The Hauraki Gulf: Auckland

"I have seen Napoli la bella and didn't die; have gazed on panoramas from Alpine and Apennines summits . . . but. . . Waitemata's waters . . . stood forth, pre-eminent, unequalled, unsurpassed." Sir John Logan Campbell, 1817-1912

THE HAURAKI GULF stretches from the mangrove-fringed fingers of the Upper Waitemata harbour, past the sprawl of Auckland City and out over the sparkling water to the Barrier Islands. With ample harbours and idyllic islands, the Hauraki Gulf's 7,450 square kilometres provide a unique coastal haven for recreation. Auckland has more boats per capita than any city in the world. Every Sunday afternoon the harbour resembles a motorway as boats dodge one another racing back to their weekday moorings.

Over forty islands are scattered across the Gulf, varying in size, topography, geology, vegetation cover, wildlife and accessibility. Beneath the waters of the Gulf an even greater range of species and habitat diversity exists. From the mud flats that provide extensive feeding areas for birds, to the bladderkelp fringe and kina flats of sub-tidal zones, down through the ocean depths to underwater forests of *Ecklonia* and sponge gardens, the Hauraki Gulf provides a range of habitats with a vast array of marine plant and animal life. This complex mosaic of life is supported by the microscopic phytoplankton living in the lighted surface layers of the sea. Moving with the ocean's moods, these plants are the mainstay of all life in the sea. Marine animals eat either phytoplankton or other animals which are dependent on these minute plants for food.

Along with phytoplankton, the sea floor, with all its benthic richness, is one of the marine ecosystem's key production areas. The thin, living skin of the sea floor is like the top-soil found on land: immensely fertile, fragile and minute in size when compared to the vastness of the waters above. The sea knows no boundaries. Its productivity and food chains depend upon clean water and the health and diversity of life on the sea floor.

In civilisation's haste to develop, grow and expand, we have encroached upon the sea – redesigning the boundaries between land and sea, disgorging sewage into oceans, dumping lifeless and toxic sediments scraped off the land into the sea, and filling in shallow estuaries where marine productivity is highest.

As the Roman poet Horace wrote two millenia ago, as he despaired the dumping of marina dredgings into the sea, *"Contracta pisces aequora sentiunt"* – the fishes feel the seas contracting.

History of dumping in the Hauraki Gulf

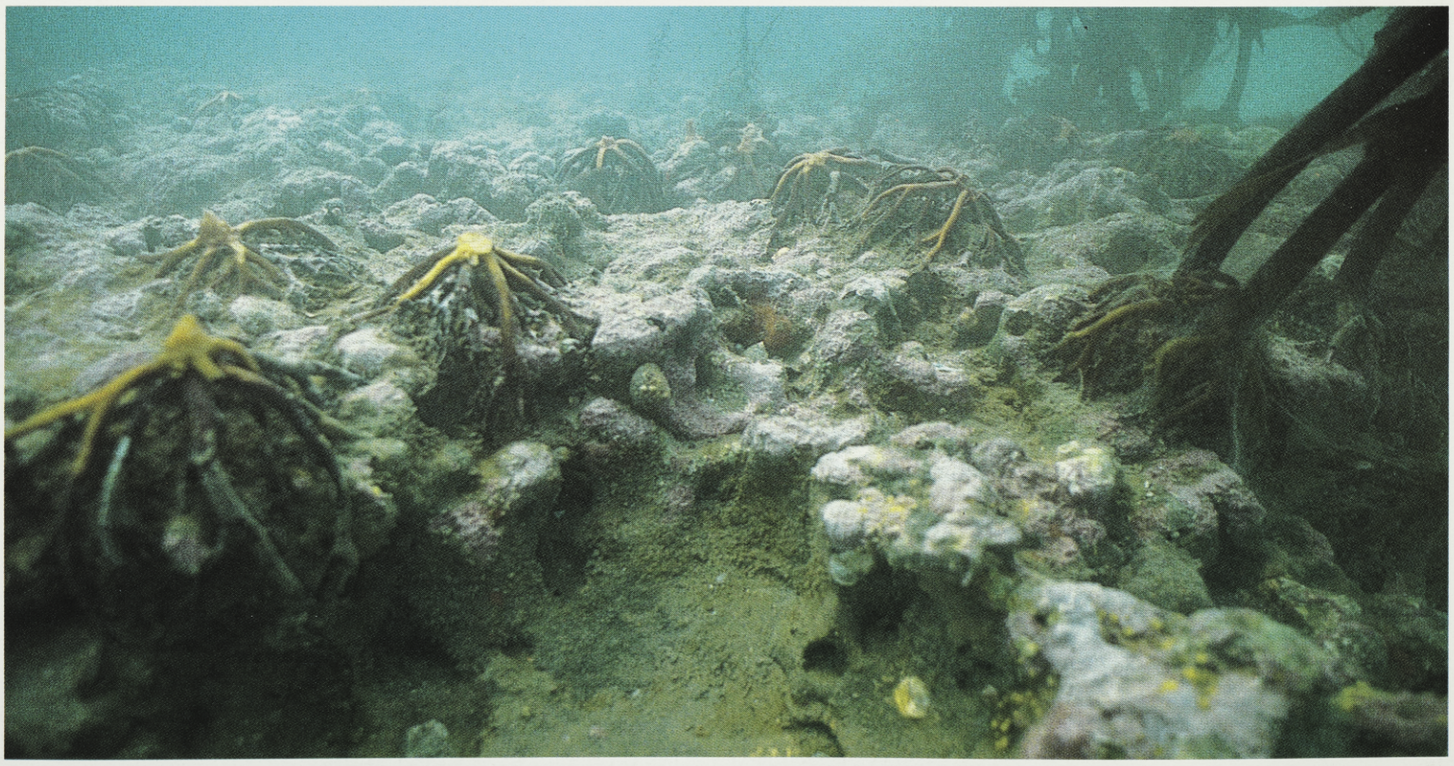
Over the past century, the sea floor of the Hauraki Gulf has been the recipient of over six million cubic metres of sediment dredged from Auckland's wharves and marinas. Around the foreshores of the Waitemata Harbour a similar amount has been dumped to reclaim land from the sea. Twelve million cubic metres of sediment over a century is a lot of dirt – enough to build a new island the same size as Browns Island or Pakatoa.

Dredge dumping in the waters of the Gulf became a pressing public concern in 1987 when material was dumped near Browns Island. The dumping of 143,000 cubic metres of dredge spoil at a site near Browns Island was ecological vandalism. Over 150 hectares of seabed surrounding the dump site was visibly affected, with a marked reduction in the diversity and abundance of marine life.

Dr Roger Grace, a biological consultant with over 25 years of experience in coastal and marine environments, undertook the post-dumping ecological survey of Browns Island. He found that in the most adversely affected area 97% of marine life had disappeared from a 21 hectare area of the seabed. In assessing the future ecology of the dump site, Dr Grace predicted that marine life would recolonise the area but stated "it was unlikely that the previous populations of marine life would be restored." Some marine life would return once the dumping ended but would lack the diversity and richness of the original community.

Proposals to dump a century of dirt

Maintenance dredging is needed if Auckland's international container port is to continue operating. Each year, goods to the value of $10.5 billion move across Auckland's wharves and the port generates an estimated $2.5 billion in revenue for the region. Groups concerned about the dumping accept that dredging is needed if the port is to remain viable. There is,



Rotted Ecklonia *seaweed. When dump sediment accumulates around the bases of Ecklonia, this important seaweed rots leaving a star-shaped root system.*
Photo: Roger Grace