

The sea is a place of mystery, where animals big and small play hide and seek! Can you imagine a shark hiding in the light? What about a clownfish in plain sight? Don't believe it? Then, sink into the deep blue sea with Jennifer Evans Kramer and Ocean Hide and Seek! Surround yourself with the vibrant ocean illustrations of Gary R. Phillips. The ocean is an old, old place, and the exotic animals in the depths have learned to adapt to their surroundings to survive. Can you find the creatures hidden on every page? Or will you, too, be fooled by an ancient, underwater disquise?

It's so much more than a picture book . . . this book is specifically designed to be both a fun-to-read story and a launch pad for discussions and learning. Whether read at home or in a classroom, we encourage adults to do the activities with the young children in their lives. Free online resources and support at www.ArbordalePublishing.com include:

- · For Creative Minds as seen in the book (in English & Spanish):
- ° Animal Hide and Seek
- Hiding in plain sight
- Pretending to be something else
- Now you see me, now you don't - Light from inside
- Red fish. blue fish
- Transparency
- Wearing a mask
- Shape up
- Watch out!
- Darkness and light Animal classification
- Food for thought
- Teaching Activities:

- Bubbles

- **Reading Questions**
- ° Mathematics
- Language Arts
- [°] Geography
- ° Science ° Coloring Pages Interactive Quizzes: Reading Comprehension,
- For Creative Minds, and Math Word Problems
- English and Spanish Audiobooks
- Related Websites
- · Aligned to State Standards (searchable database)
- · Reading Counts! Quizzes
- · Lexile and Fountas & Pinnell Reading Levels

eBooks with Auto-Flip, Auto-Read, and selectable English and Spanish text and audio available for purchase online.

Thanks to Nancee Hunter, Oregon Sea Grant Director of Education at Hatfield Marine Science Center: Dr. Michael Vecchione of the NMFS National Systematics Laboratory at the Smithsonian National Museum of Natural History; and Allison Byrd, Education Coordinator for the Consortium for Ocean Leadership for verifying the accuracy of the information in this book.

Jennifer Evans Kramer loves spending time outdoors and believes children make the very best nature guides. Jennifer graduated with a BA from Emory University and a JD/MBA from Georgia State University. At Emory, she took classes in Child Psychology and Education, and worked with children at Fernbank Elementary, The Phoenix School, and the St. Stephens Infant School in Canterbury, England. Her favorite time was recess, though she was hopeless at jump rope and hide-and-seek! It was also at Emory that Jennifer obtained her NAUI scuba certification. Her first dive trip was to a rock quarry in Alabama, where there were no sea animals. Since then, she has snorkeled and dived off Maui, the Caymans, and the coast of Cozumel. She loves to talk about coming face-to-face with a white tipped reef shark! In addition to *Ocean Hide* and Seek, Jennifer has also written Good Luck Charlie and The Ninth Dragon. Jennifer resides in Georgia, with her husband, four children, and a standard poodle that thinks he is Elvis.

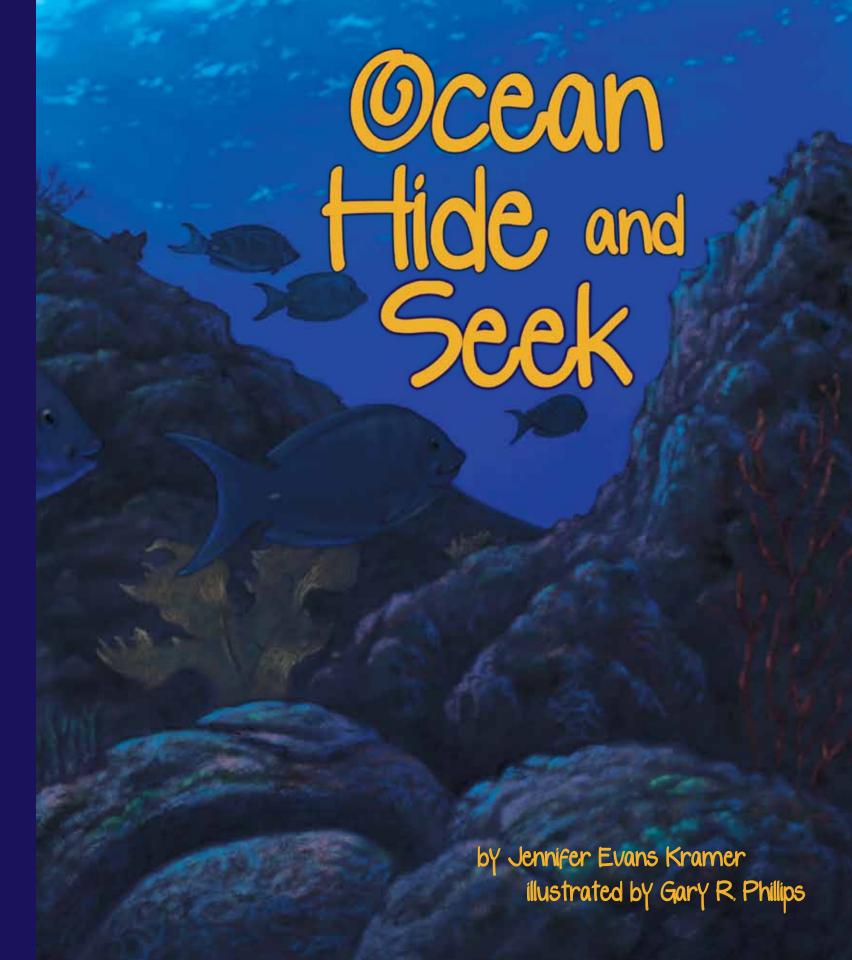
Gary R. Phillips has been a freelance illustrator for 22 years. He has illustrated for numerous clients in both the editorial and children's illustration markets, receiving an award for "Verse Page Illustrator of the Year" from Highlights for Children magazine in 2003. Gary has several books to his credit, including Animals are Sleeping, 86 Years, The Legend of the Red Sox, The Naptime Book, Tiny Little Engine, and Santa's Little Sleigh. He also taught as an adjunct professor for several semesters. Gary lives outside of Philadelphia with his wife, two daughters, and two Siamese cats. He loves running, being out in nature, and drawing wherever he goes.

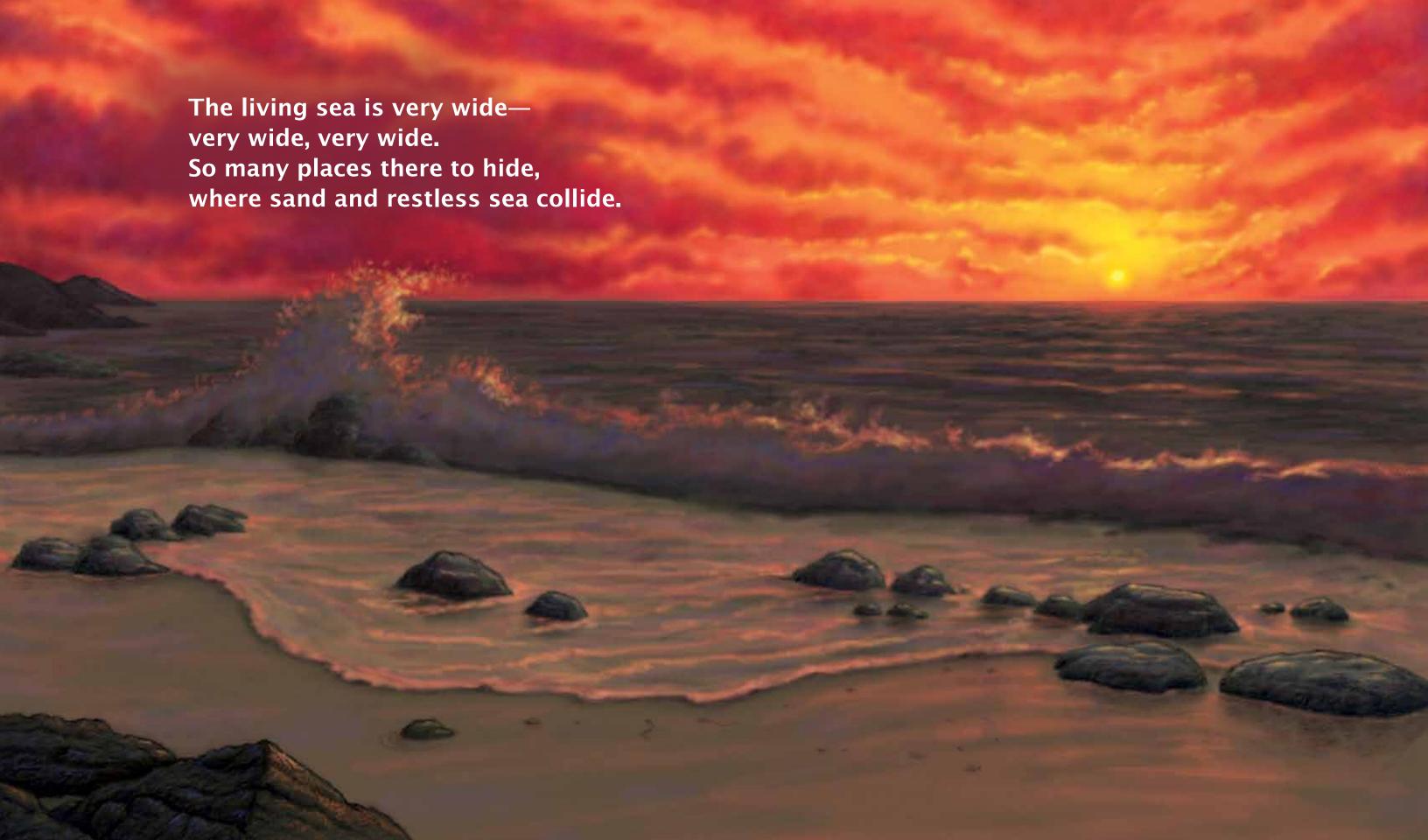


Jennifer Evans Kramer

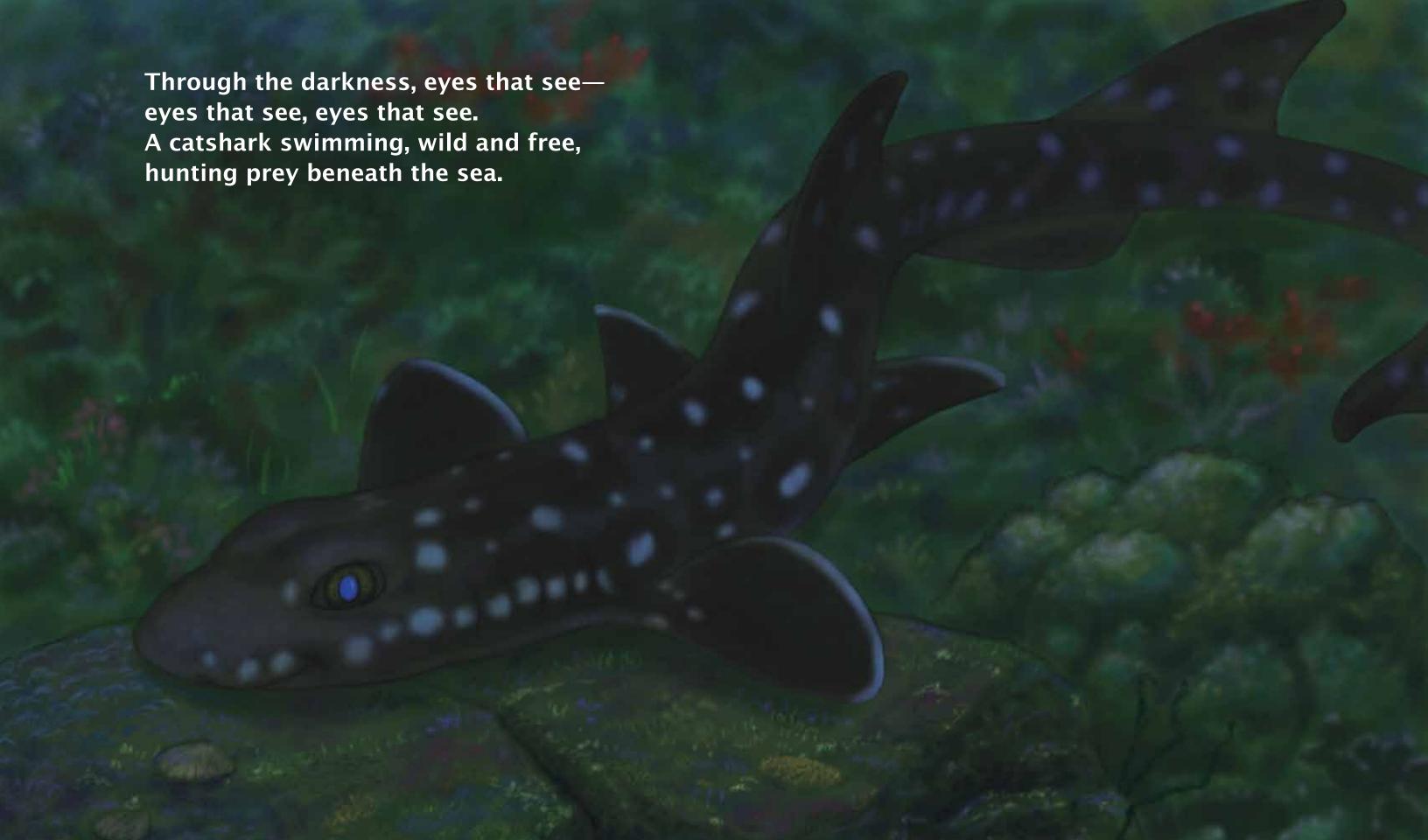


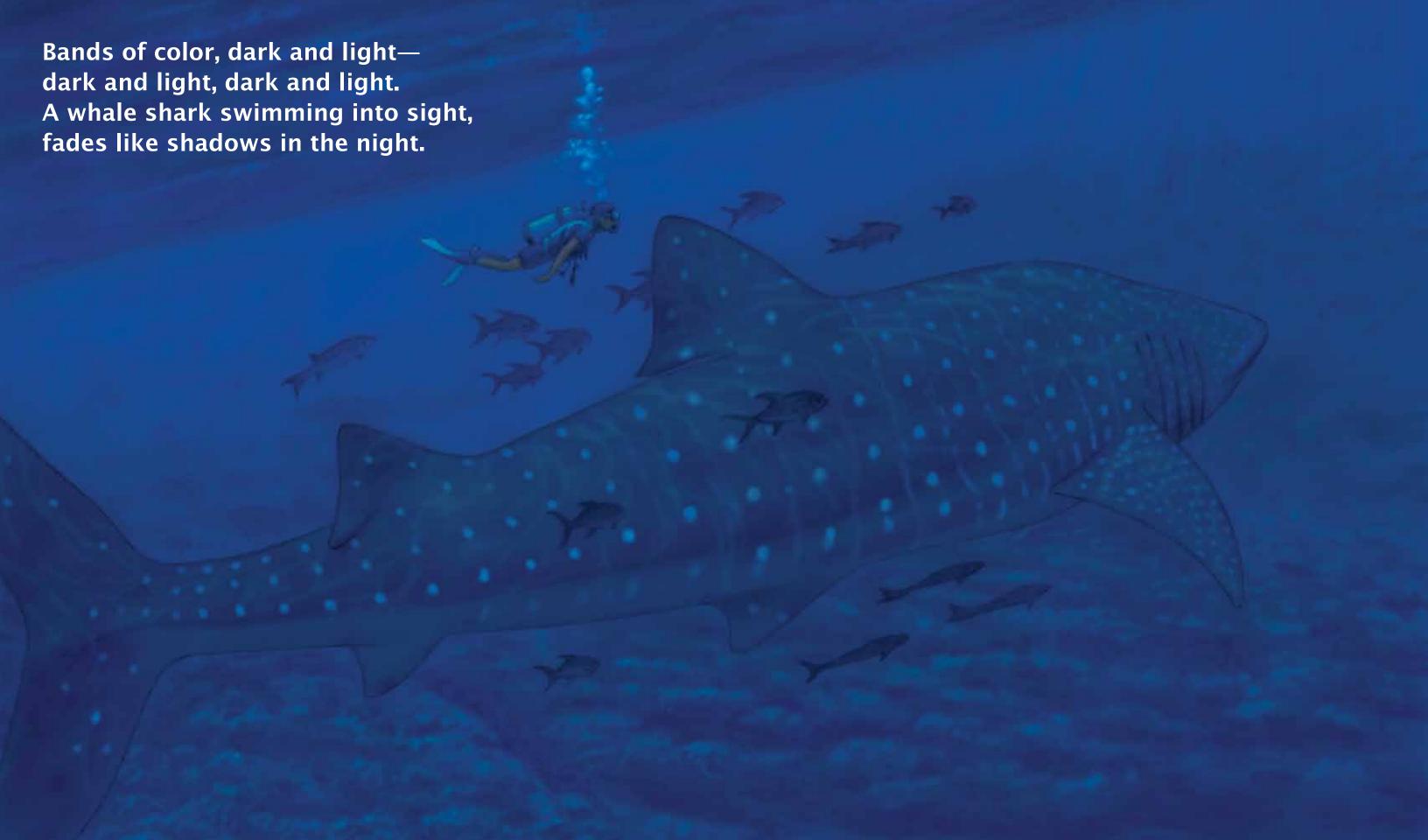
Gary R. Phillips











For Creative Minds

The "For Creative Minds" educational section may be photocopied or printed from our website by the owner of this book for educational, non-commercial uses. Cross-curricular "Teaching Activities," interactive quizzes, and additional resources are available online. Go to www.ArbordalePublishing.com and click on the book's cover to find all the links.

Animal Hide and Seek

Do you like to play hide and seek? For animals, this game is a matter of life or death. Prey must hide or risk becoming another animal's next meal. Sometimes a predator hides and waits for its meal to come swimming by! Either way, camouflage helps these animals survive.

Look for the picture of the animal listed in bold to see the camouflage description.

Hiding in Plain Sight

When an animal matches the color of its environment, it is called *cryptic* camouflage. Many fishes and sharks have colors that blend into the water. But what about spots and stripes? On land, a tiger's stripes help it blend in with the tall grass and break up the tiger's outline. This makes it hard to see how big it is. This is known as disruptive coloration. Many ocean animals have spots or stripes, from fish (including clownfish) to eels, rays, and even catsharks. If you are as big as a whale shark, it is good to have both!

Pretending to be Something Else

If it looks like a sea snake and slides like a sea snake, it must be a sea snake right? Not always. Mimicry is when one animal copies how another animal looks. When attacked by grouper, a mimic octopus can look like the deadly sea snake. The grouper avoid it at all costs. Wouldn't you?

Transparency

Being as clear as glass (like a **jellyfish**) is another important way to avoid being seen.



Red Fish, Blue Fish

Have you ever wondered why some fish are brightly colored? On land, the colors red and yellow are easy to spot. That's why they are used for things like traffic lights and street signs. But coral reefs can be a rainbow of colors—a perfect place for a queen parrotfish

In deep water, red can also be hard to see because red is the first color to be absorbed at the surface. In shallow water at night, red looks gray. Soldier or squirrel fish are red.

Light from Inside

Counter illumination is when an animal lights up its own body from the inside, so the outline of its dark body can't be seen. Squid and some types of fish, like the deep-sea bristlemouth, can seem almost invisible to other animals hunting in the waters below.

Bubbles

Some parrotfish make a clear, mucus "sleeping bag" cocoon at night. The mucus covers their scent, making it more difficult for predators to find them.



Some animals make their own camouflage. *Masking* is when an animal uses something in its environment to hide itself. Some crabs hide by sticking bits of kelp to their shells. Talk about playing with



For some animals, hiding is not just about color—it's about shape too. The leafy sea dragon has leaf-like flaps of skin and floats among sea plants. Stonefish, as you might guess, look like stones. Pipefish look like the blades of grass in which they live.

Darkness and Light

Sharks, whales, and rays have dark backs and light bellies. This is known as counter shading. To animals swimming above them, the dark color blends in with the dark water below. To animals swimming below them, the light color blends in with the sunlit water above.

Watch Out!

Sometimes bright colors warn of danger. Orange and white clownfish can often be found among the tentacles of the sea anemone. The sea anemone looks like a harmless plant but is really an animal with a poisonous sting. The clownfish makes special mucus to protect itself from the sting. Other sea creatures are not so lucky! The bright orange of the clownfish may warn other animals to stay away from the anemone's poison!



Animal Classification

Fish are not the only type of animals that live in the ocean. Just as there are many different classes of animals that live on land, there are many classes of animals that live in the ocean.

Marine reptiles (sea turtles and sea snakes) and mammals (dolphins and whales) come to the surface to breathe the air they need. Other marine animals can get their oxygen from the water.

Fish are divided into two major groups: fish with bones and fish with cartilage (like our ears) instead of bones. Sharks and rays are examples of fishes with cartilage. Angelfish and parrotfish are examples of fishes with bones.

Invertebrates are animals without a backbone. More than 90% of all animals on earth are invertebrates. This includes **mollusks** (whelks, conchs, octopuses, clams, oysters), worms, and arthropods (insects, crustaceans, spiders), among others.

cartilage fish	bony fish	mollusk	arthropod
		5	

Food for Thought

What are some of the things you do when you hide during a game of hide and seek? You might hide in or behind something—animals do, too.

Imagine if you could change your skin color to blend into your surroundings. In fact, if you look at an Army camouflage outfit, that's what soldiers do with their clothes!

To what color would you change your skin to hide in or around . . .

water mud Snow sand rocks leaves

The author is donating a portion of her royalties to the National Marine Sanctuary Foundation. "Each footprint may be small, but together they create a trail for others to follow. Our seas are home to some of the earth's most valuable treasures, an abundance of plant and animal life that we are just beginning to learn about and understand. Once lost, these treasures may disappear forever. Education is the first step to preserving and protecting this ecosystem, and providing future generations with a priceless legacy."—JEK

To my dad, Randall Evans, who taught me to read; to my husband, Andrew, who taught me to believe; to my children, Mitchell, Patrick, Jessica & Jeffrey, who taught me to dream; and to my son's teacher, Mrs. Debbie Kelley, who inspired both me and my son to learn about one of earth's most precious resources, its oceans.—JEK

To Mom and Dad who always allowed me to swim into the depths.—GRP

Thanks to Nancee Hunter, Oregon Sea Grant Director of Education at Hatfield Marine Science Center; Dr. Michael Vecchione of the NMFS National Systematics Laboratory at the Smithsonian National Museum of Natural History; and Allison Byrd, Education Coordinator for the Consortium for Ocean Leadership for verifying the accuracy of the information in this book.

Publisher's Cataloging-In-Publication Data

Kramer, Jennifer E.

Ocean hide and seek / by Jennifer Evans Kramer illustrated by Gary R. Phillips.

p.: col. ill.; cm.

Summary: The ocean is an old, old place, and the exotic animals in the depths have learned to adapt to their surroundings to survive. Can you find the creatures hidden on every page? Includes "For Creative Minds" educational section.

Interest age level: 004-008. Interest grade level: P-3. ISBN: 978-1-934359-91-4 (hardcover) ISBN: 978-1-607180-36-4 (pbk.) ISBN: 978-1-607180-56-2 (eBook) ISBN: 978-1-607180-46-3 (Spanish eBook)

1. Marine animals--Juvenile literature. 2. Picture puzzles--Juvenile literature. 3. Camouflage (Biology)--Juvenile literature. 4. Marine animals. 5. Picture puzzles. 6. Stories in rhyme. I. Phillips, Gary R. II. Title.

QL122.2 .K73 2009 591.77 2008936037

Text Copyright © 2009 by Jennifer Evans Kramer
Illustration Copyright © 2009 by Gary R. Phillips
The "For Creative Minds" educational section may be copied by the owner for personal use or by educators using copies in classroom settings.

Arbordale Publishing formerly Sylvan Dell Publishing Mt. Pleasant, SC 29464 www.ArbordalePublishing.com



If you enjoy this book, look for other Arbordale books relating to the ocean:



Includes 4 pages of
learning activities.
Look for more free activities
online at
www.ArbordalePublishing.com