

Chile Travel Scholarship Funding Report

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Kew Diploma Student

Course 58

Trip undertaken January 2023

Aims of trip

To gain an indepth understanding of the conservation practices around Chilean endemics in and ex situ at various sites including the Atacama Desert, Zapallar Coast and Valdivian temperate forest. In addition, gain a wider knowledge of horticultural practices and techniques and build local connections.

Objectives

Zapallar – visit the El Bordo and Cerro de la Cruz conservation projects, volunteer at these projects and produce a report for RBG Kew on the current status previous collaborative conservation efforts. See how varied Chilean endemics are grown and reintroduced into these projects, and how issues like invasives and erosion are managed.

-visit BioParque Puquen to see an established conservation projects with many endemic species of flora and fauna successfully grown and managed in a project open to the public

-Visit Vina del Mar Botanic Garden where Chilean natives are displayed

-Visit San Cristobal and Quinta Normal Park in Santiago where natives from around Chile are grown

-Visit Valdivian Nursery supplying Chilean conservation projects with endemics and native species, participate in a seed collecting trip

-Lago Ranco, Valdivia tour including visit to old growth Laurel forest

-Parque Oncol visit – lots of temperate forest natives and endemics

-Cajon de Maipo tour Santiago, visit mountain habitat at alitiude and alpine meadows

-Compare and contrast the different habitat zones, as travelled through Meditteranean, desert and temperate rainforest areas, each with very distinct plants.



Fig 1. BioParque Puquen showing a mix of succulent and Mediterranean species growing on rocky outcrops at the coast.

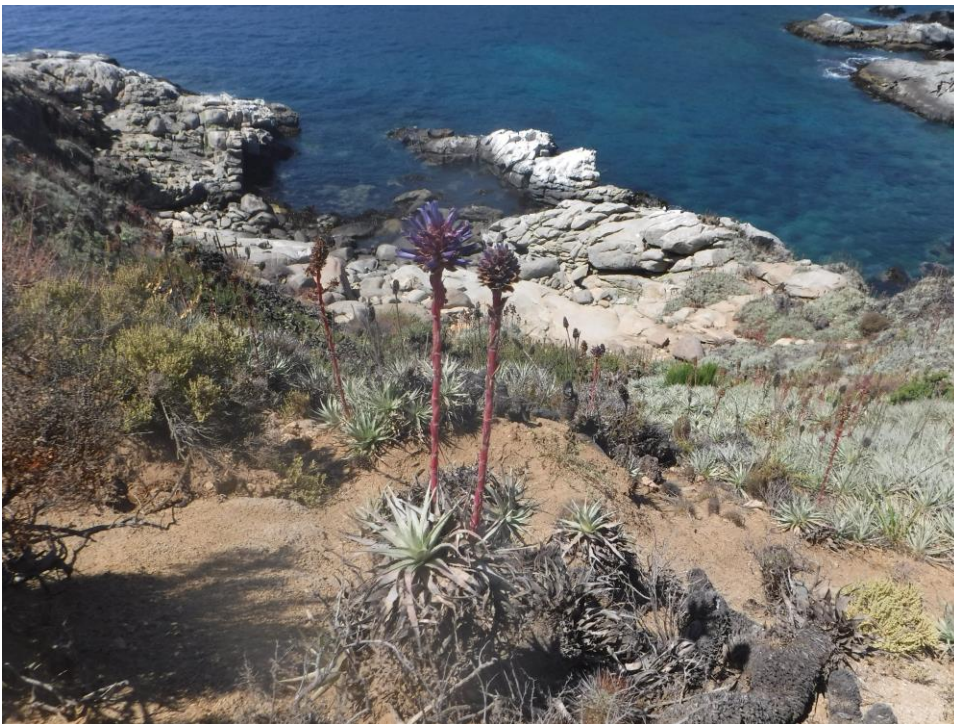


Fig 2. *Puya venusta* common name Chagual. Growing at BioParque Puquen on the Zapallar coast



Fig 3. Beautiful but invasive *Mesembryanthemum crystallinum*, seen at Cerro de la Cruz project. This succulent was removed from the reserve as it draws water from the soil and mist, outcompeting other plants. It was removed by hand. I worked with ranger Monte removing these plants, welcoming visitors, preparing paths and clearing debris that washed up on the rocky shore of the reserve.



Fig 4. Valle de la Luna, Atacama Desert, high nitrate and salt levels have been mined historically in this now protected area. Nitrate is used in weapons production and the Chilean refusal to supply nitrate to Germany during the first world war among other factors led to large scale economic depression.



Fig 5. Flamingos at the Ceja Laguna Salt Flats in the Atacama Desert, part of the Los Flamencos nature reserve that stretches for 740km².



Fig 6. Gonzalo seed collecting for his nursery specialising in endemics. Seed is used to propagate native and endemic species which are then supplied to conservation projects around Chile. Population growth and subsequent pollution have affected the flora and fauna around Valdivia, with birds in particular seeking new habitats away from the urban centre.

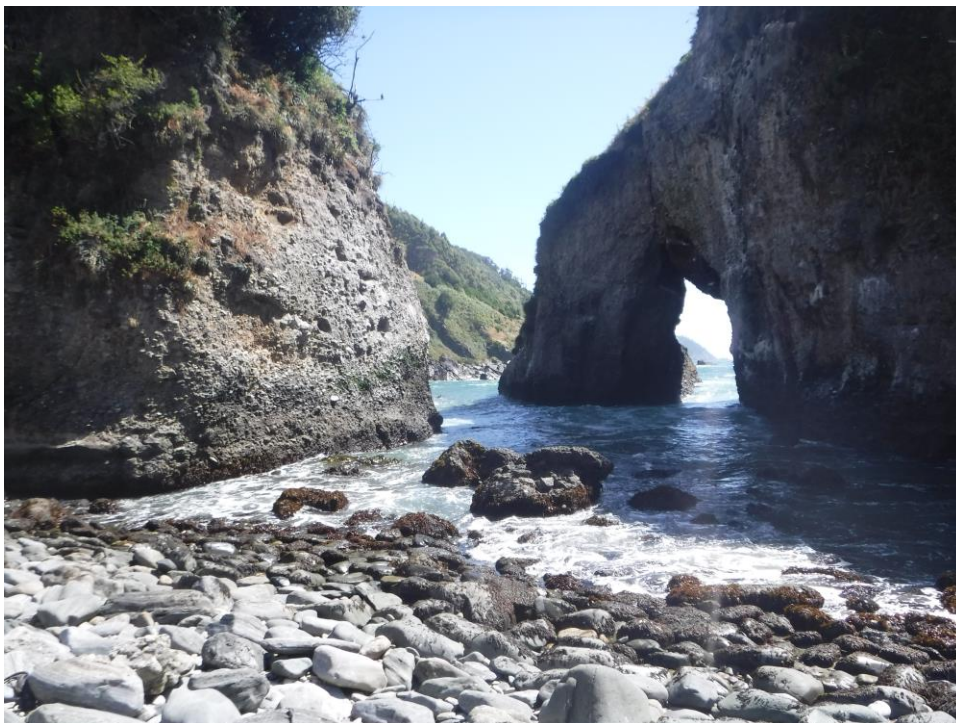


Fig 6. Valdivia coastline and rock formations



Fig 7. Epiphytic endemic *Mitraria coccinea* Luzuriaga *radicans* seen in the old growth Valdivian temperate forest



Fig 8. *Lapageria rosea* common name Chilean bellflower endemic seen flowering in old growth Laurel forest in Valdivia



Fig 9. Valdivian *Eucalyptus globulus* plantation (invasive) showing evidence of logging, areas of clear cut logging were seen with little evidence of habitat restoration.



Fig 10. *Luma apiculata* common name Arrayan endemic – edible fruits, thin bark means that this tree feels cold to the touch, even in the heat of the day. The bark is also soft to the touch. It is a sacred tree for the indigenous Mapuche people. Valdivia.

Conclusion

I was able to over 2,000km around Chile experiencing many different endemics, natives and their habitats as well as gaining insight into conservation techniques and making local connections. I would like to plan a subsequent trip to Patagonia and the National Park Tierra del Fuego as due to the remote nature of this location it was not possible on this trip.

Thank you to the Hardy Plant Society for supplying funding for my trip. It was invaluable and has supported my studies as a Botanical Horticulturalist. I would not have been able to make this trip without your support.

Your support paid for my flights to and from Chile.

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