



Kāti Huirapa Rūnaka ki Puketeraki

Meri Kirihimete 2023

Message From Our Upoko

David Ellison



Christmas greetings to all of you, kia ora koutou katoa. Kā mihi to all Rūnaka members and members of our Executive, various komiti, and delegates standing for us on external boards, and a giant tēnā koe to all our staff.

May you all have a safe and enjoyable Christmas and treasure the blessings that we have.

Arohanui

Christmas Service

Hui te Rangiora Church



The Christmas Service will be held at the church on Saturday 23rd December 2023 at 2 pm

The service will be conducted by The Reverend Tony Curtis, Dean of St Paul's Cathedral.

Everyone is welcome.

Message From our Chairperson

Ko te tuatahi, e te whānau whānui, nāia nei kā mihi o te Kirihimete ki a koutou i tēnei wā.

Ko te tuarua, e mihi whakamaumahara ki a rātou o ia whānau, o ia whānau, kua mene atu ki te po. Haere koutou i ruka i te rakimarie o Te Atua i ruka rawa. Āpiti hono tātai hono kā huka mate ki ka huka mate. Āpiti hono tātai hono, ka huka ora ki ka huka ora. Kāti rā.

E te kākā tarahae, e mihi tino nui ki a koe, e tā mātou Upoko David - tēnā rā koe. Kai te miharo au ki te koha o koutou, hai makai mō mātau. Kia kaha rā. A big thank you David for the contribution you continue to make as Upoko. I know there are many who seek your counsel on matters concerning Te Ao Māori and their relationship with manawhenua. It is a very important contribution you continue to make on our behalf.

Kai te mihi ki kā kāhui kaumātua me kā whānau whānui o tātou i tēnei wā Kirihimete. Another very special mihi to our ahi kā and all our whānau who are living outside the takiwa, in other parts of Te Wai Pounamu or the many places of Te Ika a Māui. Our ability to utilise the technology with teams/zoom has been slowly improving and allowing more of our members to engage directly in our Rūnaka General Meetings.

There's room to make changes that improve the sound quality in the whareniui so I ask for your patience and to hang in there. It hasn't been the easiest of years for anyone with the economic pressures and rising cost of living we are all having to manage. I'm hopeful a good summer will lift our spirits and help us to enjoy the holidays.

E te whānau, have a well-deserved holiday and we'll see you rested and invigorated for what comes our way in the New Year.

Mā te Atua e tiaki, e manaaki i a koutou katoa. Nō reira, tēnā koutou, tēnā koutou, tēnā koutou katoa.

Nā Matapura



Opening of the New Maniototo Area School



On 14 September 2023 the new Maniototo Area School opening was attended by some of our Rūnaka members. From the left, Peter Ellison, Kaitoko Rua McCullum, Dr Richard Davies, Governor General The Rt Hon Dame Cindy Kiro GNZM, QSO, His Worship Tim Cadogan, Mayor of Central Otago, and Kati Huirapa members Jason Te Raki, and Mauraka Edwards.

Guests were given tours of the school by prefects, who showed their pride in introducing visitors to the well-designed science lab, technology block, art room, community library and primary school.

The new \$11 million Maniototo Area School has been a complete rebuild, built in four stages over 2.5 years, beginning in 2021 - starting with the demolition of a block built in 1953 and replacing it with a hard materials classroom, food technology room, science lab, design hub and music/whānau room.

It was my privilege to speak on behalf of the Rūnaka at the official opening of the Maniototo school. To meet the Rt Hon Dame Cindy Kiro and Dr Richard Davies the viceregal consort, for the first time, and their support team who were very helpful with the protocols. The rakatahi were thrilled and on the school tour they were respectful when explaining their various projects. It was altogether a very inspiring occasion.

□ **Nā Mauraka Edwards**



One block of the newly constructed classrooms at the school.



The Moa Footprints from The Pliocene – Early Pleistocene of Kyeburn

Kane Fleury, Emma Burns, Marcus Richards, Kevin Norton, Stephen Read, Rachel Wesley,
R. Ewan Fordyce & Klaus Wilcken.

□ Nā Kane Fleury

In 2019 a group of Puketeraki members assisted Otago Museum staff with the removal of fossilized Moa footprints spotted by a local farm worker in the Kyeburn River. Following is the story about the scientific analysis of the foot prints.

Research has been finalised on the footprints and is published in the Journal of the Royal Society of New Zealand.

The research has provided a proper ichnological description of the trackway and sought to answer the questions that everyone had at the time. These were: How old are they? How big was that moa and how significant are these footprints?

How old are the footprints?

We managed to get an age of the overlying sediments above the footprints that give us a minimum age of deposition of **3.6 million years old**. To obtain this we used a dating technique called cosmogenic nuclide dating that looks at changes in isotope ratios in quartz grains and pebbles. The climate during this time was transitioning from a warm period to an ice age where there were a huge number of glaciers in the area which caused a significant extinction event around the world especially with northern hemisphere mega fauna.

What kind of moa was it, how big was it and how fast was it moving?

Because of the age and the sizes of the footprints, we are able to compare the footprints to more modern forms of moa (most moa skeletons are at the oldest ~10,000 years old). From this analysis we were able to work out that this moa would have been from the **Emeidae family** and would have been from the **Pachyornis genera**. It was most similar in size to that of the heavy-footed moa. This moa would have been approximately **86 kg** and would have had a **hip height of 1095.33 mm**, with an average **stride length of 1018 mm**. The average estimated speed of travel when the footprints were deposited is **2.61 kmh**.



Artwork inspired from the footprints by Paulina Barry.

Another footprint left in the layer above the trackway that was eroded away by the river.

Prior to the footprints removal from the riverbed, we took photos of the site which allowed us to construct a highly accurate 3D model of the trackway and clay slab. During the review of this imagery, we discovered a very faint impression that was likely made in the overlying layer that was washed away by the river, another larger moa footprint. This faint impression was 285 mm long from the end of the metatarsal pad to the end of the middle claw and 448 mm wide. We believe this moa to be from the **family Dinornithidae**, most likely from the **genus Dinornis**. This is the same genus that contains the South Island giant moa. This footprint was big enough to be comparable with a female animal when compared to more modern moa. It has an **estimated mass of 158 kg**.



David Pukurakau Thomas Reaches Milestone of 100 Years in January 2024

□ Nā Whanau

David was born in Waimate on 16th January 1924 to Minnie Paiki and William Thomas. His whakapapa links to Kati Huirapa are through Irihapeti Matiu and Ripeka Korako, to Moeraki, Arowhenua and Waihao. He is the fourth child of eight and the youngest son. Sadly, David is the last surviving member of his siblings and the first to reach such an age.

The whānau was brought up with other whānau along Māori Road at Morven, South Canterbury. During his childhood, when his mother showed signs of wanting to go into town at Waimate, he would hide in the paddocks with his

Right: David at Government house a couple of years ago when he attended as part of a J Force veterans celebration. He met parliamentarians, the Governor General and dignitaries from the armed forces.



siblings to avoid having to go. She would go out with a stick trying to flush a child out to accompany her. He helped his mother pick potatoes for the local farmers and continues contact with those families today.

David started school at Willowbridge travelling by horse and dray and then to Morven Primary. He continued to Waimate High School which meant a 20-mile round trip by bike. His brother Charles had been Dux there.

From High School, he left home and went to work for the National Service at the age of 17. At 18 he joined the army where he had to learn to drive the large army trucks and while his instructor was driving, they landed up in the harbour. What a great tuition that must have been! He travelled overseas at the age of 21 towards fighting in the war effort. However, on the way to Egypt they found the war had finished so went as clean up forces to Egypt and Italy. He was approached to join the Airforce but refused saying that if the army was good enough for his brothers, then it was good enough for him.

One of his brothers went with the Māori Battalion. The army took him to Japan, in Senzaki and Hiroshima at least four times following the dropping of the atomic bomb. Their job there was supervising Koreans who were returning home.

On his return to NZ David went back to Wellington and eventually to the Rehabilitation Department where he met the lovely Lorna Douglas whom he married in 1949 and had three children. Sadly, he was widowed in 1995 and lived alone until his tamāhine Jennifer moved in with him in 2013. David has always been a whānau man and still enjoys having his mokopuna around for dinner on a Thursday night. Between his tamariki Graeme and Jennifer he has six mokopuna.

Work took him to Invercargill with the Department of Labour, Dunedin with State Advances, then back to the Department of Labour until 1975. On to Timaru, as the District Superintendent before returning to Dunedin retiring as second in charge in 1983. Part of his job with the Labour Department was supervising others, factory inspecting and prosecuting workplace incidents within the court system.

Most holidays and weekends were with whānau at Waikouaiti where they still maintain a cottage. Many hours were spent patiently fishing and whitebaiting on the awa and off the cliffs of Matanaka and the Ledge or Red Sand, and sometimes in a boat with George Williamson. He shot rabbits in the sandhills and ducks at the railway line only giving up two years ago. Whānau enjoyed early morning mushrooming in nearby paddocks and immensely enjoyed the Christmas carnivals at Karitāne with the fairground atmosphere, chocolate wheels and other entertainment.

David's active life includes attending Marae meetings, and he has planted his vege garden out again for the season.

We wish David all the best in reaching this huge milestone to be celebrated in grand style with friends and whānau.



Huikaau - Where Currents Meet at Dunedin Public Art Gallery

□ Nā Claire White

In June 2023 I was approached by Kāti Huirapa Rūnaka ki Puketeraki to be their co-representative alongside Robert Sullivan for the new Dunedin Public Art Gallery (DPAG) exhibition collection.



We were joined by Paulette Tamati-Elliffe from Ōtākou and met regularly via Zoom with gallery staff Lucy Hammonds, and Lauren Gutsell. Lucy and Lauren sourced possible artworks from the collections, and we would view them before the meetings and then we were invited to make written contributions and responses to the art.

It seemed important to show works from Paemanu, a collective of Kāi Tahu artists who have worked alongside and with DPAG and whose work is now part of the



Suzanne Ellison, Claire Kaahu White, Moewai Marsh, and Simon Kaan.



collection. The older artworks, particularly the 19th century oil and watercolour paintings were, in the main landscapes, particularly of the hinterland, Central Otago, the lakes and mountains. These are important in the whakapapa of the gallery which

was established in 1884. We were aware of the importance of women artists in art herstory, this was something that, alongside mana and takata whenua, shaped the exhibition.

There was one small oil painting of Lake Hāwea by Iwa (Eva) Burns that is part of the Hocken collections that became a critical and important link in the show. Iwa was a Kāi Tahu artist with whakapapa links back to Kaiapoi Pā but also more recently to Ōtākou and to Moeraki. Iwa painted in the early 20th century, ostensibly her work is of the landscape genre, but the story behind this work became very important to the mauri of this exhibition. At Lake Hāwea is Manuhaea, a nohoaka mahika kai, very significant to southern whānau who seasonally used to visit there to stay and gather kai.

We then extrapolated on the themes of nohoaka and nohoaka mahika kai, the places where we stayed to gather kai, as well as the old trails that took us from the inland kai gathering areas to the coast – ki uta ki tai. We focussed on artworks in a variety of media that spoke both literally and figuratively of places and journeys, of memories and symbols of loss and reclamation.

The theme of water runs throughout the works, sustainer of life, carrier of voyagers, the beginning and the end. To honour this the exhibition carries the name Huikaau – where currents meet. Huikaau is a small island that sits at the entrance of the Otago Harbour, a passing place for Māori and Pākehā, a convergence of waters where currents meet. This exhibition represents all of us, the convergence of time, the convergence of culture, the past, the present and the future.

Tawini's Journey to Reo

□ Nā Tawini White

Tēnā koutou katoa e
aku huāka.
Nō Kāi Tahu tōku
hākui, nō Te Rarawa
tōku pāpā.
I taku taha Kāi Tahu
nō Puketiraki, nō
Ōtākou, nō
Arowhenua ahau.

Nō te whānau Te
Raki me te whānau
Kaahu.
Ko Tāwini White tōku
ikoa.
Tēnā tātau katoa.

Reclaiming a
language is a
marathon, not a
sprint. It has taken
many methods of learning and
teaching practices to get me to
where I am, and I didn't do it
alone.

My reo Māori journey started
with my parents. Both starting
off with very different
backgrounds and iwi. They were
determined to give us the best
start possible. Ko rāua tahi kā
pou o tōku whare reo Māori.

My siblings and I attended
kōhaka reo. I attended Te
Kōhanga Reo o Raumanga &
Raurimu in Whangārei. By the
time I was four, we moved to Te
Waipounamu, to Ōtautahi
where I attended Te Tikanga Reo
Rua (a bilingual unit within a
mainstream school, St Albans
Primary School). I have fond
memories of this kura and
shared this time with many Tahu
cousins. When I turned 10, we
moved to a small town called
Rāwene as my whakapapa Te



Rarawa was just across the
harbour at Motukaraka.
Rāwene School also turned into
a bilingual unit while I was there
and we attended with many,
many cousins.

For high school, I attended a
'mainstream' school called
Northland College. It was 97%
Māori role and I was lucky
enough to be taught by native
speakers and second language
learners alike. I was able to have
conversations in te reo, I was
engaged in kapa haka and I
was spending a lot of time at
the marae. Te ao Māori was
normalised by my parents with
us in every way.

After high school, I decided to
move back to Te Waipounamu
to attend the University of
Otago to be closer to my Tahu
whakapapa. It was here that I
really focused on the grammar
side of te reo Māori which

paired really nicely with what I
already had. I continued
through my degrees in Māori
Studies and was reintroduced
to Kotahi Mano Kāika (the Kāi
Tahu language revitalisation
strategy).

Ki te kore a Kotahi Mano Kāika,
ko kore taku reo. I attribute my
continued learning of te reo
Māori with a focus on Kāi Tahu
dialect to Kotahi Mano Kāika.
With the focus of
intergenerational language
transmission in the home, it is a
great initiative to keep the reo
dream and goal alive; that our
Kāi Tahu dialect (which is more
than the switching of the ng to
the k) stays well and thriving
from generation to generation.
KMK fed my Kāi Tahu soul, and it
was what I needed to continue
my journey. This kaupapa
launched when I was eight, and
my parents ensured that we
participated in the hui and

wānaka when we lived in Ōtautahi. I can wholeheartedly say that my reo is maintained and grown through this kaupapa and the huāka (relations) who are on the same waka. We focus on te reo in many different contexts which encourages us to be authentic and proud as Kāi Tahu, Kāti Māmoe, and Waitaha uri (descendants). When I say my reo journey is a box of all sorts, I mean it!

I am very lucky to have been given space to get things wrong, to practice and to contribute by my Tahu aunties in the marae and hapori space. Ko rātau kā maihi o taku whare reo Māori e whakahaumaru nei i au.

My main inspiration now is the continuation of the dream that te reo Māori returns to my whānau. It has been 3 - 4 generations of whakapapa that haven't had te reo Māori as an intergenerational language on both sides of my whakapapa. Now that I have te reo Māori, it is my responsibility to tautoko those in our hapori to speak Māori so my boy and his whanau have people to kōrero Māori to. It is also my responsibility to ensure my tama and my karaka tamariki (nieces and nephews) are speaking te reo Māori with me as a first language, to foster their reo, to care for it, and to thrive with it. Learning a language that you feel you should already know is

hard, but it is one of the most rewarding things you can ever do.

I have been lucky enough to be a part of the wānaka reo efforts that we have run through the rūnaka with support from Te Mātāwai over the last six months. We have seen many whānau participate, both locals and returning whānau. He mihi nui tēnei ki kā pouako o ēnei wānaka, ki a Waiariki Parata-Taiapa rātau ko Lily Fraser, ki ko Rauhina Scott-Fyfe, ko Makayla Hewlett, ko Rahera Cowie i ō koutou āki i te iwi ki te hiki i te mānuka reo Māori. Our last wānaka reo of this series will be held 16 - 18 of February 2024.

Unveiling of Mural at Watson Park, Port Chalmers on Sunday 5 November



Collaboration with kaitoko Rua McCallum and Nikki Crossan, and the West Harbour Arts Charitable Trust resulted in the creation of two murals, one for Pūrākaunui School and the other pictured here, running alongside Watson Park in Port Chalmers.

The trust has an annual arts residency and this year the artist is Kate Stevens West (Kai Tahu) who worked with Port Chalmers and Pūrākaunui Schools, Puketeraki Marae, Orokonui Ecosanctuary, Koputai Pioneers Early Childhood Centre, Port Chalmers Kindergarten and the North Dunedin Shed Society.



Kate was keen to seek mana whenua involvement and share stories of the West Harbour through their work with the children. Co-operation with Rua and Nikki guided their approach in design and storytelling suggesting that they work with a narrative of Māpounui and Mihiwaka, and Te Waka Araiteuru. The focus on Taoka species was aided by Rua and Taylor from Orokonui.

Over two weeks they worked with 200 children creating the two murals.

Kate said that it was a very special project, and the creators really valued the contribution of Kāti Huirapa.



Signing and Re-signing of the School Memorandum of Partnerships

□ Nā Rua McCallum

Since the first Memorandums of Partnership were signed with the East Otago school cluster some years ago, Kāti Huirapa Rūnaka ki Puketeraki has forged new relationships and deepened old ones. In collaboration we are jointly working toward the educational, social and cultural development of tamariki attending the schools in our takiwā.



New Memorandums of Partnership were signed at Puketeraki Marae on the 13th of November 2023 in the spirit of Te Tiriti o Waitangi to enhance Māori participation at all levels of engagement with schools. Kate Bateman, who sits on the Rūnaka

Executive signed on behalf of Kāti Huirapa ki Puketeraki. Nine schools re-signed with us. They were Big Steps Educare, East Otago High School, Karitāne School, Learning Links Palmerston, Palmerston School, Pūrākaunui School, Waikouaiti School, Waitati School and Warrington with three others signing for the first time. They included Rudolf Steiner, Port Chalmers and Ravensbourne. Best Start Montessori (Gardens) who are an Early Childhood Centre are also new to our cluster but signed separately on Friday 24th of November 2023, in Kate's presence at a small gathering at the centre. This increases our cluster to a total of 18 schools in total and we are negotiating with two or more.



Kerry Forse, Tumuaiki/Principal of Palmerston Kura with Rua McCallum, Kate Bateman and Nikki Crossan at the signing held at Puketeraki Marae.

We are very proud to be part of building the future hopes and aspirations of tamariki and rangatahi throughout our takiwā.

Shortbread for Christmas

□ Aroha Ellison

This recipe comes highly recommended and has been handed down through the family from Aroha's great grandmother, Nana Devlin.

225 g butter (1/2 lb)

2 c flour

113.4 g icing sugar (4 oz)

1 tbsp cornflour

Preheat the oven to 300° f – 320° f (150° c - 160° c)

Cream together sugar & butter, until light & creamy, 2-3 minutes. Sift together flour & cornflour & add to the butter mix until just incorporated.

Turn the dough onto a work surface, press the dough together, and shape into a rectangle log about 3 ½ cm x 6 cm (1.4" x 2.3"), squaring off the edges.

Using a sharp knife, cut into biscuits 1 cm (0.4") thick, and arrange on the tray, leaving a little room for spreading.

Bake for about 30 minutes, until set and just beginning to turn golden around the edges. Leave to cool on the tray, then transfer to a wire rack.









Puketeraki Nursery

□ Nā Angelina Young

Taking a few minutes to reflect on the year in the nursery has reminded me to check in with the pou sketched out a couple of years ago in our informal founding documents:

The nursery is an active expression of:

- *Kaitiakitaka, we seek good use of our natural resources for the future.*
- *Manaakitaka, we nurture and respect people's mana.*
- *Whakapapa, we develop relationships with whanau.*
- *Kaikokiritaka, we strive for excellence, able to evolve, building leadership capacity.*
- *Rēhia, we like having fun and following healthy lifestyles.*
- *Tikaka and kawa, we follow our customs and protocols.*



And although it can feel like we still have a long way to go, I think we can say we have also taken some strides – it's not just the plants doing the growing here folks!

Many of you will have heard about or been involved in aspects of what we do, but for those of you who are in other parts of the community, or in other parts of the motu, here's a summary:

We have supplied over 30,000 plants to - Tiaki Maniatoto, Toitū Te Hākapupu, Waikouaiti Water Treatment Plant, Ohinepouwera/Waikouaiti Sandspit, the Halo Project and QEII; and smaller numbers to local landowners in the takiwā (and beyond).

We have strengthened our ties with other our neighbours: Te Runanga o Moeraki (Whiria te Waitaki) and Te Runanga o Ōtākou (Te Nukuroa o Matamata).

We have reached out to community nurseries in the rohe, to support their (and our) continued understanding of what it means for us to grow indigenous species to heal the whenua.



In collaboration with our Te Māra Araiteuru rōpū and with local groups (East Otago Catchment Group/Wild Dunedin/The Valley Project) we have had volunteer open days and run workshops on seed propagation. We are planning a monthly open day for whānau and friends who want to do a bit of nursery mahi in 2024- watch this space!

We have hosted ākonga from Te Koronga and Ecology/Botany/Marine (Otago University), as well as Karitāne School.

We have squeezed in hīkoi and seed collection missions which serve not only to provide materials for growing plants, but also profoundly deepen our understanding of plants and place. Almost all our plants were grown from seed sourced by us or our friends this year. Shout out to Greg Kerr and Dhana Pillai for their massive contributions to this mahi. We could not have done this without you.

Our kaimahi have been able to take advantage of varied training opportunities to extend themselves - and support our mahi as well. Shaunae Coombes has almost completed her horticulture papers! Shaunae also spent two weeks doing work experience at Ribbonwood Nurseries in Kaikorai Valley where she was instructed to learn all their trade secrets, but instead she chose to work really hard and have a great time, seriously though, we have a great relationship with Phil and the Ribbonwood team, they are very generous with their knowledge and support us by answering our many questions. We return the favour whenever possible.

We are assisting several groups with research relating to plants, including: Kānuka, Limestone-endemic species ("calcioles"), Nāu/Lepidium (Cook's scurvy grass), Oioi, and the use of Undaria as a replacement for synthetic fertiliser.

And somewhere along the line we managed to have a few laughs. As a team we want to take a moment to acknowledge all the support and love we have got over the course of the year – it really has been a huge, combined effort that got us this far. We are amped for next season's mahi!

Whānau Notices



The Keane whānau were blessed with the arrival of Leo John Richard Keane earlier in the year on 5 March 2023 to Josh and Hope.

He was delivered on the 10 July 2023 at Southland Hospital. He was finally laid to rest in Aparima on the 11 November 2023. Nestled with his Tupuna Mātua, John Hoani Tarena Stirling (Ngāi Tahu) and Elizabeth Petihaukino Davis Stirling (Waitaha, Ngāti Māmoe).

Elshaddai is the great great grandson of Duncan Stirling. Duncan is the third son of John and Elizabeth Stirling, they had seven children. Duncan Stirling married Mihi Kōtukutuku Te Ehutu (Te Whānau ā Apanui). Duncan's resting place is in Raukokore, Bay of Plenty. The family urupa is beside one of the beautiful churches he built in the region.

Elshaddai has six siblings. He is the fifth child of Kahutāiki Stirling-Boyles (Ngāi Tahu, Te Whānau ā Apanui, Te Atihaunui ā Pāpārangi) and Hamuera Boyles (Ngāi Tahu, Ngāti Kōata, Ngāti Toa Rangatira).

Love you to eternity son.
Mum & Dad xx



Our Son Born Sleeping

Elshaddai Te Hono i Te Rongo Hohepa Boyles died in the womb on the 1 July 2023.



Members at the last session for the year attending the wonderfully healthy classes.

Taurite Tū is a strength and balance exercise programme specially designed for Māori aged 50+ and their whānau. The exercises and activities strengthen the legs and improve balance, all the while having fun. Lead by Adam Keane and assisted by Ngahuia Wood, with Chad Steiner-Mitchell assisting in 2024. Well done everyone.

The Story Behind the Pepeha Series

□ Nā Waiariki Parata-Taiapa & Rua McCallum

This project was in partnership with Te Tāhuhu o te Mātauranga and Kāti Huirapa Rūnaka ki Puketeraki and funded by the Ministry of Education Toikuranui Investment Fund to create a resource for the Marae, whānau and hapū of Puketeraki.



Waiariki Parata-Taiapa giving the karakia.

The intent of Toikuranui is to fund initiatives that contribute to strengthening educationally powerful connections for Māori learners and enabling Māori learners to participate, engage and achieve as Māori in and through the education system.



Gathering at Puketeraki Marae to celebrate the introduction of the works. Authors and artists Mauraka Edwards, Rua McCallum, Vicki Lenihan, Claire Kaahu White and artist Madison Kelly.

Our intention was to create a resource that centres around our tamariki and whānau who could share and enjoy the connections back to their whakapapa, in which the pepeha book series was created.

The project took over two years to complete after holding several hui to consolidate ideas with both artists and writers. As with any project, there were times where our development of the pukapuka did not always go to plan, but we forged ahead, producing a set of five books that we are especially proud of. Kā mihi nunui to all the contributors behind the scenes, writers and artists.

Books are available to purchase from the Rūnaka office, see last page for details.



The 14th Annual East Otago Taiāpure Student Research Evening

University of Otago students came together to present their studies of the East Otago Taiāpure on the evening of Tuesday 5 December 2023. Accompanying them was supervisor Professor Chris Hepburn and interested members of the public, held at Huriawa Peninsula, through Tiakitaka archway and down the pathway to Te Puna ā te Wera.



Mauraka Edwards and Hinerangi Ferrall-Heath lead the opening.

Students presented the results of their studies on:

- Dolphins of Blueskin Bay.
- Carbon limitation and its impact on giant kelp forest productivity in a high CO₂ world.
- *Undaria pinnatifida* control within the East Otago Taiāpure
- Kelp as a trophic resource for the New Zealand green-lipped mussel (*Perna canaliculus*) along the Otago coast.
- Exploring *Undaria* microbiomes.
- Drivers of temperature variability in southern New Zealand forests of giant kelp, *Macrocystis pyrifera*.
- Wave exposure and pāua distribution.
- The East Otago Taiāpure pāua fishery: assessment, restoration, and management.
- Characterising the distribution, behaviours, and size structure of parāoa over the Otago submarine canyon, New Zealand.
- Sediment Budgeting on the East Otago Coast.
- Parasitic Plankton; Syndiniales.



Louise Bennet-Jones presenting her findings on The East Otago Taiāpure pāua fishery: assessment, restoration, and management.



Meg Threlfall presenting on her study of Carbon limitation and its impact on giant kelp forest productivity in a high CO₂ world.



**The Rūnaka office will be closed from Friday 22 December 2023
Reopening Monday 8 January 2024**

WELCOME TO MEA

NAU MAI, HAERE MAI

MEA is a natural perfume oil crafted in New Zealand (NZ) with sustainably hand-harvested Taramea. It is a sacred treasure species traditionally worn by Māori ancestors and blended with the highest quality fragrance ingredients.

Collectively this combination brings you distinct perfumes to remind you of Aotearoa.

Together they weave a thread in the story of an innovative and resourceful people – Ngāi Tahu.



Mea Fragrance - MEA Natural Perfume Oil New Zealand: <https://meafragrance.co.nz/>

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Suzanne and the staff in the Rūnaka teams would like to wish you all a very Merry Christmas and a Happy New Year

