

Legal protection of New Zealand's indigenous aquatic fauna – an historical review

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ABSTRACT: At least 160 different pieces of New Zealand legislation affecting total protection of species of aquatic fauna (other than birds) have been passed since 1875. For the first 60 years, legislation focused on notification of closed seasons for New Zealand fur seals (*Arctocephalus forsteri*), for which the last open season was in 1946. All seal species (families Otariidae and Phocidae) have been fully protected throughout New Zealand continuously since October 1946. The first aquatic species to be fully protected were the southern right whale (*Eubalaena australis*) and pygmy right whale (*Caperea marginata*) within 3 nautical miles (5.6 km) of the coast in 1935. Attempts to protect famous dolphins (including Pelorus Jack in 1904 and Opo in 1956) were *ultra vires*, and there was no effective protection of dolphins in New Zealand waters before 1978. The extinct New Zealand grayling (*Prototroctes oxyrhynchus*) was fully protected in 1951, and remains New Zealand's only fully protected freshwater fish. Nine species of marine fishes are currently fully protected, beginning in 1986 (spotted black grouper, *Epinephelus daemeli*). Protection of corals began in 1980. The reasons why aquatic species were protected are explained, and their protection history is compared and contrasted with the history of protection of terrestrial species in New Zealand.

KEYWORDS: Environmental legislation, history of legal protection, marine mammals, marine reptiles, fish, sharks, coral, wildlife, animal protection, New Zealand.

Introduction

Legal protection is a necessary first step in protecting endangered species from exploitation, and has a long history of application in New Zealand (Galbreath 1989, 1993; McDowall 1994; Miskelly 2014). The first indigenous species to be granted full protection was the tūī (*Prosthemadera novaeseelandiae*) in 1878, and more than 130 native New Zealand bird species were absolutely protected by 1906 (Miskelly 2014). Full protection was extended to the terrestrial reptile tuatara (*Sphenodon punctatus*) in 1907, native frogs (*Leiopelma* spp.) in 1921 and native bats (*Mystacina* spp. and *Chalinolobus* spp.) in 1922. However, marine mammals, marine reptiles and fishes were among the faunal groups excluded from protection in the Animals Protection and Game Act 1921–1922, and of these, only

marine reptiles were (implicitly) covered by the Wildlife Act 1953 (Miskelly 2014).

In contrast to the early absolute protection of many terrestrial animal species, exploitation of marine and freshwater species in New Zealand was managed initially through regulation of harvest season lengths and bag limits, rather than complete prohibition of harvest (McDowall 1994; Paul 2000; Young 2004). This contrast between management approaches for terrestrial and aquatic species reflected a similar situation for protection of habitats, where creation of marine reserves in New Zealand lags about a century behind protection of land habitats (Ballantine 1991; Young 2004; Enderby & Enderby 2006).

This review summarises legislation providing full protection for New Zealand's indigenous marine and

freshwater fauna. It does not include the extensive legislation limiting harvests in New Zealand's fisheries, apart from any legislation prohibiting both commercial and amateur harvest of a species throughout the entire country for a year or longer. Nor does it include legislation providing protection for marine or freshwater areas (e.g. marine reserves). For introductions to New Zealand fisheries management and marine reserves, see Paul (2000: 173–238) and Enderby & Enderby (2006), respectively.

The main purpose of the review is to provide a database of when each species or species group received legal protection (and under which piece of legislation), as a resource for environmental managers and researchers. This review complements a previous review of legislation protecting New Zealand's terrestrial fauna (Miskelly 2014), and likewise includes information on why protection was sought for those species for which it has been granted. Together, the two reviews provide an insight into the development of a conservation ethos in New Zealand, based on public submissions to relevant government ministers and their departments, and the responses of government employees and ministers to demands for protection (or renewed harvest) of New Zealand wildlife.

Methods

Legislation and context relevant to the legal protection of New Zealand's aquatic wildlife were located through searches of paper-based, digital and online archives. The main paper-based archives searched were bound volumes of *Rules, Regulations and By-Laws Under New Zealand Statutes* (Volumes 1–13, 1910–36), *Statutory Regulations* (1936–2014) and *New Zealand Parliamentary Debates (NZPD)*, held at the National Library and Wellington City Library, Wellington; archived files of government departments held at Archives New Zealand, Wellington; and subsequent files held at the Department of Conservation (DOC) and Ministry for Primary Industries (MPI) national offices in Wellington. Digital copies of the *New Zealand Gazette* (NZG, the official organ of the New Zealand legislative assembly) at the National Library and at Archives New Zealand were searched for keywords using optical character recognition. The main web-based source of New Zealand statutes searched was the New Zealand Legal Information Institute *NZLII Databases* (New Zealand Legal Information Institute n.d.), particularly 'New Zealand Acts as Enacted (1841–2007)', with citation details confirmed by inspection

Table 1 The principal Acts providing legal protection to New Zealand's aquatic wildlife.

Protection of Animals Act 1873
Seals Fisheries Protection Act 1878
Fisheries Conservation Act 1884
Sea-fisheries Act 1894
Fisheries Act 1908
Animals Protection and Game Act 1921–1922
Whaling Industry Act 1935
Wildlife Act 1953
Marine Mammals Protection Act 1978
Fisheries Act 1983
Fisheries Act 1996

of bound copies of the *Statutes of New Zealand* and the *Statutes of the Dominion of New Zealand* held at Wellington City Library, Wellington.

All legislation found that contained information relating to legal protection of indigenous aquatic fauna was compiled in a chronological database, along with citation details and a summary of relevant information contained therein (Appendix 1). Correspondence files relating to most of the more significant pieces of legislation were located via the Archives New Zealand *Archway* website (www.archway.archives.govt.nz; accessed 19 July 2014) or with the assistance of DOC or MPI staff.

Results

Part 1: The main pieces of legislation and their impact on the protection of New Zealand's aquatic wildlife

Protection of New Zealand indigenous aquatic wildlife has been covered by 11 principal Acts (Table 1), plus 6 minor Acts, 6 Amendment Acts, 73 Statutory Regulations (including Notices and Orders), and at least 65 Orders in Council or *New Zealand Gazette* notices. A chronological list of legislation, with citation details, is provided as Appendix 1.

The legislation falls into two main groups: regulation of fisheries (including former seal and whale 'fisheries') by the government department responsible for fisheries management; and 'no-take' legislation administered by DOC (and, before 1987, the Wildlife Service of the Department of

Internal Affairs). However, there were exceptions, most notably the 'no-take' Marine Mammals Protection Act 1978, which was initially administered by the Ministry of Agriculture and Fisheries (MAF) until it was included among the responsibilities of the newly formed DOC in 1987.

The main legislation controlling the sealing and whaling industries

The earliest New Zealand legislation that referred to aquatic fauna was the Protection of Animals Amendment Act 1875, which restricted hunting of seals to four months (June to September). Hunting of New Zealand fur seals (*Arctocephalus forsteri*) for their skins was the basis for New Zealand's first export industry, beginning in 1792 (Grady 1986: 16). The industry was unregulated by New Zealand statutes for its first 83 years, leading to the near extirpation of fur seals by the 1830s (Harcourt 2005). The 1875 Amendment Act was followed by the Seals Fisheries Protection Act 1878, before regulation of the seal fishery became founded on wider fisheries legislation from 1884 to 1978 (Fisheries Conservation Act 1884, Sea-fisheries Act 1894, Sea-fisheries Act 1906, Fisheries Act 1908). Details of open and closed seasons for seals is provided in Appendices 1 and 2.

Whaling in New Zealand waters was unregulated by New Zealand legislation before the Whaling Industry Act 1935 came into force, protecting southern right whales (*Eubalaena australis*) and pygmy right whales (*Caperea marginata*). The Whaling Industry Regulations 1949 imposed a September to April closed season for baleen whales, reaffirmed in 1961. The Whaling Industry Regulations 1961, Amendment No. 1 (enacted in 1964), provided full protection for humpback whales (*Megaptera novaeangliae*), and a May to August closed season for sperm whales (*Physeter macrocephalus*).

The Fisheries Act 1908 (and its preceding Acts) made no mention of marine mammals other than seals, until the Fisheries Amendment Act 1956 provided for the Governor-General to make regulations protecting all marine mammals. All marine mammals throughout New Zealand and New Zealand fisheries waters (up to 200 nautical miles, or 370.4 km from the coast) have been fully protected since the enactment of the Marine Mammals Protection Act 1978.

Legislation protecting marine reptiles

Sea snakes and sea turtles have been recognised as part of the New Zealand fauna since 1837 and 1885, respectively (Gill & Whitaker 1996). The Animals Protection and Game Act 1921–1922 protected a single reptile species only (tuatara,

Sphenodon punctatus), but Section 3.2 provided a mechanism for further reptile species to be added to the schedule of absolutely protected wildlife. The green turtle (*Chelonia mydas*) and leathery turtle (*Dermochelys coriacea*) were added to the schedule in March 1939 by a notice under the Regulations Act 1936. All marine reptiles were protected when the Wildlife Act 1953 was enacted; the Act covered 'any reptile' throughout New Zealand, and then excluded skinks and geckos only.

Protection of sea turtles in commercial fisheries was extended to all New Zealand fisheries waters (i.e. out to 200 nautical miles/370.4 km from the coast) by fisheries regulation in August 1990. All marine reptiles received full protection out to 200 nautical miles (370.4 km) from October 1996, when the Fisheries Act 1996 extended the provisions of the Wildlife Act 1953 to cover New Zealand fisheries waters.

The main legislation protecting fishes, shellfish and corals

The first species protected in the three remaining groups were all covered initially by fisheries regulations under the Fisheries Act 1908 or the Fisheries Act 1983.

The New Zealand grayling (*Prototroctes oxyrhynchus*) was the first fish species protected, under the Freshwater Fisheries Regulations 1951 (reaffirmed in 1983). It remains the only fully protected freshwater fish. The spotted black grouper (*Epinephelus daemeli*) was the first marine fish protected, in both commercial and amateur fishing regulations, in September 1986. Its protection was initially confined to the Auckland and Kermadec fishery management areas (i.e. covering its core New Zealand range), but this was extended to national protection when spotted black grouper was included in Schedule 7A ('Marine species declared to be animals') of the Wildlife Act 1953, created by the Fisheries Act 1996. Eight further species of marine fishes were added to Schedule 7A by Wildlife Orders in 2007 (great white shark, *Carcharodon carcharias*), 2010 (deepwater nurse or sandtiger shark, *Odontaspis ferox*; whale shark, *Rhincodon typus*; manta ray, *Manta birostris*; spinetail devil ray, *Mobula japonica*; giant (or Queensland) grouper, *Epinephelus lanceolatus*; and basking shark *Cetorhinus maximus*), and 2012 (oceanic whitetip shark, *Carcharhinus longimanus*). Great white shark, basking shark and oceanic whitetip shark are further protected under the Fisheries Act 1996 (by regulation), which provides protection from fishing by New Zealand vessels on the high seas.

The Toheroa Regulations 1955 established a closed season for the large bivalve shellfish toheroa (*Paphies ventricosa*). Subsequent amendments varied the closed season, but allowed at least some commercial or amateur harvest each year through to 1980. Toheroa became fully protected by the Toheroa Regulations 1955, Amendment No. 19 (1 September 1980), which stipulated a closed season from 1 December 1980 to 30 November 1983. This closed season has continued to the present in broader fisheries regulations, apart from open days for non-commercial harvest on Oreti Beach, Southland, on 8 September 1990 (Fisheries (Amateur Fishing) Regulations 1986, Amendment No. 2; *SR* 1990/217) and 18 September 1993 (Fisheries (Amateur Fishing) Regulations 1986, Amendment No. 5; *SR* 1993/284). The Fisheries (Amateur Fishing) Regulations 1986 provided a mechanism whereby persons representing a Māori community could take fish (including shellfish, *sensu* the Fisheries Act 1983) otherwise protected by fisheries regulations, for hui, tangi or other approved purposes, provided conditions listed in the permit were met. Although no species were named, in practice this allowed a limited take of toheroa each year from 1986. This provision was continued in the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, the Fisheries (South Island Customary Fishing) Regulations 1998 and 1999, and the Fisheries (Amateur Fishing) Amendment Regulations (No. 2) 2005.

Black corals (initially all species in the genus *Aphanipathes*, and from 1984 all species in the order Antipatharia) were first protected in December 1980 by the Fisheries (General) Regulations 1950, Amendment No. 34 (*SR* 1980/245), and subsequently in fisheries notices and regulations in 1983, 1984, 1986, 1988, 1989 and 1991. Red hydrocorals (order Stylasterina, now order Anthomedusae) were protected in commercial fishing regulations for the South-East, Southland and Sub-Antarctic fishery management areas in October 1989, and in corresponding amateur fisheries regulations in April 1991. Black corals and all species of 'red corals' became absolutely protected throughout New Zealand fisheries waters when included in the newly created Schedule 7A of the Wildlife Act 1953 by the Fisheries Act 1996. The Wildlife Order 2010 removed confusion over the meaning of 'red coral' by restricting protection to hydrocorals (all species in the family Stylasteridae). The Wildlife Order 2010 also added gorgonian corals (all species in the order Gorgonacea [Alcyonacea]) and stony corals (all species in the order Scleractinia) to Schedule 7A, thereby granting them absolute protection.

The Wildlife Amendment Act 1980 created a mechanism for protection of freshwater invertebrates (by adding them to the newly created Seventh Schedule of the Wildlife Act 1953), but to date no such species have been included in the schedule, and so all freshwater invertebrates remain unprotected.

Territorial sea and fisheries waters

Protection of marine fauna at sea requires spatial definition of the waters covered by the legislation. This has varied over time and between legislation, partly reflecting changing definitions of New Zealand waters, territorial sea and fisheries waters.

The Fisheries Conservation Act 1884 defined 'waters' to include any salt, fresh or brackish waters in the colony, or on the coasts or bays thereof. The Sea-fisheries Act 1894 stipulated an outer limit of 'waters of the colony' of one marine league (equivalent to 3 nautical miles, or 5.6 km) from the coast, and the same delimitation was used in the Fisheries Act 1908 and the Whaling Industry Act 1935. This was extended to a 12 nautical mile (22.2 km) 'fishing zone' in 1965 (Territorial Sea and Fishing Zone Act 1965), with the innermost 3 nautical miles (5.6 km) defined as 'territorial sea'. Territorial seas were extended to 12 nautical miles (22.2 km) in 1977 (Territorial Sea and Exclusive Economic Zone Act 1977), surrounded by the newly created Exclusive Economic Zone of New Zealand (EEZ), which extended to 200 nautical miles (370.4 km) from the coast. This same Act further defined 'New Zealand fisheries waters' as including all waters in the EEZ, which was the spatial extent covered by the Marine Mammals Protection Act 1978, the Fisheries Act 1983 and the Fisheries Act 1996.

Both the Animals Protection and Game Act 1921–1922 and the Wildlife Act 1953 referred to wildlife as being protected 'throughout New Zealand', without defining whether this included any adjacent sea. This ambiguous wording was never tested in court, but was interpreted by some commentators as meaning that the provisions of the Wildlife Act 1953 ceased at the low-water mark (e.g. Lello 1980 and Ministry for the Environment 1988), while others considered the Act to include territorial sea (i.e. to 12 nautical miles/22.2 km offshore; see, for example, Ministry of Agriculture and Fisheries [1990] and Tennyson 1990, followed by Miskelly 2014). Staff of the former Wildlife Service, DOC, and the Royal Forest and Bird Protection Society (Forest & Bird) considered the Wildlife Act 1953 to include territorial sea, based on several unpublished reports

and submissions in Ministry of Fisheries files (now held by MPI), and on emails to the author from Brian Bell and Mark Bellingham (August 2014). This confusion was cleared up by the Fisheries Act 1996, which extended the provisions of the Wildlife Act 1953 to cover New Zealand fisheries waters (i.e. out to 200 nautical miles/370.4 km).

Part 2: Why were aquatic wildlife species protected (or not)?

The reasons why aquatic species were protected, or why protection was removed, are mainly found in archived files from the relevant government departments. Most of the information quoted was sourced from Marine Department files (series M1, M2, M42 and M46), Department of Internal Affairs files (series IA46), and Department of Tourist and Health Resort files (series T&H25) held at Archives New Zealand (ANZ), Wellington (a total of 15 files quoted herein); Ministry of Fisheries files held by the MPI national office, Wellington (seven files quoted); and DOC files held at the DOC national office, Wellington (eight files quoted).

The compilation of rationale for protection (or removal of protection) of aquatic wildlife species presented here is incomplete, as a few files were missing or not found, and surviving files mainly contain written correspondence and replies. Any changes to protection status resulting from in-house deliberations may not have left a complete paper trail. However, the majority of decisions affecting the protected status of native aquatic wildlife between 1904 and 2012 (other than closed seasons for harvested species) can be linked to specific written requests, or to government department reports.

Famous dolphins: 1904, 1945 and 1957

New Zealand has had a succession of individual dolphins that became famous for their sustained interactions with people or boats. Three of these individuals prompted the provision of special protective legislation.

The most famous New Zealand dolphin – at least in terms of international awareness at the time – was also our first celebrity dolphin. ‘Pelorus Jack’ accompanied vessels across the mouth of Admiralty Bay (east of D’Urville Island, outer Marlborough Sounds) for at least 24 years, between 1888 and 1912 (Fig. 1; see Alpers 1960). Efforts to protect Pelorus Jack began in November 1903, at the behest of the Reverend Daniel Bates (clerk of the Meteorological Department of the Colonial Museum). Bates wrote to his



Fig. 1 Pelorus Jack (a Risso's dolphin, *Grampus griseus*) accompanies a vessel in Admiralty Bay, 1901–09 (photo: James McDonald, purchased 2009, Te Papa C.025085).

manager in the Department of Tourist and Health Resorts, suggesting that the dolphin be protected (unpublished manuscript by Anthony Alpers in ANZ M42/9/2 Part 1). Thomas Donne, superintendent of the Department of Tourist and Health Resorts, agreed, and wrote to Hugh Pollen, under-secretary of the Colonial Secretariat, on 4 December 1903: ‘Being informed that this fish is not protected, and as it is now of national interest, I consider that some steps should be taken to protect it as far as possible’ (ANZ M2/12/34). Pollen referred the matter to the Marine Department, stating that Sir James Hector had informed him that Pelorus Jack was ‘an antarctic white whale (Beluga Kingii) [now considered a junior synonym of *Delphinapterus leucas* (beluga)]’. Pollen continued, ‘It would perhaps be desirable to formally protect Pelorus Jack against capture or injury as he might be killed by some collector of curiosities for the sake of his skeleton or wantonly destroyed or injured [*sic*] by ignorant or mischievous persons ... Kindly say whether there is power in the Sea Fisheries Acts to protect whales in New Zealand waters’ (letter, 30 December 1903,

ANZ M2/12/34). George Allport, secretary of the Marine Department, wrote his reply at the bottom of the same letter the following day: 'Subsection 14 of Section 5 of the Sea-fisheries Act 1894 provides that the Governor in Council may prohibit the taking of any fish for such period as he thinks fit. The Antarctic white whale (Beluga Kingii) could therefore be protected by a prohibition against the taking of them being issued.'

A draft Order in Council, 'Prohibiting Taking of Antarctic White Whale in Cook Strait, &c.', dated 26 January 1904, was prepared by the Government Printer, but it was never published, as within a day Bates wrote to both Donne and Allport stating that he was sure that Pelorus Jack was 'neither Beluga nor Ziphius [i.e. Cuvier's beaked whale]'. Bates further stated: 'Until I may be able to see the fish and verify some observations, although I now feel certain about his species, I do not like to define and try to prove it. I will try to go soon' (ANZ M2/12/34, and similar wording in ANZ T&H25/7). However, on 30 January 1904, Bates provided a report to Donne concluding that Pelorus Jack was a Risso's dolphin (*Grampus griseus*) (report in ANZ T&H25/7). Their minister (Sir Joseph Ward) referred the report to the Minister of Marine (William Hall-Jones), and a letter was sent to Bates in mid-February advising that the Minister of Marine considered 'that as there is a difference of opinion as to the real species to which this fish belongs it has been decided to take no action at present in regard to Gazetting it as protected' (ANZ T&H25/7).

Thomas Donne wrote to the Colonial Secretariat's office again on 4 March 1904 (ANZ M2/12/34), providing a further draft Order in Council to protect Pelorus Jack as a named individual (i.e. to avoid naming the species). Pollen forwarded the request again to the Marine Department, with the comment 'I think it would be better to protect the species rather than the individual even if there is power to do so, which is doubtful' (marginal note on Donne's letter, dated 7 March 1904). Allport replied to Donne on 21 March 1904, stating that Crown Law Officers had advised the Marine Department 'that the power to prohibit the taking of any fish contained in section 5 of "The Sea-fisheries Act, 1894," refers to fish as a species or kind, and not to any individual fish. There is therefore no power to issue the proposed Order in Council to protect "Pelorus Jack" by name' (ANZ T&H25/7).

Donne then changed tack, and wrote to his own minister (Sir Joseph Ward) on 25 March 1904, stating that 'As the whale family are mammals I would suggest that an effort be

made to protect Pelorus Jack under the Animals Protection Act. Will you please refer the question for an opinion of the Crown Law Office' (ANZ T&H25/7). The reply was 'In my opinion this cannot be done' (marginal note on Donne's letter, dated 31 March 1904).

The matter sat for a further six months, until an article in the *Lyttelton Times* dated 16 September 1904 stated that Pelorus Jack had been 'declared by Captain [Frederick] Hutton to be a goose-beak whale (*Ziphius cavirostris*)' ("Pelorus Jack": his classification' 1904), based on information supplied by Mr P.C. Threlkeld of Ohoka. This prompted Bates to reveal his hand publicly, and the following day the *New Zealand Times* ran an article that presented Bates's conclusions that Pelorus Jack was a Risso's dolphin, and stated 'the Government will protect the fish as classed by that gentleman' ("Pelorus Jack": his genus decided' 1904). Bates based his identification on a 'remarkable' photograph taken by the Attorney-General, the Honourable Colonel Albert Pitt, presumably while travelling between his home in Nelson and Parliament in Wellington. Pitt agreed with Bates's identification, and requested the Marine Department to proceed with a protection order for Pelorus Jack as a Risso's dolphin (memo to the Minister of Marine from his under-secretary, George Allport, dated 21 September 1904, ANZ M2/12/34). The Order in Council (published in the *New Zealand Gazette* on 29 September 1904) covered a period of five years, and stated: 'it shall not be lawful for any person to take the fish or mammal of the species commonly known as Risso's dolphin (*Grampus griseus*) in the waters of Cook Strait, or the bays, sounds, and estuaries adjacent thereto'. This was renewed for a further five years on 31 May 1906, when the fisheries regulations were consolidated and amended, and again on 4 May 1911.

Uncertainty over the identity of Pelorus Jack is demonstrated by comparing the first three editions of Frederick Hutton and James Drummond's *The animals of New Zealand*. The first edition (1904: 51) followed Hector in stating that it was a beluga (*Delphinapterus leucas*), a species now recognised as confined to Arctic waters. In the second edition (1905: 47), Hutton and Drummond concluded that Pelorus Jack was a goose-beak whale (now known as Cuvier's beaked whale, *Ziphius cavirostris*). When preparing the third edition (following Captain Hutton's death), Drummond followed the 1904 Order in Council in considering Pelorus Jack to be a Risso's dolphin (Hutton & Drummond 1909: 18, 62–63). Debate over the identity of Pelorus Jack continued for more than seven decades.

Troughton (1931) concluded that it was not reconcilable with *Grampus*, and suggested that it was 'probably a large Dolphin of an allied genus', while Gaskin (1972) concluded that it must have been a bottlenose dolphin (*Tursiops truncatus*), before Baker (1974) reassessed historical photographs to reaffirm Bates's identification of Pelorus Jack as being a Risso's dolphin.

Reference to Pelorus Jack as being a 'fish or mammal' did not pass unnoticed by zoologists. Constance Barnicoat worked as a New Zealand government secretary and short-hand reporter before sailing to England in 1897 (McCallum 2012). In 1905 she was working for the *Review of Reviews* in London, and wrote to New Zealand Premier Richard Seddon on 30 May, stating that an 'English authority on fishes and to a certain extent on animals in general has made considerable fun of the "fish or mammal" clause; Pelorus Jack is, he says undoubtedly a mammal, and I have wondered whether a proclamation is valid in which the Governor in Council protects a mammal under an Act for the protection of sea-fishes' (ANZ M2/12/34). It is evident that legislators were employing a sleight of hand in referring to Risso's dolphin as a fish, as neither the Sea-fisheries Act 1894 nor the subsequent Fisheries Act 1908 made any provision for protection of marine mammals other than seals (see below).

Pelorus Jack was last seen in 1912 (Alpers 1960). In September 1944, the Marine Department received information that a second pale dolphin, dubbed 'Pelorus Jack II', was accompanying boats in Pelorus Sound, this time in Hikapu Reach ('The latest picture of Pelorus Jack II' 1944; Oliver 1946). Ernest Lawrence of the Portage, Pelorus Sound, wrote to the Marine Department describing the behaviour of the 'white porpoise' and suggesting that some measure of protection should be given to it (ministerial advice, 1 November 1944, ANZ M2/12/34). The Marine Department sought the assistance of Reginald (W.R.B.) Oliver, the director of the Dominion Museum, who visited Hikapu Reach with Lawrence in the last week of September 1944, and identified the animal as a 'coast porpoise [Hector's dolphin], *Cephalorhynchus hectori*' (letter from Oliver to the secretary, Marine Department, 9 October 1944, ANZ M2/12/34). Oliver considered the animal to be 'of sufficient interest to have some measure of protection, and accordingly recommend that an Order-in-Council be Gazetted as was done in the case of "Pelorus Jack".' The letter was referred to Arthur Hefford, Chief Inspector of Fisheries, who replied 'I think an O/C for its protection would be desirable' (marginal note on Oliver's letter, dated 11 October 1944).

On 1 November 1944, Richard Gerard (Member of Parliament for Mid-Canterbury) asked the Minister of Marine in the House of Representatives 'Whether he proposes having an Order in Council issued for the protection of the blue and grey porpoise in French Pass, recently reported to be showing a desire for association with man?' (ANZ M2/12/34). James O'Brien, the minister, replied that 'The question of protection of this porpoise has already been investigated by officers of the Dominion Museum and the Marine Department, and action is being taken in that direction' (ibid.). Regulation 10 of the Sea-Fisheries Regulation 1939, Amendment No. 16 (SR 1945/14, 28 February 1945), stated: 'During a period of three years from the 31st day of January, 1945, no person shall take or attempt to take any porpoise of the species commonly known as white porpoise [Hector's dolphin] (*Cephalorhynchus hectori*) in the waters of Cook Strait, including the bays, sounds, and estuaries adjacent thereto.' This was renewed for four further periods of three years in May 1947, August 1950, February 1956 and March 1966, before being revoked in June 1968.

The third famous dolphin was Opo, a young bottlenose dolphin that frequented Hokianga Harbour from early 1955 to March 1956, interacting with bathers and people in small boats (Fig. 2; see Alpers 1960). On 15 December 1955, H. Chappell, the secretary of the Hokianga Harbour Board, wrote to the secretary of the Marine Department stating that the board was 'of the opinion, that immediate action should be taken to give [the dolphin] protection and has directed me to inform you of the position, in order that your Department can investigate the matter and take such action it might consider necessary to guard this sea mammal against destruction' (ANZ M42/9/2 Part 1). Gerald O'Halloran, secretary of the Marine Department, replied on 20 December 1955, saying, 'I regret that I see no way in which to provide special protection for the dolphin' (letter also in file ANZ M42/9/2 Part 1, as is all the following correspondence regarding protection of dolphins).

On 20 February 1956, A.M. Brierley, secretary of the Whangarei District Progressive Society, wrote to Sidney Smith, Minister of Internal Affairs, asking that the Opononi dolphin 'be protected against vandals and other ill-intentioned persons', and requesting that he 'take the necessary steps to have such a Protection Order published in the New Zealand Gazette'. File notes indicate that Smith discussed the request with John McAlpine, Minister of Marine, and that McAlpine instructed O'Halloran via telephone to prepare an Order in Council protecting the

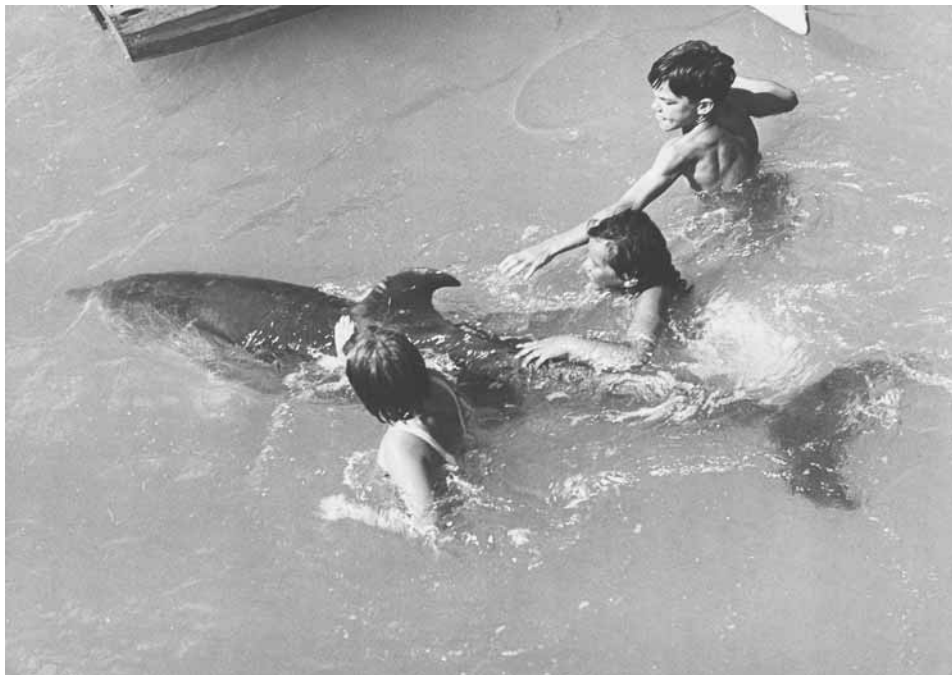


Fig. 2 Children playing with Opo (a bottlenose dolphin, *Tursiops truncatus*), Opononi, 1956 (photo: Eric Lee-Johnson, purchased 1997 with New Zealand Lottery Grants Board funds, © Te Papa CC BY-NC-ND licence, Te Papa O.007809/04).

dolphin. Other cabinet ministers were also being lobbied – see for example, the letter from Alison Dunne to Ronald Algie, dated 27 February 1956, expressing concern at a letter in the *New Zealand Herald* (Admirer, Opononi 1956) describing how ‘two visitors tried to lift [Opo] bodily out of the water’. The same letter to the editor commended ‘Mr Algie and Mr Smith on the move they have made to have “Opo” the dolphin protected’.

O’Halloran sought advice from the Solicitor General, Crown Law Office, on 28 February 1956, stating that the Chief Inspector of Fisheries ‘is of the opinion that protection cannot be given under section 5 of the Fisheries Act 1908 as the animal is a mammal and not a fish ... Mr E.G. Turbott of the Auckland Museum has stated that the animal is a very young bottle-nosed dolphin’. There was considerable ministerial pressure being applied to the Marine Department, as on the same day O’Halloran sent a draft Order in Council to protect the dolphin to his minister:

In accordance with your telephonic instructions ... You are aware, of course, that there is no statute under which this provision can be given and that even if the provisions of the Fishery Act [*sic*] are to be adopted as was done in the case of Pelorus Jack in 1904 the species but not single fish requires to be protected. In this case it has not been

ascertained to which species this particular dolphin belongs, so in order to prevent any possibility of error the phrase ‘all dolphins inhabiting the Hokianga Harbour’ should be inserted in the Order in Council.

O’Halloran wrote another memo to the Solicitor General on 2 March, stating that since writing [on 28 February] ‘I have been advised that Cabinet has decided that Regulations are to be made urgently. Consequently I have forwarded a copy of the draft regulations to the Law Draftsman for urgent revision ... However, I should be glad if you would still let me have your opinion on this matter.’

Also on 2 March, O’Halloran drafted a cabinet briefing memo for McAlpine’s signature, worded as follows:

**Fisheries Hokianga Dolphin Protection
Regulations 1956**

The above regulations, a copy of which is attached, have been prepared following on representations for some formal protection to be given to the Dolphin now frequenting the Hokianga Harbour in the vicinity of Opononi.

The regulations are made following on the precedent of ‘Pelorus Jack’ which was first protected by an Order in Council dated 26th September, 1904, and made under Section 5 of the Sea Fisheries Act 1894, now Section 5 of the Fisheries Act 1908.

You are aware, of course, that these regulations may not be valid as a dolphin is a mammal and not a fish. However, as an expediency measure I think they should suffice.

The species and not a single fish requires to be protected and as it has not been ascertained to which species this dolphin belongs, all dolphins in the Hokianga Harbour are to be protected from being taken or molested for a period of five years.

These regulations have been reviewed by the Law Draftsman and have been submitted to the Attorney General for his approval for submission to Cabinet. No other Department is affected. It is recommended that Cabinet approve these regulations.

The Fisheries (Dolphin Protection) Regulations 1956 (*SR* 1956/25) were issued on 7 March 1956, and notified in the *New Zealand Gazette* on 8 March. Sadly, Opo probably died that same day; she was found dead, trapped in a tide pool, on 9 March – the day the regulations came into effect (Alpers 1960).

It is unlikely that news of Opo's death had reached Wellington before E.J. Haughey, Crown Solicitor, replied (on 9 March) to O'Halloran's memo of 28 February:

Although in a loose and popular sense the word 'fish' is sometimes used to include mammals living exclusively in the water and having a fish-like form (cetacea) such as whales, porpoises and dolphins, it strictly means and is restricted to 'vertebrate animals, provided with gills throughout life, and cold-blooded; the limbs, if present, being modified into fins' ... It is in this latter sense, I think, that the term 'fish' must be deemed to have been used in section 2 of the Fisheries Act 1908; and I am therefore of opinion that the draft Order in Council submitted by you herein (which I see from the Press has now been enacted) is *ultra vires* ... As I know of no other statutory provision or rule of law under which this dolphin can be afforded adequate legal protection I can only suggest that special legislation should be enacted by Parliament for this purpose.

On 13 March, M.W. Young, the Chief Inspector of Fisheries, wrote a memo stating that he considered the Order in Council to be *ultra vires* in two ways, because (1), 'the Act does not give power to make regulations for dolphins' and (2), 'the term of the protection is for five years, whereas the maximum period [allowed in the Act] is three years ... To repair the damage of (1) amend Section 5 of the principal Act by the amendment of (h) by adding after the word "seals" in both places the words "or other mammal found in New Zealand waters" and do the same for 5 (o).' These suggested amendments to the Fisheries Act 1908 were forwarded to the

Law Drafting Office in a letter by O'Halloran on 29 March 1956 and resulted in the changes implemented when the Fisheries Amendment Act 1956 was enacted on 26 October 1956 [i.e. replacing the word 'seals' with 'marine mammals (including seals)'].

Following Opo's death, the Fisheries (Dolphin Protection) Regulations 1956, referring to dolphins in Hokianga Harbour, were revoked on 6 March 1957, as Marine Department staff remained concerned about their validity (memo from O'Halloran to Richard Gerard, Minister of Marine, 19 December 1956). In a curious twist, the Fisheries Amendment Act 1956 did result in some dolphins being protected immediately. It was enacted on 26 October 1956, eight months after the Fisheries (General) Regulations 1950 had been reprinted, 'protecting' Hector's dolphins in Cook Strait for three years from 1 March 1956. The Fisheries Amendment Act 1956 legitimised Regulation 110 (protecting Hector's dolphins), and so the first legally protected dolphins in New Zealand were Hector's dolphins in Cook Strait and its adjoining waters, for 28 months between 26 October 1956 and 1 March 1959. The Fisheries (General) Regulations 1950 were again reprinted in March 1966, thereby protecting Hector's dolphins in Cook Strait for a further three years from 17 March 1966. However, the Fisheries (General) Regulations 1950, Amendment No. 10 revoked Regulation 110, meaning that this localised protection of Hector's dolphins lasted only a further 15½ months, from 17 March 1966 to 4 July 1968. It is unlikely that 'Pelorus Jack II' (first reported in 1944) benefited from these two belated periods of protection. The maximum lifespan of a Hector's dolphin is about 20 years (Slooten 1991), and on 13 April 1956, Gerald O'Halloran wrote that 'none has been sighted in recent years' in the vicinity of Pelorus Sound (letter to F.C. Rhodes, Brisbane). The amended Fisheries Act 1908 was not used further to protect marine mammals (other than seals) before the Marine Mammals Protection Act 1978 was enacted.

Twentieth-century New Zealand fur seal harvests: 1923–29 and 1946

Few details are available regarding the reasons why closed seasons were set for fur seals from 1882 onwards, possibly due to the destruction of Marine Department files in the Hope Gibbons fire in 1952. The main advisers on seal stocks during this period were the captains of government steamers, which regularly visited the subantarctic islands until 1929, and continued servicing lighthouse stations around the

New Zealand coast after that date (e.g. report by Captain John Bollons to the secretary for Marine, 5 July 1919, ANZ IA46/33/7). New Zealand fur seals took many decades to recover from their near extirpation in the early nineteenth century, and from 1875 the New Zealand government closely regulated their harvest, with closed seasons in 51 of 71 years up until the last open season in 1946 (see Appendices 1 and 2). The correspondence and reports that survive are mainly in relation to open seasons on Campbell Island/Motu Ihupuku in the 1920s, and around southern New Zealand in 1946.

Sealing on Campbell Island/Motu Ihupuku during the 1920s was linked with attempts to achieve economic viability of sheep farming on the island. Attempts to farm the island began in the late 1890s, and in 1916 the lease was transferred to a Dunedin-based syndicate led by James Patrick and John Mathewson (Dingwall & Gregory 2004). In March 1922, Sir Francis Bell, the acting Minister of Marine, granted the Campbell Island Syndicate permission to kill up to 400 bull seals per annum 'on the understanding that your Company will make every endeavour to prevent poaching of seals on the Island' (letter, 11 March 1922, ANZ M2/6/1 Part 3). A total of 278 skins was taken in the first year, and brought to the mainland on the government steamer *Tutanekai* in early April 1923 (telegram from Captain John Bollons to the secretary for Marine, 3 April 1923, ANZ M2/6/1 Part 3).

A second permit, with no limit on numbers, ages or sexes, was issued for a further year by James Anderson, Minister of Marine, on 18 April 1923. However, regulations for the seal fishery on Campbell Island/Motu Ihupuku published in the *New Zealand Gazette* on 15 March 1923 stipulated that no more than 400 seals be taken, and that no females and no animals under the age of one year be taken. A further 67 seal skins from Campbell Island/Motu Ihupuku were delivered to the Collector of Customs in Dunedin via the whaling vessel *Sir James Clark Ross* in mid-March 1925 (letter from George Godfrey, secretary for Marine, to James Anderson, Minister of Marine, 30 March 1925, ANZ M2/6/1 Part 3). Inspection of the cargo revealed multiple breaches of the licence and regulations, and an attempt was made to prosecute the syndicate for taking seals after their permit had expired, and for taking females and young animals. A settlement was reached that included the Campbell Island Syndicate paying the Marine Department's expenses of £28 2s. 0d. (letter from George Godfrey to James Anderson, 4 September 1925, ANZ M2/6/1 Part 3),

and the following day the syndicate applied to have their licence renewed. The request was declined (letter from James Anderson to the secretary of the Campbell Islands Syndicate, 29 September 1925, ANZ M2/6/1 Part 3). A report by George Godfrey, secretary of the Marine Department, to his minister dated 14 December 1925 concluded that the seal population at Campbell Island/Motu Ihupuku was too small to sustain harvest (noting that only 67 skins were taken, when 400 were permitted), and that Captain Bollons did not consider the seal herds on the subantarctic islands to be large enough for 'general re-opening of sealing' (ANZ M2/6/1 Part 3). He continued:

As to the Campbell Island Syndicate, I have no sympathy whatever with them. So far as the Marine Department is concerned they have done nothing but 'winge' and complain – they seem to regard the Government as a charitable institution especially constituted to remit or reduce charges for transport services rendered to them. They have about 28,000 acres of land at a rental of £50 a year and want us to carry their produce at a loss to yourselves ... As a concession, they were given a valuable sealing license subject to certain conditions and they failed to play the game.

The Campbell Island/Motu Ihupuku grazing lease was purchased by John Warren in early 1927 (Dingwall & Gregory 2004). In July 1928, Warren sought the right to take seals on the island, as 'he is making a loss on his farming operations and he is extremely doubtful if he can make a success of it without being able to increase his revenue by means of sealing' (letter from Messrs Wright, Stephenson & Co., Ltd to Sir Francis Bell, Minister of Marine, 17 July 1928, ANZ M2/6/1 Part 4). A permit was duly issued on 15 November 1928, with the same conditions as in 1923: 'A special condition in regard to the issue of the license is that those who hold it shall protect the islands as far as possible against poachers, and shall give full information to the Government as to the names of ships and persons ascertained by them to be engaged in poaching' (letter from Sir Francis Bell, Minister of Marine, to Messrs Wright, Stephenson & Co., Ltd, 11 September 1928, ANZ M2/6/1 Part 4). The licence took a further nine months to reach Warren on Campbell Island/Motu Ihupuku (August 1929), but he took 102 seal skins in what remained of the period allowed, and delivered them to Bluff aboard the *Tamatea* in August 1931 (letter from Warren to John Cobbe, Minister of Marine, 20 August 1931, ANZ M2/6/1 Part 4). Warren continued, 'When I arrived back at Bluff early this month



Fig. 3 New Zealand fur seal (*Arctocephalus forsteri*) skins drying in the rigging of FV *Kekenō*, Luncheon Cove, Dusky Sound, 6 July 1946. The crew of the *Kekenō* took 1181 skins during a 13-day trip in June–July 1946 (photo: Harold Roderique, reproduced with the permission of the Roderique family).

by the s.s. ‘Tamatea’, I found that owing to the depression, the skins were worth only five shillings each [when royalty of £1 per skin was required to be paid], so that all our work has gone for nothing.’ The skins were duly forfeited to customs for non-payment of royalties two months later, signalling the end of both sealing and farming on Campbell Island/Motu Ihupuku.

Requests to reopen the southern fur seal fishery began again in the late 1930s, largely from Southland and Stewart Island/Rakiura fishermen, supported by local politicians. A deputation comprising the Reverend A.E. Waite (mayor of Bluff), the Hon. T.F. Doyle and fisherman Harry Roderique met with Peter Fraser, Minister of Marine, at Bluff on 14 January 1937, arguing for an open season for seals on economic grounds, and because they considered that there were ‘thousands of seals in the southern waters’ (quote from Roderique in minutes of the meeting, date-stamped 1 February 1937, ANZ M2/6/1 Part 5). In late 1944, the Marine Department received reports of fur seals and sea lions taking fish from set nets and lines around Stewart Island/Rakiura, along with claims that their increasing numbers were responsible for depleted fish stocks (two

letters from R.H. Thomson dated 22 November 1944, ANZ M2/6/1 Part 5). Further ‘numerous and continued complaints from fishermen’ concerning perceived impacts of fur seals on the blue cod fishery around Stewart Island/Rakiura were received in 1945 (Sorensen 1969). William Denham, the Member of Parliament for Invercargill, raised the matter with James O’Brien, Minister of Marine, on 15 August 1945, asking ‘Whether he will favourably consider permitting the killing of seals with a view to increasing the fish supply for the domestic market?’ On the same date, O’Brien received a report from the acting secretary for Marine, W.C. Smith, recommending that he ‘approve in principle the opening of the season ... under a licensing system controlled by our Inspector of Fisheries at Bluff’ (Sorensen 1969). The resulting Seal-fishery Regulations were gazetted on 29 May 1946, authorising the issue of licences conferring the right to take seals through to 30 September 1946, for specified parts of Otago, Southland, Fiordland, and Stewart Island/Rakiura and offshore islands. There was no restriction on the ages or sexes of seals that could be taken, as the primary goal was to reduce their numbers. At least 6187 seals were killed (Sorensen 1969, and see Fig. 3).

The decision to open a limited season for killing seals was publically criticised by Robert Falla, director of Canterbury Museum (letters from Falla to the secretary of the Marine Department, 4 and 12 July 1946, ANZ M2/6/1 Part 5; 'Fur seal season' 1946; Sorensen 1969), and the Canterbury naturalist Edgar Stead (Stead 1946), among many others (clippings in ANZ M2/6/1 Part 6a). The main concerns expressed were the absence of direct evidence of seals impacting on the blue cod fishery, and lack of evidence of a general population recovery, along with concerns about the economic viability of the harvest model proposed. Survey of stomach contents of 91 of the animals killed in 1946 failed to identify any blue cod remains (A.M. Rapson *in* Sorensen 1969). Despite occasional requests for removal of protection (e.g. by Sir Tipene O'Regan in 1996; Scadden 1996), all New Zealand seal species have remained fully protected since the closing of the 1946 limited season.

Right whales and humpback whales: 1935 and 1964

The earliest request for protection of whales retained in Marine Department files is a letter from Miss M. Lavington Glyde to the manager of the Department of Tourist and Health Resorts, dated 15 July 1916, containing a copy of a letter she had sent to the Wellington *Evening Post* (the letter was published two days later; ANZ M2/9/4). The published letter requested protection for all whale species in New Zealand waters. Glyde argued that whales were almost extinct due to 'their ruthless destruction, and unless something is done, and done at once, this last of the living wonders of the world will be lamented in vain', and that the world could get on just as well without the commodities extracted from slaughtered whales. The letter was referred to George Allport, secretary of the Marine Department, who sought advice from Lake Ayson, Chief Inspector of Fisheries. Allport's reply to Glyde (4 August 1916, ANZ M2/9/4) pointed out that protection could be given only to whales within 3 miles (5.6 km) of the shore (i.e. territorial seas) as the Dominion had no power to legislate or apply regulations outside such limit, and that international agreement might be necessary in order to achieve effective protection outside the 3-mile limit. Glyde replied that 'even such an enactment by New Zealand to protect whales within our own waters would create a precedent for other countries to follow' (5 August 1916, ANZ M2/9/4).

Initiation of protection for whales did eventually proceed through an international agreement negotiated by the Economic Committee of the League of Nations, seeking to

protect right whales 'which have become extremely rare', including the southern right whale (League of Nations Economic Committee 1929). The resolution, which was expanded to include the pygmy right whale, was adopted by the League of Nations on 24 September 1931 (ANZ M2/9/3 Part 3a). Despite signing this Convention for the Regulation of Whaling, the New Zealand government did not ratify the convention until 30 August 1935, shortly before Parliament passed the Whaling Industry Act 1935 (on 24 October), giving effect to the convention in respect to territorial waters of New Zealand and the Ross Dependency (ANZ M2/9/3 Part 3a). Southern right whales were a rare sight in New Zealand coastal waters in the early twentieth century, with only 13 taken by shore-based whaling stations between 1916 and the last capture of two animals in 1926 (Gaskin 1972).

Humpback whales continued to be hunted from New Zealand shore-based stations through to the early 1960s (Gaskin 1972). The International Whaling Commission (IWC) first met in 1949, and initiated protection for humpback whales in the North Atlantic in 1955. At its 15th meeting (London, July 1963), the IWC further prohibited the taking of humpback whales in all waters south of the Equator, due to concern at their rapidly declining stocks (International Whaling Commission 1965). The proposal was put forward by the Commissioner for Canada, and seconded by Norway. However, Australia and New Zealand moved that protection be limited to south of latitude 40°S, which would have allowed whaling to continue north of Bass Strait and Cook Strait. This amendment was lost, but the main proposal was passed, and became binding on all contracting governments on 9 October 1963 (International Whaling Commission 1965). By this date, the population of humpback whales migrating through New Zealand waters had crashed, as revealed by the numbers of whales killed at the two remaining New Zealand whaling stations, Tory Channel in Cook Strait and Whangamumu on Great Barrier Island (Aotea Island). Between 109 and 318 humpback whales were taken each year from 1951 to 1959, followed by 361 in 1960, 81 in 1961, 35 in 1962, 9 in 1963 and none in 1964 (Gaskin 1972). The Whangamumu station ceased operating after the 1962 season, and the Tory Channel station in 1964 (Fig. 4), the latter having focused on sperm whales during its last two seasons of operation (Gaskin 1972). Humpback whales were therefore economically extinct in New Zealand waters before Parliament ratified the 1963 IWC decision. The Whaling Industry Regulations 1961, Amendment No. 1 (passed on 1 July 1964), prohibited the



Fig. 4 A humpback whale (*Megaptera novaeangliae*) being processed at Perano whaling station, Fishing Bay, Tory Channel, c. July 1948 (photo: Dr W. Arriens, *New Zealand Free Lance*, Alexander Turnbull Library, PAColl-8163-38).

taking of humpback whales within 3 nautical miles (5.6 km) of the New Zealand coast.

The Territorial Sea and Fishing Zone Act 1965 redefined New Zealand fisheries waters as extending to 12 nautical miles (22.2 km) from the New Zealand coast. As the enactments applied to the Whaling Industry Act 1935, southern right whales, pygmy right whales and humpback whales gained protection within this expanded zone.

Sea turtles: 1939 and 1990

In early 1939, Miss E. Katie Pickmere of Whangarei wrote to the Department of Internal Affairs seeking protection for sea turtles. The original letter, and the date it was written, has not been located, but on 9 February 1939, Joseph Heenan (Internal Affairs under-secretary) wrote to the secretary of the Marine Department, quoting the following from Pickmere's letter (ANZ M2/12/155):

We read in the Newspapers that yet another turtle has been seen in the vicinity of Cape Brett. A pair has already

been captured up there (a pair that frequented those waters for many years) and sent to the Museum by someone apparently wishing for cheap publicity.

In your Ministerial position, could you not do something to protect these (in N.Z. waters) rare and interesting creatures, and prevent further slaughter.

Heenan wrote that 'the species could be afforded protection under the Animals Protection and Game Act, 1921–22, but before submitting a report to my Minister, I should be pleased to have the views of your Department, together with any information which your Department may have to the species, and whether there is evidence of others having been observed'.

L.S. Campbell, secretary of the Marine Department, sought advice from Arthur Hefford, Chief Inspector of Fisheries, and was advised that the director of the Auckland Museum or possibly Reginald Oliver of the Dominion Museum could provide information on the identity of the turtle (hand-written notes by Hefford on the margins of Heenan's 9 February letter, ANZ M2/12/155):

My view is that they are abnormal & infrequent visitors to N.Z. coastal waters & that therefore a measure for their protection would probably be a waste of time ... One deplores the pointless slaughter of any creature, rare or common, but specimens cannot be sent to a Museum for identification & study unless they are killed. Until the species is (or are) known it would appear to be impossible to make a protection regulation without prohibiting the killing of any Chelonian (which would be pointless).

Hefford further suggested that the turtle was probably a leathery turtle, based on a press report (*ibid.*).

Campbell's reply to Heenan (21 February 1939, ANZ M2/12/155) recommended that advice be sought from the Auckland Museum or Dominion Museum. However, neither institution has a record of the correspondence and Internal Affairs file 46/88 cannot be located. Advice was apparently received that the green turtle and leathery turtle were the predominant or only species known to occur in New Zealand, as these two species were added to the First Schedule (absolutely protected species) of the Animals Protection and Game Act 1921–1922 on 24 March 1939.

All sea turtles were protected by the Wildlife Act 1953, but it is unclear whether this provided protection within territorial waters (3 nautical miles/5.6 km offshore up until 1977, then 12 nautical miles/22.2 km), or whether this protected turtles only when ashore. Extension of protection throughout New Zealand fisheries waters (i.e. to 200 nautical miles/370.4 km offshore) was initiated by an enquiry from DOC's Rangitikei District Office to their Protected Species Policy Division in May 1989 (MPI 10/19/1 Vol. 1). Pam Cromarty from DOC phoned MAF on 16 May, asking whether the Fisheries Act 1983 provided any protection to marine turtles in New Zealand waters. The reply from MAF (letter from Karen Chant, economic analyst, 16 May 1989, MPI file 10/19/1 Vol. 1) stated that there was no such provision, but that the Act provided for such regulations to be made: 'If you would wish the protection of marine turtles to be provided for within the Fisheries Act 1983, please provide a submission to the Director-General of Agriculture and Fisheries outlining the specific need and degree of protection required for this species.'

DOC's submission seeking protection of marine turtles under Section 89(2) of the Fisheries Act 1983 was dated 13 September 1989 (MPI file 10/19/1 Vol. 1). This stated DOC's understanding of the spatial extent of the Wildlife Act 1953: 'This protection extends as far as the territorial waters of New Zealand or 12 nautical miles from the baseline, as defined in the Territorial Sea and Exclusive Economic

Zone Act 1977.' The reasons given for further protection were founded in the threat ranking assigned to all five marine turtle species known in New Zealand waters, based on listings by the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the Trade in Endangered Species Act 1989. The submission considered the highest threat to marine turtles in New Zealand to be incidental capture in shrimp and prawn trawls, squid nets and other nets, but also targeted fishing to meet international trade demands for turtle soup, tortoise-shell accessories, turtle oil and turtle-skin leather.

The submission was approved by the MAFFish Board on 13 December 1989 (file 10/19/1 Vol. 1); their support resulted in the Fisheries (Commercial Fishing) Regulations 1986, Amendment No. 7 (SR 1990/186), prohibiting commercial fishers taking or possessing marine turtles within New Zealand fisheries waters. There were no equivalent regulations for amateur fishers before the Fisheries Act 1996 extended the provisions of the Wildlife Act 1953 out to 200 nautical miles (370.4 km).

New Zealand grayling: 1951

The New Zealand grayling was a medium-sized (maximum length at least 45 cm) freshwater fish that formerly occurred in rivers and large streams throughout the North Island and South Island (Allen 1949; McDowall 1990; McDowall & Stewart 2015). It is believed to have been adversely affected by land-use changes and the introduction of brown trout (*Salmo trutta*) and rainbow trout (*Oncorhynchus mykiss*). The last authenticated records of grayling were in the 1920s (McDowall 1990).

Both Marine Department and Internal Affairs files provide background information on the 1951 protection of the grayling (example below), however, none of them includes reference to any particular request or trigger for protection. Protection may have been prompted by Gerald Stokell's (1941) stinging reference to the (nearly extinct) position of the grayling as a 'standing reproach on the administration of wildlife in New Zealand and a monument to the indifference with which many natural resources of this country have been treated'. It is also possible that K. Radway Allen's 1949 paper on possible causes of extinction of the grayling was a contributing factor to the initiation of protection measures the same year. A memo by Derisely Hobbs, Senior Fishery Officer, dated 7 September 1949, referred to

consultation on draft freshwater fishery regulations that included the suggestion that 'the taking of native grayling, now very rare, will be prohibited' (ANZ M1/5/31 Part 3). The explanatory notes for the 1951 regulations sent to the Minister of Marine on 3 January 1951 included:

REGULATION 99: Indigenous Fish. Before the amendment of the Fisheries Act in 1948 it was not possible, without special legislation, to afford permanent protection to any fish. It is proposed, belatedly, to give protection to the native grayling which is now extremely rare or possibly extinct. The chief practical end of the regulation is to ensure notice will be obtained should this fish be found in any district. Should it be found, a study of its life history with a view to its rehabilitation would be warranted.

The New Zealand grayling has been fully protected since 9 February 1951 (Freshwater Fisheries Regulations 1951, SR 1951/15).

Further protection for marine mammals: 1978

Demand for additional protection for marine mammals came from several sources during the 1970s. Baden Norris, Honorary Fisheries Officer, Christchurch, wrote to Colin Moyle, Minister of Agriculture and Fisheries, on 29 October 1973 expressing concern over reports of dolphins being harpooned for human consumption off the Canterbury coast: 'I am distressed to discover that no protection is afforded by the [Fisheries] Act' (ANZ M42/9/2 Part 1). Fisheries scientist Mike Hine wrote to Duncan Waugh, director of the Fisheries Research Division, MAF, on 19 December 1973, primarily concerned with the potential for dolphins being caught in purse-seine nets, and stating, 'Legislation protecting all marine mammals in New Zealand waters is strongly recommended' (ANZ M42/9/2 Part 1). Fisheries Management Division staff expressed a diversity of opinions in response. Ron Lundy (District Inspector of Fisheries, Wellington, 24 December 1973, ANZ M42/9/2 Part 1) stated that he believed 'that these marine mammals [dolphins] should be absolutely protected', and that he had heard of fishermen shooting them (because, like seals, they eat fish) and using them for bait. James Reade, District Inspector of Fisheries, Auckland, stated on 3 January 1974 that he had heard no reports of dolphins being taken for food, 'nor do we see any need for legislation to protect them'. The reply sent to Norris in late January 1974, under Moyle's signature, stated: 'While I am personally of the opinion that it is undesirable for these sea mammals to be taken for food I am not in favour of introducing regulations

except when clearly essential to conserve a fish species. However, porpoises and dolphins may represent a special case and I propose to discuss the problem with the Fishing Industry' (ANZ M42/9/2 Part 1).

Concerns were also raised about dolphin by-catch by United States super-seiners fishing for skipjack tuna (*Katsuwonus pelamis*) in New Zealand waters during 1974 (memo to Colin Moyle, 28 January 1974, ANZ M42/9/2 Part 1). Fishermen in the eastern tropical Pacific tuna fishery had developed the technique of using the presence of dolphins to indicate where the schools of tuna were, resulting in large numbers of dolphins being caught when the purse-seine net was closed (Martin Cawthorn report, c. April 1974, ANZ M42/9/2 Part 2). While protection by itself would not prevent by-catch, it would require fishermen to release dolphins unharmed if any were caught (file note by R. Beatty, dated 25 January 1974, ANZ M42/9/2 Part 1).

An additional stimulus for increased protection of marine mammals was the clandestine (though not illegal) export of more than 100 specimens of stranded whales and dolphins to a Dutch museum by marine mammalogist Frank Robson between 1970 and 1975, which was brought to the attention of MAF in late 1975 (Baker 1997; letter from Richard Dell, the director of the National Museum, to the Director-General of MAF, 10 September 1975, and file note dated 24 October 1975, ANZ M42/9/2 Part 2). New Zealand Customs were alerted, but it was recognised that broad legislation to control the harassing, killing, and souvenir scavenging of marine mammals was required (Baker 1997).

MAF Fisheries Management Division staff contacted stakeholders (including the Nature Conservation Council, and Alan Baker at the National Museum) in June 1974 seeking their views on proposals to protect all marine mammals (ANZ M42/9/2 Part 2 and 36/1/95). Government action reflected increasing public demands for the protection of whales in particular. This was exemplified by a petition from Ecology Action (Christchurch) Incorporated, 'Praying for protection of cetacean species of whale', signed by Graham King and 8000 others, received by the House of Representatives in June 1975 (ANZ M42/9/2 Part 2). The petition – which was supported by Ecology Action (Wellington), Action for the Environment, and Project Jonah (Wellington) – requested that the government ban all import of goods containing whale products where substitutes were available, to call upon whaling nations to impose a 10-year ban on commercial hunting of whales, and to enact a law protecting cetaceans from commercial exploitation in New Zealand

fishing waters. The Petitions Committee of Parliament noted that most of the items in the petition were ‘under consideration by the Government’ (importation of whale products was banned a few weeks later), and the Cabinet Committee on Legislation and Parliamentary Questions (CCLPQ) requested a report from the Minister of Agriculture and Fisheries recommending what action, if any, should be taken (letter from C.J. Hill, secretary of the CCLPQ, to Colin Moyle, Minister of Agriculture and Fisheries, 16 June 1975, ANZ M42/9/2 Part 2). Moyle’s reply (10 July 1975) noted the intention to protect all species of mammals through inclusion of protection proposals in a Fisheries Amendment Bill in 1976, and copies of the draft proposals were circulated among interested parties for perusal and comment in September 1975 (*ibid.*). Following analysis of submissions, this expanded into development of a separate Marine Mammals Protection Bill (letters, 5 and 6 November 1975, ANZ M42/9/2 Part 2).

The Marine Mammals Protection Bill was drafted in early 1976 (ANZ 36/1/95). A subsequent draft was provided to the Parliamentary Counsel in November 1976, and introduced to the House on 3 August 1978 (New Zealand Parliamentary Debates 1978). Provisions in the Bill (which was passed in October 1978) provided for the complete protection of all marine mammals, whether dead or alive, within New Zealand fisheries waters – i.e. within 200 nautical miles (370.4 km) of land.

Toheroa: 1980

Despite increasingly restrictive harvest regulations from 1955, toheroa stocks continued to decline until all fisheries were closed from 1 December 1980 (Stace 1991; Beentjes 2010). Toheroa have never been declared a fully protected species, but there have been no open seasons anywhere since 1993. Provisions for customary harvest by Māori were introduced in 1986. This review has not looked into the details of the rationale for setting successive toheroa closed seasons and harvest limits, which are peripheral to whether the species was fully protected or not.

Coral: 1980, 1989, 1991 and 2010

Protection of coral in New Zealand was triggered by an application to harvest black coral from Fiordland for the manufacture of jewellery. The application was made by Graham, Dave and Ken Mackie of Dunedin, via their accountant George Morton, with the initial enquiry addressed to the Fiordland National Park Board on 16 May

1980 (MPI 10/19/1 Vol. 1). The board replied that they did not have jurisdiction over the waters of the sounds, and suggested that the enquiry be referred to the Marine Division of the Ministry of Transport (letter, 22 May 1980, MPI 10/19/1 Vol. 1). Morton wrote to the Fisheries Management Division of MAF on 1 July 1980, who, in response, clarified that black coral was included in the definition of ‘fish’ in the Fisheries Amendment Act 1979, and expressed concern at the potential impacts of even limited harvest, due to the slow growth rate of black coral: ‘In view of the foregoing there is no possibility of any relaxation of existing controls and in fact to do so would create a dangerous precedent’ (letter from B.T. Cunningham, director of the Fisheries Management Division, 7 July 1980, MPI 10/19/1 Vol. 1).

Morton wrote again to the Fisheries Management Division on 18 August 1980 (MPI 10/19/1 Vol. 1), seeking clarification of the exact clauses that controlled the collection of black coral, as he had been unable to find anything controlling harvest of black coral in the Fisheries Act 1908 or subsequent Regulations. An undated memo filed alongside this letter admitted that the ministry had been ‘foxing’, that there was no prohibition on the taking of black coral in force, and that an application to harvest coral made through proper process could not be refused. Similar concerns were expressed to the Fiordland National Park Board in a letter from R.D. Cooper, Senior Fisheries Management Officer, Marine, dated 23 September 1980 (MPI 10/19/1 Vol. 1), and stating that a regulation to rectify this would be promulgated shortly. Comment on the proposed harvest was also sought from the Southland United Council, and the New Zealand Oceanographic Institute (Department of Scientific and Industrial Research/DSIR). Both agencies expressed concern that black corals were considered endangered by the IUCN, and that black corals formed the principal substrate and source of shelter for numerous other species, and they stressed the scientific importance of the subtidal fjord-wall biota (letters, 15 September and 8 October 1982, respectively, MPI 10/19/1 Vol. 1). A fisheries regulation prohibiting the taking of black coral came into force on 12 December 1980.

As for black corals, red hydrocorals (family Stylasteridae) were considered ‘highly collectable and would be eagerly sought after by the tourist trade and other markets if this were permitted’ (Coral Issues Summary, 18 April 2007, DOC NHS-01-01-02 HO1). They are similarly slow-growing, occur within reach of divers and share the same vulnerability to any form of harvesting as black coral (file

note dated 1 October 1990, MPI A/2/11/B). Protection was initiated in October 1989 through prohibitions on commercial fishers taking or possessing red coral in waters around Southland, southeast New Zealand and the subantarctic (see Appendix 1). A year later, a paper recommending that prohibition be extended to amateur fishers noted that DOC personnel around Fiordland and Stewart Island/Rakiura were concerned about the frequency of 'Removal of red coral as a souvenir of diving trips', and that DSIR studies along the Fiordland coast had confirmed damage occurring to red corals (1 October 1990, MPI A/2/11/B). DOC staff had requested protection of red corals at meetings held in Invercargill and on Stewart Island/Rakiura in February 1990, and this was supported by local representatives of the recreational fishing sector at a meeting in June 1990 (*ibid.*). Amateur fishing regulations prohibiting taking or possessing red coral in the same fishery management areas as the commercial prohibitions were gazetted in April 1991.

Unlike the Fisheries Act 1908, the succeeding Fisheries Act 1996 was restricted to managing extractive use of living resources on a sustainable basis. This meant that the new Fisheries Act could no longer be used to totally protect species (MPI DFP 5/1/11 Vol. 2b). Ongoing protection of species such as black and red corals (and spotted black grouper, see below) was achieved through the Fisheries Act 1996 amendment of the definition of 'animal' in Section 2 of the Wildlife Act 1953, and creation of Schedule 7A of the Wildlife Act 1953 ('Marine species declared to be animals'), with black corals, all species of red coral and spotted black grouper listed in the schedule. The same schedule of the Fisheries Act 1996 extended most provisions of the Wildlife Act 1953 to include New Zealand fisheries waters, thereby protecting black and red corals out to 200 nautical miles (370.4 km) from the New Zealand coast.

Further protection for corals was raised during consultation on amendments to Schedule 7A of the Wildlife Act 1953, starting in 2005. Initial suggestions were for protection of gorgonian corals (phone and email exchange between Steve O'Shea, Auckland University of Technology, and Michael Gee of DOC, December 2005, DOC NHS-01-01-02 HO1). O'Shea commented that (along with other corals), gorgonian corals were affected by bottom-trawl and dredge fisheries (see Clark & O'Driscoll 2003), and that 'shallower-water coastal representatives are potentially impacted by boat anchors, chains, SCUBA divers, and recreational and commercial fishing gear'. O'Shea further commented that identification of corals even to order level (Scleractinia,

Stylasterida, Antipatharia or Gorgonacea [Alcyonacea]) was difficult for non-specialists, with no identification guide available locally that enabled their unambiguous differentiation. He suggested that some species of gorgonian corals needed protection due to their 'apparent scarcity, unrecognised diversity, and susceptibility to damage', and that this would best be achieved by protecting all gorgonian corals, to remove any uncertainty in identification.

An additional incentive for adding gorgonian corals to Schedule 7A was to align with reporting requirements for corals under the Fisheries Act 1996 (internal email, 9 October 2006, DOC NHS-01-01-02 HO1). All scleractinian (stony) corals (along with hydrocorals and black corals) are listed on Appendix II of CITES, meaning that an export permit is required to take them out of New Zealand (Coral Issues Summary, 18 April 2007, DOC NHS-01-01-02 HO1). Protection of both gorgonian and stony corals would mean that fishers could be directed to collect information on the impacts of fisheries by-catch on corals, without the complication of figuring out which species required reporting (i.e. they would have to report all hard corals, with samples returned for expert identification) (internal email, 5 April 2007, DOC NHS-01-01-02 HO1). Provided that the incidental catching of 'protected' corals is reported, and specimens are not retained by fishers, no offence is committed. Reporting of coral by-catch could benefit management of coral through contributing to knowledge of distribution and abundance (Coral Issues Summary, 18 April 2007, DOC NHS-01-01-02 HO1). The main counter-argument for blanket protection of entire orders of coral in New Zealand was the potential adverse impacts on research (as researchers would need to apply for permits to take, hold and transfer specimens), including the need to collect voucher specimens in the field for subsequent identification in the laboratory, and the frequent need for transfer of reference specimens between research agencies, including overseas (*ibid.*).

While it was recognised that protection under the Wildlife Act 1953 could not address many potential impacts on coral (e.g. pollution, sediment smothering and anchor damage), it was anticipated that protection would assist in mitigating other potential impacts such as commercial trade, collecting by divers and some fishing activities, particularly when protection was applied in tandem with fisheries regulations (Coral Issues Summary, 18 April 2007, DOC NHS-01-01-02 HO1).

Many of these arguments for further protection of corals were presented in a public discussion document seeking submissions on levels of protection for New Zealand wildlife (Department of Conservation 2006). The document also pointed out the ambiguity of the term 'red coral', which can be applied to some gorgonian corals in addition to *Errina* species (hydrocorals in the family Stylasteridae). Sixteen submissions on coral were received, with 15 seeking improved protection (Department of Conservation 2008). The report initially (p.108) recommended continued protection of black corals and hydrocorals, and new protection for several shallow-water scleractinian corals: the branching coral *Oculina virgosa* and three genera of large cup corals (*Caryophyllia*, *Desmophyllum* and *Stephanocyathus*). However, following a discussion of fishery impacts on deep-water corals, and particularly the practical considerations of reporting requirements, the same report (p.112) also proposed an alternative regime of protecting all stony corals (order Scleractinia) and all gorgonian corals (order Gorgonacea). All gorgonian corals and stony corals were added to Schedule 7A of the Wildlife Act 1953 in the Wildlife Order 2010 (in force from 8 July 2010), along with a clarification of the taxonomy and nomenclature of red corals (all species in the family Stylasteridae).

Spotted black grouper: 1986

Spotted black groupers are very large reef-dwelling fish that are highly vulnerable to overfishing. In New Zealand, they are mainly found around the subtropical Kermadec Islands, with occasional individuals seen around islands and headlands of the northeast coast of the North Island, and stragglers reaching as far south as Palliser Bay and Westport (Roberts 2015).

The New Zealand Underwater Association introduced a voluntary ban on spearing spotted black grouper in 1982 (letter, 30 April 1986, MPI 9/3/1/28/1 Vol. 4). The Kermadec population was considered to be the world's only remaining unfished population, and concerns over its vulnerability were first expressed in 1985, when the Ministry of Transport introduced changes to survey requirements for inshore fishing vessels, which were expected to result in increased fishing activity in the Kermadec Fishery Management Area (letter to Auckland Fisheries Management Advisory Committee, 30 April 1986, MPI 9/3/1/28/1 Vol. 4). MAF considered that the scientific values of the Kermadec marine area warranted the establishment of a marine park or

reserve (Francis 1985), however, 'as this may take some time, MAF considers that controls under the Fisheries Act may be an appropriate way to protect the area [in the interim]' (ibid.). The letter of 30 April 1986 invited members of Auckland Fisheries Management Advisory Committee to provide comment on the protection proposal for spotted black grouper, among a raft of proposed protection initiatives relating to the Kermadec Islands, by 20 June 1986. A briefing note to the Minister of Fisheries dated 28 August 1986 stated that extensive consultations had been held with commercial and recreational groups in the Auckland and Northland area, and that there was an awareness among all those consulted that measures to protect this species were required (MPI 9/2/4/1 Vol. 2). Regulations prohibiting the taking of spotted black grouper by commercial and amateur fishers in the Kermadec and Auckland fishery management areas came into force on 18 September 1986. The spotted black grouper was included in Schedule 7A of the Wildlife Act 1953 (in the Fisheries Act 1996) at the request of Forest & Bird, and the Environment and Conservation Organisations of Aotearoa New Zealand (ECO) (MPI 15/5/2 Vol. 2a).

Great white shark: 2007

Protection of great white sharks in New Zealand waters was preceded by an Australian proposal to list the great white shark and the basking shark in Appendix 1 of CITES (letter, 26 April 1999, DOC NHS-11-07-03-01 HOM-1). The CITES proposal was voted down in April 2000, falling short of the two-thirds majority required. Australia had granted protection to great white sharks in 1999, and was therefore able to list the species on Appendix III of CITES (requiring other parties to assist in controlling trade) in October 2001 (letter, 6 March 2003, DOC NHS-07-01 HOM-1), and the IUCN listed the species as 'Vulnerable' in 2000.

In September 2002, New Zealand attended the (Seventh) Conference of Parties to the Convention for the Conservation of Migratory Species of Wild Animals (CMS) for the first time. The meeting agreed to an Australian proposal to list the great white shark on Appendices I and II of CMS. The listing obligated New Zealand (as one of the 'Parties that are Range States' for great white sharks) to prohibit deliberate taking of the species (including by recreational fishers) and to prohibit sale of their body parts, including fins and jaws (briefing note, 22 May 2003, DOC ICC-05-08 HO1). However, no regulatory action had been taken

before the capture of a 6 m-long pregnant female great white shark in a commercial set net off Waiheke Island in November 2003 led Chris Carter, Minister of Conservation, to request a briefing paper on whether it was time for New Zealand to follow the United States, Australia and South Africa in protecting the species (email from DOC CEO Alastair Morrison, 12 December 2003, DOC NHS-07-01 HOM-1). Although great white sharks were not a quota species (i.e. a permissible catch) for commercial fisheries in New Zealand, there was a market for their jaws, and there were concerns that international anglers were travelling to the Chatham Islands to obtain trophy jaws (briefing to Chris Carter, 3 February 2004, DOC LCV-01-15-01-04 HO1).

Chris Carter issued a press release on 6 June 2004 stating the intention of the Ministry of Fisheries and DOC to protect the great white shark, in order to meet New Zealand's obligations under the CMS (DOC NHS-07-01 HOM-1). This was given further impetus in October 2004, when the great white shark was listed on Appendix II of CITES (on the second attempt), further obligating New Zealand to prohibit trade in great white shark body parts. However, progress was slow, with a ministerial briefing on 13 July 2005 recommending that the Minister of Conservation and Minister of Fisheries agree to consult with interested parties on options for the best way to provide full protection to great white sharks in New Zealand waters and from the activities of New Zealand vessels (DOC NHS-01-01-02 HO1). The options paper to stakeholders was released on 3 March 2006, with a 3 May deadline for responses (DOC NHS-01-01-02 HO1). There was overwhelming support for protection from those consulted, with 18 of the 22 submitters in favour of protection, and 12 explicitly supporting combined use of the Wildlife Act 1953 and the Fisheries Act 1996 to achieve protection (summary of recommendations, October 2006, DOC NHS-01-01-02 HO1 and LCA-08-05-01 HO1). Note that the Fisheries Act 1996 provided for regulations controlling New Zealand vessels on the high seas, whereas the Wildlife Act 1953 (since 1996) applied only to New Zealand fisheries waters. The Ministry of Fisheries and DOC jointly recommended to their ministers that the great white shark be protected under both the Wildlife Act 1953 and the Fisheries Act 1996 (DOC LCA-08-05-01 HO1). This was achieved through the Wildlife (White Pointer Shark) Order 2007, adding the great white shark to Schedule 7A of the Wildlife Act 1953 (26 February 2007), and a week later the Fisheries (Southland and Sub-Antarctic Areas Amateur Fishing)

Amendment Regulations 2007, removing the great white shark from the schedule of species able to be taken in the Southland and Sub-Antarctic fishery management areas, and the Fisheries (White Pointer Shark – High Seas Protection) Regulations 2007, prohibiting use of New Zealand ships on the high seas to take great white sharks.

Additional marine fish species: 2010 and 2013

Two separate initiatives led to the full protection of seven further species of marine fishes in New Zealand waters in 2010 and 2013. In July 2006, DOC initiated a review of the schedules of the Wildlife Act 1953, by releasing the public discussion document *Review of level of protection for some New Zealand wildlife*. This included consideration of expanding Schedule 7A ('Marine species declared to be animals' for the purposes of the Act). At the same time, DOC staff were seeking to implement further obligations flowing from New Zealand being a party to the CMS, CITES, and the Western and Central Pacific Fisheries Commission (WCPFC).

The CMS (or Bonn Convention) aims to conserve terrestrial, aquatic and avian migratory species throughout their ranges. All migratory bird and whale species that visit New Zealand are automatically protected by the Wildlife Act 1953 or the Marine Mammals Protection Act 1978, but migratory fish species are not protected unless they are included in Schedule 7A of the Wildlife Act 1953, and/or are protected by regulations under the Fisheries Act 1996.

Both DOC and Forest & Bird had advocated for protection of certain migratory shark and ray species since the early 1990s. A DOC submission on bag limits for amateur fishers in coastal fisheries dated 13 December 1991 requested that it be made illegal to kill, injure, capture or otherwise harass basking sharks and manta rays (genera *Manta* and *Mobula*) (DOC COA 0052), and an August 1992 article in *Forest & Bird* magazine argued that 'basking sharks deserved full protection under the law' (Tennyson 1992). Reasons given for basking shark protection included evidence of declining numbers, their presumed very slow reproductive rate, their potential as a focus for ecotourism, their vulnerability to commercial fishing for their fins and livers and to accidental capture in set nets, and their intrinsic value as one of New Zealand's most impressive fish species (Taylor 1992; Tennyson 1992).

The United Kingdom initiated a proposal to list the basking shark on Appendix II of CITES at the April 2000 Conference of the Parties to the Convention (email, 20 April

2000, DOC NHS-11-07-03-01 HOM-1). The initial proposal was voted down, but it received the required two-thirds support (along with a proposal to list the whale shark) in February 2003 (Convention on International Trade in Endangered Species of Wild Fauna and Flora 2013). As New Zealand is a range state for both species, this obligated it to pass legislation prohibiting sale of these sharks or their body parts (briefing to Minister of Conservation, 12 February 2004, DOC NHS-07-01 HO-1). The obligation increased further to a requirement for full protection when the basking shark was added to Appendices I and II of the CMS in November 2005.

Initiatives to protect further species of *Epinephelus* grouper species (in addition to spotted black grouper) began in December 2001, when Sandra Lee, Minister of Conservation, wrote to Pete Hodgson, Minister of Fisheries, stating that Roger Grace and others had written to her seeking protection for any members of the genus occurring in New Zealand waters, and citing an example of a 115 kg giant or Queensland grouper killed in a spear-fishing competition in Northland (MPI 10/15/18 Vol. 1). The three *Epinephelus* species occurring occasionally in New Zealand waters were giant grouper, convict grouper (or eightbar grouper; *E. octofasciatus*) and half-moon grouper (*E. rivulatus*). Lee stated her intention to seek protection for *Epinephelus* grouper species under the Wildlife Act 1953, and sought Hodgson's support for protection via regulations under the Fisheries Act 1996. Hodgson acknowledged her concerns, but did not believe that 'convict, Queensland or half moon grouper are targeted by recreational fishers' (letter, 25 February 2002, MPI 10/15/18 Vol. 1). A DOC report dated 24 March 2005 (DOC NHS-01-01-02 HO1) recommended that giant grouper be protected due to 'their low resilience to fishing pressure, vulnerability to spear and line fishers, small population size and intermittent recruitment' to waters around islands north and northeast of New Zealand, south to the Aldermen Islands. As giant grouper can be confused with spotted black grouper, the DOC report suggested that protection of giant grouper would provide additional protection for spotted black grouper.

Whale sharks are summer migrants to northern New Zealand waters, occasionally ranging as far south as Fiordland and South Canterbury (Duffy 2002; DOC report, 24 March 2005, NHS-01-01-02 HO1). They were listed on Appendix II of the CMS in 1999 (International Union for Conservation of Nature 2015), and Appendix II of CITES in February 2003 (Convention on International Trade in

Endangered Species of Fauna and Flora 2013). The CMS listing obligated protection in the waters of signatory range states (briefing to Minister of Conservation, 12 February 2004, DOC NHS-07-01 HO-1).

The earliest record of a suggestion to protect the deep-water nurse shark is in the DOC report dated 24 March 2005 (NHS-01-01-02 HO1), stating that the species appeared to be naturally rare and was vulnerable to deep-water line and net fisheries at aggregation sites. Within New Zealand waters there are isolated records from the Norfolk Ridge, New Plymouth, the Kermadec Islands, Volkner Rocks, Whakaari/White Island, Gisborne, the Mahia Peninsula and Lachlan Banks (*ibid.*). Although prohibited as a commercial target species (Francis & Shallard 1999), deep-water nurse sharks could be utilised commercially if taken as by-catch, and were occasionally caught in bottom trawls and deep-set gill nets, including attempts to capture them for display at Kelly Tarlton's Underwater World (DOC report, 24 March 2005, DOC NHS-01-01-02 HO1).

The same 24 March 2005 DOC report (DOC NHS-01-01-02 HO1) also recommended protection for the two species of mobulid rays known from New Zealand waters: the manta ray and spinetail devil ray. Spinetail devil rays are common to abundant beyond the shelf break off northern New Zealand in summer, while manta rays are recorded more rarely over the shelf (Stewart 2002; Duffy & Abbott 2003). Although not targeted by commercial or recreational fisheries in New Zealand, at least 234 spinetail devil rays were landed as by-catch in the skipjack tuna purse-seine fishery of northern New Zealand between 1977 and 1981 (Paulin *et al.* 1982), and it was considered that protection in New Zealand waters would assist protection efforts for mobulid rays elsewhere (DOC report, 24 March 2005, DOC NHS-01-01-02 HO1).

Five of these marine fish species (i.e. giant grouper, whale shark, deepwater nurse shark, manta ray and spinetail devil ray) were included as the only fish discussed as potential additions to Schedule 7A of the Wildlife Act 1953 in the public discussion document released in August 2006 (Department of Conservation 2006). Basking shark and great white shark were excluded, as they were both considered commercial fishery by-catch species requiring a different consultation process, including potential amendments to regulations under the Fisheries Act 1996 (*ibid.*). Submissions on the report were overwhelmingly in favour of all five species being added to Schedule 7A, although the resulting report recommended that all species of manta and

mobula rays be protected in New Zealand waters, to safeguard against misidentifications and taxonomic changes (Department of Conservation 2008). This last recommendation was not followed, but all five species were listed in Schedule 7A in the Wildlife Order 2010 (June 2010).

The Ministry of Fisheries and DOC continued to consider protection options for the basking shark during the review of Wildlife Act 1953 schedules. The New Zealand national plan of action for the conservation and management of sharks, published by the Ministry of Fisheries in October 2008, stated that consultation would soon be initiated on full protection for the basking shark (Ministry of Fisheries 2008). In August 2010, a 'final advice' paper on basking shark protection prepared for their ministers summarised submissions, and recommended that the species be included in Schedule 7A of the Wildlife Act 1953, that regulations be made under Section 297 of the Fisheries Act 1996 to restrict the take of basking sharks by New Zealand-flagged vessels operating on the high seas, and that amendments be made to the Fisheries (Reporting) Regulations 2001 to require fishers to report take of basking sharks on the protected species catch return (Ministry of Fisheries 2010). The resulting amendments to fisheries regulations and the Wildlife Act 1953 came into force on 16 December 2010.

The seventh and final species of fish to receive full protection in New Zealand waters during 2010–13 was the oceanic whitetip shark. This arose through New Zealand's membership of the WCPFC. The oceanic whitetip shark is a highly migratory species that, in New Zealand, has been recorded near the Kermadec Islands and off the northeast coast of the North Island south to Mahia Peninsula (DOC NHS-07-01 HO-1). Although it was formerly abundant throughout most of the world's tropical and warm-temperate oceans, targeted fishing plus by-catch in tuna longline and driftnet fisheries led to large reductions in its relative abundance and a listing as 'Vulnerable' by the IUCN in 2006 (*ibid.*). The background to the joint protection initiative by DOC and MPI was laid out in an initial position paper released in July 2012 (DOC NHS-07-01 HO-1). (MPI was formed in April 2012 through the merger of three former ministries, including the Ministry of Fisheries.) In response to concerns about a rapid decline in oceanic whitetip shark abundance, the United States proposed a draft measure to prohibit any landings or sales of the species within the WCPFC area, effective from 1 January 2013. The

measure was adopted at the WCPFC's annual meeting in March 2012, obligating New Zealand to implement protection measures for oceanic whitetip sharks, regardless of whether there was evidence of New Zealand fisheries impacting on the local population (*ibid.*). Submissions on proposed protection measures were invited from stakeholders, and all four submissions received supported the proposal (DOC submission to Kate Wilkinson, Minister of Conservation, 13 September 2012, DOC NHS-07-01 HO-1). The resulting amendments to the Wildlife Act 1953 and fisheries regulations came into force on 3 January 2013.

Discussion

This review provides a chronological database that allows comparison of when and why legal protection was initiated between different faunal groups, particularly when contrasted with the protection histories for New Zealand's terrestrial fauna (Miskelly 2014). The most striking contrast is the much later implementation of full legal protection of any marine species (right whales in 1935), 57 years after the first terrestrial species (*tūī*, in 1878; Miskelly 2014). Most native New Zealand birds have had ongoing full protection since at least 1910. Equivalent blanket protection for marine reptiles (at least on New Zealand shores) was granted in 1953, for marine mammals in 1978, and for hard corals in 2010 – a full century after birds. Absolute protection of marine fishes remains limited to nine iconic species, and was initiated in the 1980s. This is similar in both timing and proportional extent to the protection history for terrestrial invertebrates: 29 species and two genera were granted absolute protection in 1980, with further species and genera added in 2010 (Meads 1990; Miskelly 2014).

With the exception of analyses of legislation regulating fur seal closed seasons (Sorensen 1969; Crawley & Wilson 1976; Grady 1986: 45), and discussion of protection of celebrity dolphins (see below), few authors have touched on the legal protection of New Zealand's marine and freshwater fauna. Part of the reason for the limited reporting of the processes by which other species of New Zealand's aquatic fauna gained protection is that much of the activity, particularly relating to protection of marine fishes and corals, has been recent, with details retained in active or recently closed files held by DOC and MPI. This contrasts with the much earlier correspondence leading to the protection of most of New Zealand's terrestrial fauna, which is in files held

by Archives New Zealand, and therefore is more accessible to researchers (e.g. examples quoted in Barlow 1972; Galbreath 1989; Young 2004; Cree 2014; Miskelly 2014).

The absence of published detail on how, why and when aquatic species were protected is most apparent in the extensive literature on whale and dolphin conservation in New Zealand, which focuses more on the actions of conservation groups since the 1970s than on the earlier history of regulated harvest, and reasons for the stepwise protection for cetaceans in New Zealand (e.g. Dawson 1985; Baker 1990; Cox 1990; Donoghue & Wheeler 1990; Todd 2007, 2014). Most of these publications gloss over how recently most cetacean species have been protected in New Zealand waters (1978), and all fail to mention the Australian and New Zealand governments' attempts to limit proposed protection of humpback whales in the southern hemisphere as recently as 1963 (International Whaling Commission 1965).

There has also been ready acceptance of flawed attempts to protect famous individual dolphins (Baker 1990; Cox 1990; Lee-Johnson & Lee-Johnson 1994; Young 2004: 104, 153; King & Morris 2008; Peat 2010: 64; Todd 2014: 174–175). Before October 1956, New Zealand Acts contained no provision for protection of marine mammals other than seals, a shortcoming that was recognised by public servants and politicians at the time. Notwithstanding this, they prepared and approved Orders in Council and Regulations claiming to protect Pelorus Jack (in September 1904, May 1906 and May 1911), Pelorus Jack II (in February 1945, May 1947, August 1950 and February 1956) and Opo (in March 1956). Gerald O'Halloran's memo of 2 March 1956 (ANZ M42/9/2 Part 1) – 'You are aware, of course, that these regulations may not be valid as a dolphin is a mammal and not a fish. However, as an expediency measure I think they should suffice' – makes it clear that the government was more concerned about the appearance of taking measures to satisfy public demands for protection of these dolphins than they were about ensuring that their efforts were legally valid. Alpers (1960: 117) and Peart (2013: 24) commented on the questionable validity of legislation purporting to protect Pelorus Jack. However, there has been less scrutiny of the 'protection' of Pelorus Jack II and Opo, or comment on the retrospective implications of the passing of the Fisheries Amendment Act 1956, seven months after Opo's death. This Amendment Act provided for the Governor-General to make regulations protecting all marine mammal species (cf. seals only) – an admission by Parliament that the eight different Orders in Council and Regulations passed between

1904 and 1956 that were intended to protect these three dolphins had all exceeded the powers of the Sea-fisheries Act 1894 and subsequent Fisheries Act 1908.

The New Zealand fur seal has been the subject of more legislation and species-specific New Zealand Gazette notices than any other fully protected indigenous species (83 examples listed in Appendix 1). The effort that the New Zealand government invested in legislation to protect fur seals and to regulate their harvest reflected the economic significance of seal skins to the early New Zealand economy, and the hope that seal stocks would recover sufficiently to allow resumption of harvest (Crawley & Wilson 1976; Grady 1986). A similar (and equally ineffective) approach was applied to regulation of toheroa harvest, with at least 24 increasingly restrictive regulations applied from 1955 until all fisheries were closed in December 1980 (Stace 1991; Beentjes 2010). However, toheroa management differed from that for fur seals, as there was a high level of recreational harvest of toheroa, continuing long after cessation of commercial harvest in 1969 (Stace 1991).

Ironically, none of the legislation regulating fur seal harvest referred to the species by either its common or scientific name, with all using the generic term 'seal' or simply referring to the activity of sealing. This meant that the legislation covered all eight seal species recorded from New Zealand (King 2005; Miskelly 2015). There is no indication that this wider interpretation of 'seal' was intended before the drafting of the Marine Mammals Protection Act 1978, which specifically protected 'All species of seal (*Pinnipedia*)'.

The processes by which most marine species have become protected were markedly different from the protection histories for New Zealand's terrestrial species. Legal protection of many birds, and also tuatara, bats, frogs and lizards, was reactive, triggered by written requests from individuals, scientific societies, conservation groups or acclimatisation societies (35 examples in Miskelly 2014: table 2). In contrast, among marine species, only the protection of green turtle and leathery turtle in 1939, giant grouper in 2010, and the *ultra vires* protection of the three individual dolphins referred to above can be traced back to written requests to ministers or government departments. Protection of marine species has been predominantly proactive, with government departments initiating processes to protect threatened species from both commercial and recreational harvest. For a few species (notably black coral in 1980 and spotted black grouper in 1986), protective legislation was both proactive

and pre-emptive. Opportunities for harvest of these species were closed before fisheries or markets became established.

A final, striking, difference between the protection processes for marine and terrestrial species is the number of marine species that have become protected as a result of obligations stemming from New Zealand being a signatory nation to international commissions and conventions. Protection of three species of whales resulted from New Zealand's membership of the IWC, and protection of four species of sharks resulted from New Zealand being a party to the CMS, CITES and the WCPFC. CMS, CITES and the Agreement on Conservation of Albatrosses and Petrels (ACAP) also create obligations for protection of listed terrestrial species and seabirds by member nations. However, all New Zealand bird and terrestrial reptile species listed in these conventions and agreements were protected by New Zealand legislation long before there was any international obligation to do so (Miskelly 2014).

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Appendix 1: Chronological list of New Zealand legislation relevant to protection of indigenous aquatic wildlife (other than birds)

Legislation prohibiting some or all fishing methods at a particular locality (e.g. creation of marine reserves and marine mammal sanctuaries) is excluded unless explicit mention is made of the species thereby protected. Abbreviations: *NZG* = *New Zealand Gazette*; *SDNZ* = *Statutes of the Dominion of New Zealand*; *SNZ* = *Statutes of New Zealand*; *SR* = *Statutory Regulations*.

The Protection of Animals Act 1873 (37 Victoriae 1873 No. 42; *SNZ* 1873).

Section 8 allowed for additional animals to be proclaimed to come within the operation of the Act. In force from 1 January 1874.

The Protection of Animals Act Amendment Act 1875 (39 Victoriae 1875 No. 18; *SNZ* 1875).

Section 2. No person shall hunt, take or kill any seal except during June–September. In force from 21 September 1875.

The Seals Fisheries Protection Act 1878 (42 Victoriae 1878 No. 43; *SNZ* 1878).

Section 3 set a closed season from 1 October to 1 June. In force from 2 November 1878.

Extending time during which it is prohibited to hunt, catch, or kill seals. *NZG* 84, 20 October 1881: 1306.

Closed season extended from 1 November 1881 to 1 June 1884.

Extending time during which it is prohibited to hunt, catch, or kill seals. *NZG* 64, 29 May 1884: 871.

Closed season extended from 1 June 1884 to 1 June 1886.

The Fisheries Conservation Act 1884 (48 Victoriae 1884 No. 48; *SNZ* 1884).

Section 5. The Governor may make regulations providing for the more effectual protection and management of seals. Section 2 incorporated the Seals Fisheries Protection Act 1878. In force from 10 November 1884.

Regulations under ‘The Fisheries Conservation Act, 1884’. *NZG* 20, 2 April 1884: 380–381.

Clause 4. October–May to be a closed season for seals of all kinds, with the current closed season extended to 1 June 1886.

Regulations prescribing the terms upon which leases will be issued for the encouragement of seal fisheries. *NZG* 7, 11 February 1886: 181.

The months of November–June are a closed season for seals.

Extending close season for seals. *NZG* 32, 3 June 1886: 697.

Closed season extended to 1 June 1887.

The Fisheries Conservation Act 1884 Amendment Act 1887 (51 Victoriae 1887 No. 27; *SNZ* 1887).

Section 4. Possession of seals during closed season is sufficient proof that they were taken illegally. In force from 23 December 1887.

Extending close season for seals. *NZG* 26, 21 April 1887: 506.

Closed season extended to 1 June 1888.

Regulations under ‘The Fisheries Conservation Act, 1884,’ and ‘The Fisheries Conservation Act 1884 Amendment Act, 1887’. *NZG* 2, 12 January 1888: 13–14.

The months of October–May are a closed season for seals.

Extending the close season for seals. *NZG* 4, 19 January 1888: 42.

Closed season extended to 1 June 1889.

Extending close season for seals. *NZG* 31, 25 May 1888: 613.

Closed season extended to 1 June 1889.

Prescribing a close season for seals. *NZG* 51, 13 September 1888: 973–974.

Previous closed seasons revoked. September–December 1888 prescribed a closed season for seals.

Extending the close season for seals. *NZG* 69, 20 December 1888: 1401.

Closed season extended to 31 December 1889.

Further extending the close season for seals. *NZG* 1, 2 January 1890: 4.

Closed season extended to 31 December 1890.

Prescribing a close season for seals. *NZG* 5, 23 January 1891: 67.

January–May 1891 prescribed a closed season for seals.

Sealing on Macquarie Island prohibited. *NZG* 33, 7 May 1891: 511.

Taking of seals on Macquarie Island prohibited. Notice received from the Government of Tasmania, published for general information.

Prescribing a close season for seals, and fixing minimum size of seals that may be taken in open season. *NZG* 42, 4 June 1891: 670–671.

June and September–December 1891 prescribed closed seasons for seals. Seals less than 36 in [91 cm] in length protected, as are female seals. [Therefore July–August 1891 was open season.]

Prescribing a close season for seals. *NZG* 98, 31 December 1891: 1486.

January–May 1892 prescribed a closed season for seals.

Prescribing a close season for seals. *NZG* 43, 26 May 1892: 767.

June–December 1892 prescribed a closed season for seals.

Prescribing a close season for seals. *NZG* 102, 29 December 1892: 1740.

January–May 1893 prescribed a closed season for seals.

Prescribing a close season for seals. *NZG* 40, 18 May 1893: 657.

June–December 1893 prescribed a closed season for seals.

Prescribing a close season for seals. *NZG* 1, 4 January 1894: 3.

January–June 1894 prescribed a closed season for seals.

Extending the close season for seals. *NZG* 42, 7 June 1894: 820.

Closed season extended to 30 September 1894.

Revoking Order in Council extending close season for seals, and prescribing fresh close season. *NZG* 64, 30 August 1894: 1361–1362.

Closed season to end 1 September 1894. November–December 1894 to be a closed season.

Varying Order in Council prescribing close season for seals. *NZG* 72, 4 October 1894: 1506.

October–December 1894 to be a closed season between Hokitika River and West Whanganui Inlet.

The Sea-fisheries Act 1894 (58 Victoriae 1894 No. 56; *SNZ* 1894).

Sections 41–44 prescribed conditions and restrictions for the regulation of the taking of seals. In force from 23 October 1894.

Protection of seals on Macquarie Island. *NZG* 82, 16 November 1894: 1666.

Taking of female fur seals and animals under 10 months of age on Macquarie Island prohibited. Notice received from the Government of Tasmania, published for general information.

Extending the close season for seals. *NZG* 1, 7 January 1895: 3–4.

January–June 1895 prescribed a closed season for seals.

Extending the close season for seals. *NZG* 47, 27 June 1895: 998.

Closed season extended to 30 June 1896.

Extending the close season for seals. *NZG* 45, 11 June 1896: 906.

Closed season extended to 30 June 1897.

Extending the close season for seals. *NZG* 37, 15 April 1897: 885.

Closed season extended to 30 June 1898.

Extending the close season for seals. *NZG* 37, 19 May 1898: 864.

Closed season extended to 30 June 1899.

Extending the close season for seals. *NZG* 19, 2 March 1899: 499.

Closed season extended to 30 June 1900.

Extending the close season for seals. *NZG* 24, 29 March 1900: 637.

Closed season extended to 30 June 1901.

Extending the close season for seals. *NZG* 43, 2 May 1901: 985–986.

Closed season extended to 30 June 1902.

Extending the close season for seals. *NZG* 23, 20 March 1902: 670.

Closed season extended to 30 June 1903.

Extending the close season for seals. *NZG* 26, 9 April 1903: 953–954.

Closed season extended to 30 June 1904.

Extending the close season for seals. *NZG* 19, 3 March 1904: 729.

Closed season extended to 30 June 1905.

Prohibiting taking of Risso's dolphin in Cook Strait, &c. *NZG* 79, 29 September 1904: 2302.

For the next five years it shall not be lawful to take Risso's dolphin (*Grampus griseus*) in the waters of Cook Strait and adjacent bays, sounds and estuaries. [*Ultra vires.*]

Extending the close season for seals. *NZG* 41, 4 May 1905: 1049.

Closed season extended to 30 June 1906.

Extending the close season for seals. *NZG* 84, 21 September 1905: 2262.

Closed season extended to 30 June 1906.

Extending the close season for seals. *NZG* 37, 17 May 1906: 1285.

Closed season extended to 30 June 1907.

Regulations under 'The Sea-fisheries Act, 1894'. *NZG* 41, 31 May 1906: 1381–1385.

Regulation 46. For the next five years it shall not be lawful to take the fish or mammal of the species commonly known as Risso's dolphin in the waters of Cook Strait, or the bays, sounds and estuaries adjacent thereto. [*Ultra vires.*] In force from 1 September 1906.

The Sea-fisheries Act 1906 (6 Edward VII 1906 No. 42; *SNZ* 1906).

Section 2. Minister may authorise taking of seals during a closed season for exhibition or for science purposes. In force from 29 October 1894.

Extending the close season for seals. *NZG* 26, 21 March 1907: 983.

Closed season extended to 30 June 1908.

The Fisheries Act 1908 (*SDNZ* 1908, No. 65).

Sections 42–45 prescribed conditions and restrictions for the regulation of the taking of seals.

Section 2 defined New Zealand waters as extending one marine league (equivalent to 3 nautical miles, or 5.6 km) from the New Zealand coast.

Extending the close season for seals. *NZG* 19, 12 March 1908: 846.

Closed season extended to 30 June 1909.

Extending the close season for seals. *NZG* 39, 13 May 1909: 1300.

Closed season extended to 30 June 1910.

Regulations for licenses to take seals. *NZG* 61, 22 July 1909: 1889.

Process for issuing permits to take seals on subantarctic islands.

Amending regulations as to licenses to take seals. *NZG* 94, 11 November 1909: 2891–2892.

Closed season for sea lions on Enderby Island for the following three years.

Extending the close season for seals. *NZG* 21, 10 March 1910: 780.

Closed season extended to 30 June 1911.

Extending close season for fish known as Risso's dolphin (*Grampus griseus*). *NZG* 36, 4 May 1911: 1454.

It shall not be lawful to take Risso's dolphin in the waters of Cook Strait and adjacent bays, sounds and estuaries before 31 May 1914. [*Ultra vires.*] In force from 31 May 1911.

Extending the close season for seals. *NZG* 36, 4 May 1911: 1454.

Closed season extended to 30 June 1912.

Extending the close season for seals. *NZG* 47, 30 May 1912: 1781.

Closed season extended to 30 June 1913.

Prescribing a close season for seals. *NZG* 43, 29 May 1913: 1782.

Closed season set at 1 July 1913 to 1 October 1914; closed season set at 1 October to 31 May each year, starting 1914.

Regulations regarding seals. *NZG* 43, 29 May 1913: 1782.

No females may be taken; no bulls under 12 months old may be taken.

Amending regulations prescribing a close season for seals. *NZG* 47, 19 June 1913: 1922.

Open season prescribed for 1 July to 30 September 1913.

Prescribing a close season for seals. *NZG* 135, 1 December 1916: 3706.

Closed season set at 27 November 1916 to 27 November 1919.

Extending close season for seals. *NZG* 99, 14 August 1919: 2617.

Closed season extended from 27 November 1919 to 27 November 1922.

Animals Protection and Game Act 1921–1922 (12 GEO V 1921 No. 57; *SDNZ* 1921–1922).

Section 3(1) provided for the Governor-General to declare additional animals (including reptiles) to be included in the First Schedule (i.e. absolutely protected throughout New Zealand). [This provided protection to the low-water mark only.] In force from 1 April 1922.

Extending close season for seals. *NZG* 5, 18 January 1923: 139.

Closed season extended from 27 November 1922 to 27 November 1925.

Making regulations for licensing seal-fisheries. *NZG* 24, 15 March 1923: 726.

Closed season does not apply to Campbell Island/Motu Ihupuku, apart from 1 October 1923–31 May 1924.

Varying close season for seals. *NZG* 24, 15 March 1923: 726.

Closed season does not apply to Campbell Island/Motu Ihupuku, backdated to 11 March 1922.

Extending close season for seals. *NZG* 75, 22 October 1925: 2991.

Closed season extended from 27 November 1925 to 27 November 1928.

Revoking Order in Council varying close season for seals. *NZG* 75, 22 October 1925: 2994.

Campbell Island/Motu Ihupuku no longer exempt from closed season.

Extending close season for seals. *NZG* 70, 20 September 1928: 2824.

Closed season extended from 27 November 1928 to 27 November 1931.

Varying close season for seals. *NZG* 71, 27 September 1928: 2888.

Closed season does not apply to Campbell Island/Motu Ihupuku.

Extending close season for seals. *NZG* 90, 26 November 1931: 3388.

Closed season extended from 27 November 1931 to 27 November 1934.

Revoking Order in Council varying close season for seals. *NZG* 90, 26 November 1931: 3392.

Campbell Island/Motu Ihupuku no longer exempt from closed season.

Extending close season for seals. *NZG* 80, 1 November 1934: 3429.

Closed season extended from 27 November 1934 to 27 November 1937.

International Convention for the Regulation of Whaling. NZG 63, 29 August 1935:2387–2389.

Convention signed at Geneva on 24 September 1931, and duly ratified by New Zealand. Article 4 protected southern right whale (*Eubalaena australis*) and pygmy right whale (*Caperea marginata*).

Whaling Industry Act 1935 (26 GEO V 1935 No. 12; SDNZ 1935).

Sections 4 and 5 granted full protection to southern right whale and pygmy right whale within 3 nautical miles (5.6km) of the New Zealand coast, and prevented treatment of these species by New Zealand factories. Section 5 also protected females accompanied by calves, and immatures of other baleen whale species. In force from 24 October 1935.

The Salt-water Fisheries Amendment Regulations 1937, No. 3 (SR 1937/257, 13 October 1937).

Closed season for seals extended by three years from 30 November 1937. In force from 22 October 1937.

Green turtle (*Chelonia mydas*) and luth or leathery turtle (*Dermochelys coriacea*) absolutely protected (SR 1939/32, 24 March 1939).

Green turtle (*Chelonia mydas*) and leathery turtle (*Dermochelys coriacea*) to be added to the First Schedule of the Animals Protection and Game Act 1921–1922 (i.e. absolutely protected). Apart from a single record of loggerhead turtle, these were the only marine turtle species known from New Zealand at the time (Gill & Whitaker 1996). In force from 31 March 1939.

The Sea-fisheries Regulations 1939 (SR 1939/225, 18 October 1939).

Part XVII. Closed season for seals extended to 31 March 1942. In force from 20 October 1939.

The Sea-fisheries Regulations 1939, Amendment No. 13 (SR 1942/211, 8 July 1942).

Closed season for seals extended to 31 March 1945. In force from 10 July 1942.

The Sea-fisheries Regulations 1939, Amendment No. 16 (SR 1945/14, 28 February 1945).

Part XIXA. No person shall take or attempt to take white porpoise [Hector's dolphin] (*Cephalorhynchus hectori*) in the waters of Cook Strait during 31 January 1945 to 31 January 1948. [*Ultra vires.*] In force from 2 March 1945.

The Sea-fisheries Regulations 1939, Amendment No. 17 (SR 1945/45, 6 April 1945).

Closed season for seals extended to 31 March 1948. In force from 3 May 1945.

The Seal-fishery Regulations 1946 (SR 1946/83, 29 May 1946).

Closed season declared for seals of every species through to 31 March 1948. Allowed for licences conferring the right to take seals to be issued at the discretion of the Minister through to 30 September 1946 for specified parts of Otago, Southland, Fiordland, Stewart Island/Rakiura and offshore islands. In force from 7 June 1946.

The Fisheries (General) Regulations 1947 (SR 1947/82, 28 May 1947).

Regulation 104. No person shall take or attempt to take white porpoise [Hector's dolphin] in the waters of Cook Strait during 1 June 1947 to 1 June 1950. [*Ultra vires.*] In force from 12 June 1947.

The Seal-fishery Regulations 1946, Amendment No. 1 (SR 1948/65, 28 April 1948).

Closed season declared for seals of every species through to 31 March 1951. In force from 7 May 1948.

Fisheries Amendment Act 1948 (SNZ 1948, No. 11).

Section 11 revised Section 83 of the Fisheries Act 1908 to provide for the Governor-General to make regulations to protect, preserve or develop freshwater fisheries, thereby providing a mechanism to protect freshwater fish species. In force from 26 August 1948.

The Whaling Industry Regulations 1949 (SR 1949/149, 28 September 1949).

Closed season for baleen whales set at 1 September to 31 April. In force from 1 November 1949.

The Fisheries (General) Regulations 1950 (SR 1950/147, 23 August 1950).

Regulation 110. No person shall take or attempt to take white porpoise [Hector's dolphin] in the waters of Cook Strait during 31 August 1950 to 31 August 1953. [*Ultra vires.*]

The Freshwater Fisheries Regulations 1951 (SR 1951/15, 6 February 1951).

Regulation 99 prohibited intentional taking or killing of grayling (or fish of the genus *Prototroctes*). In force from 9 February 1951.

The Seal Fishery Regulations 1946, Amendment No. 2 (SR 1951/78, 20 April 1951).

Closed season declared for seals of every species through to 31 March 1954. In force from 13 April 1951.

Wildlife Act 1953 (SNZ 1953, No. 31).

Sections 2, 3 and 7(3). All reptiles other than lizards absolutely protected, thereby granting protection to sea snakes (*Pelamis platurus* and *Laticauda* spp.) and marine turtles (Cheloniidae) throughout New Zealand [i.e. to the low-water mark]. In force from 1 April 1954.

The Seal Fishery Regulations 1946, Amendment No. 3 (SR 1954/68, 5 May 1954).

Closed season declared for seals of every species through to 31 March 1957. In force from 7 May 1954.

The Toheroa Regulations 1955 (SR 1955/206, 7 December 1955).

Closed season established for toheroa (*Paphies ventricosa*), varied by 20 amendments through to 1981, but allowing some harvest each year through to 1980. In force from 15 December 1955.

The Fisheries (General) Regulations 1950 (Reprint) (SR 1956/16, 13 February 1956).

Regulation 110. No person shall take or attempt to take white porpoise [Hector's dolphin] in the waters of Cook Strait during 1 March 1956 to 1 March 1959. [*Ultra vires* before 26 October 1956.] In force from 1 March 1956.

The Fisheries (Dolphin Protection) Regulations 1956 (SR 1956/25, 7 March 1956).

It shall not be lawful to take or molest any dolphin in the Hokianga Harbour for the next five years. [*Ultra vires* before 26 October 1956.] In force from 9 March 1956.

Fisheries Amendment Act 1956 (SNZ 1956, No. 77).

Section 2 provided for the Governor-General to make regulations protecting all marine mammal species (previously seals only were provided for). In force from 26 October 1956.

Revocation of Fisheries (Dolphin Protection) Regulations (SR 1957/36, 6 March 1957).

Dolphins cease to be protected in Hokianga Harbour. In force from 7 March 1957.

The Seal Fishery Regulations 1946, Amendment No. 4 (SR 1957/90, 16 April 1957).

Closed season declared for seals of every species through to 31 March 1960. In force from 18 April 1957.

The Seal Fishery Regulations 1946, Amendment No. 5 (SR 1960/123, 10 August 1960).

Closed season declared for seals of every species through to 31 March 1963. In force from 12 August 1960.

Whaling Industry Regulations 1961 (SR 1961/123, 20 September 1961).

Whaling Industry Regulations 1949 revoked. Closed season for baleen whales set from 1 September to 30 April. In force from 28 September 1961.

The Seal Fishery Regulations 1946, Amendment No. 6 (SR 1963/38, 18 March 1963).

Closed season declared for seals of every species through to 31 March 1966. In force from 22 March 1963.

Whaling Industry Regulations 1961, Amendment No. 1 (SR 1964/94, 1 July 1964).

No person shall take or kill any humpback whale or right whale (latter includes southern right whale and pygmy right whale) within 3 nautical miles (5.6 km) of the New Zealand coast. Closed season for baleen whales set from 1 May to 31 October. Closed season for sperm whales set from 1 May to 31 August. In force from 9 July 1964.

Territorial Sea and Fishing Zone Act 1965 (SNZ 1965, No. 11).

Section 8 defined New Zealand fisheries waters as extending to 12 nautical miles (22.2 km) from the New Zealand coast, including outlying islands. Section 11 stated that the enactments apply to the Fisheries Act 1908 (Part I) and the Whaling Industry Act 1935 [and therefore the enactments implicitly did not apply to the Wildlife Act 1953]. Since 1908, 'New Zealand waters' had extended one marine league (equivalent to 3 nautical miles, or 5.6 km) from the New Zealand coast. In force from 1 January 1966.

The Fisheries (General) Regulations 1950 (Reprint) (SR 1966/20, 7 March 1966).

Regulation 110. No person shall take or attempt to take white porpoise [Hector's dolphin] in the waters of Cook Strait during 17 March 1966 to 17 March 1969. In force from 17 March 1966.

The Seal Fishery Regulations 1946, Amendment No. 7 (SR 1966/26, 14 March 1966).

Closed season declared for seals of every species through to 31 March 1969. In force from 18 March 1966.

The Fisheries (General) Regulations 1950, Amendment No. 10 (SR 1968/104, 24 June 1968).

Regulation 18. Revocation of regulation restricting the taking of porpoises in Cook Strait – Regulation 110 of the principal regulations is hereby revoked. In force from 4 July 1968.

The Seal Fishery Regulations 1946, Amendment No. 8 (SR 1969/114, 23 June 1969).

Closed season declared for seals of every species through to 31 March 1972. In force from 27 June 1969.

Fisheries Amendment Act 1971 (SNZ 1971, No. 72).

Section 2 further defined 'Fish' to include every description of seaweed found in New Zealand fisheries waters, and its spores. In force from 3 December 1971.

The Seal Fishery Regulations 1946, Amendment No. 9 (SR 1972/74, 27 March 1972).

Closed season declared for seals of every species from 1 April 1972 to 31 March 1975. In force from 1 April 1972.

The Seal Fishery Regulations 1946, Amendment No. 10 (SR 1975/42, 10 March 1975).

Closed season declared for seals of every species from 1 April 1975 to 31 March 1978. In force from 1 April 1975.

Customs Import Prohibition (Whales and Whale Products) Order 1975 (SR 1975/205, 4 August 1975). In force from 8 August 1975.

The Customs Import Prohibition (Whales and Whale Products) Order 1975, Amendment No. 1 (SR 1977/120, 9 May 1977).

Whale teeth added to prohibited import items. In force from 13 May 1977.

Territorial Sea and Exclusive Economic Zone Act 1977 (SNZ 1977, No. 28).

Sections 9 and 10 exercised the sovereign rights of New Zealand to make provision for the conservation of resources within 200 nautical miles (370.4 km) of the New Zealand coast, including outlying islands, and the inclusion of these seas within New Zealand fisheries waters. Section 10(2) stated that the enactments apply to the Fisheries Act 1908 (except Part II) and the Whaling Industry Act 1935 [and therefore the enactments implicitly did not apply to the Wildlife Act 1953]. New Zealand fisheries waters had previously extended 12 nautical miles (22.2 km) only from the coast (see the Territorial Sea and Fishing Zone Act 1965). Sections 22(i) and 27(b) empowered the Governor-General to make regulations prescribing measures for the conservation of fisheries resources and for the protection and preservation of the marine environment within the New Zealand EEZ. Section 22(j) empowered the Governor-General to regulate fishing for particular types of highly migratory species

of fish by New Zealand fishing craft beyond the EEZ. In force from 26 September 1977.

The Seal Fishery Regulations 1946, Amendment No. 11 (SR 1978/74, 20 March 1978).

Closed season declared for seals of every species from 1 April 1978 to 31 March 1981. In force from 1 April 1978.

Marine Mammals Protection Act 1978 (SNZ 1978, No. 80).

Sections 1 and 4 granted absolute protection to all species of seals, whales, dolphins and porpoises in New Zealand fisheries waters and on shore. Section 30 repealed the Whaling Industry Act 1935 and the Fisheries Amendment Act 1956, and revoked the Whaling Industry Regulations 1961; the Whaling Industry Regulations 1961, Amendment No. 1; the Seal Fishery Regulations 1946; the Seal Fishery Regulations 1946, Amendment No. 7; and the Seal Fishery Regulations 1946, Amendment No. 11. In force from 1 January 1979.

Fisheries Amendment Act 1979 (SNZ 1979, No. 35).

Section 2 amended Section 2(1) of the Fisheries Act 1908 by defining 'fish' to include every description of fish and shellfish found in New Zealand fisheries waters, and their young or fry or spawn; and to include every description of seaweed found in those waters, and its spores, and every description of fauna and flora naturally occurring seawards of mean high-water spring tides; but not to include salmon, trout, oysters or marine mammals. This allowed for regulations to protect coral. In force from 2 November 1979.

Toheroa Regulations 1955, Amendment No. 19 (SR 1980/184, 1 September 1980).

Closed season set from 1 December 1980 to 30 November 1983. In force from 13 September 1980.

The Fisheries (General) Regulations 1950, Amendment No. 34 (SR 1980/245, 8 December 1980).

Regulation 12 inserted Regulation '107F. No person shall take any black coral (*Aphanipathes* spp.).' In force from 12 December 1980.

Toheroa Regulations 1955, Amendment No. 20 (SR 1981/230, 17 August 1981).

Allowed for open season to be notified via a *New Zealand Gazette* notice. In force from 21 August 1981.

Fisheries Act 1983 (SNZ 1983, No. 14).

Section 2 defined New Zealand fisheries waters to include all waters in the New Zealand EEZ (i.e. extending out to

200 nautical miles/370.4 km from the coast). In force from 1 October 1983.

Freshwater Fisheries Regulations 1983 (*SR* 1983/277, 19 December 1983).

Regulation 69 continued protection for New Zealand grayling. In force from 1 January 1984.

The Fisheries (Amateur Fishing) Notice 1983 (*SR* 1983/297, 21 December 1983).

Clause 18 prohibited taking or disturbing toheroa. Clause 22 prohibited taking, selling or possessing black coral. In force from 1 January 1984.

The Fisheries (Fish Species Restrictions) Notice 1983 (*SR* 1983/308, 21 December 1983).

Clause 10 prohibited taking, possessing or conveying toheroa. Clause 25 prohibited taking, selling or conveying black coral (a coelenterate of the genus *Aphanipathes*). In force from 1 January 1984.

The Fisheries (Amateur Fishing) Notice 1984 (*SR* 1984/348, 18 December 1984).

Clause 18 prohibited taking, possessing, conveying or disturbing toheroa. Clause 22 prohibited taking, possessing, conveying or selling black coral (a coelenterate of the order Antipatharia). In force from 1 January 1985.

The Fisheries (Fish Species Restrictions) Notice 1984 (*SR* 1984/351, 18 December 1984).

Clause 13 prohibited taking, possessing, conveying or selling black coral. In force from 4 January 1985.

Fisheries (Commercial Fishing) Regulations 1986 (*SR* 1986/215, 2 September 1986).

Regulation 26 prohibited taking or possession of toheroa by commercial fishermen. Regulation 31 prohibited taking or possession of black coral by commercial fishermen. In force from 18 September 1986.

Fisheries (Auckland and Kermadec Areas Commercial Fishing) Regulations 1986 (*SR* 1986/216, 2 September 1986).

Regulation 20 prohibited taking of spotted black grouper (*Epinephelus daemeli*) by commercial fishers in the Auckland or Kermadec fishery management areas. In force from 18 September 1986.

Fisheries (Amateur Fishing) Regulations 1986 (*SR* 1986/221, 2 September 1986).

Regulation 22 prohibited taking, possessing or disturbing toheroa. Regulation 26 prohibited taking or possessing

black coral (order Antipatharia). Regulation 27 provided a mechanism whereby persons representing a Māori community could take fish (including shellfish, *sensu* the Fisheries Act 1983) otherwise protected by the regulations, for hui or tangi, provided listed conditions were met. Although no species were named, in practice this allowed a limited take of toheroa (otherwise fully protected). In force from 18 September 1986.

Fisheries (Auckland and Kermadec Areas Amateur Fishing) Regulations 1986 (*SR* 1986/222, 2 September 1986).

Regulation 10 prohibited taking of spotted black grouper in the Auckland or Kermadec fishery management areas. In force from 18 September 1986.

The Fisheries (Commercial Fishing) Regulations 1986, Amendment No. 2 (*SR* 1988/104, 16 May 1988).

Regulation 7 prohibited selling or possession for sale of black coral. [In error, as appended to the wrong clause.] In force from 1 June 1988.

The Fisheries (Commercial Fishing) Regulations 1986, Amendment No. 3 (*SR* 1988/175, 1 August 1988).

Regulation 2 prohibited selling or possession for sale of black coral. In force from 1 September 1988.

Trade in Endangered Species Act 1989 (*SNZ* 1989, No. 18)

Section 9 referencing the First and Second Schedules prohibited trade in any specimens of listed species, including all species of Cetacea (whales and dolphins), sea turtles, southern fur seals and elephant seals. In force from 1 June 1989.

The Fisheries (South-East Area Commercial Fishing) Regulations 1986, Amendment No. 4 (*SR* 1989/322, 30 October 1989).

Updated Regulation 11A(3) of the 1986 Regulations, prohibiting taking or possession of red coral and also black coral from the waters of Quota Management Areas 3 or 4. In force from 1 December 1989.

The Fisheries (Southland and Sub-Antarctic Areas Commercial Fishing) Regulations 1986, Amendment No. 7 [*sic*] (*SR* 1989/323, 30 October 1989).

Regulation 15C(2) prohibited taking or possession of red coral (a hydrocoral of the order Stylasterina) and also black coral from the waters of Quota Management Areas 5 or 6. In force from 1 December 1989.

The Fisheries (Commercial Fishing) Regulations 1986, Amendment No. 7 (*SR* 1990/186, 30 July 1990).

Taking or possession of marine turtles prohibited within New Zealand fisheries waters (i.e. protection extended to 200 nautical miles/370.4 km). In force from 30 August 1990.

The Fisheries (Amateur Fishing) Regulations 1986, Amendment No. 2 (*SR* 1990/217, 27 August 1990).

Regulation 4 established an open day for toheroa at Oreti Beach, Southland, on 8 September 1990. In force from 8 September 1990.

The Marine Mammals Protection Regulations 1990 (*SR* 1990/287, 8 October 1990).

Conditions governing commercial marine mammal guiding to view. In force from 8 November 1990.

The Fisheries (Southland and Sub-Antarctic Areas Amateur Fishing) Regulations 1991 (*SR* 1991/57, 8 April 1991).

Regulation 6 prohibited taking or possession of red coral (a coelenterate of the order Stylasterina) in the Southland and Sub-Antarctic fishery management areas. In force from 9 May 1991.

The Fisheries (South-East Area Amateur Fishing) Regulations 1986, Amendment No. 2 (*SR* 1991/59, 8 April 1991).

Prohibited taking or possession of red coral from the South-East Fisheries Management Area. In force from 9 May 1991.

The Fisheries (South-East Area Commercial Fishing) Regulations 1986, Amendment No. 8 (*SR* 1991/163, 26 August 1991).

Updated Regulation 11A of the 1986 Regulations, prohibiting taking or possession of red coral and also black coral from the waters of Quota Management Areas 3 or 4. In force from 26 September 1991.

The Fisheries (Southland and Sub-Antarctic Areas Commercial Fishing) Regulations 1986, Amendment No. 11 (*SR* 1991/164, 26 August 1991).

Regulation 15C prohibited taking or possession of black coral or red coral from the waters of Quota Management Areas 5 or 6. In force from 26 September 1991.

The Marine Mammals Protection Regulations 1992 (*SR* 1992/322, 16 November 1992).

Conditions governing commercial marine mammal guiding to view. *SR* 1990/287 revoked. In force from 1 January 1993.

Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (*SNZ* 1992, No. 121).

Section 37 amended Regulation 27 of the Fisheries (Amateur Fishing) Regulations 1986, thereby providing a mechanism whereby persons representing a Māori community could take fish, aquatic life or seaweed otherwise protected by the regulations, for hui, tangi or other approved purposes, provided listed conditions were met. Although no species were named, in practice this allowed a limited take of toheroa (otherwise fully protected). In force from 23 December 1992.

The Fisheries (Amateur Fishing) Regulations 1986, Amendment No. 5 (*SR* 1993/284, 13 September 1993).

Regulation 8 established an open day for toheroa at Oreti Beach, Southland, on 18 September 1993. In force from 18 September 1993.

Fisheries Act 1996 (*SNZ* 1996, No. 88).

The Twelfth Schedule (Part III, particularly the first and last pages referring to the Wildlife Act 1953) created Schedule 7A of the Wildlife Act 1953, thereby granting absolute protection to black corals, all species of red coral and spotted black grouper. The same schedule extended most provisions of the Wildlife Act 1953 to include New Zealand fisheries waters, thereby protecting sea snakes and marine turtles out to 200 nautical miles (370.4 km) from the New Zealand coast. Amendments included in the Twelfth Schedule (Part III) were deemed to have come into force on 1 October 1995.

Fisheries (South Island Customary Fishing) Regulations 1998 (*SR* 1998/72, 20 April 1998).

Regulation 11 provided a mechanism whereby Māori could take fish, aquatic life or seaweed for customary food-gathering purposes, provided listed conditions were met. Although no species were named, in practice this allowed a limited take of toheroa (otherwise fully protected). In force from 24 April 1998.

Customs Import Prohibition Order 1999 (*SR* 1999/271, 23 August 1999).

Schedule 4 prohibited importation of whales and whale products. In force from 1 October 1999, expired 30 September 2002 [not renewed as duplicated by similar protections in the Marine Mammals Protection Act 1978 and the Trade in Endangered Species Act 1989].

Fisheries (South Island Customary Fishing) Regulations 1999 (*SR* 1999/342, 11 October 1999).

Regulation 11 provided a mechanism whereby Māori

could take fisheries resources for customary food-gathering purposes, provided listed conditions were met. Although no species were named, in practice this allowed a limited take of toheroa (otherwise fully protected). In force from 11 November 1999.

Fisheries (Commercial Fishing) Regulations 2001 (*SR* 2001/253, 17 September 2001).

Regulation 36 prohibited taking or possession of toheroa by commercial fishers. Regulation 44 prohibited taking, possessing, selling or processing for sale of black coral by commercial fishers. Regulation 45 prohibited taking or possession of marine turtles from New Zealand fishing waters by commercial fishers. In force from 1 October 2001.

Fisheries (Amateur Fishing) Amendment Regulations (No. 2) 2001 (*SR* 2001/254, 17 September 2001).

Regulation 9 provided a revised Regulation 22 for the principal (1986) regulations prohibiting taking, possessing or disturbing toheroa. In force from 1 October 2001.

Fisheries (Amateur Fishing) Amendment Regulations (No. 2) 2005 (*SR* 2005/341, 19 December 2005).

Regulations 4 and 5 provided a revised Regulation 27 for the principal (1986) regulations regarding traditional non-commercial fishing use. Although no species were named, in practice this allowed a limited take of toheroa (otherwise fully protected). In force from 1 March 2006.

Wildlife (White Pointer Shark) Order 2007 (*SR* 2007/42, 26 February 2007).

Added great white shark (*Carcharodon carcharias*) to Schedule 7A of the Wildlife Act 1953, thereby granting absolute protection in New Zealand fisheries waters. In force from 1 April 2007.

Fisheries (Southland and Sub-Antarctic Areas Amateur Fishing) Amendment Regulations 2007 (*SR* 2007/47, 5 March 2007).

Regulation 5 removed white pointer (great white) shark from the schedule of species able to be taken in the Southland and Sub-Antarctic fishery management areas. In force from 1 April 2007.

Fisheries (White Pointer Shark – High Seas Protection) Regulations 2007 (*SR* 2007/48, 5 March 2007).

Prohibition on using New Zealand ships on the high seas to take white pointer shark [great white shark]. In force from 1 April 2007.

Fisheries (Commercial Fishing) Amendment Regulations 2008 (*SR* 2008/26, 25 February 2008).

Updated regulations on incidental capture of marine turtles. In force from 1 April 2008.

Wildlife Order 2010 (*SR* 2010/159, 8 June 2010).

Schedule 7A of the Wildlife Act 1953 updated and extended to include:

Cnidaria: Anthozoa (corals and anemones) – black corals (all species in the order Antipatharia); gorgonian corals (all species in the order Gorgonacea [Alcyonacea]); and stony corals (all species in the order Scleractinia); and Cnidaria: Hydrozoa (hydra-like animals) – hydrocorals (all species in the family Stylasteridae).

Chordata: Chondrichthyes (cartilaginous fishes): Lamniformes (mackerel sharks) – deepwater nurse shark (*Odontaspis ferox*) and white pointer [great white] shark; Orectolobiformes (carpet sharks) – whale shark (*Rhincodon typus*); and Rajiformes (skates and rays) – manta ray (*Manta birostris*) and spinetail devil ray (spinetail mobula) (*Mobula japonica*); and Osteichthyes (bony fishes): Perciformes (perch-like fishes): giant grouper (Queensland grouper) (*Epinephelus lanceolatus*) and spotted black grouper. In force from 8 July 2010.

Fisheries (Basking Shark – High Seas Protection) Regulations 2010 (*SR* 2010/401, 15 November 2010).

Prohibition on using New Zealand ships on the high seas to take basking shark (*Cetorhinus maximus*). In force from 16 December 2010.

Wildlife (Basking Shark) Order 2010 (*SR* 2010/411, 15 November 2010).

Added basking shark to Schedule 7A of the Wildlife Act 1953, thereby granting absolute protection to the species in New Zealand fisheries waters. In force from 16 December 2010.

Fisheries (Sharks – High Seas Protection) Regulations 2012 (*SR* 2012/355, 3 December 2012).

Prohibition on using New Zealand ships on the high seas to take basking shark, oceanic whitetip shark (*Carcharhinus longimanus*) or white pointer [great white] shark. In force from 3 January 2013.

Wildlife (Oceanic Whitetip Shark) Order 2012 (*SR* 2012/356, 3 December 2012).

Added oceanic whitetip shark to Schedule 7A of the Wildlife Act 1953, thereby granting absolute protection to the species in New Zealand fisheries waters. In force from 3 January 2013.

Fisheries (Amateur Fishing) Regulations 2013 (*SR* 2013/482, 9 December 2013).

Regulation 25 prohibited taking, possessing or disturbing toheroa. Regulation 32 prohibited taking or possessing black coral. Regulation 67 prohibited taking or possessing spotted black grouper from the Auckland and Kermadec fisheries management areas. Regulations 131 and 150

prohibited taking or possessing red coral from the South-East, Southland and Sub-Antarctic fisheries management areas. Revoked Fisheries (Amateur Fishing) Regulations 1986 (*SR* 1986/221) and Fisheries (Auckland and Kermadec Areas Amateur Fishing) Regulations 1986 (*SR* 1986/222). In force from 1 February 2014.

Appendix 2: Summary of the history of legal protection of New Zealand's marine mammals, marine reptiles, native fish and marine invertebrates

See Appendix 1 for full references for Acts, statutory regulations and *New Zealand Gazette* notices matching the dates given here. F = fully protected throughout New Zealand for all of that calendar year, P = partially protected (i.e. some animals able to be taken that year, with spatial, temporal, numerical and/or demographical restrictions).

Marine mammals

Seals (Pinnipedia; no New Zealand legislation distinguished between seal species) P 1875–81, F 1882–90, P 1891, F 1892–93, P 1894, F 1895–1908, P 1909–13, F 1914, P 1915–16, F 1917–22, P 1923–24, F 1925–28, P 1929, F 1930–45, P 1946, F 1947–current (to 200 nautical miles/370.4 km from coast since January 1979).

Southern right whale (*Eubalaena australis*) and pygmy right whale (*Caperea marginata*) F 1935–current. Humpback whale (*Megaptera novaeangliae*) P 1935–64, F 1965–current. Remaining baleen whales (Balaenopteridae) P 1935–78, F 1979–current. Hector's dolphin (*Cephalorhynchus hectori*) P [Cook Strait] 1956–59, P 1966–68, F 1979–current. Sperm whale (*Physeter macrocephalus*) P 1964–78, F 1979–current. Remaining toothed whales (Odontoceti), including dolphins (Delphinidae), F 1979–current. All legislation to protect dolphins before 1957 (i.e. Pelorus Jack, Pelorus Jack II and Opo) was *ultra vires*. All whale and dolphin species have been protected to 200 nautical miles (370.4 km) from the coast since January 1979.

Reptiles

Green turtle (*Chelonia mydas*) and leathery turtle (*Dermochelys coriacea*) F 1940–current. Remaining sea turtles (Cheloniidae) F 1954–current (to 200 nautical miles/370.4 km from the coast since 1996).

Sea snakes (*Pelamis platurus* and *Laticauda* spp.) F 1954–current (to 200 nautical miles/370.4 km from the coast since 1996).

Fishes

New Zealand grayling (*Prototroctes oxyrhynchus*) F 1952–current.

Spotted black grouper (*Epinephelus daemeli*) F 1987–current. Giant grouper (Queensland grouper) (*E. lanceolatus*) F 2011–current.

Great white shark (*Carcharodon carcharias*) F 2008–current. Whale shark (*Rhincodon typus*), basking shark (*Cetorhinus maximus*), deepwater nurse shark (*Odontaspis ferox*), manta ray (*Manta birostris*) and spinetail devil ray (spinetail mobula) (*Mobula japonica*) F 2011–current. Oceanic whitetip shark (*Carcharhinus longimanus*) F 2013–current.

Marine invertebrates

Toheroa (*Paphies ventricosa*) P 1955–80, F 1981–85, P 1986–current.

Black corals (all species in the order Antipatharia) F 1981–current. Red hydrocorals P 1989–1991, F 1992–current. All remaining species in the family Stylasteridae (order Anthoathecata) F 2011–current. Gorgonian corals (all species in the order Alcyonacea [formerly order Gorgonacea]) and stony corals (all species in the order Scleractinia) F 2011–current.