The Guides' Guide

An introductory resource
for volunteers and staff of the
New Zealand Maritime Museum

2019

New Zealand
Maritime Museum
HUI TE ANANUI A TANGAROA

PART ONE

The Guides' Guide (part one)
Third Edition
2019

New Zealand Maritime Museum
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Viaduct Harbour, Auckland

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In memory of Marleene Boyd, NZ Maritime Museum Librarian 2003-2017

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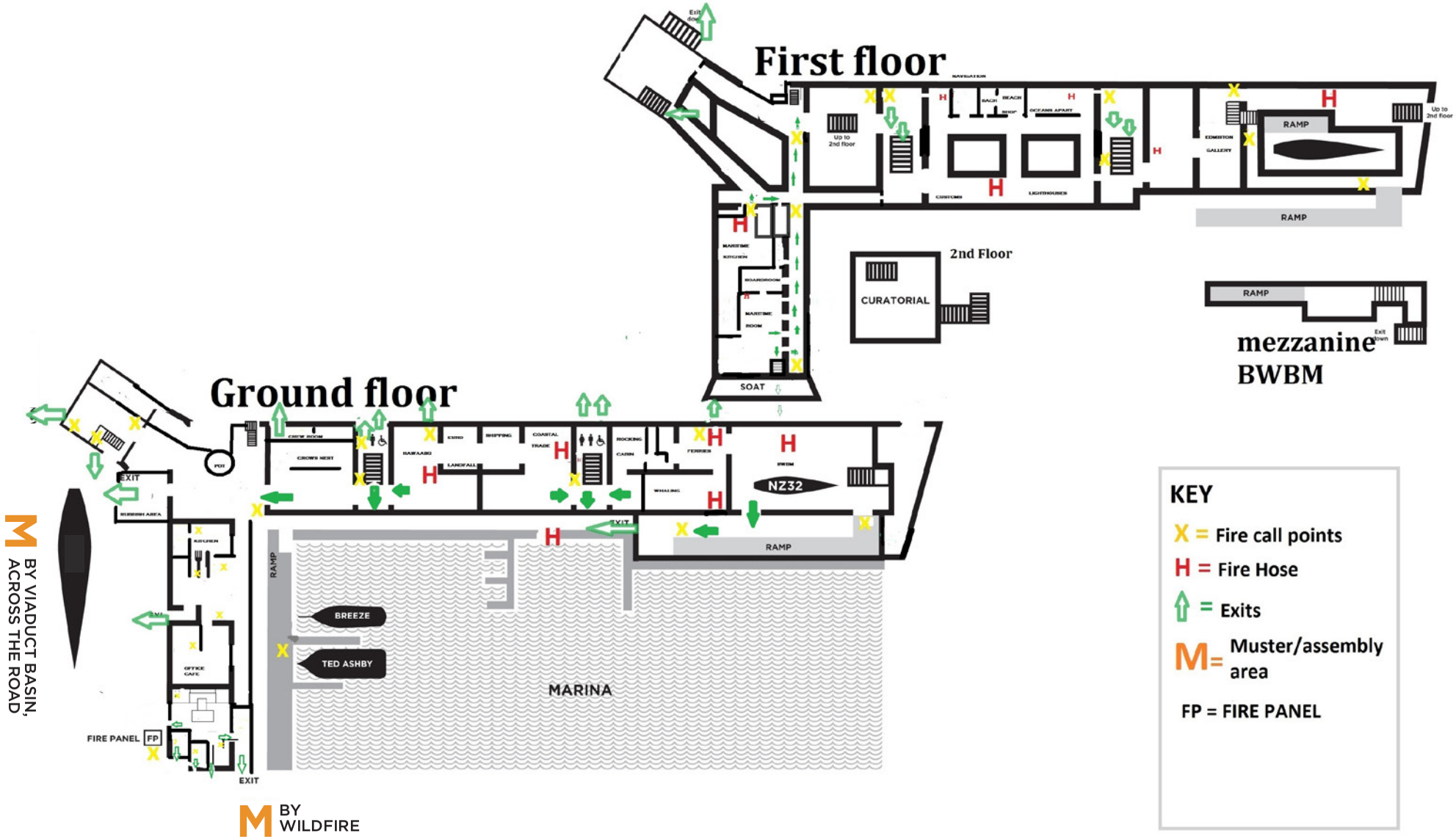
EMERGENCY EVACUATION MAP



Health & Safety Information

Health & Safety and Site Safety

All volunteers must complete the Health & Safety induction and a Site Safety tour when they first join the museum, and at any future time as required. You will also receive a full information pack.

Additionally, Health & Safety information is available on the Volunteer Intranet page of the museum's website.

Remember that we are an on-the-water museum, so all volunteers must be vigilant to ensure visitors' safety, particularly around the pontoon area.

You should also pay particular attention to visitors with mobility problems and be alert around steps and ramps. A lift is available near the Pacific Discovery Theatre.

FIRST AID

St John's First Aid Kits are located in the Administration Office, Collections area and the lunchroom. A qualified first-aider is always on duty – contact Front of House.

In the case of heart attack or serious injury, **contact Front of House immediately – 373 0803**.

An AED (Automated External Defibrillator) device is available. It is located on the wall to the left of the main stairs in the first stairwell.

In case of emergency, contact Front of House immediately. If necessary, call 111 for an ambulance. Be as specific as possible about the location of the patient.

FIRE

The museum is equipped with fire alarms, an automatic sprinkler system, fire hoses, fire escape doors and evacuation notices. Volunteers should know the location of all emergency exits and fire equipment. Please ask a Custodian or a member of the Health & Safety team if you need help.

In the event of fire, first break an alarm panel and then escort your group to one of the Muster Points outside the museum (see Evacuation Plan opposite for location of Muster Points).

Do not attempt to tackle the fire yourself.

All museum personnel and visitors must evacuate the building immediately. Safety Officers will 'sweep' the building to ensure complete evacuation.

IMPORTANT

If you notice an immediate health or safety hazard within the museum, you must report it straight away to a Custodian, either in person or by contacting the Front Desk, or by calling 373 0808.

See the museum floor plan opposite for the location of:

- **Emergency Exits**
- **Muster Points**

The New Zealand Maritime Museum

Our mission is to preserve, present, interpret, and celebrate Aotearoa New Zealand's maritime heritage – to be a place of learning and understanding, and to engage our audience through unique maritime experiences.

Our name

After several years of planning, the museum finally opened its doors on 19 August 1993. Before the opening and in its early days, it had been referred to as Hobson Wharf, Auckland Maritime Museum. In 1996, the name was changed to the New Zealand National Maritime Museum.

In 2009, the name was changed to Voyager New Zealand Maritime Museum, and later changed again to simply the New Zealand Maritime Museum.

Our Māori name, *Hui te Ananui a Tangaroa*, was gifted to us by Sir Hugh Kāwharu, and means the Dwelling of Tangaroa (the god of the sea).

Our history

A maritime museum was first proposed in 1980 by a group of like-minded individuals, many of whom were Auckland Harbour Board and Union Steam Ship Company members.

It was to house the growing collection of maritime archives within the Auckland Maritime Society and Auckland Museum collections, and was to be the first and only museum that dealt with New Zealand's maritime history as a whole. However, many years went by before the museum finally started to take shape.

Auckland Maritime Museum was founded by Gordon Stephenson, who had previously founded the Army Museum at Waiouru, and was formally established in 1989 by the late Dr Rodney Wilson, who led the fundraising efforts. In his own words he had "no buildings, no collection, no staff and no money". He was the museum's first director, 1989-1994. Previously he had been director of the Auckland Art Gallery, and in 1994, went on to become director of the Auckland War Memorial Museum.

Today

From uncertain beginnings, we are now home to New Zealand's largest maritime collection, with approximately 2,000,000 items, large and small – most of which are not able to be displayed due to lack of space. However, the Collections Department is undertaking a long-term project to correctly record and photograph every item. The information will then be available through the museum's website so anyone, anywhere, any time, can explore our collection.

In 2009, the museum was substantially extended, with the opening of the newest gallery *Blue Water Black Magic*. It was developed as a tribute to Sir Peter Blake, and to house NZL32 – Black Magic – which won the America's Cup in 1995.

Smaller gallery changes and updates continually take place, and the next major challenge will undoubtedly involve incorporating the 2021 America's Cup challenge event into the life of the museum.

The Guides' Guide & Tour

This guide contains information and stories not generally available within the gallery, so guides can give visitors a more in-depth, informative and enjoyable experience.

The Guides' Guide is also for others to learn more about the galleries and exhibits for themselves.

The range of topics in the museum is impossible to cover fully in this guide, so bear in mind that the information may be incomplete, historical accounts often differ and new information comes to light all the time.

Use your judgement when answering questions and keep yourself as informed and up to date as possible. For fuller information on any topic, the best source is the museum library. The Librarian is always happy to help with enquiries.

How to use this guide

Gallery information is generally presented in three sections:

First: an introductory page, giving a broad overview of the gallery.

Second: history and background stories in more depth. Interesting extra facts are featured in the blue boxes.

Third: specific details of selected objects and displays within the gallery.

If tour time is limited, focus on the first and second parts.

Otherwise talk about some of the objects in relation to the stories of the gallery, according to your own knowledge, or the interest of the visitors.

The visitors' experience

- At the start of the tour, introduce yourself in a friendly manner and engage your visitors in a little conversation.
  Find out about any maritime interests they may have so, where appropriate, you can tailor the tour for their maximum enjoyment.
- Two wheelchairs for visitors' use are available at front of house, if required.
- Away from the distractions of the concourse, welcome your visitors and give them a brief idea of what to expect from the tour: that they won't see everything, but you will give them a broad understanding of each gallery you visit so they can look at the individual objects at their leisure after the tour.
- Let them know that questions are welcome. Don't worry if you don't know the answers – a useful reply could be something like "That's a very good question and I'm afraid I don't know the answer." You can then try to find out later – ask other guides or the librarian, or do your own research.
- They are welcome to take photos, as long as they don't use flash.
- The full tour lasts about an hour and a half – any longer and visitors start to get information overload. You may need to shorten the tour if visitors are booked for a public sailing or have other commitments. Adjust the length of the tour accordingly, or indicate when visitors should break off from the tour. Pre-booked groups may have other timings – you will be advised in advance.
- You are not expected to show the whole museum. It would take much too long to do it justice and everyone (including you) would be exhausted! Start by concentrating on subjects you are confident talking about and with time your knowledge will increase.
- During the tour, try to make regular eye contact with each member of the group. Taking a personal interest makes them feel more involved and the tour more enjoyable, both for them and you!
- Once in the galleries, try to ensure visitors can see and hear you clearly. In less well-lit areas you may need to stand near a source of light so your face can be easily seen.
- Make sure you speak clearly, and loudly enough that you can be heard well by everyone. Vary your tone to avoid sounding monotonous and, when possible, make use of stories, so listeners stay engaged with your commentary. Visitors really enjoy hearing *relevant* personal stories you may be able to share. Be sure to keep them brief and non-technical.
- Allow for visitors who have hearing difficulties: speak a little louder or make sure they stand near you while you talk; the extra effort is much appreciated!
- It takes a while to learn the techniques, but work towards being positive and enthusiastic about the stories or objects you are talking about. Visitors respond particularly well to your personal enthusiasm about a subject.
- If some of the group lag behind, don't wait too long for them all to catch up before beginning to talk about the next section. That way the people who have stayed with you won't be bored waiting for you to start talking again (and to avoid them wandering off!) The slow ones will catch up more quickly if they hear you starting the next story.
- At the end of the tour, thank them for their attention and indicate the way out of the museum. Also let them know that they are welcome to stay in the museum or, if they need to leave, that they can come back later in the day or within a week, on presentation of their ticket.

IMPORTANT TOUR NOTES

- **No smoking, eating or drinking** is allowed inside the museum.
- Visitors **must not touch** the exhibits.
- General photography is welcome, but **no flash** may be used. Commercial photography is not allowed without permission.
- Please make sure you are fully familiar with all the Health & Safety requirements of the museum for your own and the visitors' wellbeing. You should have already received H&S and Site Safety inductions. Please also carefully read the **Safety Information** on page 5.

Outdoor Exhibits

At the museum entrance

Displayed outside the museum is New Zealand – KZ1 – the massive and controversial yacht, designed by New Zealander Bruce Farr, which took part in the notorious America's Cup races of 1988 in San Diego.

The NZ challenge came about when Sir Michael Fay saw an opportunity in the America's Cup regulations (the Deed of Gift) to initiate a direct challenge to the holders, the San Diego Yacht Club headed by Dennis Conner, that would exclude other teams, and avoid a challenger series.

When it was launched in 1988, KZ1 was compared with the large J-Class yachts of the 1930s. In reply, Dennis Conner entered a fast catamaran, Stars & Stripes. The disparity in yacht types meant that, eventually, the result was decided in the courtroom, in Conner's favour.

KZ1 – the legacy

The legal wrangling sparked significant changes to the America's Cup competition.

To avoid similar problems in the future, a new class was born. For the first time a purpose-designed rule would regulate the specifications of the boats sailing for the Cup – giving rise to the America's Cup Class.

Vessels on the water

The museum's marina serves two purposes: berthing for visiting vessels, and to berth our own heritage fleet, of a brigantine, a scow, a historic launch and a small steam launch, along with a selection of classic yachts and other interesting vessels.

Ted Ashby **Ketch-rigged deck scow, 1993**

Ted Ashby is a modern-built ketch-rigged deck scow, built for the museum when it opened in 1993. She was built to plans replicating the original scows and it took 11,000 hours of volunteer labour to build her.

She was named after a well-known former scowman and author, Ted Ashby, who documented much of the history of scows in his book *Phantom Fleet – The Scows and Scowmen of Auckland*.

She is built of blackbutt, an Australian hardwood grown in Northland, instead of the traditional kauri, which is now a protected species. Underwater, the hull is sheathed in worm-resistant totara.

She is fitted with diesel engines to comply with maritime safety standards, and is licensed to carry 48 passengers. Ted Ashby is crewed by volunteers and sails regularly for museum visitors and school groups.

The scow was introduced to New Zealand in 1873, by American shipmaster George Spencer. The American design was adapted for New Zealand conditions, and the first local scow was named Lake Erie. There is more information about scows in the *Coastal Trade* section of this guide.

Breeze **Brigantine rigged coastal trader, 1981**

Breeze was built at Coromandel by Ralph Sewell in 1981. She is rigged as a brigantine, and was constructed specifically to recreate a 19th century style vessel requiring traditional sailing skills. Many of the construction techniques and materials used were faithful to that time.

Breeze has a significant place in NZ history. In 1985, the environmental organisation Greenpeace intended to monitor (and if possible, disrupt) the French nuclear testing on Mururoa atoll, near Tahiti. Their ship, Rainbow Warrior, came to Auckland to lead a 'Peace Flotilla' to the atoll. To prevent the protest, the French sent secret agents to Auckland. On July 10 1985, whilst the ship was berthed at Marsden Wharf, French divers attached mines to the hull and blew it up, killing photographer Fernando Pereira. This was a major diplomatic incident which made headlines worldwide. Subsequently, Breeze set sail to lead the Peace Flotilla instead.

By 1989, in need of a major refit, an agreement was made between Sewell and the Auckland Maritime Museum for the sale of Breeze, at materials cost only. With major contributions from supporters, the refit was completed in 1990 and she has been a permanent fixture at the museum since then.

From left:
Ted Ashby.

Breeze.

Puke **Steam launch, 1870s**

Puke, a steam launch built on the Kaipara Harbour in the 1870s, is reputedly New Zealand's oldest steamboat. She is licensed for short harbour trips for museum visitors.

Her original purpose was as a tender for small towing jobs for the kauri milling industry. Puke lay in a mud berth at Thames for many years. In 1988 she served as a river ferry at the Brisbane World Expo. In 1993 a major rebuild was carried out and today Puke is maintained by volunteers.

The Union Shipping Group sponsored her restoration and gifted her to the Museum in 1989. She is painted in the USSCo colours of green and red.

Nautilus **Motor launch, 1913**

Since she was launched Nautilus has performed many roles: as a family vessel for picnics and racing, and operating public excursions, ferry trips and charters. She was also involved in the rescue of a survivor from a tragic yachting accident and served as the hospital ship Marama's launch in WWI.

In 1913, Francis H.E. Chester from Christchurch had Nautilus built by prominent boat-builders, Collings and Bell, in St Mary's Bay, Auckland. In 1915, Chester offered her for use onboard the New Zealand hospital ship, Marama.

Nautilus was one of two motorboats carried by Marama during WWI, which served in the Mediterranean and the English Channel transporting wounded soldiers to hospitals in England.

Marama also made several return voyages to New Zealand with recuperating soldiers.

In January 1918, Nautilus was returned to Chester, and after the war she ran excursions for the public on rivers and estuaries around Christchurch.

Subsequently, she seems to have mostly been used as a private launch. Nautilus has been altered several times, including being lengthened by four feet.

She was acquired by Allan Williams in 1994. While in his ownership, Williams refitted her with a new engine and enjoyed 17 years of family boating before donating her to the museum in 2011.

Between 2011-2016, Nautilus was meticulously restored at the Maritime Museum, in an open air workshop at the end of the wharf.

Note: Stories that Marama and Nautilus served at Gallipoli during WWI are incorrect, as is the story that she returned home with bullet holes in her hull.

From left:
Puke.

Nautilus.

Classic Yacht Charitable Trust vessels

Some of the yachts belonging to the Classic Yacht Charitable Trust are berthed in the marina, and regularly take part in regattas and classic yacht races.

The Logan Brothers were iconic New Zealand boatbuilders and designers who played a significant part in our yachting history. Waitangi, Gloriana and Frances are some examples of their work.

Gloriana C8 Gaff cutter, 28ft, 1892 designed by John Logan

Gloriana was the first boat built by the fledgling Logan Brothers firm.

She was built as a half-size version of her New York namesake, designed by the famous American naval architect Nathaniel Herreshoff. A very successful racing yacht in her early days, she regularly competed against yachts designed by Chas. Bailey.

During the clashes between the Bailey and Logan boats, wharves would be crowded with spectators, and ferries were chartered to follow the races. A great deal of business flowed into the houses of Bailey and Logan at that time, and the Logans had a full order book, thanks to Gloriana's successes.

Waitangi A6 Gaff cutter, 74ft, 1894 designed by Robert Logan

Waitangi is the largest surviving early Logan yacht and is an outstanding example of late 19th century design and craftsmanship.

A syndicate of Wellington yachtsmen had commissioned Logan to build a yacht guaranteed to win the New Zealand First Class Championship race in Wellington in January 1895. Waitangi won by 27 minutes and continued to dominate local yacht racing for a decade.

Waitangi was owned by five RNZYS Commodores and then sold to a Sydney owner in 1948. She has been raced in Wellington, Christchurch and Auckland for much of her history. Regrettably she was later modified and then fell into disrepair. In 1986 she was purchased in Australia by the Waitangi Syndicate, a group of Melbourne businessmen and sailors who undertook extensive research to restore her to her original condition.

The work took eight years and she was relaunched in 1994 to celebrate her 100th birthday. Her rigging, sail plan, hull and interior are exactly as built by Robert Logan, and her restoration is spectacular.

She was shipped to Auckland from Melbourne to participate in the Logan Classic in 2000. She was bought by the Classic Yacht Charitable Trust and now sails New Zealand waters permanently, regularly taking part in heritage and classic yacht regattas.

From left:
Waitangi (A6).

Frances (A11).
Gloriana (C8).

Ariki (A3).

Frances A11 Gaff cutter, 38ft, 1906 designed by Arch Logan

Frances was built off her twin yacht Victory's moulds by Logan Brothers at St Mary's Bay.

Her first owner was an Austrian-born Auckland storekeeper who used her primarily as a fishing boat.

In 1908 she was acquired by Robert Shakespear, who had helped to build her while serving his time at the Logan Brothers' yard. He and his family used her for many years carrying wool and produce from their Whangaparaoa farm to the Auckland markets.

The Cato family acquired Frances in 1991 and carried out a major refurbishment late in 1999.

In 2003 they generously gifted Frances to the Classic Yacht Charitable Trust to be maintained and sailed out of the museum with other gaff riggers.

Ariki A3 Gaff cutter, 54ft, 1904 designed by Arch Logan

Ariki, meaning Māori Chief, was built by the Logan Brothers, the design based on their highly successful Rainbow (1898). She was designed to be a fast racer and up until 1938, she was the fastest yacht on the Waitemata Harbour.

However, the arrival of Lou Tercel's Ranger in 1938 signalled the end of her dominance and, following depression and war, Ariki fell into disrepair. In the 1970s, she was restored by a team of volunteers and her owner at the time. Eventually she fell out of use, and it looked as though she would spend her final years rotting away in a mooring in Bayswater.

In December 2016 Andrew Barnes purchased her and, in April 2017, started a new restoration at Okahu Bay in Auckland. She was relaunched in April 2018 to join the other CYA yachts in the regular classic yacht races on the Waitemata Harbour and is berthed next to Waitangi (1894), in the museum's marina.

She is a gaff-rigged cutter with a jackyard topsail. Featuring a spoon-bowed and counter-stern, her hull was planked in copper fastened kauri, consisting of two thinner layers of planks that were diagonal to each other and the third skin of planks running horizontally fore and aft along the yacht.

GAFF SAILS AND TOPSAILS

Most commonly seen on older yachts such as the 'classics' featured here, gaff sails are recognisable by their large, distinctive four-cornered shape. The sails are suspended from a wooden pole, known as the gaff yard, or spar.

To increase sail area, a topsail is also used. This is the smaller triangular sail above the mainsail, and is most commonly held in position by ropes (see photo), but they can also be supported between two wooden spars. This type is known as a jackyard topsail, recognisable as it usually extends slightly beyond the gaff spar.

"A jackyard topsail is rarely seen today, and there is good reason for that. The jackyard topsail is a sail with murder on its mind, swinging long spars along the deck, intent on sweeping the crew overboard. If you see a jackyard topsail set today, you should take notice, because under a jackyard topsail lies a brave captain and braver crew, whose full attention will be on that large sparred piece of canvas hoisted high into the sky."

Left:
Rob Hamill and Phil Stubbs rowing *Kiwi Challenge*, 1997.

Below:
Piri Pono.

(See next page.)

Vessels on the concourse

Kiwi Challenge **Trans-Atlantic rowing boat, launched 1997**

New Zealanders Rob Hamill and Phil Stubbs rowed this boat 5106 kms (2757 nautical miles) to victory in the first trans–Atlantic challenge, in October 1997.

It was assembled by Hamill and Stubbs from a 23-piece plywood kitset supplied by the race organisers. They rowed for 41 days, two hours and fifty-five minutes, and came in six days ahead of the next team. In 2001, and renamed Telecom Challenge 2, it was used in the same race by the only all-female crew, who came fourth.

Kiwi Challenge was donated to the museum by Rob Hamill and the family of the late Phil Stubbs, who died in a light plane crash in December 1998.

Piri Pono **Speedboat, launched 1929**

Commissioned by Robert Laidlaw – founder of the Farmers Trading Company – for holiday use on Lake Taupo, the mahogany-hulled Piri Pono was designed by Charles Collings and built in Auckland.

She is a twin-cockpit, 12-seat runabout of the type developed in the United States by Chris-Craft, Jon L Hacker (who designed Jon-El, the speedboat in the upper gallery) and others. The original engine was a 155 hp Atlanta, but this was replaced by the present Graymarines after WW II service on the Waitematā Harbour.

She was capable of 30 knots and with her, the Laidlaw family introduced water-skiing to New Zealand.

Montagu Whaler K11 **Naval whaler, 27ft, built 1977**

One of the standard ships' service boats in the Royal Navy since the turn of the 20th century, the Montagu whaler is a double-ender suited to rowing in open sea conditions.

The whaler was developed as a standard type by Rear Admiral Victor Alexander Montagu from earlier whalers which, in turn, were derived from the old whaleboats used in the whaling industry. The RNZN disposed of its last whalers in 1990.

Steinlager 2 **Half-hull replica**

This half-hull replica was made from the original mould.

For the 1989-90 Whitbread Round the World Yacht Race, Peter Blake and expert sailors among his crew came up with initial concepts for a different kind of yacht: Steinlager 2. Blake commissioned renowned designer Bruce Farr to produce the detailed plans.

Steinlager 2 easily won the race in 128 days, with Peter Blake as skipper.

For the first time since the 1981-82 race, the victor won all six legs (closely followed by both Grant Dalton's Fisher & Paykel NZ and Pierre Fehlmann's Merit).

After the race in 1990 she was sold and renamed Safilo.

In 2012, and by now named Steinlager 2 again, the yacht joined the NZ Sailing Trust, and is based in Auckland.

She is New Zealand's most successful ocean racing yacht. No other maxi ketch has ever had such a series of victories:

1st place: Whitbread 89/90
1st place: Europe Tour UAP
1st place: World Circuit (Maxi Division)
1st place: Transat des Alizees
1st place: Boston–New York
1st place: Nioularge
1st place: Ostende–Helgoland

Far left:
Steinlager 2 in Auckland, 2016.

Below:
The half-hull replica on the outside of the museum.

Pacific Discovery Theatre

Te Waka: Our Great Journey is a wide-screen animated film which tells the story of the migration of the early Polynesians to New Zealand.

Over the span of 2800-3000 years, Polynesians explored 16 million square miles of the Pacific Ocean, an area often referred to as the Polynesian Triangle, and settled on a large number of the habitable islands.

The Polynesian people had no written language but were able to develop a very sophisticated knowledge of sailing, boat building and navigation, among other things.

Te Waka provides an introduction to the first great migration in history that required technology.

Film background

Commissioned by the museum, *Te Waka* was the longest digitally produced animated film made in New Zealand at the time.

The 10 minute film plays continuously, with a short break between showings.

The making of Te Waka

The animated film *Te Waka: Our Great Journey* was opened at the museum in December 2001 by the Governor-General, Dame Silvia Cartwright. It was conceived by documentary maker George Andrews and event designer Logan Brewer and shows the voyage of a group of travellers familiar with navigating the sea with the help of stars, currents, wave patterns and the flight path of migratory birds and whales.

Extensive consultation was undertaken, aimed at pre-empting any complaints, by working with top Polynesian scholars such as Auckland University's Geoffrey Irwin, the Pacific's foremost authority of traditional voyaging, Sir Tom Davis, Sir Hugh Kāwharu and Cook Island cultural adviser George Upu.

The film, which apart from short commentaries features a smattering of dialogue in Cook Island Māori, is a testament to many months of research and painstaking animation by George Port and his company PRP VFX.

Port helped to found Weta Studios in the mid-80s with friends including Peter Jackson and Richard Taylor, and went on to provide visual effects for many locally produced series including *Xena* and *Hercules*. The film was created with the help of his 20 staff.

Polynesian Landfalls

The Pacific Ocean covers nearly a third of the world's surface. It contains hundreds of tiny islands.

People began arriving on these islands thousands of years ago, in canoes made of timber with sails of plaited strips of pandanus leaves.

Canoes were also used for fishing, trade, going to war and socialising.

Long before European open ocean exploration had begun, Polynesia had already been explored and settled.

Polynesians were skillful navigators voyaging confidently without the use of maps, as they had no written language. They developed a highly sophisticated knowledge of sailing, boat building and navigation.

Gallery overview

The gallery is presented in two parts. The small entrance hall features stories of the arrival of Māori around 700 years ago, including traditional woven tukutuku panels and Māori canoe artefacts.

The main gallery features vessels from various regions of the Pacific.

They demonstrate some traditional styles and techniques used in the design, construction and sailing of these canoes.

KEY GALLERY FEATURES

- Migration wall map
- Double-hulled voyaging canoe Sema Makawa
- Outrigger voyaging canoe Taratai

Entry hall – Māori elements

Māori are the descendants of the great Polynesian voyagers who first populated New Zealand. The entrance to the gallery focuses on Māori culture.

Artefacts of Māori canoe building include delicately carved models of waka, and examples of the highly decorated prows (tauihu) and sternposts (taurapa) used on war canoes.

The display includes the story of how the mythical character Maui fished up the North Island, *Te Ika-A-Maui* (the fish of Maui) from his canoe, the South Island – *Te Waka-A-Maui* (the canoe of Maui).

War canoes were used for taking warriors around the coast, across the harbours and up the rivers. They were richly carved and decorated to impress the enemy and give spiritual energy to the warriors.

Māori war canoe models

The model nearest the entrance is of the very impressive 24 metre war canoe which is on display at the Auckland War Memorial Museum. That canoe was built approximately 170 years ago, from a single log.

The second canoe model is accompanied by an anchor rock and a beautifully designed *tata* or bailer.

Tukutuku panels

A traditional Māori art form, tukutuku panels decorate the interior walls of meeting houses. The patterns play an important role in the storytelling of each whare (house), while adding warmth and beauty.

These panels were made especially for the museum by women from Ngāti Whātua Ōrākei, the local iwi of Auckland.

The panels represent proverbs of the Ngāi Tai people, whose ancestors settled in Tāmaki Makaurau (Auckland).

Creating tukutuku panels is a time-consuming craft. Traditionally, they were made from a latticework of dried grass and fern stalks, and wooden slats from rimu and totara trees. Intricately stitched patterns were created by threading native plants pingao and kiekie through the rods and stakes.

Taurapa

Rising up at the stern of the *waka taua* (large canoe) is the intricately carved *taurapa* (sternpost), which would be lashed onto the waka and could be removed and stored.

The two flat ribs represent the fundamental aspects of Māori existence: the humans and the gods. The spirals symbolise the ever evolving energy of the soul, and the lattice work allows light and knowledge to pass through.

Large waka were usually coloured a darkish red and the taurapa was usually blackened.

Carving was done exclusively by men, and was considered a sacred activity. Only master carvers were allowed to work on waka taua.

Main gallery – Pacific canoes

Most of the continents on Earth had already been populated for thousands of years, but as people continued to spread eastwards into the Pacific, new technologies were needed in order to reach the distant islands: the ability to construct sturdy ocean-going vessels, and to navigate accurately over long distances.

The canoes in this gallery come from all over the Pacific. Their shape and style were determined by their function and also by what resources were available on the island.

With a few exceptions, the canoes in the gallery have been constructed since 1970. They are traditional designs but often incorporate modern elements and were mainly constructed using metal tools. (Before Europeans entered the Pacific, canoes were built without the use of metal, which was not available on the islands.) Materials used include wood for the hull and plant materials for the ropes and glue.

The simple outrigger canoe is actual size and would have been used for everyday fishing in sheltered lagoons. The dark wood Fijian double-hull canoe Sema Makawa is one-fifth size, and represents the type that was used for long ocean voyages and warfare.

This Melanesian style of canoe featured unequal length hulls, in contrast to the Polynesian style which featured equal length hulls. The first arrivals to New Zealand sailed in this kind of canoe.

Large wall map

The map gives an idea of just how vast the Pacific Ocean is – it covers almost a third of the world's surface. Visitors arriving by plane may have noticed how many hours they spend flying over an empty ocean.

It shows the routes of early migrations from the China region into the Pacific, then outwards to Easter Island about 1,700 years ago, Hawaii – the most isolated islands in the Pacific – about 1,600 years ago, and finally New Zealand 700 years ago – between 1250 and 1300AD.

These islands form the corners of the 'Polynesian Triangle'. In spite of the great distances involved, the close links between the Pacific islanders is reinforced by the similarities in culture, religious beliefs and language. For example, the word 'Māori' is used in New Zealand and the Cook Islands, while in French Polynesia the word is 'Māohi'.

BP – BEFORE PRESENT

Visitors often ask the meaning of the suffix BP. **It stands for 'Before Present'** and is a timescale based on radiocarbon dating, used mainly in geology and other sciences, to date past events.

Because the 'present' is always changing, 1st January 1950 was chosen as the commencement date, reflecting the fact that radiocarbon dating became practical in the 1950s.

1950 is also before the large scale atmospheric testing of nuclear weapons, which artificially altered the proportion of carbon isotopes in the atmosphere, making radiocarbon dating after that time likely to be unreliable.

From outrigger to catamaran

The fishing outrigger canoe beside the wall map is small because generally only small trees were available on small islands. The outrigger was added for stability.

Visitors immediately assume that people must have been much smaller in the past! In fact the fisherman would straddle the canoe or sit on the outrigger spars.

For larger canoes, the outrigger was increased to almost the same size as the main hull, and a platform placed across. Our Fijian *drua* Sema Makawa is a one fifth scale example. Keeping one hull shorter than the other made the vessel easier to manoeuvre.

Equal length double-hulled canoes were also developed and both styles were used for long distance voyaging and warfare.

The hulls are hollow for storage. Examples of these double-hulled canoes, or waka, can often be seen berthed in the museum's marina.

The modern catamaran is developed from the double-hulled canoe concept and is very fast and efficient. Most of Auckland's ferries are now catamarans and in recent years the design has also been used for America's Cup yachts, which are much faster than the traditional monohulls.

Photo Gilles Martin-Paget

Pacific exploration

Well before arriving in the Pacific islands, early humans had reached other parts of the world by walking – crossing short stretches of water by swimming, or in rudimentary boats.

During ice ages sea levels fell, creating land bridges from time to time, but the farthest islands of Polynesia could not have been successfully inhabited without two important human developments.

One was **blue-water technology**: the ability to construct large ocean-going vessels and navigate accurately over long distances.

This was the first great human migration that required technology.

The other was **farming**: settlers had to know how to cultivate crops in order to survive.

THE KUMARA'S ORIGINS

The theory of the kumara's arrival in Polynesia from South America – having been brought back by Polynesian explorers – is now thought to be incorrect, according to recent research (*Current Biology*, 2018). The research suggests it arrived by seed dispersal in the ocean, before any human contact that may have taken place.

Finding New Zealand

New Zealand was the last major landmass in the world to be inhabited by humans. It was also the last land reached by the Polynesians. They had reached remote Easter Island 1,700 years ago, but it was another thousand years before they began to settle here, about 700 years ago.

The legendary Māori homeland of Hawaiki is generally thought to be a region in East Polynesia which today is the Society and Austral Islands, and the southern Cook Islands.

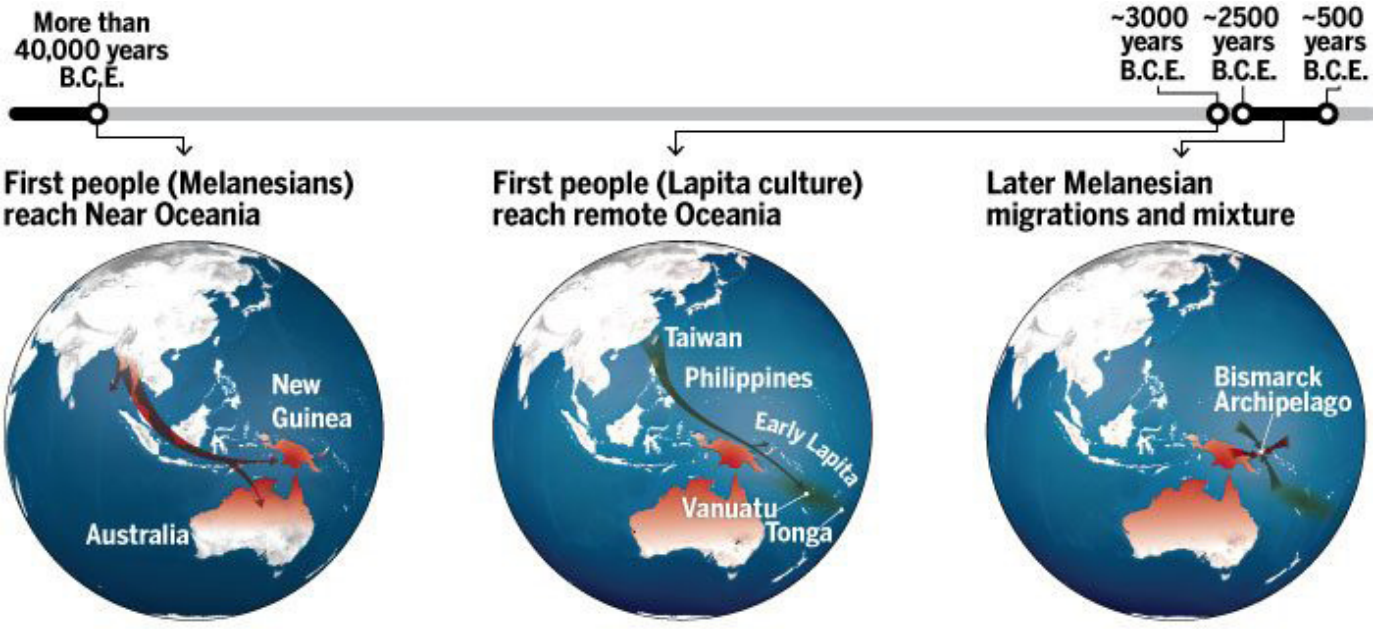
These Māori ancestors arrived to a large, cool, fertile land covered in forest, with abundant birdlife – including the large moa and other natives. Fish, shellfish and marine mammals, particularly seals, were plentiful.

Polynesians introduced the dog and the Pacific rat (kiore), and brought crops with them including taro, yam, kumara and gourd.

Once established, Māori had no further contact with their ancestors, becoming isolated from the rest of the world.

THE SEVEN CANOES

The story of the 'great fleet' of seven canoes from Polynesia was a myth invented by early, non-Māori, scholars. It is now known that many canoes made the voyage. Through stories passed down through generations, tribal groups (iwi) can trace their origins (whakapapa) to over 40 canoes, which arrived during a period beginning in the late 13th century.



Graphic: V. Altounian and A. Cuadra, *Science*

Where did Polynesians come from?

Modern humans (*homo sapiens*) are estimated to have left Africa at least 100,000 years ago.

Like many races, the origins of Pacific people are difficult to trace precisely. However, current research (2016, based on archeology, DNA and language*) indicates that more than 40,000 years ago there was a migration from southern Asia into Australia and New Guinea (Near Oceania). These early people are referred to as Melanesians.

Then, about 5,000 years ago, a separate migration of indigenous people from Taiwan (not related to the mainland Chinese) went directly into Remote Oceania. During their migration they came to be known as the Lapita people, and when they eventually settled in Remote Oceania, they became the Polynesians.

Though they passed close to New Guinea as they migrated, they do not appear to have mixed with the Melanesians at that time. It wasn't until later that the two groups began to intermingle, and these 'modern' Polynesians spread further into the Pacific.

*Much more information can be found in the journal *Science*: www.sciencemag.org/news/2016/10/game-changing-study-suggests-first-polynesians-voyaged-all-way-east-asia

How did they navigate?

At a time when European sailors were wary of long voyages, the Polynesians were confidently sailing great distances in double-hulled canoes, carrying men, women, animals, food and water.

Polynesian navigators had no maps or instruments – their techniques were based on observations and knowledge of natural phenomena and seasons. This knowledge was passed on from master to apprentice, in the form of stories or song.

There was a system of searching, then returning home. The safest way was to go against the prevailing winds, so when they decided to turn back, the winds would take them home again.

Navigators could read the patterns, positions and motions of stars and the position of the sun. They observed the effects of weather and seasonal changes, land and sea bird and whale habits and migrations, cloud formations and reflections, floating leaves, the colour of the sea and the sky. These all helped to determine if an island was nearby.

Other indicators were the prevailing wind and swell patterns. When swell encounters an obstacle such as a reef or an island it is reflected, breaking the swell pattern and creating turbulence.

It is said that navigators could lie in the bottom of the canoe during the night and know its position by the feel of the swell.

Migrating land birds (such as the long-tailed cuckoo) may have led people to New Zealand.

Polynesian double-hulled voyaging canoe.

Sema Makawa **Fijian drua**

The Fijian *drua*, considered a 'sacred canoe' has been described as "the largest and finest sea-going vessel ever designed and built by natives of Oceania".

Often used for warfare, druas could measure up to 40 and 50 metres, and took up to seven years to construct. Some were reputed to be large enough to carry over 200 warriors!

They were longer than Cook's ENDEAVOUR (32 metres) and could reach speeds of up to 14 knots, steered by massive steering sweeps. The large druas often required three or four men on the helm.

Their hulls were carved from toredo worm-resistant *vesi loa*, still considered superior to all other timbers.

The longer hull took the weight of goods and people, the shorter hull stabilised the vessel, allowing quick turning, functioning like an outrigger.

SEMA MAKAWA is a small version, approximately one-fifth scale. Not a model, SEMA MAKAWA was actually sailed into the museum's marina for a ceremonial handover, when the museum opened in 1993.

INSIDE A DRUA

The typical Fijian drua had room for many passengers, as well as supplies and livestock. In some of the larger drua, a person could easily stand in the hold without their head touching the ceiling.

Bonito fishing canoe

The *lisi* is a traditional bonito fishing canoe from Santa Catalina, a small island at the south-east end of the Solomon Archipelago. Catching your first bonito fish is a sign of manhood, so the canoes are often decorated with representations of the bonito and the frigate bird – in this case they are shown in the decorations on the hull and the bow.

Tikopian outrigger canoe

As a slight diversion for the visitors, note the Tikopian outrigger canoe under the large sailing canoe TARATAI. It was apparently found adrift in the Pacific Ocean during the 1970s with all its gear on board but no sign of a crew!

New Zealand river canoe

Near the *European Arrivals* gallery is the only Māori exhibit in this gallery – the river canoe, *waka tiwai*. The hull was carved with an adze, and it shows common Māori features of being narrower towards the bow (the square end), and knots in the wood have been carved around to prevent them falling out. The holes along the top edges were for attaching flax saddles and also for ropes for carrying (portage).

Outrigger sailing demonstration model

The model on the wall shows the technique of sailing an outrigger canoe into the wind, compared with a monohull boat.

Outrigger hulls are not symmetrical and the side nearest the outrigger is more curved – this means the water has further to travel along that side, making the hull act in a similar way to an aerofoil, 'lifting' the canoe towards the wind, counteracting the drag of the outrigger and keeping it on course.

An outrigger canoe is always sailed with the outrigger to windward, the sail blows out to the opposite side, and the crew position themselves on the outrigger frame, far enough out that the outrigger float just skims the water.

The canoe, being double-ended, reverses (or shunts) when tacking, and the sail is moved to the other end. Effectively however the 'bow' is always facing forward and the sail is always lashed toward the 'front'.

The demonstration is usefully placed just in front of TARATAI, as it shows the exact technique that bauruas used when sailing.

SEMA MAKAWA after launch in Fiji, 1993.

Decorated prow of the bonito fishing canoe.

For long voyages in the Pacific, the Polynesians used double canoes. However, on the western side of the Pacific, large outrigger sailing canoes were used.

Taratai **large outrigger sailing canoe**

TARATAI is a traditionally constructed replica of a *baurua* voyaging canoe. It was built in 1976 in the village of Taratai on the island of Tarawa, in the Republic of Kiribati.

New Zealand author and photographer James Siers sponsored the project with the aim of demonstrating that long distance Polynesian voyages were possible in vessels made only of wood and rope.

It was constructed by 14 local men, while the women of the island made the rope (about 11km/7 miles) and provided food to the builders. It took six months to build and the project brought back a sense of pride and self respect to the islanders in their own ancient arts of boatbuilding and seafaring. Though they were paid by Siers, the islanders worked much harder than required, as it had become a significant cultural undertaking.

Coconut tree wood was used for the construction, and the rope was made of sennit (coconut fibre).

Traditional sails would have been made of woven pandanus leaves, 1000 sq ft was required but ultimately cotton canvas was used for the voyage.

As they visited different islands during sea trials, the locals would help with repairs, improvements and strengthening of TARATAI, and in return they asked for transport to other islands, as there was no other alternative for them. It was a request that slowed the project, but could hardly be refused!

With a crew of 13, TARATAI sailed to Fiji, stopping at various islands where they received enthusiastic welcomes, feasts and willing help. All told it was a distance of about 2400 km (1500 miles) of open ocean, including an 11 day unbroken stretch.

Navigation was a combination of traditional and modern techniques. Though British naval architect Peter Barton was the navigator, he tried to learn as much as he could from the Gilbertese navigator on board.

Food for the voyage consisted mostly of coconuts, dried fish, and fresh raw fish, when they could be caught.

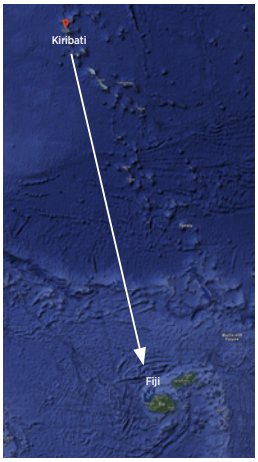
During the voyage, TARATAI encountered a storm overnight. One of the masts was broken, the hull was filled with water and the lashings were strained, but the boat survived and the crew managed to repair the mast.

TARATAI TRIMMED

Visitors are often entertained to find out that, when initially acquired by the museum in 1993, TARATAI was too wide for the planned gallery, so the outrigger frame was shortened.

Far left:
TARATAI sailed from Kiribati to Fiji.

TARATAI sets off. Stills from the documentary *Vikings of the Sunrise*, by James Siers.



Constructing a canoe

Most canoes on display are either dugout or stitched-plank. Some are a combination of dugout hull with added sides and top attached by stitching, more suited to rougher waters.

No ore-bearing rock was available on the small islands, so construction involved **wood and plant materials**. Tools were made of **stone**, **bone** and **coral**.

Common timbers included **vesi** in Fiji; **pandanus**, **breadfruit** and **tamanu** (ocean mahogany) in tropical Polynesia; and **totara** in New Zealand.

Throughout the islands, strong and durable sails were made from **pandanus tree leaves**, similar in shape and strength to New Zealand flax. The leaves were dried, divided into strips, scraped, then woven.

Rope, made of **sennit** (coconut fibre) – twisted into strands and braided – was used to stitch or lash parts together. Sealants and fillers could be made from **breadfruit tree gum and coconut fibre**, **pandanus fluff and boiled coconut oil**, or paste from the fruit of the **tita nut** (or **putty nut**) tree, inside of which is an orange paste which sets like putty.

Pacific islands of volcanic origin are generally more fertile and can sustain large trees, suitable for making dugout canoes.

The low-lying islands (such as coral atolls, or ancient, worn down volcanoes) are generally less fertile and only sustaining trees too small to hollow out, though planks can be made from them. **Driftwood** was commonly used.

Early European explorers were impressed

Double-hulled canoes were seaworthy enough to make voyages of over 2,000 miles.

Though they had less carrying capacity than the broad-beamed ships of the European explorers, the canoes were faster: one of Captain Cook's crew estimated a Tongan canoe could sail "three miles to our two."

After a visit to the Society Islands in 1774, Spanish explorer Andia y Varela described the canoes he saw:

"It would give the most skilful [European] builder a shock to see craft having no more breadth of beam than three [arm] spans carrying a spread of sail so large as to befit one of ours with a beam of eight or ten spans, and which, though without means of lowering or furling the sail, make sport of the winds and waves during a gale ... These canoes are as fine forward as the edge of a knife, so that they travel faster than the swiftest of our vessels; and they are marvellous, not only in this respect, but for their smartness in shifting from one tack to the other."

Small dugout canoe carved from a solid log, Western Samoa, circa 1955.

POLYNESIANS IN AUSTRALIA?

There is no evidence that Māori ever made the journey to Australia. They may have been deterred by the tempestuous Tasman Sea, but it's much more likely that, having discovered the large and fertile land of New Zealand, they felt they didn't *need* to travel further. (However, archaeological excavations have shown that Polynesians definitely reached Norfolk Island at some point.)

Likewise, though human occupation of Australia began about 65,000 years ago, the Australian indigenous people never attempted to cross the Tasman.

The harsh Australian landscape offered few natural resources, so the Aborigines followed a 'hunter-gatherer' lifestyle. Without established settlements there was no reason to develop technology such as voyaging vessels. Instead they learned to survive in and make the most of their inhospitable environment – a significant and often under-appreciated achievement.

European Landfalls

European exploration of the Pacific did not even begin until long after Polynesians settled the region.

The existence of a legendary Great Southern Continent to balance the globe, was taken for granted at that time and, with all its potential for wealth, lured men on perilous voyages into the unknown, keen to be the first to find it.

The earliest Europeans to enter the Pacific were the Spanish and Portuguese, in the early 16th century.

By the late 16th century, they had discovered and colonised many islands, but the vast majority of the ocean was still unknown to them.

Gallery overview

The hall is designed in the style of a London Admiralty office.

It features models of ships from four significant European countries – Holland, France, England and Portugal, a cannon, a piece of ballast from the ENDEAVOUR, maps and early world globes, a British naval uniform and Victorian boardroom furniture.

KEY GALLERY FEATURES

- Tasman's story and ship models
- Cook's story, chart and ENDEAVOUR model
- Ballast from ENDEAVOUR

Finding the Pacific

Ferdinand Magellan of Portugal was the first European to voyage into the Pacific from the Atlantic. He entered through the Strait of Magellan in November 1520 and named it 'Pacific', meaning 'peaceful' as it was calm when he sailed across it.

In the seventeenth and eighteenth centuries many more explorers, merchants and others from Europe penetrated further into this uncharted expanse, believed to include the mysterious great southern land. They came in search of highly prized exotic spices, and advantageous trade with new societies.

It was just such a search that led to the first sighting of New Zealand by a European, Abel Tasman, in 1642.

A Great Southern Continent?

In the middle ages, there were many theories on the make-up of the Earth. Ancient Greek mathematicians and astronomers had already established that the Earth wasn't flat, but it was assumed that there was a large unknown continent in the Southern Hemisphere.

This 'unknown southern continent' – Terra Australis Incognita – *had* to exist to balance the amount of land in the Northern Hemisphere, and explain why the globe didn't wobble.

Explorers hadn't yet voyaged far enough south to discover it, so many maps of the time had large blank areas or a large imaginary continent.

Abel Tasman
1602-1659

In 1642, the Dutch East India Company sent Abel Janszoon Tasman in search of the 'Unknown Southern Continent', not so much for exploration but to find better trade routes and search for new sources of wealth. Tasman was told to treat indigenous people well, but cautiously. If they had gold or silver, he was to pretend it was of little value.

In command of two ships, he sailed along the uncharted south coast of Australia, discovering Tasmania on the way. He then crossed the Tasman Sea and, on 13 December 1642, sighted the west coast of the South Island – which he described as 'a large land uplifted high'.

He sailed north, eventually anchoring at Golden Bay, having seen people on the shore, but abandoned hopes of trade after a fatal incident in which four of his men were killed by the local Māori, to which the Dutch retaliated by killing several Māori. The encounter had not gone well and Tasman concluded there was not much likelihood of trade. He named it 'Murderer's Bay'.

Sailing north, he charted the coast as far as the tip of the North Island, before heading away.

After 10 months at sea, his employers were not impressed with his findings – they felt he should have been 'more persistent'. Tasman died 17 years later, in 1659 aged 56 – unaware of his legacy to New Zealanders!

Mercator's 'Planisphere' of 1587, showing the hypothetical continent Terra Australis Incognita.

James Cook
1728-1779

Captain James Cook was an extraordinary man who, during three voyages, made numerous discoveries and virtually completed the map of the known world. He reached New Zealand from England, in October 1769.

Cook was of humble origins – the son of a farm labourer – and was destined to follow his father into farm work. However, his father's employer recognised young James' intelligence and supported him to go to school, where he learned writing and arithmetic until the age of twelve. He excelled in maths, which ultimately enabled him to develop his exceptional navigational and cartographic abilities.

Cook wasn't given the rank of Captain until his second voyage to the Pacific: he was only a Lieutenant when he discovered New Zealand. Nevertheless, his natural abilities as a brilliant navigator, cartographer and leader meant he became the first non-aristocrat to achieve a rank higher than Master. He was also the first British captain to complete a long voyage without a case of scurvy amongst his crew.

Sponsored by the Royal Society and Sir Joseph Banks, the voyage lasted for 34 months from 1768 to 1771. Cook sailed first to Tahiti to observe the Transit of Venus on 3 June 1769.

However, he also had secret, sealed, orders to investigate the elusive Great Southern Continent.

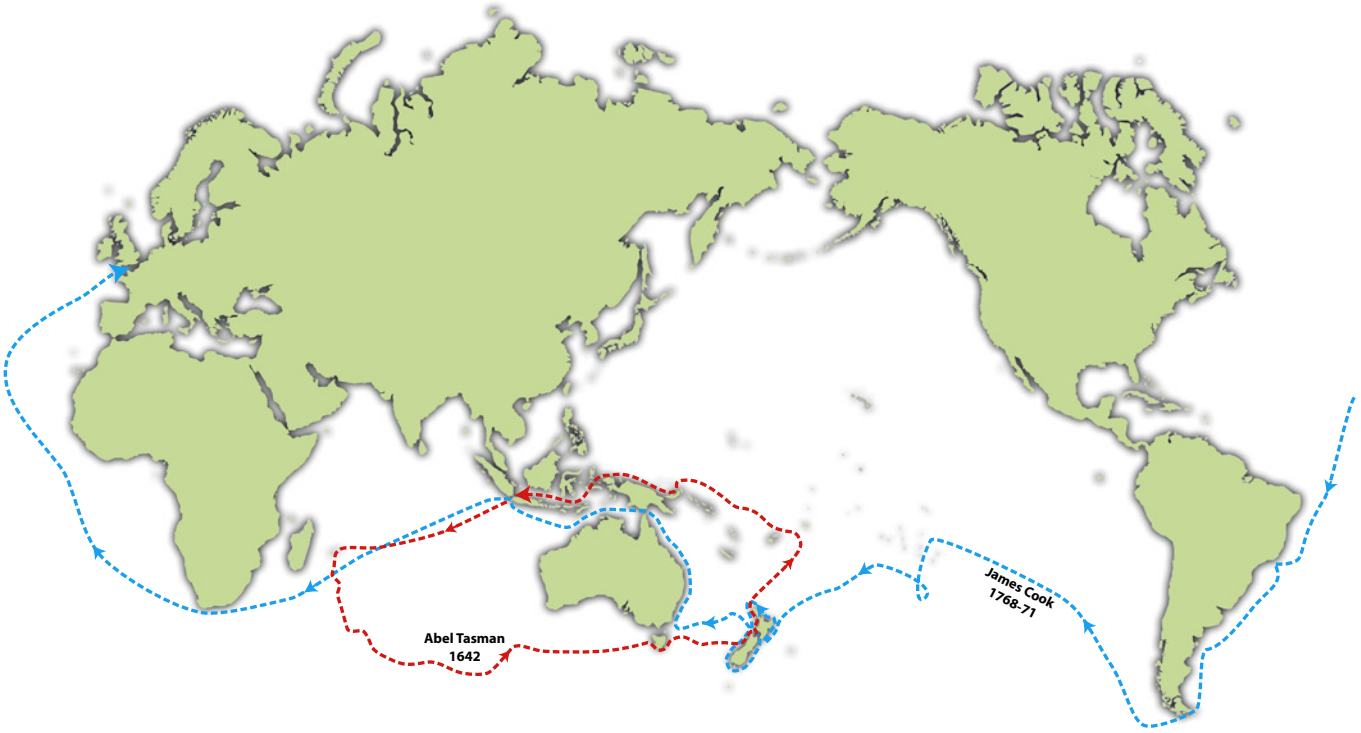
He made a complete circumnavigation and chart of New Zealand between October 1769 and April 1770, proving it was not the Great Southern Continent, then went on to chart the east coast of Australia.

His first Pacific voyage had been made in ENDEAVOUR, a converted collier previously named EARL OF PEMBROKE. His next two voyages were made in a slightly larger collier, RESOLUTION, as ENDEAVOUR was in poor condition by then.

During the third voyage, in 1779, he was murdered in Hawaii by the natives. Relations had soured when they realised that the sailors were not gods, and Cook believed they had stolen one of the ship's cutters. A fight developed which resulted in multiple deaths, including that of Cook himself. He was 51.

FROM COOK'S SECRET ORDERS

"... You are also, with the consent of the natives, to take possession of convenient situations in the country in the name of the King of Great Britain; or, if you find the country uninhabited, take possession for His Majesty by setting up proper marks and inscriptions as first discoverers and possessors."



The French

The only other Europeans to play a significant part in mapping New Zealand's coastline were the French, having become interested in the Pacific at about the same time as the English.

De Surville

On 13 December 1769, at the same time as Cook rounded the top of the North Island in Endeavour, French explorer Captain Jean François Marie de Surville passed close by in his ship St Jean Baptiste, but neither ship sighted the other due to bad weather conditions. He was employed by the French India Company to explore in search of trade opportunities.

With his crew suffering scurvy, he anchored in Doubtless Bay. In a storm, his ship St Jean Baptiste lost three anchors and when Māori stole a ship's boat, de Surville took savage reprisals.

From Doubtless Bay he sailed east, eventually drowning in April 1770 in heavy seas off Peru, while seeking help for his once again scurvy ridden crew.

Marion du Fresne

Two years later, in 1772, Cook and de Surville were followed by another Frenchman, Marc Joseph Marion du Fresne, who was also in search of the Great Southern Continent. He had sailed from Mauritius with two ships, Mascarin and Marquis de Castries and sighted Mount Egmont in March 1772. He followed the coast around the top of the North Island eventually landing in the Bay of Islands, where they stayed several weeks.

There were friendly encounters with Māori, but eventual misunderstandings meant that Marion du Fresne and 25 others were killed. The French took savage revenge before returning to Mauritius.

Europeans change the face of Aotearoa

As a result of the European discovery of New Zealand, and reports of its wealth of natural resources, people began arriving relatively quickly after Cook's arrival to take advantage of the commercial opportunities.

Among the early arrivals were missionaries, to convert the 'natives' to Christianity – which in many circumstances also had the effect of putting Europeans in a position of authority over the Māori.

European settlements began to develop around the coast as trade increased, and the European population started to grow rapidly.

MAORI AND PAKEHA POPULATIONS

1800 – approximately 100,000-120,000 Māori and 50 Pākehā.

1840 – Māori population was about 100,000 and Pākehā about 2,000.

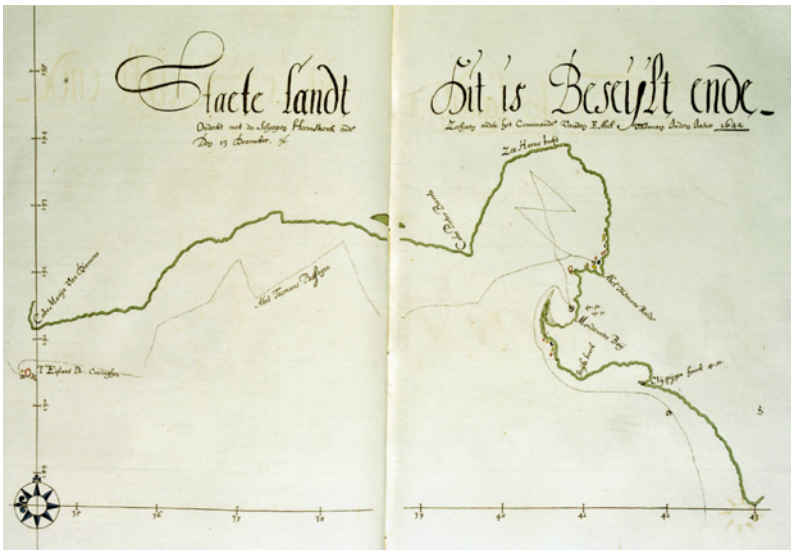
1859 – Māori and Pākehā populations were equal, at approximately 60,000 each.

1878 – Māori numbers decline to 43,595; Pākehā rise to 432,519.

1893 – Pākehā numbers reach 672,265 and ...

1896 – the lowest point for Māori, at 39,663.

The first European women to arrive in New Zealand were thought to be Kathleen Hagerty and Charlotte Edgar, in 1806. Both were escaped convicts from New South Wales.



Tasman's 1642 chart of the previously unknown coastline of New Zealand, showing 'Mordenaars Bay' (now Golden Bay).

The modern map of New Zealand (in green) overlaid by the outline of Cook's chart.

1642 Abel Tasman's ships – a partial map of New Zealand

Heemskerck

Heemskerck, probably named after a village in the Netherlands, was a three-masted ship built in 1638 and was the flagship of Tasman's 1642-1643 expedition.

She was a small warship – a war *jacht* (yacht) – and sailed with a crew of sixty men.

Zeehaen

Zeehaen was a *fluit*, a common type in the Dutch merchant fleet at the beginning of the 17th century.

A *fluit* was ideal for the shallow waters of Holland and the Baltic. With its flat bottom and full ends it could carry a large cargo on a shallow draught. The inward curve of the sides combined with the high deck made the vessel reasonably seaworthy, although the deck was made narrow to reduce customs duties payable in Danish ports, as the breadth of the ship was measured at deck level for tonnage calculations.

1769 James Cook, one ship – the complete circumnavigation

HM Bark Endeavour

Endeavour was Cook's ship for his first voyage into the Pacific, 1768-1771.

She was originally a 368 ton, standard merchant collier (coal ship) named Earl of Pembroke, built in Whitby, North Yorkshire in 1764.

She was chosen for exploration because she was sturdy, could be beached for repairs and could carry sufficient stores.

She was known as a 'Whitby Cat' – a type of ship which Cook knew well from before his navy career. Purchased by the Royal Navy, she was refitted in 1768, converting her from a collier, and renamed Endeavour.

HMS Resolution

Resolution was used for Cook's two subsequent voyages into the Pacific: 1772-1775 and 1776-1779.

She was another Whitby collier, originally called Marquis of Granby, and built in 1770.

Resolution impressed Cook greatly and he called her "the ship of my choice, the fittest for service of any I have seen". She was 100 tons larger than Endeavour, but she had the same broad, flat bottomed hull.

The model of Resolution was made by the museum's modelmakers, Roger Hames and Ole Clemenson and went on display in 2005.

ENDEAVOUR'S FATE

After her Pacific voyage, Endeavour was refitted again, this time as a troop ship named Lord Sandwich. It is believed she was scuttled, in August 1778, along with many other British vessels, to form a blockade in Newport Harbour, Rhode Island, during the American War of Independence.

Globes and Cook's journal

The two globes on display represent celestial and terrestrial views, and date from 1816. The voyages of Cook, Captain Vancouver and La Pérouse are indicated.

Displayed in the glass case opposite is a facsimile of the log kept by Cook's during his first voyage to the Pacific.

1930s British naval uniform

The uniform style has hardly changed since the late 18th century, and is similar to that worn by James Cook.

The Portuguese Caravel

In one of the corner displays is a model of a hypothetical caravel of the early sixteenth century. It is a square-rigged *caravela redonda* – a fast, shallow draught vessel.

Similar vessels were used in the spice trade. If it is in fact a caravel, the 'Dargaville wreck' may have been engaged in the trade, but blown off course.

Cook's chart

The chart that James Cook made of New Zealand (1769-1770) was a very accurate survey of the coastline, especially considering he had neither sextant nor chronometer. He used an octant and the 'lunar distance method', which demanded quite difficult mathematical calculations, for longitude. He got New Zealand's north-south location (latitude) correct and was only about 20-25 nautical miles out east-west (longitude).

Cook's legacy was in charting the New Zealand coastline in detail, and having circumnavigated both islands, and from Queen Charlotte Sound he claimed the South Island for King George III, in January 1770.

He went on to chart the east coast of Australia and many Pacific islands. During his subsequent Pacific voyages he returned to New Zealand each time.

Endeavour's Iron ballast

Adjacent to Cook's chart of New Zealand is a piece of iron ballast from ENDEAVOUR.

In 1770, while exploring the east coast of Australia, the ship ran aground on the Great Barrier Reef. To get off the reef, the ballast and everything else that could be spared was thrown overboard to lighten the load. ENDEAVOUR was eventually repaired on the beach, in the area which later became known as Cooktown.

The ballast was recovered some 200 years later and donated to the museum by the Australian National Maritime Museum and delivered to us by the crew of the Australian replica Bark ENDEAVOUR on her first visit to Auckland on 9th December 1995.

How they survived the reef

From Cook's Journal, Great Barrier Reef, 11-12 June 1770:

"... the ship struck, and remained immovable, except by the heaving of the surge that beat her against the crags of the rock upon which she lay. In a few moments everybody was upon the deck, with countenances which sufficiently expressed the horrors of our situation.

... Mr. Monkhouse, one of my midshipmen, proposed an expedient that he had once seen used on board a merchant-ship ... it is called fothering the ship.

He took a lower studdingsail, and having mixed together a quantity of oakum and wool, chopped pretty small, he stitched it down in handfuls upon the sail, as lightly as possible, and over this he spread the dung of our sheep and other filth; but horse dung, if we had it, would have been better. When the sail was thus prepared, it was hauled under the ship's bottom by ropes, which kept it extended, and when it came under the leak, the suction which carried in the water, carried in the oakum and wool from the surface of the sail, which in other parts the water was not sufficiently agitated to wash off. By the success of this expedient our leak was so far reduced, that instead of gaining upon three pumps, it was easily kept under with one."

Once on the beach, they careened the ship (laid it on its side) and made repairs to the hull. A piece of coral the size of a man's fist had sliced clean through the planks of the hull, and broken off, wedged there. It was fortunate it stuck, because an open hole that size would in all probability have sunk the ship.

Cannon from La Boussole

In 1785, Jean-Francois de Galaup, Comte de la Pérouse, led an expedition into the Pacific, commanding LA BOUSSOLE and L'ASTROLABE.

After three years spent mapping regions of the Pacific, disaster struck and both ships disappeared. Local people reported that they were hit by a storm and wrecked on reefs in the Solomons, in 1788.

LA BOUSSOLE sank, and most of the men drowned or were killed by islanders, La Pérouse among them.

L'ASTROLABE became trapped on a nearby reef, and the crew were unable to free the ship. Later, some survivors who had made it to land built a small boat and sailed away, never to be seen again.

In 1958, New Zealand diver Reece Discombe, rediscovered the wreck of L'ASTROLABE, and in 1964 found LA BOUSSOLE. Reports from the diver suggest this cannon comes from LA BOUSSOLE.

The story is the subject of a chapter from *Twenty Thousand Leagues Under the Sea* by Jules Verne.

Another Astrolabe

The display case contains a model of a French corvette also called L'ASTROLABE (originally named COQUILLE, renamed in honour of La Pérouse's ship which had been lost), in which Dumont D'Urville explored the coast of New Zealand between 1822 and 1840.

L'ASTROLABE made some of the last great voyages of scientific exploration to the Pacific Ocean. She made three voyages through the Pacific, visiting New Zealand each time. As COQUILLE, her first voyage (1822-1825) was under the command of Lieutenant Duperrey, with Dumont D'Urville as his second-in-command.

D'Urville led the next voyage (1826-1829), having renamed the ship L'ASTROLABE. He made the first extensive survey of the New Zealand coast since Captain Cook, and demonstrated great navigational skill and seamanship.

D'Urville's last voyage in L'ASTROLABE (1837-1840) was a hazardous exploration of Antarctic waters.

NZ'S EARLY COMMERCIAL ASSETS

- *Trees* – were used for spars and masts, the British Navy was one of the largest customers.
- *Flax* – the quality of rope made from New Zealand flax was widely known. Nowadays, all parts of the plant are researched for commercial potential.
- *Seals* – seal skins and oil were among the first of New Zealand's natural resources to appear in world markets. In 1792 a group of sealers in Dusky Sound caught 4,500 seals in 10 months.
- *Whales* – the first recorded whale ship was the WILLIAM AND ANN which called at Doubtless Bay in 1791, just 22 years after Cook's first voyage to New Zealand.

Coastal Trade

Following Cook's exploration of New Zealand, and news of the potential wealth of resources here, ships soon started to arrive from other countries, and the major ports began to develop. The ships brought cargo, mail and passengers, and took away assorted exports.

This was the start of the European economic development of New Zealand, and shipping provided the all-important links between New Zealand and the rest of the world.

International trade was handled at the main ports such as Auckland, but distribution from there to smaller settlements was handled by small coastal trading vessels.

On the return trip they would take away local produce for export. This allowed the settlements to develop and prosper in places otherwise inaccessible by land.

Gallery overview

The gallery recreates a small seaport at the turn of the last century.

It features a shipping office, wharf and cargo shed, and the trading cutter Rewa. It also features scows as the classic coastal cargo vessel of the north.

KEY GALLERY FEATURES

- Model of scow Rangi
- Coastal trading cutter Rewa
- Wool bales

The heyday of coastal trade

In the early 1800s, many European settlers lived in isolated and scattered communities. New Zealand's island geography and rugged, bush-clad terrain made it difficult to travel on land.

The lifeline for these people were the waterways – rivers and the sea. From the beginning, the ever-increasing immigrant population depended on export trade for their economic survival. Coastal trade became a vital element of New Zealand's early economic development.

Supply ships to remote whaling stations and settlements in the late 18th century were the earliest freight runs. A coastal trade soon developed, and by the 1840s was well established. In the mid-19th century, most coastal freight was carried by small-scale operators with one or two ships. Typical cargoes were coal, building materials, grain, potatoes, flour and beer.

By the 1870s, once iron was introduced as a shipbuilding material and better engines developed, larger ships with more capacity meant freight costs could be reduced, and between 1870 and 1914, coastal shipping increased more than tenfold.

Māori trade

Before European settlement, Māori tribes had extensive trading networks for goods such as produce, manufactured items and greenstone.

The arrival of Europeans in the early nineteenth century – and then settlers a few decades later – created new markets for timber, flax, produce and fisheries.

Auckland had depended on Māori trade from the Waikato and the north for food and other supplies. These were shipped by canoes and sailing vessels owned and operated by Māori.

With the decline of tribal economies and the rise of large shipping companies however, Māori involvement in coastal trade diminished.

The shipping office

The display is typical of a shipping office of the late 19th and early 20th centuries. It would have been a busy place, with hardworking clerks bent over dimly-lit desks, documenting all manner of things including cargo movements, passenger and crew lists, tugboats used, sailing schedules, customs and taxes, vessels and shipping companies, maintenance, ships' stores, accounts, supplies, receipts, incoming and outgoing mail, and much more.

The shipping office includes maps and office equipment typical of about 1900.

Some of the display pieces, such as the angled desk, pigeonholes for mail and other items are said to have been taken from the old Launchmen's Building (beside the museum) when it was closed. You can still see its architecture above the restaurants to the right of the museum's entrance.

THE END OF COASTAL TRADE

As early as 1863, a railway line was established between Christchurch and Lyttelton, and in 1878 between Christchurch and Dunedin. Elsewhere though, coastal shipping remained vital – especially between the North and South Islands.

However, as the rail network spread, freight and passenger services declined steadily, then more rapidly from 1936 when Union Airways (an offshoot of the Union Steam Ship Company) began operating. The introduction, in 1962, of the Wellington to Picton roll-on, roll-off rail ferry ARAMOANA signalled the beginning of the end for the remaining freight services.

1898. A very busy Queen Street wharf, before the waterfront land reclamation was undertaken.

In the background is Customs Street.

During the mid-1800s, small vessels were used to carry cargo and freight around Auckland and the Hauraki Gulf. By the 1870s an unusual, flat-bottomed, flat-sided sailing vessel had appeared: the scow.

The scow

Scows played a big part in New Zealand's coastal trade and are represented by the model of one of the biggest, Rangi. The museum's own Ted Ashby is a 1993 recreation of a smaller one.

Scows were simple, flat-bottomed, centreboard vessels ranging from 45 to 130 foot in length. Most of them carried their cargo (logs, firewood, sand and shingle, machinery and stock) on deck, and were ideal for working estuaries and shallow harbours. In a small population, there were few specialised boatbuilders, so the flat sided design made them relatively easy to build.

An American shipmaster George Spencer, introduced the scow design to New Zealand in 1873. He had lived and worked on the Great Lakes and gained a first-hand knowledge of the scow schooners that worked there. He recognised their potential for New Zealand, and had shipbuilder Septimus Meiklejohn construct a similar vessel, the Lake Erie, capable of carrying a large cargo of timber on deck. It was so successful that over 130 scows were built in New Zealand between 1873 and 1925.

They were not fast or particularly easy to handle but the success of the scow was due to the fact that it was such a practical vessel and well suited to the needs of early New Zealand coastal trade.

Scows and their fate

The flat bottom permitted the scow to go where other vessels couldn't, including shallow rivers, treacherous harbour bars and onto beaches, where cargo could easily be loaded and unloaded.

Flat-sided hulls were relatively easy to build and they were very strong. Usually made of kauri to withstand the strain of frequent grounding and to carry heavy cargoes, they were built in or north of Auckland, where kauri was plentiful.

The crew of a scow would normally be three or four men. Scows would generally hug the coastline, so no formal navigation training or experience was thought necessary. However, in heavy rain, high winds or fog, many scows ran aground, due to the captain's inexperience.

The crews became very competitive. In 1884 the first scow races were organised for the Auckland Anniversary regatta.

The original scows were fitted with masts and sails, and could cover surprising distances, some of them ending their days as far away as Australia and the islands, having made their own way there.

Later, as masts decayed and motors became cheaply available, most were fitted with engines or used as barges. They were largely gone by the 1930s.

Below left: Scow Kaiaia, and a horse drawn cart carrying logs, circa 1910, probably in the Canterbury Region.

Below: Auckland waterfront c1910. Kauri logs and a boom behind. One of the earliest scows, Lady of the Lake (1876) is beached beside the wharf.

The epic adventure of Rangi, Moa and Count Felix von Luckner

In 1917, Count Felix von Luckner, formerly commander of the German raider Seeadler, was being held prisoner on Motuihe Island in the Hauraki Gulf. He escaped along with nine other prisoners, by seizing Pearl, a small launch belonging to the island's commanding officer.

After their escape in the small launch, they made their way toward Mercury Island, where they came across two large timber scows, Rangi and Moa. Rangi was ahead by about four miles.

Flying the New Zealand ensign, Von Luckner decided to capture the 28.6m long Moa, which was en route to Auckland.

Pulling alongside the scow, the Count sprang aboard, followed by his men who had been in hiding until then. They waved a rifle at the crew telling them to surrender. Unarmed and threatened by the German crew, the skipper and his crew of four men and a boy, had little choice but to obey.

Von Luckner might have escaped had it not been for the skipper of Rangi, Captain Francis. When he saw Moa luff up into the wind with a launch go alongside, his suspicions were immediately aroused, as he was aware of von Luckner's escape. Rangi hastened to Port Charles, near Cape Colville and sent a message saying that Moa had been boarded and was heading out to sea.

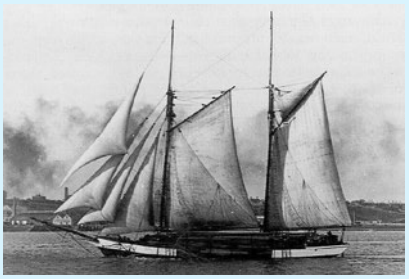
On leaving Port Charles, Rangi passed close by the cable steamer Iris, which was outward bound in search of von Luckner and his men. Signalling her, the skipper of Rangi explained about the boarding of Moa, and Iris set off in pursuit.

On 21 December the prisoners were recaptured by Iris off the Kermadec Islands. At the time Moa only had sails and was flying the German flag.

She was towed back to Auckland by Iris, having suffered no apparent damage. The launch Pearl, which was being towed by Moa, was lost in heavy weather beyond the New Zealand coast.

The story of Count von Luckner is featured in more depth in our Oceans Apart gallery.

Count Felix von Luckner.



Moa, built 1907 by G. T. Nicol, Auckland.

Huia

The topsail schooner Huia was built in 1894 near Dargaville, to carry timber and other cargoes around the coast and to Australia.

During her long career, she was seen in ports as diverse as Fremantle, Western Australia and San Francisco. Between 1912 and 1949 she carried explosives from Australia to New Zealand and around the coast, for the Nobel Explosives Company.

In 1951 she ran aground near Noumea and broke up.

Rangi

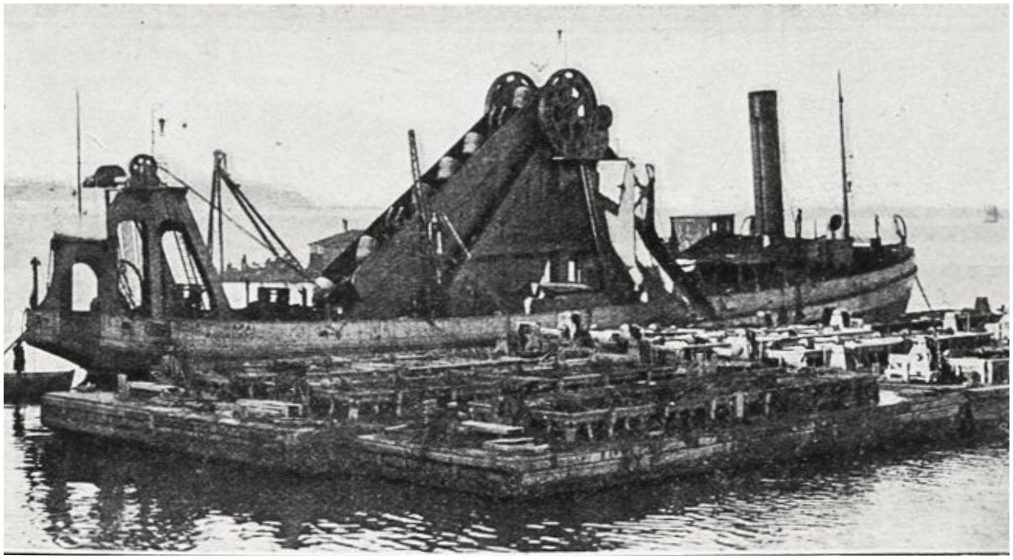
Launched in Auckland in 1905, schooner-rigged Rangi was one of the larger scows and considered by many to be the finest of them all. The model shows her with her usual cargo of logs on their way to the Auckland saw mills.

Rangi was the last of the larger scows to rely on sail power alone.

In 1937 she capsized and sank in a violent storm off Motutapu Island. Four of her crew of six were lost.

From left:
Schooner Huia.

Hapai bucket dredge at work, early 1900s.



As ships carrying coastal trade and passengers began to increase in size during the early part of the 20th century, dredges were essential for developing and maintaining ports.

They were (and still are) used for deepening berths, creating new ones and assisting with port reclamations. Today, with the construction of ever-larger container ships and cruise liners, the Waitematā Harbour and Rangitoto Channel still need to be dredged on a regular basis to provide a deep enough channel to allow them to pass.

Hapai bucket dredger

Built in 1909, the Hapai was a steam-powered hopper dredge belonging to the Auckland Harbour Board. As a hopper dredge, she carried her own dredgings to the dumping area (note the mirror at the bottom of the display case which shows the opening under the vessel for unloading the dredgings).

Later, she would also fill two hopper barges and tow them to the dumping area as well. In 1957 she overturned at her moorings in the Rangitoto Channel during a gale, but was salvaged, reconditioned and returned to service. She was scrapped in 1968.

Rewa

Built in 1886, this small coastal gaff cutter is perhaps the last of her kind. She carried cargo around the coast before the road network was developed.

Her builder, 'Chips' Hunter, was a retired ship's carpenter. He used local kauri for her planking, setting up her pohutukawa frames on a beach at Kirita Bay near Coromandel. She was built for the Foster family, who had a large farm nearby, to carry wool and produce to Auckland and bring back general supplies. Her heavy cotton canvas sails were tanned to prevent rot.

Launched as Rosalie, she was renamed Rewa during a refit in 1914-15. At one stage in her career she was used to bring explosives into Auckland from the schooner Huia, which was out at the explosives anchorage in the Hauraki Gulf. She had to fly a large square red flag to warn that she had dangerous cargo on board.

Her working career spanned over a hundred years and fulfilled many roles. She would generally have had a crew of two men, or perhaps a man and a boy. Their cramped living quarters were forward of the hold, with a tin basin for washing and a bucket for a toilet. They cooked their meals in a cut-down oil drum with sand in the bottom to insulate it from the deck. On a long trip they would work four hours on and four hours off.

For a time she was abandoned in the mud of the Tamaki River. In 1981 the Waters family acquired Rewa as an unseaworthy, unwanted ketch. She had been converted into a yacht – the cargo hold having been converted into a cabin with more comfortable furnishings. After considerable research, the couple gradually restored her, turning her back into a cutter.

When her pohutukawa frames began to soften, her last owners realised her sailing days were over. They sailed her to Hobson Wharf and handed her over to the museum when it was founded in 1992. She has been restored more or less to her original configuration.

Rewa in her working days.

Rewa at Port Fitzroy, Great Barrier Island. By now she was fitted with a cabin and used as a family yacht.

Kelvin diesel engine

Designed as the main engine for a small vessel, this Kelvin Series 66K engine was salvaged from the coastal passenger vessel SETTLER which was wrecked at the entrance to Tairua Harbour on the Coromandel Peninsula at Christmas, 1992.

It was built by Bergius-Kelvin Company of Glasgow in the 1930s, and has a power output of 22 horsepower per cylinder. With three cylinders, this unit would therefore be rated at 66 hp at its maximum of 750 rpm. Normally the engine would be operated at 450 rpm, or about two thirds of its full power.

To overcome difficulty in starting this particular engine, a magneto-distributor electric impulse spark system has been fitted to operate on all three cylinders rather than on just one, which would normally be the case. Thus the engine could be termed 'dual ignition' – and as such is a very rare exhibit indeed.

From the Kelvin instruction book:

Starting by hand and petrol

"Open the injector drains. Remove magneto stopping terminal from its pin. Put impulse starter into action by tightening screw beside magneto. Put reverse gear at neutral. Turn changeover valves to petrol. Put petrol in carburettor (mixture should be in proportion of 32:1). Prime cylinders with petrol-oil mixture – 5 to 10 squirts per cylinder – ascertain correct quantity by trial. Pull engine over compression by handle. When engine starts turn one change-over valve to diesel and close its injector drain. When the cylinder fires repeat the operation for the remaining cylinders but consume all the petrol in the carburettor. Put the impulse starter out of action by slackening the screw beside the magneto. Put the spark plugs out of action by placing the stop- ping terminal on its pin. If the engine does not take diesel fuel suspect an air lock ..."

International vessels change the face of local shipping

When Europeans first settled in New Zealand, the dense bush and rough terrain made land travel difficult. People travelled and transported goods by ship or canoe.

In the late 19th century refrigerated shipping was introduced, steamships became more common and ports improved.

The first international freight was cargoes of whale and seal products, timber and flax, sent to Europe and America. Later, wool was exported. It was carried from inland farms to the coast, then a boat took it out to a sailing ship.

In 1936, the government limited the distance trucks could carry goods to 50 kms. In 1961 the distance was increased to 67 kms, and then to 150 kms by 1977. Carriers were licensed to carry specific types of freight, within particular areas. This favoured coastal shipping.

Shipping itself was also regulated.

Cargo handling was government regulated, – 'cabotage' meant that only New Zealand ships could carry freight between New Zealand ports.

A post-war period of prosperity for shipping – supported by the booming coal trade – ended in 1962 when demand for coal dropped away and the Railways Department introduced its roll-on, roll-off inter-island ferry.

Coastal shipping cargoes became increasingly low-value and high-volume, such as salt, coal and logs. Vessel numbers dropped from 93 in 1965 to 19 in 1976; total tonnage more than halved.

In 1971, the first container ship arrived in New Zealand. COLUMBUS NEW ZEALAND was part of the worldwide revolution in shipping.

In the 1980s the government lifted controls on long-distance trucking: which goods could be carried and where. Now trucking could flourish at the expense of coastal shipping.

Then in 1994, the government removed cabotage and, from 1995, international ships travelling along the New Zealand coast as part of longer voyages were allowed to carry freight between local ports.

Staff numbers fell dramatically, cargo-handling gang sizes were halved and work continued round the clock. Crew numbers dropped by 20-40%. Ship turnaround time was almost halved and freight costs decreased.

By the 2000s, most New Zealand freight was carried by road. However the cost of freight was still relatively high, largely due to the scattered settlement and length of the country.

For international freight, shipping has maintained its overwhelming dominance.

1903 panorama of Auckland city and waterfront, looking south. Queens Wharf runs into Queen Street in the centre.

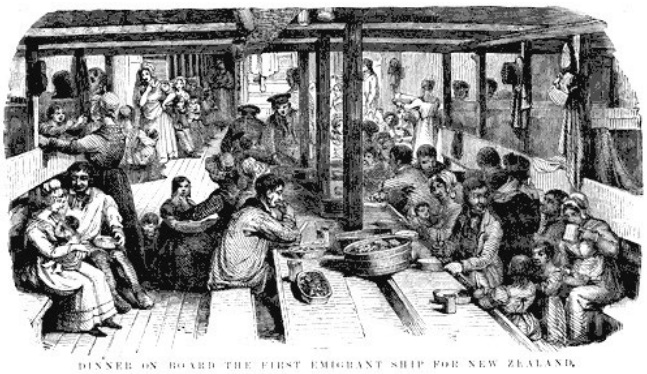
The Immigrants

Once an uninhabited group of islands in the South Pacific, Aotearoa New Zealand is now a multicultural as well as a maritime nation.

Its people are the descendants of those who travelled long distances and crossed oceans to get here.

The first were the Polynesians, who came in large, double-hulled canoes. Later, Europeans arrived in ships of wood, iron and steel, powered by sail, steam and diesel engines.

In the 1960s, when air travel became more efficient and economic, immigrants from all over the world began to arrive by plane. That trend has continued and the population continues to rise, becoming ever more diverse.



DINNER ON BOARD THE FIRST EMIGRANT SHIP FOR NEW ZEALAND.

Gallery overview

The entry area explains some of the reasons immigrants came to New Zealand.

The 'rocking cabin' and the 1950s cabin give visitors an immersive experience of immigration.

The portrait gallery documents the different nationalities who arrived after the European discovery of New Zealand.

The immigrant stories and the 'wheel of fortune' recount the fate of some of the immigrants.

KEY GALLERY FEATURES

- The 'Rocking Cabin'
- The 1950s cabin
- Immigrant stories

Escaping destitution in Britain

In 1839 the total European population of New Zealand was about 2,000. Just 13 years later that number had increased to 28,000.

This dramatic change was the result of two important events which took place in 1840.

First, the Treaty of Waitangi established British sovereignty over Māori, giving British immigrants legal rights as citizens.

Then, the first assisted immigrants arrived, through the newly-formed New Zealand Company scheme: free passage in exchange for work in the new colony.

Prospective labourers were encouraged by the expectation of eventually being able to buy land or set up a small business.

This was at a time of great hardship for the working class in Great Britain. The agricultural and industrial revolutions caused widespread unemployment, and overcrowding, disease and pollution sent many in search of a better life.

Few understood the magnitude of their voyage. In fact these people, who included pregnant women, babies, adults and children, were embarking on the longest immigrant voyage in history, which would take them half way round the world, in sailing ships, through some of the most dangerous seas on earth.

The voyage took about three months, non-stop, but could last four or even five months in bad weather.

The earliest immigrant ships were small, carrying 150-200 passengers. They were made of wood, so fire was a constant danger. For all on board, their first sight of land was also their destination – New Zealand.

The New Zealand Company

Founded as a commercial operation designed for investors, the New Zealand Company was also based on the view that the solution to mass starvation was to export surplus population.

Investors in the company were promised 100 acres of farmland and one town acre; the initial 1,000 orders were snapped up in a month. But how to attract the labourers to improve the value of their poor quality land?

To combat negative notions about New Zealand, the company produced books, pamphlets and broadsheets to promote the country as 'a Britain of the South', a classless society in a fertile land with a benign climate, free of starvation and overpopulated cities.

Later, immigrants were encouraged to write glowing letters home to attract their families.

Founder Edward Gibbon Wakefield argued that to make emigration 'pay', land should be charged beyond the reach of the immigrants. This would ensure that investors who bought

Differing views of early New Zealand.

"Very near to Australia there is a country which all testimony concurs in describing as the fittest in the world for colonization, as the most beautiful country with the finest climate, and the most productive soil; I mean New Zealand."

Edward Gibbon Wakefield, 1836

"The islands of New Zealand are uncultivated wastes either of mountains covered with dense forest, of plains and lowlands covered with high ferns, or of swamps and marshes covered with rush and flax without any open spots for pasturage, or of verdant downs and hills for sheep."

Charles Terry, 1842

To attract settlers, the NZ Company published romanticised images of New Zealand.

Illustration from *Adventure in New Zealand* by Edward Jerningham Wakefield, 1845.

land would have a good supply of labourers.

The company's promises were flights of fancy, only partially made good by dubious land purchases from Māori. Wakefield's neat plans did not work out – land titles were uncertain, there was a lack of useable land and no obvious way to generate income through exports.

In spite of this, the New Zealand Company had a remarkable impact on New Zealand. Of the 18,000 settlers who came directly from Britain between 1840 and 1852, about 14,000 were brought in by the company or its successors.

It reached peak efficiency in about 1841, but from 1843 the company encountered financial problems and was wound up in 1858.

However, by then it had established the basis of immigration from Britain to New Zealand, setting in place mechanisms that were used in the following years.

The experience of an 1840s voyage

Tickets set out the food that each immigrant would receive on the voyage. If progress was slow, rations became smaller, and staler. Food consisted of things like salt beef, ship's biscuits, porridge, jam and various concoctions made with these ingredients and flour.

The cooking was done in a sheltered galley on deck and rough weather made the distribution of food to the passengers a tricky operation.

Paying cabin passengers had better rations and fresh food from the live animals (cows, sheep and poultry) kept on board.

Fresh water was strictly rationed to about one litre per person per day. Often the water went foul and needed to be boiled before drinking, and tanks were refilled with rainwater if the ship encountered downpours in the tropics.

Washing facilities were virtually non-existent: only salt water was available. Diseases could spread quickly among the passengers, many of whom died on the voyage.

On many ships the men were assembled on a discreet part of the deck for a weekly hose down with salt water. However, out of modesty, women had to make do by other means.

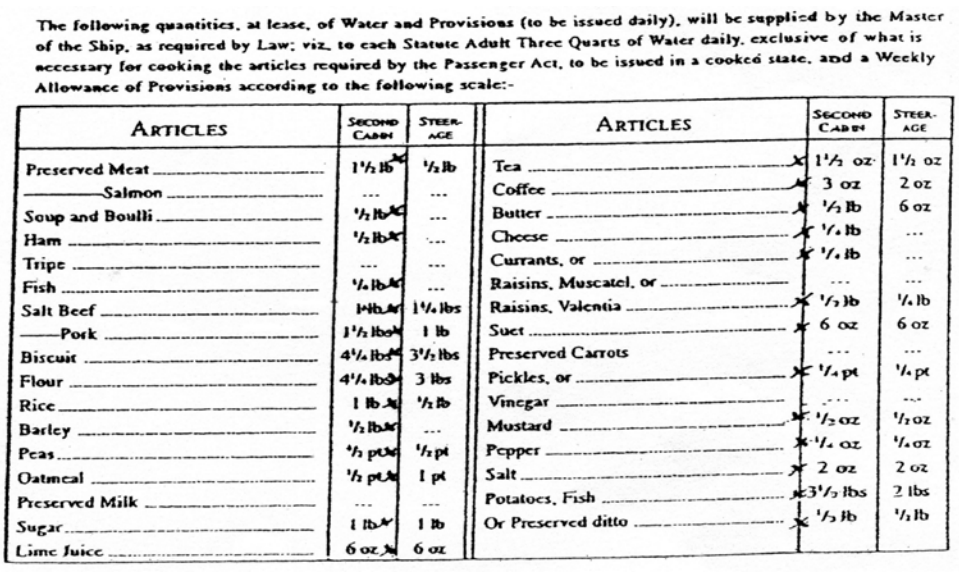
Passengers spent most of their time in the cabin, so the smell of rarely washed bodies and clothing, along with the results of seasickness must have been extremely unpleasant.

The most common ailments on board were seasickness, toothache, boils, colds and fever; the ship's doctor also treated minor accidents, burns, scalds, bruising, fractures, and the aftermath of the occasional fights.

Ship hygiene was questionable – they were usually infested with rats and cockroaches, and the passengers with fleas and head lice.

All passengers were supposed to have a clean bill of health, but inevitably diseases were found on board. Scarlet fever, dysentery, typhoid and whooping cough thrived in the close environment. Some passengers succumbed to 'consumption' (tuberculosis). Ships found to have illness on board were quarantined on reaching New Zealand.

Nevertheless, the captain and crew had an incentive to keep the passengers healthy as they were paid a bonus for each person who arrived in good condition.



The following quantities, at least, of Water and Provisions (to be issued daily), will be supplied by the Master of the Ship, as required by Law; viz., to each Statute Adult Three Quarts of Water daily, exclusive of what is necessary for cooking the articles required by the Passenger Act, to be issued in a cooked state, and a Weekly Allowance of Provisions according to the following scale:-

Articles	Second Cabin	Steerage	Articles	Second Cabin	Steerage
Preserved Meat	1½ lb	½ lb	Tea	1½ oz	1½ oz
Salmon	...	...	Coffee	3 oz	2 oz
Soup and Boulli	½ lb	...	Butter	½ lb	6 oz
Ham	½ lb	...	Cheese	¼ lb	...
Tripe	...	...	Currants, or	¼ lb	...
Fish	¼ lb	...	Raisins, Muscatel, or	...	...
Salt Beef	1 lb	1¼ lbs	Raisins, Valentia	½ lb	¼ lb
Pork	1½ lbs	1 lb	Suet	6 oz	6 oz
Biscuit	4¼ lbs	3½ lbs	Preserved Carrots	...	...
Flour	4¼ lbs	3 lbs	Pickles, or	¼ pt	¼ pt
Rice	1 lb	½ lb	Vinegar	...	...
Barley	½ lb	...	Mustard	½ oz	½ oz
Peas	½ pt	½ pt	Pepper	¼ oz	¼ oz
Oatmeal	½ pt	1 pt	Salt	2 oz	2 oz
Preserved Milk	...	...	Potatoes, Fish	3½ lbs	2 lbs
Sugar	1 lb	1 lb	Or Preserved ditto	½ lb	½ lb
Lime Juice	6 oz	6 oz			

Daily provisions listed on the 'Passengers Contract Ticket' for the Edwin Fox voyage, London to Canterbury, January 1873.

From bad to worse – the tragedy of the Cospatrick

Immigrants travelling to New Zealand by sailing ship faced many dangers, including death by disease, accident or drowning. The worst disaster was that of the sailing ship Cospatrick.

In 1874, the Cospatrick sailed from Belfast bound for Auckland. On board were a total of 478 people, most of them young Irish women seeking a new life in New Zealand. The voyage was uneventful until, 350 miles south-east of Cape Town, fire was discovered in the paint locker by Charles Henry McDonald, the second mate.

Attempts were made to quell the flames but to no avail, and in a very short time the fire began to spread. The sails caught alight, also the deck housing and, worst of all, the lifeboats. Panic ensued. Three life boats were found to be serviceable. Forty-two women crowded into the first one, and as it was being hastily lowered, it up-ended, and the women fell into the sea and drowned.

Forty men commandeered the second life boat, successfully lowered it and pulled away from the now blazing Cospatrick. McDonald took command of the last life boat, filled it with 35 men, women and children, and left the Cospatrick.

Over 350 people were left on board with the choice of drowning or being burnt alive. Several hours later the decision was made for them. In the hold was stored 100 tons of gunpowder and as soon as the flames reached this lethal cargo there was a horrendous explosion. It blew out the stern of the vessel and she sank within minutes, leaving those on board who were not killed in the explosion to flounder and die in the shark-infested water.

Meanwhile, the two life boats which had escaped watched the drama unfold from a safe distance, unwilling to pick up survivors in case their own boats became dangerously overloaded. For approximately 24 hours McDonald kept the other boat in sight, but after that it simply disappeared and was never seen again.

There was little fresh water or food on board McDonald's boat and within days people began to die or go insane from drinking sea water.

Under these extreme circumstances McDonald and others on board decided they would have to eat the livers and drink the blood of the corpses to stay alive. Those who couldn't bring themselves to do this simply died.

After nearly two weeks adrift they were rescued by the sailing ship Sceptre with only five of the original 35 still alive: McDonald and four other men, two of whom died before reaching England.

Of the 478 who set out from Belfast, only three survived this tragic accident. However, McDonald's luck ran out two years later: his ship was wrecked off the coast of New South Wales.

The 1950s – a new wave of immigrants

The Australian Assisted Passage Migration Scheme was created in 1945 – part of their 'Populate or Perish' policy.

In a similar effort to increase the population, the New Zealand government initiated their own assisted immigration scheme in July 1947, and the first immigrants arrived in the RMS Rangitata later that year.

The scheme lasted until 1971, by which time it had brought 76,673 immigrants.

In the aftermath of World War II, many parts of Europe and Britain had been left severely damaged. Cities and homes had been destroyed, and rationing of food and goods continued for several years. The opportunity to 'start again' was an attractive proposition.

Applying to emigrate

Immigrants were carefully chosen. Ads appeared in newspapers, displays were set up at trade exhibitions, and promotional films were shown in British cinemas.

The New Zealand High Commission in London interviewed applicants, who had to bring birth certificates and references. If there was difficulty in filling quotas for particular skills, the deciding factor would be 'the applicant's bearing and the estimates of his character as a potential New Zealand citizen'.

The applicants had often met New Zealanders or had relatives there, and they came for a 'better life', usually perceived as a sunnier climate, a healthier lifestyle, and an egalitarian society. For some the new life was a disappointment but many others persuaded friends or family to pay their own way out.

The Dutch

In 1950, the government expanded the scheme to include the Netherlands. Among Europeans, the Dutch were the most favoured, because they seemed most likely to be easily assimilated.

Over 6,000 were eventually selected, the majority of them between 1952 and 1954. The scheme ended in 1963.

The first of the New Zealand Company ships, Aurora, arrived in Wellington on 21 January 1840, and there has been a constant stream of immigrants since then.

The second wave of immigrants began in 1947 with the NZ Assisted Passage Immigration Scheme. By now, the fast and more comfortable diesel ships were a big improvement on those of the 19th century.

1840s cabin

Although it has a ceiling somewhat higher than in some of the original immigrant ships, our 'rocking cabin' still gives a strong sense of the cramped, gloomy conditions endured by the immigrants. In reality the headroom between decks could be as little as 1.8 metres.

- The 'rocking cabin' represents married quarters, which would sleep over 40 people: two adults per bunk or, depending on size, up to three children.
- Passengers were provided with mattresses, but not bedding. Bunk space was cramped, and tables and forms occupied the spaces between bunks.
- There were no bathroom facilities of any kind and only buckets for toilets.
- Vermin infested the ships. Steerage compartments were subject to flooding when waves broke over the ship.
- Immigrants were only allowed on deck at set times so as not to interfere with the sailors' work. In rough weather, they could spend several weeks below deck.
- Most of their belongings had to be kept in the hold and weren't available to them during the voyage.

1950s cabin

This cabin is a recreation of a 3-berth cabin from a Dutch passenger ship of the 1950s. It shows the considerably improved conditions of the mid 20th century, and highlights the post-war immigration boom when thousands of people came to New Zealand, principally from Britain and the Netherlands.

In July 1947 the assisted passage scheme began which, over the next 30 years, brought more than 76,000 people to New Zealand. During the 1950s, 6,000 Dutch people also emigrated to New Zealand.

The cabin had no air-conditioning though there was forced air ventilation, essential for inside cabins, and the cabins had a handbasin with hot and cold water. There were also fully equipped bathrooms, shared between several cabins.

By this stage, thanks to fast diesel ships and the use of the Panama and Suez canals, the length of the voyage was reduced to between four and six weeks, which included three or four stops on the way.

On these voyages, passengers had much greater freedom of movement around the ship, there were entertainments, games, swimming pools, dining saloons, lounges, libraries and other comforts.


EMIGRATION
TO
NEW ZEALAND.

The Directors of the New Zealand Company, do hereby give notice that they are ready to receive Applications for a FREE PASSAGE to the

TOWN OF WELLINGTON,
AT LAMBTON HARBOUR,
PORT NICHOLSON, COOK'S STRAITS,
NEW ZEALAND,

From Agricultural Laborers, Shepherds, Miners, Gardeners, Brickmakers, Mechanics, Handicraftsmen, and Domestic Servants, BEING MARRIED, and not exceeding Forty years of age; also from SINGLE FEMALES, under the care of near relatives, and SINGLE MEN, accompanied by one or more ADULT SISTERS, not exceeding, in either case, the age of Thirty years. Strict inquiry will be made as to qualifications and character.

Apply on Mondays, Thursdays, and Saturdays, to Mr. JOSEPH PHIPSON, 11, Union Passage, Birmingham,
AGENT TO THE COMPANY.

TOWN and COUNTRY SECTIONS of LAND on sale, full particulars of which may be had on application as above.

Becoming a multicultural nation

Following the two cabins is the immigrant portrait gallery. Behind some of the larger images are stories of the many nationalities that have become part of our cultural heritage.

Among them are Chinese, English, Scottish, Irish, Scandinavians, Pacific Islanders, Eastern Europeans (including 'Dallies' from Dalmatia, a province of what is now Croatia), Germans and Greeks.

Nearby, personal stories and accounts are presented on the walls, relating to individuals and families who emigrated from Europe from the 1800s onwards. Some of the stories were contributed by the museum's own volunteers.

The wheel of fortune

Visitors can pick up their 'passenger ticket' at the entrance to the 'rocking cabin'. The ticket relates the story of the early life of specific individuals before their arrival in the 1800s and early 1900s.

Then, by the gallery exit, the Wheel of Fortune tells visitors the story of how they fared in their new life in New Zealand.

Campbell's Point land deed

Sir John Logan Campbell, sometimes referred to as the 'Father of Auckland', built his home overlooking the harbour. The deed for the land, signed in 1878, still exists today. The 5 acres (2 ha) in Parnell – Campbell's Point – were purchased from William Swainson, the last Attorney-General of the Crown Colony of New Zealand.

The gracious Italianate mansion that Campbell built stood for 43 years before being demolished. A section of the garden remains as part of the Parnell Rose Gardens.

A tale of two Croatians in New Zealand

Mate Knezovich and Marino Selak came from the same small village in Croatia. They arrived in New Zealand in 1906 when Mate (pronounced 'Matty') was 14 and Marino was 25.

Mate and Marino. Studio portrait taken in Whangarei, c1912.

After initially working as gumdiggers in Northland, Marino went on to found the successful Selak's winery – his face still appears on every label – while Mate became a farmer in Mangamuka.

Early Croatian settlers had faced harsh working conditions in the Far North, and also the social discrimination often experienced by non-Anglo-Saxon settlers.

Like many other young Croatian men, Mate had been sent away by his family during the turbulent times before WWI, in what was then part of the Austro-Hungarian Empire.

In 1922 he married Isabella, whose father, Duncan Cameron, was a stern Scottish schoolteacher at the 'native school' in Mangamuka.

Duncan didn't like Mate – he was foreign, with a foreign accent and foreign name – so the young couple had to elope to Auckland to get married. Mate had changed his name to Matthew Gordon – a good Scottish sounding name to appease his father-in-law! Duncan was still not impressed.

However, once Isabella and Mate's first child was born, Duncan's wife Margaret said "I don't know about you, but I'm going to see that baby!" Relations warmed significantly after that, and four more grandchildren followed.

When Isabella died aged 46 in 1946, followed a year later by the broken-hearted Mate, Duncan reportedly said "I don't know that I'm not sadder to lose Mate than I was to lose my own daughter."

Ferries

In New Zealand's early colonial days, roads and bridges were poor or non-existent, so water transport was vital.

Ferries have played an important role in the growth of Auckland, as well as other harbours, lakes and rivers throughout New Zealand.

Auckland's ferry service is New Zealand's longest running passenger service. First appearing in the mid 1800s, ferries have woven together both sides of the harbour. However, the construction of the Harbour Bridge in 1959 almost put an end to the service.

Fortunately ferries are now enjoying renewed popularity with, by 2016, faster ferries carrying over 6 million passengers a year.

Auckland Ferry Building, 1930s.
Auckland Institute and Museum.

Gallery overview

The space is themed as a 1930s ferry terminal, the decade which saw the start of a major expansion of passenger and vehicular ferry services through to the 1950s.

One of the major display items – the TAKAPUNA wheelhouse – dates from that period.

KEY GALLERY FEATURES

- Wheelhouse and model of the 1924 ferry SS TAKAPUNA
- Photo on the wall of the Ferry Building
- Model of car ferry

A ferry service develops

As the Auckland community grew, pockets of population were established around the harbour and the North Shore. From the time in the early 1840s when the naval stores depot was established at Devonport (then known as Flagstaff) and the first civilian settlers had to cross the harbour, open sailing and rowing boats effectively served as ferries, followed by scows and towed barges which handled cargoes of stores and building materials.

Many types of vessels have served the Waitematā harbour over the years, initially wooden and steel built steamers, then the modern aluminium and fibreglass fast ferries.

The double ended ferries like the SS Takapuna began services from 1881 onwards, mainly run by the Devonport Steam Ferry Company, which was incorporated into Fullers.

Vehicular ferries became necessary with the arrival of the motor car, and operated mainly from Devonport, until 1959 when the Harbour Bridge was completed. The steam ferries were then nearly all broken up and buried in a reclamation at Westhaven.

The Ferry Building, depicted in the large wall photo taken in the 1930s, was built in 1912 and is still in use today, very little changed. It remains the focal point for the Auckland's ferry services.

Waitematā destinations

Settlements sprang up around the Waitematā Harbour at Stokes Point (Northcote), Birkenhead, Bayswater, Stanley Point, Devonport, Takapuna, St. Heliers etc, and each of these locations had a wharf to handle the traffic at all states of the tide.

Waiheke Island, Coromandel and Thames also featured as destinations which created demand for efficient steamers, especially after the discovery of gold on the Coromandel in the 1870s. Waiheke was a convenient stopping point on the route.

Kawau Island became popular for picnic trips after the Mansion House was built. The ferry services and these more distant destinations in the Hauraki Gulf became interdependent.

However almost without exception the services were very marginal economically, and few of the early operating companies lasted very long. Even today most of the ferry services depend on subsidies from Auckland Council. As of 2017, the Devonport ferry service is the only one that doesn't receive a subsidy to operate.

In 1860 a small paddle-steamer, Emu, was brought from Melbourne, and ran services to Devonport and Stokes Point. To make money, these early ferries also ran picnic trips down the harbour and the Emu was lost after stranding on a rock off Motutapu Island, in October 1860. Her name is perpetuated as Emu Point on the charts today.

From left:

Passengers disembarking from ferry in Auckland.
Alexander Turnbull Library

The Ferry Building today.

Types of ferry

Most of the early ferries were **paddle steamers**, some built from kitsets from Australia or Britain, others were constructed locally with engines from Glasgow. Paddle gave way to screw, and coal fired boilers were the norm until the late 1930s.

The first **double-ended** screw ferry was Condor, built in Scotland in 1902, and re-assembled in Auckland by the scow builder, George Niccol.

Condor was unique in that she had two funnels side-by-side. She carried 1207 passengers – at least 50% more than any other vessel then in service.

In later years, Condor became the first **vehicular ferry** and also served briefly in Dunedin, her decks being boarded over to make the long sea passage there. Subsequent vehicular ferries had a capacity of up to 36 cars and 900 passengers.

Devonport Steam Ferry Company's Kestrel, was originally a steam double-ender, then a diesel powered vessel. The DFS Co. was founded by Devonport resident, and later its Mayor, Ewen W Alison.

During WW2, many harbour defence vessels were built under licence in Auckland and subsequently some of these became Hauraki Gulf ferries. They were occasionally used, during times of survey or refit, on the harbour ferry runs. Most well known of these were the Iris Moana and the Ngaroma.

High-speed catamarans have been popular since the 1980s. Double hulls make higher speed possible, offer generous deck space and stability in choppy seas. The 33-metre Quickcat of 1986 was the head-turner of her day. Built for the Waiheke Island service, the 445-ton ferry could reach 33 knots, three times the speed of an old double-ender.

The effect of the Harbour Bridge

From the end of the Second World War, many smaller launches and miscellaneous vessels kept up the ferry services, but in July 1959 came the opening of the Auckland Harbour Bridge.

During the 1950s whilst the promised Harbour Bridge was under construction, the old steam ferries were kept afloat on a make do and mend basis, in the belief that they would no longer be needed once the traffic began to flow over the bridge. Certainly the Devonport vehicular ferries Goshawk (1909), Sparrowhawk (1911), Mollyhawk (1923, see model) and Eaglehawk (1926) ceased to run, though there were still foot passenger ferries to Devonport and Stanley Point.

Before the bridge was built, the only way to reach downtown Auckland by car or bus from Devonport was a 35 mile narrow route through Albany and Riverhead, before the motorways were constructed. Thus the vehicular ferries had been a popular alternative for the growing number of car owners on the Shore.

By 1959 there were extensive queues of vehicles through Devonport and Northcote Point, with much impatience and 'queue-jumping'.

From left:

The Devonport ferry Kea (built 1988).

Disembarking from SS Makora at Auckland, 1949.
Alexander Turnbull Library

Eaglehawk about to berth at Mechanics Bay.
New Zealand Herald

Many are the harrowing tales of mothers-to-be travelling by ambulance, which had priority, to reach the maternity ward at Auckland Hospital. Someone confided that he had to ditch his 'geographically impossible' girlfriend from Takapuna when he lived in Mission Bay!

The opening of the bridge was a significant day for the whole of Auckland, and it was assumed ferries would no longer be needed. Some of the stately double-enders and car ferries, so much a part of life for half a century, were laid up in St Mary's Bay, and became popular subjects for artists and photographers. Others were broken up for scrap or buried in the reclamation west of Beaumont Street.

Originally the bridge was built with four lanes, as the government had placed a restriction on the number of lanes it could carry. But it was not long before traffic volumes began to exceed planned estimates, as the planners had grossly under-estimated the development of the North Shore. However, the builders/designers had made sure the structure would be strong enough to carry extra lanes in the future.

In 1966 the bridge was doubled to eight lanes, with the addition of the 'Nippon Clip-Ons', but with the continued growth of Auckland and car ownership, it has become a bottle-neck once again, and the ferry services have increased and are heavily used.

The fate of some historic harbour ferries

Of the original ferries, none survive now. Some were preserved as floating restaurants, others were broken up.

Baroona (1904) was originally an Australian gentleman's yacht. Initially steam driven, in later years Baroona was the main ferry on the Waiheke service, though not all that popular as she was rather slow, and somewhat ugly. She was taken out of service following the arrival of the 'Quick-Cat' ferries in 1987.

Kestrel (1905) was a steam double-ender and could carry 1258 passengers. When she was converted to diesel in 1951, her passenger numbers were reduced to 500. She was used until 2001 as a stand-by vessel for Devonport and special excursions.

Ngoiro (1913), sister ship of the Kestrel, became a floating restaurant in the Viaduct Basin until 1998. She then became a floating restaurant at Tairua, on the Coromandel Peninsula.

The Takapuna (1924), the model and wheel-house of which are on display in the gallery, had a single coal-fired steam engine. One of her two older sisters, Peregrine (1912) was laid up in 1959, and subsequently buried, like Takapuna, in the Westhaven reclamation. The other, Makora (1921), was scrapped in 1981.

Toroa (1925), another steam double-ender, was used for the Devonport service until 1980. She is now in the care of the Toroa Steam Preservation Trust.

Ewen W Alison (1930) went to Australia in 1959, to become the Mangana in Tasmania.

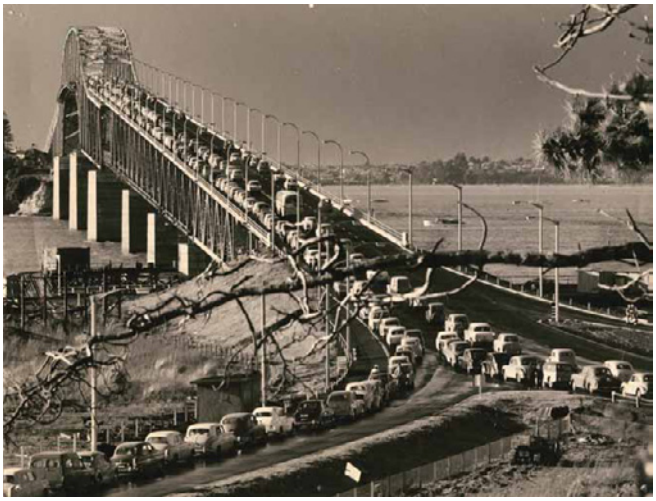
Less conventional ferries were tried after the bridge was opened. The hydrofoil, Manu-Wai (1963), ran a faster passenger service to Waiheke and Pakatoa Islands, but was forced out of service by the intransigent Seamen's Union, which insisted on uneconomic crew numbers.

There was also the English hovercraft Wakatere and the luxury Te Kotuku (1974), bought for the Pakatoa service. However it had more than one design fault, resulting in high fuel consumption and a very large wake, to the consternation of all yachtsmen on the harbour!

From left:

The Harbour Bridge before widening.

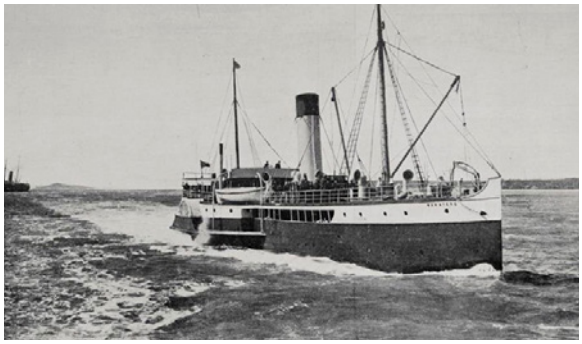
Adding the 'Nippon Clip-Ons', in 1966.



Ferries outside Auckland

On display is a model of the roll-on roll off, inter-island Union Co vessel Rangatira (built 1971, 9,387 tons). She was the last and largest of the Lyttelton to Wellington Steamer Express vessels and was a replacement for, and closely resembled, the ill-fated Wahine. (See story below.)

Other ferries featured in the gallery are Wakatere (1896), the paddle-steamer serving Auckland and Thames until 1926, and the Picton-Wellington rail ferry Aratika (1974).



Wakatere. "The Thames boat, the Northern Steamship Company's fine paddle steamer in the Hauraki Gulf."

Auckland Weekly News 16 May 1912. Photo by C.F. Bell

The loss of the Wahine

Perhaps the best-known shipping disaster in New Zealand is the sinking, in 1968, of the ferry Wahine (built 1965, 8,948 tons).

Though the story is not covered in the gallery, visitors may ask about it, so an account of the event is included here.

The tragedy can be largely attributed to one cause – the weather. The storm which exploded upon Wellington that day was one of the worst ever recorded in New Zealand. Its ferocity was due to it being a combination of two storms which by chance merged directly over Wellington at almost exactly the same time as the overnight Lyttelton–Wellington ferry TEV Wahine approached the harbour entrance.

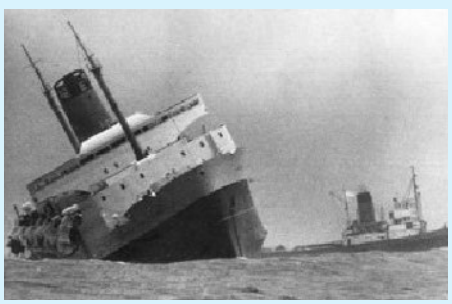
"At around 6 a.m. the Wahine was entering the heads when she abruptly lurched to port. The helm would not respond. The sea was so turbulent that the propellers were often out of the water. The ship's radar had failed as she entered the narrow, rocky channel and visibility deteriorated quickly to zero. The captain and crew could not determine which way the vessel was oriented and inadvertently backed over a reef, severely damaging the ship's bottom.

The Wahine then began to develop a severe list and the order to abandon ship was given. Many of those who perished were in the first lifeboat away which was swamped soon after launching. The others landed safely on the beach at Seatoun. The Wahine was within sight of the shore and a large number of other vessels, including a smaller ferry, the Aramoana, stood by to pick up those in rafts. Some passengers were left with no choice but to jump from the listing vessel into the cold water. They were blown across the harbour towards Eastbourne Beach, an area with difficult access. Debris on the road caused by the storm meant that rescue vehicles couldn't gain access to the beach itself.

The Wahine had an enormous two-tiered vehicle deck capable of holding over 200 cars. This single compartment spanned nearly the entire length of the ship and clear across the width. When the reef damaged the ship's hull, the stability of the vessel was maintained until the vehicle deck began to take on water. Once this happened, a principal known as 'free-surface effect' began to slowly drain the ship of its stability, as water sloshed from one side of the ship to the other.

As the ship continued to rock back and forth, the momentum of the flooded water slowly increased her list to starboard. As she approached the point of no return, the captain gave the command to abandon ship and all on board rushed to the lower, starboard side lifeboats. This sudden shift in weight, although slight, caused the ship to lose her little remaining stability, and at 2.30 p.m. the now abandoned Wahine capsized in 38 ft (11.6m) of water and crashed heavily to the bed of the sea."

Of the 734 passengers and crew on board, 51 people lost their lives.



"We had a family reunion in Blenheim that Easter, and I travelled across the Cook Strait the very next night to Picton and the Wahine had lights marking where she lay on her side, there were flowers and wreaths floating around her.

Coming home on the Monday afternoon sailing, when we neared the Wahine, our ferry listed badly because of so many passengers moving to the one side to see the wreck. It was panic stations with several bursts of a horn and the Captain on the loud speaker ordering passengers to return to their previous positions."

TEV Rangatira **built 1971, England**

After the loss of the Wahine in 1968, a new car ferry, Rangatira, finally entered service in 1972. However, by this stage, demand for such a ferry service had dwindled, as traffic had already been lost to airlines and the rail link through Picton. After four years on the increasingly uneconomic Lyttelton to Wellington run, Rangatira made her last voyage, in 1976, sailing back to England, in the hope that she could be sold.

After that rather downbeat start, her subsequent life was more colourful, if not exactly glamorous. In 1978, she began a four year charter as an accommodation vessel at Sollum Voe – a large oil refinery being constructed in the Shetland Isles. She was extensively altered to provide a high standard of comfort, all the cabins being converted to single berth, additional TV rooms were built into the upper car deck, along with areas for sports such as snooker, table-tennis and a gymnasium. She even hosted royalty. The Queen officially opened the oil terminal on May 9 1981, and the royal party dined aboard her, despite an IRA bomb threat.

In 1982, Rangatira was converted for use in the Falklands, during the war with Argentina. Alterations included guns and a helipad – capable of landing a fully laden Chinook helicopter, and the lower deck was fitted out to hold provisions for six months, for approximately 1,200 people. Also on board was a complete hospital, including staff and equipment. She remained there for over a year, providing food and accommodation for the troops, finally leaving in September 1983.

After the Falklands, she was eventually sold and served as a passenger ferry for various owners. By 2004 she was in very poor condition, and was broken up for scrap in 2005.

Replacing Wahine

Reporting on the arrival of the new Rangatira in 1972, *New Zealand Marine News* reported:

'... one gains the impression of being on a large overseas liner, with the spacious vestibule and purser's bureau forward, not overlooking the shop, well stocked with a multitude of items.'

The attractively decorated cabins featured showers, toilets, basins and everything else needed for a comfortable night's accommodation.

To while away the time, passengers had a stylish cocktail bar, a cafeteria, a restaurant with an à la carte menu, and a cinema.

Whaling

Whaling commenced in New Zealand waters just 22 years after Captain Cook's first arrival in New Zealand. The first recorded whale ship was American, the William and Ann, which called at Doubtless Bay in 1791 during a sperm-whaling voyage in the Pacific.

The gallery examines whaling in our waters from 1800-1960, and the display itself recreates the working scene of a typical whaling station during the period 1830-1850 – the peak of shore-based whaling.

The gallery reflects the importance of whales, whaling and whaleboats in New Zealand's maritime heritage.

South seas whaling painting, 1820s.
Alexander Turnbull Library

Gallery overview

A full-scale mural of an average-sized female sperm whale with calf appears on the wall opposite the display.

The centrepiece is the whaleboat Tainui, but there are also try pots (vats for boiling blubber) and whaling sheds, which feature typical materials: raupo reed (bullrush) thatched roof, and walls of whalebone ribs, timber, mud and wattle.

There is a whim (a form of windlass or winch) for dragging blubber to the try-works, and a whaler sharpening his harpoon.

KEY GALLERY FEATURES

- Whaleboat Tainui
- Whaling shed
- Whim and try-works

Whale oil brings the whalers

To the Americans and Europeans of the nineteenth century, the significance of the Pacific Ocean meant first and foremost oil. Long before crude oil was discovered, whale oil provided lubrication for the Industrial Revolution and lit the streets of Europe and America.

Whalers roamed for years over the Pacific which to them was 'a vast field of oil deposits known as sperm whales'. The American author of *Moby Dick*, Herman Melville, estimated that by the 1840s the American whaling industry employed 18,000 men aboard 700 ships, reaping a harvest of $7 million annually.

The whaling business was driven by hardy seamen and entrepreneurs who risked fortunes and life and limb on dangerous multi-year voyages in scarcely charted waters.

Ship-based whaling began in our waters in 1791. The early ships were mainly British and Australian, but eventually the Americans came in increasing numbers. By 1839 it was reported that 150 American whaling ships, mainly from New England, were in New Zealand waters.

Shore-based whaling in New Zealand began around 1827. Two pioneering whalers were an ex-convict and a sea captain – John Guard – who began whaling at Te Awaiti (anglicised to 'Tar White') in the Marlborough Sounds.

Whaling dropped sharply in 1841 – the year following the Treaty of Waitangi which had established British sovereignty – with the imposition of port dues and excise duties.

Eventually, by the 1930s and 40s, petroleum oils and machinery lubricants were found to be just as efficient and the demand for whale oil declined through to the 1960s.

Commercial whaling in New Zealand came to an end in 1964, and we are now signatories to the International Whaling Commission (IWC), effectively banning all whaling. Surprisingly perhaps, the end of whaling in New Zealand was due to a lack of whales, as much as to public opposition to the practice.

Two types of whaling

Ship-based whaling, which involved launching small whaleboats from a sailing ship to catch the whale. The processing of the whale generally took place on the ship.

Shore-based whaling, which is represented in our display. The whales were often found close inshore, 2 to 7 miles off the coast. The whalers moved in with their fleet of small whaleboats and made their kill, then dragged the large carcasses back to the station which, depending on size and weight, could take up to 14 hours hard rowing over several days. If the weather became stormy, they sometimes had to anchor their catch in the swell and row for the safety of the shore, to return the next day.

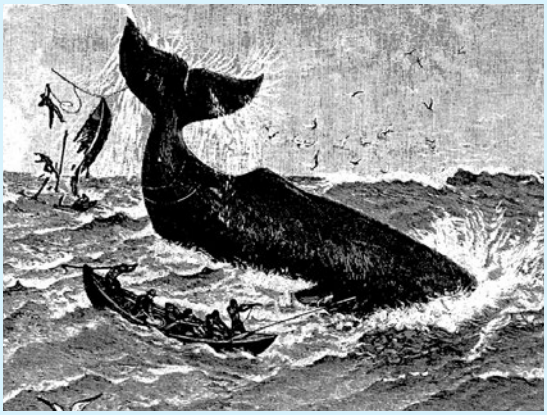
How to catch a whale

The whalers would approach silently – because of the whale's acute hearing – and once close, the harpooner would throw the harpoon at the whale. The harpoon was attached to a line, up to 300 metres long. Once it held fast in the whale's side, the men shifted to the stern for the 'Nantucket sleigh ride'.

Sometimes, as in an incident at Rununder Point, Cloudy Bay, the whale would drag the boat under. Others would thrash their tails. One sperm whale known as New Zealand Tom allegedly destroyed many boats.

Eventually, after a protracted struggle, the whale would tire and the steersman would come forward to plunge a lance into the whale's heart or lungs.

Finally, if the crew were from a shore-based whaling station, they then had the long and difficult task of hauling the whale to shore!



Making money from whales

In the 19th century the commercial value of whales was mainly in the oil derived from boiling down, or 'trying', the insulating layer of blubber. Whalebone, from the mouths of baleen whales (used by the animal to strain water, while retaining the krill on which they feed) was also commercially valuable, as was the fine spermaceti oil in the reservoir in the head of the sperm whale.

Since the discovery of the process of refining crude oil into kerosene in 1853, and the development of modern synthetic materials, whale-based products have been almost completely replaced, and the commercial value of whales has greatly reduced.

Whale oil

Whale oil was used for machinery lubrication and as a clean burning fuel for lamps in Europe, Asia and America, where the oil from the head and jaw of the whale did not congeal in extreme cold, nor require any form of refining. The oil had a wide variety of uses including the manufacture of margarine and cooking oil, soaps, varnish, cosmetics, paint, glaze for photographs, and to process textiles and rope.

Spermaceti

A very fine whale oil is derived from the spermaceti organ in the head of the sperm whale. It was considered the finest lubricating oil on Earth.

At the whales' normal body temperature, spermaceti is liquid, but it hardens into a white wax at air temperature. In liquid form it was used to lubricate delicate machinery such as clock mechanisms and, as a wax, to produce smokeless, odourless candles, six times the price of a tallow candle. The wax was also used in the cosmetic industry, especially face and hand creams, since it was smoother than its nearest competitor, lanolin.

Ambergris

Ambergris is an excretion from the intestines of the sperm whale. It comes in many forms and can be hard and pebble-like or softer and waxy. It is found floating on the oceans or collected from the shores of many countries around the world. Ambergris is thought to be formed in response to irritation caused to the stomach lining from the indigestible, parrot-like beaks of giant squid, on which the whale feeds. It was used as a fixative for perfumes and was extremely valuable because of the difficulty of finding it.

Meat

In the early days the meat was rarely eaten, but in the 20th century the Japanese have become the meat's principal consumers, and it is seen as a delicacy.

However, following the devastation of World War II, food was scarce, and whales, being a cheap source of protein, became a staple in the Japanese post-war diet. For the same reason whale meat was also eaten in the UK after World War II.

Whalebone

Originally whalebone had many uses: corset stiffeners in Victorian ladies' undergarments, whip handles, umbrella and helmet frames, walking canes, covers for telescopes, bird cages, tools for nautical tradesmen, to name a few.

Brushes made from whalebone were especially suited for industrial purposes being stronger and more durable than bristle.

In the nineteenth century when supply was plentiful, whalebone fetched a low price – £25 per ton – but by the 1880s, when it had become a scarce commodity, it was worth £2000 per ton on the London Market.

Scrimshaw

To help while away long hours of boredom at sea, sailors used the teeth from the jawbone of the sperm whale onto which they etched drawings (scrimshaw) for sweethearts and loved ones whom they may not see again for many years. Nowadays, a piece of scrimshaw is a potentially valuable collector's item, depending on the quality and subject of the etching.

Tourism

Nowadays, with a few exceptions, commercial whaling no longer takes place. But from the New Zealand point of view, the whale is still an extremely valuable commodity – as a tourist attraction. Kaikoura, in the South Island, is the best known New Zealand destination for whale watching, as nearly half the world's 76 species of whales and dolphins have been seen offshore.

In the Hauraki Gulf, only a short distance from Auckland, 22 species of dolphins and whales have been seen.

Other by-products

"The pancreas supplied insulin; the tendons were used for surgical sutures; and glycerine – extracted from bone – found its way into explosives. Teeth were sliced into piano keys; skin was turned into laces, handbags and bicycle seats; and baleen was used for everything from shoehorns to knife handles." (*NZ Geographic* magazine)

Valuable whale species

The most sought-after were the southern right whale, the sperm whale and the humpback whale. The whaling season lasted from May to October, when the southern right whale migrated up the east coast of the South Island, through Cook Strait, and along the west coast of the North Island.

Southern right whale

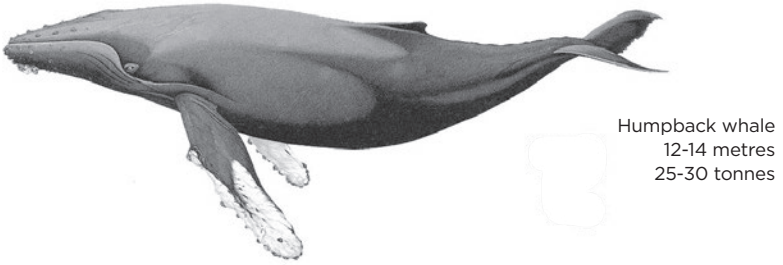
Early whalers called them 'right' whales because they were the right kind to catch: they were big, relatively docile, produced good quality oil, made easy targets as they swam close to shore, and did not usually sink once killed, whereas other species needed to be filled with air.

Migrating north in small groups these slow swimmers came close inshore seeking shallow waters and bays for mid-winter calving. Formerly abundant around the New Zealand coast and in the Tasman Sea, they were hunted almost to extinction.

Right whale
13-18 metres
40-80 tonnes

Humpback whale

Humpback whales are the most abundant large whales found in New Zealand waters. They have deep creases under their throats, allowing for expansion when the whale's mouth is distended with food and water. The species is known for its 'whale songs' – communication between individuals and groups. Valued for their oil and whalebone products, their meat was sometimes used for meat meal and pet food.



Humpback whale
12-14 metres
25-30 tonnes

Sperm whale

Males grow up to 20m in length and weigh approximately 36 tonnes. The females are slightly smaller, and weigh approximately 20 tonnes. They both have a life span of 70 plus years. (Note that the mural on the gallery wall represents an average sized female sperm whale and her calf.)

The sperm whale was valued for both its rich blubber and fine quality spermaceti oil. Found worldwide, they concentrate near deep ocean trenches like the Kaikoura Canyon, or in deep water near continental shelves. Using sonar and echo-location they feed on giant squid found at depths of 1000m or more. A sperm whale swims at the surface for ten minutes or so, spouting frequently in a forward direction, then dives to great depths for an hour or more.

Sperm whale
11-15 metres
20-45 tonnes

From left:

Māori whaling scene.

Whale being processed at Perano Whaling Station, partially covered by a shed at the end of a jetty. Circa July 1948.
Photo Dr W. Arriens. Alexander Turnbull Library, ref. PA Coll-8163-38

Russell in the Bay of Islands was a major whaling port, and its numerous pubs and brothels were well patronised by whalers, spending their money during the short periods when they were not at sea. This earned the town the dubious title of 'hell-hole of the Pacific'.

Whalers' earnings

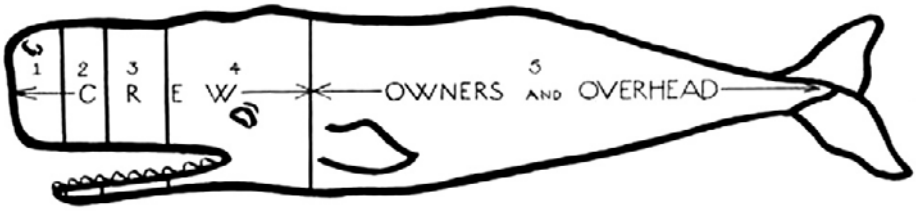
Whalers were paid by 'lays', or shares of the gross produce of the voyage. The diagram shows how the value of the whale was divided up between the captain, officers, crew and owners.

For all their hard and dangerous work, the crew did not fare particularly well. They paid high interest on money which was advanced to buy clothing from the ship's slop chest, and this came off their final share.

A tax of one shilling (roughly equal to about $70) was levied on every whale carcass that was processed on the shore, to deter the practice, and gain revenue to clean up the mess.

Below, a whale's value:

1 Captain's share.
2 Three officers divide.
3 Six boat-steerers divide.
4 Twenty crew divide.
5 Owners and overheads.



Tainui

Built in the 1860s or earlier, whaleboat Tainui was used for hunting whales from ship and from shore. Whaleboats were superb craft – light, fast and strongly built.

Tainui was built in the American whaling town of New Bedford, Massachusetts for the whaler Cape York. In 1868, the ship visited the Bay of Islands and Tainui was sold to the Ngapuhi people.

About 1887, she was then purchased by John McIntosh of Houhora who used her for whaling until 1903.

Tainui's crew included a harpoonist and a steersman, who changed places after a whale had been harpooned, as the harpooner had command of the boat. She could also be rigged for sailing.

Whim and try-pots

The display includes a reconstruction of a whim, or beach capstan. Whims were used at whaling stations to haul boats and whale carcasses from the water.

They also hauled blubber from the carcasses to the large try-pots where it was boiled down to make whale oil.

Te Awaiti whaling station, 1875

Seen on the panel behind the display, the photo shows the whaling station at Te Awaiti (anglicised as 'Tar White'), at Tory Channel in the Marlborough Sounds.

It was established in 1827, becoming the South Island's largest whaling station, and its first 'town', with a population of 700. Whaling ended there in 1964.

It handled mainly right and humpback whales, which were slow moving and relatively easy to catch.

From left:

Early 19th century whaleboat. The drawing shows the position of the crew as they prepare to harpoon a whale.

Te Awaiti whaling station in 1875.

New Zealand whaling stations

Early whaling stations were usually located on the migration routes or in the calving harbours. Plentiful wood and water, a good harbour and land for growing food were also important.

Cook Strait was a major centre, especially Tory Channel and Port Underwood. By 1836 there were six shore stations and 18 whaling ships at anchor. Further north, the Kapiti region had six stations and 23 ships by 1839. In the far south a series of stations were established in the 1830s around the coast. Johnny Jones, a former convict and sealer, at one stage employed 280 men on seven stations.

In 1835, at a station in Otago Harbour, the 85 men there killed 103 whales, producing 248,300 litres of oil – despite competition from foreign bay whalers. Like many other stations, it doubled as a trading centre purchasing potatoes, pigs and flax from Māori for sale to Sydney merchants.

By 1840 there were up to 1,000 whalers in New Zealand and whaling led the country's economy. During that decade new areas for whaling were discovered. Kaikōura saw a rush in the early 1840s as whalers moved there.

Another area of growth was the east coast of the North Island. By 1847 in Gisborne there were 17 boats in Hawke's Bay.

Eventually more than 100 whaling stations had been set up and much wealth produced. However, the shore whalers' methods were ultimately ruinous for the industry.

Naturalist Ernst Dieffenbach wrote: *'The shorewhalers, in hunting the animal in the season when it visits the shallow waters of the coast to bring forth the young, and suckle it in security, have felled the tree to obtain the fruit, and have taken the most certain means of destroying an otherwise profitable and important trade.'*

From the journal of
Rev. Edward J. Wakefield, 1839:

"A large gang were busy at the try-works boiling out the oil from a whale lately caught ... The whole ground and beach about here were saturated with oil and the stench of the carcasses and scraps of whale flesh lying about in the Bay was intolerable ...

The workers at these bay-whaling stations were not paid wages, they were paid in slops (loose fitting trousers; ready made clothing), spirits or tobacco. They were a bearded, unkempt mixture of runaway seamen, deserters, or escaped convicts of several nationalities. They could earn the equivalent of 35 wages during the season between May and October, while carpenters, blacksmiths and coopers (barrel-makers) were paid at the higher rate of 10 shillings a day.

The women at Cloudy Bay were from the Māori tribe of Kawhia, those in the Sounds were Ngati-awa. There were twenty-five children at the whaling station, all part-Māori."

NOTES