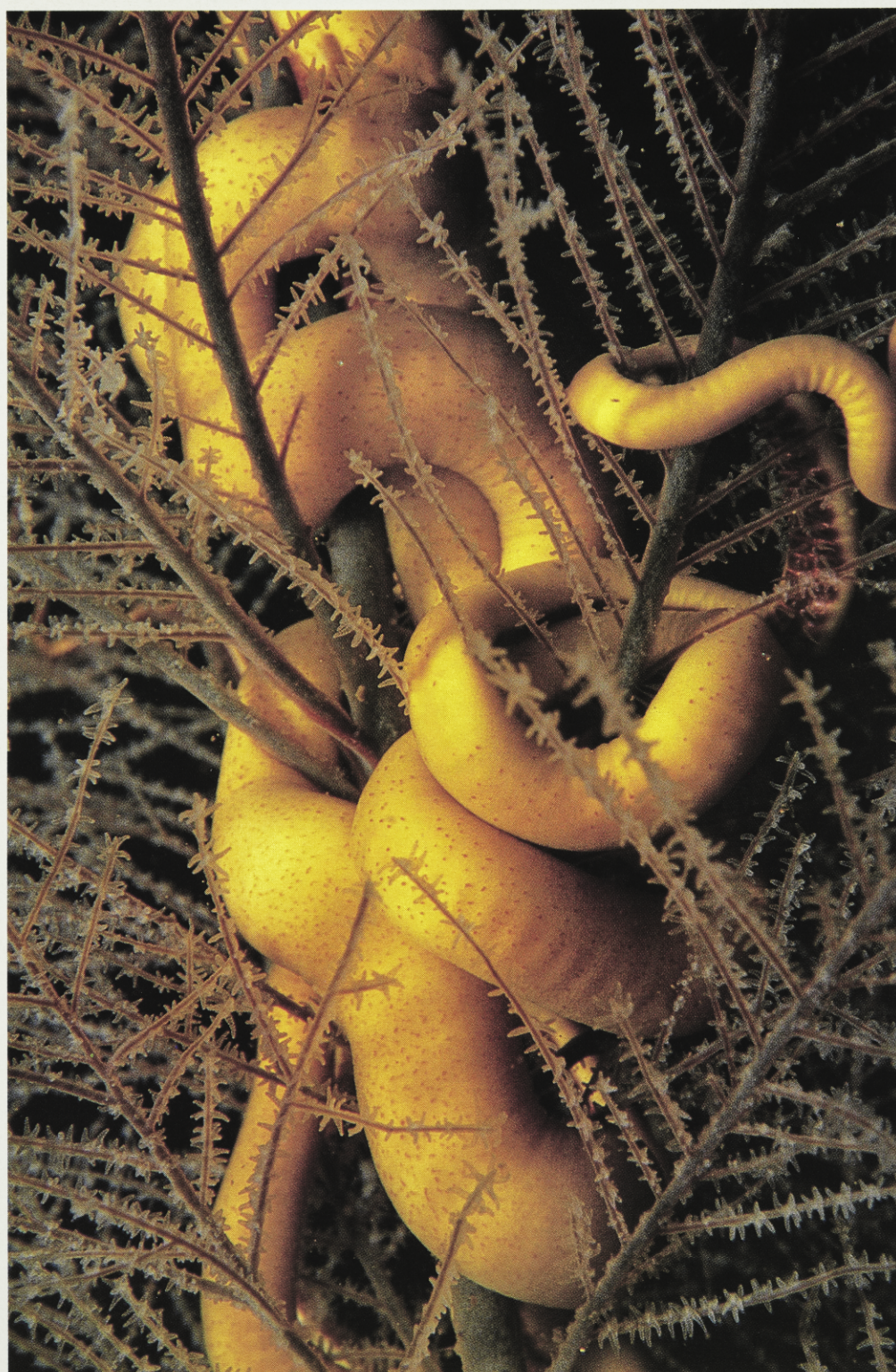


# PROTECTING THE UNDERSEA WORLD

*The waters around Fiordland National Park currently have no protection. They continue to be exploited for crayfish, blue cod, sea cucumbers and, potentially, kina. Department of Conservation marine scientist Anita Pillai explains why the fiords are a unique and vulnerable marine environment deserving of protection.*



**T**O MOST PEOPLE Fiordland appears a vast, remote and unspoilt area.

At more than 12,500 square kilometres, Fiordland National Park is the country's largest national park.

Near a park this size, you would think it would be easy to catch a fish, especially a blue cod. Yet during Easter last year, 42 keen fishermen, using 12 boats, took part in a three-day fishing competition in Doubtful Sound. They caught only two blue cod.

Yet photos and archives held at the Deep Cove Hostel show that in the past school children regularly caught cod.

This puzzled Dr Ken Grange, a DSIR scientist, and author of a recent report "Unique Marine Habitats in the New Zealand Fiords".

He recognised that strong flows of fresh water down the fiords limited the entry of ocean water and blue cod larvae, but doubted this was enough to cause the collapse of the fishery.

It was not until Dr Grange started calculating the amount of habitat available to most marine life in the fiords that the reasons for the poor catch became evident.

## Mountain wall

In Fiordland the mountains form a wall which forces the warm wet westerly air to rise up into cold alpine air. It then condenses to form rain. Up to seven metres is fed into the fiords every year by thousands of creeks and rivers.

As the rain filters down through the forest, it picks up tannic acid from decaying vegetation and turns the colour of strong tea or beer.

This stained freshwater layer floats on top of the seawater in a permanent three-to-four-metre deep layer, and like a blanket spread

*Opposite: The mirror world of Hall Arm, Doubtful Sound. The tremendous diversity of the underwater Fiordland is concentrated in a narrow band of 46 square kilometres - less than the area of each of our main centre harbours.*

*Photo: Simon Hayes*

*Left: The world's largest population of black coral occurs in Fiordland where it provides habitats for other animals such as brittle stars which in this photo are wrapped around the coral's branches. Corals may be as old as 300 years.*

*Photo: Simon Hayes*