THE BEST OF NEW ZEALAND GEOGRAPHIC
EXPLORING OUR LAND & CULTURE
**ORCA**

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**MY FIRST CLOSE** encounter with an orca took place in May 1991. I was a student at Auckland University’s Leigh marine lab when I heard that orca had been sighted in the bay. Grabbing my snorkelling gear, I sprinted down to the beach and dived in.

Nearby, the tall fin of an adult male was projecting from the surface, but under the murky water I couldn’t see him. I dived deeper, hoping to glimpse him, but moments later, as I headed up for a breath, there was a large female orca between me and the surface, lying on her side and looking down at me. We surfaced for air together, then I dived back down while she circled me before heading off. A few minutes later she was back, this time with a calf. They swam past me, then the calf started circling me rapidly, while I span round and round trying to hold eye contact.

It was a game played under Mum’s watchful eye, and lasted until dizziness forced me to stop. Alas, the magic was broken. The female swam up and both creatures moved sedately out of the bay. For years, I’d been keen on orca. Now I was really hooked—and have remained so ever since.

When I began studying New Zealand orca in 1992, a few people told me they could be seen close to shore. No one really knew what they were doing there, but suggestions included mating, giving birth and hunting. As my research developed, it became apparent that most of the close-to-shore activity was hunting. I noticed that the orca hunted in very shallow water, often only a body’s length from the beach, at times spending hours in areas where there was so little water they couldn’t even completely submerge.

Prior to these observations, it was thought that orca hunted in the water column—that is, between the surface and the ocean floor but not on the floor itself. However, shallow-bottom foraging for various species of ray proved to be normal for New Zealand orca.

When hunting in estuarine areas, the orca dig in the mud to extract the rays, surfacing on occasion for a breath with dirt coating their faces like a beauty face-pack. The rays do everything they can to escape, including using their stings or, in the case of electric rays, their jolt of numbing power. They are sometimes successful: a young orca was found in 1998 with stingray barbs lodged in her back, chin and throat, and she died from an allergic reaction to the poison in them.

Foraging for rays is a risky occupation, and I have seen as many as seven orca attempting to catch a single large animal. Often young, inexperienced orca will float nearby and watch the action; such lessons help build the distinctive New Zealand orca culture. Once a ray has been immobilised, youngsters are given the opportunity to participate, although this may entail simply sharing the spoils of a kill.

**Elasmobranchs** (skates, rays and sharks) are relatively primitive vertebrates and their nervous system can be reduced to insensitivity. Forced onto its back, an elasmobranch becomes motionless and defenceless, a state known as tonic immobility. Orca have learnt this, and will often turn a ray (or shark) over, allowing them to come in safely for the kill. One way of doing this is to flick it into the air, so when orca are hunting rays, it isn’t uncommon to see them treated as Frisbees.

To escape, rays will often make for extremely shallow water, even coming in so close that they end up flapping about on the beach. It is this evasive behaviour which draws the orca into the shallows, where they sometimes become stranded. Typically they free themselves, but occasionally human help is needed, and I believe this to be how they have formed a connection with people. Once back in the water, they are perhaps sufficiently curious to continue the interaction.

New Zealand has one of the highest rates of orca strandings in the world, so if this notion is correct, it is no coincidence that New Zealand orca interact with humans more than most others. The few animals that first sought encounters with people have started a trend: even young orca are now getting in on the act, being particularly keen on tugging divers’ fins.

Readers can find more information on orca at www.orcaresearch.org ; Orca: issue 78
EXPLORING OUR LAND AND CULTURE

New Zealand is an archaic and surprising archipelago. A land where alps run into plains, glaciers coexist with deserts, and rivers float on the surface of the sea. It's the habitat of parrots too heavy to fly, insects that grow to the size of rodents, and a bird that lays an egg a quarter of its own weight. It is a territory of modest dimensions, but quite improbable contents.

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