

Freshwater Colonists:
The Wellington Acclimatisation Society and the Introduction
of Trout, 1871-1914

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Abstract

The Wellington Acclimatisation Society was established in 1871, as part of a larger acclimatisation movement that featured the systematic introduction and exchange of many species across the world. After merging with other lower North Island societies, the Wellington Society began work on introducing trout to the streams and rivers of the district. Initially, the Society was made up of prominent members of the Wellington community, but over time these well-connected enthusiasts gave way to those with practical skills and knowledge. During the twentieth century the Society became an increasingly formalised group, working closely with the Government and other acclimatisation societies within New Zealand, as well as internationally. These networks, which were initially essential for trout introductions through imperial links, soon moved from an emphasis on importations and exchange to a focus on the continued maintenance of trout species throughout the Wellington district. The success of trout introductions relied on the ability of the Wellington Society to sufficiently modify the New Zealand environment. The close ties that existed between acclimatisation societies and the colonial Government meant the Wellington Society could undertake extensive environmental modification and management using a special authority, alongside a degree of involvement from the community. In this way, the introduction of trout had a significant impact on both the social and environmental history of New Zealand.

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Introduction

Arthur Seed was an angler who lived in Wellington in the late nineteenth century. He worked as an insurance agent, and later moved to the Hutt Valley where he took over ownership of a sawmill, but in his weekends he spent considerable time troutfishing in the Wellington region. Between 1893 and 1897 Seed kept a diary of his fishing expeditions over four seasons. His detailed accounts noted the location, time, weather, techniques, and the size and number of fish he caught in each outing. Seed often complained of the weather, frequently noting “a chilly South wind”, and recorded the effects that he believed this had on his luck that day.¹ He favoured the Karori Reservoir as his primary fishing spot, though often stayed with relatives and enjoyed fishing in Makara and Wainuiomata. While his tallies at the end of each season suggest that he was fairly skilled and enjoyed considerable success, Seed is an example of the kind of people who engaged in recreational fishing during this time.

What is particularly interesting about Seed’s diary is that it describes a man in New Zealand taking part in a sport traditionally found in the waters of Great Britain. It raises questions about how the sport came to be in New Zealand, who were the people involved in establishing and participating in recreational troutfishing, and how trout were able to adjust and thrive in New Zealand waters. This thesis examines the introduction of trout into the Wellington region through the work of the Wellington Acclimatisation Society. It will examine the people behind the initial introduction and the subsequent maintenance of trout populations, the networks and connections that were established to facilitate trout distribution in New Zealand, and the resulting intentional environmental modification and management of the Wellington region. Through exploring these aspects, it will become apparent that the leisurely experiences of men such as Seed resulted from an increasingly systematic and complex project of acclimatisation that would have a lasting impact on the people and environment of Wellington.

Hunting and fishing have received relatively little attention from academic historians. Thomas Altherr and John Reiger discussed this gap in the historical

¹ Arthur J. Seed, ‘Fishing Diary’, part of Seed Family Papers, Alexander Turnbull Library, MS-Group-1479.

narrative and challenged other academic historians to explore this topic as a viable and rich source for developing understanding of the interaction of humans and their environment over time. They point out that hunting has “been much more than a peripheral activity over the centuries”,² and there are a number of different ways that scholars could explore hunting in a historical context. These include, the role of hunting and definitions of masculinity and manhood, the formation of communities and group traditions, impacts on public policy decisions relating to natural resources, issues of gender and the separation of roles, the transition from subsistence to sport, the differences between class engagements with nature, and the tension between the public image of game sports and the shift towards conservationism.³ Altherr and Reiger call for environmental historians to “leave individual ideological baggage behind, and to study hunters in their own words in the contexts of their own time”.⁴ This is important for New Zealand environmental historians, as the impact of groups and individuals who set out to create hunting and fishing traditions caused drastic and irreversible changes to the environment. While Altherr and Reiger mainly refer to hunting histories, the call for ‘more and better scholarship’ also applies to freshwater fisheries and recreational fishing.

Kate Hunter has responded to Altherr and Reiger’s call to academic historians with reference to New Zealand hunting history. Hunter explores the early emergence of hunting as a tradition brought from the British metropole at the time of European colonisation of New Zealand, and the impact that this new tradition had on New Zealand society.⁵ This is an examination of hunting in the context of New Zealand’s social history, rather than an ecological approach, which means that attention is given to the ways individuals and communities were influenced by hunting traditions, as well as human impact on the environment. Hunter describes the ways that hunting traditions have developed in New Zealand, from subsistence hunting to the growth of recreational hunting, and looks at how people engaged with the activity, including family traditions as well as events that involved entire communities. The growth of hunting as a sport relied on the work

² Thomas L. Altherr and John F. Reiger, ‘Academic Historians and Hunting: A Call for More and Better Scholarship’, *Environmental History Review*, Vol.19, no.3, 1995, p.41.

³ *ibid.*, pp.41-47.

⁴ *ibid.*, p.53.

⁵ Kate Hunter, *Hunting: A New Zealand History* (Auckland: Random House New Zealand, 2009).

of acclimatisation societies, particularly when it came to the introduction larger game such as deer.⁶ Hunter's discussion of acclimatisation societies gives a broad outline of the work that they did to facilitate new outdoor sports for New Zealand, and many parallels can be drawn for the introduction of freshwater fish to encourage recreational fishing.

New Zealand environmental historians have examined the acclimatisation of a variety of flora and fauna, and located it as part of the general narrative of imperial connections with Britain. Tom Brooking and Eric Pawson's edited collection, *Seeds of Empire*, explores the introduction of British grassland species and emphasises the drastic impacts that introduced species can have in the rapid transformation of the indigenous environment. While touching on aspects such as the improvement and productivity of the existing natural environment, Brooking and Pawson also examine the importance of "mobilities and networks" in the large-scale transformation of grasslands.⁷ The subsequent establishment of networks of communication and information with Britain, and also other colonies, was also a key part of the successful modification of grasslands environments across New Zealand. The introduction of grasses and other plants necessary for agriculture follows a similar pattern to the introduction of other species, with the initial introductions conducted primarily by early settlers before being picked up by specialised groups and experts. Similar studies of the introduction of birds, for example work by G.M. Thomson or T.H. Potts,⁸ show that in many cases introductions of new species to New Zealand shared similar processes of importation, and the resulting impact on the natural environment and attitudes of settlers.

Few New Zealand environmental histories have given much attention to freshwater environments. There has been considerable study of wetlands, particularly by Geoff Park, and Terry Hearn has discussed the use of rivers in waste removal for early mining, but these only refer to rivers and streams in

⁶ *ibid.*, pp.37-46.

⁷ Eric Pawson and Tom Brooking, "Introduction", in Tom Brooking and Eric Pawson (eds.), *Seeds of Empire: The Environmental Transformation of New Zealand* (New York: Palgrave Macmillan, 2011), pp.3-6.

⁸ G.M. Thomson, *The Naturalisation of Animals and Plants in New Zealand* (Cambridge: Cambridge University Press, 1922); T.H. Potts, *Out in the Open: A Budget of Scraps of Natural History, Gathered in New Zealand* (Christchurch: Lyttelton Times Company Limited, 1882).

relation to the use of land, rather than exploring waterways as the primary focus.⁹ More recently, the new edition of *Environmental Histories of New Zealand*, which engages with a wide range of issues in New Zealand environmental history, also fails to explore the subject of freshwater rivers and streams particularly thoroughly.¹⁰ It is not that rivers are uniquely absent from global environmental histories. Richard White's history of the Columbia River shows that rivers can be used in context of wider social, industrial, and environmental histories and can bridge gaps between micro and macro histories.¹¹ It seems that in terms of New Zealand's histories rivers are taken somewhat for granted.

The acclimatisation of species can often be included in part of a larger context of ecological imperialism. Because so many species were introduced to New Zealand during the nineteenth century it is convenient to describe them as a collective imported group. The ideas, theories, and practices of ecological imperialism are discussed by scholars such as Thomas Dunlap and Alfred Crosby, who have explored the role of the New Zealand environment as part of the expansion of the British Empire. Dunlap refers to this expansion as an 'English [*sic*] Diaspora', and follows how the European settler societies in the United States, Canada, Australia and New Zealand sought to make sense of their new lands through understandings of science and nature.¹² Crosby also explores the successful colonisation of the 'new world'. He refers to the establishment of European settlements as a project of 'ecological imperialism' and the subsequent creation of 'neo-Europes'.¹³ The themes of species exchange, ecological imperialism, and settler attitudes towards nature that these scholars explore are all relevant to the work of acclimatisation societies. While some game species are mentioned and the role of hunting is also discussed, there is very little work done

⁹ Geoff Park, "'Swamps which might doubtless Easily be drained': Swamp drainage and its impact on the indigenous", in Eric Pawson and Tom Brooking (eds.), *Environmental Histories of New Zealand* (Melbourne: Oxford University Press, 2002), pp.151-165; Terry Hearn, 'Mining the Quarry', in Eric Pawson and Tom Brooking (eds.), *Environmental Histories of New Zealand* (Melbourne: Oxford University Press, 2002), pp.84-99.

¹⁰ Eric Pawson and Tom Brooking (eds.), *Making a New Land: Environmental Histories of New Zealand* (Dunedin: Otago University Press, 2013).

¹¹ Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1996).

¹² Thomas Dunlap, *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia and New Zealand* (Cambridge: Cambridge University press, 1999).

¹³ Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, 2d ed. (Cambridge: Cambridge University Press, 2004).

on river modifications or the impacts of introduced fish species. However, the emphasis is on the broader implications of species exchange along imperial lines, as well as the overall global context in which these exchanges occur.

Andrew Hill Clark, author of *The Invasion of New Zealand by People, Plants and Animals*, leaves little doubt of his attitudes towards the environmental changes that were a result of introduced species. Clark does not dwell on many specific examples of acclimatisation, and emphasises the negative effects of introduced rabbits and deer. His focus is mainly on the effects of these introductions on the natural environment in the South Island.¹⁴ There is a distinct lean towards an emphasis on the historical geography of the land, but overall Clark offers an insight into the broad effects that the introduction of exotic species had on the landscape of the South Island, drawing attention to the changes to the “regional character” of the island. Clark describes the acclimatisation societies, and refers to them as being primarily sentimentally minded groups working towards the ultimate aim of replicating the game sports that were available for the upper classes in Britain.¹⁵

A generation earlier, George Malcom Thomson also explored these issues. He was a scientist with interests in biology and the natural world, a member of the Otago Acclimatisation Society, and the New Zealand Institute.¹⁶ In 1922 Thomson attempted to catalogue the introduction of almost all species of mammals, birds, reptile, insect, and fish, and also a wide variety of plants.¹⁷ While he was obviously very involved in the acclimatisation society himself, he also formed a critical response to it. His scientific background is noted when he decries the lack of biological considerations and ecological policy making that had been involved in the acclimatisation process. Instead, he remarks, “It has hitherto been carried on in the most haphazard and irresponsible manner, districts, societies and individuals acting quite independently of, and often in direct opposition to, one another”.¹⁸

¹⁴ Other studies of ‘natural history’ of the South Island include Michael Winterbourn, et al, *The Natural History of Canterbury* (Christchurch: Canterbury University Press, 2008); John Darby, et al, *The Natural History of Southern New Zealand* (Dunedin: Otago University Press, 2003).

¹⁵ Andrew Hill Clark, *The Invasion of New Zealand by People, Plants and Animals: The South Island* (New Brunswick: Rutgers University Press, 1949), pp.266-267.

¹⁶ E. Yvonne Speirs, ‘Thomson, George Malcolm’, *Dictionary of New Zealand Biography – Te Ara – the Encyclopedia of New Zealand*, <http://www.TeAra.govt.nz>; accessed 12 February 2014.

¹⁷ Thomson, *The Naturalisation of Plants and Animals in New Zealand*.

¹⁸ *ibid*, p.2.

This was also a time when the harmful effects of certain introduced species were becoming increasingly visible, and this distance from the early enthusiasm for ‘improving’ the natural environment meant that environmental histories began to engage with these issues. While Thomson was critical of most of the work of the New Zealand acclimatisation societies, explaining from personal experience how, “No biological considerations ever disturbed their dreams, nor indeed did they ever enter into their calculations”,¹⁹ he was very positive about one specific introduction. On the subject of trout he claims, “a certain measure of good has been achieved – notably in stocking our nearly empty rivers and lakes with fine food- and sport fishes”.²⁰ However, overall Thomson’s account of environmental transformations in New Zealand emphasises the considerable degree of human error made by acclimatisation societies and other early European colonists in their over-enthusiastic and misguided attempts to create their own slice of ‘home’ in the new land.

Thomson’s negative opinions of acclimatisation societies reflect a general sense of pessimism that can become associated with studying imported species in New Zealand history. This pessimistic attitude of many historians may have led to gaps in this area of study. For example, Kerry-Jayne Wilson’s work on the ecology and conservation of indigenous New Zealand species in response to acclimatisation offers a largely negative account.²¹ In summing up the impact of acclimatisation she states that “The story that has unfolded in this book is not a happy one and there is no happy ending”.²² Herbert Guthrie-Smith’s account of life on his Hawkes Bay station is among the most famous of the early environmental histories, and documents the decline of many native species in that specific place.²³ This is a now familiar tale in many other parts of New Zealand as the drastic impact of exotic species continues to be revealed.

While, therefore, pessimism is not entirely unfounded, it needs to be balanced by the distance that Altherr and Reiger call for. This is particularly the

¹⁹ *ibid.*, p.22.

²⁰ *ibid.*, p.3.

²¹ Kerry-Jayne Wilson, *Flight of the Huia: Ecology and Conservation of New Zealand’s frogs, reptiles, birds and mammals* (Christchurch, New Zealand: Canterbury University Press, 2004).

²² *ibid.*, p.310.

²³ Herbert Guthrie-Smith, *Tutira: The Story of a New Zealand Sheep Station* (Auckland, 1921: repr. Random House New Zealand, 1999).

case when looking at New Zealand rivers, as these were heavily politicised areas and often sites of conflict over ownership and access rights between Māori and European colonists. Navigating these issues and the negative connotations that are often associated with acclimatisation societies can be difficult, and it is unsurprising that topics in this area can be dismissed as a general wave of ecological imperialism.

Acclimatisation Society Histories

Ecological imperialism, to use Crosby's term, was nothing new in the nineteenth century (nor, indeed confined to European colonialism), but the first bodies that were called acclimatisation societies emerged in France in the mid-nineteenth century. The establishment of colonial outposts meant that interest soon turned to the potential colonial resources could have for the improvement of the French economy. Ideas around the importation of new species focused on the forced adaptation of flora and fauna to environments that were very different, mainly the transferral from a tropical climate into France.²⁴ These theories were rooted in Enlightenment thought and took a rational approach to the man-made transformation of local environments. As research and experiments into species transferrals continued, societies and associations were established to help facilitate this. In 1854 Isidore Geoffroy Saint-Hilaire, an expert researcher in the subject of exotic animal exchanges and who had considerable involvement with major French zoos, set up the *Société Zoologique d'Acclimatation* in Paris.²⁵ This was the first of its kind, and generated great interest. It attracted a number of wealthy supporters and by the 1860s there were over one thousand new members including diplomats, bankers, military men and heads of foreign states.²⁶ The support of such influential members was crucial for establishing networks of exchange across countries. The general public was also drawn into the acclimatisation project through the establishment of the *Jardin Zoologique d'Acclimatation*. The Jardin

²⁴ Michael A. Osborne, 'Acclimatizing the World: A History of the Paradigmatic Colonial Science', *Osiris*, Vol.15 Nature and empire: Science and the Colonial Enterprise, 2000, p.137.

²⁵ *ibid*, p.143.

²⁶ Warwick Anderson, 'Climates of Opinion: Acclimatization in Nineteenth-Century France and England', *Victorian Studies*, Vol.35, no.2, 1992, p.144.

was established in 1860 to display the work and results of acclimatisation to the public as a botanic garden and zoo.²⁷ This made acclimatisation accessible to those outside of the scholarly and scientific circles and, “gave acclimatization a cultural presence not seen in other European capitals”.²⁸ The Jardin received great popularity from this combining of commercialism alongside popular scientific education,²⁹ which meant that acclimatisation work moved out of the realms of the institutional and became a part of the engagement between people and the natural environment.

Acclimatisation societies soon emerged in Britain. While many British individuals had been unofficially engaging in species exchanges through the Empire, official institutions for introduction and propagation of new species were not established until the 1860s. Unlike the French experience, where acclimatisation was initially the domain of scientists and scholars, in Britain it was wealthy landowners and gentlemen naturalists who were particularly enthusiastic.³⁰ The formation of the first British acclimatisation society in 1860 is credited to Frank Buckland, a former surgeon who devoted most of his life to his interest in exotic species introductions. Stories around Buckland’s work and eccentric lifestyle have become almost mythologised, as historians have detailed his interest in experimenting with alternative food sources, including mice, hedgehogs, and earwigs, and his ultimate goal of finding more economic sources of food for the poor, including envisioning herds of eland on the English plains, to his eventual focus on research into pisciculture.³¹ His founding of the Acclimatisation Society of the United Kingdom met an enthusiastic response, and members were soon at work creating Empire-wide connections to facilitate the introduction of beneficial and useful plants and animals. This early enthusiasm for acclimatisation societies soon began to dwindle, and the low membership of those from learned societies in London may have been a key factor. Christopher Lever argues, “If members of the scientific standing.... had been prepared to play a more

²⁷ Christopher Lever, *They Dined on Eland: The Story of the Acclimatisation Societies* (London: Quiller Press, 1992), pp.7-8.

²⁸ Osborne, p.144.

²⁹ Lever, p.8.

³⁰ Anderson, p.147.

³¹ Timothy Collins, ‘From Anatomy to Zoophagy: A Biographical Note on Frank Buckland’, *Journal of the Galway Archaeological and Historical Society*, Vol.55, 2003, pp.91-108.

energetic role in the activities of the Society (which is really to say if the work of the Society had held a greater appeal for them), then even without government support the Society might have become a potent and long-lasting organisation”.³² However, without the support of the scientific community the principal British acclimatisation society went bankrupt in 1867.³³

Acclimatisation societies were soon established in other British colonies as part of a larger official movement in Britain towards processes of ecological imperialism. Institutes, such as the botanic gardens at Kew, were driving a global exchange of useful and beneficial species for scientific and also economic reasons. Kew Gardens was a particularly significant site in this network of imperial exchange, as it was also information that was being interchanged between metropole and colonies.³⁴ While Kew had been involved with flora exchanges for over a century, the new focus on exchanges of fauna between colonies was an important shift in nineteenth century acclimatisation projects.

While the success of acclimatisation societies was relatively short lived within Britain, they were met with enthusiasm in the colonies. Acclimatisation societies were established across the Empire; including Australia, India, and New Zealand. By 1901 there were more than one hundred and fifty societies in India and Australasia.³⁵ In many places these societies remained active well into the twentieth century. Acclimatisation societies were a way that new colonists could attempt to alter their environments and make their new lands a more familiar and domesticated space. Dunlap has explored this movement of people, plants, and animals throughout the colonies, and argued that this transformation of the natural environment was part of a “generation’s expression of ideas about nature and human’s relation to it, ideas deeply rooted in European culture and their new societies”.³⁶ He also suggests that the expansion of European settlement overseas was the opposite to the exploratory voyages of the sixteenth and seventeenth

³² Lever, p.96.

³³ *ibid.*, p.93.

³⁴ Lucile H. Brockway, *Science and Colonial Exchange: The Role of the British Royal Botanic Gardens* (Connecticut, United States of America: Yale University Press, 2002), p.7.

³⁵ Osborne, p.145.

³⁶ Thomas R. Dunlap, ‘Remaking the Land: The Acclimatization Movement and the Anglo Ideas of Nature’, *Journal of World History*, Vol.8, no.2, 1997, p.304.

centuries; the explorers ransacked the world, while settlers attempted to refill it.³⁷ As European colonists sought to make new homes acclimatisation came to be used as a way of connecting with the familiar and recognisable, and also a way to exert control over unpredictable new lands. Alongside acclimatisation, as John MacKenzie has shown, was the spread of the cult of hunting. Acclimatisation mainly referred to exchanges of physical specimens, but there was also a simultaneous element of cultural exchange. MacKenzie describes how the spread of European game sports was turned into “a symbolic activity of global dominance”.³⁸ Official networks of exchange ensured that the British Empire was able to control the settlements of new colonies, as well as the biological and ecological make-up of distant parts of the globe.

Fishing in New Zealand

European species exchange had occurred early in New Zealand. From the initial contact between British and French mariners and Māori new species, such as potatoes and pigs, had been introduced as useful resources. As European settlement increased, New Zealand’s temperate and fertile environment soon became the focus for many colonists’ ambitions for the development of the landscape. Wakefieldian rhetoric of systematic colonisation and improvement, and of a ‘better Britain’,³⁹ meant that the environment was already a part of a nation-building narrative for newly arriving settlers. For example, Charles Hursthouse declared that New Zealand would be transformed to become “the Britain of the South”.⁴⁰ Pastoralism and agriculture were soon established, involving drastic changes to the landscape. Alongside this large-scale environmental modification, changes were made by individual colonists making space for gardens and homesteads, and importing new species for sentimental and ornamental reasons. By the end of the nineteenth century, the New Zealand

³⁷ *ibid.*, p.304.

³⁸ John M. MacKenzie, *Empire of Nature: Hunting, Conservation, and British Imperialism* (Manchester: Manchester University Press, 1988), p.ix.

³⁹ Dunlap, *Nature and the English Diaspora*, p.2.

⁴⁰ Charles Hursthouse, *New Zealand, or Zealandia, the Britain of the South* (London: Edward Stanford, 1857).

environment had been radically altered, and the landscape was dominated by recognisable signs of British colonialism.

Many early settlers relied on hunting as a necessary food source, particularly in the years before organised settlement.⁴¹ However, many colonists noted that there was a considerable lack of ‘adequate’ game.⁴² There were plenty of native birds, and the wild pigs and goats could be found in most areas of bush, but the game that was traditionally favoured by the British upper classes, for example deer and grouse, were noticeably absent. This idea that hunting for sport was ‘ennobling’, and that a Britain of the South could be created where estates and parks would be established as a way to improve the New Zealand wilderness, helped to drive the enthusiasm for imported game species.⁴³

As British hunting traditions were imported to New Zealand, so too were issues involving game laws. Britain had a long history of punitive game laws, many which had been in place in England since the 1670s.⁴⁴ Many restrictions were placed on members of the lower classes, which meant that while much of the surrounding countryside was well-stocked with game, it was off-limits to the great majority of the population. This was a source of tension for those living throughout the countryside and often led to widespread poaching.⁴⁵ When it became clear that New Zealand could be transformed into a hunter’s paradise, attempts were made to ensure that the British model of game laws could also be improved on. There was much enthusiasm for new settlers from the labouring and working classes for the ready access to hunting and fishing that New Zealand had to offer, and the issue of accessibility for all citizens was one that acclimatisation societies sought to address from the outset.⁴⁶

While there were a number of indigenous fish species already present in New Zealand waters, colonists looking for recreational fishing similar to that in Britain were disappointed. Indigenous fish were thought to lack both the vigour

⁴¹ Hunter, pp.81-82.

⁴² John Robert Godley, *Extracts from Letters of John Robert Godley to C.B. Adderley* (London: Savill and Edwards, 1863), p.166.

⁴³ Hunter, pp.45-46.

⁴⁴ *Ibid.*, p.40.

⁴⁵ R.M. McDowall, *Gamekeepers for the Nation: The Story of New Zealand’s Acclimatisation Societies, 1861-1990* (Christchurch, New Zealand: Canterbury University Press, 1994), p.26.

⁴⁶ *Ibid.*

and fight which provided anglers with the kind of ‘sport’ that they sought, as well as offering little in the way of good eating.⁴⁷ This meant that it was only a short time until serious action was taken to introduce new species to fill the rivers. The first attempts at fish introductions were largely unsuccessful. After several failed experiments, new technologies led to the construction of a system of ova transportation in ice-boxes and trout were soon successfully transported from hatcheries in Tasmania and established in Christchurch, before being transported around New Zealand. This was the beginnings of what would be a complex network of exchanges between acclimatisation societies within New Zealand, as well as with similar societies in other British colonies. The Otago Society was particularly significant in the early distribution of trout and was very active in stripping ova from hatchery-raised fish, and also fish trapped from the wild.⁴⁸ Despite difficult beginnings, the acclimatisation of trout in New Zealand soon became one of the star introductions and its continued success as a game fishing favourite for New Zealanders as well as tourists goes some way to show how the early decision to propagate trout and promote recreational fishing had a lasting impact on New Zealand’s society and environment.

Recreational fishing has a long history in Europe. In 1653, Izaak Walton’s *The Compleat Angler* offered advice to amateur anglers and reflected on some of the aspects that made the sport so enjoyable for participants. Walton describes angling as a kind of art form, and in the conversational manner that the text follows argues that “it is an art, and an art worthy the knowledge and practice of a wise man”.⁴⁹ Although it is often a skill that requires some inherent talent it can be picked up by those willing to learn, and “he must bring a large measure of hope and patience, and a love and propensity to the art itself; but having once got and practiced it, then doubt not but Angling will prove to be so pleasant, that it will prove to be a virtue, a reward to itself”.⁵⁰ Throughout the instructive advice that he gives to new anglers, Walton frequently draws attention to the intricate techniques required, such as the technical and artistic skills used to construct an

⁴⁷ Thomson, pp.187-188.

⁴⁸ McDowall, *Gamekeepers*, p.251.

⁴⁹ Izaak Walton, *The Compleat Angler, or the Contemplative Man’s Recreation* (London, 1653: repr. Nicholas Van Publishers Ltd, 1948), p.24.

⁵⁰ *ibid.*, p.25.

artificial fly that looks realistic enough to lure trout. This acknowledgement of artistic ability alongside the naturalist's ability to read an environment shows how Walton understood angling to be about more than simply catching fish.

While *The Compleat Angler* is one of the classics in angling literature, it drew from earlier sources. This included the second edition of *The Boke of St Alban*, written in 1496 by Dame Juliana Berners, thought to have been a Benedictine nun. In her work on the sporting pursuits of English gentlemen a section is dedicated to angling, and instructions are given as to the correct equipment, such as the kinds of rods and the size of the hooks.⁵¹ What these texts help to illustrate is that angling was a heavily ritualised activity. Parallels are often drawn between recreational fishing and the highly formal and ritualised land-based game sports, such as deer stalking, hawking, or duck shooting. Modern anthologies also make the point that angling as a sport carries an extensive history, from the artificial flies made in Macedonia to fishing in India during British occupation, and this history has contributed to the heavily ritualistic aspects that angling is met with even in modern times.⁵²

As recreational fishing traditions were brought to New Zealand, New Zealand angling literature soon emerged. One of the most influential early authors on the topic of trout fishing was William H. Spackman, a Christchurch lawyer. Spackman's book, *Trout in New Zealand: Where to go and how to find them*, provided a basic guide.⁵³ As president of the Canterbury Angler's Society and Counsel to the Canterbury Acclimatisation Society, Spackman was very involved in trout introductions and distributions in New Zealand, which meant he was a credible authority for giving advice and information on the matter. He was also very involved in the formation of laws regarding acclimatisation restrictions, and played a significant part in the prohibiting of dangerous animals and reptiles, such as snakes.⁵⁴ His angling guides were not aimed just at tourists or newcomers to the

⁵¹ Dame Juliana Berners, *A Treatyse of Fysshynge with an Angle* (London, 1496: repr. Eliot Stock, 1880).

⁵² Jeremy Paxman, *Fish, Fishing and the Meaning of Life* (London: Penguin books Ltd, 1995), p.xx.

⁵³ William H. Spackman, *Trout in New Zealand: Where to go and how to find them* (Wellington: Government Printer, 1892).

⁵⁴ Joan Druett, *Exotic Invaders: The Introduction of Plants and Animals into New Zealand* (Auckland, New Zealand: Heinemann Publishers, 1983), pp.231-232.

country, but were also a way to encourage anglers within New Zealand to visit other regions in the colony. He states, “Most anglers, even in New Zealand, are unacquainted with any district but their own”.⁵⁵ By describing the brief histories and general environmental conditions of each area, Spackman was able to inform anglers of what to expect in other regions. It was also a way that the unique aspects of a New Zealand fishing culture and tradition could be emphasised for anglers, with advice such as, “the angler is strongly recommended to buy his flies in the colony, as the tackle-makers are now well acquainted with what is required, and can tell the flies most suitable for the different streams”,⁵⁶ suggesting that the New Zealand environment was different to that which could be expected in Britain, and that trout had adapted to New Zealand conditions.

New Zealand angling literature from the twentieth century has emphasised the distinct New Zealand angling experience, while also giving further insight into some of the reasons why recreational fishing continued to be a popular activity. While much of the early literature followed the practical and instructional tone of Spackman’s works, angling literature soon began to explore the more personal aspects of fishing experiences. George Ferris published several works during the mid-twentieth century and became a staple in many anglers’ libraries. One of his major works, *Fly Fishing in New Zealand*, follows the general tropes of the instructional angling guides, with discussions of the right flies to use for particular New Zealand lakes and rivers. However, Ferris also offers some reflection on the experience of angling, and thoughts on sportsmanship and ethics. His descriptions of angling acknowledge the technical and practical aspects, but also refer to the emotional and near-spiritual experiences that come with the sport. For example he describes the transformation that comes over an angler, as “he moves upstream, but he leaves behind him the consciousness of everything extraneous to angling. He has entered a new world full of excitement and anticipation, and he gives himself up to its enjoyment”.⁵⁷ These narratives of personal experiences, alongside comments about the “excellent sportsmen” involved in the angling fraternity,

⁵⁵ Spackman, p.i.

⁵⁶ *ibid.*, p.21.

⁵⁷ George Ferris, *Fly Fishing in New Zealand: A Complete and Comprehensive Work on Fly Fishing* (London: William Heinemann Ltd., 1954), p.133.

show that while the primary aim of recreational fishing is to catch a fish, there are more abstract features at work that continually drawn more anglers to the sport.

More recent works follow both traditions. Keith Draper, for instance, continues the ‘how-to’ aspect of angling guides.⁵⁸ John Parsons’ work has a story-telling quality and also seems to identify the complex list of factors that work to make recreational fishing a continually widespread sport. Many of his books are compilations of his newspaper columns published in the *Press* and *Taupo Times*, and are excellent examples of Parsons’ reflective tone and approach to angling.⁵⁹ Parsons also compiled an anthology of trout and salmon stories, which contains selections from a wide range of sources, from formal angling guides and history books to personal narratives and poetry.⁶⁰ These materials help to show the varied reasons that draw anglers to the sport, including interests in the natural sciences and technical skills, and also the more abstract aspects such as the ritualised processes, artistry, or mental capacities required during long periods spent communing with nature. Parsons portrays angling as a sport that is both relaxing and stimulating, and one that requires a degree of both brains and brawn. This kind of attitude is also demonstrated in the periodical *Fish and Game New Zealand*, which contains reflective stories about New Zealand anglers, while also providing tips and guides to help improve skills and technique.⁶¹ This publication also provides an insight into the changes in recreational fishing, such as the move towards practices like catch and release. Identifying these complex features of the sport shows the significance of angling culture within New Zealand, and that the introduction of recreational fishing not only had an impact on the environment, but also a significant impact on New Zealand society and culture.

⁵⁸ For example, Keith Draper, *Hooked on Fly-Tying* (Christchurch: Shoal Bay Press Ltd, 1997); *Choose the Right Fly!: A Streamside Guide for New Zealand Anglers* (Christchurch: Shoal Bay Press, 1997).

⁵⁹ For example, John Parsons, *Parsons’ Glory: a Bedside Book for Anglers* (Auckland: William Collins (New Zealand) Limited, 1976); *A Taupo Season: a Bedside Book for Trout Fishermen* (Auckland: William Collins Publishers Ltd, 1979); *Parsons Passion: A Troutfisher’s Year* (Auckland: The Halycon Press, 1990).

⁶⁰ John Parsons and Bryn Hammond (eds.), *New Zealand’s Treasury of Trout and Salmon: An Angling Anthology* (Auckland: The Halycon Press, 1989).

⁶¹ For example, *Fish and Game New Zealand*, Special Issue, 37, 2014.

Acclimatisation Society history in New Zealand

The history of acclimatisation societies in New Zealand is only marginally covered by historians. The most notable work on the subject is the virtually encyclopaedic text *Gamekeepers for the Nation*, by R.M. McDowall. His interest in acclimatisation societies stems from his scientific background in the study of freshwater fish.⁶² While his work covers an extensive time period, starting with the first establishment of acclimatisation societies in the 1860s until the 1990s, he is able to provide a wealth of detail on the introductions of a wide variety of species. This focus on the process and, to some extent, the consequences of these introductions is important, as it goes some way to demonstrate the environmental impacts that such species had. McDowall is also able to track the development of acclimatisation societies into the fish and game associations that took over the management of hunting and fishing during the late twentieth century. However, there is very little exploration into the people behind the acclimatisation societies, or any discussion of the impacts these societies had on the Māori population in New Zealand, particularly in the early decades of acclimatisation work. These are significant components in the historical narrative of acclimatisation societies in New Zealand and it is important that the environmental and social aspects are considered together in context.

Other attempts to explore acclimatisation societies in New Zealand have been made in the centenary histories published by individual societies. These histories were written by enthusiasts. The main centres are represented, including Hawke's Bay, Canterbury, Auckland and Nelson.⁶³ However, no centenary history was published for the Wellington Acclimatisation Society. These centenary histories are a good source for the overview of activities during the first period of

⁶² Other works include, *New Zealand Freshwater Fishes: An Historical and Ecological Biogeography* (New York: Springer, 2010); *Ikawai: Freshwater Fishes in Māori Culture and Economy* (Christchurch: University of Canterbury, 2011).

⁶³ More information can be found in the centenary editions created for these acclimatisation societies: R. C. Lamb, *Birds Beasts and Fishes: The First Hundred Years of the North Canterbury Acclimatisation Society* (Christchurch: The North Canterbury Acclimatisation Society, 1964); Joyce M. Wellwood, *Hawke's Bay Acclimatisation Society: Centenary, 1868-1968* (Hastings: Hawke's Bay Acclimatisation Society, 1968); Clifton R. Ashby, *The Centenary History of the Auckland Acclimatisation Society, 1867-1967* (Auckland: Auckland Star Commercial Printers, 1967); W.C.R. Sowman, *Meadow, Mountain, Forest and Stream: The Provincial History of the Nelson Acclimatisation Society, 1863-1968* (Nelson: Nelson Acclimatisation Society, 1968).

acclimatisation in New Zealand, and offer an insight into the individuals and events that had a significant impact on the shaping of acclimatisation work in a particular region. Nevertheless, these histories read as a chronology of events and there is very limited historical analysis. Although this fits with their purpose as documents for the celebration of important historic events, it does mean that they have to be used as a source of information rather than an academic discussion of acclimatisation. The broad nature of the histories means that they can help draw comparisons between different regional societies, which could contribute to an overall general understanding of the workings of acclimatisation in New Zealand.

Acclimatisation societies are often mentioned as players in early environmental management and modification, but their influence and lasting impact on the New Zealand environment is rarely explored with much depth. While some historians have attempted to tease out aspects of acclimatisation societies that had an effect on early settlers, the societies themselves have yet to be the focus of a historical account dedicated solely to their history. Paul Star has explored some dimensions of early settler interaction with acclimatisation societies, but the emphasis is mainly on the shift away from exotic species introductions and the new interest in preserving existing indigenous species.⁶⁴ This thesis is a contribution to the history of New Zealand acclimatisation societies, and attempts to fill some of the gaps in the historical narrative of both the Wellington Acclimatisation Society and also the introduction of trout into New Zealand waterways.

The Wellington Acclimatisation Society District was one of the largest in New Zealand, and covered most of the lower North Island. Following provincial lines, it included the Wairarapa area and went as far north as Taihape. The district was made up of a number of smaller societies that had decided to amalgamate in the 1880s. It is not very clear why these smaller societies, which included Wairarapa, Woodville, Manawatu, Rangitikei, and Levin, decided to form one larger group, but it may have been part of a movement towards more formalised and official groups, rather than pockets of acclimatisation enthusiasts dotted across

⁶⁴ Paul Star, 'From Acclimatisation to Preservation: Colonists and the Natural World in Southern New Zealand, 1860-1894', PhD Thesis, University of Otago, 1997.

the lower North Island. The two largest societies, Wellington and Wairarapa, merged in 1884 and between them organised the establishment of the Masterton Fish Ponds and Hatchery.⁶⁵ New Zealand acclimatisation societies worked on the idea that for successfully established populations to exist the rivers needed to be stocked to the point where any natural enemies would be overwhelmed. This policy that meant that large numbers of trout were propagated at the hatchery before being transported across the countryside, as part of a nation-wide network of trout distribution. While initially brown trout were the main species, later establishment of rainbow trout added to the species for distribution.⁶⁶ The Masterton hatchery was an important facility for the Wellington Society and ensured that the Wellington district had a ready supply of large quantities of trout for the enjoyment of anglers.

The landscape throughout this area included a number of geographical features including swamps and wetlands through the Manawatu, coastal landscapes along the east and west, the Tararua and Rimutaka mountain ranges, and a number of rivers and tributaries. European exploration and expansion transformed much of the landscape into farmland, with wetlands drained and bush cleared to make way for grasslands suitable for pastoralism and agriculture. Several major river systems provided an essential freshwater resource, and these rivers and smaller tributaries were soon used for recreational purposes too. *W.H. Tisdall's Angler's Guide* highlights the main rivers and streams that were of interest for anglers in the Wellington district, including the Ruamahanga, Hutt, Wainuiomata, Mungaroa and Mangatainoka.⁶⁷ The specific features of each river are discussed, and the general features of the waterways in the district included clear waters, wide rivers, and the willingness of trout to chase a variety of flies. These were all aspects that would have been good news for anglers looking to fish in this area.

There are very few records that document the early introductions of trout into Wellington. Brown trout were first introduced into the Wairarapa area in

⁶⁵ Wellington Acclimatisation Society (WAS) Annual Report, 1884, pp.1-2.

⁶⁶ *ibid.*

⁶⁷ W.H. Tisdall, *W.H. Tisdall's Angler's Guide and Price List* (Wellington, New Zealand: Whitcombe and Tombs Ltd. Printer, 1898).

1874, when 50 were purchased by locals, William Beetham and Alexander Rutherford from the Canterbury Acclimatisation Society and released directly into the Waipoua River.⁶⁸ Unfortunately, nothing further was seen of them. Two years later, a further 1,700-2,000 trout ova were purchased and hatched from Beetham's estate at Brancepeth.⁶⁹ The hatching and rearing of trout remained a personal enterprise for a number of years, with other individuals, such as George Denton, offering sales of trout to land-holders with rivers or streams.⁷⁰ It was not until the Wairarapa Acclimatisation Society was formed in 1882, when importations of trout increased and hatching boxes were built, that serious trout cultivation and distribution began for the district.⁷¹ After the amalgamation of Wairarapa with the Wellington Society, the Masterton Hatchery was established in 1885, and the Wairarapa region had the facilities that were required to become a major part of the trout distribution network.⁷² The hatchery was supplied by several natural springs, which kept a regular supply of fast-flowing water of even-temperature, and holding ponds, hatching tanks, and rearing races were built. Other acclimatisation projects were kept at the hatchery, including water-fowl and pheasants.⁷³ The Masterton Fish Ponds and Hatchery eventually became a cause for pride in the region and was often quoted as being a major attraction for tourists, sports enthusiasts, and other acclimatisation societies.

The Wellington Acclimatisation Society and the Introduction of Trout

This thesis will explore three major aspects of the Wellington Acclimatisation Society and their project of trout introductions. While the different types of trout will often be referred to collectively, the brown trout was the more popular species during the period. The focus will be on the Wellington region and the people and

⁶⁸ WAS Annual Report, 1884, p.2.

⁶⁹ *Evening Post*, 5 October 1876, p.2.

⁷⁰ *Evening Post*, 5 October 1881, p.2.

⁷¹ Wellington Acclimatisation Society (WAS) Annual Report, 1884, pp.2-3.

⁷² Cyclopedica Publishing Company, *The Cyclopedica of New Zealand: Industrial, Descriptive, Historical, Biographical Facts, Figures, Illustrations*, Vol. 1, Wellington Provincial District, (Wellington, New Zealand: Cyclopedica Company Ltd, 1897), p.592.

⁷³ *ibid.*, p.952.

processes that were involved that ultimately transformed the environment into a habitat suitable for introduced trout.

The first chapter will explore the individuals who made up the Society, including both executive members and the Society's paid employees. The executive members of the Society were often influential in their local communities, and their authority to make decisions that could have a drastic impact on the New Zealand environment meant they could have a significant influence over the district. However, there were several shifts that meant the makeup of the Society changed. One such shift was the change from informal enthusiasts to a more structured and official group. The other was the gradual acceptance of members into executive roles who were practically involved with the work of the Society, rather than being figureheads or patrons. Following these changes can provide insight into how the Wellington Society became such an influential group in the region.

The next chapter examines the networks and connections that linked the Wellington Acclimatisation Society and other societies along imperial, local and national lines. These networks were essential for the exchange of species between different colonies and then for the further spread of introduced species within New Zealand. Again, there was an overarching pattern where initial informal connections eventually became formalised and increasingly complex. These networks contributed to the spread of trout from the metropole to the colonies, but were also channels for exchanges of information, technology, and personnel.

The final chapter addresses the environmental management and modification that the Wellington Acclimatisation Society was responsible for. This large-scale modification of the natural environment was considered necessary for the successful introduction of trout populations into the Wellington rivers and streams. Hatcheries and predator control were the favoured measures taken to ensure that large trout populations could be accessed by Wellington anglers, and the monitoring of water quality was a constant concern for the Wellington Society. The extent to which the Wellington Society could modify the environment was derived from authority granted by the Government. This relationship between acclimatisation societies and the Government was unique, and resulted in the

privileged position of the societies as the Government sought to share in the vision for New Zealand that could be attained through acclimatisation work. Government support was a sign that acclimatisation projects had largely been accepted as part of the colonial project of improving of landscape.

Chapter One: Members and Membership

In terms of rhetoric and law, recreational fishing for trout and salmon in New Zealand has always been open to any person who purchased the correct licence and equipment. The idea that troutfishing, and other game sports, have been much more accessible and democratic than in Britain is a source of some pride, and is not entirely wrong. However, the Wellington Acclimatisation Society was dominated by members who were part of the social elite and who were able to exercise considerable influence over the availability of trout fishing opportunities. This chapter will explore who the members were and how they influenced the organisation and activities of the Society.

The Wellington Acclimatisation Society was established on 10 September 1884. A meeting was advertised in the local newspaper, and called for the attendance of, “all persons interested in stocking the North Island rivers with salmon and trout, and in acclimatisation in general”.¹ An acclimatisation society had existed in Wellington some years before, but had been discontinued after a short time. This 1884 meeting signified the desire for a revival of acclimatisation work for the Wellington region, and the 30 gentlemen who attended formed the core group who shared enthusiasm for this renewed venture. Almost as a sign of this new vigour, it was decided at this first meeting that the region would be significantly extended to include the area of the Wairarapa Acclimatisation Society, which had been established in 1882. While the newly amalgamated society was one of the last to be established in New Zealand, the work that it achieved in the short time that followed, particularly in the propagation and liberation of trout, meant that it was soon a major fixture in the introduction of exotic species.

Members of the Wellington Acclimatisation Society were the driving force behind the venture to modify and ‘improve’ their provincial environment. McDowall recognised the importance of this element and described the people behind the Society as “the essential resource”.² This was a resource that could be carefully controlled and used to its full advantage, and the early organisers of the Wellington Society were able to create certain structures, values, and expectations that the new Society was based on. Because the Wellington Society, in its fully amalgamated form, was established

¹ *Evening Post*, 9 September 1884, p.3

² McDowall, *Gamekeepers*, p.75.

later than those in other regions, it had the advantage of being able to follow the examples of societies from elsewhere in New Zealand and overseas. Through establishing formal hierarchies, a system of outreach to other parts within the district, and a group of skilled workers the Wellington Society was able to use people as a powerful and effective resource in the acclimatisation of trout in the region. This chapter will explore the overall structure and function of the Wellington Acclimatisation Society, and also attempt to discover more about the people who became a part of it.

Acclimatisation societies were established in New Zealand with the aim of providing access to hunting and fishing for all citizens and trout were among the most highly anticipated game species. This meant that the kind of people who were drawn to acclimatisation work were not only interested in making use of the natural features of the New Zealand environment, but were also a part of the movement to create a new sporting lifestyle that could be widely enjoyed. Game sports were considered to be a sign of a civilised society and provided a link to the traditions of ‘home’. According to Hunter, some “saw in hunting the means to improve the moral character of the country”.³ Charles Hursthouse is often quoted for his claim that hunting would protect young men from the habit of relaxing “in city dissipations and the laps of ballet girls”.⁴ Trout fishing was part of this game tradition and acclimatisation enthusiasts would have anticipated the associated benefits of the inferred lifestyle that came with recreational fishing. With reports that “New Zealand should swarm with game”,⁵ it may have been hard for anglers to resist the call to attempt trout introductions as soon as possible.

Many of the people who made up the governing bodies of the Society were members of the Wellington elite. This included sheepfarmers, parliamentarians, leading scientists, and urban professionals such as lawyers and doctors. These men could be involved in the Wellington Society for a considerable number of years, such as William Beetham, a Wairarapa landowner; Alexander Rutherford, a civil servant; and Leonard Tripp, a prominent Wellington lawyer. The social standing of these men was an asset, as it meant that their time, land, and funds could be at the disposal of

³ Hunter, p.46.

⁴ Hursthouse, p.130.

⁵ *ibid.*, p.128.

acclimatisation projects. In this way, the kind of people who were drawn to acclimatisation in Wellington could be compared to those who were first interested in acclimatisation societies as they emerged in Britain. The backing of such influential figures meant that acclimatisation in the Wellington district would have had considerable credibility, which meant that the Wellington Society was able to become a significant force in the environmental modification and management of the region.

As the membership of the Wellington Society continued to grow and its propagation of trout expanded, increased support was needed from paid experts. These experts were hired by the Society to help manage the practical side of acclimatisation work. Such workers included Curators, to manage the fish ponds and hatcheries, and Rangers, employed to monitor trout populations after liberation. This was essential work for the Society, and these paid workers were carefully selected for their roles. Contrasts can be made between the people on the governing bodies of the Society and those who were hired to perform the task of making the introductions a reality. Paid workers exercised a lot of responsibility over the processes of acclimatisation in the region, and some, such as fisheries expert Lake Falconer Ayson, went on to gain national significance.

It is also important to consider who was not involved with the Society, or who were left out of the process of acclimatisation altogether. While there is evidence to suggest that children, women, and tourists were all invited to participate in recreational fishing, the extent to which this participation was facilitated could reveal more about the real aims of the Society. Tourism was considered desirable, and many decisions were made to encourage its development in the Wellington region. The unique landscape of New Zealand provided a spectacular background for the hunting and fishing pursuits that the Society promoted, and further concessions were given to tourists with licences that were valid for a shorter time. Issues around licences became increasingly significant as changes were instated that meant licence-holders were able to become full members of the Society. These changes to membership rules and entitlements became an important way that the Wellington Society could manage the accessibility of the Society's services and also towards gaining the support and interest of those they considered to be desirable members.

Hierarchy

The Wellington Acclimatisation Society was made up of a hierarchy of executive members who were elected by the general membership. This system was centred on the annual election of members for the positions of President, Vice President, and body of representatives for a Council, and was established in the very early meetings of the Society. This focus on participation of all members signalled that the Society held the idea of equality very highly, although voting rights could only be exercised by those able to hold a membership, either through a ten shilling subscription fee or holding both a hunting and fishing licence for £1, which may have been a restricting factor.⁶ While the Society offered democratic participation, it was democracy of those who could afford it. As the Wellington Society grew over time, both in terms of membership and district size, the role of the Council changed too and there was a progression from initial introductions to maintenance and development. This change was reflected in the makeup of the executive members, as there was a shift from well-connected elite to a greater involvement of practical and hands-on enthusiasts.

The hierarchical structure meant that the decision making and management of the Society was left in the hands of the executive members, who were elected each year at the Annual General Meeting. AGMs were important events for the society, as they were open to all members, whereas the monthly Council meetings were for Council members only. Attendance was occasionally noted in the minute books, often estimated by the Secretary, and at its peak around 50-60 gentlemen were recorded.⁷ The meetings concluded with a voting process, overseen by the Chairman and selected scrutineers, and the announcement of the new executive members and positions. These measures show the serious nature behind the Society, and the desire to have smooth-running body of members united in their aims for acclimatisation. It also reflects the general associational culture of the time, situating the acclimatisation societies within a wider context of groups and associations that were being formed in New Zealand in the initial decades of organised settlement.

This annual voting process meant that the executive positions in the Society could be regularly reviewed, and changes could be made to ensure that there was

⁶ WAS Minutes, Vol.1. p.260.

⁷ WAS Minutes, Vol.3, p.171.

strong internal leadership for members. However, certain positions were often held by the same individuals for a number of consecutive years. Certain positions seemed to be tied up in formality, such as the position of President, seemingly more of an honorary role, which was always given to the Governor of New Zealand. This was the case, even when the Governor was not yet in the country to accept the role. Instead, he was officially elected and it was assumed that he would contact the Society in due time in order to accept it. It was not even confirmed that the Governor would have any interest in acclimatisation matters, although it may have been assumed that he would have wanted to be involved with a society that was working towards the improvement of the colony. The fact the President was not usually called upon to act in any kind of proactive way, apart from the official duty of Chairing the AGM, meant that his role was more like that of a 'patron'. The assumption that the Governor would accept the Presidency appears to be a demonstration of self-confidence on the part of the Society's leaders that the Society was of sufficient status and credibility for him to accept, or might have been an opportunity to gain respectability from association with a man of his station.

Between two and four Vice Presidents were elected for the year, and the role seems to be similar to that of the President, as those appointed were usually respected members who had given significant contribution to the Society. In many cases the Vice Presidents did not attend the AGM, and only very rarely did they make an appearance at the Council meetings. However, unlike the President, the Vice Presidents did seem to have an active interest in acclimatisation projects. One of the longest serving Vice Presidents was Sir James Hector. Hector was a dominant figure in colonial science.⁸ He was elected the first Chairman of the Otago Acclimatisation Society in 1864,⁹ before moving to Wellington to take up the positions of director of the Geological Survey and the Colonial Museum.¹⁰ While in Wellington he helped to form the Wellington Acclimatisation Society and, after its reforming in 1884, held the position of Vice President for the next 15 years. His presence on the executive would have been particularly useful in the early years of the Society's existence, although

⁸ See, Simon Nathan and Mary Varnham (eds.), *The Amazing World of James Hector* (Wellington: Awa Press, 2008).

⁹ McDowall, *Gamekeepers*, p.21.

¹⁰ R.K. Dell, 'Hector, James', *Dictionary of New Zealand Biography – Te Ara, the Encyclopedia of New Zealand*, accessed 17 October 2013.

this was more in terms of a figurehead rather than a sign that the Society was an overtly scientific organisation. In this respect, the role of Vice President seemed to be a way for the Society to draw in experienced and notable members, which in turn would have helped to increase its credibility.

As the Wellington Society continued to grow in popularity, financial stability, and influence, younger members of the Council soon began to move up the ranks, leaving space for new members. This 'internal promotion' meant that key individuals continued to be involved in the Society, and dedicated members could also be recognised for their services over the years. Examples of this include two very active Council members who eventually reached the position of Vice Presidents, William Beetham, and Alexander Rutherford. Beetham was a member of the Wairarapa pastoral elite,¹¹ and served as a Council member and Wairarapa representative for over 20 years before being elected a Vice President in 1908. He also served for many years as Chairman of the Wairarapa North County Council, Chairman of the Road Board, President of the Masterton Association, and was an active member of the Wairarapa community, as well as a noted painter.¹² He owned considerable areas of land in this area, including the Brancepeth and Annedale estates. His main interest was in the affairs of the Fish Ponds and Hatchery in Masterton. In the years after the resignation of L.F. Ayson in 1899, Beetham helped to manage the Masterton hatchery and worked hard to maintain the grounds and facilities, and also to find grants and donations to keep the running of the hatchery financially secure.¹³ As Vice President he continued to offer advice to the hatchery, and his status as a member of the pastoral elite, and involvement in many societies and associations in the Wairarapa, meant that Beetham was a significant figure in the Wellington colonial social sphere. As such, his contribution to the Wellington Society, including his financial position and social contacts, would have helped ensure the Society remained a noteworthy part of the region.

Rutherford was one of the longest serving members of the Wellington Society. He lived primarily in Masterton and owned a sheep run in Alfredton, although he also

¹¹ *Cyclopedia, Wellington*, Vol. 1, pp.943-944.

¹² *ibid.*, pp.943-944; Robin Kay and Tony Eden, *Portrait of a Century: the History of the New Zealand Academy of Fine Arts, 1882-1982* (Wellington: Millwood Press Ltd., 1983), p.16.

¹³ WAS Minutes, Vol.1.

spent considerable time in Wellington where he worked as Clerk-assistant to the House of Representatives.¹⁴ He was present at the Wellington Society's formation in 1884 and held various roles on the Council, including Honorary Secretary and Chairman, until his election to Vice President in 1902.¹⁵ In this new position he continued his enthusiastic work in acclimatisation through publishing papers, which he presented at several of the AGMs, and remaining involved in many other projects, including the importation of new trout species, and the improvement of the Masterton hatchery and further hatchery expansion into Palmerston North and the Hutt Valley.¹⁶ His work in Parliament was no doubt useful to the Society. While the Vice Presidents were not necessarily required to be active in their roles, the actions of some of the longer serving members show that those who were elected after already being involved in the society for some time were recognised for their previous displays of commitment to the Society, and this dedication to the work of the Society continued in their new positions.

The change in participation from Vice Presidents also signals a shift in the kind of people who were active in the Society. As the Society changed its focus from importations of new and different kinds of species to the maintenance and management of existing exotic populations, the members who were most involved were those who worked in the more practical and hands-on side of acclimatisation. McDowall also identifies this change, which was not unique to the Wellington Society, and concludes that after acclimatisation societies shifted away from introductions of species, "membership eventually consisted primarily of anglers and hunters, though not entirely so".¹⁷ In the early days of acclimatisation work the Society needed men who had the right connections and influence to secure importations from other agencies or individuals around the globe. This accounts for the initial membership consisting mainly of men in positions of wealth and high social-standing. As the need for such connections diminished, it became evident that a more 'hands-on' approach was more appropriate. The new generation of active Vice Presidents, as seen with the appointment of Beetham and Rutherford, indicates that this shift in

¹⁴ 'Political News and Notes', *Evening Post*, 25 June 1913, p.8.

¹⁵ WAS Minutes, Vol.3.

¹⁶ WAS Minutes, Vol.5.

¹⁷ McDowall, *Gamekeepers*, p.75.

membership meant that participation and administration came together more effectively.

The next tier in the Wellington Acclimatisation Society hierarchy, the Council, was the most effective branch of the executive and acted as the main decision-making body. Many of the Council members were from the upper classes of Wellington society. Acclimatisation efforts had long been associated with those who were wealthy enough to be able to import and then sustain new species in an unfamiliar environment.¹⁸ New Zealand lacked the members of nobility and high-ranking imperial officials that acclimatisation societies in Europe could boast, and yet the men who were drawn to the cause were often of high social rank within the colony. Large land-holders, influential political leaders, and respectable urban professionals made up the majority of New Zealand acclimatisation society executive members. In Wellington, these members were often notable public figures, or those of sufficient social standing who were often recognised and reported in social newspaper columns.

Between 1884 and 1899, a maximum of 12 men were elected to the Council. Some Council members were re-elected and became an almost permanent feature of the makeup of the Wellington Society. One such was Leonard Owen Howard Tripp, the son of a leading Canterbury sheep farmer, and a well-known legal figure in Wellington. Tripp's career began when he was admitted to the bar in 1887, after which he joined the law firm with Martin Chapman in 1889, later to become Chapman Tripp. He was made an Officer of the Order of the British Empire in 1918.¹⁹ Alongside his legal work, he was nationally recognised for his commitment to acclimatisation. Tripp was first elected to the Wellington Acclimatisation Society Council in 1901, became Chairman in 1905, and served for a total of 53 years.²⁰ Outside of his role in the Wellington Society, he was elected foundation Chairman of the New Zealand Acclimatisation Society Association (NZASA) in 1905, and retained this position for over thirty years. McDowall states, Tripp's "history of individual involvements in the Wellington Society is, in itself, quite a story", before listing Tripp's various successes in the management of the Wellington Society, and involvement in the larger New

¹⁸ See the chapters about early acclimatisation efforts in France and Britain: Lever, *They Dined on Eland*.

¹⁹ 'Order of the British Empire', *Evening Post*, 5 October, 1918, p.4.

²⁰ WAS Minutes, Vols. 3-5; McDowall, *Gamekeepers*, pp. 75-76.

Zealand acclimatisation context.²¹ One particular legacy of Tripp's was the opening addresses that he made at the start of each NZASA meeting. McDowall describes these as 'a homily', as Tripp used the opportunity to set the scene for acclimatisation societies at the time, and reflected or established Society attitudes on a wide variety of topics.²²

Many other members of the Council, while not as long-serving as Tripp, were also prominent figures in Wellington. Charles Beard Izard and James Joseph Devine also had extensive legal practices. Izard was Cambridge educated and upon arriving in New Zealand in 1860 established the legal firm Bell, Gully and Izard. After retiring from the law in 1887, he represented Wellington South in the tenth Parliament.²³ He joined the Wellington Society Council in 1891 and was made a life member five years later. Devine had a similar career path, although he practised law as a barrister and solicitor as a solo practitioner rather than as part of a firm. He was also involved in Wellington regional politics and was a member of the Wellington City Council. While he was not a hugely influential figure, he was well-known in the community and was described as "socially a very popular man and takes great interest in all intellectual pursuits".²⁴ Among the doctors were Thomas E. Cahill, who became the honorary surgeon to the Wellington Hospital and chief medical officer of the New Zealand Government Insurance Department,²⁵ Charles Faulke, a physician and surgeon who practiced in Wellington from 1895,²⁶ and Herbert Rawson, a well-known dentist and a member of a highly respected family of medical practitioners.²⁷ While many of these men played relatively minor roles on the Council, their positions as public figures meant that their work in acclimatisation was notable.

Council members held diverse interests that covered different areas of acclimatisation, from hunting and fishing to pest management and ornamental plants. The monthly meetings were the primary place for planning and initiating projects, and smaller committees were often formed within the wider council group, consisting of members who held particular skills or interests that would be useful in taking care of

²¹ McDowall, *Gamekeepers*, p.77.

²² *ibid.*, p.76.

²³ *Cyclopedia, Wellington*, Vol. 1, p.266.

²⁴ *ibid.*, p.281.

²⁵ *ibid.*, p.270.

²⁶ *ibid.*, p.481.

²⁷ *ibid.*, p.484.

a particular project or issue. The Fish Distribution Committee was formed each year and was tasked with arranging the distribution of fry and ova from the hatcheries. This involved collecting the orders from the various regional sub-committees, other acclimatisation societies, and sometimes special orders from overseas. The people nominated to this committee were usually those who were actively involved in facilitating trout fishing in the district, such as Beetham, whose involvement with the Masterton Fish Hatchery has been previously mentioned. Similar committees were established for other projects including the formation of a game farm in Wainuiomata, developments for a new holding pond in Palmerston North, and the organisation for the care and management of shipments of new species such as pheasants. Splitting the Council into smaller committees ensured that the particular skills and interests of Council members could be utilised effectively.

As the boundaries of the Wellington Society's district expanded, regional subcommittees were established in towns like Palmerston North, Levin, and Pahiatua, and representatives from these areas were also included on Council meetings. This meant the overall number of Council members was raised to seventeen. These 'country members' also came from the upper levels of their communities and had considerable social standing. For example, A.J. Parsons was one of the first members of the Wellington Society in 1884, although did not remain in Wellington for long, and later became mayor of Wanganui. He was an active figure in the public life of Wanganui and had "sat in the [borough] council almost continuously since first entering it".²⁸ Some were lawyers, such as William Tosswill, who practiced in Pahiatua where he also served as country representative on the Council for the Pahiatua sub-committee from 1901.²⁹ There were also Councillors from more trades-based occupations. For example, Frederick George Roe was the Business Manager of the Weraroa Sawmill and acted as the Levin subcommittee representative from 1908 to 1913;³⁰ H.P. Higginson was a Council member for seven years, and was the chief engineer for the Manawatu Railway construction, before becoming manager of the Wellington Gas Company.³¹ Ernest Larcomb was a prominent architect and civil engineer in Palmerston North, served on the local borough council, and was a member

²⁸ *ibid.*, p.1364.

²⁹ *ibid.*, p.1031.

³⁰ *Cyclopedia, Wellington*, Vol. 6, p.713.

³¹ *Cyclopedia, Wellington*, Vol.1, p.753.

of a variety of school boards and committees, while holding a position on the Wellington Council from 1902 to 1907.³² These country members were responsible for representing acclimatisation efforts in their areas, and the fact that they were often notable members of the community, like the Wellington members, meant their contributions and work in acclimatisation projects would have been significant.

It is unsurprising that many professionals and public figures were elected as Councillors for the Wellington Society. Men in these roles had the time, money, and social prestige that would allow them to take part in acclimatisation work as well as the recreational activities that they brought about. It is also significant that they were men who were in respectable and often influential roles in their local communities. This meant that when it came to making decisions about the way local environments and resources were to be used in acclimatisation efforts, these men were given a significant degree of authority to make the necessary changes.

General Membership

While the executive members of the Wellington Acclimatisation Society were charged with the overall running of the Society, the general members naturally made up the largest proportion. General members were mainly hunters and fishermen who sought to benefit from the acclimatisation work done by the Society and participate in the new recreational activities that were being offered. During the first years of the Society members were able to join after the payment of a ten shilling subscription fee.³³ This was a time when the Society was still trying to build up financial resources in order to import new game species to the region, as costly importations were the only way of ensuring there would be enough game species for the sporting season to be a success. As more members became involved in the Society, and facilities such as the hatcheries became more productive, there was less need to rely on importations of game. This meant that the majority of Society revenue could be drawn from fishing and hunting licences. In 1894 the compulsory subscription fee was abolished, and those wishing to become members were given the option of holding both a hunting and fishing

³² *ibid.*, p.1176.

³³ WAS Minutes, Vol.1

licence, at the cost of £1, and then registering their names before the AGM.³⁴ This meant that numbers of members grew steadily, and the Wellington Acclimatisation Society soon became able to experiment with importing different game species as well as continue to improve the hatcheries and game farms.

The management of licences was a significant part of the Society's work. Licences were given out by certain officials appointed by the Society, usually the town Postmaster, and were only available for purchase during certain periods of the year. The cost of licences had to be carefully balanced; if the price was too high it could lead to a fall in membership and a net loss of income. All licences were carefully monitored and regularly checked by Rangers as they made their rounds of the district. Cases of poaching or misuse of licences were reported in the regional newspapers, and many letters were sent in to the Society requesting the presence of a Ranger in order to curb a particularly bad case in their area. In the early years of the Wellington Society there were very few fishing licences issued. The names of the licence holders were recorded in some of the early annual reports, and the majority of the names appear to be of people connected with the Society whether as Council members or as Rangers and Curators. As the Society continued to promote game fishing, the numbers of licences increased drastically.³⁵

³⁴ *ibid.*, p.260.

³⁵ WAS Annual Reports, 1884-1914.

Table 1: Total Number of Fishing Licences Issued, 1887-1907

	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Men	70	95	-	176	163	192	236	-	291	250	317
Women	-	-	-	-	10	11	11	-	20	21	19
Boys	-	-	-	-	54	93	121	-	123	108	141
TOTAL	70	95	-	176	227	296	368	-	434	379	477

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	
Men	453	462	488	507	687	767	948	763	882	995	
Women	20	32	18	10	24	22	30	23	32	18	
Boys	136	139	163	224	245	273	206	242	216	322	
TOTAL	609	633	669	741	956	1062	1184	1028	1130	1335	

Possession of a licence conferred the right to fish in the rivers and streams within the district in which it was issued. It was also possible to use the same licence to fish in other districts, but this required endorsement by the acclimatisation society Secretary of the relevant district.³⁶ While this meant that there was a degree of freedom for anglers to visit other parts of New Zealand, guidebooks cautioned that travelling anglers should be wary of any difference in regulations that might exist between different acclimatisation districts.³⁷ Information about district licences could be found in regional guidebooks. *W.H. Tisdall's Angler's Guide and Price Book* was printed each year from 1894, and contained information about the environmental conditions of the Wellington district, advice about fishing in Wellington waters, and also a list of

³⁶ Spackman, p.19.

³⁷ *ibid.*

necessary equipment that could be purchased from the shop.³⁸ Tisdall also supplied anglers with a map of the important rivers and tributaries in the Wellington district, which would have helped licence-holders to find suitable fishing spots.³⁹

Fishing licences were divided into three main categories; men's, boys', and women's. The significant majority of fishing licences issued were men's and during the early twentieth century there were usually between 600 and 800 men's licences issued during the year. Boy's licences were also very popular, with around half as many as men's licences issued. Women's licences were issued in much smaller numbers. The cost of licences for both women and boys were set at five shillings.⁴⁰ In the few Annual Reports where the names of licence holders are recorded, it appears that women who held licences were often related to men who were also licence holders, most likely either as wives or daughters. Repeated names of families and individuals also appear across consecutive years. This suggests that once an interest in the sport had been established, it was likely that it would continue to be pursued. As policies towards licences were changed by the Society, new categories of licences were created. These included monthly licences, week-long licences, and also day licences.⁴¹ The records of these licences are more sporadic, which may mean that these categories were being trialled for only a short time. By offering members a variety of different licences the Wellington Society was able to ensure that they could be inclusive of a wide range of people with varying needs and requirements.

It is likely that short-term licences were introduced to encourage tourism in the Wellington district. While there were a number of reasons behind the initial introduction of exotic species to New Zealand, from sentimental to economic reasons, there were also hopes that a tourism industry could be established. Margaret McClure identifies the beginnings of this important industry in the 1870s.⁴² As increasing numbers of visitors travelled to New Zealand to marvel at the distinctive scenery and landscape, the potential for New Zealand as a sportsman's paradise was soon

³⁸ W.H. Tisdall, *W.H. Tisdall's Angler's Guide and Price List* (Wellington: Whitcombe and Tombs Ltd. Printer, 1896).

³⁹ *Map of Fishing Streams in the Southern Portion of the North Island, New Zealand expressly compiled for and issued with W.H. Tisdall's Angler's Guide* (Wellington: W.H. Tisdall, 1898).

⁴⁰ Tisdall, 1896, p.37.

⁴¹ WAS Annual Report, 1904.

⁴² Margaret McClure, *The Wonder Country: Making New Zealand Tourism* (Auckland: Auckland University Press, 2004), p.8.

recognised. In 1901 the Department of Tourist and Health Resorts was established under Superintendent Thomas Donne, a former member of the Wellington Society.⁴³ While the initial focus of the Department centred on the thermal wonderlands in the Rotorua and Taupo areas, Donne's attention soon turned to his aim, "to make New Zealand one of the most foremost sporting countries in the world".⁴⁴ He also noted that, "The excellent deer-stalking and trout-fishing to be had throughout the colony brings many shooting-men and anglers from the United Kingdom, India, and elsewhere", and many of these travellers were often surprised that "the pursuit of the sport is much less expensive here".⁴⁵ From 1904 the Wellington Society began to offer monthly, weekly, and daily licences. As Donne was pushing for increased Government efforts into creating and maintaining trout fishing as a flourishing recreational sport during most of the early twentieth century, it is probable that these new licences were offered as part of this new consideration for fishing tourists.

Paid Workers

Much of the practical work of the Wellington Society was undertaken by paid workers, and their numbers gradually increased as the importance of their knowledge and skills became recognised. Rangers and Curators played an important part in the successful establishment of game fishing. These men were employed by the Council and were engaged with the more practical tasks associated with the management and upkeep of trout populations. Curators were primarily responsible for the propagation and raising of trout to be liberated, while Rangers were responsible for monitoring and protecting trout populations once they had been released into the district streams and rivers. The highly skilled roles that these paid workers held were soon acknowledged by the executive members, and men who exhibited this kind of knowledge and skill were highly sought after as the focus of the Wellington Society moved to the ongoing management and maintenance of trout in the district.

Curators played a vital role in the Wellington district, to maintain and manage the hatcheries. The Masterton Fish Ponds and Hatchery, founded in 1885, was the first

⁴³ *ibid.*, p.3.

⁴⁴ 'Sport', *Appendices to the Journals of the House of Representatives (AJHR)*, 1903, H-2, pp.iv-v.

⁴⁵ *ibid.*

hatchery in the district, and several more were built in the early twentieth century.⁴⁶ The Curator ensured that there was a continuous source of trout for liberation in the Wellington district, and that the overall health of trout was kept high by ensuring that only healthy fry were released. An expert knowledge of pisciculture was required, as well as basic building skills for the upkeep of hatching boxes and holding ponds. A Curator's Cottage was built at the Masterton Hatchery, which was maintained by the Society and renovated several times during the first 30 years. Curators were also responsible for the yearly ova collection process. This required the stripping of wild trout, and trout from captivity once the hatchery stock had become established, before the ova were cultivated and distributed or sometimes reared into fry. Curators also had to monitor the health of trout in the wild, and in some cases were required to remove populations of unhealthy trout and repopulate rivers and streams with trout reared at the Fish Ponds. Because the rearing and management of trout required such a specific set of skills and an extensive knowledge-base the Curators were often requested to speak at Council meetings, or to give advice on the purchasing of new equipment or renovations in the hatcheries. The Curators in Masterton were an essential part of the introduction of trout for not only the Wellington region, but also for other parts of New Zealand.

The longest serving Curator at the Masterton Ponds was Lake Falconer Ayson. Ayson was born in New Zealand and grew up on the family farm in the Clutha Valley, where his family were among the first colonists in the area.⁴⁷ After leaving home he moved to Canterbury to join the shearing gangs, where he met F.S Pillans, another early settler who had training as a 'fish culturist' in England. Through discussion with Pillans, as well as gaining familiarity with the Waitaki River during his position as rabbit inspector, Ayson soon had a rounded knowledge of pisciculture. After accepting the position of Curator at Masterton in 1886, Ayson built up the hatchery to the extent that it became nationally and internationally recognised as an important hub for trout ova and fry, and "under his management the hatchery was built up to be, at the time, the largest in the Southern Hemisphere".⁴⁸ This was no small achievement, and as the workings of the hatchery continued to improve Ayson became a well-known figure,

⁴⁶ *Cyclopedia, Wellington*, Vol. 1, p.952.

⁴⁷ Peter D.G. Ayson, *The Ayson Story: Glenshee to Otago, 1853-1990* (New Zealand: Clan Ayson of New Zealand Society, 1991), p.32.

⁴⁸ *ibid.*,

even outside acclimatisation society circles. In 1898 Ayson was requested by the Government to head the new Marine Department as Inspector of Fisheries.⁴⁹ As part of his duties he was sent overseas to Britain and parts of Europe to investigate fisheries practices. Upon his return he maintained some connection with the Wellington Acclimatisation Society, particularly advising the Council on their new hatchery building projects. Under the guidance of L.F. Ayson trout fishing in the Wellington district became a sport that could be fully maintained by the Wellington Society, from cultivation to liberation.

As L.F. Ayson moved on to other areas of fisheries management, his son, William Douglas Ayson, took over as Curator for a time. Through observing the work of his father, and also through employment by the Wellington Society as an official assistant to the hatchery, W.D. Ayson was able to learn about trout cultivation first-hand from a very early age. He was later able to take the skills learned in Masterton to other parts of the country, as he took up positions in Hokitika, and later in 1908 in southern Waikato, where he was responsible for the establishment of new trout hatcheries.⁵⁰ As W.D. Ayson moved on from the Wellington district the Council sought to find a new Curator, this time specifically requesting a person who had received some kind of formal training in England. This requirement suggests that, perhaps mistakenly, the Council now believed English training to be superior to colonial experience, even though previous work with the Ayson Curators would have been some proof that knowledge of the specific New Zealand conditions could be extremely beneficial to trout cultivation in the colony.

While the new Curator, Ernest DeLatour, had indeed received training and education in pisciculture in England, his appointment in 1900 was not as much of a success as the Wellington Society Council anticipated. He came recommended by Lord Loch, who was Governor of the Cape Colony and High Commissioner for South Africa from 1889 to 1895, and who spoke well of the work that DeLatour had done.⁵¹ It was reported that, “He was in charge of fish culture at the Cape, but owing to the withholding of the Government grant there his services became available to New

⁴⁹ R. M. McDowall, ‘Ayson, Lake Falconer’, *Dictionary of New Zealand Biography: Te Ara – the Encyclopedia of New Zealand*; www.TeAra.govt.nz; accessed 28 September 2013.

⁵⁰ Ayson, p.53.

⁵¹ ‘Local and General’, *The Evening Post*, 21 December 1899, p.4.

Zealand”.⁵² DeLatour had worked as a fisheries expert in several parts of the Empire, though mainly based in South Africa, before taking over salmon hatching ventures in Ireland.⁵³ This experience in different colonies, as well as time spent on fisheries in Britain would have been considered a useful asset to the Wellington Society. His appointment had support from members of the public as well as those from within the Society. A letter to the *Evening Post* referred to De Latour as a “first class man”, and “a new expert here, a man who understands what an up-to-date fish hatchery should be”.⁵⁴ However, after these initial warm sentiments, his management of the hatchery and ova collection processes soon meant that attitudes shifted, which will be explored in following chapters. As a result, it became clear that while out-sourced experts may have been considered an asset for the Wellington Society, the specialised knowledge and experience needed for the unique New Zealand environments meant that paid workers needed to be carefully selected.

A number of Rangers were hired throughout the district to monitor the waterways and surrounding land. While not every part of the district could afford their own Ranger, they travelled from place to place as directed by the Council, in order to address specific causes for concern. Poaching was a significant issue that required the attention of Rangers. As the streams and waterways became well-stocked with trout, there was every opportunity for poachers to easily take large numbers of fish, and it fell to the Rangers to ensure that those fishing from district waterways held the right licences or permissions. A head Ranger was appointed by the Council, who was required to send in a report about the state of the district to each monthly meeting. Sometimes the head Ranger was required to attend meetings, in order to field questions or to provide the Council with expert advice about certain practical matters of acclimatisation. Honorary Rangers were also appointed, but worked as volunteers rather than receiving a wage from the Society.

One of the more well-known Rangers was Frederick Moorhouse, who was first appointed as head Ranger in 1892.⁵⁵ Moorhouse worked under the Wellington Society until 1901 and was very active in his role, particularly when it came to enforcing

⁵² *ibid.*

⁵³ *Evening Post*, 29 January 1900, p.6.

⁵⁴ ‘Rod and Gun’, *Evening Post*, 25 February 1900, p.2.

⁵⁵ WAS Minutes, Vol.1, p.163.

licence regulations and monitoring pollution in the streams and rivers. Only two months after his appointment, Moorhouse was involved with a case that went to trial in Palmerston North, which was described as being “of particular interest to sportsmen and land-owners”.⁵⁶ The case involved a landowner refusing to comply with the authority that Moorhouse held as a Ranger, and the Resident Magistrate ruled in Moorhouse’s favour. He was also successful in his dealings with pollution coming from a fellmongery at Belmont, which was a relief to the Society who were concerned about the effects on trout in the area.⁵⁷ His work in the area was often acknowledged, and upon his decision to leave the position of Ranger, Rambler, of the column Rod and Gun, wrote of the “feelings of the deepest regret that sportsmen generally learned of the retirement”.⁵⁸ Moorhouse’s skills were also frequently acknowledged by the Society. During his time working as head Ranger he often received monetary bonuses or extra benefits like free fishing licences.⁵⁹ The Wellington Society also gave public attention to the work he had done by giving him a number of official ‘votes of thanks’.⁶⁰ Highlighting his important work in this formal way was a sign of how highly respected Moorhouse was by the rest of the Society, including executive as well as general members.

Curators and Rangers filled a very important role in acclimatisation societies. Their practical skills and knowledge of the unique environmental conditions in New Zealand meant that their expertise was vital for the success of acclimatisation ventures. While the executive members of the Society were often of the upper or middle classes of Wellington, for whom acclimatisation was an interest or diversion, Rangers and Curators earned their living through their specialist and practical knowledge of different species and environments. However, although in some European acclimatisation societies this difference in social standing may have had an impact on the way that the executive members interacted with the Rangers and Curators, this does not necessarily seem the case in New Zealand. Rangers and Curators often attended Council meetings, offered advice, and gave informative tours around the hatcheries and game farms, as their roles as experts of practical

⁵⁶ *Evening Standard*, 13 June 1892, p.2.

⁵⁷ WAS Minutes, Vol.1, pp.493-511.

⁵⁸ ‘Rod and Gun’, *Evening Post*, 9 November 1901, p.4.

⁵⁹ WAS Minutes, Vol.1, p.348 and p.383.

⁶⁰ *ibid.*, p.478.

acclimatisation work was utilised accordingly. Some became influential figures in other areas of environmental management. A good example of this was L.F. Ayson, who was selected by the Government to be Inspector of Fisheries and continued to give valuable help and advice to the Wellington Society, often giving educational lectures about fisheries and fish acclimatisation. The executive members of the Wellington Council relied on the experience and expertise of the paid staff, and this was acknowledged through the deference shown to them in matters concerning the practical introduction of species to Wellington.

A White Man's World?

While the work of the Wellington Acclimatisation Society was professedly for the benefit of all Wellington people, the executive members and the elected Council were generally made up of a certain section of Wellington's early society. The average Council member between 1884 and 1914 was male, European, and usually held a prominent position in early Wellington society. While this could be expected of a Society set up in the late nineteenth century that dealt in activities that were traditionally a male domain, there is a significant lack of representation of other groups even in its general membership. The absence of women and low-wage earners from many of the Society's dealings is particularly notable in light of the main Society aims of providing opportunities for game fishing for all citizens. Māori were also noticeably absent from membership lists, but this was also due to fundamental issues around Māori resources and environmental modifications, which are examined in the third chapter.

Women had little involvement in running the Wellington Acclimatisation Society. Although women's licences were available, which meant that they could effectively be general members of the Society, the extent to which women anglers actually used this membership is unclear. At AGMs the number of "gentlemen" was recorded, and the Council and executive members were male. It was only in the late twentieth century that women became part of the paid staff, and even later when they appeared as representatives on Council boards. McDowall attempts to trace the involvement of women in the New Zealand Societies, but eventually concludes that before the 1970s and 1980s virtually no women held a remotely significant role. He

states the even during the ‘progressive’ decades of the 1970s and 80s women’s involvement, “was regarded by both societies and the women themselves, as significant events”.⁶¹ This lack of women’s representation does not seem so unusual, particularly during the late nineteenth and early twentieth century, as recreational fishing has traditionally been a male-dominated sport.

While women may not have been directly involved in the Wellington Society, there is evidence that suggests their participation in many aspects of trout fishing. Women were employed in fishing tackle shops to make artificial flies. It was reported to be a lucrative job, paying as much as £3 to £4 a week, as the craftsmanship required to create a fly that would be attractive enough for trout or salmon was highly sought after.⁶² However, while women’s needlework skills were put to use in the making of sporting equipment, they were under-utilised when it came to sports-wear. One aspect that may have caused a hesitation in women interested in fishing was the lack of suitable clothing. A 1901 letter, signed, ‘Priscilla’, and written to a fictional pen-pal in a ladies gossip column, referred to the inability of women to fully participate in the sport as they were limited by convention and not able to wade into the rivers. She complained, “I wish some philanthropic soul would invent an apparatus for women to wade after the wily trout”, and that in the meantime, “There is an inflated dress, in which the fair angler must look like a black buoy, and which is, presumably, a cunning combination of waders and frock all in one piece. But the garment does not sound attractive, and it certainly would not be smart”.⁶³ This concern may have been confined to women in select social circles, as another letter to the same column some time later describes, “My neighbour and rival was a Māori maiden in a thin pink skirt, with no waders on and a short quaint rod”.⁶⁴ Even without the correct sports-wear or rod, the rival female angler managed to catch “three fish to my one”.⁶⁵ Parallels can be drawn between issues around women’s clothing in other outdoor sports such as mountaineering. Freda Du Faur was one of the first women to take up that sport in New Zealand. Clothing became an important consideration, as she required an outfit that would allow her freedom of movement, while also retaining her femininity. As a

⁶¹ McDowall, *Gamekeepers*, p.80.

⁶² ‘News in brief’, *Evening Post*, 2 July 1892, p.1.

⁶³ ‘Ladies’ Column – Girls’ Gossip’, *Evening Post*, 14 December 1901, p.2.

⁶⁴ ‘Ladies’ Column – Girls’ Gossip’, *Evening Post*, 1 February 1908, p.15.

⁶⁵ *ibid.*, p.15.

result, Du Faur found a compromise in a knee-length skirt which fell over the top of a pair of knickerbockers and long puttees.⁶⁶ While alternatives could be found, issues around appropriate and acceptable clothing could often be a hindrance to women wanting to be fully active in outdoor pursuits.

Newspaper columns occasionally mentioned women's involvement in fishing, but it was more often the case that this was a notable lady from overseas participating in the sport as a part of the tourist activities that New Zealand had to offer. Reports from England in 1902 suggested that trout fishing was becoming more popular amongst women, and that ladies were "taking up the sport most enthusiastically".⁶⁷ This may have also been the case in New Zealand, as the number of women's licences in the Wellington region increased around the turn of the century, before settling at around 20 to 30 issued each year. The popularity of trout fishing among women reached a peak in the early twentieth century, after steadily increasing throughout the 1890s, particularly due to the increasing amount of tourism that it generated. A notable example is the 1927 tour of the Duke and Duchess of York, later King George VI and Queen Elizabeth. The royal couple included a stop at Taupo to fish near the Tongariro River where the Duchess was photographed along the river banks.⁶⁸ The increasing numbers of issued licences, as well as notable examples of female anglers, suggests that trout fishing was enjoyed by at least some women, despite the lack of representation on acclimatisation societies.

The introduction of hunting and fishing traditions to New Zealand may have been accompanied by egalitarian rhetoric, but the reality of the sport meant that those earning a lower wage could be excluded from fully participating. Licence fees were often a considerable sum for low wage earners, and the equipment that was required added to the overall costs. G.D. Hamilton, an enthusiastic angler and one of the first individuals to introduce trout into the Hawke's Bay region, outlined the various equipment that a visitor to New Zealand or a beginner angler would need.⁶⁹ The list of the 'basic' gear that was required is extensive. Hamilton begins by stating, "Taking

⁶⁶ Graham Langton, 'Du Faur, Emmeline Freda', *Dictionary of New Zealand Biography*, *Te Ara – the Encyclopedia of New Zealand*, www.teara.govt.nz; accessed 18 March 2014.

⁶⁷ 'Rod and Gun', *Evening Post*, 4 October 1902, p.14.

⁶⁸ 'Sorry to Leave', *Auckland Star*, 2 March, 1927, p.10.

⁶⁹ G.D. Hamilton, *Trout-fishing and Sport in Maoriland* (Wellington: Government Printing Office, 1904).

it for granted that the fisher will wade wherever required, two lengths of rods are sufficient for fishing ordinary rivers or lakes".⁷⁰ He then goes on to describe the many fine details that need to be observed in order to obtain and maintain the necessary rods, reels, flies, lines, and clothing that were essential for anglers. New Zealand anglers were also required, at least initially, to import tackle from Britain. This would have added to the costs of the gear. Fishing tackle shops often advertised their quality, English-made stock, and George Denton, an active member of the Wellington Society, and J. Tisdall were two of the most well-known suppliers of such angling equipment.⁷¹ Costs associated with trout fishing may have driven many towards poaching. Poaching remained an issue for many acclimatisation societies throughout New Zealand, and was reminiscent of the problems in Britain that these new world establishments were attempting to avoid.

However, while the combined costs of licences and equipment could indicate that angling was a sport restricted to higher wage earners, some evidence suggests that these costs were not necessarily prohibitive. *Tisdall's Angler's Guide* lists the prices for a range of angling equipment, from rods and reels to lines and lures. While there are many high-quality products listed, it soon becomes apparent that there are also many cheaper options. An average purchase from the more affordable options could include a rod, reel, line, leader, a dozen flies, and a spinner, all of which adds to a total of 26 shillings.⁷² This cost would be additional to the 10 shilling fishing licence, and any other cost that may come with gaining access to appropriate waterways. For a skilled tradesman earning a wage of about £2.10.0 a week,⁷³ and given the fact that many of the pieces of equipment would not necessarily need to be replaced frequently, this is not an outrageous sum. Of course, there were many other items that anglers could purchase to improve their experience, from tackle boxes and intricate artificial lures to waders and fishing baskets, but if just the basic equipment was required it is reasonable to suggest that it was within the means of a tradesman to save enough of his weekly wage to purchase the basics.

⁷⁰ *ibid.*, p.12.

⁷¹ For example, 'Page 4 Advertisements, Column 2', *Evening Post*, 19 September 1893, p.4.

⁷² Tisdall, 1896, pp.14-33.

⁷³ 'Factories', *AJHR*, 1896, H-6, p.22.

These issues around accessibility and participation highlight some of the ways in which trout fishing remained out of reach for some members of society. Although the introduction of hunting and fishing traditions to the Wellington region may have been intended for the enjoyment of all citizens, it is likely that it was at least accessible for skilled tradesman and members of the middle class, as well as the wealthier members of Wellington society. Early Wellington was dominated by the wealthy, pastoral elites, and the upwardly mobile middle class,⁷⁴ and the membership of the Wellington Acclimatisation Society largely reflects this pattern. While trout fishing may have been intended to be an activity for all citizens, the resulting community of anglers may have followed similar patterns to those found in Britain. Accessibility to lakes, rivers, and streams may have been more available in New Zealand, and it did only require a licence and a rod in order to fish in many of them, but initially it was still a certain cross-section of society who was able to afford the time and money in order to fully participate in the sport.

⁷⁴ Roberta Nicholls, 'Elite Society in Victorian and Edwardian Wellington', in David Hamer and Roberta Nicholls (eds.), *The Making of Wellington, 1800-1914* (Wellington: Victoria University Press, 1990), pp.224-225.

Chapter Two: Networks of Acclimatisation

Acclimatisation societies were part of a world-wide movement for exotic species exchange. At the time that European settlement in New Zealand was rapidly increasing, cultural and scientific networks had already become a well-established feature of the British Empire. Often, scientific networks involved the collection and cataloguing of newly discovered flora and fauna by scientists and naturalists exploring new colonies. Examples of these new species were sent back to the metropole to be further analysed and studied by experts.¹ Imperial networks also involved the idea of ‘improvement’ of colonial environments, and networks were established to import exotic species into colonies to help civilise or utilise the new landscapes.² Crosby and Dunlap have also looked closely at the interactions between Britain and the colonies and have discussed these links as evidence of ecological imperialism. Acclimatisation societies are an example of these processes, as their main goal was to introduce and establish species that would be advantageous to the colonies. As a result, connections were made between groups and individuals working to facilitate introductions of new species. These connections gradually became increasingly complex and formal, and often involved the exchange of people, technologies, and ideas, as well as the desirable specimens. Eventually acclimatisation networks reached the point where society and the state worked in close cooperation to allow for the introduction and propagation of species that would soon drastically alter the colonial environments.

The Wellington Acclimatisation Society was established at a time when networks of acclimatisation were becoming increasingly sophisticated, and this chapter will examine the three general networks that were at work as the Wellington society sought to successfully introduce trout into the district; imperial, local, and national networks. While New Zealand was geographically isolated from other parts of the world, attempts were made to ensure that the acclimatisation movement was well established and able to function in cooperation with international acclimatisation organisations. Links with acclimatisation societies outside New Zealand followed imperial lines, and other British colonies were relied upon to contribute to the acclimatisation project of brown trout introductions to New Zealand. While initially

¹ MacKenzie, pp.36-38.

² Richard Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000), pp.85-124.

these ties with other colonies, rather than the metropole itself, were due to the necessity of transporting trout short distances at a time, the increasing involvement of the New Zealand Government meant that these networks took on a more formal aspect. The introduction of rainbow trout from California meant that connections were also made with the United States.³ Once trout populations had become established, the reciprocal movement of species, and sometimes people, from New Zealand meant that acclimatisation societies in the colony were an active part of this world-wide connection.

While imperial connections were very important for the initial introduction of trout, the subsequent establishment of the species in New Zealand waters relied on local networks. The distribution of trout from the main centres into the outer parts of the acclimatisation district was an important step in the attempts to ensure trout became more widespread. For the Wellington Society, this depended on the ability of the Masterton Fish Ponds and Hatchery to produce enough fry and ova that could then be sent into other parts of the region. This meant that the Wellington Society depended on the practical skills and expert knowledge of Curators and Rangers. As the district expanded, subcommittees were officially established in various parts of the districts, as a way to formally supervise and manage acclimatisation work in their localities. This was also a sign of the move from informal ties to a more systematic approach towards the establishment of recreational trout fishing in Wellington.

New Zealand acclimatisation societies did not exist in isolation, and important connections existed between the Wellington Society and those in other major New Zealand centres, including Auckland, Hawke's Bay, Canterbury, Nelson, and Otago. While there has been some debate about exactly which acclimatisation society was the first to be established, it has been generally accepted that Wellington was one of the last.⁴ This meant that by the time the Wellington Society was formed, and certainly by the time of the amalgamation of the Wellington and Wairarapa Societies, there was already an existing 'family' of Societies that operated throughout New Zealand. The Auckland, Hawke's Bay, Nelson, North Canterbury, Otago, Southland, and Whanganui societies had all been operating for a number of years, and during that

³ McDowall, *Gamekeepers*, pp.256-257.

⁴ McDowall, *Gamekeepers*, pp.18-19.

time had created substantial connections through shared acclimatisation efforts.⁵ The North Canterbury Society had played a significant role in the initial importation of trout to New Zealand, and the subsequent distribution process had meant that a number of ties had been created across the colony. However, these ties were initially very loose, and it was not until early in the twentieth century that a national network could be identified. This emergence of a national network coincided with the increased involvement of the government in acclimatisation matters, which follows a similar pattern as imperial and local networks. In many ways, the success of the Wellington Society in introducing trout to the region could only have been achieved through their involvement with international networks, alongside their dedication to creating and maintaining networks throughout the local districts and wider New Zealand.

International Networks

The Wellington Society's connection with other societies internationally was part of the basic concept of acclimatisation; the exchange of new and different species across countries. In the early years of the New Zealand acclimatisation societies this exchange was mainly one way, as societies sought to import flora and fauna from their homelands. However, as the global acclimatisation movement picked up and the British Empire continued to grow in strength and influence, acclimatisation societies in New Zealand began to depend on ties with other British colonies, such as exchanges with Tasmania for trout ova, rather than solely on connections with Britain itself. This development of imperial connections extended to many other areas of the colonial experience and was vital for the shaping of New Zealand as a part of the British Empire, so the acclimatisation societies were certainly not unique in this sense. Tony Ballantyne describes this interconnectedness as a 'web', and argues that, "colonial development was shaped by a complex mesh of flows, exchanges, and engagements that linked New Zealand to other colonies as well as to Britain, the heart of the Empire".⁶ Acclimatisation societies relied upon other parts of the Empire for the importation of flora and fauna, but also the necessary equipment, expertise, and

⁵ Wellwood, p.128.

⁶ Tony Ballantyne, *Webs of Empire: Locating New Zealand's Colonial Past* (Wellington, New Zealand: Bridget Williams Books Limited, 2012), p.14.

ideology that came with establishing a new game fishing tradition in a new colony. For this reason, the connections that were made with Britain and other British colonies were vital for the success of the early acclimatisation societies in New Zealand.

Brown trout were the first of the trout species to be ‘officially’ introduced into New Zealand. While some settlers may have attempted to privately import and cultivate exotic fish, the most notable first attempt was by Alec Johnson in 1864.⁷ Johnson had emigrated from England and brought with him a number of different species of live fish, including Atlantic salmon, brown trout, minnow, goldfish and perch. This was ultimately a failed project; it is said that the only fish to make it to New Zealand alive were a few goldfish. One of the main issues with this initial experiment with trout importations may have been the fact that it was adult fish that were being transported. Given that live trout require a consistent source of fresh water and a stable cool temperature, the conditions on board a nineteenth century ship would have hardly created an ideal environment. Instead of continuing with experiments, New Zealand pisciculturists waited for the results of attempts to transport fish to Australia, and helped to fund experimental techniques in shipments.⁸ Success eventually came with the technique of transporting large quantities of trout ova, rather than hatched fish. The ova were already fertilised, and if kept on ice could be kept at a cool enough temperature that would allow for the development of the ova to slow without altering the hatching process. This process was trialled with shipments to Tasmania, and when this was successful the New Zealand acclimatisation societies were finally able to begin their own importations.

Christchurch, Nelson, Auckland, and Otago all received their initial shipments of trout from Tasmania. The trout from Tasmania had arrived from England in the eyed ova stage in two consignments.⁹ The first was shipped over from an acclimatisation society from Itchen near Winchester, England. These were sent by Frank Buckland, the individual considered responsible for setting up the acclimatisation society movement in England. The second shipment was sent to Tasmania by Francis Francis, who had secured them from Alton on the Wey. The North Canterbury Acclimatisation Society was the first in New Zealand to attempt to

⁷ McDowall, *Gamekeepers*, p.217.

⁸ *ibid.*, p.249.

⁹ Lamb, p.25.

import trout from Tasmania. The venture into trout introductions was becoming so popular that in 1864 the Canterbury Provincial Government had offered a grant of £300 to the Society for them to forward to the Tasmanian Salmon Commissioners to help with financing trout acclimatisation experiments. In 1867 these experiments had finally proved to be successful and the Curator, A. M. Johnson, went to secure 800 brown trout ova from the Tasmania Royal Society.¹⁰ Four hundred of these trout were immediately sent to the Otago Society. However, concern was raised when it was discovered that only three of the ova had survived the trip, and further alarm when these eventually escaped - fortunately, two were recaptured and when these were discovered to be male and female the process of rearing and stripping began, which resulted in thousands of fish being hatched in the newly built rearing ponds, before eventually being released into Canterbury waters.

The Otago Society, having received half of the consignment initially sent over from Tasmania, was the next New Zealand acclimatisation society to begin hatching and cultivating trout. While the trout that had been sent over with Johnson had all failed to hatch successfully, another 800 were brought over from Tasmania the next year.¹¹ This was followed by the Nelson Society in 1868,¹² and Auckland in 1870.¹³ The introduction of trout to Hawke's Bay was a little different to the other main societies. The Hawke's Bay Acclimatisation Society did not arrange for the purchase of trout ova directly from another society, but instead relied on the work of an individual from the area. Captain G. D. Hamilton was known to be an enthusiastic fisherman, as the publication of his 1904 book *Troutfishing and Sport in Maoriland* would indicate, and had arranged for his own personal release of trout into a tributary of the Manawatu River.¹⁴ The Hawke's Bay Society's centenary history claims that Hamilton's release of trout meant that this, "was probably the first water to contain trout in the North Island".¹⁵ It was not until 1878 that the Hawke's Bay Society eventually received a full consignment from one of the other New Zealand societies, as brown trout ova were brought down from Auckland by dray. The first trout in the

¹⁰ *ibid.*

¹¹ McDowall, *Gamekeepers*, p.251.

¹² Sowman, p.20.

¹³ Ashby, p.110.

¹⁴ Wellwood, p.145.

¹⁵ *ibid.* (Although, Guthrie-Smith attempts to claim he "in a modified sense can claim to be the oldest trout propagator in the Dominion": Guthrie-Smith, *Tutira*, p.343.)

Wellington region were sent from Christchurch, and so had relied on the shipments from Tasmania.¹⁶

The very possibility of the initial introduction of trout to New Zealand relied on the connections between Britain and other colonies. The early introductions of trout were carried out before the invention of refrigerated shipping, which meant that there were significant obstacles to overcome in order to ensure that trout could travel the vast distances necessary and still be alive at the time of arrival. Even with the method of using ice, as a way of slowing development of ova through lowered temperatures, the journey of trout from the waterways of England and Scotland would not have been successful. It was only through using connections with Canada and Australia that acclimatisation societies were able to create a series of 'stepping stones', establishing trout hatcheries and rearing ponds in the new settlements before setting off again in the direction of New Zealand. Using colonies and settlements in this way illustrates Ballantyne's notion of webs of Empire, and also shows how important it was for New Zealand to be a part of this global network of acclimatisation. Without these international connections the transport of trout, and also many other species, to New Zealand may have taken many more years to succeed.

As the Wellington Society became an increasingly formal organisation, importations of trout and the construction of a hatchery in Masterton meant that the district attracted notice from other parts of the world. The Masterton Fish Ponds and Hatchery were thought to be the largest in the Southern Hemisphere, and were considered to be of a very high standard.¹⁷ As a result, acclimatisation societies from outside New Zealand were interested in exchanging species. Correspondence recorded at the Council meetings show that the Wellington Society was in regular contact with acclimatisation societies, or sometimes individuals themselves, from Australia, Britain, the United States, and Canada. In many of these cases the Wellington Society was attempting to bring in new species to help improve their own stocks. However, there were also some requests from places that were less often in contact with the Wellington Society. In 1898 the British Consul stationed in Uruguay wrote asking for advice on fishing in Argentinian rivers, and in response the Council offered to send a

¹⁶ Lamb, pp.32-33.

¹⁷ *Cyclopedia, Wellington*, Vol.1, p.952.

case of trout ova “with instructions”;¹⁸ in 1899 a letter from Calcutta was read out in the Council meeting, requesting a number of game birds;¹⁹ and a letter was received in 1910 from Mr Stephenson in Rhodesia, enquiring after a list of rules of the Society that he might be able to use as a guide.²⁰ It is interesting that these societies chose to contact the Wellington Society, particularly requesting introduced species rather than indigenous game, as it indicates that the status of the Society had reached a level that invited attention from other parts of the Empire.

This connection with the wider Empire was also built on the movement of people. As individuals travelled throughout the Empire they encountered ideas, technologies and species that could then be brought back to acclimatisation societies in New Zealand. While letters and telegraphs could be used to relay recent advances in the field of acclimatisation, such as new hatchery practices or ideas for new species exchanges, in some cases it was considered more advantageous to send individuals or experts on an information gathering expedition. In 1898 the Curator of the Masterton Fish Ponds and Hatchery, LF Ayson, was instructed by the Government to investigate fisheries research and management in Canada, Italy, Switzerland, Britain, and the United States.²¹ As a secondary focus, Ayson was also instructed to look into any other fish species that could be acclimatised into New Zealand, and particularly assess the reasons for failed previous attempts at acclimatisation, such as the Atlantic salmon.²² Alongside these official instructions, the Wellington Society asked Ayson to ensure that a range of suitable species were brought back to New Zealand, including, “Rocky Mountain Sheep, Prairie Hens, and White Tailed deer or other deer of desirable kinds”.²³ This venture meant new species were introduced, and new ideas and practices in acclimatisation and pisciculture could be brought back into the Wellington Society, before being sent to the rest of New Zealand. Soon after this trip Ayson was appointed as Inspector of Sea-Fishing in the Marine Department.²⁴ Through the connections with these international acclimatisation societies the Wellington Society was able to stay informed about the latest technological and

¹⁸ WAS Minutes, Vol.1, p.460.

¹⁹ WAS Minutes, Vol. 2, p.18.

²⁰ WAS Minutes, Vol.4, p.185.

²¹ McDowall, ‘Ayson, Lake Falconer’.

²² *ibid.*

²³ WAS Minutes, Vol. 1, p.464.

²⁴ McDowall, ‘Ayson, Lake Falconer’.

scientific advances, and use this information to improve the acclimatisation venture in New Zealand.

Networks with the Empire were also created when people travelled into New Zealand in connection with acclimatisation interests. People who had particular expertise were often welcomed into New Zealand, as it was hoped that they would be able to share their knowledge and experience gained from working in other parts of the globe. One example of this is the effort that went into securing DeLatour as the new Curator for the Masterton Fish Ponds and Hatchery. As mentioned in the previous chapter, the Wellington Society Council decided that it would be an advantage to the district to employ a Curator with English training and experience. DeLatour's previous position had been at hatcheries in South Africa working under the Governor Lord Loch. Lord Loch's predecessor as governor at the Cape was Hercules Robinson, who had been Governor of New Zealand in 1879.²⁵ New Zealand was a part of a network of governors who were often particularly active subjects of Empire, moving from positions in different colonies. As David Lambert states, "Since most governors dwelt multiple colonies during their careers, so they inevitably made comparisons and connections between those colonies".²⁶ These connections between governors were an important aspect in forming Empire-wide networks between influential individuals.

The hiring of DeLatour by the Society may have reflected the general consensus at the time that all things British were best, and that securing the services of a British expert would have been more desirable than simply hiring a man from within New Zealand. Bringing in workers from Britain would have added to the reputation of the Wellington Society, as it would have been seen to demonstrate the level of professionalization that the Society was bringing to its trout rearing enterprise. Other colonies would have also known the significance of a metropolitan Curator and may have been more inclined to initiate transactions or exchanges with the Wellington Society. The fact that there may have been men within New Zealand who would have been able to fill the role of Curator seems to have had little influence on the decision of the Wellington Society. Other Societies around New Zealand were asked to put

²⁵ Bernard John Foster, 'Robinson, Hercules George Robert', in *Te Ara – An Encyclopedia for New Zealand* 1966, www.teara.govt.nz; accessed 1 April 2014.

²⁶ David Lambert and Alan Lester, 'Imperial Spaces, Imperial Subjects', in David Lambert and Alan Lester (eds.), *Colonial Lives across the British Empire: Imperial Careering in the Long Nineteenth Century* (Cambridge: Cambridge University Press, 2006), p.11.

forward any suitable candidates,²⁷ and one such man considered for the role was Henry O'Callaghan, a Ranger for the Wellington Society who was also given executive positions in the Wellington Agricultural and Pastoral Association.²⁸ Instead, it was the connotations that came with the links back to Britain that were considered to be one of the major advantages.

The New Zealand government also began to cultivate official networks of exchange. During the initial establishment of organised acclimatisation societies personal connections between the members themselves and other individuals in the Empire were often used as a valuable way of species exchange. However, as acclimatisation societies became increasingly formal and bureaucratic the government often stepped in to contribute to these international exchange networks. This was the case when a member of the Wellington Society, and a representative of the Pahiatua Subcommittee, W. Wakeman, attempted to set up an individual contact with someone in England who could supply pheasants and deer to the Society. Wakeman was put in contact with C.J. Lucas from Sussex, a well-known authority on deer.²⁹ As arrangements were made, other acclimatisation societies also became involved, and eventually what started off as an attempt to import deer for the Wellington Society soon became reported in New Zealand newspapers as a gift to the New Zealand Government.³⁰ This event was also recorded in the annual report of the Department of Tourist and Health Resorts.³¹ This government involvement, rather than the direct interaction between individuals and acclimatisation societies, was a way the state could monitor and regulate the exchange of game species, as well as maintain a role in the networks that such exchanges created. It was also a sign of the increasingly important connection between the Society and government, and that the imperial networks that were being established through this connection were becoming increasingly formal and systematic.

Local Connections

²⁷ WAS Minutes, Vol.2, p.13.

²⁸ *Evening Post*, 15 August 1891, p.2.

²⁹ *Evening Post*, 8 November 1907, p.6.

³⁰ *Evening Post*, 19 May 1908, p.8.

³¹ 'Sport', *AJHR*, 1908, H2, p.7.

Local connections were an important part of the work of acclimatisation societies. Each Society was responsible for a distinct area, which came to be known as acclimatisation society districts. Many of these districts grew up around the main city centres and broadly followed the provincial boundaries that already existed for the area. While there were often fixed points within that district from which the Societies could operate, usually the main city centres, the outlying boundaries could often be very flexible. The Wellington Society's boundaries were constantly shifting, and in many cases they had to request official maps to be drawn up in order to determine the exact extent of the boundary borders.³² Because of this expansive nature of the districts, connections and networks between the outlying townships were fairly arbitrary, which meant that what connections did exist had to be constantly maintained and monitored.

As the Wellington Society's district become larger, the Council's procedures reflected a more deliberate approach to maintaining connections across the district. Initially the only distinction between Council members was made between those from Wairarapa, and separate representatives were appointed from this area in 1893.³³ As mentioned, the Wairarapa region had once held a separate acclimatisation society of its own, and this previous acclimatisation involvement, coupled with the fact that the Wairarapa area was not only large, but also separated from the Wellington district by the Rimutaka Range, meant that the particular concerns of the area would be better known to those who lived there. When the Wellington Society rules were drawn up regarding the new positions of Wairarapa representatives on the Council it was stipulated that they were to be permanent residents of the Wairarapa area.³⁴ This was to ensure that appropriate representatives would be appointed who knew the concerns of the people of the district and the unique needs of the area.

To help facilitate acclimatisation work in other parts of the district, the Society established subcommittees in many of the larger towns, including Pahiatua, Palmerston North, and Levin. These subcommittees were charged with the running of acclimatisation work in those smaller areas, with responsibilities such as the monitoring of rivers and streams, making note of licence numbers, and also ordering

³² WAS Minutes, Vol.1, p.153.

³³ WAS Minutes, Vol.1.

³⁴ *ibid.*

new shipments of trout fry or ova as required. This new system meant that the main hub of the Society could continue to be in Wellington, while still maintaining a presence in the outlying areas. Subcommittees were also set up to deal with matters of importance that required further action outside of regular Council meetings. This included topics such as fish distribution, hatchery management, or regulation revisions. These subcommittees were less formal than the regional subcommittees and could be disbanded after they had served their purposes. Regional subcommittees had their own Councils, which met when they saw fit and reported back to the Society with any major concerns or developments. These subcommittees were still reliant on the district Council for allocation of funds, as any licence fees or fines collected by the subcommittees were sent to the Council in Wellington. The role of the subcommittees soon became a very important feature in the efficient transportation and liberation of trout across the district. From 1900, reports from the subcommittees were printed in the Annual Report booklet published by the Society and a grant system was soon set up to ensure that the subcommittees could be financially independent to carry out their own Society work.

Subcommittees became an important feature for Society work across the district, and it was decided that representatives from these areas should be present on Council boards. While members of subcommittees had been welcome to attend certain meetings that may have dealt with a matter of particular concern to the area, such as the management of localised pollution or specific ova orders, it was decided that a more permanent position for representatives needed to be made. As new subcommittees were formed these positions were added to the Council, resulting in up to 17 members being elected at one time. Representatives were selected at the Society AGM, just as other Council members, although if the elected representative left the Council during the year then the subcommittees were able to elect their own members. The residential clause that had been put in place on the appointment of Wairarapa representatives was also enforced for other district representatives. This meant that the representatives were all locals with a connection to the area and who had the interests of their communities to bring before the Council. The presence of district wide representatives was a way for the Wellington Society to ensure the uniform management of the different areas that fell under the acclimatisation district.

The inclusion of country members on the Council meant that new issues had to be taken into consideration. The foremost practical issue was how to ensure that all Council members could attend the monthly meetings with ease. As country members had to travel from across the district, it became evident that this travel cost was a difficulty.³⁵ For the district representation to be effective all members had to be present and the Council had to find ways to ensure full attendance. At one point it was suggested that the residential clause be removed from the Society rules, which would have allowed for a member to be elected who would live closer to Wellington and be able to attend the meetings. However, this prompted disagreement among the Council, as it was pointed out that the reason the country members were appointed as representatives was to ensure that all parts of the district had a voice on the Council.³⁶ Instead, railways became an important part of connecting the country and city members, as it was proposed that the train fares of the country members would be paid in full by the Wellington Society. This stipend was extended a year later to include other expenses that might have come with the monthly trips to Wellington.³⁷

Transport was an essential part of creating connections between different parts of the acclimatisation district. Early trout distribution was undertaken by the Curator, and very basic methods were used to transport the trout across the district. This usually involved transporting cans of trout fry most of the way to the site by horse or bicycle, and then travelling the rest of the way on foot. While this method may have arisen out of practical necessity, it also had some advantages that may have been unknown to the Rangers or Curators at the time. Trout need to be in water that is constantly aerated, and so the movement of cans on the bicycle, horse, or on foot would have meant that the fish were kept in good condition on the journey, provided that the temperatures were kept low.³⁸ As railways became established across the country trains were used as a way to stay in connection with the outlying areas. However, this new transportation technique was somewhat less effective in the distribution of trout in the further parts of the district. While trains meant that large amounts of fry could be sent across larger distances, this smoother method of travel and the long waits at the stations meant the fry were often spoiled by the time they arrived at the correct

³⁵ WAS Minutes, Vol.3, p.37.

³⁶ *ibid.*, p.43.

³⁷ *ibid.*, p.104.

³⁸ Wellwood, p.139.

destination.³⁹ The use of trains in the networks of trout distribution had a significant impact on the amount of trout that could be transported, but this was only once the reasons for the high trout mortality could be identified.

Local connections were also maintained through the travel of the Rangers throughout the acclimatisation district. The Wellington Society hired a number of Rangers over the years who were charged with managing and monitoring hunting and fishing within the Wellington boundaries. The role of the Rangers was established by the societies when it became clear that as introduced species became numerous in the wild it was easier for people to exploit the resource or begin poaching. This meant that the Ranger became the primary law-enforcer in the field.⁴⁰ As the Society had fairly limited funds, with nearly all of its income from the sale of licences, the Rangers had a very large area under their care. Some 'Honorary Rangers' were appointed to help support the Rangers. These Honorary Rangers were volunteers and did not receive payment for their services, but usually reported to their local subcommittees and worked within their own localities for short periods during the year. One of the main concerns that the Wellington Society Council had to address was the requests for Ranger assistance in other parts of the district. This was usually if there had been many cases of poaching, or if there were reports of pollution or unruly game, such as deer. Initially, Rangers relied on horses to carry out their field work. However, as their responsibilities to the expanding district increased and new technologies became available, the preferred forms of transport changed. Trains began to be used more often, which were often used in conjunction with bicycles as a way to reach more remote areas,⁴¹ and once motorcycles became available a number of requests were sent in to the Wellington Society to purchase them for the head Rangers.⁴² Access to the different areas of the district was important for the work required of the Rangers, and making use of new developments in transport meant that even the more remote areas of the district were connected under the management of the Wellington Society.

Connecting the different areas of the Wellington Acclimatisation Society District was important for the work and continued functioning of the Wellington

³⁹ *ibid.*

⁴⁰ McDowall, *Gamekeepers*, p.85.

⁴¹ *ibid.*, p.90.

⁴² WAS Minutes, Vol.5, p.263.

Society. This was particularly evident in cases where smaller subcommittees attempted to break away from the larger Wellington Society and form their own independent groups. One example is the Feilding subcommittee, which created a stir when they announced their decision to leave the Wellington Society. The Feilding Subcommittee had already voiced some dissatisfaction with the Wellington Society in 1897, claiming that not enough money was being spent in their district and accusing the Council of showing favour towards the Pahiatua Subcommittee instead.⁴³ While attempts were made to placate the Feilding Subcommittee, such as various balance sheet and finance reports being sent to the secretary as proof of fair treatment for all subcommittees, the Feilding Subcommittee made a further request that two thirds of the revenue from the Feilding District would remain in the Subcommittee's hands.⁴⁴ This request was politely turned down, with the promise that the Council would "deal as liberally as possible" with the subcommittee.⁴⁵ Eventually, the Feilding Subcommittee made the final decision to end its association with the Wellington Society and proclaimed itself the Feilding Acclimatisation Society in 1899, which was officially recognised.⁴⁶ This was a move that, while significant in principle, was ultimately short-lived. The small size of the district and the low population meant that the Feilding Society moved between several of the other larger acclimatisation societies, including the Taranaki Federation of Societies, before returning to form part of the Wellington Society in 1937.⁴⁷

Another way that local connections were formed and maintained was through the publication of the weekly *Evening Post* article, 'Rod and Gun'. The column first appeared on 10 February 1900, and began by stating, "There are a good many "long felt wants" in this community, and though a column dealing with angling and shooting may not quite come under this category, the time now seems to have arrived when something of the kind is desirable".⁴⁸ This column was written by hunting and fishing enthusiasts, often with names such as 'Minnow', 'Field-Sport', or 'Game-bag'. The focus of the column was on news or events related to hunting and fishing, mainly in the Wellington district, but also any significant stories from other parts of New

⁴³ WAS Minutes, Vol.1, p.442.

⁴⁴ WAS Minutes, Vol.1, p.480.

⁴⁵ *ibid.*

⁴⁶ McDowall, *Gamekeepers*, p.370.

⁴⁷ *ibid.*

⁴⁸ Field-Sport, 'Rod and Gun', *Evening Post*, 10 February 1900, p.2.

Zealand. It often featured a report on the latest seasonal updates, followed by mentions of any important people or remarkable sporting achievements that had been witnessed over the past week. Acclimatisation Societies were frequently mentioned, and the AGM reports were published so that all could be informed of the recent goings on of the Society. Society liberations of trout into local streams or news from the Masterton hatchery were also highlighted. Using this column as a way to publicise the work of the Wellington Society was very effective, as the *Evening Post* was widely circulated. By offering informative accounts, this column would have been particularly useful for visiting tourists, or those who wished to experience fishing in a different part of the district for the weekend. This meant that information on the work of the Wellington Society was not only more accessible to the outer parts of the district, but residents were able to keep informed of other areas as well. This would have been important in strengthening local fishing connections, and also encouraging recreational fishing in other parts of New Zealand too.

Another feature of the Rod and Gun was the request for letters and reader input. Reports on notable catches or distinguished fishermen required news to be sent in by the readership, and requests were frequently made for more information of this nature to be sent in. This meant that stories focussed on the experiences of the Wellington elite, who could be easily recognised, but could also mention other keen anglers. These reports often mentioned the names of important members of the Wellington Society Council, which showed that the interests these men held in matters of trout introductions and management extended from within the Council room to the great outdoors as well. For example, it was reported that Reverend W.C. Oliver, a Council member in 1900, had a particularly good days fishing in the Waitaki River catching six fish, “the largest weighing 9lbs”.⁴⁹ The letters that were sent in to the column were sometimes published at the end. These often took on the tone of a ‘letters to the editor’ section. Authors were rarely mentioned by their names, but in many cases discussions between several authors continued over the course of several weeks, and great debates could be waged over the pages. An example of this was the response to Mr Whitley, who wrote in to express his interest in seeing the grayling introduced into New Zealand waters, and, according to the Rod and Gun, “stirred up something

⁴⁹ ‘Rod and Gun’, *Evening Post*, 23 November 1901, p.6.

in the nature of a hornet's nest".⁵⁰ The debate over graylings continued for several weeks, as many sent in their arguments against this idea, with the main area of concern being the potential of damage to trout populations.⁵¹ This element of the Rod and Gun would have been a way to foster a community of anglers from various parts of the district. Through a shared interaction with the Rod and Gun, either through engaging with the written material or writing in submission of their own, the anglers in the Wellington district would have been able to participate in a shared experience of fishing in their unique district. This feeling of a shared experience would have been useful in creating links between the main centres, such as Wellington, and other smaller settlements, and strengthening the relationships between the different towns within the district.

The Rod and Gun was also very careful to mention instances where Wellington was required to offer assistance to other acclimatisation societies. This may have been anything from supplying other regions with trout ova or fry, to offering to host national conferences. While other acclimatisation societies were sometimes mentioned, this was mainly if there was any significant news from AGMs or Council meetings. News of other societies may have helped give a sense of connection between the national acclimatisation societies, but the frequent mention of the Wellington Society seems to suggest that the focus was still kept on the efforts of the Wellington region. This emphasis of the Wellington Society's response to the requests of other acclimatisation societies seems to suggest that the Wellington Society was able to operate with a certain degree of success. There is some evidence that there was an element of uneasiness when it came to the politics of trout distribution between districts. In one case the Wellington Society received a letter from the Auckland Society, in which the Wellington Society was kindly requested not to supply their outlying district with trout fry.⁵² This may indicate that there was an underlying tension between acclimatisation societies within New Zealand that was evident in cases of commercial benefit.

The Wellington Society worked hard to ensure that its region was one of the major sites of acclimatisation success in New Zealand. One way that it could be

⁵⁰ 'Rod and Gun', *Evening Post*, 4 August 1900, p.3.

⁵¹ 'Rod and Gun', *Evening Post*, 11 August 1900, p.3; 'Rod and Gun', *Evening Post*, 18 August 1900, p.3.

⁵² WAS Minutes, Vol.1, p.355.

distinguished from other New Zealand acclimatisation societies was through its connections with some of the colonial elite. As previously discussed, many of the men who were members of the Wellington Society, and particularly those who acted as significant figures on the Council, were from the social elite. Many of these were extensive Wairarapa landholders, prominent lawyers, or involved in the local and governmental level politics. This was an important advantage for the Wellington Society, as their location in the capital of the colony meant that many of the locals held these influential positions. Through maintaining strong local connections, the Wellington Society was able to successfully manage substantial trout distributions that ensured the district soon became a prominent region for angling.

Emergence of a National Network

Connections between acclimatisation societies within New Zealand began with the formation of loose ties, and a more formal national network was not established until after sophisticated imperial and local networks were in existence. National networks were initially based on the early trout distribution links between acclimatisation societies, which were used when trout were first brought into New Zealand. As the Wellington hatchery began to grow in importance in a national context many of these links became more of a formal connection between societies, as species exchange and negotiations became increasingly systematic and organised. This meant that it was not until the twentieth century that a formalised national network emerged, with the formation of the New Zealand Acclimatisation Societies' Association in 1903.

Hatchery construction was a very important factor in building up a reliable inter-regional network of trout supply. While Tasmania was initially heavily relied upon as the source for trout importations, trout populations were successfully established in Christchurch, before eventually being distributed throughout the country and established in other parts of New Zealand too. Soon, as McDowall describes, "A countrywide traffic and trade in trout ova became vigorous, some societies such as Otago, Canterbury and Wellington developing reputations as reliable suppliers of huge numbers to other societies".⁵³ Trout stocks were carefully reared to

⁵³ McDowall, *Gamekeepers*, p.252.

ensure that reliance upon international importations of trout could be broken, and smaller acclimatisation societies within New Zealand purchased their trout supplies from nearby hatcheries. The Wellington Society's involvement in the distribution of trout soon became so well established that by 1897 the entry into the New Zealand Cyclopedia described it as "the largest in the Southern Hemisphere".⁵⁴ By ensuring the effective management of a significant hatchery, the Wellington Society became an important centre in the network of trout distribution to other acclimatisation societies within New Zealand, as well as internationally. The fact that the Masterton Hatchery could be considered one of the largest in the Southern Hemisphere shows that connections existed between other similar facilities, and that these connections were maintained even after hatcheries were able to become more self-sufficient in trout cultivation.

The New Zealand Acclimatisation Societies' Association Conference was the first time that the various acclimatisation societies around New Zealand came together as an official body in order to create a cohesive voice for matters involving acclimatisation interests. Each acclimatisation society was instructed to send in up to two delegates to represent their district. The idea for such an association was put forward by the Christchurch Society, so originally there was pressure to have the first NZASA Conference in the South Island.⁵⁵ However, after some negotiation, it was eventually decided that as the Conference would deal with issues relating to Government restrictions and involvement in acclimatisation matters so it would be useful to meet in Wellington, home of the Government itself. The event generated much interest. Initially the Conference was planned for only one day, but after discussion and debate became increasingly engaged it was extended out for a few more days. The events were reported in great detail by the press, and the *Evening Post* took care to keep readers informed on the latest decision put forward by the Conference.⁵⁶ Notable attendees were also mentioned, such as the Minister for Lands, T.Y Duncan.⁵⁷ While there were a number of different issues to be discussed by the NZASA, the initial concern was around how the group would be set up. Following on from the democratic make-up of the individual acclimatisation societies it was decided

⁵⁴ *Cyclopedia, Wellington*, Vol.1, p.952.

⁵⁵ WAS Minutes, Vol.3, p.107.

⁵⁶ *Evening Post*, particularly in issues from the 22 January – 24 January 1903.

⁵⁷ 'Acclimatisation Societies' Conference', *Evening Post*, 24 January 1903, p.6.

that a Chairman be elected at each meeting, who would preside over the events at the Conference and a new election would be held for this position each year. The first Chairman to be elected by the NZASA was a Wellington delegate, Leonard Tripp. As previously mentioned, Tripp was very involved in acclimatisation interests, and eventually ended up holding onto the Chairman's position for a number of consecutive years, as the rule about re-election was seemingly disregarded.

The objects of the new association were, "to further acclimatisation and improve the management of acclimatisation matters throughout New Zealand, to foster and encourage acclimatisation through the societies, to represent and further the wishes of the societies, and to assist the Government in framing and passing legislation for the furtherance of acclimatisation work".⁵⁸ However, the first issues that the NZASA was primarily concerned with involved the idea of creating standardised rules for all New Zealand acclimatisation societies. Foremost were issues surrounding the cost and range of hunting and fishing licences, and also finding a nation-wide consensus for the appropriate dates for the opening and closing of the hunting and fishing seasons. The cost of licences and the dates of the seasons had until then usually been left up to the individual acclimatisation societies to decide. This made some sense, as the different environmental conditions in each of the regions may have meant that different opening and closing dates for the seasons would have been required to meet certain environmental or financial pressures. However, each time the new season dates were announced there was invariably some complaint about the disadvantages of those particular dates.⁵⁹ Discussion over the hunting season was finally resolved at the first meeting of the NZASA in 1903, as it was decided that, "the opening of the season for shooting native and imported game [birds] be uniform throughout the colony, viz., from May 1 to June 31".⁶⁰ While this meant that the hunting season was the set for the rest of New Zealand, the dates for the fishing seasons were still at the discretion of the individual acclimatisation societies. The Fisheries Conservation Act Amendment Bill was put forward at the end of 1903, which outlined the fishing season as 1st of April until the 30th of September, but this

⁵⁸ 'New Zealand Acclimatisation Association', *New Zealand Herald*, 24 January 1903, p.6.

⁵⁹ The Wellington Society eventually established a committee to investigate an appropriate date for the shooting and fishing seasons: WAS Minutes, Vol.1, pp.362-364.

⁶⁰ 'New Zealand Acclimatisation Association', *New Zealand Herald*, 24 January 1903, p.6.

was not passed until it became part of the *Fisheries Act 1908*, which consolidated many other regulations relating to saltwater and freshwater fisheries and fishing.⁶¹

The biggest issues were around licences. One major concern was the cost of licences. Changes to the system of membership applications meant that there was no longer a yearly subscription fee, and instead members were only required to register their involvement after the purchase of a licence, which resulted in a drastic change to the financial conditions of the societies. Licences became the major source of income, so in some cases these fees were increased in order to help make ends meet. Because the individual societies were all under very different financial pressure, some districts could end up with higher licence fees than others. For example, when the Feilding branch formed its own official acclimatisation society it lowered the licencing fees for their area to five shillings, compared to other parts of the lower North Island where the fees were closer to £1.⁶² A way to ensure that all acclimatisation society members were held to the same fees was to create a universal licensing fee that would be set at the NZASA. The issue of a universal fishing licence fee was put forward in a motion at the very first NZASA Conference in 1903, where the Chairman, C. A. Fitzroy, suggested, “that it is desirable there should be a uniform fee for fishing licences of each class throughout the colony”.⁶³ Much discussion ensued on what this fee should be. The participation of the Wellington Society was ensured by the motions of W. Andrew and L.G. Reid, who were the selected delegates for the year, and who supported the Chairman’s proposal. However, Reid cautioned that a “reasonable standard” had to be agreed to before a fee could be decided on.⁶⁴ He suggested that, “No one could grumble at being charged £1 for a long season covering a wide area, but if the licence fee was brought down to 5s, as at Feilding, they in this district could not carry on”.⁶⁵ Eventually, the motion was passed in favour of the universal licence system. Further discussion led to the conclusion that the fees for each licence were £1 for adults, 5s for ladies, 5s for boys, and 12s 6d for a half season licence.⁶⁶ This agreement on a universal licence was an important issue for the NZASA, as it was evidence that connections between acclimatisation societies across New Zealand

⁶¹ *Fisheries Act 1908*.

⁶² ‘Acclimatisation Societies Conference’, *Evening Post*, 24 January 1903, p.2.

⁶³ ‘New Zealand Acclimatisation Association’, *New Zealand Herald*, 24 January 1903, p.6.

⁶⁴ ‘Acclimatisation Societies Conference’, *Evening Post*, 24 January 1903, p.2.

⁶⁵ *ibid.*

⁶⁶ *ibid.*

could bring about important changes to help enhance the emerging New Zealand angling culture.

Another significant licencing issue that the NZASA sought to resolve was the push for a single licence that would allow access to hunting and fishing across New Zealand. Issues with early licencing mainly involved the definitions of the area in which it was valid, and with the often unsettled and changing boundaries of the newly forming societies, this could sometimes cause confusion. While this issue remained a concern for hunters, a national angling licence may have been available from the early 1900s. McDowall argues that early NZASA reports often contrasted the plight of hunters requesting national licences alongside the example of the wide-reaching angling licence.⁶⁷ The angling licences were national to an extent, as only Rotorua and Taupo required a separate licence in order to fish in that area.⁶⁸ At the 1903 NZASA conference it was decided that fishing licences could be used in all regions, and after much discussion it was also decided that there would be a uniform fee for fishing licences of £1.⁶⁹ As discussion around the reach of hunting and fishing licences continued there was some debate about whether to make angling licences locally restricted as well, as some of the reasons that supported the localisation of hunting licences could also be extended to fishing.⁷⁰ However, the status of either licence did not change until the 1960s and the discussion of these topics remained an important issue in NZASA for decades.

This regulation of licence boundaries was an important issue for New Zealand acclimatisation societies, as it was a key factor in their work to manage and monitor populations of game species for the area. The transferable nature of licences to other acclimatisation society districts was a sign that the societies were becoming systematically organised, rather than pockets of enthusiasts. The system of transferring relied on the acclimatisation society district endorsing the licence that was purchased in another region.⁷¹ However, the district housing the visiting anglers did not receive any funds from the licence that had been purchased elsewhere, so there

⁶⁷ McDowall, *Gamekeepers*, p.68.

⁶⁸ Taupo and Rotorua remained outside of the national licences, and still require a separate licence in recent years: McDowall, *Gamekeepers*, p.69

⁶⁹ 'Conference of Acclimatisation Societies', *Evening Post*, 23 January 1903, p.5.

⁷⁰ McDowall, *Gamekeepers*, p.69.

⁷¹ Spackman, p.19.

does not appear to be any financial benefit for societies to accept anglers on outside licences. While this may not have been a significant issue, this could have been a potential source of conflict, particularly if one district fell under the impression that more anglers were fishing in it than buying licences. There is no evidence to suggest that this may have caused trouble between different acclimatisation districts, which may indicate that such widespread travel for the purpose of fishing was not so prevalent before 1914. The acclimatisation society districts were often quite large, the Wellington district alone covered most of the lower North Island, so it may have required a large number of people travelling significant distances before this became a major issue.

Creating a connection between each of the New Zealand acclimatisation societies meant that they could lobby as one group when it came to issues involving Government involvement or legislative changes. McDowall suggests, “the societies were concerned to develop a better profile with the Government and to be able to influence decision-making more directly”.⁷² This was an important feature, as it meant that the concerns prompted by changes to acclimatisation laws or regulations could be dealt with using the full influence of an organised and cohesive group. It also meant that if the Government were to pass a law which would have an impact on local acclimatisation societies, the NZASA could step in as an organised and influential body to ensure that the acclimatisation societies’ needs were met. As the public image of the acclimatisation societies began to suffer, mainly during the 1920s due to issue involving conservation, the NZASA became one of the primary ways that acclimatisation societies were able to enhance their public image and also ensure that communication with the Government could be maintained.⁷³ The NZASA was a way for acclimatisation societies to ensure that they had a degree of control over their interactions and involvement with the Government.

Networks of exchange were a significant feature of the acclimatisation movement, and were essential for the movement of new species between, and also within, different countries and colonies. In the case of the introduction of trout to New Zealand these networks initially relied upon imperial connections as part of the British

⁷² McDowall, *Gamekeepers*, p.43.

⁷³ *ibid.*

Empire. Colonies such as Canada and Tasmania were essential stopping points to break the journey of trout from Britain to New Zealand, and helped to create a web of networks along imperial lines. After initial trout introductions were made to Christchurch and Otago, local and national networks meant that trout were soon distributed elsewhere. However, while these connections were a vital part of the successful establishment of trout these were initially ad-hoc and loose connections that were based on the necessity of cooperation between societies. As trout introductions, and other species exchanges, continued to be made these links become more sophisticated and formalised. While in some cases this was a relatively slow-going process, such as the establishment of national networks, by the twentieth century there were more bureaucratic measures in place to facilitate and maintain these connections for the sake of continued acclimatisation projects.

Chapter Three: Environmental Modification and Management

Acclimatisation societies had very broad goals in introducing and maintaining imported species, and in most cases this meant the modification of the existing environment and the continued monitoring and management of new species. The Wellington Society set out its ultimate aims in the first annual report, which involved the introduction of new species from Great Britain, and other colonies, and facilitating the spread of introduced species to other parts of New Zealand.¹ At this time it was decided that the types of species that were to be introduced to New Zealand would be “all innoxious animals, birds, fishes, insects, and vegetables, whether useful or ornamental”.² The following rule of “the prevention of the introduction of noxious animals, birds, fishes, insects, &ct.” suggests that this was, at least in theory, a carefully planned environmental modification.³ It also shows that from early in the Society’s life there was an effort made in controlling the types of introduced species that were desirable for settling a new colony. It was this overall attempt at ensuring the ‘right’ kind of species were introduced to New Zealand that helped to set the tone of environmental management that the acclimatisation societies were soon associated with. With the new responsibilities of environmental management and the assumed authority to modify the existing environment, New Zealand acclimatisation societies were able to work alongside the Government and colonists to create a transformed colonial environment in New Zealand.

Water quality and predator control were two of the most significant areas of concern for acclimatisation societies interested in establishing trout populations. Close management was required to ensure the habitat for trout was free from pollution, and also free from predators, such as shags and eels. While the main strategy of most New Zealand acclimatisation societies was to liberate as many trout as possible, as a way to provide anglers with as much sport as possible, it was still in the societies’ interests to protect trout populations from damage from

¹ WAS Annual Report, 1884, p.7.

² *ibid.*

³ *ibid.*

other environmental factors. In some cases this work to protect trout habitats came into conflict with certain ideologies about the benefits of industry over environmental conservation, but this focus on water quality was a positive, if self-interested, feature in the modification of waterways for trout.

Another aspect of major environmental transformations came from the measure put in place to control indigenous species that were identified as being predators of trout. A combined effort from rangers, anglers, and the general public led to a drastic simplification in river ecosystems. However, the targeting of shags and, importantly, eels also had an impact on the lives of Māori who relied on traditional freshwater resources. The operation of hatcheries as a way of ensuring mass-liberations of trout also helped to mitigate the effects of predators, and hatchery staff and facilities were carefully selected so that acclimatisation societies had access to a large number of healthy and robust fish. Hatchery management also required effective systems to mitigate disease and spaces continue to produce high quality ova and fry for regional distribution. The expansion of hatchery facilities in the twentieth century reflected the increasingly systematic approach to environmental transformation, and was a way that the Wellington Society could continue to fill rivers and streams with trout.

One of the factors that enabled acclimatisation societies in their environmental modification was the support of the New Zealand Government. This was mainly in the form of legislation passed to give acclimatisation societies the authority to propagate and protect all acclimatised species, and much of it specifically related to the establishment of trout. Government support also came in the form of funding. This close relationship between acclimatisation societies and government show that the societies' significant impact on the New Zealand environment was not only permitted by the government, but actively supported. Increased government support has been a feature in previous chapters, and was another indication of the shift from unintentional or consequential environmental changes, to a conscious effort that had legislative support. From the perspective of the Wellington Society, their work in the management of waterways was ultimately a successful venture, as the result was a drastically modified environment that was made to suit the ecological needs of trout.

Water Quality Management

Monitoring the conditions of the rivers and streams was an essential task for the acclimatisation societies interested in creating and maintaining successful populations of trout. As European settlement continued to grow the quality and access of waterways became a concern. Rivers were essential to the development of new towns and communities and were relied upon in numerous ways, including the transport of colonists and cargo between settlements, such as in the case of the Whanganui River; the supplying of fresh water for towns, where often streams and rivers would be diverted or modified to ensure a consistent water supply; and as a power source and waste disposal system for many of the new industries, such as flour mills, flax mills, or wool scouring and tannery plants, particularly as steam became more important for power. While initially the fresh waters of New Zealand may have been famed for being pure and pristine, the reality of European colonisation meant that the degradation of waterways was becoming all too common.

For acclimatisation societies, this was a significant problem, as the optimum trout habitat required a consistent source of fast-flowing, clean, cold water. In order for the project of trout liberation to be a success, acclimatisation societies had to monitor the conditions of rivers and streams to ensure that conditions were suitable for trout populations. This was a constant concern for acclimatisation societies as changes to the water conditions could have immediate and drastic effects on the trout populations in the area. An effort was made to monitor the numbers of trout that were being caught, as a way to estimate and compare population sizes. Reports were sent in during the annual collection of trout for stripping and a general estimate on the population growth was noted in the Wellington Society's annual reports. For example, a section from the 1888 Annual report states, "Judging from the fish caught when netting for ova, the trout in Wainuiomata appear to be falling off in numbers and size".⁴ While these reports do not seem to be based on a standardised or objective system of measurement, it was a way that the Curators, Rangers, or other workers involved regularly with the

⁴ WAS Annual Report, 1888, p.11

liberation process could take some form of indication of the state of trout populations in Wellington waterways.

One of the main concerns for acclimatisation societies in terms of water conditions was the pollution or run-off that could enter into rivers and streams from surrounding industry. Run-off from dairy farms and wastes from industrial areas alongside rivers posed some of the greatest pollutants. These industrial complexes included saw mills, flax mills, tanneries, mines, and wool scouring plants.⁵ The wastes that were created at these plants could accidentally leak into the waterways, or, in some cases, it was easier for the wastes to simply be dumped into the water, rather than finding other ways to dispose of them. Increased modification of the land for farming and agriculture also had a significant impact on the water quality of rivers. Phosphate and nitrate, by-products of farm fertilizers and animal wastes, were harmful pollutants that increased in waterways along with the growth of farming.⁶ Soil erosion was also a concern, brought about largely through bush-clearing measures as a way to create farmlands, and resulted in increased flooding and damage to overall river conditions.⁷ In the South Island, rivers were relied on for providing irrigation to inland farms and the construction of water-races meant that rivers and tributaries were drastically modified to ensure agricultural lands had access to fresh water.⁸

This kind of pollution was a concern for acclimatisation societies, particularly when trout were being liberated in streams or tributaries nearby. Often information about cases of pollution would reach the acclimatisation societies, through Ranger reports, anglers, or other concerned members of the public, and then action would be taken to prevent further pollution and, if possible, ensure that steps were taken to clean up the affected areas. Usually acclimatisation societies would deal directly with the creators of the pollutions, before taking legal action to prevent destruction of waterways. In some cases local Councils could become involved as the issue of water pollution moved from being a problem for

⁵ Examples of notable industries in the Wellington region, particularly in the Hutt Valley, can be found in Susan Butterworth, *Petone: A History* (Petone: Petone Borough Council, 1988).

⁶ G.P. Glasby, 'Modification of the New Zealand Environment', *Ambio*, Vol.15, no.5, 1986, p.270.

⁷ *ibid.*

⁸ Clark, pp.324-327.

acclimatisation work to becoming a concern for the interests of the local community as well.

The Wellington Acclimatisation Society was required to respond to cases of pollution numerous times. One example in particular involved the Hutt River, and became more than an acclimatisation issue, instead involving the wider Wellington community. The Hutt River was one of the larger rivers in the lower Wellington District, and was often a site for yearly trout liberations. Reports of significant pollution first started to be mentioned in the minutes of the Council meetings in November 1897, when it was reported that a saw mill run by local men, Mr Brown and Mr Gardiner, was allowing sawdust to run directly into the river.⁹ Initially, attempts were made to contact the owners themselves and they were issued with a warning. However, when there were no assurances made that the pollution would be stopped, the Wellington Society Council began to make enquiries as to what kind of legal action could be made against the saw mill owners. There are no further records in the minute books or mentions in the local newspapers, so it is unclear how, or if, this issue was eventually resolved.

The major battle between the Wellington Society and polluters of the Hutt River came a year later, when the waste disposal of a fellmongery and wool-scouring factory was brought to public attention. The matter was brought up in a Society Council meeting at the beginning of June. It was decided that the Wellington Society would start the process of prosecuting the owners for their continued dumping of wastes into the Hutt River, and that the Chairman at that time, A.J Rutherford, would also notify the Hutt County Council and the Hutt Borough Council in order to secure their support.¹⁰ However, when this request from the Wellington Society was discussed at a meeting of the Hutt Borough Council it was decided, “that the matter was greatly exaggerated, and moved that no action be taken by the Council”.¹¹ A meeting of the Hutt County Council a week later also reflected a general disinclination to help with the matter. As reported in the *Evening Post*, “The general opinion was that every encouragement should be given to local industries, and that the matter of “a few fish and some

⁹ WAS Minutes, Vol.1, p.440.

¹⁰ *ibid.*, pp.482-485.

¹¹ ‘Hutt Borough Council’, *Evening Post*, 7 June 1898, p.2.

lazy whippers of streams” should not interfere”.¹² While there was some mention of the need to maintain clean streams generally in the district, more arguments were raised against the work of the Wellington Society, even claiming, “the Acclimatisation Society was becoming a nuisance, what with the filling of our back land with deer, &c., and its restrictions”.¹³

While it seemed the Wellington Society may have lost the support from the Hutt councils, an article published in the local newspapers soon after the Hutt County Council meeting suggested that there may have been wider community support. The author urged that the issue of pollution be treated seriously, as the condition of the Hutt River was something that should be taken up by the whole Hutt community. Unlike the Hutt councils, this article offered a more balanced view of the role of industries to the area, arguing, “Local industries such as the proposed fellmongery are admittedly of great importance, and should be fostered, but not in places where their presence is detrimental to public welfare”.¹⁴ The author also encouraged readers to think of the future of the community, prompting the idea that the preservation of the Hutt River was not only important to prevent the immediate pollution, but that steps should be taken to ensure the “pure and crystal waters of the Hutt” would be available to members of the Hutt community in the future.¹⁵ Interestingly, the author also seemed to be sympathetic towards the work of the Wellington Society. It was suggested that its initial attempts to bring notice to the pollution issue and the subsequent lack of favour was not necessarily a new approach from the public, and pointed out that “As usual, the Acclimatisation Society is abused for trying to prevent the mischief”. Instead, the author praised the efforts of the Society and argued, “The Society has spent large sums of money in stocking the Hutt River and the harbour with sea-going varieties of trout, imported at great expense, which are fast increasing and will in the future if not destroyed form a valuable food supply, afford our citizens good and healthy sport, and increase the attractiveness of our city”, proving to the Hutt community that the Society deserved support for the work done for the good of the city.¹⁶ By

¹² ‘Local and General’, *Evening Post*, 17 June 1898, p.5.

¹³ *ibid.*

¹⁴ ‘A Place for Noxious Trades’, *Evening Post*, 16 June 1898, p.4.

¹⁵ *ibid.*

¹⁶ *ibid.*

bringing the issue of the pollution of the Hutt River to a more public forum, the Wellington Society was able to ensure that the river would not only be preserved, but that the conditions of the water would continue to be monitored by the community in the future.

This reluctance of the local councils to engage with water pollution issues can be paralleled with other cases where conservation was called for in the face of industry. Graeme Wynn explores the reactions to the forestry conservation measures that were introduced in the 1870s. The need for conservation of some forest areas, after many years of unconstrained resource use in the name of progress, was voiced and championed by Premier Julius Vogel. While Vogel sought to draw attention to the dangers of unwisely exploiting this natural resource, and to encourage a more cautious use of what remained, one of the prevailing arguments against such forest protection was that this would be detrimental to the progress of the colony.¹⁷ Wynn states that these concerns for progress were not surprising, as “Early New Zealanders were, overwhelmingly, transplanted Britons, and the criticisms of Vogel’s proposals were, in part, the product of ideas nurtured in the homeland in the age of industrial revolution and laissez-faire economics and carried to the colony to be implemented there”.¹⁸ At this time in the nineteenth century, colonists’ attitudes towards environmental resources were still being dictated by this need to encourage industry and development, which was more pressing than the seemingly distant consequences of eventual environmental degradation.

The Wellington Society worked hard to ensure that the water quality encouraged large trout populations in Wellington waterways, mainly through the constant monitoring of the conditions of the rivers and streams. While in some cases this vigilance meant that the Society was able to act to prevent harm to trout, for example when water was polluted, there were other times when the Society could do very little against the natural environment, such as in times of flood or drought. If flooding or drought came at particular times in the fishing season this could have a significant effect on the sport. The 1905 fishing season suffered due

¹⁷ Graeme Wynn, ‘Conservation and Society in Late Nineteenth-Century New Zealand’, *New Zealand Journal of History*, Vol.11, no.2, 1977, p.132.

¹⁸ *ibid.*, p.134.

to flooding during the netting time, when trout were being caught for stripping, and then later in the season a drought meant that in some parts of the district anglers were offered very little sport.¹⁹ However, the necessity of protecting the quality of the waterways in the district meant that even in times of environmental extremes the Wellington Society was very active in staying informed about the water conditions in all parts of the district. Monitoring the rivers was a way that both the Wellington Society and the local communities could work to ensure that water quality remained high in many parts of the lower North Island.

Predator control

A significant concern for acclimatisation societies was the protection of newly acclimatising species during the initial stages of introductions. While New Zealand was relatively free from aggressive predators, which meant that new land-based game species had few indigenous predators, acclimatisation societies perceived constant threats to trout. While hatcheries had already been acknowledged as a highly successful venture in cultivating healthy trout populations, measures had to be taken to safeguard trout when they were eventually liberated into the rivers and streams. The main predators of trout, eels and shags, were identified early on and New Zealand acclimatisation societies worked hard to combat the impact that these indigenous species could have on liberated trout. Eels and shags were regarded as a major problem for acclimatisation societies and the measures that were taken, particularly nationwide condemnation and the offer of bounties, reflect the lengths that societies went to as a way to remove this threat from New Zealand waterways.

Eels were among the first species to be targeted by New Zealand acclimatisation societies for their predation of trout in freshwater rivers and streams. The two species in New Zealand were the longfinned eel, which is one of the largest species of eel, and the shortfinned eel.²⁰ Eels had been abundant in New Zealand waters, and were an important resource for Māori. However, it was not long before acclimatisation societies recognised the behaviour of larger eels as

¹⁹ WAS Annual Report, 1905, pp.6-9.

²⁰ McDowall, *Gamekeepers*, p.120.

predators of fish, and they soon became blacklisted as undesirable species. In the very first published Rod and Gun column anglers were warned of the dangers of eels: “Large eels do an almost incalculable amount of harm in some of our trout streams, and startling tales are told concerning their voracity in regard to small and even good-sized trout”.²¹ Anglers were encouraged to destroy any eels that they may have accidentally come across during their fishing, and the Rod and Gun column publicly praised anglers who had come across particularly large eels. Some stories became the stuff of legend, as in the story of anglers who came across a “monster eel”, which was not only reported to be 4ft long, but was also discovered to be a serious threat to trout, as “Upon opening the fish the men found in its stomach no less than 15 trout of various sizes”.²² Stories of this nature, with the heroic angler making short work of the villainous eel, were often printed in the Rod and Gun, and seem to be a way of continuing the narrative of the hard-working colonists’ struggle to improve the New Zealand environment.

While warnings about the dangers of eels may have been enough to motivate some interested individuals into action against these predators, it was decided that a monetary reward would be more effective to bring in help from the wider community. Bounties were set by acclimatisation societies to encourage people outside of Society membership to help with eel control. The Wellington Society offered a reward based on the weight of eels, with significantly higher reward for the larger eels. In 1903 it was decided by the Wellington Council that a reward of 1d per pound of weight would be given for each eel weighing up to 10lb, and then every eel over 10lb would get a bonus of 6d per eel.²³ This was set for a period over the following year, and all eel specimens had to be taken to official Wellington Society agents at specified places.²⁴ The eel problem must have been particularly bad that year, as the reward was changed just a few weeks later to offer 1d per pound of weight for eels between 5lb and 10lb, while the 6d bonus for eels over 10lb was kept in place.²⁵ This may have been a way for the Wellington Society to encourage the destruction of large eels, as they were the

²¹ ‘Rod and Gun’, *Evening Post*, 10 February 1900, p.2.

²² ‘Rod and Gun’, *Evening Post*, 19 April 1902, p.6.

²³ WAS Minutes, Vol.3, p.155.

²⁴ *ibid.*

²⁵ *ibid.*, p.158.

main culprits as trout predators. Ensuring that eels were only taken to official places for rewards meant that acclimatisation societies could still be in control of the eel catching process, and could even use it as a way of publicising the work of the Society. It appears that this bounty system was well received by the public as Society accounts showed a monthly sum set aside for eel bounties, although the details as to the number caught or the number of those who participated in eel catching was not recorded.

Although the joint measures of angler cooperation and bounties meant that the issue of eel capture had drawn in significant attention from people outside of the acclimatisation society membership, Council members continued to find other means of eel capture to supplement community involvement. The situation of eels was often discussed at Council meetings, and was also brought up in AGMs and annual reports. While there was continued support for the use of bounties and angler involvement, it was also suggested that the Council fund and install eel baskets in sections of the river where eels were considered a particular issue. The eel baskets were made of wicker and manufactured in Dunedin, and seem to be based on designs that had been used by Māori. Several baskets were bought and were sent out to different parts of the Wellington Society district. It was decided by the Council in 1906 that a total of £10 would be set aside to spend on the eel baskets for the year.²⁶ This was most likely a careful investment, as it was then decided that several samples of eel baskets would be ordered before a main order of one dozen was placed.²⁷ The sample baskets must have been satisfactory, as when an order arrived several months later they were all allocated to individuals who owned properties connected to rivers or streams.²⁸ Other orders could be placed for eel baskets through the Society, though the cost meant that in some cases only a few could be distributed. While these baskets were considered to be fairly effective, as many more were ordered over the years, it is interesting that the baskets continued to be sourced at Dunedin, rather than use the skills of Wellington iwi to produce baskets locally. This may be significant in offering an

²⁶ *ibid.*, p.234.

²⁷ *ibid.*, p.237.

²⁸ *ibid.*, p.264.

insight into the relationship between acclimatisation societies and local iwi in New Zealand, particularly in the case of freshwater resources and rights of access.

Targeting eels had a major impact on Māori, who relied upon the freshwater eels as a significant resource. The importance of eels to Māori was something that many colonists acknowledged, and was the subject of a study by T.W. Downes, which was published in the *Transactions and Proceedings of the Royal Society of New Zealand*. Downes identified the basis of eels in Māori mythologies and the development of highly skilled processes of trapping eels in weirs and baskets.²⁹ This trapping of eels was something that was praised by the acclimatisation societies, as in their view it was a mutually beneficial activity; Māori were able to make use of the eels, while the removal of these species from the rivers and streams meant that there was less threat to trout. However, the district-wide attempts to target eels put pressure on a traditional Māori resource that was already being threatened through issues with river access and water ownership rights. One major example of this was the conflict over the control of the Wairarapa Lakes in the late nineteenth century. Land claims from farmers and developers put the traditional fishing areas, which included a number of eel weirs, in jeopardy.³⁰ Such conflict over resources occurred often over this time, and the added hardship of eel depletion by acclimatisation societies meant that these policies had an impact on the lives of people as well as the environment.

The removal of eels from waterways did not mean that Māori could replace this vital resource by fishing for the trout that were slowly becoming more numerous in streams. Māori were held to the same licencing regulations as colonists when it came to imported fish such as trout. In some cases where acclimatisation societies sought to charge Māori with poaching trout the Treaty of Waitangi was used as a defence and it was argued that access to freshwater resources was protected under this agreement. However, the courts generally ruled in favour of the acclimatisation societies, and claimed that the Treaty of Waitangi only covered indigenous freshwater fish, not the exotic imports introduced by

²⁹ T.W. Downes, 'Notes on Eels and Eel-Weirs (Tuna and Pa-Tuna)', *Transactions and Proceedings of the Royal Society of New Zealand*, 1917, pp.296-316.

³⁰ 'Chapter 13: Māori Authority over Flora and Fauna Associated with Inland Waterways', Waitangi Tribunal report, pp.352-353; 'Pakeha and Maori', *Evening Post*, 17 January 1896, p.2.

colonists.³¹ As more of these cases were reported there appeared to be an element of empathy for the Māori in this situation. One reporter claimed that sympathy could not be withheld as “Natives have been practically deprived of their fishing ground, and therefore of their means of obtaining cheap food, in order that the white man may have his sport with rod and fly”.³² Similar issues between Māori resource use and acclimatisation society regulations can be drawn from the conservation policies and legislation for indigenous game birds favoured for hunting, particularly in the case of kereru.³³ Conflict over the environment has been a constant feature in the history of interactions between Māori and colonists, and attempts by acclimatisation societies to modify and manage the environment represents another part of this narrative.

Shags were branded as vermin very early in the Wellington Society district, with the first annual report of the Society proclaiming that, “Your Committee would urge upon members and everyone interested in our work to lose no opportunity in destroying these mischievous birds, the great enemies of our fresh water fisheries”.³⁴ Bounties of 1s 6d were already on offer for the destruction of shags, but at this stage only three had been brought in. While this may have been a slow start, the destruction of shags throughout the district, and also in other parts of New Zealand, continued well into the twentieth century. The targeting of shags was based on the visual evidence that shags preyed on fish from rivers and streams in New Zealand, and as trout were soon plentiful in these waterways, the trout that had been so carefully introduced by the Wellington Acclimatisation Society were soon becoming meals for these indigenous birds. Shags were blamed as much as eels for the declining trout numbers in streams, and extensive measures were put in place to manage the numbers of shags around Wellington waterways. By the twentieth century bounties were being offered on the presentation of shags heads or pairs of feet, and Rangers were given authority to destroy ‘shaggeries’ where large shag populations were grouped. The fact that shags roosted in one place in large numbers meant that it was easy for acclimatisation society members

³¹ ‘Local and General’, *Evening Post*, 3 March 1897, p.5.

³² ‘Topics of the Day’, *Evening Post*, 6 October 1913, p.6.

³³ See, Ross Galbreath, ‘Displacement, Conservation and Customary Use of Native Plants and Animals in New Zealand’, *New Zealand Journal of History*, Vol.36, no.1, 2002, pp.36-50.

³⁴ WAS Annual Report, 1884, pp.2-3.

to target the shaggeries and take more responsibility for shag control, rather than rely on offering bounties to the general public.³⁵ While there were a number of different species of shag the measures against them were put in place indiscriminately, which suggests that these blanket bounties lacked rigorous study or investigation, and instead were more of a generalised reactions against what was perceived as a serious threat to the efforts in acclimatising trout.

The offer of rewards for shag and eel destruction meant that the Society could involve members of the wider community in pest control. While it may have been important for anglers that the shag and eel populations remained low, the bounty meant that those who were interested more in the monetary rewards could also be of use to the Society. Often, prizes were offered for the largest eels, or the greatest number of shags. The spirit of competition meant that pest control could almost be a sport in itself, and at the very least draw in youths wanting to earn some extra spending money. These offers of rewards must have been readily taken up, as the Wellington Society accounts consistently show a monthly spending for shags feet and often for eels.³⁶ These bounties were also advertised in the newspapers, and when annual reports were published the general public could also examine how much effort and expense the Wellington Society was willing to put into removing predators of trout. While there is no record of the numbers of eels and shags that were brought in for reward, the annual reports show that a considerable sum was allocated for these rewards, usually between £4 to £12,³⁷ which suggests that large numbers of these species were being collected.

While eels and shags were widely vilified, there is some evidence that suggests these measures of environmental modification and management did little to contribute to the overall success of trout species in New Zealand after all. Some suggestion was made that the presence of shags and eels meant that there was a healthy competition for trout, meaning weaker members of the population were removed leaving the stronger and ‘fit’ members of the species to populate the rivers and streams. Not only would this have been important for the genetic lines of New Zealand trout, but anglers were also more impressed to find fewer but

³⁵ McDowall, *Gamekeepers*, p.126

³⁶ Particularly during the first decade of the twentieth century, WAS Minutes, Vol.3.

³⁷ WAS Annual Reports, 1900-1910.

well-conditioned trout, compared to catching many smaller fish that provided little of a game experience. As one angler told the NZASA, “[shags] thus prevent overcrowding, and by thinning out they do effect much more good than harm, as trout, where very numerous, may reach old age without exceeding a pound in weight, while they are under these conditions poorly fed and afford no sport”.³⁸ Shags would have also been useful in controlling eel populations, as these were part of their diets. Questions about the effectiveness of predator control were also raised in response to reports of a West Coast eeling competition. As there were prizes for “the most eels caught”, many of the children caught the smaller eels that hid under rocks. Later in the day a large trout was spotted feeding on these smaller eels, which revealed that the competition organised to protect trout was actually causing the removal of a food source.³⁹ Stories such as these suggest that while the actions of acclimatisation societies may have been considered appropriate by supporters of trout introductions, it could have been more beneficial to take a considered and well-investigated approach to pest control, rather than favour immediate action.

The campaign against indigenous eels and shags appears to be an issue unique to New Zealand acclimatisation societies. In Britain, shags and cormorants were known to occasionally prey on trout, but were not targeted as pests or allocated bounties as they were in New Zealand. This may have been because shags were mainly found along the coastlines rather than at inland river systems, and an article celebrating shags and cormorants as “Primeval Fishers” described how the shag “does not leave salt water, and seldom seeks the flat shores of the east coast”.⁴⁰ However, shags were still monitored somewhat, and in 1911 the Salmon and Trout Association decided that they would be officially removed from the list of protected birds.⁴¹ This suggests that shags may have been identified as a predator of trout, but there was not nearly as much animosity towards them as in New Zealand. Eels were also considered as a natural predator of some trout and were known to feed on ova, but were not made specific targets for trout

³⁸ ‘Local and General’, *Evening Post*, 24 August 1918, p.6.

³⁹ McDowall, *Gamekeepers*, p.122.

⁴⁰ ‘Cormorants and Shags’, *The Times*, 28 August 1924, p.13.

⁴¹ ‘Salmon and Trout Association’, *The Times*, 20 January 1911, p.18.

protection.⁴² Rather, during the early decades of the twentieth century much discussion was focused on how to make the most of eels as a potential economically efficient food source.⁴³ This difference in the treatment of eels and shags between Britain and New Zealand is substantial, and suggests that there may have been more than objective rationale behind the persecution of indigenous predators in New Zealand. Perhaps this attack on eels and shags by New Zealand acclimatisation societies was in some ways fuelled by the sentimental attachments to the recreational fishing and symbolism of home and Empire that trout introductions were associated with, or evidence of a naïve belief in a perfectly controllable environment.

Hatchery management

The Wellington Society hatcheries were sites important for both environmental modification and management. The hatcheries were in constant operation, and at any time could hold thousands of ova, fry, or grown fish. The purpose of artificially cultivating the ova at the hatcheries was to ensure that large numbers of trout could be reared and liberated into the streams and rivers in the district. It was important that there were enough trout to supply anglers with good sport for the season, and that there were enough left after the season to ensure that permanent populations could establish naturally in the streams. However, the Society believed that this natural population growth was not enough to sustain anglers, especially as environmental conditions, such as floods, droughts, or pollution, as well as poachers, could quickly decimate trout numbers. For these reasons, the focus of hatcheries was mainly on providing the acclimatisation societies with large numbers of fish, rather than on the propagation of a smaller number of fish that were bigger, or better conditioned. In order to manage this aspect of recreational fishing, the Wellington Society ensured that a good supply of trout was reared at the hatchery each year, allowing for a supply of fry or ova to be sent across the district.

⁴² *The Times*, 19 August 1899, p.12.

⁴³ *The Times*, July 12 1915, p.9.

Ova collection was an important practice for the Masterton Hatchery. To collect ova the Curator, and often several volunteers, would ‘strip’ ova and milt from trout netted in the streams and rivers in the district during the spawning season.⁴⁴ The fertilised ova would then be cultivated at the hatchery before being distributed to other acclimatisation societies or individuals. It was skilled work, as it required the navigating of rivers, the ability to catch and identify male and female trout, and also the knowledge of effective and safe methods of milt and ova extraction so as not to damage the mature fish or the ova.⁴⁵ Stripping wild trout was important, as it meant that genetic diversity could be introduced to the hatchery, but also that the quality of the trout in the district could be monitored. If the collections for the year were low, this could signal to hatchery staff a decline in the overall condition or health of trout populations. Reports on ova collections were discussed at council meetings of the Society, and were also made available to the general public through newspaper reports. The total number of collections was recorded and it was often noted how successful the operation was, such as in the 1896 season which allowed the *Evening Post* to proudly state, “The quantity of ova collected is double that of any previous record of other societies in the colony”.⁴⁶ After the yearly ova collection was made, and the condition of trout noted, the ova was prepared for distribution to other parts of the district, New Zealand, or overseas.

This yearly distribution of trout was monitored by the Fish Distribution Committee, which was established for each ova collection season by the Wellington Society Council members. This committee met outside of regular Council meetings and was responsible for receiving and filling orders sent in from local, national, and sometimes international acclimatisation societies. Sometimes individuals applied for orders of trout to supply their private streams or ponds, but priority was given to subcommittees within the Wellington district. The committee was required to report back to the Council meetings once distribution lists had been finalised, and distribution figures were published in the Society’s annual reports. By appointing a committee that dealt solely with the distribution of

⁴⁴ WAS Minutes, Vol.3, p.34.

⁴⁵ John E. Bardach, et al, *Aquaculture: The Farming and Husbandry of Freshwater and Marine Organisms* (New York: Wiley-Interscience, 1972), pp.399-400.

⁴⁶ ‘Wairarapa News’, *Evening Post*, 8 July 1896, p.5.

hatchery trout the Society was able to control trout populations across the different areas of the district. This meant that the Society did not have to rely on natural areas of trout dispersal or population growth, and instead could provide pockets of reliable trout fishing areas in specific places in the district. Different species of trout could also be carefully selected and distributed, with rainbow trout, which was harder to establish in New Zealand waters than the widely dispersed brown trout, a good example of the careful distribution tactics of the Society.

The management of trout in hatcheries also required an awareness of the limitations of artificially breeding large populations. This was experienced in 1899, a season described by the Wellington Society as, “undoubtedly the worst ever experienced for ova collecting”.⁴⁷ While the weather at the beginning of the season was particularly bad, with heavy floods destroying a number of collection nets, it was reported that the actual number of ova taken per fish was lower than it had ever been in previous years.⁴⁸ It was also reported by the press that once the ova had been collected a further 500,000 of the 992,800 eggs collected were lost through “unforeseen circumstances”.⁴⁹ Even though the weather could reasonably account for the overall low collection for the season, the fact that ova count from the individual fish was so low became a cause for concern. This concern was also brought up in the annual report, stating “It is apparent that the stockfish are becoming increasingly infertile, and your Council is of opinion that efforts should be made in the ensuing year to replace them with fresh blood”.⁵⁰ It was essential for the condition of the fish in the hatchery to be constantly monitored, as the resulting offspring would be released to areas across New Zealand and the world. If the fish were deficient in some way, due to accidents in breeding, this would have been disastrous for the acclimatisation of trout.

A hatchery environment also called for vigilance around trout health and disease control. This proved a challenge for the Wellington Society when cases of gill disease outbreak appeared in the Masterton hatchery in the early twentieth century. The 1904 annual report first refers to presence of the gill disease among

⁴⁷ WAS Annual Report, 1899, pp.12-13.

⁴⁸ *ibid.*

⁴⁹ ‘Local and General’, *Evening Post*, 27 May 1899, p.4.

⁵⁰ WAS Annual Report, 1899, pp.12-13.

some of the rainbow trout at the hatchery. Some fish displaying the symptoms were sent to London, to be examined by an expert, while any other fish at the hatchery that showed any signs of gill disease growths were immediately destroyed. The Curator set about investigating the cause and whether there was any possible cure for the disease, but the main method of containment was to continue to destroy infected fish. The report concluded by stating, “it is gratifying to be able to report that no such affectation has ever been discovered among fish taken from rivers within this district”.⁵¹ The annual report for the following year stated that the gill disease situation was still being monitored. The report from the spawning season remarked, “The rainbow trout were very disappointing this year; a large number of them became affected with “gill disease” and had to be destroyed. Every fish was carefully examined, and any shewing signs of disease were killed”.⁵² This close monitoring of the disease and the containment of it within the hatchery meant that this was the last mention of gill disease on the annual reports. Controlling outbreaks of disease was very important, as the wide distribution of trout across the Wellington district could have led to a nation-wide outbreak.

The importance of managing trout in hatcheries meant that the role and the knowledge of the Curator was essential. While it was important for Curators to understand the scientific practices behind trout rearing, particularly when it came to the issues of genetics and disease control, a knowledge of local environmental conditions was equally as important. L.F. Ayson was one of the first, and was also arguably the best, Curator for the Wellington Society. His New Zealand upbringing and early adulthood spent along South Island rivers meant that he had first-hand experience with the types of environmental conditions that were specific to New Zealand waterways. Rivers in the Wellington district were largely snow-fed and formed in the mountain ranges before, as Tisdall describes giving an example of the Wairarapa and Hutt rivers, “running through rocky gorges in the mountains, and issuing out into wide shingle beds on the plain”.⁵³ A similar guide to British rivers highlights features of the lake-fed River Itchen and River Test,

⁵¹ WAS Annual Report, 1904, p.8.

⁵² WAS Annual Report, 1905, p.6.

⁵³ Tisdall, 1896, p.7.

which were considered to be excellent waterways for troutfishing, describing them as “silently gliding”, and, “even and stately”.⁵⁴ The difference in New Zealand environmental features meant that trout management may have required a different approach, which, in the early years of trout acclimatisation, would have been found through experience in the environment, rather than by relying on skills and knowledge gained primarily through work in Britain.

Understanding these environmental differences between New Zealand and British rivers was important, as the New Zealand environment had generally been considered as quite similar to that in Britain. Based on these assumed similarities, it was generally expected that species which were successful in Britain would similarly thrive when transplanted to New Zealand. However, it became clear to many colonists that there were often considerable differences, not just in the types of species that were able to be successfully introduced, but also the differences in behaviour of species once they had become acclimatised to the New Zealand environment. This was particularly evident as an influx of rabbits, introduced birds, and fast growing weeds started to wreak havoc on newly cultivated farmlands and homesteads, giving some evidence that, “The image of England’s farm in the antipodes comforted and inspired five generations of rural New Zealanders, but as a model for environmental transformation it was to have undesirable implications for this small, geographically isolated country”.⁵⁵

While the hatchery at Masterton was the main facility for the district, several other hatcheries were established in the Wellington acclimatisation region in the early twentieth century. In 1904 the suggestion was made to build a new hatchery in the Hutt, mainly to provide another trout distribution point as there had been some concern about the distance between the Masterton hatchery and the rest of the district.⁵⁶ The decision was made that a holding pond for yearlings was to be built at Upper Hutt.⁵⁷ Several years later it was suggested that a similar set of holding ponds be established in Palmerston North, to help with distribution to

⁵⁴ John Geddie, *The Rivers of Great Britain: Descriptive, Pictorial, Historical. Rivers of the South and West Coasts* (London: Cassel and Company Ltd, 1897), pp.17-19.

⁵⁵ Peter Holland, *Home in the Howling Wilderness: Settlers and the Environment in Southern New Zealand* (Auckland, New Zealand: Auckland University Press, 2013), p.15.

⁵⁶ WAS Minutes, Vol.3, pp.161-163.

⁵⁷ *ibid.*, pp.255-278.

the northern parts of the district.⁵⁸ Although these hatcheries required a great deal of specialist knowledge, there was little focus on scientific research into trout propagation or populations. It was not until the 1920s that attempts began to be made by the society to measure the success and development of hatchery outputs, as shown in one of the first quantitative studies into the conditions of trout caught by anglers in the Wellington region.⁵⁹ The expansion of hatcheries in the Wellington district was part of continued efforts in the management of numerous trout distributions to all parts of the region. It is also a sign that the idea of overwhelming waterways with larger numbers of trout as the key to successful population sizes was still acceptable in the early decades of the twentieth century.

New Zealand environmental realities

This difference between environmental assumptions and the reality of the New Zealand environment was also an aspect that acclimatisation societies had to address. Initially, it was thought that the possibilities of recreating an idealised English countryside were well within the abilities of colonists. It was also thought that the similarities between Britain and New Zealand meant that the knowledge and expertise necessary for successful recreation of the British countryside could only come from Britain itself. This may have been the reasoning behind the Wellington Society's decision to specifically seek out a British-educated fisheries expert for the position of Curator, which resulted in the appointment of DeLatour. The hope the Wellington Society expressed in the 1900 annual report that "the society is sanguine that it has obtained a new curator worthy to succeed the previous holder of the office", shows the high esteem that the Society held for the valuable knowledge and experience of L.F. Ayson.⁶⁰ However, the insistence on a British-educated expert was a reflection of the overall assumption that a British-influenced environment was the ultimate aim for the Wellington Society.

⁵⁸ WAS Minutes, Vol.4, p.18.

⁵⁹For example, Wellington Acclimatisation Society Miscellaneous Records, 1922-1934, Fish Report, 2004-043-3/6, Alexander Turnbull Library.

⁶⁰ 'Annual Report', *Evening Post*, 9 May 1900, p.6.

While the appointment of a London expert may have been a great achievement for the Wellington Society, it was recognised that his adjustment into his new home and workplace may take some time. The Society stated, “Although handicapped at the outset by lack of local knowledge, which is so essential to the collection of wild ova, it is expected that Mr DeLatour will make a worthy successor to Mr Ayson”.⁶¹ This shows that the Society was aware that a degree of learning on the job was required for working in New Zealand conditions, and also assured members in the 1900 annual report, “He has already made valuable suggestions relative to new methods of procedure, and the coming season is being looked to with even greater interest than usual”.⁶² The beginning of DeLatour’s career in New Zealand went reasonably well, with many of the ‘new methods of procedure’ that the Society had alluded to emerging as a reorganising of the Masterton Hatchery and grounds. DeLatour was also quick to employ methods that he had taken from Europe, such as the introduction of new hatchery boxes and trays only months after his appointment.⁶³

However, as the fishing season drew closer, it seemed that the local knowledge that DeLatour needed would be in great demand. The first attempt at ova collecting went well, as the Rod and Gun was able to report that “A capital start has been made by Mr DeLatour, curator at the Masterton Fish Hatcheries, with the season’s ova collecting. In three hauls in the Ruamahanga and Waipoua Rivers he secured respectively 20, 27, and 31 trout for stripping purposes”.⁶⁴ However, by the end of the ova collecting season it became evident that the season was not as successful as the Society had hoped, and that it would be a struggle to fill the trout fry orders that had already been received. Again, his lack of local experience was brought up in his defence as the Rod and Gun claimed, “Of course Mr. De Latour cannot be held altogether responsible for the falling off. His local knowledge of streams at present is naturally very slight, and this no doubt was a big handicap”.⁶⁵ However, it soon became apparent that not only had DeLatour refused help from the previous Curator, but that he also blamed L.F. Ayson for the

⁶¹ WAS Annual Report 1900, p.10.

⁶² *ibid.*

⁶³ ‘Rod and Gun’, *Evening Post*, 12 May 1900, p.2.

⁶⁴ ‘Rod and Gun’, *Evening Post*, 9 June 1900, p.3.

⁶⁵ Field-Sport, ‘Road and Gun’, *Evening Post*, 4 August 1900, p.3.

low numbers of fertile male fish that were collected and which had resulted in the poor collection for the year. DeLatour alleged that due to poor management at the Hatchery, “the indiscriminate use of male fish in impregnating trout ova in the past has resulted in the production of ‘mules’, and that male fish suitable for breeding have been scarce in consequence”.⁶⁶ Cross-bred fish were sterile, and by claiming that there was a significant majority of these fish, DeLatour was able to ensure that the poor ova collection would not be blamed on him and his reputation as an expert would remain intact by making Ayson the responsible party instead.

Ayson adamantly denied these accusations, writing to the press as well as to the Society to defend his work at the Hatchery. Public opinion seemed to be in favour of Ayson, with letters to the editor expressing support for his previous good work. One individual, writing under the name of ‘Angler’, asked readers, “Does any sane angler believe that our late curator, who for fourteen years did such noble work in stocking almost every river in the Wellington Province and sending millions of fish outside the province, would descend to such an absurd process as turning a lot of mules into the rivers?”⁶⁷ After discussion with the Society, DeLatour eventually conceded that he may have started his collection too late to collect many of the male fish, as in New Zealand the male fish often ran upstream earlier than the females, and agreed on the Society’s suggestion to accept more help and advice from Ayson in the future. This matter was not looked into any further, and it was never confirmed why there had been so many cases of infertility among trout, but DeLatour resigned shortly after.

The issues around DeLatour’s success as a Curator seem to largely come from his lack of knowledge about the specific New Zealand environmental conditions that needed to be considered in river management. DeLatour did show his experience as a skilled pisciculturalist, particularly in experimental research in the area of the effects of temperature on trout ova growth,⁶⁸ so it is unfair to suggest that he was merely incompetent. The case of the early-season running of male brown trout coupled with the challenges of the crossing of fish species were two key factors that drew attention to this difference in New Zealand ova

⁶⁶ ‘Wairarapa News’, *Evening Post*, 31 July 1900, p.5.

⁶⁷ ‘Rod and Gun’, *Evening Post*, 18 August, 1900, p.3.

⁶⁸ ‘Rod and Gun’, *Evening Post*, 11 August 1900, p.3.

collecting. It was also known among New Zealand anglers that the environmental conditions around rivers could change substantially between seasons, as farming and other industries were being established at a rapid rate. Hamilton advised anglers of this fact, stating “In a new country like this, banks that are to-day covered in scrub, fern, or forest may in a few years be quite clear and sown with English grasses and clovers to the water’s edge”.⁶⁹ This constantly shifting environment would have created challenges for the management of liberated trout populations that may not have been present in Britain. What DeLatour’s ova collection incident demonstrated to the Society, as well as members of the public following the situation on the pages of the *Evening Post*, was that while the rearing and management of trout may have traditionally been an area of British expertise, the unique environmental conditions in New Zealand meant that a new knowledge-base had to be built in order to ensure the successful establishment of trout.

The impact of trout on the indigenous freshwater fish in New Zealand waters is one of the more drastic modifications of the environment. While it may not have been the intention of the acclimatisation societies to damage indigenous fish populations to such great extent, it was certainly an aim to ensure that trout populations succeeded no matter the cost and indigenous fish were regarded as having little value. Initially, European colonists were unimpressed at the existing indigenous fish species, as they had very little to offer in terms of sport or sustenance. McDowall describes the early encounters of colonists with New Zealand fish as disappointing, as “the native fish fauna was sparse – relatively few species, many of them small, most of them secretive and seldom seen, and they were often so few in number”.⁷⁰ The eels were more plentiful, but were valued more by the early explorers who sought easy and nutritious food on their journeys, particularly when their own provisions were low.⁷¹ Grayling and whitebait were also sometimes consumed by colonists, but these were not considered to be good sport.⁷² The popular opinion, or at least the opinion of colonists in the position to consider possible alternatives, was that New Zealand lacked suitable fishing,

⁶⁹ Hamilton, p.131.

⁷⁰ McDowall, *Gamekeepers*, p.216.

⁷¹ *ibid.*, p.217.

⁷² *ibid.*

which meant that new species had to be introduced. While trout and salmon were the most desirable species, other species such as tench and perch were brought over by the societies to offer some variety to anglers. Species such as goldfish and catfish were also introduced into New Zealand waters, but their propagation was mainly due to aquarists.⁷³ The result of so many foreign species meant indigenous fish populations drastically declined. Introduced fish took over indigenous habitats with ease, and with the added advantage of acclimatisation society assistance trout became the main culprit in the extinction of many indigenous species.

While the introduction of trout was largely harmful for indigenous species, acclimatisation societies were not above using the existing fish species in order to help the success of the introduced. It was discovered by anglers that the common bully could be used as a very effective live bait for trout. McDowall describes the practice, “anglers would catch enough bullies for a fishing trip, and should any of them survive at the completion of an outing, they would be tipped into the nearest lake or stream”.⁷⁴ This would have had the unintended consequences of creating translocated populations of bullies in waterways across New Zealand. Another indigenous species that was considered useful was the common smelt, and was specifically distributed to other parts of New Zealand to encourage the growth of trout populations. Acclimatisation societies believed that smelt could form an excellent food source for trout. While smelt were usually only found in the mouths of rivers, they were often transported to supply lakes. In many cases, such as at Lake Rotorua and Lake Rotoiti this project was very successful and smelt became established in the region.⁷⁵

The Society and the State

The New Zealand Government was involved with acclimatisation societies from the 1860s, as it became clear that acclimatisation projects could have a significant influence on the colony. To support the work of acclimatisation societies legislation was enacted that would give authority and funding to these groups. The

⁷³ *ibid.*, pp.220-222.

⁷⁴ *ibid.*, p.226.

⁷⁵ *ibid.*, pp.226-227.

first of these acts was the *Salmon and Trout Act 1867*, which was primarily for, “the preservation and propagation of young salmon salmon fry and spawn and young trout trout fry and spawn upon its importation into this Colony”.⁷⁶ It also set out the regulations for fishing, and the officers who were in charge of enforcing the regulations. This was followed by the *Fish Protection Act 1877*, which sought to regulate fisheries in New Zealand while also, “encouraging establishment of the same”.⁷⁷ This act covered both freshwater and saltwater fisheries and allowed the government to regulate fisheries set aside for “the natural or artificial propagation of fish”.⁷⁸ Interestingly, this act also took into account the rights of Māori over waterways, and section 8 stated, “Nothing in this Act contained shall be deemed to repeal, alter or affect any of the provisions of the Treaty of Waitangi, or to take away, annul, or abridge any of the rights of the aboriginal natives to any fishery secured to them thereunder”.⁷⁹ The inclusion of this section alludes to the political issues that were tied with resources and resources management of waterways that had existed from very early on in New Zealand’s history.⁸⁰ While the *Salmon and Trout Act* and the *Fish Protection Act* may have been acclimatisation projects involving the protection and propagation of fish, there were no special allowances made in the acts that gave special authority to acclimatisation societies.

However, the *Animals Protection Act 1880* was one of the first acts that legislated for the work of acclimatisation societies in New Zealand. The long title, *An Act to consolidate the Law for the Protection of Animals and for the Encouragement of Acclimatization Societies*, shows that the role of New Zealand acclimatisation societies had been brought to the fore of environmental management.⁸¹ Acclimatisation societies had been acknowledged in previous legislation dealing with the protection of animals, particularly the *Protection of Certain Animals Act 1865* and the *Protection of Animals Act 1867*, but in the case

⁷⁶ *Salmon and Trout Act 1867*.

⁷⁷ *The Fish Protection Act 1877*.

⁷⁸ *ibid.*

⁷⁹ *ibid.*

⁸⁰ This section eventually had some force in the 1986 case, *Te Weehi v Inspector of Fisheries*, which related to sea fisheries. However, the courts were not willing to extend this argument to freshwater, as stated in Geoffrey Palmer’s discussion of the 1998 *Taranaki Fish and Game Council v McRitchie* case, in which Kirk McRitchie, of Ngāti Hine, was charged for fishing for trout without a licence. Geoffrey Palmer, *Reform: A Memoir* (Wellington: Victoria University Press, 2013), pp.577-578.

⁸¹ *Animals Protection Act 1880*.

of the 1880 Act the authority that was given to acclimatisation societies was in connection with game protection and management. Certain sections detailed the responsibilities that acclimatisation societies had, including careful monitoring of introduced species before they were released and also forbidding any non-desirable species from being introduced.⁸² There was also some mention of the benefits that the acclimatisation societies could receive from working closely with the Government. The act stated that in the case licences sold or penalties fined under the act, “shall be handed to the Treasurer of some registered acclimatization society in the district in which such fees or fines shall have been paid or recovered, for the purposes of that society”.⁸³ While fish are not mentioned as part of these game laws, the emphasis on the encouragement of acclimatisation societies had an effect on the ways they were able to follow through on acclimatisation projects in waterways too.

Parliamentary debates around these pieces of legislation reveal the willingness of the Government to support acclimatisation work. The importance of introducing advantageous species was recognised, and it was decided that it would be in the best interests of the colony to legislate for “protecting animals which had been imported into this colony at considerable cost and trouble”.⁸⁴ The work of acclimatisation societies in importing birds from “home” was particularly noted, and it was agreed that “it was obvious that some protection should be afforded by the Legislature”.⁸⁵ Protection for trout required a little more discussion, as some members of Parliament argued that this was an issue for the provincial councils rather than government. However, arguments were made that alluded to similar discussions in favour of protecting game animals, and that the acclimatisation of game fish was a part of this overall desired image of British game sports translocated to New Zealand.⁸⁶ Through these debates it became apparent that the Government of New Zealand had a clear vision for the New Zealand environment and the resulting support of acclimatisation societies at this time was a way that this vision could be realised. This vision encompassed the

⁸² *ibid.*

⁸³ *ibid.*

⁸⁴ W. Hall, *New Zealand Parliamentary Debates (NZPD)*, 1867, Vol.1 p.1229.

⁸⁵ Murison, *NZPD*, 1867, Vol.1, p.472.

⁸⁶ J. Vogel, *NZPD*, 1867, Vol.1, p.545.

clear idea that acclimatisation of New Zealand was a good thing for the colony as a whole, and any work to this end was to be supported.

Another tool that the Wellington Society used in environmental management was the system of licencing. The details of the Wellington Society hunting and fishing licences are outlined in the previous chapter, including the costs and issuing of licences, as licences were an important part in the management of the sport throughout the Society's area of authority. However, licences were also key to the successful maintenance of the environmental features of the districts. Fees that were paid on the issuing of licences were put back into the Wellington Society funds, which were then administered by the Council. Often these funds were used to ship in more species for introductions, but the wages of the Rangers and the upkeep of the Masterton fish ponds and hatchery were also paid for using the fees. Through the appointment of Rangers and Curators the Wellington Society was able to keep informed of any environmental issues that may have adversely affected trout populations, any drastic changes to the number of trout present in the district streams and rivers, and the battle against poachers or illegal fishing practices. This kind of monitoring of the streams and rivers was essential for the upkeep of the environment for the enjoyment of Wellington Society anglers, and could only be possible if professionals were hired for the job.

Licences also allowed the Wellington Society to set out rules and regulations for the public to follow. Such regulations were reviewed each year and presented in the annual reports of the Society. The regulations covered aspects of fishing ranging from the type of equipment and baits that could be used, to the area of streams that would be open, season dates, and the limits to the number and size of the trout that were caught. Setting regulations meant that the Wellington Society had a degree of control over the way Wellington anglers were able to fish, including size of trout populations and protection of certain environmental features, such as the preservation of rivers and streams from overfishing, or other damage as a result of anglers' activities. The management of the environment in this way was also important for tourism, as the image of pristine and plentiful rivers and streams was a significant feature for visiting anglers from other areas of New Zealand and also internationally. For recreational trout fishing to be a successful venture anglers needed to be kept happy during their visits to

Wellington waterways, and the waterways had to be maintained and protected in order to continue to draw in anglers to the region.

However, these regulations could not be made solely by acclimatisation societies. The *Protection of Animals Act 1867* had set out rules for acclimatisation societies concerning the need to be registered with the Colonial Secretary of New Zealand, which later became the Department of Internal Affairs.⁸⁷ By registering, the acclimatisation societies were given full authority under law to undertake acclimatisation work in New Zealand. Although this authority had been granted, it did not necessarily mean full autonomy, as it was also stipulated that any regulations that the acclimatisation societies wanted to pass for their districts had to be submitted to the Colonial Secretary's office for scrutiny before being published in the *Gazette*.⁸⁸ This was a rule that ensured the New Zealand Government could maintain a degree of control over the work of acclimatisation societies. It is difficult to judge whether this government influence over regulations was significant in the decisions that were made by the societies. Council minutes of the Wellington Society show that fishing regulations were discussed during the AGM, which may have meant that there would be more deliberation on this topic as the AGM was open to more members of the Society. It also meant that when letters were received by the Council regarding issues that required a change of regulations, any actions to address the issues had to be put off until after the regulations could be submitted and Gazetted. By slowing down the process of fishing regulation formation, the New Zealand Government may have played a role allowing acclimatisation societies to formulate more considered regulations rather than create hastily made decisions based on an instinctive reaction to immediate events.

Another interesting factor in the interaction between Society and State was the legislation allowing acclimatisation societies to pocket funds from fines for infringements within the district. As previously mentioned, the *Animals Protection Act 1880* allowed for acclimatisation societies to collect the fees or fines that were a result of licence infringement and that had been prosecuted in the

⁸⁷ *Protection of Animals Act 1867*.

⁸⁸ McDowall, *Gamekeepers*, p.56.

district.⁸⁹ Licence infringements were processed through the courts and many cases charged were fined. Allowing acclimatisation societies to take proceedings from the Crown courts and to collect the fines was essentially a privatisation of justice. This indicates that acclimatisation societies had a privileged position within New Zealand at this time and the Government was willing to give any extra help and support that was possible. This is also an example of just how willing the Government was to share in the kind of vision that acclimatisation societies offered for the future of New Zealand. However, it also shows the extent of the influence that acclimatisation societies could have over the colony. With backing from the government, financial as well as legislative, acclimatisation societies could instigate environmental changes that could have a lasting impact on New Zealand, and these changes could be based on the decisions made by a select group of individuals dictated largely by their own whims, ideas of improvement, and ultimate belief that acclimatisation was a desirable venture.

The Wellington Acclimatisation Society was able to identify a number of environmental factors that had a significant impact on the successful establishment of trout populations, and were able to manage and modify the natural environment to bring about drastic transformations. While monitoring the water quality of rivers and streams may have had a positive effect on the natural environment, other methods had consequences that impacted on the lives of people as well as the makeup of the landscape. A particularly striking example is the effects of eel destruction on the lives of Māori. The increasingly systematic approach to altering the environment eventually culminated in a series of laws made in favour of acclimatisation work, and a significant authority for environmental modifications which came about as a result of close ties between acclimatisation societies and the New Zealand government. This seemingly unrelenting environmental modification shows the extent to which many colonists saw acclimatisation as a good thing, for citizens as well as the good of the colony in general. It also shows the ultimate and naïve belief of acclimatisation societies in a perfectly controllable environment.

⁸⁹ *Animals Protection Act 1880.*

Conclusion

The Wellington Acclimatisation Society, initially formed by a small gathering of well-connected enthusiasts, grew to be a well-organised and highly-structured group that had a significant impact on the environment. The introduction of trout to Wellington was one of the first major ventures for the Society, and the success of this project relied on the knowledge and skill of Society staff, the creation of imperial, local, and national networks, and the large-scale transformation of Wellington waterways. The involvement and support of the New Zealand Government was a feature that helped with a number of aspects, and as a result the Wellington Society was able to drastically modify the natural environment and transplant a recreational fishing tradition for New Zealand anglers.

The work of the Wellington Acclimatisation Society continued for much of the twentieth century, and only in 1990 was rebranded as part of Fish and Game New Zealand.¹ Fishing licences were available to a large number of Wellington citizens, and the ideals of equality that the society was founded on remained a high priority for those on the council. Connections with other acclimatisation societies in New Zealand were strengthened through the continued work of the NZASA, which meant that a widespread angling community was soon established. The natural environment had been drastically altered in order for trout populations to survive, including the removal of potential predators and the large-scale releases of trout into rivers and streams, and anglers were able to fish during seasons that were controlled by legislation. This was a signal to the Wellington Society that their trout acclimatisation project was ultimately a success.

However, as more of the New Zealand public began to voice their concerns at the damage to the natural environment that imported species brought about, backlash was generated against the acclimatisation societies. Calls for conservation, which had emerged from as early as the end of the nineteenth century, gained force among the general public, and acclimatisation societies faced a great deal of criticism for their seeming disregard for indigenous species. These attitudes are still present today in studies about the negative impacts that

¹ McDowall, *Gamekeepers*, pp.462-463.

were brought about by acclimatisation work, and are hugely influential in many fields of scholarship that deal with the alarming state of many threatened and extinct indigenous species.

This thesis does not intend to defend the actions of acclimatisation societies in contributing to the destruction of many parts of the New Zealand environment. However, it does attempt to answer the call of Altherr and Reiger by studying the Wellington Society in its own time and context. That many colonists thought the transformation of the New Zealand environment to resemble British environments was largely a good thing may seem somewhat incomprehensible to modern readers. Yet this transformation was a part of the process of colonisation, and the result of newly arrived settlers attempting to make the unknown more familiar by taking control of a strange environment. There may have also been ideas of improvement at work, as colonists sought to introduce species that would be beneficial to both people and the environment. The introduction of trout to waterways was believed to be advantageous to the region for reasons of improvement, but also contributed to a growing tourism industry that emerged as a rapidly developing New Zealand began to take advantage of the naturally occurring wonders in the environment. Reasons behind the introduction of trout may have ranged from sentiment to economics, but a malicious intent of colonists and officials for environmental destruction was not necessarily high on this list.

Acclimatisation societies in New Zealand underwent a significant change as the shift to ideas of conservation intensified. Many of these societies ceased importations of species and instead emphasised their work in protection of the environment, including the continued monitoring of freshwater quality and the preservation of national parks and forest areas. By the 1990s acclimatisation societies became known as regional fish and game councils, which were collectively Fish and Game New Zealand. The primary roles of these council became management and maintenance of game sports, such as through taking care of licences and ensuring the habitats of game species remained protected. This change in focus to conservation and protection largely reflects a change within the acclimatisation societies themselves, as “No other agencies in New Zealand have ever been to the same extent self-regulating in a statutory sense with such minimal Government oversight, or without input into their affairs from the general public

at large.”² As the role of acclimatisation societies changed over time, the aims and purpose of the societies reflected these changes taking place from within the societies themselves and in the local community.

The history of acclimatisation societies, and of the associated hunting and fishing, in New Zealand is an area that could benefit from further academic research. The centenary histories published by a number of the societies show that there is a wealth of information that could be used by historians looking to investigate other aspects of acclimatisation projects, particularly in terms of freshwater. It would also be interesting to make a comparison between the histories of the larger acclimatisation societies. The differences between the people involved, the unique environmental features, and the geographical location of the New Zealand acclimatisation districts could all play a part. For example, it could be interesting to compare the Otago Acclimatisation Society, with its distinct Scottish makeup from colonists in the region, with the experience and work of the Wellington Society. Exploring the introduction of trout on a larger, New Zealand-wide scale could also be an avenue of further research. Such a large-scale study could reveal more about the social and environmental impacts of trout introductions, as well as how the close governmental ties, resulting in legislation in favour of the acclimatisation societies, had an effect on the local politics between regions.

Another area of further study could focus on the establishment of recreational fishing and an angling culture that became established in New Zealand along with the trout introductions. The history of sport has been a growing field in New Zealand. Again, there has been little academic study into recreational fishing, which means the work of acclimatisation societies has yet to be discussed in much detail in the context of introducing angling as a sport. The significant amount of angling literature, as well as the continued enthusiasm in the activity that is still exhibited to this day, indicates that there may be a variety of approaches that could be made in this area. Aspects around the history of angling tourism could also be explored more fully. While often Taupo and Rotorua are looked to as examples of attempts to draw in international tourism for troutfishing, the

² McDowall, *Gamekeepers*, p.32.

efforts of other regions in New Zealand to invite tourism could also be examined. This may involve looking at examples of local tourist attractions as part of an attempt to attract people already living in New Zealand to visit other regions for the purposes of new angling experiences. There could also be significant areas for research in terms of freshwater fisheries management as a way to enhance the experience of the angler.

The participation of women and Māori in the New Zealand acclimatisation societies is in need of attention from historians. While this thesis only briefly mentions the role of women in the early Wellington Society, more work could be done on the increasing involvement of women in the sport as a whole. This may be true of the histories of many male-dominated sports, but it could be potentially very interesting to look at a New Zealand case study as the dynamics of a small, settler-based society could perhaps have a unique influence over the involvement of women in outdoor sports. Māori participation also needs to be addressed by historians of acclimatisation societies. Often Māori are mentioned in records outlining their conflict with acclimatisation societies, either through breaking regulations or through interactions with officials. While larger issues such as access to resources and the control of land are often significant factors, it would be important to track these interactions between acclimatisation societies and Māori to gain insight into the impact that changes from acclimatisation to preservation may have had.

While the Wellington Acclimatisation Society began as a collection of well-connected enthusiasts with an interest in introducing “beneficial” species to the region, it soon became an extensive and organised group that was connected with other similar groups around New Zealand and the world. Working with highly skilled and knowledgeable people, using the resources and information gathered through national and imperial networks, and through state-sanctioned changes to the natural environment, the project of establishing trout in the Wellington district soon became a reality. This continued effort over the course of decades resulted in major and lasting changes on waterways in New Zealand. While there have been many negative associations with the environmental impact of these acclimatisation societies, they have also had an impact on the people of New Zealand too, through the development of what was in Britain an elite sport.

What the history of the Wellington Society and the introduction of trout helps to reveal is the connection between people and their environments, and the many ways in which a small group can work to leave behind a significant legacy for the people of New Zealand.

Bibliography

Primary Sources

Books

Berners, Dame Julia, *A Treatyse of Fysshynge wyth an Angle* (London, 1496: repr. Eliot Stock, 1880).

Geddie, John, *The Rivers of Great Britain: Descriptive, Pictorial, Historical. Rivers of the South and West Coasts* (London: Cassel and Company Ltd, 1897).

Godley, John Robert, *Extracts from Letters of John Robert Godley to C.B. Adderley* (London: Savill and Edwards, 1863).

Hamilton, G.D., *Trout-fishing and Sport in Maoriland* (Wellington: Government Printing Office, 1904).

Hursthouse, Charles, *New Zealand, or Zealandia, the Britain of the South* (London: Edward Stanford, 1857).

Potts, T.H., *Out in the Open: A Budget of Scraps of Natural History, Gathered in New Zealand* (Christchurch, NZ: Lyttelton Times Company Limited, 1882).

Spackman, W.H, *Trout in New Zealand: Where to find them and how to catch them* (Wellington: George Didsbury, 1892).

Thomson, George M., *The Naturalisation of Animals and Plants in New Zealand* (Cambridge: Cambridge University Press, 1922).

Tisdall, W.H., *Tisdall's Angler's Guide and Price List* (Wellington: Whitcombe and Tombs Ltd., 1896)

——, *Tisdall's Angler's Guide and Price List* (Wellington: Whictombe and Tombs Ltd., 1898)

Walton, Izaak, *The Compleat Angler or the Contemplative Man's Recreation* (London, 1653: repr. Nicholas Vane Publishers, 1948).

Unpublished Papers

Connell, Marjorie Bertha, 1907-1995: Seed Family Papers, MS-Group-1479, Alexander Turnbull Library (ATL).

Wellington Acclimatisation Society Minute Book, Vol.1, 1884-1899, MSX-6844, ATL.

Wellington Acclimatisation Society Minute Book, Vol.2, 1899-1900, MSX-6845, ATL.

Wellington Acclimatisation Society Minute Book, Vol.3, 1900-1906, MSY-5773, ATL.

Wellington Acclimatisation Society Minute Book, Vol.4, 1907-1911, MSY-5774, ATL.

Wellington Acclimatisation Society Minute Book, Vol.5, 1911-1914, MSY-5775, ATL.

Wellington Acclimatisation Society Miscellaneous Records, 1922-1934, 2004-04303/6, ATL

Official Publications

Bagge, W.R., 'Map of Fishing Streams in the Southern Portion of the North Island, New Zealand, expressly compiled for and issued with W.H. Tisdall's Angler's Guide' (Wellington: W.H. Tisdall, 1898).

Cyclopedia Publishing Company, *The Cyclopedia of New Zealand: Industrial, Descriptive, Historical, Biographical Facts, Figures, Illustrations*, 6 volumes (Wellington: Cyclopedia Publishing Company, 1895-1908).

Wellington Acclimatisation Society, 'Bound Annual Reports, 1884-1929', MSX-6855, ATL.

Department of Labour, *Appendix to the Journals of the House of Representatives*, H-06, various years.

Department of Tourist and Health Resorts, *Appendix to the Journals of the House of Representatives*, H-02, various years.

Downes, T.W., 'Notes on Eels and Eel-Weirs (Tuna and Pa-Tuna)', *Transactions and Proceedings of the Royal Institute*, Article XXXI, 1918, pp.296-316.

Legislation

Animals Protection Act 1880.

Fisheries Act 1908.

The Fish Protection Act 1877.

Protection of Animals Act 1867.

Salmon and Trout Act 1867.

Newspapers and Periodicals

Auckland Star.

Evening Post.

Fish and Game New Zealand.

New Zealand Herald.

The Times.

Secondary Sources

Books

Ashby, Clifton R., *The Centenary History of the Auckland Acclimatisation Society, 1867-1967* (Auckland: Auckland Acclimatisation Society, 1967).

Ayson, Peter D.G., *The Ayson Story: Glenshee to Otago, 1853-1990* (New Zealand: Clan Ayson of New Zealand Society, 1991).

Ayson, Douglas, *Looking Back: Glenshee to Otago, 1853-56 to 1953-56* (New Zealand: Clan Ayson of New Zealand Society, 1953).

Ballantyne, Tony, *Webs of Empire: Locating New Zealand's Colonial Past* (Wellington: Bridget Williams Books Limited, 2012).

Bardach, John E., John H. Ryther, William O. McLarney, *Aquaculture: The Farming and Husbandry of Freshwater and Marine Organisms* (New York: Wiley-Interscience, 1972).

Brockway, Lucile H., *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens* (New Haven: Yale University Press, 2002).

Butterworth, Susan, *Petone: A History* (Petone: Petone Borough Council, 1988).

Clark, Andrew Hill, *The Invasion of New Zealand by People, Plants, and Animals: The South Island* (New Brunswick: Rutgers University Press, 1949).

Crosby, Alfred, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, 2d ed. (Cambridge: Cambridge University Press, 2004).

Draper, Keith, *Hooked on Fly-Tying* (Christchurch: Shoal Bay Press Ltd., 1997)

——, *Choose the Right Fly: A Streamside Guide for New Zealand Anglers* (Christchurch: Shoal Bay Press, 1997).

Drayton, Richard, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000)

Druett, Joan, *Exotic Intruders: The Introduction of Plants and Animals into New Zealand* (Auckland: Heinemann Publishers, 1983).

Dunlap, Thomas R., *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia, and New Zealand* (Cambridge: Cambridge University Press, 1999).

Ferris, George, *Fly Fishing in New Zealand: A Compleat and Comprehensive Work on Fly Fishing* (London: William Heinemann Ltd., 1954).

Guthrie-Smith, Herbert, *Tutira: the Story of a New Zealand Sheep Station* (Auckland, 1921: repr. Random House New Zealand, 1999).

Harker, P.J., *Protectors of Our Environment: Otago Acclimatisation Society and the History of the Introduction of Deer to Otago* (Dunedin, New Zealand: The Otago Acclimatisation Society, 1973).

Holland, Peter, *Home in the Howling Wilderness: Settlers and the Environment in Southern New Zealand* (Auckland, New Zealand: Auckland University Press, 2013).

Hunter, Kate, *Hunting: A New Zealand History* (Auckland, New Zealand: Random House New Zealand, 2009).

Kay, Robin, and Tony Eden, *Portrait of a Century: The History of the N.Z. Academy of Fine Arts, 1882-1982* (Wellington, New Zealand: Millwood Press, 1983).

Lamb, R.C., *Birds Beasts and Fishes: The First Hundred Years of the North Canterbury Acclimatisation Society* (Christchurch, New Zealand: The North Canterbury Acclimatisation Society, 1964).

Lever, Christopher, *They Dined on Eland: The Story of the Acclimatisation Societies* (London, England: Quiller Press Ltd, 1992).

———, *Naturalized Animals: The Ecology of Successfully introduced Species* (London, England: T & A. D. Poyser Ltd., 1994).

———, *Naturalized Fishes of the World* (London, England: Academic Press, 1996).

MacKenzie, John M., *The Empire of Nature: Hunting, Conservation and British Imperialism* (Manchester: Manchester University press, 1988).

McClure, Margaret, *The Wonder Country: Making New Zealand Tourism* (Auckland: Auckland University Press, 2004).

McDowall, R.M., *Gamekeepers for the Nation: The Story of New Zealand's Acclimatisation Societies, 1861-1990* (Canterbury, New Zealand: Canterbury University Press, 1994).

——, *New Zealand Freshwater Fishes: An Historical and Ecological Biogeography* (New York: Springer, 2010).

——, *Ikawai: Freshwater Fishes in Māori Culture and Economy* (Christchurch: University of Canterbury, 2011).

Palmer, Geoffrey, *Reform: A Memoir* (Wellington: Victoria University Press, 2013)

Park, Geoff, *Theatre Country: Essays on Landscape and Whenua* (Wellington, New Zealand: Victoria University Press, 2006).

Parsons, John, *Parsons' Glory: A Bedside Book for Anglers* (Auckland: William Collins (New Zealand) Limited, 1976)

——, *A Taupo Season: A Bedside Book for Trout Fishermen* (Auckland: William Collins Publishers Ltd., 1979).

——, *Parsons' Passion: A Troutfisher's Year* (Auckland: The Halycon Press, 1990).

Paxman, Jeremy, *Fish, Fishing and the Meaning of Life* (London, Penguin Books Ltd., 1995).

Ritvo, Harriet, *The Animal Estate: The English and Other Creatures in the Victorian Age* (London, England: Harvard University press, 1987).

Sowman, W.C.R., *Meadow, Mountain, Forest and Stream: The Provincial History of the Nelson Acclimatisation Society, 1863-1968* (Nelson, new Zealand: Nelson Acclimatisation Society, 1981).

Wellwood, Joyce M., *Hawke's Bay Acclimatisation Society Centenary, 1868-1968* (Hastings, New Zealand: Hawke's Bay Acclimatisation Society, 1968).

Wilson, Kerry-Jane, *Flight of the Huia: Ecology and Conservation of New Zealand's Frogs, Reptiles, Birds, and Mammals* (Christchurch: Canterbury University Press, 2004).

White, Richard, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1995).

Edited Collections

Brooking, Tom, and Eric Pawson (eds.), *Seeds of Empire: The Environmental Transformation of New Zealand* (London: I.B. Tauris Co Ltd, 2011).

Darby, John, R. Ewan Fordyce, Alan Mar, Keith Probert, Colin Townshend (eds.), *The Natural History of Southern New Zealand* (Dunedin: Otago University Press, 2003).

Lambert, David, and Alan Lester (eds.), *Colonial Lives Across the British Empire: Imperial Careering in the Long Nineteenth Century* (Cambridge: Cambridge University Press, 2006).

Nathan, Simon, and Mary Varnham (eds.), *The Amazing World of James Hector* (Wellington: Awa Press, 2008).

Parsons, John, and Bryn Hammond (eds.), *New Zealand's Treasury of Trout and Salmon: An Angling Anthology* (Auckland: The Halycon Press, 1989).

Pawson, Eric, and Tom Brooking (eds.), *Environmental Histories of New Zealand* (Melbourne: Oxford University Press, 2002).

——, *Making a New Land: Environmental Histories of New Zealand*, new edition (Dunedin, New Zealand: Otago University Press, 2013).

Banivanua-Mar, Tracey and Penelope Edmonds (eds.), *Making Settler Colonial Space* (Hampshire, England: Palgrave Macmillan, 2010).

Winterbourne, Michael, George Knox, Colin Burrows, Islay Marsden (eds.), *The Natural History of Canterbury* (Christchurch: Canterbury University Press, 2008).

Articles and Chapters

Altherr, Thomas L., and John F. Reiger, 'Academic Historians and Hunting: A Call for More and Better Scholarship', *Environmental History Review*, Vol.19, no.5, Autumn, 1995, pp.39-56.

Anderson, Warwick, 'Climates of Opinion: Acclimatization in Nineteenth-Century France and England', *Victoria Studies*, Vol.35, no.2, Winter, 1992, pp.135-157.

Collins, Timothy, 'From Anatomy to Zoophagy: A Biographical Note on Frank Buckland', *Journal of the Galway Archaeological and Historical Society*, Vol.55, 2003, pp.91-109.

Dunlap, Thomas, 'Remaking the Land: The Acclimatization Movement and Anglo Ideas of Nature', *Journal of World History*, Vol.8, no.2, 1997, pp.303-319.

Galbreath, Ross, 'Displacement Conservation and Customary used of Native Plants and Animals in New Zealand', *New Zealand Journal of History*, Vol.36, no.1, 2002, pp.36-50.

Glasby, G.P., 'Modification of the New Zealand Environment', *Ambio*, Vol.15, no.5, 1986, pp.266-271.

Nicholls, Roberta, 'Elite Society in Victorian and Edwardian Wellington', in David Hamer and Roberta Nicholls (eds.), *The Making of Wellington, 1800-1914* (Wellington: Victoria University Press, 1990), pp.195-226.

Osborne, Michael A., 'Acclimatizing the World: A History of the Paradigmatic Colonial Science', *Osiris*, Vol.15, Nature and Empire: Science and the Colonial Enterprise, 2000, pp.135-151.

Wynn, Graeme, 'Conservation and Society in Late Nineteenth-Century New Zealand', *New Zealand Journal of History*, Vol.11, no.2, 1977, pp.124-136.

Theses

Star, Paul, 'From Acclimatisation to Preservation: Colonists in the Natural World in Southern New Zealand, 1860-1894'. PhD Thesis, University of Otago, 1997.

Online Sources

Atlay, J.B., 'Loch, Henry Brougham, first Baron Loch of Drylaw (1827-1900)', *Oxford Dictionary of National Biography*, www.oxforddnb.com.

Dell, R.K., 'Hector, James', *Dictionary of New Zealand Biography – Te Ara, the Encyclopedia of New Zealand*, www.teara.govt.nz.

Foster, Bernard John, 'Robinson, Hercules George Robert', *Te Ara – An Encyclopedia for New Zealand*, www.teara.govt.nz.

Langton, Graham, 'Du Faur, Emmeline Freda', *Dictionary of New Zealand Biography – Te Ara, the Encyclopedia of New Zealand*, www.teara.govt.nz.

McDowall, R.M., 'Ayson, Lake Falconer', *Dictionary of New Zealand Biography – Te Ara, the Encyclopedia of New Zealand*, www.teara.govt.nz.

Speirs, E. Yvonne, 'Thomson, George Malcom', *Dictionary of New Zealand Biography – Te Ara, the Encyclopedia of New Zealand*, www.teara.govt.nz.

Waitangi Tribunal Reports

Marr, Cathy, Robin Hodge, and Ben White, 'Crown Actions in Relation to Flora and Fauna, 1840-1912', Wellington, 2001.