

at the beach

explore & discover
the New Zealand
seashore



Ned Barraud & Gillian Candler

craig potton publishing

For Rory, Leila & Alfie — NB
For Tobias — GC



Ned Barraud is a talented illustrator with a passion for sea creatures. His work has been published frequently in the School Journal, and he illustrated *The Earthquake and the Butterfly* (2012). He works at Weta Digital as a texture artist and lives in Wellington, spending lots of time exploring the seashore with his three young children.



Gillian Candler was a teacher for many years before moving into educational publishing with Learning Media in Wellington, where she worked as an editor, project manager and eventually CEO. She currently works as a writer and consultant from her home in Pukerua Bay, where she explores the beach most days.

First published in 2012 by Craig Potton Publishing

Craig Potton Publishing
98 Vickerman Street, PO Box 555, Nelson, New Zealand
www.craigpotton.co.nz

Illustrations © Ned Barraud; text © Gillian Candler

ISBN PB 978-1-877517-73-0; HB 978-1-877517-74-7
Designed by Sarah Elworthy
Printed in China by Midas Printing International Ltd

This book is copyright. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the Copyright Act, no part may be reproduced by any process without the permission of the publishers.

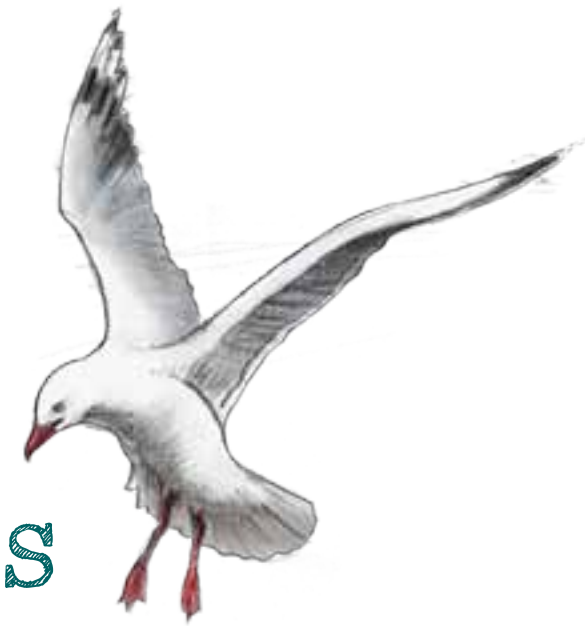
staying safe at the beach

- stay close to adults
- keep off rocks if the weather is stormy or the sea is rough
- learn to swim

look after the beach and its creatures

- use a bucket with seawater in it to look at creatures, then put them back in the rock pools
- follow the rules about taking seafood
- don't leave rubbish at the beach
- take photos, not living things
- use binoculars to look at birds and sea mammals

contents



Sandy beaches 6

What lives on sandy beaches? 8

Mudflats 10

What lives on mudflats? 12

Rocky shores 14

What lives on rocky shores? 16

Crabs 18

Shells you might find on the beach 20

Shellfish 22

Sea stars, kina & anemones 24

Seaweeds, sponges & sandhoppers 26

Fish, jellyfish & shrimps 28

Birds 30

Glossary & want to find out more? 32



At the edge of the land where the sea begins, there are
sandy beaches, mudflats & rocky shores.

It's low tide. The beach is wide, the mudflats are exposed,
and the rock pools are nearly empty.

As the tide comes in, the salty sea water will creep up over
the mudflats and fill the rock pools, and the waves
will break high up on the beach.

Many animals and plants make their home at the beach.
They live in the sand and mud, or hang on tight to rocks.
Some even live underwater.

The creatures here have to watch out for other hungry
animals looking for a meal. Some dig into the sand to escape.
Some hide under rocks. Others have clever ways of protecting themselves.

Look carefully, as you turn the pages of this book,
for different plants and animals that live at the beach.



sandy beaches

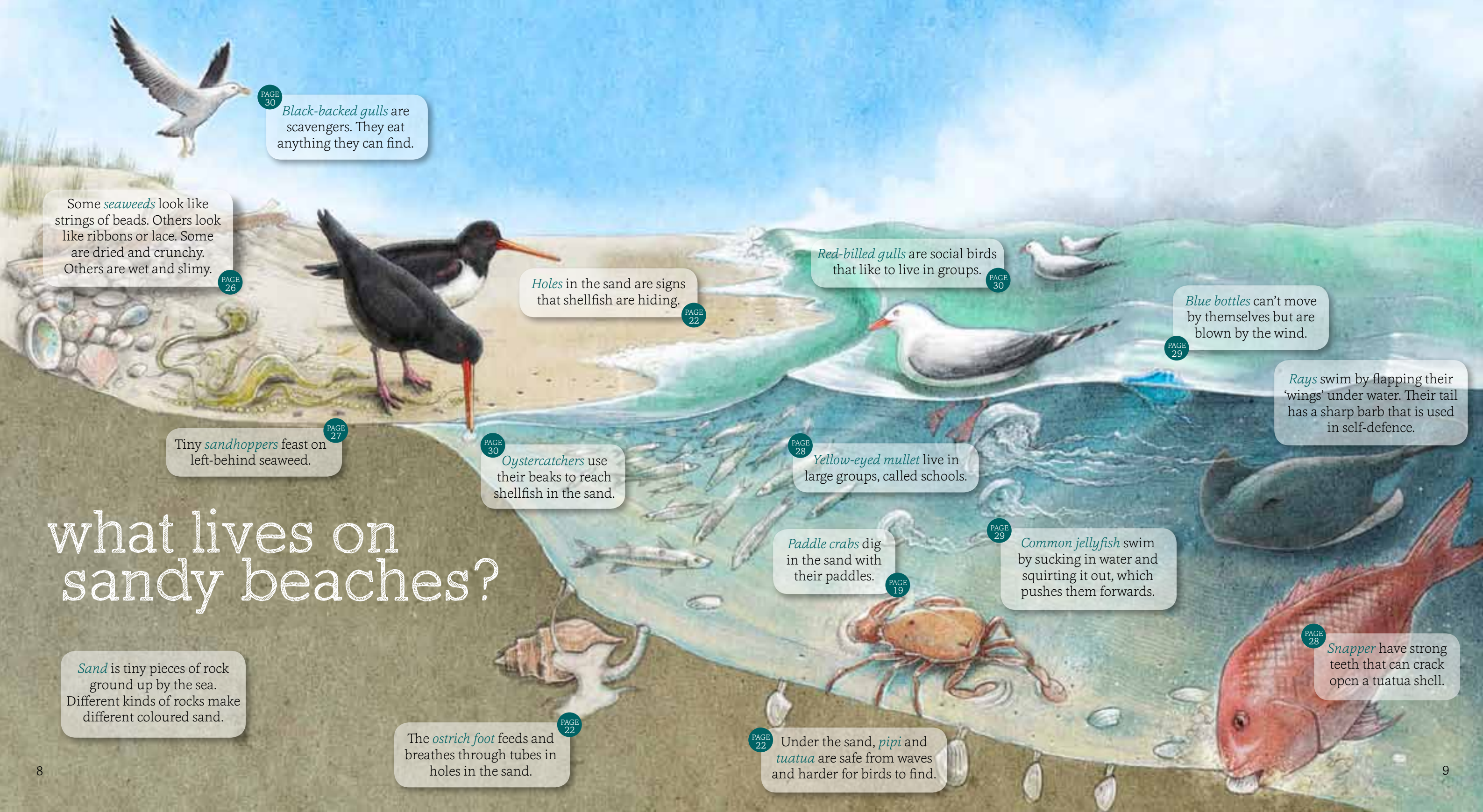
Above the beach, dry sand is blown by the wind into sand dunes. Grasses and other plants hold the sand in place with their roots. Insects and birds live here too, above the reach of the sea.

When the tide goes out again, the sea leaves behind driftwood, seaweed and sometimes pieces of sponge.

There are shells of all shapes and sizes that were once home to many different animals. [Look at pages 20-23](#) to find out what they are.

If you [look closely](#), you can see holes in the wet sand. Something is hiding there. Birds like oystercatchers know this. They search for food, leaving their footprints behind in the wet sand.

You may be lucky enough to see a crab shell or a glistening jellyfish near the water's edge, or some little fish darting around in the shallow water.



PAGE
30

Black-backed gulls are scavengers. They eat anything they can find.

Some *seaweeds* look like strings of beads. Others look like ribbons or lace. Some are dried and crunchy. Others are wet and slimy.

PAGE
26

Holes in the sand are signs that shellfish are hiding.

PAGE
22

Red-billed gulls are social birds that like to live in groups.

PAGE
30

Blue bottles can't move by themselves but are blown by the wind.

PAGE
29

Rays swim by flapping their 'wings' under water. Their tail has a sharp barb that is used in self-defence.

Tiny *sandhoppers* feast on left-behind seaweed.

PAGE
27

PAGE
30

Oystercatchers use their beaks to reach shellfish in the sand.

PAGE
28

Yellow-eyed mullet live in large groups, called schools.

Paddle crabs dig in the sand with their paddles.

PAGE
19

PAGE
29

Common jellyfish swim by sucking in water and squirting it out, which pushes them forwards.

PAGE
28

Snapper have strong teeth that can crack open a tuatua shell.

what lives on sandy beaches?

Sand is tiny pieces of rock ground up by the sea. Different kinds of rocks make different coloured sand.

The *ostrich foot* feeds and breathes through tubes in holes in the sand.

PAGE
22

PAGE
22

Under the sand, *pipi* and *tuatua* are safe from waves and harder for birds to find.



mudflats

Mudflats are made of mud that has been washed down from mountains and farms by slow-moving rivers and creeks. The mud settles and spreads out in estuaries, the places where the river or creek meets the sea.

At low tide, the only water is in small channels, which cross the mudflats like silver ribbons.

Mangroves grow in some estuaries, and their special breathing roots poke out of the mud.

Holes in the mud are signs that mud crabs and cockles are hiding. People dig for cockles in estuaries. Pied stilts and herons search for food too.

At high tide, the fresh water from the river mixes with the salt water from the sea and covers the mud flats.

what lives on mudflats?

Mangroves grow in the top part of the North Island. They have special roots so they can live in salty water. Fish and other small animals hide among the mangrove roots.

Ducks can live in fresh water and salt water.

Pied stilts wade in the water with their long legs and dig for food with their long beaks.

Mud crabs make burrows in the mud. These are safe places to hide when the tide goes out.

Sea lettuce is eaten by crabs and fish.

Kingfishers dive into the water to catch a meal of yellow-eyed mullet.

Cockles live in large groups called beds. They take in water through their feeding tubes and filter out tiny pieces of food.

Flounder are camouflaged to look like the mud in the estuary.

Mud snails eat mud and leave a trail of mud waste behind them.