

## THE BURIED MARINE MEADOW IN CHARTERIS BAY

by Oliver Hunter.

If Dame Fortune, on a bright and sunny day, should allow you to visit Charteris Bay, a popular week-end resort near the head of Lyttelton Harbour, you may linger there to view the 1,026 acres of sheltered sparkling water, now the venue of so many who revel in aquatic sports. And should it so happen that a hundred yachts, gay with sails of rainbow colours are racing to and fro, you may see a picture that to you will be memorable. But if you later return when a spring tide has taken the water to lowest ebb, you will be shocked to see before you a dreary, almost lifeless expanse of 500 acres of leaden-grey mudflat.

You will probably be quite unaware that beneath that visible mud, and more unseen beneath the tide, there lies the rotting remnant of a remarkable plant that once formed, bound together and completely blanketed the famous oyster bank in Charteris Bay. From time immemorial, dead sea-shells had accumulated on the sea-bed beneath the tidal water, and up from among the shells and sand there grew a specie of zosteria (sea-wrack or eel grass) that seems to have been specially produced by nature to frame, form and perfectly camouflage a safe breeding place and nursery for fish and shell-fish alike. The leaves of the grass are green, narrow and supple and grow to a length of twenty inches in the deeper water, but to only a few inches where, nearer shore they are longer exposed whilst the tide is out. Though nothing like flower stalks can be seen, the plant has its own system of pollinising under water.

Very early colonists have said that the original oyster bank as they first saw it was one undivided area, save where the outflow of the main creek from Mount Herbert and where the tide-rips at Potts' Point and at Hay's Bay Point, keep open channels. There had always been a broad belt of almost grassless mud-flat between the bank and the shore where the silt washed down from the hillsides constantly smothered any young zosteria grass.

As first viewed over eighty years ago by the writer, the original

bank had, through human interference, already been widely severed into large patches and smaller dabs together aggregated only two or three hundred acres. But even then the banks were an interesting haunt. There the upstanding submerged zosteria, supplemented by entangled flimsy seaweeds, multicoloured to match the colours of any fish, made a jungle hide-out for all fish that came there to spawn. And the countless fish eggs and oyster spat deposited on the oyster banks in Charteris Bay years ago, must have gone far towards restocking Lyttelton Harbour and the sea beyond. Mother Nature had a simple plan for the preservation and protection of the young fish and shell-fish there. The outgoing tide turned all the leaves of the close grown crop of zosteria very neatly towards the sea and beneath the zosteria carefully enfolded in soaking wet blankets of soft seaweed, lay all the small fish and shell-fish till the tide came in.

Until the coming of Europeans, Lyttelton Harbour teemed with marine life which the pakeha, pursuing his inherent practice of wilful waste and woeful want seems to be still striving to destroy. Cooper and Levy established their whaling station at Little Port Cooper. The Deep Sea Fishing Company built a fish curing and smoking plant and also huts for their employees by the creek mouth at Church Bay. The huts were afterwards occupied there by ballast men and their families. Handlines and set-nets were used by everyone who cared to catch fish. The run of large, fat and healthy deep-sea cod came in regularly in September and settlers round the harbour caught, cleaned, salted, dried and lightly smoked thousands of them. These dried fish would keep indefinitely and made delicious eating. Every smooth sandy or shelly beach made a landing place for a drag-net which, when hauled in under favourable conditions, produced a harvest sometimes too heavy to be dragged from the water until the load was lightened by a fisherman wading round the net and hastily casting ashore many of the largest fish. The silvery jumble of edible cod, flounder, sole, ling, barracouta, garfish herrings and many others then drawn up in the net would be very welcome today.

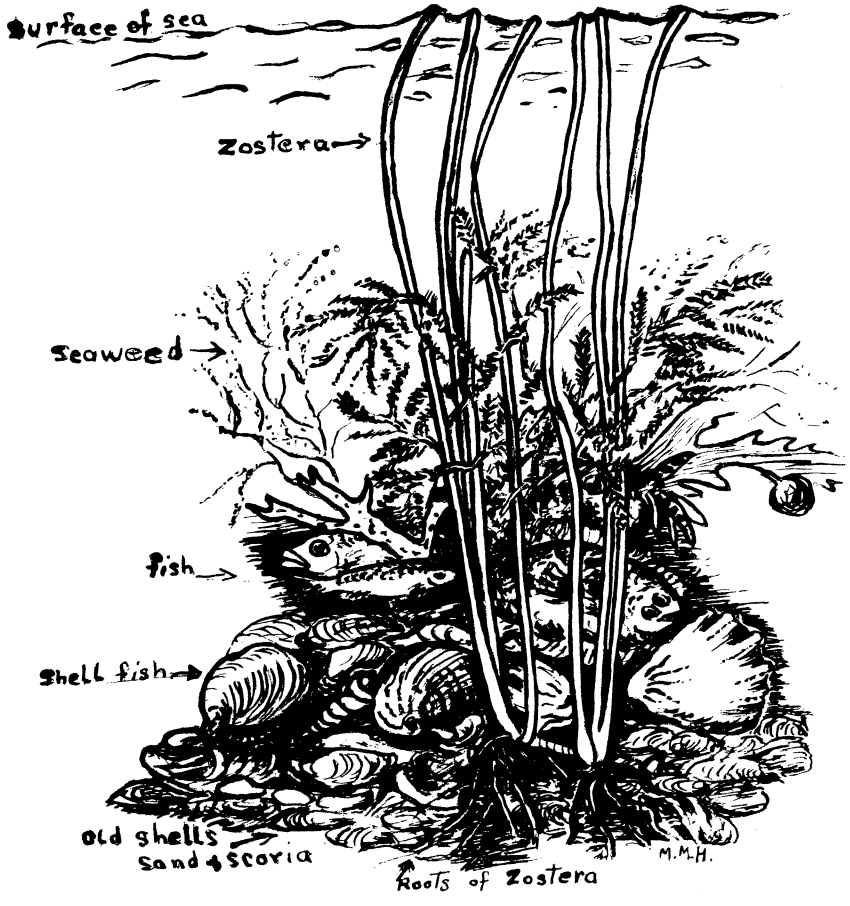
The unwanted sharks, rig, elephant-fish, skate etc. were then dragged up to above high water mark to dry up or rot and with their numbers added to daily, in summertime, there maintained a far-reaching fragrance of their own particular brand.

Large oysters hailed abroad as the world's finest, were plentiful, on and around the oyster bank. When the tide was low settlers could walk about on the bank and pick up oysters, small fish, crabs and shells. While the tide was in, sharp-edged iron-dredges were dragged behind the many boats that came from near and far to the oystering. The dredges scraped up the hidden oysters but at the same time scalped off the zosteria grass. In the wave-lapped, criss-crossing strips left behind the drawn dredges, began the disintegration of the bank with its overmantle of marine jungle, and consequently, the utter rout of all other marine life there. Clear water became addled with the disturbed mud and choked the fish and shell-fish. At high-water, shags, seagulls, penguins and sometimes swans, dived for the disturbed fish, and in the case of the swans, perhaps having a few blades of zosteria for the vegetable portion of their diet. When the tide was out, thousands of gluttonous sea-birds flew screeching overhead or trampling about on the flattened jungle, instantly devouring any sprat or crab that dared to move.

But it was the land-lubbers ashore who contributed most to the destruction of marine life in Lyttelton Harbour. Runholders felled and burned the beautiful native bush, fern, flax and tussocks that together, had prevented erosion of the uplands. Lower down, roads were made and farmers ploughed the land. The product of their combined activities was shown in the increased deposit of silt on the harbour bottom. When we reflect that to this silt is constantly added the droppings from farm live stock, the poisons washed off sprayed vegetation, also drainage from stockyards, sheep dips and sewers, the present smell of the harbour mud is quite understandable.

Today, the silt deposit deepens where the oysters and zosteria of that once beautiful marine meadow lie dead and buried in Charteris Bay.

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surface of sea

Zostera →

Seaweed →

fish →

Shell fish →

old shells  
sand & scoria

Roots of Zostera

M.M.H.