

SCIENCE FOR KIDS BOOK 1
WISSENSCHAFT FÜR KINDER
ENGLISCH UND DEUTSCH

GRADES K-3
ALTER 6 BIS 9

PENNY THE HUNGRY PENGUIN CHICK **PENNY DAS HUNGRIGE PINGUIN KÜKEN**

ON THE LIFE IN THE ANTARCTIC
ÜBER DAS LEBEN IN DER ANTARKTIS



Dr. Wolf Berger
with advice from Brianna
mit Ratschlägen von Brianna

Copyright © 2012 by Wolf Berger

1st Edition (2006):

ISBN 10: Softcover 1-4257-2496-5

Hardcover 1-4257-3759-5

ISBN 13: Softcover 978-1-425724-96-2

Hardcover 978-1-425737-59-7

This is the 2nd edition (2012).

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system without permission in writing from the copyright owner.

General permission, valid till end of 2014 : Author grants to any nonprofit educational institute a three-year non-exclusive worldwide license to reproduce, distribute, and/or display this work without compensation to the Author. This license expires on December 31, 2014. Author retains the copyright and all other rights in and to the work. Recommended retail price is \$ 8 or equivalent.

This is a work of fiction. Names, characters, places and incidents either are the product of the author's imagination or are used fictitiously, and any resemblance to any actual person, living or dead, events, or locales is entirely coincidental.

**Penny wants food
Penny will Futter haben**



**This is Penny. She wants food.
Dies ist Penny. Sie will Futter haben.**

**I am hungry. Please! Feed me!
Ich bin hungrig. Bitte sehr! Füttere mich!**



**This is Penny's mother. Her name is Jentoo.
She is coming up from the sea to feed Penny.
She walks over the rocks at the beach.
She puts out her wings for balance.**

**Dies ist Pennys Mutter. Sie heisst Jentoo.
Sie kommt aus der See um Penny zu füttern.
Sie geht über die Steine am Strand.
Sie streckt ihre Flügel aus um Balance zu halten.**



**This is Penny's brother Meetoo.
He is hungry also.
Who will get food next?**

**Dies is Pennys Bruder Meetoo.
Er ist ebenfalls hungrig.
Wer kriegt zuerst zu essen?**



**Jentoo goes to Penny.
She opens her beak.
Penny puts her beak inside to get the food.**

**Jentoo geht zu Penny.
Sie öffnet ihren Schnabel.
Penny geht mit dem Schnabel tief in den Schlund
der Mutter um das Futter zu holen.**



**Now Penny is tired. She has to rest.
Jetzt ist Penny müde. Sie muss ausruhen.**



**Meetoo is still hungry.
Jentoo calls for Penny's
father to bring food.**

**Meetoo ist noch immer
hungrig.
Jentoo ruft nach Pennys
Vater –
er soll Futter bringen.**



**This is Jontoo. He is Penny's
father. He has food.
He hears the call.**

**Dies ist Jontoo. Er ist Pennys
Vater. Er hat Futter.
Er hört den Ruf.**

**He starts walking.
Penny's uncle Fredo
follows him.
Fredo has food
for his own chicks.**

**Er beginnt zu laufen.
Pennys Onkel Fredo
folgt ihm.
Fredo hat Futter für
seine eigenen Küken.**





**They bring krill.
They caught the
krill in the sea.
The krill are small.
They fit into the
beak of a penguin.**

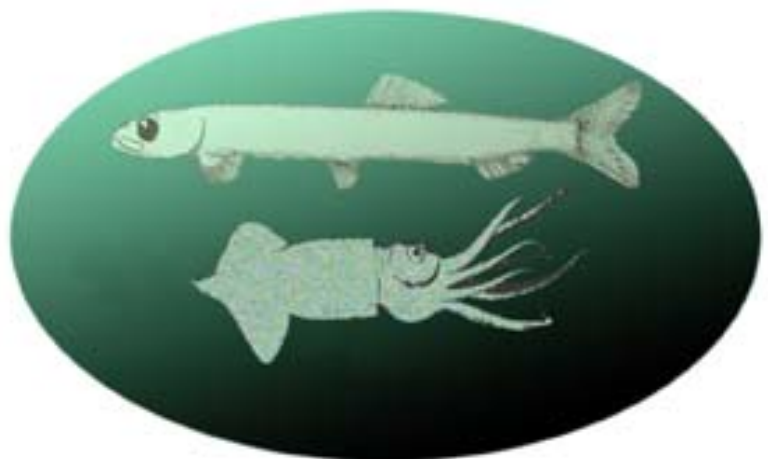
**Sie bringen Krabben.
Sie fingen die
Krabben im Meer.
Die Krabben sind
klein.
Sie passen in den
Schnabel eines
Pinguin Vogels.**

**Sometimes Penny's
father brings a small fish
or a small squid.**

**Manchmal bringt Pennys
Vater einen kleinen Fisch
oder einen kleinen
Tintenfisch.**

Penny likes fish.

**Penny mag gern Fisch
essen.**





**Penny's father
looks up.
It is a long way
up the hill.**

**Pennys Vater guckt nach
oben.
Es ist ein langer Weg
bergauf.**

**Penny's father and
Fredo go up
through the snow.
They bring the food to
their chicks.**



**Pennys Vater und
Fredo steigen hoch
durch den Schnee. Sie
bringen das Futter zu
ihren Kücken.**



**Penny and her friends are waiting.
They are hungry. Which one is Penny?
Which one is Meetoo? Who will get food?**

**Penny und ihre Freunde
warten. Sie sind hungrig.
Welche ist Penny?
Welcher ist Meetoo? Wer
wird Futter kriegen?**



**This time, Meetoo
gets food from his
father.**

**Diesmal kriegt
Meetoo Futter von
seinem Vater.**

Penny and Meetoo are still hungry.

Penny und Meetoo sind immer noch hungrig.



Penny's Mom and Dad go back to the sea to get more food.

Pennys Mutter und Vater gehen zurück ins Meer um mehr Futter zu holen.



**Penny's parents jump in the ice-cold sea.
The krill, the fish and the squid live in the sea.
Her parents dive to catch them for food.**

Pennys Eltern springen in das eiskalte Meer. Die Krabben, die Fische und die Tintenfische leben im Meer. Ihre Eltern tauchen um sie zu fangen, als Futter.

Penny's neighbors

Pennys Nachbarn



When the chicks were little, only one parent could leave to get food.

Als die Küken klein waren konnte nur eines der Eltern weggehen um Futter zu holen.

One parent had to stay because of the Big Brown Bird. He takes little penguin chicks to feed his own chicks. He is very dangerous.

Eines der Eltern musste bleiben wegen dem Grossen Braunen Vogel. Er nimmt kleine Pinguine um seine eigene Küken zu füttern. Er ist sehr gefährlich.

He has a big hooked beak. Just now he is taking a bath in the pool nearby.

Er hat einen grossen gekrümmten Schnabel. Eben badet er im nahen Teich.





**Other big birds also
are looking for food.
They look down
from the sky.**

**Andere grosse
Vögel gucken auch
nach Futter. Sie
schauen runter aus
dem Himmel.**

**The little chicks stay close
to their parent to be safe.**

**Die kleinen Küken bleiben
dicht bei ihrem Vater oder
ihrer Mutter um geborgen
zu sein.**





Penny can see her aunt Tardie. She is in her nest. She was late in laying her egg. Her chick is very small.

Penny kann ihre Tante Tardie sehen. Sie ist in ihrem Nest. Sie hat ihr Ei spät gelegt. Ihr Kücken ist sehr klein.

Where is Penny's cousin Eeny?

Wo ist Eeny, die Kusine von Penny?

Eeny hides from the big birds and also from the Little White Bird.

Eeny versteckt sich vor den grossen Vögeln und auch vor dem Kleinen Weissen Vogel.

The Little White Bird is dangerous. And he steals food when the chicks are eating.

Der Kleine Weisse Vogel ist gefährlich. Und er stiehlt Futter wenn die Kücken fressen.



Watch out, Eeny!

Pass auf, Eeny!

**Penny has a nice neighbor.
Penny hat eine nette Nachbarin.**



**Her name is Ada. Ada is a
different kind of penguin.
Can you see the
difference?
Ada brings food to her
chick Dallie.**

**Sie heisst Ada. Ada ist ein
anderer Typ von Pinguin.
Kannst Du den
Unterschied sehen? Ada
bringt Futter für ihr Küken
Dallie.**

**Dallie and her sister Dellie
are still hungry. But Ada
has no more food. She
runs away. The chicks run
after her.**

**Dallie und ihre Schwester
Dellie sind noch hungrig.
Aber Ada hat kein Futter
mehr. Sie rennt weg. Die
Küken rennen hinterher.**



**Ada's little brother Bert
is changing his feathers.
He looks silly.**

**Adas kleiner Bruder Bert
kriegt neue Federn.
Er sieht komisch aus.**



Penny can see Petrella in her nest.

Penny kann Petrella in ihrem Nest sehen.



Petrella is very big. She has huge wings. She also has a very big beak with a sharp hook. Petrella looks for food at sea and also on the beach.

Petrella ist sehr gross. Sie hat riesige Flügel. Ausserdem hat sie einen sehr grossen Schnabel mit einem scharfen Haken. Petrella guckt nach Futter im Meer und auch am Strand.

Penny is afraid of Petrella.

Penny hat Angst vor Petrella.

Penny can see Shaggie the cormorant.

Penny kann Shaggie sehen. Sie ist ein Wasserrabe.



She looks like a penguin.

Sie sieht aus wie ein Pinguin.

She swims and dives like a penguin.

Sie schwimmt und taucht wie ein Pinguin.

**But she can fly through the air!
Aber sie kann fliegen! In der Luft!**

She flies up to her nest to feed her chick.

Sie fliegt hoch zu ihrem Nest um ihr Junges zu füttern.

**He is big and very hungry.
Es ist gross und sehr hungrig.**

**Please! More fish.
Bitte sehr! Mehr Fisch.**



Penny can see Vitta, the tern.

Penny kann Vitta sehen, die Seeschwalbe.

**Vitta has her nest
nearby in the cliffs.**

**Vitta hat ihr Nest in
den nahen Felsen.**



**Vitta is small but she
has no fear.**

**Vitta ist klein, aber sie
hat keine Angst.**

She has a sharp beak.

Sie hat einen scharfen Schnabel.

She flies at the Big Brown Bird and drives it away.

Sie fliegt auf den Grossen Braunen Vogel zu, und vertreibt ihn.



**Thank you, Vitta!
Danke schön, Vitta!**

**When Penny is big
Wenn Penny gross ist**



**Penny and her friends are growing.
Soon Penny will be big like her parents.
She will get a shiny black and white coat.
She will be ready to go into the water to catch krill.**

**Penny und ihre Freunde wachsen auf.
Bald wird Penny gross sein, wie ihre Eltern.
Sie wird ein glattes schwarz-weisses Federkleid kriegen.
Sie wird bereit sein ins Wasser zu gehen um Krabben zu fangen.**



**The water will be cold.
Das Wasser wird kalt sein.**

**But Penny has lots of
fat and feathers.
Aber Penny hat viel Fett
und Federn.**

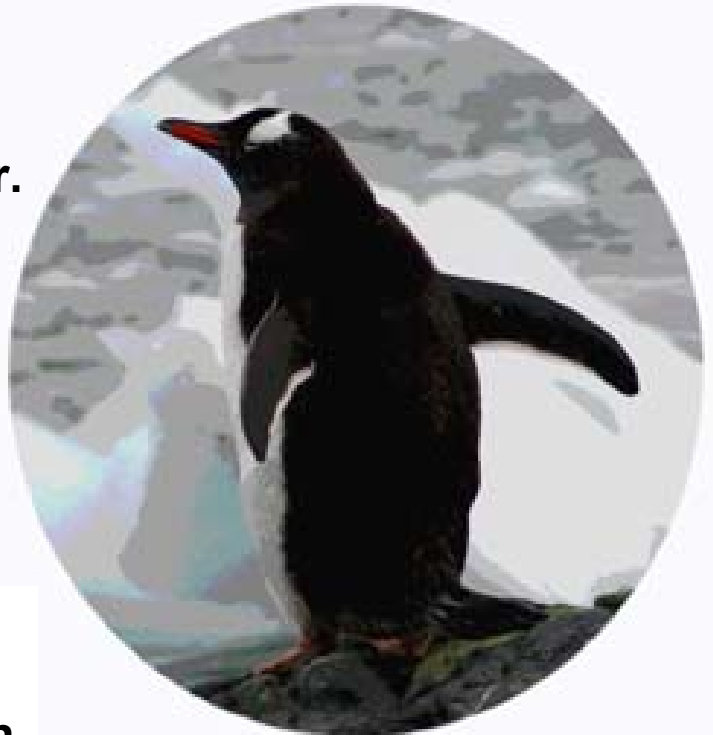
**She will be warm.
Sie wird warm bleiben.**

**She will be hungry.
Sie wird hungrig sein.**

**The krill is in the water.
Die Krabben sind im Wasser.**



**Penny will go into the water
to get food.
Penny wird ins Wasser gehen
um Futter zu kriegen.**





**Penny will fly through the water.
Penny wird durch das Wasser fliegen.**

**She will dive to get food.
Sie wird tauchen, um Futter zu kriegen.**

**She will come up to get air.
Sie wird auftauchen, um zu atmen.**

**She will meet many other animals in the water.
Sie wird viele andere Tiere sehen, im Wasser.**



This is Penny's cousin Chinnie. Chinnie jumps out of the water to go faster and to find his way.

Dies ist Pennys Vetter Chinnie. Er springt aus dem Wasser um schneller zu gehen und um zu sehen wo er ist.

Penny will learn to jump just like Chinnie.

Penny wird lernen, genau wie Chinnie zu springen.



Penny will meet Cesar and his kind. Cesar is big. He swims fast. Penny will not keep up with Cesar.

Penny wird Cesar treffen und seine Familie. Cesar ist gross. Er schwimmt schnell. Penny kann nicht mit Cesar Schritt halten.

Penny will meet many seals.

Penny wird viele Robben treffen.



Seals like to play catch.

Some seals eat penguins. Penny does not want to meet them.

Robben spielen gern Fangen. Manche Robben fressen Pinguine. Penny mag sie nicht treffen.



This seal eats krill. It is resting on floating ice. Hi there.

Diese Robbe frisst Krabben. Sie ruht sich auf einer Eisscholle aus. Hallo, wie geht's.

Penny will see whales. Whales are huge animals, bigger than an elephant. These whales eat krill. Hi there.



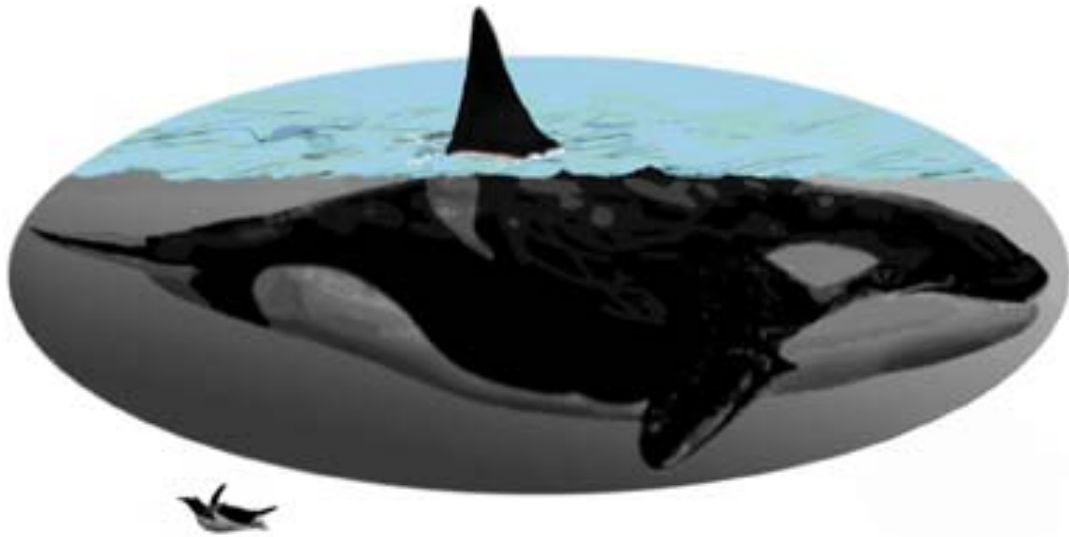
Penny wird Wale sehen. Wale sind riesige Tiere, grösser als ein Elefant. Diese Wale fressen Krabben. Hallo, wie geht's.



**The big whale cannot see Penny.
Can you see Penny swim under the big whale?
Der grosse Wal kann Penny nicht sehen.
Kannst Du sehen wo Penny schwimmt, unter dem
grossen Wal?**

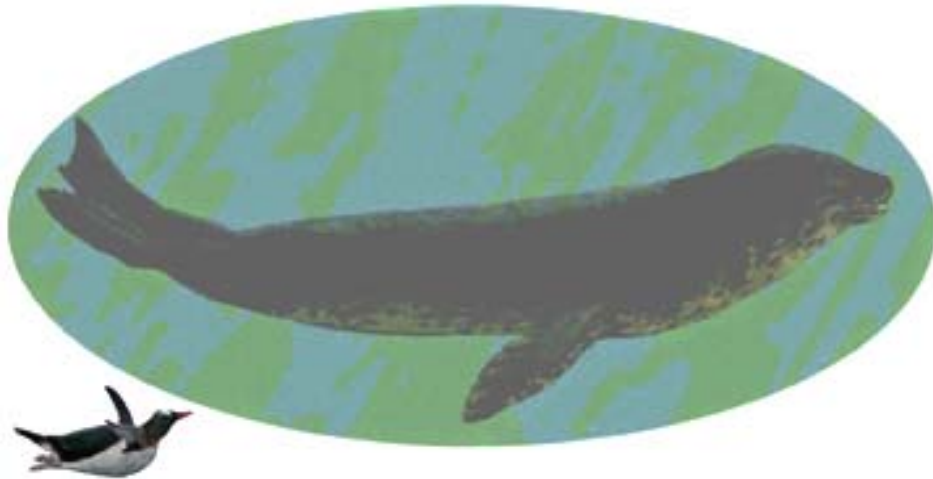


**Some whales eat seals. Also, they eat penguins.
Penny does not want to meet them.
Manche Wale fressen Robben. Ausserdem fressen
sie Pinguine.
Penny will sie nicht treffen.**



**How does Penny know which whales are
dangerous? They make shrill noises and they have
big teeth. Careful, Penny!**

**Woher weiss Penny welche Wale gefährlich sind?
Sie haben eine schrille Stimme und sie haben
grosse Zähne. Vorsicht, Penny!**



The most dangerous animal in the water is the leopard seal. Stay away, Penny!

Das gefährlichste Tier im Wasser ist der Seeleopard. Bleib weg, Penny!

When there is danger, Penny can jump out of the water. She will be safe on the ice.

Can you see the penguins on the ice?



Wenn es gefährlich wird kann Penny aus dem Wasser springen. Sie wird sicher sein, auf dem Eis. Kannst Du die Pinguine auf dem Eis sehen?



Penny will find a mate. Her mate will help find or make a nest. Penny will lay two eggs. She will have chicks of her own. She and her mate will protect the chicks from the big birds in the air and from the Little White Bird.

Penny wird einen Partner finden. Ihr Partner wird helfen ein Nest zu finden oder eines zu machen. Penny wird zwei Eier legen. Sie wird ihre eigenen Küken haben. Sie und ihr Partner werden ihre Jungen vor den grossen Vögeln in der Luft beschützen und vor dem Kleinen Weissen Vogel.

**The chicks will be very hungry. Please, more food!
Penny will be busy.**

Die Küken werden sehr hungrig sein. Bitte, mehr Futter! Penny wird viel Arbeit haben.

Notes for parents and teachers:

The focus of the story is on the life of Gentoo Penguins as seen on the shores of Bransfield Strait, along the Peninsula of Antarctica. Two closely related penguin species are shown also: Adelie Penguins (“Ada,” “Dellie,” “Dallie,” “Bert”) and Chinstrap Penguins (“Chinnie,” jumping while traveling). The Emperor Penguin (“Cesar”) was not seen; it does occur all around Antarctica but breeds on the ice, away from the water. It is the largest of the penguins (35kg vs. 5 kg for Gentoo).

The scientific name for the Gentoo is *Pygoscelis papua*. The others are *P. adeliae*, *P. antarctica*, and *Aptenodytes forsteri*. All four species are widely distributed in the seas and islands around Antarctica. Other penguin species (there are 18 in all) live farther north. All are restricted to the southern hemisphere, to regions of high productivity. Some species only raise one chick per season (e.g., the Emperor), others raise two if food is plentiful, otherwise only one (even though there are two eggs to begin with).

Species other than penguins:

Krill: *Euphausia superba*. They are euphausiid shrimp, about 2 inches long. They feed on diatoms (“grass of the sea”) which are abundant around Antarctica in southern summer. Krill is the staple food of Gentoo, Adelie and Chinstrap penguins, as seen in the spilled food on colony grounds.

Fish, squid: generalized. No particular species.

Big Brown Bird: Antarctic Skua, *Catharacta antarctica*. Predator.

Big Bird, “Petrella”: Giant Petrel, *Macronectes giganteus*. Scavenger.

Little White Bird, Snowy Sheathbill, *Chionis alba*. Scavenger.

Cormorant, “Shaggie”: Antarctic Shag, *Phalacrocorax bransfieldensis*.

Tern, “Vitta”: Antarctic Tern, *Sterna vittata*.

Seals: sub-adult or female Fur Seals, *Arctocephalus gazella*; adult Crabeater Seal *Lobodon carcinophaga* (note tooth marks on belly); Leopard Seal, *Hydrurga leptonyx*.

Baleen whales: a pair of humpback whales, *Megaptera novaeangliae*.

Toothed whales: a group of orcas (one male, two females), *Orcinus orca*. An orca weighs as much as a large elephant (5 tons plus or minus 2 tons), and is much larger than any predator on land. From the point of view of a penguin, the presence of orcas is a mixed blessing: they keep the penguin-eating leopard seals away, but they also eat penguins if they can catch them (big ones preferred).



Bransfield Strait is at the northernmost tip of Antarctica. It is reached by ship from Ushuaia, which is located in Beagle Channel in the southern tip of Argentina.

Technical notes

Images are based on digital photos taken in January 2006, on a cruise to Bransfield Strait, Antarctica, using high-resolution Canon and Nikon cameras with 10x optical magnification. Two photos of “Meetoo” are by Karen Berger. Krill: SIO collections. Squid: based on a drawing by J.L. Sumich, modified. Fish larva: CalCOFI (SIO), simplified. Emperor Penguin, submerged whales: after Museum exhibits in Hamburg and in Bergen, redrawn. Leopard Seal: based on a drawing by D. Scott, greatly modified.

Cruise participation (on M/V Corinthian II) was arranged by Dr. Nigella Hillgarth of the Birch Aquarium at Scripps. Cruise Leader: John Frick; Naturalist: Lyn Mair. Images were processed using Adobe Photoshop. The translation is by the author.

Factual information on Antarctic fauna is based on:

T. Soper and D. Scott, 2004, Antarctica – a guide to the wildlife. Bradt Travel Guides, UK.

For a general introduction to marine biology, see:

J.L. Sumich and J.F. Morrisey, 2004. Introduction to the biology of marine life. 8th ed. Jones and Bartlett.

Penguin expert Torrence Stockard (S.I.O.) checked identifications and several colleagues and friends gave valuable advice. Thanks to all!

Discussion Questions

How do parents recognize their own chick? (By voice, mainly. Chicks of neighbors sometimes beg for food and are told to go away.)

How do they find back to the right place where their chicks are? (They look for landmarks when jumping while traveling, upon approaching the shore.)

Why do some penguins spread their wings while standing around? (Probably to cool off. It gets warm under that black suit when the sun shines.)

Why do penguins have webbed feet with strong claws? (For steering and pushing to jump, in the water, and for climbing the rocks and snow.)

Will Aunt Tardie’s Eeny make it? (Unlikely. It must grow much bigger before fall comes with sea ice, and there is not much time left.)

Does Petrella eat penguin chicks? (Petrella eats dead animals on the beach and looks for food in the water.)

Can you tell the difference between Gentoo and Adelie chicks? (Yes. Markings.)

What is the best way to escape from a leopard seal? (Jumping out on the ice.)

About this book, the author and his advisor:

The book started out as a family weekend project, putting together a story on Gentoo Penguin childhood using pictures taken during a week's visit to the breeding grounds of penguins around Bransfield Strait, Antarctica. During that visit, the weather was unusually favorable – no storms, no fog, no indication whatever that these parts of the world offer some of the nastiest weather imaginable. Thus, conditions for taking photos were ideal.



The story emerged readily enough, based on observation, but there were requests for various additions and explanations, especially with regard to the leopard seal and other potentially threatening large animals. The appropriate illustrations were created using Adobe Photoshop.



W. H. Berger has degrees in geology and oceanography from Colorado University, the University of California, and the University of Bremen. He works at Scripps Institution of Oceanography, University of California, San Diego. He is engaged in public education through an outreach website at SIO, (“Earthguide”) and as a speaker for the Rotary Clubs in the San Diego area. This is his first children’s book.

Brianna was in kindergarten at the time of writing of the book (2006). She likes animals and stories about animals, and she likes the beach and the ocean. She pointed out what is of interest to children, commented on the choice of names for the various characters in the story, and edited the text for clarity. She likes the story about Penny the penguin chick and hopes Penny will never meet a leopard seal.

Good luck, Penny!

