

CLIMATE CHANGE



Tourism Sustainability and Protecting Fiji's Northern Lau Islands

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Photographs **Vatuvara Foundation**

If I could paint a picture of the paradise islands of Fiji's Lau Group, *the canvas would be sprayed with azure waters every shade of blue, turquoise and jade glimmering in the sunlight, with shallow lagoon mirage-like limestone karsts and sandbanks floating in the distance. Many of the islands in the Lau group remain much as they were during the days of early exploration – untouched and unparalleled in beauty.*

Originally, the islands of the Lau Group were formed from a volcanic island arc along the Lau Ridge. Around 5.5 million years ago the active volcanoes that formed the islands underwent a period of subsidence and the Lau Ridge became covered by shallow water reef limestone. The geology of these islands now comprises both volcanic and reef-limestone rock. The Lau Group comprises of 60 islands and islets scattered over 114,000 km² of pristine ocean. The Lau Group has been identified as an area of national significance and high priority for marine protection. However, predicted sea levels rising, warming waters, extreme climate events and overfishing are likely to exceed the coping capacity of diminishing coral reefs and local livelihoods they support.

Vatuvara Foundation has embarked on a journey to protect the northern Lau group through conservation and the empowerment of local communities as stewards of their natural resources. Our projects range from scientific research and

monitoring, marine protection, poaching surveillance, threatened species restoration, community awareness and education. We have joined together with Vatuvara Private Islands in ridge to reef conservation. Vatuvara Private Islands is a remote island resort located on Kaibu Island and its associated private islands of Vatuvara, Kanacea and Adavaci in northern Lau. The resort's land-based operations are run on solar and follow organic standards. Our partnership demonstrates a sustainable model for how conservation and tourism can unite to support scientific research, community development, and ensure environmental protection.

Determined to assess the health of these remote islands in Lau and surrounding coral reefs, our team initiated marine and terrestrial expeditions to preserve the rich biodiversity of the islands and safeguard their vital ecosystems. Vatuvara Foundation conducted its first marine biological baseline surveys around the five islands in northern Lau in collaboration

with Wildlife Conservation Society (WCS). The research team surveyed coral reef systems to assess coral health, fish species and Cyclone Winston damage. During this expedition, the team identified several important conservation sites for protection based on the health of coral and fish communities. The biological data collected establishes a baseline understanding of the marine environment of the remote islands surveyed and will be used as reference for the long-term monitoring of these marine environments to detect potential impacts. These recommendations along with awareness conducted by Vatuvara Foundation, WCS and Ministry of Fisheries were presented to the traditional *iqoliqoli* owners, where the community of Yacata Island declared a portion of their traditional fishing grounds a no-take marine protected area or *tabu*.

Our terrestrial surveys of the pristine, privately owned Vatuvara Island, found to support healthy populations of several globally threatened species, a wealth of

diverse native plants and wildlife. The island is protected as a natural reserve and safe haven, with the survey highlighting the Island's vital importance to Fiji's natural history. The surrounding beaches and seagrass beds of these islands have been identified as vital green and hawksbill sea turtle nesting and feeding grounds. We have partnered with the University of the South Pacific to monitor nests, foraging areas and turtle movements.

A large, unique, prehistoric looking, endangered land crab rule these islands. Coconut crabs (*Birgus latro*) or ugavule in Fijian, is a very visible part of the island's fauna in northern Lau. This creature is active throughout the day, but at night the island jungle comes alive, as the world's largest arthropods (weighing up to 4kg and a metre from leg to leg) are found roaming and searching for dropped coconuts, which they crack open with their powerful pincers to feed upon. Coconut crabs were once plentiful throughout much of the tropical Indo-Pacific region, but overharvesting has resulted in their diminishing stocks.

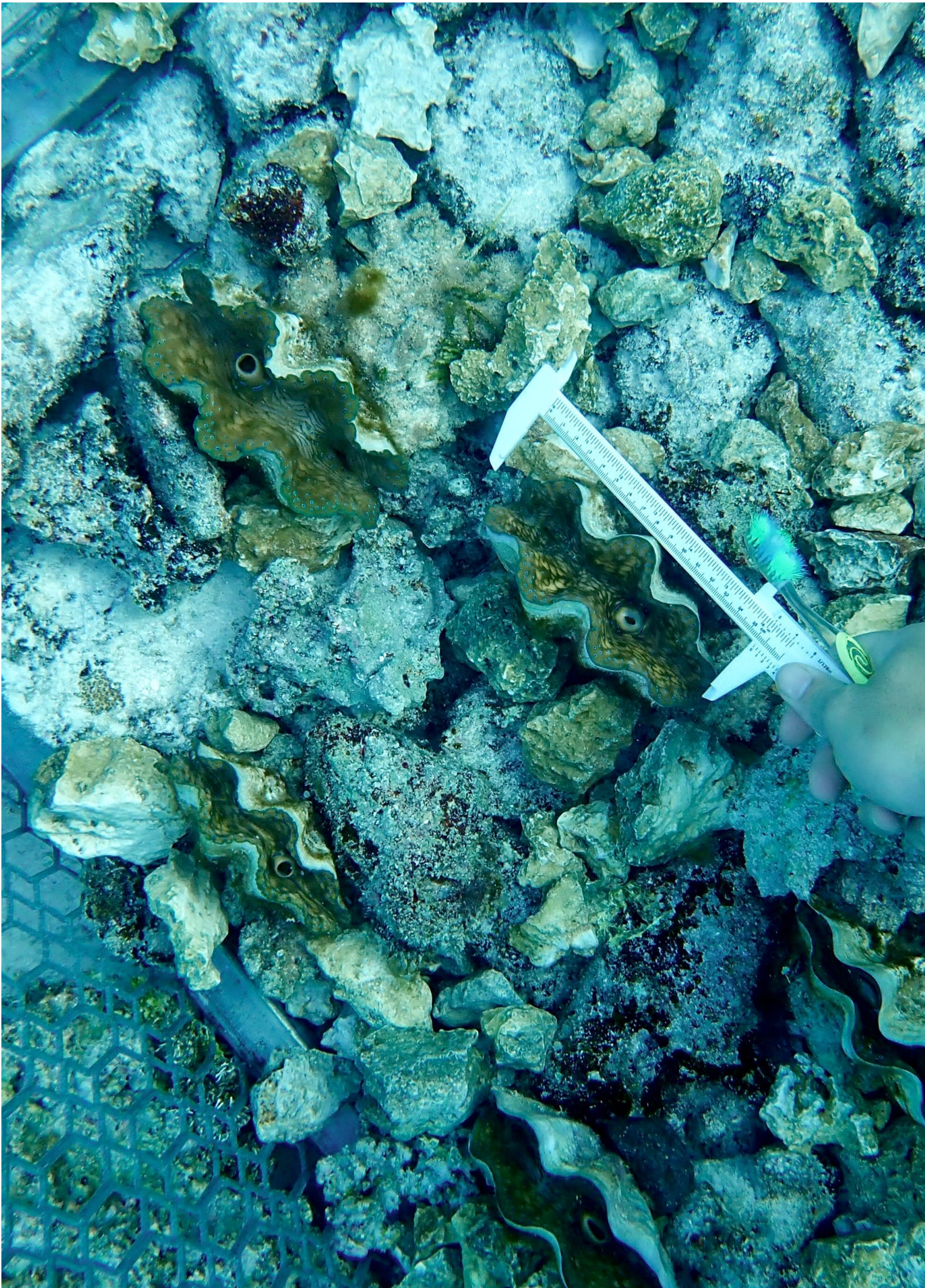
These long-lived terrestrial crabs, can survive for 40-60 years, are now under threat. Coconut crabs are considered a local delicacy, causing populations to be increasingly confined to isolated islands or protected areas. Their slow growth rate makes them susceptible to even low



Green sea turtle on Kaibu Island returning to the ocean
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Vatuvara Foundation Marine Scientist, Tyler Rae Chung, monitoring lagoon coral nurseries in Northern Lau
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Monitoring the giant clam nursery and conducting monthly measurements
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levels of continued exploitation. Few islands in the Lau archipelago host these remaining populations and priority of this important natural resource is critical in these remote regions. Although small in populations, the species is listed as Data Deficient on the IUCN Red List, with no regulations for a protected breeding season or harvesting size. The coconut crab has been identified by the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), as an endangered species, and is listed under Fiji's Endangered and Protected Species Act (Amendment) Act 2017. It is illegal to export, import, or introduce the species without a permit. Any violations result in hefty fines or imprisonment. There is a general lack of awareness regarding the protection of coconut crabs. By improving local knowledge about the endangered species, including its contribution to biodiversity and the importance of protecting their habitat will ensure that the public is more aware of their own responsibilities for better managing their natural resources. Our recent terrestrial survey findings will help to better understand the state of coconut crab stocks and to ensure measures are in place to protect this unique species.

Our team together with Yacata Island, have established a giant clam lagoon nursery to monitor over 200 juvenile giant clams until they are large enough to

be transferred back into the reef system. As part of our preservation commitment, our staff and community members were involved in giant clam awareness workshops to ensure the lagoon nursery is safeguarded. This year, Yacata Island youth have also undertaken coral restoration training and established lagoon coral nurseries to rebuild our surrounding coral reefs. Our hope is that through coral restoration work, the reefs and communities will be able to withstand and build resilience to climate change impacts.

Vatuvara Foundation and Vatuvara Private Islands are working with communities in northern Lau on awareness of threatened species and marine management within their traditional fishing grounds. We are making long term commitments to self-sustain and protect surrounding islands with corridors of protection.

The Vatuvara Foundation is a Fijian non-profit organisation committed to protecting Fiji's ocean, empowering local communities and inspiring young ocean advocates. For more information, please visit www.vatuvara.org or contact Katy Miller at katy@vatuvara.org