

# Moeraki Boulders

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*Moeraki Boulders 3 - Moeraki Boulders. Photo by [Russell Charters](#)*

The mysterious spherical rocks that lie along a stretch of beach on the wild [Otago](#)

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coast have long been a source of legend and curiosity.

Located on the *Koekohe Beach* between Moeraki and Hampden, the strikingly large *Moeraki Boulders* are scattered within a stretch of beach designated a scientific reserve.

## Geology

The boulders are grey-colored septarian concretions, which have been exhumed from the mudstone enclosing them and concentrated on the beach by coastal erosion. Around a third of the boulders range in size from 0.5 to 1.0m in diameter, while the other two thirds range in size from 1.5 to 2.2m.

Although unusual, the Moeraki Boulders are not the only of their kind in the country. Practically identical spherical boulders, named the “Koutu Boulders”, are found on the beaches, cliffs and beneath the surface inland of the shore of [Hokianga](#)

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Harbour in the North Island. A number of similar boulders are also found on Shag Point, around 19km south of the Moeraki Boulders. The *Shag Point* boulders are unique for their concretions containing the bones of dinosaur-like marine reptiles. Similar spherical boulders have also been found in *North Dakota, USA*, and in [Ontario, Canada](#).



*Moeraki Boulders - Moeraki Boulders. Photo by [Jeremy Taylor](#)*

Scientific analysis has shown that the Moeraki Boulders are made up of mud, fine silt and clay, cemented together by calcite. The boulders interestingly have a hollow core. Some of the rocks have strange cracks, known as septaria. The cracks have been filled with small amounts of dolomite and quartz as well as brown and yellow calcite, giving the boulders their distinctive appearance.

The boulders were formed by the cementation of Paleocene mudstone in the Moeraki Formation. The main body of boulders started forming in what was then marine mud. The larger boulders are estimated to have taken 4 to 5.5 million years to grow, while 10 to 50m of marine mud accumulated on the seafloor above them.

There are currently over 50 boulders on the beach, the largest weighing around 7 tons. Waves continue to erode the mudstone of the area, made up of local bedrock and landslides, which means that embedded boulders are often exposed, resulting in “new” boulders.



*Moeraki Boulders 9. Photo by [Russell Charters](#)*

## **History**

Local Maori legends explained the boulders as the remains of eel baskets, calabashes (gourds), and kumara (sweet potato) washed ashore from the wreck of Arai-te-uru, a large sailing canoe. This legend tells of the rocky shoals that extend seaward from Shag Point as being the petrified hull of this wreck, and a nearby rocky promontory as being the body of the canoe's captain.

In 1848, W.B.D. Mantell sketched the beach and its boulders, which appear to have been more numerous than today. The boulders were also described in 1850 colonial reports and numerous articles from that time. In recent times, the boulders have become a popular tourist attraction.

## **Wildlife**



*Kekeno - Moeraki Boulders. Photo by [catnthecat](#)*

In addition to the boulders, the area is also home to large numbers of [New Zealand](#) fur seals (kekeno). The seals haul themselves out of the water to rest on the rock platforms around *Katiki Point* and *Moeraki Peninsula*. This is the main breeding area in *North Otago*.

A variety of sea and shore birds also breed in the area, with Katiki Point being the most significant breeding site for yellow-eyed penguins (hoiho) in North Otago.

The native endangered Hector's dolphins are also seen in the waters near the shore from time to time.

## **How to Get There**

The boulders are located on Koekohe Beach, between the towns of *Moeraki* and *Hampden*. It is an easy (and very scenic) drive on State Highway 1 from the north or south.

Coming from the north, the boulders are about 40km (30 minutes) south of [Oamaru](#)

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. Just follow State Highway 1 towards Hampden. Coming from the south, the boulders are approximately 75km (1 hour) drive north of [Dunedin](#), up State Highway 1. The boulders are signposted on State Highway 1 approximately 1km

south of Hampden.

To reach the boulders, you can walk for 300m (10 minutes) along the beach from the *Moeraki Boulders Scenic Reserve* carpark and picnic area. Alternatively, take the track leading from the café at the end of a private road directly to the beach. A short loop track (150m) also begins from the café, and provides a view of the boulders from above.



*Moeraki Boulders Sunrise - Moeraki Boulders. Photo by [Kathrin & Stefan Marks](#)*

## **Other Information**

Right beside the boulders, the Moeraki Café, Bar and Gift Shop serves up their famous seafood chowder or strong coffee to both tourists and drivers needing a pick-me-up.

The nearby town of Moeraki is a small and sleepy fishing village, nestled under a peninsula with a rare north-facing outlook over the rest of the coast. A visit to the famous Fleur's Place restaurant is not to be missed.

Accommodation is also available in Moeraki, and there are campsites in the area between *Herbert* to the north and *Palmerston* to the south.

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## **Pictures of Moeraki Boulders**