

Australia – New Zealand Tour 2019



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Azamara Quest; February 7 - 21, 2019

Sydney, Australia to Auckland, New Zealand

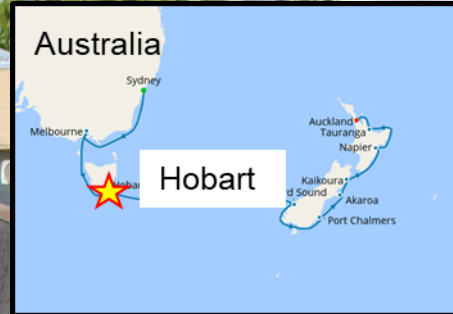


Coming into Melbourne Harbor, Australia at dawn.

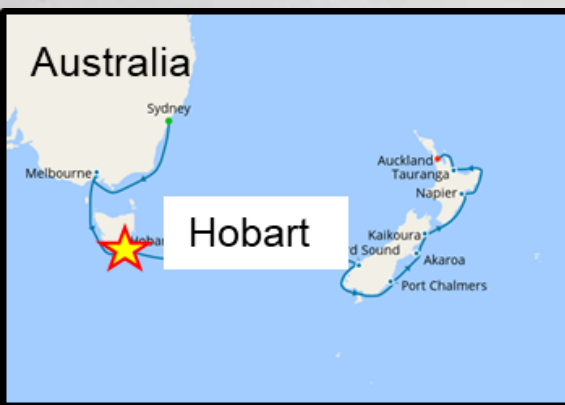




The wildlife nearby Melbourne includes a flock of white Cockatiel in a forest containing the native blue gum eucalyptus trees.



One of the most famous geologists and Antarctica explorers, Sir Douglas Mawson (1882-1958) was a professor of geology and mineralogy. Hobart is the jumping off point for exploration of the South Pole. The replica in Hobart is shown here. The actual Mawson historic huts used 1911-1914 in Antarctica (insert) are exposed to extreme conditions.

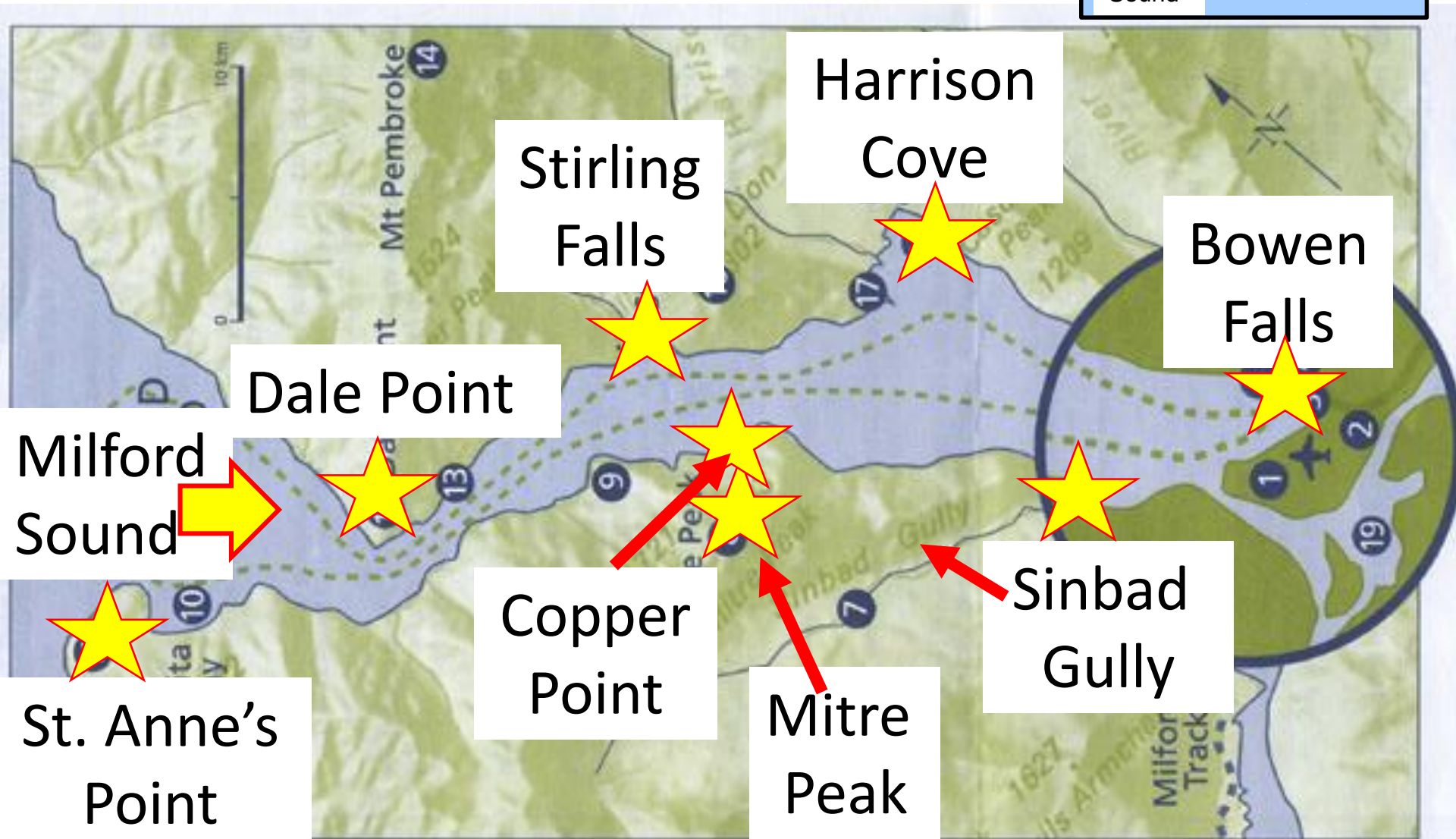


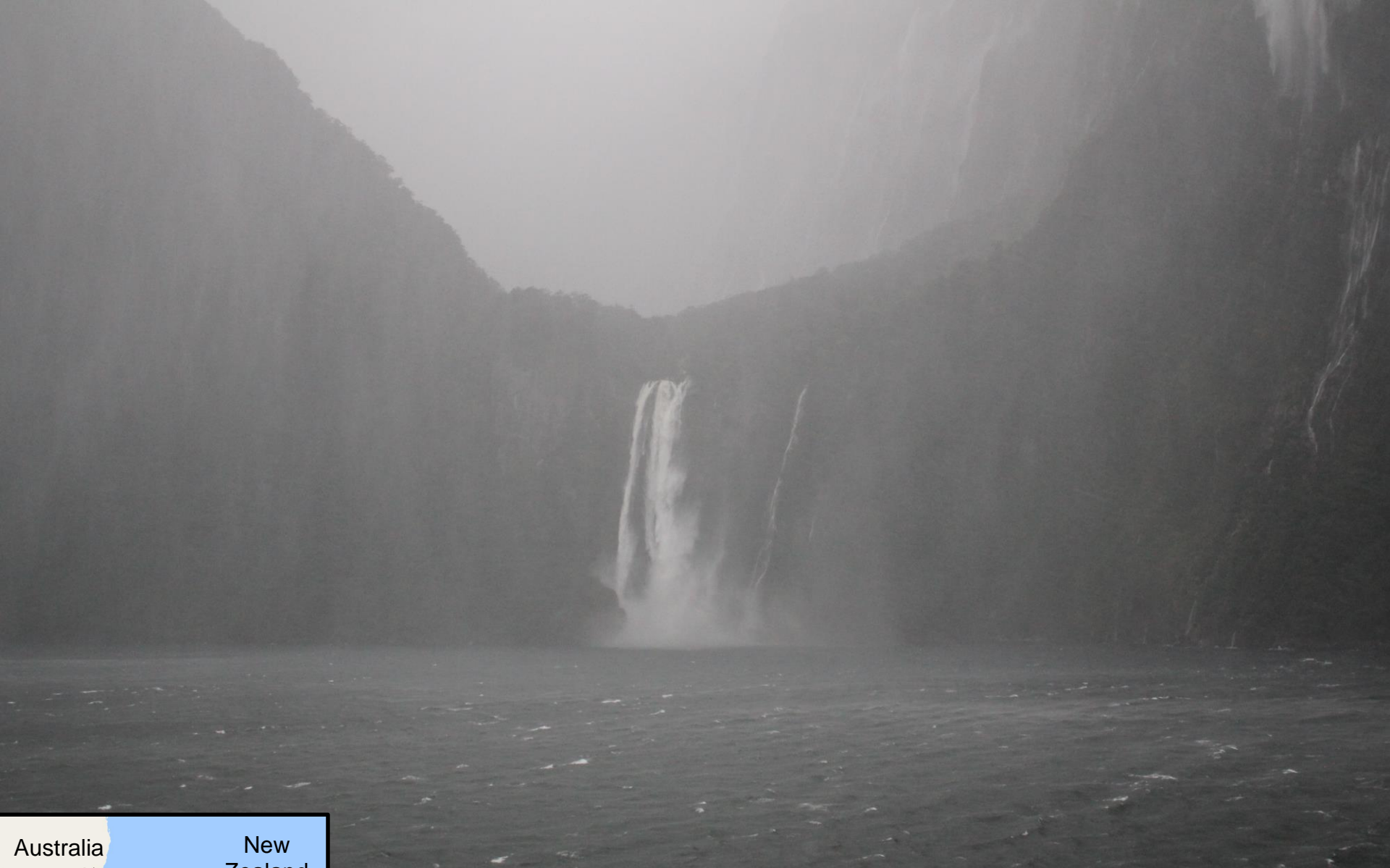
During the Heroic Age of Antarctic Exploration (late 1800s to early 1900s), Sir Douglas Mawson was a key expedition leader. Mackay, David and Mawson (shown with star) raise the flag at the Magnetic South Pole on 16 January 1909. Mawson joined Ernest Shackleton's (1907-1909) Expedition. Mawson was the first to climb Mt. Erebus and trek to the South Magnetic Pole. Geologist Mawson is featured on the \$100 Australian paper note.

Mitre Peak in Milford Sound, New Zealand



Milford Sound Bridge Narration Trip Map





The magic of Stirling Falls in Milford Sound is shrouded in rain and mist, which is common. The geologic narration from the bridge described glacial processes during the past 20,000 years, geology of the meta-sediments in the glacial fjord, as well as mountain and waterfall names and local places.

Stirling Falls 155 m (508 ft)

Hanging
Tributary Glacial
Valley

Milford Sound, NZ



Southern Fur Seals on Seal Rock, Milford Sound, NZ



On a sunny day, December 2010

Mitre Peak

5,560 ft (1,695 m)

Milford Sound, NZ

Sinbad Gully

(U-Shaped Tributary Glacial Valley)

Arete, or knife edge ridge

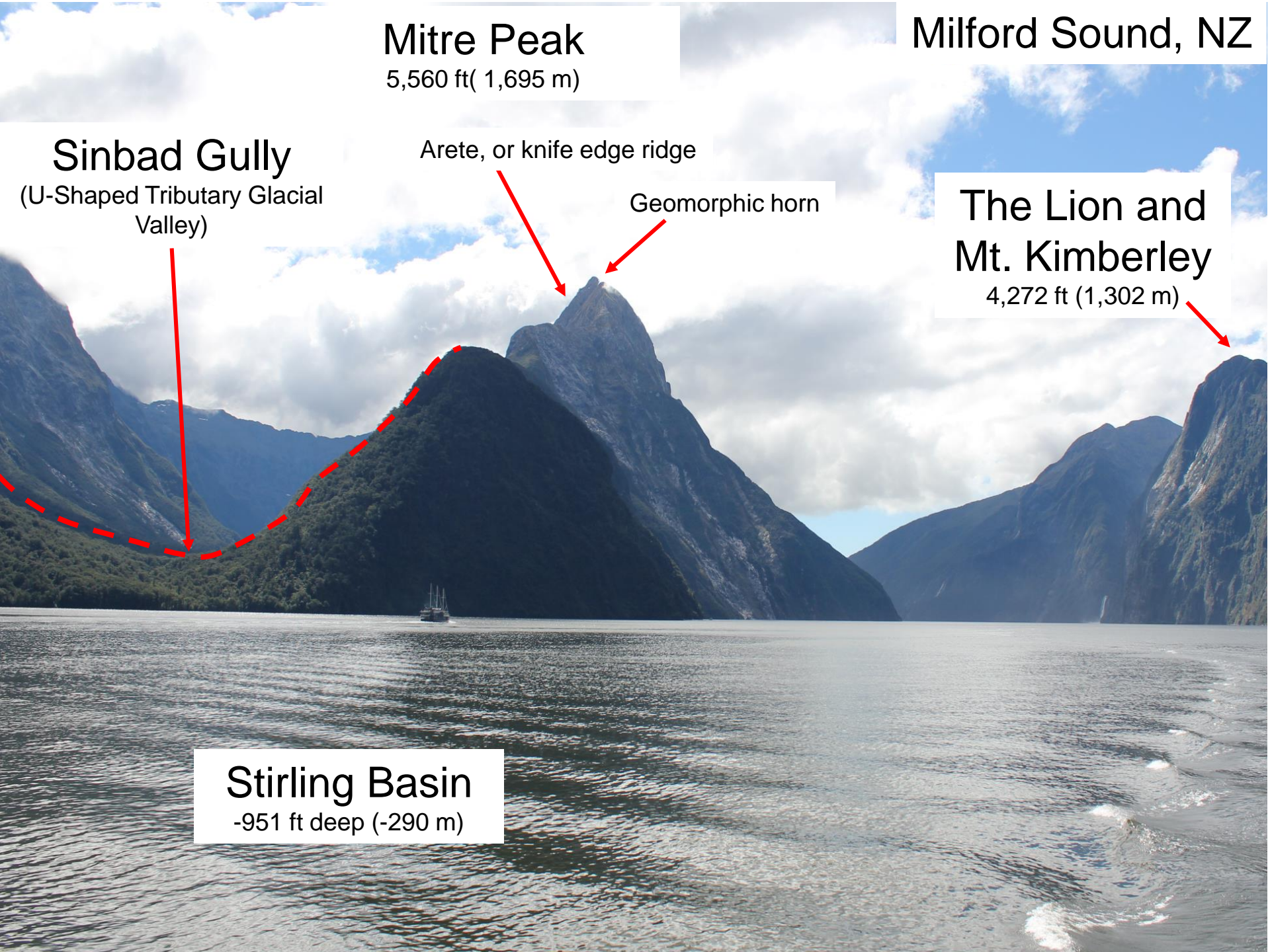
Geomorphic horn

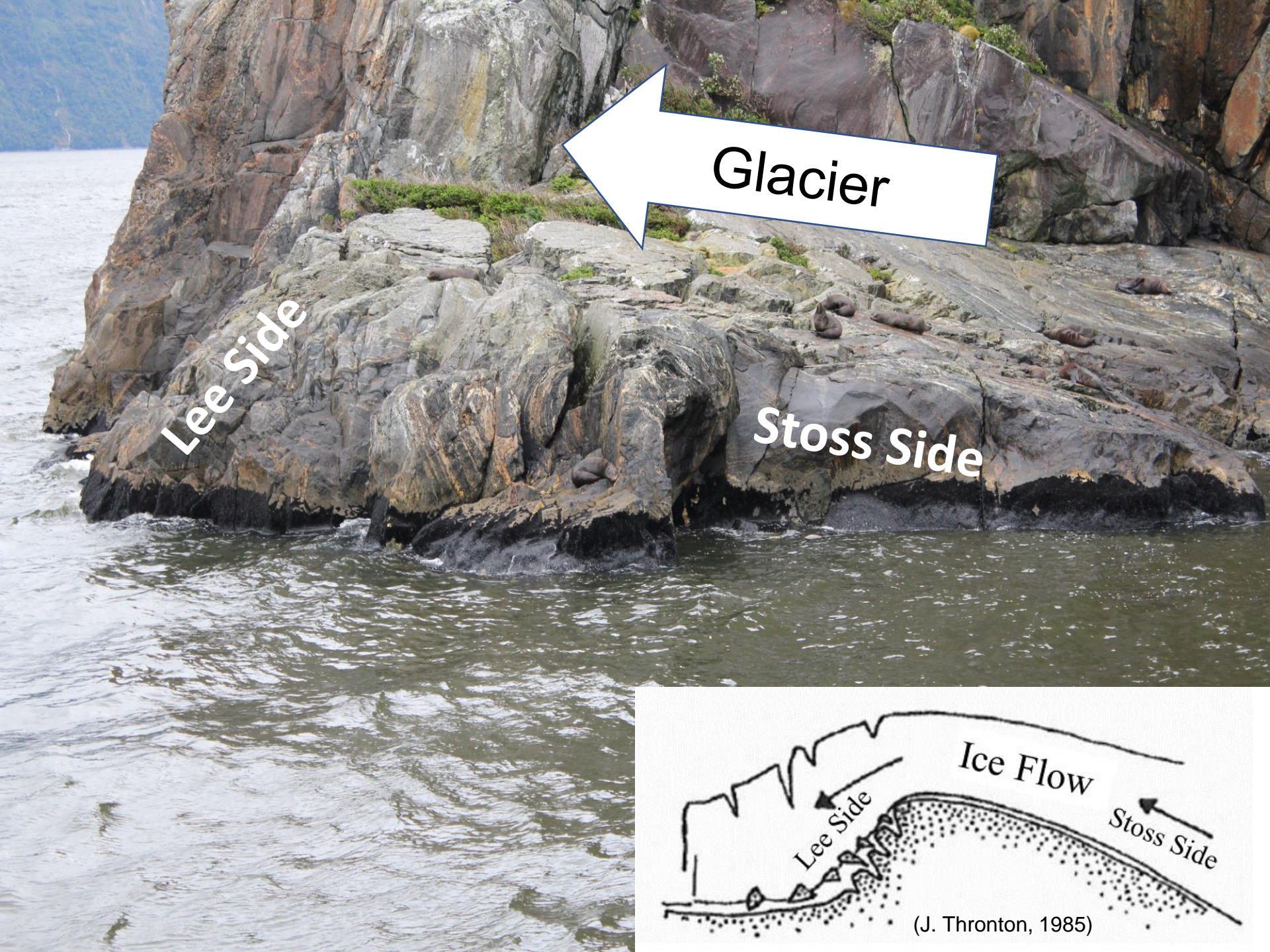
The Lion and Mt. Kimberley

4,272 ft (1,302 m)

Stirling Basin

-951 ft deep (-290 m)

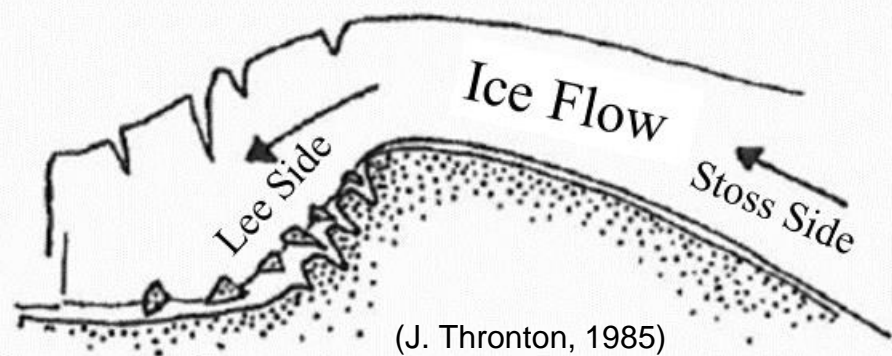




Lee Side

Glacier

Stoss Side



(J. Thronton, 1985)

Dunedin and Port Chalmers on the South Island are former volcanic centers.



The imported Radiata pine is the primary exported wood species in New Zealand. The fast-growing trees are harvested in about 24 years



Port Chalmers on the South Island near Dunedin exports logs mainly to Asia to be made into plywood and furniture. The historic railway cars (behind) take cruise passengers to central Otago.



Brewed since 1876, Speight's Brewery in Dunedin gives locals free access to water from their well; the groundwater is the secret to the beer.



Dunedin, a Victorian city built with gold-field cashflow in the 1860s to 1880s, was built on steeply-dipping volcanic hills.

Akaroa, an historic French town on the Banks Peninsula near Christchurch, NZ



The Banks Peninsula represents several overlapping shield volcanoes from about 8 million years ago. Akaroa is a harbor town and tourist destination near Christchurch.



Christchurch Art Gallery (Te Puna o Waiwhetu) was built in 2003, prior to the 2011 earthquake. It sustained some earthquake damage which was repaired.

Christchurch: Cathedral of the Blessed Sacrament, Feb. 2019.



<https://www.geonet.org.nz/earthquake/story/>

Damage from the February 22, 2011 M 6.3 Earthquake; (the wall is being held up by concrete-filled shipping containers). 2007 photo of historic cathedral (inset)

1931 Earthquake in Napier, New Zealand

Ahuriri Lagoon, before the 1931 earthquake

Pre-Earthquake



Uplifted Ahuriri Lagoon, after the 1931 earthquake

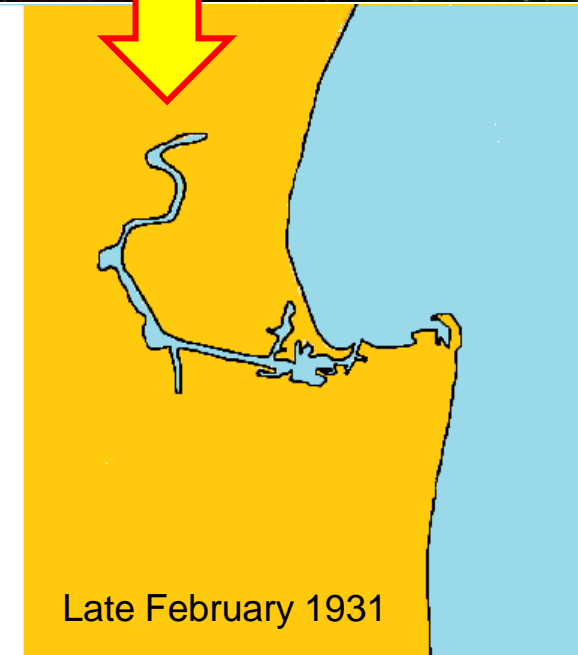


Post-Earthquake

Napier, 1931 – Earthquake, Fire and Tsunami Damage



Early February 1931



Late February 1931

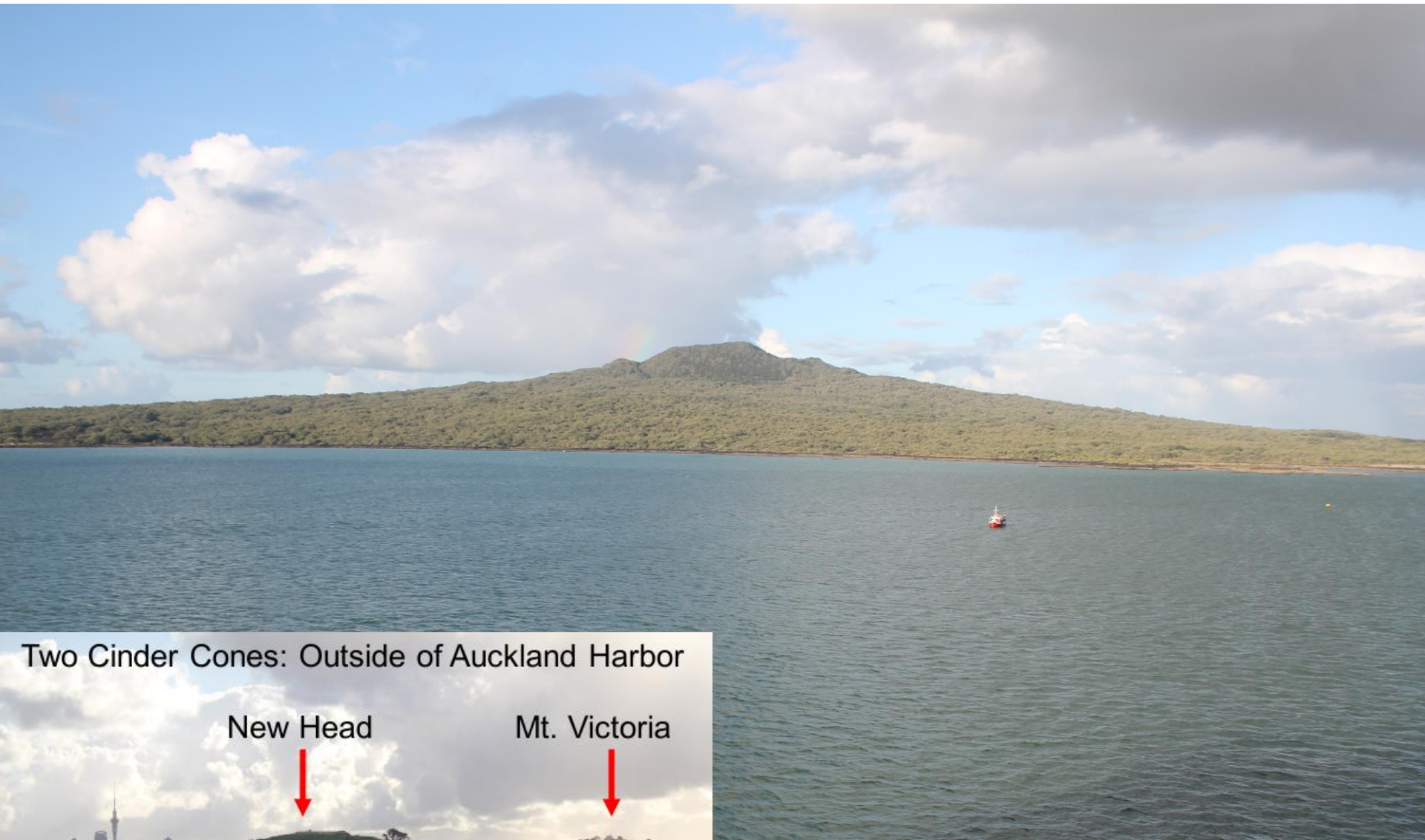


Due to 1931 devastating earthquake in Napier, New Zealand, the entire downtown was rebuilt in Art Deco Style (1931-1934) creating an historic district.

Azamara *Quest* arriving in Auckland, NZ



Auckland, NZ is located within a volcanic cinder cone field



Mt. Rangitoto (above) east in Auckland Harbour, was last active 600 years ago

The Auckland War Memorial Museum is a world-class natural history museum featuring geologic exhibits, mineral specimens and military history. The museum sits at the top of an extinct volcanic cinder cone.



The sides of the Auckland War Memorial Museum are the slope of a cinder cone



Sketch of extinct volcanic cinder cone slope

Former
magma
chamber

Azamara Quest; February 21 – March 8, 2019

Auckland, New Zealand to Cairns, Australia



View of beaches near Tauranga, NZ from Mount Manganui



Mount Maunganui (322 m high) near Tauranga, NZ



Extinct Rhyolite Lava Dome: 2.35 million years old. Landslides and unstable slopes seen in photo on left side. Evidence of Maori settlement at base (shell middens at least 600+ years old) based on Carbon-14 dating).

Wellington is the capital of New Zealand



The NZ Beehive is the Parliament Building

Known as “Windy Welly”, Wellington is the capital of New Zealand



The windiest city in the world is not Chicago, but Wellington, New Zealand. Photo is of the first windmill in the city.

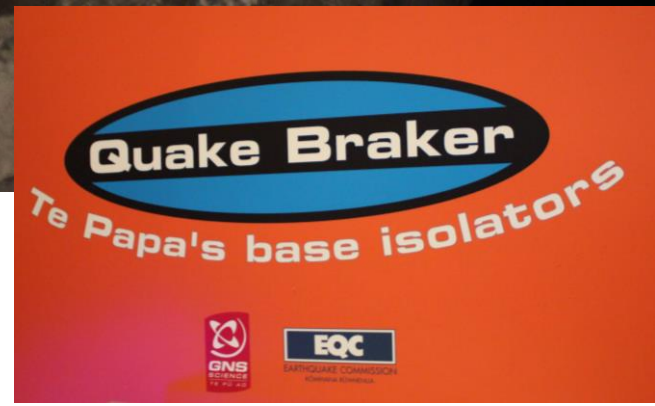
The Museum of New Zealand (Te Papa) in Wellington, NZ



The Museum of New Zealand (Te Papa) in Wellington, NZ



Te Papa's base isolators
reduce earthquake damage





Selected Exhibits at the Museum of New Zealand (Te Papa)



Azamara Quest; February 21 – March 8, 2019
Auckland, New Zealand to Cairns, Australia



Dawn entry into Sydney Harbour with a Geology Bridge Narration

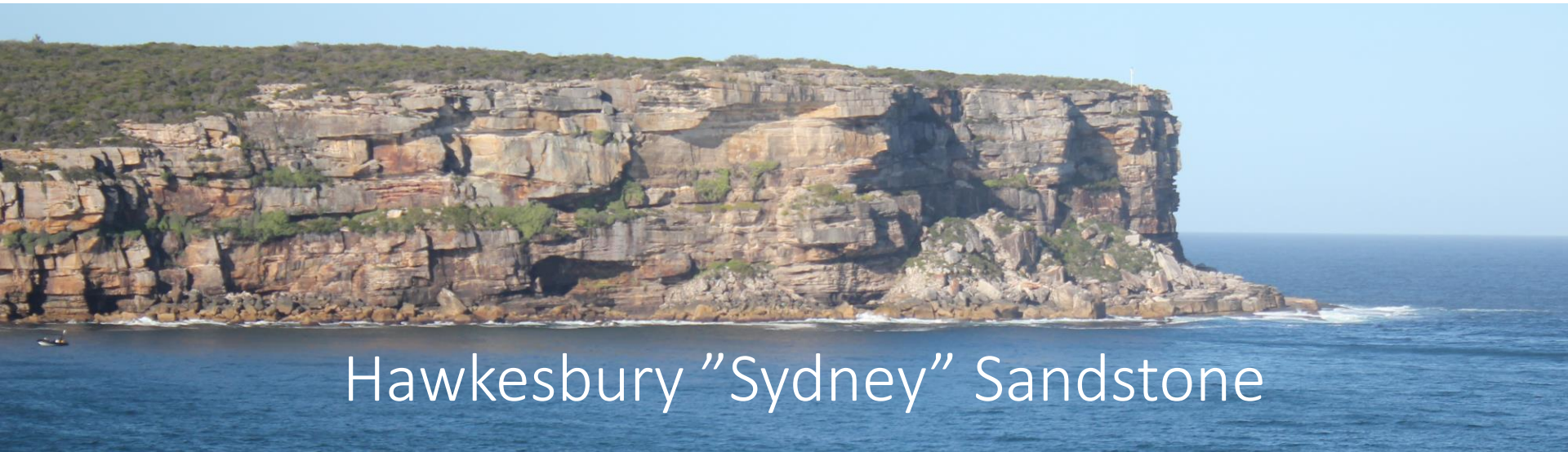


Sydney Harbour Bridge



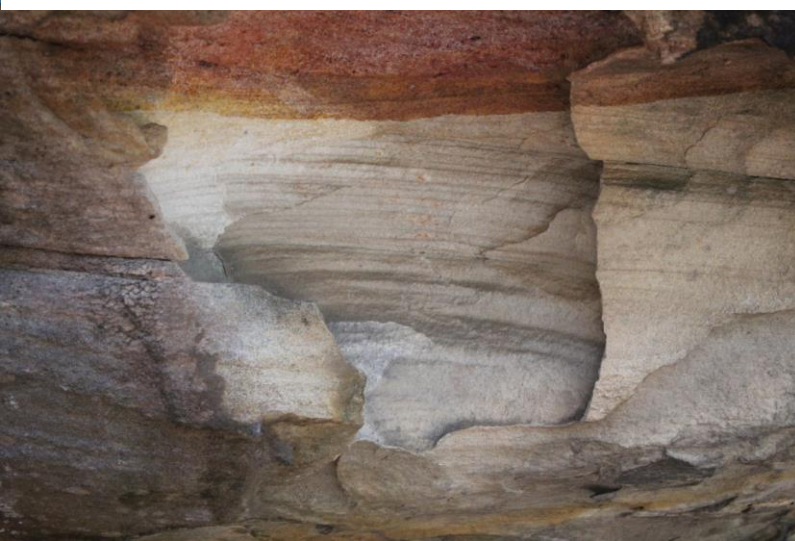
Iconic Sydney Opera House

North Sydney Head: Hawkesbury "Sydney" Sandstone: Triassic 200 million year old aluvial sandstones up to about 20,000 feet (6 km) thick derived from rocks formed between 500 to 700 million years ago on long-eroded mountains in Antractica. Buildings in Sydney (inset) are clad in this sandstone.



Hawkesbury "Sydney" Sandstone

Close up of sandstone with staining



Close-Up of Rock Materials



The passengers and crew revel in full regalia on White Night on the Azamara Quest



Offshore islands and the blue-green waters on the way to Airlie Beach, Australia



Soft corals from the Great Barrier Reef dance with water currents



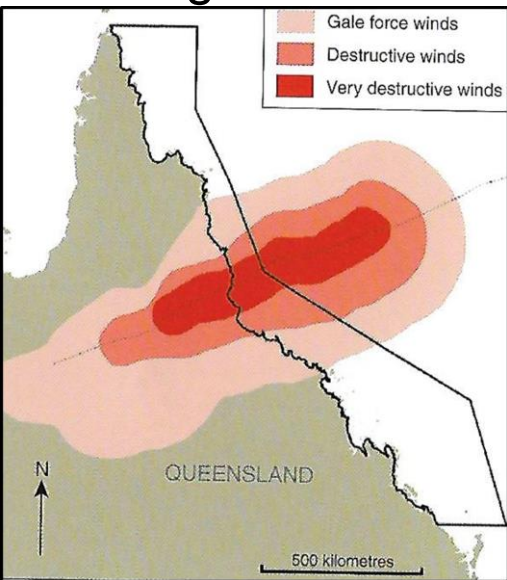
Sugar cane is a major export near Cairns



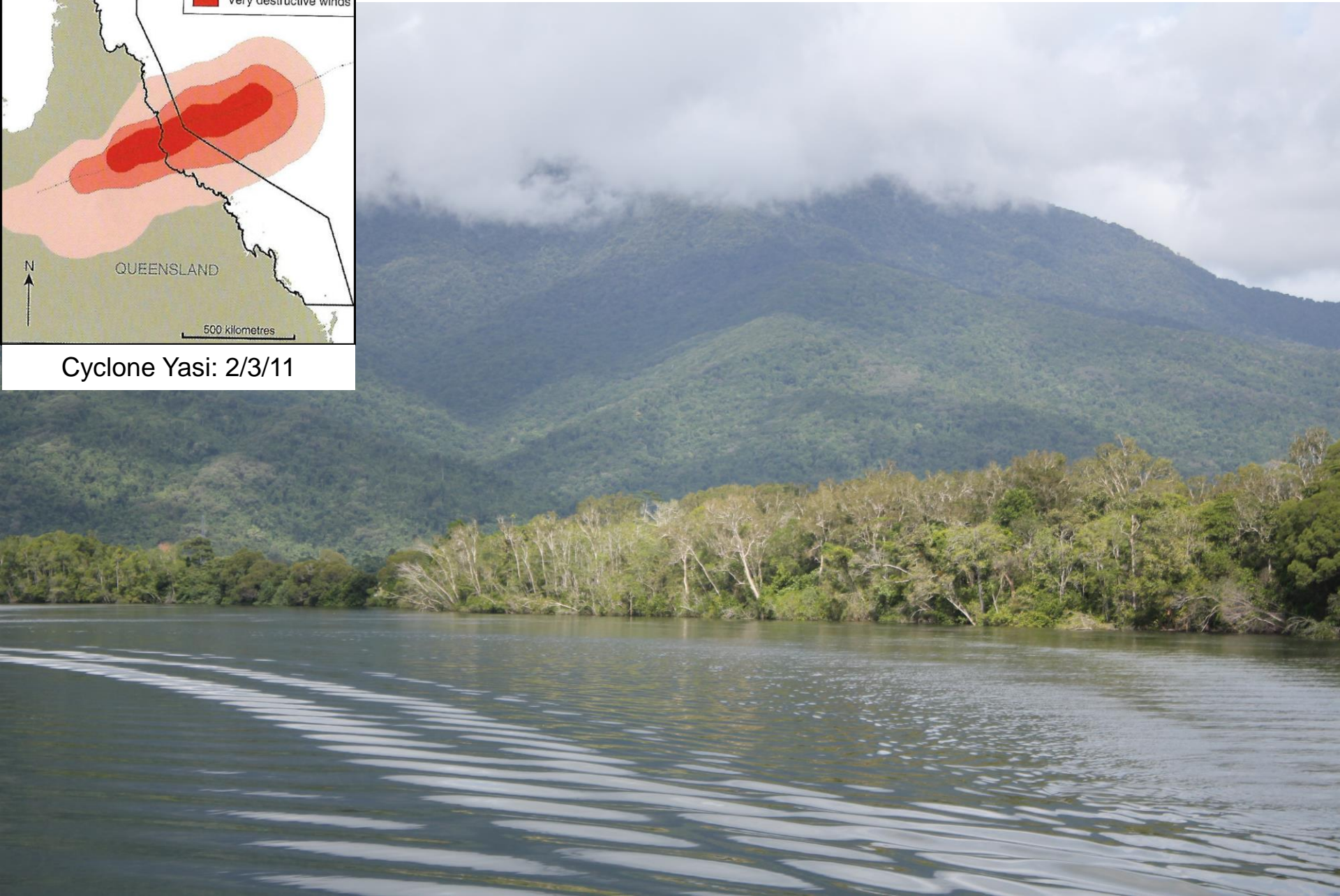
The turbid waters north of Cairns don't reveal the Great Barrier Reef just offshore, about 1 to 2 hours by boat.



Damaged trees in a tropical rainforest on the Russell River southeast of Cairns in 2019 attest to the destruction of Cyclone Yasi from 2011



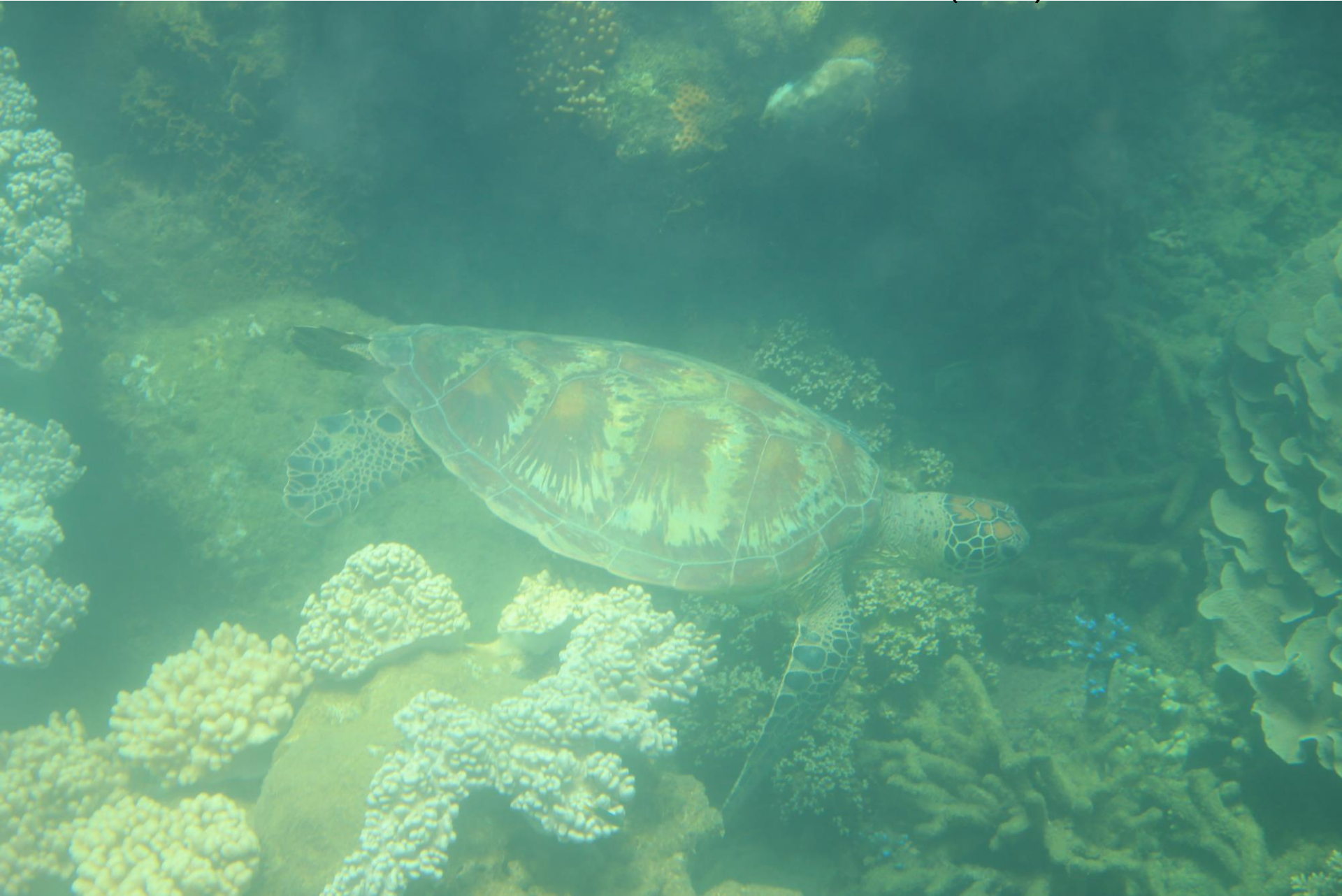
Cyclone Yasi: 2/3/11



Frankland Island with fringe reef southeast of Cairns, Australia



As seen from a glass-bottom boat, a green turtle passes by hard corals off Frankland Island in about 6 feet (2 m) of water.



Exotic flowers bloom at the Cairns Botanical Garden



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James Jacobs presenting a lecture at the Cabaret Lounge on the Azamara Quest about volcanoes and the 1886 explosion of Mount Tarawera, New Zealand.