

Fungi of Matiu / Somes Island

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There is always something a bit unworldly about an island, a sense of being removed from the mainstream of life, even if only by 3 km of water—and so it is with Matiu / Somes Island in Wellington Harbour. How do you go about explaining the presence of 54 species of macrofungi, observed over a period of 23 years, when in 1872 it was noted by a Wellington newspaper article that the island was bare apart from three native palms on the east side, and ferns, toetoe and a species of cotton in a ravine near the lighthouse on the south end? A closer look at the island's history gives many clues.

From earliest days, in about the first half of the 14th Century, after Kupe found and named the island, various tribes fled to it in times of intertribal strife, built two fortified villages, developed kumara patches and gathered shellfish, birds, fish and edible roots. It wasn't continuously occupied because of a water shortage and there are no records of the island's vegetation from this time.

About 1820 saw whalers and sealers arrive, and the 1840s brought European settlers. It was recognised as a convenient place to off-load those carrying exotic diseases to either die and be buried there or be released when proven healthy. Settlers were fumigated in a brick smokehouse and their clothes and bedding burnt on the beach. Accommodation had to be built to house them, healthy people to the island's north and sick people to the south. Locally sourced materials were used as well as imported. One wonders what fungal spores there were on shoes, clothing, and introduced plants.

For a short time in the 1840s, and then before the last world war, picnickers sometimes visited, as the island was a protected habitat of birds and lizards. Primaeval forest had long gone but there were a few pockets of shrubs grown from old seed banks and seeds brought by birds and wind.

In 1872 the island was exempted from sale and reserved to the Queen for a quarantine station, and subsequently its tradition of exclusivity was perpetuated when it was used as an animal and bird quarantine station and prisoner of war camp in the two world wars. By 1877, Australian eucalypts and English firs had been planted, maybe by lighthouse keepers, for shelter and firewood and the commonest plants were toetoe and flax. Two cabbage trees grew in a cleft and ferns were seen only on the island's shady side. There were a few wild cats, many rats and two goats. No sheep were allowed at first, lest their wool carried infection to the town.

One hundred years later some Ministry of Agriculture staff and members of the Royal Forest and Bird Protection Society, mainly from Lower Hutt, began

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to augment the patches of vegetation which straggled mainly around the fringes of the island. The largest was quite a pocket of karaka, ngaio, karo, pōhutukawa and prominent pines above the wharf. Flaxes survived well even in the windiest spots. *Olearia*, taupata, *Muehlenbeckia*, a few pūriri, native fuchsia and even a whau began to be joined by thousands of trees native to the surrounding hillsides. The last hillside has now been planted and non-native species are being removed.

It is interesting to wonder what types of fungi lurk in the soils. In the rich soils of the areas where the lighthouse keepers and quarantine workers kept flocks of sheep, the edible *Agaricus campestris*, species of *Chlorophyllum* and *Lycoperdon* are found. The various species of *Pinus* growing on the island proved treasure troves because of their age. In grass amongst their roots are red and white *Amanita muscaria* and big, fleshy, brown-capped *Lepista nuda* with bright purple gills and white, purple-flushed stipes. On one ancient storm-wracked *Cupressus macrocarpa* were two prized specimens of *Tyromyces setiger* with its bristly upper surface and distinctive blue-white tints. Other conifers held shelf fungus *Phellinus wahlbergii*, bright orange *Pycnoporus coccineus* (formerly mis-identified in New Zealand as *P. cinnabarinus*), the ruffled fan-shaped and striped brown, orange, grey and green *Trametes versicolor* and the hairy *Trametes hirsuta*.



Tyromyces setiger.

Photos: Ron & Angela Freeston.

Fallen and decaying branches and twigs of karaka, pōhutukawa, ngaio, karo, pūriri and *Leptospermum scoparium* are difficult to identify but held many fungi. There are delicate cream-coloured, kidney shaped *Crepidotus mollis* and *C. variabilis*; thick, brown, ear-like *Auricularia cornea* and droves of radially grooved bell-like *Coprinus disseminatus* that change colour from cream to grey and have a striking yellow apex.



Chlorophyllum rachodes (left) and *Favolaschia calocera*.

As logs fall and age they often have a succession of colonisers; a group of orange-brown pointy capped *Galerina* sp. one year, the next invariably a velvety net-patterned *Pluteus velutinornatus*, and later the black, white spore-tipped dead men's fingers of *Xylaria hypoxylon*. Before complete disintegration of *Leptospermum* branches, the fresh pink splotches with white woolly margins of *Aleurodiscus ochraceoflavus* are seen. Cut ends of logs are preferred habitat of the tiny jelly-like fingers of *Dacrymyces stillatus*, and on the old roots are often large, bright orange specimens of *Gymnopilus junonius* with caps up to 15 cm diameter and wide rings on their stems. Wound sites on old ngaio trees hold *Marasmius* sp. and about 10 years ago fallen branches began to be coated with drifts of *Favolaschia calocera*, a charming orange fungus with little holes on the underside. This fungus, from Madagascar, first appeared in New Zealand about 1970 and is a widespread invasive species likely to compete with native species. It is always a pleasure to find twigs with 'birds nest' fungi (*Cyathus olla*) with its little round cups filled with egg shaped spore packets, ready to be splashed out by a drop of rain.

The distinctive brown circular caps of *Polyporus arcularius* made their trip to the island on a sheet of plywood used in the nursery where indigenous native plants are propagated. The bright red *Stropharia aurantiaca* grow happily in the sawdust between the rows there. In the soil and potting mix in the plant pots *Inocybe* sp. flourish and over the past three years are making their way down zigzag paths beneath the nursery. Leaf litter is always a rich source of fungi and Matiu/Somes Island had *Paurocotylis pila*, a species similar in appearance to *Lyophyllum decastes*, the ubiquitous *Laccaria laccata* and the lacy basket-like *Ileodictyon cibarium* with its odorous spore filled gleba. By far the most exciting find was a species of *Amanita* with a pointed cap and stipe thickly covered with felty grey scales.

A very distinctive *Amanita* species known only from New Zealand.

