

EXPLORING

THE WORLD AROUND YOU



A LOOK AT NATURE FROM TROPICS TO TUNDRA

GARY PARKER

EXPLORING
The World Around You

First Printing: January 2003

Copyright © 2002 by Gary Parker

All rights reserved. No part of this book may be used or reproduced in any manner whatsoever without written permission of the publisher except in the case of brief quotations in articles and reviews.

For information write: Master Books
P.O. Box 726, Green Forest, AR 72638

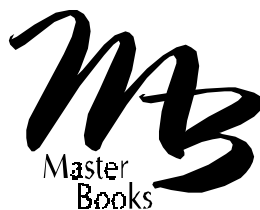
ISBN: 0-89051-377-5 Library of Congress: 2002105389

Ozone illustrations on page 101 are courtesy of NASA Goddard Space Flight Center Scientific Visualization Studio.

Printed in the United States of America

Please visit our website for other great titles:
www.masterbooks.net

For information regarding author interviews, please contact
the publicity department at (870) 438-5288.





Contents



Unit One: Spaceship Earth and the Web of Life

| | | |
|------------|---|----|
| Chapter 1: | Building on the Right Foundation; Seeing the 4 Cs | 5 |
| Chapter 2: | Ecosystems and Biogeography | 10 |
| Chapter 3: | Biomes | 16 |
| Chapter 4: | Aquatic Ecosystems | 24 |

Unit Two: The Environment: Abiotic Factors

| | | |
|------------|--|----|
| Chapter 5: | Light and the Rhythms of Life | 31 |
| Chapter 6: | Temperature, Water, and Minerals | 36 |

Unit Three: The Community: Biotic Relationships

| | | |
|-------------|-------------------------------------|----|
| Chapter 7: | Food | 45 |
| Chapter 8: | Energy Flow | 52 |
| Chapter 9: | Population Balance | 60 |
| Chapter 10: | Population Growth and Control | 68 |
| Chapter 11: | Succession | 74 |



Unit Four: The Individual and the Species in the Ecosystem

| | | |
|-------------|---|----|
| Chapter 12: | Niches, Habitats, and Adaptations | 85 |
| Chapter 13: | Symbiosis | 92 |

Unit Five: Mankind in the Biosphere

| | | |
|-------------|---|-----|
| Chapter 14: | Pollution | 99 |
| Chapter 15: | Energy Problems | 106 |
| Chapter 16: | Preservation and Human Population | 114 |

| | |
|----------------|-----|
| Index | 127 |
| Glossary | 130 |



1

UNIT ONE:

SPACESHIP EARTH AND THE WEB OF LIFE

Earth was created as a “garden of delight.” It was not a corrupt place in the beginning. In this unit, we’ll learn what happened to our home to cause bad things to happen, what’s in store for our planet, and what we need to be doing in the meantime. We’ll explore some of the different “rooms” of our home and find out about the flora and fauna in each.

Building on the Right Foundation; Seeing the 4 Cs

If you don't live in the country, I hope you have a yard, school grounds, or park nearby, where you can watch flowers blooming, dragonflies chasing each other, or little birds learning how to fly. Maybe there's a pond, or even a ditch, where you can play with the turtles or watch tadpoles sprout legs and grow into frogs.

You may have thought that the building where you live is your home.

But God meant for the whole world to be our home! He created a garden of "delight" (the word *Eden* means "delight") as the home for our first parents, Adam and Eve. God told them and all living things to "multiply and fill" all the wonderfully different "rooms" or environments in our marvelous garden home, the earth.

Ecology is the "study of" (-logy) our "home" (*eco-* or *oikos* in Greek).

Ecologists study the plants and animals on earth and their environments.

To get the most enjoyment from our home, we need to

MYSTERIES OF LIFE

1. Did God create bad things?
2. Why is there pain, death, and suffering?
3. What does the future hold for earth?

Can You Provide the Explanations?

know where the different rooms are; how the lights, plumbing, heating, and air conditioning work; where the power comes from; where to find the food; and how to take care of it all. In this book, I plan to take you on a tour of your fabulous home and teach you how it works and how to take care of it — all so you can enjoy it to the fullest and thank God for giving you such a wonderful place to live.

two chapters tell us how God created a perfect world. There was no pain, suffering, disease, or death, and no animals or people killing each other. God created all living things working together in perfect peace and harmony, and He told our first parents to “till and keep” (Gen. 2:15) the earth as a “garden of delight.”

But in Genesis 3, we learn that our first parents did something that people have been doing ever

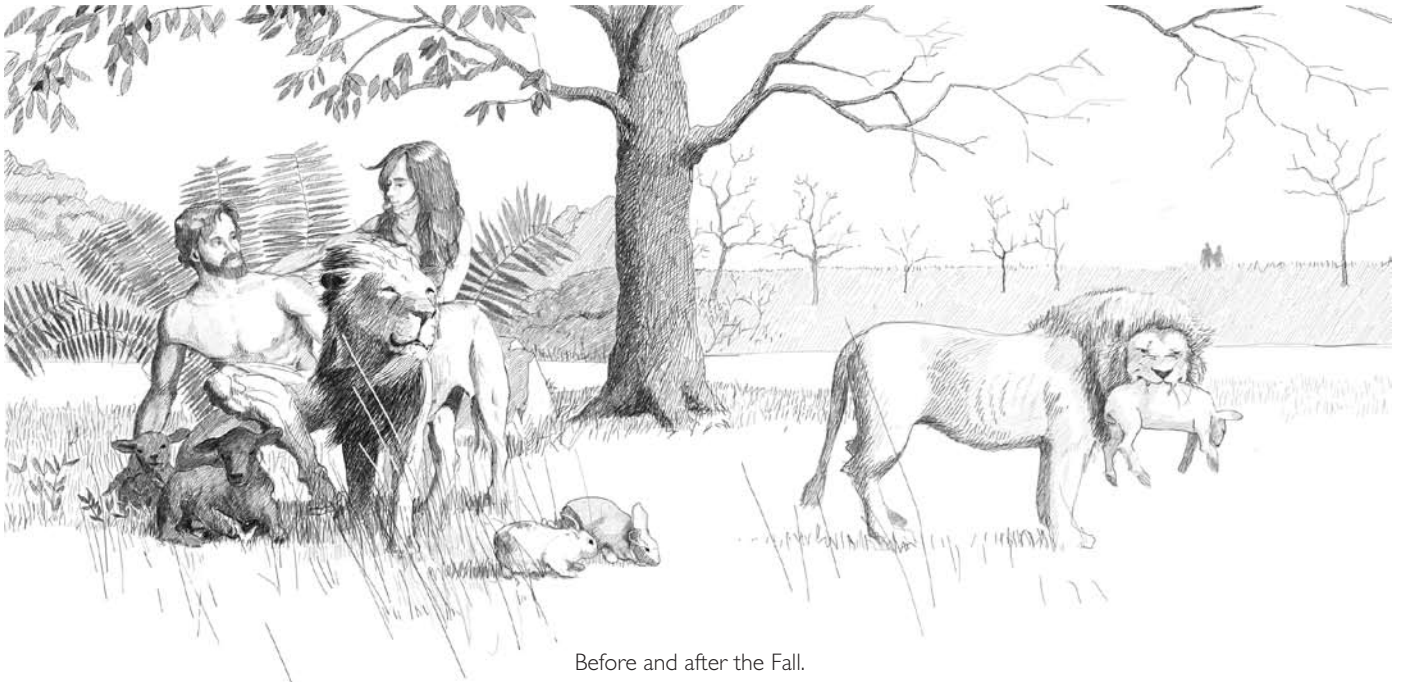


Wait a minute, you might be thinking. Sure, flowers and birds and tadpoles are wonderful. But I've been bitten by mosquitoes and scared by poisonous snakes, and I've heard that people have been killed by bears in Yellowstone Park and have had their arms bitten off by alligators in the Florida Everglades. People are always talking about pollution and overpopulation, the ozone hole and cancer, and how global warming is going to make the earth too hot. If God made the world such a wonderful place for us, why do all these terrible things happen?

The Bible has the answer. The answer is in Genesis, the first book in the Bible. The first

since. Like us, they acted selfishly. They disobeyed God. They thought they knew better than God what was right and wrong, what was best for themselves and their world. They rebelled and rejected both God's love and God's Word. In other words, they sinned.

Human sin corrupted (ruined) the world that God had created “very good.” Now, mixed in with the beauty and design that tell us about God's wonderful creation, we find the pain, suffering, disease, and death that remind us of human sin. In fact, human rebellion brought so much violence and corruption into our



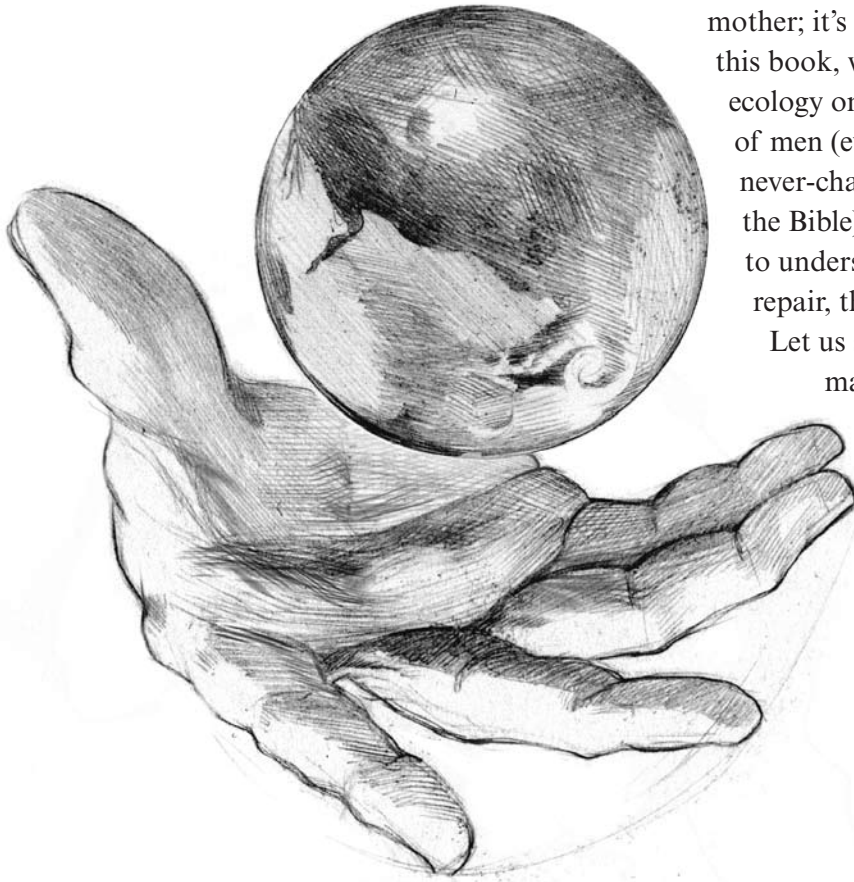
world that God sent a worldwide Flood that destroyed all the dry land animals and all the people, except those who accepted God's grace and were saved in the ark with Noah. The corruption of human sin and the catastrophe of Noah's flood dramatically changed the world from the way God made it at creation.

Creation followed by **corruption** and **catastrophe** — that's the bad news. The good news is the "fourth C," Jesus **Christ**. God loved us too much to leave us and our world to suffer under sin. He sent His only Son, Jesus Christ, who died for our sin and rose to give us new life, rich and abundant, now and forever (Romans 6:4). And Jesus is coming again to make all things new, a "new heaven and new earth" (2 Pet. 3:13), where "the wolf and the lamb will lie down together" (Isa. 65:25), and we'll live again in perfect peace and joy.

Creation — Corruption/Catastrophe — Christ: a perfect world (1) created by God, (2) ruined by mankind, (3) destroyed by the Flood, and (4) restored by Christ. We'll need to understand this biblical record of the earth's past, present, and future to understand ecology. There are things right with our world that must

be preserved and protected, and there are some things wrong that need to be set right. God's stewardship command to our first parents was to **till and keep**, to preserve and protect, to cultivate the promise in each wonder God created. But where things have gone wrong, then, following the example of Christ who healed the lame and blind and restored the withered arm, we need to "heal and restore." Perhaps **heal and restore** is our new ecology command in a "fallen" (sinful) world.

There is another view. In our present fallen world, everyone can see there's pain, suffering, disease, struggle, and death. But people who believe an idea called **evolution** think that struggle and death are normal, that there never was a perfect world created without struggle and death, and there never will be a perfect world in the future that Christ restores. In fact, according to evolution (the "war of nature, famine, and death," as Charles Darwin called it), struggle and death are what made life evolve into all the forms we see today, including us, and it all happened without needing God's help! Struggle and death have been going on for millions of years,



"It's the home my Father gave me."

mother; it's the home my Father gave me." In this book, we won't build our understanding of ecology on the fallible, ever-changing words of men (evolution), but on the infallible, never-changing Word of God (Jesus and the Bible). May God grant us the wisdom to understand, and the love to care for and repair, this awesome home He's given us.

Let us serve faithfully until Jesus comes to make "all things bright and beautiful" again!

says the evolutionist, and struggle and death will continue on earth until the sun burns out and life is no more. According to evolution, the earth is our "mother," and when "Mother Nature" or "Mother Earth" dies, we die.

Evolution says it's millions of years of struggle and death until death wins. The Bible says *life* wins — new life in Jesus Christ!

Praise God, science supports the Bible, and we have reason to live in hope, not despair (1 Pet. 3:15). Even so, a lot of people choose to believe evolution, and it affects the way they view ecology. For an evolutionist, man is just another animal, with no special place in God's plan, and constant struggle to the death, not interdependence and cooperation, is the rule of "nature red in tooth and claw."

But a song my friend Kenny Kirchhavel wrote puts it this way: "The earth is not my

EXPLANATIONS

1. God called His original creation "very good."
2. These "bad" things did not exist until sin and corruption.
3. Christ is returning to make all things new.



Questions

Building on the Right Foundation; Seeing the 4 Cs

1. God created our home, the earth, as a “garden of _____” (the meaning of the word “Eden”).
2. What word means “the study of [our] home”?
3. If God created our home in peace and harmony, why do we have mosquitoes, disease, death, and disaster?
4. God’s original stewardship ecology command was to “till and _____”; in our fallen (sin-ruined) world, the command, following Christ’s example, might be to “heal and _____.”
5. Catastrophe, Christ, Corruption, Creation: Put this alphabetized list of the “four Cs” of earth history in correct order from first to last.
6. Associate each of the following with one of the “four Cs” of earth history:
 - a. billions of dead thing (fossils) buried in rock layers laid down by water all over the earth
 - b. struggle, disease, and death
 - c. a perfect world in the past with no pain, suffering, or death
 - d. a perfect world in the future, with no pain, suffering, or death
7. What belief says that time, chance, struggle, and death will go on for “millions of years” until finally death wins?
8. What book says that life wins when Christ comes to restore peace and joy forever?

