

SEA LION

—a problem of bycatch

by S. J. Owen

The New Zealand Sea Lion is an animal about which little is known and which few New Zealanders will get the chance to see. Now however it is being affected by an intensive squid fishery to the north of its principle breeding grounds. Greenpeace New Zealand this year began a campaign to ensure the survival of these animals — New Zealand's largest indigenous mammal

The Auckland Islands are a group of six main islands and numerous small islets, 400 kilometres south of Stewart Island. Since 1934 the Auckland Islands have been a nature reserve and are home to many species of birds and mammals including the Auckland Island flightless teal (*Anas aucklandica aucklandica*). Enderby Island, one of the islands in the archipelago, is one of two breeding sites of the Southern Royal Albatross, the other being Campbell Island. Fur seals (*Arctocephalus forsteri*) and Elephant seals (*Mirounga leonina*) breed on the Auckland Islands as, unfortunately, do rats, mice, rabbits, goats and feral cattle in various combinations on the various islands.

All but 100 of New Zealand's endemic sea lion (*Phocarctos hookeri*) also breed on the Auckland Islands. Enderby Island, Dundas Island and Figure of Eight Island all have rookeries during the breeding season from November to February. In addition there are small rookeries on Campbell Island and the Snares. Although sub fossil evidence exists to indicate that they once ranged as far north as Northland, only occasional sub-adult and adult males now straggle to Stewart Island and the southern coasts of the South Island.

With a population presently estimated to be between 5 000–7 000 they are, along with the Australian Sea Lion (*Neophoca cinerea*), the rarest of the five species of sea lion worldwide. When the Auckland Islands were first discovered in 1806 they soon became a target for sealers, and the abundant populations of fur seals and sea lions there were virtually wiped out. In 1823, at the height of the sealing, 13 000 skins were taken on one voyage of the schooner 'Henry', but by 1830 a boat sent to look for seals found no more than 20 sea lions and not a single fur seal. Not until human settlement ceased on the islands in 1856 did the sea lions begin returning to the Auckland Islands.

Mature breeding bulls of 6–8 years and over are large animals, reaching three metres in length and 300–400 kg. Their fur is a rich chocolate brown and, as the name



New Zealand Sea Lion female suckling a nine month old pup on Enderby Island. In the background lies a harem bull.

Photograph : B. J. Marlow

implies, they have a thick dark brown mane from the head to the forequarters. These males arrive at the rookeries in early November and set up territories along the beaches which they defend for the duration of the breeding season without leaving them to feed. Less bulky, younger males of around 4–6 years old line the waters edge and attempt to capture females entering or leaving the sea — usually unsuccessfully.

Female New Zealand Sea Lions begin breeding when they are approximately 4 years old and are smaller than the males with tawny belly and silvery fur. They begin arriving at the rookery at the beginning of December, give birth to one pup shortly after arriving, and 6–7 days later mate with one of the territorial bulls.

Little is known about the population dynamics of the New Zealand Sea Lion, including recruitment rates, population distribution by age and sex, and age class mortality. Pup mortality prior to the end of the breeding season on Enderby Island was estimated to be 9 percent of the 460 pups born there in 1981. However this rose to over 50 percent in the last, 1982/3 season. Many pups were trapped in rabbit burrows which honeycomb the area above the rookery, and many more were caught in a

peat bog which covered much of the island that year.

Sea Lion mortality is also now being affected by the large squid fishery to the north and east of the Auckland Islands.

Fisheries/Sea Lion interaction

Since the setting up of New Zealand's 300 kilometre 'Exclusive Economic Zone' in April 1978, there has been a large increase in fishing activity around the Auckland Islands.

The area north and east of the Auckland Islands is an important spawning area for squid, and the New Zealand squid fishery trawls intensively in that area during January to August each year. Over recent years the squid fishery around the Auckland Islands grew from a catch of 8 982 tonnes in the 1978/9 season (1 April 1978 – 31 March 1979) to 26 316 tonnes in the 1981/2 period. At present up to sixty boats trawl in the Auckland area at the height of the season, mainly foreign (USSR, Japanese and Korean) and Joint Venture vessels. Joint Venture vessels are foreign boats with a New Zealand company partner. Japan and Russia are the main squid trawler Joint Venture partners along with some Korean and, more recently,