



## City in a (Marine) Park: New Zealand's Hauraki Gulf Marine Park

By Tim Beatley

In August 2020, Rakitū island, in New Zealand's Hauraki Gulf, became the latest island to have fully eradicated non-native predator species. There are now more than 40 islands in the expansive Hauraki Gulf, to the west of the City of Auckland, on New Zealand's North Island, that are predator-free. Introduced mammals, including rats, stoats, and domestic cats, have had a devastating impact on New Zealand's native fauna, especially its birds. In response, in many parts of the country today, there are impressive efforts underway to restore the nature that existed before Europeans arrived. The effort to make many of the Gulf's islands predator-free is a huge success that is reversing the decimation wrought by these introduced species on New Zealand's native birds, bats and reptiles.

These unique islands have

always harbored remarkable biodiversity, and efforts to conserve and restore are not new. Little Barrier Island (Te Hauturo-o-Toi), became New Zealand's first nature preserve in 1895. It is an environment that to many visitors "looks prehistoric, like Jurassic Park," [says the co-editor of a new book about the island](#). It has also been a biological reservoir from which endangered species have been reestablished on other islands and in other parts of the country. Birds like the HiHi, Pōpokotea and Kākāpō are found here; species that are absent or threatened elsewhere. [The level of wildness and primeval nature on the island is remarkable](#) given its close proximity to Auckland, which lies only 80 kilometers away. The Gulf provides an extraordinary biological setting and context for a natureful city. The islands include species like the Tuatara, an unusually long-living

lizard-like animal, of special significance to the Maori. A recent [project sequencing the Tuatara genome](#) discovered just how different it is: not quite mammalian, not quite reptilian, and branching off on its distinct lineage some 250 million years ago.

These islands provide important breeding sites for many bird species, especially shorebirds and seabirds, that together form what has been called a seabird superhighway. The Hauraki Gulf is home to an amazing number of seabirds (some one-third of the global total). Equally impressive are the marine organisms lying under, and occasionally above, the water: from marine mammals like Bryde's Whales at the top of the food web to the finfish, cockles and plankton at the other end. The Hauraki Gulf amounts to a kind of massive bowl of abundance and diverse

life, providing a spectacular biological backdrop and context to the growing Auckland metro area.

In 2000, New Zealand took the bold step of establishing the [Hauraki Gulf Marine Park](#), giving reality to the moniker "city in a (marine) park." It is an expansive marine environment on New Zealand's North Island, encompassing the 1.8 million residents of Auckland, the country's largest urban area, as well as the Waikato metro area to the south. Established by legislation in 2000, the Hauraki Gulf Marine Park Act was in fact the first piece of New Zealand legislation adopted in the new millennium. The Act took an exemplary holistic view in delineating the marine park's boundaries: it extends seaward to cover the islands and waters of the Gulf, but also landward to include watershed catchments draining to the Gulf. In this way, the park reflects the indigenous Maori philosophy "from the mountains to the sea." In total, the park's boundaries encompass nearly 14,000 square kilometers. The Act helps the Gulf receive more explicit consideration when decisions are made through the New Zealand Resources Management Act (RMA) and Fisheries Management Act (FMA).

The preamble to the Act describes this remarkable ecosystem: "A diverse marine environment extends from the deep ocean to bays, inlets, and harbours off the coastline and the shallow sea and broad intertidal flats of the Firth of Thames" ([Hauraki Gulf Marine Park Act 2000](#)).

The Act continues: "People use the Gulf for recreation and for the sustenance of human health, well-being, and spirit. The natural amenity of the Gulf provides a sense of belonging for many New Zealanders and for them it is an essential touchstone with nature,

the natural world, and the marine environment of an island nation."

The 2000 Act also established the Hauraki Gulf Forum, a collaborative body and mechanism for managing activities in the Gulf. In 2020, the Forum published a [comprehensive assessment of the Gulf](#), reflecting on 20 years of conservation and management. A mixed picture emerges: one of management successes, to be sure, but also one of decline and degradation and of limitations to the current approach.

Alex Rogers, the Executive Officer for the Gulf Forum, spoke with me in July 2020 about the conservation and planning challenges facing the Gulf. As the State of the Gulf report shows, there have been many positive accomplishments, but also many troubling trends as well. Progress in creating predator-free islands has been a major success, and there has been significant strides in protecting wetlands and native vegetation. There has also been a steady increase, Rogers told me, in the number of people and communities directly involved in restoration and cleanup work. Other successes include a reduction in the number of Byrde's whales killed from ship strikes (a result of an agreement to reduce the speed of ships moving through the Gulf), and a reduction in the highly destructive practice of bottom-trawling.

However, significant alteration of the Gulf's ecology has also occurred. Overharvesting of crayfish (spiny lobsters) has led to overpopulation of urchins and, in turn, the decline of the kelp forests. While the Gulf has a designation as a marine park, few parks of the Gulf can be considered true marine protected areas. There has been an ongoing discussion, Rogers told me, about whether to expand conservation protections, for

instance extending the extent of the "no-take" zones. This has been resisted by the commercial fishing industry. Only about 0.3 percent of the Gulf is strictly in marine protected areas where fishing is prohibited. A 2017 marine spatial plan, called [Sea Change](#), identifies a number of recommendations for the future, and calls for additional marine protected areas.

There have been failings as well, in particular the failure to adequately invest in land-based infrastructure that will better control damaging stormwater runoff and sedimentation runoff from agriculture and forestry. A red-flag system that serves to close swimming areas when the water quality is too low has done much to raise awareness of these sources of pollution. There is, in addition, the challenge of controlling "ocean sprawl," those physical intrusions into the seascape, including coastal engineering works and structures, that are increasingly sprawling out into estuaries, harbors and oceans. Here again the picture is mixed: marinas have grown from 13 (in 2000) to 18 in 2020, but moorings have also been reduced.

Habitats have been altered along the Gulf in ways that have serious negative impacts, including on sea birds. Some of these important impacts have to do with the ways that development has changed light patterns: as the presence of cruise ships and other forms of urban development have "lit up" the night with significant negative impacts on shorebirds. "There is this sense that we are collectively making wild spaces harder to find for nature," says Alex Rogers.

I have wondered about the psychology of establishing such a large marine "park." Does the designation of these marine environments as a "park" send

the signal about the special status and uniqueness of these habitats? Yes, to some extent, says Alex Rogers. There is reverence and pride about this larger marine context, but as well for many there is difficulty in fully appreciating or grasping the park: "Often the marine area can be difficult for people to understand and know." That is changing, Rogers says: "we've started referring to it as our Yellowstone, as our Great Barrier Reef."

I asked Rogers about the extent to which Auckland residents enjoy this phenomenal outdoor marine environment. One of Auckland's labels was "city of sails" but surprisingly fewer residents enjoy the Gulf in this way. "Boating is a luxury," he says. Of course, it is a double-edged sword, as more people owning and using boats translates into more marine sprawl. Nevertheless, it is surprising that there is not more widespread engagement in boating and enjoyment of the Gulf in this way. Sailing and boating are not on the increase, though more residents are riding ferries to visit the islands in the Gulf.

It is such a large marine park

that visiting many parts of it, for instance Little Barrier Island, will be difficult for most. There is no ferry service here, requiring one to organize a special excursion. There is good ferry service to the nearby (and much larger) Great Barrier Island, but reaching this northwestern edge of the Gulf takes a whopping 4 ½ hour boat trip. Few will make this trip, but they will visit the many beaches and water access points that are much closer. The wild and ancient nature of these islands represent a remarkable reference point for residents of Auckland -- knowing they exist but a few kilometers away is exciting and reassuring, a mental reference point to show that it is possible to intensively use and occupy an urban landscape but to also be able to protect (and restore) a nearby part of primeval New Zealand. Just knowing such places are close by must be a delight.



The Hauraki Gulf Marine Park is an emerging story of co-management with Maori people and of acknowledging the important ways in which the philosophy and management tools used by the Maori are even more suited to the marine challenges of today. An important lesson is the value of deep connection and kinship with all things living in the Gulf. The

Maori "have always been ocean people," Rogers tells me. Indeed,

the god of the sea, Tangaroa, is understood to be an ancestor from which all Maori have descended. That helps to change the way the marine realm is seen: "You treat something very differently if you're related to it than if you conceive of it in a different way."

There are some who believe that the Hauraki Gulf deserves to be granted personhood under the law, an idea that in most parts of the world remains a theoretical possibility but in [New Zealand has become a real and meaningful legal designation](#). New Zealand has led the world in applying this important idea: there is already a river (Whangahui) a mountain (Mt Taranaki), and a forest (Te Urewera) that have been given legal personhood. Interest is growing in applying personhood to blue zones, both freshwater and marine (for instance the efforts related to the [Lake Erie Bill of Rights](#)), and it may only be a matter of time before we see many ocean cities working to establish and protect these legal rights, inspired by the pioneering work and positive examples from New Zealand. There may be a time when the Hauraki Gulf could itself institute legal action to protect or restore its ecosystem and abundant life it supports (through the structure

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## Resources

Gemmel, Neil, et al (Aug. 5, 2020). The tuatara genome reveals ancient features of amniote evolution. *Nature*. <https://www.nature.com/articles/s41586-020-2561-9#Fig1>.

Grandparents NZ (2020). Hauturu: The history, flora and fauna of Te Hauturu-o-Toi/Little Barrier Island. <https://grandparents.co.nz/hauturu-the-history-flora-and-fauna-of-te-hauturu-o-toi-little-barrier-island>.

Hauraki Gulf Forum (Feb. 2020). State of Our Gulf 2020. Available here <https://gulfforum.org.nz/state-of-the-gulf>.

Hauraki Gulf Marine Park (May 2017). Sea Change: Hauraki Gulf Marine Spatial Plan. Available here <https://www.seachange.org.nz/assets/Sea-Change/5584-MSP-summary-WR.pdf>.

Hauturu: Little Barrier Island. Supporters Trust (2016). Little Barrier: New Zealand's Ark [short film]. <https://www.littlebarrierisland.org.nz/>

New Zealand Department of Conservation. Hauraki Gulf Marine Park/Ko te Pataka kai o Tikapa Moana Te Moananui a Toi. <https://www.doc.govt.nz/parks-and-recreation/places-to-go/auckland/hauraki-gulf-marine-park>.

