

Aukute/August 2019



TE IPUKAREA SOCIETY

*Caring for our Environment
Taporoporo i to tatou Ao Rangi*

Kia Orana tatou katoatoa,

Teia te Nuti Pepa No te Marama o Aukete 2019.

Welcome to the August 2019 edition of our newsletter.

SEA Camp for Young Leaders



This month Te Ipukarea Society with support from the US Consul-General based in Auckland hosted a 2 day Sea and Earth Advocate (SEA) Camp focused on inspiring more young people to consider a career in the sphere of STEM (science, technology, engineering and mathematics), and in particular marine science and natural resource management.



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Phenomenal response of over 30 young participants

These fields of study are critical for the Cook Islands which is so reliant on its natural environment and yet is faced by threats of rapid development, and the impacts of climate change.



Chemical oceanographer Dr Ashanti Johnson speaks about the importance of not being distracted in striving for your goals!

There were a series of presentations and interactions with a number of inspirational guest speakers. These included two scientists from the United States, Dr Nevada Winrow, founder and CEO of the Black Girls Dive Foundation, and Dr Ashanti Johnson, a chemical oceanographer.



Maruia Willie speaks about her experience as an engineer





Dr Nevada Winrow and whale song researcher, Natalie Sinclair

A selection of local guest speakers cover a range of topics including marine biology, deep sea exploration, geographic information systems, careers in engineering and fisheries.



Jess Cramp encouraging young Cook Islanders to get involved in her PhD shark research.

One of the highlights was the live interactive feed to the crew of the deep sea exploration vessel Nautilus which was on expedition in American

Samoa. There was some serious interest from the participants about seeking the internships offered on the vessel.



Live link to scientists on the Nautilus Explorer vessel in American Samoa

Participants attended afternoon field trips including a visit to the traditional Cook Islands Voyaging canoe Marumaru Atua to learn about traditional navigation and a visit to the robotics competition – (more on that below!)



Field trip to the Marumaru Atua to learn about traditional navigation

A massive meitaki ma'ata to all of our speakers and for the funding made available by the US Consul-General. Also thanks to USP for the venue and to Emma from NukuKai catering for the delicious kai.

Robot Competition to help against Ocean Pollution

The society's Technical Director, Kelvin Passfield was a guest speaker at Tereora College for the inaugural Cook Islands 'Design a Robot' competition.



Kelvin presents to keen robotics students about Ocean Pollution

The theme of this year's competition is ocean pollution and Kelvin spoke about how technology can be used to help take action in protecting our marine environment and wildlife.



Students presenting to the Cook Island's Robotic Competition at Tereora College

Both Kelvin and Te Ipukarea Society president Teina Mackenzie were also invited to judge the robot design competition the following week. Five lucky students will be selected to go off to Dubai later this

year to participate in a global robotics competition with the theme of cleaning up ocean pollution. Te Ipukarea Society donated reusable stainless steel bottles as a part of the prize packages for the Cook Islands competition.

Calls for a moratorium on seabed mining

Pacific civil society organisations (CSOs) encourage Forum Leaders to endorse a ten-year moratorium on Seabed mining within the United Nations Decade of Oceans Science for Sustainable Development (2021 – 2030), to allow for the generation of scientific data and information to better inform the governance and conservation of our Ocean.

This was the key message given to the leaders of the Pacific Islands Forum by Teina Mackenzie this month at the annual Pacific Island Leaders forum meeting. Teina was attending the meeting in Tuvalu as a CSO representative.



TIS President Teina Mackenzie addresses the Pacific Islands Leaders Forum

Teina was honoured to be able to address the leaders on the topic of Oceans Health and Governance. She reminded the leaders and decision makers of our region that securing our future in the Pacific requires securing the health of our shared Ocean. In the address, the leaders were told that we must all strive to reverse the current decline in our Moana Nui o Kiva, from the myriad of cumulative pressures she currently faces, and support initiatives that will see her productive health return. To invest in the health of the Ocean is to invest in the health of our Pacific people.

Leaders from Fiji, Vanuatu and Papua New Guinea have now confirmed their support for the 10 year moratorium. Now we just need the Cook Islands to join them!

Teina has been passionate about the potential impacts of seabed mining in the Pacific for a number of years, and sees this as one of the emerging issues of our time. Her statement highlighted the lack of information we have about our deep seabed, and the potential impact that seabed mining could have on as yet undescribed species. In order to ensure the vital but little understood role that this deep sea ecosystem plays in keeping our planet healthy is not lost, she relayed the request of CSOs in the region that the Leaders declare a 10 year moratorium on deep sea mining (DSM).



A sea toad rests atop Manganese nodules

A moratorium on DSM will allow time to collect important information through research that will be taking place as part of the Decade of Ocean Science (2021-2030). This in turn will allow Leaders to be well-informed on best practice to progress the DSM industry - if they choose to do so, and the risks that will be taken should this proceed.

A moratorium would be in line with taking a precautionary approach to seabed mining, something in fact that we are obligated to do under international law. As well, it would allow time to generate interest and funding for scientific research from more independent scientific research organisations, as opposed to mining companies with vested interests in progressing their industry.

Another opportunity Teina highlighted, aligning with the UN Decade of Science, was using this 10 year period to ensure a strong focus on supporting,

involving, and empowering Pacific youth in the development agenda, especially with regards to the custodianship of natural resources. A commitment to build the capacity within, foster greater interest in, and provide more options for, careers in science, technology, engineering, and maths (S.T.E.M.) will assist these future leaders in dealing with the challenges we, and those before us, have created.

Fish feeding can harm fish

Fish viewing is a popular component of tourism in many locations around the world. It increases interaction and interest between people and marine life, can increase visitor numbers to localised areas and can be an enjoyable experience for families and individuals alike. However, as awareness of the potential environment impacts of tourism increases, there has been a rising awareness on the impacts of fish feeding on fish communities and the ecosystems they live in.

Feeding can cause behavioural change in fish which can then have knock-on effects on the wider ecosystem, including coral reefs and lagoons. Many fed species are fish whose feeding habits play a key role in the balance of life on coral reefs. By supplementing or replacing the diet of these fish we are interrupting this natural balance. For example, grazing fish such as parrotfish, rabbitfish, and surgeonfish play an important role in keeping coral reefs and lagoons healthy.

Firstly, grazing of the reef surface limits algae growth, which increases the settlement space available for juvenile corals and reduces the ability of algae to trap sediment, which can cause mortality in new corals. In addition, by reducing growth of algae, grazing may reduce the competition between algae and corals, allowing coral reef areas to recover from other disturbances. When grazing fish are no longer performing these functions because they are receiving food from another source, such as fish feeding, the reef or lagoon can suffer a decline in coral settlement. As algae grow faster than corals, it can eventually result in a loss of coral cover for an area. In areas with low existing coral

cover, this may reduce coral cover further, and recovery of the reef may be prevented.



Often, the foods provided are not types that fish naturally encounter or are equipped to process. Foods such as rice, bread, potato chips are commonly fed to fish and can result in health problems as they do not naturally encounter such substances. Even presumably “natural” foods sometimes prove harmful or lethal to marine animals. There are numerous locations around the world where fish feeding is banned or heavily regulated including the State of Hawaii, US National Park Service and the Great Barrier Reef Marine Park in Australia.

A more sustainable and long term alternative to fish feeding is having a healthy reef and lagoon area for fish populations to thrive in. This can be achieved through a number of initiatives, including reduction of nutrient and sediment pollution and litter affecting the area, changes in behaviour of humans using the area, reduction of impacts from snorkelers and harvesters, increasing accessibility to healthy areas for tourists, coral and habit restoration, and voluntary changes in operations by tourism operators. Healthier habitats ultimately lead to healthier fish and invertebrate populations, which creates flow-on benefits for tourism, fisheries, local communities, and the environment in general.

Adapted from an article prepared for a Lagoon Day in 2012 by Marine biologist Katherine Ross

Say no to plastic and polystyrene.

If you are a food vendor, you may be aware that Government is moving forwards on a ban on single use plastics and polystyrene. So now is a good time to make the switch, to be sure you are not caught with a lot of useless plastic and polystyrene stock that you cannot get rid of. One place to look for bio-degradable alternatives is the Pacman store in Tupapa.



They stock a wide range of bio-degradable products suitable for the fast food industry.



Pacman store managers Nunu and Liam

Meitaki ma'ata for reading our newsletter and for your continued support for conservation in the Cook Islands

Kia manuia, The TIS Team

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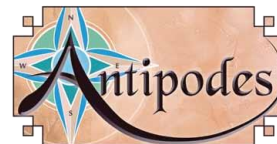


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