

SCIENCE FOR KIDS BOOK 1
SCIENCE POUR ENFANTS
ANGLAIS ET FRANCAIS

GRADES K-3
AGE DE 6 A 9

PENNY THE HUNGRY PENGUIN CHICK **PENNY LE PETIT MANCHOT QUI A FAIM**

LIFE IN THE ANTARCTIC
LA VIE EN ANTARCTIQUE



Dr. Wolf Berger
with advice from Brianna
avec les conseils de Brianna
traduit avec l'aide d'Edith Vincent, Ph.D.

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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 veut manger



This is Penny. She wants food.
Voici Penny. Elle a faim.

I am hungry. Please! Feed me!
J'ai faim. S'il vous plait! Donnez moi a manger!



**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.**

**Voici la maman de Penny. Elle s'appelle Jentoo.
Elle sort de la mer pour apporter à manger à Penny.
Elle marche sur les cailloux de la plage.
Elle écarte ses ailes pour garder son équilibre.**



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

**Voici le frère de Penny, Meeto.
Lui aussi a faim.
Qui sera le premier à manger?**



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

**Jentoo rejoint Penny.
Elle ouvre son bec.
Penny glisse son bec dans la gorge de sa maman
pour attraper la nourriture.**



Now Penny is tired. She has to rest.
**Maintenant Penny est fatiguée. Elle doit se
reposer.**



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

**Meetoo a encore faim.
Jentoo appelle le papa de
Penny pour qu'il apporte à
manger.**



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

**Voici Jontoo. C'est le papa de
Penny. Il a de la nourriture.
Il entend l'appel.**

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

**Il commence à
marcher.
Fredo, l'oncle de
Penny, le suit.
Fredo apporte de la
nourriture pour ses
propres bébés.**





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

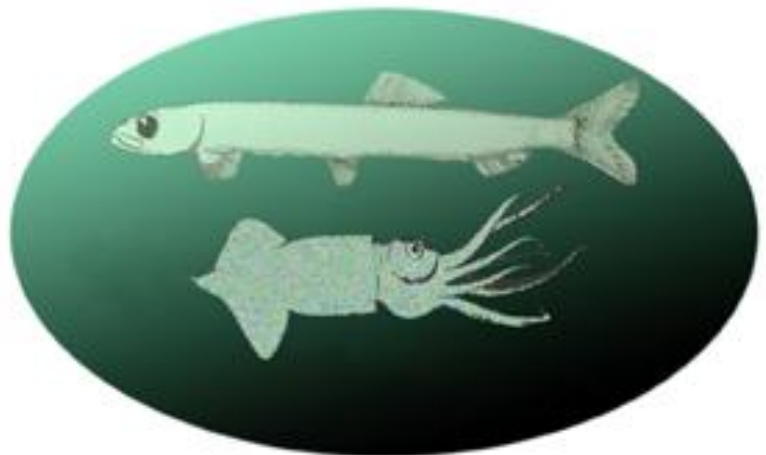
**Ils apportent du
“krill”, des petites
crevettes. Ils ont
attrapé le krill dans la
mer. Le krill est assez
petit. Il tient
facilement dans le bec
d’un manchot.**

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

**Parfois le papa de Penny
rapporte un petit poisson
ou un petit calmar.**

Penny likes fish.

Penny aime le poisson.





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

**Le papa de Penny
regarde devant lui.
La montée de la colline
sera longue.**

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

**Le Papa de Penny et
Fredo montent à
travers la neige. Ils
apportent à manger à
leurs petits.**





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

**Penny et ses amis
attendent. Ils ont faim.
Laquelle est Penny?
Lequel est Meeto?
Qui va avoir à
manger?**



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

**Cette fois, c'est le
papa de Meeto qui
lui donne à manger.**

Penny and Meetoo are still hungry.

Penny et Meetoo ont encore faim.



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

La maman et le papa de Penny retournent à la mer pour y trouver plus de nourriture.



**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.**

**Les parents de Penny sautent dans l'eau glacée. Le krill, les poissons et les calmars vivent dans la mer.
Les parents plongent pour les attraper.**

Penny's neighbors

Les voisins de Penny



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

Quand les enfants étaient tout petits, un seul parent pouvait les laisser pour aller chercher à manger.

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.

Un des parents devait rester à cause du Grand Oiseau Brun qui attrape les bébés manchots pour nourrir ses petits à lui. Il est très dangereux.



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

Il a un gros bec crochu. Pour l'instant il prend un bain dans la mare à côté.



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

**D'autres grands
oiseaux cherchent
aussi à manger. Ils
observent depuis le
ciel.**

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

**Les petits manchots
restent près de leurs
parents pour être
protégés.**





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

Penny peut voir sa tante Tardie. Elle est dans son nid. Elle était en retard pour pondre son œuf. Son bébé est très petit.

Where is Penny's cousin Eeny?

Où est Eeny le cousin de Penny?

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

Eeny se cache des grands oiseaux et aussi du Petit Oiseau Blanc.

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

Le Petit Oiseau Blanc est dangereux. Et il dérobe la nourriture des bébés manchots quand ils mangent.



Watch out, Eeny!

Attention, Eeny!

**Penny has a nice neighbor.
Penny a une voisine bien gentille.**



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

Elle s'appelle Ada. Ada est une autre sorte de manchot. Peux-tu voir la différence? Ada apporte à manger à son bébé Dallie.

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

Dallie et sa sœur Dellie ont encore faim. Mais Ada n'a plus de nourriture. Elle part en courant. Les petits courent derrière elle.



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

Bert, le petit frère d'Ada perd ses plumes d'enfant pour avoir celles d'un adulte.

Il a l'air ridicule.



Penny can see Petrella in her nest.

Penny regarde Petrella dans son nid.



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 est très grande. Elle a des ailes immenses. Elle a aussi un gros bec crochu très coupant. Petrella va chercher à manger en mer et aussi sur la plage.

Penny is afraid of Petrella.

Penny a peur de Petrella.

**Penny can see Shaggie the cormorant.
Penny regarde Shaggie le cormoran.**



**She looks like a penguin.
Elle ressemble à un manchot.**

She swims and dives like a penguin.

Elle nage et plonge comme un manchot.

**But she can fly in the air!
Mais elle peut voler dans les airs!**

**She flies up to her nest to feed
her chick.**

**Elle vole jusqu'à son nid pour
nourrir son petit.**

**He is big and very hungry.
Il est déjà grand et a très faim.**

**Please! More fish.
S'il te plait! Encore du poisson.**



**Penny can see Vitta, the tern.
Penny regarde Vitta, la sterne.**

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

**Vitta a son nid près
des falaises.**



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

**Vitta est petite mais
elle n'a peur de rien.**

She has a sharp beak.

Elle a un bec très pointu.

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

Elle vole vers le Grand Oiseau Brun et le fait partir.



**Thank you, Vitta!
Merci, Vitta!**

When Penny is big Quand Penny est grande



**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 et ses amis grandissent.
Bientôt Penny sera aussi grande que ses parents. Elle aura
un dos noir et brillant et un manteau blanc. Elle sera prête à
plonger dans l'eau pour attraper du krill.**



**The water will be cold.
L'eau sera froide.**

**But Penny has lots of
fat and feathers.**

**Mais Penny a beaucoup
de graisse et de plumes.**

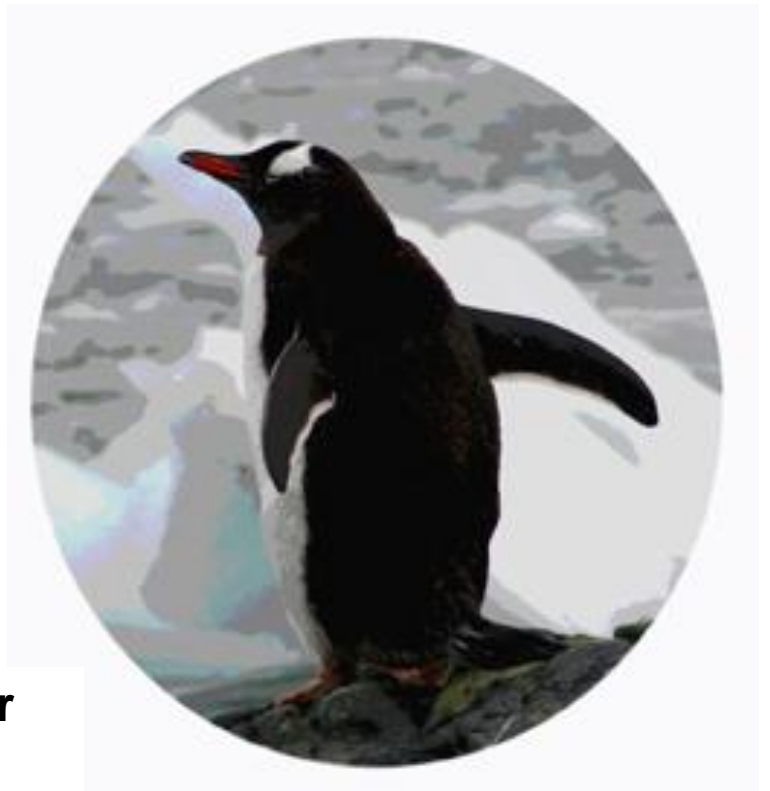
**She will be warm.
Elle aura bien chaud.**

**She will be hungry.
Elle aura faim.**

**The krill is in the water.
Le krill est dans l'eau.**



**Penny will go into the water
to get food.
Penny ira dans l'eau pour
trouver à manger.**





**Penny will fly through the water.
Penny volera sur l'eau.**

**She will dive to get food.
Elle plongera pour attraper la nourriture.**

**She will come up to get air.
Elle remontera à la surface pour respirer.**

**She will meet many other animals in the water.
Elle rencontrera beaucoup d'autres animaux dans
l'eau.**



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

Voici Chinnie le cousin de Penny. Chinnie saute hors de l'eau pour aller plus vite et pour trouver son chemin.

Penny will learn to jump just like Chinnie.

Penny va apprendre à sauter juste comme Chinnie.



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

Penny rencontrera César et sa famille. César est grand. Il nage vite. Penny n'arrivera pas à suivre César.

Penny will meet many seals.

Penny va rencontrer de nombreux phoques.



**Seals like to play catch.
Some seals eat penguins. Penny does not
want to meet them.**

**Les phoques aiment jouer à attraper les
choses au vol. Certains d'entre eux
mangent des manchots. Penny ne veut
pas les rencontrer.**



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

**Voici un phoque qui mange du krill. Il se repose sur une
plaque de glace qui flotte. Bonjour le phoque!**

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



Penny verra des baleines. Les baleines sont des animaux énormes, plus gros que les éléphants. Voici des baleines qui mangent du krill. Bonjour les baleines!

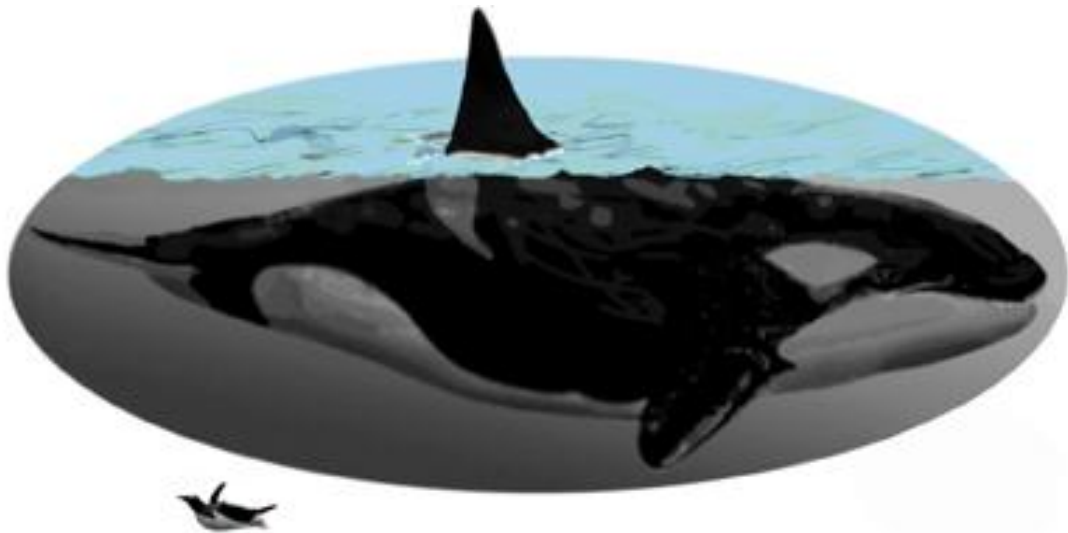


**The big whale cannot see Penny.
Can you see Penny swim under the big whale?
La grosse baleine ne peut pas voir Penny. Peux-tu voir
Penny qui nage sous la grosse baleine?**



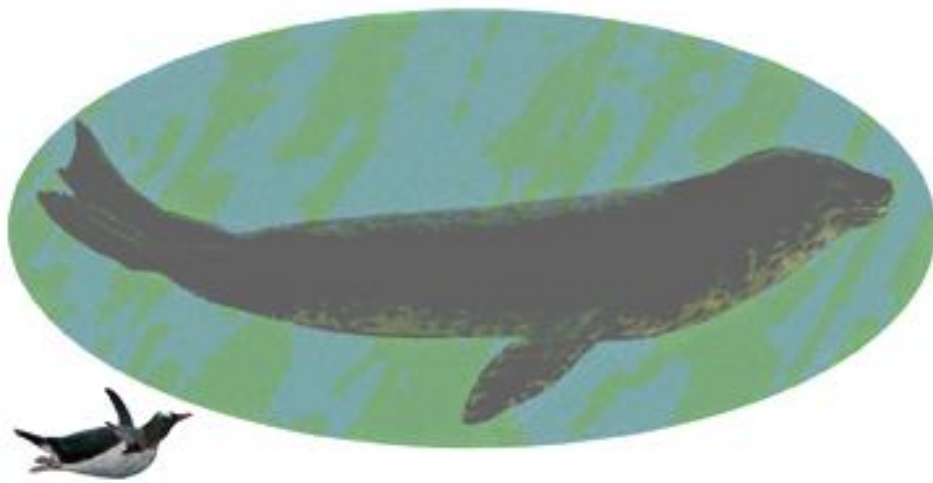
**Some whales eat seals. Also, they eat penguins.
Penny does not want to meet them.**

**Certaines baleines mangent des phoques. Elles
mangent aussi des manchots. Penny ne veut pas
les rencontrer.**

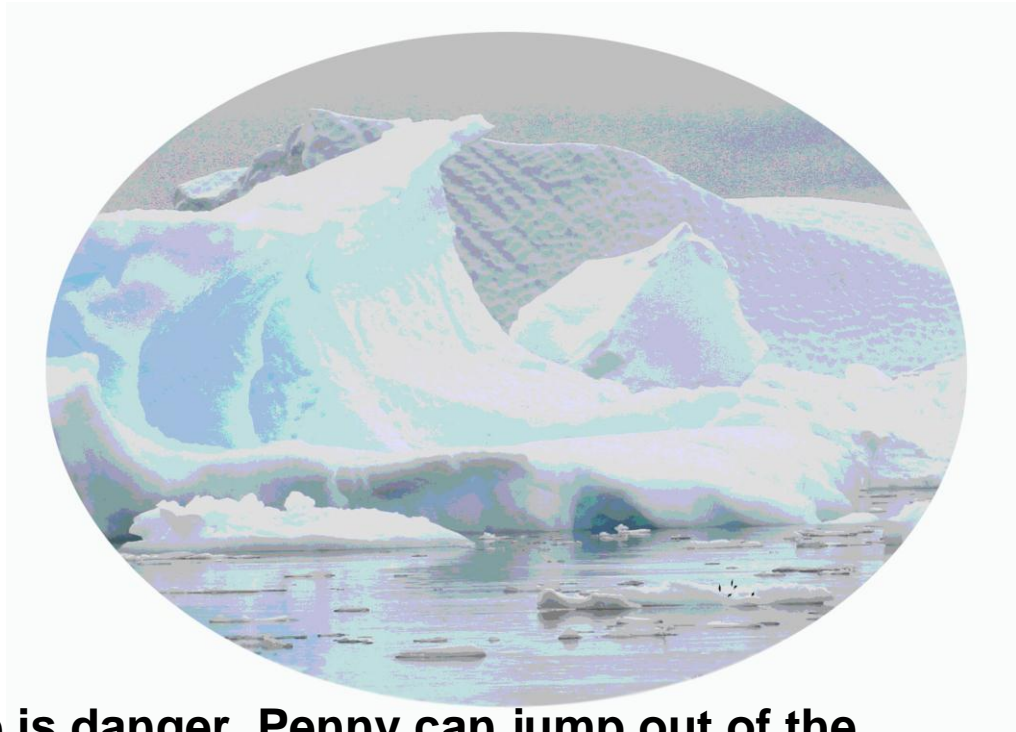


**How does Penny know which whales are
dangerous? They make shrill noises and they have
big teeth. Careful, Penny!**

**Comment Penny sait-elle quelles baleines sont
dangereuses? Elles poussent des cris perçants et
ont des grandes dents. Attention, Penny!**



The most dangerous animal in the water is the leopard seal. Stay away, Penny!
L'animal le plus dangereux dans l'eau est le Léopard de mer. Ne t'approche pas, 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?

Quand il y a un danger, Penny peut sauter hors de l'eau. Elle sera en sécurité sur la glace. Peux-tu voir les manchots sur la glace?



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 trouvera un compagnon. Son compagnon aidera à trouver ou à faire un nid. Penny pondra deux œufs. Elle aura à son tour des bébés. Avec son compagnon ils protégeront leurs bébés des grands oiseaux qui volent et du Petit Oiseau Blanc.

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

**Les petits auront très faim. S'il vous plait, encore à manger!
Penny sera très occupée.**

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, with respect to taxonomy and also with respect to the translation. 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 and the University of California. 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 original English text for clarity. She likes the story about Penny the penguin chick and hopes Penny will never meet a leopard seal.

Good luck, Penny!

