

WHAT MAKES THE CAPE CAMPBELL COAST SPECIAL

Review by Geoff Walls, Ecologist, Christchurch, 18 May 2018

Above the tide, Cape Campbell has its own distinctive character. The Cape Campbell Coastal Terrestrial Area is defined as extending from the western end of Marfells Beach to just north of Chancet Rocks (MDC 2014). Underwater it is seen differently. The tip of the cape marks the division between the two South Marlborough coastal marine areas: Cloudy and Clifford Bays Coastal Marine Area to the north and Cape Campbell to Willawa Point Coastal Marine Area to the south. Either way, it is recognised both for its own qualities and as an important transitional point.

Marine features/values

In the marine environment, the Cloudy and Clifford Bays Coastal Marine Area is described as being very exposed, with cold turbid waters, extensive sand/gravel beaches and a wide continental shelf. Important features are two large estuarine lagoons, one of which (Lake Grassmere) abuts Cape Campbell, and the generally low species diversity because of the lack of reefs - except near the cape. The greatest coastal marine biodiversity occurs at the cape and in its lee, including various limpets, chitons, topshells, mussels, barnacles, sponges, ascidians and bryozoans. Some of the species are newly discovered; others are far from the nearest known neighbouring population. Numerous seaweeds grow in the inter-tidal channels and pools, and in the sub-tidal reef structures. They include bull kelp, giant kelp and other conspicuous algae. Rock lobsters are abundant in the cape vicinity.

Hector's dolphins are resident in Cloudy and Clifford Bays. Dusky dolphins pass through, rounding Cape Campbell, on seasonal migration between the Kaikoura coast and sheltered shallow waters to the north such as in Admiralty Bay near D'Urville Island. Humpback whales also pass by on migration and sperm whales frequent deep undersea canyons in the vicinity. Seabirds include albatrosses, petrels, prions, gannets, gulls, terns, shags and penguins.

The Cape Campbell to Willawa Point Coastal Marine Area is also very exposed, with cold turbid waters, extensive sand/gravel beaches and a wide continental shelf. The low sea temperatures are due to the influence of the Southland Current. Mudstone and limestone form broad and deeply cut reefs in the north (Cape Campbell) and the biodiversity composition is much the same as described for the Cloudy and Clifford Bays area. The main distinguishing feature is the large offshore beds of giant kelp that occur between Cape Campbell and Ward Beach. These beds are home to the mottled brotulid, an endemic fish known only at two other locations nationally. Marine mammals and coastal seabirds are as for the northern coastal marine area.

Terrestrial features/values

The Cape Campbell Coastal Terrestrial Area is defined as extending from sea level to 350m. The defining landform is undulating hill country, etched by small gullies with streams and ponds, some of which dry up in summer. There are precipitous coastal cliffs dissected by deeply incised gullies, fans and terraces, raised gravel beaches, beach ridges and extensive

sand dunes with wind-deflated areas and occasional wetlands. Loess soils cover sandstones, siltstones, conglomerate and limestone.

Primeval vegetation

Erosion-prone though it was, occasionally wildly shaken by earthquakes, climatically extremely dry and constantly worked at by wind and water, the land was cloaked in forest. The only substantial openings were where there were cliffs, wetlands, slumps, outcrops of rock, storm damage or recent wildfires. The abundant wildlife created and maintained an intricate network of tracks and small clearings within the forest, and along the coast the forest edge was shaped and re-shaped by colonies of seals and birds and the interplay of the elements.

The hill country forest was a variable mix of podocarps and broadleaved trees. Totara was probably dominant throughout, but matai was common and kahikatea possibly occurred on the fringes of wetlands. The other main trees were titoki, mahoe, ngaio, akiraho, manuka and kanuka. Also likely to have been present were kowhai, tree hebe, lowland ribbonwood, narrow-leaved lacebark, akeake, five-finger and the locally endemic coastal tree broom (*Carmichaelia muritai*). Despite the dry climate, ferns would have been abundant within the forest, especially in gullies.

Outcrops and cliffs were home to numerous small-leaved shrubs, including prostrate kowhai, also to wharariki, sun hebe, rock daisies, speargrasses, tussocks and a spectrum of herbaceous plants. Wetlands were fringed or clad in raupo, rushes, sedges, cabbage tree, manuka, coastal shrub daisy and harakeke, with distinct zones according to water depth and turfs maintained by waterfowl. Where streams emerged onto the shore were zones of saltmarsh ribbonwood, sea rush and glasswort. On the dunes and gravel beach ridges was an ever-changing mix of sand-binders (spinifex, pingao, knobby clubrush and sand coprosma), prostrate shrubs (matagouri, sand daphne, tauhinu, coastal shrub daisy and tororaro) and opportunists (sand tussock, silver tussock, pohuehue, mat daisy and shore milkweed). The dune profiles were smoothly rounded, the sand held in a loose embrace. The forest edges were probably dominated by windswept ngaio.

Most of that primeval vegetation has long gone, swept away by fires, land clearance for farming, the activities of introduced browsing animals and invasions of weeds. The small remnants are precious and serve as guides for restoration. A considerable number of sites around the cape have been fenced off, formally protected and planted in native species.

Flora

There are several nationally threatened or at risk plants on the Cape Campbell coast. Coastal tree broom (*Carmichaelia muritai*) is a true local endemic and very rare in the wild, occurring only at Marfell's Beach and in the Shingle Fans south of Kekerengu. *Muehlenbeckia astonii* and *M. ephedroides* are both present, growing strongly but in only a few small sites. Other nationally threatened or at risk plants include pingao (*Ficinia spiralis*), sand tussock (*Poa billardierei*), sand coprosma (*Coprosma acerosa*), sea holly (*Eryngium vesiculosum*), coastal mat daisy (*Raoulia* "hookeri coast"), *Einadia allanii*, *Sonchus kirkii* and poroporo (*Solanum aviculare*). Cape Campbell also has a distinctive form of *Senecio glaucophyllus*. Its population of coastal mat daisy is among the strongest in the country.

Fauna

Fur seals are abundant at Cape Campbell and breed there. Elephant seals occasionally visit and a pup was born there recently, a rare event on the NZ mainland. Leopard seals also turn up and rest on the shore. Individual Fiordland crested penguins and hoiho (yellow-eyed penguins) arrive at the cape from time to time, but little blue penguins are the only species in residence. Various seabirds wash up, dead or alive, after severe storms. Many coastal birds breed, roost and feed around Cape Campbell, including gulls, terns, shags, herons, oystercatchers, stilts and dotterels. Migratory waders frequently rest or congregate on the coastal platforms and exposed reefs at the cape. Nationally threatened or at risk birds include wrybill, South Island pied oystercatcher, black-billed gull, red-billed gull, banded dotterel, NZ dotterel, white-fronted tern, black-fronted tern, Caspian tern, pied shag, Fiordland crested penguin, hoiho, NZ scaup, pipit and pied stilt. Geckos and skinks are fairly common, especially amongst driftwood. In addition, there are invertebrates endemic to the cape.

Skeletal remains of birds found in the dunes, particularly the collection made at Marfells Beach and considered one of the richest in the country (Worthy 1998), have revealed the wealth of wildlife on the Cape Campbell coast prior to human arrival. The fossil and archaeological avifauna included moa, adzebills, giant eagles, sea ducks, grebes, petrels, giant penguins and numerous other species, most of which are now extinct. Bones of tuatara and sea lions have also been found in the dunes.

The human presence

Evidence of people having lived at and near the Cape Campbell coast in the past goes back a long way (Taylor 2016). It is a rich and significant archaeological landscape. In the dunes and on the coastal flats many occupation sites have been excavated by amateurs and professionals, yielding numerous artefacts such as argillite and nephrite tools, bone fish-hooks, bone needles, tattooing implements, cutters made from local chert and imported obsidian and rare types of bone and stone ornaments. Oven stones cracked by heat can be found in many places. Human burials have been found, mainly in the dunes. Much of this evidence dates to the early settlement period of NZ (c. 1300-1500 AD), by oceanic long-distance sea-faring people from East Polynesia. Since then, the coast has been much used as a pathway for people hunting, gathering, migrating, visiting or fighting over ownership. Groves of karaka were planted around the cape, but have since disappeared (one of the last was apparently deliberately destroyed on orders from Te Rauparaha in the late 1820s). There is a comprehensive body of oral history for the century or so prior to European arrival and settlement (Buick 1900; Elvy 1957).

The discovery and settlement of this coast by Europeans is fairly well documented. Shore whaling was fleetingly done early in the piece from stations at Port Underwood and Waipapa (Prickett 2002), but mostly the quest was for pasture to graze sheep and cattle. Supplies often were delivered and goods went out by boat, and the coast was much used by travellers and for droving stock.

Although a great amount of the natural heritage of Cape Campbell has been lost as a result of human arrival and settlement, sufficient remains to mark the Cape Campbell coast as distinctive and worth celebration, protection and restoration.

References

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