

# The 2017 Banks Memorial Lecture: Subantarctic Islands: An intrepid journey and brief history

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## My intrepid journey

It was with a sense of both trepidation and expectation that I boarded the shuttlebus setting out on the once busy road from Invercargill to Bluff – long gone were the miners, seafarers, polar explorers and whalers of yesteryear. Off on a long awaited journey to the islands of the subantarctic at the kindest time of the year – in January of 2016. Never a mariner, the quote came to mind “one does not discover new lands without consenting to leave sight of the shore” (André Gide). Arriving at the dock with an elect group of birdwatchers and animal photographers from various lands we boarded our sea vessel the ‘Spirit of Enderby’ (Fig. 1), hosted by Heritage Expeditions.

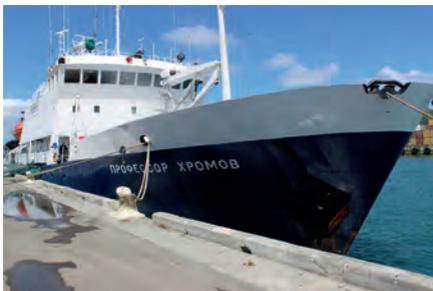


Fig. 1 The ‘Spirit of Enderby’.

Overnight we sailed the 130 km south to the Snares Islands with their steep cliffs only to be viewed from Zodiac boats (Fig. 2). The vegetation grows in deep peat soil full of breeding seabirds where the endemic *Olearia lyallii* (Fig. 3) reaches 5 m or more tall, and its tangled branches cover the myriads of muttonbird nests. The yellow-flowered tree daisy, *Brachyglottis stewartiae*, along with *Veronica (Hebe) elliptica* (Fig. 4) covered in white flowers were hanging off the rocks. The megaherb *Stilbocarpa robusta* (Fig. 5), the endemic *Anisotome acutifolia* (Fig. 6), *Asplenium* ferns and

*Poa* grass draped down to the tide edge. Snares crested penguin (Fig. 7), numbering around 60,000, and three albatross species nest here (Fig. 8), as well as New Zealand fur seals (Fig. 9) and New Zealand sea lions in small numbers. All aboard again to continue on our journey.



Fig. 2 Viewing the Snares coastal cliffs from a Zodiac inflatable.



Fig. 3 *Olearia lyallii*, the subantarctic tree daisy.



Fig. 4 *Veronica elliptica*.



Fig. 5 *Stilbocarpa robusta*.



Fig. 6 *Anisotome acutifolia*.



Fig. 7 Snares crested penguin.



Fig. 8 Buller's mollymawk, one of the smallest of the albatrosses, nesting among *Veronica elliptica* in flower.

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Fig. 9 New Zealand fur seal.

Overnight we travelled on to the Auckland Islands in choppy seas, in a small 5 metre swell, cold and windy. Now about 465 km out from Bluff, we landed in a sheltered cove, with thick bull-kelp covering the rocks and the tiny Auckland Island teal bobbing about in the surf (Fig. 10). Our Zodiac dropped us on shore and we had a short walk past clumps of healthy southern nettle, *Urtica australis* (Fig. 11), to a long sandy bay where prone New Zealand sea lions were having their pups, and the huge beach-masters, 1000 kg bull-seals (Fig. 12), kept guard over their harems. The seals come up to us to sniff and then turn away to resume skua patrol as the birds (Fig. 13) were looking for afterbirth and dead seal pups. A few yellow-eyed penguins strolled about, going up to their nests in the scrub.



Fig. 10 Auckland Island teal.



Fig. 11 *Urtica australis* (foreground) and *Asplenium obtusatum* (background).



Fig. 12 Hooker's sea lion bull.



Fig. 13 Skua and Hooker's sea lions.

The plant life is rich on the Auckland Islands (the largest of New Zealand's subantarctic islands) having more than 200 recorded species. Dwarfed southern rātā forest, *Metrosideros umbellata*, is impressive with other trees making 15 m tall (Fig. 14), and their brilliant scarlet flowers were just opening amongst the foliage of green, red, bronze and almost violet shades (Fig. 15). There were masses of ferns, including *Polystichum vestitum* (Fig. 16) of large dimensions and *Asplenium* (Fig. 17) and *Blechnum* (Fig. 18) in the open areas. Tangled clumps of weeping matipo, *Myrsine divaricata* (Fig. 19), give some shelter to flat exposed areas of the Auckland Island gentian, *Gentianella cerina* (Fig. 20), of violet to white flower colours. Many other small herbs grow there (Fig. 21–32), interspersed with orchids (Fig. 33–34), small ferns (Fig. 35), clubmosses (Fig. 36–37), lichen, mosses, and tiny fungi species.



Fig. 14 *Metrosideros umbellata*, taller trees.



Fig. 15 *Metrosideros umbellata*, just starting to flower and with coloured new foliage.



Fig. 16 *Polystichum vestitum*.



Fig. 17 *Asplenium obtusatum*.



Fig. 18 *Blechnum chambersii*.



Fig. 19 *Myrsine divaricata*.



Fig. 24 *Colobanthus muscoides*.



Fig. 29 *Montia sessiliflora*.



Fig. 20 *Gentianella cerina*.



Fig. 25 *Epilobium* species.



Fig. 30 *Phyllachne clavigera*.



Fig. 21 *Acaena minor* var. *antarctica*.



Fig. 26 *Gentianella concinna*.



Fig. 31 *Phyllachne colensoi*.



Fig. 22 *Anaphalioides bellidioides*.



Fig. 27 *Kelleria lyallii*.



Fig. 32 *Plantago triantha*.



Fig. 23 *Astelía subulata*.



Fig. 28 *Leptinella plumosa*.



Fig. 33 *Aporostylis bifolia*, the odd-leaved orchid.



Fig. 34 *Chiloglottis cornuta*, the green bird orchid.



Fig. 35 *Schizaea australis*, the southern comb fern.



Fig. 36 *Lycopodium fastigiatum*, the alpine clubmoss.



Fig. 37 *Lycopodium scariosum*, the creeping clubmoss.

The most spectacular plants of the Auckland Islands are undoubtedly the megaherbs, including *Stilbocarpa*

*polaris* (Fig. 38), usually placed in the Araliaceae family, with large pleated foliage and umbels of fruits, and *Anisotome latifolia* (Fig. 39), a giant member of the carrot family (Apiaceae), with glorious cauliflower-type heads of flowers in purples to pinks, and paler lavender forms. *Pleurophyllum* are the crowning glory giants of the perennial daisy family, with *Pleurophyllum criniferum*, *P. hookeri* and the spectacular *P. speciosum* all in flower when we visited them.



Fig. 38 *Stilbocarpa polaris*.



Fig. 39 *Anisotome latifolia*.

*Pleurophyllum criniferum* (Fig. 40) has rounded greenish-grey leaves with brown button flowers on 50–90 cm stems. *Pleurophyllum hookeri* (Fig. 41) has pointed silver leaves and smaller stems 50 cm or so tall with brown button flowers. *Pleurophyllum speciosum* (Fig. 42) has large pleated silver leaves that are covered in hairs, keeping the temperature five or more degrees warmer in the pleats. This giant has flower stems 1 m or more in height with large flowers that are blue, violet, pink and all tones in between. Interestingly, there are a number of hybrids (Fig. 43) with varying length of petals in shades of warm violet-blue.



Fig. 40 *Pleurophyllum criniferum*.



Fig. 41 *Pleurophyllum hookeri*.

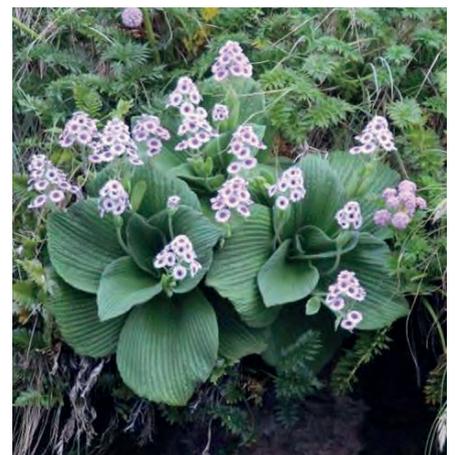


Fig. 42 *Pleurophyllum speciosum*.



Fig. 43 *Pleurophyllum criniferum* × *speciosum* hybrid.

We had a day trip to the defunct Hardwicke settlement, now a forest of rātā, with masses of ferns and the tiny orchid *Corybas oblongus* with maroon flowers and sporting a white 'beard'. This orchid was popular with the photographers and had a number of portraits taken (Fig. 44). In the early days cultivation of vegetables had been trialled at the Hardwicke settlement but with the soils being acid peats, plus the adverse weather, they fortunately failed any efforts made. Considering the lush native plants compared to the failure of cultivated food crops, I wonder if mycorrhiza associations help the native plants to flourish in such poor soils?



Fig. 44 *Corybas oblongus*.

Ever onwards we sailed overnight to our last stop – Campbell Island (Fig. 45) a further 270 km southwest of Auckland Islands. It was a nasty night in the furious 50s, with huge seas. Now that this island is free of pest species, including rats, sheep, horses, cattle and (for most of the time) humans, the environment appears to have recovered.



Fig. 45 Campbell Island with *Anisotome latifolia* in the foreground.

The first day on Campbell Island was a short walk through massed flowers of *Bulbinella rossii* (Fig. 46A–B) in full golden flowered glory, like huge

hyacinths, with numbers of albatross nesting and having reunion parties. The wind in all its fury was blowing some of the lighter folk over, but what an amazing day of botanical wonder.



Fig. 46 *Bulbinella rossii*. A, field of plants. B, close-up of plant in flower.

The following day provided the option of Zodiac boating or a 12 km hike through some tough going. So the party split, and I opted for the hike! Sure of a trip to a wonderland of plants, the track climbed steadily through massed *Pleurophyllum*, *Bulbinella*, *Anisotome*, past albatross nesting (Fig. 47), sitting tight in the short hailstorm, then further on to a rest for lunch with the black-eyed daisy, *Damnamenia vernicosa* (a subantarctic monotypic genus closely allied to *Celmisia*; Fig. 48), massed *Dracophyllum* scrub (Fig. 49), *Coprosma foetida*, orchids, and then onwards in the falling snow. Traversing soggy peat tracks with seal wallows, someone tried one on for depth! Onward, down to the coast with amazing scenery, seascapes and smaller Islands. Now quite damp, with showers of rain and huge tussocks over my head, we made our way down onto the beach past reclining elephant seals and their pups (Fig. 50) which gave us a smile! Near the end of the hike was a cave shelter for refreshments and a beautiful clump of *Ranunculus pinguis* (Fig. 51) in full flower. Then we made a last effort down to a cove, and by now we were all very cold and wet (Fig. 52). What an amazing day for a last goodbye to a group of elephant

seals, before heading back to the mothership for a hot shower. It had been a trip to another world and a privilege to be able to enjoy jewels of the southernmost South Pacific.



Fig. 47 Southern royal albatross on nest.



Fig. 48 *Damnamenia vernicosa*.



Fig. 49 *Dracophyllum* scrub.



Fig. 50 Elephant seal and pup.



Fig. 51 *Ranunculus pinguis*.



Fig. 52 Terry Hatch in full subantarctic kit.

#### Historical discovery

In November 1791 the Snares Islands (Fig. 53) were discovered by the Europeans. Traces of earlier discovery have been found and a few Polynesian artefacts collected.

Discovery of the Antipodes, Auckland and Campbell Islands followed from 1800 to 1809 and by 1810 all the Subantarctic Islands were on the map. The subantarctics abounded in life which was to be ruthlessly destroyed, whales for oil and bone, seals for skins and oil, elephant seals for oil, and penguins also for oil.

Many other birds and plants would be collected for specimens. Most of the animals were taken to the verge of extinction, hundreds of thousands of seals for 'top hats' and perhaps millions of penguins for oil used in rope making and machine lubrication.

In the procurement of these products numerous shipwrecks and loss of human life was expended as British, Norwegian, American, French, and sundry others all rushed to the bounty and bonanza to be had. By the early 1900s the animal life had plummeted.



Fig. 53 Snares Islands.



Fig. 54 Campbell Island.



Fig. 55 Historic cemetery at Hardwicke settlement, Port Ross, Enderby Island.

During those early years, 1866–1868, pigs were liberated on Campbell Island (Fig. 54), weka released on Enderby Island, plus the bonus of rats and mice from ships. There was a whaling base in 1849 which soon failed, and a human settlement on Enderby Island in 1849 that would exist for two years and then fail, leaving behind a small cemetery (Fig. 55) and a pile of bricks. In 1880 Andreas Reischek, an Austrian taxidermist, naturalist, ornithologist and collector, would blast away at the birdlife, using his gun for profit.

Scientific visits were made by Sir Joseph Hooker and David Lyall who made collections of plants which formed *Flora Antarctica (The Botany of the Antarctic Voyage of H.M. Discovery Ships Erebus and Terror in the years 1839–1843)* in 1844, and in 1890 Thomas Kirk visited the Islands and made further collections. Other collections of flora and fauna were made in the 1900s of which most went overseas, and in 1903 Leonard Cockayne collected extensive plant specimens. A large expedition

organised by the Philosophical Institute of Canterbury was made in November 1907 and incorporated all the sciences which resulted in two large volumes printed in 1909.

From 1874 leases were let out to sheep ‘farmers’ and the initial introduction of several hundred sheep escalated to 8,000 by 1907. Thirty-six years of sheep desecration of the flora followed, plus the disruption of nesting albatross sites through lack of cover. And the Government had a loss of revenue which in those days was the large sum of 40 pound per year. Even today’s archaic fishing methods are killing wildlife around the area.

On a brighter note the sheep are gone, rats were eradicated from Campbell Island in 2001 and mice from Antipodes, with perhaps now only a few pigs and cats remaining on the Auckland Islands, and a few tourists now and then. The history for such a remote place is huge and there are a number of books for reference that tell their story.

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