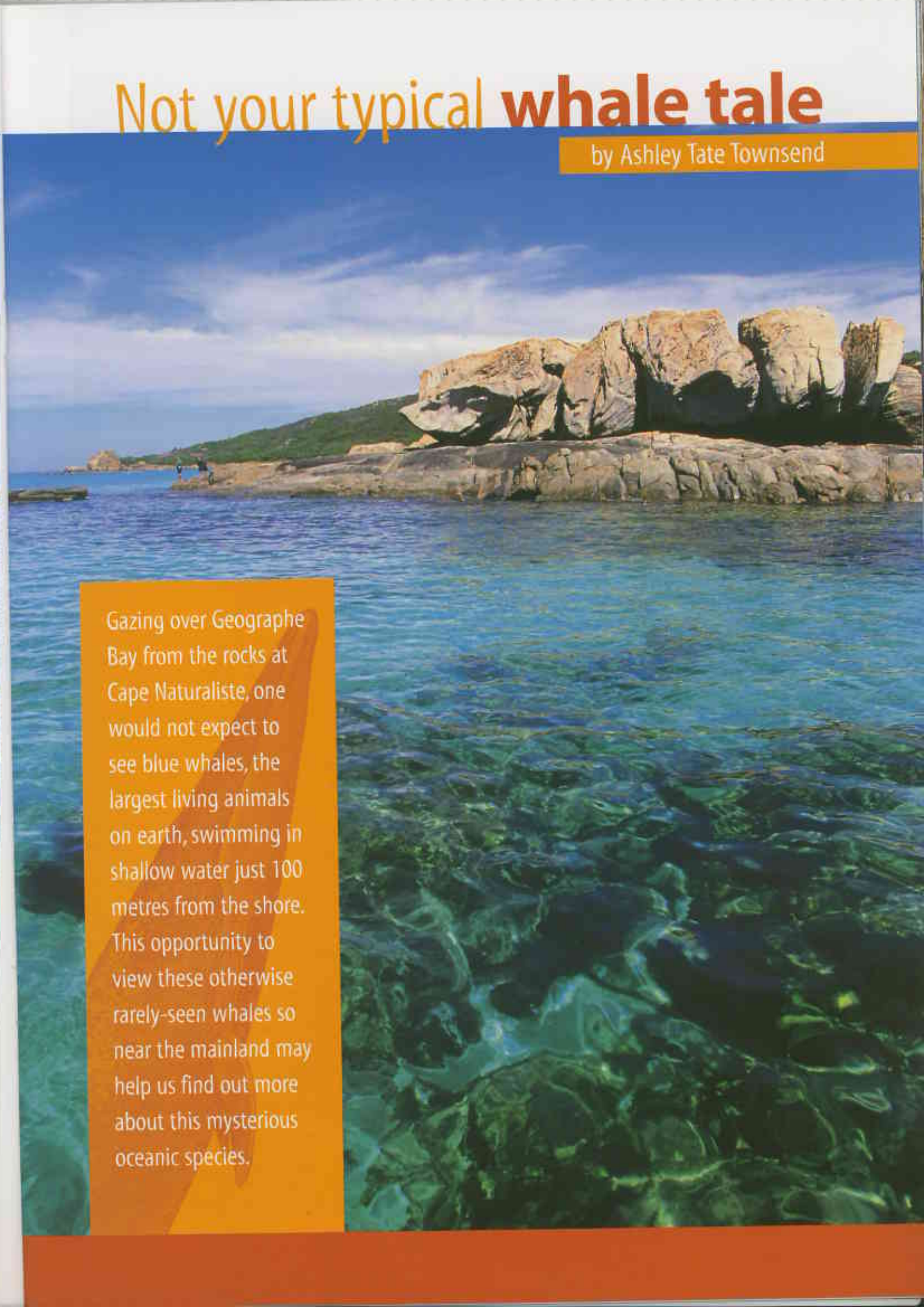


Not your typical whale tale

by Ashley Tate Townsend



Gazing over Geographe Bay from the rocks at Cape Naturaliste, one would not expect to see blue whales, the largest living animals on earth, swimming in shallow water just 100 metres from the shore. This opportunity to view these otherwise rarely-seen whales so near the mainland may help us find out more about this mysterious oceanic species.

In 1994, Chris Burton—who operates Western Whale Research and monitors whales for industries with seismic operations—teamed with Steve Mitchell, owner and operator of Naturaliste Charters, to monitor whales in Geographe Bay during whale watching cruises. The charters take tourists close to humpback whales so that they can view their behaviour and record data on the whales. When a different species of whale emerged from the water on one trip, they weren't sure what they had witnessed.

Chris later confirmed that they had sighted and photographed four blue whales. He assumed they were the subspecies known as pygmy blue whales. Even more amazing, was how close the whales were to the shore. Blue whales are mostly animals of the open ocean that feed on krill. But, in this case, they were coming as close as 100 metres to the Geographe Bay shore. More than 200 sightings of pygmy blue whales were recorded from 1994 to 2002, and the numbers sighted have steadily increased each year.

Part of Geographe Bay is a proposed marine conservation reserve (see 'The Capes Coast: a diverse coastal and marine environment', *LANDSCOPE*, Summer 2002-03). The bay's sheltered shores are populated with a wealth of colourful marine plants and animals with both temperate and tropical distributions. Many of these species are only found locally. The presence of blue whales in the area adds to the importance of this biodiverse ecosystem

and further highlights the need to protect it. The ever increasing popularity of the region means it is under increasing human pressure and there may be a need for special management of blue whales.

Two subspecies of blue whales are found in the southern hemisphere: 'true' blue whales (*Balaenoptera musculus intermedia*), which inhabit cold southern waters of the Antarctic in summer, and 'pygmy' blue whales (*Balaenoptera musculus brevicauda*). True blue whales grow to an average length of 25 to 26 metres and weigh 100 to 200 tonnes. The largest female recorded was measured at 31 metres. Pygmy blue whales are smaller, but no means miniature versions of the 'real' thing, as the names 'true' and 'pygmy' might suggest. Although pygmy blue whales average 20 to 22 metres in length, they may reach a maximum size of 24 metres.

Whaling

Observing a marine animal of that size made it difficult for Chris to determine whether he was watching true or pygmy blue whales. Japanese and Soviet whaling fleets targeted pygmy blue whales in the late 1950s and early 1960s, and their observations

of a smaller body, baleen and part of the tail distinguished the subspecies from true blue whales.

Whaling records indicate that pygmy blue whales primarily inhabit the Indian Ocean—along the east coast of Africa, the Western Australian coast and east along Australia's southern coast to New Zealand. Based on this information, Chris recorded his sightings as pygmy blue whales, but he has no definitive confirmation of the subspecies he sighted.

The migratory patterns of true blue whales are more mysterious—they migrate between the warm waters of low latitudes to breed and cold waters of high latitudes to feed. They occur off the coast of southern Australia, but a specimen in the WA Museum—the skeleton of an immature true blue whale that stranded near Busselton in 1898—suggests that true blue whales visit WA's western coast as well.

Research

Western Whale Research received federal funding from the Department of Environment and Heritage to study the abundance and distribution of blue whales in Geographe Bay from October to December 2003. Chris recorded 121 presumed pygmy blue whale sightings during the migratory season.

Naturaliste Charters played a crucial role during the project, providing daily cruises, during which Chris observed 11 calves, three subadults and 61 adult blue whales in 41 pods from Naturaliste Charters vessels. The enthusiasm and skill of the crew also enabled important photo-identification of these huge whales to be carried out. Additional aerial surveys



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Main Granitic coastline near Castle Rock, Geographe Bay.

Photo – Brett Dennis/Lochman

Transparencies

Inset Blue whale.

Illustration – L Broomhal (courtesy WA Museum)

Left The blue whale skeleton held in the WA Museum.

Photo – Soula Vouyoucalos (courtesy WA Museum)



Above Two blue whales in a breathing sequence.

Photo – Doug Coughran/Lochman Transparencies

Right Steve Mitchell on a whale-watching charter in Geographe Bay.

Photo – Rhianna Mooney/CALM



resulted in 12 sightings, and indicated the spatial distribution of the whales extended north from Cape Naturaliste to Bunbury. Land-based surveys from a rocky headland, five metres above sea level on the cape, produced 34 sightings of blue whales moving west close to the land in early morning and late evening. Chris photographed several pods as they passed very close to the shore in 10 to 30 metres of water.

Chris collaborated with Rob McCauley from Curtin University, Curt and Michlene Jenner from the Centre for Whale Research and John Bannister from the WA Museum. Since 1999, Rob has coordinated a continuing study of presumed pygmy blue whales in the Perth Canyon—deep water west of Rottnest Island—where these baleen whales feed on krill. They plan to compare Chris's photographs with those taken for the Perth Canyon project, as any positive matches of images would indicate that some blue whales move between the two areas.

Chris also hopes to compare his databased collection of blue whales photographed off the WA coast to those taken from the south-east of Victoria by Pete Gill. If any of the

whales photographed off the WA and Victorian coasts are the same animals, it might provide clues as to where they go for the six or so months of the year that they are unaccounted for. As they can cover distances of up to 100 kilometres per day, perhaps they travel back and forth between these two important feeding grounds off Victoria and Rottnest Island.

Future research

With continued research, Chris hopes to determine why these gigantic whales enter Geographe Bay, where the water is relatively shallow and where there is no food for them. Are they just passing through, with the Cape forming an obstacle around which they must move, or is this an important resting stop on some long migration route? With further funding from the Department of Environment and Heritage, Chris will continue his work

through 2005, which will include a larger aerial survey and provide more data on abundance, distribution and residence times of the blue whales in and around Geographe Bay. He also hopes to satellite track whales using tags fitted to the back of up to 10 whales.

This work is slowly, but surely, unlocking the secrets of the world's largest living creatures.



Ashley Tate Townsend completed an internship with CALM's Strategic Development and Corporate Affairs Division as part of her environmental and communications studies at Virginia Commonwealth University in Virginia, USA.

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