

New project to assess and regenerate kelp

A pilot citizen science project to trial a novel approach to regenerating seaweed along the north shore of the island will begin this March.

Led by marine conservation enthusiast Mark Russell, a team of volunteer snorkelers and divers will regularly assess levels of kelp, a type of seaweed that used to be abundant around coastal areas. Because of overfishing and the resulting decline in snapper and crayfish numbers, the kina population, which feeds on kelp, is exploding unchecked.

Usually, these key species would control kina but this is no longer happening, and hordes of the spiked sea urchins can easily strip a reef of kelp resulting in what is known as kina barrens - bare rocky reefs where kina have eaten all of the usually occurring seaweed cover.

People are also contributing to the loss of kelp by washing sediment into the sea. This run-off affects the light that kelp forests need to stay healthy.

"Kelp is a keystone species and once it starts to regenerate so too will the many other species that depend upon it," says Mark.

"Seahorse sightings around Enclosure Bay used to be more common, now they're a rarity, and we hope this project and follow-on projects will eventually contribute to improving their habitat."

Kelp is one of the fastest-growing plants on earth, and it doesn't require fertiliser, fresh water or pesticides. As well as improving the underwater environment, an increase in kelp forests can play a significant role in mitigating climate



Kelp farmer Karl Fredrik Helgesen and project founder Mark Russell. Photo Sophie Boladeras

change effects by drawing carbon from the atmosphere, much like trees on land but at higher and more sustained levels.

To measure kelp forests around the island and to help them thrive, the first step for Mark and his team is to look into how controlling urchin populations can create favourable conditions to revitalise seaweed habitats or urchin barrens.

The project isn't to eliminate kina but to reduce numbers to normal levels. To do this, the team will dive at selected experiment sites starting around Enclosure Bay and Palm Beach to remove urchins from those sites. This will be done by hand and the kina will either be moved elsewhere or will be taken ashore and given to the marae and other community organisa-

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SOURCE: MIRATECH, 2011.

Waiheke Weather

Supplied by Weatherwise Auckland, 020 4023 0106

7 - 13 Jan 2019	Rainfall mm		Maximum temperature °C		Minimum temperature °C	
	Waiheke	Auckland	Waiheke	Auckland	Waiheke	Auckland
Monday	0.0	0.0	27.3	28.8	19.0	19.9
Tuesday	0.0	0.0	26.4	27.3	15.6	14.8
Wednesday	0.0	0.0	24.4	27.1	18.6	20.5
Thursday	0.0	0.0	26.0	28.8	19.0	18.7
Friday	0.0	0.0	26.5	30.7	16.1	16.2
Saturday	0.0	0.0	24.9	28.3	18.5	20.2
Sunday	0.0	0.0	25.9	27.4	18.8	19.3
Weekly Total	0.0	0.0				
January Total	0.0	0.0				
Weekly ave			25.9	28.3	17.9	18.5
January Hist Ave	63.1	51.6	24.1	24.3	16.0	15.7

tions on the island. Respecting Māori cultural considerations, killing urchins in the water won't be part of the project.

Kina are usually found under rocks and rock shelves on the shore below the high-tide mark, and the daily limit per person is 50 kina.

"Over the course of the pilot we'll keep the sites urchin free, giving the



Kina can easily strip a reef of kelp.

and many organisations in Norway and around the world have been cultivating it for carbon sequestration, animal feed, and even to power vehicles with kelp bio-fuel. It's also a nutrient-dense food high in iodine and vitamin K - in New Zealand, it's most commonly used to wrap sushi.

Dr Tim Haggitt and colleagues from the University of Auckland will set up and monitor the Waiheke pilot project from March and will use the information gathered by divers and snorkellers to predict the required effort for restoring larger areas of urchin barrens across the gulf in future.


"The possibility of widespread regeneration of seaweed growth in urchin barrens around the Hauraki Gulf offers a fantastic opportunity to contribute to the regeneration and the restoration of the ocean's mauri," says Mark.

"This will make our oceans and coasts and ourselves more resilient to the impacts of climate change."


Results and outcomes of the project will be written up as a report, and it's hoped that findings might be published in a relevant peer-reviewed scientific journal.

To get involved in the project contact Mark Russell on 021456891 or find Kelp Gardeners on Facebook.

• Sophie Boladeras



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kelp habitat a chance to regenerate," says Mark who has been discussing the project with researchers from the University of Auckland as well as Karl Fredrik Helgesen who has worked on multiple kelp farms in coastal regions around Norway.

Kelp regeneration is not a new issue,

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