



Mamaku Point

CONSERVATION RESERVE

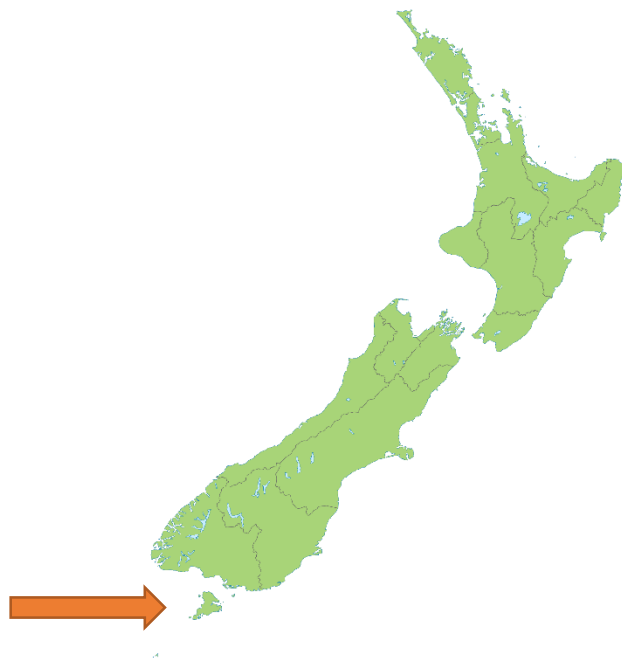
FUNGI AND LICHEN

Biol. Silvia Rodríguez



MAMAKU POINT

Located in Stewart Island / Rakiura, close to Oban township, between Horseshoe Bay and Lee Bay, in New Zealand / Aotearoa.



The Reserve has 172 hectares and it is enclosed by a 2.1 km long biosecurity fence, that prevent other non-native mammals into the Reserve, also it is marked by lines to monitor it.





FUNGI AND LICHEN RESEARCH

I choose to do a research about fungi and lichen, so we can understand its importance in the reserve and have some information about what kind do we have.

The method I used was to walk 6 lines (3, 4, 7, 8, 9 and 20), looking for fungi and lichen, take pictures and then identify them.

FUNGI

Fungi have no chlorophyll consequently they cannot photosynthesis and are unable to use sunlight to make sugar, like animals they are dependent directly or indirectly on green plants for their food materials.

Fungi are decomposers, they are breaking down organic matter all the time, releasing minerals back into the soil to be taken up by other plants. For much of the time they do this work invisibly, fungi are the fruiting bodies of organisms that spend most of their life buried underground in the form of a fine tangle of threadlike strands called hyphae. When large amounts of hyphae come together it is called the mycelium, which can be seen with naked eye. From this mycelium new fruiting bodies are formed.

Some are parasites, they develop at the expense of living trees, being able to attack the weak ones; others live in close association with the living roots of plants, to mutual advantage, the fungus facilitates the assimilation of mineral materials necessary for the growth of the trees while they produce organic products favorable for the development of the fungus.; many are saprophytes, growing on the dead parts of other organisms, on dead branches, fallen trunks or open wood, helping to decompose them.

We can also find edible, medicinal and toxic fungi.

LICHEN

Lichens are fungi's that live intimately with unicellular algae in a symbiotic way and they have bodies that do not look like algae and do not often look much like fungi either. They are mostly Ascomycetes fungi associated with algae Chlorophyceae and Cyanophyceae.

Lichens can colonize the most diverse substrates, approximately 8% of the total surface of the Earth. We can find them in visible shapes of the trunks and the branches of the trees, up to the microscopic size.

They have been used in popular medicine for their antibiotic properties, also for industrial purposes, as producers of dyes, in perfumery and decoration.

Currently, they are used as indicators of environmental pollution, if they are found in places with pollution, they are the first organisms that disappear, they are very susceptible and the variations of the physical and chemical characteristics of the environment are recorded. There are a few families that can remain in contaminated places.



FUNGI AT MAMAKU POINT



Kingdom: Fungi **Phylum:** Ascomycota **Class:** Pezizomycetes **Order:** Pezizales **Family:** Sarcosomataceae
Genus: Plectania **Species:** *Plectania Campylospora*



Kingdom: Fungi **Phylum:** Ascomycota **Subphylum:** Pezizomycotina **Class:** Pezizomycetes
Subclass: Pezizomycetidae **Order:** Pezizales **Family:** Pyronemataceae **Genus:** Scutellinia
Species: *Scutellinia colensoi*

* The images described (classification of fungi and lichens) may contain erroneous information since they were only identified by photographs.



Kingdom: Fungi **Phylum:** Basidiomycota **Class:** Basidiomycetes/Agaricomycetes **Order:** Agaricales
Family: Mycenaceae **Genus:** Mycena **Common name:** Waxgill fungus



Kingdom: Fungi **Phylum:** Ascomycota **Class:** Pezizomycetes **Order:** Pezizales **Family:** Tuberaceae

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Kingdom: Fungi **Phylum:** Basidiomycota **Class:** Agaricomycetes **Order:** Agaricales **Family:** Psathyrellaceae
Genus: Parasola **Common name:** Japanese Umbrella Inkcap, Pleated Inkcap



Kingdom: Fungi **Phylum:** Basidiomycota **Class:** Agaricomycetes **Order:** Agaricales
Family: Bolbitiaceae **Common name:** Yellow Fieldcap



Kingdom: Fungi **Phylum:** Basidiomycota **Class:** Agaricomycetes **Order:** Polyporales **Family:** Ganodermatacea
Common name: Ganoderma, Shelf mushroom, Bracket fungus

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LICHEN AT MAMAKU POINT



Kingdom: Fungi **Phylum:** Ascomycota **Class:** Lecanoromycetes **Order:** Pertusariales **Family:** Icmadophilaceae
Genus: Dibaeis **Species:** *Scutellinia colensoi*



Kingdom: Fungi **Phylum:** Ascomycota **Class:** Lecanoromycetes **Order:** Peltigerales **Family:** Lobariaceae **Genus:** Pseudocyphellaria **Species:** *Pseudocyphellaria* spp. (about 50 species in NZ) **Common name:** Specklebelly lichens. Wool-dyers lichens. *Orange fungal spore cups on top.

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Kingdom: Fungi **Phylum:** Ascomycota **Class:** Lecanoromycetes **Order:** Lecanorales **Family:** Parmeliaceae



Kingdom: Fungi **Phylum:** Ascomycota **Class:** Lecanoromycetes **Order:** Lecanorales
Family: Cladoniaceae **Genus:** Cladonia

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CONCLUSION

After doing this little research on fungi and lichens at Mamaku Point, I have realized that, although sometimes it is small and sometimes even invisible to the naked eye, this element of nature accomplishes a great function by degrading the matter to reintroduce it as elements and nutrients to the soil and these are used by the plants. It can also give us valuable information about the ecosystem, as it is an environmental indicator in relation to pollution, diseases and pests.

It is also important to know the species of fungi and lichens found in Mamaku Point to have an idea of how the ecosystem is conformed and keep a record of them for later studies. It could also help us to understand the dynamics of this reserve because it is isolated, since we could find unique species in it.

Because we are classifying the species found by photographs, we can not guarantee the correct information of them, but this research is intended to show the importance of fungi and lichens in the natural reserve and show some of the species that can be found in it.

GRATEFULNESS

I want to thank Mamaku Point for allowing me to do this little research, to Roy and Rachel Thompson for opening the doors of their company, to Antony Simpson for receiving me and showing me the natural reserve, Steve Black for sharing his knowledge and in last but not least to Ernie and Kathleen who showed me the essence of the place.

The time I spent in Mamaku Point allowed me to walk through the nature reserve finding an exceptional nature, a place with little impacted by the human and for being isolated has allowed nature to develop without concern of predators. It is a magical place where you can connect hundred percent with nature.

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