

## HOUSE OF ASSEMBLY

THURSDAY 29<sup>TH</sup> MARCH 2012

### NEW ZEALAND FUR SEALS

**Mr PEDERICK (Hammond) (12:15):** I move:

That this house calls on the government to develop an abundant native species management plan, noting the effects of the rapidly increasing numbers of New Zealand fur seals on South Australian marine life on the environment.

I will give some history about fur seals in this state and this country. The first known occurrence of seals being hunted and killed by humans dates back to the Stone Age. A number of seal species were hunted by Aboriginal people in coastal southern Australia beginning at least 8,000 years ago.

Species taken included the Australian fur seals, the New Zealand fur seals, the southern elephant seals and leopard seals. There are many archaeological sites with seal remains on the Tasmanian coast. The seals suffered a severe decline as a result of commercial sealing from 1798 until protection measures were introduced in Western Australia in 1892, in South Australia in 1919, in Tasmania in 1889, in Victoria in 1891 and in New South Wales in 1918. Since the protection measures were put in place, no fur seals have been legally killed. Since then, New Zealand fur seal numbers have increased rapidly. It is documented that it is currently estimated that there are around 40,000 New Zealand fur seals in Kangaroo Island waters alone, with the population expanding at a compound rate of 10-12 per cent a year.

There are 10 pinniped (fin-footed mammal) species, or seals, regularly recorded in Australian waters, three of which are the Australian sea lion, the New Zealand fur seal and the Australian fur seal, all of which breed on the coast of the Australian mainland including Tasmania. The Antarctic fur seal, the subantarctic fur seal and the southern elephant seal breed in Australia's subantarctic islands. There is also the leopard seal, the crabeater seal, the Ross seal on pack ice and the Weddell seal on fast ice adjacent to the Antarctic mainland.

I now wish to make some comments about the habitat and ecology of the New Zealand fur seal. The New Zealand fur seal species utilises rocky habitat as breeding and haul-out sites, and appears to avoid open rock platforms and sandy or pebbly beaches. Every year these sociable animals return to the same area for the breeding season. In Australian waters this species has been reported in Western Australia, South Australia, Victoria, Tasmania, New South Wales and Queensland, south of Fraser Island. Australian breeding colonies of the New Zealand fur seal are known to

be on islands off Western Australia, South Australia and Tasmania, including Macquarie Island.

Although the New Zealand fur seal does not breed in waters around New South Wales, habitat and resources within the state are important to non-breeding individuals. Montague Island near Narooma is a regularly used haul-out site in New South Wales, although other infrequently used haul-out sites have been recorded along the New South Wales coast. New Zealand fur seals have an appetite for penguins as well as fish, squid, octopus and cuttlefish. The Australian fur seal eats mainly fish, squid, cuttlefish and octopus but it does not have an appetite for penguins—that is the Australian fur seal.

In relation to breeding cycles, data collected from various sites around Kangaroo Island for the 2010-11 pupping season, together with earlier estimates for colonies not visited this season, add up to a total of 8,436 pups. This is an increase of 38 per cent on the estimated data collected in January 2010 and a 34 per cent increase on the estimate of pups for season 2007-08. Again, this equates to a 10 to 12 per cent increase in numbers since the study began.

New Zealand fur seals are annual breeders and generally produce one pup after a 10-month gestation period. Females first give birth between four and eight years of age, with an average age at reproductive maturity of five years. The age of first territory tenure in males ranges from eight to 10 years, and variation in age and reproductive maturity between individuals appears to be related in part to body size and condition.

In South Australia seals extend from The Pages in Backstairs Passage to Nuyts Reef in the Great Australian Bight. A survey to determine the distribution and abundance of New Zealand fur seals in South Australia and Western Australia was conducted in January-March 1990. Minor surveys were also conducted in the summers of 1987-88, 1988-89 and 1990-91.

In Western Australia the range comprised islands on the south coast from the Recherche Archipelago to islands near Cape Leeuwin. There were 29 breeding localities, and 13 are in South Australia and 16 in Western Australia. Estimates of the number of pups for the 1989-90 breeding season were 5,636 in South Australia and 14,029 in Western Australia. This leads to a population estimate at that time of approximately 34,600 seals in those two states. Most of the population (77 per cent) is in central South Australian waters from Kangaroo Island to the southern end of Eyre Peninsula.

The New Zealand fur seals' main prey includes redbait and jack mackerel and myctophid (cuttlefish, squid and octopus) species. Unlike the Australian fur seal, it also consumes seabirds such as little penguins and shearwaters (a long winged sea

bird). A SARDI Aquatic Science report in 2008 noted that New Zealand fur seals consume the greatest biomass (biological material from living, or recently living organisms) of pelagic (relating to, occurring or living in, or frequenting the open ocean) resource of all marine and seabird species.

In terms of minimising the impact of interactions, information has been taken from a report prepared by the Marine and Marine Industries Council in 2002 from Tasmania. They include the use of seal crackers, or underwater firecrackers, which are explosive devices. These are thrown into the water where they explode under the surface. They have been used in Tasmania in an attempt to deter seals and whales from interacting with fishing operations.

Seal crackers have been effective as a short-term basis in other situations, but in the long term and with continuous use, seals learn to ignore or avoid the noise. However, the flash from the crackers continues to be effective at night time if crackers are used skilfully by the operator.

Acoustic devices have been developed with a twofold aim of, one, alerting marine mammals to the presence of fishing gear to reduce by-catch and, two, acoustically harassing marine mammals to prevent degradation of fishing gear. These devices are often accused of attracting the seals—'dinner bell'.

Trapping and relocation of fur seals that repeatedly attack fish farms was introduced in Tasmania in 1990 to assist fish farmers whilst improved predator net designs were being developed. This nonlethal method of mitigation involves removing the offending seal from an area. While 63 per cent of seals are not recaptured, some seals have been trapped and transported on repeated occasions. This method is most effective when used in very specific circumstances, when seals have entered pens.

In summary, the merit of this seal trapping and relocation program from marine fish farms is often debatable. In terms of methods used in the tuna fishing area around Port Lincoln, the New Zealand fur seals are more agile than the Australian fur seals and more capable of climbing over conventional protection systems.

There are large round cages used with very low stocking densities of tuna. The tuna's accessibility to the seals is reduced if larger cages are used, and the number of fish per cage is reduced. Round cages also help as seals can manipulate the corners of square cages which are the points of weakness. Low stocking density means that tuna can get away from a seal that is inside or outside of the cage, probably reducing the tuna's stress levels.

Electric fencing is also known, and a product called Seal Guard is used, which is manufactured and distributed by Lincoln Rural Supplies, which has a high

voltage/low amperage current, constantly pulsing through the wire, and when a seal touches it, the wire transfers an electric shock of 7,000 volts that immediately repels the seal. At the beginning of 2003, 90 per cent of the 140 tuna cages in Port Lincoln and all local yellow-tailed kingfish farms used Seal Guard.

Other methods used are raised railing, jump nets and bird netting. New Zealand fur seals can scramble over fences that are 1.5 metres above water level but cannot access the pen from the top when the jump fence is raised to two metres above sea level. Nets that are raised above the rails prevent seals accessing the cage over the top of the rails.

Another method is predator nets which are used in the marine finfish farming sector. Predator nets are not used by the tuna industry; however, the other marine finfish farms use them to deter sharks. Even though the marine finfish farmers have had little interaction with seals to date, the nets would assist in providing a barrier between the stock and the seal. The siting of tuna farming pens away from seal colonies and haul-outs is thought to reduce potential interactions.

I want to note some of the principles for managing wildlife that the Department of Environment and Natural Resources has adopted and these include: wildlife and conservation are not confined to reserves; wildlife management must be based on sound ecological, environmental, social and economic factors; the welfare of all wildlife is intrinsically important; and, under DENR principles, the landholders, land and resource managers, community and industry have a need to control the impact caused by wildlife to acceptable levels to protect their livelihoods, safety and biodiversity assets where it is consistent with the objectives of the National Parks and Wildlife Act.

In this situation, state legislation needs more information to make sound judgements about the conservation and management of seal populations. To date, they are protected under schedule 1 of the National Parks and Wildlife Regulations in force under the National Parks and Wildlife Conservation Act 1975. An integrated commonwealth/state approach to their management is essential.

Little penguins are being targeted by New Zealand fur seals. The penguins are very faithful to their nesting sites, with over 75 per cent of both male and female birds returning to the same nest. Male fidelity reached 90 per cent if both partners returned to the colony the next breeding season. However, nearly half of the pairs from the previous season could not reunite because at least one partner did not return to the colony. The clutch of two eggs is laid in winter or spring, two or three days apart, and the incubation time is 36 days, with male and female penguins taking shifts to incubate the eggs. Hatching success is approximately 60 per cent. However, in a good season, three clutches of eggs may be laid.

Little penguins are the only penguin species known to breed in Australia and are the smallest penguins in the world. They have a lot of natural predators including sea eagles, fur seals, goannas and snakes. They have the same habitat as the New Zealand fur seal and the environment department has confirmed that it has been lobbying for a cull or relocation program as penguin numbers in the Victor Harbor/Kangaroo Island region have plummeted. The New Zealand seals are not native to the area but have become one of Kangaroo Island's tourist drawcards.

The penguins are also in trouble in Encounter Bay, where a count on West Island near Victor Harbor this year found only 50 birds, down from the 2,000 which lived there in 2001. There have been reports that the current number at Penneshaw has dropped from 200 birds previously to fewer than half a dozen. Data taken from a SARDI report printed in 2007 from Granite Island and West Island—six kilometres west of Granite Island—has confirmed that New Zealand fur seals consumed adult penguins at both sites, indicating that they may be causing part of the decline in numbers. Ongoing monitoring of the fur seal diet is required.

On attending a meeting on Kangaroo Island last week with the member for Finniss which about 70 people attended, the people there were very keen to see that there was an immediate implementation of a full investigation on the interaction between fur seals and the little penguins. It is an issue. It is an ever evolving issue, and I have certainly had anecdotal evidence from divers on the West Coast on Eyre Peninsula that they may be the culprits that are causing the decline of the cuttlefish in Spencer Gulf because it is certainly part of their diet. I do call on the government to introduce a management plan, because otherwise we could see the total demise of cuttlefish and the little penguins. I commend the motion.