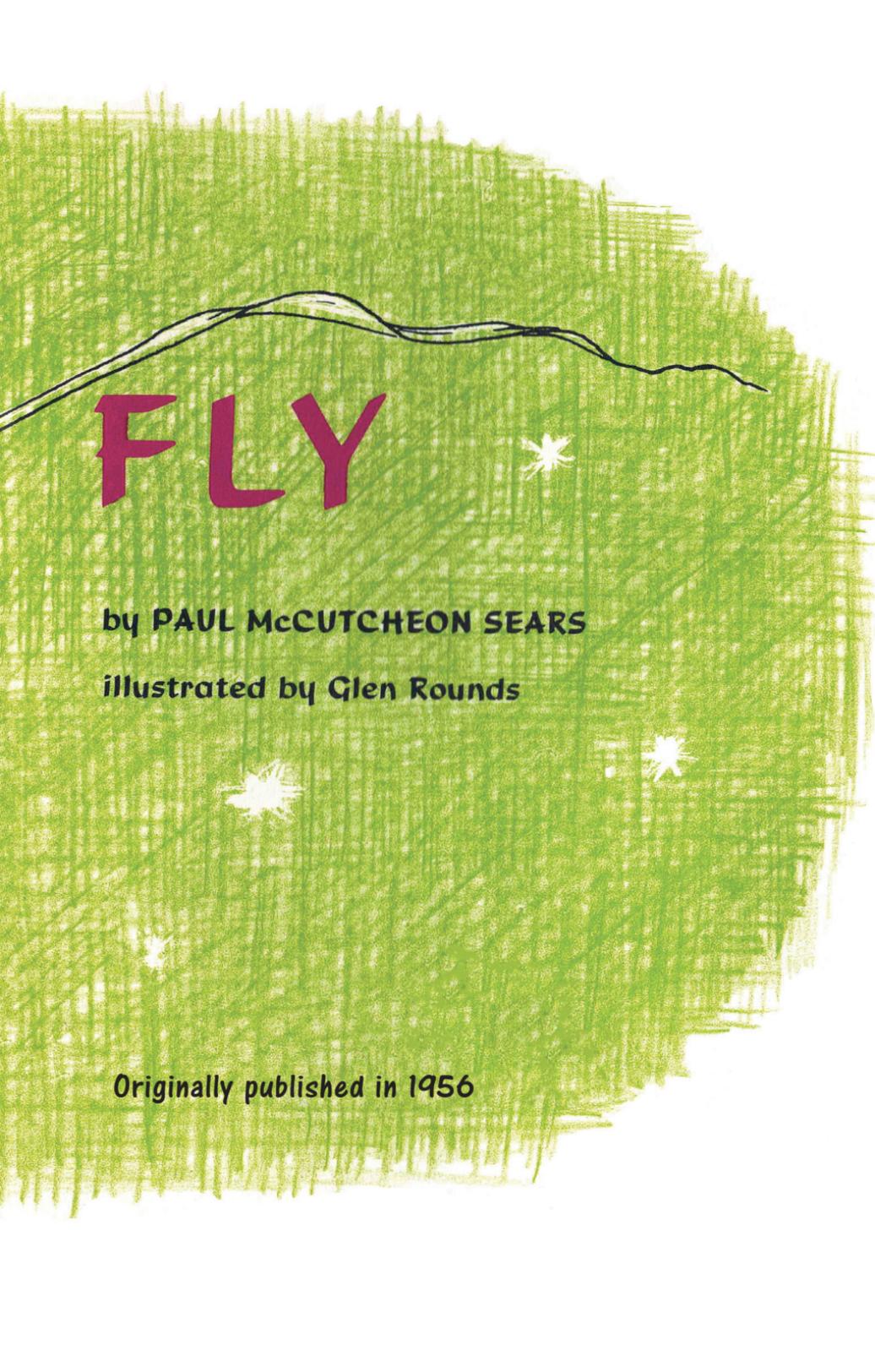
CONTENTS

Firefly	4
Garden Spider	41
Honeybee	79
Monarch Butterfly	130



FIRE.





FLY

by **PAUL McCUTCHEON SEARS**

illustrated by **Glen Rounds**

Originally published in 1956



FOREWORD

Fireflies belong to a family of beetles

named Lampyridae—a family with more than 1,500 species, about 60 of which are found in the United States. They differ principally in the way they flash their lights, which are mating signals.

In the western part of this country, there are fireflies that do not produce light as adults, although the larvae often glow. These non-flashers are active by day instead of night.

This book is about a light-signaling firefly (of the genus *Photuris*) whose life story is much like that of our other fireflies. Only the final few weeks of its two-year life span are spent in the winged, flashing adult beetle stage. Most of the time, it leads a hidden life in a form that does not even resemble the adult.

The “living light” of fireflies has been studied



by many scientists. Much has been learned about its chemical nature, but the way fireflies turn on their light is not completely understood.

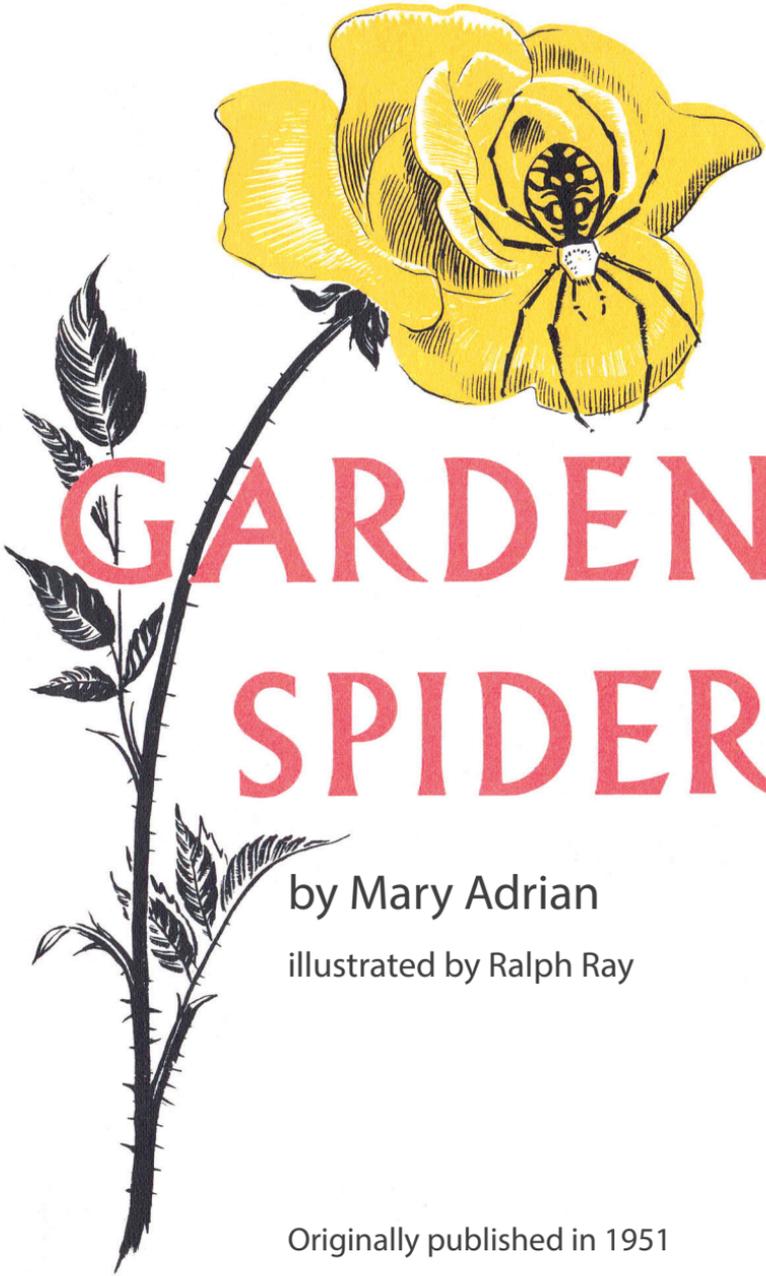
Firefly light is sometimes called “cold light” because the amount of heat it produces is so slight. For example, the flashing firefly does not feel warm to the hand.

I wish to thank Mr. Frank A. McDermott of Wilmington, Delaware, for checking the manuscript for accuracy. Mr. McDermott, a physical scientist, has worked on chemical problems of living light and has published papers on fireflies in professional journals for many years. In addition, Dr. C. Clayton Hoff at the University of New Mexico gave valuable help in locating materials concerning the habitat of the firefly in this book.

Paul McCutcheon Sears
Albuquerque, New Mexico







GARDEN SPIDER

by Mary Adrian

illustrated by Ralph Ray

Originally published in 1951



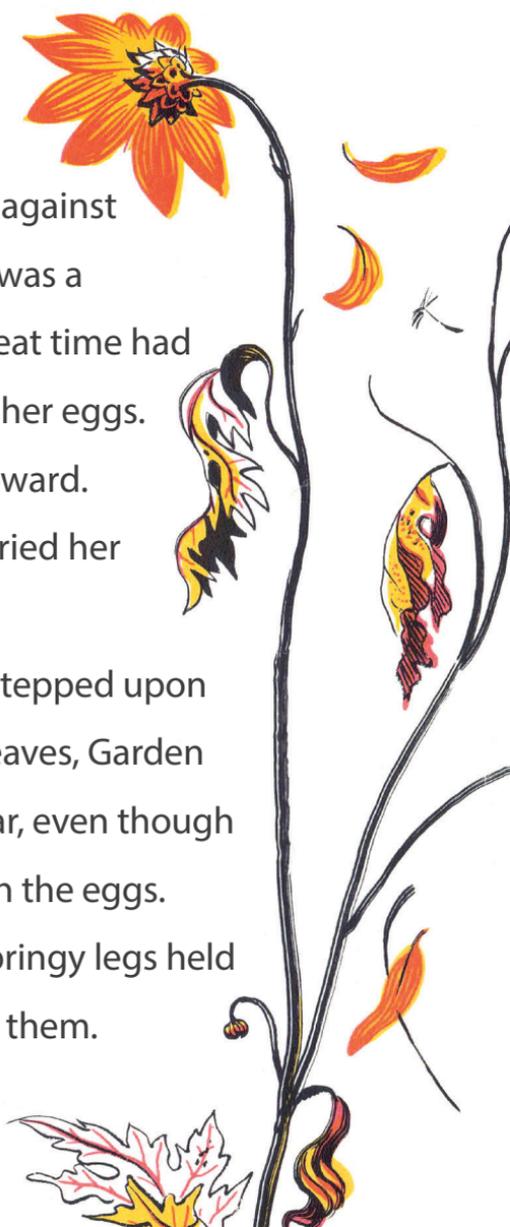
FIVE HUNDRED EGGS

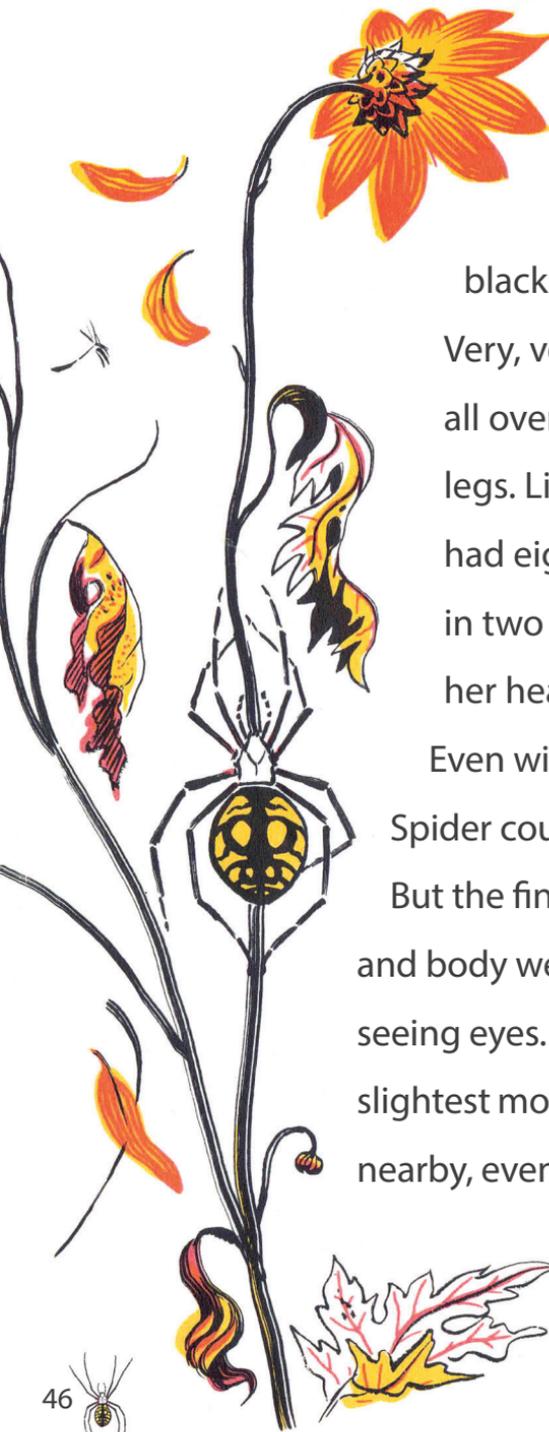
A garden spider was climbing up a dying flower stalk. Many of the plants in the garden around her were turning brown.

Garden Spider was feeling the frosty fall air against her body. This frosty air was a signal to her that the great time had come. It was time to lay her eggs.

She kept climbing upward. Her eight legs easily carried her oval-shaped body.

When the eight legs stepped upon broken stems or dried leaves, Garden Spider did not feel the jar, even though her body was heavy with the eggs. That was because her springy legs held her body snug between them.





She had a beautiful body, this creature of the garden. It was black with gold spots. Very, very fine hairs grew all over it and down her legs. Like most spiders, she had eight bright eyes, set in two rows on the front of her head.

Even with eight eyes Garden Spider could not see very far. But the fine hairs on her legs and body were almost like far-seeing eyes. They could feel the slightest movement of everything nearby, even of the air.





Up the flower stalk she
climbed, stepping care-
fully and feeling her way. Then
she stopped to spin her egg case.

Garden spiders are spinners and wonderful ones. They spin silk, and it comes from their own bodies. It comes out of spinnerets, which are tiny tubes under the back part of the body. While the silk is inside, it is a liquid, but as soon as it comes out, the air hardens it into a delicate thread.

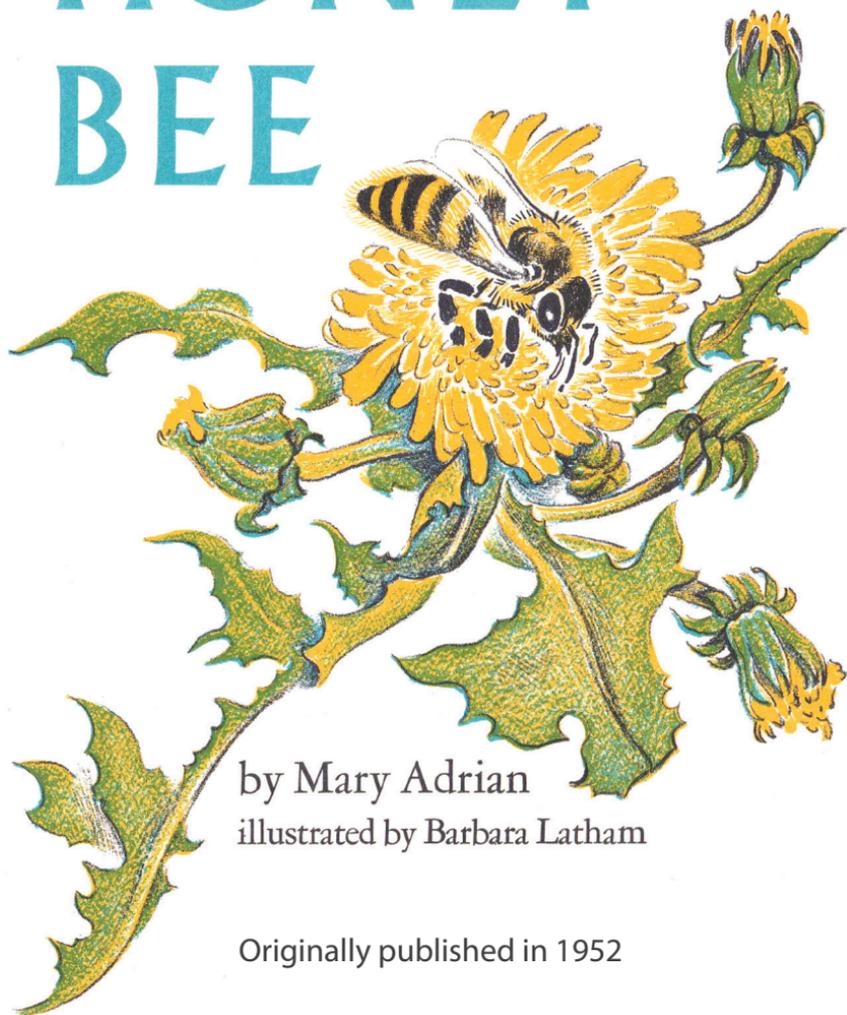




First, Garden Spider spun several crosslines of silk and attached them to different parts of the flower stalk. These made the frame of her nest.

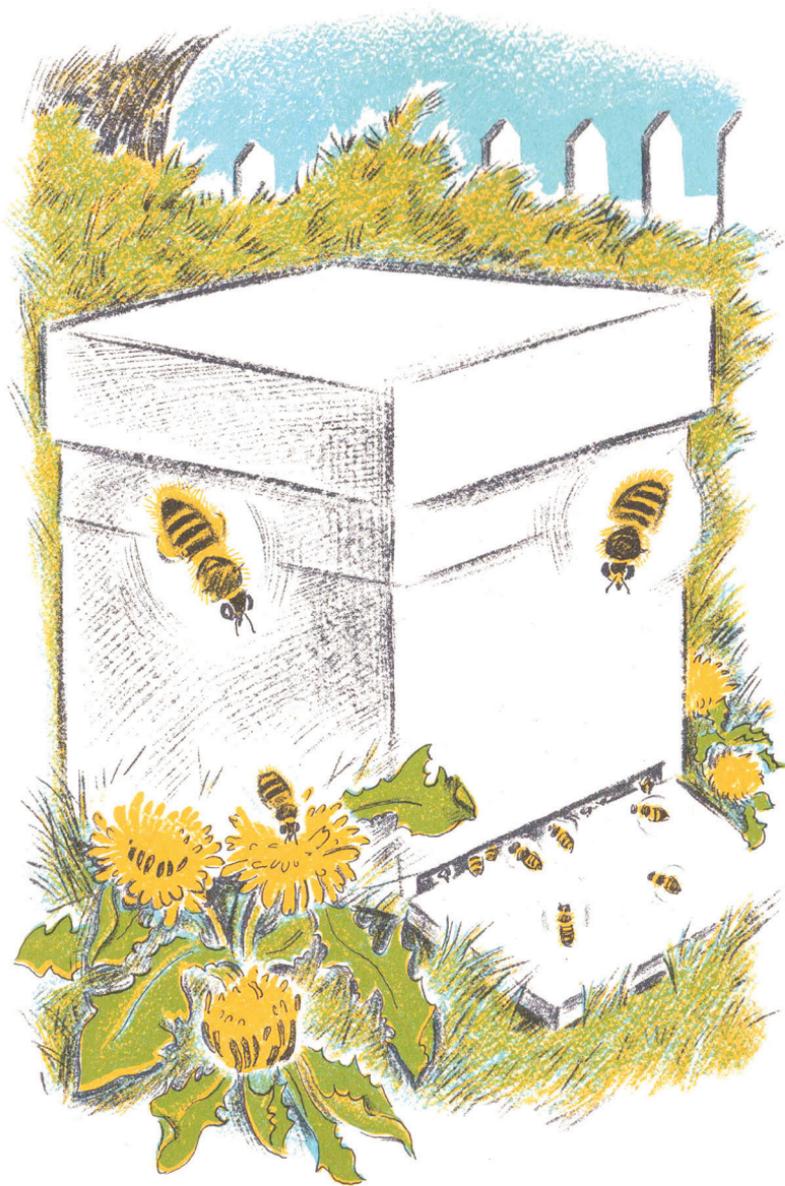


HONEY- BEE



by Mary Adrian
illustrated by Barbara Latham

Originally published in 1952



A QUEEN LAYS AN EGG

Humm-Humm! Honeybees were working in their hive one spring day. Thousands and thousands of bees were crawling over the combs, working and humming. It was dark in the hive, but they smelled and felt their way around with their long antennae.

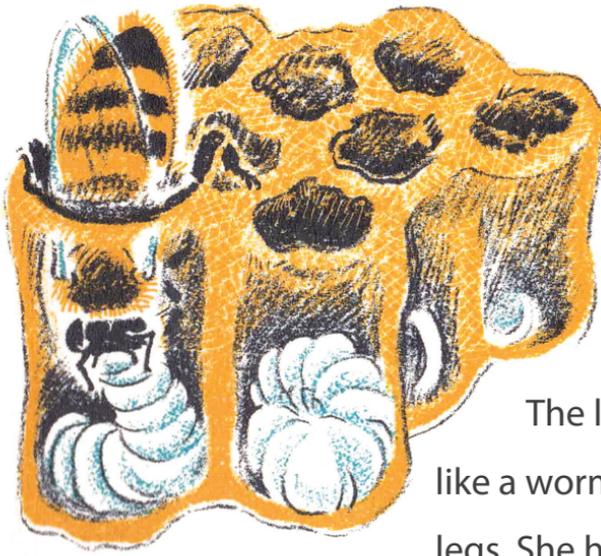
Wax combs, made of tiny cells, hung from the ceiling in wooden frames.

The queen was on one of the combs, laying eggs. Her long, slender body was banded with gold. She was a handsome insect, as the queen and mother of 6,000 bees should be. Small worker bees kept circling around her and touching her with their antennae.

The queen put her head into a cell to see if it was clean. Then she turned around and laid in it a tiny bluish-white egg.

For three days the egg lay in the cell. Then it





moved, and out crawled a white larva with a black head.

The larva looked like a worm. She had no legs. She had no eyes.

But she had a mouth, and she was hungry.

So she ate a few drops of bee milk from the forehead glands of a nurse bee who came to feed her.

The larva liked the sour taste of the bee milk, but the nurse bees fed it to her for only two days. If she had kept on eating bee milk (or royal jelly, as it is also called), she would have grown into a queen bee. The hive needed workers, not queens. So on the third day, the nurses began to feed her bee bread, a mixture of pollen and honey.

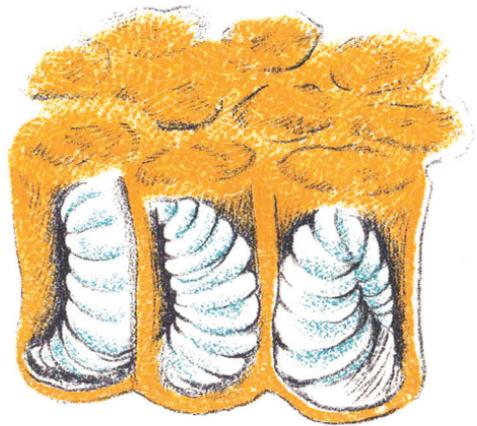
The larva liked this, too. She ate so much of it that she grew too big for her skin. Pop! Off it came. She ate more and more and more bee bread and shed her skin nearly every day.

On some days the nurse bees fed her a thousand times. In five days she had grown so big that she filled the cell.

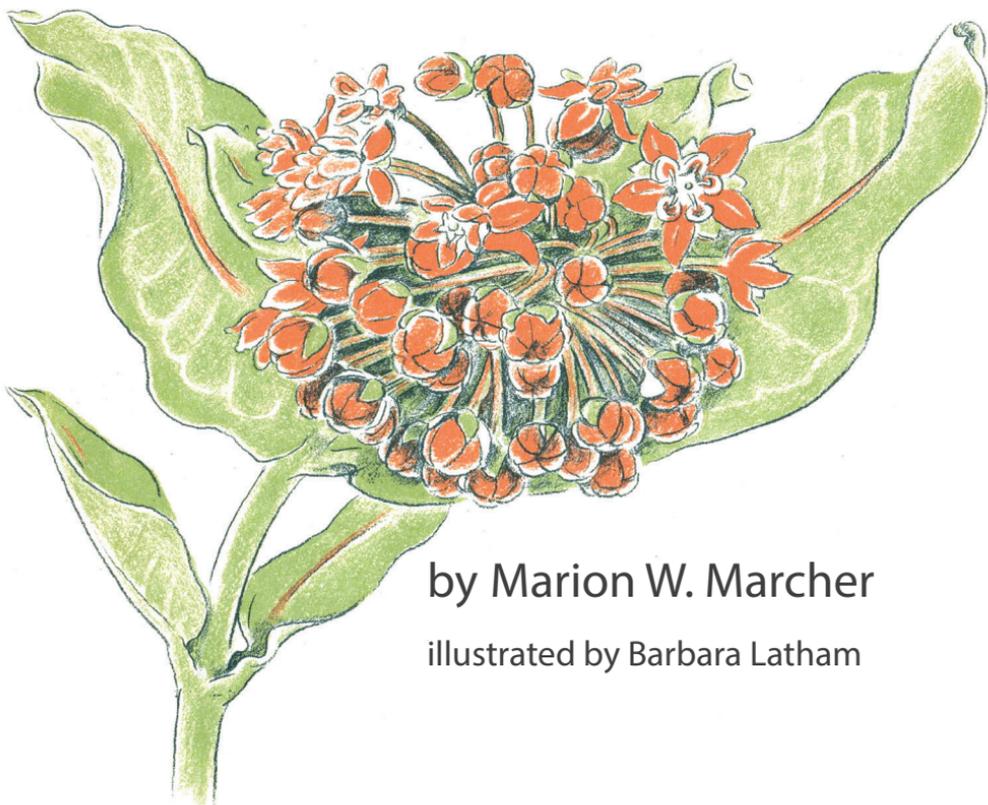
The larva spun a cocoon. Round and round she covered her round body with white silk from her mouth.

Then she lay very still and went to sleep.

Wonderful things began to happen to the larva. Her round body began to separate into a thorax (or a chest) and an abdomen. From her head grew two antennae and five eyes—two great ones on the sides and three tiny ones on the forehead.



MONARCH BUTTERFLY



by Marion W. Marcher

illustrated by Barbara Latham

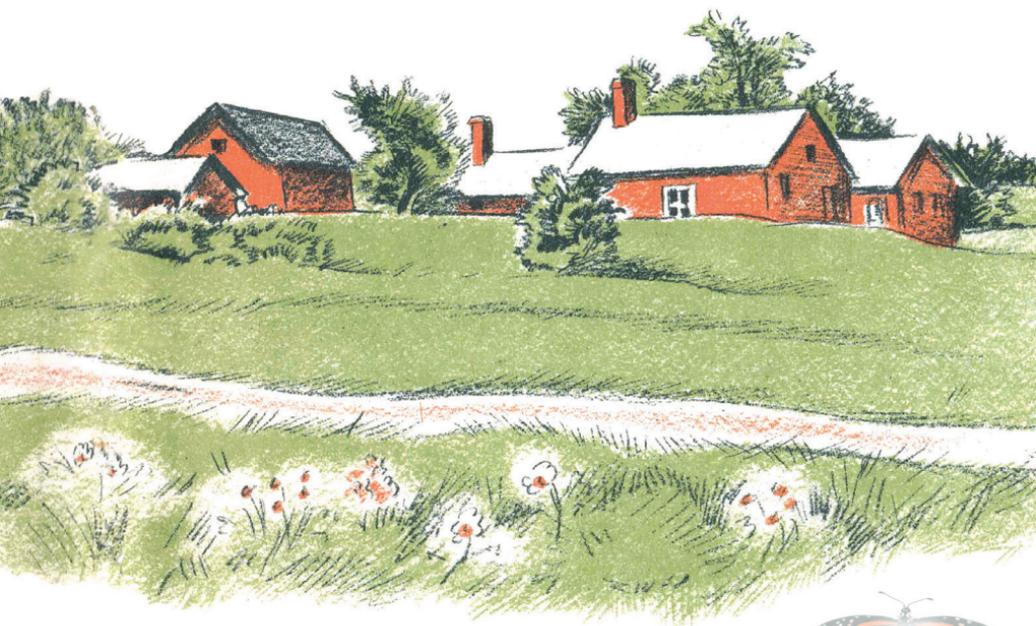
Originally published in 1954



SPRING FLIGHT NORTH

In the clear spring air, Monarch Butterfly was winging her way across the country. She was an old and faded beauty of the Royal Family of butterflies, but her orange-brown wings still flashed in the sunshine.

All winter she had been in the warm south-land, like the robins. Now she was going north. She flew slowly and not far from the ground, hunting for milkweed as she went along.



Over fields and along hillsides she flew and then down through valleys. No river or lake was too wide for her to cross. She hurried over the water, flying above people in boats.

As soon as she came overland again, she flew lower and slower. She stopped moving her wings and coasted along in twirly glides. She dipped her wings on one side then on the other. This made her tilt from one side to the other, but it steered her wherever she wished to go.

The sky became cloudy. Rain began to fall. Monarch found a tree and fluttered down upon a large branch.

Spreading her wings to balance herself, she stepped to the underside of the branch. Here she had a roof to get under, out of the cold rain.

She fastened into this roof using the tiny hooks that were on the ends of her legs and





hung downward. She folded her wings together and rested. Rain splashed on her roof all night long, but she was dry.

The next morning, the sun shone. Monarch smelled delicious flower nectar. She smelled it with the two thread-like feelers on her head. These were her antennae. She smelled the nectar with another pair of feelers, too. They were feathery little palps on either side of her tongue.

Soon she saw where the delicious smell came from—clover blossoms. She chose a nice

