

# Volunteering Experience in Aotearoa

## Auckland Botanical Gardens

11/11/2025-19/12/2025



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Grants for Young Horticulturists

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## Acknowledgement

This once in a lifetime project would not have been possible without the financial support of the bursaries allocated by Hardy Plants Society, Kenneth Black bursary, Merlin Trust Award and the RHS Travel Bursary. I am so grateful to have been one of the beneficiaries this year as this placement in Auckland Botanical Gardens has enriched my professional career as well as my personal learning. Thank you to the garden team and Barbara Wheeler for taking me on board and sharing their knowledge and passion for native species, especially Angela for her support and in-depth knowledge in local, edible, and traditional plant usage. Finally, thank you to my friends and family for cheerleading me through this experience, particularly Nathan, my husband, without whose support this ambitious venture would not have taken place.

## Introduction

In the context of climate change, it is important to anticipate the future of changing environments and growing conditions, be it for edible or ornamental production. Aotearoa, New Zealand is an excellent example of conservation, and biosecurity success is present everyday through the resurgence of native and endemic flora, fauna, and fungi species.

Although as a horticulture student the primary goal of this visit was to focus on plants, conservation and habitat maintenance goes hand in hand with the development and well-being of fauna and fungi species. I have been absolutely bewildered by the diversity and beauty of the bird population in urban areas such as South Auckland, which testify to the fantastic work of education and conservation effort put in place by locals and governmental groups.

## Work placement initial objectives

My initial learning objectives were as follows:

- Gain theoretical knowledge specialised in endemic species;
- Gain practical experience in conservation and propagation techniques;
- Experience in five garden areas with a primary focus on nursery tasks;
- Peer learning from experienced horticulturists (i.e. integrated pest and disease management)

Although a lot of the tasks were repetitive and could have been considered basic, working alongside the team has been very valuable. This has been a fantastic learning experience thanks to the knowledge shared as well as the observations and practice I was allowed to take part in.

I did complete my initial learning objectives and learned more than I had anticipated. Flexibility in learning outcomes and how they take shape has been the key to the success of this work placement which offered more than anticipated.

## Auckland Botanical Gardens presentation

Situated on the southern outskirts of Auckland, New Zealand, the Botanical gardens are composed of 18 distinct inner gardens/areas with specialised plants and a nursery. It covers around 64 hectares of land and offers over 10,000 plants to discover which is a delight for local communities and international visitors alike.

Each mini garden is specialised but the flow between them is very natural making it seamless and easy to navigate. The visitors center provides information with various trail options and species-focused itineraries.



Fig 1: Auckland Botanical Gardens, Visitor centre (Bertille, 2025)

The designs and spaces make it very accessible, with several events organised to promote feelings of community, as well as some learning workshops and guided tours.

The cafe and library (sadly closed during my visit due to renovations) are a great addition allowing people to meet, share and learn in all weather.

The diversity of spaces and plant collections permit us to enjoy the beauty in all seasons. You can see the dedication and talent of the horticulture team at every corner.

The 10 hectares of native forest are a perfect oasis in the urban environment for humans and birds alike.

Very important work is taking place at Auckland Botanical Gardens, conserving and developing the endemic and native plants of New Zealand with an emphasis on the Auckland region, which presents a very humid environment.

A major highlight of horticulture practice in these gardens is the choice of pesticide-free and fungicide-free gardening, and educating the public on the benefits.

Sustainable practices are at the heart of the development and commitment by the team of horticulture experts working here.

There is an extensive part of the garden dedicated to plant trials, permitting observation of growing results of certain plants to see which ones thrive the most in the environment, upkeep and care provided in the gardens. The aim is mainly to understand which would be best suited to the area.

Throughout the garden you can see experiments to reduce water consumption. There are also a number of low-tech solutions, such as lasagna layers planted in the orchards to try to reduce watering.



Fig 2: Water saving experiment (Bertille, 2025)

New Zealand being much more exposed to the elements than European countries due to its geographical location, climate change is impacting the region faster and more vigorously. While there, I experienced several tropical storms which were stronger than ever experienced and surprised local communities.

Storm water is one of the main causes of damage and incidents. The urban environment provides very little land for water to be absorbed, excess water has nowhere to evacuate. Throughout the gardens you can see examples of technology to capture, treat and reuse the water, such as living roofs on certain buildings, rain gardens, Riparian planting preventing erosion, permeable surfaces allowing water to seep through, water pathways redirecting excess water to ponds and wetland areas. These are further examples of the team's commitment to sustainability, and concrete solutions to difficulties that are already in need of being addressed in the U.K.

Due to biosecurity restrictions, most of the plants currently at the gardens have been grown, propagated or developed in New Zealand, with specimens collected (rescued) from the wild, local to the region.

Agreements have been put in place with certain Pacific islands and Australia, allowing some movement of plants into the country, but it is very interesting to see the difference in labeling between UK botanic gardens and Auckland Botanic Gardens in terms of provenance. This allowed me to participate in a small portion of specimen propagation from the garden for other gardens around the country.

Another way the gardens play a vital role in conservation is the partnership with organizations trying to promote habitat preservation and native species protection. During my stay I helped the

amenity team providing a conservation group from the islands with *Griselinia littoralis* as bait for invasive wallabies destroying native plants and habitat.

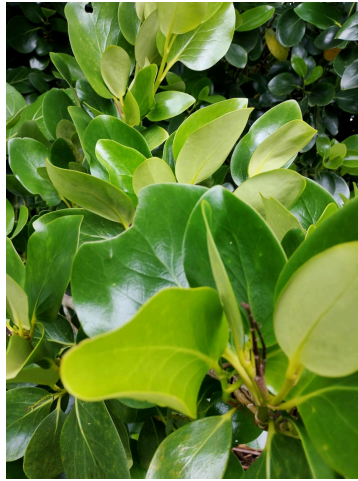


Fig 3: *Griselinia littoralis* (Bertille, 2025)

The gardens play a vital role in local conservation as well by creating biodiversity. Tūī, Kererū, Pūkeko and eels are all thriving within the facilities.



Fig 4: Tūī feeding on Harakeke nectar (Bertille, 2025)



Fig 5: Kererū feeding on Kōwhai (Bertille, 2025)

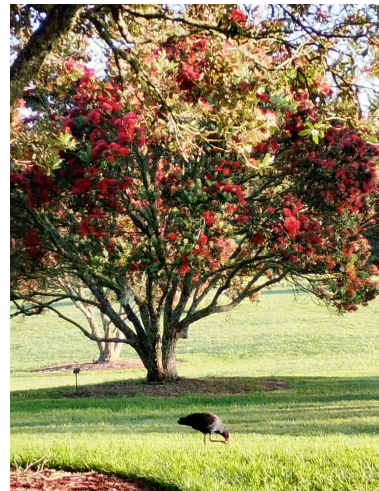


Fig 6: Pūkeko grazing under Pōhutakawa (Bertille, 2025)

Each small garden brings plants and designs that allow diversity. Although it is strange to see Tūi flying over African plants, it is a testimony of the ingenious design work of the team to promote biodiversity through the incorporation of both native and exotic plants.

The diversity makes your journey through the gardens relaxing while keeping your interest and playing with the seasons.

## Placement diary

I had the opportunity to meet and work alongside this brilliant team in November and December 2025.

I really enjoyed being able to assist across the various collections and gardens. It allowed me to not only learn about different types of plants but also observe and learn from different professionals, each with their own expertise, passions and techniques.

My primary focus for this volunteering experience was the endemic and native plants of New Zealand, but I am also very grateful to have been able to widen my experience with "common" garden plants. It has allowed me to further my education and practice for my future employment.

The nursery provided a view on the work behind-the-scenes. A lot of the plants for DOC sites (Department of Conservation) are grown and propagated here. It was a fantastic experience to witness endemic plants from seedlings but also very precious endangered species up close. I was fortunate to join the team multiple times allowing me to really get into the routine and be able to identify certain plants. The morning weeding sessions enabled conversations with each of them and extended my knowledge about plants and horticulture's role in the context of climate change.

My main role was to repot, divide, spot check, and organize plants per curated area.

I developed a special interest in Harakeke, *Phormium tenax*, New Zealand Flax. Working in the nursery allowed me to see the full growing process and evolution from seeds, to young plants, mature plants, to transformation and usage by local communities.

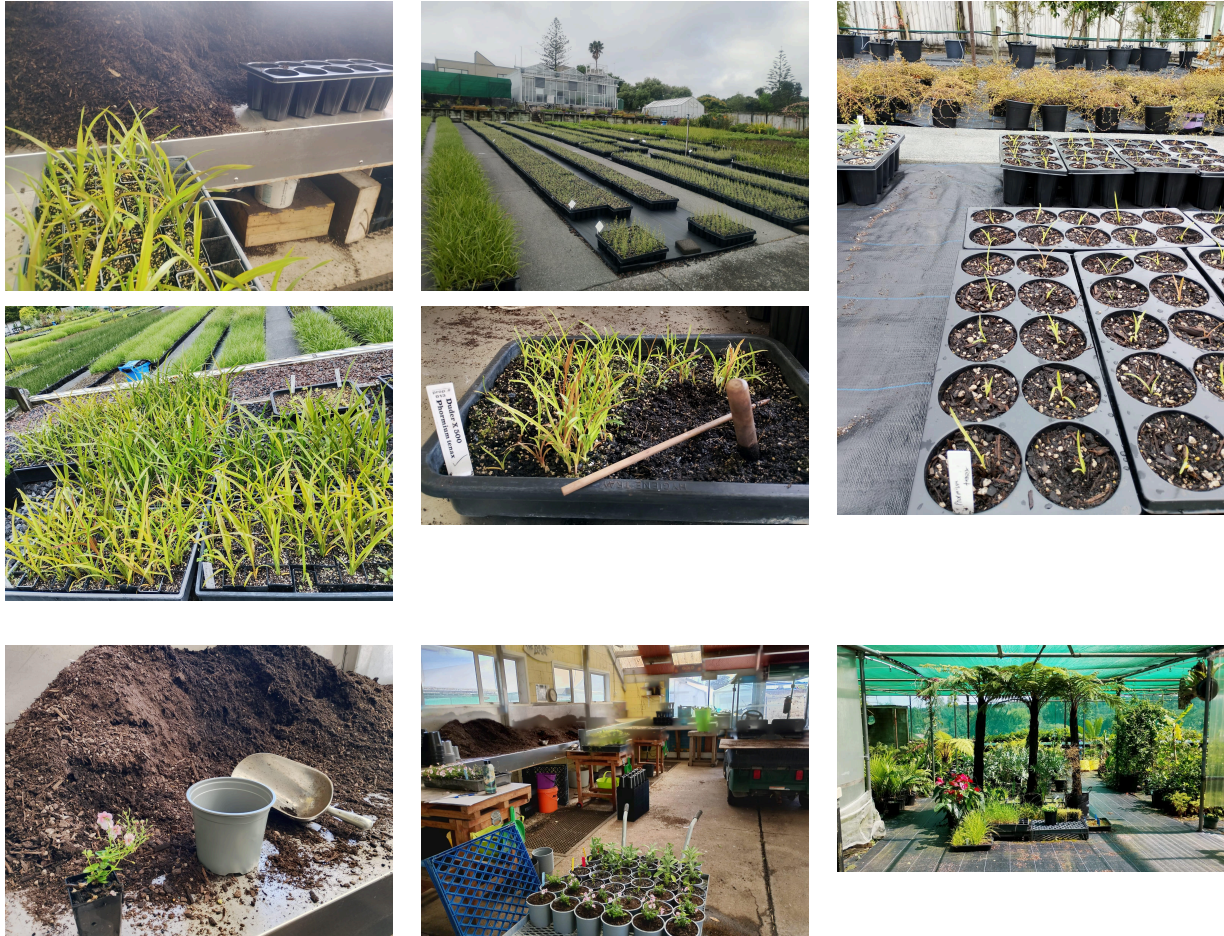


Fig 7: Overview of Auckland Botanical Gardens' Nursery (Bertille, 2025)

On my field days, due to lack of experience and the season, the tasks were often focused on weeding, trimming shrubs, deadheading flowers and tidying the areas to keep the gardens presentable and welcoming. The time spent in the field provided me with an opportunity to learn more about the upkeep of certain plants, being able to ID more species, the ins and outs of working in a botanical garden and witnessing the benefits of such spaces to the community.

Starting my experience at the herb garden, this was a perfect introduction to meet a threatening pest. While weeding the beds I encountered paper wasp, *Polistes humilis*, nests. Working with other trainees is great as they were able to inform me that those specific wasps aren't beneficial to pollinisation and are in fact invasive and problematic for other native insects. Once shown how to eliminate it the conversation around pests impacting the native biodiversity was rich in insights.

While working alongside the Harakeke team lead I was able to learn how to harvest the Flax leaves properly respecting tikanga. I was also invited to participate in a weaving workshop in the very recent Te Puna Raranga weaving shelter. The Pā Harakeke collection regroups very impressive amounts of *Phormium* which allow various textures, colours and usage in traditional

utilisation and weaving projects. Be it for cooking, dyeing, clothing, building wall panels, or nautical cordage, this plant is very important in Maori culture and I am eager to keep learning about it.

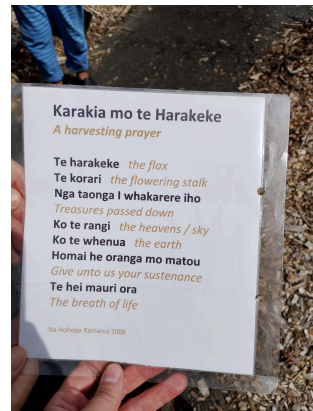


Fig 8: Harakeke heritage (Bertille, 2025)

I also had the opportunity to be working alongside the team looking after the native plants, trails and garden which was perfect to learn more about New Zealand plants, endangered species and their preferred growing conditions, how to look after them, and their role in diversity.



Fig 9: Garden for Native Plants (Bertille, 2025)

During this volunteering experience I also had the occasion of working face-to-face with the public. This was shared between helping out at the front desk of the information center as well as leading activities for children for the Tangled Roots exhibition . It was very interesting to share information about the gardens with visitors and it was a good opportunity to work on skills that are now valuable in my career.



Fig 10: Leading public events (Bertille, 2025)

Being present during the Tangled Roots exhibition was very interesting. The displays were very informative and interactive, and I really appreciate this aspect of making education accessible. The Grass Man performance was definitely a highlight of the exhibition events and learning how his suit was made and the work being it was very impressive. I was glad to be able to participate in a talk given by Ashley Peavor, the research and innovation to create those living costumes demonstrate that horticulture is so varied with infinite possibilities to create.



Fig 11: Tangled Roots Festival (Bertille, 2025)

## Native and endemic plants:

The following plants are some of my personal favourite specimens that I worked with during my stay in Auckland. Tasks varied from simply deadheading and trimming to repotting. The plants highlighted in light blue are hardy which means they are of interest in Europe outside of greenhouses mainly for ornamental purposes, but are also great for reducing erosion and climate adaptability.

### *Kawakawa, Piper excelsum subsp. Psittacorum*

The green and glossy heart shaped leaves coupled with the orange berry give this plant an interesting ornamental stance. It is a part of the pepper family which you can smell when crushing the leaves. This plant is the medicine of the forest, often used during trekking but is an everyday remedy for all.

Relatively easy maintenance and only requires a yearly soil top-up to preserve surface roots. Once established it can withstand drought which makes it perfect for dry regions and the impact of climate change. The young plants may suffer from some pests like caterpillars but once established it is pest and disease free.

Unfortunately, it needs to be looked after during winter time as it is cold sensitive.



Fig 12: *Piper excelsum subsp. Psittacorum* (Bertille, 2025)

*Carex flagellifera*, Grasses

Multiple varieties were displayed for the Tangled Roots exhibition.

Great in mass planting providing a spectacular effect, especially on windy days. Offers a very natural-looking garden with various shades of leaves from bright green to gray with brown and bronze tone specimens.

Will thrive in well-drained soil and can tolerate partial shade to sun. Some specimens are very hardy allowing interesting permanent features in gardens.

It needs to be divided from time to time to promote plant growth, as well as cutting seed heads to limit spreading if grown in a limited space.

Rare aphid issues in some types.



Fig 13: *Carex flagellifera* (Bertille, 2025)

Harakeke, *Phormium tenax*

Very hardy, frost-resistant perennial evergreen growing as a clump with long fan shaped leaves. The flowers and seed pods are visually interesting, and a great source of food for local wildlife. It is commonly used for ornamental purposes in Europe but is also a great wind barrier and is often used in conservation areas as ground cover and great food source for native birds. The traditional harvest and care of the plant really interested me due to all the possible uses of Flax. Seeing it in its natural habitat made me change my mind over the aesthetic and use of these plants in our gardens, especially with the great amount of variety in colours and textures. In terms of growing conditions and usage it reminds me of dogwood, Cornus in the British Isles. Harakeke prefers wetland areas with mulch. For best looking plant divisions allow it to thrive and keep expanding.

Millibugs are the only potential issue that could impact the growth and wellbeing of the plant.



Fig 14: *Phormium tenax* (Bertille, 2025)

## *Hebe*

Hardy evergreen shrub , very low maintenance with long lasting and diverse flowers and compelling leaf shapes.

Pest and disease free. Some are even developed to specific regions' characteristics. (ie: *wiri Image Hebe* for Auckland region developed in Auckland botanical Gardens)

There is a wide range of specimens allowing for a beautiful mixed hedge border.

It will grow in poor quality soil, as long as it is well drained and has access to good sun exposure.

Fantastic for pollinators and attracts beneficial insects to the garden.

A yearly pruning will allow them to stay dense and produce more bloom.



Fig 15: *Hebe* - Wiri Mist (Bertille, 2025)

Horoeka, *Pseudopanax ferox*, lancewood

Fascinating evergreen tree with architectural shape given by serrated leaves.

It is very slow growing and the look of the young tree will differ from their mature counterpart.  
Heteroblastic.

Very low maintenance but needs to be grown in well-drained soil due to root rot sensitivity.

Excellent food source for native birds provided by its fruit.

Unfortunately can be a victim of possum damage.



Fig 16: *Pseudopanax ferox* (Bertille, 2025)

**Kānuka, *Kunzea ericoides***

Fast growing hardy ever green, often used to protect slower growing plants in reforestation. Distinct from manuka due to its softer leaves, but has similar flowers, just more profusely present.

It is used for honey production. Auckland botanical gardens have an impressive collection with specimens showing pink hybrid flowers.

It will thrive in poor soil and tolerates frost, growing in inaccessible terrain. It is very important in conservation as well as a food source and shelter to small birds and insects.

It is traditionally used for medicinal tea as well as firewood.



Fig 17: *Kunzea ericoides* (Bertille, 2025)

**Kapuka, *Griselinia Littoralis***

Hardy plant usually used as hedging in coastal areas as the leaves have a special coating resisting salt water. It is loved as shelter for several bird species, also often used as bait for invasive wallabies.

If left untrimmed it can grow up to 15m, but is usually kept low for use as a wind barrier. It prefers well drained soil and full sun exposition.

Mulch needs to be applied yearly away from the stem, and it can be trimmed quite hard to develop more volume.

It is prone to leaf spotting.

**Korokio, *Corokia cotoneaster***

Hardy dense divaricating evergreen providing aesthetic interest as well as shelter for small birds. Great food source for insects and pollinators.

New leaf growth providing bright colours, matching the darker shade of older growth. A spectacular quantity of small, light, yellow flowers and red berries give it a year round interest.

Prefers well-drained soil and partial sun. It is relatively low maintenance and great for hedging.



Fig 18: *Corokia cotoneaster* (Bertille, 2025)

Paranako, *Asplenium obtusatum*, Shore spleenwort

Evergreen fern growing up to 1 meter high, prefers growing in full sun on well-drained soil. The upright frond offers an interesting variety in rock garden collections.

Does need water in very dry periods as well as trimming damaged fronds to keep thriving.

The multitude of fern varieties in New Zealand is exciting and I hope to focus a paper on them soon.



Fig 19: *Asplenium obtusatum* (Bertille, 2025)

Pōhutakawa, *Metrosideros excelsa*

Large evergreen coastal tree with impressive blossoms, can grow up to 4 meters tall.

Very short flowering season up to two weeks during the end of November/ December.

Bright pompom-looking collections of filaments contrast with the dark green/grey leaves.

It is a symbol of Christmas time and is loved by many, painting their windows and creating decorations representing the blossoms

It is relatively resistant to wind and soil conditions but young trees will be frost tender.

Pest and disease free, requires a yearly mulch and trim if in a formal garden.



Fig 20: *Metrosideros excelsa* (Bertille, 2025)

Rengarenga, *Arthropodium cirratum*, Renga lily

Native ground cover providing flowers, contrasting well with long leaves, presents well among ferns. Evergreen hardy perennial which can reach a half-meter high.

They can survive coastal conditions but prefer partial shade.

They tend to spread fast so if grown in a garden, containers might need to be considered.

Mulch yearly for moisture retention and dehead the bloom once past.

Very susceptible to slugs, it is recommended to keep slug bait until fully established.



Fig 21: *Arthropodium cirratum* (Bertille, 2025)

## Personal highlights

Although a consequence of climate change, I was very lucky to see the flowering of the Pōhutukawa tree, the New Zealand Christmas tree. This is one of my favourite memories of this experience as it is a beautiful sight. I was also fortunate to have been involved in the Tangled Roots Festival happening in the garden and experienced the Grass Man performance.

Finally, meeting artists of the Maori community transmitting their knowledge of Harakeke as a plant, the meaning of it for the community and how to use it changed my way of seeing this plant which when in Europe I wasn't enthused about, but within its original context I developed care and interest in it.

## Recommendations (literature, visit period, things to consider)

Spending time in a different country is culturally enriching for everyone, but I deeply recommend it for horticulture students. This is a brilliant opportunity to learn about different plants, environments, ways of working as well as building a network of professionals with which you will be able to exchange ideas throughout your career. If you have the option to participate in a field trip with the team, you will discover other gardens or interesting botanical spaces that will enrich your experience.

For New Zealand specifically, although there is always something growing, depending on your objectives for this voyage, I recommend early spring time. This way, duties will be more varied and you will be able to develop your practical skills with more diversified tasks.

The choice of location will also impact this a lot as each Island and region seems to have micro climates with various growing periods, which does impact the task timetable.

In order to help with plant ID and familiarisation of this new growing environment I recommend reading and learning about specimens prior to arrival as it is really helpful. I provide a short bibliography in this report with valuable resources.

## Conclusion

This opportunity has had a tremendous impact on my professional development as well as personal flourishing.

The practical aspect enriched my knowledge of plants in general with a focus on NZ natives and endemics, growing techniques, local needs and resources deployed to protect it. Through this experience I was also able to redefine which areas I would like to develop and have a better idea of which branch in horticulture I would like to work in. Being a late bloomer in horticulture it has been difficult to access paid positions in this field. Since this experience I have had numerous interviews and managed to secure a position in conservation with heavy horticulture input. This is unquestionably the result of accrued experience and knowledge during this volunteering which I am very grateful for.

Finally on a personal level, I fell in love with the country, language, culture and the people which I hope one day be able to visit again. While this may take some time to happen I will continue to learn about the plants of Aotearoa, their vernacular usage as well as how we can use similar systems with our Northern Irish native plants.

**Thank you for reading**



Kōwhai, *Sophora microphylla* (Bertille, 2025)

## Appendix i - Budget

Element of Project	Spending
<b>Travel</b>	
<b>Return Air Fare</b> From: London To: Auckland	£1386.62
<b>Return Air Fare</b> From: Belfast To: London	£178.52
<b>Bus Fare</b> From Auckland City Centre To: Auckland Botanic Garden 50 NZD per week	£135
<b>Total Travel Cost</b>	<b>£1,700.14</b>
<b>Subsistence</b>	
<b>Accommodation:</b>	
<b>Shared accomodation</b>	£ 1210.13 (all fees included for six weeks)
1 night stay at London Heathrow Going	£70.50
1 night stay at London Heathrow return	£45
<b>Food:</b> 44 days @ £17.5 per day average	£770
<b>Other Costs</b>	
<i>Insurance - £143</i> <i>Visa - £370</i>	£513
<b>TOTAL COSTS</b>	<b>£4,308.77</b>
<b>FUNDING:</b>	
<b>Personal Contribution to the Project</b>	£ 1000
<b>RHS Bursary Award</b>	£ 734
<b>Merlin Trust award</b>	<b>£ 1200</b>
<b>Hardy Plant Society Kenneth Black bursary</b>	<b>£ 1000</b>
<b>Family Support</b>	<b>£374.77</b>

## Appendix ii - Bibliography

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