


# The Octopus Scientists: Exploring the Mind of a Mollusk

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With three hearts and blue blood, its gelatinous body unconstrained by jointed limbs or gravity, the octopus seems to be an alien, an inhabitant of another world. It's baggy, boneless body sprouts eight arms covered with thousands of suckers—suckers that can taste as well as feel. The octopus also has the powers of a superhero: it can shape-shift, change color, squirt ink, pour itself through the tiniest of openings, or jet away through the sea faster than a swimmer can follow.

But most intriguing of all, octopuses—classed as mollusks, like clams—are remarkably intelligent with quirky personalities. This book, an inquiry into the mind of an intelligent invertebrate, is also a foray into our own unexplored planet. These thinking, feeling creatures can help readers experience and understand our world (and perhaps even life itself) in a new way.

## The Octopus Scientists: Exploring the Mind of a Mollusk Details

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## From Reader Review The Octopus Scientists: Exploring the Mind of a Mollusk for online ebook

### Samantha says

I think I would have enjoyed this book more had I read it before reading "The Soul of an Octopus." Montgomery's affection for these animals comes across so strongly in that book, and I didn't get quite the same feel in this one. It's not to say this book isn't excellent, or worthy of consideration. When I finished "Soul of an Octopus," I wanted to go out and find one and have its suckers on my arms, despite screaming at the touch of a stingray in aquariums before. I didn't have the same reaction here. The pictures are gorgeous, although I would have appreciated captions on every photo. Still, it's a worthy entry in the "Scientists in the Field" series. If you're able, I would recommend the adult title over this one.

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### Michelle Stimpson says

I enjoyed the narrative style of how a group of octopus scientists conduct fieldwork, but the photographs are what make this book really special. They are stunning.

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### Linda Russo says

Very interesting. It's kind of how we communicate with aliens in sci-fi movies.

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### Amanda Brooke says

Grabbed this book at the library because my son is currently obsessed with the Kracken. It sat around the house for about a month. I read some of it - I did not know that octopuses have three hearts and blue blood - they have hemocyanin instead of hemoglobin - so I learned something. But no one else in the house cracked the book.

So when I went to return it I was informed, "do not return the kracken book. Do not check it in."

So for now it is renewed.

Another bonus feature of the book - the photography is fantastic and most of the featured scientists are women. The book is text heavy so I would suggest it to an older reader who might be thinking about a career with animals.

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### Alicia says

Having read Soul of an Octopus, I knew enough about these beautiful and mysterious creatures that it didn't take me by surprise, but again, when Montgomery has a talented photographer to bring along to amass

images of the topic, it adds a layer of awe. This book absolutely is enhanced by the underwater images of the sea and octopuses (and I learned a bit about Greek too).

As with many of these scientist in the field books, it was simply too short but she did bring us readers valuable information both about animal intelligence and conservation of the sea.

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### **Nancy says**

Sy Montgomery has written another exciting and informative book for young readers. The Octopus Scientists brings readers along on a tropical search for the illusive, intelligent octopus. Readers of other Scientists in the Field books will enjoy adding this to their collection. Adult readers of Montgomery's magical The Soul of An Octopus will enjoy the beautiful photographs and travelogue feel this book provides. All readers will come away appreciating this amazing creature.

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### **Leslie Souther says**

Summary:

This book is about octopuses and all their remarkable quirks and intelligent ways. These animals are classified as mollusks which is also the same classification as a clam. These funny and interesting creatures are full of all kinds of new and exciting ways to understand our planet.

Teaching Idea:

This book could be used for the classification of animals. The students could read this book as well as many others and see what these types of living things are classified as and what they need in order to survive. They can make a graphic organizer that lists the animals under their correct classification, The students can use this website, (<https://a-z-animals.com/reference/ani...>) for a guide.

Evaluation:

This is a great book when learning about octopuses and all their interesting ways. It will keep students engaged with all of the interesting facts as well as giving them a new perspective towards the ocean.

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### **Joan says**

The photographs in this book are spectacular! Remember when looking at the octopuses (correct spelling, not a Latin word. It is a Greek word) that the majority of the photos were taken underwater! They are so clear! The colors are amazing, but the animals themselves deserve the credit there. I had no idea how easily the octopus can change their colors, in a tenth of a SECOND! They have extremely complicated cells in layers and manipulating these different layers give you an incredible variety of coloration. Red usually means emotional, such as upset. White often means that you're looking at a relaxed octopus. OK, fascinating, right? now for the shocker: scientists think octopuses are color blind! So how do they change their colors to work as camouflage???. Octopuses are the most intelligent of the mollusk family and are pretty smart by most standards, in spite of having a smallish brain. They have a huge number of nerves running through their arms.

Although Montgomery didn't say so point blank, I sensed that this was not really a successful expedition for her. However, she did get a beautiful book out of it, so maybe that made the expedition worthwhile for her. She convinced me. I had no idea how complicated octopuses are. Hopefully they will have time to study

these even with the damage done to oceans due to climate change. Note this last sentence is my comment, not one from the book. Highly recommended as a very easy way to get a kid to be amazed and fascinated!

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### **Cheryl says**

Long, for a book marketed to children, but wonderful and thorough for all ages. Even though I'm not particularly interested in ocean themes, I was excited to read this for the group theme in Children's Books, because I love works by Sy Montgomery. This is just as engaging & fun as I thought it would be. It's also very informative; not only did I learn a lot about octopuses, but I learned a lot about what it's like to be a naturalist. There's such attention to details, for example of how it feels to 'swim' in shallow water, or what strategies to use to find the octopuses, or how much is learned by negative results... I almost felt like I was there on this island near Tahiti with Sy, photographer Keith, and the teams.

And now I love the "Scientists in the Field" series ... what a great way to inspire kids to get into a career where they can have adventures, indulge their natural curiosity, and help save the world all at the same time. I particularly appreciate the 'meet the team' spreads ... whether you want an advanced science degree or you want to be a tech or divemaster, whether you want to work with the critters in the wild or you want to use computers or other technology, there's a career for you.

Complete appendixes, including 'thank yous' to the octopuses themselves.

I would absolutely buy this whole series for a school library or for a homeschooling association, and buy individual titles as my children expressed interest in them.

Forgot to mention, I also noted that the wonderful Tracking Trash: Flotsam, Jetsam, and the Science of Ocean Motion is part of the series!

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### **LauraW says**

This is a gorgeously photographed book on a great topic. The only problem with it is that it is a bit too much for the audience that I assume it is designed for: older elementary through high school students. I like that the author introduced each of the researchers and explained how they became interested in octopuses. And it is helpful to detail the struggles that scientists have when doing field research. I must admit, however, that I skimmed many of the parts about the wonders and the beauty of the world in which the octopuses live. I was eager to hear more about the octopuses, not so much the different fish and other denizens of the deep. Still, I am enjoying these science books that I have been perusing lately.

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### **Andrea Lorenz says**

I love Sy Montgomery and I love the Scientists in the Field series. The whole series is a fantastic look into what life as a scientist is actually all about. I had no idea that octopuses were so mysterious and hard to study in the wild. I learned a ton about octopuses (and was that much more inclined to read Montgomery's adult book about the species) and about how to study ocean creatures. Two thumbs up. Give this to budding naturalists.

## Dolly says

I have really enjoyed reading Sy Montgomery's science books and this one does not disappoint. One of the Scientists in the Field books, it is great for older children and adults, too.

I have also read Dr. Montgomery's book, *The Soul of an Octopus: A Surprising Exploration Into the Wonder of Consciousness*, and watched her talk about her experiences here, and while some of the information overlaps (see p. 32), the majority of this book focuses on this expedition to French Polynesia, specifically the island of Moorea.

Big, beautiful color photographs, along with an informative but not boring narrative makes this an engaging and educational book about these wonderous cephalopods.

The description of the expedition reads like an exciting diary, with ups and downs, amazing finds and big disappointments.

One of the aspects of the octopus hunting I found to be true with my own ocean explorations is that the times when you aren't actually searching for something, but just observing the environment, are often when you see the most.

interesting quotes:

*"The ocean is the world's largest wilderness, covering 70 percent of the surface of the globe. But this vast blue territory is even bigger than it looks from land, or even from space. It's a three-dimensional realm that accounts for more than 95 percent of all livable space on the planet - and most of it is unexplored."* (p. 1)

*"To both hunt and hide, an octopus must choose wisely among many options, and it has evolved a big brain to help it do so."* (p. 2)

*"Nobody in the sea is tidier than an octopus!"* (p. 5)

*"An Octet of Octo Facts:*

- 1. The seas are home to more than 250 species of octopus*
- 2. The plural of octopus is octopuses, or octopods*
- 3. An octopus has three hearts*
- 4. The octopus's blood isn't red like ours, but blue*
- 5. If a predator bites off an octopus's arm, the octopus can regrow it*
- 6. Octopuses are members of one of the most successful groups of animals on earth - the mollusks...within this broad classification, or phylum, octopuses belong to a smaller group, or class, called cephalopods, which means 'head-foot,' because their limbs attach directly to their heads (an arrangement that means you find the octopus's mouth in its armpits)*
- 7. Octopuses live fast and die young*
- 8. An octopus can taste with its skin"* (p. 11)

*"The laboratory is about control - but the field is about serendipity."* (p. 17)

*"...it's important to know where the octopus is - but it's also important to know where they aren't. It's all part of the research. Every time we get in the water, we know a little more about what octopus habitat looks like. Every time we put our heads in the water, we're closer to finding what we need to know."* (p. 49)

*"Hawaiian myths tell how our current world is really the remnant of a previous one, and the only survivor of that prehistory is the octopus." (p. 58)*

*"As is often the case in science, our field expedition generated more questions than answers." (p. 66)*

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### **Alenka says**

I loved the narrative style of this book; Montgomery takes us on an expedition searching for octopuses, gives us some intriguing details about the researchers studying them, and even builds a little suspense! (Will it be a successful trip? Will they find more than one study site?) The passion of both the researchers and Montgomery really make the book; you can tell that they love and are really fascinated by these creatures, and it's easy to match their enthusiasm. Also, octopuses are so weird! It was fun to learn about the stuff they can do, like change color and shoot salt water.

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### **Lata says**

My child recommended this to me. He loves reading nonfiction titles, and will often foist his selections on me. I get the heebie jeebies when it comes to creepy crawlies and tentacled creatures, so in my ongoing effort to deal with this, I opened the book.

A-mazing photos! The book is about the creatures, but it's also a profile of a small group of scientists looking for and studying octopuses (it actually is 'octopuses' according to the scientists and author of this book) in the Pacific. The group brings diverse experience together, and they encounter a variety of octopuses. Even with the heebie jeebies, I could appreciate just how weird and wonderful and smart the tentacled creatures are.

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### **Krista the Krazy Kataloguer says**

I have long been a fan of Sy Montgomery. Anything she writes is fascinating, because she makes you feel like you're right there with her. This book, an entry in the excellent Scientists in the Field series, is no exception.

Here, she accompanies Dr. Jennifer Mather and her team on the island of Moorea, part of French Polynesia, to study the Pacific day octopus. They have two weeks to find at least two locations off the island's coast where octopuses live. They find one location in the first week, but will they find more, with only one week to go? The suspense mounts.

I learned so much about octopuses here. Though their brains are the size of a walnut, they have amazing intelligence, and are able to solve problems, recognize faces, and remember events and experiences. They live only 3 to 5 years. They have special cells in their skin that allow them to change into a wide variety of colors, the meanings of which scientists are still trying to determine. (See the 2-page spread on pages 42 and 43 for the range of colors and patterns one octopus produced.) They can regrow arms they've lost to predators. They're neat freaks, and like to pile up the shells and carapaces of their prey neatly near their dens. Because they have no bones, they can squeeze themselves into very small cracks and crevices to hide. How to tell a male from a female? The female has suckers all the way to the tip of her third right arm, whereas the male has a ligula (for reproduction) at the tip of his. They're incredible animals!

My favorite chapter in the book is the one in which Montgomery describes making friends with several octopi at the New England Aquarium in Boston. Reading it made me want to go there and try my luck too. I think octopi must be very perceptive, perhaps even psychic. They seem to instinctively know who they can trust. Jennifer and her team actually had personality tests to determine if individual octopi were shy or bold, friendly or hostile. And I loved how they named the octopi they found off Moorea after family members and pets.

I also love the photos here. The cover has a beautiful photo of an octopus who appears to be smiling, even laughing, with contentment (even though I know that what I'm interpreting as a mouth isn't a mouth). On pages 25 and 39 are photos of an octopus that appears to be standing on its tentacles. It was watching the scientists in this position!

I really must read more about this creature, who is far from the menacing giant whose tentacles snatch people off of ships, as depicted in science fiction. I'll start with Dr. Jennifer Mather's own book, *Octopus: the Ocean's Intelligent Invertebrate*. If you've never liked reading about the ocean's animals, this book is sure to hook you. Highly, highly recommended!

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