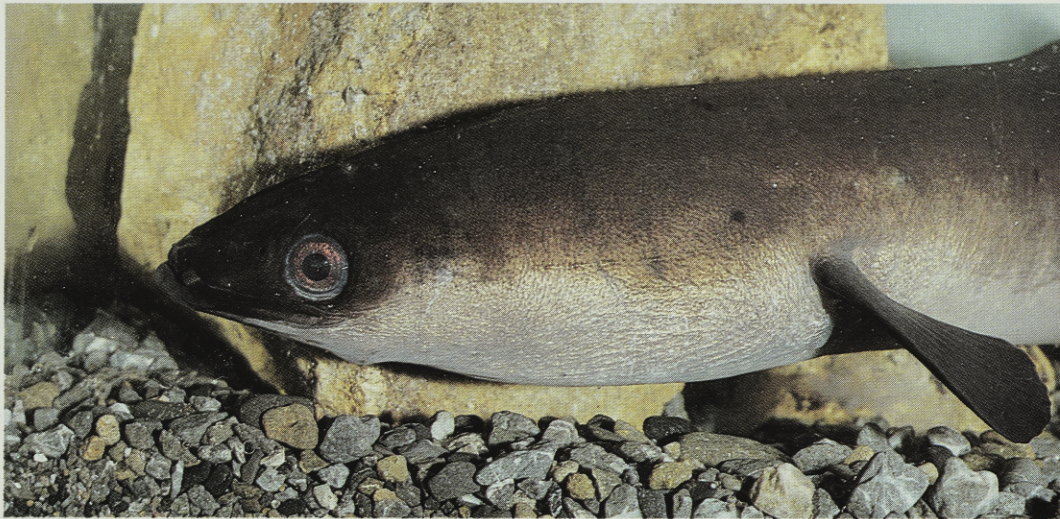


fishery developed. Before 1965 the annual eel catch was only 15-20 tonnes. By 1970 it was about 800 tonnes and in 1975, 2364 tonnes. That year was the peak and the catch has never recovered. It now averages about 1000 to 1500 tonnes a year. In the year to last November the catch was 1474 tonnes. The great bulk of this was exported, mostly to the Netherlands, Germany, the United Kingdom and Belgium bringing in over \$9 million. Most of the exported catch is frozen while about 16 percent is exported live.

- The signs of a sick industry are many:
- At Lake Ellesmere (Waihora) south of Christchurch, previously the largest fishery and the only one to have a total allowable catch (TAC), the TAC is never reached. If the minimum legal weight elsewhere in the country of 150 g was enforced at Ellesmere, the fishery would close.
 - In the Waikato, now the largest fishery, eels larger than the minimum size have declined from 70 percent to less than 10 percent of the population.
 - On the West Coast a long-term agreement between commercial operators to limit the take to eels larger than 400 g has broken down. Outsiders, as multiple operators on one licence, have recently poached reserved areas. Smaller eels have been taken. The total catch has increased but with a dramatic decrease in catch per effort.

THE EEL FISHERY is managed by both the Department of Conservation (DoC) and MAF, the only freshwater fishery to be jointly managed in this way. DoC is responsible for the preservation of eels as indigenous species, and MAF administers the commercial fishery.

It is recognised by both MAF and DoC that a system of reserves is critical for allowing eels to grow to maturity



Shortfinned eels. The eel below is preparing for migration. Note the darker colour and the larger blue-ringed eye. It is thought that the eyes enlarge to cope with the low light levels in deep ocean waters.

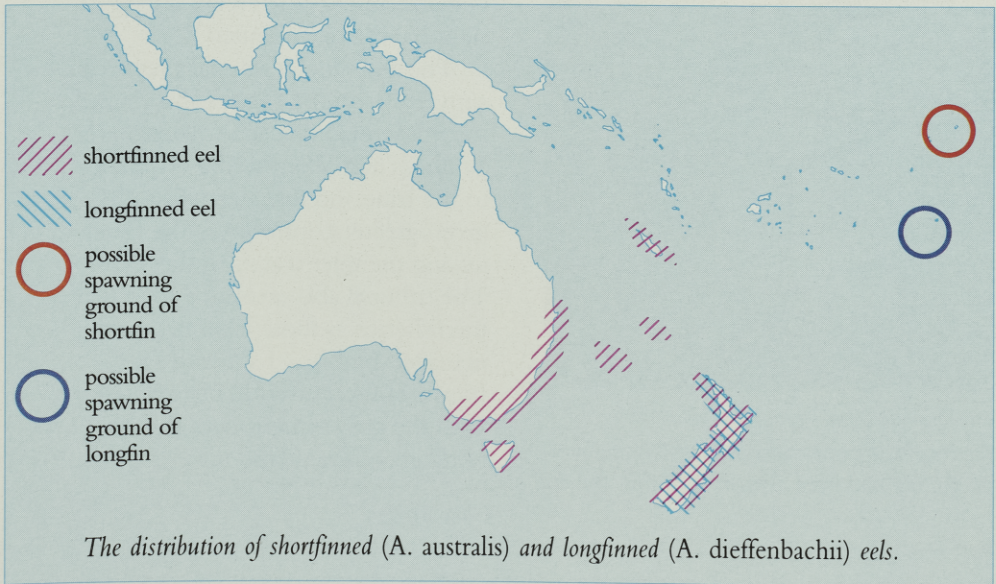
R.M. McDOWALL

before they return to the sea to breed. Yet commercial eeling continues illegally in some reserves, especially in the Waikato. Although DoC has inherited this problem it excuses its reluctance to enforce the law because of limited resources to monitor compliance and, strangely, because enforcement “could see several fishers lose their livelihoods”.

Even without the problem of lack of enforcement, it is very difficult to determine whether our current reserve system

contains enough eels to maintain population size in the context of heavy exploitation. MAF’s administration of the fishery itself has long been recognised as unsatisfactory. Eels are classed as non-quota fish and there is no cap placed on the total catch. Both DoC and MAF believe that a quota system would allow better management. However, the problems of the eel fishery have become tied up with Maori claims over fisheries in general. Many Maori have real concerns about a quota system which in effect creates a private property right in a resource they regard as their own. The unresolved Maori claims have created a culture of administrative reluctance to make any decision about the management of the fishery.

MAF is currently reviewing the eel fishery and the pressures on it. Last year they suggested, as a short term plan, an increase in the minimum legal weight for eels from 150 g to 250 g, except for Lake Ellesmere (to 130 g) and the West Coast (to 400 g). DoC has argued that the proposals should go further: that the TAC on Ellesmere be reduced and that a maximum weight be put in place as well as the minimum, to protect older pre-migratory eels. No decision has been made to date on any change in the legal size.



The distribution of shortfinned (*A. australis*) and longfinned (*A. dieffenbachii*) eels.