

Spongy Skeletons

article and photographs
by Jill MacGregor



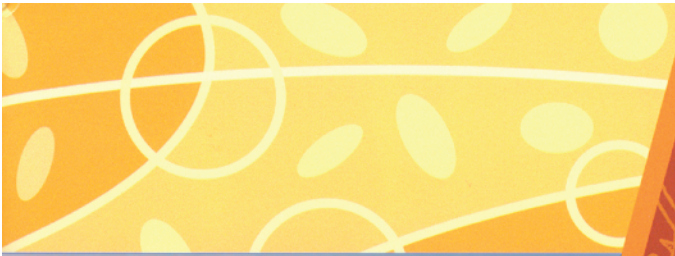
Rachel and Robbie came back from the beach one Sunday with a bag full of sea sponges. They'd found the sponges scattered along the high-tide line.

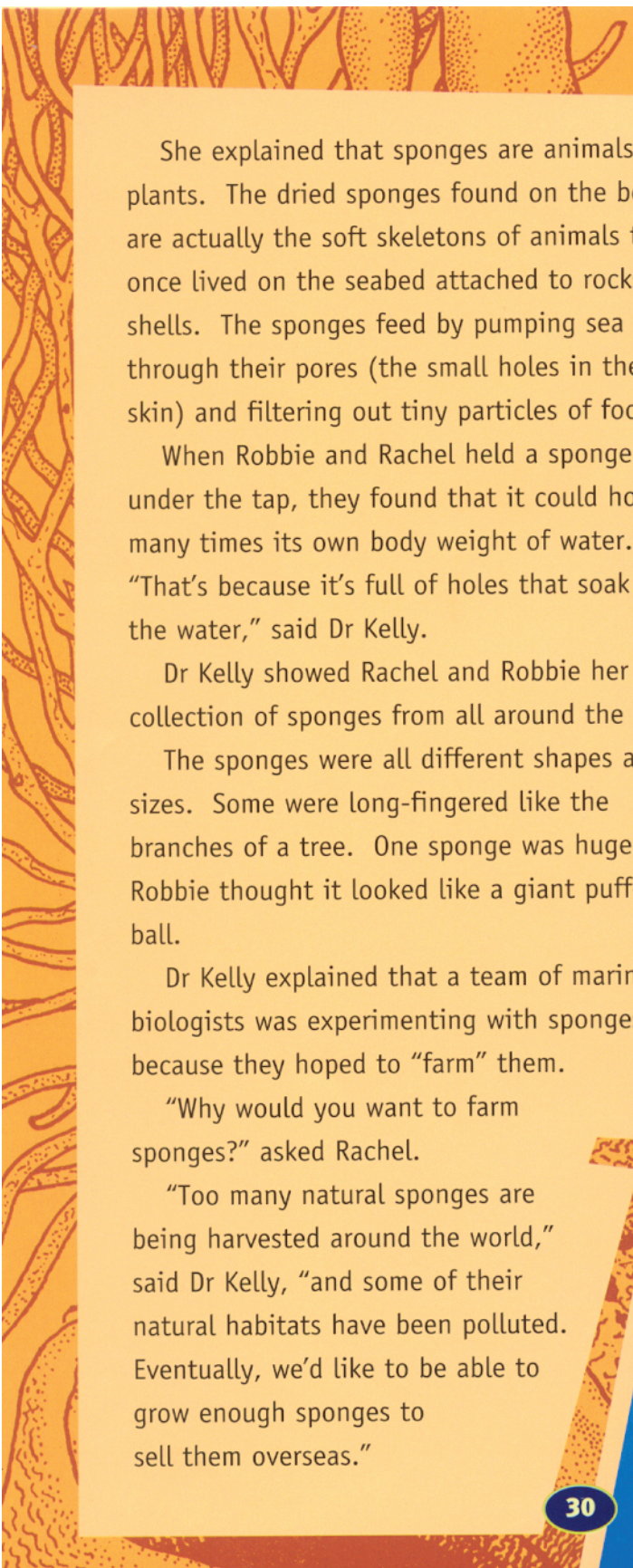
"They must be plants – they look like seaweed," said Robbie.

Rachel was curious about the sponges, too. She looked on the Internet and found out that a team of marine biologists at NIWA¹ in Wellington were doing research on sponges. She rang NIWA and talked to Dr Kelly, one of the biologists. Dr Kelly was interested in what Rachel and Robbie had found and invited them to visit her laboratory.



¹ NIWA stands for National Institute of Water and Atmospheric Research.





She explained that sponges are animals, not plants. The dried sponges found on the beach are actually the soft skeletons of animals that once lived on the seabed attached to rocks or shells. The sponges feed by pumping sea water through their pores (the small holes in their skin) and filtering out tiny particles of food.

When Robbie and Rachel held a sponge under the tap, they found that it could hold many times its own body weight of water. "That's because it's full of holes that soak up the water," said Dr Kelly.

Dr Kelly showed Rachel and Robbie her collection of sponges from all around the world.

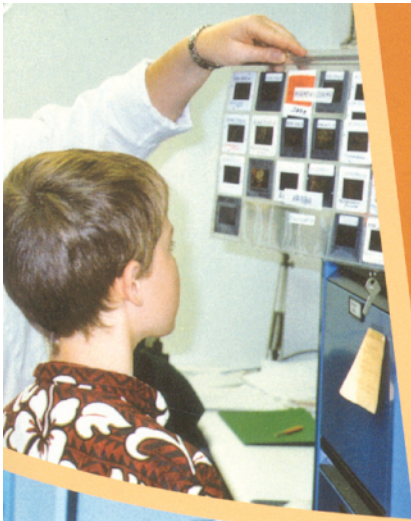
The sponges were all different shapes and sizes. Some were long-fingered like the branches of a tree. One sponge was huge. Robbie thought it looked like a giant puff-ball.

Dr Kelly explained that a team of marine biologists was experimenting with sponges because they hoped to "farm" them.

"Why would you want to farm sponges?" asked Rachel.

"Too many natural sponges are being harvested around the world," said Dr Kelly, "and some of their natural habitats have been polluted. Eventually, we'd like to be able to grow enough sponges to sell them overseas."





Dr Kelly explained that in other parts of the world, like Micronesia, where the seas are calmer, sponges are grown on lines. In New Zealand, the waters are rougher, and sponges are grown on a “sponge lantern”. These lanterns are dropped to a depth of 5–10 metres around the coastal waters of New Zealand, for example, in the Marlborough Sounds.

The sponges are harvested by cutting off a piece of sponge with a sharp knife.

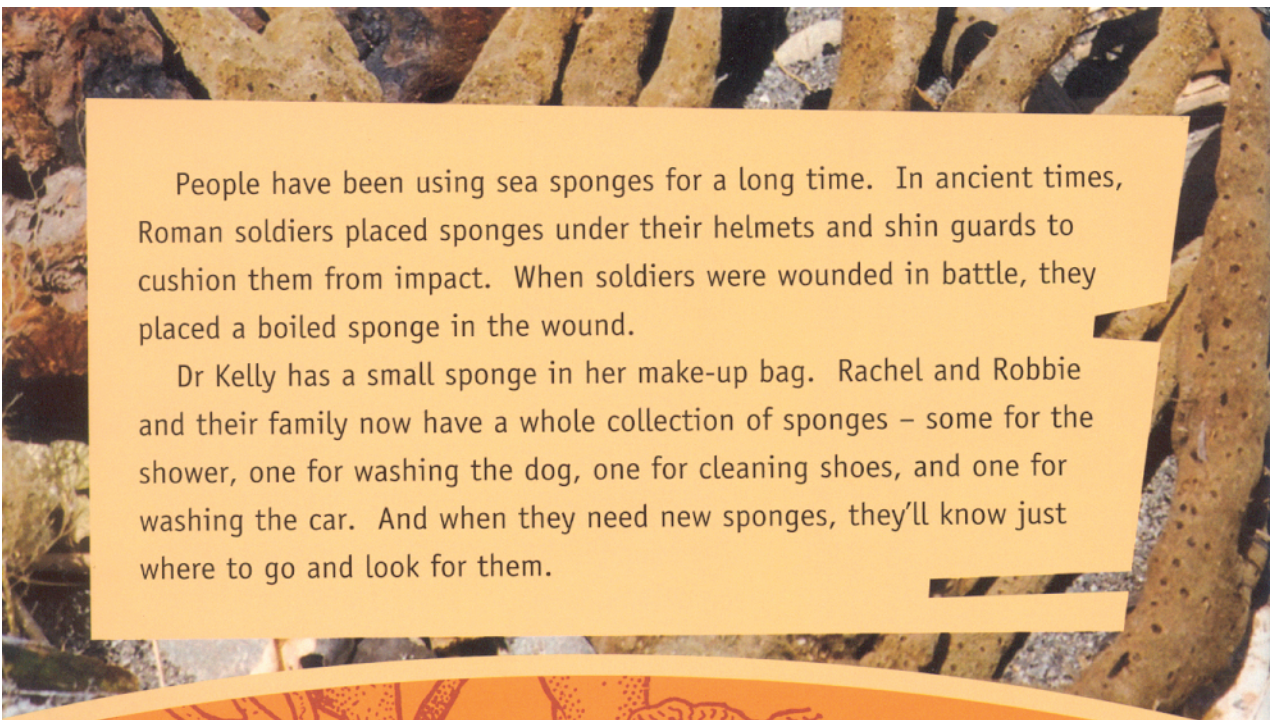
Before they can be used, the sponges have to be cleaned. They are put back into the water for several days till the skin rots and falls off, leaving just the skeleton. They are then soaked in bleach and dried in the fresh air.

“Why would people want to buy sponges?” asked Robbie.

“Natural sponges are much more absorbent than factory-made ones,” said Dr Kelly. “And they don’t rot or go smelly, because the holes are all connected up, and the water can drain away. They can be sterilised and used in surgery and medical treatments. Also, some sponges contain substances that might help to cure diseases in animals and humans one day.”

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People have been using sea sponges for a long time. In ancient times, Roman soldiers placed sponges under their helmets and shin guards to cushion them from impact. When soldiers were wounded in battle, they placed a boiled sponge in the wound.

Dr Kelly has a small sponge in her make-up bag. Rachel and Robbie and their family now have a whole collection of sponges – some for the shower, one for washing the dog, one for cleaning shoes, and one for washing the car. And when they need new sponges, they'll know just where to go and look for them.

