



God Made **ANIMALS**

Science/Worldview | 5-7 Grade

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Generations
PASSING ON THE FAITH

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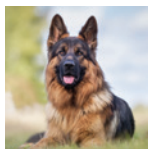
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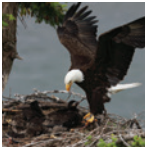
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INTRODUCTION



This course will represent a paradigm shift in the way that the student understands science. A biblical worldview perspective of science always puts God at the center. The purpose of science is to enjoy God in the context of His creation and praise Him for His marvelous works.

Thus, this course will provide devotional reading in many Scriptures throughout as we introduce the animal creation to the students. There will be many opportunities provided for prayer and singing of praise. These elements are core to a Christian view of science. As the teacher/parent disciples the child in the study of science, we hope the student develops a Godward view of science and all of life.

If education will be truly effective, the student must be well aware of the purpose of the study throughout. Hardly a page of the text should go by without the student realizing the high significance and purpose of the study. For the Christian, the purpose of science is absolutely clear. It is for praise

and dominion. We glory in God's nature and His works, and we seek to fulfill our role in ruling over the natural world (as the Lord commanded man to do at the beginning).

If there is a clear integration of praise and life application on every page, the material will be much better retained. The perpetual spewing of disconnected and purposeless facts in education does little for retention. When science is given meaning and purpose on every page, the student will be much more likely to retain the material and apply it in a meaningful way in his life.

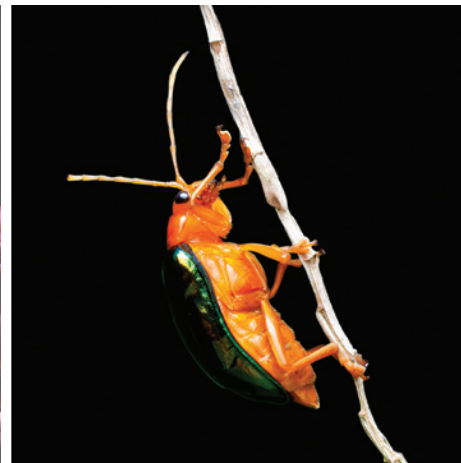
There must be an integration of the material the student is learning into real life. Great efforts have been taken to provide suggestions on how this might be done. Laboratory work and experiments are interesting and helpful, but they are not enough. The student must find ways to take the scientific knowledge he has picked up and apply it to his own life, to his own home and garden, and to his own community.

GOD MADE ANIMALS

For the 6th grade student, Generations introduces a biblical worldview into the field of science in the most winsome way possible. Captured in this introduction to animal biology are the most amazing facts and the most interesting facets of God's creation. The course is filled with Scripture and with a sense of wonder and praise, which is only fitting for a Christian child's

education. Prayers of praise and hymns will play an important part in the course. Critical elements of the biblical worldview in the scientific field are laid out to counter the false view of science that has become increasingly destructive in the present day.

Included in this course are the world of vertebrates, invertebrates, warm-blooded animals, cold-blooded animals, and



insects including the bombardier beetle, the butterfly, the spider, the mosquito, the dung beetle, the house fly, the silkworm, grasshoppers, the honeybee, the leech, the octopus, the jellyfish, the penguin, the chicken, the crow, and the pigeon, as well as the wonderful world of fish and mammals.

Also covered in this course is basic genetics, basic taxonomy, the basics of bird

flight, animal domestication, and real-life science application opportunities for the student. The student is introduced to man's responsibility to take dominion over insects, birds, fish, and domesticated animals as one of the most critical elements of science (from a biblical perspective).



Johannes Kepler
(1571-1630)



Chapter 1

SCIENCE FROM A BIBLICAL WORLDVIEW

The four and twenty elders fall down before him that sat on the throne, and worship him that liveth for ever and ever, and cast their crowns before the throne, saying, Thou art worthy, O Lord, to receive glory and honour and power: for thou hast created all things, and for thy pleasure they are and were created. (Revelation 4:10-11, KJV)

Science is the study of God's created world. When we study God's world, we are looking at how God does things.

Henry Ford built one of the first cars over one hundred years ago. If you were to take apart Henry Ford's first car, and look at each piece of it, you would learn something about Henry Ford.

Our God has made this world all around us. When we study the sun, the stars, the rivers, the oceans, the trees, the plants, and the animals, we learn something about God.

More than anyone else, Christians should be eager to study science. The greatest scientists in the past have been Christians. It



Sir Isaac Newton (1642-1727)

is these men and women who have made the most progress in good and helpful fields of science through the years. The following is a short list:

Bacteriology

Louis Pasteur (1822-1895)

Calculus

Isaac Newton (1642-1727)

Chemistry

Robert Boyle (1627-1691)

Computer Science

Charles Babbage (1792-1871)

Dynamics

Isaac Newton (1642-1727)

Electrodynamics

James Clerk Maxwell (1831-1879)

Electromagnetics

Michael Faraday (1791-1867)

Electronics

John Fleming (1849-1945)

Fluid Mechanics

George Stokes (1819-1903)

Physical Astronomy

Johannes Kepler (1571-1630)

Thermodynamics

Lord Kelvin (1824-1907)

Systematic Biology

Carolus Linnaeus (1707-1778)

Science taught by worldly-minded people is very different from science taught by Christians. We look at science differently in the following ways:

1. Christians believe that God is the cause of everything in the universe. When you see a beautiful sunset, you need to see this as God's handiwork. When your dog gives birth to a litter of eight little puppies, you need to see this as a work of God too.

Unbelieving scientists do not believe that God created the world. They do not believe that God's hand is still involved in all of His creation. That is why they would reject the possibility of miracles.

The unbelieving scientist does not believe that a personal God made the world. He thinks it is all an accident. And so, he studies the world like an ant walking across a painting. He does not see the beauty of it and the wonder of it. If the



A litter of puppies



Carolus Linnaeus (1707-1778)

creation is an accident, like spilled milk on a floor, then there is no beauty in it. Science becomes boring when there is no personal God who has made all these things.

2. As Christians, we believe that we are not the first to learn this knowledge. We are only learning things that God has known all along. God knows everything, and we do not know very much. He is the original Teacher, and He shares His knowledge with us through creation.
3. From Scripture, we also learn that God has hidden things in the world for us to discover.



Sunset in Hawaii

It is the glory of God to conceal a matter, but the glory of kings is to search out a matter. (Proverbs 25:2)

Imagine for a moment that your grandfather had hidden some treasures in the backyard. Would you search for these treasures? If you were to run out to look for these treasures, you would have to believe several things. You would have to believe that:

- a. Grandfather exists, and he really did hide these things in the backyard.
- b. Grandfather is good, and the discoveries will not be bad for you.
- c. Grandfather has not made it too difficult or impossible for you to find the treasures.

We must believe these same things about God and His world. He really does exist and He has hidden things in His world



Glacier National Park in Montana, USA

for us to discover. Somewhere He has hidden the cure for cancer and other things. But He challenges us to put effort into finding these things. We believe that there is order in the world and that there are solutions to our problems, because we believe that God is good. We believe His promises.

4. We can study science because we know God is in control of the world and He will not let it get out of control. If we let a ball drop out of our hands 10,000 times in a row, we could watch it fall to the ground. And we can be sure that it will fall again the 10,001st time because God has made natural laws and patterns to prevent chaos in our world. When Noah came out of the ark, the Lord promised him (and us) that the world would run by a regular pattern.

Then Noah built an altar to the Lord, and took of every clean animal and of every clean bird, and offered burnt offerings on the altar. And the Lord smelled a soothing aroma. Then the Lord said in His heart, "I will never again curse the ground for man's sake, although the imagination of man's heart is evil from his youth; nor will I again destroy every living thing as I have done."

"While the earth remains,
Seedtime and harvest,
Cold and heat,

Winter and summer,
And day and night
Shall not cease." (Genesis 8:20-22)

5. Most importantly, true science must be done in humility and the fear of God. When scientists become proud of their own knowledge, they begin to destroy science.

The fear of the LORD is the beginning of knowledge,
But fools despise wisdom and instruction.
(Proverbs 1:7)

6. Christians have a different purpose for studying science than unbelieving scientists. Christian students and Christian schools are completely different from non-Christian education.

We study the world in order to praise God, to give glory to God, and to thank God for what He has done. This is the most important reason to study science. When we look at God's world, we are wowed. We are impressed. We want to stand up, lift our hands in the air, and sing a praise song.

*Praise God from whom all blessings flow!
Praise Him all creatures here below!*

Thus, singing needs to be an important part of the science class. You will not hear songs of praise coming out of ungodly science classrooms. This is one of the biggest mistakes that non-Christian schools make when they teach science. They forget to sing praises to God.

7. Another reason for Christians to study science is because God has assigned this task to us. He has given us a reason in that we are to rule over His world. He wants us to make good use of His creation. Of course, God owns the whole world. And He rules the world. But He wants us to take care of His world. He wants us to make good use of the trees and build houses. He wants us to make good use of the iron ore in the ground and make cars and airplanes out of it. He wants us to take care of the animals so they won't all die.

So God created man in His own image; in the image of God He created him; male and female He created them. Then God blessed them, and God said to them, "Be fruitful and multiply; fill the earth and subdue it; have dominion over the fish of the sea, over the birds of the air, and over every living thing that moves on the earth." (Genesis 1:27-28)

Unbelievers will study science so they can learn things and feel proud about themselves.

They want humans to evolve into some smarter or some better creature, and they think this will happen if they learn enough about science. But they cannot define what a better creature would look like. Some believe science will keep the human race from disappearing and dying out. They have not considered the problem of sin against God. They do not trust that God has an eternal purpose for us.

So you see, there are big differences between how unbelievers study science and how Christians study science. As we study science or teach science, we do not believe that we are accidents. We are not accidents of nature trying to discover or create more accidents. We have ultimate purpose to study science. God has placed ultimate meaning and significance upon our own lives. There is great meaning to everything we study. There is great purpose to every part of our lives. And, the greatest purpose of all is to glorify the God who made us and everything around us!

The heavens declare the glory of God;
And the firmament shows His handiwork.
Day unto day utters speech,
And night unto night reveals knowledge.
There is no speech nor language
Where their voice is not heard.
(Psalm 19:1-3)



Pray

Take a moment and thank the Lord for the following:

1. That He has given us eyes, ears, hands, and brains to discover His world.
2. That He has hidden wonderful secrets in the world for us to discover.
3. That He is wiser than we are.

Sing

How Great Thou Art!

O Lord my God, when I in awesome wonder
Consider all the worlds Thy hands have made,
I see the stars, I hear the rolling thunder,
Thy power throughout the universe displayed:

[Refrain]

Then sings my soul, my Savior God, to Thee:
How great Thou art! How great Thou art!
Then sings my soul, my Savior God, to Thee:
How great Thou art! How great Thou art!

When through the woods and forest glades I wander
And hear the birds sing sweetly in the trees,
When I look down from lofty mountain grandeur,
And hear the brook and feel the gentle breeze;

And when I think that God, His Son not sparing,
Sent Him to die, I scarce can take it in,
That on the cross, my burden gladly bearing,
He bled and died to take away my sin.

When Christ shall come with shout of acclamation
And take me home, what joy shall fill my heart!
Then I shall bow in humble adoration,
And there proclaim, My God, how great Thou art!

(If you do not know the hymn, you may listen to a version of the hymn on the Internet with supervision and sing along with it.)

Watch

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View of the
Milky Way Galaxy





Chapter 2

GOD'S AMAZING CREATIVE POWER



Thus says the LORD who made it, the LORD who formed it to establish it (the LORD is His name): "Call to Me, and I will answer you, and show you great and mighty things, which you do not know." (Jeremiah 33:2-3)

Look around you and ask yourself, "Who made all of this? Where did all of this come from?"

Worldly scientists do not believe that God created the world and everything in it. They think that it appeared by accident. Have you ever created anything useful by accident? If you kicked dirt into the air would it turn into a duck that walks around, eats, and gives birth to little ducklings? If you spilled milk on the floor, do you think it would turn into a bicycle? Of course, it is silly to think that useful things were created by accident. Some scientists have come up with silly ideas similar to this because they do not want to believe in

God. They do not want to believe that God created the world.

How can we know for certain the truth about the beginning of the world? How did all of this get here in the first place? Of course, the best way to learn about this is to get the story from somebody who was there when the world began. God was there at the beginning, and He tells us how the world started in His Word. It is the first verse in the Bible:

In the beginning God created the heavens and the earth. (Genesis 1:1)

The Days of Creation

The first chapter in Genesis lays out the six days in which God created the world and everything in it.

Creation Day 1 (Genesis 1:1-5)

God created light and He made the heavens and the earth. The heavens mean space outside of the material earth. The earth is the globe with some sort of matter.

Creation Day 2 (Genesis 1:6-8)

God created the sky with clouds and moisture in the air.

Creation Day 3 (Genesis 1:9-13)

God created dry land and the oceans. God made all plant life.

Creation Day 4 (Genesis 1:14-19)

God created the moon, the sun, and the stars in the sky.

Creation Day 5 (Genesis 1:20-23)

God made fish and birds. He also made flying insects, and he gave these animals the ability to reproduce (or have babies).

Creation Day 6 (Genesis 1:24-31)

God created all the animals that live on dry land. And finally, God made man in His own image.





Creation Out of Nothing

The first thing you need to realize about creation is that God made the world out of nothing. Where there was no water, suddenly water appeared. Where there were no fish, suddenly there were fish swimming around in the water.

Humans make houses out of wood. They make cars out of iron ore which they dig out of the ground. They make highways out of rocks, sand, and limestone. No human being can make something out of nothing. We need raw materials to put together the things



Clownfish

we make. So how did God make the world out of nothing? The Bible tells us that he did it by the Word of His power. He spoke, and it came into being.

By the word of the LORD the heavens were made:
And all the host of them by the breath of His mouth. (Psalm 33:6)

Now that is power. If you could speak and create something out of nothing, what a powerful voice that would be! God's Word is powerful. When Jesus spoke to Lazarus who was dead in the tomb for four days, what did He say? "Lazarus, come forth!" Then, what happened?

And he who had died came out bound hand and foot with graveclothes, and his face was wrapped with a cloth. Jesus said to them, "Loose him, and let him go." (John 11:44)

When God speaks, He has a very powerful voice. The Son of God speaks and dead people rise up and walk out of the graves. He spoke at the beginning and created the sun, the moon, the stars, the animals, and man himself. This is how the world came into being.

God created all things out of nothing with one exception. He created Adam

out of the dust of the ground. This was a tremendous miracle too! It was still an act of creation. When the Lord Jesus was at the wedding in Cana about 2,000 years ago, He made wine out of water. This was a miracle as well. Imagine what it would take to turn a book into a stone! That would be supernatural. . .or something that is not natural. . .something that is not in accord with normal natural laws. You would have to rearrange the atoms (or the basic building blocks of matter) that make up the book to turn it into a stone. You would have to create a certain kind of matter that did not exist before. That is what it took to create man. When Jesus turned the water into wine, He performed an act of creation (John 2:1-11). When Jesus made hundreds of loaves and fish out of one little boy's lunch, He performed an act of creation. He added to the matter that existed in the world already, and thereby created more bread and more fish out of nothing (John 6:1-14). These were small miracles conducted about 2,000 years ago, which helped to prove that Jesus really was the Son of God who had created the whole world out of nothing 4,000 years earlier.

Let them praise the name of the LORD,
For He commanded and they were created. (Psalm 148:5)

The Appearance of Age

Then God said, "Let the waters abound with an abundance of living creatures, and let birds fly above the earth across the face of the firmament of the heavens." So God created great sea creatures and every living thing that moves, with which the waters abounded, according to their kind, and every winged bird according to its kind. And God saw that it was good. (Genesis 1:20-21)

When you cut down a tree, you can count the growth rings and figure out the age of the tree. Usually, each ring on the inside of the tree represents one year. When you look at a man, you know that he is over twelve years old. It took awhile for him to grow tall like that. What if a scientist examined a grown tree on the first week of creation? Of course, he would count the rings and determine the tree to be more than one year old. In fact, the trees were already bearing fruit on the day God made them. The growth rings were necessary to give them strength and sturdiness. During the first week, the



Tree rings

trees looked like they had been growing a long time, for God had made them with an appearance of age.

When Adam was created, he was a grown man. He looked like he was more than twelve years old. He most definitely did not look like a 1-year-old baby boy. Eve looked like she was more than twelve years old also. We do not know if they had belly buttons. The belly button is the port for the umbilical tube, which carries food to the baby from the mother when the baby is in the womb. Adam and Eve were never carried in their mother's womb. They were created by God as adults.

Some people ask the question—which came first, the chicken or the egg? Did the chicken come out of the egg? Or did the

chicken exist first and then produce an egg? The answer to this question is easy. God created the chicken as a grown animal ready to lay eggs at the beginning. The chicken came first!

Even the stars in the sky appeared all of a sudden. And although they were so very far away and their light would take a long time to reach the earth, it was already there visible on the earth!

This all goes to show that God can do things which we cannot do. His power and wisdom are amazing. Our only response must be to praise and worship Him!

Chicken sitting on a nest



Pray

Take a moment and pray a prayer of praise to God for:

1. His powerful voice which brings about such powerful things.
2. His amazing creation.
3. His wisdom and goodness.

Sing

I Sing the Mighty Power of God

I sing the mighty pow'r of God, that made the mountains rise,
That spread the flowing seas abroad, and built the lofty skies.
I sing the wisdom that ordained the sun to rule the day;
The moon shines full at His command, and all the stars obey.

I sing the goodness of the Lord, that filled the earth with food,
He formed the creatures through the Word, and then pronounced them good.
Lord, how Thy wonders are displayed, where'er I turn my eye,
If I survey the ground I tread, or gaze upon the sky.

There's not a plant or flow'r below, but makes Thy glories known,
And clouds arise, and tempests blow, by order from Thy throne;
While all that borrows life from Thee is ever in Thy care;
And everywhere that man can be, Thou, God, art present there.

(If you do not know the hymn, you may listen to a version of the hymn on the Internet with supervision and sing along with it.)

Watch

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German
Shepherd



Chapter 3

GOD MADE ANIMALS

Then God said, "Let the earth bring forth the living creature according to its kind: cattle and creeping thing and beast of the earth, each according to its kind"; and it was so. And God made the beast of the earth according to its kind, cattle according to its kind, and everything that creeps on the earth according to its kind. And God saw that it was good. (Genesis 1:24-25)

In this course, we will study God's marvelous creation of the animal kingdom. Animals are amazing! Humans cannot create anything so complicated as an animal. Some scientists have created a robot dog, but it is nothing like a real dog.

A number of companies today make robotic dogs, but they are far more boring than real dogs. These creations of man are not alive. If little children had a choice between playing with a real dog and a robotic dog, which do you think they would choose?

On February 23, 2019, a dog named Eurie broke the record for catching a frisbee.



Robotic dog

He grabbed the frisbee out of the air at 83 yards. No robotic dog can perform such an amazing feat!

Robotic dogs do not have a reproductive system. That means that they cannot give birth to little robotic dog babies. When they break down, somebody has to fix them. When a real dog gets sick, however, its body heals itself because of the system God has designed for that purpose. God's creation is more amazing than man's creation!

When an ant crawls across a great work of art, do you think it is impressed by the art? Does the little ant tell his friends about this great work of art? Of course not! He doesn't recognize the great beauty and the creative skill behind it. We humans, however, have the ability to recognize wisdom and beauty. When we are bored at God's amazing creative work, it is because we are not thinking. We are not thinking about God, and we are not thinking clearly about His creation. When we do not wonder at God's work, we are acting like ants crawling across a great work of art. Every time you watch a dog or some other animal, think of the wisdom and the

power of God to create such a thing. Ask yourself, "Could I make an animal like this?" Think about the Creator when you look at the creation. Ask the Holy Spirit to help you to wonder at God's stunning creation.

What Is an Animal?

Out of the ground the LORD God formed every beast of the field and every bird of the air, and brought them to Adam to see what he would call them. And whatever Adam called each living creature, that was its name. So Adam gave names to all cattle, to the birds of the air, and to every beast of the field. But for Adam there was not found a helper comparable to him. (Genesis 2:19-20)

When God created Adam, He gave him the responsibility to name the animals. This is basic science, and our Creator and God calls us to this task. We are to observe the creation and distinguish one thing from another. God wants us to notice the difference between a dog and a cat. These are two kinds of animals, and they cannot mate to produce a cat-dog. The Lord doesn't want us to mix up the different kinds of animals in our minds.

It is difficult to know exactly how many different **kinds** of animals are in the world—animals that are incapable of cross-breeding. What modern scientists refer to as "**species**"

Prayer: Take a moment and pray that the Holy Spirit would open your eyes to see the beauty and glory of God's creation, especially when it comes to the animal creation.

can often cross-breed with each other. So far, researchers have found about 1.2 million different species of animals in the world. Some believe there are as many as 8 million total. So we still have some work to do if we are going to find all of these animals and give them names. This course will begin to describe various kinds of animals.

But before we get to defining an animal, we should break down all of God's creation of living things into categories. There are six main categories or kingdoms (the scientific term) of God's living creation:

1. Kingdom Monera

These are very small, single-cell life forms (sometimes forming in colonies). They do not have membranes around the nuclei of the cells. Examples of these include streptococcus and staphylococcus. These bacteria cause terrible infections in the human body. Blue-green algae are also included in this group. God made the living Monera.

2. Kingdom Protista

These are very small, single-cell life forms (sometimes forming in colonies). Examples include Algae and Protozoans (like amoebas). The amoeba reproduces by dividing itself in half. God made these living Protista.

3. Kingdom Fungi

These are single-cell life forms, but they combine in large colonies, forming mushrooms and molds. They typically get

their food from dead plants and animals. Some fungi live off of living things (humans and animals). God made the living Fungi.



Amanita muscaria, a toxic mushroom

4. Kingdom Plantae

These are usually called plants (which include trees). These living growing things are made up of tissue (a bunch of cells that interlock and function together in teamwork). Plants



Venus flytrap

make their own food using chlorophyll. The cells in plants are surrounded by stiff cell walls, and the cell walls in trees are very thick. Most plants do not move, with the exception of the Venus flytrap and a few others. God made all the plants in the world.

5. Kingdom Animalia

Animals are made of tissue as well. Unlike plants, animal cells do not have the stiff walls surrounding them. They do not manufacture their own food, and so they have to hunt for food. Most animals move, except for sponges. Kingdom Animalia is broken up into two varieties. There are those animals in whom

exists the breath of life (Genesis 7:15). And then there are those animals that do not have lungs (in which does not exist the breath of life). Here are examples of animals from the simpler to the more complex:

- a. Sponges
- b. Jellyfish
- c. Tapeworms
- d. Roundworms
- e. Earthworms
- f. Squids and octopi
- g. Clams and oysters
- h. Snails and slugs
- i. Starfish
- j. Crabs and shrimp
- k. Dragonflies, cockroaches, grasshoppers, moths, butterflies, fleas, beetles, flies, ants, and bees
- l. Centipedes
- m. Spiders, scorpions, and ticks
- n. Sharks and rays
- o. Salmon, pike, perch, trout, eels, and minnows
- p. Amphibians like toads, frogs, and salamanders
- q. Reptiles like lizards, snakes, turtles, and alligators
- r. Birds
- s. Mammals like whales, seals, horses, rats, dogs, cats, bats, monkeys, beavers, elephants, and deer

God designed and created all of the animals in the world.

6. Kingdom Man

Man is not an animal. His body consists of tissue made of interconnected cells like animals. He also has the breath of life like certain animals with hearts and lungs. But man is uniquely different from animals in that he is made in the image of God.

The worldly scientists and even many Christian scientists do not want to separate the category of humans from the category of animals. However, the Bible does separate these two categories. Man is very different from animals.

Man is capable of a relationship with God. He is created with a sense of righteousness and morality. He can know a million times what an animal knows. Also, he was created with the responsibility to rule over the creation and take care of the earth. Animals don't do this kind of thing. If you left your dogs in the house all by



North American Beaver

themselves for three months, what would it look like when you came home? Imagine the mess you would find!

Man can speak. He can communicate on a very complex level using many forms



Burgundy Snail

of communication. Man is also capable of emotion. He is capable of appreciating God and appreciating God's creation. He can appreciate art. He creates art. Animals cannot do any of this.

Then God said, "Let Us make man in Our image, according to Our likeness; let them have dominion over the fish of the sea, over the birds of the air, and over the cattle, over all the earth and over every creeping thing that creeps on the earth." So God created man in His own image; in the image of God He created him; male and female He created them. (Genesis 1:26-27)

Man is created with honor, such that he can walk upright. Animals cannot walk upright on two feet for very long. Psalm 8 explains how God has placed an honor upon humans:

When I consider Your heavens, the work of Your fingers,
The moon and the stars, which You have ordained,
What is man that You are mindful of him,
And the son of man that You visit him?
For You have made him a little lower than the angels,
And You have crowned him with glory and honor.
You have made him to have dominion over the works of Your hands;

You have put all things under his feet,
All sheep and oxen—
Even the beasts of the field,
The birds of the air,
And the fish of the sea
That pass through the paths of the seas.
(Psalm 8:3-8)

God Made Animals After Their Kind

Then God said, "Let the earth bring forth the living creature according to its kind: cattle and creeping thing and beast of the earth, each according to its kind"; and it was so. And God made the beast of the earth according to its kind, cattle according to its kind, and everything that creeps on the earth according to its kind. And God saw that it was good. (Genesis 1:24-25)

God made animals after their kind, and He made some animals to reproduce *after their kind*. This is basic to understanding God's creation. As already mentioned, a dog and a cat cannot produce little baby dog-cats. However, various breeds of dogs can interbreed and produce puppies. There are over 300 official breeds of dogs in the world today, and each of these different breeds can interbreed with the others. For example, a **cocker spaniel** can breed with a **poodle**, and produce little **cockapoos**. **Wolves**, **foxes**, and **coyotes** can breed with dogs and produce



Cockapoo

is because God has limited the genetic information in the dog. The genetic code is like a collection of instructions that comes from the dad dog and the mom dog which determines what the dog is going to look like. So when a cocker spaniel and a poodle come together to produce puppies, the instructions that come from the cells of the dad dog and the mom dog describe what the puppy dogs are going to look like. And sure enough, the puppies look kind of like a cocker spaniel and kind of like a poodle! The puppies sure don't look like pigs or cats. They look like dogs. And the dogs that are produced do not have the ability to breed with another kind of animal.

wolf-dogs, fox-dogs, and coy-dogs. We don't do this much, but **zebras** and **donkeys** can breed to produce a "zonkey." Nevertheless, God has ordered the animal creation such that there are limits to this interbreeding. A dog cannot breed with a cat.

Non-Christian evolutionists do not believe that God created animals after their kind, as He told us in His Word. Evolutionists think that when different animals within a certain species (or kind) breed many times over, they will eventually produce a brand new kind of animal. Christians, however, disagree. Dogs can breed for 100,000 years, and they will always produce dogs. They could never produce some other creature—like some weird looking pig or cat. That



Zonkey

Definitions

A **Species** is a certain variety of animal that may be described by its features, but may be capable of reproducing with another species.

A **Kind** of animal is that category of animal created by God which is incapable of reproducing with another kind.

A **Cell** is the smallest living thing. It is alive. Some cells have a nucleus and some do not. All cells have a cytoplasm that is held inside of a membrane of some kind. Cells were named after the place where Christian monks would gather to pray. It is where life abides.

Cytoplasm is the gooey stuff inside of the cell which makes it alive. It is the most creative, most complicated, and most amazing stuff of life. Scientists will never be able to explain the complicated stuff, which includes proteins, DNA, RNA, Amino Acids, and so forth.

God Made Some Animals with the Breath of Life

The waters prevailed fifteen cubits upward, and the mountains were covered. And all flesh died that moved on the earth: birds and cattle and beasts and every creeping thing that creeps on the earth, and every man. All in whose nostrils was the breath of the spirit of life, all that was on the dry land, died. So He destroyed all living things which were on the face of the ground: both man and cattle, creeping thing and bird of the air. They were destroyed from the earth. (Genesis 7:20-23)

After creation, Adam, the first man, disobeyed God and ate the forbidden fruit. Adam and Eve's son Cain killed his brother Abel. Later generations of men and women became very evil and continued in the pattern of Cain. Finally, after about 1,600 years, God was tired of the evil in the world. He sent a worldwide flood which destroyed all the people except Noah and his family. Also, all of the land animals were destroyed except those which Noah kept with him on the ark.

Here in Genesis chapter 7 the Lord provides a category of animals which he refers to as animals "in whose nostrils was the breath of the spirit of life." These are probably animals which have a heart

and lungs. This is an important difference between two varieties of animals. Bugs and fish do not have lungs into which they take in oxygen from the air. However, birds and land mammals do breathe in the air.

No Death Before the Fall

According to Genesis 1:29-30, animals did not feed on each other before the Fall. They were created to eat vegetation. Even the dinosaurs, the lions, and the bears would eat vegetation. Of course, bears still eat vegetation along with some animal meat. Those animals in whom was the breath of life did not die before Adam ate the forbidden fruit.

When man fell into sin, everything changed. Animals began to eat other animals, and even humans came to eat meat later on, after the flood (Gen. 9:2-3). Thus, the animal creation bears the burden of Adam's fall into sin. With the Fall, death came into the world. Romans 8 reminds us that the creation is groaning under this curse that man brought on the world. The whole creation can hardly wait for the new heavens and the new earth where all death will be done away with.

When your pet dog or cat dies, most likely you will be very sad. That is because this death and dying comes as part of the curse that visited the world when Adam disobeyed God. One day, this curse will be gone and Jesus will make everything like new.

For the creation was subjected to futility, not willingly, but because of Him who subjected it in hope; 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. Not only that, but we also who have the firstfruits of the Spirit, even we ourselves groan within ourselves, eagerly waiting for the adoption, the redemption of our body. (Romans 8:20-23)



The Fall brought death to animals

Pray

Take a moment to praise God for the 1.2 million varieties of animals that He has created. This is amazing. Every animal is very complex, and no human could ever make an animal. As you praise God, try to list as many animals as you can think of.

Sing

All Things Bright and Beautiful

[Refrain]

All things bright and beautiful,
All creatures great and small,
All things wise and wonderful:
The Lord God made them all.

Each little flow'r that opens,
Each little bird that sings,
He made their glowing colors,
He made their tiny wings.

The purple-headed mountains,
The river running by,
The sunset and the morning
That brightens up the sky.

The cold wind in the winter,
The pleasant summer sun,
The ripe fruits in the garden,
He made them every one.

The tall trees in the greenwood,
The meadows where we play,
The rushes by the water,
To gather every day.
He gave us eyes to see them,
And lips that we might tell
How great is God Almighty,
Who has made all things well.

(If you do not know the hymn, you may listen to a version of the hymn on the Internet with supervision and sing along with it.)

Watch

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Chrysaora melanaster jellyfish



Chapter 9

GOD MADE FISH

Then God said, "Let the waters abound with an abundance of living creatures, and let birds fly above the earth across the face of the firmament of the heavens." So God created great sea creatures and every living thing that moves, with which the waters abounded, according to their kind, and every winged bird according to its kind. And God saw that it was good. (Genesis 1:20-21)

Every living being needs to stay together without falling apart or collapsing on itself. When He created everything, God designed the animals with various ways of keeping their bodies held together in one piece. He made animals with backbones (vertebrates) and animals without backbones (invertebrates). He made some animals with a jelly-like substance and some animals with an **exoskeleton**, such as insects and beetles. This is an external structural system that holds the little creature together.



Crab, an example of a creature with an exoskeleton

Vertebrates like fish are held together by a skeleton made of **bone** and **cartilage**. Your nose and outer ears are built up on cartilage. If you twist your nose and ears, you can tell that cartilage is more flexible than bones.

Bones serve another important purpose for all vertebrates. Our Creator God knew that the critical organs of the body would have to be protected, so He used the rib bones to protect the lungs and heart. He also made the **vertebral column** to protect the **spinal cord**, and the **skull** to protect the **brain**. Sometimes we hear of a person who has suffered a terrible accident, and their vertebral column and skull is cracked or broken. The injured person then may have to be confined to a wheelchair or to a bed for the rest of his life.

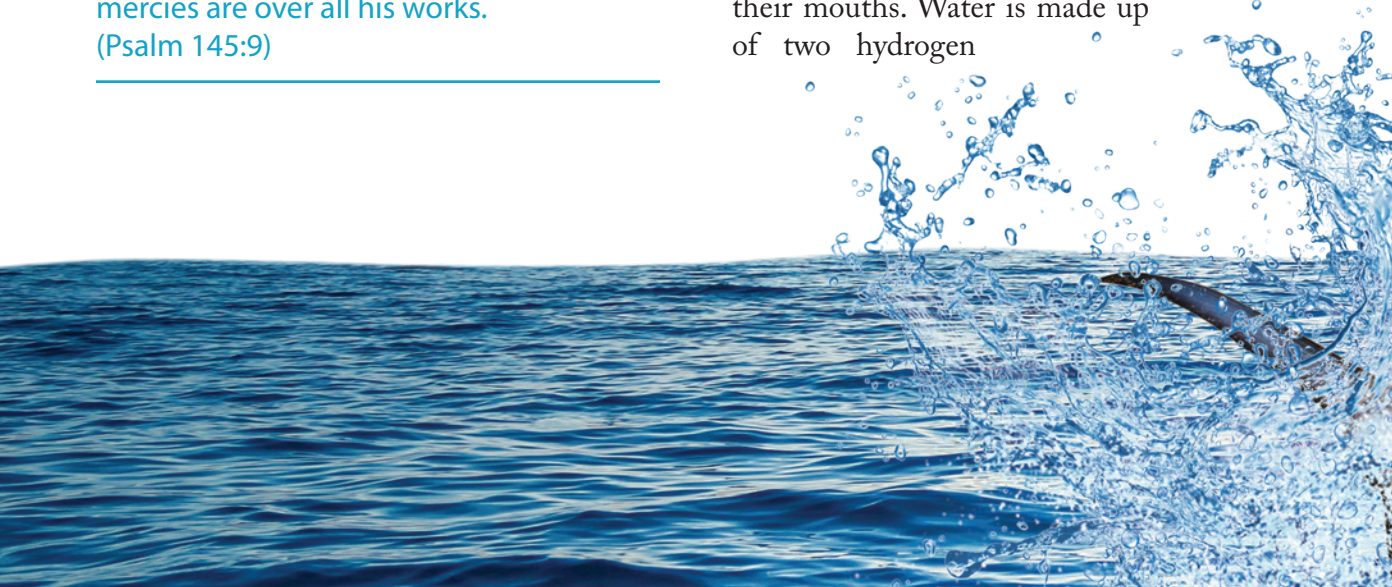
Praise God for the carefully designed skeletal system He provided for us out of His kindness and concern for our lives and the lives of his animals.

The LORD is good to all: and his tender mercies are over all his works.
(Psalm 145:9)

God Made 3.5 Trillion Fish

The Lord our God made fish and birds on the fifth day of creation. If you have ever gone swimming in the ocean, you know that the underwater world is a whole other world. It is teeming with life—an estimated 3.5 trillion fish. That's about 500 fish for every person on earth. This underwater creation is a charming, beautiful, mysterious world. Much of this part of God's creation has yet to be explored by humans. Surely, our Creator wanted a different ecosystem made for the delight of men and for His own glory.

The most outstanding thing about fish is that they are able to breathe underwater. Most of us cannot hold our breath for much longer than 2-3 minutes—the world record is 24 minutes for a human. But fish can swim underwater indefinitely. That is because they receive oxygen very differently than humans do. Humans breathe in air and their lungs will absorb the oxygen and expel the other parts of the air they don't need. However, fish will take in water through their mouths. Water is made up of two hydrogen

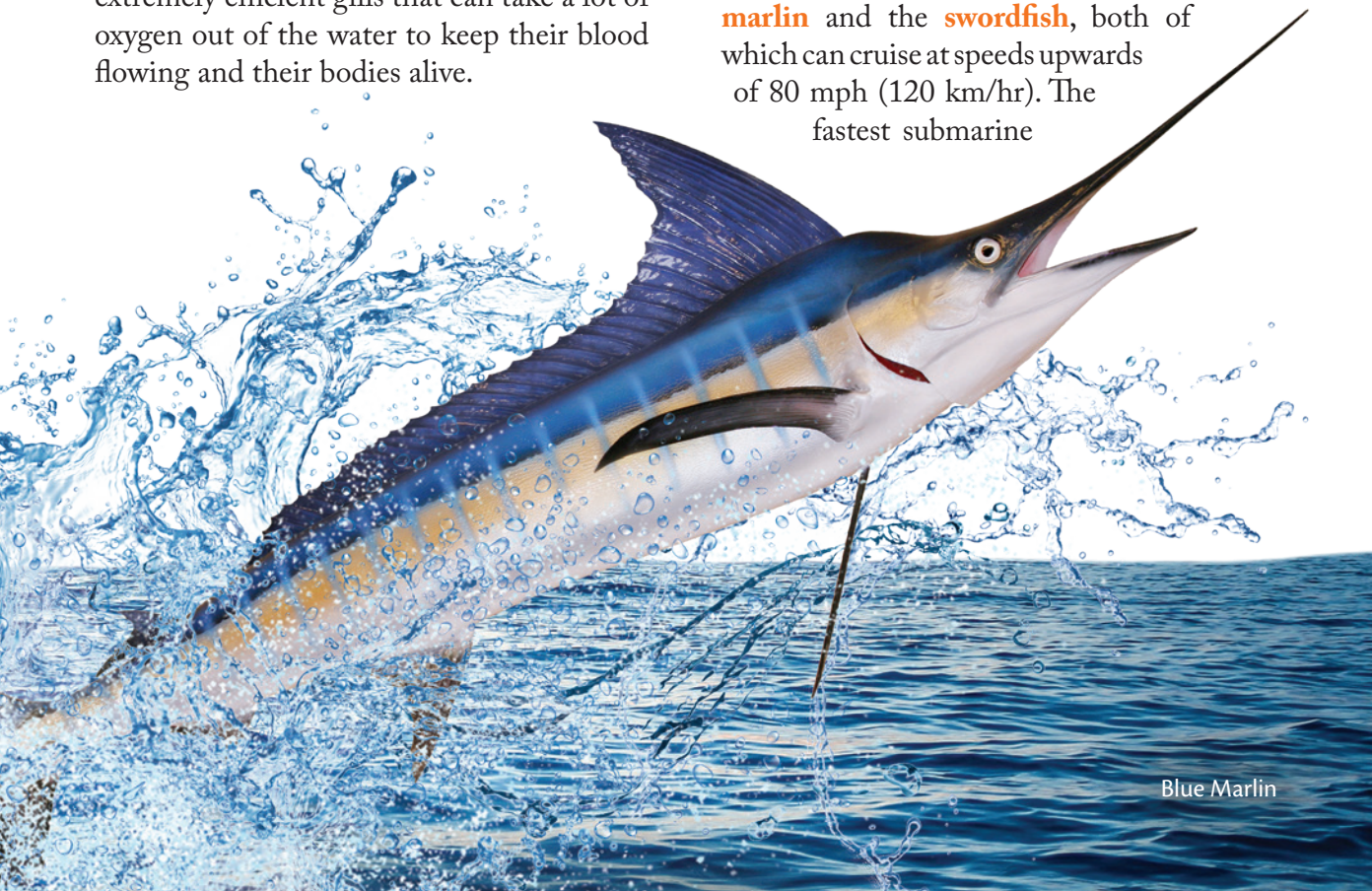


atoms and one oxygen atom (and other substances like salt). God has designed feathery instruments in the fish gills to filter the oxygen out of the water. Meanwhile, the fish's heart is pumping blood into the gills, where it picks up the oxygen and distributes it through its body. There is far less oxygen in water than in air. Actually, the little bit of oxygen fish get out of the water would be equivalent to only one tenth of the oxygen available in the air on the top of Mount Everest. Those mountain climbers who make it up Mount Everest usually must rely on tanks of oxygen brought with them. To compensate for this deficiency of oxygen in water, the Lord has provided fish with extremely efficient gills that can take a lot of oxygen out of the water to keep their blood flowing and their bodies alive.

God Made Fish to Swim

Fish are excellent swimmers, because the most wise Creator has designed their skeletons with maximum flexibility. Humans cannot manipulate their whole skeletal system with such ease and grace. However, fish will flex their bodies such that they can propel themselves almost effortlessly through the water. The Lord of creation made fish with five kinds of fins—the pectoral, the pelvic, the dorsal, the anal and the caudal fins. Typically, fish will gain the most speed by swishing the caudal (tail) fin back and forth. The pelvic and pectoral fins were designed to steady the fish in the water, to prevent them from rolling over.

The fastest fish in the world are the **marlin** and the **swordfish**, both of which can cruise at speeds upwards of 80 mph (120 km/hr). The fastest submarine



Blue Marlin



Walking Catfish



Mudskipper



Flying Fish

ever developed by man can only move at 51 mph (83 km/hr). God's technology is hard to match by the greatest minds of men.

God made some fish super special, surely to confuse scientists who believe all this nature came about by chance. The **batfish** walks on the sea floor. The **walking catfish** can survive outside of the water for several days by a special respiratory system. This fish can "walk" on its fins from one water source to another, and thereby survive even when its swamps, ponds, and rice paddies dry up. This catfish was first found in Southeast Asia, but it has made its way into other countries. The **mudskipper** hops along across land on its fins. This fish can breathe through its skin and throat, as long as the skin stays moist. It is found along the coast of eastern Africa and India.

The **Hawaii goby fish** has been seen climbing up sheer rock faces to get to the top of waterfalls. He uses his mouth and little sucker appendages on his belly to work his way up the cliff.

Our blessed Creator has also made some fish to fly. He equipped the **flying fish** with fins designed like bird's wings, with the same aerodynamic characteristics. The record flight for this amazing fish was 45 seconds, and they have flown as far as 1,300 feet (400m), reaching altitudes of 20 feet (6m) in the air!²⁵



Defense Mechanisms

For the creation was subjected to futility, not willingly, but because of Him who subjected it in hope; 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. Not only that, but we also who have the firstfruits of the Spirit, even we ourselves groan within ourselves, eagerly waiting for the adoption, the redemption of our body. (Romans 8:20-23)

Animal death came because of man's fall into sin in the Garden of Eden. Now, all of

the material creation, including the animal kingdom, is groaning and travailing in this situation. There is something wrong with a world full of death, where blood is to be found in tooth and claw. In a world where animals hunt and kill each other for food, God still demonstrates His kindness by providing His smaller creatures with a "fighting chance."

Flight for the flying fish is one of the hundreds of defense mechanisms God built into fish. This is the way these little fish could escape the largest predators in the ocean. **Coral-reef fish** are colored just like the coral they hang out with, and the **spotted ray** looks like sand and pebbles. God programmed the DNA of these fish with the coloring schemes that could blend in with their surroundings so that predators have a hard time spotting them.



Porcupine Fish

Sometimes various sea creatures will protect each other from harm. For example, the **clownfish** is protected by the sea

anemone's stinging tentacles. In return, the clownfish leaves a few scraps of food for the anemone. God has designed the clownfish such that he isn't bothered by the poisonous sting of the anemone.

The **boxer crab** and the **hermit crab** also depend on the sea anemone for their defense. The boxer crab will grab two anemones in his hands and wave them around to defend himself from attackers.

The **porcupine fish** lives up to its name. The Lord has equipped this fish with spines that will stick out as it blows itself up like a balloon. This fish's orange coloring also makes it look quite ominous to any would-be assailants.

Stingrays





The **surgeonfish** has a lancet-type blade that can slice up its predators. The blade is at first invisible until the fish whips it out like a switchblade knife. The **stingray** can grow to an astounding ten feet in width, and weigh 660 lbs (300 kg). This powerful creature defends itself with a stinger that can kill humans as well as other predators. The most poisonous fish of all is the **stonefish**. It lives mostly on the bottom of the ocean, usually hard to distinguish from coral and rock. Even its eyes are designed to look like algae growing on a rock. One sting from this fish can kill you. The **lion fish** are also equipped with spiny rays through which they can shoot venom into predators.

How God Has His Animals Help Each Other

The **imperial shrimp** is so lazy and slow that he would rather catch a ride with the incredibly slow **sea cucumber** or a **sea slug** than to move on his own. In exchange for the ride, he will clean up parasites and algae growing on the cucumber or slug.

The Lord of Creation also teamed up the pistol shrimp with the **goby fish**. The **blind pistol shrimp** digs a burrow in the sea floor to locate food. While it digs, the goby plays bodyguard for the shrimp, threatening any would-be predators. In fact, the shrimp will keep one of his feelers on its friend. If a



Blue-streak Wrasse

predator approaches, the goby fish flicks its tail and both creatures rush down the hole together. The goby fish enjoys the advantage of hiding out in the hole dug by the shrimp, where it can lay its eggs out of sight. The ocean currents are such that the shrimp has to stay on the job digging out the hole again and again.

In certain locations on the coral reefs, **blue-streak wrasses** have set up cleaning stations for a wide variety of fish who want their bodies, gills, and teeth cleaned. Of course, everybody who comes through the cleaning station knows the unspoken rule. You don't eat the wrasses! The very carnivorous **Oriental sweetlips** fish swims

up to the cleaning station and opens his mouth wide for the wrasse to do his cleaning work. The wrasse swims into the big mouth



Barracuda

to clean out the plaque and parasites in the fish's mouth and teeth, without fear that the larger fish would consume him. Even the aggressive **barracudas** submit to the cleaning wrasses. In turn, the wrasses get to eat the parasites they clean out. Only God could have ordered such a beautiful relationship in this awesome creation!

When animals help each other like this, it is called **sympiosis**. These complex arrangements could never have come about by chance evolutionary processes. Both of these animals must have been created on the same day with this mutual relationship in mind. Ungodly evolutionists still want

to believe that these creatures developed independently, millions of years apart. Of course, that is impossible if they were created for one another.

Only God could create these fish, and assign certain tasks to them as He did for the fish that swallowed Jonah.

Now the LORD had prepared a great fish to swallow Jonah. And Jonah was in the belly of the fish three days and three nights. (Jonah 1:17)



Mandarin Fish



The Beautiful Underworld

He has made everything beautiful in its time. Also, He has put eternity in their hearts, except that no one can find out the work that God does from beginning to end. (Ecclesiastes 3:11)

If you ever go snorkeling in the ocean waters, you will discover an amazing world of beauty and color. Because God is Himself clothed with strength and beauty, He brings both of these together in His creation. The ocean contains the mighty whales and sharks, but there we also find incomparable beauty.

The **mandarin fish** is the most beautiful fish in the world. Look, but don't touch—this fish is also highly poisonous, and smelly. The

bright colors, the poison, and the smell make up a defense system from predators. This gorgeous fish is found in the Pacific ocean, from the coast of Japan down towards the coast of Australia. Then there are the ornate **Banggai cardinalfish**, the **symphysodon discus**, the **blueface angelfish**, and the



Archerfish

spectacular **moorish idol**. Many of these fish end up in aquariums where humans will sit and stare with amazement for hours at the beauty reflected in these creatures of our God.

The Lord, Our Creator “Feeds All Flesh”

All animals are equipped to do one thing especially, and that is to eat. God has built into them the instinct to look for food. Eating is a full-time job for most animals. They are always on the lookout for food, whether it be vegetation or other smaller animals in the food chain. The **archerfish** uses its mouth like a squirt gun. He swims about, searching above him for insects in the air or hanging out on branches. Then, he lets loose a jet of water, and the fly or moth falls directly into his mouth. The **African tiger fish** is extremely coordinated, and it can be seen leaping out of the water to grab a bird with a mouth fully armed with sharp teeth.

The very long, saw-like snout of the **sawfish** is used to locate prey hiding under the sea floor. This high-tech instrument, designed and built by our Creator God, can detect slight movements, even the heartbeat of an animal. The fish picks up the electric fields emitted by its prey hiding as far away as 16 inches (40 cm). This sensory system provides a three-dimensional image for the sawfish.

There is never a bite too big to chew for the **black swallower**. God made this toothy, big-mouthed fish able to scarf down



Sawfish

a meal ten times his own size. Sometimes called the “Boa Constrictor of the Sea,” this 10-inch (25 cm) fish lives 10,000 feet under the ocean. How can he eat so much? Researchers think that the tissues of his stomach stretch so thin that you can pretty much see everything going on inside of it! If he overeats, his prey decomposes inside of his stomach and produces gases which float the black swallower to the surface of the sea.

Oh, give thanks to the LORD, for He is good!
 For His mercy endures forever. . .
 Who gives food to all flesh,
 For His mercy endures forever.
 (Psalm 136:1,25)

Pray

Give thanks to the Lord for His 3.5 trillion fish in the seas and oceans. Praise Him for the beauty, the mystery, and the careful order created in this massive ecosystem. Praise Him for your favorite fish. Praise Him for His goodness and wisdom that created defense systems and mobility systems (flight, crawling, and swimming). Praise Him for the amazing coordination He built into the goby fish and the blind shrimp. Praise Him for the blue streak wrasses who clean up so many fish.

Sing

All Praise to God Who Reigns Above

All praise to God, who reigns above,
The God of all creation,
The God of wonders, pow'r, and love,
The God of our salvation!
With healing balm my soul he fills,
The God who every sorrow stills,
To God all praise and glory!

What God's almighty pow'r hath made
His gracious mercy keepeth;
By morning dawn or evening shade
His watchful eye ne'er sleepeth;
Within the kingdom of his might,
Lo, all is just and all is right,
To God all praise and glory!

I cried to him in time of need:
Lord God, O, hear my calling!
For death he gave me life indeed
And kept my feet from falling.
For this my thanks shall endless be;
O thank him, thank our God, with me,
To God all praise and glory!

The Lord forsaketh not his flock,
His chosen generation;
He is their refuge and their rock,
Their peace and their salvation.
As with a mother's tender hand
He leads his own, his chosen band,
To God all praise and glory!

Ye who confess Christ's holy name,
To God give praise and glory!
Ye who the Father's power proclaim,
To God give praise and glory!
All idols underfoot be trod,
The Lord is God! the Lord is God!
To God all praise and glory!

Then come before his presence now
And banish fear and sadness;
To your Redeemer pay your vow
And sing with joy and gladness:
Though great distress my soul befell,
The Lord, my God, did all things well,
To God all praise and glory!

(If you do not know the hymn, you may listen to a version of the hymn on the Internet with supervision, and sing along with it.)

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