

Doubtful Sound

Visitor Information



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Doubtful Sound

Welcome to this most remarkable part of New Zealand, located in the heart of a designated World Heritage Area. It is remote, wild and imposing. You will see and feel the power of nature in this spectacular place.

Your journey to Doubtful Sound begins in Manapouri (170km from Queenstown and 22km from Te Anau). The excursion includes a cruise across the island-studded Lake Manapouri, and a coach trip over Wilmot Pass to Deep Cove, where you board our vessel for a cruise on Doubtful Sound. As you journey to Doubtful Sound you will experience a magnificent cross section of wilderness - a lake, alpine pass and a fiord.

Doubtful Sound is the second largest of Fiordland National Park's 14 fiords (Dusky Sound is the largest). It is three times longer than Milford Sound and it has a sea surface area roughly 10 times larger than Milford Sound due to its greater length and its three arms - Hall, Crooked and First. All three arms are found on the southern side of the fiord. Thompson and Bradshaw Sounds connect to the north.

Doubtful Sound reaches about 430m at its maximum depth. Near the entrance there are sills where the water is relatively shallow (90m). The waters of Doubtful Sound are subject to tides but the range is only moderate, generally between 2.5m and 3m. The water temperature in the fiord averages a bracing 11 degrees Celsius. In warm weather the temperature can reach 15 degrees in shallow places but in the deepest basins it is a uniform 11 to 12 degrees.

Doubtful Sound has one of only two marine reserves in Fiordland. It covers the narrow passage called Te Awaatu Channel between Bauza and Secretary Islands. The water is relatively shallow, just 30m in places, and is popular with divers.

Wanting to learn more?

Fiordland guidebooks entitled *Milford Sound & Road to Milford and Doubtful Sound & Manapouri* by New Zealand writer Neville Peat, are available for purchase at Real Journeys Visitor Centres.

Wildlife

Fiordland is home to a variety of marine mammals, mostly dolphins and seals. One of the world's rarest penguins, the Fiordland crested or tawaki is also often seen in Doubtful Sound, as is the little blue penguin. Many other bird species can be found in the forest - listen out for these when we turn the engines off.

Bottlenose Dolphins

Doubtful Sound is home to a resident pod of around 60 bottlenose dolphins. In playful mood they will ride the bow waves of vessels and leap and somersault in the air. Research shows these dolphins seldom leave Doubtful Sound. They are among the largest known of their species and are much larger than dolphins in temperate or tropical habitats.

Like all dolphins they are built like torpedoes. Their backs are dark grey, grading to white around their bellies. They can reach 3.8m (10 feet) in length. Research has shown dolphins form cliques or friendships with each other and that females have the strongest association with other females. They become socially powerful when pregnant or nursing a calf. They have a gestation period of around 12 months and mothers will nurse their calves for about 19 months. Calving occurs every two to three years. The lifespan of these dolphins is thought to be about 25 years.

The bottlenose dolphins feed on fish and squid and may dive to depths of over 200m in search of prey. They can remain underwater for up to seven minutes.

The bottlenose dolphins in Doubtful Sound are some of the southernmost in the world, living close to their ecological limit.

Other dolphin species (dusky and common) and whales are on occasion also sighted in the fiord.

Fur Seals

Fur seals are seen at Nee Islets near the entrance to Doubtful Sound all year and can also be sighted basking on the rocks around the fiord.

Seals are mammals and while they have adapted well to the sea they need to come ashore to breed and moult.

The breeding season is signalled by the arrival of bulls in October and November. They set up territories which are fiercely defended. Females arrive about a month later and pups are born in mid December. Around 10 days after the pups are born their mothers mate with the leader of the harem (he commonly has up to 10 females). Adult males return to the sea in late summer. The cows, immature adults and young seals remain undisturbed for another 10 months. The fur seals sleep and relax ashore during the day and feed at night eating mainly squid, octopus and fish.

Fiordland Crested Penguins

Fiordland crested penguins have a distinctive yellow stripe over each eye and grow up to 70cm high. They are often seen on the Rolla and Shelter Islands. Their breeding season (mid July to November) and moulting time (mid January to March) offer the best viewing opportunities. For several months between moulting and breeding, the birds are at sea.

Blue Penguins

Blue Penguins may be encountered in Doubtful Sound, usually in the water. These are the smallest of the penguin species growing to 40cm.

Rainforest

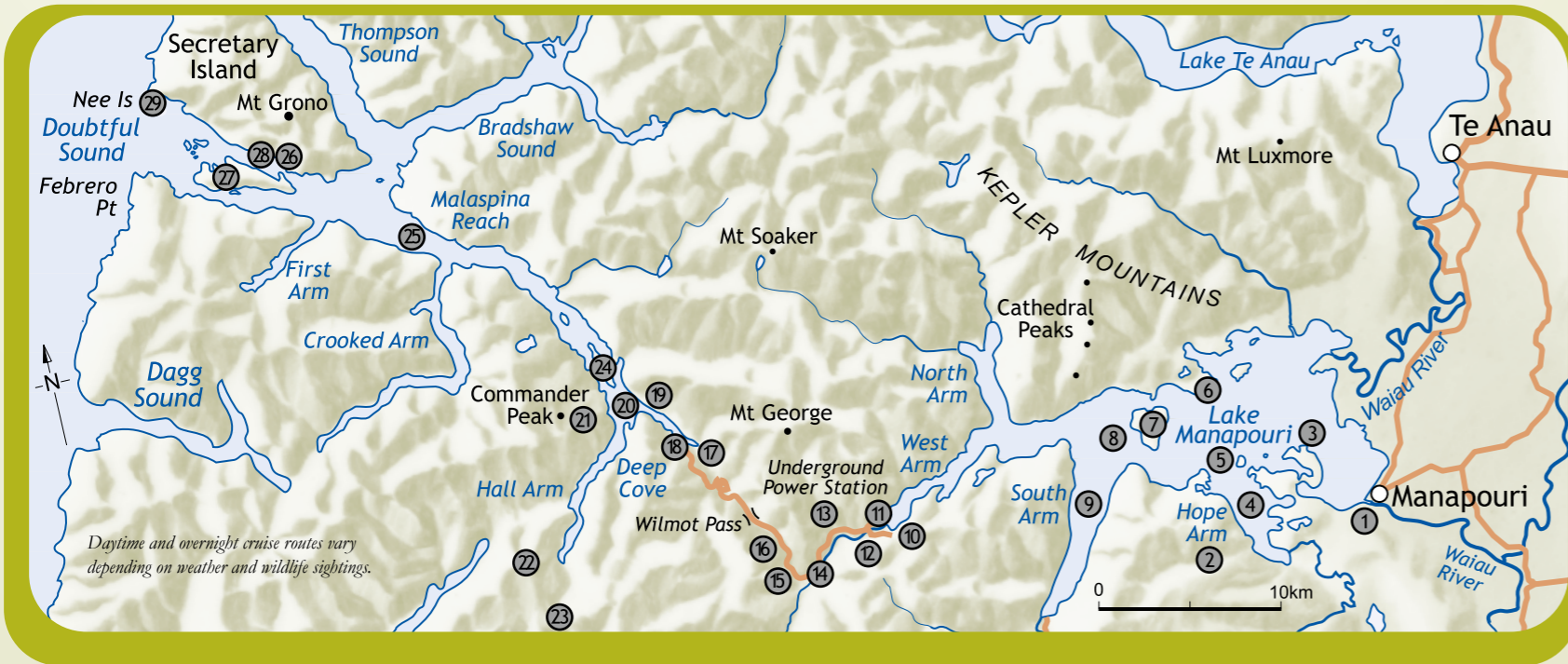
Rainforest is a term associated with tropical regions, but Fiordland can claim a rainforest of a temperate kind, jungle-dense and complete with vines, perching plants like orchids, and tree and ground ferns in profusion. On valley floors large podocarp trees, notably rimu, compete with the beech.

Southern beech trees dominate the forest between Lake Manapouri and Doubtful Sound, with silver beech or tawhai the most widespread species. Two other beech species are found in central Fiordland - red beech, the tallest species growing on warmer and more fertile sites, and mountain beech found mainly on the drier eastern side of the region.

The forest on the mountainsides has grown in the absence of deep soil development. Solid rock, scraped smooth by glaciers, lies not far under the matted and interlocking roots of the trees, which depend on the build-up of leaf mould for nutrients.

Tree avalanches are common, triggered usually by high rainfall or snow. Following these avalanches the lichens, mosses liverworts and the hardier colonising shrubs cover the rock scars laying the foundations for the forests regeneration. Good examples of these colonising species can be found at the 'moss gardens' on the Wilmot Pass Road.





Lake Manapouri

Lake Manapouri is regarded as New Zealand's most charming and beautiful lake. It is renowned for its numerous islands, deserted beaches, seductive arms and clear water. Lake Manapouri, the fifth largest lake in New Zealand, is exceptionally deep as a result of the grinding, scooping action of the ice age glaciers. The name Manapouri is thought to be an adaptation of Manawapore (or Manawapouri), which means sorrowful or anxious heart.

- ① **Pearl Harbour** – Location of Real Journeys Visitor Centre.
- ② **Hunter Mountains** (1,768m) – In front of the mountains the conspicuous shaped hill is the Monument, site of the first release of Red Deer in Fiordland.
- ③ **Stony Point Light** – Where we see our first view of the lake with its 34 islands.
- ④ **Hope Arm** – Backed by the 1,710m Mount Titiroa (what appears to be snow on the upper slopes is weathered granite).
- ⑤ **Channel Islands** – The major group of islands on the lake.
- ⑥ **The Beehive** – Its shape is caused by glacial action.
- ⑦ **Pomona Island** – The largest of the lake's islands and the halfway point across the lake.
- ⑧ **Deepest part of the lake** – Depth 444m.
- ⑨ **South Arm** – Pylons at the head indicate part of the transmission line route.
- ⑩ **The first section of transmission line**
- ⑪ **West Arm** – The site of the underground power station.

Doubtful Sound

Doubtful Sound lies at the geographical heart of Fiordland. Deep Cove at the head of the fiord is 40km from the open sea, which makes Doubtful the second largest fiord.

- ⑲ **Lady Alice Falls**
- ⑳ **Rolla Island**
- ㉑ **Commander Peak** – 1,274m.
- ㉒ **Mount Danae** – 1,509m.
- ㉓ **Mount Crowfoot** – 1,695m.
- ㉔ **Elizabeth Island** – Named after Elizabeth Bristowe, wife of John Grono.
- ㉕ **Malaspina Reach** – Named after Captain Alessandro Malaspina who commanded the Spanish exploration of Doubtful Sound in 1793.
- ㉖ **Grono Bay** – Site of an early sealing station set up by Captain John Grono.
- ㉗ **Marcaciones Point** – Site of the first landing by the Spanish, Bauza Island.
- ㉘ **Marine Reserve** – Between Bauza and Secretary Islands.
- ㉙ **Nee Islets** – Named after Luis Nee, botanist on the Spanish expedition; site of a large fur seal colony.

Wilmot Pass Road

The 22km Wilmot Pass Road between Doubtful Sound and Lake Manapouri is one of New Zealand's remotest roads. The road was built in the mid 1960s to provide heavy equipment access for the construction of the power station. Floods, snow, mud and landslides lengthened the project from 12 months to two years.

- ⑫ **Spey River**
- ⑬ **Mica Burn Bridge**
- ⑭ **Moss Garden** – Site of a wide variety of coloured mosses and lichens.
- ⑮ **Cleve Garth Falls** – 365m.
- ⑯ **Wilmot Pass** – View of Doubtful Sound.
- ⑰ **Causeway and Tailrace Tunnel**
- ⑱ **Deep Cove Wharf** – Cantilever construction due to the water depth.

Relentless Rain

Fiordland is one of the world's wettest regions. Moist westerly airstreams fan across the southern ocean and south Tasman Sea, and crash into the high landmass of Fiordland. The weather can change suddenly for the worse, but also clear to a fine sunny day just as abruptly.

Most of the rain falls on the seaward side of the mountains. The land lying to the east of the mountains is in a 'rain shadow'. Mean annual rainfall figures bear this out. Manapouri village receives 1,143mm a year but over in West Arm the rainfall rises to 3,786mm, and at Deep Cove it is higher still at 5,290mm. The effect of this rainfall gradient is seen in the changes in the vegetation as you travel across from Pearl Harbour, Manapouri village to Doubtful Sound.

The high rainfall influences the fiord environment. As the rainwater journeys to the fiord by way of rivers, streams and waterfalls it becomes the colour of weak tea, stained by the tanin and other organic matter from the forest floor. This tanin stained water is less dense than sea water and forms a layer on the surface that floats and mixes only partially with the salt.

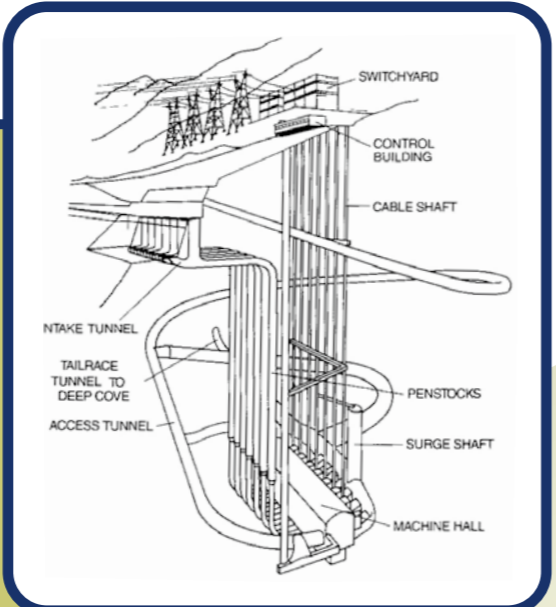


Manapouri Power Station

When you arrive at West Arm you will see the signs of the power station in the form of an above ground control building, a switchyard and four sets of transmission lines that loop across the head of the arm on their way to join the national grid. The generation however, occurs some 176m below lake level in a powerhouse excavated from the granite.

The power station was built to supply the power requirement of Comalco Aluminium Smelter, situated 171km away at Bluff. Work began on the power station in 1963 and was completed in 1971. An awesome feat of engineering, the project was international, with drillers, tunnellers and engineers from around the world.

Travel down the 2km spiral access tunnel to the machine hall is by coach (please note access is not always possible).



Shaping the Landscape

Fiordland lies next to a dramatic fracture in the boundary between two of the plates making up the earth's crust – the Pacific and Indo-Australian Plates. The Alpine Fault marks the place where they meet, with the Indo-Australian Plate diving beneath the Pacific Plate. In the collision, the land on the Pacific Plate is being heaved up to form the Southern Alps, the mountain backbone of the South Island. Consequently, Fiordland is a geographically complex region.

It is renowned for its speckled granites and kindred igneous rocks. Limestone shows up spectacularly in places, and the dark slate of the southern fiords dates from some 450 million years ago. These are among New Zealand's oldest rocks.

A mere two million years ago ice ages developed as the earth's climate cooled. Snow built up across the Fiordland landscape, and turned to ice. In valleys like that of Doubtful Sound, glaciers ground their way towards the sea. Warm periods were interspersed with cold so that the glaciers retreated and advanced many times, and each time they advanced they sculpted more of the landscape, deepening valleys and scraping the sides. Their impact was colossal.

On the eastern side of Fiordland the glaciers scooped out the beds of Lakes Te Anau and Manapouri to well below sea level. The effect of the glaciers on Lake Manapouri may be seen in the low rounded hills and islands on the eastern part of the lake, giving way to the deep U-shaped valleys of the western end.

Maori Legend

In Maori legend, Doubtful Sound and the other fiords were created by a godly figure (atua) who came wielding a magical adze and uttering incantations.

Tu-Te-Raki-Whanoa, the creator of the fiords, aimed to fashion long winding inlets that would serve as refuges from the restless, often stormy seas. He began in the south and worked north, applying his immense strength and splitting the rock with the adze. As he opened up the land, the sea rushed in.

When Tu crafted Doubtful Sound (Patea) he was assisted by four young sea gods named Taipari, who created the arms – First Arm or Taipari-poto (short), Crooked Arm or Taipari-nui (big), Hall Arm or Taipari-roa (long) and Deep Cove or Taipari-tiki (little).

Early Maori

Little evidence survives of the occupation of Fiordland by Maori. Venturing into the region often meant a perilous sea journey by canoe or larger vessels. These first arrivals would have led an isolated existence as they explored the fiords.

Maori from outside the area took an interest in the regions resources most notably pounamu (jade). They made seasonal journeys from the east by way of traditional pathways across passes such as Wilmot Pass. Landmarks were named and woven into chants.

Captain Cook encountered a Maori group in Dusky Sound, and throughout the 19th century there were reports, mainly from sealing and whaling captains, of Maori living in the wilds of Fiordland.

European Explorers

Doubtful Sound was originally named 'Doubtfull Harbour' by Captain Cook when he sailed past in the Royal Navy ship *Endeavour* on his first circumnavigation of New Zealand in 1770. Captain Cook skirted past the entrance to Doubtful Sound, wondering whether there was sufficient wind to manoeuvre his vessel in the narrow reaches. It was reported scientists on board wanted to land, but Cook thought it not worth the risk.

Twenty-three years later the outer reaches were eventually explored by a round the world Spanish expedition under the command of Alessandro Malaspina. Like Cook, Malaspina also worried about sailing into Doubtful Sound and so he dispatched a long boat with the hydrographer Don Felipe Bauza in charge. They landed at the eastern end of Bauza Island, Marcaciones Point where a plaque now commemorates the event. Felipe Bauza produced a remarkable map of Doubtful Sound that was published by the British Hydrographic Office in 1840. No other part of New Zealand has a collection of Spanish place names like Doubtful Sound.

Sealers

About the same time in the early 1800s the sealing era was dawning in Fiordland and hundreds of thousands of fur seals were killed for their blubber and skin.

In Doubtful Sound, Captain John Grono established a sealing station at Grono Bay. This sealing station offered ready access to the seals on Nee and Shelter Islands, only a short distance away.

With the seal population in danger of becoming extinct, in 1875 the New Zealand government began to make tentative moves towards conserving the species. On 30 September 1946, the season was closed permanently and the New Zealand fur seal finally gained full and lasting protection.

Fiordland National Park

Doubtful Sound is situated within the Fiordland National Park. The park is 1.25 million hectares, or 3 million acres and it is the largest of the 14 national parks in New Zealand.

In 1986, Fiordland National Park was declared a World Heritage Area on account of its superlative natural features, its exceptional beauty and its role in demonstrating the world's evolutionary history.

In 1990, Fiordland was linked with three other national parks - Mount Aspiring, Westland and Aoraki Mount Cook, to form an expanded World Heritage Area of South West New Zealand. It was given the Maori name Te Waipounamu.