

Jan Heuschele

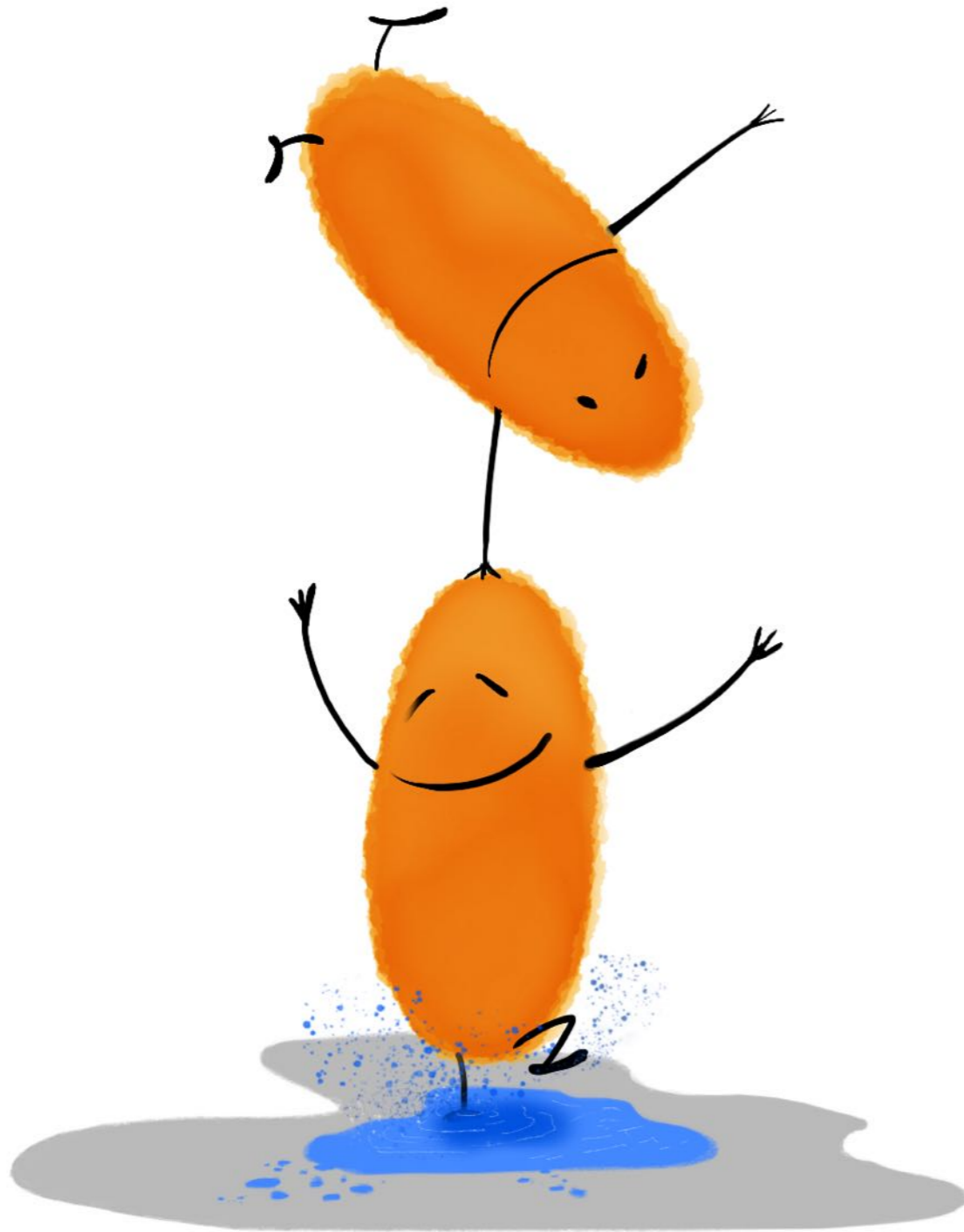
The world of Hopfs

A small story about evolution



Free version

The World of Hopfs



This story is meant to be a small introduction to the very basic requirements of evolution: variation, heritability, and selection. Evolution is often perceived as something complicated, but it can be boiled down to a few processes. Evolution simply describes how the genetic composition of populations changes over time.

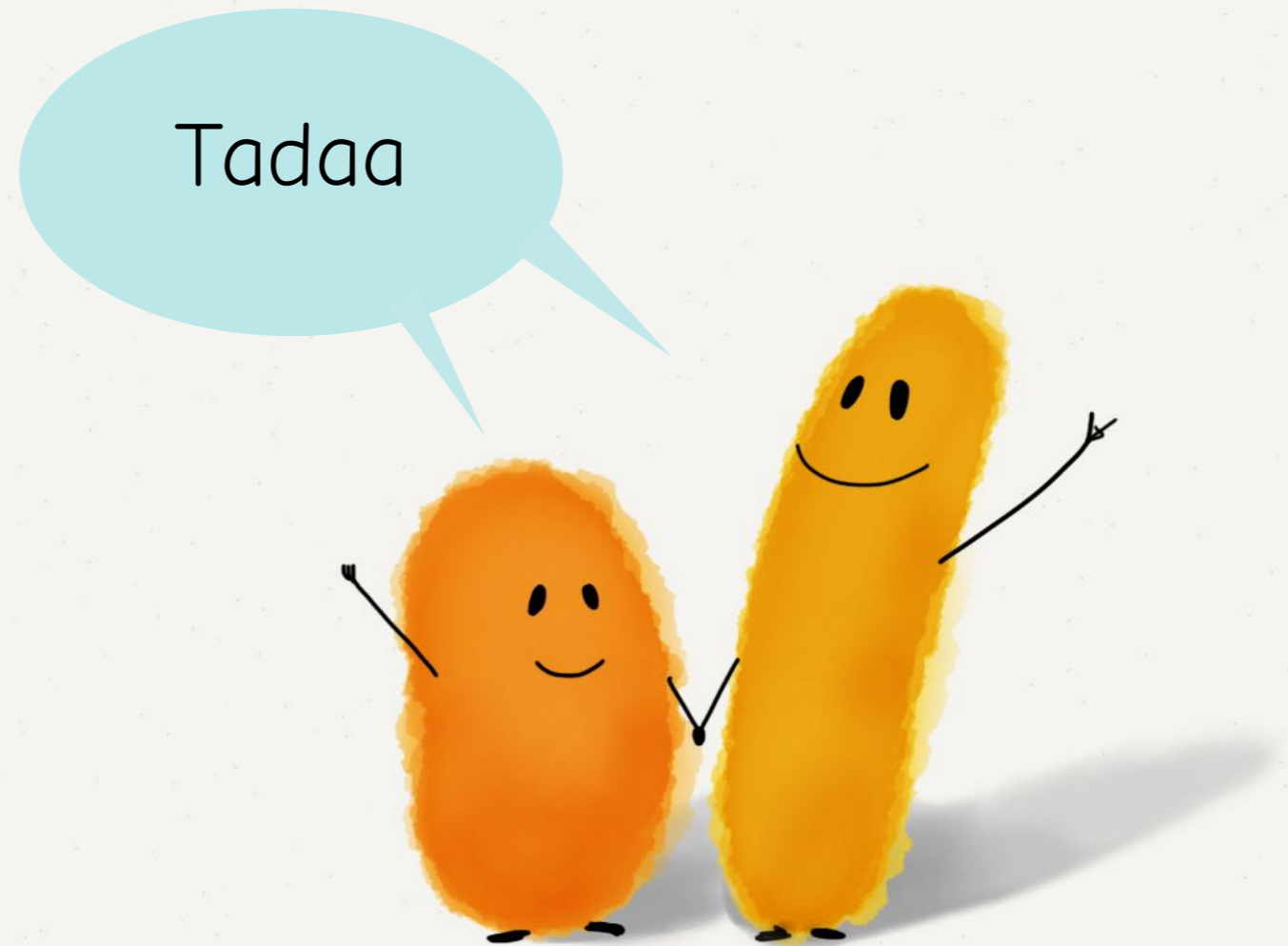
The Hopfs are basically a pretty normal animal population with some differences between the individuals, that are imperfectly transmitted from parents to children. Sometimes the environment influences who is able to survive and reproduce and this brings about a change in the distribution of their genes (or in case of the Hopfs the information in their Hepps). Of course, the Hopfs are not real animals, but the basic principles are the same as in real nature. If you see a small info sign tap on it to receive additional information about the topic.



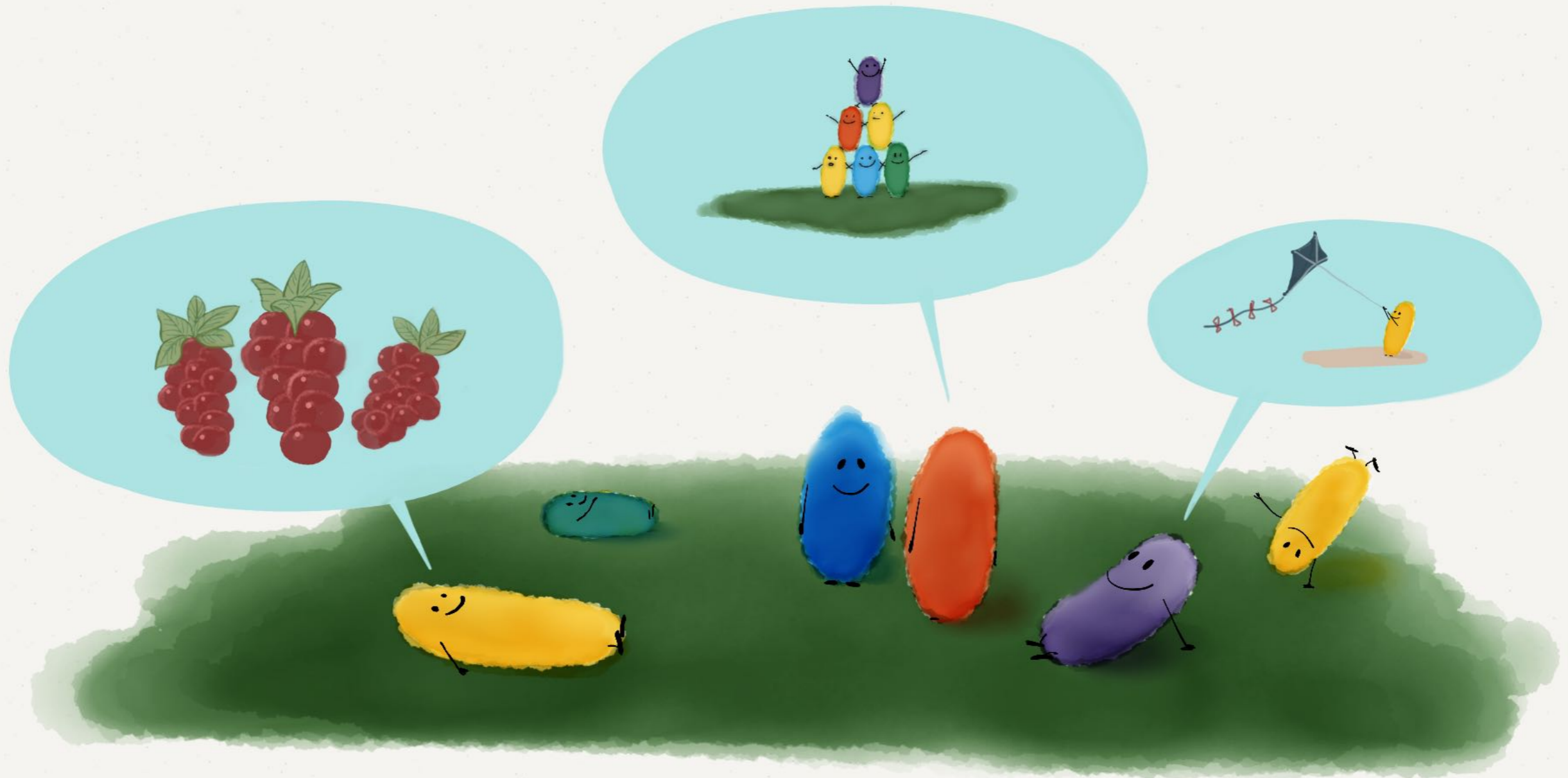
This project would not have been possible without the support of the European Society for Evolutionary Biology ([eseb](http://eseb.org)). I am also thankful for the support and helpful comments from friends and colleagues. The Hopfs were brought to life by me, Jan Heuschele. Please visit my website to learn more about other projects. www.heuschele.com

I am grateful to Katrina Lythgoe for copyediting this version of the Hopfs.

Say hello to the Hopfs!



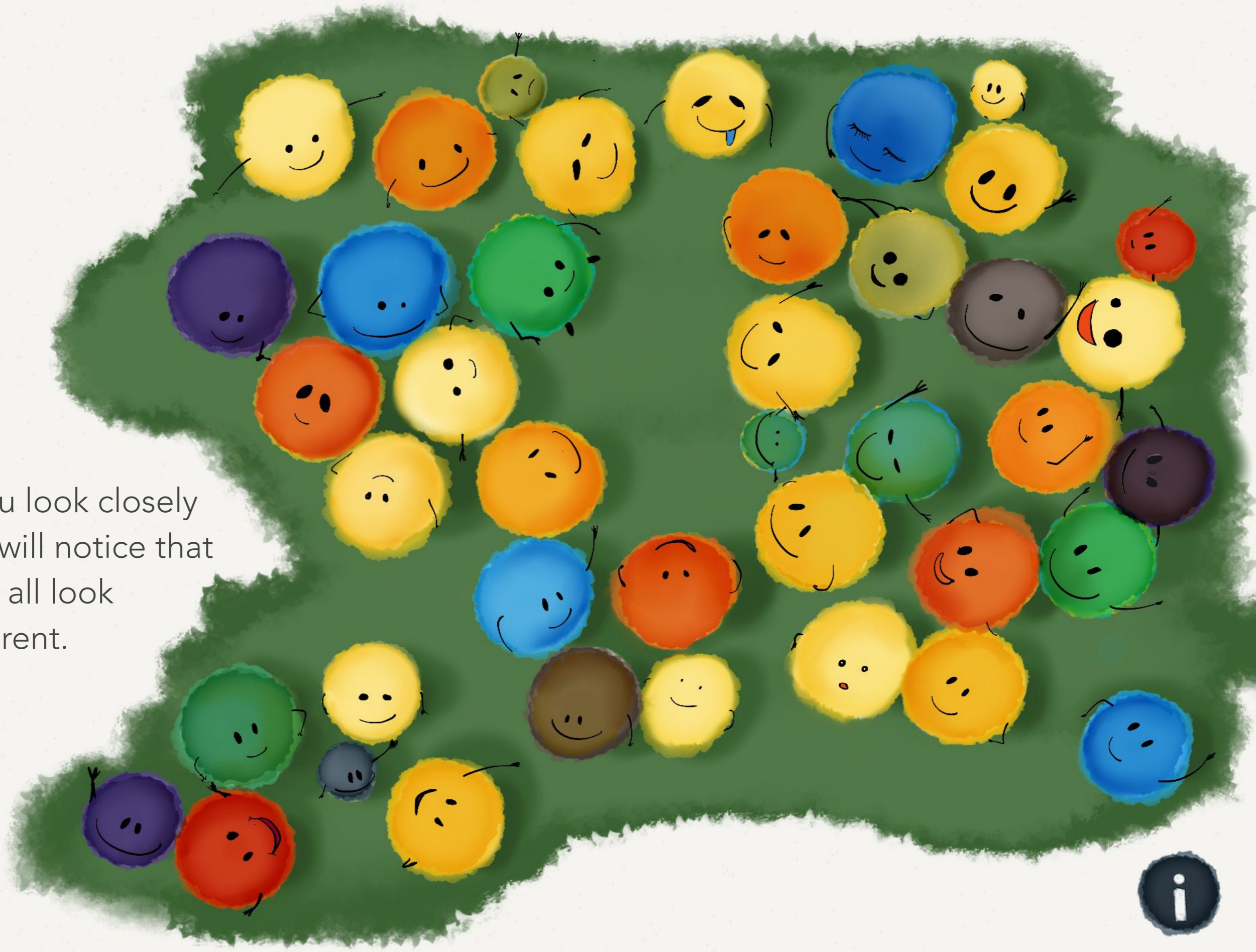
These small and fluffy creatures are called Hopfs. Here they do what they do best: being lazy, relaxing and thinking of food and fun things to do...



They live in Hopfland, with
its gentle hills and grassy
open plains.



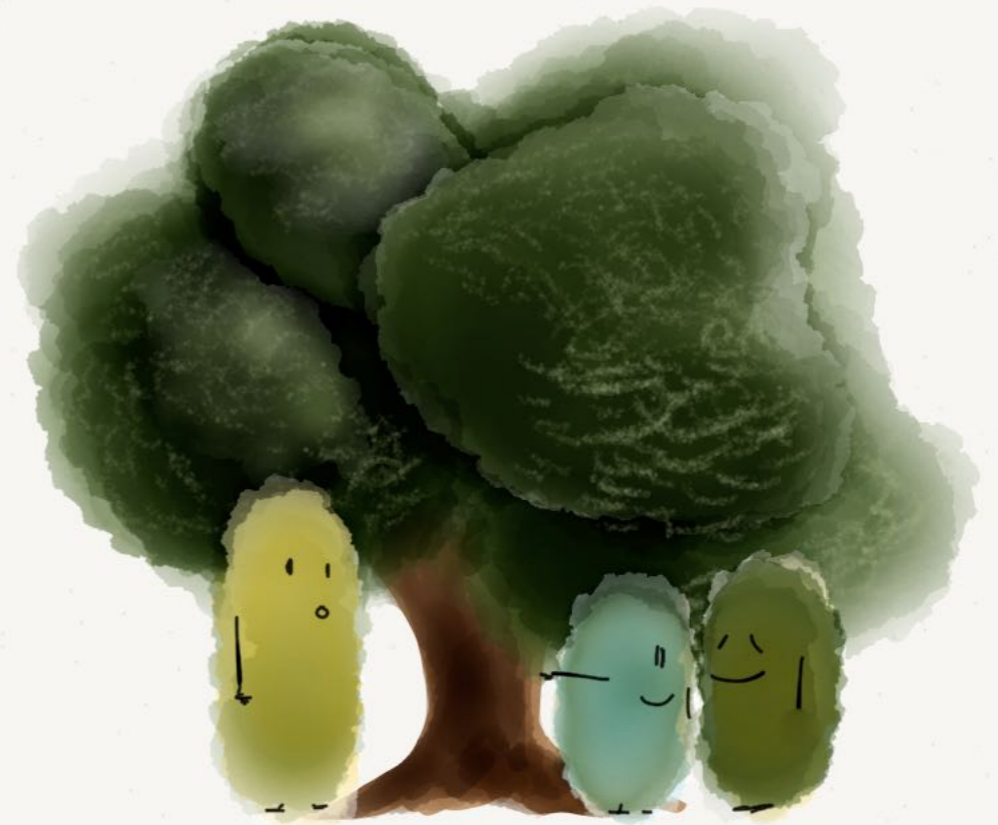
If you look closely
you will notice that
they all look
different.



Some are tall while some are small...



red like tomatoes



green like leaves

some are...



yellow like bananas

purple like
eggplants



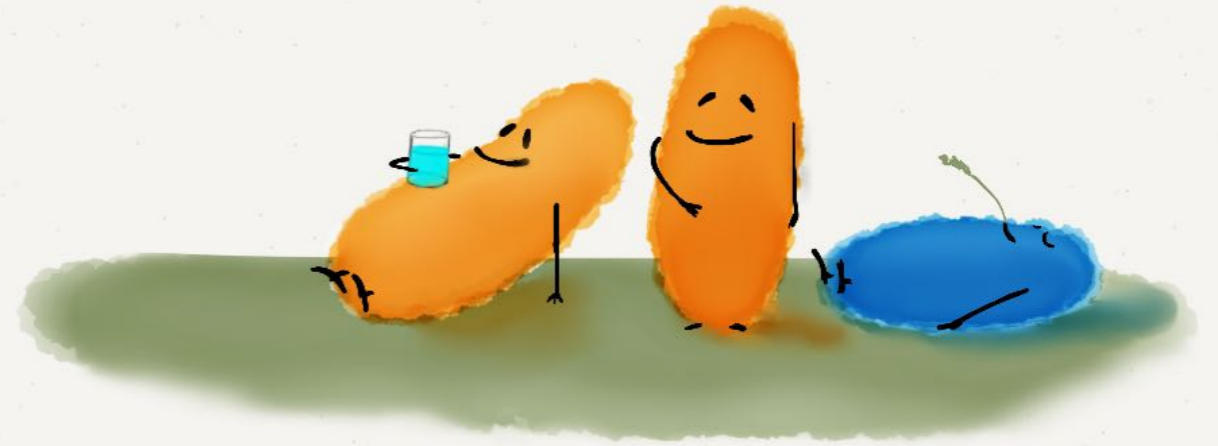
blue like the sky



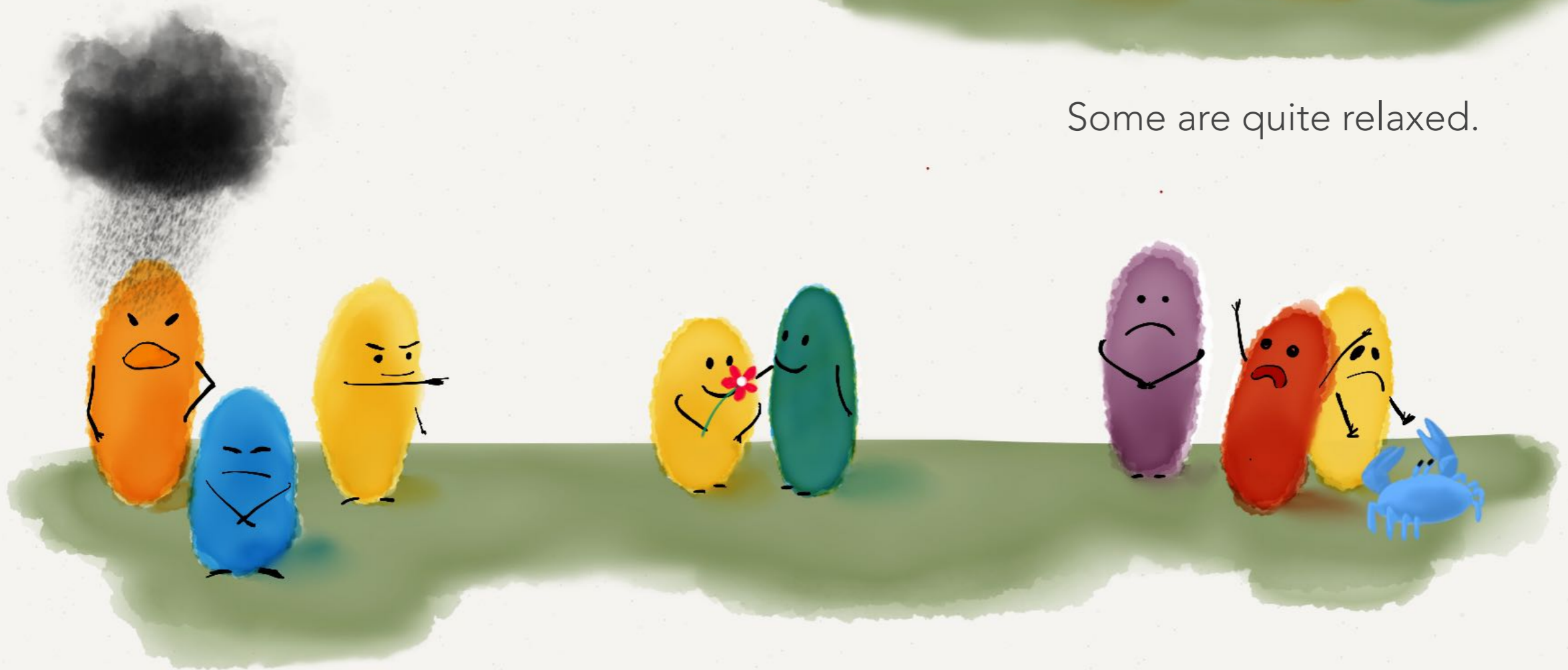
And not all of them look like
crispy french fries....



If you watch them for a while you will notice that they do not all act the same.



Some are quite relaxed.



Some are angry and grumpy.

Some are super friendly.

And some are always worried and scared.

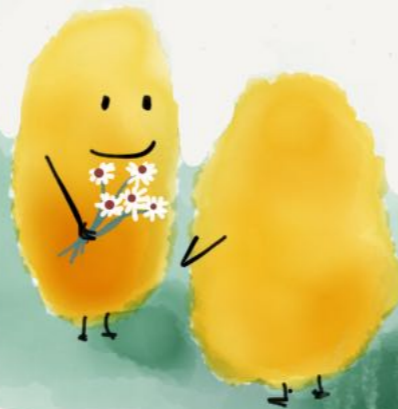


Sometimes two Hopfs really like each other a lot. In these moments they follow the “official” Hopf rulebook of engagement.

I. the casual wink



II. the small flower gift



III. the delightful hug

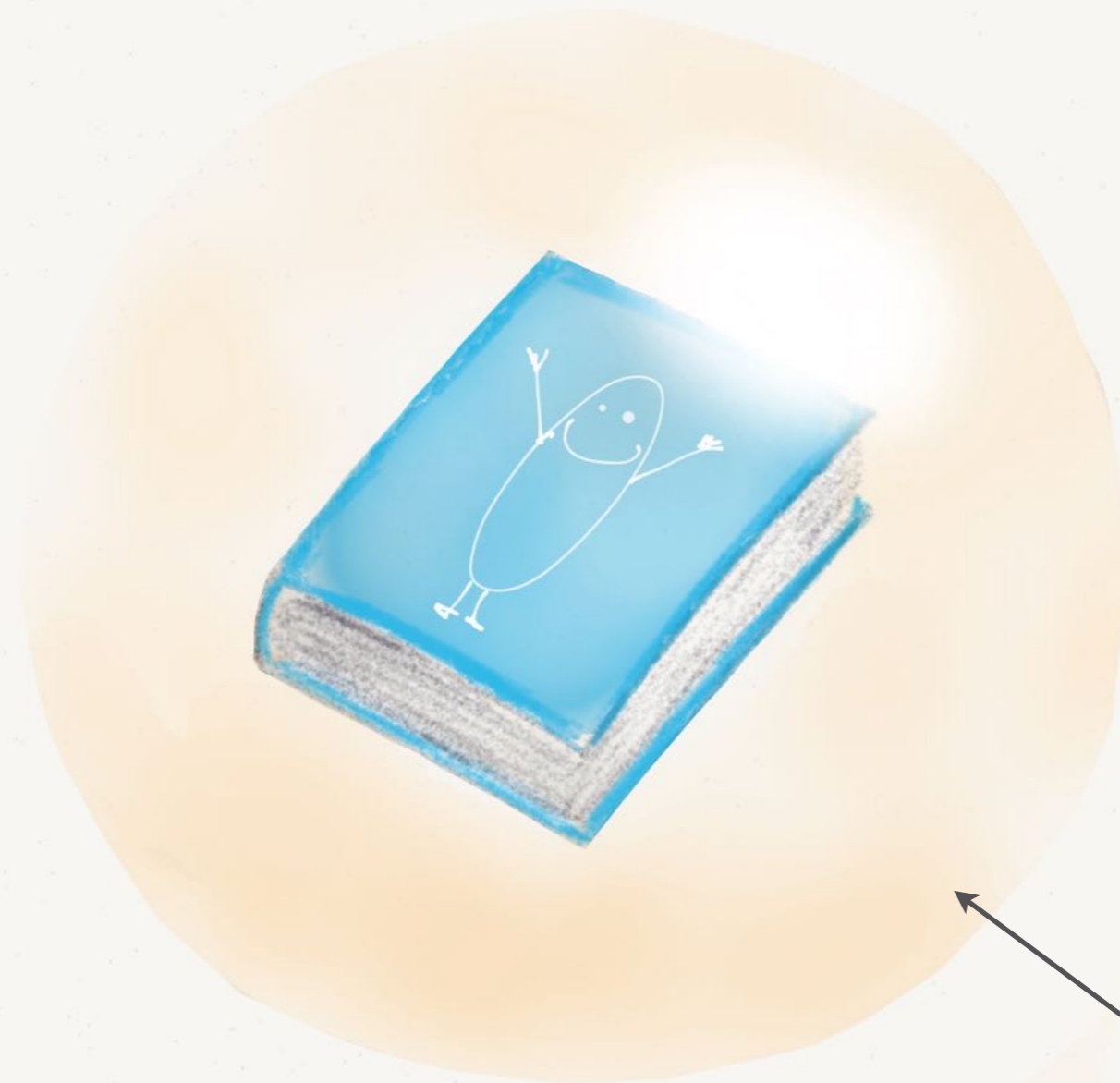




And sometimes, at night, two
Hopfs that really like each
other combine their "Hepps"
to make a tiny new Babyhopf.

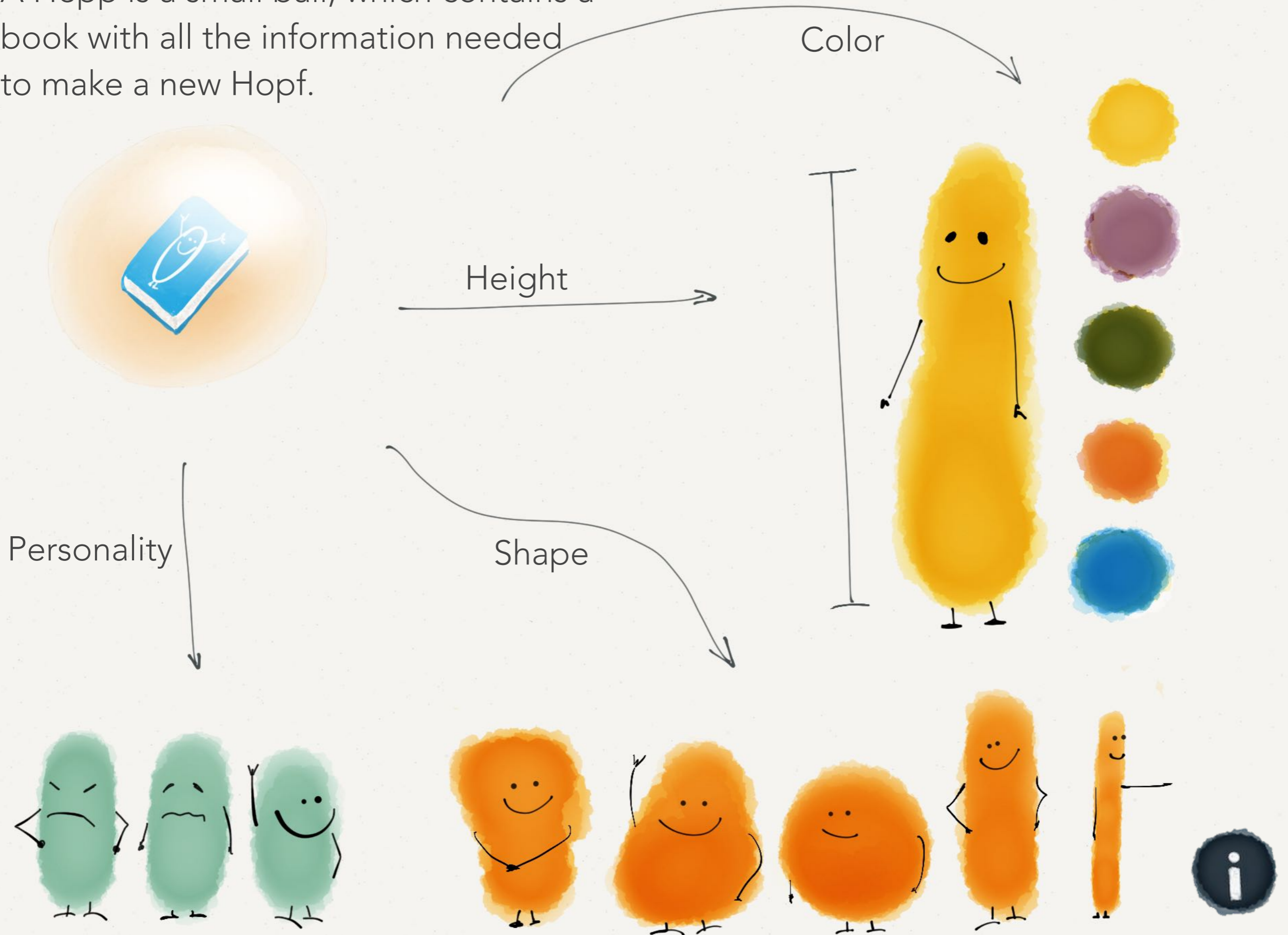


Wait, what you might ask. Their Hepps?
What are they supposed to be?

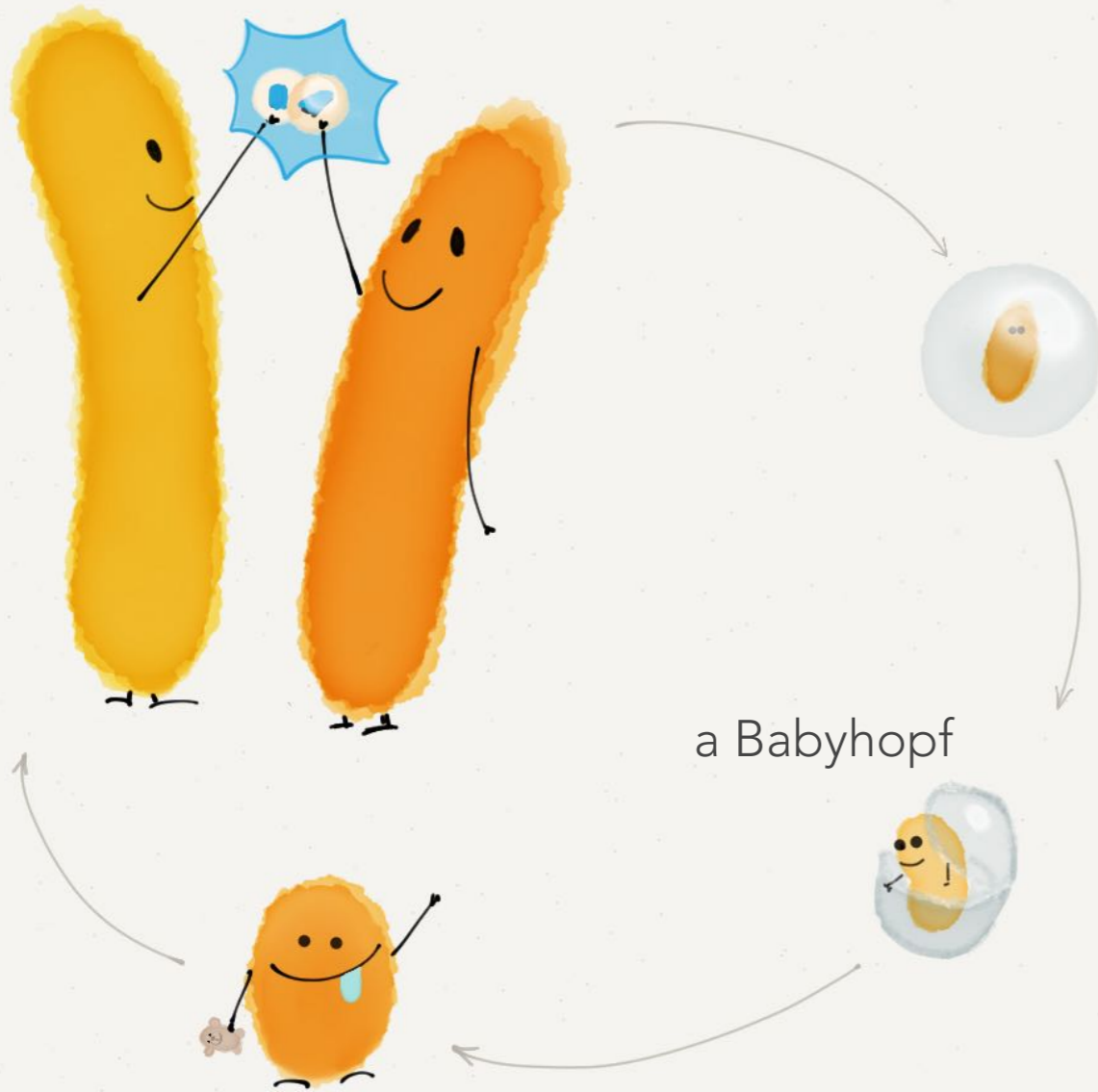


← This is a Hepp

A Hepp is a small ball, which contains a book with all the information needed to make a new Hopf.

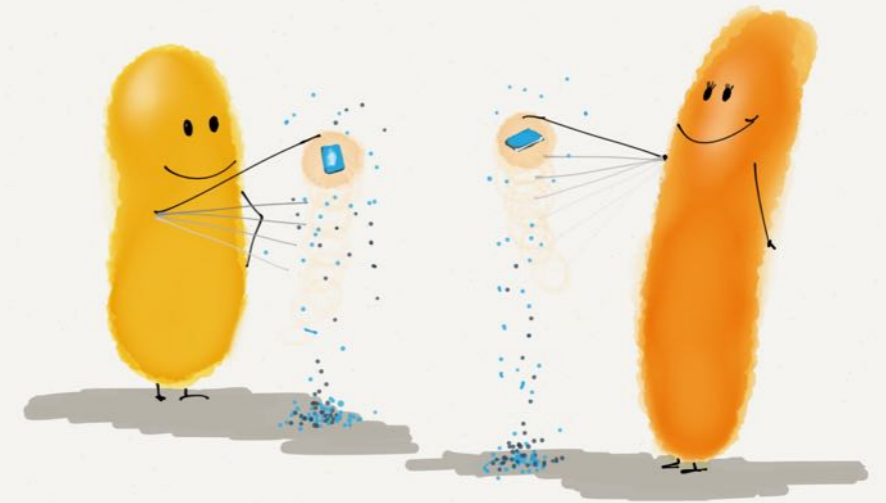


A Hepp only has space for one book, so both Hopfs have to shake their Hepps until half of the words and letters have fallen out.

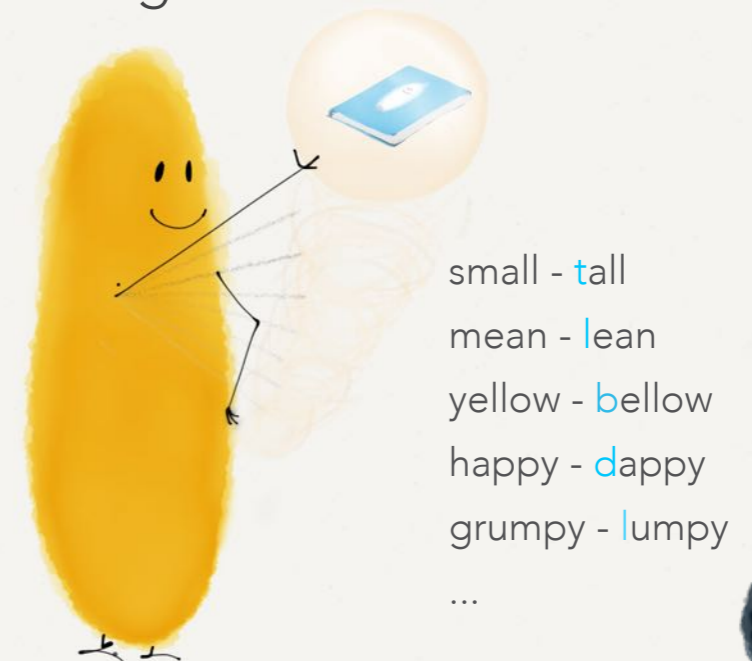


a Babyhopf

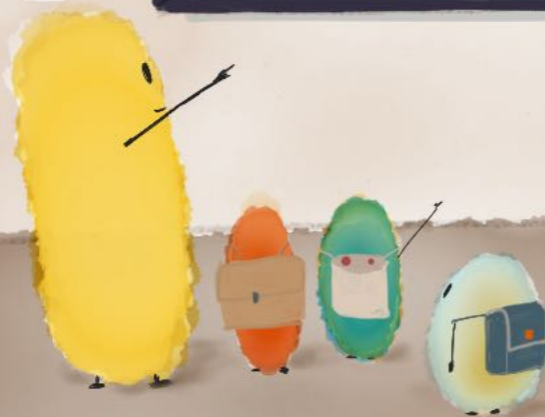
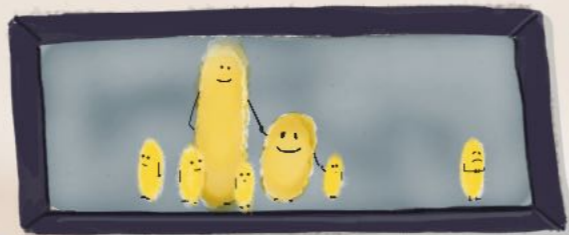
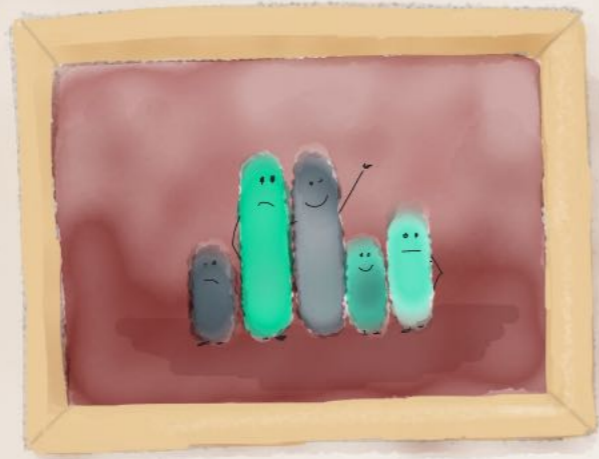
And that is how the two Hepps are combined.



Because of all this shaking some of the words in the book change.



The Hopf Museum of Modern Art.



Kids get half of their Hepp from each parent, so they always look a bit like mom and a bit like dad.



The Hopfs really love to combine their Hepps. Over time Hopfland became filled with more and more Hopfs. They ate so much hardly any food or space was left.



The bravest Hopfs decided to travel and explore the rest of the planet.

Hopfplanet



Hopfland



Some reached a beautiful forest, with large trees and moss on the ground ...



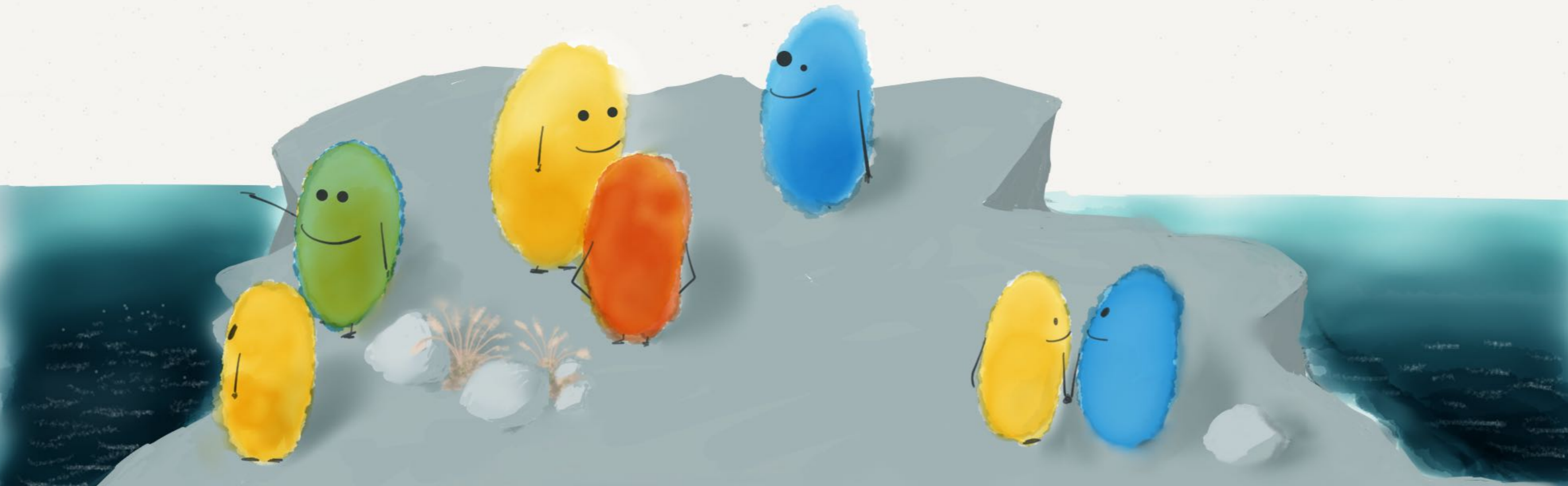
... but they were not alone. Inside the forest the vicious and mean Fressköpfe were waiting for them...



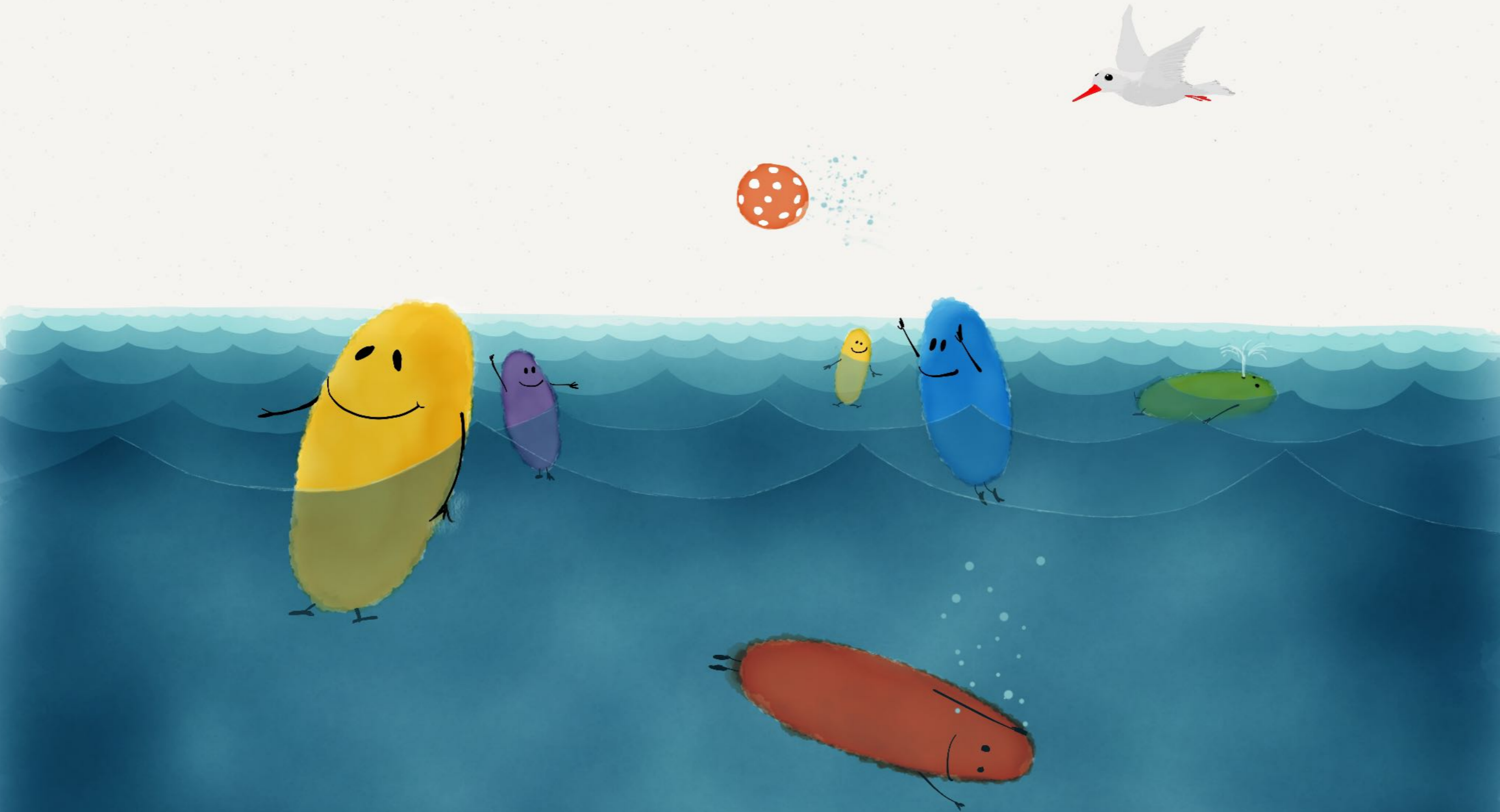
... and only those Hopfs who could blend in with the forest survived and lived happily with their families.



Others reached the coast at the edge of a beautiful ocean.

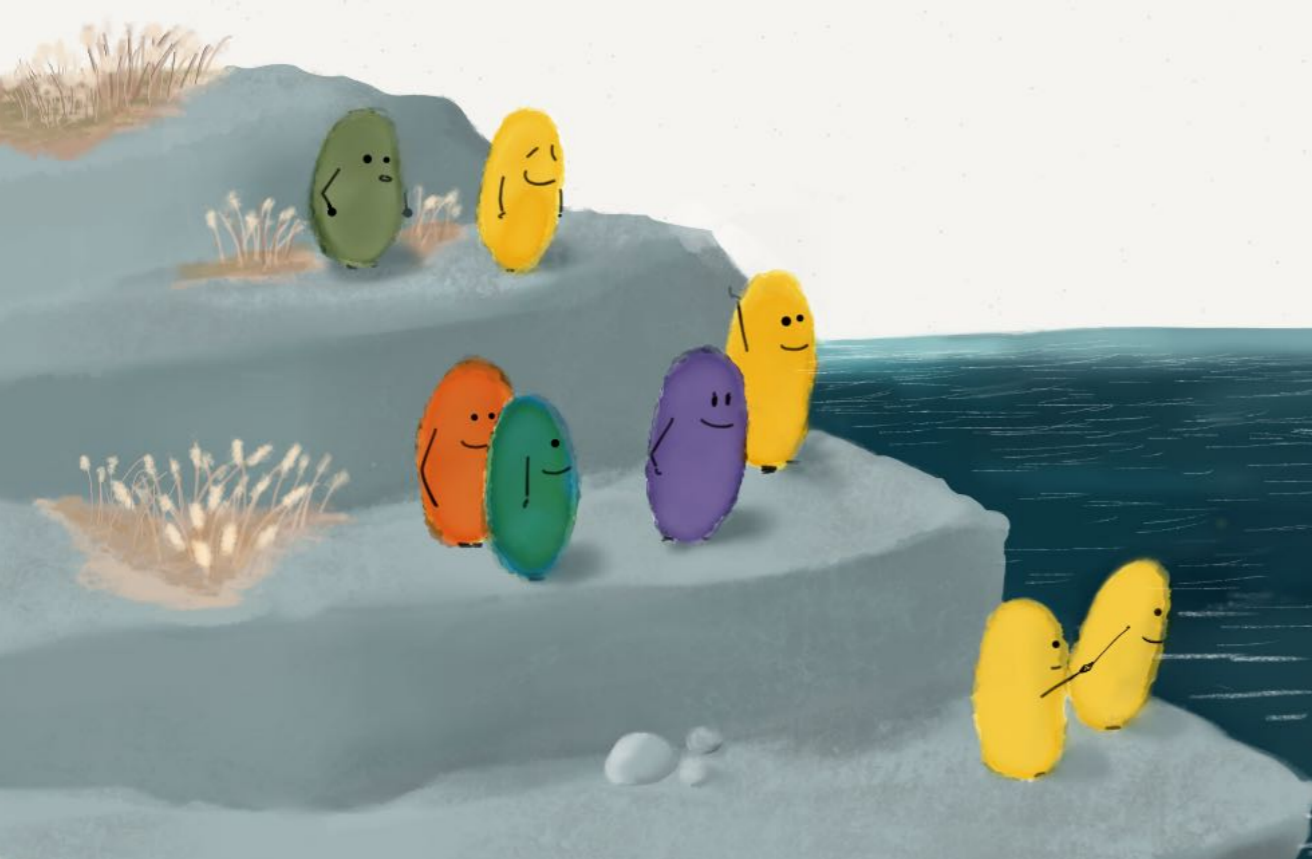


They loved to go swimming in the sea.



But one day in a storm,
two blue Hopfs drifted to
a far away island





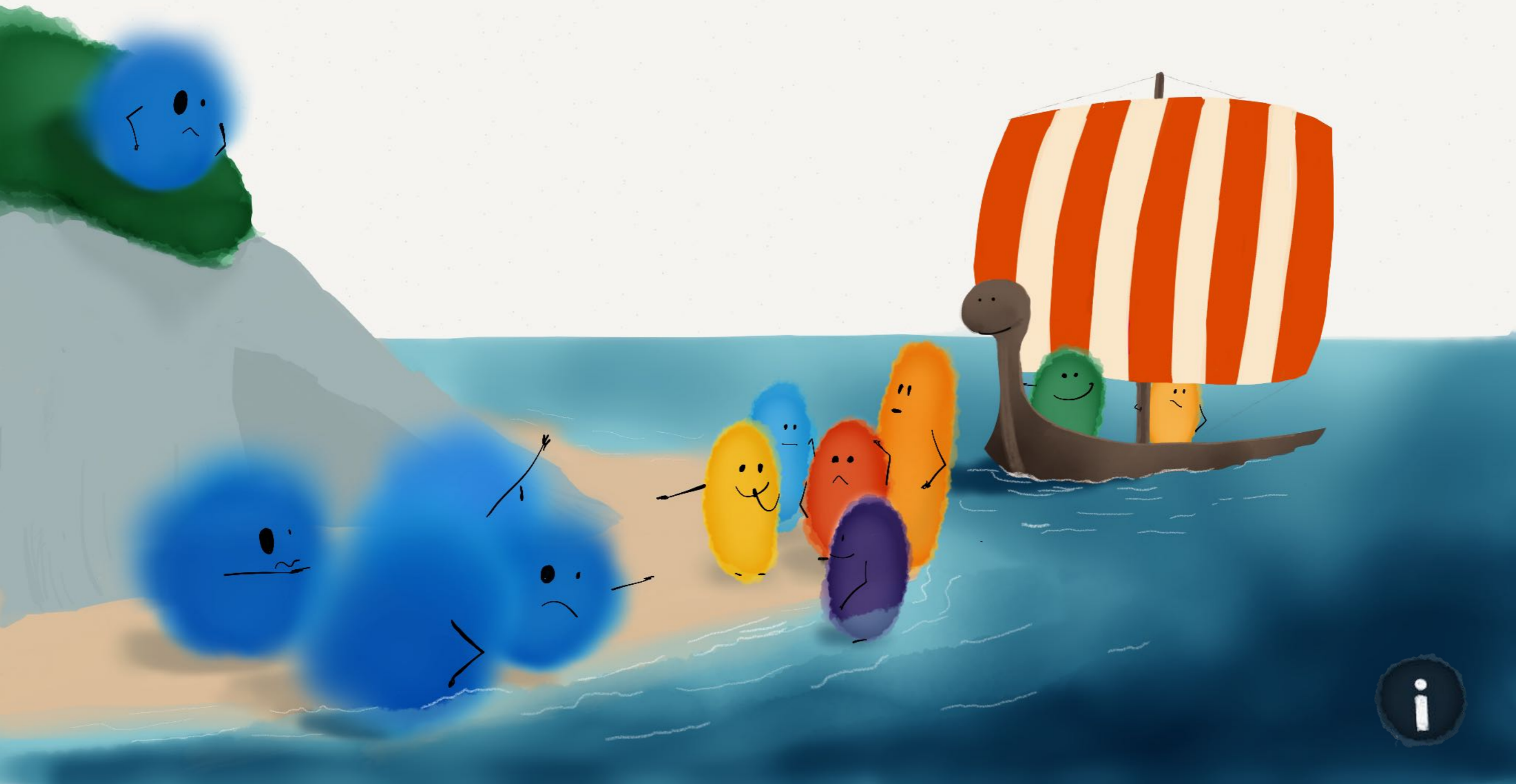
Far away island here



The blue Hopfs and all their Babyhopfs lived on the island for a very long time, until...



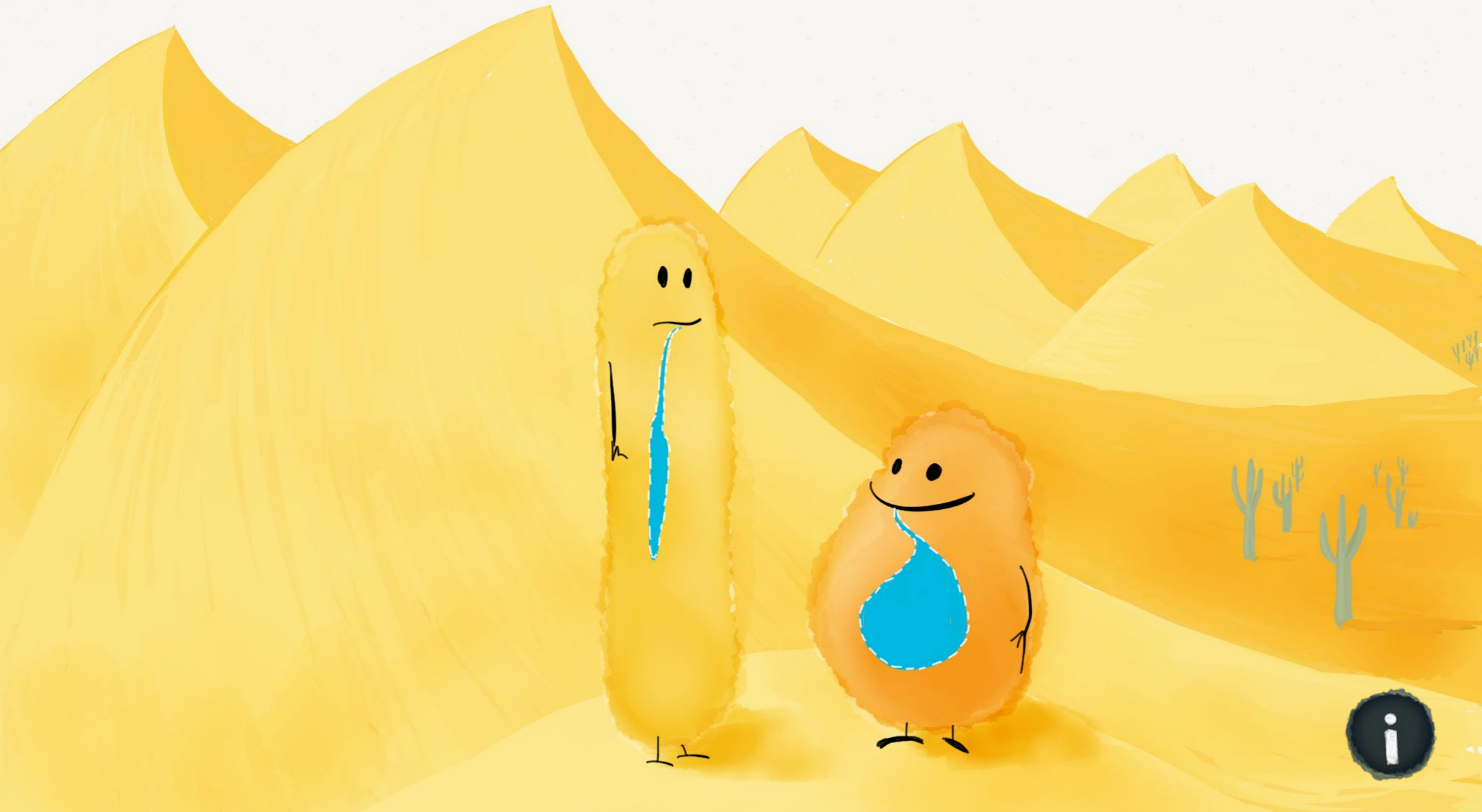
... many years later another group visited the island. But by then the visitors and those on the island couldn't recognize each other anymore. Now there were two species, the Hopfs and the Blopfs.



Other Hopfs came across a desert that was hot and dry.



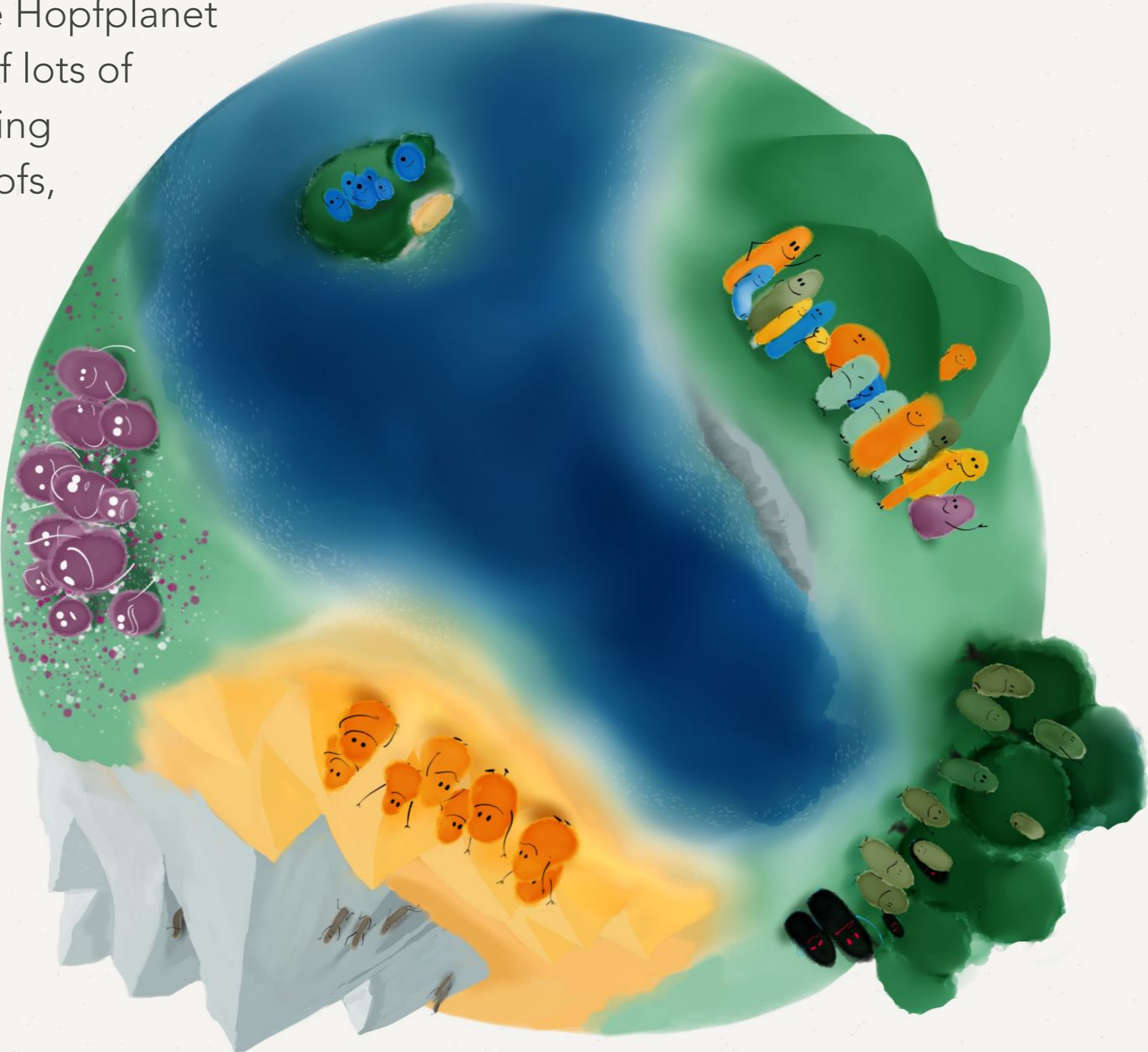
Some of them could store a lot of water inside their bodies. They might have been a bit more round, but at least they weren't thirsty.



Only the round Hopfs were able to live in the dry desert. Some time later the place was full of their children and grandchildren.

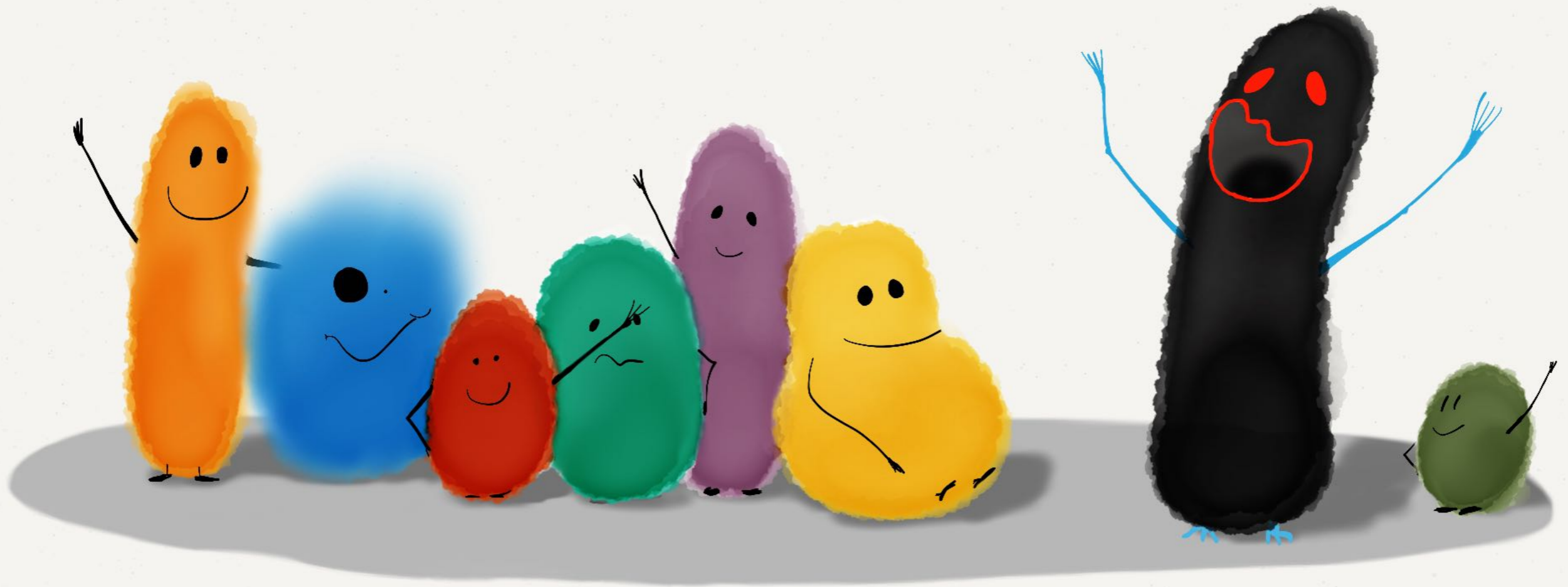


Over time the Hopfplanet became full of lots of different looking groups of Hopfs, Blopfs and others.



And all of them say...

Helloooooo



... to you!