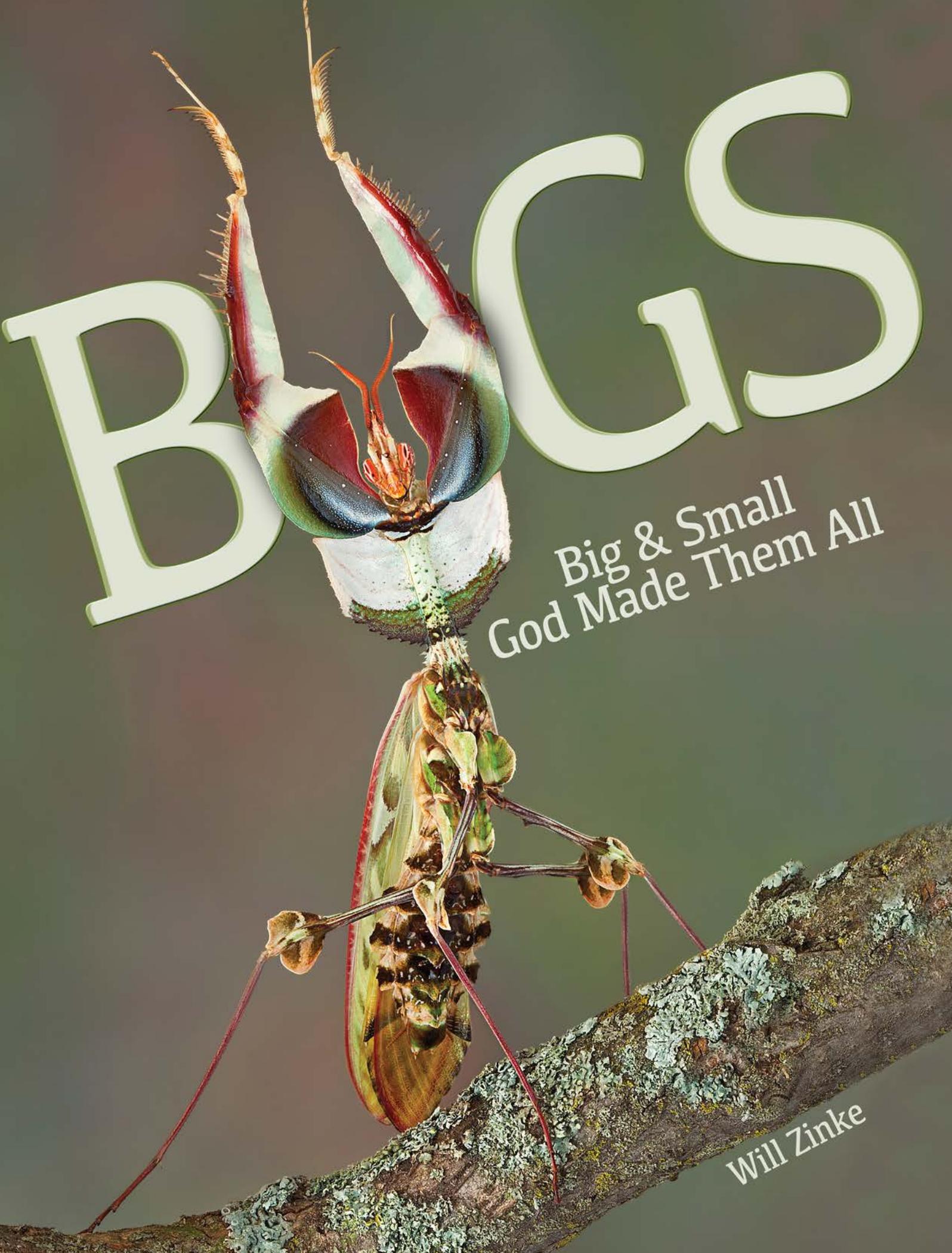


BUGS



Big & Small
God Made Them All

Will Zinke

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About the author: Will Zinke has been fascinated with the insect world ever since he saw a goliath beetle in a museum at the age of seven. He holds a BS in biology and has taught science for over ten years. He was home schooled and is now home schooling his four children. He is currently assisting Dr. Gary Parker with the Creation Adventures Museum in Florida, conducting fossil and insect adventures! His wife, Amy, and their children run their website www.wingoftherainforest.com, displaying many works of “Creation Art.”

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AMAZING Creepy Crawlers

BUGS! They are everywhere! Those amazing creepy crawlers all have special and sometimes incredible jobs that their Creator gave them to do. With so many bugs on planet Earth, God must think they are pretty important!

What are bugs? Well, let's set the record straight: "All bugs are insects, but not all insects are bugs," or so the saying goes. This means that the term "bug" refers to just one order of insects. Generally, there are over 40 insect orders. Some examples are the beetles (*Coleoptera*, meaning "sheath

wing"), the butterflies and moths (*Lepidoptera*, which means "scale wing"), and the flies (order *Diptera*, or "two wing").

Insects, with their three body parts and six legs, are small signposts pointing to God's infinite creativity. With their alluring beauty, incredible design features, and limitless variety, they are a testament to our all-wise and wonderful Creator! In this book we will show you just a few of the most amazing, strange, and wonderful examples of insects that God has made!





So why did God make insects? Well, without insects such as bees, butterflies, hornets, and beetles, many plants would not be able to reproduce. Pollination, anyone? And without insects such as flies, ants, and dung beetles, the world would be a very smelly place, because they are scavengers and decomposers. God made insects to keep things running smoothly. Let's take a look at how important just one insect, the honey bee, is!



When you think of a bee, you may think of enjoying their honey or the fear of being stung in your garden. Bees are so important to the environment because of being a pollinator. Pollinators are insects and other creatures that transfer pollen or seeds from one flower to another, fertilizing them so they can grow to produce many foods we like to eat and flowers we enjoy just looking at, like roses.

The honey bee seems to be disappearing and that has alarmed both farmers and scientists. In the past few years, bee colonies have been discovered that appear to be abandoned and have vanished without a trace, something called “colony collapse disorder.” Many studies have taken place to try to solve this mystery that threatens part of the ecosystem.

Pesticides, chemicals used to kill bugs and weeds, are one cause that many blame for this decline in honey bee populations. Other studies have focused on fewer and less diverse food sources because of a decline in the variety of crops taking up the space in gardens and farms, leaving no room for other plants that may have longer flowering times.

Often a bee eats from a specific type of flower as long as it is available, making sure the right pollen gets to the right flowers.

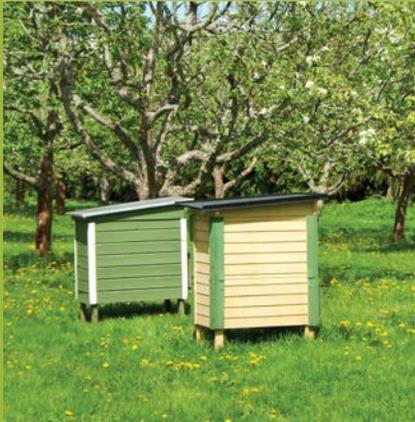


Pollination

Some plants can pollinate themselves without help, but many cannot, so they need something to do it for them. Bees are helpful pollinators, and the process normally goes like this:



- 1** Bees are attracted to flowers to consume nectar and pollen.
- 2** Pollen is collected on the bee's body while it is feeding.
- 3** The bee carries the pollen to another plant, leaving pollen, and fertilizing the flower.



Without bees we wouldn't have cherries, blueberries, apples, onions, cucumbers, avacados, oranges, or Brazil nuts!



But what if the bee is missing and cannot pollinate the flowers?

- 3** Blossoms appear on an apple tree, but no bees are available to pollinate.
- 2** The blossoms do not develop into fruit.
- 1** No fruit to eat!



Unfortunately, the first thought folks have when they hear the word bug is, “Yuck! Quick, get the bug spray!” It is true that the common insects that live close to us are usually pests that bring disease, such as roaches, mosquitoes, and fleas. In fact, do you know what the most deadly animal on earth is today? Not the lion. Not the cobra. Not even the great white shark. The

deadliest animal is the tiny mosquito! Thousands of people die every day from diseases transmitted by mosquitoes. But did you know that the male mosquito is a vegetarian, only eating sap and plant juices? In fact, not all species are blood-suckers, and even the blood-loving females also eat plant juices and only use blood as a supplement for their eggs.



Elephant mosquito

Elephant mosquitoes, of the genus *Toxorhynchites*, are some of the largest mosquitoes in the world and are not bloodsuckers. Their larvae actually hunt down and eat the larvae of the bloodsucking mosquitoes!



Another question might be, “Why would God make these awful bugs?” Well, we know that the Bible says that everything God created was “very good” in the beginning; it was man’s sin that brought corruption and death upon the whole creation. It was probably at this time that some creatures that once ate only plants and provided good benefits became carnivores and parasites. Where once life was easy and safe, now it would be dreadfully difficult. As we read in Genesis 3:18, “***Both thorns and thistles it shall bring forth for you. . .***” Their lives no longer a picnic in the park, our first parents (Adam and Eve) were beginning to see the terrible price of their sin as everything around them changed.



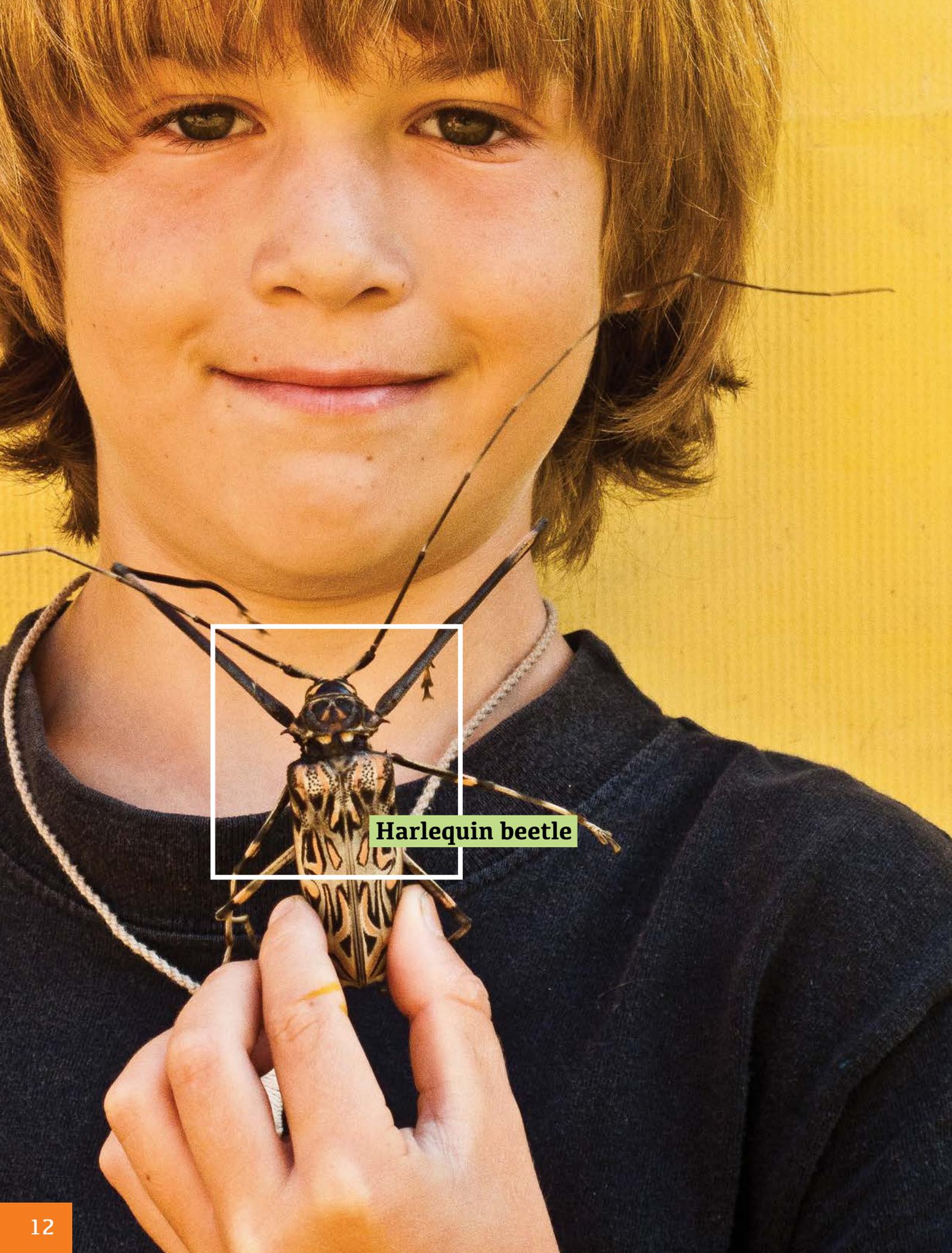


Treehoppers



But we have hope! In Genesis 3:15 our Savior is first mentioned, a deliverer who would someday set things right again! One who would “crush” the head of the serpent (Satan). And we have this hope not because we are developing better cures for diseases or using our own intellect to save the planet, but because of the shed blood of Jesus, our Redeemer, who has promised to return again! In Romans 8:21–22 we read: *“...because the creation itself also will be delivered from the bondage of corruption into the glorious liberty of the children of God. For we know that the whole creation groans and labors with birth pangs together until now.”* Oh, what a wonderful day it will be when Christ returns!

Let's take a look at some of the most amazing creatures found all over the Earth!



Harlequin beetle