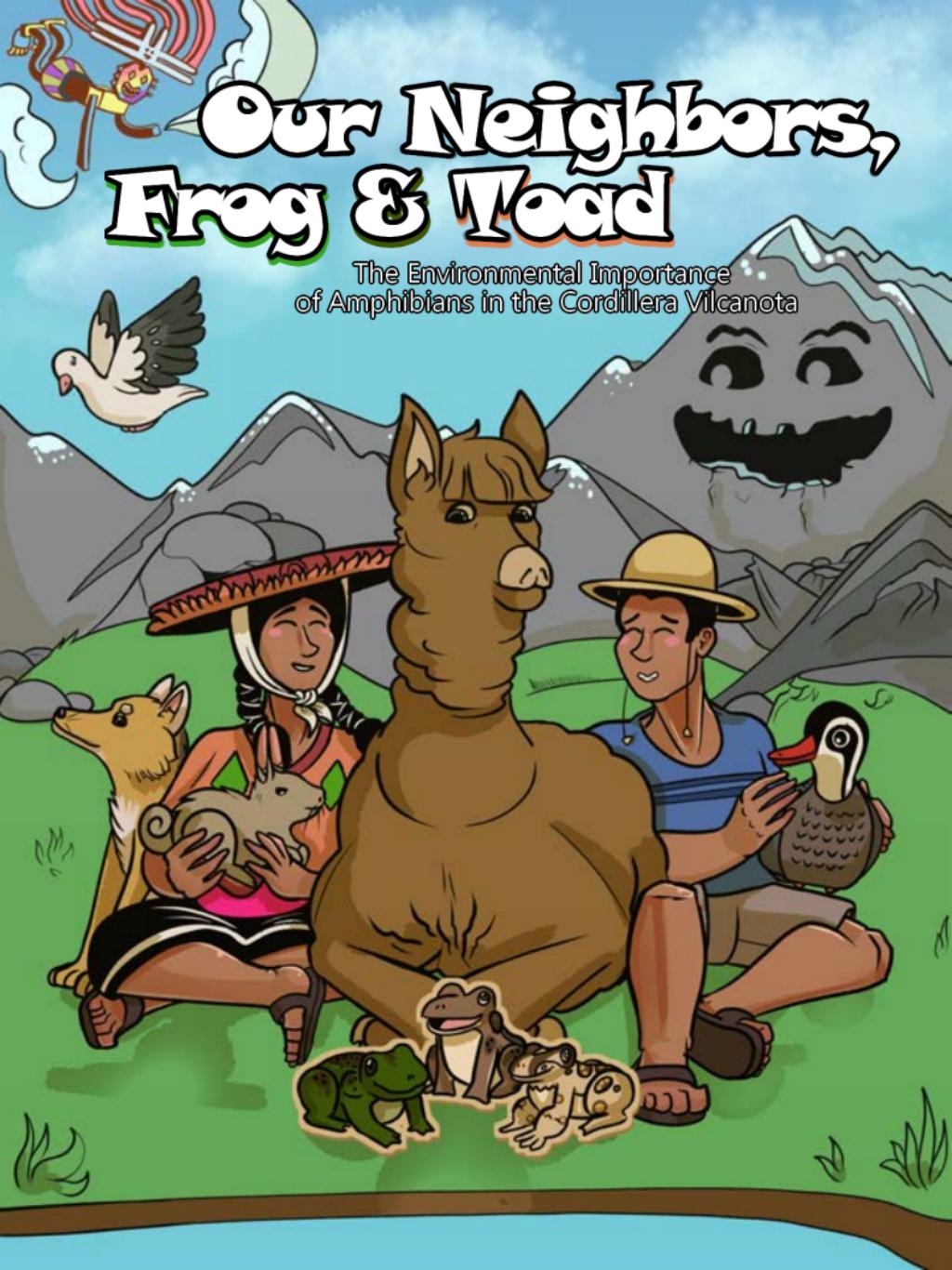


Our Neighbors, Frog & Toad

The Environmental Importance
of Amphibians in the Cordillera Vilcanota



This comic book project is the product of a collaborative effort among many volunteers:

Inking and Lettering

Lily Herring

Digital Coloring

Cara Robbins

Pamela Tseng

Lily Herring

Corey Savickas

Beau Townsend

Storyboarding

Cara Robbins

Pamela Tseng

Lily Herring

Writing

Addah McMillan

Emma Steigerwald

Anton Serekin

Project conception

Emma Steigerwald

Project oversight

Emma Steigerwald

Beau Townsend

Axel Reitzig

Cara Robbins

Translation

Emma Steigerwald

Maria Isabel Diaz Huaman

Michell Frank Oruri Condori

Frank Peter Condori Ccarhuacrapay

Cultural and biological revision

Frank Peter Condori Ccarhuacrapay

Maria Isabel Diaz Huaman

Allison Cain

Kelsey Reider

Emma Steigerwald

Anton Serekin

Preston Sowell

Jared Guevara Casafranca

Michell Frank Oruri Condori

Educational standards consultation

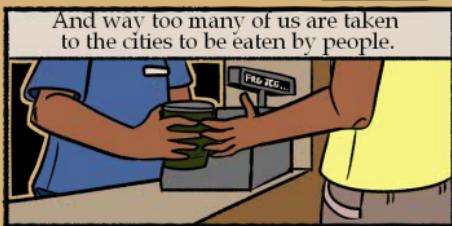
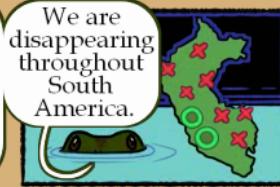
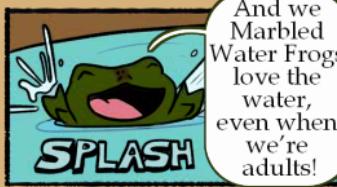
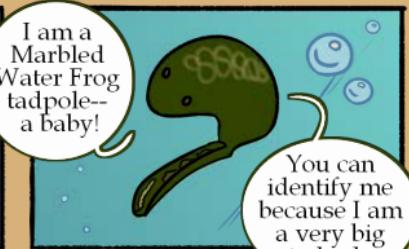
LuLu Cruz Buck

Printing

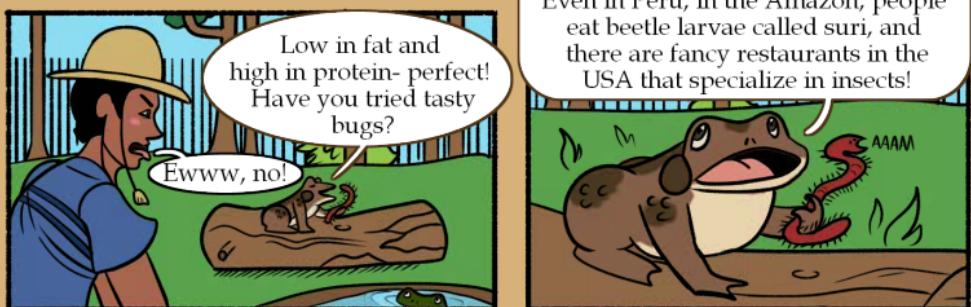
Emma Steigerwald

Delfin Lozano

Meet the Marbled Water Frog



Amphibians: Disgusting?



Stories in the Stars

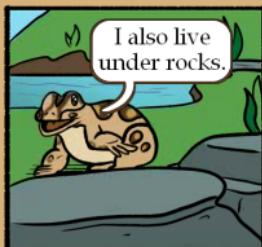


Meet the Marbled Four-Eyed Frog



I'm not the Andean Toad. I'm the Marbled Four-Eyed Frog! It's not that hard to tell us apart. I'm not even a toad!

Hello, Andean Toad!



As an adult, I don't go to the water except to have babies.



Huh, I haven't seen that many Marbled Four-Eyed Frogs besides you.



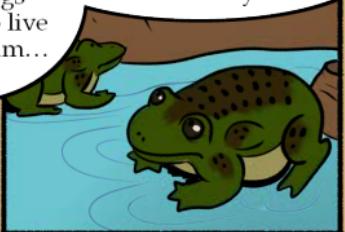
That's because, well... there aren't as many of us left.



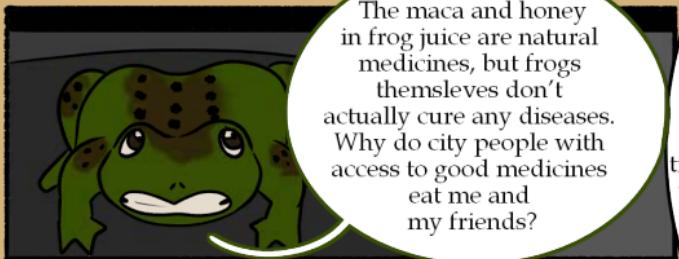
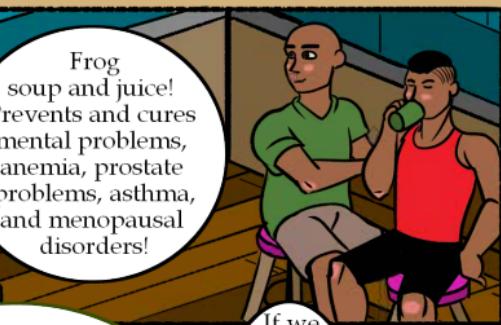
Frog Broth

My grandmother always told me of the frogs that used to live in our stream...

... she said they used to protect the water... But where are they now?



Frog soup and juice! Prevents and cures mental problems, anemia, prostate problems, asthma, and menopausal disorders!



If we want frogs to continue to be an important part of tradition, their uncontrolled harvesting must stop!



Meet the Andean Toad

What's this creature? It looks different from the other frogs.

Yes, that's because I'm the Andean Toad! You can tell by my dry, bumpy skin.

I have bumps on my neck that are poisonous to predators.

I can survive far from water and not dry out because of my special skin.

But I still need to go back to pools of water to reproduce.

We lay eggs here, and once they hatch, the tadpoles live in the water.

Now they're toadlets, so they're leaving the water. Look at their cute orange feet!

We live high in the Andes from Peru to Argentina.

But we are in danger from new predators like trout.

And llamas and horses eat the vegetation we like to hide in.

I didn't know I had such interesting neighbors. I hope that they stay safe here!

Vampire Toads

My mother tells me that toads suck blood. No wonder they come into my house... they are looking for their next meal!

Yum yum yum! So delicious and nutritious!

What's that?!

It's a frog!

The frog's throat is moving! What's it doing?

That means it's sucking your blood!

Look out!

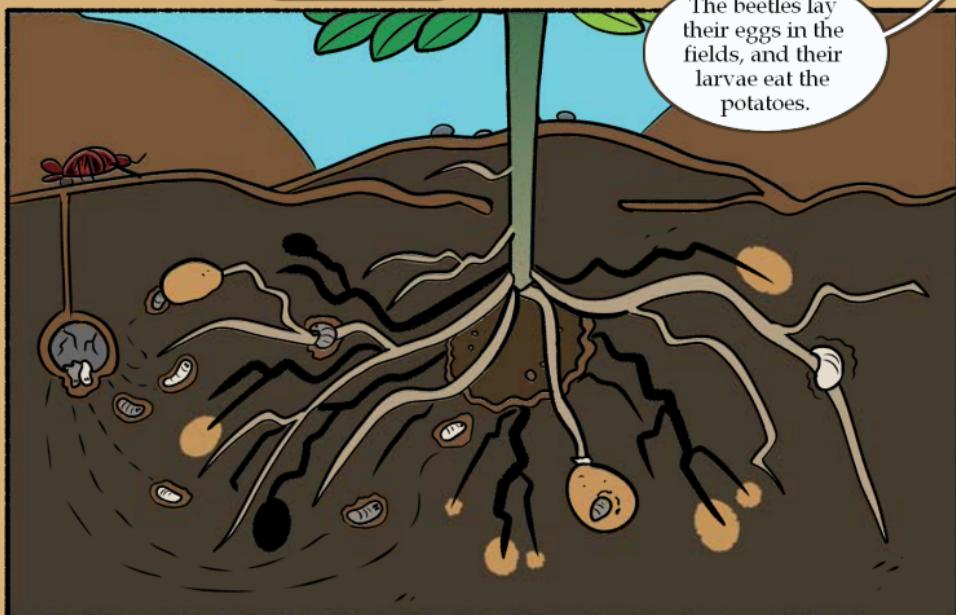
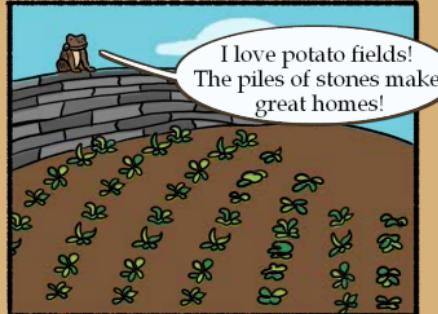
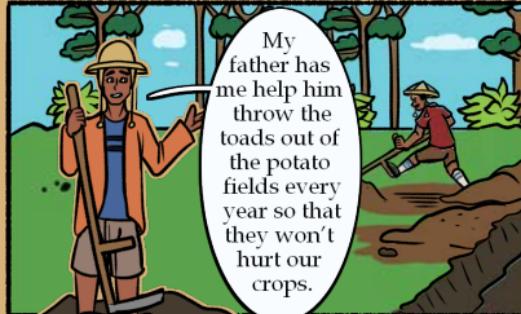
Kill it!

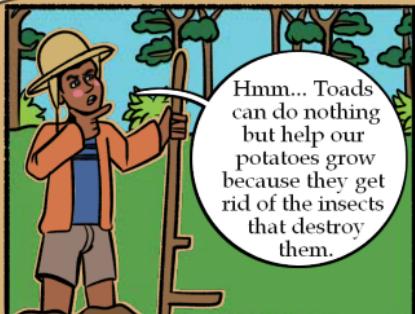
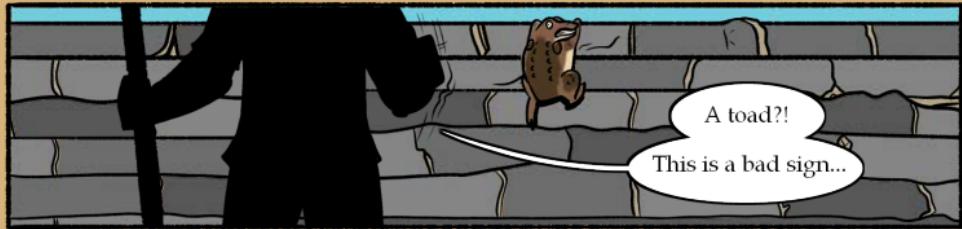
Why would they think I'm sucking blood? I don't even like blood!
When my throat moves, it just means I'm breathing!

Poor guy!
You did nothing wrong, but they're still scared of you.

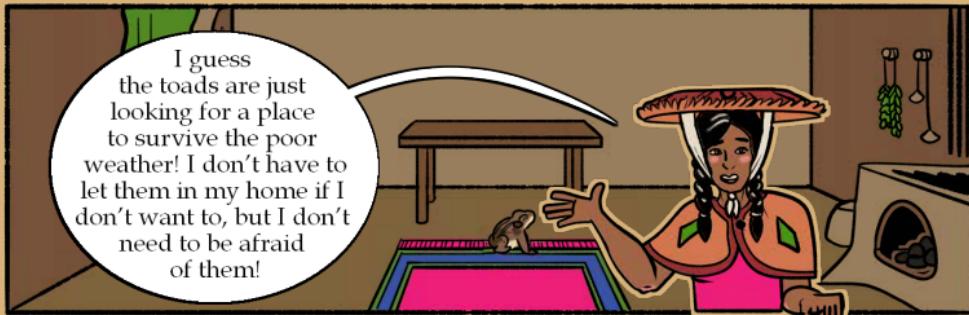
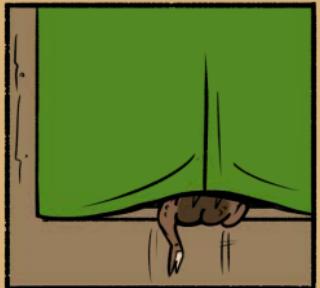
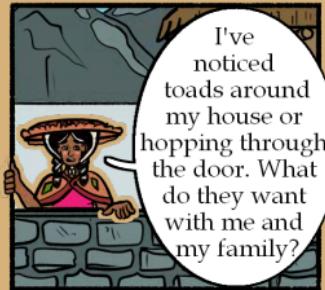


Helping Potatoes Grow

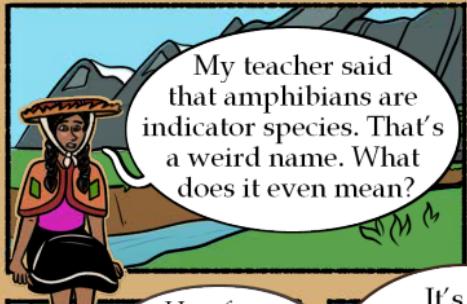




Intruder Alert!

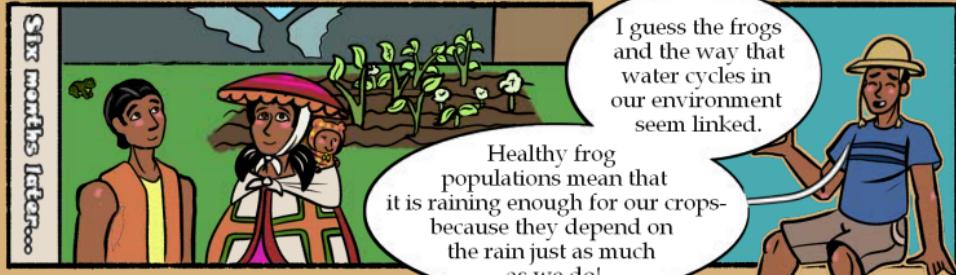


Indicator Species



Calling the Rain





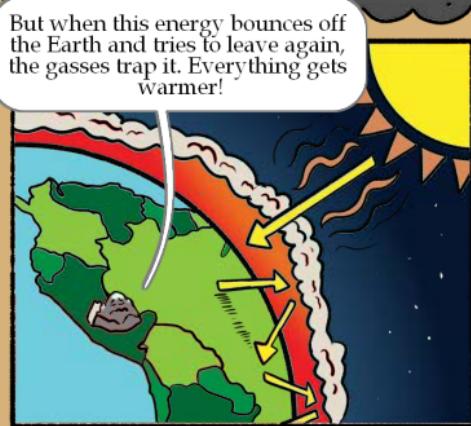
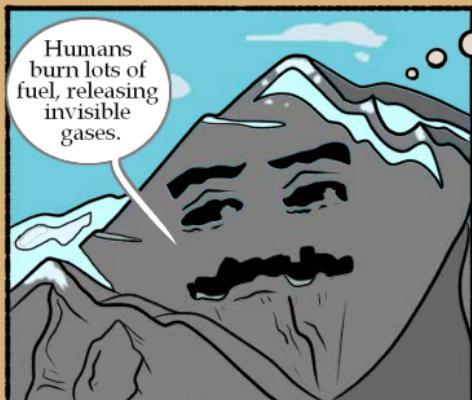
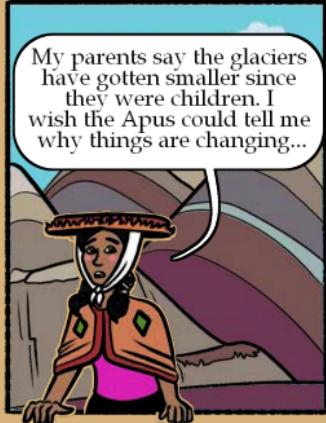
Frog or Toad?



Chytridiomycosis



Climate Change

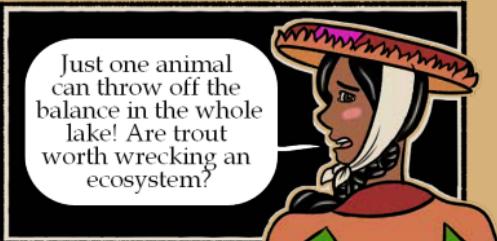
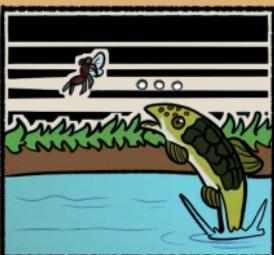
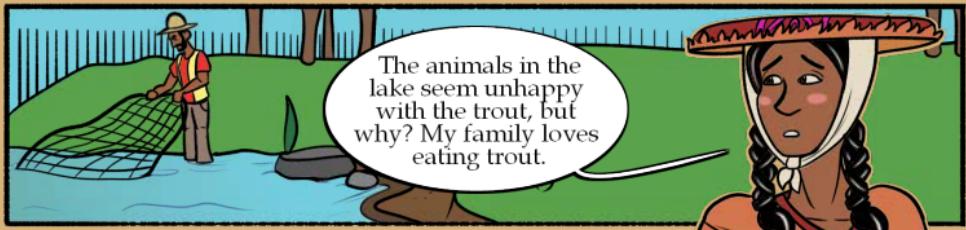




Mining



Trout: An Invasive Species



Metamorphosis

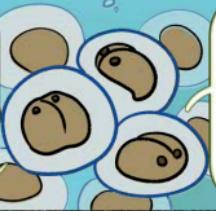
How do frogs and toads get from tiny eggs to... actual frogs and toads?



I lay a lot of eggs since most of my babies won't survive to see adulthood. I want to give as many of them as I can a chance to live.

Her eggs develop into adults very quickly, but my babies are tadpoles for a very long time! I must find a place with everything they need while they grow.

The sensory system I will use to see and feel the world is only just beginning to develop.



While I'm stuck inside this egg, all my energy will come from the yolk-- like a chicken yolk!! that my mother left with me...

I'm growing very quickly! My organs are developing, so when I hatch, I'll be ready to eat, swim, and sense the world around me!

I'm so glad my mother laid so many eggs! They make a nice first, easy snack for me!

Up high in the mountains, the sun is really strong! Just like people, we can get sunburns, but we don't have clothes or sunblock to protect us!

That's why we hide in the mud!

It's like nature's sunblock!

And it makes a great blanket!

And we can find our food in the mud.

IN OTHER WORDS:
MUD
IS
EVERYTHING

It's time for me to leave the stream and start my adult life!

After a long season of eating and growing, I'm feeling the weather getting dry. It's time for me to hide until the rainy season returns.

I kind of like it here! I guess you could call me a homebody, but I don't think I'll leave!

Here in the water, I have plenty of food and moisture to last me all year.

The rain is back!

I... I don't remember you being that cute...

And that's how the cycle of life continues for us!

I wish I could transform as much as frogs and toads do during their lives! It's like magic!



The Cordillera Vilcanota is a beautiful, glacier-blanketed mountain chain in Southern Peru. It supports endangered animals, breathtaking scenery, and rich cultural traditions. Join with the residents of Cordillera Vilcanota to explore their world!

Contained in this book are colorful adventures that will help you discover the hidden depths of a wondrous environment. They will show you the animals who live here, particularly the amphibians--the highest elevation frogs in the entire world! You will also learn about some of the challenges these animals face in a changing world and the role they have held in ancient local culture.

Everyone can pitch in to save this extraordinary place, and here is a great place to start.

