

Astro

The Steller Sea Lion



By Jeanne Walker Harvey
Illustrated by Shennen Bersani

Astro

The Steller Sea Lion



Astro is a stellar Steller sea lion! Only a few days old when found orphaned, he was cared for and raised at The Marine Mammal Center in Sausalito, California. When big enough to be released to the wild where he needed to be, he had other plans! Just like a lost dog finding his way home, Astro kept swimming back towards the Center, crossing miles of open ocean water to do so. After several attempts, people realized that Astro was too accustomed to humans and would just keep coming back. Based on real events, readers follow Astro through some of his travels that have now taken him across the U.S. to his current home at the Mystic Aquarium in Connecticut.

Free online resources and support for the book at www.ArbordalePublishing.com include:

- For Creative Minds as seen in the book (in English & Spanish):
 - Steller Sea Lions
 - Steller Sea Lions Threatened and Endangered
 - Where in the World? A Map Activity
 - Steller Sea Lion Life Cycle
 - Sea Lion or Seal? What's the Same? What's Different?
- Teaching Activities:
 - Reading Questions
 - Language Arts
 - Science
 - Math
 - Geography
 - Science
- Interactive Quizzes: Reading Comprehension, For Creative Minds, and Math Word Problems
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Thanks to Ann Bauer, Director of Education at The Marine Mammal Center, and the staff at Mystic Aquarium, a division of Sea Research Foundation, Inc., for verifying the accuracy of the information in this book.

Jeanne Walker Harvey teaches Language Arts and a Writing Workshop at her local public middle school. She is a member of the Society of Children's Book Writers and Illustrators with many magazine articles to her credit, including articles about nature and marine animals. She lives in Marin County, California with her husband, two teenage sons, and a black lab who sits at her feet when she writes. *Astro: The Steller Sea Lion* is her debut picture book.

Award-winning children's book illustrator **Shennen Bersani** has had two million copies of her illustrated books cherished and read by families throughout the world. She has been a freelance illustrator since 1989. She works primarily with colored pencils, sometimes using a mixed-media technique of colored pencils, crayons, and paint. Her art delivers a unique blend of realism, heartfelt emotion, and life lessons for children of all ages. Shennen's long-time love of sea lions and their protection influenced this emotional and realistic portrayal of a sea lion hero in *Astro: the Steller Sea Lion*. Her best selling books include: *Nana, What's Cancer?; Snakes: Long, Longer, Longest; Ocean Counting: Odd Numbers; and My Sister, Alicia May*. Her art also appears in many magazines, newspapers, and publications. Shennen lives with her family near Boston, Massachusetts.



Jeanne Walker Harvey

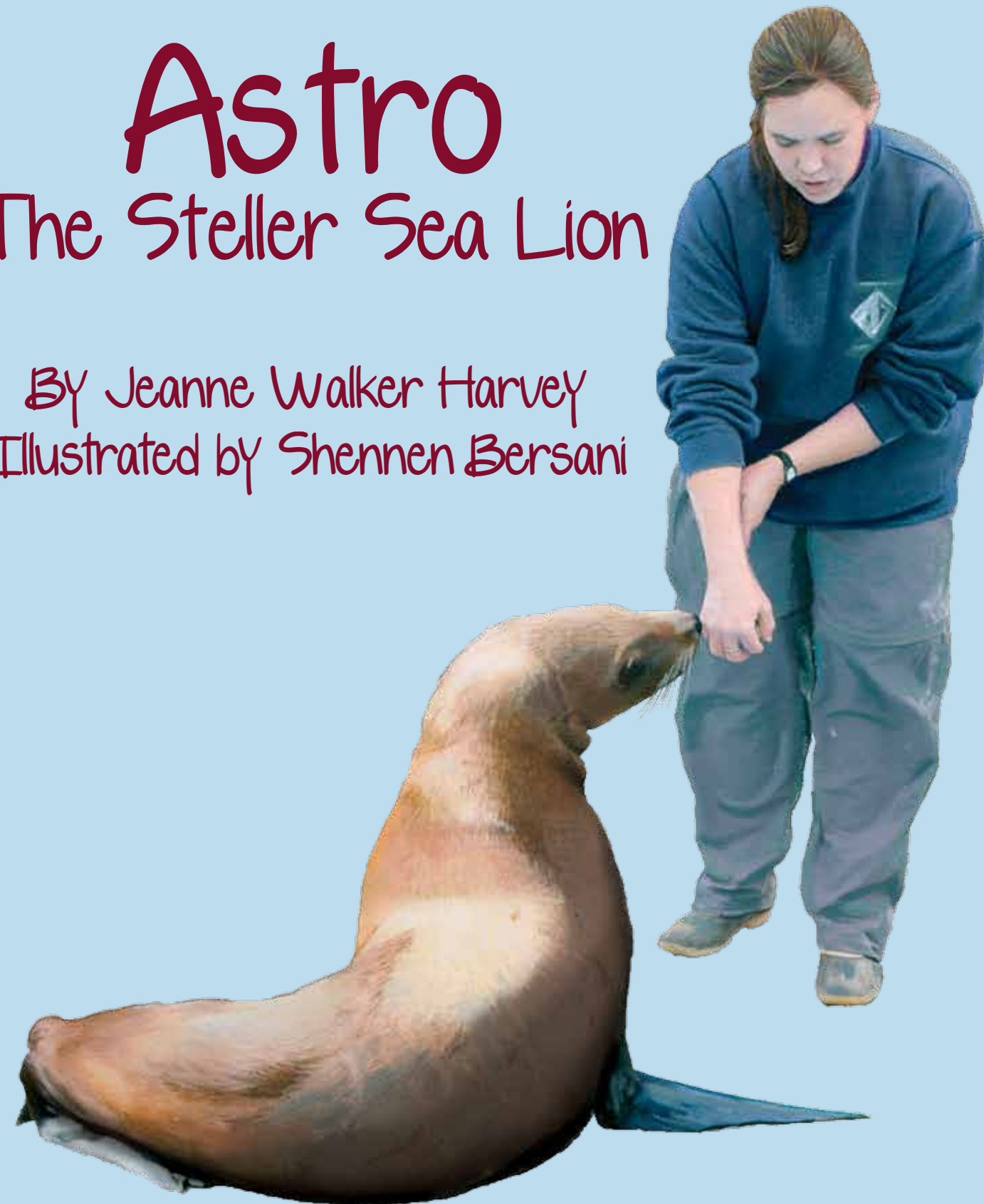


Shennen Bersani

Astro

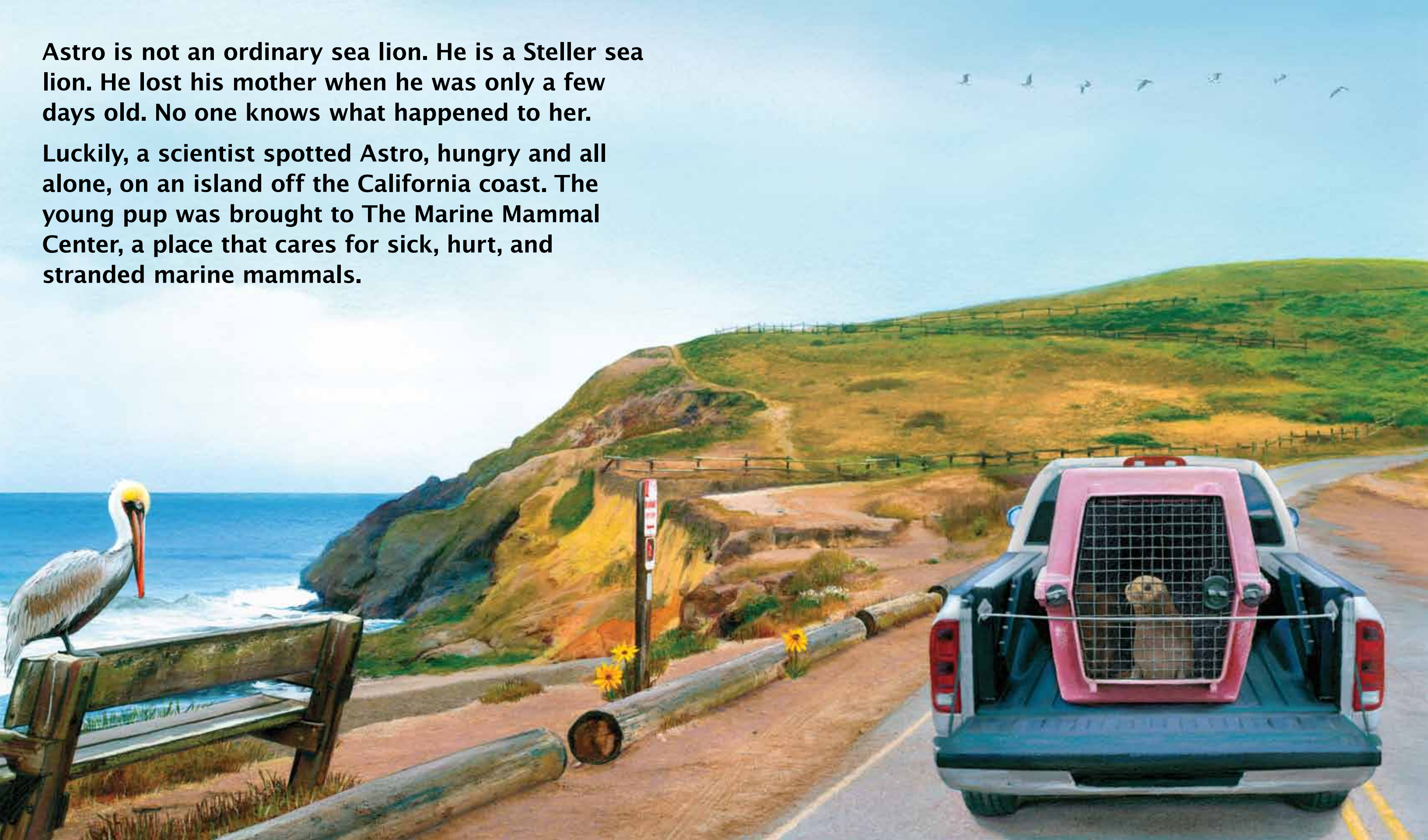
The Steller Sea Lion

By Jeanne Walker Harvey
Illustrated by Shennen Bersani



Astro is not an ordinary sea lion. He is a Steller sea lion. He lost his mother when he was only a few days old. No one knows what happened to her.

Luckily, a scientist spotted Astro, hungry and all alone, on an island off the California coast. The young pup was brought to The Marine Mammal Center, a place that cares for sick, hurt, and stranded marine mammals.



Astro only weighed 39 pounds (18 kg). His new friends mixed up a special smoothie made from ground herring, salmon oil, and whipping cream. Astro happily gulped it down as volunteers bottle-fed him. When he gained weight, his friends attached the bottle to the fence of his pen so he could feed himself.



Astro needed to go into the ocean, not up on the beach with people. Would Astro be able to return to the wild? Was he so young when he was rescued that he attached to people instead of other sea lions?

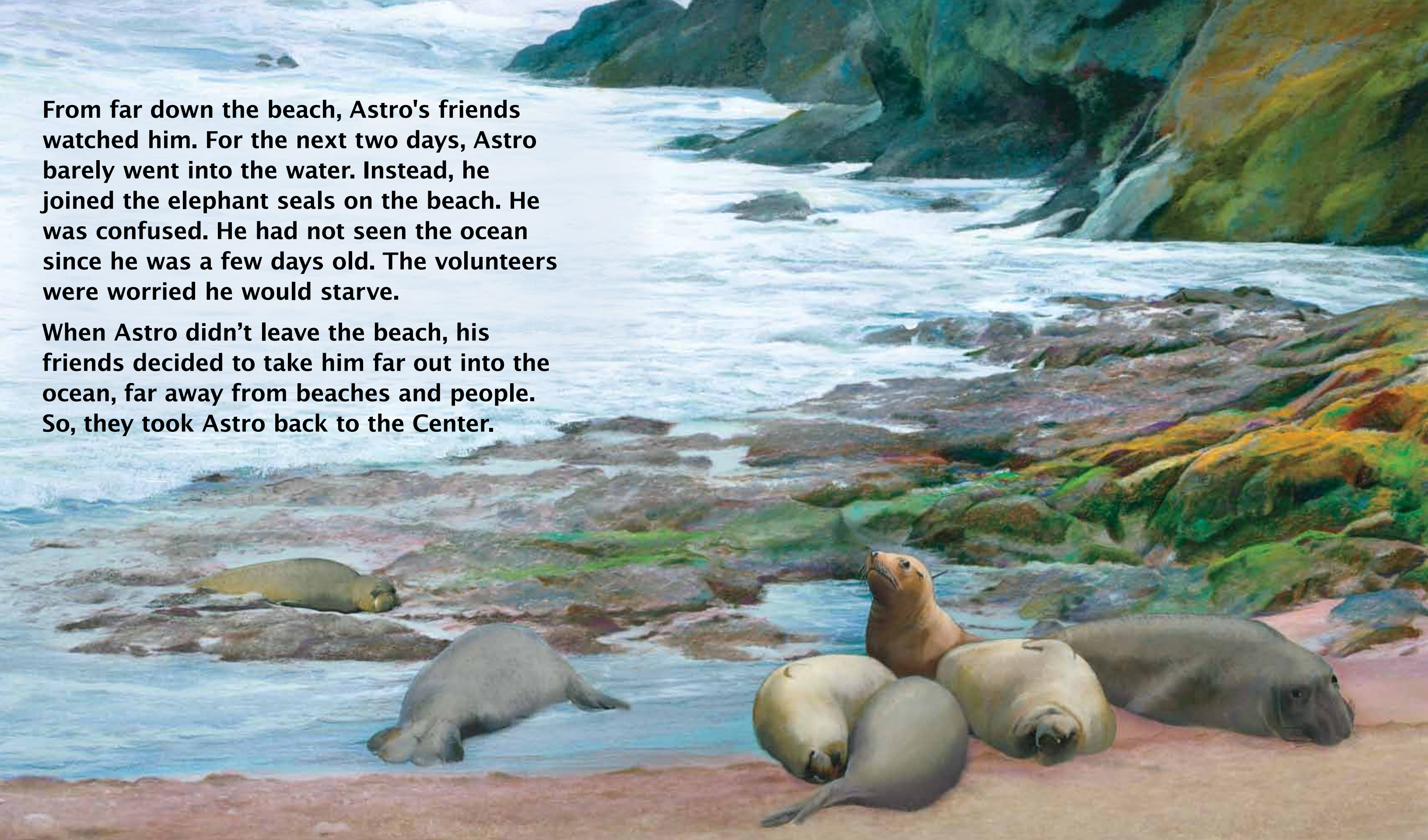
By the time he was 10 months old, Astro was big enough to join other Steller sea lions in the wild where he belonged. A satellite tag was attached to Astro's back so The Marine Mammal Center would be able to track his travels in the ocean.

His friends took him to the beach where he had been found and set him free in the surf. Astro paddled into the foam. Then a wave hit him. He didn't know what to do. He was scared and scooted out of the water onto the sand.



From far down the beach, Astro's friends watched him. For the next two days, Astro barely went into the water. Instead, he joined the elephant seals on the beach. He was confused. He had not seen the ocean since he was a few days old. The volunteers were worried he would starve.

When Astro didn't leave the beach, his friends decided to take him far out into the ocean, far away from beaches and people. So, they took Astro back to the Center.



For Creative Minds

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Steller Sea Lions

The word "stellar" is a descriptive word (adjective) that describes something or someone as being a "star" or a great performer. The word "Steller" with an "e" is a specific species of sea lion (proper noun) named after the naturalist Georg Wilhelm Steller (1700s). So, you could say that Astro is a stellar Steller sea lion!

Steller sea lions dive deeper than 1,300 feet (400 m) to find food!

Rookeries are isolated, rocky coastal areas and islands where sea lions gather to mate and where females give birth to their pups.

Prey: walleye pollack, mackerel, herring, capelin, sand lance, cod, and salmon
Predators: orca whales, humans, and some sharks

Only Native Alaskans who rely on the sea lions are allowed to hunt them. All other hunting is illegal. In addition, commercial fishermen cannot fish within three nautical miles of rookeries.

Adult males can be 11 feet (3.25 m) long and weigh up to 2,500 lb. (1120 kg). Males have long, coarse hair on their necks that looks like a male lion's mane.

The smaller females can be 9 feet (2.9 m) and usually weigh 400 to 600 lb. (181 to 272 kg) but can weigh up to 770 lb. (350 kg).

Steller sea lions' fur is a coarse and light tan to red brown when dry. When wet, it is smooth and slick and lies flat against their skin.

They have a thick layer of fat (blubber) that keeps them warm in cold water.



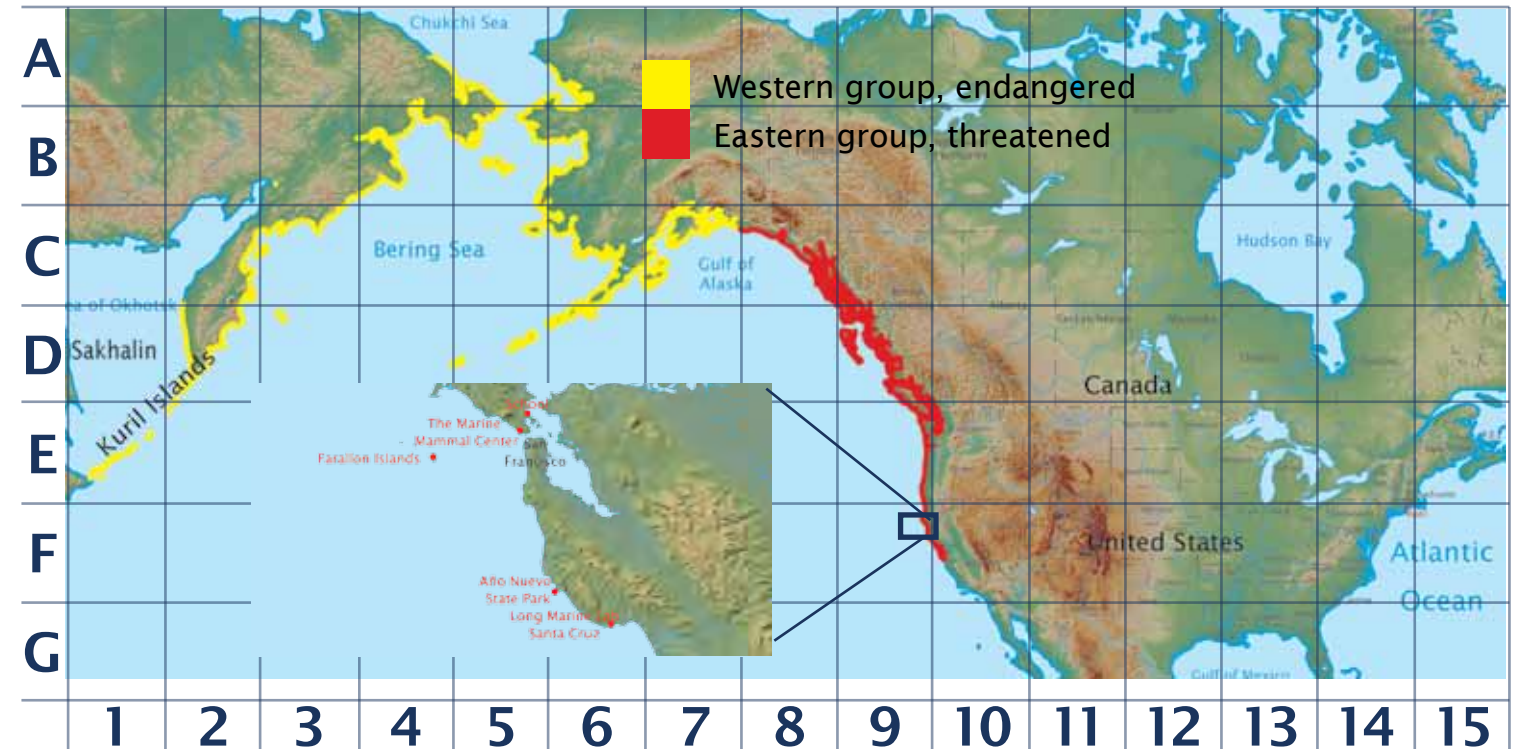
Steller Sea Lions Threatened and Endangered

There are two main groups of Steller sea lions. The Eastern group lives off the coast of California, up the Pacific Coast to 144° West Longitude in Alaska. This group is threatened, (a species in trouble). The Western group lives west of 144° West Longitude to Japan. That group is endangered (a species in danger of extinction). Scientists are not sure what has caused the Steller sea lions to decrease in numbers. Some possible reasons include:

Commercial fishing competes with the Steller sea lions for fish. Technology has made it much easier for fishermen to find schools of fish, leaving fewer fish for the sea lions.

Pollution kills all kinds of marine animals. It can poison the animals, or sometimes the animals get trapped in garbage (fishing nets or the plastic rings that go around soda cans).

Where in the World? A Map Activity



Use the map to find the various locations mentioned below, then put the events in proper chronological (by date) order. Answers are upside-down, below.

- In April 2007, Astro was taken back to Año Nuevo State Park, but he stayed on the beach. He was then taken to the Farallon Islands.
- Astro flew in an airplane from California to Mystic, Connecticut in February, 2008.
- In August 2007, Astro went to the Long Marine Laboratory in Santa Cruz.
- Astro was found orphaned at Año Nuevo State Park in June 2006.

Steller Sea Lion Life Cycle

Put the Steller sea lion life-cycle events in order to spell the scrambled word.

A Pups are born in late May through July. They are about 3.3 feet (1 m) long, weigh 35 to 50 pounds (16-23 kg), and are black or very dark brown in color.

O Pups molt (shed) their fur when they are about 4 or 5 months, and the new fur is lighter in color. They will then molt several times and by the end of their second year, they will have their adult color.

I When the pups are 4 to 6 weeks old, they swim for the first time.

E The females (cows) arrive at the rookery at the end of May or early June and look for good birthing areas. The male may end up with several females to care for. The females, who have been pregnant for a year, give birth to their pup shortly after arriving. They can get pregnant again when their pups are only a few weeks old.

S In early May, the adult males (bulls) fight for and claim their rookery territory. They generally return to the same area to claim, and it may be several years before they can fight off an older male. Once they “have” their territory, they may hold onto it for a few years until they are too old and weak (13 to 15 years old) to fight off younger males. The fighting for territory consists of roaring, hissing, and chest-to-chest fights with open mouths that sometimes cause severe injury. The winner keeps the best areas and the losers go to smaller, not as nice areas. Males do not leave their territories or eat while waiting for the females to arrive—up to a month.

L The mother stays with the pups for a week or two before leaving it alone while she goes off to find food. The young pups gather in groups to sleep and play together while their mothers are gone. The mothers and pups find each other by smells and sounds. A cow will not nurse a pup that is not hers. A pup nurses from its mother for at least three months, and will usually nurse until its mother has another pup.

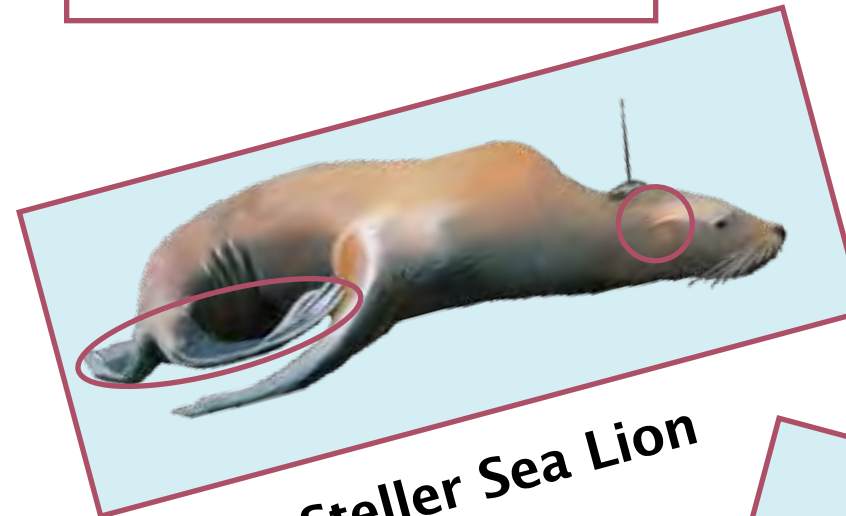
N Females have their first pups when they are 4 or 5 years old and live about 30 years in the wild. Males, on the other hand, only live to about 18 in the wild, probably because of all the fighting for territory.

Answer: SEA LION

Sea Lion or Seal? What's the Same? What's Different?

Both sea lions and seals are marine mammals, which means they are adapted to life in the ocean and rely on the ocean for their food.

Both get their oxygen from the air.



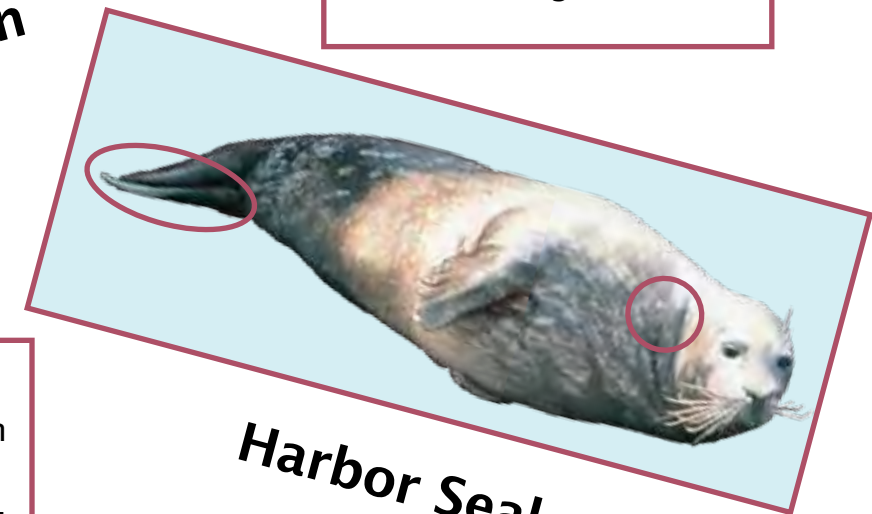
Steller Sea Lion

They are pinnipeds (flipper-footed), an order of marine mammals that also includes walruses. They haul themselves onto land to rest and breed.

They are both carnivores (meat-eating animals).

Sea lions are noisier than seals.

Sea lions have long front flippers and can pull their rear flippers under them so they can “walk” on land. Seals do not “walk”—they slide around on land.



Harbor Seal

Seals have short front flippers with claws that they use to haul themselves out of the water onto land.

Seals swim with their rear flippers.

Sea lions have external ear flaps, seals do not.

Sea lions swim with their front flippers and use their rear flippers to steer.

Astro is held at the Mystic Aquarium under the authority of NMFS Permit No. 42-1908-00 issued pursuant to the provisions to the Marine Mammal Protection Act and the Endangered Species Act.

The author donates a percentage of her royalties to The Marine Mammal Center and the Mystic Aquarium.

Thanks to Ann Bauer, Director of Education at The Marine Mammal Center, and the staff at Mystic Aquarium, a division of Sea Research Foundation, Inc., for verifying the accuracy of the information in this book.

To my parents, June and Joe Walker, and Kent, my husband, and Will and Scott, my sons, for all their encouragement, and to Astro, a truly stellar Steller sea lion! Special thanks to Jane Oliver (The Marine Mammal Center in Sausalito, CA) and Traci Kendall (the Long Marine Laboratory, UC Santa Cruz), and Astro's current trainer, Erin Sermac (Mystic Aquarium, Mystic, CT) for sharing with me their experiences with Astro — Astro's story is definitely their story, too! And to all the volunteers and staff at The Marine Mammal Center and the Long Marine Lab for their incredible dedication and devotion, and to those at the Mystic Aquarium for their amazing care and warm welcome of Astro.—JWH

While doing research for the illustrations, I traveled from the Mystic Aquarium in CT, to The Marine Mammal Center in Sausalito, CA and the Long Marine Lab in Santa Cruz CA, to the New England Aquarium in Boston, MA. I would especially like to thank Ann Bauer and the staff at The Marine Mammal Center and Traci Kendall and Beau Richter at the Long Marine Lab, UCSC—all for giving up their time and allowing me to tour 'behind the scenes' of their facilities; Matt Pearson of the Marin Country Day School for photos from the Walk-a-thon; the Northern Fur Seals at the New England Aquarium; and Becky Giantonio of the Mystic Aquarium for her help; and, of course, Astro—SB



Publisher's Cataloging-In-Publication Data

Harvey, Jeanne Walker. Astro : the Steller sea lion/
by Jeanne Walker Harvey ; illustrated by Shennen Bersani.

p. : col. ill. ; cm.

Summary: Astro, an orphaned, endangered Steller sea lion, was found and then raised at the Marine Mammal Center in California. When released, he kept swimming back to the Center, just like a lost dog finding his way home. Readers follow Astro through some of his travels that have now taken him across the U.S. to his current home at the Mystic Aquarium in Connecticut. Includes "For Creative Minds" educational section.

ISBN: 978-1-60718-860-5 (hardcover)

ISBN: 978-1-60718-874-2 (paperback)

ISBN: 978-1-60718-101-9 (English downloadable eBook)

ISBN: 978-1-60718-112-5 (Spanish downloadable eBook)

ISBN: 978-1-60718-299-3 (Interactive, read-aloud eBook featuring selectable English and Spanish text and audio (web and iPad/tablet based))

Grade level: P-4

ATOS™ Level: 4.4

Lexile Level: 790 Lexile Code: AD

1. Steller's sea lion--Juvenile non-fiction. 2. Marine animals--Juvenile non-fiction. 3. Steller's sea lion--non-Fiction. 4. Marine animals--non-Fiction. I. Bersani, Shennen. II. Title.

QL706.2 .H37 2010

599.79/75 2010921908

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Manufactured in China, December 2012
This product conforms to CPSIA 2008
Second Printing

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



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