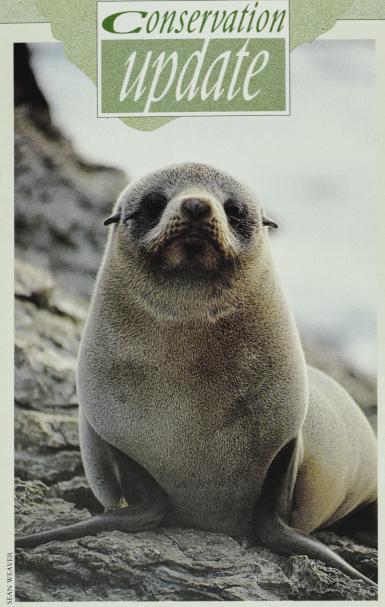
## Under-reporting continues

THE DEATH of fur seals in the nets of foreign trawlers continues. And so does the trend of under-reporting by skippers. Claims by the Fishing Industry Association that all the seals which are caught are reported, defies belief. In the West Coast hoki fishery, which started in July, vessels carrying MAF scientific observers were ten times more likely to report fur seal deaths than those without an observer.

Unless you believe that seals can detect which vessels have observers on board and deliberately drown themselves in the nets of these boats, there is no reason to suppose that the total seal catch is not in direct proportion to the number of trawls observed.

This is the basis on which MAF Fisheries extrapolates the likely catch by the full fleet. Last year, for example, with observed vessels reporting 26 fur seal deaths and total observer coverage of just over 15 percent, MAF estimated that about 172 fur seals were



A West Coast fur seal pup with an insecure future.

killed over the whole fishery. Another 70-80 seals were killed in the hoki fishery off Puysegur Point, Fiordland.

Observer coverage this year has been the lowest ever. On the West Coast, despite a promised coverage of 20 percent, only ten percent of trawler tows were watched by MAF observers. Recent research by MAF researchers and overseas scientists suggests that to get reliable figures on the by-catch of marine mammals and birds, observer coverage needs to be over 50 percent.

Forest and Bird estimates that in the season which finished in September, over 200 fur seals were killed in the West Coast and Puysegur hoki fisheries.

Another 60-120 seals were killed by trawlers earlier in the year in the squid fishery on the Snares shelf. The deaths in this fishery are a recent event, and have occurred in spite of the much-heralded industry code of practice. They bring the total of fur seals killed this year in New Zealand fisheries to nearer 300.

Barry Weeber

## Open Bay Island leech

THERE IS GROWING interest in conserving New Zealand's invertebrates, especially those that are large and have restricted ranges. One of the biggest problems facing those enthused to save such rarities is the poor public image of our spineless cousins. No matter how much propaganda we spread about giant snails and weta they will never have



The Open Bay Island leech: its known range confined to one square metre.

the widespread appeal of kakapo and penguins.

Few people are aware that there are terrestrial leeches in New Zealand since these animals are usually associated with a mammal fauna. This country's two species are large, sanguivorous ("blood-eating"), ornithophilous ("bird-loving") and confined to small islands. Both can exceed eight centimetres when extended, and have been known to sample the occasional crop of human blood.

Ornithobdella edentula is confined to the Snares Islands and Little Solander Island, where it is usually recorded among penguin and mollymawk colonies. Hirudobdella antipodum has an even more restricted distribution – it is currently known from under one boulder on Taumaka, the largest of the. Open Bay Islands.

The Open Bay Islands are about five kilometres offshore from Okuru, Haast. They are Maori-owned, and Taumaka has had a University of Canterbury research hut on it since the late 1960s. Almost all the research to date has focused on fur seals and Fiordland crested penguins.

The leeches were first recorded in 1903, when they were reported as common around the entrances of muttonbird burrows. Weka were introduced to the islands a couple of years later, and were long assumed to have exterminated the leeches. However, they were rediscovered in 1987 near water-logged penguin nests under a large glacial boulder. Subsequent searches relocated them in 1988 and in January this year all in the same one square metre of habitat.

The Open Bay Island leech must be one of New Zealand's rarest invertebrates, but it may not be as scarce as the above records suggest. As next to nothing is known of its ecology and habitat preferences, no appropriate survey technique has been developed.

We do know that at the one site, the leeches are living in mud and penguin guano in almost complete darkness. It may be this last factor, along with their slow movements, that has saved a few leeches from the ever-watchful weka. Penguins nest in other muddy caves on the island, and there may be other isolated pockets of leeches hanging on in the inaccessible recesses.

New Zealand also has a dozen or so species of freshwater leeches which feed on fish and waterfowl. Colin Miskelly