Open Endings:
Recent Gray Whale Strandings and their Cultural Representations in the Pacific Northwest

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The candidate confirms that the work submitted is their own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

Whale strandings and mass whale strandings have captured human imaginations for millennia. My focus is on the 1999-2000 eastern North Pacific gray whale 'unusual mortality event' (UME), when 651 whales were found stranded in Mexico, the USA and Canada. This event sheds light on the historical and contemporary impacts of nineteenth and early twentieth-century commercial whaling, its physical effects on the species, and the cultural representation of gray whales in lay communities. I reflect on the shifting status of these animals as they experienced near-extinction, relative population recovery, and ongoing vulnerability to anthropogenic activity. Whale strandings trigger different responses shaped by science and religion, extinction and conservation, and the intertwined histories of whaling and colonialism. I focus here on two gray whale deaths in the Pacific Northwest and their cultural 'afterlives' during the UME period. The first whale stranded on Whidbey Island, Puget Sound, and its skeleton was subsequently salvaged for educational purposes. The second was found entangled in fishing nets in Clayoquot Sound, Vancouver Island, whereupon it was harvested it for consumption according to the traditional whaling customs of the Ahousaht First Nations people in a powerful enactment of community revival. This thesis is interdisciplinary, reflecting the complexity of gray whales and their significance in diverse human cultures. Grounded in the blue humanities, the thesis draws on marine environmental history, animal studies and environmental sciences to show how gray whale deaths provide rich insights into the species and its ecosystem while revealing different human communities' changing relationship to whales.

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Abbreviations

Central Puget Sound Marine Mammal Stranding Network – **CPSMMSN**

Committee on the Status of Endangered Wildlife in Canada – **COSEWIC**

British Columbia - **BC**

El Niño-Southern Oscillation – **ENSO**

Eastern north Pacific – **ENP**

International Union for the Conservation of Nature – **IUCN**

International Whaling Commission **– IWC**

National Marine Fisheries Service – **NMFS**

National Oceanic and Atmospheric Administration – **NOAA**

Polychlorinated biphenyls – **PCBs**

Unusual mortality event – **UME**

Glossary

Nuu-chah-nulth words

Aht – people of

Chakwa'si – Whale saddle or dorsal fin

Cheesum – Whaling magic, whaling shrine

Hahuulthi* (*haḥuułi) – Traditional or ancestral territories

***Ha'wiih* (*ḥawiiḥ*)** – Hereditary chiefs

Ha'wilth – Hereditary chief

Heshook-ish tsawalk – Everything is one

Iihtuup – Large whales (big mystery)

***Isaak* (*iis?*ak)** – Respect

***Oosumich (?uusumc'*)** – Vision quest

Qua-ootz – Owner of Reality

T'iick'in – Thunderbird

Tyee ha'wilth – Head chief

Introduction

Soundings

The winter of 1998/99 marked the beginning of a series of deaths on the Pacific coast of North America that was unprecedented in living memory. Between 1999 and 2000, 651 eastern North Pacific (ENP) gray whales (*Eschrichtius robustus*) were discovered stranded over thousands of miles of shoreline along their migration route passing Mexico, the USA and Canada [see figure 1].[1] Whale strandings are a natural phenomenon around the world and have been occurring for millions of years with different causes. In 1999, however, there was a dramatic increase in gray whale strandings, triggering concern among those monitoring the species. That year, 283 animals were discovered, whereas in the three previous years there had been an annual average of 41 individuals [see table 1 and 2, figure 2]. Following this new surge, the US government body of the National Marine Fisheries Service (NMFS) of the National Ocean Atmospheric Administration (NOAA) consulted the Working Group on Marine Mammal Unusual Mortality Events, which formally declared the deaths to be an 'unusual mortality event' (UME) for this species.[2] Under the 1972 US Marine Mammal Protection Act a UME is defined as 'a stranding that is unexpected, involves a significant die-off of any marine mammal population, and demands immediate response'.[3] The declaration of

[1] This thesis uses the North American spelling 'gray'. See Frances M. D. Gulland and others, 'Eastern North Pacific Gray Whale (*Eschrichtius robustus*) Unusual Mortality Event, 1999-2000', US Department of Commerce, *NOAA Technical Memorandum*, NMFS-AFSC-150 (2005), p. 2. The Eastern North Pacific gray whale will be referred to hereafter simply as the 'gray whale'. It will be made clear whether I am referring to the critically endangered West Pacific or extinct Atlantic gray whale populations.

[2] Gulland and others, p. 2.

[3] Marine Mammal Commission, 'Definitions', in *The Marine Mammal Protection Act of 1972 as Amended*, updated with 2015 Amendments by NOAA's National Marine Fisheries Service, Section 410 (2015), p. 103. The Working Group on Marine Mammal Unusual Mortality Events was established in 1991. It is made up of specialists from a range of organisations and fields of expertise. See NOAA Fisheries, 'Marine Mammal Unusual Mortality Events', <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-unusual-mortality-events> [accessed 8 May 2021].

the gray whale strandings as a UME marked this out as an anomalous incident that necessitated scientific investigation. It was the first UME declared for this species.

In 2000, a further 368 animals were found stranded, more than doubling the total number of strandings in the period [tables 1 and 2, figure 2].[4] Scientific researchers from the three North American countries along the migration path investigated the potential causes and implications of this new wave of strandings. Monitoring the migration of the species also revealed changes in the overall population. The migration started later than it usually did, there were fewer calves, and there was an increase in emaciated whales. More alarming still was the discovery of a wider population decline of around a third. Gray whales had been heavily hunted in the nineteenth and early twentieth centuries, but following over five decades of national and international protections, by the 1990s they were believed to have recovered to pre-whaling numbers. Numbers reached a peak population of approximately 26,635 in 1997/98, but by 2002 the population had dropped to an estimated 17,500.[5] The strandings therefore represented just a small percentage of the die-off.

These signs of serious trouble – of both visible and invisible mass death – raised concern amongst the scientific community and the general public in the affected Pacific regions.[6] The gray whale migrates from the winter grounds of the birthing lagoons of Baja California, Mexico, past the US states of California, Oregon and Washington, then along the coast of Canada's British Columbia until it reaches Alaska and its summer grounds in the Arctic Bering and Chukchi Seas as shown on the map below [figure 1]. Gray whales are a coastal species, often visible from land or dwelling relatively close to shore. This is a species that traverses three countries, that crosses several different states and bioregions, and spans a

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[4] Gulland and others, p. 2.
[5] Sheela McLean, 'Pacific Gray Whale Population Estimate Released', NOAA Fisheries: Alaska Regional Office (10 May 2002), <https://alaskafisheries.noaa.gov/node/10779> [accessed 13 December 2017].
[6] Gulland and others, p. 2; Linda Hogan and Brenda Peterson, *Sightings: The Gray Whales' Mysterious Journey* (Washington, DC: National Geographic Society, 2003), pp. 89, 90-91, 256; Dick Russell, *Eye of the Whale: Epic Passage from Baja to Siberia* (New York: Simon & Schuster, 2001), pp. 155, 180, 194, 202, 609-610.

diversity of communities and cultures. In death as in life, gray whales have been the focus of human imaginings along this vast coast for thousands of years, and the species continues to have layered and often shifting meanings for different human groups.

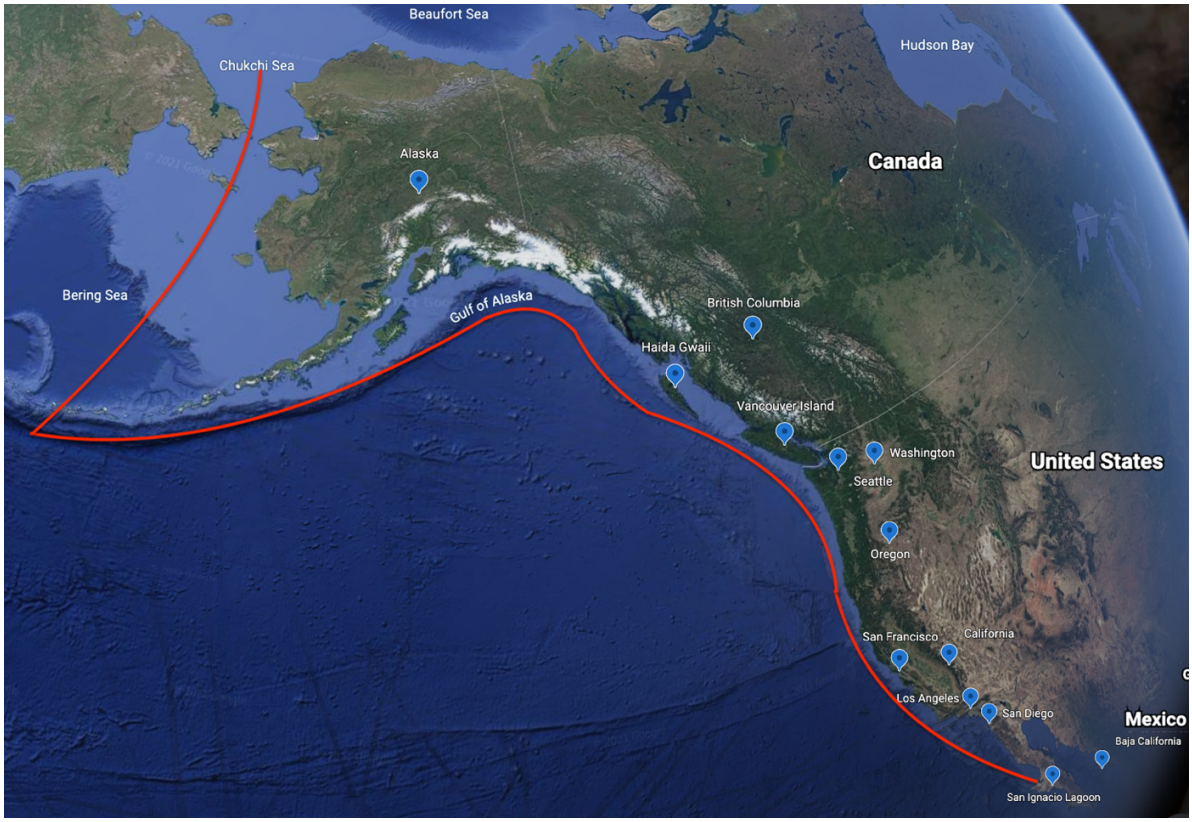

Figure 1. ENP gray whale migration route from Baja California to the Bering and Chuchki Seas. Source: Google Earth, map of eastern North Pacific and west coast of North America (2021), *Data SIO, NOAA, US Navy, NGA, GEBCO Landsat / Copernicus IBCAO I NEGI TMap Mobility*, adapted by author, <https://earth.google.com/web> [accessed 1 August 2021].

Table 1. Total gray whale stranding reports, 1995-2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
Total reported strandings	39	21	46	56	283	368	21	26

Source: Table adapted from F. M. D. Gulland and others., 'Eastern North Pacific Gray Whale (*Eschrichtius robustus*) Unusual Mortality Event, 1999-2000', US Department of Commerce, *NOAA Technical Memorandum*, NMFS-AFSC-150, (2005), p. 8.

Table 2. Gray whale strandings by region, 1999-2000

Year	**Mexico**	**California**	**Oregon**	**Washington**	**Canada**	**Alaska**	**Total**
1999	124	45	3	28	10	73	283
2000	207	59	2	23	22	55	368

Source: Table adapted from F. M. D. Gulland and others, 'Eastern North Pacific Gray Whale (*Eschrichtius robustus*) Unusual Mortality Event, 1999-2000', US Department of Commerce, *NOAA Technical Memorandum*, NMFS-AFSC-150, (2005), p. 28.

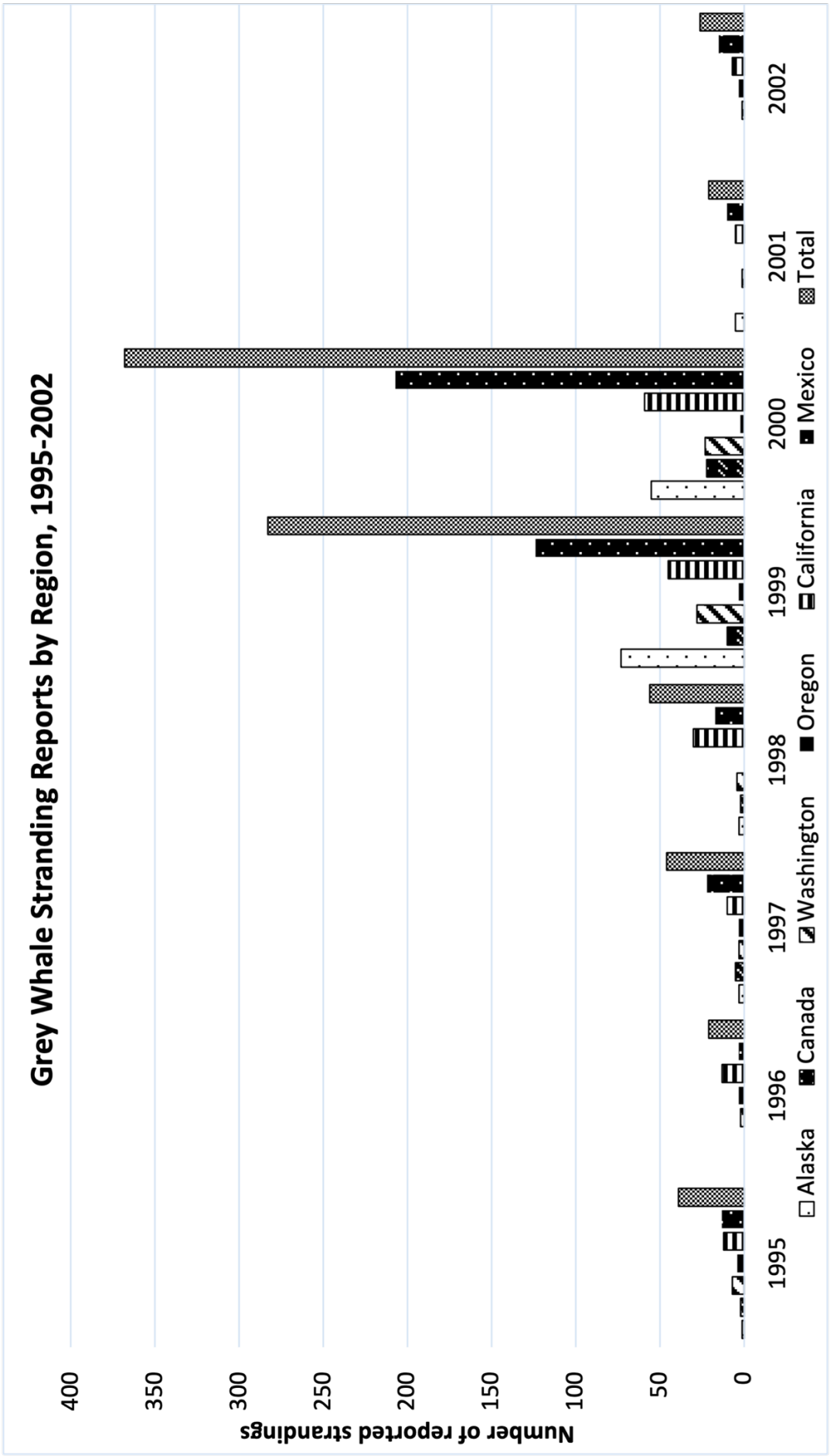

Figure 2. Gray Whale Stranding Reports by Region, 1999-2005. Source: Graph adapted from F. M. D. Gulland and others, ' Eastern North Pacific Gray Whale (*Eschrichtius robustus*) Unusual Mortality Event, 1999-2000' , US Department of Commerce, *NOAA Technical Memorandum*, NMFS-AFSC-150, (2005), pp. 28-29, 33.

In the first chapter of this thesis, I will set out the broader context for human-gray whale relationships, and will discuss some responses to the 1999-2000 mortality event along the length of the migration route. I will approach the gray whale strandings as an overall event, exploring scientific and popular cultural responses to the deaths, and examining theories that emerged, then changed over time, in some cases quite substantially. In the main body of the thesis, however, I have chosen to focus on one particular region that the gray whale customarily passes through on its migration: the transnational bioregion of the Pacific Northwest. The boundaries of the Pacific Northwest vary according to different definitions constructed around ecology, geography and culture. The region is usually understood as crossing the US-Canada border between British Columbia and Washington State at the 49th parallel and extending to Oregon [see figure 3].[7] Another conception of the Pacific Northwest is that of Cascadia, defined by the Pacific Ocean on its western edge and the Cascade Mountains in the east, which range between southern British Columbia, Washington, Oregon and northern California. Canadian ecocritic Laurie Ricou sees the Pacific Northwest, however conceived, as a 'border-crossing region'[8] whose borders, running both horizontally and vertically, include 'physical lines marked by rivers, mountains, and coastline [as well as] the conventional lines of latitude used as state and international boundaries'.[9]

[7] Beyond this, the boundary lines are shifting with some conceptualisations extending to Northern California, Alaska, Idaho and western Montana in the USA, and the Yukon in Canada. See Nicholas O'Connell, *The Spirit of Place in Pacific Northwest Literature*, (Seattle: University of Washington Press, 2003), p. xi. Raymond D. Gastil and Barnett Singer, *The Pacific Northwest: Growth of a Regional Identity* (Jefferson, NC: McFarland & Company, Inc., Publishers, 2010), p. 5.
[8] Laurie Ricou, 'The Pacific Northwest as a Cross-Border Region', in *Updating the Literary West,* by Western Literature Association (Fort Worth: Texas Christian University Press, 1997), pp. 262-67 (p. 262).
[9] Laurie Ricou, 'Crossing Borders in the Literature of the Pacific Northwest', in *Borderlands: Essays in Canadian-American Relations,* ed. by Robert Lecker (Toronto: ECW Press, 1991), pp. 286–308 (pp. 288-89).

Figure 3. Map of the extended boundaries of Pacific Northwest or Cascadia. Source: Lauren Tierney, Projection: US National Atlas Equal Area Sources: Commission for Environmental Cooperation, Natural Earth, QGIS, via Wikimedia, adapted by author, <https://commons.wikimedia.org/wiki/File:CascadiaMap.png> [accessed 1 August 2021].

The Pacific Northwest is a vast region that consists of both coastal and inland territory. For my purposes here, I will concentrate on human-gray whale relations and strandings in one particular coastal area of this bioregion. This is an area that runs along the outer Pacific coast of Vancouver Island and the Olympic Peninsula, covering the area between Vancouver Island and Washington State [see figure 4]. Depending on how it is seen, the region is either divided or connected by a large body of inland marine water, the Salish Sea, through which the international border runs [see figure 5]. The stories about gray whales around which I will move themselves circulate around different bodies of water and islands: from the Pacific Ocean bordering the outer coasts of Vancouver Island and the Olympic Peninsula, to the inlets of

Clayoquot Sound on Vancouver Island's west coast, to the inland waters of the Strait of Georgia, the Juan de Fuca Strait, and Puget Sound. More specifically, however, my work converges on two distinct island locations, one south of the US-Canada border, Whidbey Island (Puget Sound), and the other north of the 49th parallel, Flores Island (Clayoquot Sound).

The ostensible concern of this thesis is with major whale stranding events (UMEs) and their cultural and scientific implications. But, paradoxically perhaps, in its two main chapters I will be considering two *individual* deaths and community responses to them, though these deaths took place during, and can be used in turn to reflect upon, the UME years. These case studies fall on either side of an invisible aquatic border. Taken together, they represent the chance occurrence of two gray whales dying in proximity to specific human communities, which then became catalysts for a series of events that reflected the cultural values and histories of these communities. One case study presents a cultural relationship with gray whales that have been present in the region for less than two hundred years, while the other registers the presence of a people whose interrelationship with gray whales is many thousands of years old.

Figure 4. Map of Vancouver Island. Source: Wikimedia, 'Vancouver Island', via Demis, <https://commons.wikimedia.org/wiki/File:Vancouver_de.png> [accessed 1 August 2021].

Figure 5. Map of the Salish Sea. Source: Western Washington University, Aquila Flower (2020), <https://wp.wwu.edu/salishseaatlas/> [accessed 12 June 2021].

Of the two case studies, the first revolves around the beaching of a dead gray whale on Whidbey Island in December 1998 – one of the first victims of the UME. This whale would come to be known by locals as 'Rosie'. Since the mid-nineteenth century Whidbey Island, which is the traditional territory of several Coast Salish groups, has been dominated by Euro-American settler society. The main response to the beached gray whale was a community initiative to salvage the animal's bones for public exhibition. This response, as I will show in the second chapter of my thesis, was rooted in marine conservation, education and science, further linked to natural history displays of animals, and connected to the local marine environment. The dead whale brought together a collective of specialist and lay community members who took it upon themselves to 'save' it for posterity, reconstructing it in a joint

project that occupied more than a year. This display was Rosie's first and most conspicuous legacy: a particular kind of cetacean afterlife. While Rosie's significance may have faded in the two decades since being first put on display, the longer-term legacy of this particular animal's death and of the experience of working to preserve the skeleton, is that it forged the roots of a formal marine mammal stranding network in Puget Sound that endures to this day. Among its many roles, this network responds to marine mammal strandings, conducts routine necropsies, retrieves samples for research, conducts citizen science and engages in public education.

My second case study, highlighted in Chapter 3, centres on the death of a gray whale that drowned in fishing nets in Sydney Inlet, off Flores Island in Clayoquot Sound in March 2000. The nets in question belonged to the Ahousaht, one of the Nuu-chah-nulth First Nations whose traditional territories extend across western Vancouver Island [see figure 4]. The dead whale was towed to shore by the Ahousaht, then butchered and prepared for a feast according to traditional customs.[10] The Ahousaht, like other Nuu-chah-nulth peoples, are traditional subsistence whalers, having hunted gray and humpback whales for thousands of years but they have not actively whaled since the early twentieth century. Nuu-chah-nulth whaling was severely affected by the impact of European, American and Canadian commercial whaling industries on gray whale populations as well as the broader effects of European settler-colonisation, cultural assimilation and genocide. As I will show in Chapter 3, the single whale that died in Sydney Inlet and which was then cut up and ritually consumed, is bound up in an entire whaling tradition that was carried out continuously until the beginning of the twentieth century. The events that followed this whale's death also contain within them a densely interwoven cultural, cosmological and spiritual relationship with the species, a history of colonisation to be sure, but also a history of cultural revival:

[10] Denise Ambrose, 'Ahousaht Feasts on Drowned Whale', *Ha-Shilth-Sa,* 23 March 2000, pp. 1, 8.

Native survivance, in Gerald Vizenor's terms.[11] According to Vizenor, 'Native survivance is an active sense of presence over absence, deracination, and oblivion; survivance is the continuance of stories, not a mere reaction … Survivance is greater than the right of a survivable name'.[12]

I will consider how this anonymous gray whale reflects broader Nuu-chah-nulth survivance in the face of dramatic and far-reaching changes to their society and the natural world around them. While the whale was not a direct victim of the UME, it – like Rosie in Chapter 2 – was found close to human society, and its death was recorded and talked about, contributing to the broader discourses of mortality that, whether associated with the UME or not, inevitably circulated during the UME years.[13] As my two case studies aim to show, the reception of each of these two whale deaths, and their subsequent afterlives, were shaped by distinct knowledge systems that operate on different timescales. My thesis, too, works across multiple timescales, and even though my focus is on the period from the winter of 1998 through to the end of the UME in 2000, I will also explore interconnections between time periods that stretch across decades and centuries, millennia even. It is also the case that the two deaths, while each distinctive in its own way, reflect the broad history of human-gray whale relationships in the Pacific Northwest region. As previously noted, one case study represents a history that is less than two centuries old, the other a history of several millennia, but these two different histories – and the different conceptions of time that inform them – are both layered in themselves and productively intersect.

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[11] Gerald Vizenor, *Manifest Matters: Narratives on PostIndian Survivance* (Lincoln, NE: University of Nebraska Press, 1999); Gerald Vizenor, 'Aesthetics of Survivance: Literary Theory and Practice', in *Survivance: Narratives of Native Presence,* ed. by Gerald Vizenor (Lincoln, NE: University of Nebraska Press, 2008), pp. 1-23; Gerald Vizenor, *Liberty: Natural Reason and Cultural Survivance* (Lincoln, NE: University of Nebraska Press, 2009).
[12] Vizenor, 'Aesthetics of Survivance', p. 1.
[13] Gulland and others, pp. 10-11.

There are also several commonalities across the events and their cultural interpretations that each cetacean death would set in motion. Thus, while each death was a chance occurrence, it was also an opportunity for measured reflection. Complex meanings were ascribed to the whales, whose bodies, entangled as they were with those of the human communities involved with them, became a multi-purpose community event. In each scenario, I want to suggest, the sharing of knowledge was a fundamental aspect: either the chance to update information about biology and natural history or the occasion to rehearse and act upon traditional beliefs. Each scenario, I would further claim, can be used to problematise borders and boundaries of different kinds, both in terms of human societies in the region and of cetacean species and their living element: marine space. Finally, the two cases similarly reveal the volatile histories, both human and nonhuman, of the extraction, near-extinction, and population recovery of gray whales.

Preliminary reflections on method

This thesis takes an interdisciplinary approach that draws on blue humanities, environmental humanities, cultural studies and Indigenous studies. My background is in environmental history, but the cross-disciplinary remit of my PhD has led me to engage with insights from a mixture of different fields and sources. More specifically, I combine marine environmental history and animal history with ecocritical approaches, as well as contributing research that emanates from environmental sciences, especially marine conservation biology. The source material I have worked with is equally diverse, pointing to the myriad roles that a single species, the gray whale, continues to play in the cultural imagination of different human societies. Although this was not my original intention, I eventually chose to focus on a single cetacean species because each species has a complex relationship to humans that is influenced by its biology and where it lives in relation to human societies. Different whale

species have distinct whaling histories and population declines, and in turn attract distinct conservation efforts.[14] Each cetacean species involves a particular set of meanings to different people across time and space. By concentrating on the ENP gray whale, I have been able to explore these meanings in greater depth, and to shed light on the complexity of this specific interspecies relationship.[15]

While terrestrial environments and animals have long been the focus of scholarly research within the arts and humanities, it is only more recently that the ocean has become the subject of sustained academic attention. This is largely in response to growing knowledge about the human-caused degradation of marine ecosystems. Environmental historians and history of science scholars have been at the forefront of the so-called 'oceanic turn' since the opening years of the twenty-first century. Helen Rozwadowski has been applying the history of science to ocean history since the 1990s,[16] while in 2006 W. Jeffrey Bolster confidently announced 'Opportunities for Marine Environmental History'.[17] Literary scholars have contributed to the turn as well, among them Steve Mentz, who in 2009 called for a 'blue cultural studies' that moves beyond the ocean as a space to be crossed and instead takes the ocean as a subject in its own right.[18] Mentz and others have since come to be associated with the 'blue humanities', a cross-disciplinary formation that represents an attempt to situate the

[14] Examples of species specific studies include Richard Ellis, *The Great Sperm Whale: A Natural History of the Ocean's Most Magnificent and Mysterious Creature* (Lawrence, KS: University Press of Kansas, 2011); David W. Laist, *North Atlantic Right Whales: From Hunted Leviathan to Conservation Icon* (Baltimore: John Hopkins University Press, 2017).
[15] Serge Dedina, *Saving the Gray Whale: People, Politics, and Conservation in Baja California* (Tucson: University of Arizona Press, 2000).
[16] See, for example, Helen M. Rozwadowski, '"Ocean Planet" at the National Museum of Natural History, Smithsonian Institution', *Technology and Culture*, 37 (1996), 330-339; Helen M. Rozwadowski, 'Ocean's Depths', *Environmental History*, 15 (2010), 520–525; Helen M. Rozwadowski, 'The Promise of Ocean History for Environmental History', *Journal of American History*, 100 (2013), 136-139; Helen M. Rozwadowski, 'Focus: Knowing the Ocean: A Role for the History of Science', *Isis,* 105 (2014), 335-337; Helen M. Rozwadowski, *Vast Expanses: A History of the Oceans* (London: Reaktion, 2018).
[17] W. Jeffrey Bolster, 'Opportunities in Marine Environmental History', *Environmental History*, 11 (2006), 567-97 (p. 569).
[18] Steven Mentz, 'Toward a Blue Cultural Studies: The Sea, Maritime Culture, and Early Modern English Literature', *Literature Compass,* 6 (2009), 997-1013 (p. 997).

ocean and its inhabitants within human narratives.[19] The oceans have become the subject of ecocritical discourse, with Elizabeth DeLoughrey charting 'the rise of a new oceanic imaginary for the twenty-first century' that addresses the oceans as 'multispecies' spaces with 'geopolitical, biopolitical, environmental, and ontological dimensions'.[20] Meanwhile, other critics have proposed that in order to consider the oceans in the context of the Anthropocene, new dimensions and temporalities beyond the human must be conceptualised.[21] Stacy Alaimo, for example, suggests that while the sciences have been integral for environmental humanities in its terrestrial form, they have been of even greater importance in the blue humanities, 'since most aquatic zones, species, and topics exist beyond human domains, requiring the mediation of science and technology'. A gaze toward the ocean and its inhabitants thus evolves new questions around disciplines and methods: around ontologies and epistemologies.[22] New challenges present themselves too, for while scholarship in the blue humanities is usually distinguished by a reasonably high level of scientific literacy, it also reveals the potential for misalignment between knowledge derived from the sciences and insights provided by the arts.

As one of the most charismatic ocean species, whales are high-profile subjects of the oceanic turn. As early as 2001, Lawrence Buell applied the concept of global environmental awareness to literary works at whose centre were whales.[23] More recently, others have

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[19] Laura Winkiel, 'Introduction', *English Language Notes*, 57 (2019), 1-10 (p. 1); Stacy Alaimo, 'Introduction: Science Studies and the Blue Humanities', *Configurations*, 27 (2019), 429-32 (pp. 429, 429-32); Elizabeth DeLoughrey, 'Submarine Futures of the Anthropocene', *Comparative Literature,* 69 (2017), 32-44 (p. 32); Mentz; Ian Buchanan and Celina Jeffery, 'Towards a Blue Humanity', *Symplokē,* 27 (2019), 11-14; John Gillis, 'The Blue Humanities', *Humanities*, 34 (2013), <http://www.neh.gov/humanities/2013/mayjune/feature/the-blue-humanities> [accessed 16 December 2015].
[20] DeLoughrey, 'Submarine Futures', pp. 33, 42, 34.
[21] Pieter Vermeulen, '"The Sea, Not the Ocean": Anthropocene Fiction and the Memory of (Non)human Life', *Genre,* 50 (2017), 182-84; Stacy Alaimo, 'The Anthropocene at Sea: Temporality, Paradox, Compression', in *The Routledge Companion to the Environmental Humanities,* ed. by Ursula K. Heise, Jon Christensen and Michelle Niemann (London: Routledge, 2017), pp. 153-161.
[22] Alaimo, 'Introduction', p. 429.
[23] Lawrence Buell, 'Global Commons as Resource and Icon: Imagining Oceans and Whales', in *Writing for an Endangered World: Literature, Culture, and Environment in the U.S. and Beyond* (Cambridge, MA: Harvard University Press, 2009), pp. 197-223.

considered the human-whale relationship within Indigenous and postcolonial literatures.[24] More recently still, Graham Huggan interrogates major narrative junctures in the ways humans have related to whales, including empire and colonialism, display and entertainment, extinction and redemption, apocalypse and eschatology.[25] Arne Kalland is similarly preoccupied with the multiple discourses that surround whales and whaling.[26] Whales have also captured the attention of historians. In 2012, Graham D. Burnett published a comprehensive overview of cetacean science in the twentieth century, documenting key figures and institutions in the development of western conservation efforts.[27] Unsurprisingly, environmental historians have taken on this 'cetacean turn' – to borrow Jonathan Steinwand's phrase.[28] My own previous work was on responses to sperm whale strandings in Britain since the 1980s,[29] while Frank Zelko has recently focused on the 1970s anti-whaling movement and the creation of the 'metaphysical whale'. Zelko considers the whale's elevation to that of pseudo-spiritual figure in the New Age and icon of the environmental movement.[30] For his part, Ryan Tucker Jones has focused on environmental histories of whaling and other marine mammal exploitation through the history of Empire and the Pacific, with a particular

[24] See, for example, Jonathan Steinwand, 'What the Whales Would Tell Us: Cetacean Communication in Novels by Witi Ihimaera, Linda Hogan, Zakes Mda, and Amitav Ghosh', in *Postcolonial Ecologies: Literatures of the Environment,* ed. by Elizabeth DeLoughrey and George B. Handley (New York: Oxford University Press, 2011), pp. 182-99; Joni Adamson, 'Whale as Cosmos: Multi-Species Ethnography and Contemporary Indigenous Cosmopolitics', *Revista canaria de estudios ingleses,* 64 (2012), 29-45; Graham Huggan and Helen Tiffin, *Postcolonial Ecocriticism: Literature, Animals, Environment,* 2nd edn (London: Routledge, 2015), pp. 62-67, 215-218.
[25] Graham Huggan, *Colonialism, Culture, Whales: The Cetacean Quartet* (London: Bloomsbury Academic, 2018); Graham Huggan, 'Last Whales: Eschatology, Extinction, and the Cetacean Imaginary in Winton and Pash', *The Journal of Commonwealth Literature,* 52 (2017), 382-396.
[26] Arne Kalland, *Unveiling the Whale: Discourses on Whales and Whaling* (New York: Berghahn Books, 2009); Arne Kalland, 'Management by Totemization: Whale Symbolism and the Anti-whaling Campaign', *Arctic,* 46 (1993), 124-133.
[27] Graham D. Burnett, *The Sounding of the Whale: Science & Cetaceans in the Twentieth Century* (Chicago: University of Chicago Press, 2012).
[28] Steinwand.
[29] Sophia Nicolov, 'On the Beach and Beyond: Responses to and Understandings of Sperm Whale Strandings on the British North Sea Coast since 1980' (unpublished Master of Philosophy thesis, University of Bristol, 2017).
[30] Frank Zelko, 'From Blubber and Baleen to Buddha of the Deep: The Rise of the Metaphysical Whale', *Society and Animals*, 20 (2012), 91-108; Frank Zelko, 'A Flower is Your Brother!: Holism, Nature, and the (Non-Ironic) Enchantment of Modernity', *Intellectual History Review*, 23 (2013), 517-36.

emphasis on Russia and the Soviet Union.[31] Similarly, whales are a key species present in Bathsheba Demuth's monumental *Floating Coast: An Environmental History of the Bering Strait*, which moves through the territories of the Iñupiat, Yupik and Chukchi peoples, considering the changes to human and nonhuman life wrought by colonialism, ecological damage, capitalism and communism.[32] Last but not least, Cristina Brito has approached the marine environmental histories of whales and other ocean mammals from an interdisciplinary perspective, intertwining perspectives from history and marine historical ecology in order to understand both real and imagined whales and marine environments in the past, and the implications of this for today.[33]

This academic cetacean turn might be seen as just the latest iteration of an extended cetacean craze. In the 1970s, the prime example was the 'Save the Whale' movement, which was bound up in salvation and New Age environmentalism.[34] Now it is the reengagement with them in humanities research, nature writing and popular science. The flourishing presence of whales in academic scholarship reflects their growing prominence in creative nonfiction nature writing and popular science writing over the past 15 years. This includes

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[31] Ryan Tucker Jones, *Empire of Extinction: Russians and the North Pacific's Strange Beasts of the Sea, 1741–1867* (New York: Oxford University Press, 2014); Ryan Tucker Jones, 'Running into Whales: The History of the North Pacific from Below the Waves', *American Historical Review,* 118 (2013), 349-377; Ryan Tucker Jones, 'Vladimir Arsen'ev and Whales in Russia's Revolutionary Far East', *Sibirica*, 19 (2020), 60-78; Ryan Tucker Jones, 'When Environmentalists Crossed the Strait', *RCC Perspectives,* 5 (2019), 81-88.

[32] Bathsheba Demuth, *Floating Coast: An Environmental History of the Bering Strait* (New York: W. W. Norton and Company, 2019). See also, Bathsheba Demuth, 'What is a Whale? Cetacean Value at the Bering Strait, 1848–1900', *RCC Perspectives,* 5 (2019), 73-80.

[33] See, for example, Cristina Brito, 'Medieval and Early Modern Whaling in Portugal', *Anthrozoös*, 24 (2011), 287-300; Cristina Brito, 'Portuguese Sealing and Whaling Activities as Contributions to Understand Early Northeast Atlantic Environmental History of Marine Mammals', in *New Approaches to the Study of Marine Mammals*, ed. by Aldermaro Romero and Edward O, Keith (Rijeka: InTech, 2012), pp. 207-222; Cristina Brito and Andreia Sousa, 'The Environmental History of Cetaceans in Portugal: Ten Centuries of Whale and Dolphin Records', *PLoS One,* 6 (2011) <doi.org/10.1371/journal.pone.0023951>; Cristina Brito, 'Beauties and Beasts: Whales in Portugal, from Early-Modern Monsters to Today's Flagship Species', *Arcadia,* 21 (2018), <http://www.environmentandsociety.org/arcadia/beauties-and-beasts-whales-portugal-early-modern-monsters-todays-flagship-species> [accessed 28 May 2020].

[34] Frank Zelko, *Make It a Green Peace! The Rise of Countercultural Environmentalism* (Oxford: Oxford University Press, 2013), pp. 161-94; Zelko, 'From Blubber and Baleen', p. 103; Max Ritts, 'Environmentalists Abide: Listening to Whale Music – 1965–1985', *Environment and Planning D: Society and Space,* 35 (2017), 1096-1114. See Joan McIntyre, *Mind in the Waters: A Book to Celebrate the Consciousness of Whales & Dolphins* (New York: Charles Scribner's Sons, 1975).

works focusing on gray whales specifically, which have come to inform my own research.[35] Since 2008, Philip Hoare has woven together literary criticism with science, history and personal experience to reflect on the transatlantic cultural mediation of cetaceans in several nonfictional works.[36] Smithsonian palaeontologist Nick Pyenson has published a remarkable work of popular science drawing together his experiences excavating cetacean fossils around the world with scientific insights into the lives and deaths of these whales.[37] Most recently, Rebecca Giggs' *Fathoms: The World in the Whale* (2020) offers a far-reaching meditation on these animals via her own memories and experiences as well as through philosophy, history, and science, and asks the reader to contemplate what the fate of whales will be in an increasingly threatened environment.[38]

Chapter summaries

Before turning to my case studies in Chapters 2 and 3, in the first chapter I will discuss human responses to and imaginings of gray whales and the UME along the length of the North American migratory path. In this scene-setting chapter, I sketch out the major underlying contexts that go towards explaining the multiplicity of significances of each of the two gray whale deaths. These are the history and consequences of commercial whaling, the near-extinction of the species, the relative recovery of the population, and the UME between late 1998 and 2000. I draw together literary responses, in particular two creative nonfictional works, with articles from national and regional newspapers, online platforms, and scientific reports and publications. I also bring environmental humanities and cultural studies into

[35] Hogan and Peterson; Russell; Robert Busch, *Gray Whales: Wandering Giants* (Victoria, BC: Orca Book Publishers, 1998).
[36] Philip Hoare, *Leviathan or, the Whale* (London: Fourth Estate, 2009); Philip Hoare, *The Whale: In Search of the Giants of the Sea* (New York: Ecco, 2010).
[37] Nick Pyenson, *Spying on Whales: The Past, Present and Future of the World's Largest Animals* (London: Williams Collins, 2018).
[38] Rebecca Giggs, *Fathoms: The World in the Whale* (London: Scribe, 2020).

conversation with insights from marine conservation sciences and discuss the implications of this alliance between the sciences and the arts.

Chapter 2 is shaped by my fieldwork on Whidbey Island in July 2019. I spent several days there with Matthew Klope, a wildlife biologist who was the lead on the project to salvage and display Rosie's bones. I also visited the skeleton in Coupeville Wharf, interviewed others involved, and participated in porpoise and seal necropsies with the Central Puget Sound Marine Mammal Stranding Network (CPSMMSN). In this chapter, my work is guided by animal studies and environmental history, material culture and museum studies, as well as by marine conservation science.

In Chapter 3, 'The Ahousaht Whale', I turn my attention to the words of Ahousaht and other Nuu-chah-nulth voices. This includes major academic works by Nuu-chah-nulth scholars, non-academic material such as published oral histories and articles from the Nuu-chah-nulth newspaper *Ha-Shilth-Sa*, and works by prominent Nuu-chah-nulth artists. The 1994 documentary film *The Washing of Tears*, directed by Hugh Brody, which centres on the Mowachaht/Muchalaht, a Nuu-chah-nulth Nation, has also been an invaluable resource.[39] Among the disciplines I draw on here are Indigenous studies, environmental history and cultural anthropology.

In 2018 and 2019, I carried out archival research in a number of locations in California, Washington and Vancouver Island. During my field trip to the US west coast, I also interviewed key figures in gray whale and marine mammal conservation and strandings in California (Monterey, LA and San Francisco) and Washington (Olympia and Whidbey Island). Much of what I read, saw and experienced during my fieldwork in North America has not made it onto these pages, but it has offered a depth and breadth of understanding that has undoubtedly influenced the direction I have taken in my work.

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[39] *The Washing of Tears,* dir. by Hugh Brody (Nootka Sound and Picture Co. Inc., 1994).

In the first year of my PhD, my research aimed at taking in the entire length of the gray whale's migration route, and I ambitiously envisioned my thesis exploring gray whale strandings and the UME in the context of the three countries that the species passes on its biannual voyage. A semi-conscious shift in focus began in the summer of 2018, at the end of my first year of research, when an opportunity arose to travel to Vancouver Island to participate in a course at the Bamfield Marine Sciences Centre called 'In Pursuit of the Whale'. The course, run by leading ecocritical scholars Greg Garrard and Nicholas Bradley, was an interdisciplinary exploration of whales in literature, culture, history and science. It was pure coincidence that I had been researching the gray whale UME and its range of cultural representations, and that this course was being run in a location the gray whales pass on their migration route. The immersive course was three weeks long and rooted in place-based learning, including classes on the beach, hikes, and a whale-watching trip. Bamfield Marine Sciences Centre and the community of Bamfield are on the traditional territory of the Huu-ay-aht Nation of the Nuu-chah-nulth peoples, and we visited the ancient whaling village of Kiiẋin with Traditional Knowledge Holders Stella Peters and Wisqii. We hiked through old growth rainforest and walked along the same shoreline that has been traversed by the Huu-ay-aht for thousands of years, until we reached a settlement tucked between the edge of the forest and the beach. The trees made way here for curving beaches and jagged, uneven rocks set against the myrtle green-blue ocean and the white foam of the waves. The village, last inhabited in the nineteenth century, contains the standing remains of longhouses built from huge tree trunks. Trees and roots have wound their way around the posts, and there were some old whale bones in the undergrowth with moss growing on them. Our guides talked about the historical importance of the longhouse to community, whaling and life in this intertidal realm. Carbon dating at the site reveals that it has been occupied for over 5000 years. The immensity of time and human history swirled around us.

My experiences on the course were transformational. In our spare time we went swimming in the Pacific Ocean, rowed boats to the convenience store, camped on the beach, and went for walks in the temperate rainforest. We spent time reading and writing in the scallop-inspired Rix Centre or the idyllic library, both of which looked out over Barkley Sound where seals and sea otters could be spotted, and we watched the boats coming in and out. I was told that gray whales sometimes come and dwell in the coastal waters, but this year none had. To my frustration, I still have yet to see a live gray whale. But where there was a dearth of gray whales, we witnessed an abundance of orcas. During our whale watching trip in Barkley Sound, we saw K pod, one of the three pods that make up the critically endangered southern residents. For around 40 minutes, we watched these cetaceans, so emblematic of the Pacific Northwest, breaching, tail slapping and sounding. Their straight, towering dorsal fins cut through the water as they puffed out clouds of luminescent air. It is difficult to come away from experiences like this unchanged.

In 2019, I travelled to California and Washington to carry out a two-month field trip. While I was planning my trip, dozens of gray whales started to wash ashore. It was a chilling echo of the mass death that had taken place precisely two decades earlier and it was declared as the second UME for the species shortly before I arrived in the USA. I decided to maintain focus on the first event because the deaths were still unfolding, but it was nevertheless at the forefront of many of the conversations I had during my journey. I travelled through San Francisco, Monterey, Los Angeles and San Diego, carrying out archival research and interviews with key individuals involved in gray whale strandings and marine mammal response on the California coast. Just over a month into this work, I fetched up on Whidbey Island to see Rosie's display and interview those involved. I met Matthew Klope, a key figure in the project to salvage and exhibit Rosie. He went above and beyond to share his time and knowledge, his memories and experience with me. I spent several days with him as he

accompanied me to Rosie's display, showed me around Whidbey Island, and invited me to a marine mammal necropsy. He welcomed me into his home and taxidermy workshop, always giving me a lift back to my motel on the edge of town. I am so grateful for Matt and his wife Joan's openness and friendship because what they shared with me has had a great influence on my research and indeed on me personally. My time on Whidbey Island was similarly a form of place-based, experiential learning. These two periods of my PhD shaped my focus on the Pacific Northwest, and more particularly the immediate region on either side of the border that runs through the Salish Sea. In what follows, I will set the scene for the UME and human-gray whale relationship, which provides a rich frame of reference for understanding human responses to the deaths of the two gray whales in the Euro-American settler community of Whidbey Island, and the Ahousaht First Nations people of Clayoquot Sound.

Chapter 1

Gray Whales Ashore

Introduction

From the discovery of ancient whale graveyards that are millions of years old to the images that circulate through the global media of contemporary mass whale strandings, people today all over the world are captivated by large-scale whale strandings. Mass strandings are a natural phenomenon that have occurred for thousands, even millions of years, as evidenced in palaeontological discoveries, oral histories and ancient writings.[1] Answers have been sought to these unusual and incongruous events, explanations offered and meanings ascribed to the deaths, which often reflect the contemporary concerns of particular human societies.[2] For example, mass sperm whale strandings on the Flemish North Sea coast in the sixteenth and seventeenth centuries were once considered ominous signs of the outcome of overseas wars, but since the late twentieth century the strandings of sperm whales on North Sea coastlines have often been interpreted as evidence of human damage to the ocean.[3] Advances in scientific research mean that more knowledge can now be gained from whale strandings. The recent unearthing of mass strandings that occurred many millions of years ago offers us a lens

[1] Pyenson, *Spying on Whales,* pp. 101-109; Nick Pyenson and others, 'Repeated Mass Strandings of Miocene Marine Mammals from Atacama Region of Chile Point to Sudden Death at Sea', *Proceedings of Royal Society B*, 281 (2014), <http://dx.doi.org/10.1098/rspb.2013.3316>; Jacqui Mulville, 'The Role of Cetacea in Prehistoric and Historic Atlantic Scotland', *International Journal of Osteoarchaeology,* 12 (2002), 34-48 (p. 36); Brito and Sousa, p. 2; Giovanni Bearzi and others, 'Overview of Sperm Whale Physeter Macrocephalus Mortality Events in the Adriatic Sea, 1555–2009', *Mammal Review,* 41 (2011), 276-293; A. Asbjørn Jøn, 'The Whale Road: Transitioning from Spiritual Links, to Whaling, to Whale Watching in Aotearoa New Zealand', *Australian Folklore*, 29 (2014), 87-116 (p. 91, 92, 94); Hal Whitehead and Luke Rendell, *The Cultural Lives of Whales and Dolphins* (Chicago: University of Chicago Press, 2015), p. 259; Aristotle, *Historia Animalia,* 9.48, quoted in Whitehead and Rendell, p. 259; Pliny the Elder, *The Natural History of Pliny*, 9.4, trans. by John Bostock and H.T. Riley (London: Taylor and Francis, 1855), <http://data.perseus.org/citations/urn:cts:latinLit:phi0978.phi001.perseus-eng1:1> [accessed 12 July 2021].

[2] Michael T. Walsh and others, 'Mass Strandings of Cetaceans', in *CRC Handbook of Marine Mammal Medicine: Health, Disease, and Rehabilitation*, ed. by Leslie Dierauf and Frances M. D. Gulland, 2nd edn (Boca Raton: Taylor & Francis, 2001), pp. 83-96 (p. 83).

[3] Schama, pp. 133, 135, 137; Nicolov, pp. 133-39.

onto deep time, while the UMEs that have occurred since the late twentieth century shed light on the past, present and potential future of cetacean species and their ecosystems.[4]

A mass stranding involves the coming together of two or more whales in a particular area. Many different causes obtain, both natural and anthropogenic, but sometimes it is not possible to identify why the stranding has occurred.[5] Marine biologists Hal Whitehead and Luke Rendall call mass strandings 'one of the great puzzles of the Cetacea'.[6] Odontocetes (toothed whales) mass strand the most often because they are highly social species, using echolocation as their primary means of navigating the marine world. Sperm whales, false killer whales and, more than any, pilot whales mass strand the most frequently. Other toothed cetaceans are also known to mass strand, including melon headed whales, beaked whales, bottlenose whales, orcas and dolphin species.[7] Current scientific research suggests that if an animal becomes disoriented and strands or beaches because it is sick, injured or old, the social cohesion of a pod may mean that others follow to stay with the affected animal and end up being stranded themselves. Moreover, toothed cetaceans rely on echolocation and this can be disrupted by underwater terrain, for example sandbanks and shallow waters. Navigational errors may bring pelagic species into waters that are fundamentally unsuited to the species. For instance, sperm whales, which are deep diving creatures, may struggle to navigate an area that is relatively shallow: the dominant theory behind the stranding of pods of bachelor sperm whales on North Sea European coasts and repeated mass stranding of hundreds of pilot

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[4] Nick Pyenson and others; Elizabeth Alter, E. Rynes and Stephen R. Palumbi, 'DNA Evidence for Historic Population Size and Past Ecological Impacts of Gray Whales', *Proceedings of the National Academy of Sciences*, 104 (2007), 15162-15167.
[5] Joseph R. Geraci and Valerie J. Lounsbury, *Marine Mammals Ashore: A Field Guide for Strandings,* 2nd edn (Baltimore: National Aquarium Baltimore, 2005), pp. 113-118; Whitehead and Rendell, pp. 258-264; C. J. Bradshaw, K. Evans and M. A. Hindell, 'Mass Cetacean Strandings: A Plea for Empiricism', *Conservation Biology* (2006), 584–586.
[6] Whitehead and Rendell, p. 159.
[7] Whitehead and Rendell, p. 159; Geraci and Lounsbury, pp. 113-115; Nick Pyenson, 'Carcasses on the Coastline: Measuring the Ecological Fidelity of the Cetacean Stranding Record in the Eastern North Pacific Ocean', *Paleobiology*, 36 (2010), 453–480 (p.454).

whales in New Zealand and Australia.[8] Beaked whales are also affected by anthropogenic noise pollution, such as military sonar exercises, with groups of animals being found on beaches with evidence of decompression sickness (the bends) because they have risen too quickly from deep water to escape the noise.[9]

The mass stranding of baleen whales, which include gray whales, is much rarer. These whales do not stay in large, socially cohesive pods, and they do not use echolocation. Mass strandings of baleen whales have been linked to harmful algae blooms which can be of natural causation (e.g. major weather events that produce warming waters) or the result of human-induced pollution and accelerated climate change. Harmful algae blooms have been linked to the ancient whale graveyard Cerro Ballena in the Atacama Desert, Chile, containing a number of long-extinct cetaceans. They have also been connected to the 2015 discovery of over 300 stranded sei whales in Chile's southern Patagonian fjords.[10]

The most common response to such mortality events is to question why they occur, but there is no single or obvious answer. Mass whale strandings, like other instances of large-scale death, demand an urgent response. The site of so many whale bodies out of place on land, many of them dying or dead, inevitably makes people wonder if something has gone

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[8] Whitehead and Rendell, pp. 259-60; Geraci and Lounsbury, p. 115; D. E. Sergeant, 'Mass Strandings of Toothed Whales (Odontoceti) as a Population Phenomenon', *Scientific Reports of the Whales Research Institute,* 34 (1982), 1-47; Sandro Mazzariol and others, 'Sometimes Sperm Whales (Physeter macrocephalus) Cannot Find Their Way Back to the High Seas: A Multidisciplinary Study on a Mass Stranding', *PLoS ONE* (2011), <https://doi.org/10.1371/journal.pone.0019417>; Joseph G. Schnitzler and others, 'Inter-Individual Differences in Contamination Profiles as Tracer of Social Group Association in Stranded Sperm Whales', *Scientific Reports,* 8 (2018), <https://doi.org/10.1038/s41598-018-29186-z>; Pyenson, 'Carcasses on the Coastline', p. 454; Nicolov, p. 74.

[9] Darlene R. Ketten, 'Sonars and Strandings: Are Beaked Whales the Aquatic Acoustic Canary', *Acoustics Today,* 10 (2014), 46-56; Y. Bernaldo de Quirós and others, 'Advances in Research on the Impacts of Anti-Submarine Sonar on Beaked Whales', *Proceedings of the Royal Society B,* 286 (2019), <https://doi.org/10.1098/rspb.2018.2533>; Antonio Fernández and others, '"Gas and Fat Embolic Syndrome" Involving a Mass Stranding of Beaked Whales (family *Ziphiidae*) Exposed to Anthropogenic Sonar Signals', *Veterinary Pathology,* 42 (2005), 446-457; E. C. M. Parsons, 'Impacts of Navy Sonar on Whales and Dolphins: Now Beyond a Smoking Gun?', *Frontiers in Marine Science,* 4 (2017), <https://doi.org/10.3389/fmars.2017.00295>; Geraci and Lounsbury, p. 84; Pyenson, 'Carcasses on the Coastline', p. 460.

[10] Verena Häussermann and others, 'Largest Baleen Whale Mass Mortality During Strong El Niño Event is Likely Related to Harmful Toxic Algal Bloom', *PeerJ,* 5 (2017), <https://doi.org/10.7717/peerj.3123>; Pyenson and others, 'Repeated Mass Strandings'.

seriously awry in the marine environment. Such scenes are simultaneously shocking and distressing; they administer a jolt to the system that is potentially devastating in its effect.[11] The gray whale unusual mortality event sits at an intersection between mass whale strandings and individual strandings. Certainly, the 651 individual strandings over the course of two years in Mexico, the USA and Canada amounted to a protracted mass mortality event. Nevertheless, individual whale strandings, while upsetting in themselves, do not usually trigger the visceral shock of a large mass whale stranding. Instead, an overall picture builds up as time passes and the numbers of strandings increase across different regions.

In this chapter, I aim to look at the 1999-2000 ENP gray whale UME, which involved the strandings of 651 animals, and varying responses to it, in terms of a series of interconnected mortalities. The following two chapters then engage with local responses to individual deaths. This reflects the position that UMEs hold as both mass death events and individual mortalities. I will oscillate in my work between coastal and oceanic perspectives, emphasising the ways in which these spaces exist in symbiosis and ultimately cannot be separated. Thus, while the stranding of gray whales presents a radical dislocation of these animals from their natural habitat, their appearance on the shoreline cannot be disconnected from the Pacific waters in which their lifecycle takes place. The intertidal zone is a 'hybrid, fluctuating between high and low tide', where the coming and going of the tides contract and expand the marine environment and the terrain, revealing and obscuring landscapes.[12] It is in

[11] Adam Morton, 'Death at Hells Gates: Rescuers Witness Tragic End for Hundreds of Pilot Whales on Australian Coast', *Guardian,* 25 September 2020, <https://www.theguardian.com/environment/2020/sep/25/death-at-hells-gates-rescuers-witness-tragic-end-for-hundreds-of-pilot-whales-on-australian-coast> [accessed 30 July 2021]; 'New Zealand Beached Whales: Why are so Many Getting Stranded?', *RNZ,* 1 December 2018, <https://www.rnz.co.nz/news/national/377272/new-zealand-beached-whales-why-are-so-many-getting-stranded> [accessed 30 July 2021]; Barry Lopez, 'A Presentation of Whales', in *Crossing Open Ground* (New York: Vintage, 1989), pp. 117-46.

[12] Nicolov, pp. 12-13; Kevin Meethan, 'Walking the Edges: Towards a Visual Ethnography of Beachscapes', in *Liminal Landscapes: Travel, Experience and Spaces In-Between*, ed. by Hazel Andrews and Les Roberts (London: Routledge, 2012), pp. 69-86 (p. 70).

this ecotone that humans encounter stranded gray whales,[13] a contact zone where gray whales are accessible to humans in a territory that is exposed twice a day.

This chapter provides a broad overview of scientific and wider societal responses to the 1999-2000 gray whale UME. I begin with historical perspectives on the human-gray whale relationship, then move into the science of strandings and UMEs, and end with some of the key conceptual themes that emerged during my research and shape Chapters 2 and 3: endings and afterlife; conservation and survivance. I discuss how gray whales (among other species) have come to be associated with notions of vulnerability as a legacy of the whaling industry. I also reflect on the ways in which scientists and lay people have sought answers to this particular mortality event, as well as on what the strandings reveal about the species, the cause (or causes) of death, and the impact of human activity on cetaceans and the ocean more widely. As Bruno Latour contends, there are phenomena that are 'too social and too narrated to be truly natural'; human responses to whale strandings exemplify this 'double construction'.[14] I also analyse selected works by creative writers who have responded to the gray whale and the UME, highlighting some of the ways in which their observations are alternately informed by and diverge from contemporary scientific information. The two key texts here are nonfictional accounts: Dick Russell's *Eye of the Whale: Epic Passage from Baja to Siberia* (2001), and *Sightings: The Gray Whales' Mysterious Journey* (2003) by Linda Hogan and Brenda Peterson, both written at the time of the 1999-2000 mortality event.[15]

[13] Michael Pearson proposes that the littoral is 'a symbiosis between land and sea', see Michael N. Pearson, 'Littoral Society: The Concept and the Problems', *Journal of World History*, 17 (2006), 353-373 (p. 357).
[14] Bruno Latour, *We Have Never Been Modern,* trans. by Catherine Porter (Cambridge, MA: Harvard UP, 1993), p. 6.
[15] Russell; Hogan and Peterson.

Covering the territory

The eastern North Pacific population of gray whales has twice been hunted to the brink of extinction, once in the mid-1840s and the second time in the early 1900s.[16] The first wave of whaling is the most infamous, focusing as it did on the lagoons in Baja California Sur that offer sanctuary to gray whales coming to mate, give birth, and nurse their young [figure 6]. There are three main birthing lagoons: Laguna San Ignacio (also known as Bahía de Ballenas or Whale Bay), Bahía Magdalena (Magdalena Bay), and Ojo de Liebre (Eye of the Hare). The last is known to the English-speaking world as Scammon's Lagoon, after the notorious whaler Captain Charles Melville Scammon, who drove the violent nineteenth-century near-extermination of the species.[17]

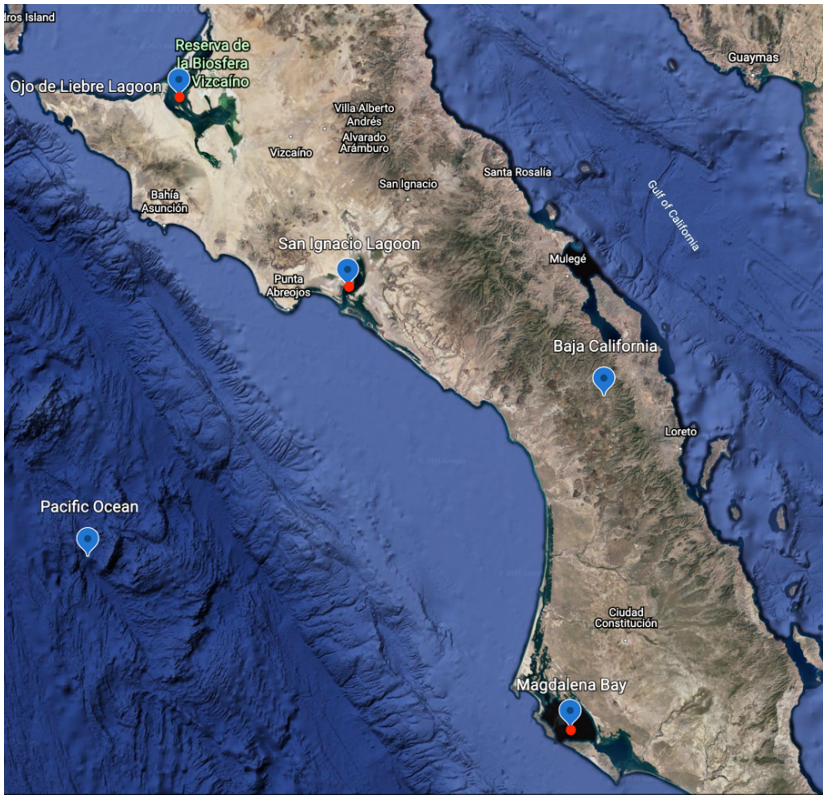

Figure 6. Map of the three lagoons where gray whales go to mate, give birth, and nurse their young in Baja California, Mexico. Source: Google Earth, map of Baja California from Ojo de Liebre Lagoon to Magdalena Bay (2021), *Data SIO, NOAA, US Navy, NGA, GEBCO Landsat / Copernicus Data LDEO-Columbia, NSF, NOAA INEGI,* adapted by author <https://earth.google.com/web> [accessed 1 August 2021].

[16] Richard Ellis, *Men and Whales* (New York: Knopf, 1991), pp. 242-244; Dedina, pp. 19-24, 26.
[17] See Dedina, pp. 20-24.

In the chapter dedicated to the California gray whale in his 1874 book, *The Marine Mammals of the North-Western Coast of North America*, Scammon graphically describes how he and his men took full advantage of the lagoons.[18] In one extract, he recalls how when two females with their calves were discovered 'playing about' in Bahía Magdalena, the whalers 'attacked' and set the 'hand-lance into her "life", dispatching the animal at a single dart' and subsequently exploiting the vulnerability of the mother-calf pairs.[19] The targeting of whales in the lagoons – in particular the reckless slaughter of females, including those that were pregnant, and calves, 'the core reproductive stock of any animal population' – contributed to the decimation of the species.[20] By 1869, Scammon declared that San Ignacio Lagoon would 'very soon g[i]ve out' and was 'no longer regarded as valuable for that purpose', while Ojo de Liebre now 'had so few whales' that it had 'been abandoned'.[21] In one of the best-known passages from Scammon's work, he laments that the lagoons 'are already nearly deserted'. All that is left are 'mammoth bones … bleaching on the shores … scattered along the broken coasts, from Siberia to the Gulf of California; and ere long it may be questioned whether this mammal will not be numbered among the extinct species of the Pacific'.[22]

In reading Scammon's work, my reaction to the brutality enacted upon this species and other marine mammals was visceral. As one nineteenth-century commentator gleefully

[18] Charles Scammon, 'The California Gray Whale', in *The Marine Mammals of the North-Western Coast of North America* (San Francisco: John H. Carmany and Company, 1874), pp. 17-33 (pp. 22, 23, 25-26, 29). See David A. Henderson, 'Nineteenth Century Gray Whaling: Grounds, Catches and Kills, Practices and Depletion of the Whale Population', in *The Gray Whale: Eschrichtius Robustus,* ed. by Mary Lou Jones, Steven L. Swartz and Stephen Leatherwood (Orlando: Academic Press, 1984), pp. 159–186 (p. 174). ENP gray whales were commonly known as the California gray whale.
[19] Scammon, *Marine Mammals,* p. 25.
[20] Henderson, 'Nineteenth Century Gray Whaling', p. 174; Dedina, p. 23; Scammon, *Marine Mammals*, pp. 22, 23, 25-6, 29.
[21] Charles Scammon, 'Report of Captain C. Scammon, of the U.S. Revenue Service, on the West Coast of Lower California', in *Resources of the Pacific Slope,* ed. by J. Ross Browne (New York: D. Appleton and Company, 1869), pp. 123-31 (pp. 126, 124).
[22] Scammon, *Marine Mammals*, p. 33.

noted, 'The havoc made amongst them … was terrific',[23] but while much of the audience at that time would have found nothing wrong, Scammon's account makes for distressing reading in the twenty-first century.[24] After having only read it online, in San Diego Natural History Museum Archive I eventually got to handle a first edition of this book. I felt a mixture of wonder because of its historical significance and revulsion because of the horrific cruelty and scale of killing detailed in its pages. Still worse, by the tail end of the nineteenth century there was mounting evidence of opportunities for the general public to watch the killing of gray whales for entertainment purposes. Near Tacoma, Washington, 'several steamers' were 'chartered to carry people out to witness the chase', and 'hundreds of others [would] view the sport with field glasses from the beaches and islands'.[25] In *Eye of the Whale*, Russell describes the gray whales as having been 'massacred'.[26] 'Massacre' is a term more usually applied to human-on-human violence where large groups of people are murdered. It is strongly associated with genocide, implying a gross imbalance of power between the killers and the killed. In 2012, the animal-rights activist Paola Cavalieri explicitly applied Raphael Lemkin's 1943 definition of genocide to the destruction of whale communities through whaling, finding close correlation to the key conditions essential to genocide, particularly in view of the complex cognition of whales and their cultural lives.[27]

Nor was it just in the Mexican lagoons that gray whales were being pursued. By the second half of the nineteenth century, whaling was a vast industry occupying large swathes of the eastern Pacific coastline, particularly the California region. As British marine biologist

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[23] John A. Veatch, 'Report of Dr. John A. Veatch on Cerros or Cedros Island', in *Resources of the Pacific Slope,* ed. by Browne, pp. 143-54 (p. 151).
[24] The cruelty of whalers in the second half of the nineteenth century was brought to the American public via newspaper articles which were often graphic in their accounts of violence towards whales. See, for example, 'A Whaling Adventure', *New York Times*, 19 March 1871, p. 2; 'Whale Hunt at Monterey', *Daily Alta California*, 2 July 1880, p. 1; 'Tacomans Going on a Whale Hunt', *San Francisco Call*, 31 July 1897, p. 4.
[25] 'Tacomans Going'.
[26] Russell*,* p. 529.
[27] Paola Cavalieri, 'Declaring Whales' Rights', *Tamkang Review* (2012), <https://www.thefreelibrary.com/Declaring+whales%27+rights.-a0293812816> [accessed 20 May 2018].

Callum Roberts notes, 'By the mid-1850s, boats hunted whales from every navigable bay and lagoon along the entire coast of California and the Baja Peninsula. Their pursuit was intense and relentless'.[28] Shore whalers targeted whales on both their southbound and northbound migration, dragging the animals back onto land to be processed. 'After evading … whalers and the instruments of destruction, and perhaps while they are suffering from wounds received in their southern haunts,' Scammon wrote, 'these migratory animals begin their northward journey' where they would be pursued by other fleets of whalers.[29] In California, shore whaling was established from 1854 onwards, with major whaling stations based in San Francisco, San Diego and Monterey. David A. Henderson suggests rather cautiously that shore whaling 'would seem to be significant, but the lack of solid information makes it impossible to calculate'.[30] Lack of evidence aside, there seems little doubt that its effects, allied to those of pelagic whaling, were devastating. Ironically, the three Californian coastal sites mentioned above have all become major locations for gray whale watching, and they have acted as hubs for the transformation of the human-whale relationship and 'extraordinary whale-hugging enthusiasm' from the mid-1960s and 1970s onwards. This demonstrates the extent to which ideas about gray whales, and cetaceans more widely, changed in little over a century.[31] (I visited these three cities during my trip to the USA in 2019, not least because they have become key sites for gray whale conservation activities.) Heading further north to their summer feeding grounds, here too gray whales fell victim to the whaling industry. Thus, while Scammon blithely states that in the most northerly regions, 'the animals are rarely pursued [and can] rest in some degree of security', Henderson suggests by contrast that as

[28] Callum Roberts, *The Unnatural History of the Sea: The Past and Future of Humanity and Fishing* (Shearwater: Island Press: 2007), p. 98; Henderson, 'Nineteenth Century Gray Whaling', p. 175.
[29] Scammon, *Marine Mammals*, p. 32; Henderson, 'Nineteenth Century Gray Whaling', p. 175.
[30] Hazel Sayers, 'Shore Whaling for Gray Whales Along the Coast of the Californias', in *Gray Whale,* ed. by Jones, Swartz and Leatherwood*,* pp. 121-157 (p. 123).
[31] Burnett, p. 524; Buell, 'Global Commons', p. 216.

many were caught and killed in the Bering Sea as during the mid-nineteenth century peak of gray whaling in Baja.[32]

Figure 7. Engraving of gray whales in their Arctic feeding grounds by Charles Scammon. Source: Charles Scammon, 'California Grays Among the Ice', *The Marine Mammals of the North-Western Coast of North America* (San Francisco: John H. Carmany and Company, 1874), p. 32, Plate v.

The second wave of whaling in the early twentieth century has been seen as 'modest' in contrast to the relentless pursuit of gray whales in the previous century, and to the hundreds of thousands of baleen whales that were slaughtered following the advent of modern factory whaling ships. Estimates suggest that 'only' around 1000 of the ENP stock were killed during this period, but if anything this short-lived industry was testament to the low remaining population of gray whales following the intense whaling of the previous century.[33] Russell puts it more strongly, remarking that following commercial pelagic

[32] Scammon, *Marine Mammals*, p. 31; Sayers, 'Shore Whaling', p. 173.
[33] Randall R. Reeves, 'Modern Commercial Pelagic Whaling for Gray Whales', in *Gray Whale,* ed. by Jones, Swartz and Leatherwood*,* pp. 187-200 (p. 187).

whaling in the 1920s and 1930s, the gray whale was considered practically extinct.[34] While the figures remain in doubt, it is clear that a violent history on the Pacific coastline ensued when gray whales, among other cetacean species, came into contact with Europeans and Americans, and when both of these mixed – often with equal violence – with Indigenous whaling parties. Indigenous whaling continues to attract controversy today. But while Indigenous groups have hunted gray whales for thousands of years, as evidenced in the oral traditions and artefacts of these communities as well as archaeological findings, this has not dramatically affected the population of the species.[35] Moreover, killing whales had and continues to have important cultural significance for many native peoples on these coastlines. More evident is that for almost a century European and American whalers systematically overexploited this neritic (coastal water dwelling) species.[36] In *Sightings,* Linda Hogan notes that it is because they '*are locked to the land*' and '*live, by necessity, in the sunlit habitat of coastal waters where plankton are rich*' that the gray whales are '*so vulnerable*'. They are '*damned*' by this coastal fidelity, which is '*why they have twice been brought to near extinction along the Pacific coast'*.[37]

By the 1930s, recognition of this finally dawned and, several decades before commercial whaling was banned, the ENP gray whale population was being afforded total protection. All hunting of gray whales was banned by the League of Nations in 1935 in what was the first international agreement relating to the protection of whales. Since the establishment of the International Whaling Commission (IWC) in 1946, the ban on

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[34] Russell, pp. 439, 26.
[35] Charlotte Coté, *Spirits of Our Whaling Ancestors: Revitalizing Makah and Nuu-chah-nulth Traditions* (Seattle: University of Washington Press, 2010); Alan D. McMillan, 'Whales and Whalers in Nuu-chah-nulth Archaeology', *BC Studies: The British Columbian Quarterly,* 187 (2015), 229-261; Randall R. Reeves, 'The Origins and Character of 'Aboriginal Subsistence' Whaling: A Global Review', *Mammal Review,* 32 (2002), 71-106; Erica Hill, 'Animals as Agents: Hunting Ritual and Relational Ontologies in Prehistoric Alaska and Chukotka', *Cambridge Archaeological Journal*, 21 (2011), 407-426; Milton M. R. Freeman and others, *Inuit, Whaling, and Sustainability* (Walnut Creek: Altamira Press, 1998).
[36] Dedina, p. 19.
[37] Hogan and Peterson, pp. 69-70.

commercial hunting of gray whales has been upheld.[38] However, the interest of popular society in whales for their inherent as well as their instrumental value was minimal into the 1950s and early '60s; protection was largely about safeguarding an economic resource.[39]

Eye of the Whale and *Sightings* both provide rich insights into this history, particularly during the nineteenth century, and the two texts, while designed mainly for popular audiences, provide largely accurate descriptive accounts. Factual references rub shoulders in both with anecdotal extracts from popular whaling narratives. In *Eye of the Whale*, it is Scammon's interactions with gray whales and his journey north following their migration that frames the work, while the whaler himself becomes a running theme in Russell's chapters: 'We will follow Scammon's odyssey as we traverse the gray whale's migratory path'.[40] Extinction is a common motif as well. Like other great whales, the gray whale has come to represent, not just its own history of slaughter, but a global industry that has reduced many cetacean populations to near extinction. It seems worth pointing out that while the majority of great whale populations were greatly reduced by centuries of whaling, sometimes popular discourse falsely implies the near extinction of *all* whales insofar as cetaceans are often spoken about without the nuances of individual species.[41] Notwithstanding, the close brush with extinction is a major aspect of the cultural material that surrounds gray whales, suggesting that it has come to be a defining feature of this particular species' identity. As Hogan writes, '*The animals were gone, the whales were nearly extinct'*; Peterson, too, mentions their 'near extinction';[42] and Russell informs the reader

[38] Dedina, pp. 48-49. Bowhead whales (*Balaena mysticetus*) and all three populations of right whales – North Atlantic (*Eubalaena glacialis)*, North Pacific (*Eubalaena japonica*) and Southern (*Eubalaena australis*) – were also granted total protection. See Heike K. Lotze, 'What Recovery of Exploited Marine Animals Tells Us about Management and Conservation', in *Marine Historical Ecology in Conservation: Applying the Past to Manage for the Future,* ed. by Louise K. Blight and others (Berkeley: University of California Press, 2015), pp. 15-37 (p. 19).
[39] Burnett, pp. 521, 522; William Roy Vallance, 'The International Convention for Regulation of Whaling and the Act of Congress Giving Effect to its Provisions', *American Journal of International Law*, 31 (1937), 112-119 (p. 113).
[40] Russell*,* p. 27.
[41] Roberts, *Unnatural History,* p. 95; Kalland, *Unveiling the Whale,* p. 29.
[42] Hogan and Peterson, pp. 70, 19.

that by the end of 1930s, even after a decade of protection many people believed that the gray whale was 'all but extinct'.[43]

Meanwhile, in his work on the figure of the 'melancholy whale' Graham Huggan has proposed equivalence between the Freudian notion of melancholia as the mourning of a loss still to be determined and what (after Kate Marshall) he terms as 'pseudo-extinction'. Unlike traditional extinction narratives that involve mourning for the real disappearance of species, Huggan suggests, 'pseudo-extinction' applies to 'species [that] may be *imagined* as being lost even though the science tells us otherwise'.[44] Whatever the case, popular discourses surrounding the gray whale suggest that these animals have inherited the near extinction of their ancestors as a defining aspect of their identity. As Thom van Dooren proposes, 'When species are understood as vast intergenerational lineages, interwoven in rich patterns of co-becoming with others … then their departure from the world cannot help but be felt in a range of complex and drawn-out ways'.[45] The feelings engendered by scientifically proven extinctions, such as regret, fear and anxiety, can equally apply to animal populations which are still here but have an *aura* of extinction about them, brought about either by a history of near extinction or because there is a projected future extinction – or an element of both. While it is true that the genetic and cultural characteristics of the population will show the effects of whaling, modern accounts are typically suffused with elegy.[46]

A powerful example is W. S. Merwin's 1967 poem 'For a Coming Extinction', which directly addresses the gray whale. The poem is in most respects a conventional elegy, lamenting

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[43] Russell*,* pp. 26, 439.
[44] Huggan, *Colonialism, Culture, Whales*, p. 89; Sigmund Freud, 'Mourning and Melancholia', trans. by James Strachey, in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. by James Strachey, 24 vols (London: Hogarth Press, 1957) XIV, pp. 237-260; Thom van Dooren, *Flight Ways: Life and Loss at the Edge of Extinction* (New York: Columbia University Press, 2014), pp. 142-144; Ursula K. Heise, *Imagining Extinction: The Cultural Meanings of Endangered Species* (Chicago: University of Chicago Press, 2016). 'Pseudo-extinction' is not to be confused with 'pseudoextinction', which is the phyletic evolution of a species into a new species where there is no extinction of the lineage and it is part of evolutionary development.
[45] Dooren, *Flight Ways,* p. 12.
[46] Dedina, p. 19.

the human-caused decline of this species. It is a poem heavy with grief, and Merwin mourns the gray whale being driven towards extinction: 'Gray whale / Now that we are sending you to The End'. However, unlike most elegies the poem does not close with solace, but ends instead by apparently resigning itself to the inevitable disappearance of ocean creatures. The endangered gray whale's association with extinction is reinforced by Merwin's declaration that the gray whale is fated for the 'black garden / And its court' where Steller's sea cow (*Rytina gigas*) and great auk (*Pinguinus impennis*) already reside.[47] The disappearance of these marine animals at the hands of humans is well known but, as real as is the extermination of the Steller's sea cow (by 1768) and the great auk (by 1844), their respective extinctions are also held up as multifaceted cautionary tales, entering the social imagination as composite symbols of humans' irresponsible relationship with wild animals and the natural world.[48]

The 'black garden' trope also speaks powerfully of the emptying of the ocean through harmful human activity. Since the 1960s, largely thanks to underwater photography, we have come to think of the sea as living and flourishing, but Merwin's 'black' ocean is abyssal and void of life.[49] It is a sinister and striking image, drawing associations with the underworld in Greek mythology, which is ruled by Hades and is often represented as a kingdom under the ocean where the deceased are sent. The 'black garden' is like Hades' palace and 'its court' are all those that dwell in this abyssal realm. Here, the dead carry on existing but are unable to communicate with the living. Similarly, extinct species go on, but they do not physically exist

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[47] W. S. Merwin, 'For a Coming Extinction', *The Lice* (New York: Atheneum Publishers, 1967).
[48] Leonhard Stejneger, 'How the Great Northern Sea-cow (*Rytina*) Became Exterminated', *The American Naturalist,* 21 (1887), 1047-1054; Ryan Tucker Jones, 'Introduction: The Meanings of Steller and His Sea Cow', in *Empire of Extinction: Russians and the North Pacific's Strange Beasts of the Sea, 1741–1867* (New York: Oxford University Press, 2014), pp. 5, 1-8; Frederick A. Lucas, 'The Expedition to Funk Island, with Observations Upon the History and Anatomy of the Great Auk', *Annual Report of the Board of Regents of the Smithsonian Institution for the Year Ending June 30, 1888* (Washington, DC: Government Printing Office, 1890); Franck Courchamp and others, 'Rarity Value and Species Extinction: The Anthropogenic Allee Effect', *PLoS Biology,* 4 (2006), <https://doi.org/10.1371/journal.pbio.0040415>.
[49] Celmara Pocock, 'Entwined Histories: Photography and Tourism at the Great Barrier Reef', in *The Framed World: Tourism, Tourists and Photography,* ed. by Mike Robinson and David Picard (Farnham: Ashgate Publishing, 2009), pp. 197-210 (pp. 193-194).

in our world, dwelling in an alternative and parallel place of being. While the underworld is not visible to the living, the dead endure through the words and stories of the living, much in the same way that extinct animals come to exist largely in the imagination, immortalised in myth.[50] A bleak future for the gray whale is projected through the use of dissipative language: 'end', 'left', 'empty', 'dying', 'dead', 'black'. At one point, Merwin simply states that 'you will not see [them] again'. The poem, heavy with a sense of desolation, reminds us that humans will come to feel the collective loss of animal being. Merwin's 'For a Coming Extinction' is not hopeful, to say the least; extinction *is* coming. Laden with premature mourning, his meditation on the gray whale and its life in the ocean projects a bleak future for the planet, including humankind. In a 1976 poster from a Pacific Grove, California, bookshop (see figure 8 below), Merwin's poem is printed alongside images taken from Scammon's book. The small print of the poster states that 'Bookworks joins with everyone in celebrating the migration of the California Gray Whale along our coast. May their passage be safe'.[51] Merwin's poem is thus bound, paradoxically perhaps, to the protection and safe passage of the species.

[50] Robin Hard, 'Hades and the Mythology of the Underworld', in *The Routledge Handbook of Greek Mythology: Based on H. J. Rose's Handbook of Greek Mythology* (London: Routledge, 2004), pp. 107-110.
[51] Center for the Study of Political Graphics, Bookworks poster (1976), folder *A-33.11 Animal Rights: Marine Life*, poster 98-102.

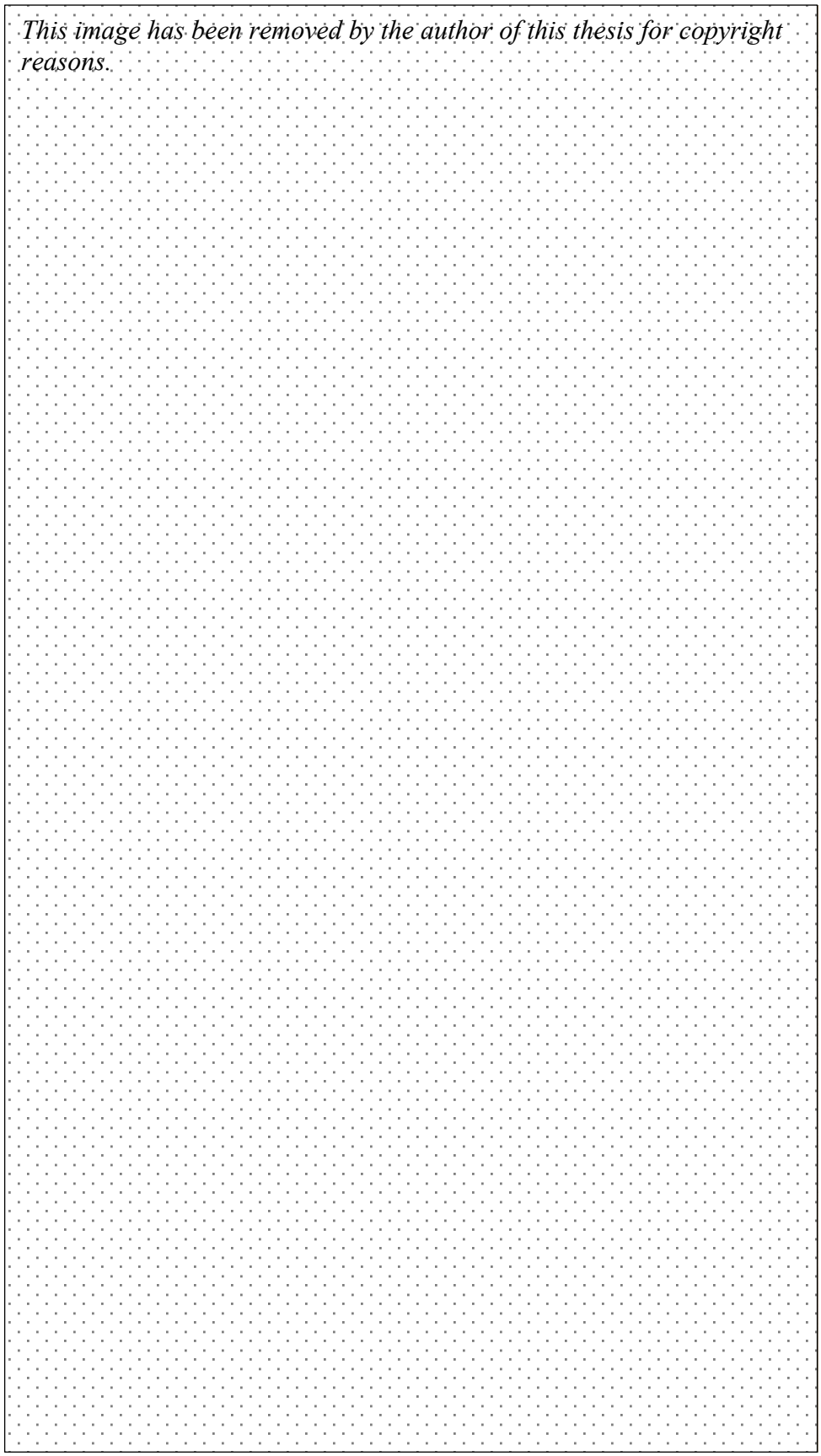

Figure 8. Bookworks (Pacific Grove, California) poster featuring Merwin's 'For a Coming Extinction' and illustrations by Charles Scammon to mark the gray whale Spring/Winter migration 1976-1977 (1976). Source: Center for the Study of Political Graphics, Los Angeles, folder *A-33.11 Animal Rights: Marine Life*, poster 98-102.

While Merwin's poem laments the impending extinction of the gray whale, the species had in fact been fully protected from whaling for thirty years at the time of its publication. In 1967-68 the population was an estimated 12,921, having almost trebled since 1956-57.[52] Perhaps for Merwin, the gray, a charismatic species pushed to the absolute limits, was the ultimate symbol of extinction. Moreover, while gray whales had been protected for three decades, whaling was still a global industry and other great whale species, in particular the blue (*Balaenoptera musculus*) and the humpback (*Megaptera novaeangliae*), were in extinction territory having been ruthlessly exploited since the 1920s with the advent of factory whaling. In 1965, the International Union for the Conservation of Nature (IUCN) assessed the blue whale as 'very rare and believed to be decreasing in numbers' (Category 1), with populations in some oceans depleted to just a few hundred.[53] The humpback, similarly, had been reduced to just a few per cent of its historic population.[54] Both blue and humpback species were completely protected from commercial whaling by the IWC in 1966.[55] The mid-1960s was a time of increasing anti-whaling rhetoric and action as well as vigorous measures to prohibit the hunting of the most depleted whales. Could it be that for Merwin, the gray whale effectively represented *all* endangered great whales? After all, it was a species that had come close to extinction earlier than many other whales, and was intimately associated with exploitation and disappearance, but was also popular with the US public.[56] Perhaps the gray whale was – and still is – a concentrated symbol for the human exploitation of the oceans and marine life.

Since 1972, the gray whale has been protected under the MMPA, which recognises marine mammals' roles in healthy ecosystems and prohibits their hunting, harming, capturing

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[52] Dedina, p. 21.
[53] J. L. Bannister and others, '*Balaenoptera musculus'*, *The IUCN Red List of Threatened Species 2008* (2008), <http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T2477A9447146.en> [accessed 16 May 2018].
[54] J. L. Bannister and others, '*Megaptera novaeangliae*', *The IUCN Red List of Threatened Species 2008* (2008), <http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T13006A3405371.en> [accessed 16 May 2018].
[55] IUCN, 'International Whaling Commission', in *IUCN Bulletin* (1966), p. 27.
[56] Ellis, *Men and Whales,* p. 466.

or killing.[57] In 1973, the US Endangered Species Act was passed, which recognised the national importance of wildlife and the need to protect key endangered species from extinction; gray whales were one of the species listed from the outset. This was a time of growing environmental consciousness, the developing field of ecology, and a deep preoccupation with conservation in the USA and, more widely, the western world.[58] The Endangered Species Act also represented the *nationalisation* of the gray whale, bound up in American identity as well being protected for its role as a keystone species. Charismatic megafauna like gray whales have 'immediate appeal to the broad public' because they are aesthetically impressive and may have 'anthropomorphic qualities'.[59] The gray whale, once described in terms of the barrels of oil it yielded, thus went from commodity to revered species, reflecting a paradigm shift in which 'the perception of the whale was now one of a sentient animal, a victim of the human activity destroying its habitat'.[60]

Meanwhile, north of the border the species was designated 'Not at Risk' in 1987 under the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which had been established ten years before.[61] With national and international protections, the gray whale population steadily rose to an estimated 23,109 by 1993-94. The ENP population was believed to have returned close to its pre-whaling numbers and, as recommended by the NMFS, the

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[57] Marine Mammal Commission, 'Findings and Declaration of Policy', in *Marine Mammal Protection Act*, Section 2 **(**2015), p. 3.
[58] Robert Leo Smith, 'Ecological Genesis of Endangered Species: The Philosophy of Preservation', *Annual Review of Ecology and Systematics*, 7 (1976), 33-55 (pp. 33, 35, 44); Thomas R. Dunlap, *Saving America's Wildlife* (Princeton: Princeton University Press, 1988), pp. 161-164.
[59] Ursula K. Heise, 'Lost Dogs, Last Birds, and Listed Species: Cultures of Extinction', *Configurations*, 18 (2010), 49-72 (p. 60).
[60] Nicolov, p. 11; Zelko, 'From Blubber and Baleen', pp. 96, 98-100, 103, 104, 105.
[61] COSEWIC, *COSEWIC Assessment and Status Report on the Grey Whale Eschrichtius robustus, Northern Pacific Migratory Population, Pacific Coast Feeding Group Population and the Western Pacific Population, in Canada* (Ottawa, 2017), p. iii-iv; Randall R. Reeves and E. Mitchell, *COSEWIC Status Report on the Grey whale (Eastern North Pacific Population) Eschrichtius robustus in Canada* (1987). In 1987 the gray whale was assessed as one overall population and The Pacific Coast Feeding Group and the West Pacific population were included in the original designation. In 2004 the status was reassessed as 'Special Concern' and in 2017 the population was split into two with the Northern Pacific Migratory (or ENP) population 'Not at Risk' and the western population 'Endangered'. The Pacific Coast Feeding Group ('resident gray whales' or 'Pacific Northwest feeding group") were designated an 'Endangered' population.

species was removed from the Endangered Species Act list of endangered species in 1994.[62] As Peterson proclaims triumphantly in *Sightings*, this was a species come back from the dead.[63] For this reason, the gray whale has been heralded as one of the greatest conservation success stories, an icon of the global environmental movement and of our progressively changing relationship with wildlife.[64] The term 'conservation success story' is a frequently encountered formulaic phrase used by conservation organisations, government bodies and the media. This familiar trope would become a part of the gray whale's symbolic value, offering an alternative narrative to extinction and supporting the notion that the state can play a redemptive role on behalf of its citizens.[65]

Notwithstanding, at the turn of the millennium the species was still associated with vulnerability both in wider society and the scientific community. This is amply evidenced in *Sightings*. As previously noted, Hogan refers to the '*vulnerability*' of the gray, suggesting that this is a specific aspect of the species' existence. After all, the Atlantic population went extinct in the eighteenth century; the critically endangered western Pacific population, which remains today at just above one hundred individuals, has failed to rebound; and the Pacific Northwest resident gray whales that forage around Oregon, Washington and Vancouver Island in the summer are considered by many to be a subgroup of less than 250 individuals.[66] Quoting Vancouver Island based marine biologist Jim Darling, *Sightings* reminds the reader that, from

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[62] Doug P. DeMaster and others, 'Status Review of the Eastern North Pacific Stock of Gray Whales', US Department of Commerce, *NOAA Technical Memorandum*, NMFS-AFSC-103 (1999), p. 1*;* Stephen R. Palumbi and Joe Roman, 'The History of Whales Read from DNA', in *Whales, Whaling, and Ocean Ecosystems*, ed. by Robert L Brownel and others (Berkeley: University of California Press, 2006), pp. 102-15 (p. 102).
[63] Hogan and Peterson, p. xviii.
[64] See, for example, Jim Darling, *Gray Whales* (Grantown-on-Spey: Colin Baxter, 1999), p. 68.
[65] William J. Sutherland, *The Conservation Handbook: Research, Management and Policy* (Oxford: Blackwell Publishing, 2000); John Henry-Pitas, 'Deathly Storytelling in the Ecological City: How Pigeons Became Falcon Food in Baltimore, Maryland', *Social & Cultural Geography* (2021), <https://doi.org/10.1080/14649365.2021.1950822>.
[66] Hogan and Peterson, p. 70. Richard Ellis, 'Gray Whales in the Atlantic', in *The Empty Ocean: Plundering the World's Marine Life* (Washington, DC: Island Press, 2003), pp. 3-7; Amanda L. Bradford and others, 'Critically Endangered Western Gray Whales Migrate to the Eastern North Pacific', *Biology Letters,* 11 (2015), <https://doi.org/10.1098/rsbl.2015.0071>.

a scientific perspective, 'Gray whales hold the dubious distinction of being the only whale species with entire populations declared extinct … We know the fragility of the species. This is the last healthy population and we must look after it very, very carefully'.[67] While 'Endangered (EN)' is an official classification of the IUCN Red List and species must meet at least one of five criteria to be listed, many species of whales no longer have this status – including the gray whale.[68] But as I have been arguing here, cetacean species, sometimes just 'the whale', exist in the public psyche as endangered because of mediated knowledge about the history of human-whale encounters and the notions of vulnerability, fragility and extinction that are bound up in this.[69] It is true as well that a number of cetacean species, sub-species and populations remain endangered, some critically so.[70] Finally, this knowledge exists in symbiosis with conservation organisations' association of whales with endangerment, which has been the dominant discourse in relation to whales since the first anti-whaling campaigns.[71] 'Endangered' as a term is far more complex than population figures or official classifications; it affords whales a particular status, and thereby certain protections, because there is a prevailing sense that these animals are at risk of extinction, whether this is actually true or not.

The gray whale is bound up in stories of death and disappearance as well as recovery and rejuvenation. The two sets of narratives are inextricably connected – a recovery of this magnitude would not be so remarkable had the gray whale not been reduced to such rarity. As Dedina notes, gray whales 'represent [both] our destructive past and a hopeful future'.[72] This status as a recovered species is a defining aspect of the gray whale's identity. As Russell declares, their rebound 'is considered the most dramatic achieved by any species of whale',

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[67] Hogan and Peterson, pp. 16-17.
[68] IUCN, 'v. The Criteria for Critically Endangered, Endangered and Vulnerable', *2001 Categories & Criteria (version 3.1),* <http://www.iucnredlist.org/static/categories_criteria_3_1> accessed 15 May 2018].
[69] Kalland, *Unveiling the Whale,* pp. 27, 29, 33, 65.
[70] Peter O. Thomas, Randall R. Reeves and Robert L. Brownell, 'Status of the World's Baleen Whales', *Marine Mammal Science,* 32 (2016), 682-734.
[71] Kalland, *Unveiling the Whale*, pp. 37, 65; Buell, 'Global Commons', p. 200.
[72] Dedina, p. 8.

and their 'survival is nothing short of miraculous'.[73] By the end of the twentieth century, gray whales had become an outsize symbol of hope, and for this reason the mortality trend, which was understood by specialists, and the shocking strandings, which were witnessed beyond the scientific community, came as a body blow. Looking back today, there was only a brief window of optimism before the population suffered a significant setback.[74]

Investigating the sources

What then had caused 651 whales to strand, and what had caused a third of the population to die off between the winter of 1998/9 and 2000? Whale strandings are visually disruptive, emotive and disturbing. When whales and other cetaceans are discovered beached, scientists and lay people alike ask questions about sources.[75] Since the end of widespread commercial whaling, whales – and cetaceans more broadly – face new threats caused by anthropogenic activity in and degradation to the marine environment. Our imagining of whales is transforming as our perceptions of the natural world give way to new understanding of its decline at the hands of humans. And as might be expected, mass mortality on this scale triggers alarm on local, national and international scales.

Scientific and popular speculation about the possible causes of the gray whale UME is documented in *Sightings* and *Eye of the Whale*. Peterson cuts to the chase while Hogan presents more general musings on Indigenous peoples' relationships with gray whales, the ocean, and the natural world more widely. Both texts offer valuable insight into the reactions of those their respective authors encountered as they travelled to places where whales stranded or regions where changes in distribution and behaviour were observed. A broad range of people and communities are given voices in these two books, from Indigenous groups to gray whale

[73] Russell, p. 26.
[74] McLean.
[75] Nicolov, p. 65.

specialists. Both texts report the questions and theories that different individuals, communities and organisations have within eastern North Pacific societies; and as a result, both present a spectrum of perspectives on the human-gray whale relationship and, significantly, the mass mortality event.

This array of different perspectives highlights the ways in which there is divergence as well as agreement *within* both scientific and popular conversations and *between* these two spheres. *Sightings* and *Eye of the Whale* weave scientific information with anecdotes, personal ruminations with the views of others. In so doing, both texts serve a pedagogical function; indeed, *Sightings* and *Eye of the Whale*, though neither is a strictly scientific work, have been invaluable for my own research into this UME.[76] While there are undoubtedly many similarities between the two texts, there are also notable differences. Russell provides more scientific detail, infusing his engaging prose with scientific information and evidence in accessible ways for his popular audience. He appears to give greater weight to scientific information, which might reflect the personal interests of the author. He speaks with specialists more than do Peterson and Hogan, often quoting them and also directly referencing scientific reports released after the UME.[77] By comparison, in *Sightings* there does not appear to be a clear bias towards any one particular interpretation, and it is left to the reader to decide why this particular spate of whale deaths might have occurred.[78]

In a section written in 2000, Peterson states that 'many of us were concerned about the recent unprecedented die-off', positioning herself and Hogan in the narrative with the people and communities they have met. The authors are not just observers, but engaged and distinctly anxious participants. In the same passage, Peterson notes that on Alaska's Kodiak Island, the 'mysterious whale deaths were the talk of this small town'.[79] In Spring 2001, marine biologist

[76] Hogan and Peterson; Russell.
[77] See, for example, Russell, pp. 518-19.
[78] Hogan and Peterson.
[79] Hogan and Peterson, p. 17.

and gray whale expert John Calambokidis, of the non-governmental organisation (NGO) Cascadia Research – whom I interviewed in Olympia in 2019 – is described as attending a 'lively and packed meeting' on Whidbey Island, answering 'questions from islanders eager to understand and protect' local grays, with 'most of the questions being about the dead whales and the many dangers along their migration path'.[80] Such extracts show how significant these animals continue to be for communities along this particular stretch of coastline, and how eager people are to seek out answers about the causes of death, which relate as much to their own wellbeing as to that of the whale population. In a die-off such as this, the calls for answers inevitably get louder, and it becomes increasingly important to determine whether human activity may have played a significant role.

To this day, though, the cause of the UME remains 'undetermined'.[81] This is a common conclusion in the case of beached cetaceans. Strandings take on an ambiguous nature, with speculation coming from both scientific and popular sources, and swirling explanations and hypotheses, contending stories and interpretations, at every turn. In such interpretative processes, stranded whale bodies become scientific objects, analysed and tested in order to discover clues.[82] With the whale body as the main source of evidence, it is often impossible to pinpoint exactly why the animal beached and/or died. In the case of the 1999-2000 UME, only three whales underwent a full necropsy – just 0.5% of the animals that stranded.[83] As post mortems of whales rely on the animal being very recently dead because of the speed of decomposition in animals of this size, specialists were only able to carry out post mortems on those that live-stranded and were then euthanised.[84] One resident on Kodiak Island lamented

[80] Hogan and Peterson, p. 89.
[81] NOAA Fisheries, 'Marine Mammal Unusual Mortality Events', <http://www.nmfs.noaa.gov/pr/health/mmume/events.html> [accessed 12 January 2018].
[82] Nicolov, p. 68; Adrian Franklin, *Animals and Modern Cultures: A Sociology of Human-Animal Relations in Modernity* (London: Sage, 1999), pp. 62-83.
[83] Gulland and others, pp. iii, 5, 9-11, 12, 18.
[84] Nicolov, pp. 63-65; Gulland and others, p. 5.

that the only response was to 'take tissue samples'.[85] While this appears to be a criticism of scientific researchers, if decomposition is too advanced all they can do is take samples for analysis. This is a reflection of a lack of knowledge about the stranding response and the conditions necessary for a post mortem among the general public. The UME and wider die-off was subject to much investigation, as evidenced by the large number of papers on the subject that were published in the following years. Furthermore, in response to the 651 strandings in 1999, there was increased effort to monitor the coastline for bodies.[86]

Only limited knowledge was gathered via post mortem, and the 2005 report itself states that because specialists examined such a low number of animals thoroughly, evidence was unavailable 'for the actual cause of death of most of the animals'.[87] This statement suggests that it is the *body* that is vital for clues: without a full necropsy there can be no definitive answer. But while popular society may have looked to specialists for answers, sometimes answers are simply beyond the reach of human investigation. NOAA stated that 'the ultimate cause of [whale] death is elusive and difficult to define', permitting full reign to speculation within popular society.[88] The word 'elusive' is significant, echoing the use of 'mysterious' by Peterson to describe the gray whale mortality event.[89] Even with the most up-to-date discoveries of science, there is a sense in which whales' lives, not to mention their deaths, are beyond human knowledge; their strandings are as mysterious to us as their ocean-going lives. Much of cetaceans' existence remains beyond our grasp and, unsurprisingly, the trope of whales and their ocean habitat as mysterious or even 'mystical' is present in a broad range of cultural responses to these creatures. For much of human history, whales have been approached largely through myths; according to Lawrence Buell, since ancient times they have been

[85] Hogan and Peterson, p. 264.
[86] Gulland and others, p. iii.
[87] Gulland and others, p. 12.
[88] Gulland and others, p. 13.
[89] Hogan and Peterson, p. 17.

perceived as sharing the 'ocean's mysterious, radical, ambiguous otherness'.[90] Simon Schama points out that from the seventeenth century onwards the global whaling industry led to the 'demythologising of the whale';[91] but in the mid-nineteenth century, Herman Melville's *Moby-Dick* (1851) would recast the whale as a highly symbolic entity by superimposing a 'multi-mythic collage' over a narrative of the whaling industry.[92] While global commercial whaling would continue for more than a century after the book's publication, in the 1960s and '70s whales were imbued all over again with a mystic quality. This quality was reinforced rather than rebuffed by emerging cetacean science, which revealed whales as having complex cognitive abilities; and above all by the 'Save the Whale' campaigns and the wider environmental movement, which transformed whales into 'icons of endangerment'.[93] The new imagination of what Frank Zelko terms the 'metaphysical' whale is augmented by pre-existing myth, and these different imaginaries co-exist and interact with one another right up to the present day.[94]

While popular society may look to the scientific community for expert knowledge, the belief in scientific truth does not mean that it is always possible to fulfil those demands. Even the gray whale, one of the most studied cetaceans, 'still mystifies scientists'.[95] As Dorothee Brantz notes, human relationships with and understanding of animals 'always remain ambiguous and beyond the grasp of instrumental reason'; 'luckily', she says, 'an element of surprise and unpredictability persists whenever we look at animals … Ultimately, animals escape us, and that is what makes them fascinating'.[96] This might help explain why humans

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[90] Buell, 'Global Commons', p. 200.
[91] Simon Schama, *The Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age* (London: Fontana Press, 1991), p. 133.
[92] Herman Melville, *Moby-Dick* (Evanston: Northwestern University Press, 1988); Buell, 'Global Commons', p. 203.
[93] Buell, 'Global Commons', p. 201; Claude Lévi-Strauss, *Totemism*, trans. by Rodney Needham (Uckfield: Beacon Press, 1963), p. 162; Burnett, pp. 529-30.
[94] Zelko, 'From Blubber and Baleen'; Burnett, pp. 643, 626; Huggan, 'Last Whales', p. 391.
[95] Hogan and Peterson, pp. xvii, xviii.
[96] Dorothee Brantz, 'Introduction', in *Beastly Natures: Animals, Humans, and the Study of History*, ed. by Dorothee Brantz (Charlottesville: University of Virginia Press, 2010), pp. 1-13 (p. 6).

continue to study whales so intensively: in order to understand in greater detail their complex and multidimensional lives. Strandings data provide insight into 'distribution, abundance, seasonal movements, biology, life history, health, mortality rates, and the interaction of marine mammals with human activities'.[97] It is through science that humans attempt to displace whales from the realm of myth into the domain of knowledge. However, while science is generally understood as 'a process of demythologization', knowledge emanating from scientific research in turn feeds into and enriches the whale as a symbolic and mythical creature.[98] Peterson writes that 'the magic and majesty of other species eludes us', and that we might overcome this ontological divide if we 'actually imagine ourselves part of their mysterious lives'.[99] Where science might be limited, perhaps this imaginative capacity – which is itself limited – is a way we can come to comprehend animal lives.[100]

When a necropsy is not carried out, collecting body parts and tissue samples for analysis becomes essential. Each stranded whale discovered is recorded and preserved in its individuality in scientific data. Each animal has individual scientific value whilst also representing the generality. Thus, stranded whales are critically important for gaining knowledge about what is happening, both to individual species and the marine environment more broadly.[101] 'By understanding the normal causes and mortality patterns', scientists are better able to identify 'extraordinary events and determine their causes and impacts on the population'.[102] Cetacean bodies thus become an 'environmental tool of measurement' and human impacts can be recorded over time and space.[103] I will return to this particular aspect of

[97] Erick Bravo and others, 'Occurrence and Distribution in Todos Santos Bay, Baja California, Mexico, 1998-2001', *Lajam*, 4 (2005), 15-33 (p. 15).
[98] Burnett, pp. 643-645; Bruno Latour and Peter Weibel, eds., *Iconoclash: Beyond the Image Wars in Science, Religion, and Art* (Karlsruhe: Center for Art and Media, 2002); Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge, MA: Harvard University Press, 1999).
[99] Hogan and Peterson, p. 71.
[100] Thomas Nagel, 'What is it like to Be a Bat?', in *Mortal Questions* (Cambridge: Cambridge University Press, 1979), pp. 165-80.
[101] Nicolov, pp. 70-71, 150.
[102] Bravo and others, p. 15.
[103] Nicolov, p. 72.

the gray whale-human relationship in my Whidbey Island chapter (see Chapter 2 below).

Globally, samples from strandings are tested for heavy metals and chemicals in order to gain insight into 'the degree to which human pollution of the oceans is directly affecting these marine mammals bodies'.[104] Among the greatest concerns regarding chemical pollution are immunosuppressive pollutants such as polychlorinated biphenyls (PCBs). Despite having been banned from the 1970s onwards when it was discovered that these synthetic chemical compounds were harmful to the marine environment and marine mammals more specifically, they continue to be found in samples from stranded cetaceans worldwide. Analysing stranding samples is a major way their ongoing presence can be tracked. Heavy metals such as lead and mercury are also known to be unsafe for marine mammals. Stranded cetaceans provide unique opportunities to investigate the impact of anthropogenic activity on marine species.[105] In the case of gray whales, whales caught by subsistence hunters also provide valuable insight.[106] With long life spans and key positions within food webs, gray whales, like other cetaceans and marine mammals, 'can be considered as strong candidates for assessing cumulative and biomagnified pollutants'. As flagship or indicator species, they are important for gaining insight into the health of the marine environment.[107] Furthermore, 'Establishing databases on contaminants in marine mammals will help to understand the role of contaminants in mortality events and provide a basis to investigate, predict and mitigate these events'.[108] It is important to monitor the impact of pollution on these animals in order to better manage conservation of marine species and ecosystems.[109] Mercury, for instance, whilst naturally occurring in the oceans, also enters the marine environment and cetacean bodies via fossil fuel combustion and

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[104] Nicolov, p. 72.
[105] Nicolov, pp. 72, 73; Jorge R. Ruelas-Inzunza and others, 'Methylmercury and Total Mercury Distribution in Tissues of Gray Whales (*Eschrichtius robustus*) and Spinner Dolphins (*Stenella longirostris*) Stranded Along the Lower Gulf of California, Mexico', *Ciencias Marinas,* 29 (2003), 1-8 (p. 6).
[106] Karen L. Tilbury and others, 'Chemical Contaminants in Juvenile Gray Whales (*Eschrichtius robustus*) from a Subsistence Harvest in Arctic Feeding Grounds', *Chemosphere*, 47 (2002), 555-564.
[107] Bravo and others, p. 2; Nicolov, p. 73.
[108] Ruelas-Inzunza and others, p. 2.
[109] Nicolov, p. 73.

industry, such as mining and the processing of minerals, particularly when these are situated on or near the coast. This aggregation of contaminants from anthropogenic sources increases mercury in the water as well as contributing to changes in 'the chemical forms and species of this trace element present', such as methylmercury.[110] Methylmercury is a bioaccumulative environmental contaminant that 'enters biological tissue' and the main anthropogenic source is the burning of fossil fuels, particularly coal. Evidence of biomagnification has 'raised the concerns that marine mammals transiently residing in urban-influenced waters may also experience adverse effects induced by chemical contaminants'.[111] Samples from the muscles, kidneys and livers of four gray whales found stranded along the lower Gulf of California (Mexico) between February and March 1999 were tested for mercury. While mercury and methylmercury were present, it was decided that it was unlikely to be a significant factor in the stranding. However, the authors of the paper stressed that the role of these compounds in cetacean strandings required further study.[112]

There are numerous challenges that come with investigating marine species, in particular large whales. It is often hard to determine what is caused by 'natural environmental levels', or to what degree human activity has played a role. In addition, the influence of 'biological parameters' such as age or the 'antagonistic or synergistic effects' of different metals 'has not been well established'.[113] While it may not have played a role in the UME, nor is it fully known what the long-term impacts of exposure to pollutants might be:

> Regardless of the levels found, it is particularly difficult to demonstrate a causal link between pollution and the strandings of marine mammals given the lack of a sufficient number of tissue samples from both healthy and stranded animals, and the inability to conduct controlled laboratory studies with live animals,

[110] Ruelas-Inzunza and others, p. 1.
[111] Ruelas-Inzunza and others, p. 2; Usha Varanasi and others, 'Chemical Contaminants in Gray Whales (*Eschrichtius robustus*) Stranded Along the West Coast of North America', *Science of the Total Environment*, 145 (1994), 29-53.
[112] Ruelas-Inzunza and others, p. 1.
[113] Ruelas-Inzunza and others, p. 6.

particularly with large marine mammals.[114]

It does not appear from extant studies that gray whales have particularly high concentrations of PCBs and heavy metals in their bodies, unlike other cetaceans, in particular odontocetes such as sperm whales (*Physeter macrocephalus*) and orcas (*Orcinus orca*). This is because of the different feeding habits of these cetaceans. Despite foraging relatively close to shore and nearer to human industry than many other cetaceans, gray whales as benthic feeders prey upon creatures like crustaceans and molluscs, resulting in less bioaccumulation up the trophic chain.[115] Toothed cetaceans, on the other hand, feed on animals such as fish, squid and, in the case of orcas, other marine mammals. Using information gleaned from samples taken from strandings, there is worrying evidence that with these marine apex predators biomagnification occurs to a greater extent and contaminants are found in the highest concentrations in animals at the highest levels of the food chain.[116]

As Stacy Alaimo states in her discussion of the Anthropocene and the sea, 'no species is safe, removed, or protected from the biological, chemical and physical alterations of the planet. Marine creatures are submerged in, and literally the stuff of, the world that has been rapidly transformed by human and nonhuman agencies'.[117] In this context, Peterson's use of the word 'pristine' on three separate occasions in *Sightings* is highly problematic. With the persistent presence of chemicals including PCBs, which have even been discovered along with plastic in the very deepest parts of the oceans, we must remember that vast swathes of the ocean have been altered by anthropogenic activity.[118] The thousands of miles of water gray whales swim

[114] Ruelas-Inzunza and others, p. 6; see also, Varanasi and others, p. 30.
[115] Varanasi and others, p. 32; Tilbury, p. 562.
[116] Nicolov, p. 72; Paul Jepson and Robin Law, 'Persistent Pollutants, Persistent Threats: Polychlorinated Biphenyls Remain a Major Threat to Marine Apex Predators', *Science,* 352 (2016), 1388-1389.
[117] Alaimo, 'Anthropocene at Sea', p. 156.
[118] Tony Koslow, *The Silent Deep*: *The Discovery, Ecology, and Conservation of the Deep Sea* (Chicago: University of Chicago Press, 2009), pp. 1, 3; Alaimo, 'Anthropocene at Sea', p. 155; Alan J. Jamieson and others, 'Bioaccumulation of Persistent Organic Pollutants in the Deepest Ocean Fauna', *Nature Ecology & Evolution*, 1 (2017), <https://doi.org/10.1038/s41559-016-0051>.

through can scarcely be described as pristine. As Buell highlights, 'oceans are the closest thing … to a landscape of global scope. They are also incomparably the largest commons; if there is to be a "tragedy of the commons," this will be the biggest'.[119] This knowledge about the extent to which humans are perhaps irreversibly modifying not just the environment whales rely on to survive, but also their very bodies, might be seen as evidence of what Bill McKibben has declared as the 'end of nature'. In his influential study *The End of Nature* (1989), McKibben contends that humans have altered the natural world and systems to such an extent that we can no longer speak of a 'nature' that is separate or pristine. Rather, due to the global and irreversible impacts of climate change, transnational pollutants and the transformation of ecosystems for human industry, 'We have deprived nature of its independence', which is arguably 'fatal to its meaning' for 'Nature's independence *is* its meaning; without it there is nothing but us'.[120]

Growing concern in the 1980s and '90s about the impact of industry on the oceans and marine mammals filtered into the public sphere, with PCBs in particular being highlighted by the mainstream media in countries such as the USA and the UK. For instance, in 1990 the *New York Times* covered a lawsuit led by NOAA against three American companies for polluting coastal waters off LA, reporting that the suit confirmed that PCBs 'cause injury to natural resources, including fish, birds and marine animals'.[121] A few years later, an article published in *The Observer* warned that 'At least 150,000 different chemicals are dumped every year into the seas ... Experts believe that global industrialisation may now pose as great a threat to the world's largest mammals as the factory whaling fleets of the past'.[122] This awareness of the insidious nature of ocean pollution also features in literary responses to gray whales. One

[119] Buell, 'Global Commons', p. 199; Garrett Hardin, 'The Tragedy of the Commons', *Science*, 162 (1968), 1243-48.
[120] Bill McKibben, *The End of Nature* (New York: Random House, 2006), pp. 90, 91, 58.
[121] Robert Reinhold, 'Suit Seeks to Force Repair of Pollution's Damage', *New York Times*, 19 June 1990.
[122] Polly Ghazi, 'Life – and Slow Death – in the World's Cruel Seas', *The Observer,* 1 October 1995, p. F20.

individual Peterson and Hogan encounter on Kodiak Island speculates that the strandings might have been caused by persistent organic pollutants such as 'DDT, PCBs, dioxins, lead, and benzene', noting that marine mammals immune systems may become 'weakened', leaving them 'more susceptible to diseases and other changes in their environment'.[123]

In varying ways, individuals and communities along the eastern Pacific coastline perceive grays as signifiers of healthy oceans. Peterson writes that 'As the whales rebound along the West Coast, scientists look to them as an "indicator species" that shows us the health of our shared ecosystem'.[124] And if their life and vitality is a sign of ocean wellbeing, then gray whale deaths are signifiers of something gone seriously awry. Whales are often seen as 'bellwethers of ecological collapse' or as omens from the sea; in line with this, the 1999-2000 UME was perceived as a message.[125] Peterson creates a connection between the strandings and saltworks projects near the lagoons in Baja California in spite of there being no evidence for this; using broader knowledge about damage to the marine environment, the salt industry is implicated. Similarly, polluted waters are often cited by others who share the Pacific coastline with the grays. Whilst on Kodiak Island, Peterson and Hogan interview biologist and high-school teacher, Stacy Studebaker, about the strandings. Studebaker discusses military dumping of toxic waste during World War II, speculating: 'We have such short memories for environmental damage done in the past … But half a century later … we are only now beginning to see the effects. Perhaps the grays feeding on the ocean bottom are showing us, with their deaths, the health of our marine environment.'[126] This is at heart a form of storytelling, and again there is no evidence of this causing the strandings. However, because Hogan and Peterson record this conjecture, those reading it might believe it to be true. These forms of counterfactual writing run the risk of reinforcing information that might not be true

[123] Hogan and Peterson, p. 264.
[124] Hogan and Peterson, p. 65.
[125] Burnett, p. 529; Nicolov, p. 134; Schama, p. 133.
[126] Hogan and Peterson, pp. 263-64.

but has been recorded for posterity. This is an example of how popular discourse can come to reinterpret events by telling a story about how nature is declining due to human action. With growing environmental awareness at the turn of the century, as with strandings, 'there is a tendency to seek explanation in human interference in the environment of which the whales are victims but also signifiers'.[127] Strandings, and even more so UMEs, are often perceived as 'unnatural' events and are consequently attributed to human activity. With increasing acceptance in recent years that we are living in the Anthropocene (the so-called Human Age), will the ability for the public to distinguish between what is natural and what is artificial diminish? Perhaps the distinction itself is losing meaning as planetary processes become increasingly driven by human activity.[128]

Certainly, works like *Sightings* provide insight into the ways the ocean exists as a polluted and toxic environment in the human imagination. As Buell argues, in part due to widespread media coverage of incidents such as Chernobyl (1986) and the Exxon Valdez oil spill (1989), the notion that the natural world is polluted has resulted in a generalised 'toxic discourse' that in turn reflects the 'fear of a poisoned world'.[129] Buell proposes that this 'toxic rhetoric' or 'consciousness' essentially began with Rachel Carson's *Silent Spring* (1962), which contributed to the concept of "contaminated communities" and brought the pollution of water systems into the public imagination.[130] Awareness of pollution and other anthropogenic

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[127] Nicolov, p. 135; Heise, 'Lost Dogs, Last Birds', pp. 59, 60; Helen M. Rozwadowski, *Fathoming the Ocean: The Discovery and Exploration of the Deep Sea* (Cambridge, MA: Harvard University Press, 2005), p. 213.
[128] Paul Crutzen and Eugene Stoermer, 'Anthropocene: An Epoch of our Making', *Global Change Newsletter*, 41 (2000), 17-18; Dipesh Chakrabarty, 'The Climate of History: Four Theses', *Critical Inquiry,* 35 (2009), 197-222. McKibben, *End of Nature;* Peter Coates, *Nature: Western Attitudes since Ancient Times* (Cambridge: Blackwell Publishers, 1998), p. 176. Several scholars have emphasised the limitations of the term 'Anthropocene', including that it reinforces anthropocentrism, ignores the unequal contribution of different societies historically and contemporaneously, that it fails to represent the disproportionate impact of climate change on the Global South and Indigenous peoples, and that it overlooks the past and present impact of colonialism. See, for example, Donna Haraway, 'Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin', *Environmental Humanities,* 6 (2015), 159-165.
[129] Lawrence Buell, 'Toxic Discourse', *Critical Inquiry,* 24 (1998), 639-55 (pp. 642, 644, 639, 641).
[130] Buell, 'Toxic Discourse', pp. 639, 642, 645-46; Rachel Carson, *Silent Spring* (London: Penguin, 1999), pp. 21-22, 50-60, 122-41.

activity informs Peterson's writing. As Buell comments, 'writing about whales has taken on a more explicitly protectionist cast', and *Sightings* is one such example.[131] While humans are concerned with investigating strandings because they reveal the ways in which anthropogenic activity is damaging the oceans and marine life, humans also give value to strandings because ultimately they might tell them something about themselves.

Starving whales

A paper published by NOAA's Technical Memorandum in 2005 states that a number of factors could have been possible causes of the UME: 'chemical contaminants, biotoxins, infectious diseases, parasites, fisheries interactions and ship strikes'. These are identified as possible causes during the three post mortems and are also some of the more common factors believed to cause strandings globally.[132] It is not suggested, though, that these definitely caused the mortality event, reinforcing a general lack of clarity about cause(s) of death. As Peterson reports, scientists at the time had 'contending theories'. Writing prior to the Memorandum in 2001, she tells the reader that 'no one knows the reason for the terrible die-off' and a number of extracts in *Sightings* highlight this uncertainty.[133] While there appears to be a lack of definitive answers, the Memorandum notes that in a significant proportion of animals examined, blubber lipid content was considered low and many were emaciated, suggesting that starvation may have played a role. Many living whales, in particular females, were also reported as skinny and malnourished and there were fewer reported calves during this period. In 2005, however, 'the underlying cause of starvation during this event is unknown'.[134] What the report *does* suggest is that there was an issue with feeding. Stranded whale bodies were

[131] Buell, 'Global Commons', p. 219.
[132] Gulland and others, pp. iii, 9-11; See International Whaling Commission, *Report of an IWC Workshop Developing Practical Guidance for the Handling of Cetacean Stranding Events*, IWC/66/WKM&WI: Rep02 (2016), <https://archive.iwc.int/pages/view.php?ref=6231&k=1503bd9f88> [accessed 20 May 2018].
[133] Hogan and Peterson, pp. 256, 91, 16, 89-90, 90-91, 263-264.
[134] Gulland and others, pp. iii, 8-9.

major sources of knowledge about potential changes in the Bering and Chukchi seas. Starvation was cited as a major factor in the 1999-2000 strandings and is discussed on several occasions in both *Eye of the Whale* and *Sightings*. Peterson's account of the meeting at Whidbey Island Church in April 2001, for example, details how Calambokidis of Cascadia Research, in answering the many questions from attendees, identified starvation as likely having played a key role.[135]

By the early 2000s, there appeared to be two leading explanations for the mortality event, the population decline, and general changes in distribution and behaviour, both of which had significant traction in the scientific community. These explanations were identified as factors that would cause malnutrition and starvation, and the combination of these factors was considered the most likely explanation for the high level of mortality. A particularly powerful El Niño and La Niña weather event between 1997 and 2000 was acknowledged as one of the most important factors.[136] El Niño and La Niña are the terms given to climatic events concentrated in the central and eastern Pacific and are the two phases of the *El Niño-Southern Oscillation* (ENSO) cycle. They recur as part of a natural cycle every few years. El Niño refers to a warming of sea surface temperature, usually for around 12 to 18 months. La Niña is the term for a phase of cooler sea surface temperatures.[137]

It is known that El Niño can significantly impact upon a number of animal species' population levels and distribution, including those of marine mammals.[138] The El Niño event of 1997-98 was the strongest of the twentieth century, triggering catastrophic damage to marine ecosystems around the world due to warming water. 1998 became the hottest year on record

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[135] Hogan and Peterson, p. 89.
[136] Gulland and others, p. 15; See, for example, Alejandro Gómez-Gallardo U., Jorge Urbán R. and Stefan Ludwig, 'Abundance and Mortality of Gray Whales at Laguna San Ignacio, Mexico, During the 1997-98 El Niño and the 1998-99 La Niña', *Geofísica Internacional*, 42 (2003), 439-446; B. J. Le Boeuf and others, 'High Gray Whale Mortality and Low Recruitment in 1999: Potential Causes and Implications', *Journal of Cetacean Research and Management,* 2 (2000), 85-89.
[137] Michael H. Glantz, 'El Niño', in *Currents of Change: Impacts of El Niño and La Niña on Climate and Society,* 2nd edn (Cambridge: Cambridge University Press, 2001), pp. 15-28.
[138] Gómez-Gallardo, Urbán and Ludwig, p. 439.

up until that point because during El Niño, heat that the ocean had absorbed was released into the atmosphere. (This is one of the ways in which natural weather events and anthropogenic climate change intersect.)[139] Scientists speculated that the changes in water temperature in the Bering and Chukchi seas during this El Niño may have had a negative impact on the productivity of the benthic community and the main food source of gray whales, amphipods, tiny shrimp-like creatures that live in the sediment.[140] The unusually high temperatures in the extra-tropics as a result of El Niño had far-reaching effects.[141] Impacts included the global coral reef bleaching event of 1997-98, which killed an estimated 16% of the world's corals.[142] As with the coral reef bleaching, the decline in the benthic biomass in the gray whales' northern feeding grounds highlighted the vulnerability of marine ecosystems sensitive to changes in water temperature.[143] In this and other ways, it was recognised that El Niño weather events might provide insight into how marine ecosystems that rely on stable temperature conditions fare in warmer future oceans due to global warming. Furthermore, with increased water temperatures caused by human induced climate change, these ecosystems will likely be less able to withstand the worst effects of shorter-term stressors like El Niño.

Following the end of El Niño, a 'moderate-to-strong' and 'prolonged' La Niña phase began in mid-1998, lasting until the tail end of 2000.[144] This resulted in cooler than normal temperatures over the North Pacific that 'had a deep vertical extent in the troposphere'. These below-normal temperatures were recorded in the north-eastern Arctic and along North

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[139] Magdalena A. Balmaseda, Kevin E. Trenberth and Erland Källén, 'Distinctive Climate Signals in Reanalysis of Global Ocean Heat Content', *Geophysical Research Letters,* 40 (2013), 1754-1759.
[140] Gulland and others, p. 15; Gómez-Gallardo, Urbán and Ludwig, p. 444.
[141] Amir Shabbar and Bin Yu, 'The 1998–2000 La Niña in the Context of Historically Strong La Niña Events', *Journal of Geophysical Research,* 114 (2009), <https://doi.org/10.1029/2008JD011185>.
[142] Gian-Reto Walther and others, 'Ecological Responses to Recent Climate Change', *Nature,* 416 (2002), 389-395 (p. 392).
[143] Roberts, *Ocean of Life*, pp. 77-79.
[144] Shabbar and Yu, p. 1; Michael H. Glantz, 'La Niña: An Overview of the Process', in *La Niña and Its Impacts: Facts and Speculation*, ed. by Michael H. Glantz (Tokyo: United Nations University Press, 2002), pp. 3-24 (p. 6).

America's west coast.[145] In the Bering and Chukchi seas, this resulted in greater sea ice extent and also longer ice cover. The decline in productivity from the warm cycle of ENSO, combined with more Arctic Sea ice extending into the Bering and Chukchi seas during the cooler phase, meant that the animals were unable to feed as much, or for as long.[146]

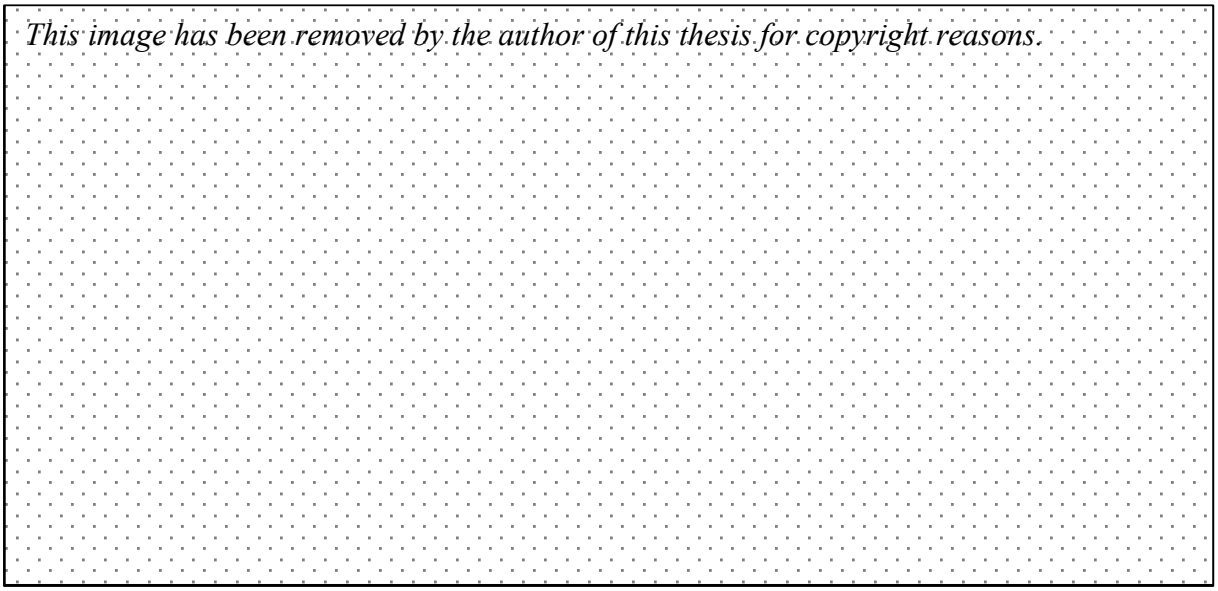

Figure 9. Oceanic Niño Index (ONI) Values 1955-2017: red indicates warm conditions and blue indicates cool conditions of the Equatorial Pacific (> +2 associated with very strong events). Source: NOAA Fisheries Northwest Fisheries Center, 'Oceanic Niño Index', adapted by author, <https://www.nwfsc.noaa.gov/research/divisions/fe/estuarine/oeip/cb-mei.cfm> [27 May 2018].

[145] Shabbar and Yu, pp. 2, 6, 11.
[146] Gulland and others, p. 15; Gómez-Gallardo, Urbán and Ludwig, p. 444; Le Boeuf and others, pp. 85-99; Alter, Rynes and Palumbi, p. 15166.

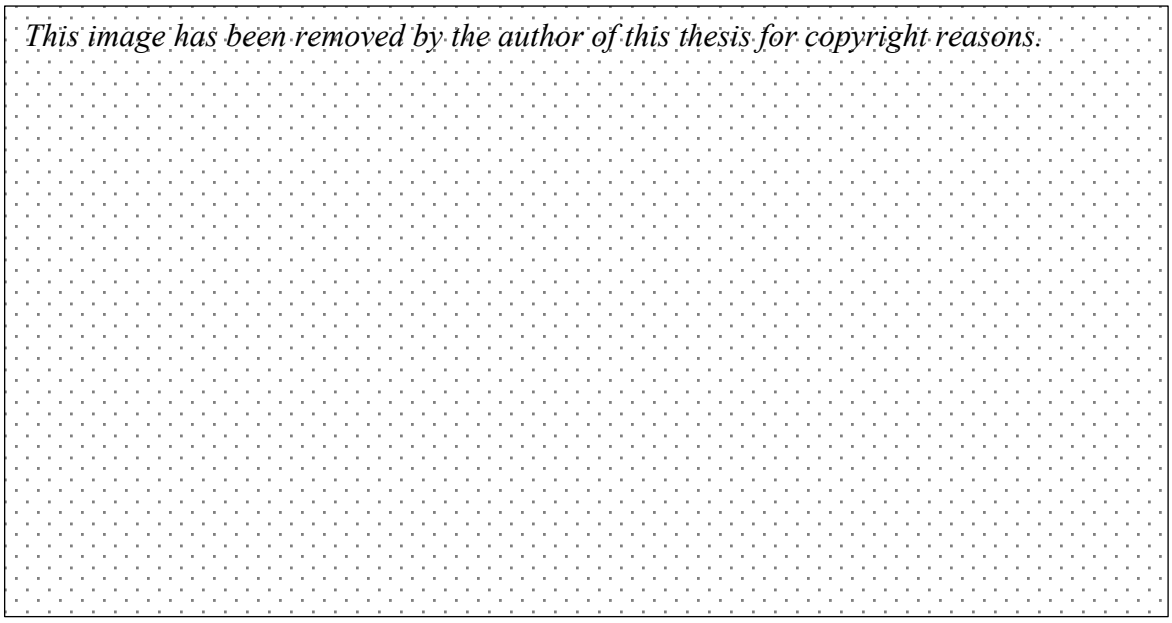

Figure 10. Sea surface temperature anomaly during the very strong El Niño in December 1997. Source: NOAA Office of Satellite and Product Operations, <http://www.ospo.noaa.gov/data/sst/anomaly/1997/anomnight.12.27.1997.gif> [accessed 25 May 2018].

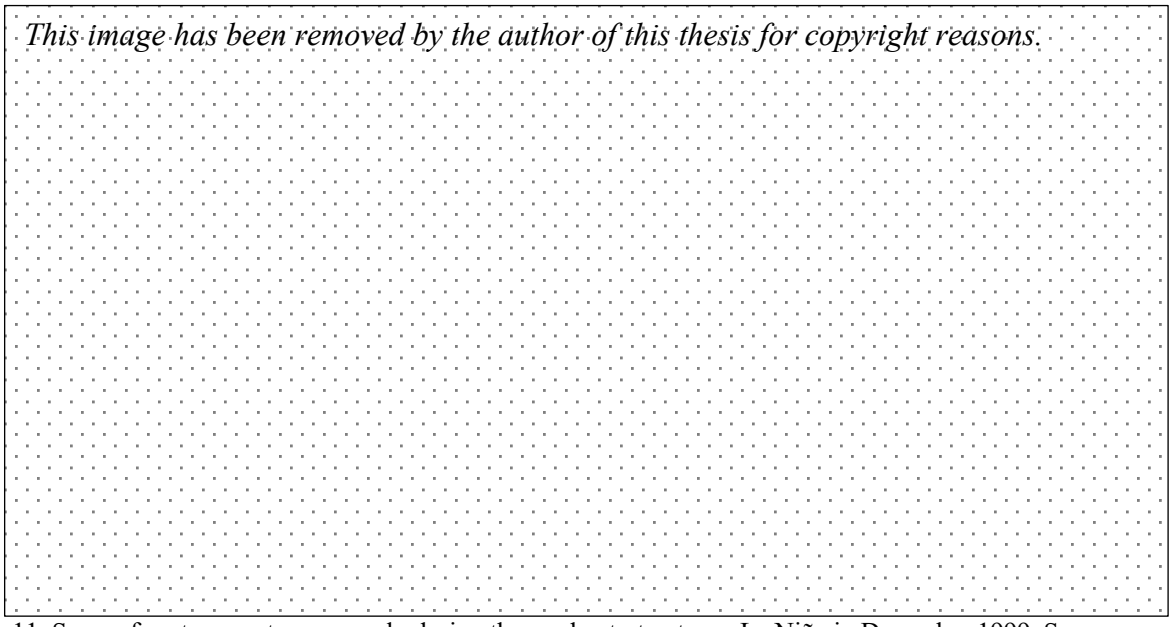

Figure 11. Sea surface temperature anomaly during the moderate-to-strong La Niña in December 1999. Source: NOAA Office of Satellite and Product Operations, <http://www.ospo.noaa.gov/data/sst/anomaly/1997/anomnight.12.27.1997.gif> [accessed 25 May 2018].

Scientists in Mexico investigating the abundance, distribution and mortality of gray whales in Laguna San Ignacio concluded that there was likely a causal link: 'We submit that El Niño and La Niña events had an effect on the mortality and nutrition of whales, as well as on their winter distribution'.[147] 1998 saw a 'shift in the general distribution pattern toward northern latitudes. Very few whales remained in the southern range', which was likely caused by higher than normal sea surface temperature in the southern latitudes due to the onset of El Niño. In 1999, gray whales were discovered 'in places and latitudes where they are not usually present', most probably due to lower water temperatures.[148]

Given its crucial importance, the lack of discussion of the El Niño/La Niña weather event in *Sightings* is remarkable. El Niño is mentioned just three times in passing, once in the introduction, which was written after the authors' journey, and, later on, twice in the same passage, which was written in 2001. This glaring omission reveals how the understanding of the role of the weather event emerged over time.[149] La Niña, for its part, is not referred to at all. This may be because it was only after the 1997-98 El Niño, which was popularly seen as the 'weather event of the century', that El Niño really entered public discourse. La Niña, however, still fails to capture the popular imagination today so it is perhaps not so surprising that it does not feature in this millennial text.[150] Russell, in contrast to Peterson and Hogan, discusses El Niño in more depth, including scientists' theories about its role in the gray whale UME and other changes in their distribution and abundance.[151] He also refers to the role of La Niña, noting that this phase of the ENSO cycle led to greater sea ice extent in the Arctic in 1999. Russell also includes a conversation with Wayne Perryman, a NOAA scientist and gray whale specialist, who explains the impact of La Niña and the particularly cold winter conditions

[147] Gómez-Gallardo, Urbán and Ludwig, p. 439.
[148] Gómez-Gallardo, Urbán and Ludwig, pp. 439, 443.
[149] Hogan and Peterson, pp. xvi, 234, 236.
[150] Glantz, 'La Niña: An Overview', p. 6.
[151] Russell, pp. 194, 195, 230, 518.

in the feeding grounds, while Russell recalls witnessing for himself parts of the Bering Sea still covered in ice in the summer of 1999.[152] As Russell notes, this 'served as a warning of how fragile is the gray whale's world, in both its feeding habitat and its breeding areas, where life is so utterly linked to weather patterns and water temperatures. It was too warm up there, too cool down here'.[153]

A second explanation for the UME was that the gray whale feeding grounds in the north might have reached long-term carrying capacity – the maximum population of a species that an ecosystem can support indefinitely – because the population had rebounded to what many specialists believed was pre-whaling abundance. This was based on the conclusion that the population had reached a peak of almost 27,000 in 1998 and on the particularly low population estimates in 2001 and 2002.[154] Peterson describes how Calambokidis explained to those at the 2001 Whidbey Island meeting that the strandings could have been caused by the Pacific waters that are home to the gray whale having reached carrying capacity.[155] Peterson reflects on what carrying capacity might mean for these whales: 'can the ocean bottoms continue to supply enough nutrients to ensure the gray whale's continued survival? One thing is certain. The grays are starving to death. Their emaciated carcasses are an alarming sign'.[156] Peterson notes later on that 'Another theory comes from the National Oceanic and Atmospheric Administration (NOAA): Perhaps gray whale populations have rebounded so much the food supply has reached its carrying capacity', going on to warn in plain terms, 'This means that the oceans may not support growing numbers'.[157]

For a species that had been so depleted to have returned to what was believed to be pre-whaling abundance was, unsurprisingly, considered to be a momentous achievement,

[152] Russell, p. 518, 554.
[153] Russell, p. 195.
[154] McLean.
[155] Hogan and Peterson, p. 89.
[156] Hogan and Peterson, p. 90.
[157] Hogan and Peterson, p. 256.

dominating the discourse surrounding gray whales at the turn of the millennium. Perceived within the general context of a great conservation 'success', the wave of deaths was assumed by some to be a natural course of events.[158] Peterson's statement that they had 'rebounded so much' sounds positive.[159] As upsetting as 651 dead gray whales were to those sharing this coastline as well as to those studying them, could it be that this mass mortality event was simply 'nature's way'? But even though the prevailing notion in the early 2000s was that this was most likely a natural event, there was still a lingering feeling that it may have been driven by the longer-term impacts of human activity. Calambokidis himself, whilst highlighting that the strandings and wider die-off might have been caused by Arctic waters reaching carrying capacity, also suggested that they may have been triggered by a fateful combination of warming waters, reduction in ocean productivity, and marine pollution.[160] Likewise, in January 1999 at a press conference, the Mexican poet Homero Aridjis, who has dedicated much of his life and work to the plight of gray whales and other species, raised the alarm about changes in gray whale migration, suggesting that humans might bear some responsibility for this: 'There has been an undeniable change in the global climate, and it's possible this had an impact on the migratory patterns of the whales'.[161] Russell later adds his voice to these concerns, musing that 'The timing was off. Was nature – or, perhaps, humankind's impact *upon* nature in the form of global climate change – putting gray whales in potential jeopardy?'[162] However, while suggestions that anthropogenic activity could be a key factor were being made at the time, this was not the dominant hypothesis, with scientists tending to conclude that it was most likely

[158] Gulland and others, p. 17; McLean; P. R. Wade, 'A Bayesian Stock Assessment of the Eastern Pacific Gray Whale Using Abundance and Harvest Data from 1967-1996', *Journal of Cetacean Research and Management,* 4 (2002), 85-98; Doug DeDemaster (NMFS), interviewed by Alaska Sea Grant and University of Alaska Fairbanks, 'Gray Whale Comeback', *Arctic Science Journeys* (2000), radio transcript, <https://seagrant.uaf.edu/news/00ASJ/05.01.00_GrayWhales.html> [accessed 12 December 2017]; Alter, Rynes and Palumbi, p. 15162.
[159] Hogan and Peterson, p. 256.
[160] Hogan and Peterson, p. 89.
[161] Russell, p. 141.
[162] Russell, p. 195.

due to numbers rebounding to pre-whaling levels. Still, these early suggestions foreshadowed research that would come later, and it is this that I now turn.

Recovered species?

Less than a decade on from the UME, ground-breaking research by the American researchers Stephen Palumbi, Eric Rynes and S. Elizabeth Alter suggested that the pre-whaling population of gray whales in the Pacific was likely to have been between 78,500 and 117,700. They used advancing technology to analyse the DNA of the current population, including samples from stranded gray whales, in order to determine the species' genetic diversity. This diversity was too high for a pre-whaling population of just 22,000 to 26,000, which had been the average population size since the 1990s and was generally assumed to have been equivalent to a recovery to pre-whaling levels.[163] Genetic diversity can be relatively unaffected by short-term reductions in population size, such as that caused by whaling. Commenting on an earlier study by Palumbi and conservation biologist Joe Roman into the genetic diversity of whales in the Atlantic in the pre-whaling period, Callum Roberts explains, 'Because whales have a long generation time, it takes a very long time for genetic variability in their populations to equilibrate after a change in population size. The genetic heterogeneity of today's whale populations still reflects population sizes from days before large-scale commercial whaling'.[164]

Alter, Rynes and Palumbi argue that because gray whales are bottom feeders and therefore a 'key ecological structuring agent' in the Bering and Chukchi seas, at previous population levels they may have been responsible for recycling the equivalent amount of sediment as twelve Yukon Rivers by filtering nutrient-rich sediment through their baleen. This filter feeding process can be seen in the illustration below [figure 12] (Running through Alaska

[163] Alter, Rynes and Palumbi, p. 15165.
[164] Roberts, *Unnatural History,* p. 102; Joe Roman and Stephen R. Palumbi, 'Whales Before Whaling in the North Atlantic', *Science,* 301 (2003), 508-510.

and British Columbia, the Yukon is the largest river flowing into the Bering Sea). Vast levels of productivity have since been lost, with profound ecosystem impacts. The researchers further suggest that global warming had caused the waters in the Bering and Chukchi seas to warm, with adverse effects for the benthic community and, consequently, the whales' food source.[165] In 2012, Palumbi and Alter published further research with Seth D. Newsome based on their investigations into gray whale diversity by testing DNA from ancient whale remains, including gray whale bones excavated from Makah territory in the ancient village of Ozette. The research once again revealed high genetic diversity. They posited that this might support the possibility of a pre-whaling population much larger than the present population and previous estimates of numbers before whaling.[166] DNA analysis of other species of whales, including humpback and fin (*Balaenoptera physalus*) whales, has likewise suggested that pre-whaling populations were much higher than previous estimates, providing new awareness of the significant reduction in these animals' ranges. Global strandings have been central to many of these discoveries.[167] These investigations reveal the ways in which scientific knowledge shifts over time and how alternative hypotheses can be both conflicting and contradictory.

Creative nonfiction works like *Sightings* and *Eye of the Whale* reflect contemporary scientific thinking while also working to democratise it for a general audience. Science writing of this kind typically blends personal experience with cultural and historical references. At its best, it offers scientific knowledge in accessible and digestible ways, overlaying it with aesthetic and emotional registers. It also plays an important role in raising awareness of

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[165] Alter, Rynes and Palumbi, p. 15166. See Eddy C. Carmack and others, 'A Major Ecosystem Shift in the Northern Bering Sea', *Science*, 311 (2006), 1461-1464.
[166] S. Elizabeth Alter, Seth D. Newsome and Stephen R. Palumbi, 'Pre-Whaling Genetic Diversity and Population Ecology in Eastern Pacific Gray Whales: Insights from Ancient DNA and Stable Isotopes', *PLOS*, 7 (2012), <https://doi.org/10.1371/journal.pone.0035039>.
[167] See Roman and Palumbi, 'Whales Before Whaling'; Palumbi and Roman, 'History of Whales', pp. 103, 107-113; Roberts, *Unnatural History,* pp. 100-102. In 2016 I met with Richard Sabin, Principal Curator of the Natural History Museum, London, and cetacean and strandings specialist. During a visit to the Museum's storeroom he explained the scientific value of strandings for determining previous genetic diversity and historic ranges. See Nicolov, pp. 74-76.

environmental threats while providing a gateway to engagement with the natural world. Popular science is by no means a recent phenomenon, of course; nor is it necessarily attuned to the conservationist sympathies of our times. Natural histories published in the nineteenth century by whalers like Scammon or William Scoresby can be understood as pursuing forms of popular science, and even Melville's *Moby-Dick* can be read as popularising the cetacean science of his time.[168]

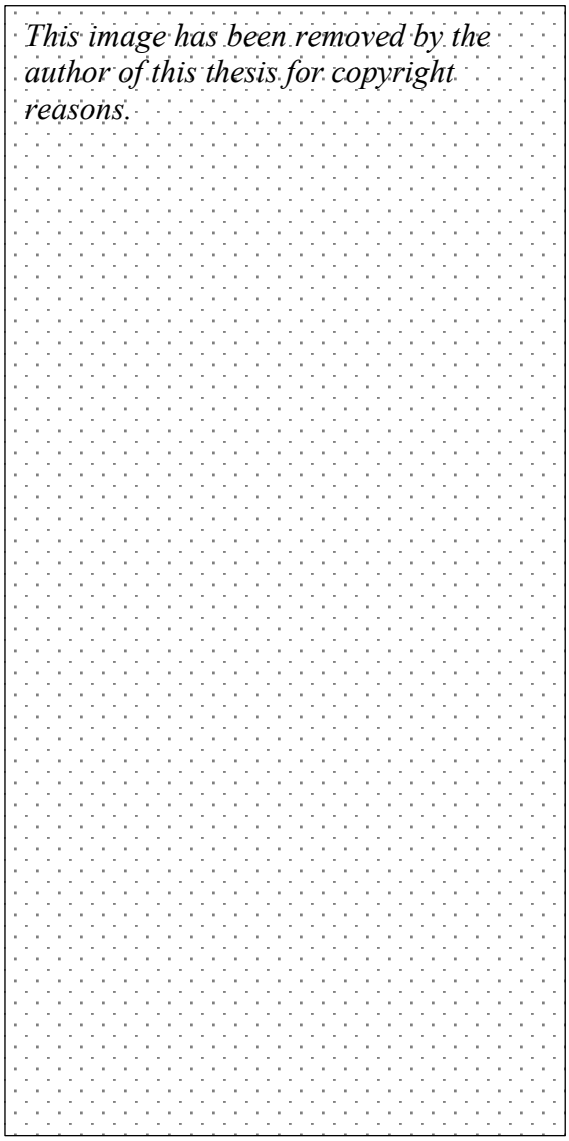

Figure 12. Gray whale bottom feeding. Source: Davis Melzer/National Geographic, in Carl Zimmer, 'Whales on Wrong Side of the World', *National Geographic,* 3 October 2015, <https://www.nationalgeographic.com/science/article/whales-on-the-wrong-side-of-the-world> [accessed 27 May 2018].

[168] Scammon, *Marine Mammals*; William Scoresby, *An Account of the Arctic Regions,* 2 vols (Edinburgh: Archibald Constable and Co, 1820); Melville; Jane Gregory and Steve Miller, *Science in Public: Communication, Culture, and Creativity* (New York: Plenum, 1998), pp. 19-23; Huggan, 'Sperm Count: The Scoresbys and the North', in *Colonialism, Culture, Whales,* pp. 25-56.

However, the scientific elements included in such popular accounts are regularly superseded as scientific knowledge changes over time. As Roberts asserts, 'Old theories are overthrown when new data and new ideas provide better explanations for what we see around us'.[169] Popular science writing may be condemned to lag behind professional scientific research, but its power to convey important ideas about, for example, human-animal relations should not be underestimated, especially given the need to rethink those relations and their implications in Anthropocene times.[170] Texts such as *Sightings* and *Eye of the Whale* may be flawed, but they are valuable resources based on creditable amounts of research. *Sightings*, after all, is where I first found out about Rosie's skeleton and Whidbey Island, and it is where I first encountered Susan Berta of Orca Network and John Calambokidis of Cascadia Research Collective, both of whom I would go on to interview in 2019 (see Chapter 2). Finally, popular science writing may influence scientific research even as it draws upon and interprets it, offering a snapshot of the status of scientific knowledge at a given point of time. An extract in *Sightings* is a reminder that at the turn of the twenty-first century, knowledge about whales was restricted. Peterson quotes from a conversation she had with the then President of the American Cetacean Society, Katy Penland: 'What we really know … is so small. We've only been formally studying … [whales] for the last 30 years or so—which is only half the average life span of a whale. Prior to this, everything we knew about whale population figures came from whaling records'.[171] Russell similarly reports how in 1999, NOAA specialist Wayne Perryman was cautious of agreeing with scientists who attributed the die-off to gray whales returning to pre-whaling numbers and their feeding grounds reaching carrying capacity, because at this stage there was 'simply no real data about how [before whaling] many gray whales were able

[169] Roberts, *Ocean of Life*, p. 80.
[170] Graham Huggan, 'Back to the Future: The "New Nature Writing", Ecological Boredom, and the Recall of the Wild', *Prose Studies,* 38 (2016), 152-171 (p. 155).
[171] Hogan and Peterson, p. 77.

to support themselves'. Russell directly quotes him as stating 'All we have is current information'.[172]

In light of changing scientific knowledge today, the UME and wider population decline can no longer be attributed with any degree of certainty to a positive rebound in the ENP gray whale population. While gray whales were removed from the Endangered Species Act list in 1994, and the growth in numbers is indeed a conservation success in terms of the Act, can a population three to five times smaller than its original abundance truly be considered to have 'recovered'? Even before advances in technology, historical accounts of the gray whale describe numbers far greater than those witnessed today, calling into question NOAA's contention that numbers had rebounded to pre-whaling levels. As one eighteenth-century explorer's account of whales around Monterey Bay declared, 'It is impossible to describe either the number of whales with which we were surrounded, or their familiarity'.[173] Similarly, in 1869 Scammon described 'vast numbers' of whales 'huddled together', while one of his contemporaries noted that the numbers in Ojo de Liebre were 'immense' and 'astonishing'.[174] In *The Marine Mammals of the North-Western Coast of North America*, Scammon describes again how whales in the lagoons, mainly females and calves, were gathered together 'so thickly that it was difficult for a boat to cross the waters without coming into contact with them'.[175] That these numbers would later plunge into precipitous decline seems in little doubt though the recorded figures are nothing if not inconsistent, and historical sources for the data such as whaling logbooks are far from reliable, especially when seen in isolation from other accounts.[176]

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[172] Russell, p. 534.
[173] Jean François de la Pérouse, *Monterey in 1786: The Journals of Jean François de la Pérouse,* ed. by Malcolm Margolin (Berkeley: Heyday Books, 1989), p. 54.
[174] Scammon, 'Report of Captain C. Scammon', pp. 127, 126; Veatch, p. 151.
[175] Scammon, *Marine Mammals,* p. 23, 25; Ellis, *Men and Whales*, pp. 242-244.
[176] Many logbooks are unaccounted for, lost or destroyed, leaving gaps in the data available. Whales would also often be struck and would swim away, die or sink before they were retrieved. These would usually not be recorded. Calves killed by accident would not be recorded, nor the great number of calves that died once their

Contemporary sources may not be too reliable either. Early on in *Sightings*, Peterson cites the 'once-great [gray whale] herds', evoking the image so ingrained in the American imagination of the huge herds of bison that once roamed the mid-western plains but were hunted to the point of extinction by settlers.[177] Peterson's descriptions of the past abundance of the gray whale are reminiscent of Merwin's declaration that these animals once 'ranged countless'.[178] This contradicts earlier passages where she heralds the species as having rebounded, reinforcing the lack of clarity about shifting whale populations as well as asserting her artistic license to play with readers' perceptions of the gray whale as either 'depleted' or 'recovered' depending on the perspective she happens to favour at the time.[179] Later on, she questions NOAA's contention that gray whales had reached pre-whaling levels and that their feeding grounds were now at carrying capacity. She reasons that 'this theory does not take into consideration the huge pre-hunting populations of grays, since there are few sources except hunting ships that can supply that valuable data'.[180] She also plays up the significance that whaling logbooks have had for specialists attempting to reconstruct whale populations. While whaling logbooks are indeed valuable sources, relying on the data they provide may result in a skewed representation of numbers.[181] This has become even more apparent with the development of advanced genetic tests. When catch records are compared to the data from more recent DNA testing, the overall picture of the population is significantly different. To Roberts, 'these genetic estimates seem much more in accord with the kind of whale numbers seen by early travellers'.[182]

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mothers had been killed. See Roberts, *Unnatural History,* p. 101. Scammon, '*Marine Mammals*', pp. 24-25; Henderson, 'Nineteenth Century Gray Whaling', p. 174.

[177] Hogan and Peterson, p. xvii; Patricia Nelson Limerick, *The Legacy of Conquest: The Unbroken Past of the American West* (New York: W. W. Norton & Company, 1987), p. 322; A. C. Isenberg, 'The Returns of the Bison: Nostalgia, Profit and Preservation', *Environmental History*, 2 (1997), 179-196 (p. 181).

[178] Merwin.

[179] See, for example, Hogan and Peterson, pp. xviii, 17, 65.

[180] Hogan and Peterson, p. 256.

[181] Roberts, *Unnatural History,* p. 101.

[182] Roberts, *Unnatural History,* p. 101

This might be seen as an example of where a species' population baseline has been constructed based on a depleted population. Apart from whaling logbooks, as Perryman notes, 'All we have is current information', and that information consists of the gray whale population having been observed at a peak in 1997 and at the lows of 2001 and 2002.[183] In 1995, Daniel Pauly famously coined the term 'shifting baseline syndrome' in relation to fisheries, calling for more inclusion of anecdotal accounts as valuable sources. As he states:

> each generation of fisheries scientists accepts as a baseline the stock size and species composition that occurred at the beginning of their careers, and uses this to evaluate changes. When the next generation starts its career, the stocks have further declined, but it is the stocks at that time that serve as a new baseline. The result obviously is a gradual shift of the baseline, a gradual accommodation of the creeping disappearance.[184]

Pauly's concept was ground-breaking in marine conservation biology and ecology more widely, 'for which our limited understanding of patterns of distribution and abundance, food webs, and community structure are based on the assumption that what we can observe today is all that matters'.[185] Environmental scholars Jeremy Jackson and Jennifer Jacquet have noted more recently that 'no rational person would deny' that the bison on the plains of North America ranged in the millions before settler expansion simply because there is 'no ecological survey data'. The evidence is there in the many historical descriptions. However, this is 'in effect … what most marine ecologists have done until very recently for the former extraordinary abundance of large animals in coastal seas around the world'.[186] These types of sources tend to be eschewed by those working within the environmental sciences because they

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[183] Russell, p. 534; McLean.
[184] Daniel Pauly, 'Anecdotes and the Shifting Baseline Syndrome of Fisheries', *Trends in Ecology & Evolution*, 10 (1995), 430.
[185] Jeremy Jackson and Jennifer Jacquet, 'The Shifting Baselines Syndrome: Perception, Deception, and the Future of Our Oceans', in *Ecosystem Approaches to Fisheries: A Global Perspective,* ed. by V. Christensen and J. Maclean (Cambridge: Cambridge University Press, 2011), pp. 128-141 (p. 128).
[186] Jackson and Jacquet, p. 129; A. C. Isenberg, *The Destruction of the Bison* (Cambridge: Cambridge University Press, 2000).

are qualitative, resulting in incomplete pictures being formed of marine animal populations. With the use of a broader range of types of sources or data, trust in reconstructed historic baselines is greater. Jackson and Jacquet argue that the exclusion of historical sources 'risks ignoring the obvious' and, paraphrasing Pauly, they declare that 'anecdotes are the data'. By insisting 'on traditional quantitative population data', the results can be 'a kind of "false precisionism" that ignores reality and generality'.[187]

Shifting baseline syndrome has now been extended to a range of conservation issues, and is useful when considering the ENP gray whale. While gray whale population estimates, like those of other whale populations, have been based in large part on whaling logbooks, other useful information can be taken from historical descriptive accounts. Through a combination of geological, archaeological and historical data – much of which is qualitative – as well as more recent DNA testing techniques, the long-term detrimental impact of humans on this species has become much clearer. In order to come close to understanding past life in the oceans, this cross-disciplinary approach is essential. The discoveries made in relation to gray whale and other whale species' historic populations have serious ramifications for the limitations of marine ecosystem restoration.[188]

As noted above, the tremendous loss of biomass through the reduction in the gray whale population may have had a drastic impact on the recycling of nutrients which, together with other ecological changes such as warming waters triggered by climate change, is having adverse impacts on benthic marine communities as well as seabirds and other terrestrial animals. These fundamental changes to the benthic community reveal the extent to which human activity has altered the foundational level of the marine ecosystem. As Alaimo argues,

[187] Jackson and Jacquet, p. 132.
[188] Alter, Rynes and Palumbi, pp. 15162-67; Alter, Newsome and Palumbi; Palumbi and Roman, 'History of Whales', pp. 102, 103.

the benthic zones of the oceans signal the 'enormity' of the impacts of anthropogenic activity, and the consequences 'reverberate all the way to the sea floor'.[189]

One of the main reasons that this recent research has had such significance is that because of a presumed recovery of ENP gray whales, there has been a perceived decline in extinction risk and consequently a reduced management concern. In this context, knowledge about the past abundance of animal populations is crucial for the present and future management and restoration of species.[190] Scientists have suggested that reduced productivity in the benthic community along with greater ice cover in the years 1998-2001 meant that gray whales simply could not access enough food to sustain their migration. The combination of long-term 'shifting climatic conditions' and short-term El Niño and La Niña events was particularly disastrous for females who were pregnant or suckling calves, because they were unable to endure the huge migration burdened with these additional pressures.[191] With a reduced carrying capacity and the population confined below 26,000 since the 1990s, a number of scientists argue that the ENP gray whale population, far from having recovered, should be considered 'depleted relative to historical numbers'.[192] This is complicated further by an ever-evolving understanding of the Pacific Northwest resident gray whales as being a genetically distinct sub-population.[193]

All of the above findings call into question the meanings we attach to the word 'endangered', both in scientific and popular usage. We might also want to think about what this has to say about our perception of 'recovered species'. As Jackson and Jacquet suggest,

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[189] Alaimo, 'Anthropocene at Sea', p. 155.
[190] Alter, Rynes and Palumbi, pp. 15162, 15166; Jackson and Jacquet, p. 136; Palumbi and Roman, 'History of Whales', p. 102.
[191] Gómez-Gallardo, Urbán and Ludwig, p. 444; Gulland and others, pp. 7, 15, 16.
[192] Alter, Rynes and Palumbi, pp. 15162, 15166.
[193] John Calambokidis, Jeffrey Laake and Alie Pérez, 'Updated Analysis of Abundance and Population Structure of Seasonal Gray Whales in the Pacific Northwest, 1996–2015', *Paper submitted to IWC North Pacific Gray Whale Comprehensive Assessment Meeting* (2017); A. R. Lang and others, 'Assessment of Genetic Structure Among Eastern North Pacific Gray Whales on their Feeding Grounds', *Marine Mammal Science,* 30 (2014), 1473–1493.

'Learning about the past is important because it will help us determine our future'.[194] The reality is that the possibility of gray whales returning to their previous numbers is unlikely, perhaps even impossible, because of large-scale and likely irreversible ecological changes in their Arctic feeding grounds.[195] The Arctic is experiencing transformative change due to human activity: it has come to be considered as the canary in the frozen mine.[196] In turn, gray whales have been dubbed 'sentinels of change'.[197] With future predictions of Arctic ecosystem collapse due to climate change and marine defaunation, it is important to speak frankly about the future of what supposedly recovered and stable populations of animals might actually be.[198] This is not to undermine the significance of certain cetacean population recoveries. Rather, it reinforces the need for action to be taken to tackle the drivers of climatic shifts and ecological changes in order to ensure that species like the gray whale do not eventually disappear, along with those species we might not think about so readily when we imagine the oceans. Taking knowledge about historic abundance and reduced ecosystem productivity into account may result in improved scientific, political and cultural representation of marine mammal populations into the future.[199] Failure to do so may result in 'conservation success stories' obscuring the longer-term detrimental impacts of humans and the threat of future declines as a result of climate change. The recovery of whale populations since the end of widespread commercial whaling is welcome, but not secure.

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[194] Jackson and Jacquet, p. 136.
[195] Alter, Rynes and Palumbi, p. 15166.
[196] Scott G. Borgerson, 'Arctic Meltdown: The Economic and Security Implications of Global Warming', *Foreign Affairs, 87* (2008), 63-77.
[197] NOAA Fisheries, 'Sentinels of Change: Gray Whales in the Arctic', 29 March 2016, <https://www.fisheries.noaa.gov/feature-story/sentinels-change-gray-whales-arctic> [accessed 17 September 2018].
[198] Douglas J. McCauley and others, 'Marine Defaunation: Animal Loss in the Global Ocean', *Science*, 347 (2015), <http://dx.doi.org/10.1126/science.1255641>.
[199] Bruno Latour, *The Politics of Nature: How to Bring the Sciences into Democracy,* trans. by Catherine Porter (Cambridge, MA: Harvard UP, 2004) pp. 41, 70.

From endings to afterlives

So far this chapter has presented an in depth overview of the UME between 1999-2000 and shifts in the human-cetacean relationship since the mid-nineteenth century as a result of commercial whaling, the near-extinction and consequent protection of gray whales, and the development of scientific research on this species. This work offers vital context to the understanding of the UME as well as two sets of events, both of them structured around individual whale deaths, that were loosely associated with it. These events will be dealt with in detail in subsequent chapters. In what remains of this chapter I want to introduce a few of the key conceptual ideas that emerged during my research into these two case studies: endings, afterlife, conservation and survivance, each of which, though they overlap with one another, I will deal with in turn.

Endings

Endings are central to this thesis. While endings evoke finality, they can often imply the very opposite of their meaning: after the end, there is the beginning of something else. Endings may be individual or collective. They can be localised or they can operate on global scales. Apocalyptic narratives are perhaps the most powerful, though by no means unproblematic, trope of the end. The Christian tradition has entrenched ideas about apocalyptic finality as the inevitable future into the collective psyche of those communities where Christianity has taken hold. Many different versions of 'the End' feature, however. Apocalypse has been tied to particular epochs (usually millennia), imbuing them with symbolic significance while gesturing towards the 'end' of humanity, the 'end' of society as we know it, the 'end' of the world.[200] Since the latter half of the twentieth century and intensifying in the twenty-first,

[200] Frank Kermode, *The Sense of an Ending: Studies in the Theory of Fiction* (Oxford: Oxford University Press, 2000); Stefan Skrimshire, 'Climate Change and Apocalyptic Faith', *Wiley Interdisciplinary Reviews: Climate Change,* 5 (2014), 233-246; Stefan Skrimshire, 'Activism for End Times: Millenarian Belief in an Age of Climate Emergency', *Political Theology*, 20 (2019), 518-536.

projected ecological apocalypse has become an increasingly common variant. As environmental degradation accelerates, we are increasingly preoccupied by a human-induced 'end' and what might come after it. In recent years, we have witnessed some of the largest forest fires in human history and extreme heatwaves,[201] while too little water (drought, desertification)[202] or too much (floods, rising sea levels)[203] are becoming pressing issues in several parts of the world. Growing numbers of refugees are fleeing their homes because of these impacts, and greenhouse emissions, deforestation, and species extinctions are all on the rise.[204] So where are we in the continuum of environmental apocalypse? Are we on the brink of an apocalypse, in the throes of an apocalypse, or already living in post-apocalyptic times? Possibly we are trapped in what Lois Parkinson Zamora describes as 'the period of transition, which becomes an age in itself as crisis succeeds crisis'.[205] Or maybe we are in what Frank

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[201] See, for example, Mahlatse Kganyago and Lerato Shikwambana, 'Assessment of the Characteristics of Recent Major Wildfires in the USA, Australia and Brazil in 2018–2019 Using Multi-Source Satellite Products', *Remote Sensing,* 12 (2020), <https://doi.org/10.3390/rs12111803>; Tom Di Liberto, 'Astounding Heat Obliterates All-Time Records Across the Pacific Northwest and Western Canada in June 2021', *NOAA Climate.gov,* 30 June 2021, <https://www.climate.gov/news-features/event-tracker/astounding-heat-obliterates-all-time-records-across-pacific-northwest> [accessed 30 July 2021]; Colin Raymond, Tom Matthews and Radley M. Horton, 'The Emergence of Heat and Humidity too Severe for Human Tolerance', *Science Advances,* 6 (2020), <https://doi.org/10.1126/sciadv.aaw1838>.

[202] See, for example, Alisher Mirzabaev and others, 'Desertification', in *Intergovernmental Panel on Climate Change (IPCC) Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystem*s, ed. by P. R. Shukla and others (2019), pp. 249-343; Sourav Mukherjee, Ashok Mishra and Kevin E. Trenberth, 'Climate Change and Drought: A Perspective on Drought Indices', *Current Climate Change Reports,* 4 (2018), 145-163.

[203] See, for example, Curt D. Storlazzi and others, 'Most Atolls Will be Uninhabitable by the Mid-21st Century Because of Sea-Level Rise Exacerbating Wave-Driven Flooding', *Science Advances,* 4 (2018), <https://advances.sciencemag.org/content/4/4/eaap9741> [accessed 15 July 2021]; E. Kirezci and others, 'Projections of Global-Scale Extreme Sea Levels and Resulting Episodic Coastal Flooding Over the 21st Century', *Scientific Reports,* 10 (2020), <https://doi.org/10.1038/s41598-020-67736-6>; Elizabeth DeLoughrey, 'The See is Rising: Visualising Climate Change in the Pacific Islands', in *Meteorologies of Modernity: Weather and Climate Discourses in the Anthropocene*, ed. by S. Fekadu, H. Straß-Senol and T. Döring (Tübingen: Narr Francke Attempto, 2017), pp. 237-253.

[204] John R. Wennersten and Denise Robbins, eds., *Rising Tides: Climate Refugees in the Twenty-First Century* (Bloomington: Indiana University Press, 2017); Celso H. L. Silva Junior and others, 'The Brazilian Amazon Deforestation Rate in 2020 is the Greatest of the Decade', *Nature Ecology & Evolution,* 5 (2021), 144-145; Gerardo Ceballos, Paul R. Ehrlich and Peter H. Raven, 'Vertebrates on the Brink as Indicators of Biological Annihilation and the Sixth Mass Extinction', *Proceedings of the National Academy of Sciences,* 117 (2020), 13596-13602; Deborah Bird Rose, Thom van Dooren and Matthew Chrulew, eds., *Extinction Studies: Stories of Time, Death, and Generations* (New York: Columbia University Press, 2017).

[205] Lois Parkinson Zamora, *Writing the Apocalypse: Historical Vision in Contemporary U.S. and Latin American Fiction* (Cambridge: Cambridge University Press, 1989), p. 49.

Kermode calls 'intemporal agony', unable to go back to the beginning or to proceed towards an ending because we are permanently caught up in living and experiencing the now.[206] Perhaps, as Kermode suggests, we give significance to the endings of things because we can only experience things *in medias res*. [207]

In the case of whale strandings, we assume that their 'end' is also of significance to us. Sometimes it is. A whale may have died as the result of harmful human activity. But it may also have died because of old age or sickness. A whale's death ultimately belongs to it and it alone. Not that this prevents us from interpreting it for our own purposes, for example, as presaging our own deaths, or the death of the planet or the death of the ocean. Consider toxic spills, coral bleaching, atomic testing, the Pacific garbage patch, dead zones – and unusual mortality events. Whale strandings, both individual and mass, have often been seen through the cracked lens of apocalypse narratives. As Graham Huggan writes, whales represent 'a kind of planetary last chance in the face of impending catastrophe'; in acting to save them, we are giving ourselves one last chance to save ourselves.[208] Or as James Berger puts it more broadly, 'Apocalyptic representation stands in the midst of crisis and between two catastrophes: one historical (remembered and suffered), and one imagined (desired and feared)'.[209] In this context, whale strandings are both material reminders of atrocities past and symbolic portents of future environmental destruction. Individual strandings fit into an overall picture of ongoing environmental degradation and possible future ecological disaster, while mass strandings – UMEs – are catastrophic scenarios *par excellence*. Then there is the question of timing, or rather the interpretation of time: the 1999-2000 gray whale UME,

[206] Kermode, p. 4.
[207] Kermode, pp. 7, 8.
[208] Huggan, 'Last Whales', pp. 382-396.
[209] James Berger, *After the End: Representations of Post-Apocalypse* (Minneapolis: University of Minnesota Press, 1999), p. 35.

which occurred at the turn of the twenty-first century, fits perfectly into the template of disaster narratives of the new millennium.[210]

Yet there are other ways of framing these narratives. As Stefan Helgesson writes, 'beginnings may be the surest way to end something else', and vice versa.[211] The deaths of the gray whales I cover in these pages represent the end of living in its biotic sense, but also the beginnings of a relationship with humans, which is to say the start of an *afterlife.*[212] Whales' afterlives are not just about humans; their deaths also register the beginning of processes that involve a phenomenal spurt of energy as the body breaks down and the animal becomes food for other species. As well as recycling nutrients into the surrounding environment, their deaths are part of the beginning of others' lives. Death may be a biological end to an individual life, but it is far from the end of that body's biological impact. Endings, in this sense, are nearly always unstable and shifting, and in some cases they can produce new cross-species beginnings: cetacean afterlives.

Afterlives

Cetacean afterlives almost always go unnoticed by humans. We have little knowledge of how most of them come to their end, and their deaths hold little direct significance to us. Of the thousands of gray whales that died between the end of 1998 and 2000, humans were aware of just 651 specific deaths because the vast majority of them died in the ocean. Taking into account the thousands of miles of eastern Pacific coastline, which includes isolated and dangerous regions, it is highly likely that gray whales stranded, and have stranded since, in remote areas unknown to humans. Frances Gulland, a veterinary pathologist and US Marine

[210] Kermode, pp. 183-191; Skrimshire, 'Climate Change'; Skrimshire, 'Activism for End Times'.
[211] Stefan Helgesson, 'Introduction', in *Exit: Endings and New Beginnings in Literature and Life*, ed. by Stefan Helgesson (Amsterdam: Rodopi, 2011), pp. ix-xiii (p. x).
[212] Samuel J. M. Alberti, 'Introduction: The Dead Ark', in *The Afterlives of Animals: A Museum Menagerie,* ed. by Samuel J. M. Alberti (Charlottesville: University of Virginia Press, 2011), pp. 1-16.

Mammal Commissioner, explained to me in 2019 that there were 'big black holes' on the California coastline, such as Big Sur, 'where anything could be happening'. 'How many whales wash up in places that we will never know', she remarked, and 'how many things go unnoticed?'[213]

However, for the 651 whales that *were* discovered stranded, or that died close to the shore, their post-mortem lives were dictated by humans. While some were left where they were because they had fetched up in remote locations, many became subject to human interventions of different kinds, rupturing the natural process of decomposition.[214] Each individual stranded gray whale was given a human-determined afterlife, ranging from data banks to salvaged body parts. These afterlives were defined by a series of transformations resulting in drastic changes in the form, the significance, and the value of the animal.[215]

It has been difficult for me to track down what happened to many of these animals, but it is still possible to chart the stories of some of them. The three young male gray whales that were the only animals to be found alive were euthanised and full necropsies carried out; only these three animals could be given a post mortem because this procedure relies on the body being freshly dead because of the fast rate of decomposition in large whales.[216] Samples were taken from these whales for further analysis, just as with many of the other grays that were discovered stranded as part of the UME.[217] It seems likely that most of the 651 whales were removed, buried or otherwise disposed of. A number of skeletons, however, were saved for display in local communities in the US. I have been able to track down four locations: Whidbey Island, Washington, Long Beach, Washington, and Homer and Kodiak Islands, both in Alaska. Finally, there is the death of the gray whale in Ahousaht, which was not a

[213] Frances Gulland, Moe Flannery and Denise Greig, interviewed by author, San Francisco, 9 July 2019.
[214] Gulland, Flannery and Greig. John Calambokidis and Jessie Huggins, interviewed by author, Olympia, 29 July 2019.
[215] Alberti, 'Introduction: The Dead Ark', p. 1.
[216] Nicolov, p. 64.
[217] Gulland and others, p. 5

UME stranding but was reported dead in the same period. To write about all of these gray whale afterlives is far beyond the limits of this thesis, so I will focus in the next two chapters on two key case studies. More specifically, I will chart the personal post-death history of two whales that died in the period between the end of 1998 and 2000, exploring some of the ways in which these whales had a continued life – an afterlife – through prolonged contact with humans.

The term 'afterlife' has been used in many contexts, including with specific application to animals; however, it is useful to begin with Walter Benjamin's influential conception of the term. Benjamin conceived of the term in the context of the translation of texts, notably in his essay *Die Aufgabe des Übersetzers [The Task of the Translator]* (1923).[218] As he writes, 'A translation proceeds from the original. Not indeed so much from its life as from its "afterlife" or "survival" [*Überleben*]'. Significantly, 'the translation is later than the original', and this is the point at which something has 'reached the stage of their continuing life [*Fortleben*]'. So, Benjamin concludes, there is the 'life and continuing life'.[219] Jacques Derrida, in his own writings on Benjamin and translation, defines afterlife as 'living on' or 'surviving', suggesting that 'translation is neither the life nor the death of the text, only or already its living on, its life after life'.[220] Benjamin's *Überleben* can be understood as a 'beyond' or further life, and there is an implication that this may be a higher level of life, something superior and greater which is imposed onto the first life.

Another major theorist who considered the notion of afterlife is the German art historian, anthropologist and philosopher Aby Warburg, for whom the key term is *Nachleben.* Warburg's major contribution to art historical thinking came from his explorations of the

[218] Walter Benjamin, *Die Aufgabe des Übersetzers [The Task of the Translator]*, trans. by Steven Rendell, *TTR: traduction, terminologie*, *rédaction,* 10 (1997), 151–165, <https://doi.org/10.7202/037302ar>.
[219] Benjamin, p. 153.
[220] Jacques Derrida, 'Living On/Border Lines', trans. by James Hulbert, in *Deconstruction and Criticism,* by Harold Bloom and others (New York: Seabury Press, 1979), pp. 75-176 (pp. 76, 102-103).

afterlife of antiquity, *Nachleben der Antike*, in the early twentieth century.[221] Georges Didi-Huberman summarises Warburg's theory as follows: '"Survival" is the central concept … *Nachleben* refers to the survival (the continuity or afterlife and metamorphosis) of images and motifs – as opposed to their renascence after extinction or, conversely, their replacement by innovations in image and motif'.[222] The art publication Mousse Magazine provides a further, succinct explanation of the term, stating that it is one 'meaning both afterlife and survival, [which] relates to the perseverance of images, associative thoughts and forms of seeing across differing cultural, social, chronological and intellectual weltanschauungs'.[223] Afterlives should therefore be understood as multi-layered, complex and enduring. Moreover, Warburg rejected the idea of a linear accumulation of history, influences and facts, putting forward instead a 'ghostly and symptomatic time'.[224] In contrast to a strict chronological trajectory, ghostly time is an understanding of the present as the complex amalgam of many intersecting pasts.

Edgar Wind, an art historian associated with Warburg, borrowed his term *Nachleben* and similarly criticised an emphasis on historical continuity. Didi-Huberman usefully summarises Wind's position on afterlives: 'Every survival entails: a play of "pauses" and "crises," of "leaps" and "periodic reversions," that together form, not a narrative account of the history in question, but a web of memory—not a succession of artistic facts, but a theory of symbolic complexity'.[225] Deborah Cherry's 2013 exploration of the notion in the context of monuments provides further insights on as well as a theoretical grounding for the term'

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[221] Aby Warburg, *Gesammelte Schriften,* ed. by G. Bring and F. Rougemont (Leipzig: Teubner, 1932), pp. 670-73; Georges Didi-Huberman, 'The Surviving Image: Aby Warburg and Tylorian Anthropology', *Oxford Art Journal*, 25 (2002), 59-69 (p. 61).
[222] Georges Didi-Huberman, 'Artistic Survival: Panofsky vs. Warburg and the Exorcism of Impure Time', trans by Vivian Rehberg and Boris Belay, *Common Knowledge,* 9 (2003), 273-285 (p. 273).
[223] Mousse Magazine, 'Exhibitions: Nachleben – New York', 24 May 2010, <http://moussemagazine.it/new-york-nachleben/> [accessed 21 May 2019].
[224] Didi-Huberman, 'Artistic Survival', p. 274.
[225] Didi-Huberman, 'Artistic Survival, p. 274; Edgar Wind, *A Bibliography on the Survival of the Classics*, 2 vols (London: Cassell, 1934–39), I, p. viii.

afterlife'. Cherry notes how 'Afterlives accrue through material alteration and … accumulate in representations'. In this cumulative process, they are 'marked by material change [and] put to new uses and interpretations, travelling through image-banks, archives, collections and exhibitions. [A]fterlives … are multi-media'.[226] For Cherry, afterlives are neither static nor one-dimensional; instead, they are an aggregate sum of 'the restless multiplicity of co-existing versions, representations, imag(in)ings, and interactions'. They exist alongside one another, intercepting, diverging, contradicting and supporting each other. [227] Afterlives are recorded through the senses and formed through the interactions between different human agents (from the individual to the institutional), different locations and time periods, and different visual sources, such as texts or images. In this way, they offer the potential for 'survival, of living-on, through change'. [228] Like Warburg and Wind, Cherry emphasises that afterlives are not the result of a linear history but rather resist chronological trajectory, reflecting a myriad of human and nonhuman forces and influences.[229]

Having rooted the term 'afterlife' in (human) cultural theory, I now turn to those who have considered *animal* afterlives. While academic research on animal afterlives tends, understandably perhaps, to focus on animals exhibited after their deaths in natural history museums, animal afterlives exist in many different sites and media. Samuel Alberti's work is of vital importance to any discussion on this topic. While Alberti concentrates mainly on animals intended for natural history displays and museums, his introduction to his edited collection *The Afterlives of Animals: A Museum Menagerie* (2011) is applicable to a broad range of nonhuman afterlives. As he writes, 'biological death is only one moment, one narrative hinge of many (admittedly a particularly resonant one) in the life/afterlife of the

[226] Deborah Cherry, 'The Afterlives of Monuments', in *The Afterlives of Monuments,* ed. by Deborah Cherry (London: Routledge, 2014), pp. 1-14 (p. 1).
[227] Cherry, p. 3.
[228] Cherry, p. 3.
[229] Cherry, p. 3.

animal'. Human intervention and the conversion of the animal into new states and identities represent a 'different phase of its existence'.[230] Encounters with humans typically trigger the beginning of the animal's cultural life/afterlife, as it moves from the domain of the natural world into the culturally mediated world of humans.

Writing a decade earlier, the anthropologist Garry Marvin had already contemplated 'the journeys or passages that some wild animals make between the contested terrains of "nature" and "culture"'.[231] Animals, for Marvin, can have material afterlives defined by their corporeality – taxidermy, skeletons, specimens – but also non-material survivals: memorials, spiritual renderings, digital presences (databanks), visual and verbal sources (photographs and artworks; literature and other cultural texts). Animal afterlives are defined by the multiplicity of media that prolong, but also reinvigorate, said animals' life or lives. Each afterlife can thus be understood as consisting of multiple survivals. As Marvin asks, 'What is the nature of [these animals'] life after life? Do they haunt us from this afterlife?'[232] As spectral figures addressing us from other worlds, they are of the past but exist in the present, and they also have the potential to speak to the future. As Cherry further suggests, 'while afterlives accrue with the support of history and memory, in their projection of a future they exceed reconstructions of the past and mnemonic recollection'.[233] It is this that makes afterlives, and specifically animal afterlives, such a valuable area of study.

Alberti's collection focuses on animals that were known to humans in life, including many 'celebrity' animals such as Chi-Chi the giant panda in London Zoo. Animals on display who were named or made famous 'have usually had close relationships with humans in their

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[230] Alberti, 'Introduction: The Dead Ark', p. 6.
[231] Garry Marvin, 'Perpetuating Polar Bears: The Cultural Life of Dead Animals', in *Nanoq: Flatout and Bluesome: A Cultural Life of Polar Bears*, ed. By Bryndis Snæbjörnsdóttir and Mark Wilson (London: Black Dog, 2006), pp. 156–65 (p. 157).
[232] Marvin, p. 157.
[233] Cherry, pp. 3-4.

lives', for example, as domestic or captive animals.[234] As Deidre Coleman puts it, 'Named animals such as these … possess a pre-mortem existence (often anthropomorphized) which is then consolidated in their afterlives as front-of-house specimens or (perhaps even more importantly) in the stories we tell about their lives amongst us.'[235] With wild animals such as cetaceans, the possibility of knowing their life history is impossible aside from the brief encounters that humans have had with these animals whilst still alive and what can be gleaned from their bodies during necropsies and specimen analysis.

Writing about a collection of taxidermy polar bears on display at the exhibition *Nanoq: Flat Out and Bluesome* in Bristol between 2001-2006 (many of them wild animals killed by hunters), Marvin reminds us that:

> Although these bears were born of particular parents, inhabited particular places, experienced some sort of family life, played, hunted, perhaps raised their own offspring, we have no access to those lives except as knowledge of how polar bears in general live.[236]

We can only make assumptions about these animals' lives based on existing scientific knowledge about things such as behaviour or anatomy. Tracked in this way, individual wild animals almost always become representative for their species, whether in life or death. As Marvin writes, 'for although they had a past, the majority do not begin to have a recoverable history until their … encounter with humans', and this moment of contact then begins the animal's 'specific, individual, cultural life'.[237] However significant and fascinating the life history of individual whales might be, the inherent difficulty of accessing these means that, like Marvin, I am primarily interested in the interactions humans have with the physical remains of dead wild animals – in this instance, gray whales – and the ways in which those

[234] Nicolov, p. 143.
[235] Deirdre Coleman, 'Menageries and Museums: John Simons' *The Tiger that Swallowed the Boy* (2012) and the Lives and Afterlives of Historical Animals', *Animal Studies Journal,* 2 (2013), 114-132 (pp. 115-16).
[236] Marvin, p. 158.
[237] Marvin, pp. 158, 165.

interactions are constructed.[238] 'Dead animals', as Stephen Asma cannily observes, 'do tell tales'.[239]

Conservation

Wildlife conservation by definition reveals human desires and concerns in so far as its operating principles and procedures are organised around those particular species which are considered worth saving by humans and human societies and which are not. This applies as much to the conservation of animal remains as it does to the conservation of living species. Animal remains contain valuable data about the individual animal, its species, and its habitat range; at the same time, public displays of wild animal body parts since the late twentieth century have been used to inspire diverse conservation efforts. Similarly, scientific performances such as necropsies and the extraction of data for research into causes of death feed into species conservation initiatives. Whales' afterlives, in this respect, exist as specimens, data, numbers, tables, graphs, and scientific publications. The data retrieved can shed light into the long-term impact of whaling on a particular species, offering insight into the afterlife of an entire population. Conservation is guided by a conscience-driven understanding of the natural world at risk and/or in decline as a result of human activity. Scientific engagement with gray whale strandings is driven by an understanding that these animals need human monitoring for their ongoing existence as well as the ocean ecosystems of which they are a part. As we have seen, the past history of near extinction, along with persistent anthropogenic threats, has come to shape how contemporary humans and human societies relate to gray whales. The avoidance of future extinction is at the heart of current conservation efforts. The consideration of wild animals' inherent value and welfare concerns,

[238] Marvin, p. 158.
[239] Stephen Asma, *Stuffed Animals and Pickled Heads: The Culture and Evolution of Natural History Museums* (Oxford: Oxford University Press, 2001), p. 27.

e.g. those related to animal suffering as a result of human activity, also play their role in driving conservation initiatives and popular support. This is especially though not exclusively the case with charismatic animals. Knowledge about cetaceans drowning after becoming entangled in fishing nets, dying as a result of being struck by boats, starving because of lack of prey, or being poisoned by plastic and other ocean pollutants, stirs something in us, as we are awkwardly reminded that these animals are physically suffering because of the encroachment of the human world. In turn, strandings also act as a trigger for popular understandings of species conservation at a time of growing public concern about spiralling biodiversity loss and accelerated climate change.

The great whales have been acknowledged for some time now as carrying an even greater burden of human exploitation. Charismatic as they are, they have been positioned as emblems of the global conservation movement, becoming 'outsize standard-bearer[s] for marine and other environmental issues'. This is evidence of their 'immediate emotional appeal as well as their enduring symbolic power'.[240] Whales are also conservationist stand-ins, representing other species, the ocean, entire ecosystems, and the planet itself. The conservation of gray whales since the 1930s is the direct result of European and American commercial whaling, which was part of colonial intrusion into Pacific North America. The exploitation and subsequent decimation of cetacean species by the European colonial powers, and the harmful consequences this had for Indigenous communities, is a scenario that has been repeated countless times across the globe. The fallout of this confrontational relationship with the nonhuman world is, as Graham Huggan and Helen Tiffin put it, that 'the original accommodated relations between environment, humans and animals were [systematically] fractured, sometimes beyond repair'.[241] The dramatic decline in gray whales

[240] Huggan, 'Last Whales', p. 2.
[241] Graham Huggan and Helen Tiffin, 'Green Postcolonialism', *Interventions,* 9 (2007), 1-11 (p. 1).

meant that Indigenous whaling communities that had once hunted these whales could no longer practise a major traditional lifeway, not only because were there virtually no whales to hunt, but because strict international protections on target species were implemented from the 1930s onwards.[242] Both the exploitation of and subsequent conservation of the species imposed a rupture in the practices of subsistent whaling communities such as the Nuu-chah-nulth (see Chapter 3). Gray whales, which experienced a first wave of existential threat from European over-exploitation through whaling, now face a second challenge from entanglement, ship strikes and marine pollution, along with climate change. Many of these issues are driven by the dominant settler-colonial states of the USA and Canada. The recovery of species populations requires ongoing conservation because of these threats.

While sound environmental practice is often associated with Indigenous peoples, western conservation initiatives tend ironically to exclude them, failing to work with Traditional Ecological Knowledge (TEK) or prohibiting traditional practices that have their basis in sustainable attitudes towards the natural world. At the same time, there are growing efforts to ensure dialogue between western scientific practitioners and local Indigenous communities.[243] These efforts often have their basis in cultural revival as well as the protection of the natural world.

Survivance

As we will see in Chapter 3, the Ahousaht's celebratory response to the presence of a dead whale in their midst can be understood within the context of cultural revival or, as the Anishinaabe theorist Gerald Vizenor calls it, *Native survivance*. Survivance rejects the rendering of Indigenous people as victims. Vizenor takes his cue from the French-Algerian

[242] Dedina, pp. 48-49; Huggan, *Colonialism, Culture, Whales,* p. viii.
[243] Calambokidis and Huggins; Gulland, Flannery and Grieg.

philosopher Jacques Derrida, who interprets survivance 'in the context of a relic from the past or in the sense of an *afterlife*' (emphasis mine).[244] Vizenor equates survivance with afterlife and vice versa, quoting Derrida to the effect that 'afterlife no longer means death … but [rather registers] *the surviving of an excess of life which resists annihilation*' (emphasis mine). For Derrida, survivance is the 'the return of the repressed' as 'phantoms of the past', but also as the 'triumph of life'.[245] Vizenor's original move is to recast survivance specifically in terms of indigeneity, moving beyond the purview of victim narratives. Diane Chisholm, who has considered survivance in Inuit filmmaking, likewise reflects that 'More than a postcolonial phantasmagoria of remnants and revenants, survivance demarcates a thriving afterlife of traditional culture'.[246] Survivance is survival *and* resistance. Karl Kroeber, a contributor to Vizenor's book, maintains that Vizenor's recasting of the word 'subordinates survival's implications of escape from catastrophe and marginal preservation'. Survivance works in a way that diminishes 'the power of the destroyer'. Moving beyond survival, survivance also recalls an older meaning encoded within it, 'succession', and in so doing 'orient[s] its connotations not toward loss but renewal and continuity into the future'.[247]

Vizenor gives centre stage to the telling of Native stories as survivance. He refers to the 'fourth person' in these stories, that is to say, the presence of the previous teller or tellers of the story. This fourth person is none other than the 'storied presence of native survivance', and the preceding voice becomes contemporaneous with the present speaker. The temporal here and now encompasses the fourth person, the speaker in the past, in an act of celebratory

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[244] Vizenor, 'Aesthetics of Survivance', p. 21
[245] Jacques Derrida, *Archive Fever: A Freudian Impression* (Chicago: University of Chicago Press, 1996), p. 60; Vizenor, 'Aesthetics of Survivance', p. 21.
[246] Dianne Chishold, 'The Enduring Afterlife of Before Tomorrow: Inuit Survivance and the Spectral Cinema of Arnait Video Productions', *Études/Inuit/Studies,* 40 (2016), 211-227 (p. 215).
[247] Karl Kroeber, 'Why it's a Good Thing Gerald Vizenor is not an Indian', in *Survivance: Narratives of Native Presence,* ed. by Vizenor, pp. 25-38 (p. 25).

continuance. The fourth person as survivance is both powerful and subtle, reflecting the protean quality of oral tradition, which resists easy translation into written words.[248] Vizenor offers an example of the presence of the fourth person from his own Anishinaabe people. Charles Aubid once gave evidence in a trial in a US courtroom, recalling in his testimony the presence of an Elder no longer alive. For the Anishinaabe, the force of law resides in the act of telling via the 'indirect linguistic evidence of a fourth person'. Aubid's 'stories were intuitive, visual memories, a native sense of presence, and sources of evidence and survivance'.[249] Survivance also has a strong element of consciousness of the history and selfhood of the people, from whose authority it speaks and in whose name it lives and grows.

My second case study, in Chapter 3, will return to this resonant term and tease out some of its further implications. First, though, I want to present another example, which is heavily shaped by my fieldwork in Canada and the US in July 2019. This, as previously announced, is the case of 'Rosie', the gray whale skeleton that was salvaged in December 1998, then put on display by a group of local Whidbey Islanders. As with the second example, I am interested in one particular gray whale's afterlife, both in the immediate aftermath of its discovery and in the wider circumstances that surrounded it. The fieldwork I conducted on Whidbey Island gave me the opportunity to understand and explore what some of the legacies and unstable meanings of 'Rosie' were, and brought up important issues around cetacean conservation more generally. These legacies, meanings and issues are now discussed in some detail in the chapter that follows.

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[248] Vizenor quotes Peggy Kamuf's reflection that the suffix '*ance*' in Derrida's *différance* 'calls up a middle voice between the active and passive voices' and this speaks to survivance as the fourth person. Peggy Kamuf, quoted in Vizenor, 'Aesthetics of Survivance', p. 21.
[249] Vizenor, 'Aesthetics of Survivance', p. 3.

Chapter 2

Rosie the Gray Whale
Whidbey Island, Washington, USA, 1998-2019

> Rosie was done a long time ago, before anybody articulated whales around here. She was the first. And we did it because we had a group of volunteers who were ready to do it at the time. She was the right size … she was only 37 feet. She wasn't a 45-footer that we couldn't handle. So, she was the right size, the right place, the right moment. I had the volunteers, so we said, 'Okay, let's do this.'
>
> – Matthew Klope (1 August 2019)[1]

Introduction

Driving along the winding roads of Whidbey Island in Washington's Puget Sound, I was conscious of the dying muskrat in the boot of the vehicle I was travelling in. The rodent's final living moments were in the hardtop pickup truck of Matthew Klope, or Matt as I came to know him, a skilled taxidermist, retired Federal wildlife biologist, and go-to person for all matters on Whidbey Island relating to wildlife. I had called Klope the previous day from my motel room in Oak Harbor, on the northern end of the island, hoping that we might meet to speak about his experience responding to whale strandings, including the case of a specific gray whale that was found dead on a beach here in December 1998 and whose bones Klope had helped salvage for public display. I had not been expecting such a friendly phone call and that afternoon we met in a local café, talking for a few hours. His wealth of knowledge, enthusiasm and experience was palpable as he animatedly recalled strandings, sketching vigorously on his notepad to explain his points.

Klope is a compelling character, passionate, ebullient and knowledgeable, immediately drawing me into the solar system of people, places, events and animals that radiate around

[1] Matthew Klope, interviewed by author, Whidbey Island, 1 August 2019.

him. I had been tracing the afterlife of a stranded gray whale that came to be known as 'Rosie', whose skeleton had been salvaged from its decomposing body in 1998 by a group of Whidbey Islanders – Klope at the helm – then rearticulated for display in Coupeville Wharf. Rosie duly joined a scattered collection of gray whale skeletons and bones moored ashore by human societies along the vast Pacific coastline that stretches from Baja California in the south to the Arctic in the north. During this first encounter, Klope recalled the years spent working on Rosie, from discovering the putrefying whale to suspending the skeleton. By the end of the conversation, we had a busy two-day itinerary planned. Seeing Rosie's skeleton in person should be first on our agenda. The next morning we met early. As we were about to set off for Rosie's resting place in the town of Coupeville, south of Oak Harbor, Klope received a call about the muskrat and a detour was made to collect the animal. It was dazed and barely conscious when we arrived. As he picked it up from the gutter by the scruff, he guessed that a car had hit it. I pitied the small creature whose life had been violently interrupted by humans. It did not appear to have any external injuries, and I hoped it had only been clipped and would eventually recover. The veteran wildlife biologist was less hopeful, and he quickly placed the muskrat in the hot boot of his car. As Klope drove away, he explained that his taxidermy skills could transform the muskrat into a skin or a model that could be used by a school or state park for educational purposes. As Klope sees it, his skill can make the best of a situation in which a 'beautiful little creature's life has ended'. This was clearly a sentiment that underscored Klope's callouts to wildlife, including Rosie the gray whale.[2] It was a sunny day in this often gloomy part of the Pacific Northwest, and we exchanged stories as we cut through woodland and rolling malachite green hills, regularly hugging the coastline. The surface of Penn Cove, an area of water that gray whales

[2] Klope, interview; Matthew Klope, conservation with author, Whidbey Island, 2 August 2019.

occasionally visit, gleamed as we pulled up outside Coupeville Wharf. I asked how he thought the muskrat was, but Klope already knew that it was dead.

Soon afterwards, I was observing a white skeleton suspended in mid-air, arching across the ceiling of Coupeville Wharf. The animal (Rosie) had died twenty years earlier, triggering a two-year project of salvaging, cleaning and displaying the bones. I was aware that what I was seeing was the end result of a staggering amount of work. The skeleton before me was an alabaster off-white with hues of ashen and perfectly clean except for the dust that inevitably gathers. The animal had first been discovered in an advanced state of decomposition, presaging a long-term project that would take several years to complete. After the manual effort of de-fleshing the skeleton and removing as much of the soft tissue as possible, the bones were suspended off the wharf until the middle of 1999 to take advantage of saltwater maceration and scavenging marine organisms whose opportunistic feeding would finish cleaning the bones. On 17 November 2000, Rosie was suspended in a final resting place. Held together with black metal rods, the osseous creature loomed across the space. Over the years, Rosie has accrued the company of other locally iconic, albeit much smaller marine mammals: Rudy the Dall porpoise (*Phocoenoides dalli*) and Samson the Steller Sea Lion (*Eumetopias jubatus*). Together, these animals offer a showcase of charismatic ocean creatures of Puget Sound. The structural whale, however, continues to dominate the space 17 years after its display, dwarfing its co-inhabitants. Thus, while humans had no known contact with Rosie whilst alive, this most charismatic of creatures came to have great significance after death to a large number of people, and still retains an enduring afterlife twenty years on.

Figure 13. My first encounter with Rosie, Coupeville Wharf, August 2019. Author's photograph.

I had been researching the history of Rosie's display from my desk in the UK for many months, and it now seemed strange to be standing in a small town wharf on an island in the North Pacific, thousands of miles away from home. While the media reports I had been scanning provided a glimpse of Rosie, it was my time on Whidbey Island that gave me deeper insight into the singular afterlife of this huge animal, as well as into the wider efforts of those responding to cetacean strandings and other marine mammal conservation issues in this particular part of the world. I also came to recognise that my research, my visit to Whidbey Island, and my encounter with the skeleton and those involved in reconstructing it were contributing in their own way to the 'living on' of Rosie. Afterlives, Samuel Alberti contends, 'are created in the recounting – we ourselves are contributing to this process' (see also Chapter 1).[3] Academic studies that look into these types of animal afterlives effectively feed into and extend the range of an animal's survivals; or, as Geoffrey Swinney puts

[3] Alberti, 'Introduction: The Dead Ark', p. 3.

forward, 'It is through the stories that we tell about these animals that they live on'.[4] As we walked beneath Rosie, Matt re-animated the events that ensued after the stranded whale was found, building on the picture he had created during our conversation on the previous day. We were engaged in another juncture of afterlife in the simultaneous retelling and discovery.

The human response to this particular gray whale stranding has had two lasting legacies. The first is the exhibit in Coupeville Wharf, where Rosie hangs to this day. The second is much larger: an extraordinary network of individuals and organisations in and around Whidbey Island working to respond systematically to marine mammal strandings and fostering other marine conservation initiatives. I will divide this chapter along these lines, considering first the personal post-death history of Rosie and human efforts to salvage and display the skeleton. Secondly, I will look at longer-term developments in stranding protocol and conservation around Whidbey Island and the broader Puget Sound. Through a unique and intense collaboration between a complex of human agents and their interactions with nonhuman species and environments, the whale transitioned through a series of stages of afterlife until the end goal – a public display of the skeleton – was achieved in November 2000. The skeletal display is the first of Rosie's enduring legacies, encapsulating almost two years of dedicated work and active learning. More than that, though, this commitment at each stage of the process would foster remarkable networks and initiatives devoted to responding to, investigating and educating about whale strandings, as well as wider marine mammal and ecosystem conservation around Whidbey Island, through to the present day. For this reason, it is vital to return to the first two years of Rosie's afterlife and I will accordingly move through each of the key stages: stranding and discovery, dissection, cleaning and reassembling, and display. I will discuss the aims and ambitions of the original coordinators

[4] Geoffrey Swinney, 'An Afterword on Afterlife', in *Afterlives of Animals*, ed. by Alberti, pp. 219-40 (p. 230).

of the project while also revealing the major significances of each phase. Themes that emerged during the process will weave through each section, including science, teaching and learning, community, and fragmentation. The final section will turn to the display of Rosie's skeleton in Coupeville Wharf and how, while so much hard work went in to it, twenty years on it appears that engagement with this particular animal display has waned. By returning to the first years of afterlife, I hope to demonstrate not only the richness of the history behind Rosie but also the criticality of it to the stranding network that exists today.

In the second part of the chapter, I will consider the legacy that the project to display Rosie engendered. To begin with I look at the formal and informal networks formed, including the official establishment of the Central Puget Sound Marine Mammal Stranding Network (CPSMMSN) on Whidbey Island. The CPSMMSN is part of a series of vital chains of stranding response that expand across Washington, the US west coast, and beyond to ensure that thousands of miles of coastline are monitored. This is vital for the systematic retrieval of important data that feeds into understandings of marine mammals like gray whales and conservation threats. I will reveal how these processes of data retrieval and subsequent research rely on the role of committed citizen scientists from the local community. Finally, I will discuss how the stranding network is engaged in research, dissemination of information, and public engagement.

This chapter is historical in its scope, focusing on settler Euro-American attitudes, experiences and practices that have existed in Whidbey Island for less than 200 years, rather than dwelling at length on its longer history. Whidbey Island lies around 30 miles north of Seattle in Puget Sound [see figure 15]. The island has been the ancestral territory of Indigenous tribal nations of the Coast Salish, including the Lower Skagit and the Clallam for

thousands of years.[5] These groups also occupied territories across Camano Island as well as the San Juan Islands in Puget Sound. Coast Salish territories expand into coastal Washington and British Columbia as well as parts of the Oregon coastline [see figure 16], but the national borders that divide them have been 'drawn by colonizing agents, not by Salish minds'.[6] Tribal bands of the Coast Salish ancestral territories include Whidbey Island, the Camano Islands and the San Juan Islands, most of Washington's coastline (apart from Makah and Quileute territory on the Olympic Peninsula), areas on Oregon's coast and, in Canada, the east coast of Vancouver Island and west coast of mainland British Columbia. Indigenous communities here, and across the Pacific Northwest more generally, thrived on marine ecosystem abundance and terrestrial subsistence.[7] While the tribes are linguistically and culturally connected, they are also diverse, with distinctive dialects and traditions. The arrival of European travellers, and subsequently colonists, in the eighteenth and nineteenth centuries devastated the Native American communities of today's Whidbey Island and across the Pacific Northwest, through settlement, violence and the spread of diseases. From 1850 onwards, Whidbey Island was permanently settled, expanding colonial territory beyond the mainland in Washington. The 1855 Treaty of Point Elliot established reservations where a number of native communities converged. Colonial rule compelled this relocation, including Native communities of today's Whidbey Island.[8]

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[5] National Park Service, *Ebey's Landing National Historical Reserve, General Management Plan: Environmental Impact Statement* (Seattle, 2006), pp. 28-29.
[6] Michael Marker, 'The "Realness" of Place in the Spiral of Time', in *Contemplating Historical Consciousness: Notes from the Field,* ed. by Anna Clark and Carla L. Peck (New York: Berghahn Books, 2018), pp. 185-199 (p. 189).
[7] Swinomish Indian Tribal Community, 'The Swinomish Reservation', <https://swinomish-nsn.gov/government/the-swinomish-reservation.aspx> [accessed 13 September 2020]; Tulalip Tribes, 'We Are Tulalip', <https://www.tulaliptribes-nsn.gov/> [accessed 13 September 2020]; Andrea Weiser and Dana Lepofsky, 'Ancient Land Use and Management of Ebey's Prairie, Whidbey Island, Washington', *Journal of Ethnobiology,* 29 (2009), 184-212 (p. 185); National Park Service, pp. 28-29.
[8] From 1850 onwards, Whidbey Island was permanently settled, expanding colonial territory beyond the mainland in Washington. The 1855 Treaty of Point Elliot established neighbouring Fidalgo Island as the Swinomish Reservation for the Swinomish, Lower Skagit, Samish and Kikillius bands from around Puget Sound forming the present day Swinomish Tribe, while the Snohomish and several other tribes converged to form the Tulalip Tribes on the Washington mainland (across from Whidbey and Camano Islands). These tribal bands continue to negotiate and maintain their vital connection to the Salish Sea, the Skagit River, and other

It is well known, but still bears reminding, that the process of European settlement represented a wholescale attempt to remove Indigenous peoples from their land as well as to undermine their culture, traditions and spirituality. A belief system rooted in Euro-American values was imported to Whidbey Island, building on colonial settlement and extraction. While the physical ties of Native tribes to the land of Whidbey Island and other regional territories were ruptured, the belief system tied to their ancestral lands and waters has been vigorously maintained. This is not to underestimate the destructiveness of these communities' material severing from their ancestral territories; rather to assert that their culture and social systems, ancestry and history, spirituality and ecological relationships are all deeply bound to the place.

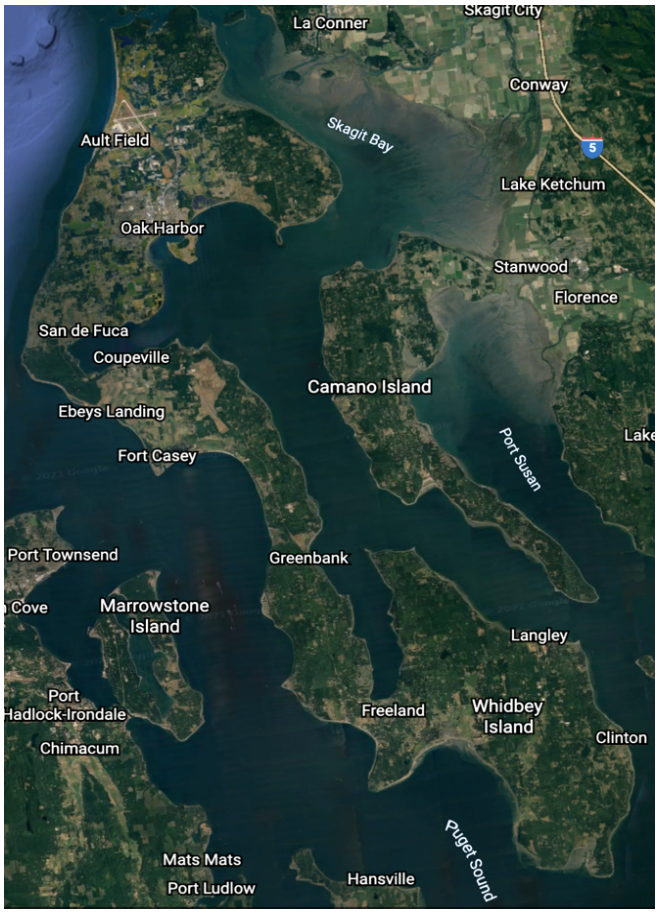

Figure 14. Map of Whidbey Island with major towns and cities marked. Source: Google Earth, map of Whidbey Island, *Data SIO, NOAA, U.S. Navy, NGA, GEBCO* <https://earth.google.com/web> [accessed 1 August 2021].

waters in the Pacific Northwest. See Swinomish Indian Tribal Community; Tulalip Tribes; National Park Service, p. 81.

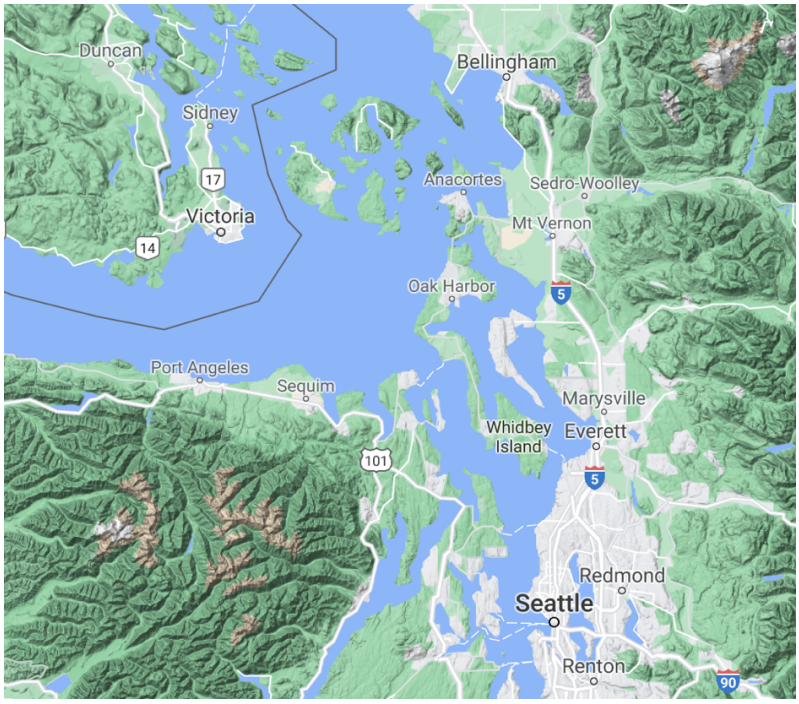

Figure 15. Map of Whidbey Island and surrounding Puget Sound area. Source: Google Maps, map of Whidbey Island, *Map Data ©2021 Google* <https://www.google.com/maps/> [accessed 12 July 2021].

Figure 16. Map of Coast Salish Language Groups. Source: Wikimedia, 'Map of Coast Salish linguistic distribution in the early to mid 1800s', by user Noahedits (2019) <https://en.wikipedia.org/wiki/Coast_Salish#/media/File:Coast_Salish_language_map.svg> [accessed 1 August 2021].

To put this more forcefully, there has been an attempted erasure of Native cultures on Whidbey Island, which means that the human-cetacean and broader human-nature relationship there are now dominated by Euro-American society. Whidbey Island, along with Camano Island and six unpopulated islands make up Island County, Washington.[9] The demographic of Island County is 85.4% 'white', only 1.1% 'American Indian and Alaska Native', and these population dynamics are reflected on Whidbey Island.[10] The population of the island today consists of descendants of nineteenth-century settlers and migrants from regions across the United States and other countries, while the US Naval Air Station located in the north of the island adds a populace of those on active duty, veterans and their families.

My research had brought me to Whidbey Island because I was pursuing the afterlives of individual whales that had died during the 1999-2000 mass mortality event. I discovered four examples of gray whale skeletons being saved for display by small communities along the North American west coast. The first of these was Rosie, while the second was a whale that stranded at Halibut Cove in the town of Homer, Alaska in 1999. (The skeleton was saved and kept in storage until it was transferred to the town's Pratt Museum in February 2014.) The third was a whale that washed up near Pasagshak Beach, Kodiak Island (Alaska again) in May 2000, and that was eventually displayed in 2007 at Kodiak National Wildlife Refuge Visitor Center.[11] The fourth was a whale that was found stranded on Long Beach, Washington, and its bones placed on display along the coastal path.[12] Displays like these are rooted in a particular worldview structured around Euro-American natural history practices that have evolved over the past two centuries. I was first drawn to the story of Rosie in Linda

[9] The other islands that make up Island County are Deception and Pass islands in Deception Pass, Ben Ure, Strawberry and Baby islands in Saratoga Passage, and Smith Island.
[10] United States Census Bureau, 'Island County, Washington', <https://www.census.gov/quickfacts/fact/table/islandcountywashington/IPE120218> [accessed 8 July 2020].
[11] I have not come across other examples in the USA or in Canada and Mexico of whales that stranded during the UME whose skeletons were saved and exhibited; however, it is certainly possible that there are.
[12] Jamie Hale, 'The Sad, Smelly Story Behind a Beloved Gray Whale Skeleton in Long Beach', *Oregon Live,* 22 December 2019, <https://www.oregonlive.com/travel/2019/12/the-sad-smelly-story-behind-a-beloved-gray-whale-skeleton-in-long-beach.html> [accessed 15 May 2021].

Hogan and Brenda Peterson's *Sightings,* when they visited Whidbey Island on their own land-voyage along the North Pacific coast, seeking out humans with close interactions with gray whales.[13] I have pieced together Rosie's life – or, more accurately, afterlife – through interviews with those involved, visits to the skeleton in Coupeville Wharf, original photographs of the reconstruction process, media reports from local news outlets, and further insights gained from Brenda Peterson's account of events in *Sightings* and her own encounter with the skeleton.

As explained in the previous chapter, the notion of afterlife is rooted in Walter Benjamin's theories of *Überleben* (afterlife) and the multiple survivals of someone or something, that is to say, the notion of a beyond life or 'continuing life [*Forteleben*]'. These further lives are interposed on the original or first life, and the various afterlives sit atop and alongside one another.[14] Afterlives or post-lives, according to Aby Warburg, can be understood as a mesh of co-existing survivals as opposed to a chronological trajectory where each manifestation of afterlife replaces the previous one (see Chapter 1).[15] Cultural studies have explored afterlives in a large number of different contexts, including artworks, monuments, artefacts and, more recently, animals. Academic research on the afterlives of animals has tended to focus predominantly on the natural history museum context and on private natural history collections.[16] In this instance, Rosie's display in a small community setting differs from this in its more informal context and the significance of this will be discussed.

The life history of an animal before human interaction is generally irrecoverable, and it is only when the cross-species encounter occurs that an afterlife or 'cultural life' begins.[17]

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[13] Hogan and Peterson, pp. 83-89.
[14] Benjamin, p. 153.
[15] Warburg, pp. 670-3; Didi-Huberman, 'Surviving Image', p. 61; Didi-Huberman, 'Artistic Survival', p. 273.
[16] Alberti, ed., *Afterlives of Animals.*
[17] Marvin, p. 158.

Cultural geographer Merle Pratchett, following Igor Kopytoff's 'The Cultural Biography of Things' (1986), notes that in the case of taxidermy in museums, as with most other objects in a collection, 'it is possible to chart its object biography and to talk of its after-life'.[18] To engage with an animal's cultural life, major aspects of that animal's life and/or afterlife must be identified, such as the network of humans the animal or animal-object is drawn into contact with, artistic renderings of it, and the key places (physical and digital) where it resides.[19] In Rosie's case, humans had no knowledge of the animal in life and what information there is has been gained from post-mortem investigations that offer limited insight into the whale's individual life and the more general knowledge we have about gray whales' life cycles. Rosie was found already heavily decomposed, and it was pure chance that the current brought the whale's body to shore.

Rosie's death and incorporation into human society raises questions about the transformation of the whale from animal to object, and about the extent to which the original animal remains. When did the gray whale become an object, if it did so at all? And how much of the whale's 'animalness', if any, is retained? In Rachel Poliquin's *The Breathless Zoo* (2012), she reflects on the 2001-2006 exhibition *Nanoq: Flatout and Bluesome*, questioning the complex significances of taxidermy, which has significance for non-taxidermy animal remains such as skeletons: 'As dead and mounted animals, … [they] are thoroughly cultural objects; yet as pieces of nature, … [they] are thoroughly beyond culture. Animal *or* object? Animal *and* object?' (emphasis mine). It is these 'irresolvable tensions …

[18] Merle Patchett, 'Animal as Object: Taxidermy and the Charting of Afterlives', paper presented at Making Animal Afterlives, Hunterian Zoology Museum, University of Glasgow (2006), <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.536.940&rep=rep1&type=pdf> [accessed 13 November 2018]; Igor Kopytoff, 'The Cultural Biography of Things: Commoditization as a Process', in *The Social Life of Things,* ed. by A. Appadurai (Cambridge: Cambridge University Press, 1986), pp. 64-91; see also Samuel J. M. M. Alberti, 'Objects and the Museum', *Isis,* 96 (2005), 559-571; Bruno Latour, 'The Berlin Key or How to do Words with Things', in *Matter, Materiality and Modern Culture,* ed. by P. G. Brown (London: Routledge, 2000), pp. 10-21.

[19] Alberti, 'Introduction: The Dead Ark', pp. 2-3; Appadurai, ed., *The Social Life of Things.*

that define taxidermy' and other forms of animal remains saved by humans.[20] Patchett is similarly concerned with the animal/object binary, reminding us that specificities of time and space, along with the nature of the encounter, must be taken into account when determining the transformation of animal into object:

> When is it that an animal becomes an object? In the case of a taxidermy mount, is it when the animal is set in a rifle sight, or at the moment of death? When it is mounted, or added to a collection? Or perhaps when it is put on public display? The taxidermy specimen differs from certain orders of museum object in that it was once animate.[21]

These questions are pertinent to Rosie's case. Is it possible to pinpoint the exact moment when whale becomes object? Was it in December 1998, at the moment humans first encountered the carcass on the littoral? Did Rosie become an object at the moment humans decided to salvage the skeleton? Or perhaps it occurred later in the winter of 1998/99 during the flensing process, or alternatively when the bones were suspended off the harbour to be cleaned by marine invertebrate scavengers? Yet another perspective might focus on the articulation stage, or when the skeleton was finally hung in Coupeville Wharf. It seems sensible to conclude that no specific moment of the transition from animal to object can be identified; rather it is a gradual shift that varies from person to person. My own perception of Rosie's status as animal and object will inevitably be different to Klope's, for example, or to a tourist's. A stranded dead whale encountered on the shore does not automatically become an object, nor is it one simply because it has been left to rot on the beach. When specimens and samples are taken, though, the said whale, while remaining unquestionably animal, also becomes involved in an explicit process of scientific objectification. Whale remains that humans leave behind or discard after examinations such as post mortems are still animal, as

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[20] Rachel Poliquin, *The Breathless Zoo: Taxidermy and the Cultures of Longing* (Pennsylvania: Pennsylvania State University Press, 2012), p. 5.
[21] Patchett.

are those whales that die and turn into multispecies whale falls (see next section). But when humans discover and study whales, they also become items of scientific interest – both animal and object.

Rosie's status as object requires an examination of materiality and a closer scrutiny of the processes of objectification.[22] For some museum studies scholars, objects are not static but, as Chris Gosden and Chantal Knowles put it, are in a 'continual state of becoming', even when they are confined within a particular museum space. Gosden and Knowles warn against focusing on 'the apparent singularity of objects', as through the processes of conservation, display and encounter, the significances an object might have will all be in a perpetual state of flux; an object is always unstable.[23] The semiotic value of an object is inevitably shaped by each individual person's knowledge and experiences of that object, local framings of the object, and broader cultural contexts, all of which are susceptible to temporal and geographical change. Writing about the object histories of photographs, Joan Schwartz explains how the intersubjective meanings derived from them are 'not simply a function of change over time and space but [are] contingent upon the pre-texts – the intellectual beliefs, needs and desires – brought to the visual and material encounter'. This undoubtedly impacts on the exchange and transmission between object and person, and the original narrative of an object, which is 'so potent at source, is dissipated by historical, geographical and cultural distance'. Schwartz argues that understandings of objects should begin with 'a strong sense of the mutability of meaning of both image and object, and proceed through careful micro- as well as macro-historical reconstruction to recover, as best we can, [their] contexts of creation, circulation and viewing'.[24] Similarly, Christopher Tilley, in reflecting on Daniel Miller's

[22] Christopher Tilley, *Handbook of Material Culture* (London: Sage, 2006), p. 71.
[23] Chris Gosden and Chantal Knowles, *Collecting Colonialism: Material Culture and Colonial Change* (Oxford: Berg, 2001), p. 4.
[24] Joan M Shwartz, 'Un Beau Souvenir Du Canada: Object, Image, Symbolic Space', in *Photographs Objects Histories: On the Materiality of Images,* ed. by Elizabeth Edwards and Janice Har (London: Routledge, 2004), pp. 16-31 (p. 26).

foundational theories on material culture, concludes that while there is inevitably a degree of fixedness, a 'final' object will 'circulate through people's activities and can contextually produce new types of activities, objects and events'.[25] Objects have many survivals, and lead complex afterlives. Gosden and Knowles explain how the meanings that accrue to objects constantly change as they come to 'accumulate history'. An object's history can be traced (if the sources for it exist) and the individuals connected to the object are inherent within that history. Gosden and Knowles thus call for objects to be approached 'as an indicative process, rather than static relations, and this process is ongoing in the museum as elsewhere, so that there is a series of continuous social relations surrounding the object connecting "field" and "museum"'.[26]

Clearly, Rosie is not just an object, an item, a 'thing', and the skeleton belongs to a once animate, living and breathing creature. There exists, Jane Desmond suggests, a 'physical truthfulness' to a display like Rosie's, in which 'the essence' of the animal remains and is drawn out through 're-creation'.[27] Despite a significant amount of human intervention and craft, Rosie's skeleton remains authentic because it once belonged to a live whale: something a model can never truly replicate.[28] Animal remains are defined by this animal/object dualism. It therefore seems necessary to approach Rosie as *both* animal *and* object, or as a kind of 'animal-object hybrid'.[29]

Using the format of 'animal biographies', which are increasingly popular these days, it becomes possible to identify and interpret the different and unstable meanings of Rosie, as both once living animal and deathly remains, in terms of science, popular culture, emotion

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[25] Tilley, p. 61; Daniel Miller, *Material Culture and Mass Consumption* (Oxford: Blackwell, 1987).
[26] Gosden and Knowles, pp. 4-5.
[27] Jane Desmond, 'Displaying Death, Animating Life: Changing Fictions of 'Liveness' from Taxidermy to Animatronics', in *Representing Animals,* ed. by Nigel Rothfels (Indiana: University of Indiana Press 2002), pp. 159-79 (p. 162); Patchett.
[28] Lynn Nyhart, 'Science, Art, and Authenticity in Natural History Displays', in *Models: The Third Dimension of Science*, ed. by Soraya de Chadaverian and Nick Hopwood (Stanford: Stanford University Press, 2004), pp. 307-335 (p. 308).
[29] Patchett.

and memory.[30] These meanings are complex, and what any given viewer may take from an encounter with Rosie's skeleton – as is the case in every human encounter with animal remains – is impossible to pin down. Alberti identifies a further tension between custodians and consumers: 'those that have custody of the dead as well as living animals play crucial roles in [their] representation, but their intended interpretations do not always tally with the meanings afforded to animals by visitors'.[31] In other words, how visitors reflect upon the animal-object, and what impact an encounter might have on the individual visitor, might not necessarily match up with the intentions of those who originally preserved it, and/or those who continue to be responsible for it today.

While I have access to those involved in Rosie's original display in Coupeville Wharf, how subsequent visitors have actually engaged with the skeleton is beyond the scope of my research here. With the skeletal remains of stranded whales, 'Questions [inevitably] arise [as] to what extent museum visitors engage with … [the] stranding [event], cetacean strandings in general and the marine environment', as visitors will 'each bring something different to the encounter'. Thus, while some individuals 'have memories of … [the] stranding shaping their experience,' there will be others that have never heard of the animal.[32] In the case of a gray whale skeleton, encounters might be shaped by knowledge (or lack of it) about damage to the ecosystems through which gray whales move, histories of extinction and recovery, information about UMEs, more general representations of whales in mainstream media, and much else besides. As I have previously argued, 'The human-animal interface inevitably inspires diverse responses, as demonstrated by visitors to the scene of a stranding and it is no different in the museum context'.[33]

[30] Alberti, 'Introduction: The Dead Ark', pp. 1-2.
[31] Alberti, 'Introduction: The Dead Ark', p. 2.
[32] Nicolov, p. 144.
[33] Nicolov, pp. 144-45.

My experience as a visitor to Coupeville Wharf was also drastically different to that of most who have encountered Rosie. I visited as an academic researcher and Matthew Klope – who as previously mentioned was central to the reconstruction project – accompanied me, providing his expert knowledge and personal memories as we stood beneath the towering display. The significance of Rosie, however seen, is by definition complex, as are the motivations behind such visits.[34] Poliquin ruminates on the reasons why humans might go about preserving and articulating animal remains. She believes these acts demonstrate human longings to hold onto life, treasuring 'what is no longer as it were immortally whole'.[35] Our (human) attempts to halt death by preserving animal remains offer fruitful insights into our (human) attitudes towards particular animals or animals in general. As Poliquin writes:

> The desire to hold something back from this inevitable course and to savor its form *in perpetuum* exhibits a peculiar sort of desire. Why this piece and not another? Why the yearning to detain what should have passed from view? … [It] is hardly a simple or swift practice … which depend[s] on an intense desire to keep particular creatures from disappearing.[36]

Poliquin suggests seven motivations or 'narratives of longing' that inspire the production of taxidermy. These, in no particular order, are 'wonder, beauty, spectacle, order, narrative, allegory, and remembrance', and each manifests in different forms including 'aesthetic hungers … intellectual concerns, memory, or the force of the personality'.[37] These forms are not fixed, and while humans may go to great lengths to draw animals into their cultures through their remains, the values placed on the creatures they embalm are continually shifting. However, it is on the first encounter with humans that these animals' unstable afterlife commences, and I turn to that inaugurating encounter now.

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[34] See Nigel Rothfels, *Savages and Beasts: The Birth of the Modern Zoo* (Baltimore: John Hopkins University Press, 2002), p. 5; Nicolov, pp. 140-142, 146.
[35] Poliquin, pp. 6-7.
[36] Poliquin, pp. 6-7.
[37] Poliquin, pp. 6-7.

Part 1: The Whidbey Whale

When exactly does the story start? A focus on afterlife might point to the moment the gray whale that would later become known as ‘Rosie’ perished. While death is certainly not the end, it is not necessarily the beginning of this particular history. Maybe imagination and scientific theories could transport us further back to the weeks of slow starvation, as the whale migrated southward from the Arctic. Perhaps the beginning lies in the saline waves that washed the dead creature ashore. Each of these is a potential opening, a chance sequence of events that led to the whale being stranded on Whidbey Island’s oceanfront on 8 December 1998. It is in this littoral contact zone that the whale was discovered by humans, and it is the place and the time where I take up the history.

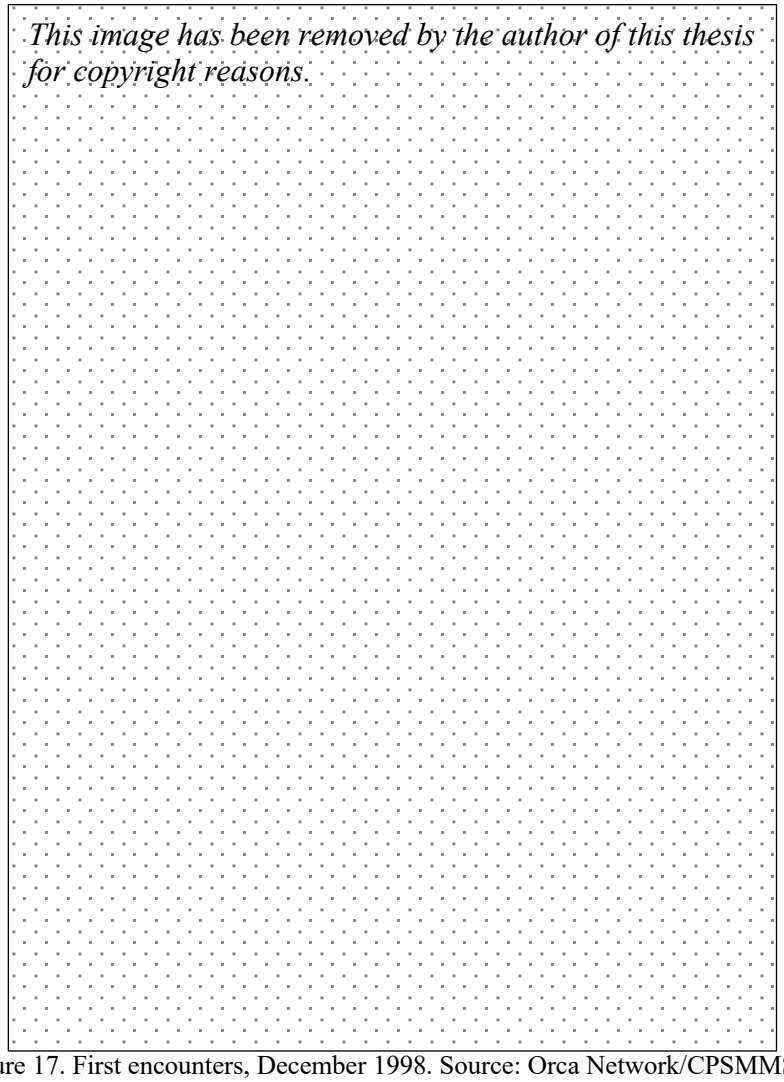

Figure 17. First encounters, December 1998. Source: Orca Network/CPSMMSN.

It is unclear how long the animal had been dead, but, as the photograph above of the first encounter clearly captures [figure 17], decomposition was well set in and the body was moving through the natural processes of breakdown. While the body was indisputably that of a gray whale, in its deflated, liquifying state it did not resemble the living animal visually. Measuring over 30 feet in length, the residents of Whidbey Island were confronted by tonnes of putrefying matter. When Matthew Klope heard about the dead whale spreadeagled on the southwest side of his home island, his first thought was that something could be made of this animal's death for the benefit of the community. Convinced that the gigantic corpse offered a great chance for a scientific, educational community project, he contacted Susan Berta, a fellow islander and leader in local marine wildlife conservation and public education. Back then (1998), Berta was the Coordinator of the joint Washington State University (WSU) and Island County Beach Watchers (now known as the Sound Water Stewards), a mixed volunteer group on Whidbey Island that was taken up with local marine conservation issues. Klope and Berta, along with a core group of non-specialist Beach Watcher volunteers, among them Penny Bowen, Mary Jo Adams, Sandy Dupernell and other community members, duly came together to extract the whale's skeleton for public display.

On 2 August 2019, I found myself standing in Rosie's presence in the animal's resting place in Coupeville Wharf, together with Klope. The skeleton before me was perfectly clean, but I was aware that this was the end result of what had been a long, difficult and, at times, gruesome process. As previously mentioned (see Chapter 1), most cetaceans die unseen, while they have lives that are unknown and go unnoticed by humans. Strandings may bring their lives (or deaths) temporarily to our attention, but the majority of dead whale bodies will never wash ashore. When whales die at sea, their bodies nourish other organisms. They are fed on while still floating in the water and, when they eventually sink to the seabed, they feed many different species, from larger fauna such as sleeper sharks to tiny invertebrates like the

bone-eating snot flower worm and microbes invisible to the naked eye. These multispecies gatherings are known as 'whale falls', and they are an important process for the marine ecosystems of which these whales are an integral part [figure 18]. The sunken carcasses of large whales can support complex communities of living beings for many decades as they are slowly recycled into the food web. Researchers believe that these microcosmic ecosystems at the depths of the ocean can support other organisms for anything between 50 and 100 years.[38] Environmental historian Bathsheba Demuth poetically describes how 'hundreds of species can make thousands of generations over decades on a single carcass, a whole world of lives'.[39] The great whales are some of the largest animals in the ocean – the blue whale being the largest of all – and their bodies offer oases of plenty amid the organism-deprived abyssal depths. Two centuries of industrial whaling deprived the oceans of millions of tonnes of vitally important biomass when their carcasses were dragged onshore at whaling stations or wrenched onto factory ships, their bodies broken down and processed for oil and meat, their blubber boiled and bones removed and rendered into fertiliser.[40] Research has shown that 'whale falls are relatively common on the deep-sea floor', suggesting the significance of whale falls to ecosystems at much higher population levels pre-whaling.[41] This offers further insights into the results of genetic testing (see Chapter 1).

These 'habitat islands' form important influxes of biological matter.[42] Whale falls are major ecological events and, as such, have been the focus of important scientific research. As the phenomenon has filtered through to popular science publications, it has captured the

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[38] Shana K. Goffredi and others, 'Unusual Benthic Fauna Associated with a Whale Fall in Monterey Canyon, California', *Deep Sea Research Part I: Oceanographic Research Papers*, 51 (2004), 1295-1306; Lonny Lundsten and others, 'Time-Series Analysis of Six Whale-fall Communities in Monterey Canyon, California, USA', *Deep Sea Research Part I: Oceanographic Research Papers*, 57 (2010), 1573-1584.
[39] Demuth, *Floating Coast,* p. 67.
[40] Nicolov, pp. 144-45.
[41] Craig Smith and Amy R. Baco, 'Ecology of Whale Falls at the Deep-Sea Floor', *Oceanography and Marine Biology*, 41 (2003), 311-354 (p. 311).
[42] Smith and Baco, p. 11. Researchers at the Monterey Bay Research Institute have sunk whale bodies, including of gray whales, off the coast of Monterey and San Diego to mimic natural whale falls in order to carry out sustained studies on them.

imagination of humanities scholars such as Bathsheba Demuth and Michelle Bastian, as well as a number of popular writers and documentary producers, such as those involved in the BBC's multi-million-pound nature vehicle, *Blue Planet II* (2017).[43] Gray whales have been the focus of major studies into whale falls, including in Monterey Bay Canyon, California, and potent images lifted from deep-sea exploration footage and time lapse sequences have circulated widely across the internet during recent times, including the famous 2019 Nautilus Expedition [see figure 18].[44] During the 1999-2000 UME, around 8000 gray whales were suspected to have died and it is likely that many thousands of these animals would have sunk to the ocean depths, becoming nutrient-rich whale falls. With a pre-whaling gray whale population potentially three to five times larger than it is today, how many more whale falls might there have been in the past? What has been the impact of depletion on the eastern North Pacific ecosystem, and how acute was it during the years of very low population levels, or when the species was believed to be extinct? As Michelle Bastian laments, 'the variety of ecological networks that these whales participated in [has not been] part of their extinction story' although the global whaling industry has had profound, irreversible and wide-ranging impacts on the 'less visible vestiges' of the ocean.[45] 'Whale fall ecosystems', she goes on, are likely 'the site of the first anthropogenic extinction in the deep sea due to the loss of habitat caused by significantly reduced numbers of "falling" whales. The difficulty in determining who or what these extinct creatures might have been creates a troubling "unknown extinction"'.[46] Bastian's work draws our attention, all over again, to the long history of

[43] Demuth, *Floating Coast,* pp. 67-68; Michelle Bastian, 'Whale Falls, Suspended Ground, and Extinctions Never Known', *Environmental Humanities*, 12 (2020), 454-474; Rebecca Giggs, *Fathoms: The World in the Whale* (New York: Simon & Schuster, 2020), pp. 19-23; 'The Deep', *Blue Planet II,* BBC*,* 5 November 2017; Jeffrey Marlow, 'A Whale's Afterlife', *The New Yorker,* 18 February 2019.
[44] NOAA National Ocean Service, 'What is a Whale Fall?', <https://oceanservice.noaa.gov/facts/whale-fall.html> [accessed 20 July 2021].
[45] Bastian, pp. 455-56.
[46] Bastian, p. 456; Demuth writes, 'Far below the human ken, commercial whaling left quiet, unsung extinctions': Demuth, *Floating Coast*, p. 67.

extinction: whales and their deaths force us to comprehend temporal as well as spatial and ecological scales far beyond our own.

Figure 18. Whale fall covered in octopuses discovered in Monterey Bay National Marine Sanctuary during the 2019 Nautilus Expedition. Source: National Marine Sanctuaries/NOAA, <https://flickr.com/photos/44124469278@N01/49050941487 > [accessed 1 August].

First encounters

If knowing when a whale strands is hard, knowing *where* it strands can be equally difficult. As previously noted (see Chapter 1), it is likely that during the UME gray whales stranded in remote areas unfrequented by humans. This offers a reminder of how much of nature remains beyond our comprehension. Travelling around the Pacific Northwest during my 2019 field trip, I was struck and at times overwhelmed by the sheer scale of the region. When whales strand in remote places, far from human civilisation, the event goes unremarked and the carcass decomposes unseen (at least by humans). Internal processes of decomposition take over while external organisms further break down the body through their consumption, and the natural elements and rhythms of the shoreline – rain, sun, wind, seawater – accelerate this inexorable process of decay. Eventually the remains become part of the terraqueous regions.

There is a profound interspecies *fecundity* in a whale corpse; the body teems with multispecies productivity, energy is produced, and organisms are nourished.[47] This process is depicted in an artwork by Laura Cunningham, who draws historical ecology together with illustration to imagine an uninterrupted gray whale stranding [see figure 19]. Most gray whales found stranded on the west coast of North America are dead and in advancing states of decomposition.[48] Humans are confronted by death and putrefaction on a gigantic scale – a powerful encounter that is also an affront to the senses. Our own human bodies also break down through similar processes – rotting flesh, organisms nourishing themselves from our once thriving body, our firm tissues now liquescent – but the grim reality of the post-mortem human body is not one that we easily confront. Stranded whales provide possibly unwanted access to what happens to mammalian bodies at the end of their life cycle; meditation on these nonhuman bodies may, as Huggan writes, 'demonstrate the one true melancholic principle: the certainty of decay'.[49]

[47] Sarah Bezan, 'Necro-Eco: The Ecology of Death in Jim Crace's "Being Dead"', *Mosaic: A Journal for the Interdisciplinary Study of Literature* (2015), 191-207.
[48] In 2019 just three of the 12 gray whales found in the San Francisco Bay area were fresh according to Gulland, Flannery and Greig.
[49] Huggan, *Colonialism, Culture, Whales,* p. 90.

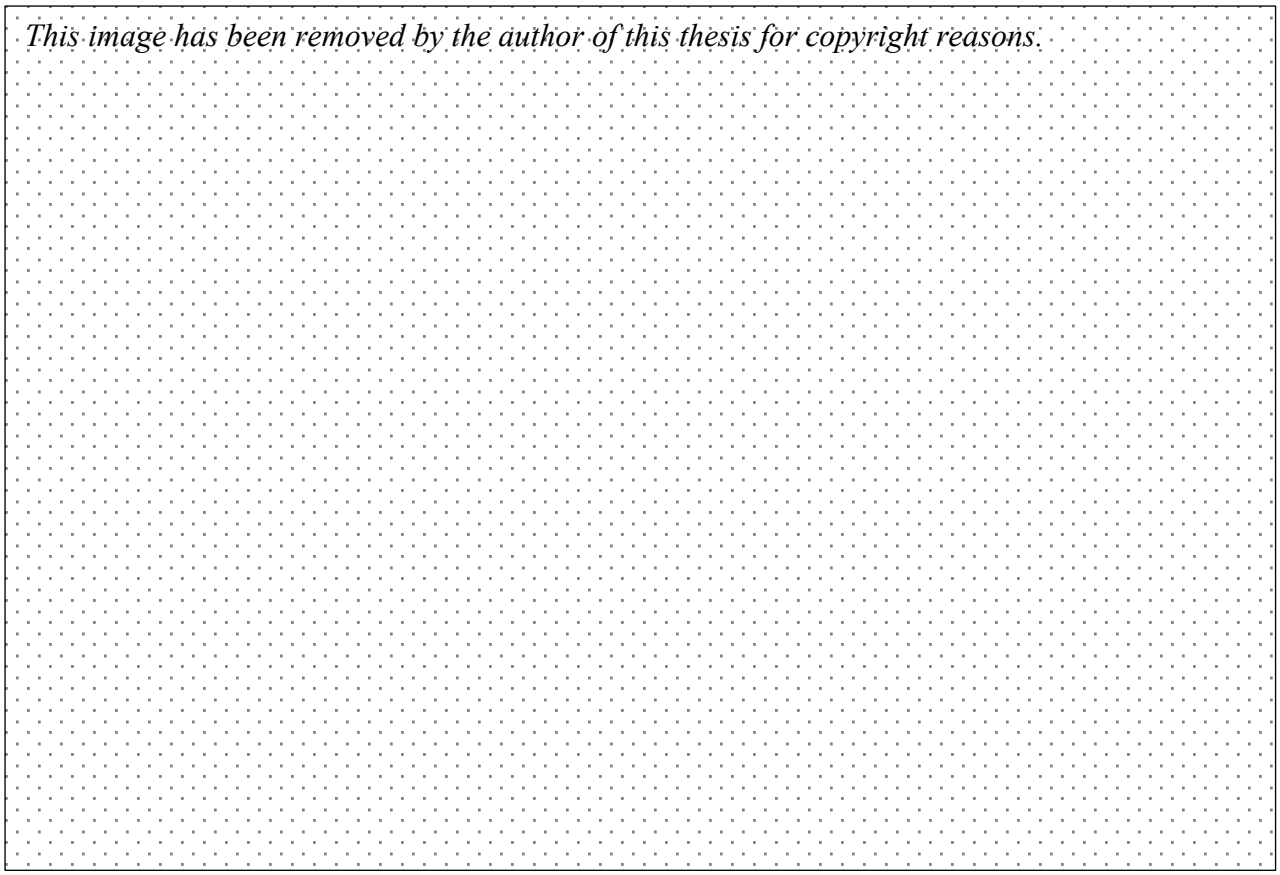

Figure 19. Laura Cunningham, *Bears at Gray Whale*, 1988. Source: Center for Political Graphics, Los Angeles, poster for the David Brower Center's Fourth Annual Art/Act Exhibition in the Hazel Wolf Gallery (September 2012 – January 2013), folder A-33.11 *Animal Rights: Marine Life*, poster 2013-117.

In the case of Rosie, Klope recalled the condition of the carcass when they first found it: 'by the time we got to her she had already deflated … All we could really do was say, "Yeah, these bones belong to the left side. These bones belong to the right side"'. Klope called Rosie a 'rotting mess' and described how the corpse barely resembled a living whale with the soft tissue liquefying: 'we were just pulling bones out of goo. There's no way you could tell whether it was a male or female by the carcass'.[50] The transmogrification of the whale body into different forms, textures and consistencies is a forceful image and a salient feature of Klope's memory of the encounter, and it is captured in photographs taken at the time [figures 20 and 21]. The post-mortem disintegration is an intense process, as whales transform into mucilaginous heaps of animal matter. When I interviewed Frances Gulland of

[50] Klope, interview; Klope, conversation.

NOAA, and Moe Flannery and Denise Greig, who are part of the stranding response at California Academy of Sciences, San Francisco, they all confirmed that the gray whales they usually encountered on beaches were heavily decomposed. Greig described the condition of two of the whales that stranded in the Bay Area as part of the 2019 UME. One of the animals 'was very rotten with no skin', while she remembered the other whale as 'probably the most disgusting one I've ever been involved in' since it was already a few weeks old. Greig recalled how she and colleagues

> went to open it so that it could decompose faster and get out of everyone's way. … It had rotted inside and formed this noxious gas … it was enough that I pulled all the people out of it because I thought it was dangerous. That is the worst smell I've ever smelled in my entire life.[51]

In each of the years of the UMEs (1998 to 2000, 2019 ongoing) there were several hundreds of gray whales in decomposed states along the eastern North Pacific coastline. Individual dead stranded whales are near impossible to ignore, but it becomes even more difficult to comprehend the scale and reality of death when considering an unusual mortality event. Stories help us cope, drawing us into the actuality of humans encountering dead whales and their massive decaying bodies.

[51] Gulland, Flannery and Greig.

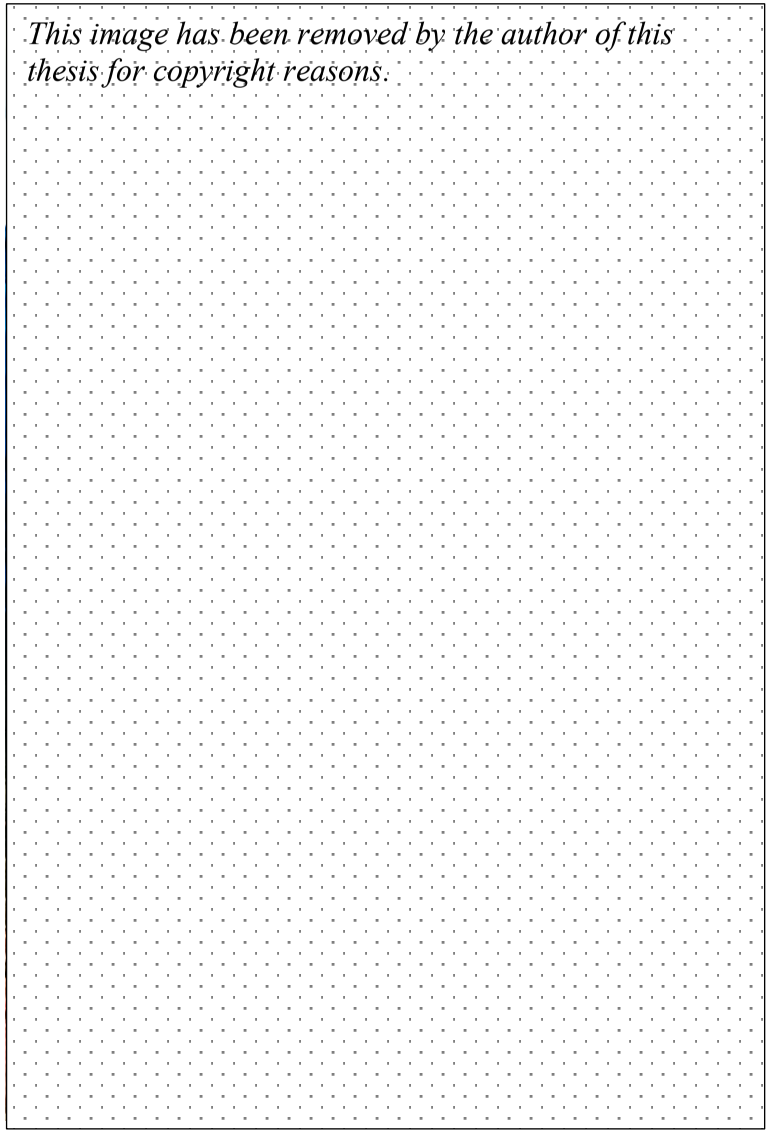

Figure 20. Cutting up Rosie. Source: Orca Network/CPSMMSN.

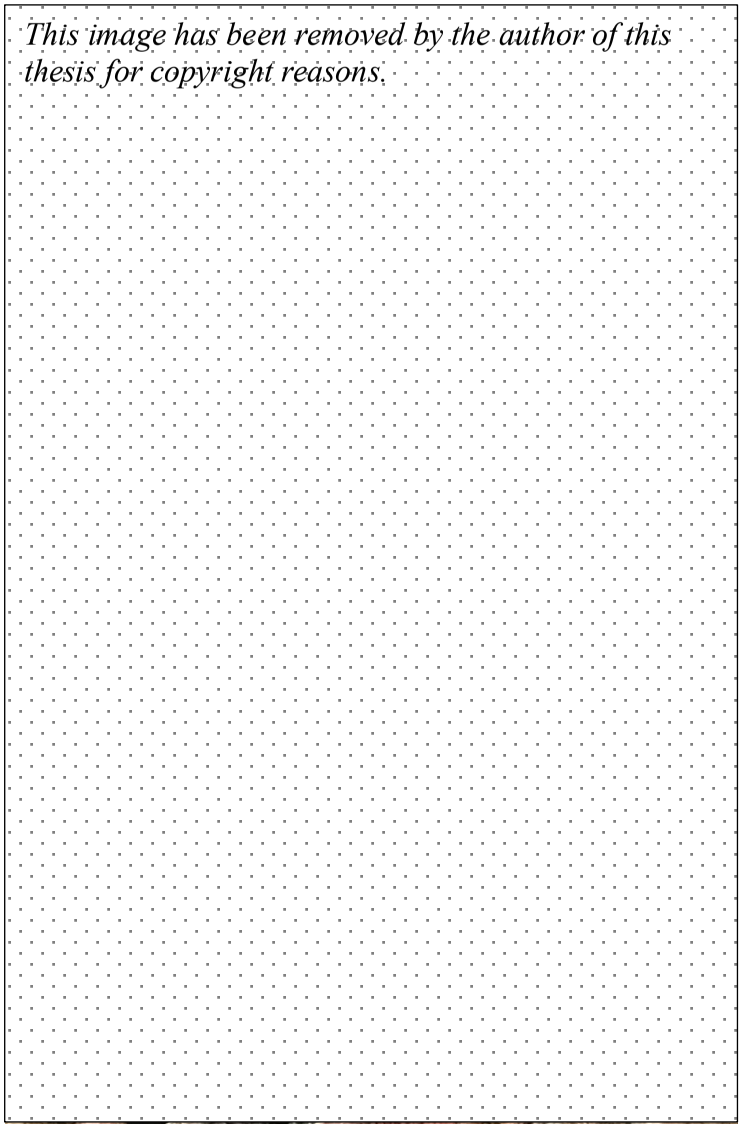

Figure 21. ‘Pulling bones out of goo’. Source: Orca Network/CPSMMSN.

The human discovery of stranded whales interrupts a whole host of natural processes, and this disjuncture signals the beginning of an animal's afterlife. What that life consists of depends on where the whale is found and what the circumstances surrounding its discovery are (the magnitude of potential difference is exemplified in the cases of Rosie [this chapter] and the whale found by the Ahousaht [the next]). There are different recourses for dealing with a dead whale stranded close to human society. Choices include burying, towing out to sea, moving to landfill, incineration, abandoning on the shoreline, and retaining the skeleton or parts of the animal or a combination of these. When the gray whale was discovered on Whidbey Island in December 1998, it quickly came to the attention of several local individuals concerned with marine conservation issues, including Klope, who saw the opportunity for a natural history display. This was entirely unplanned.[52] Discovered strandings are coincidental and it was also pure chance that it occurred in a place where there happened to be a group of people with the skills, experience and interest to make educational capital out of an unfortunate event. The whale had died at sea and washed ashore, which meant that there was no human audience to witness the excruciating drawn-out death of a stranded cetacean. This doubtless created an emotional distance that facilitated the idea of salvaging the skeleton, thereby turning the animal into an object for display.

This idea became the hinge for the animal's afterlife, leading to Klope's communication with Berta (see above). In Brenda Peterson's somewhat sentimental account of the events that surrounded Rosie's recovery and display, she reflects that instead of being 'an eyesore and a burden' to the Islanders, the stranding was perceived as an opportunity to retain a wild ocean creature for educational purposes. Klope, in particular, would bring his knowledge and experience as a Navy wildlife biologist, which included responding to stranded cetaceans before any formal networks existed, and taxidermist, while Berta and

[52] Klope, interview; Berta and Howard.

other Beach Watchers would contribute their passion for the marine environment and their commitment to public education. The main driver was the chance to create a natural history display that would teach and inspire local communities on Whidbey Island and other members of the general public about local marine conservation and the inherent value of wildlife. Klope was further motivated by the fact that the lengthy process involved in creating a preserved whale skeleton constituted a unique pedagogic experience for the community members engaged. He understood that educational value lay in *proximity* to the dead gray whale at each stage of the process, culminating in the display. The volunteers involved would have a rare opportunity for sustained and immediate physical encounter with the animal, while the eventual exhibition of the skeleton would offer a further opportunity for general audiences to get 'close up' [figure 22].[53]

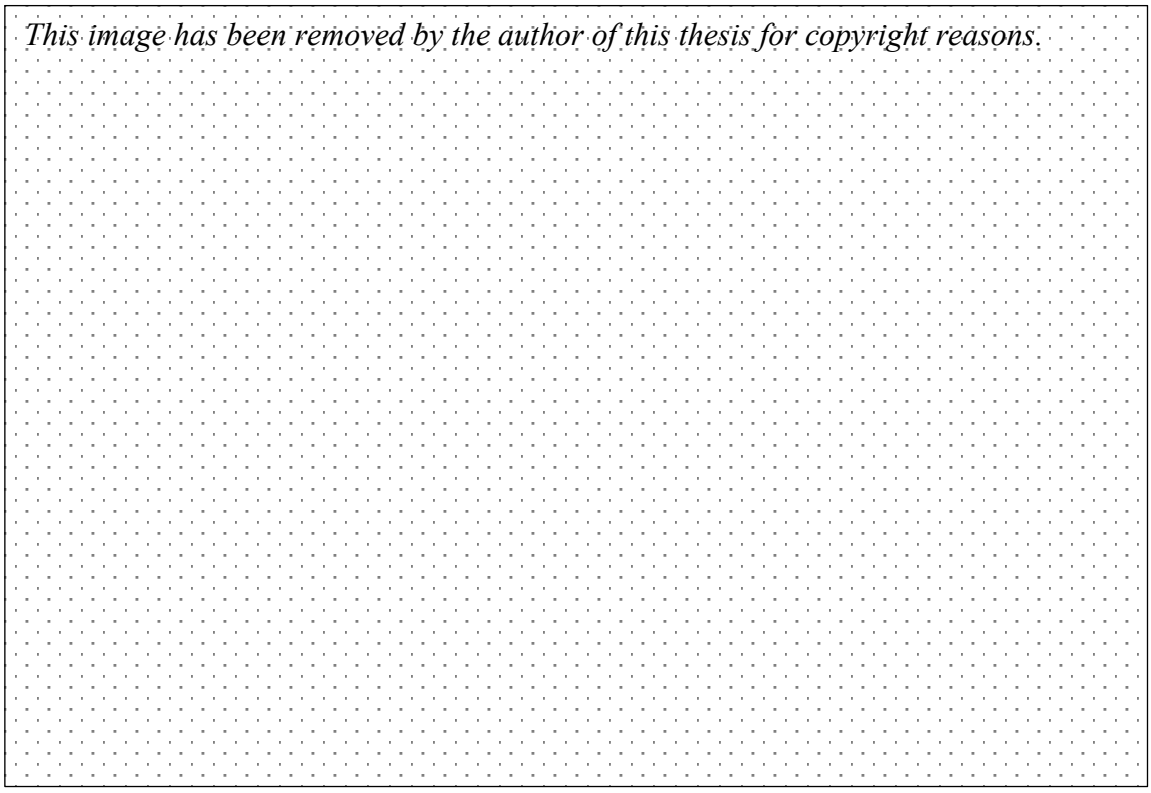

Figure 22. Organising bones on the beach. Source: Orca Network/CPSMMSN.

[53] Klope, interview; Klope, conversation; Berta and Howard.

Beyond these educational motivations, intrinsic to the enthusiasm for the project was undoubtedly gray whales' special status as a charismatic example of *local* wildlife. For Whidbey Islanders, gray whales are not a distant species that exists in the mind or in television nature documentaries; rather they are familiar creatures that pass close to the shore at certain times of year on their annual migration path. While for those living in cities, whale skeletons in natural history museums may be their closest contact with such animals, residents of Whidbey Island are used to witnessing, and to some extent co-inhabit with, living gray whales. While whales might be considered the 'common heritage of humankind', gray whales are understood as being part of the *regional* heritage of Whidbey Island and wider Puget Sound society.[54] They are endemic to waters in this particular part of the Pacific Northwest, and reside closer to shore than the other great whales, with their migration route passing a few miles from the oceanfront, sometimes a few hundred metres or less. Waters around Whidbey Island host the Pacific Northwest resident gray whales, which spend time in Puget Sound (notably around Penn Cove) foraging for ghost shrimp, their knobbly backs repeatedly breaking the surface, and notched flukes and effervescent puffs adding to a spectacle that is almost guaranteed to delight.

Fig 23. Coupeville Wharf and surrounding Penn Cove where gray whales forage. Author's photograph.

[54] Kalland, *Unveiling the Whale*, p. 208; Peter Coates, 'Creatures Enshrined: Wild Animals as Bearers of Heritage', *Past & Present*, 226 (2015), 272-298 (p. 273).

These gray whales are very much alive, but like other whale species they have also been turned into what the Australian author Tim Winton calls living 'monuments'.[55] They are monuments to many things: changed human-cetacean relations, a history of hyper-exploitation and extinction, the celebrity of the conservation movement. They are also monuments to time itself. As G. Baldwin Brown wrote in 1905, and quoted by Peter Coates, 'the monument, in the strict meaning of the term, appeals to our sense of the immensity of time. In like manner, the sublime objects of nature touch the imagination with the awe-inspiring apprehension of the vastness of the material universe'.[56] Gray whales today are monuments to their thousands of years of existence, a timescale closer to the lives of the Nuu-chah-nulth (see Chapter 3). Across the North American expanse, animal and plant species, mountain ranges and public lands have been deemed natural, as well as cultural, heritage. Rosie represents the creation of a treasured animal-object that both embodies and encapsulates these different forms of heritage; or as Peter Coates has it, 'dead nature is reconstituted as live heritage when a wild creature is converted into an object in a museum display'.[57]

To reiterate, this heritage is local as much as it is national or international. Gray whales are considered by some Whidbey Island residents to be their 'neighbours', which suggests both perceived emotional proximity and familiarity, and the overarching notion of grays as kin.[58] In this second sense, the decision to display the gray whale skeleton can be seen as having been motivated by an idea of interspecies closeness. But while they are materially present, they are also symbolically available: emblematic for the local Puget Sound marine ecosystem: emblematic for the Cascadia bioregion and, further, emblematic for

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[55] Tim Winton, *Shallows* (Sydney: Unwin Paperbacks, 1985), p. 92; Huggan, *Colonialism, Culture, Whales,* p. 12.
[56] G. Baldwin Brown, *The Care of Ancient Monuments* (New York: Cambridge University Press, 1905), p. 21; Coates, 'Creatures Enshrined', pp. 272-73.
[57] Coates, 'Creatures Enshrined', pp. 274, 285
[58] Hogan and Peterson, pp. 87, 94; Huggan, *Colonialism, Culture, Whale*s, p. 112.

the North Pacific Ocean itself.[59] In the case of Rosie, the cultural and emotional significance of the species was clearly a galvanising factor in bringing the whale into permanent physical proximity through its physical remains. A quote from Penny Bowen in *Sightings* captures this well: 'We did the job so that everyone else can share in seeing this wonderful creature who symbolizes all the grays.'[60] This representative function – one whale standing in for all whales – is typical of charismatic megafauna, and has helped turn the gray whale into the foremost species in a 'pantheon' of iconic animals resident in the Puget Sound.[61] A gray whale skeleton measuring over 30 feet retains the species' megafauna factor and makes for a more exciting display than other, less charismatic creatures (though, as is well known, some of these creatures fulfil ecological functions that are just as important as, or even more important than, the whale).

The exhibition signage at Coupeville Wharf states, simply enough, that 'skeletons are licensed by the National Oceanographic and Atmospheric Administration to Orca Network Central Puget Sound Marine Mammal Stranding Network'. Before Klope could begin work on the whale, he had to apply for a license from the National Marine Fisheries Service. (NMFS). This is not as simple as it seems; a complex web of governmental protections exists to protect marine mammals in the USA. The 1972 Marine Mammal Protection Act protects all marine mammal species and the 1973 Endangered Species Act also protects listed species, including gray whales until 1994 when the species was delisted. These protections apply post mortem to their remains and can be understood as a form of state ownership. (In Canada, the protections are very different and Nuu-chah-nulth do not have to gain permission to harvest the body of a dead whale and have rights to use it according to traditional custom [see Chapter 3].)

[59] Hogan and Peterson, p. 208.
[60] Hogan and Peterson, p. 87.
[61] Coates, 'Creatures Enshrined', p. 276.

Specific scientific research permits must be administered by NOAA before individuals or organisations can retain any part of a dead marine mammal, from an entire skeleton to a solitary whisker or a vial of blood.[62] NOAA divides marine mammal remains into two categories: Pre-Act/Antique/Pre-Listing and Post-Act.[63] Post-Act applies to Rosie as her parts are remains from marine mammals taken after the 1972 MMPA. Buying or selling these parts is prohibited, while scientific research permits are required for importing and/or exporting the parts for scientific research. These permits also allow for the transfer of parts from one collection to another under specific conditions: 'Receipt, transfer, and loans of marine mammal parts must be for the purpose of scientific research, maintenance in a professionally curated scientific collection, or education'. NOAA explicitly states that parts cannot be acquired for personal collections, drawing clear distinctions about who is deemed suitable to hold them and how. When requesting a scientific permit, a NOAA proforma and CV must be submitted alongside the application in order to confirm the investigator's legitimacy.[64] These specific conditions ensure that animal body parts are regulated, that they are being used for educational or scientific purposes, and that they are not entering into national or international black markets.

In the specific case of stranded marine mammals, parts are obtained through the coordinators of regional stranding networks. Whole animals, broken down through dissection and cleaning, may thus be split up, with different owners of different parts. Diverse afterlives are attached to each part as it makes its way to a new resting place, with different stewards

[62] NOAA Fisheries, 'Protected Species Parts', < https://www.fisheries.noaa.gov/national/protected-species-parts> [accessed 10 September 2019].
[63] Pre-Act parts are marine mammal remains that pre-date the 1972 MMPA, and this category is subdivided into Antique and Pre-Listed parts and official documentation is required in both instances. Antique parts are more than 100 years old and belong to endangered and threatened species. A Letter of Determination is required to import, export, or sell these parts for commercial or personal use. These parts may be bought and sold. Pre-listed parts are remains from endangered and threatened species that pre-date the 1973 Endangered Species Act but are less than 100 years old. A Letter of Determination is required to import or export. These parts *cannot* be bought or sold. See NOAA Fisheries, 'Protected Species Parts'.
[64] NOAA Fisheries, 'Protected Species Parts'.

maintaining the animal-objects and framing the afterlife. Networks emanating from a single animal thus often stretch across different spaces, within a particular locale (Whidbey Island), a particular region (Puget Sound), or another location entirely (e.g. the east coast of the USA).[65] Rosie's display can be understood in this respect as embodying what Mark Whitehead, Rhys Jones and Martin Jones call 'nature-state relations'; the whale's body is highly regulated, like that of other wild animals, and is actively framed within wider US governmental science, which is administered through NOAA.[66]

As our whale passed into human culture, so it came to assume new human-determined identities. One of the initiating moves was to give it the name 'Rosie'. The animal had decomposed to such an extent that it was not possible to sex the whale from the body alone. However, the animal was presumed to be female at the time of discovery, and Rosie was inspired by the Latin name for the species, *Eschrichtius robustus* (from 'Ro' in *Robustus*). According to the volunteer group website, the name was inspired by Klope calling the creature their 'Christmas Rose' (Penny Bowen is quoted dubbing the animal 'our Christmas whale') because of the time of year.[67] Naming is in part a coping mechanism, facilitating emotional support for the animal, coming to terms with its death, and, above all, enabling imaginative engagement with its life. Once named, Rosie was granted what Judith Butler has famously called a 'grievable life'.[68] A grievable life is one that can be mourned and remembered through different rituals and practices. While Butler is writing in the context of war, her work has been adapted to reflect on nonhuman organisms.[69] Jane Desmond has extended Butler's theories to nonhuman animal lives and, for her, 'The ultimate question is

[65] Klope, interview; NOAA Fisheries, 'Protected Species Parts'.
[66] Mark Whitehead, Rhys Jones and Martin Jones, *The Nature of the State: Excavating the Political Ecologies of the Modern State* (Oxford: Oxford University Press, 2007), p. 76.
[67] Sound Water Stewards, 'Who was Rosie?', <https://soundwaterstewards.org/icbw/bones/rosie.htm> [accessed 3 May 2018]; Hogan and Peterson, p. 86.
[68] Judith Butler, *Precarious Life: The Powers of Mourning and Violence* (London: Verso, 2004), p. 20.
[69] Jane Desmond, *Displaying Death and Animating Life: Human-Animal Relations in Art, Science, and Everyday Life* (Chicago: University of Chicago Press, 2016), pp. 101-124.

what constitutes a grievable (nonhuman animal) life, for and by whom, and under what conditions?'[70] Gray whales – and other cetaceans – measure high in the rankings of grievable wildlife in so far as they deemed to have subjectivity and are culturally significant.[71] As Rebecca Giggs reflects in *Fathoms: Worlds in the Whale* (2020), 'A whale warrants pause – be it for amazement or for mourning. Its appearance, and disappearance, are significant'.[72] Graham Huggan goes further still: 'Whales clearly belong to the category of "grievable life"'.[73] When a life can be mourned, mourning practices will ensue, which are shaped by cultural reference points. In the case of Rosie, these reference points are supplied by North American conservation and western natural history practices, which also have significance at local and regional levels. As I have shown in this section, the act of salvaging and preserving one particular gray whale skeleton for display has mainly had resonance for one particular Pacific Northwest community. But the values it invokes have much wider application, challenging North American and broader western societies, not just to mourn for, but to strive for the preservation of a natural world that they have done a great deal to destroy.[74]

Exploding the whale

Ever since the 1980s, there have been efforts to systematically respond to and retrieve samples from cetacean strandings on the west coast of the USA. For example, samples of blood, blubber and skin were taken from all 651 gray whales that were discovered stranded during the 1999-2000 mortality event. This scientific response has been, and remains, absolutely fundamental to the relationship of humans with dead stranded gray whales and other marine mammals. (Naturally, science also mediates relationships with these animals

[70] Desmond, *Displaying Death,* p. 107.
[71] Desmond, *Displaying Death,* p. 105.
[72] Giggs, *Fathoms*, p. 17.
[73] Huggan, *Colonialism, Culture, Whales,* p. 112; Butler, *Precarious Life.*
[74] Poliquin, p. 6.

while they are still alive). Since 1979, research into cetacean strandings and other marine mammal conservation issues around Washington's Puget Sound waters has been led by the Cascadia Research Collective and its co-founder John Calambokidis, a senior research biologist. Cascadia Research has run dedicated research projects on gray whales for several decades, and Calambokidis and others in the collective were closely involved in the research into the stranding of Rosie, along with other gray whales that stranded in the region during the UME over the course of the next two years. As was the case with Rosie, most of the whales Calambokidis and his colleagues worked with during this period were seriously decomposed.[75] While, to the non-specialist, a whale this rotten might seem unlikely to yield significant information, the Cascadia Research Stranding Network Coordinator Jessie Huggins explained to me that 'we can still recognise all the organs, they all have the same organ shape, we can look for abnormalities, even if it's not fresh enough for histology'.[76] Histology is the study of the microscopic anatomy of tissues, cells and organs. While the types and amounts of information that can be gained from a decomposing whale will inevitably depend on the level of decay, even in advanced cases valuable information can be gleaned from post-mortem scientific investigations. These investigations enshrine each individual gray whale examined in data.

In most instances, after scientific investigations on the body are complete, the animal will be disposed of in one of the ways mentioned above (towing, burying, abandonment to other creatures and the elements). In the case of Rosie, as we have seen, an early decision was made to cut up the body so that the exposed skeleton could then be preserved for display. However, beached whales like Rosie also represent opportunities to mine the body for vital data. Their bodies, submitted to science, thus undergo a period of transition, a large-scale

[75] Calambokidis and Huggins.
[76] Calambokidis and Huggins.

metamorphosis. This physical dismantling of animals is central to the ways in which humans have attempted to make sense of nonhuman others (a moment captured in figure 24). Stranded whales are taken apart, unpicked and cut open as their insides are exposed and dissected, and fragments of the body are stored or placed on display so that we can better know the animal and make sense of its death.

As previously noted, the initial discovery and cutting up of Rosie offered limited knowledge to Klope and the volunteers because of the poor condition of the carcass. However, as bones were painstakingly extracted from the putrefying flesh, and each one cleaned of soft tissue and meticulously labelled, a more complex picture of the animal began to form. This process, which involved both specialists and non-specialists, was a galvanising experience for several reasons. First, it incorporated members of the community in the processing of the body, laying the foundations for citizen science that would be further developed in the community over the next two decades. Second, this particular phase of the disassembly and reassembly process was a highly immersive one that brought people into intimate encounter with the whale. Aside from Klope, for most involved this was the first time they had participated in something of this nature, and as such it was a unique and exclusive experience. As Klope confided in me, 'Rosie was done a long time ago, before anybody articulated whales around here. She was the first'.[77] Berta also explained to me that Rosie was the first large necropsy and skeletal articulation that she had been involved in. While she had encountered dead seals and a dead porpoise before, the carcass of large whale presented a different challenge because of the size of the animal.[78]

[77] Klope, interview.
[78] Susan Berta and Howard Garrett, interviewed by author, Whidbey Island, 2 August 2019.

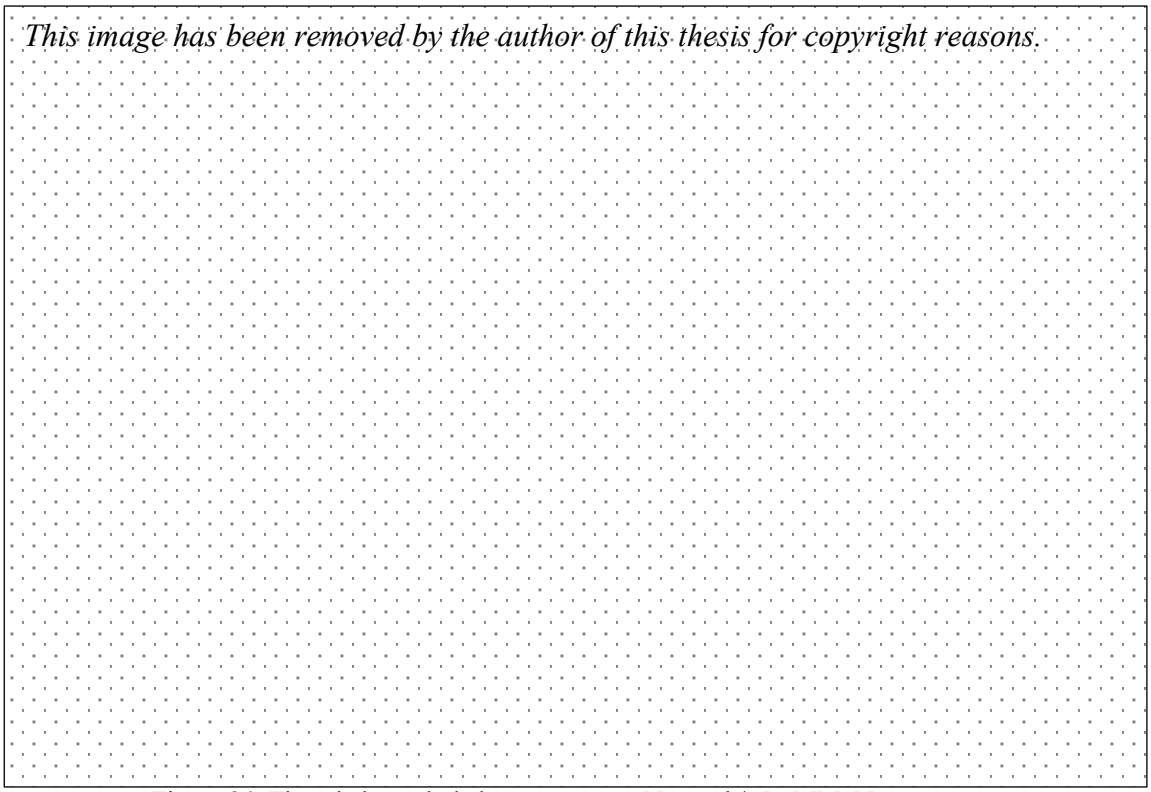

Figure 24. The whale exploded. Source: Orca Network/CPSMMSN.

Community volunteers laboured for days under Klope's guidance to remove each bone, from the epic jaw bones to the smallest vertebra in the tip of the tail, which had been exposed to winter weather conditions and frigid sea water in the intertidal zone at high tide. (Between 8 and 12 December 1998, the temperature on Whidbey Island hovered between 5-10°C and the average sea water temperature at this time of year is 7.9°C.)[79] Not only were the Islanders themselves facing the elements, but the work was exceedingly strenuous. The scene is described in *Sightings*: 'Volunteers, from children to senior citizens, waded into the shallows and worked for four cold days to remove hundreds of pounds of blubber and entrails'.[80] While this alludes to the scale of the challenge and the difficult working conditions, the reality was even harder. At this early stage, the whale body is in an acute state

[79] US Department of Commerce Record of Climatological Observations, 'Record of Climatological Observations', *National Centers for Environmental Information National Oceanic & Atmospheric Administration*, National Environmental Satellite, Data, and Information Service: climatological data 7-12 December 1998, Whidbey Island Naval Station (generated 2 January 2021), <https://www.ncdc.noaa.gov/cdo-web/datasets/GHCND/stations/GHCND:USW00024255/detail> [accessed 2 January 2021].
[80] Hogan and Peterson, p. 86.

of flux and the process of objectification is blurred as the whale's bones are gradually detached from the rest of the animal. Later stages, when the bones are clearly identified and labelled and an inventory is created from the animal's osseous framework, then give the animal scientific and curatorial significance, eventually leading to an anatomically accurate final display. Prior to this, the messy work of disassembly raises more questions than it answers. Do the parts left behind to be washed away remain wholly animal? Should the bones, which are still not identified, be considered as objects at this stage? As noted above, there is a sense in which the eviscerated whale is in a 'continual state of becoming',[81] a process which arguably extends into the later stages of the project: the suspension of the bones in the marina, the long months spent preparing and reassembling the skeleton, and the finalisation of the display.

In more ways than one, then, the time spent on the littoral is transitional for a stranded whale. A critical site in the afterlife of Rosie, it was also a transient staging place for human activity. Once the desired animal remains had been collected, focus panned away from the strandline as the bones were 'carried … nearly a mile down the beach to waiting trucks'. 'The larger vertebrae, big as beach balls, took two men to carry. The skull was ferried down the beach in a boat'.[82] The whale was fragmented or 'exploded' across greater distances. Sarah Bezan has articulated the notion of '*a body exploded*' (her italics) in the context of endlings of species whose bodies undergo 'preservative practices of taxidermy and genomic mapping'.[83] It is not just endling animals or species close to extinction that are shattered spatially. Rather, this process is fundamental to our interactions with the deaths of a broad range of wild animals, especially, though not exclusively, stranded whales. The idea of an exploded body recalls Cornelia Parker's artwork *Cold Dark Matter: An Exploded View* (Tate,

[81] Gosden and Knowles, p. 4
[82] Soundwater Stewards.
[83] Sarah Bezan, 'The Endling Taxidermy of Lonesome George: Iconographies of Extinction at the End of the Line', *Configurations,* 27 (2019), 211-238 (p. 215).

1991: see figure 25). Some fragments are lost, what remains is physically, even violently, separated and yet there is a continued relationality.

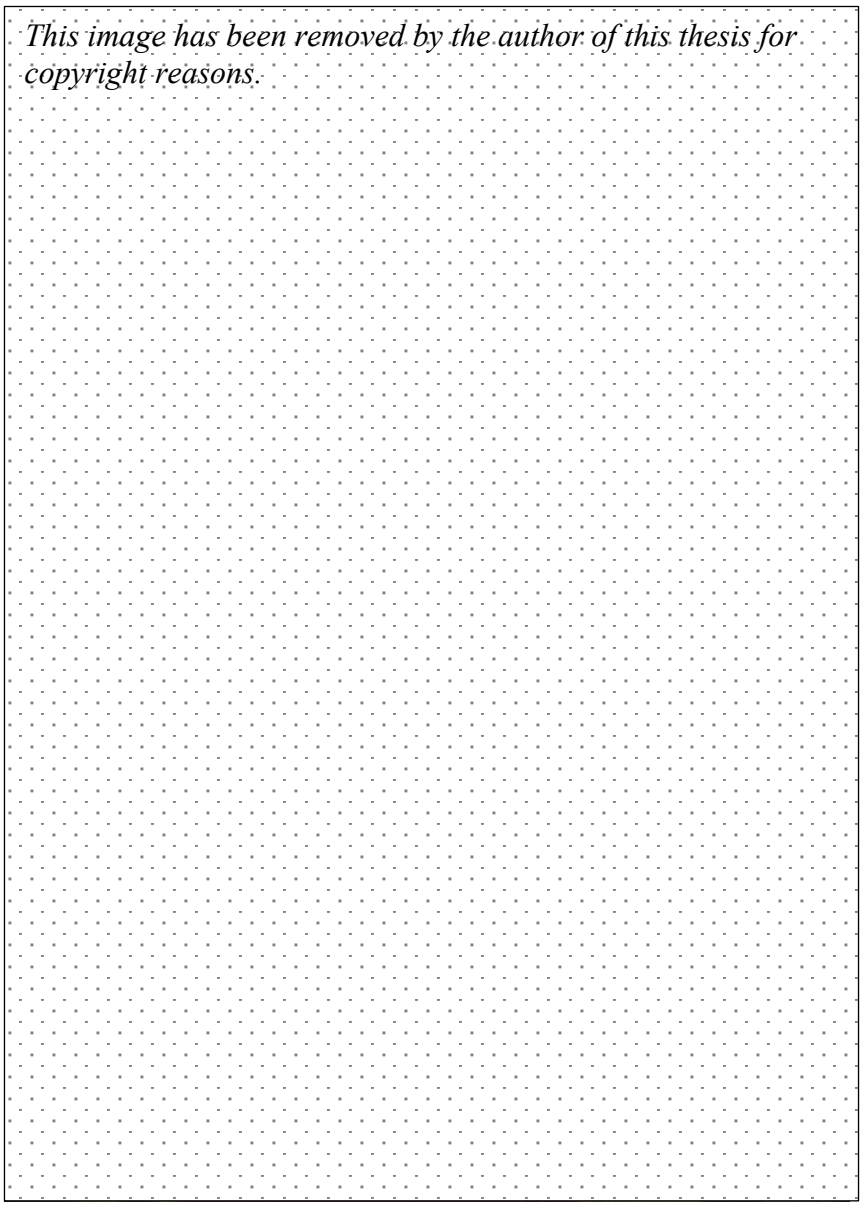

Figure 25. Cornelia Parker*, Cold Dark Matter: An Exploded View* (Tate, 1991)

There is only so much organic matter that can be removed from whale bones by stripping them by human hand alone. (This meticulous and long-lasting attention to the bones is the complete opposite to the treatment of whale bones by the Ahousaht, who bury the bones on the beach and bless them: see Chapter 3). Preparing whale bones for storage or display requires extensive cleaning. Inevitably, there will be some soft tissue that remains, not to mention cartilage and oil. Humans around the world have experimented with different

methods to clean bones, including washing detergent, boiling water, and burial. In the case of Rosie, a decision was made to return the bones to Puget Sound waters for marine organisms to scavenge on, and for the seawater to break down the organic matter. Making use of Klope's connection to the Navy, the bones were loaded into 'perforated 55-gallon plastics drums' [see figure 26], and suspended from the fuelling dock of the US Navy Seaplane Base in Oak Harbor [figure 28], while 'Rosie's 6-foot-long, 400-pound skull was strapped to a wooden pallet, covered with chicken wire and anchored underwater' [see figure 27] where they could securely be left for the next three months.[84] The baleen was also submerged with each individual plate – 168 each side – being meticulously separated. Not only did this represent exemplary community collaboration, but it also relied on interspecies productivity, with 'crabs, eels, urchins and sea stars' playing the key role in cleaning the bones.[85] The decision was one rooted in common sense and best ecological practice: feeding the bones back into the ecosystem, re-nourishing other species and the marine environment at large, and echoing the processes that take place on a whale fall. Peterson anthropomorphically describes the aquatic animals 'diligently clean[ing] the bones', which suggests a kind of active interspecies cooperation between human and nonhuman, as though the marine invertebrates were conscientiously fulfilling their role in a mutual collaboration rather than looking for their own benefit.[86] That said, nonhuman benefits *were* supplied as nutrients flowed back into the marine ecosystem.

[84] Hogan and Peterson, p. 87; Soundwater Stewards.
[85] Soundwater Stewards.
[86] Hogan and Peterson, p. 87.

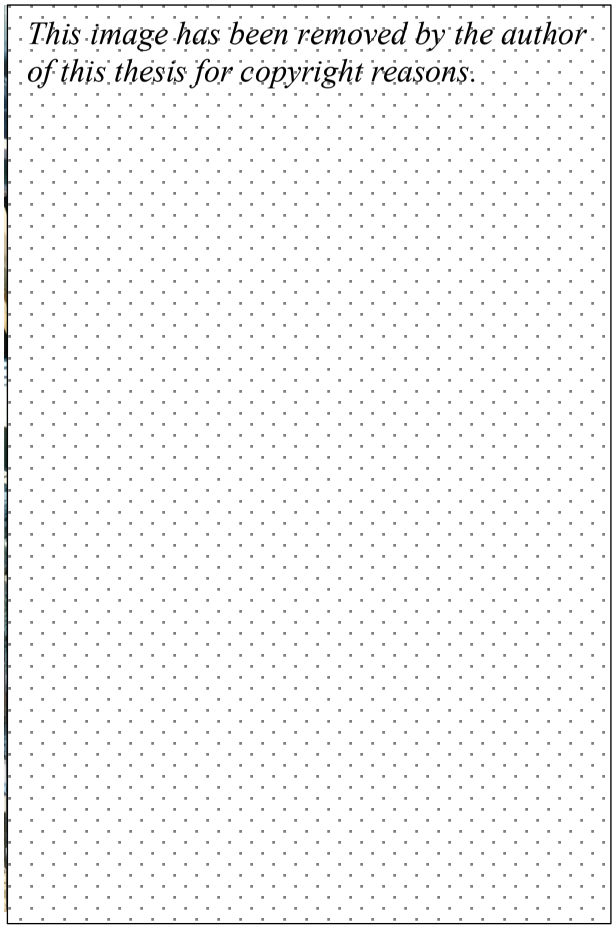

Figure 26. Bones in a barrel.

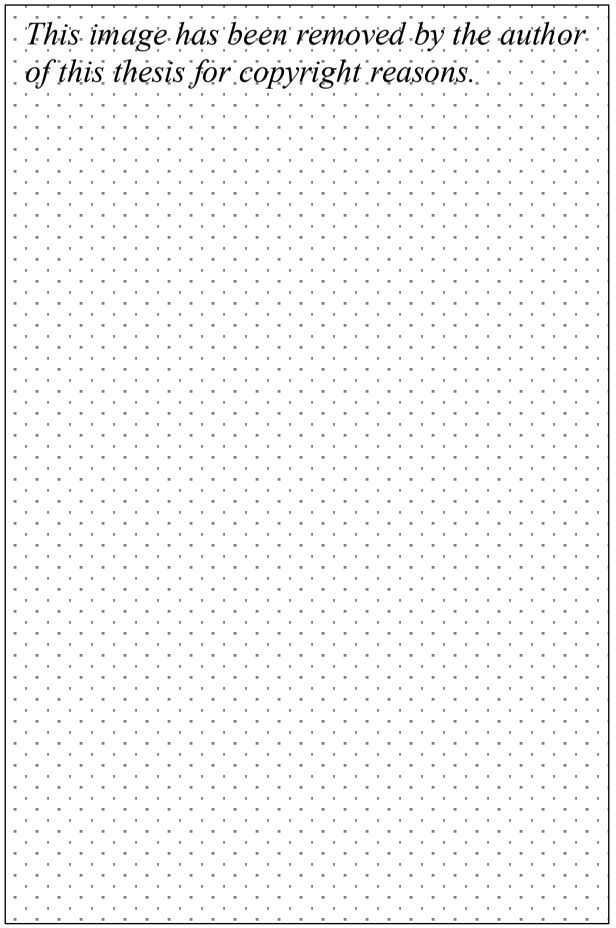

Figure 27. Skull bones prepared for submersion.

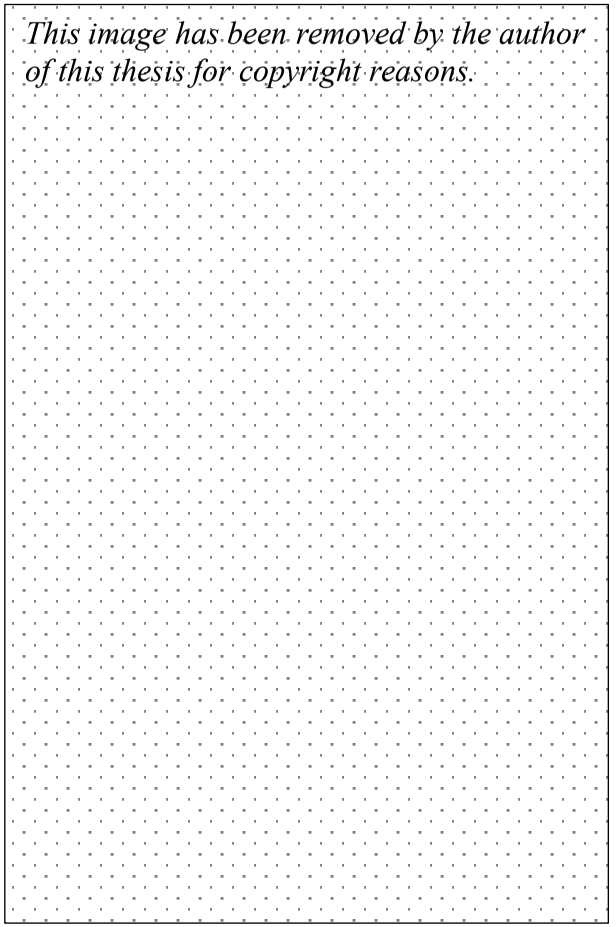

Figure 28. Suspending the bones off the dock.

Source: all Orca Network/CPSMMSN.

After three months, the osseous remains of Rosie were hoisted back onto land permanently, registering the final severing of these body parts from the marine environment from whence they came. Stranded once again on land, the bones were laid out to bleach and dry in the sun before the preparation and reassembling [figure 29].

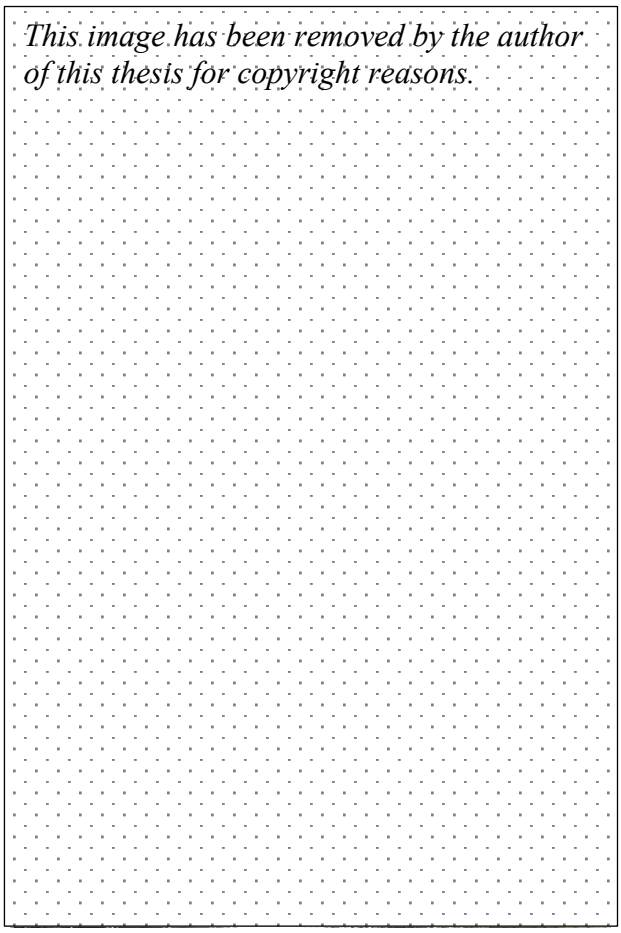

Figure 29. Bones drying in the sun. Source: Orca Network/CPSMMSN.

Here Rosie's materiality became more complex and more explicit objectifying processes were set in motion. For example, the bones' physicality was irreversibly altered through sanding and painting with a preservative made of Elmer's glue (a synthetic PVA-based glue), latex and water. This was the beginning of Rosie as what might be called a 'mixed-media' animal-object.[87] Animal displays of all kinds are defined by disjuncture. Creatures are detached from their habitat, and new materials are melded to what remains of the animal.

[87] Lukas Rieppel, 'Bringing Dinosaurs Back to Life: Exhibiting Prehistory at the American Museum of Natural History', *Isis*, 103 (2012), 460-490 (p. 465).

Beach Watcher volunteers subjected the bones of Rosie to 'the tedious job of painting … Painting, sanding, painting again' for several months, a necessary task to strip the bones of remaining oil and seal them [figures 30 and 31].[88]

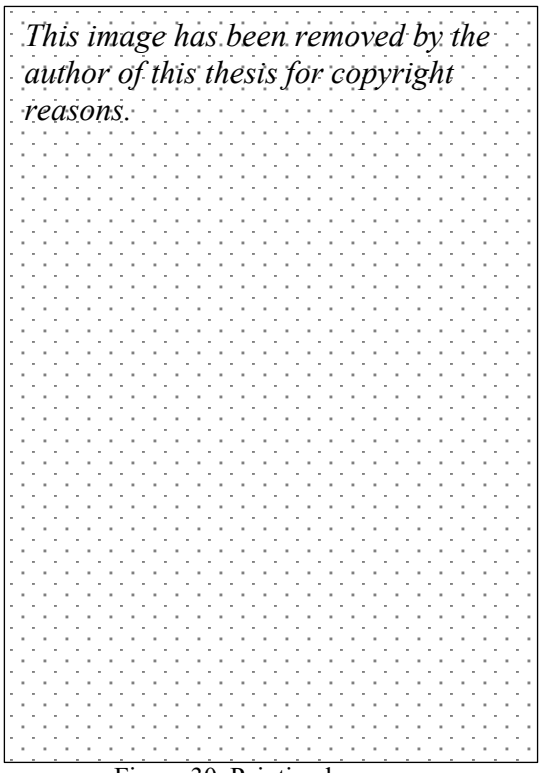

Figure 30. Painting bones.
Source: Orca Network/CPSMMSN.

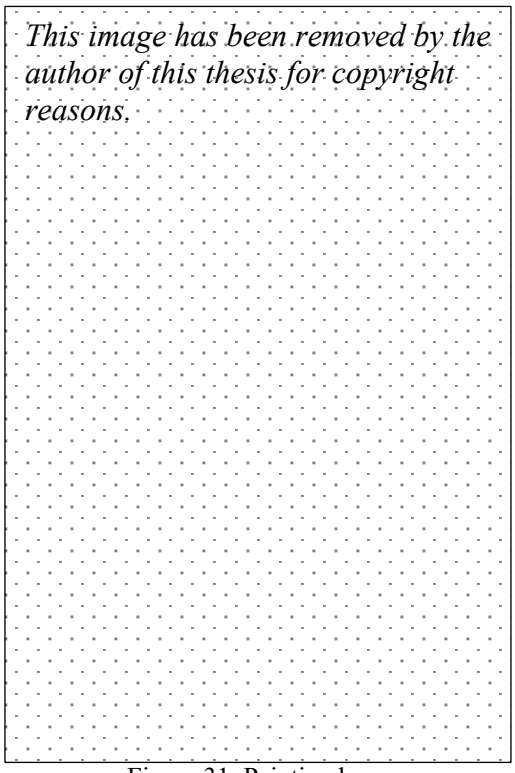

Figure 31. Painting bones.
Source: Orca Network/CPSMMSN.

Whale bones are not naturally suited to display like those of other mammals. As interdisciplinary researchers Nick Higgs (marine biologist), Crispin Little (palaeontologist) and Adrian Glover (deep-sea biologist) note in their study of whale falls and whale bone components, 'Whales are unique among vertebrates because of the enormous oil reserves held in their soft tissue and bone. These "biofuel" stores have been used by humans from prehistoric times to more recent industrial-scale whaling'.[89] Gray whale bones contain lower levels of oil than some other species, including the rorquals (e.g. blue whales), making this

[88] Soundwater Stewards.
[89] Nick Higgs, Crispin Little and Adrian Glover, 'Bones as Biofuel: A Review of Whale Bone Composition with Implications for Deep-sea Biology and Palaeoanthropology', *Proceedings of the Royal Society B: Biological Sciences*, 278 (2011), <https://doi.org/10.1098/rspb.2010.1267>.

aspect of the task slightly less problematic than the preparation of other whale skeletons. Oil has been known to continue seeping out of whale bones decades later; the cetacean storage facility of the Natural History Museum, London, has a powerful and distinctive smell because of this. Kathleen Jamie connects this 'warm and slight, not unpleasant scent' to the brutal history of whaling: 'The same whale oil that greased the machines and lit the streets and parlours, the oil of soap and margarine. All that oil! Here they were, dead for a century, still giving out oil'.[90] While oil might be a hindrance to museum conservators, it is the bone lipid content that sustains whale fall communities for many decades.

As the process unfolded, hundreds of individual bones were treated with a new coating, with the dismantled skeleton becoming further consolidated in the display agenda. The body was shifted further down the line towards a museological object through each interventionist stage. These close physical interactions with the whale body fed back in turn into human understanding. For almost everyone involved, this was a new experience. Visual and tactile information was acquired directly from the bones as they were worked with and directly handled for hundreds of hours by volunteers. While the original body on the beach may not have been an information source that non-specialist volunteers could decipher, not least because of the level of decomposition, through many hours spent with the bones a picture began to unfold about skeletal structure, which in turn offered insights into the evolution, behaviour and ecology of this particular whale. The collaborative work, as it evolved, also drew non-specialists into the orbit of scientific experts such as wildlife biologists, wildlife veterinarians, marine biologists and veterinary pathologists; and in tracking it, I was privileged enough to become involved with some of these people myself.

[90] Kathleen Jamie, *Sightlines* (London: Sort of Books, 2012), p. 102.

Rearticulation and display

The rearticulation of the skeleton began in the second half of 1999 after many months of preparation following the original discovery of the whale in December 1998. This was the concluding stage of preparatory groundwork before the final display could be achieved. Now moved to a large storage space on the military naval base, Klope guided the rearticulation of the skeleton, from the huge jaws to the smallest bones in the body in the fingers, and dozens of vertebrae in between [see figures 32, 33, 34 and 35]. While Klope had been responding to whale strandings for many years, he explained to me that this was the first time he had been involved in assembling a whale skeleton for exhibition. Like his fellow volunteers, he had had to carry out research as he went along, using available manuals on skeleton rearticulation, visiting other cetacean skeletal displays, and trying out practical applications. The Sound Water Steward website recalls that 'Volunteers visited a number of museums to look at other whale skeletons, studying the best way to attach bones'.[91]

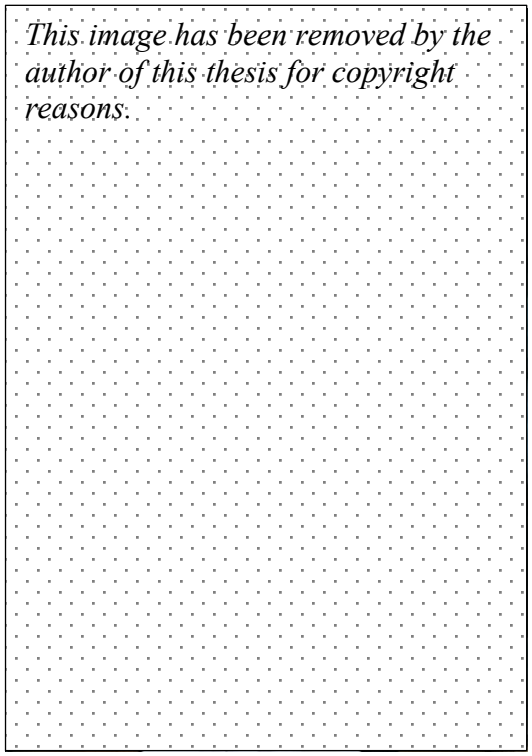

Figure 32. Counting vertebrae.
Orca Network/CPSMMSN.

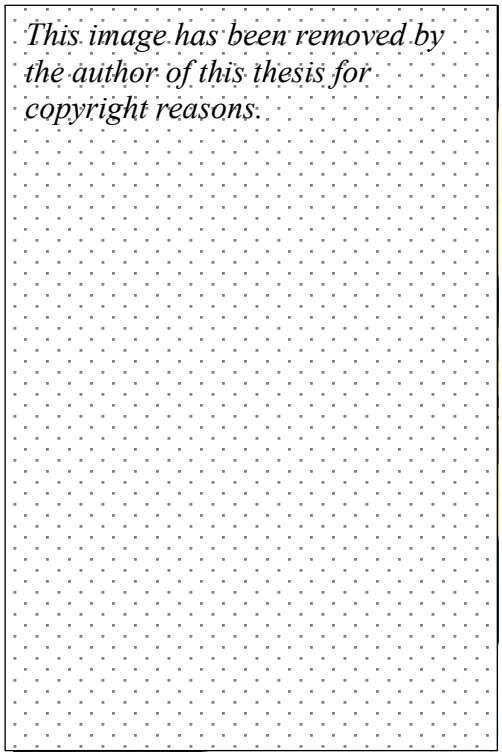

Figure 33. The spine takes form.
Orca Network/CPSMMSN.

[91] Soundwater Stewards.

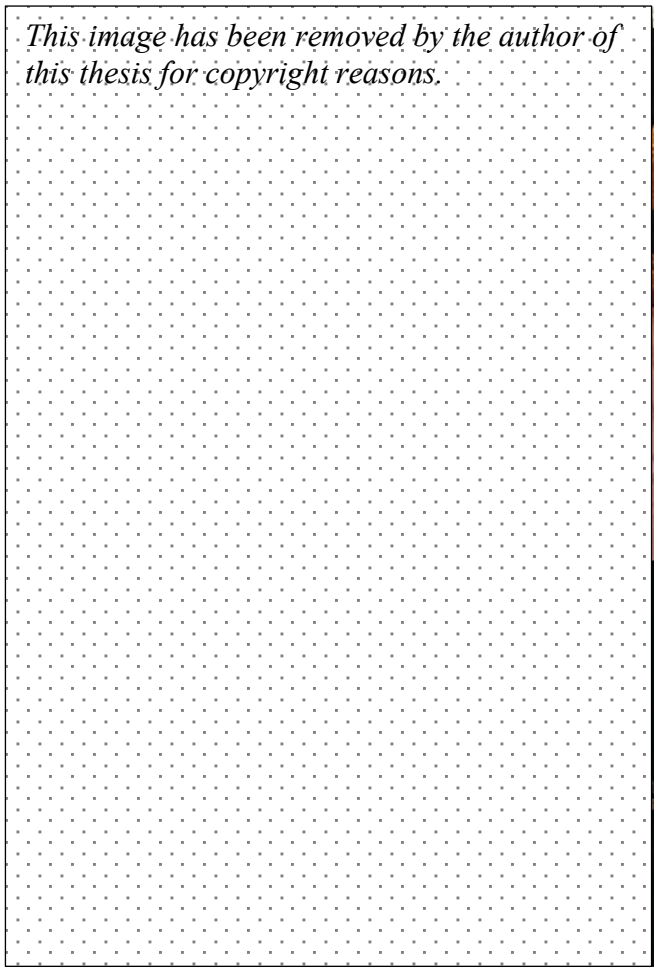

Figure 34. Putting a whale back together. Source: Orca Network/CPSMMSN.

This stage was also a key moment of community collaboration as Klope again enlisted the Island's naval base in the project, this time for the purposes of reconstructing the skeleton. More specifically, the US Naval Construction Battalion Unit 417 (or Seabees as they are commonly known) were recruited. The volunteers involved with Rosie had no past experiences they could draw on as this was their first whale articulation. The nature of the task at hand meant that craftsmen with particular skills were needed to build a frame for the skeleton out of metal. These necessary skills were located in the Seabees, who deliver construction support to the military, including steelwork. Navy welders were approached because Klope understood that their expertise could be applied to the reconstruction of the whale skeleton.[92] In the Spring 2001 Issue of *Beeline: The U.S. Navy Seabee Magazine,* the

[92] Klope, interview. Klope, conversation.

Battalion was described as the ‘backbone of the project’ by Klope, who further explained that ‘Wherever we needed technical help, they were there. We relied a lot on these guys’.[93] As I will reveal later in this chapter, this coming together laid the foundations for a collaboration that endures up to the present day.

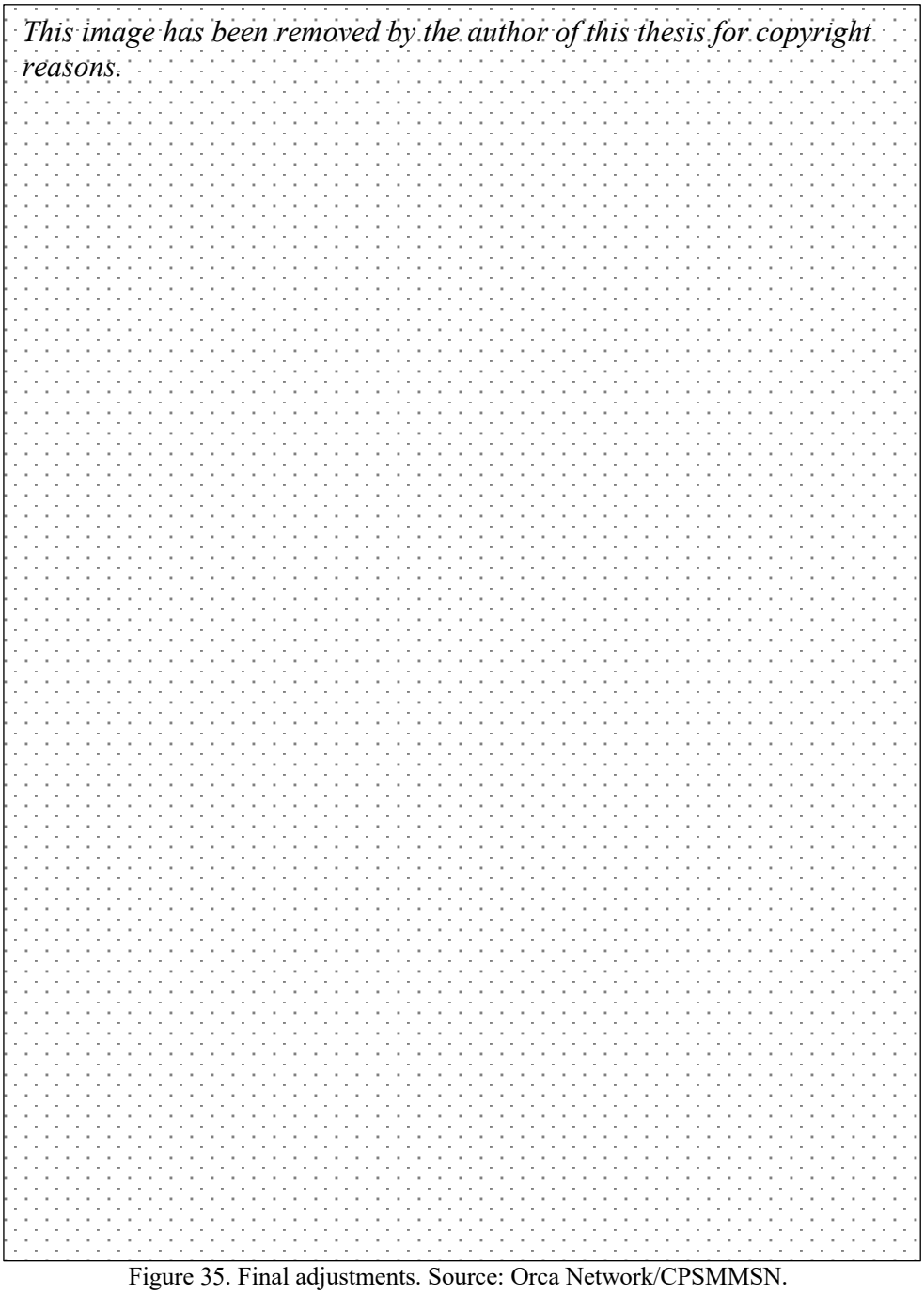

Figure 35. Final adjustments. Source: Orca Network/CPSMMSN.

[93] Joaquin Juatai, ‘What a Tale They’ll Have to Tell’, *The Beeline*: *U. S. Navy Seabee Magazine* (Spring 2001), p. 16.

First of all, a custom steel frame [figure 36] had to be designed, shaped, welded and built for the display in order to resuspend each skeletal piece to resemble the anatomically correct skeleton and evoke the living creature. The rod for the whale's spine was 'an innovative design', which gave 'the appearance of swimming, fins outstretched and tail swooping'.[94] Since it is impossible to taxidermy whales, the articulated skeleton would have to radiate an aura of the living animal. Creating movement through Rosie's bony internal framework was the main technique used to achieve this, as is the case with exhibited whale skeletons elsewhere. Klope recalled to me how they had marked out a grid on the floor 'almost as big as a basketball gym', revealing the scale of the frame necessary to hold together all of Rosie's bones.[95] This was very much a mixed approach, and there was an element of necessary artifice to achieve the display. Indeed, we should perhaps think of animal-objects in terms of what Lukas Rieppel calls 'mixed-media installations'. Rosie's display relied on a steel structure, bolts and screws, layers of preservative to seal the bones, and resin to hold the baleen. As Rieppel writes, animal displays of this sort are 'a kind of collage or assemblage. Curators and their assistants literally cobble these creatures together from … disparate materials'.[96]

[94] Juatai, p.16.
[95] Klope, interview.
[96] Rieppel, p. 465. In a BBC documentary about the installation of the blue whale skeleton 'Hope' in the Hintze Hall of the Natural History Museum, London, these types of cross-disciplinary and mixed media processes necessary to display cetacean skeletons are captured: *Dippy and the Whale*, BBC, 13 July 2017.

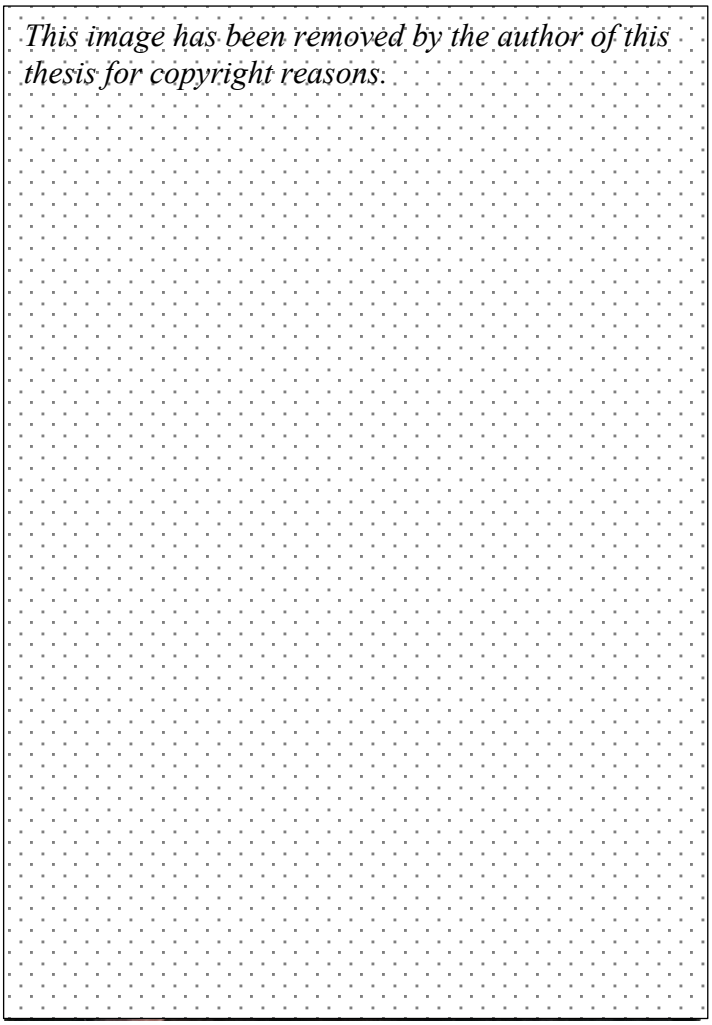

Figure 36. The steel structure. Source: Orca Network/CPSMMSN.

The concluding stage of the project was the display of Rosie's skeleton in Coupeville Wharf after almost two years of work involving thousands of hours of labour. Berta recalls that it was a 'huge effort' and that after the project was complete, they compiled a list of all those involved, which came to more than 200 people.[97] The Seabees had the mammoth task of transporting the reconstructed skeleton from the Base to Coupeville, a moment captured on camera [figure 37], then hoisting and securing Rosie to the ceiling of the Wharf's foyer [see figure 38]. Klope, Berta and the Beach Watcher volunteers had finally achieved their aim of creating a natural history display of the gray whale. Over the next 18 months, scientific research would emerge that contributed to a clearer picture of the whale's existence. First,

[97] Berta and Howard.

genetic material that had been extracted at the time of the stranding actually revealed through DNA testing that the animal was a male. Now bound to the bones by humans, the name Rosie stayed, but recast as a diminutive of Roosevelt (inspired by Roosevelt 'Rosey' Grier, a famous American athlete). It is unclear whether people particularly think of Rosie as male or female, but Klope reflects that it is not of any real significance as time has worn on.[98] Perhaps this enhances Rosie's general *whaleness* unlike other animals whose anthropomorphism is emphasised by their being ascribed to the gender binary.[99]

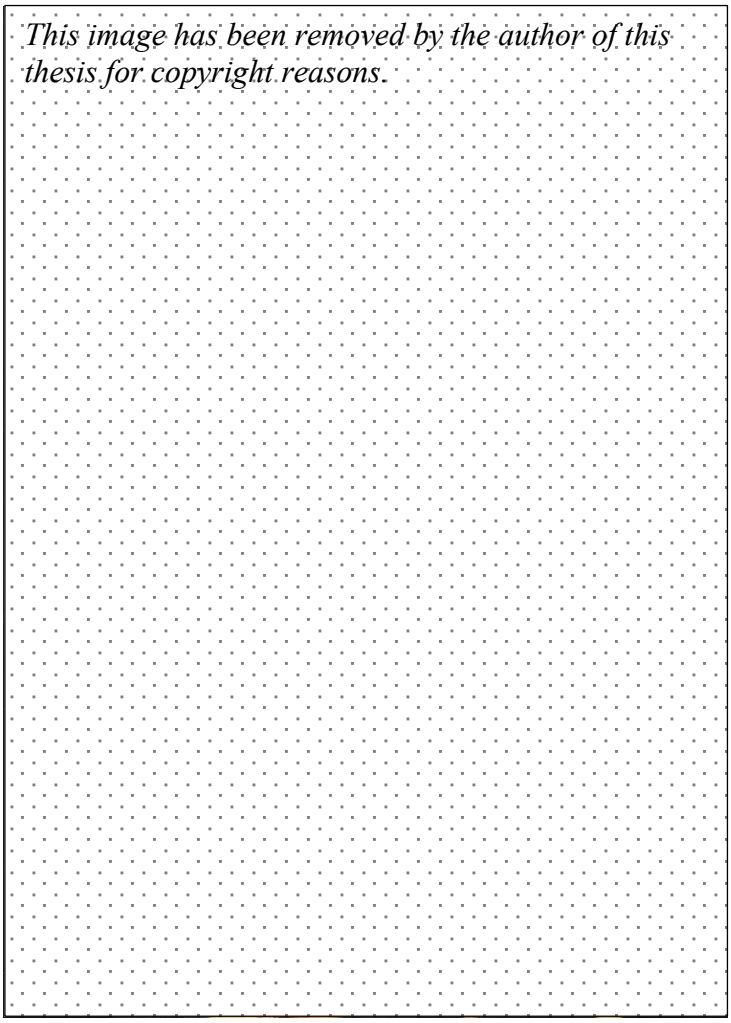

Figure 37. Whale on the move. Source: Orca Network/CPSMMSN

[98] Klope, conversation.

[99] Smilla Ebeling, 'Naturing Gender and Gendering Nature in Museums', in *Gender and Heritage: Performance, Place and Politics,* ed. by Wera Grahn and Ross. J Wilson (Oxon: Routledge, 2018), pp. 61-78 (pp. 62-63); See also, Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York: Routledge, 1989); Rebecca Machin, 'Gender Representation in the Natural History Galleries at the Manchester Museum', M*useum and Society,* 6 (2008), 54-67; A. K. Levin, ed., *Gender, Sexuality and Museums: A Routledge Reader* (London: Routledge, 2010).

Second, investigations suggested that the male was a juvenile whale of around three years old that had suffered starvation and malnutrition. Born in the Mexican lagoons of Baja California, the whale had completed just one round-trip between the summer- and winter-feeding grounds before dying in the waters of the Pacific Northwest. Rosie's body came ashore before the large numbers of stranded gray whales were recorded over the course of 1999 and 2000 and a year before the deaths along North America's Pacific coastline would officially be declared as an UME. Gray whales are known to strand along their migration route and so this early stranding could not have forewarned of the deaths to come. As Berta stated, this stranding occurred 'at the very beginning before we even knew that there was one coming'.[100] However, as the mortality event unfolded and later international research into the deaths revealed a significant number of animals had starved, Rosie's death was situated within this wider context. Rosie was one of the very first individuals to strand as part of the UME and just one of 25 gray whales found on the beaches of Puget Sound during the winter of 1998/99.[101] If harmful anthropogenic activity did indeed contribute to the UME, as surmised in the previous chapter, scientific research opens the way for us to consider the potential human impacts on Rosie's life and death, as opposed to only the animal's post-mortem remains. Perhaps, then, we should retrospectively identify the beginnings of Rosie's 'cultural life' to the starvation of the whale.

[100] Berta and Howard.
[101] 'Gray Whale Skeleton Hung at Wharf: Rosie Moves to Her New Home', *Whidbey News Times*, 18 November 2000, <https://www.whidbeynewstimes.com/news/gray-whale-skeleton-hung-at-wharf/> [accessed 18 November 2018].

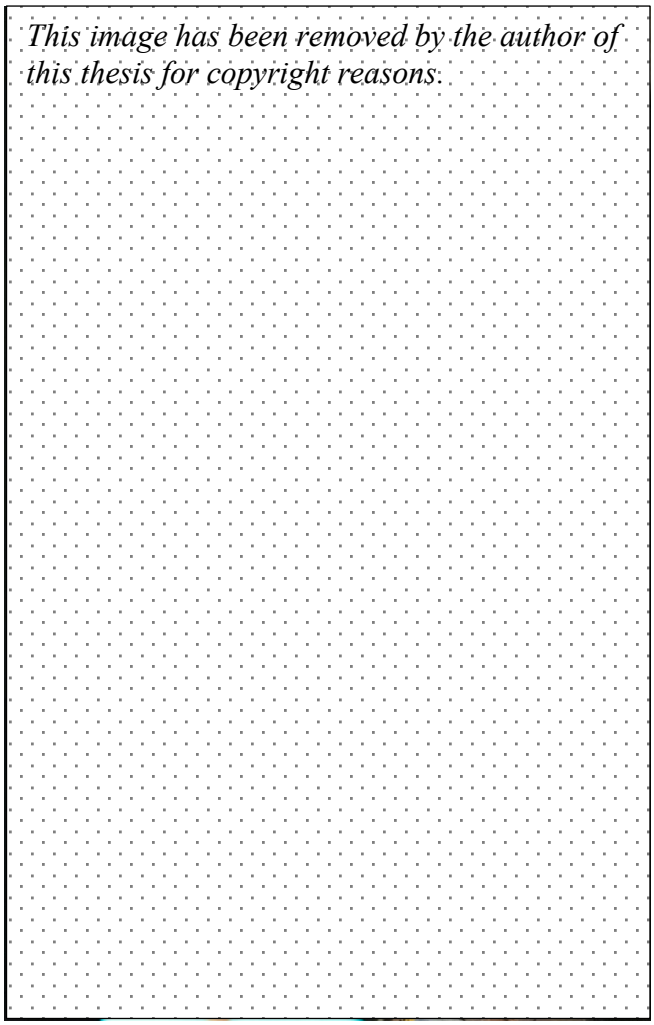

Figure 38. Navy Seabees securing Rosie in its final resting place. Source: Orca Network/CPSMMSN.

The whale in the wharf

Almost 19 years after Rosie's skeleton was hung, I found myself standing beneath the skeleton in Coupeville Wharf with the person who had led the project, Matthew Klope. The white bones loomed across the ceiling of the foyer as I tried to take in everything, from the skull to the track of the spine. I was struck my how many individual bones there were: an archway of ribs, a long trail of vertebra – each cushioned by inter-vertebral discs – and the assortment of bones in the fin, some just an inch in size [figure 39]. I will never cease to be fascinated by the osseous remains of whales, drawing me in with their beauty, their stark difference to humans', and the extraordinary ocean-going lives they propel. Klope walked

around under the whale explaining the various parts of the skeleton in terms of species generality, such as gray whale evolution and anatomy,[102] and also showing how a skeleton gives insight into the individuality of a gray whale. Visitors to the wharf can gain considerable insight into gray whales just through proximity to the skeleton. The exhibit offers knowledge about the animal and it is an encounter with a real creature, albeit detached from its ocean habitat and in a physically reduced form. I have never seen a living gray whale and for the first time I was able to take in the sheer size and physicality of these animals, even if I could not imagine the animal in full, with layers of muscle, thick blubber and mottled skin.

Figure 39. Standing beneath Rosie, August 2019. Author's photograph.

Klope pointed me towards the jawbones of Rosie, explaining that just by looking at these, we can tell whether an animal is right- or left-'handed' (gray whales turn on a favoured side to feed because of a dominant fin).[103] Gray whales are bottom feeders, scooping up mouthfuls from the seabed to filter out prey species, as described in Chapter 1. The evidence for this is

[102] Research using genetic data has also been used to discover the afterlives of entire populations of whales post-whaling such as population depletion and habitat range reduction as discussed in Chapter 1.
[103] Klope, conversation.

left behind corporeally. Rosie's right jawbone had been worn and showed evidence of lifelong feeding on that side, while the left jawbone remained more curved.[104] Handedness is something that we readily recognise in humans, and knowledge about its presence in other species helps to erode perceptions of human exceptionalism. Handedness in gray whales, as well as other cetacean species such as bottlenose dolphins, is a scientific fact, but this knowledge can easily feed into romantic narratives about human and cetacean interconnectedness.

The same goes for knowledge emanating from whale biology that reveals likenesses between humans and cetaceans, including complex brains, social lives, use of language, and similarities in anatomy. However, had I not been with Klope, I would not have known the reason. I would probably not even have noticed. What information is acquired from an animal display will always be shaped by a visitor's previous knowledge (or lack of it). One of the greatest values of natural history displays like Rosie's is that the skeleton augments pre-existing knowledge through direct contact with a once living animal. Rosie's skeleton feeds into a wider arsenal of knowledge that may be constructed through photography and film, written sources such as media articles or imaginative literature, and, for those lucky enough, actual interactions with living whales. We cannot know animals from their remains alone or from singular sources; instead, humans filter through compound sources of knowledge, themselves diverse forms of afterlife, in an attempt to circle closer to the animal at the centre.

I focused on Rosie's skull, noticing the difference in the jawbones but also thinking about how it differed from other cetacean skulls I had seen in the past, particularly that of the sperm whale. The osseous scaffolding of a whale explains the external formation of the

[104] Scientists can also use evidence from worn down baleen and scarring on one side of the body. The majority of gray whales are right-handed like Rosie, however, there are also left-handed animals. See Becky Woodward and Jeremy P. Winn, 'Apparent Lateralized Behavior in Gray Whales Feeding off the Central British Columbia Coast', *Marine Mammal Science,* 22 (2006), 64-73.

animal; it also provides insights into necessary divergences in evolution. Rosie's skeleton has unique pedagogic value as, according to Klope, this is the only articulated gray whale with its baleen plates presented in the mouth. Using a resin mould to hold the baleen together, it is possible to observe how the fringed keratinous plates sit in position along the upper jaws. Gray whales have shorter and thicker baleen than rorqual species like the humpback or blue whale. The freshly extracted baleen from the gray whale Rosie can be seen in the photograph below [figure 40]. Klope explained to me that the decision had been taken in order to demonstrate gray whales' filter-feeding function [figures 41 and 42].[105]

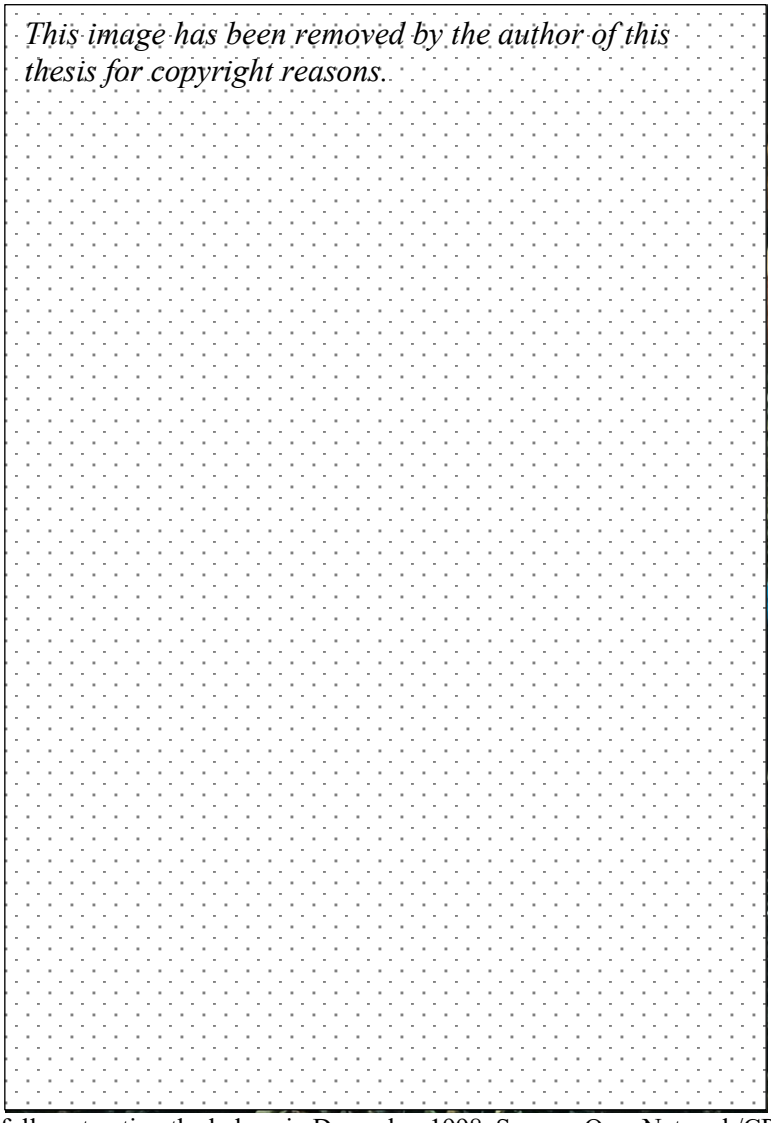

Figure 40. Carefully extracting the baleen in December 1998. Source: Orca Network/CPSMMSN

[105] Klope, conversation.

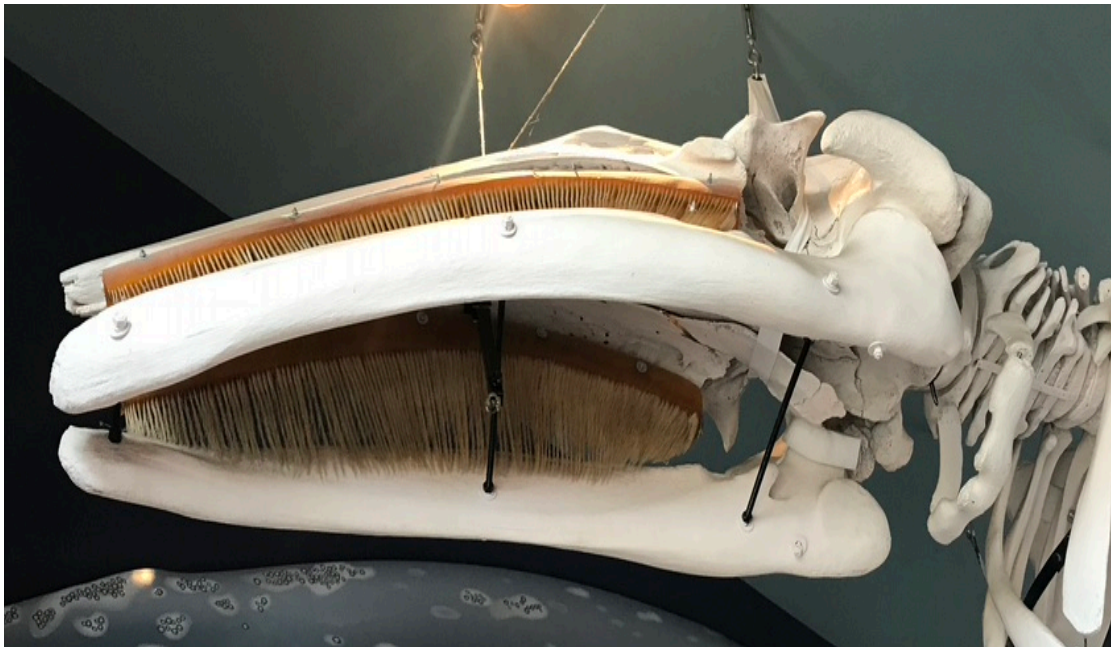

Figure 41. Baleen held in place with resin in 2019. Author's photograph.

This image has been removed by the author of this thesis for copyright reasons.

Figure 42. Baleen held in place with resin twenty years ago. Source: Orca Network/CPSMMSN.

Displays of whale skeletons like the one in Coupeville Wharf are inherently animal, and some argue that there is less truthfulness to taxidermy than to skeletal display. Richard Sabin, Principal Curator of Mammals at the Natural History Museum, London, has offered me his personal reflections on osseous remains, reflecting that skeletons are more faithful to the biological animal than taxidermy. He believes the skeleton to be 'the immutable framework of an organism', arguing that 'There is honesty in skeletal material that I fail to see in taxidermy, which for me is the artist's representation of an animal'.[106] Skeletal displays do not require imaginatively crafted facial expressions, evocative eyes fashioned from glass, or careful stuffing or mounting to achieve the shape and appearance of the living animal. The impossibility of whale taxidermy means that the choices for display are limited to the animals' bones or to a replica model. In order to display the actual whale, bones are not just practical but necessary.

When discussing animal display, questions inevitably arise about what is meant by the 'real' animal. Is it only the corporeal remains of an animal? Is it the least tampered-with remains of an animal? Or is it what looks most like the animal in its fullest living form? Perhaps it is best understood as a spectrum of reality. I understand 'real' to be the presence of the remains of the actual animal, however small or incomplete that presence may be. A microscopic specimen is the real animal, but the numbers and letters that represent it are not because these are not a reality to the animal. A model constructed out of materials that do not come from an animal can only ever be a representation of that animal; and while a skeletal afterlife might lack the visual realism of a cast, it is more authentically animal than any replica model. For some, bones do not contain 'the spark of life' or the 'sense of power, grace

[106] Richard Sabin, 'Thames Whale: The Difficult Birth of a Celebrity Specimen', in *Afterlives of Animals,* ed. by Alberti, pp. 186-201 (p. 199); Richard Sabin, conversation with author, London, 31 May 2016.

and harnessed energy that living whale possesses in such abundance',[107] but I would argue that they contain an 'essence' of the animal that cannot be disentangled from its physical remains.[108]

While models such as casts undoubtedly have their value in transmitting information, a whale model can only ever be a simulation, while whale bones carry with them a history of an individual life lived in the ocean, however inaccessible that history is to us. Rosie's skeletal remains are a case in point. Understood as containing a complex network of existence, they once kept a thriving animal moving through thousands of miles of Pacific Ocean. The skeleton is the 'hidden framework of [a] biological life'; it is the reason a whale can swim, leap through the air, dive or feed. Bones provide insight into how an animal functions.[109] A whale skeleton provides a mediation between the specimen hanging 'up there' and the once living animal 'down' underwater. As geologists Jan Zalasiewicz and Mark Williams reason in *Skeletons: Frame of Life* (2018), 'Looking at life on Earth from the perspective of skeletons can help to answer some big questions. … What advantages have skeletons conferred to animals …, and what lifestyle possibilities have they enabled?'[110] Or consider Kathleen Jamie who, after having spent time at the Whale Hall in Bergen (Norway), contemplates how whale skeletons have the potential to trigger 'a thought experiment' on their lives in the ocean:

> You could sit within the blue whale and look back, following the spine with your eye as it voyaged above the hall, curving very slightly… suspended every few yards by those chains and rods, until it tapered to an end far away. Then there would have been the tail, too, something the width of a small aircraft. Despite the size, you could, with a minimum of effort, extend your sense of self, and

[107] Joseph Wallace on the blue whale in the American Museum of Natural History, New York, see Joseph Wallace, *A Gathering of Wonders: Behind the Scenes at the American Museum of Natural History* (New York: St Martin's Press, 2000), p. 26; quoted in Whitehead, Jones and Jones, p. 75.
[108] Margo de Mello, *Teaching the Animal: The Social Sciences* (New York: Lattern Books, 2010), p. 62.
[109] Jan Zalasiewicz and Mark Williams, *Skeletons: The Frame of Life* (Oxford: Oxford University Press, 2018), p. iv.
[110] Zalasiewicz and Williams, p. xii; Michelle Henning, 'Neurath's Whale', in *Afterlives of Animals*, ed. by Alberti, pp. 151-68 (p. 162).

> imagine this was your body moving through the ocean. You could begin to imagine what it might feel like, to be a blue whale.[111]

Skeletons, argue Zalasiewicz and Williams, are 'mineral frameworks that have allowed life to engineer the planet we live on', including our own human species.[112] Perhaps nonhuman animal skeletal displays, as well as showing us our entanglement with other lifeforms, can remind us of the complexity and significance of our own osseous frames. Skeletons, after all, unite more living organisms than any other physical characteristic, from megafauna like whales to coral to microscopic life forms. They are foundational in this respect, not just to individual lives and life forms, but to 'sophisticated networks of life' that stretch across space and time.[113]

Figure 43. A 'thought experiment': what might it be like to be a gray whale? Author's photograph.

[111] Jamie, p. 115.
[112] Zalasiewicz and Williams, pp. xi-xii, v; Riley Black, *Skeleton Keys: The Secret Life of Bone* (New York, Riverhead Books, 2019), p. 3.
[113] Zalasiewicz and Williams, p. xii.

There are similarities here between the display of whale and dinosaur skeletons, both of which have great appeal to museum visitors, and not just because of their size. Great whale skeletons evoke an otherworldliness similar to that provoked by encounters with dinosaur remnants. These huge animal remains transport the viewer out of their surroundings in a way a dog, a horse, or even a dolphin skeleton is unable to. The size and strangeness of these animal frameworks facilitates an imaginative leap to their distant environments: temporally distant in the case of dinosaurs and physically distant in the case of whales. We project daydreams onto these creatures that are so physically unlike ourselves about the worlds through which they move. Yet we trail behind these worlds which remain beyond our grasp. At the same time, the dinosaurs we see before us are not the actual bones but the petrified remains, a rock copy of the animals' body parts. By preserving a whale skeleton, conservators 'can match in an instant the fossilization process [that] nature took millions of years to complete'.[114] Rosie's immortal afterlife as preserved bones can be understood in this sense as time sped up in a process of human-induced petrification, a mastery over the natural progress of decay. Indeed, it is 'rare that a living thing dies in circumstances [that are] amenable to fossilization, and even among this fossil pool the remains of many organisms are destroyed by geological processes. Of this fraction of a fraction only a very few specimens exist in rocks accessible to scientists'.[115] These kinds of preserved remains in nature are highly unusual, with almost all living things disappearing into time and space. Human intervention to preserve a whale skeleton ruptures these inevitable processes of decay and disappearance. Retaining and displaying the bones of an animal thus lends it an aura of immortality, both physically and in people's minds.

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[114] Jean Baudrillard, *America* (London: Verso, 1988), p. 41; Whitehead, Jones and Jones, p. 78
[115] Riley Black, *Written in Stone: Evolution, the Fossil Record, and Our Place in Nature* (New York: Bellvue Literary Press, 2010), p. 19.

It seems unlikely, however, that the majority of visitors to Coupeville Wharf will dwell upon such far-ranging significances. There are inherent limitations when it comes to preserving and displaying skeletons. Some of them are unique to this particular type of remains. First of all, osseous remains 'are visual signs of death' and even the most accurate of rearticulations 'cannot resemble the living animal in the same ways as taxidermy'.[116] Animal skeletons inevitably convey a sense of loss and dislocation. While the skeleton hints at the animal to which it once belonged, it also obscures it. The spaces between the bones are also gaps in our knowledge, while the missing substance of the animal, its lack of covering skin or internal organs, robs it of much of its animality – what makes it a whale. The whale skeleton, as animal-object, takes on a structural or sculptural composition behind which the real whale is always partially shrouded. This is true too though of living whales. Whidbey Islanders who see gray whales around their coastline only catch glimpses of their scarred heads and backs, or of their effervescent exhalations. Carl Safina summarises his experience of watching sperm whales in a similar vein: 'what I am left with is this impression: a whale is too big to see. At a time, you get pieces. … Never the whale'.[117] There are a lucky few of course who have had the chance to be underwater with whales, seeing them in their entirety, but most of us are resigned to mediated nature documentaries, watched through a screen in order to view a whole living whale. A stranded whale on the shoreline might give another opportunity, if rare again, to see in its physical wholeness. But a rotting whale carcass on the beach, unable to support its own weight, far removed from its usual habitat, requires an even greater imaginative leap to comprehend the animal in its vitality. These gaps, like the spaces between Rosie's bones, are filled with all manner of written, visual and auditory sources:

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[116] Nicolov, p. 146; Herman Melville on the whale skeleton: 'It may be fancied, that from the naked skeleton of the stranded whale, accurate hints may be derived touching his true form. Not at all. For it is one of the more curious things about this leviathan, that his skeleton gives very little idea of his general shape': Melville, p. 263.
[117] Carl Safina, *Becoming Wild: How Animals Learn to be Animals* (London: Oneworld Publications, 2020), p. 14.

skeletons in museums, illustrations and paintings, recordings of whale song, media footage – the list goes on. Huggan has explored this fundamental aspect of the human-whale relationship:

> On a literal level, whales are rarely seen whole; rather, their wholeness must be imagined. On a figurative level, the invisible or only partly visible body of the whale is rhetorically inflated through cetacean iconography, such that whales … become even bigger than themselves, expanding in the imagination to become worlds of their own.[118]

The amalgamation of representations feeds into what Kalland has called the 'super-whale': a single whale skeleton is bathed in 'cetacean iconography'.[119] The individual animal *may* be reachable, up to a point, but it dwells somewhere in the murky centre of layers upon layers of cultural afterlives.

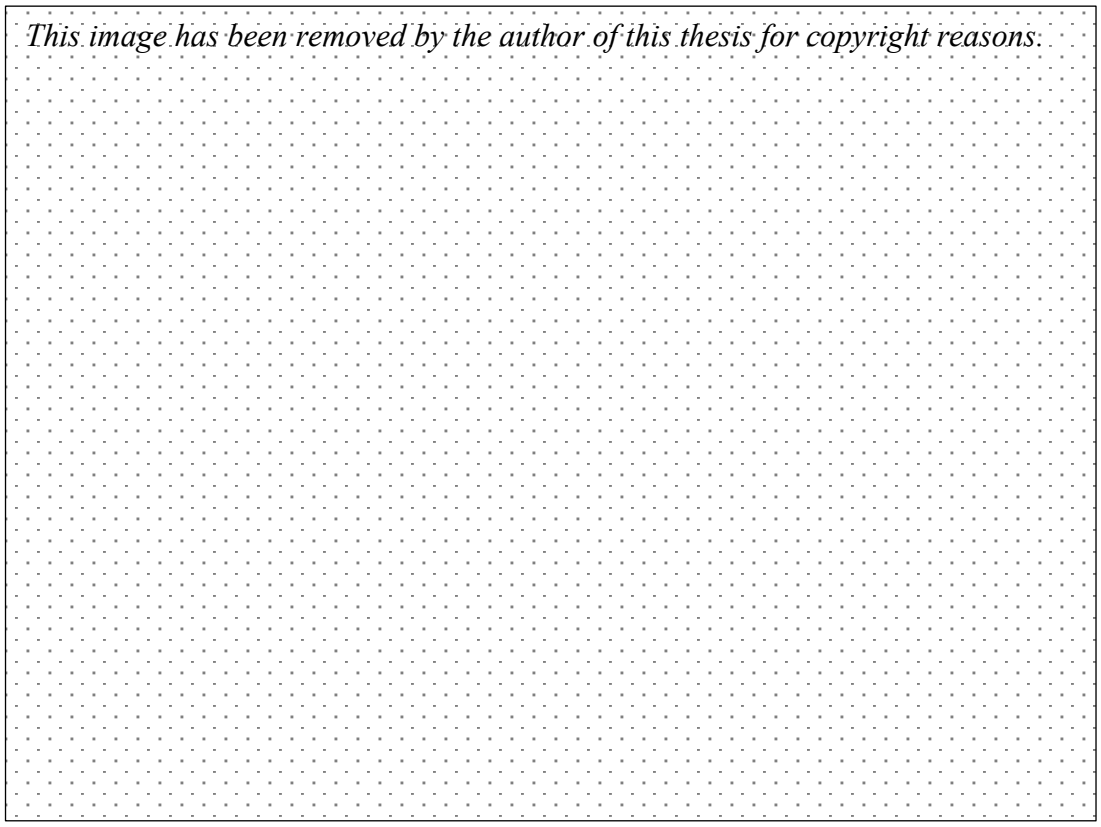

Figure 44. Photograph of the final display in 2000. Source: Source: Orca Network/CPSMMSN.

[118] Huggan, *Colonialism, Culture, Whales,* p. 109.
[119] Kalland, 'Management by Totemization', p. 2; Huggan, *Colonialism, Culture, Whales,* p. 109.

Remembering Rosie

As Klope recalled memories while standing in the whale's presence and explained technical details about the display, he also reflected on how its significance had changed over the last two decades. He noticed that the exhibition signage had changed, with less specific information now dedicated to Rosie, but more interpretative displays about the Puget Sound ecosystem: 'there used to be information on that wall about Rosie and I have a couple of pictures of us actually recovering the skeleton. They had a couple of photographs of us working on the bones with the kids. They had a really nice display over there and it's gone'.[120] Klope's comment about the reduction of information on Rosie was somewhat wistful. Rosie's history plays a diminished role in the exhibition space today. But almost as if there were a necessary tradeoff, the interpretative signage installed in 2016 offers broader contextual information by taking an ecosystem approach in an effort to educate the public about the local marine habitat and conservation threats. The signage consists of words and colourful illustrations, locating the gray whale in the Puget Sound interspecies web: eel grass, salmon, seals, gray whales, orca. It also includes the human history of the region, acknowledging the Lower Skagit who lived around Penn Cove and other Coast Salish peoples that harvested from these waters [figure 46]. It informs the public that at this point in the gray whales' migration, many will stop to feed on ghost shrimp in the sediment of Saratoga Passage.

The vast scale of the gray whale migration along North America is difficult to grasp, but this illuminates what the whales do at this particular stage of their journey. The waters of Puget Sound are an important stopping point for feeding outside of the Bering and Chuchki seas, and we can imagine Rosie dwelling in these waters during the journey. While I was at Coupeville Wharf, Klope explained that surrounding Penn Cove were various 'feeding

[120] Klope, conversation.

beaches' for migrating gray whales, recalling hearing and seeing their puffs of air and exhalate as they fed around the edge.[121] Rosie's resting place sits next to waters that gray whales seasonally move through, and the displayed whale remains close to its own ecosystem unlike the many wild animal remains that are transported to urban museums, dislocated by hundreds or even thousands of miles from the habitats where they once ranged. The changes in signage likely reflect the addition of other marine mammal skeletons to the Wharf as mentioned: Rudy the Dall porpoise and Samson the Steller sea lion [see figure 45]. Rosie does not hang in a vacuum, and while the gray whale skeleton dominates the space through its sheer size, the overall exhibition is rooted in the different species' oceanic relationality and an emphasis on conservation.

Figure 45. A charismatic trio: Rosie, Samson and Rudy. Author's photograph.

[121] Klope, conversation.

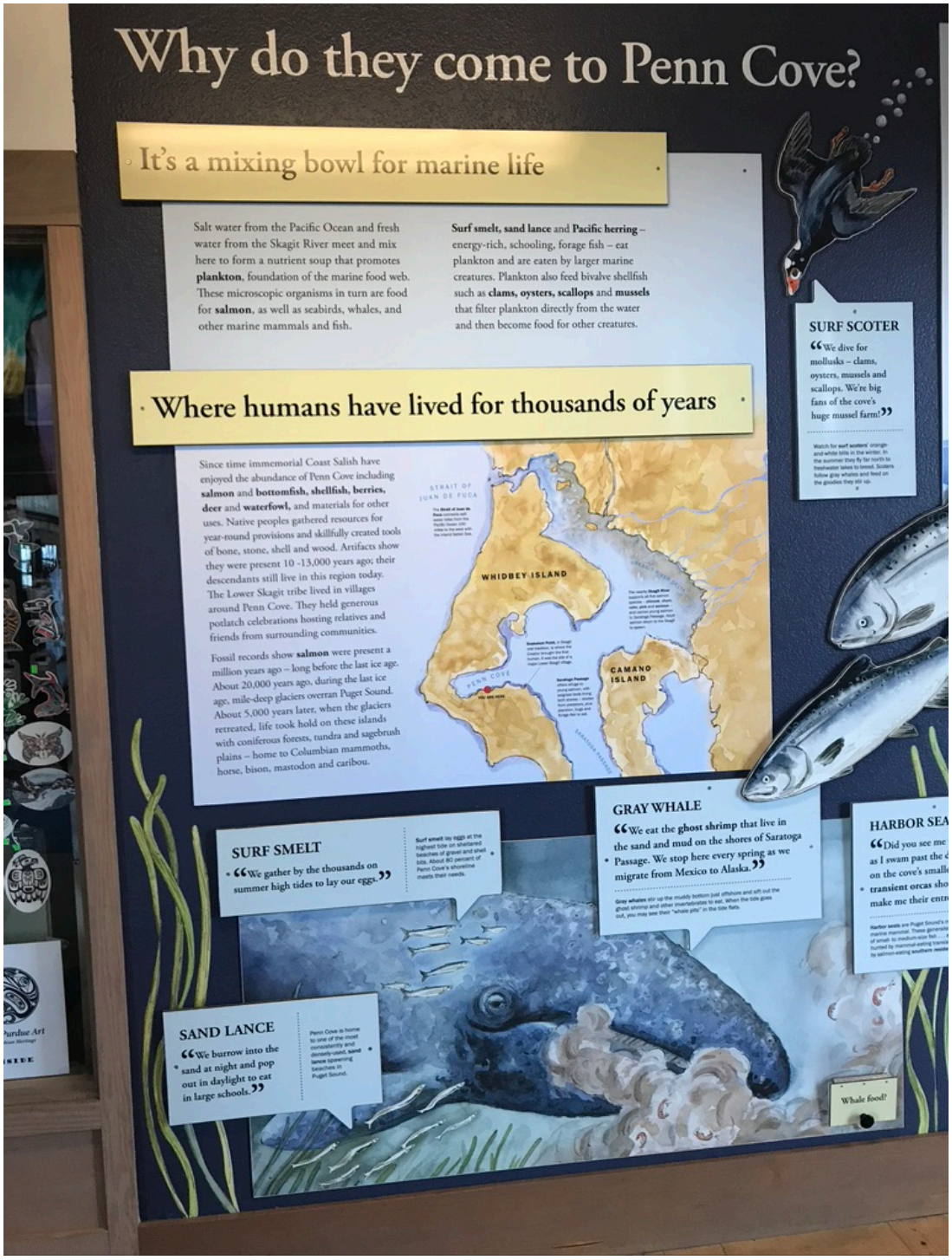

Figure 46. Exhibition panel, Coupeville Wharf, 2019. Author's photograph.

Since the 1990s, the marine mammal conservation focus in the Pacific Northwest has increasingly shifted away from gray whales following their rebounding population and removal from the Endangered Species Act, as a fellow keystone megafauna species in the region has hurtled towards extinction: the Southern Resident Orcas. While gray whales might be the 'most commonly observed whale' from Whidbey Island, orcas, according to Klope, are 'the big-ticket item'. A large part of this is that human inhabitants of the Pacific Northwest are witnessing their extinction, which is being driven by habitat destruction, which has in turn impacted their main food source, salmon. While the 1990s and early 2000s saw the publication of several texts expounding the unique relationship between humans and gray whales, the works felt dated during the conservations I had with specialists working in marine mammal health and conservation in Washington in 2019. As iconic and charismatic species teeter on the edge of extinction, they become reified. In my interview with John Calambokidis, he was clear on this: 'what has supplanted them in our region – *become God* – is the southern resident killer whales'. Calambokidis recalled how, whereas two to three decades ago if he was going out on his boat to conduct research, members of the general public would assume it was about gray whales, now orcas had come to 'dominate everything'. In the 1990s, perceptions of gray whales were still riding off the near-extinction of the species, which is no longer a potent association. Adding to that the fact that gray whales are not demonstrative to watch unlike orcas, there has since been 'a huge cultural shift' towards the southern residents.[122] The significance of living animals fluctuates as species' population status changes, and these shifting values inevitably impact animals on display.[123] The display information about Rosie in Coupeville Wharf thus had to make way

[122] Calambokidis and Huggins.
[123] For example, the blue whale skeleton in the Natural History Museum, London, being moved to Hintze Hall and named 'Hope' in 2017. See Huggan, *Colonialism, Culture, Whales,* p. 383; Pandora Syperek, 'Hope in the Archive: Indexing the Natural History Museum's Ecologies of Display', *Journal of Curatorial Studies,* 9 (2020), 206-229; Pandora Syperek and others, 'Curating Ocean Ecology at the Natural History Museum', *Science Museum Group Journal,* 13 (2020), <http://dx.doi.org/10.15180/201314>.

for signage that would educate members of the public about the significance of salmon to the local ecosystem, and in particular to the resident orcas [figure 46]. While billions of dollars from 'nearly every state [plus] federal aid' were being dedicated to the southern residents, marine biologists like Calambokidis were increasingly having to remind the public that there were other species of whales.[124] At the same time, Orca Network's focus is not surprising when taking into account the critically endangered status of the Southern Residents and that the cetacean captivity industry targeted resident orcas in Whidbey Island waters and, as the exhibition panel pictured below [figure 47] informs the public, seven were caught and five were killed in Penn Cove in 1970.[125]

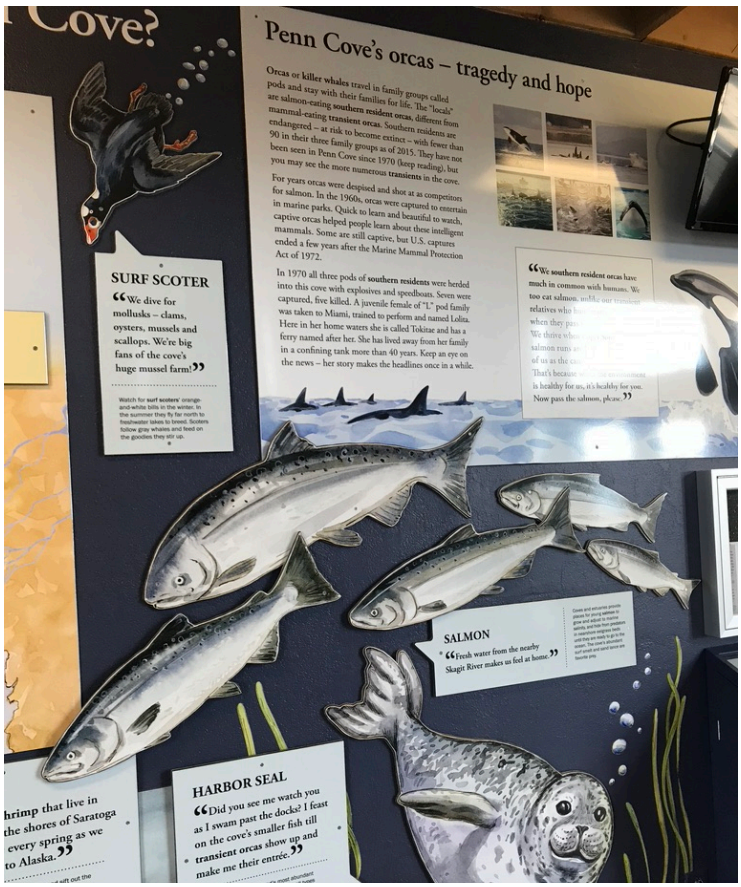

Figure 47. Exhibition panel focusing on the orcas, Coupeville Wharf, 2019. Author's photograph.

[124] Calambokidis and Huggins.
[125] Orca Network, 'Lolita's Capture', <https://www.orcanetwork.org/Main/index.php?categories_file=Lolitas%20Capture> [accessed 13 July 2021]; Sandra Pollard, *Puget Sound Whales for Sale* (Charleston: History Press, 2014); Jason Michael Colby, *Orca: How We Came to Know and Love the Ocean's Greatest Predator* (New York: Oxford University Press, 2018), pp. 173-208.

Alongside other information on local ecology, the signage includes details about when the three animals (Rosie, Samson and Rudy) died and the suspected causes of death. There is mention of the UME in regard to Rosie, but this is brief and there is nothing about the broader contextual information surrounding this death, that is to say that it was one of many hundreds of strandings and a wider die-off in the population. This is a missed opportunity to raise awareness about the major conservation issue to face this species since the end of whaling. Perhaps, in the future, the display information will incorporate more details about not just the 1999-2000 UME, but also its more recent reoccurrence in 2019. For me, part of what was so striking about being confronted by Rosie's skeleton was the knowledge that this individual death also represented a far greater number. Providing this context might inspire greater engagement with threats facing gray whales and their Pacific ecosystem, or at the very least inform visitors about these key events in the species' history. Though ENP gray whales are now considered a relatively stable population, the display could engage more critically with the mass die-offs that the species has experienced before. As biodiversity, habitat destruction and the global climate crisis worsen, stewards of natural history display have a responsibility to provide more in-depth knowledge about significant conservation threats that particular species have faced and will continue to face in the future.

As the years have passed, the significance of Rosie's skeleton and of Rosie's life and death have faded. 'People don't care anymore', Klope complained to me. 'They don't care how it got here. And a lot of those people are gone. Things change over time … over time, things get forgotten'. What was once considered a landmark community display now acts as a backdrop to the Wharf's foyer and as a recommended point of interest in tourist guides. There was lament, but also frustration, in Klope's descriptions of visitors to Coupeville who walk under the whale without looking up or, when directed skywards, express platitudes:

'That's it. *That's it*. Thousands of hours, thousands of hours'.[126] There was a profound sense of loss in his emphasis '*That's it*': the fleeting acknowledgement from a passer-by signifies a loss of the human history, the labour and skill invested, and the significance of what was achieved. The Coupeville Wharf foyer, Klope implied, had become little more than an ossuary where Rosie's bones were confined. The melancholic figure of the stranded whale on the beach is perhaps only equalled by its languishing skeleton on display and the waning memories of the history to salvage it, which spawned vital legacies in marine conservation.

Part 2: Rosie's Legacy

Wearing a plastic white apron and arm covers, a facemask, and blue surgical gloves, I positioned myself next to the stainless steel autopsy table as the lifeless body of a large seal was extracted from a bin bag. I was with Klope and a group of assorted strangers about to participate in my first necropsy. The dead seal stretched across the length of the autopsy table, its dappled, damp fur glistening under the bright lights [figure 48]. It had been in freezer storage and, now thawed, it lay awaiting the first incision. The animal was inspected for signs of external injuries or abnormalities, sexed and measured, and photographs were taken. I watched as the scalpel cut through the sleek pelt, which was still wet from defrosting, the skin and the layer of whitish blubber. Measurements were taken of blubber thickness and then the meticulous examination of the animal began, starting at the head with an incision along the jaw and eventually working down to the hind flippers. The eyes, nasal passages and mouth were inspected and as the fur and fat were separated from the flesh (something I had the opportunity to help with: figure 49), the blood began to leak from the creature onto the metal surface. Klope had invited me to join volunteers of the Central Puget Sound Marine Mammal Stranding Network (CPSMMSN) as they carried out routine marine mammal post

[126] Klope, conversation.

mortems. We were under the guidance of wildlife veterinarian and epidemiologist Stephanie Norman, a specialist in responding to marine mammal strandings and disease investigation, and also the consulting veterinarian for the CPSMMSN. Klope was also helping to coordinate the post mortem and to extract the pelt of the seal to donate to a pinniped conservation organisation under a NOAA permit.

Figure 48. Thawed seal carcass awaiting necropsy. Author's photograph.

This image has been removed by the author of this thesis for copyright reasons.

Figure 49. Taking part in my first marine mammal necropsy. Source CPSMMSN/Orca Network.

The blood drained through the plughole into a plastic bucket and pieces of fat, flesh, organs and bones were disposed of. I was asked to ‘bread slice’ one of the lungs, slicing parallel cuts at intervals like a loaf of bread to expose the internal organ for any signs of disease [figure 50]. We moved through the seal methodically, extracting each of the vital organs for examination and dissection, and taking samples and swabs for veterinary pathologists to carry out histology [figure 51].

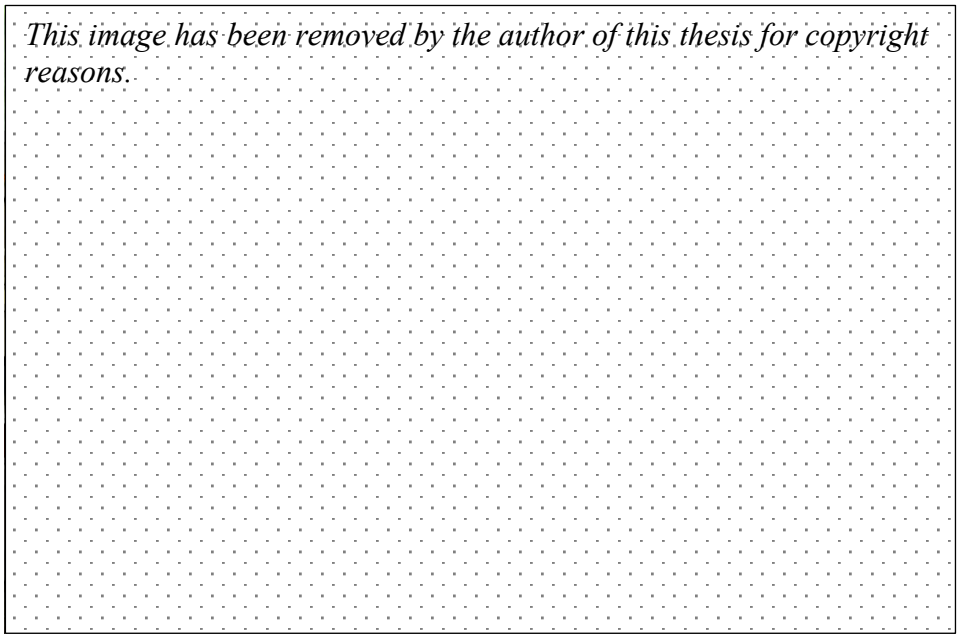

Figure 50. Bread slicing a seal lung. Source: CPSMMSN/Orca Network.

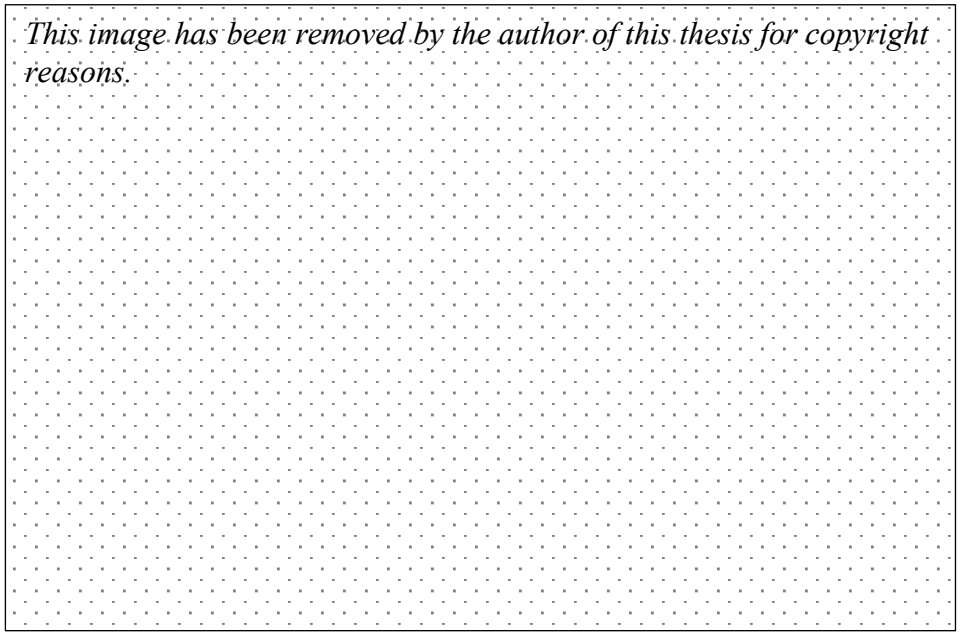

Figure 51. Assisting wildlife veterinarian Stephanie Norman. Source: CPSMMSN/Orca Network.

Once the seal necropsy was complete, there were three more animals, a porpoise calf and two seal pups, to examine. Klope ran through the seal pup examinations with another Network volunteer, while Norman led the porpoise post mortem with the assistance of two other students and myself. A porpoise is obviously far smaller than a large whale, but as a cetacean there are shared anatomical features that I had the opportunity to see for the first time. The texture of its skin was immediately striking. The colour of skin was dense, a dark pebble grey, almost black, but its rubbery texture reflected the lights [figures 52 and 53]. Spongey but firm, it was delicate and flaked away easily in small patches that seemed to suggest layers. It is entirely unlike our own and that of other land mammals – and unlike anything I have touched before. I imagine the skin of great whales to be a giant version of this.

Figure 52. Neonate porpoise awaiting necropsy. Author's photograph.

The animal was very small as can be seen in the photograph above [figure 52] and Norman immediately identified it as a neonate porpoise from the foetal folds that were still

present on its side. The porpoise had barely lived and I wondered whether the mother had died and the calf could not survive or if the adult was still swimming in the ocean after its young had expired. Once again, the methodical process from head to fluke was carried out as we inspected and cut apart the delicate creature and its tiny organs. We each had the opportunity to dissect different organs and extract samples, as with the seal. I was given the task of extracting the stomach from both the porpoise and the seal for closer examination of this particular body part and its contents. This involved tying off the stomach from the oesophagus and the intestines, then cutting through without allowing the stomach contents to escape and contaminate the body, or the intestines to contaminate the stomach. As we worked through the porpoise, Norman indicated that there did not seem to be any evidence of morbidities. We reached the intestines, which reminded me of pink, coiled udon noodles and were far smaller than those of the previous creature. As Norman felt along the coiled tissue, moving them around to expose the length, she discovered that the end of the intestine was inflamed. It might have been a contributing factor in the porpoise's death and a segment was removed for further testing.

Figure 53. Neonate porpoise tail. Author's photograph.

This had been a routine day of marine mammal post mortems for the CPSMMSN, which was formally established as a stranding network in 2002. It was founded as a branch of the nascent Orca Network, which had been set up only the year before by Susan Berta and Howard Garrett, bringing together the same core collective of volunteers involved with Rosie.[127] As previously noted, the project to salvage and display the gray whale's skeleton had galvanised a group of key individuals, including Berta and Klope, to initiate an official stranding response in and around Whidbey Island. The relationship flourished and, since 2001, the Orca Network has proven to be a powerful engine for responding to cetacean and other marine mammal deaths in the region. In this context, Rosie's display represents a pivotal moment in the history of human-whale relationships around Whidbey Island, enabling the creation of professional relationships, key organisations, and formal and informal networks that have endured up to present times.

Stranding networks

The Orca Network's CPSMMSN was formally established under the authority of NOAA to respond to strandings in Whidbey and Camano Islands (Island County), Skagit, and North Snohomish Counties. The CPSMMSN is just one of the partners that makes up the Washington Jurisdiction and there are 12 contacts for the Puget Sound region, including CPSMMSN and the Cascadia Research Collective [see figure 54].[128] Through a combination of public donations, grants and volunteers, the CPSMMSN has been able to conduct a systematic stranding response across Island County. In most cases this involves collecting samples and conducting necropsies to provide vital data for research. While marine mammal

[127] Orca Network, 'About', <https://www.orcanetwork.org/Main/index.php?categories_file=About> [accessed 13 October 2020]; Klope, interview; Berta and Howard.
[128] Seal Sitters, 'NOAA West Coast Marine Mammal Stranding Networks (MMSN)', <https://www.sealsitters.org/share_the%20shore.html> [accessed 13 October 2020].

rescue is within their remit, this is a limited aspect of the response.[129] As a central partner in the Washington Jurisdiction, veterinary pathologists and other scientific specialists from Cascadia Research respond to strandings around Washington's coast, including travelling to Whidbey Island to carry out necropsies with members of CPSMMSN. There is a close partnership between CPSMMSN and Cascadia Research, which has its roots in pre-CPSMMSN days when there was no official stranding response on Whidbey Island. (As previously mentioned, Cascadia Research was involved in post-mortem investigations into Rosie's life and death.)[130] Communication and collaboration between different partner organisations within Washington are vital to successful responses across hundreds of miles of coastline, much of which is isolated and rugged. This is important not only to track stranded dead whales, but also live stranded ones and other marine mammal strandings, as well as to help entangled or injured animals. Marine mammal biologists, wildlife biologists, wildlife veterinarians and veterinary pathologists thus work together within a complex of government guided NGOs to bring about multidisciplinary investigations into strandings on the beach and beyond.

[129] Sandra Dupernell, 'Life and Death in the Salish Sea', *Report on Orca Network for Global Giving*, 12 April 2018, <https://www.globalgiving.org/projects/central-pugetsound-marine-mammal-stranding-network/reports/?pageNo=1> [accessed 13 October 2020].
[130] Hogan and Peterson, p. 89.

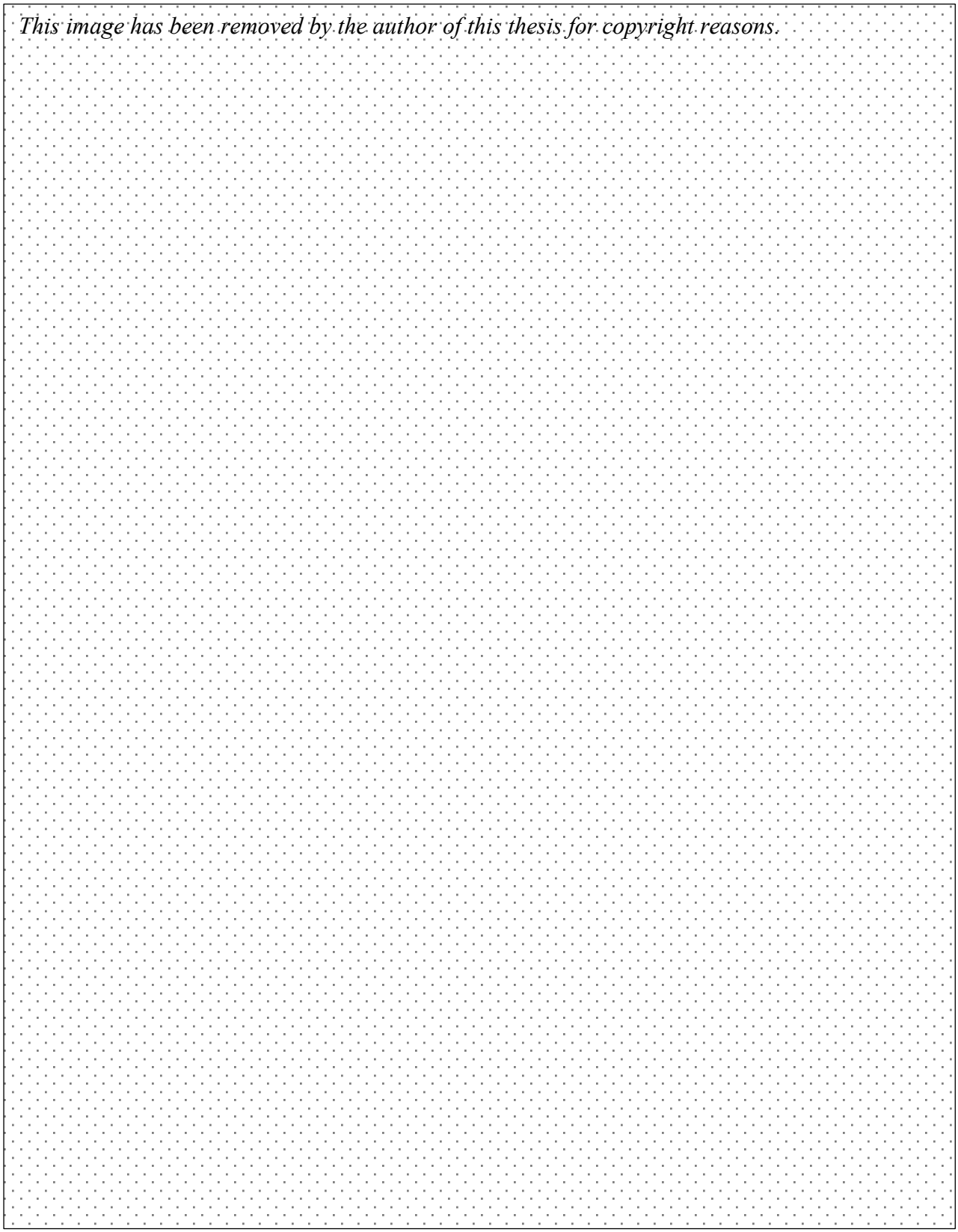

Figure 54. Map of Puget Sound Region of the West Coast Marine Mammal Stranding Network (CPSMMSN depicted in yellow). Source: NOAA Fisheries, 'West Coast Marine Mammal Stranding Network, Puget Sound', <https://media.fisheries.noaa.gov/2021-07/strandingnetwork-pugetsound-2021.pdf?null> [accessed 23 November 2019].

These stranding networks are part of the government agency's broader West Coast Marine Mammal Stranding Network (WCMMSN). Established in the 1980s under the Marine Mammal Protection Act, the WCMMSN comprises 'cooperating scientific investigators and institutions, volunteer networks, and individuals' in the US states of Washington, Oregon and California. The WCMMSN is subdivided into five jurisdictions: Washington, Puget Sound, Oregon, California Live Stranding, and California Dead Stranding. Within this there are dozens of different partners. At the same time, the WCMMSN is part of a larger national network, the Marine Mammal Health and Stranding Response Program, which provides 'emergency responses to sick, injured, distressed, or dead seals, sea lions, dolphins, porpoises and whales'. The national program comprises five regions: Alaska, New England/Mid-Atlantic, Pacific Islands, Southeast and West Coast.[131] It was formalised in the MMPA in the 1992 Amendments and centres on four key aspects including responding to stranding and entanglement, UMEs, and researching baseline health.[132] As we have seen, stranding responses – and stranded marine mammals' lives and deaths – are highly regulated through state and federal laws. Stranding networks in Washington are linked into the rest of WCMMSN, regularly communicating with organisations in California and Oregon such as the Marine Mammal Center in San Francisco (CA), Sea World in San Diego (CA), and the Oregon State University Marine Mammal Institute. This is important for a number of reasons, including sharing and developing best practices, managing migratory species such as the gray whale, and learning about unfolding mortality events as they occur. For similar reasons, it is important for the WCMMSN to maintain contact with other networks, for example the Alaska Network, as migratory species

[131] NOAA Fisheries, 'West Coast Marine Mammal Stranding Network', <https://www.fisheries.noaa.gov/west-coast/marine-mammal-protection/west-coast-marine-mammal-stranding-network#about-the-stranding-network> [accessed 26 September 2020].
[132] NOAA Fisheries, 'Marine Mammal Health and Stranding Response Program', <https://www.fisheries.noaa.gov/national/marine-life-distress/marine-mammal-health-and-stranding-response-program> [accessed 26 September 2020].

like gray whales also move through the Alaskan jurisdiction. UMEs such as the 1999-2000 and 2019 gray whale mass mortality events are not confined to one jurisdiction, and the impacts of climate change and large weather events in the eastern North Pacific that effect marine species operate beyond network borders (see Chapter 1), including the El Niño-Southern Oscillation and the marine heatwave known as 'Blob', which affects a large region including the Pacific Northwest.[133]

Links are not confined to nations. Partners in the Washington jurisdiction, including the CPSMMSN, maintain communication with organisations around coastal British Columbia. This is vital in the case of marine species that move through the waters of the Pacific Northwest, a region split between the USA and Canada. The Salish Sea, which runs between Vancouver Island and mainland Washington (and between Vancouver Island and the west coast of Canada's mainland), simultaneously divides and joins Canada and the USA, with the border running directly through the Juan de Fuca Strait. European colonisation not only affected Indigenous human communities through the imposition of national borders, but also had implications for the nonhuman species that inhabit the now shared territories as well as species that migrate across larger distances. Often gray whales will dwell temporarily in this inland Salish Sea, which encompasses the estuarine waters of Puget Sound, the waters of Rosario and Haro Strait which surround the US islands of San Juan and Orcas, and the Strait of Georgia which runs between Vancouver Island and the Canadian mainland. Species that reside in these waters regularly cross this invisible line. I myself passed through on a ferry from San Juan Island to Sidney on Vancouver Island, unsure of the exact moment territorial waters switched. I only realised I had entered Canada when I noticed that my phone network provider had changed. To the whales and other marine mammals and invertebrate species in

[133] Eli Kintisch, '"The Blob" Invades Pacific, Flummoxing Climate Experts', *Science,* 348 (2015), 17-18.

these waters, this demarcation is unknown and meaningless in their nonhuman consciousness, yet there are potential tangible effects because humans operating within different guidelines and cultures on both sides of the national border monitor and respond to these creatures.[134]

Even when gray whales do not enter the Salish Sea, the species' border-defying voyage brings them into the authority of both nations when their migration through the open waters of the Pacific runs alongside the coast of Washington and Canada. Gray whales pass the Olympic Peninsula and travel along Vancouver Island and Haida Gwaii and until eventually reaching waters adjacent to the US again when they pass Alaska. Across the bioregion of Cascadia alone, it becomes clear that international collaboration is essential to the management of gray whales and other marine creatures. Nor is it just the USA and Canada that share information. Gray whales encounter a third nation during the southern part of their migration when they swim into the territorial waters of Mexico as they pass the coast of Baja California on their way to the birthing lagoons. Communication between researchers in different countries has benefited from the development of technology and marine mammal management monitoring in the two decades between the unusual mortality events, and this became particularly apparent during the 2019 UME.[135]

Work cannot be bound by national confines because animals and anthropogenic threats to them defy these boundaries. As Serge Dedina highlights in his study of Mexican conservation of gray whales, 'the whales and their young calves are oblivious to the political boundaries through which they pass', but in spite of this 'they daily confront obstacles produced by three nations'.[136] More broadly, stranding networks across the entire continent of North America share knowledge and experiences with one another in the effort to conserve

[134] Charlotte E. Blattner, *Protecting Animals Within and Across Borders: Extraterritorial Jurisdiction and the Challenges of Globalization* (Oxford: Oxford University Press, 2019), pp. 2-4.
[135] Gulland, Flannery and Grieg.
[136] Dedina, p. 9.

whale and other marine mammal populations. For instance, the entanglement teams of east coast Canada who respond to the critically endangered right whale share expertise with organisations on the US west coast, including Marine Life Studies based in Moss Landing (Monterey), an organisation that primarily responds to entanglement.[137] While ship strikes and entanglement may be shaped to a greater extent by a particular nation's governance, these are also issues that are present along the migration route. Furthermore, the impact of global warming on the ocean environment as well as large weather events across parts of the North Pacific can cause sea temperatures to rise. These are the scales at which these scientific researchers and stranding responders, particularly during the two gray whale UMEs, have to work. Strandings are highly localised, yet they also speak to national or global conservation threats. Rosie's stranding may be pinpointed in Whidbey Island, but it is simultaneously connected to hundreds of deaths across Pacific Mexico, the USA and Canada that have been linked in turn to the Euro-American whaling industries, human-induced global warming, and global weather events.

The WCMMSN spans thousands of miles of coastline and is unsurprisingly intricate, consisting of a multitude of organisations. These range in focus, including organisations exclusively responding to marine mammal rehabilitation and stranding investigations, broader marine mammal conservation charities, universities, and even controversial sites that exploit cetaceans and pinnipeds for entertainment but offer rehabilitation facilities. Inevitably, there will be divergences of stranding response within the WCMMSN. Stranding organisations and protocols must develop in response to local conditions and sometimes practices will necessarily be highly localised. Scientific and specialist responses are also necessarily shaped by local cultural attitudes towards nature, by regional and national funding patterns, and by pressure from governmental agencies. Moreover, the different stranding

[137] Peggy Stap, interview with author, Moss Landing, 13 July 2019.

networks and organisations have evolved to reflect the conditions and requirements of different states, including the size of areas, diverse coastal characteristics, and the different species.[138]

Thus, within the overarching West Coast network practices may differ widely and this is true on a national scale across all five regional stranding networks. In Washington State, organisations like Orca Network's CPSMMSN and Cascadia Research strive for minimal intervention. CPSMMSN's main remit is post-mortem investigations, as there is a reluctance to engage in interventionist rescue practices that might interrupt the natural cycles of animal life and death in Puget Sound. In her interview with me Jessie Huggins, the stranding coordinator at Cascadia Research, explained that in this particular Pacific Northwest region, 'NOAA has been especially pushing its respect for nature's role'. Reinforcing this position, she expanded that, 'There is a certain amount of nature that has to happen, whether it's a pretty side of nature or not. It's not our job to stop it from happening. It's our job to keep humans from interfering too much'. Her conclusion was that '[Death] is a normal part of life'.[139] Speaking to stranding responders in the region like Huggins, Calambokidis, Klope and Berta, it became clear to me that the non-interventionist approach is firmly rooted in scientific understandings of wildlife. What also came across was the importance of cultural attitudes towards wild animals and ecosystems in coastal Washington in shaping protocol. Berta referred to this as 'a whole different scene' to the rest of the west coast, while Calambokidis explained that 'almost a different mentality has developed'.[140] This is reflected in response to live marine mammal strandings and it is particularly evident in the management of pinnipeds, which represent the greatest number of callouts by far. Berta explained how across the three states, stranding coordinator calls were done together as they

[138] Calambokidis and Huggins; Berta and Garrett.
[139] Calambokidis and Huggins.
[140] Calambokidis and Huggins; Peter Wallerstein, interviewed by author, El Segundo, LA County, 20 July 2019.

heard about the number of marine mammals in California being rescued and rehabbed. The approach was different in Washington where 'you have very few' being rehabilitated.[141] As I learnt, Cascadia Research also avoids euthanising marine mammals except in extreme circumstances because the process itself can cause unnecessary suffering. While to some members of the general public this might appear to be inhumane, this protocol is determined on scientific and practical understandings of animal welfare in terms of potential suffering and quality of life.[142]

The factors that guide live marine mammal response also shape decisions about dead stranded whales. In many places, whale carcasses will be removed from beaches to be disposed of on land (buried, incinerated, sent to landfill) or sometimes towed out to sea as quickly as is feasible, including in the states of California and Oregon.[143] However, there was consensus amongst those I interviewed in Washington that a dead whale on the shoreline will often be left to decompose once post-death investigations are complete. As Klope put it, 'we just walk away'.[144]

According to Huggins, at the heart of this is a broader acknowledgement and respect for the fact that humans 'have to share the beach with wildlife'.[145] Stranded whales and their decomposing bodies are a natural part of coastal environments which will inevitably feed back into the ecosystem through its breakdown from organisms feeding, weather conditions and seawater. The CPSMMSN has played a fundamental role in establishing communication with property owners to explain the value in allowing these processes to take place.[146] When I met Klope for the first time, he showed me videos he had filmed of a gray whale that had stranded as part of the 2019 UME a few months before my visit. The whale had been left on

[141] Berta and Howard.
[142] Calambokidis and Huggins.
[143] Gulland, Flannery and Greig; Calambokidis and Huggins.
[144] Klope, interview.
[145] Calambokidis and Huggins.
[146] Dupernell.

the beach to rot and the videos showed the stages of decay as the skin frayed and bones began to jut out. Coming from the UK where large whales are usually removed from beaches relatively quickly, it was fascinating for me to watch how quickly the seawater and weather work together to accelerate the process. This particular whale was 'gone within a month'.[147]

For many residents of coastal Washington, there appears to be an understanding that they are co-inhabiting their islands and coastal zones with wild animals, sharing natural spaces and the processes that shape them. Along with this is the recognition that there is a greater sense of dislocation in this particular region than in other parts of the US Pacific coastline. Here, Calambokidis echoed the sentiments of Huggins and Berta: 'Getting to that cultural issue, I think there's a little more of an appreciation in this area of wilderness, *wildness.* Not just that the beaches are for humans'. There appears to be a greater alignment between attitudes and practices between coastal Washington and coastal British Columbia than with the other two states.[148] While Calambokidis acknowledged that approaches on Vancouver Island were even more 'hands off', he saw there being shared cultural attitudes across the transnational Pacific Northwest that had been shaped by the ocean, forests and mountains. This fed in turn, he suggested, into notions of shared cultural identities bound up in approaches towards wild spaces and species in the US-Canada region.[149] However, while whales and other marine mammals are left to decompose, recycling back into the intertidal zone, there is usually human interference before this in the form of retrieving samples and necropsies.

[147] Klope, interview.
[148] Calambokidis and Huggins.
[149] Ricou, 'Pacific Northwest', pp. 262-267.

Post mortem

Necropsy and sampling response are the key remit of the CPSMMSN, and these efforts are defined by cross-community collaboration and the alliance of scientific experts, stranding specialists and committed residents participating in citizen science. Since the project to salvage Rosie began in 1998, there has been a sustained relationship between those responding to whale strandings and the Island's naval base. The Navy offers the use of its private beach Polnell Point to the CPSMMN for whale necropsies [see figure 55]. Not only has Klope brought his extensive stranding expertise to the CPSMMSN, which helped it to develop into a formal Network, but his own career in the Navy has also brought unique benefits, most significantly access to the beach. While only a small percentage of large whale strandings in Washington occur on Whidbey Island itself, it has become a focal point for whale stranding investigation, as some whale carcasses are towed from locations on the mainland, such as Seattle and Everett (Snohomish County), to the secluded beach for the purpose of scientific investigations. The beach stretches for a mile and a half, has beneficial topography and specific tidal fluctuations, making it ideal for the work carried out. Strandings of large whales on public beaches can often draw large crowds of inquisitive people, but the Navy offers a protected space where no members of the public are admitted unless they are on a list of volunteers. Furthermore, there are no residential buildings, so the investigators are able to avoid community complaints about the smell of decomposing whales. The natural topography combined with the large tidal range offers another benefit: 'we beach them at high tide. We have such a big tidal fluctuation that when the tide goes out, that whale is up high and dry. This can be at three in the morning at high tide. We'll just pull them in because they float, … tie them off, the tide goes out'.[150] Natural characteristics (tide,

[150] Klope, interview. Klope, conversation.

topography and geography) intersect with human factors (military ownership of land) to create an optimum space for scientific investigations into whale mortality.

Figure 55. Matthew Klope points Polnell Point on the exhibition map in Coupeville Wharf. Author's photograph.

Cascadia Research's stranding Coordinator Jessie Huggins come together with wildlife veterinarians such as CPSMMSN's Stephanie Norman, or wildlife biologists like Klope to perform whale and other marine mammal necropsies. Committed non-specialist volunteers are also added to the mix and are crucial to the successful stranding response of the network. These volunteers can be understood as citizen or community scientists.[151] A number of these individuals were involved in the original efforts to save Rosie's display for

[151] Jonathan Silvertown, 'A New Dawn for Citizen Science', *Trends in Ecology & Evolution,* 24 (2009), 467-471.

the Wharf and have been actively contributing to responding to stranded animals ever since. Over the years, these early volunteers have been joined by others and, together, they fall into this category of citizen scientist, helping to bring about successful stranding responses. Citizen scientist volunteers occupy a zone between qualified specialists, such as scientific experts, and the general public, including those volunteers who assist with manual labour during a large whale stranding. While they might not be scientifically trained specialists, a level of expertise has been transferred to this category of volunteer because they have developed in-depth knowledge and skills, including during the necropsy process. They have acquired what Steve Miller and Jane Gregory call 'scientific literacy'. This is not simply 'popularization of science', but active extension of expertise to individuals who are not scientific specialists.[152] The citizen scientists involved in CPSMMSN are more than nameless members of the public reporting data for distant scientists to analyse. They are embedded in all aspects of the Network, from responding to stranding alerts, participating in necropsies, collecting and bagging samples, inputting data, and photographing specimens. These individuals are central to successful post-mortem investigations, contributing to the retrieval of invaluable data and results. Their involvement is vital in areas such as Whidbey Island, which represent smaller, more isolated communities in comparison to major urban areas or research centres on the mainland, like San Francisco or Olympia. While these committed volunteers are an extension of the scientific rationale, they are also innately bound to the community.

I introduced this part of the chapter with an account of the seal and porpoise necropsies I participated in with members of the CPSMMSN. I was able to observe and actively experience the way in which the differently qualified and trained individuals were

[152] Jane Gregory and Steve Miller, *Science in Public: Communication, Culture, and Credibility* (New York: Plenum Press, 1998), pp. 92, 81.

integrated into a cohesive team. Like other necropsies in the region, these ones were carried out under a NOAA permit administered by CPSMMSN, coordinated by Stephanie Norman, and formally conducted to obtain appropriate samples, photographs, measurements and other data. Work of this kind feeds into broader scientific studies, but at the same time, there was an element of informality to the necropsies themselves: the barn setting, the openness to new people actively participating and learning, and Norman's ease in teaching non-specialists such as myself. There was also a sense of familiarity because of the camaraderie between Klope, Norman and the Orca Network volunteers, who had been involved in marine mammal necropsies since Rosie in 1998 and who were charged with taking photographs of the animals, securing the samples being extracted, and replacing equipment. I was struck by the inclusivity and commitment to teaching. That day was a learning opportunity not just for me, but also for two other students. The format resulted in scientific practices being made accessible to those beyond strict scientific circles, and can thus be understood as a democratising approach. It is open to those who are interested and passionate, but might not necessarily have the scientific training.

Until that day, I had only written about these scientific processes theoretically, and I value having been given access to the experience, both for my own research purposes and on a more personal level. The seal necropsy was not an experience that disgusted or upset me; it was a fascinating, practical and informative process. Indeed, it proved to be a highlight of my two-month field trip. As a historian, I have not had the years of training and practical experience of those involved in scientific stranding management and I admit I was enthralled by the process. It was an intense experience, and it has had a powerful and lasting effect on me. While at times images of the seal or the porpoise alive in the ocean came to me, those thoughts were fleeting as the focus was on helping to gather suitable samples and dissect organs correctly, and on absorbing knowledge shared by Norman. I undoubtedly felt sorry for

the creatures – particularly, the one-week-old porpoise calf – but my focus was predominantly shaped by the scientific objectivity that ultimately framed the setting.[153] Perhaps my research has also afforded me insights into how vital necropsies of stranded whales are to conservation efforts. While I am yet to participate in a large whale autopsy, the necropsies that day have offered a deeper understanding of practices that had previously seemed beyond my reach as a humanities scholar. The samples and the data, though, remain beyond me; I could not analyse them or derive any scientific meaning from them, and this is one of the limits of citizen science of this kind.

Research and public engagement

Data extracted from the dead bodies of stranded gray whales and other marine mammals offers up information on anatomy, behaviour and harmful human impacts; it also supplies data that contributes to the construction of population baselines.[154] Information extracted from the bodies of gray whales in Washington during the 1999-2000 and 2019 UMEs has contributed to national and international research into the causes of these events, including data about starvation and malnutrition that has shed light into changes in gray whales' prey in the Bering and Chukchi seas, which is in turn deepening our understandings of the transformation the Arctic is undergoing. The CPSMMSN also routinely swab dead pinnipeds to monitor the presence of antibiotic resistant bacteria such as E. coli as part of a broader research project headed by Stephanie Norman. The research project sheds light on the presence of resistant bacteria that enters the water from land as a result of harmful

[153] Scientific objectivity speaks to '*how* it investigates' (emphasis mine) and that the methodology is 'independent of the subject' (the investigator). See Evandro Agazzi, *Scientific Objectivity and Its Contexts* (Heidelberg: Springer, 2014), pp. 2, 51.
[154] Bravo and others, p. 15.

anthropogenic activity, including agriculture and livestock. [155] Scientific research papers published under the aegis of the project include the names of non-scientist volunteers: a formal acknowledgement and public validation of the vital contribution of citizen scientists. Combined with a range of scientific research into cetaceans, other marine mammals and the marine ecosystems they inhabit, understandings of marine mammal species are developing constantly through the necropsies of stranded animals.

A key aspect of the CPSMMSN and Orca Network is commitment to public engagement with local marine mammals and their ecosystems, stranding events, conservation threats and the work that the various participating organisations carry out. Over the past two decades, public engagement has developed far beyond Rosie's skeleton on display in Coupeville Wharf. The stranding network educates the public about strandings that have occurred and scientific research on them. Information gathered through necropsy and other investigative processes is disseminated to residents through social media, Whidbey Island news outlets, and sundry public events. There have been concerted efforts to create more environmental awareness among residents of Whidbey Island, and this has resulted in the public reporting strandings to the hotline.[156] This helps to foster a sense of stewardship and responsibility while also confirming the sense of a shared ecosystem. Indeed, as Gregory and Miller argue, there is a duty to popularise science and educate the lay community, and this is largely true of conservation organisations across the globe.[157] Public engagement is also vital to help drive public donations, which have become essential since state and federal grants have been cut. These efforts have also helped to foster ongoing volunteers, ensuring that the stranding network is an ongoing one.[158]

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[155] Stephanie A. Norman and others, 'Antibiotic Resistance of Bacteria in Two Marine Mammal Species, Harbor Seals and Harbor Porpoises, Living in an Urban Marine Ecosystem, the Salish Sea, Washington State, USA', *Oceans*, 2 (2021), 86-104.
[156] Dubpernell.
[157] Gregory and Miller, p. 1.
[158] Dubpernell.

Over the past few years, the focus seems to have shifted away from Coupeville Wharf to the Langley Whale Center, which was established by Orca Network further down the Island in 2014 (and has moved to larger sites in Langley since then). The Whale Center offers an opportunity for Orca Network to have a site dedicated to their work and public engagement. Orca Network is active in disseminating information to the general public through events such as talks with specialists and Coast Salish Traditional Knowledge Holders, interactive sessions, public exhibits, whale festivals, and the physical remains of animals.[159] On display are specimens that have been obtained through CPSMMSN work, such as skulls belonging to various Salish Sea species including gray whales, barnacles and whale lice extracted from gray whale bodies, baleen from the species too. The site is committed to the work of Orca Network, and with numerous volunteers on site there are potentially more active opportunities for visitors to interact with specimens and acquire knowledge. In line with the major focus of Orca Network, a significant emphasis of the exhibition space is the plight of the critically endangered southern resident orcas.[160] Given the critically endangered status of the orca, it is not surprising that efforts are primarily directed towards these animals, although as argued above this is potentially to the detriment of other deserving creatures, including the gray whale.

Conclusion

In the intervening years since the creation of the Rosie exhibit, the engagement of the local communities of Whidbey Island with strandings has been transformed through the formal establishment of the official stranding network in 2002. The Network has fostered a range of interests and types of involvement, which organically grew out of the project to retain Rosie's

[159] Orca Network, 'Langley Whale Center', <https://www.orcanetwork.org/Main/index.php?categories_file=Langley%20Whale%20Center> [accessed 5 December 2020].
[160] Orca Network, 'Langley Whale Center'.

skeleton two decades before. Rosie can be understood as the trigger or catalyst, but as time has passed, the skeleton remains are no longer a focal point. While Klope was initially responsible for bringing his stranding experience and expertise, and for establishing connections between different individuals, groups and organisations, since the 'Rosie project' other individuals have helped to take the network further, developing their own repertoire of skills, knowledge and experience as part of this. Thus, while Rosie was the initial impetus for this collective interest in strandings, and the first skeleton articulation on the island, the bony remains have since taken a back seat to other developments.

Though Rosie can be understood as the stimulus for the CPSMMSN, the skeleton itself seems no longer to be stimulating. Its original importance is no longer privileged in the exhibition space, and visitors to Coupeville Wharf and to the Langley Whale Center are unaware of how important Rosie's skeleton is to everything they see around them because the story of the whale and those who worked to salvage and display the skeleton has been increasingly forgotten, overlooked, even erased. Rosie can be understood as the *heritage* of this formal constellation of efforts to respond to marine mammal strandings in and around Whidbey Island; and yet there is a sense of abandonment. While Rosie has had a profound effect in terms of the legacy of stranding-response developments, the association of the skeleton with its afterlife has dwindled and become increasingly obscured. Nevertheless, Rosie has an enduring physical life, however little people may engage with it today, and this is profoundly different to the afterlife of the gray whale that died in Ahousaht territory, and that I wish to focus on next.

Chapter 3

A Whale for a Feast
Ahousaht, Vancouver Island, Canada, 2000

‘the great personage of the whale demanded the honour of extended ceremony’

Chief Umeek E. Richard Atleo, Ahousaht (2004)[1]

‘We call whales *iihtuup*, which can be translated as “big mystery”’

Elder Willie Sport, Huu-ay-aht (1997)[2]

Introduction

The front page of the Nuu-chah-nulth (NuučaaɁuł) tribal newspaper *Ha-Shilth-Sa* of 23 March 2000 announced that the Ahousaht First Nation of the Nuu-chah-nulth peoples, Vancouver Island, had brought a dead gray whale ashore to harvest on 8 March 2000 [see figure 56]. It was the first whale brought on land for traditional butchering and consumption since 1963, when the last one was harpooned. There is very little detail about that earlier event, however.[3] As this chapter will explain, the significance of the landing of this particular gray whale in 2000 relates directly to the Ahousaht and Nuu-chah-nulth peoples’ ancient whaling culture. While the Ahousaht are historically a whaling people, they had not had an active whaling tradition since the early 1900s. The animal was not caught after a lengthy pursuit by whalers, but rather discovered entangled and drowned in Ahousaht nets for a

[1] Umeek E. Richard Atleo, *Tsawalk: A Nuu-chah-nulth Worldview* (Vancouver: University of British Columbia Press, 2004), p. 17.
[2] Willie Sport, interviewed by Chuuchkamalthnii (also known as Ḵi-ḵe-in, Haa'yuups and Ron Hamilton), 1997, quoted in Martha Black, *ḤuupuKʷanum Tupaat, Out of the Mist: Treasures of the Nuu-chah-nulth Chiefs* (Victoria, BC: Royal British Columbia Museum, 1999), p. 33.
[3] Ambrose, ‘Ahousaht Feasts’, pp. 1, 8.

herring-roe-on-kelp pond in Sydney Inlet, a fjordic area in northern Clayoquot Sound [figure 57].

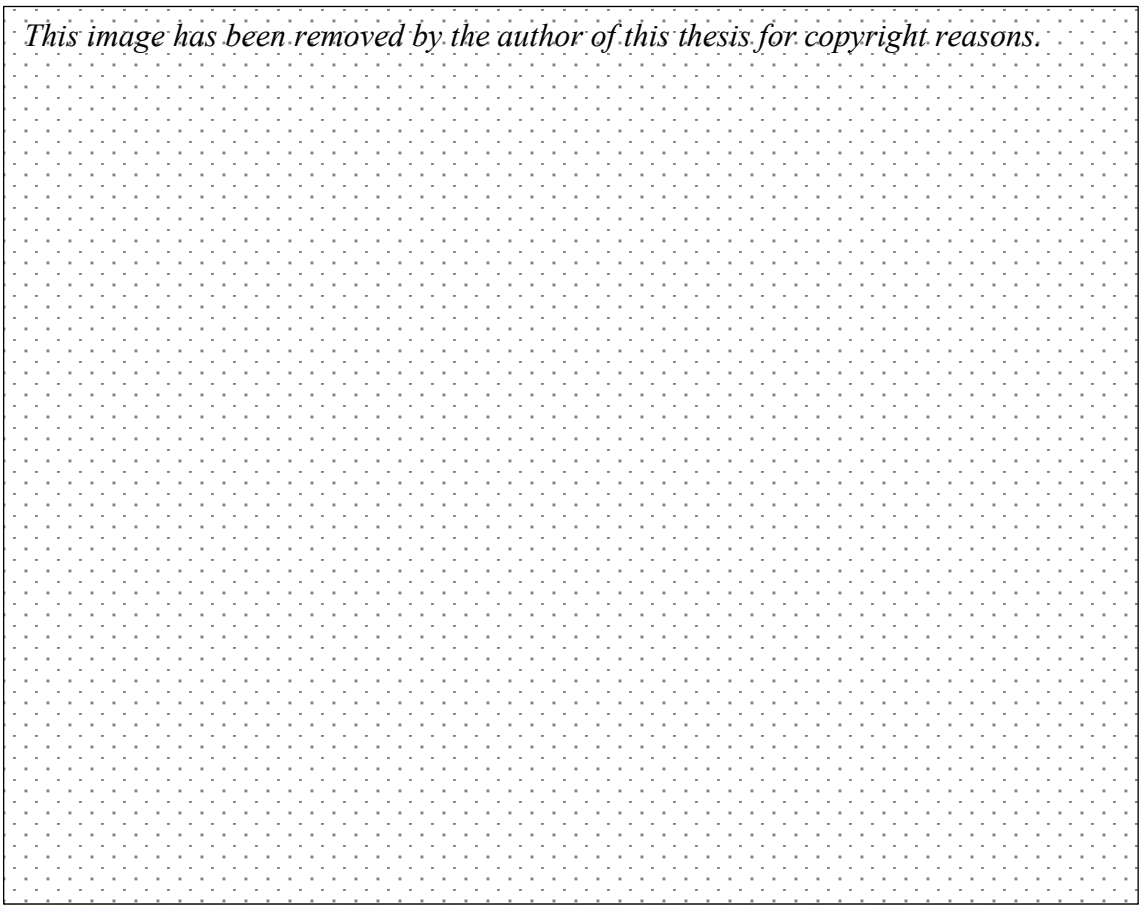

Fig 56. *Ha-Shilth-Sa* front page: Denise Ambrose, 'Ahousaht Feasts on Drowned Whale', 23 March 2000.

In spite of the effort of divers from the community to cut it free, the whale which was travelling with two others of its kind, had already drowned with the net wrapped around its tail and head.[4] It was then brought ashore to be butchered and shared out amongst the community. The newspaper published a black-and-white photograph of the dead gray whale marooned on the intertidal zone, with a child walking along its motionless body and a group of people gathered in the background [figure 56]. The headline article 'Ahousaht Feasts on Drowned Whale' explained the events that had taken place two weeks earlier:

[4] Ambrose, 'Ahousaht Feasts', p. 1; 'Rescue Efforts Too Late for Whale', *Ottawa Citizen*, 18 March 2000, p. 13; 'Natives Say Whale was Dead', *National Post*, 18 March 2000, p. 4.

> A traditional prayer chant was performed to honour the life of the whale. … Almost the entire community came to the beach to witness the butchering of the whale. Some were not interested in taking the whale meat; they came out to satisfy their curiosity and take part in an historic event. Others were excited; young and old chewed thin slices of raw whale blubber as quickly as it was being cut up.[5]

Traditional ceremonies were carried out on the beach and a whale feast was held later in the spring incorporating the harvested meat, which had been kept frozen in the meantime.

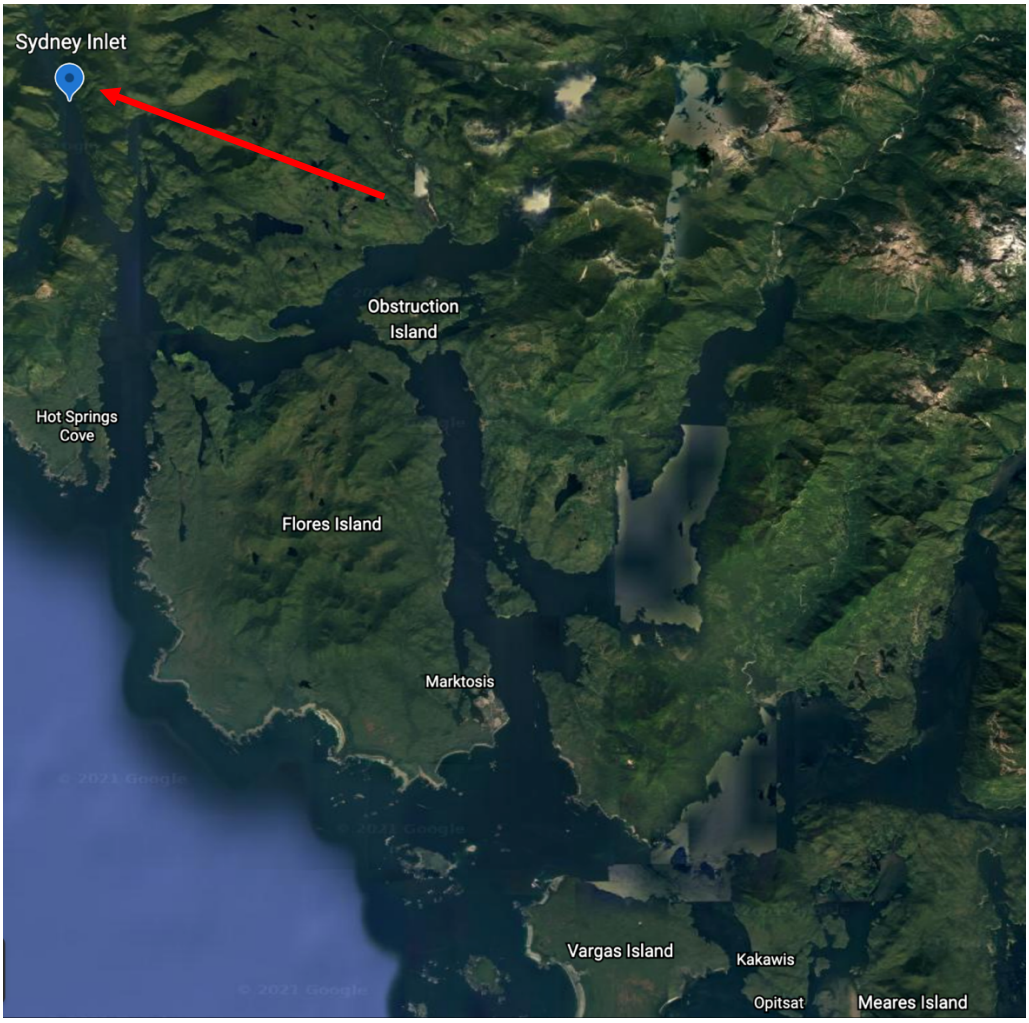

Fig 57. Map of Clayoquot Sound and Ahousaht territory, including Sydney Inlet where the gray whale was discovered drowned. Source: Google Earth, map of Clayoquot Sound (2021), *Maxar Technologies CNES / Airbus Data SIO, NOAA, U.S. Navy, NGA, GEBCO,* adapted by author, <https://earth.google.com/web> [accessed 1 August 2021].

Until the early twentieth century, welcoming the spirits of dead whales ashore, the butchering practices and the harvesting of meat, blubber and oil for energy were all an

[5] Ambrose, 'Ahousaht Feasts', p. 1.

integral part of Ahousaht life along with that of other Nuu-chah-nulth peoples that live across the west coast of Vancouver Island and the closely related Makah of Neah Bay on the Olympic Peninsula [see figure 58]. Gray and humpback whales were the main species hunted by these communities for several millennia and distinct whaling practices and cultures were developed. Not only were whales caught through hunting, but 'drift whales', those that washed ashore, stranded alive, or were found dead in the sea, would be opportunistically harvested for their meat, blubber and oil, and sometimes their bones.[6] The Ahousaht have a rich and enduring culture, spirituality and history bound to whales, whaling, and the marine world of Clayoquot Sound that spans thousands of years.[7] The Ahousaht retrieval of the consumable parts of this whale and the ceremonial burial of its bones on the beach therefore stand in considerable contrast to the Whidbey Island whale, where as we saw in the previous chapter, the bones were retained for display (see Chapter 2).

[6] Gray and humpback whales would sometimes be given physical afterlives by the Nuu-chah-nulth, such as their bones being crafted into war clubs or piled up outside longhouses as markers of status. See McMillan, 'Whales and Whalers', pp. 235-36; Alan D. McMillan, *Since the Time of the Transformers: The Ancient Heritage of the Nuu-chah-nulth, Ditidaht, and Makah* (Vancouver: University of British Columbia Press, 1999), pp. 75, 124, 147, 159, 175.

[7] Chief Earl George Maquinna, *Living on the Edge: Nuu-chah-nulth History from an Ahousaht Chief's Perspective* (Winlaw: Sono Nis Press, 2003), pp. 41-61; Clifford Atleo, 'Change and Continuity in the Political Economy of the Ahousaht' (unpublished doctoral thesis, University of Alberta, 2018), p. 168.

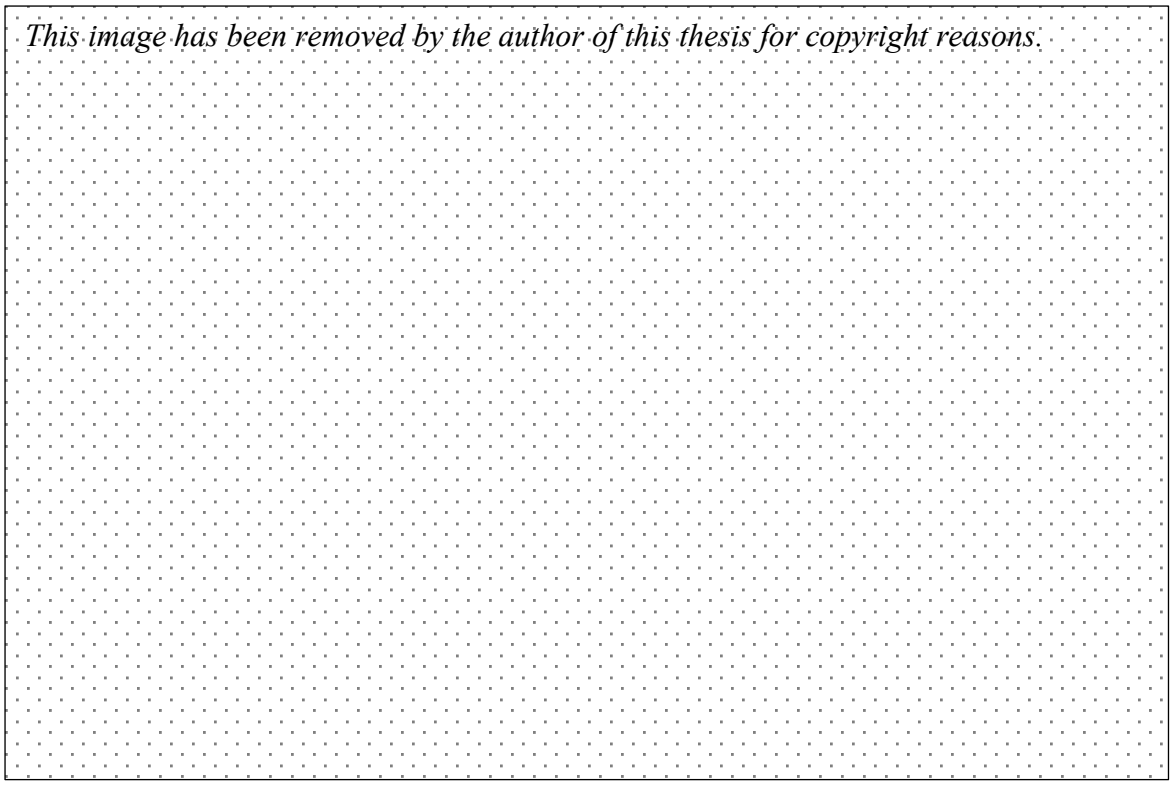

Figure 58. Map of Nuu-chah-nulth territory (dark green). Source: Ucluelet, 'Nuu-chah-nulth Tribal Council – NETP', <https://ucluelet.ca/development/chamber-of-commerce/membership-directory/item/521-nuu-chah-nulth-tribal-council-netp> [accessed 23 July 2021].

These millennia-old whaling practices were disrupted by subsequent waves of European, American and Canadian commercial whaling endeavours in the eastern North Pacific Ocean in the nineteenth and early twentieth centuries.[8] As mentioned in Chapter 1, the gray whale was heavily hunted during the second half of the nineteenth century by Euro-American whalers, mainly in the lagoons of Baja California, Mexico. The decimation of this species in Mexican waters had profound and long-lasting impacts on the Nuu-chah-nulth and Makah thousands of miles north up the coast. By the 1920s, western whaling had resulted in the almost total extinction of gray whales and the whaling nations of the Pacific Northwest, including the Ahousaht, ceased to hunt this species.[9] The other target species of the Nuu-chah-nulth, the humpbacks, which were the favoured quarry, were also depleted by hunting along North America's west coast from the mid-nineteenth century onwards.[10] In the early

[8] Coté, *Spirits of Our Whaling,* pp. 61-67.
[9] Scammon, *Marine Mammals,* pp. 32, 31-33.
[10] Robert Lloyd Webb, *On the Northwest: Commercial Whaling in the Pacific Northwest, 1790-1967*

twentieth century, the whaling nations of the Nuu-chah-nulth and Makah ceased their ancient hunting tradition because of the rarity of gray and humpback whales. Later, this was compounded by a series of international and national restrictions on whaling.[11]

In this chapter, I want to reflect on how the gray whale found in Sydney Inlet and the events surrounding its death, its bringing to shore, and the subsequent ceremonies represent a powerful moment of Ahousaht cultural revival. This cluster of events demonstrates the continuation of traditions and culture, notwithstanding the far-reaching impacts of European colonisation and ongoing federal government restrictions. I contend that these actions constitute Ahousaht 'survivance', which is defined by Anishinaabe scholar Gerald Vizenor as 'an active sense of presence, the continuance of native stories, not a mere reaction, or a survivable name. Native survivance stories are renunciations of dominance, tragedy, and victimry' (see also Chapter 1).[12] Survivance is enduring vitality, not just survival or existence. Survivance is the strength of presence, the perpetuation of oral stories, and literary tradition. It is 'not an ideology, dissimulation, or a theory', it is a 'practice'.[13] In the introduction to his edited collection *Survivance: Narratives of Native Presence* (2008), Vizenor lays out several examples of survivance, including 'the figurative presence of a fourth person' in the oral tradition of the Anishinaabe. This is a person other than the speaker and the direct reference in a story. The fourth voice is present in 'indirect linguistic evidence' and the witness is evoked in the present. The spoken word, witnessed, passed on generationally, and present in oral, aural and visual memory is the force of law, history, culture, politics, tradition and religion. The fourth person represents the chain of individual and collective knowledge and memory. The presence of the fourth person in oral stories is

(Vancouver: University of British Columbia Press, 1988), pp. xiv, xv.
[11] Coté, *Spirits of Our Whaling,* p. 66.
[12] Vizenor, *Manifest Manners*, p. vii.
[13] Vizenor, 'Aesthetics of Survivance', pp. 1-21, 11.

survivance (see also Chapter 1).[14] The Ahousaht may not have actively pursued whaling since the early 1900s, but the response to the dead gray whale in March 2000 was shaped by the persistent presence of the fourth person. The last generation of whalers continued the oral tradition so that while those in the village had not whaled in many decades, the whale resonated within the community's collective oral, aural and visual memory.

Leading Indigenous studies scholar Kyle Powys Whyte of the Potawami Nation, of the Anishinaabe peoples, has written comprehensively on issues relating to First Nations and tribal communities in North America, and my approach to the Ahousaht harvesting of the gray whale in 2000 has been influenced by his notion of 'collective continuance'. He defines this as a 'community's capacity to be adaptive in ways sufficient for the livelihoods of its members to flourish into the future' against settler-colonial states that perpetuate 'cultural discrimination and disrespect for treaty rights'.[15] Whyte's conception of 'collective continuance' echoes the idea of survivance. Allan D. McMillan, an archaeologist who has worked closely with Nuu-chah-nulth communities, has pointed to 'the resilience shown … in meeting the challenges of changing conditions … [that] carries on into the modern world'. As the Nuu-chah-nulth 'continue to adapt to new conditions in their lives', they are also 'asserting control after the demoralizing effects of colonization and taking steps to ensure the maintenance of their cultures'.[16]

By focusing on the events surrounding the dead gray whale in March 2000, I seek to highlight that while there has been loss, there is also resilience and a continuation of the cultural, spiritual and political dimensions of Ahousaht lifeways and their whaling tradition, as clearly demonstrated in the cultural revival spurred by the arrival of the dead whale in

[14] Vizenor, 'Aesthetics of Survivance', pp. 2-3, 21.
[15] Kyle Powys Whyte, 'Justice Forward: Tribes, Climate Adaptation and Responsibility', in *Climate Change and Indigenous Peoples in the United States: Impacts, Experiences, and Actions,* ed. by Julie Koppel Maldonado, Rajul E. Pandya and Benedict J. Colombi (New York: Springer, 2013), pp. 9-22 (p. 10).
[16] McMillan, *Since the Time,* p. 215.

Ahousaht territory. The chapter consists of four main parts. In the first part, I focus on the whaling heritage of the Nuu-chah-nulth and the impact of European colonisation in order to explain the historical and cultural context that gives this particular gray whale significance. In the second part, I explore the Nuu-chah-nulth philosophy of *heshook-ish tsawalk* ('everything is one') and the boundaries of the human and non-human. In part three, I consider the traditional claims of the hereditary chiefs and the ancestral terraqueous territories, and what the implications of exerting these claims might be in the ongoing settler-colonial state. In part four, I discuss the implications for community and the whale as food, both in terms of the Ahousaht as well as other closely related communities of the Nuu-chah-nulth and Makah. Recurring threads emerge as key themes across the chapter: borders and boundaries, temporality and space, and spirituality and cosmology.

This chapter takes its cue from the article published in the *Ha-Shilth-Sa*, which details the Ahousaht's decision to retrieve the entangled gray whale to traditionally butcher and eat it. To approach the significance of this event, I have turned to the words and writings of Ahousaht and Nuu-chah-nulth. This includes prominent Nuu-chah-nulth scholars such as Umeek E. Richard Atleo, a hereditary chief of the Ahousaht, and Charlotte Coté of Tseshaht First Nation. I have engaged with the writings of those within the Nuu-chah-nulth community, some autobiographical or semi-autobiographical, including those of Chief Earl George Maquinna and also Chuuchkamanthlii, also known as Ḳi-ḳe-in, Haa'yuups and Ron Hamilton, of the Hupacasath Nation, who is a creator, poet, storyteller and scholar.[17] Finally, I will draw on the 1994 documentary film *The Washing of Tears*, which focuses on the

[17] See, for example, Atleo, *Tsawalk*; Umeek E. Richard Atleo, *Principles of Tsawalk: An Indigenous Approach to Global Crisis* (Vancouver: University of British Columbia Press, 2001); Coté, *Spirits of Our Whaling*; Maquinna, *Living on the Edge;* Atleo, 'Change and Continuity'; Chuuchkamalthnii (Ḳi-ḳe-in, Haa'yuups, Ron Hamilton), 'Box of Darkness', in *In Celebration of Our Survival: The First Nations of British Columbia,* ed. by Doreen Jensen and Cheryl Brooks (Vancouver: University of British Columbia Press, 1991), pp. 62-64.

Mowachaht/Muchalaht Nation's efforts to reclaim and revive traditions, and which offers invaluable insights into changes, continuity and revival.[18]

My choice of subject may seem unusual in the sense that the Ahousaht whale was neither stranded nor directly related to the UME. There are extenuating circumstances, however. During the UME, a number of gray whales were found stranded around Vancouver Island and the smaller Gulf Islands off of it in the Salish Sea. Changes in migration patterns (for example fewer animals passing, later migrations) were also noticed. The stranded whales discovered had samples taken from them and were logged by scientific researchers.[19] Amongst these deaths was the entangled gray whale retrieved from Sydney Inlet in March 2000. As just noted, this whale did not strand, but was rather discovered as a drift whale by the Ahousaht.[20] As the entanglement was close to shore, however, we might consider it a quasi-stranding. Found dead not far from human society, the whale was rendered accessible by the nets. Like Rosie on Whidbey Island, most stranded gray whales are found decomposed and are not viable for a feast, but this particular gray whale was found very soon after its death. While it was not one of the 651 whales that constituted the unusual mortality event (UME), which only counted stranded animals, these were by no means the only gray whales that died in the years 1999-2000. Furthermore, not all the gray whales found stranded in North America as part of the UME were actually victims of the UME. While the unfolding mortality event, which has been linked to major intersecting human and natural factors (including weather events, global warming, whaling) and which resulted in the death of many

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[18] *Washing of Tears.*

[19] See, for example, 'Third Gray Whale Washes up on BC Coast', *Whitehorse Daily Star*, 19 April 2000, p. 22; Carla Wilson, 'Beached Whale is a Mystery', *Times Colonist*, 19 April 2000, p. 27; 'Whales May Be Caught in Cyclical Food Shortage', *Times Colonist*, 30 May 1999, p. 35; 'Scientists Hunt Cause of Death', *Times Colonist*, 14 May 2000, p. 27; 'Why are so Many Gray Whales Dying? Experts Worried', *Times Colonist*, 7 June 1999, p. 2; Barry Gunn, 'Tests Performed to Find Cause of Death', *Nanaimo Daily News*, 20 May 1999, p. 2.

[20] There is a Huu-ay-aht story of a drift whale being spotted out at sea and men going to retrieve it. See Kathryn Bridge, *Extraordinary Accounts of Native Life on the West Coast: Words from Huu-ay-aht Ancestors* (Canmore: Altitude Publishing, 2004), pp. 91-93.

gray whales, other grays continued to die from ongoing anthropogenic impacts, including bycatch, marine pollution, ship strikes and entanglement as in every other year (see also Chapter 1).[21]

The UME can thus be understood in terms of putting an additional, if undoubtedly intense, pressure on the species, and mortality was not confined to this particular phenomenon in those years. Globally, cetaceans face threats from entanglement and the greatest pressure on these animals comes from interaction with gear from commercial operations. When whales' habitats overlap with human activity, there is always a risk of harmful interaction. Along the length of the gray whales' migration route, sources of entanglement include active and inactive (ghost) fishing gear, including gillnets, driftnets, longlines, traps for prawn or Dungeness crabs in commercial fisheries and aquaculture gear.[22] Tribal fisheries constitute only a small percentage of fisheries on the vast west coasts of the USA and Canada.[23] The British Columbia (BC) coastal environment is typically complex and the greatest threat of entanglement for marine mammals comes from non-First Nation fisheries. Ed Lochbaum, the BC regional manager for the Department of Fisheries and Oceans (DFO), commenting on the entanglement of the gray whale in the herring-roe-on-kelp pond in March 2000, remarks that it was 'really rare for whales to get caught' in these kinds of nets and that they 'usually happen with crab gear'.[24] The true magnitude of entanglement

[21] There will also be gray whales that were found stranded as part of the UME that died of old age or disease. Gulland and others, pp. iii, 2.
[22] BC Cetacean Sightings Network, 'Entanglement', <https://wildwhales.org/threats/entanglement/> [accessed 18 May 2021]; Fisheries and Ocean Canada, 'Keeping Whales Free From Fishing Gear', <https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/docs/entanglements-empetrements-pub-eng.html> [accessed 18 May 2021].
[23] NMFS Coast Regional Office, *U.S. West Coast Large Whale Entanglement Information Sharing Workshop Report* (28 March 2014), pp. 18-19.
[24] Keven Drews, 'Ahousaht Dine on Whale', *Alberni Valley Times*, 16 March 2000, pp. 1, 3. While humpback whales are the most frequently entangled species, gray whale interactions with fishery gear are also among the more commonly reported incidents. See Fisheries and Ocean Canada.

is unclear because of the size and nature of BC waters, and because most animals that die from this cause will not be found.[25]

The Ahousaht are one of the 15 related First Nations that comprise the Nuu-chah-nulth peoples that live along the western coast of Vancouver Island. The suffix 'aht' means 'people of'. Nuu-chah-nulth translates as 'all along the mountains and the sea'.[26] The Nuu-chah-nulth Tribal Council was established in 1979 as a way to unite and represent these nations culturally and politically within the colonial apparatus of Canadian government.[27] There are three regions across which the nations range. The Ahousaht are in the Central Region together with the Hesquiaht, Tla-o-qui-aht, Toquaht, and Yuu-cluth-aht.[28] Historically, there were more tribes related to the Nuu-chah-nulth First Nations than there are today. Some merged pre-contact because of intermarriage and allegiance, as well as warfare, while others amalgamated in response to the impacts of European colonisation that caused major depopulation. Violence was inflicted and many Nuu-chah-nulth peoples were killed. In addition, introduced diseases such as smallpox may have killed up to 85% of the population, while the arrival of new and more deadly weapons in warfare and the imposition of federal government rule designating new legal and political identities resulted in further demographic reduction and changes.[29] The Nuu-chah-nulth First Nations are connected in many ways,

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[25] B.C. Cetacean Sightings Network.
[26] Coté, *Spirits of Our Whaling,* pp. 9, 19.
[27] In the 1950s, the Ahousaht and other related nations that make up the Nuu-chah-nulth formed an alliance known as the West Coast Allied Tribes to increase their political influence, later forming the Nuu-chah-nulth Tribal Council. See Nuu-chah-nulth Tribal Council, 'History', <https://nuuchahnulth.org/history> [accessed 18 March 2021]. As Eugene Arima and Alan Hoover explain, while these societies 'of the distant and recent past shared a common way of life, they were not united as one nation but divided into major groups that may be called "tribes" and "confederacies" of tribes'. Before European contact, 'there was not an 'Nootka', 'Nuu-chah-nulth' or 'Westcoast "nation"'. These are terms that descend from European categories. See Eugene Arima and Alan Hoover, *The Whaling People of the West Coast of Vancouver Island and Cape Flattery* (Victoria, BC: Royal BC Museum, 2011), p. 16.
[28] The Southern Region consists of the Ditidaht, Huu-ay-aht, Hupacasath, Tseshaht, and Uchucklesaht. The Northern Region comprises the Ehattesaht, Kyuquot/Cheklesaht, Mowachaht/Muchalaht, and Nuchatlaht. See Nuu-chah-nulth Tribal Council, 'About NTC', <https://nuuchahnulth.org/about-ntc> [accessed 18 March 2020].
[29] Coté, *Spirits of Our Whaling,* pp. 47-50; Huu-ay-aht First Nations, 'Kii?in Agenda Paper', in *Nuu-chah-nulth Voices, Histories, Objects and Journeys*, ed. by Alan L Hoover (Victoria, BC: Royal British Columbia Museum, 2000), pp. 33-61 (p. 39).

through culture and traditions, language, familial ties, spirituality and cosmology, politics and economy. However, each nation is distinct, with its own histories, customs, rituals, hereditary chiefs, *ha'wiih* (*ḥawiiḥ*), and traditional territories, *hahuulthi* (*haḥuułi)*.[30] Whaling traditions are central to the interconnection between these coastal First Nations, a tradition not shared by other First Nations in this region except the closely related Makah south across the Canada-US border.[31]

The Ahousaht Nation has inhabited the forested Clayoquot Sound region and its network of islands, inlets and fjords for thousands of years, including Flores Island where the village of Maaqtusiis (or Marktosis) is located and which is home to the largest population of Ahousaht community members on Vancouver Island [see figure 59].[32] An Ahousaht *ha'wilth* of the whaling lineage and prominent scholar, Umeek E. Richard Atleo, offers a sketch of Ahousaht's location: 'On the sheltered side of Flores Island at the base of an isthmus that narrows to form a sheltered bay with pebbled beach on one side and, on the other side, a sandy white beach facing the Catface mountain range'.[33] The name Ahousaht is rooted in the peoples' relation to the land and the sea, translating as 'facing opposite from the ocean' or 'people living with their backs to the land and mountains'.[34] Maaqtusiis is the only site inhabited year-round, but Ahousaht territories encompass 25 reserve sites, many of which are inhabited at particular times of the year to follow the seasonal movements of species that the

[30] Coté, *Spirits of Our Whaling,* p. 9; Arima and Hoover, p. 16; Tyson Atleo, 'Ahousaht Law and Chinook Salmon Conservation in The Megin River' (unpublished master's thesis, University of Victoria, 2021), p. 11.
[31] The Makah's name is *kwih-dich-chuh-ahtX* (*Qʷidiččaʔaˑtx̌*) ('people who live by the rocks and seagulls'), but they are commonly known by the Clallam (Coast Salish) name for them: Makah. Atleo, 'Change and Continuity', p. xi.
[32] Ahousaht is the largest of the Nuu-chah-nulth nations today. See Marlene Atleo, 'De-Colonizing Canadian Aboriginal Health and Social Services from the Inside Out: A Case Study – The Ahousaht Holistic Society', in *Aboriginal Canada Revisited*, ed. by Kerstin Knopf (Ottawa: University of Ottawa Press, 2008), pp. 30-49 (p. 37).
[33] Atleo, *Tsawalk,* p. 97.
[34] According to Umeek E. Richard Atleo, 'Ahous is a precontact Nuu-chah-nulth place name' and 'aht' means people of. Ahous-aht translates as person from Ahous, however, European misunderstanding meant that Ahousaht was recorded by the federal government, as with the other Nuu-chah-nulth Nations. See note 2 in Atleo, *Principles of Tsawalk*, p. 181.

people rely on for subsistence.[35] Other nations were also incorporated into the Ahousaht at different times through warfare, marriage or merger with the larger Ahousaht Nation, or were grouped for administrative purposes by the colonial government. The Ahousaht traditionally inhabited Vargas Island until they defeated the Otsosaht in war and took their territories in the 1800s, including the larger Flores Island, where Maaqtusiis is located today. The Manhousaht of Sydney Inlet and Shelter Inlet were amalgamated, as well as the Kelsemaht and Qwatswiaht.[36]

Fig 59. Map of Ahousaht Territory, Clayoquot Sound. Source: Wikimedia, 'Ahousaht', via Demis, by user Nikaeter (2008) <https://en.wikipedia.org/wiki/Marktosis#/media/File:Ahousaht.png> [accessed 23 July 2021].

[35] The traditional territory includes Vargas, Meares and Bartlett islands. It was after European contact and other societal transformations that many Ahousaht moved to Maaqtusiis, Flores Island. See Maquinna, *Living on the Edge*, p. 20.
[36] Atleo, *Tsawalk*, p. 97; Maquinna, *Living on the Edge*, pp. 42-52.

The Ahousaht, like all other Nuu-chah-nulth nations, was governed by three principal *ha'wiih* until European colonisation. The Indian Act enforced in 1876 only acknowledged elected chiefs and councils. In response, the governing system not only consists of an elected chief and council, but also draws together the hereditary chiefs. These work together to manage all aspects of Ahousaht society – from land and ocean resources to health and education. The hereditary chiefs are responsible to the people and their *hahuulthi*, the ancestral territories and resources of that chief.[37] The *ha'wiih* and the *hahuulthi* are fundamental to Nuu-chah-nulth society and the events surrounding the gray whale harvested in 2000. Each of the three *ha'wiih* represent a lineage and preside over a 'house' to which Ahousaht members belong. This would traditionally have been a longhouse, or big house, home to the hereditary chief and his extended family.[38] At the time of writing, the hereditary chiefs are Lewis George Maquinna, Tlaakiishwia John Keitlah, and Ah-in-chut Shawn Atleo, the son of the scholar and previous chief Umeek Richard Atleo. Lewis George Maquinna is the Ahousaht *Tyee Ha'wilth* – the Head Chief. Reflecting the incorporation of different family lineages in the Ahousaht, the *ha'wiih* of the amalgamated nations also continue to be recognised: Uukwaqum James Swan for Manhousaht, Hanuquii Nate Charlie for Keltsmaht, and Toomoos Ron George for Qwatswiaht.[39] It is in Chief James Swan's *hahuulthi* that the gray whale was found entangled in 2000 because Sydney Inlet is the traditional territory of the Manhousaht. In order to begin to approach the significances of the entangled gray whale in Sydney Inlet and its traditional harvesting, butchering and consumption, it is vital to return to Ahousaht and Nuu-chah-nulth traditional whaling and the consequences of European

[37] Roy Haiyupis, quoted in Clayoquot Sound Scientific Panel, *First Nations' Perspectives Relating to Forest Practices Standards in Clayoquot Sound* (1995), p. 9; Maquinna, *Living on the Edge,* p. 12.
[38] Atleo, *Tsawalk*, pp. 1-2; Ronald Trosper, 'Northwest Coast Indigenous Institutions that Supported Resilience and Sustainability', *Ecological Economics*, 41 (2002), 329-344 (p. 333). Maquinna, *Living on the Edge*, p. 21.
[39] Maaqutusiis Hahoulthee Stewardship Society, 'Hawiih/Board of Directors', <https://www.mhssahousaht.ca/about-us> [accessed 15 July 2021]; Atleo, 'Ahousaht Law and Chinook Salmon', p. 13.

exploration, exploitation of gray whales and other marine species, and colonisation. It is to this complex of social, cultural and economic practices, all of them connected to whales and whaling, that I now turn.

Part 1: Whaling: A history and a heritage

In order to grasp the significance of the gray whale's death and the events surrounding it in the year 2000, I will begin by discussing the long, complex history of Nuu-chah-nulth whaling, considering both its ancient origins through to the impact of colonialism. Without this, it is not possible to understand the meanings nor the magnitude of what happened. The Ahousaht and other Nuu-chah-nulth whaling peoples have subsisted from ocean waters since 'time immemorial', harvesting fish, shellfish, marine mammals and more, with marine fecundity nourishing people with food and societies with culture, politics, economy, religion, rituals and spirituality.[40] Resources from the sea provided and continue to provide sustenance and ceremony, as well as exchange and trade across First Nations communities. The Nuu-chah-nulth scholar Charlotte Coté of the Nuu-chah-nulth Tseshaht Nation has written of the significance of whaling to Nuu-chah-nulth and Makah cultures for thousands of years. In *Spirits of Our Whaling Ancestors: Revitalizing Makah and Nuu-chah-nulth Traditions* (2012), Coté insists that 'whaling served important social, subsistence, and ritual functions that were at the core of our societies. Whaling held economic importance as well as spiritual significance and prestige for the Makah and Nuu-chah-nulth peoples'.[41] In Nuu-chah-nulth society, whaling was traditionally carried out exclusively by the hereditary chiefs, with strict

[40] Maquinna, *Living on the Edge*, pp. 41-61; Uu-a-thluk, 'The Case for Nuu-chah-nulth Fishing Rights', <https://uuathluk.ca/litigation/fisheries-litigation-trial/> [accessed 15 May 2021]; Coté, *Spirits of Our Whaling,* p. 20.
[41] Coté, *Spirits of Our Whaling,* p. 6.

familial lineages determining the whalers. The Atleo family is the whaling lineage in the Ahousaht, and Umeek Richard Atleo's great-grandfather Keesta was the last whaling chief.[42]

Whaling is rooted in cosmological beginnings, and whales and whaling sit at the heart of Nuu-chah-nulth origin stories. Stories are told across generations about *T'iick'in*, Thunderbird, a central supernatural figure in Nuu-chah-nulth cosmology, who used Lightning Serpent to capture whales. For example, Thunderbird was the first whale hunter and taught humans how to whale, and, in another story, Thunderbird saved the Nuu-chah-nulth people from starvation during a bad fishing year by bringing them a whale to feast on.[43] *T'iick'in* bringing a whale is retold to the present day in oral storytelling and material culture, for example in ceremonial curtains and boards, totem poles and basketry.[44] The story is recurringly depicted in more recent Nuu-chah-nulth visual works, such those created by Chuuchkamalthnii (Ḳi-ḳe-in, Haa'yuups, Ron Hamilton) of the Huupasacath First Nation [see figure 60] or Joe David of the Tla-o-qui-aht [see figure 61]. In 2004, the Ahousaht school in Maaqtusiis was painted with a giant mural of Thunderbird carrying a gray whale caught with Lightning Serpent, with educational aspects being represented by different figures.[45]

[42] Atleo, *Tsawalk,* pp. x, 77-81; Marlene Atleo, 'Strategies for Equities in Indigenous Education: A Canadian First Nations Case Study', in *Decolonising Indigenous Rights*, ed. by Adolfo de Oliveira (New York: Routledge, 2009), pp. 132-64 (p. 134).
[43] Coté, *Spirits of Our Whaling,* pp. 6, 9, 15-16; Atleo, p. 61.
[44] Coté, *Spirits of Our Whaling,* pp. 6, 9, 15-16, 106-112, 210; Marlene Atleo, 'Nuučaaṇuł Plants and Habitats as Reflected in Oral Traditions: Since Raven and Thunderbird Roamed', in *Plants, People and Places: The Roles of Ethnobotany and Ethnoecology in Indigenous Peoples' Land Rights in Canada and Beyond,* ed. by Nancy J. Turner (Montreal: McGill-Queens University Press, 2020), pp. 51-64 (p. 61).
[45] Rebecca Atleo, 'Ahousaht School Mural Unveiling', *Ha-Shilth-Sa*, 13 January 2005, p. 8.

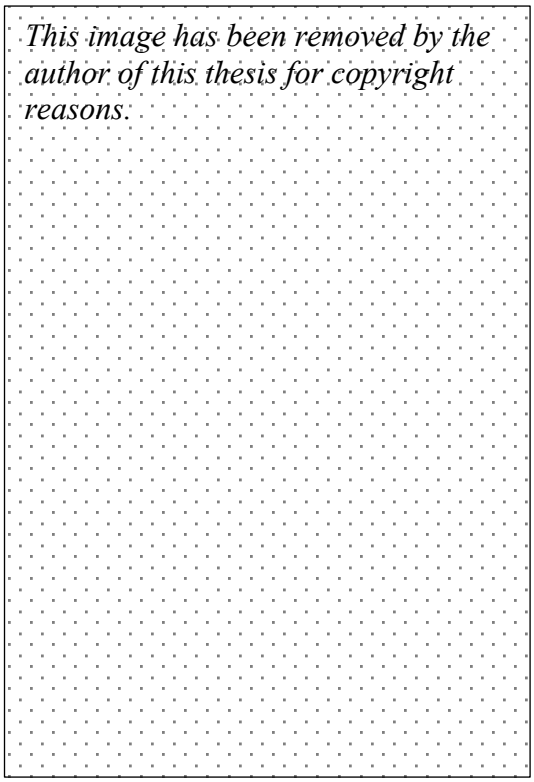

Figure 60. Chuuchkamalthnii (Ḳi-ḳe-in, Haa'yuups, Ron Hamilton), Huupasacath, *Kwatyaht and Teetskin* (*c*. 1977), print, ink and pencil on paper, University of British Columbia Museum of Anthropology, Vancouver.

The ancient story is also a contemporary one. The presence of Thunderbird is survivance, the continuation of culture and aliveness of ancient figures and stories. It consciously operates on what Doro Wiese has called 'untranslatable timescapes' and actively resists what Mark Rifkin describes as 'settler time'.[46] As Wiese writes, these alternative conceptions of time 'resist settler time and enact temporal notions in which past, present, and future are consistently shaping and shaped by interactions between spiritual, human, and animal entities'.[47] Creation stories or myths passed down through the oral tradition are relayed in the present to teach values and ethics, to help shape the perception of the world around us and offer guidance at each stage of life. According to Wiese, 'The timelessness of mythical stories is constituted because myths are, among other things, metanarratives. As

[46] Doro Wiese, 'Untranslatable Timescapes in James Welch's *Fools Crow* and the Deconstruction of Settler Time', *Transmotion,* 5 (2019), 56-75 (p. 56); Mark Rifkin, *Beyond Settler Time: Temporal Sovereignty and Indigenous Self- Determination* (Durham, NC: Duke University Press, 2017).
[47] Wiese, p. 56.

metanarratives, myths thus do not belong to an order of time'.[48] The untranslatability of Nuu-chah-nulth conceptions and experiences of time maintains cultural independence and autonomy. A rich array of rituals, protocols, tools, art, stories, songs, dances and ceremonies developed over the millennia of whaling has resulted in a distinct whaling culture among the Nuu-chah-nulth and the Makah – a culture which, as we will see, remains very much part of their respective societies today.

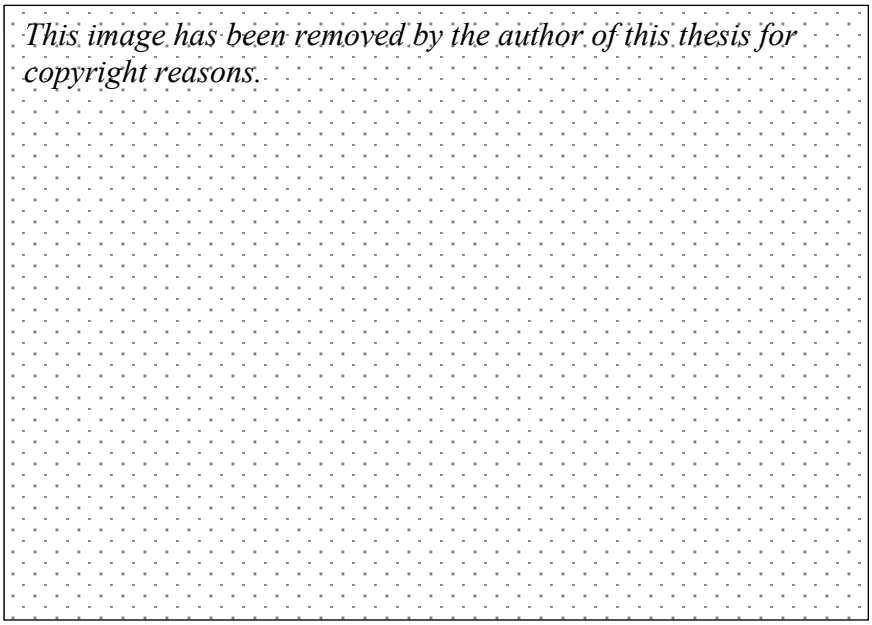

Figure 61. Joe David, Tla-o-qui-aht, *The Life of Meares Island* (1985), ink and pencil print on paper, University of British Columbia Museum of Anthropology, Vancouver.

Traditional whaling involved a strict process of preparation, adhering to key protocols, in order to ensure that the whaler was spiritually ready for the hunt and for communion with the whale's spirit. Umeek Richard Atleo has written, for example, of the various 'harmony' and 'prayer songs' that were carried out in advance over many months.[49] These would take place in the secret whaling shrines of the whaling chiefs, and Coté emphasises their absolute spiritual importance for physical and spiritual cleansing. Prayer songs that the *ha'wiih* performed before the hunt were secretly passed down from generation

[48] Wiese, p. 62.
[49] Atleo, *Tsawalk,* pp. x, 84.

to generation of whalers.[50] Whaling potlatches would also be held by the successful chiefs, with ceremonies, celebrations and feasts, and whale oil would be given away as a display of wealth.[51]

There is archaeological evidence that Nuu-chah-nulth whaling dates back several thousand years. For instance, there is evidence that the Huu-ay-aht village Kiixin was inhabited for thousands of years. Whalebones excavated from other Nuu-chah-nulth and Makah sites further support this chronology.[52] Drift whales have also been utilised by Nuu-chah-nulth peoples for thousands of years alongside pelagic whaling, and these two aspects of the human-gray whale relationship are strongly interlinked. The whaling shrines were not only used for preparation for the hunt, but whaling *ha'wiih* carried out rituals to draw drift whales ashore into their *hahuulthi*. A drift whale would belong to whichever chief on whose territory the animal was found.[53] These stranded whales were highly prized by Nuu-chah-nulth chiefs as they presented an influx of protein and oil as well as material for other resources if needed, and they also demonstrated chiefly prestige and spiritual power. The energy-rich body could save an entire village from starvation in a particularly difficult year. Even if the meat could not be saved because it was too decomposed, the blubber could be rendered down for oil.[54] If, in the Pacific Northwest, the Nuu-chah-nulth and the Makah are alone in maintaining an active whaling tradition, there is ethnographical and archaeological evidence that other coastal First Nations and Native American communities across the region scavenged beached whales, including the Coast Salish on eastern Vancouver Island, the west

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[50] Coté, *Spirits of Our Whaling,* p. 27.
[51] Coté, *Spirits of Our Whaling,* pp. 39.
[52] Kiixin, 'Explore the History and Culture of Kiixin Village', <https://kiixin.ca/our-story/> [accessed 19 June 2021]; McMillan, 'Whales and Whalers'; Gregory G. Monks, Alan D. McMillan and Denis E. St Claire, 'Nuu-Chah-Nulth Whaling: Archaeological Insights into Antiquity, Species Preferences, and Cultural Importance', *Arctic Anthropology*, 38 (2001), 60-81.
[53] Coté, *Spirits of Our Whaling*, p. 27; There appear to be some variations in communities as to who a drift whale would belong, or which specific part went to who. See Bridge, p. 91; Tseshaht First Nation, *Hishok – Tseshaht Whaling: One with the Whale Spirit* (Port Alberni: ALW Publishing, 2015), pp. 41-42.
[54] McMillan, 'Whales and Whalers', p. 232.

coast of mainland BC and coastal Washington, and the Haida on the more northerly island of Haida Gwaii.[55]

Archaeologists Gregory G. Monks, Alan D. McMillan and Denis E. St. Claire have noted that the drift whales evidenced in ethnographic sources are not only associated with natural causes of death, but were also the result of failed whaling attempts. They suggest that before the Nuu-chah-nulth developed 'full-scale whaling', it is probable that the number of stranded whales would have been much lower.[56] Archaeological excavations at Huu-ay-aht territories around Barkley Sound have revealed that the number of whale bones are a 'relatively consistent occurrence through the five-thousand-year archaeological record' and may point to 'lengthy and sustained interactions between humans and whales'. Without 'any discernible break in the archaeological record', Monks suggests that 'a long history of whale use, possibly with a gradual shift in emphasis between exploiting drift whales, opportunistic whaling, and the eventual development of the whaling technology'. When exactly this whaling technology emerged is hard to determine, but it seems unlikely that drift whales from natural mortality could make up the number of whale bones in the archaeological record.[57] Marlene Atleo, an Ahousaht scholar and the wife of Umeek Richard Atleo, has written that what set the Nuu-chah-nulth apart from other groups was that 'while others waited for drift whales to wash ashore, the first Umeek learned how to call in and catch whales'.[58] In Nuu-chah-nulth societies, drift whales were of powerful spiritual significance, and human remains were a part of the ceremonial practices drawing these animals ashore. According to Coté, in Nuu-chah-nulth and Makah societies, 'there was an understanding that the power an individual received from the spirit world could be transferred to another person after that

[55] McMillan, 'Whales and Whalers', p. 232.
[56] Monks, McMillan and St Claire, 'Nuu-Chah-Nulth Whaling', p. 65; McMillan, 'Whales and Whalers', p. 254.
[57] McMillan, 'Whales and Whalers', p. 65; Monks, McMillan and St Claire, 'Nuu-Chah-Nulth Whaling', p. 253.
[58] Atleo, 'Nuučaaʔnuł Plants', p. 60.

individual died'.[59] The power of dead whaling chiefs was both spiritual and embodied in their physical remains. The remains of the dead as well as carvings of human and nonhuman figures, including whales, were held in secret – and highly sacred – whaling shrines, *cheesum*.[60] For thousands of years, whaling knowledge was developed, shared and adapted by different individuals across these different communities.

Whaling practices and their associated cultural, ritual, spiritual and political significances developed across thousands of years and multiple generations, but Nuu-chah-nulth lifeways were violently interrupted by European contact and empire from the 1700s onwards. As Coté lays out in the aptly titled chapter 'Worldviews Collide' in *Spirits of Our Whaling Ancestors*, the first contact between Nuu-chah-nulth from the late eighteenth century onwards brought profoundly dissimilar ways of being and relating to the world into cataclysmic contact.[61] Initially, the Nuu-chah-nulth and Makah extended their trade to participate in the flourishing trans-Pacific trade in marine mammal parts using their skills and knowledge, including the lucrative sea otter pelt trade as well as whale oil and seal pelts. Eventually, as Nuu-chah-nulth chiefs and their people were progressively cut out of trade and the British Empire increasingly pursued colonisation in the region, Nuu-chah-nulth lifeways were gradually undermined.[62] Archaeologist Allan D. McMillan has emphasised that 'much of Nuu-chah-nulth culture came under intensified assault in the late nineteenth century' through the traumatic and often deadly colonial imposition of government bodies, missionaries and settlers.[63] Canadian federal government became the ruling authority, reserves were enforced, repeated and severe periods of disease brought by Europeans resulted

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[59] Coté, *Spirits of Our Whaling,* p. 2.
[60] *Washing of Tears*; Aldona Jonaitis, *The Yuquot Whalers' Shrine* (Seattle: University of Washington Press, 1999), p. 45; Coté, *Spirits of Our Whaling,* p. 27.
[61] Coté, 'Worldviews Collide: The Arrival of Mamalhn'i in Indian Territory', in *Spirits of Our Whaling,* pp. 42-68.
[62] Coté, *Spirits of Our Whaling,* pp. 59-61; Reid, pp. 164-209.
[63] McMillan, *Since the Time,* p. 215.

in major population declines, and Christian missions and conversions were imposed.[64] This is not limited to the Nuu-chah-nulth peoples. The Canadian government inflicted similar measures on First Nations, Inuit and Métis communities throughout colonised territories.[65]

Mission schools were implemented through a residential school system with compulsory attendance. These included two in Ahousaht territory, on Flores Island and Vargas Island.[66] The intentions of these institutions were to assimilate First Nations children into Euro-Canadian culture by severing the children from their families, communities, language, cultures and traditions, along with the places, plants and animals with which they shared their lives. Children experienced violence, neglect and mental abuse, as well as prohibition and humiliation of their culture. There was also widespread disease, the spread of which was exacerbated by the conditions. Many children died in these schools.[67] The intended consequence of the residential school system was to break the children's link, not only with the second person (parents, grandparents, Elders) or third person (parents passing on knowledge from someone else), but with what Vizenor calls the 'fourth person'. The fourth person, as previously noted (see Chapter 1), represents the continuity of memory and identity. Colonial agents wanted to break the chain of being within families and communities with shared language transmitting oral tradition.[68] While there was no concept of survivance

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[64] Coté, *Spirits of Our Whaling,* pp. 42-68; Charlotte Coté, '"Indigenizing" Food Sovereignty. Revitalizing Indigenous Food Practices and Ecological Knowledges in Canada and the United States', *Humanities, 5* (2016), <https://doi.org/10.3390/h5030057>; Bridge, pp. 105-116.
[65] Coté, '"Indigenizing" Food Sovereignty'.
[66] Indian Residential School History and Dialogue, 'Ahousaht (BC)', <https://collections.irshdc.ubc.ca/index.php/Detail/entities/40> [accessed 20 July 2021]; Indian Residential School History and Dialogue, 'Christie (BC)', <https://collections.irshdc.ubc.ca/index.php/Detail/entities/43> [accessed 20 July 2021].
[67] Nuu-chah-nulth Tribal Council, *Indian Residential Schools: The Nuu-chah-nulth Experience* (Port Alberni: Nuu-chah-nulth Tribal Council, 1996); Indian Residential School History and Dialogue, 'Ahousaht (BC); Indian Residential School History and Dialogue, 'Christie (BC)'; Jeff Corntassel, Chaw-win-is and T'lakwadzi, 'Indigenous Storytelling, Truth-Telling, and Community Approaches to Reconciliation', *ESC: English Studies in Canada,* 35 (2009), 137-159; Aboriginal Healing Foundation, *From Truth to Reconciliation: Transforming the Legacy of Residential Schools* (Ottawa: Aboriginal Healing Foundation, 2008); Aboriginal Healing Foundation, *Response, Responsibility, and Renewal: Canada's Truth and Reconciliation Journey* (Ottawa: Aboriginal Healing Foundation, 2010); Aboriginal Healing Foundation, *Cultivating Canada: Reconciliation through the Lens of Diversity* (Ottawa: Aboriginal Healing Foundation, 2011).
[68] Vizenor, 'Aesthetics of Survivance', pp. 2-3, 21.

for colonisers, their purpose was to destroy the relationship with the notional fourth person by stopping the children learning through the past and severing them from language as a vehicle for transmission. As has been proven all over the world, language and culture work together in a close bind. Aspects of culture exist in particular words and cannot be translated. Wiese argues that untranslatable words 'are remainders of cultural difference that remain unappropriable'.[69] The attempted destruction of cultural transmission was a fundamental part of genocide against First Nations peoples. The ramifications of this intergenerational trauma is still being experienced by survivors and their descendants today.[70]

Community and family structure were further degraded through the destruction of the longhouse. Extended families that had once traditionally lived together in large longhouses were forced into Eurocentric nuclear families.[71] When we visited the ancient whaling village Kiixin and the remnants of still standing longhouses as part of the course at Bamfield Marine Sciences Centre, our guides Stella Peters and Wisqii spoke of the importance of the longhouse and the fragmentation caused by the systematic dismantling of this particular way of living. Colonialism undermined the multigenerational, extended family as well as the position of the *ha'wiih*, eroding an entire lifeway.[72] Peter Webster recalls a childhood memory of his grandfather's longhouse in an emotive and deeply nostalgic passage: 'It must have measured sixty feet by forty feet … constructed of boards on the outside and lined on the inside … I recall on many occasions falling asleep beside my grandfather while listening to his stories of the past and to the songs that were handed down'.[73] Under the 1876 Indian Act and subsequent amendments, vital cultural traditions were outlawed, including the potlatch, a major ceremonial event for the Nuu-chah-nulth with multiple ramifications

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[69] Wiese, pp. 57, 5.
[70] Nuu-chah-nulth Tribal Council, *Indian Residential Schools.*
[71] Atleo, 'Change and Continuity', p. 178; Coté, *Spirits of Our Whaling,* p. 21.
[72] Coté, *Spirits of Our Whaling,* pp. 50-59.
[73] Peter Webster, As *Far as I Know: Reminiscences of an Ahousaht Elder* (Campbell River: Campbell River Museum and Archives, 1983), p. 18.

including marking births, marriage, successful whaling, and status recognition and which involves gift giving and feasting. Feasting and cultural expressions like dancing and singing were also banned between 1884 and 1951. Communities resisted the ban and continued to hold potlatches in secret. People were arrested for attending potlatches or other gatherings and dispatched to prison.[74] Reserves were also enforced, restricting the territories of different nations, including the allocation of limited hunting and fishing reserves.[75] Coté underscores the devastating and manifold impacts of European colonisation: 'From the mid-1800s to the early 1900s, the Makah and Nuu-chah-nulth societies underwent major economic, political, social, and spiritual transformations that weakened our traditions and destabilized our cultures. As a result, our entire social fabric began to unravel'.[76]

Many Nuu-chah-nulth turned to Euro-Canadian commercial maritime industries for livelihood, including commercial sealing and fishing operations, working on schooners and in canneries. The Nuu-chah-nulth and Makah adapted to the presence of the new cash-based economy and its values in the region. The application of their traditional subsistence hunting to commercial operations helped stave off the worst of effects of assimilation until the consequential collapse of targeted marine animal populations in the twentieth century.[77] Commercial whaling in the Pacific Northwest by Europeans and Americans began in the nineteenth century, ushering in an alternative positioning of humans to whales in this region to the Nuu-chah-nulth worldview. Whales were perceived by western societies as resources to be unremittingly extracted from the ocean, dragged onto shore to be rendered into

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[74] Atleo, *Principles of Tsawalk*, pp. 108, 116, 137; Ruth Kirk, *Tradition & Change on the Northwest Coast: The Makah, Nuu-Chah-Nulth, Southern Kwakiutl, and Nuxalk* (Seattle: University of Washington Press, 1986), pp. 32, 236.

[75] The Canadian federal government displaced the Nuu-chah-nulth from their fisheries and, according to the Nuu-chah-nulth Tribal Council's aquatic resource management department, *Uu-a-thluk* (which translates as 'taking care of'), 'allocating small fishing stations as reserves, while denying the larger land claims of the Nations'. See Uu-a-thluk.

[76] Coté, *Spirits of Our Whaling,* p. 6.

[77] Coté, *Spirits of Our Whaling,* pp. 59-61; Atleo, 'Change and Continuity', pp. 209-214.

commercial products for maximum profit.[78] The Nuu-chah-nulth whaling tradition involved preparation for many months for a whale hunt and there are accounts of the first Umeek, the whaling ancestor of Umeek Richard Atleo, spending years preparing before a whaling quest.[79] This lengthier process and the fact that only certain individuals could carry out whaling, combined with the hunting method and the further fact that whales were killed for subsistence, inevitably limited the number of whales that were killed each year by Nuu-chah-nulth whalers.[80]

By the 1860s, gray whale populations were already low as a result of intense whaling in Baja California. Late nineteenth-century American whaling enterprises that ventured into Pacific Northwest waters likely saw to it that migrating gray whales would be slaughtered alongside other whale species in the region.[81] The advent of modern industrial whaling in the region in the early 1900s then upped the ante by introducing a new, chillingly mechanised form of pursuing whales.[82] By this point, numbers of gray whales were very low and they were not a significant part of the catch. In 1905, the Pacific Whaling Company was founded and industrial shore whaling in the region was propelled by four major whaling stations on Vancouver Island, including one of the most productive stations in BC, Coal Harbour [see figures 62 and 64]. [83] In the *Victoria Colonist*, it was reported that in 1908 the Pacific

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[78] 'The Work of the Whalers', *Victoria Daily Colonist*, 15 November 1899; Bamfield Historical Archive, R. Bruce Scott, 'Pages from the Past', Extracts from Port Alberni Newspapers (1983), *Alberti Pioneer News*, 2 July 1910, p. 13, binder 20 (1980-1989).
[79] Maquinna, *Living on the Edge,* p. 53; 'Clayoquot Sound'*, Striking Balance,* TVOntario, 26 June 2021.
[80] Nancy J. Turner and Darcy L. Mathews, 'Ocean Cultures: Northwest Coast Ecosystems and Indigenous Management Systems', in *Conservation for the Anthropocene Ocean: Interdisciplinary Science in Support of Nature and People*, ed. by Phillip S. Levin and Melissa R. Poe (London: Academic Press, 2017), pp. 169-206 (p. 178); Atleo, *Tsawalk*, p. 84.
[81] Webb, p. xvi.
[82] L. M. Nichol and others, 'British Columbia Commercial Whaling Catch Data 1908 to 1967: A Detailed Description of the B.C. Historical Whaling Database'*, Canadian Technical Report of Fisheries and Aquatic Sciences,* 2396 (2002); E. J. Gregr and others, 'Migration and Population Structure of Northeastern Pacific Whales off Coastal British Columbia: An Analysis of Commercial Whaling Records from 1908-1967', *Marine Mammal Science,* 16 (2000), 699-727; Webb, pp. xiv, xv; Anthony Dickinson and Chesley Sanger, *Twentieth-Century Shore-Station Whaling in Newfoundland and Labrador* (Montreal: McGill-Queen's University Press, 2005), pp. 102-105; Coté, *Spirits of our Whaling,* pp. 61-65; Busch, pp. 96-97.
[83] A number of shore whaling stations were established on Vancouver Island, including Pipers (Pages) Lagoon at Nanaimo, Sechart, Kyuquot and Coal Harbour. Several stations closed by the 1920s because of low numbers

Whaling Company had taken 500 whales between April and August from their coastal whaling operations at Barkley Sound and Kyuquot stations, with three to five whales brought ashore daily.[84] This number is more shocking when compared to Nuu-chah-nulth whalers, who might only catch this many whales in a season.[85] Whales were no longer caught and cut up on these beaches to nourish the people who lived here and subsisted off the sea. Like canned herring or salmon, they were extracted from local environments and communities, split up, and exported to other parts of the world.[86]

of whales. The last whaling station to continue operating was at Coal Harbour which closed in 1967 when whaling was banned. See Gregr and others; Nichol and others; Dickinson and Sanger, pp. 102-105; Coté, *Spirits of Our Whaling,* pp. 61-65; Busch, pp. 96-97. In the 1953 a permit was authorised to take 10 gray whales for scientific research and these were caught at Coal Harbour station: San Diego Natural History Museum Archive, Gordon Pike, 'Preliminary Report on Gray Whales Taken at the Coal Harbour Whaling Station, April, 1953', 26 April 1953, *The Gilmore Collection*, box 3, folder 3/2.

[84] 'Whaling in Vancouver Island Waters', *Victoria Colonist,* 13 December 1908, p. 15.

[85] Coté, *Spirits of Our Whaling,* p. 6.

[86] 'Whaling in Vancouver Island Waters'.

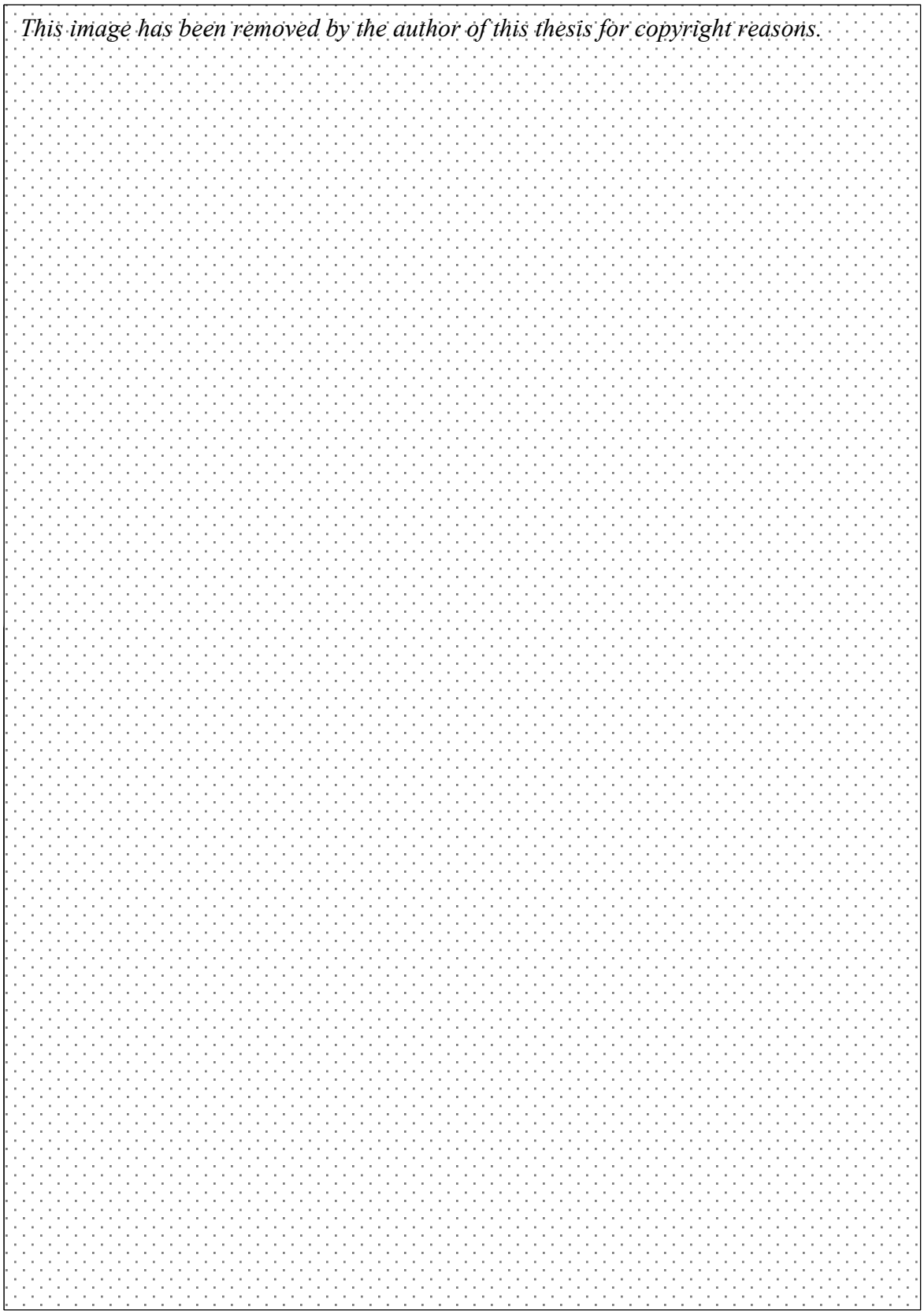

Figure 62. Whale at Coal Harbour whaling station (c. 1950). Source: Vancouver Maritime Museum, *VMM Photograph Collection*, Whaling, Whaling: Coal Harbour Station, Vancouver Island, item number: LM2018.999.016, <https://www.vmmcollections.com/Detail/objects/8746> [accessed 30 July 2021].

According to Ahousaht scholar Clifford Atleo, 'there has been no confirmation that any Nuu-chah-nulth people joined the industrial whaling fleets, likely because whaling was the sole privilege/responsibility of the *ha'wiih*'. However, there are sources that suggest that some may have worked at the shore whaling stations on Vancouver Island, which processed the whale carcasses.[87] Although commercial operations had only taken hold a few years earlier, by 1908 it was already understood by some that whale species in this region were heading for extinction.[88] In 1925, a newspaper that reported catches referred to whales caught simply by the commercial product they contained: '130 oil-bearing mammals' – a stark contrast with the cosmos-bearing whale of the Nuu-chah-nulth.[89] In just over 60 years, around 25,000 whales were killed and processed through stations in British Columbia.[90] Fundamentally different in purpose and in scale, commercial whaling devastated the Nuu-chah-nulth whaling tradition, with the practice ceasing in the early twentieth century [figures 63 and 66]. The decline in whaling as a result of the pressure of western commercial whaling had a deep impact on the Nuu-chah-nulth and Makah, as 'the ritual, spiritual, and social elements that were central to this tradition also began to diminish'.[91] The demise of Nuu-chah-nulth whaling was part of the wider assault on and degradation of traditional lifeways. As Coté asserts, 'the interdependency of each aspect of our culture was challenged' through waves of epidemics, new economies, the residential school system, and the banning of traditions. This triggered large-scale, transformations across these societies as 'a chain

[87] Atleo, 'Change and Continuity', p. 43; 'Whaling in Vancouver Island Waters'.
[88] Just a few years after the establishment of modern shore whaling in the region, a 1908 newspaper article describes how a Professor Prince, Dominion Fisheries Commissioner, 'explained that the killing of these creatures in large numbers in the southern and northern areas of the … Pacific promised their extermination at no distant date, and it was the desire to obtain a complete record of them before such an interesting form of life ceased to exist'. See 'Whaling in Vancouver Island Waters'.
[89] 'Intrepid Whalers Catch 130 Oil-bearing Mammals', *Daily Colonist*, 11 July 1925, p. 6; Adamson.
[90] Gregr and others, p. 700; Nichol and others, p. 1.
[91] Charlotte Coté, 'Food Sovereignty, Food Hegemony, and the Revitalization of Indigenous Whaling Practices', in *The World of Indigenous North America,* ed. by Robert Warrior (New York: Routledge, 2015), (pp. 239-262) p. 246.

reaction that undermined the complex social, economic, religious, and subsistence network and ultimately led to the demise of Native whaling practices'.[92]

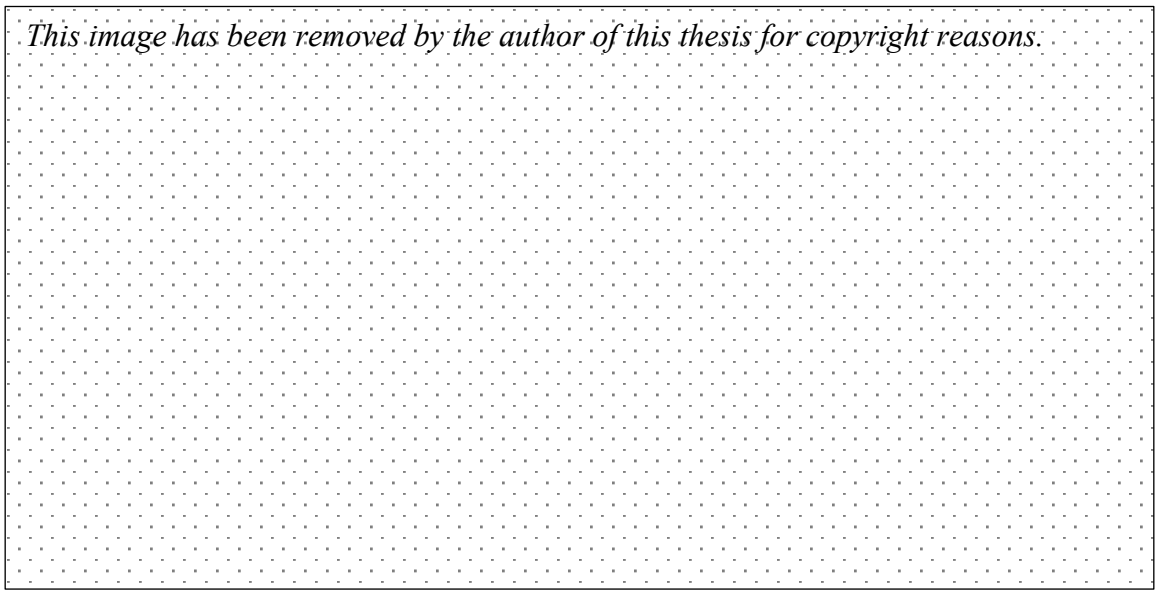

Figure 63. One of the last Tla-o-qui-aht traditional whale hunts in the early twentieth century (c. 1905). The Tla-o-qui-aht are one of the Nuu-chah-nulth Nations in Clayoquot Sound. Source: Mount Angel Abbey Library via Know BC, 'Chapter Two: The People of the Sound', <https://www.knowbc.com/knowbc/Books/Tofino-and-Clayoquot-Sound-A-History/Contents/Chapter-Two> [accessed 29 July 2021].

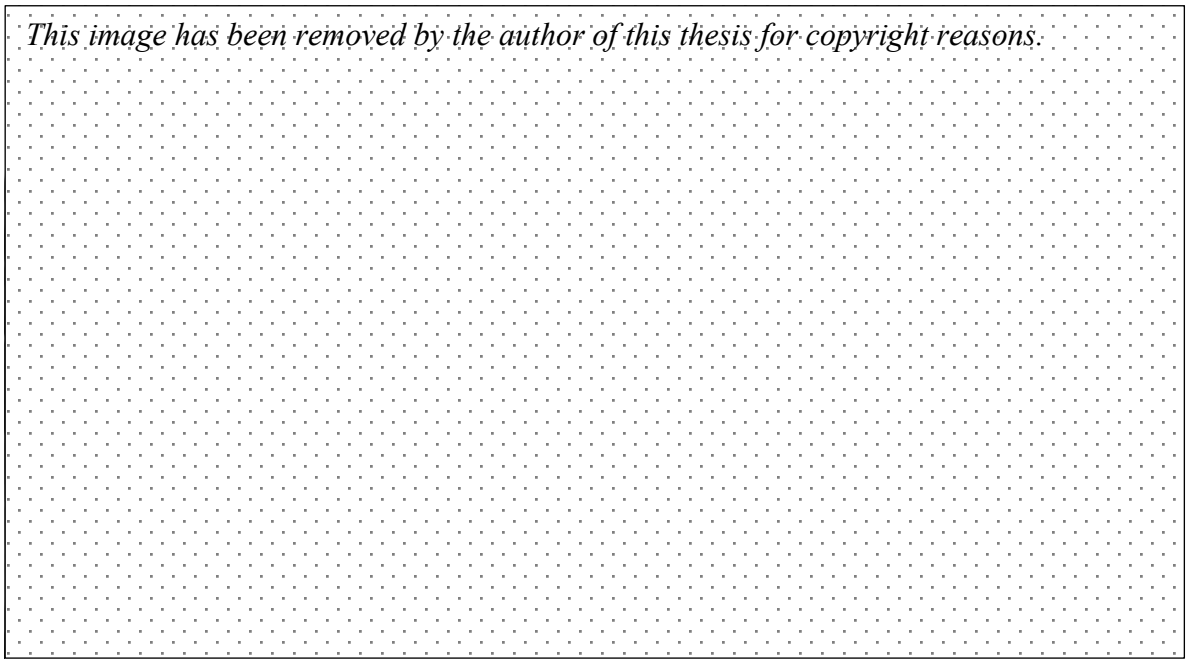

Figure 64. Whale at Coal Harbour station (c. 1960). Source: Vancouver Maritime Museum, *VMM Photograph Collection*, Whaling, Whaling: Coal Harbour Station, Vancouver Island, item number: LM2018.999.012, <https://www.vmmcollections.com/Detail/objects/8742> [accessed 30 July 2021].

[92] Coté, *Spirits of Our Whaling,* p. 42.

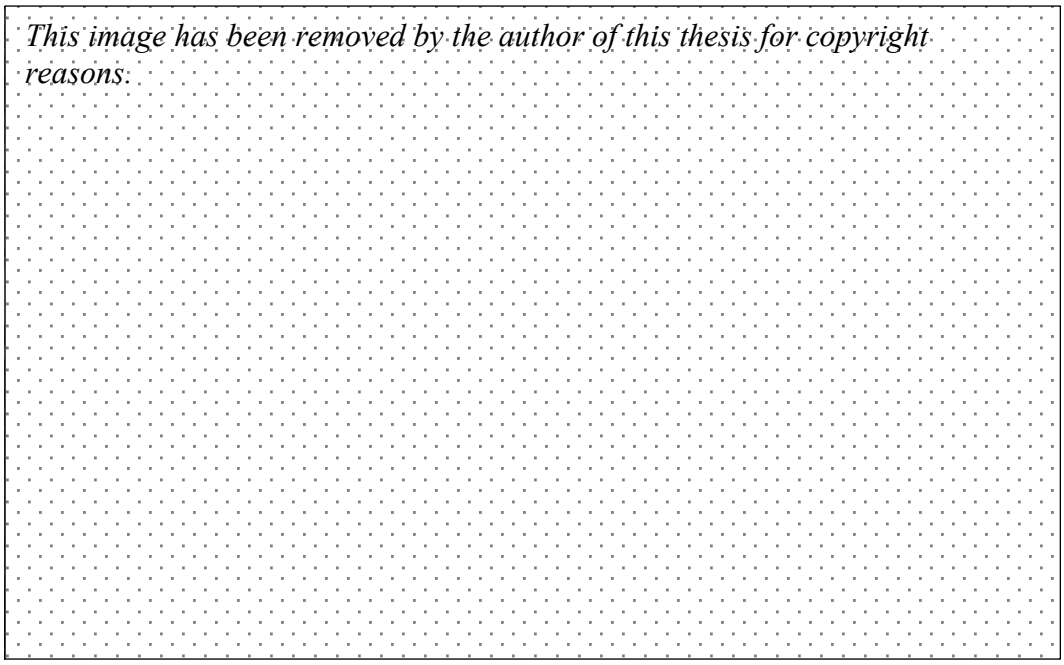

Figure 65. Whale jaw, baleen showing, Nanaimo, BC. Source: Vancouver Maritime Museum, *VMM Photograph Collection*, Whaling, Whaling: Miscellaneous, item number: 18557, <https://www.vmmcollections.com/Detail/objects/12348> [accessed 30 July 2021].

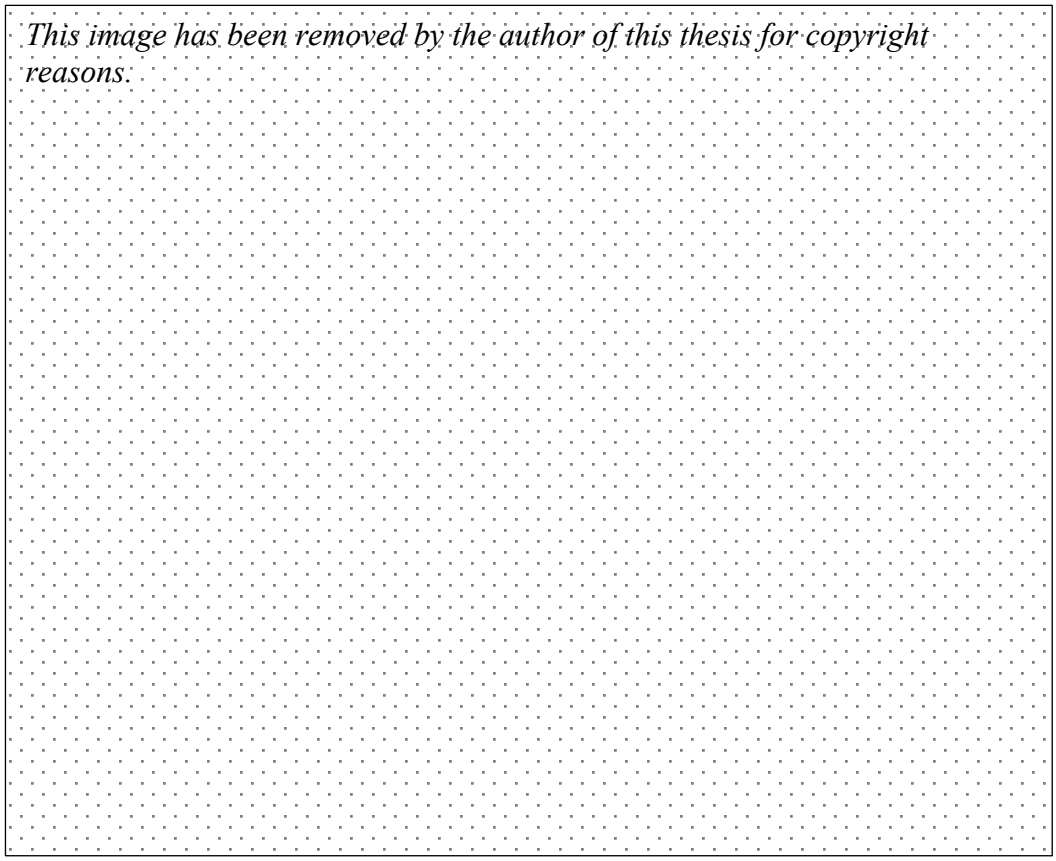

Figure 66. Makah cutting up a gray whale on the beach, Neah Bay, photographed by Asahel Curtis (1910). Source: University of Washington Libraries, Special Collections, *Asahel Curtis Collection*, A. Curtis 18752; NA 721, <https://digitalcollections.lib.washington.edu/digital/collection/curtis/id/964> [accessed 29 July 2021].

In the early twentieth century, commercial whaling of gray whales petered out because it was no longer viable, and this also signalled the end of Nuu-chah-nulth and Makah whaling. In the 1930s, the international ban on hunting gray whales was also introduced.[93] This period represents the first time in at least four to five thousand years that gray whales were no longer the target of any form of human hunting – a major disjuncture in the human and whale history of this region. For centuries, significantly longer in the case of the Nuu-chah-nulth, gray whales had suffered hunting not just by European and North American commercial whalers, but also traditional subsistence ones. It is important to understand that Nuu-chah-nulth whalers' methods were in some respects no less violent than those of their European and North American counterparts, and they could result in drawn-out and excruciatingly painful deaths. Chief Earl George Maquinna, a *Tyee Ha'wilth* of Ahousaht, describes a famous whale hunt by Keesta (Kee-sta). 'The whale took the thrust of the spear into the heart', he says, but 'that was not the end of the kill':

> The final act was executed by knife and lance thrust into the area that let all the blood out through the throat ... And the whale, gasping for air, turned over, and when it turned over it was fighting for air because the spear was in the heart and the throat was split open. … They plugged up the hole inside the throat so that kept even more air in other parts of the whale.[94]

This is undoubtedly a slow and agonising end for the animal. It would take hours for the whale to die, sometimes even days to do so. Chief Maquinna also recounts that there are stories of other whalers launching themselves onto whales in order to plug the blowhole with a rock, which would result in a quicker kill.[95] Whaling, in all its temporal and geographical forms, is a painful and violent experience for whales. Shifting the perspective to the

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[93] Dedina, pp. 48-49.
[94] Maquinna, *Living on the Edge*, p. 59.
[95] Maquinna, *Living on the Edge,* 59; Bamfield Historical Archive, W. E. Banfield, 'Whale Killing by the Netinett [Nitinaht] Indians', *Victoria Gazette,* 19 August 1958, box pre-1949, file no. 14, pp. 8-10.

experience of the species in Pacific Northwest marine space for several millennia, the 1930s can also be framed as a major moment in gray whale existence in so far as injury and death from any type of whaling were no longer a threat.[96] While Nuu-chah-nulth and Makah whaling did not present an existential threat to gray whales on a species level and it was the arrival of Euro-American and Euro-Canadian whaling that drove the almost total disappearance of these animals, it is worth acknowledging this moment. While the gray whale was still an animal conceived through the different cultures of whaling in both Nuu-chah-nulth and Euro-American mindsets, the species (or what was left of it) was not threatened with hunts.

Not only were gray whales (and, later, humpbacks) largely absent from these waters and whaling no longer practised, but a vast array of cultural objects belonging to the Nuu-chah-nulth were taken by European, Canadian and American anthropologists, ethnographers and missionaries.[97] This includes those related to whaling like harpoons, floats, drums, hats and canoes. In the early twentieth century, a number of sacred Nuu-chah-nulth whaling shrines were disturbed and stolen.[98] Human remains, carved figures and, in the case of the Yuquot Whaling Shrine, an entire structure and its contents, were removed and deposited in museums. In 1904, the Yuquot Whaling Shrine of the Mowachaht/Muchalaht, a Nuu-chah-nulth nation further north, was removed from their territory and translocated to the American Natural History Museum in New York. The shrine building along with human remains,

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[96] Claire Jean Kim raises the perspective of gray whales themselves, asking, 'Do whales, as sentient and intelligent creatures with life stories and familial and social worlds of their own, prefer being alive to being chased, harpooned, shot, and killed?'. See Claire Jean Kim*, Dangerous Crossings: Race, Species, and Nature in a Multicultural Age* (New York: Cambridge University Press, 2015), p. 245; Nagel.

[97] Umeek E. Richard Atleo, 'Policy Development for Museums: A First Nations Perspective', *BC Studies,* 89 (1991), 48-64; Andrea Laforet, 'Objects and Knowledge: Early Accounts from Ethnographers, and Their Written Records and Collecting Practices, ca. 1880-1930', in *Native Art of the Northwest Coast: A History of Changing Ideas,* ed. by Charlotte Townsend-Gault, Jennifer Kramer and Ḵi-ḵe-in (Vancouver: University of British Columbia Press, 2013), pp. 128-65.

[98] Eric Plummer, 'Whalers' Remains Come Home to Ahousaht', *Ha-Shilth-Sa,* 19 November 2018, <https://hashilthsa.com/news/2018-11-19/whalers-remains-come-home-ahousaht> [accessed 8 May 2021]; Jonaitis.

human wooden figures, and four whale figures that had been contained within it were all taken from Yuquot (the ironically named Friendly Cove) and expropriated from the chiefs and people for whom it held enormous sacred and spiritual significance.[99] What was once a deeply revered secret, with supremely powerful and supernatural meaning and accessible only to the whaling lineage, was suddenly seen and touched by museum staff, on show to the world through photographs and a replica model, while even some original figures were placed on public display. As Aldona Jonaitis writes, each of these new contexts into which the extracted whalers' shrine (or parts of it) came to be placed was 'incapable of communicating the rich Nuu-chah-nulth whaling tradition from which they emerged'.[100] There is an 'opacity of meaning' to such artefacts for those not from the community;[101] indeed, Nuu-chah-nulth material culture, oral histories and cosmologies remain fundamentally untranslatable to those from outside. An entire belief system and knowledge framework shapes 'the inner world' of those within the community and their relationship to an object.[102]

This 'opacity of meaning' contrasts powerfully with the clarity of the descendants of those that originally created and used the Yuquot whaling shrine, which is filmed in the 1994 documentary film *The Washing of Tears.* The film powerfully explores the displacement of the Yuquot Whaling Shrine and Mowachaht/Muchalaht cultural revival in the late twentieth century. *Ha'wilth* Jerry Jack, who features prominently in the documentary, explains that whaling chiefs would tell one another to use their bodily remains to entice whales: 'When I die, I want you to … use me for *cheesum.* I'll help you reach the creator to give you the strength that you need to get that whale'. *Cheesum* is 'whaling magic' and Chief Jack

[99] *Washing of Tears*; Jonaitis.
[100] Jonaitis, p. 14.
[101] Jonaitis, p. 10.
[102] Atleo, 'Policy Development', p. 52; Chuchkamanthlii (Ḵi-ḳe-in), 'Art for Whose Sake?', in *Native Art of the Northwest Coast,* ed. by Townsend-Gault, Kramer and Ḵi-ḳe-in, pp. 677-719 (p. 685).

explains that while in 'New York, they call it the whalers' shrine, … to us, it's *cheesum*'. [103] *Cheesum* – or whaling magic – is one and the same as the whaling shrine. As Chief Jack says, '*Cheesum* sounds like it's pulling, it's *pulling* something'.[104] The word evokes a supernatural pull on the whale, implying a communal relationship with it. An untranslatable word, rooted in Nuu-chah-nulth spirituality and cosmology, it has huge symbolic power.

If whaling is at the core of Nuu-chah-nulth societies, then so too are the whaling shrines. *Ha'wilth* Jack delivers an unwavering statement about the importance of the shrine and the impact of its removal in *The Washing of the Tears*:

> It was a part of us, in the Mowachaht Nation, it represented our *ha'wiih*, it represented our *hahuulthi*, it represented a lot of things. It represented our strength, that's what *cheesum* meant to us and I think that when that *cheesum* was taken away from us, it was a real shocker for our people. It took away our spirituality.[105]

With the forested island where the shrine once stood appearing in the background, Chief Jack calls out passionately for its return: 'It's got to go back where it belongs, it's got to go back where it belongs' [figure 67].[106] Since 1983, Elders have been leading the ongoing movement to return the shrine to Yuquot.[107] When Chief Jack looks at the empty space on the island, it continues to retain and transmit the spiritual power of the shrine. Even though the shrine and its contents are physically thousands of miles away, the spiritual presence endures. This is survivance. Similarly, while the physical practice of whaling may now be absent, its spiritual significance lingers, as channelled through the treatment of the gray whale that died in Sydney Inlet, but lives on in Ahousaht people's lives.

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[103] *Washing of Tears*; Jonaitis, pp. 45-48; Coté, *Spirits of Our Whaling,* pp. 27-28.
[104] *Washing of Tears*.
[105] *Washing of the Tears.*
[106] *Washing of the Tears.*
[107] Jonaitis, p. 16; Coté, *Spirits of Our Whaling,* pp. 143-43.

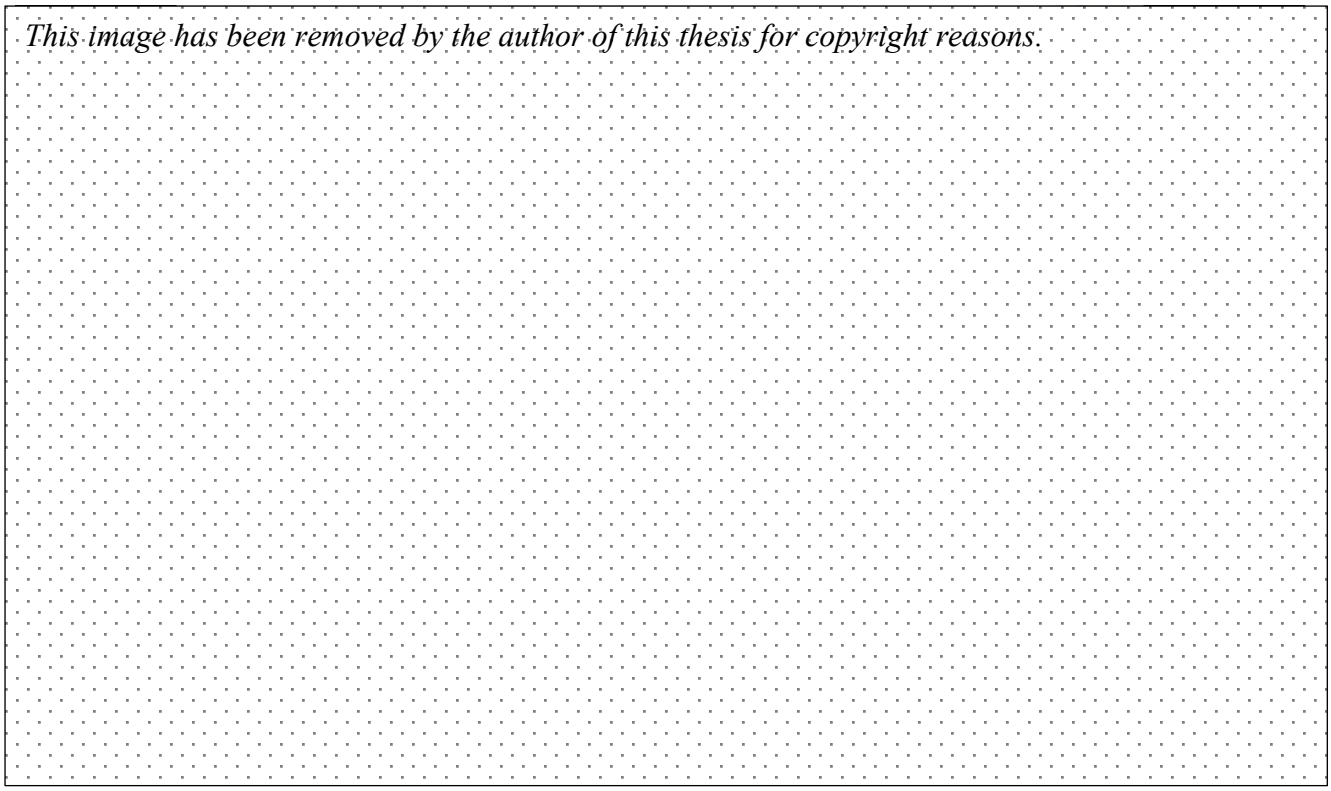

Figure 67. Chief Jerry Jack points to the island where the Whaler's Shrine, *Cheesum*, once stood. Still from *The Washing of Tears.*

In *The Washing of Tears*, a group of Mowachaht/Muchalaht, including Chief Jerry Jack and Elders Terry and Ray Williams, the last inhabitants of Yuquot, attend the shrine in its New York location. The objects are laid out on a table in the storeroom area, a bleak and sterile backdrop to the contents from the Whaling Shrine. The group perform a prayer chant and connect through their senses of sight, touch, smell and taste, reconfirming the power of the *cheesum* [see figures 68, 69, 70, 71).

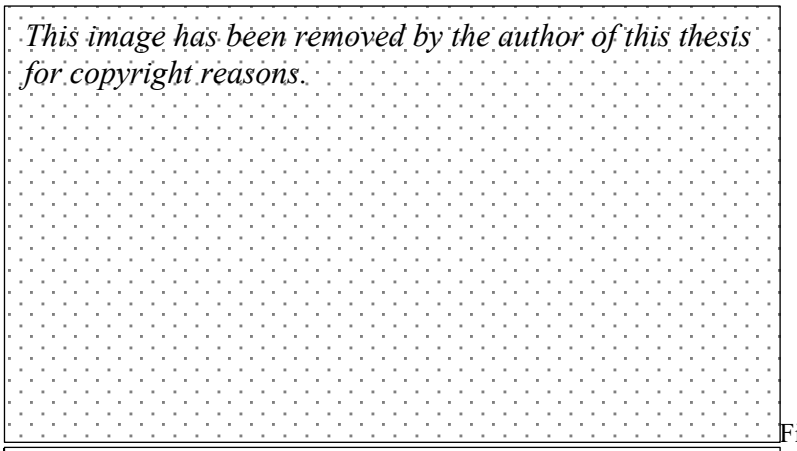

Figure 68

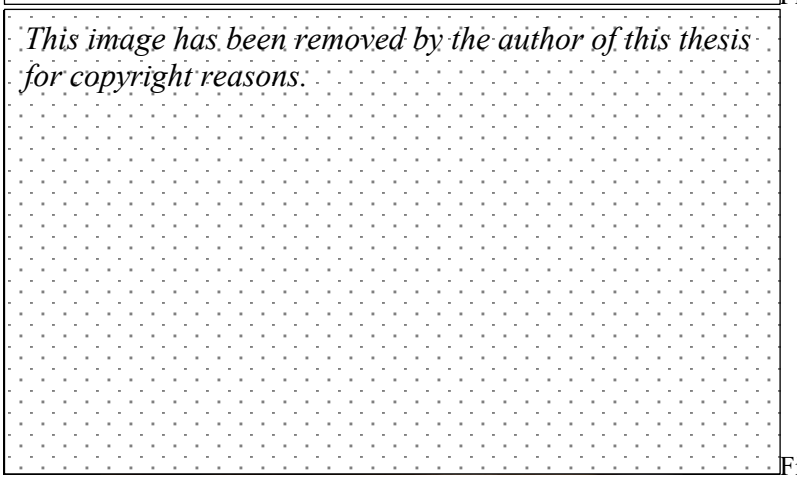

Figure 69

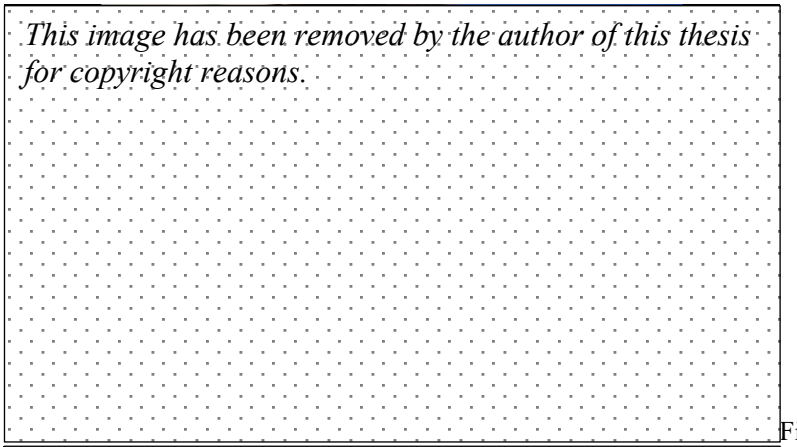

Figure 70

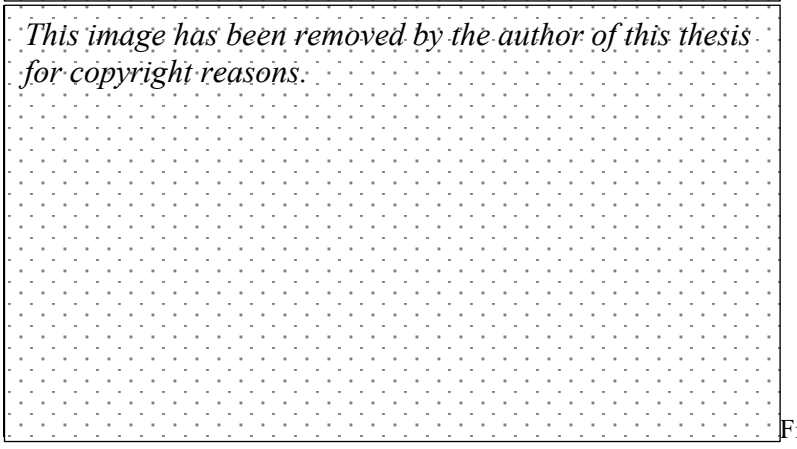

Figure 71

Figures 68-71. The group of Mowachaht/Muchalaht visiting the shrine in the Museum storeroom, engaging through sight, sound, taste, touch and smell. Stills from *The Washing of Tears.*

One man strokes the sculpture of the whale, moving his hands across the whole body and carefully over the dorsal fin or saddle area [see figure 72]. Those external to the community see objects they cannot understand, but that hint towards the culture. The descendants perceive and understand meaning because of their internal belief and knowledge frameworks; also because of the abundance of reference points – stories from parents and grandparents, the fourth voice, the hereditary chief system, the island, whaling items, the ocean itself. Insight is not total because these items were taken away for many years, and were also secret in the community. Nonetheless, the descendants have a means of communicating through the items and of reclaiming the whaling past, which is enacted through the re-establishing of continuity and connection with the whaling shrine.

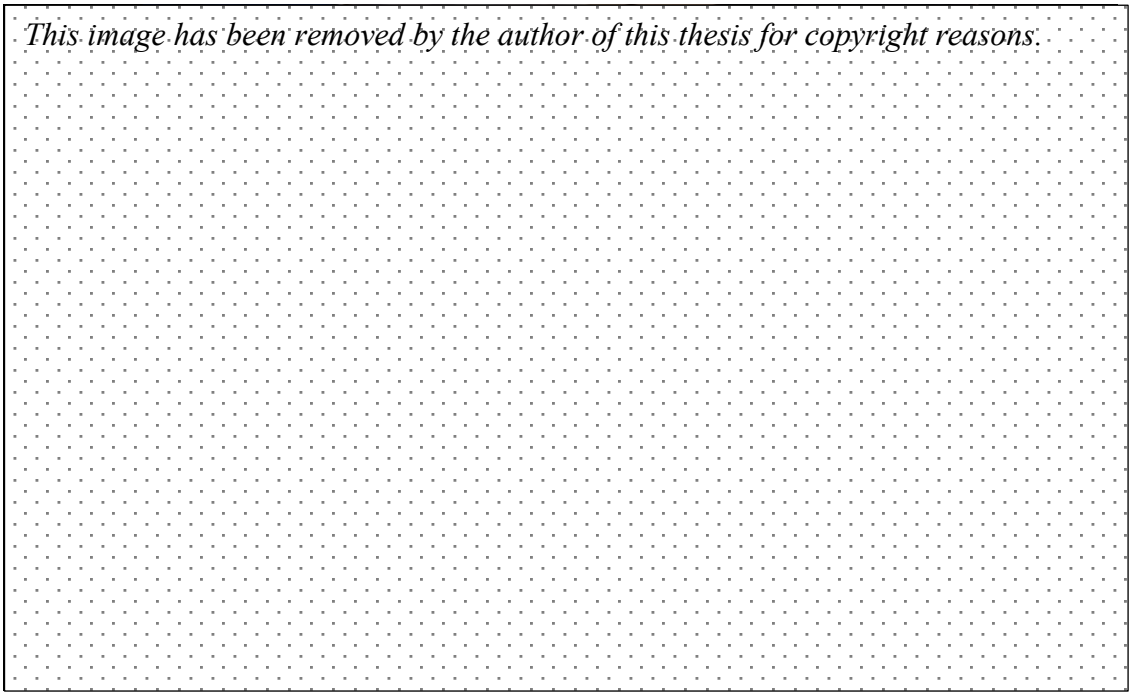

Figure 72. Connecting with the sculpture of the whale. Still from *The Washing of Tears.*

Mowachaht/Muchalaht Chief Max Savey reflects on his own experience of visiting the shrine: ‘That New York Trip was something else to me. Right away, I could feel the power

that was there. I never experienced anything like it in my life'. Confronted by the figures and human skulls from the shrine, and other cultural objects associated with whaling, he says:

> For some reason, I don't know what made me do it, but I started to pray. I'm not a very religious person but then and there I started to pray in my own language inside of me. Just deep within, like I asked for the strength these people had that used that shrine. I asked for the knowledge, the self-sacrifice and all the things that go with it. All the things these people had to do in order to get that whale out there.[108]

The cessation of whaling did not sever the connection with whaling ancestors, whaling traditions, or their spiritual aspects. We can see this in the response of the Mowachaht/ Muchalaht in the storeroom when encountering the figures from the whaling shrine, but equally in the response of the Ahousaht community to the whale entangled in their territory, which enabled them to reconnect with their traditional cultural practices and spiritual beliefs.

Ahousaht chief and scholar Umeek Richard Atleo states wryly that 'If First Nations people were not highly valued as humans their artifacts were highly valued as scientific curiosities'.[109] His work discusses how this taking and collecting of objects for museum collections was a response to the perception, or rather *misconception*, of a disappearing culture – or, in Atleo's uncompromising words, 'the notion of a dying race'. Atleo quotes Douglas Cole: 'Anthropological collecting had special impetus behind it: the realization that time was essential, that civilization was everywhere pushing the primitive to the wall, destroying the material culture and even extinguishing the native stock itself'.[110] Collecting of this kind represents the objectification of a people, fixes a culture in a particular time, and perpetuates a false idea of cultural inertia. However, as Atleo further asserts, the people and their culture did not 'disappear', the chain with the fourth person was not severed, and cultural transmission endured. In the 1973 documentary *Behind the Masks,* the anthropologist

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[108] *Washing of Tears;* Coté, *Spirits of Our Whaling,* pp. 143.
[109] Atleo, 'Policy Development', p. 51.
[110] Douglas Cole, *Captured Heritage: The Scramble for Northwest Coast Artifacts* (Vancouver: University of British Columbia Press, 1985), p. 287; Atleo, 'Policy Development', p. 49.

Claude Lévi-Strauss and a companion travel to Vancouver Island. Lévi-Strauss meets a young Chuuchkamalthnii (aka Ḳi-ḳe-in and Ron Hamilton) in Victoria during a wood carving apprenticeship he is undertaking.[111] Lévi-Strauss repeatedly questions differences in the way Chuuchkamalthnii has carved certain masks or totem poles in comparison to older ones or ones from the Kwakiutl people of Northern Vancouver Island. His commitment to theory is contrasted with the Huupacasath creator's lived knowledge and experience. Chuuchkamalthnii politely but firmly responds to his points and questions, putting the reductive theorising of experts into sharp relief. He is then questioned by Lévi-Strauss's companion about whether the variations in his work, for example, in a carving of Lightning Serpent, 'betray' older generations, but Chuuchkamalthnii replies, 'I think they'd be pleased' as these are features of Lightening Serpent he saw growing up at home. He is questioned again: 'You don't see that art should tell all over again the same stories?', to which he responds, 'It's good to see people moving, you know, otherwise we'd just be imitating, you know, spend the rest of our life imitating. We don't live the same as we did, you know, 200 years ago and if we don't live the same, I don't think our art should be the same'.[112] Chuuchkamalthnii's statement embodies survivance as an 'active sense of presence' that goes beyond imitation and repetition.[113] Change, variability and adaptation in human cultures come about in response to the experiences and force of an individual or collective. Nuu-chah-nulth culture does not exist only in museum collections. It is passed on and enacted in Nuu-chah-nulth societies, and the response to the dead gray whale in Sydney Inlet in 2000 is a striking example of this *movement* of people and tradition.

In a similar manner, Chuuchkamanthli's poem 'Box of Darkness' is a powerful condemnation of settler-colonial institutions like museums that have fragmented First

[111] *Behind the Masks,* dir. by Tom Shandel (National Film Board of Canada, 1973).
[112] *Behind the Masks.*
[113] Vizenor, *Manifest Manners,* p. vii.

Nations objects and refashioned discourses and interpretations around them: 'These are not the friends of "The Indian"; / These are The Friends of the Museum. / These are the golddiggers, gravediggers. / These are the new colonists.'[114] As is increasingly well known, repatriation is a major issue for these communities and First Nations communities have been involved in repatriation efforts for several decades. Umeek Richard Atleo understands repatriation as the 'child of self-determination and cultural revival', maintaining that the 'right to self-identify, or the right to possess and name one's own images, is a driving force for cultural revival'.[115] He argues further that while 'the dominant society owns the concept of museology, it is First Nations people who own the heritage represented in the relevant collections. There is no ambiguity about the meaning of ownership when it is defined by source and creation'. Repatriation can be approached using Atleo's summary of heritage and ownership along with an understanding of the context in which collections were obtained from First Nations and other Indigenous communities.[116] Nuu-chah-nulth human remains and cultural objects continue to be held in storage and on display in museums around the world, including Vancouver Museum of Anthropology, The Royal BC Museum, Victoria, the American Natural History Museum, New York, and further afield, such as the British Museum, London, and the Ethnographical Museum, Berlin.[117] For many Indigenous people, these sites represent the gulf between the artefacts themselves and the people and places to which their meaning is bound. In *The Washing of Tears*, we witness the dislocation of whaling shrines and their contents from the communities who endow them with deep spiritual and cultural value. The loss of culturally prominent practices is evoked through Chief Jack's

[114] Chuuchkamalthnii, 'Box of Darkness'.
[115] Atleo, 'Policy Development', p. 48.
[116] Atleo, 'Policy Development', p. 50; Chuuchkamalthnii, 'Art for Whose Sake?', p. 685.
[117] Denise Nicole Green, 'Stella Blum Grant Report: Nuu-chah-nulth First Nations' *Huulthin* (Shawls): Historical and Contemporary Practices', *Dress,* 39 (2013), 153-201 (p. 158).

words and the backshot of the island, as he points to the place where it once stood: '*Cheesum* used to be right on that island. That green spot over there, that little green spot'.[118]

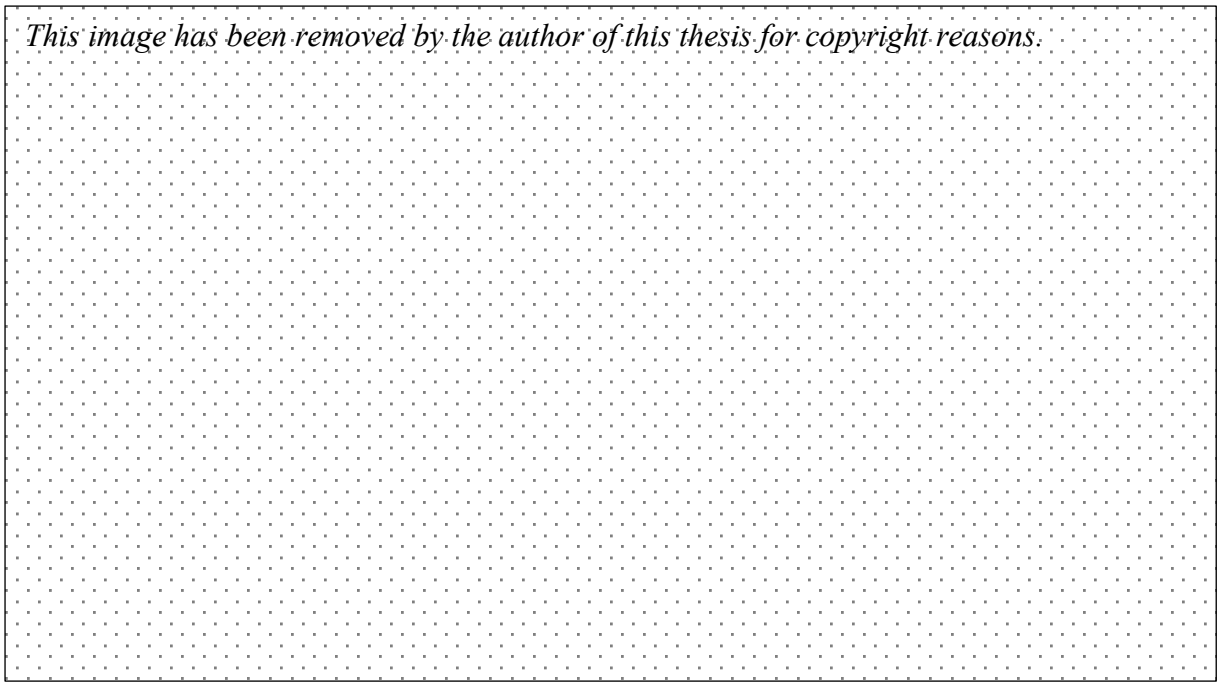

Figure 73. The empty island. Still from *The Washing of Tears.*

The twentieth century was a period of absence: objects in museums removed, traditional practices outlawed, local species decimated. Through most of the century, gray whale population levels remained low, and this would necessarily have affected the number of drift gray whales available to harvest by the Nuu-chah-nulth. Furthermore, if drift whales were often the end result of failed Nuu-chah-nulth hunts, this would mean fewer stranded whales. There are a few brief newspaper references to a whale being harpooned and brought ashore by the Ahousaht for consumption in June 1963, but there is scant other detail about this.[119] The traditional butchering of whales, the consumption of their meat and collection of their oil all but disappeared in the twentieth century. What emerged later in the century, however, was a new, western-dominated set of cultural relationships with whales. In *Living*

[118] *Washing of Tears.*
[119] 'Village Whale Feast First in Half a Century', *Vancouver Sun,* 20 June 1963, p. 3; Ambrose, 'Ahousaht Feasts', p. 1.

on the Edge, Chief Earl George Maquinna writes that 'Hunting the large whale is an important topic because whales now are very important to non-native people as well'.[120] As we have already seen, in the Pacific Northwest gray whales have multiple identities and values to the different human cultures (see Chapters 1 and 2). In the latter half of the twentieth century, whales were endowed with new ecological and, for some, pseudo-spiritual significances by North American and western European societies, especially from the 1970s onwards. A shift in values occurred when concerns about anthropogenic threats to the marine environment gained greater attention in both scientific and popular spheres and, as previously noted, from the 1980s onwards the beaches of Vancouver Island would become sites for a new set of relationships with gray whales and other cetaceans in the form of scientific investigations through necropsy and sampling as a part of wider efforts to monitor cetacean populations (see Chapter 2).[121] As also noted, government and non-government bodies have worked in conjunction since then to respond to marine mammal strandings, entanglements and other conservation issues facing cetaceans and other marine mammals (see Chapter 2).[122] Concurrently, the 1970s and 1980s spawned new age environmentalism and anti-whaling movements, notably Greenpeace and later Sea Shepherd, both founded in Vancouver.[123] Whales were upheld as sentient and numinous beings in North America, and the Pacific Northwest and US west coast became major focal points for this reimagining of cetaceans. In

[120] Maquinna, *Living on the Edge,* pp. 41-42.
[121] Robin W. Baird and others, 'An Evaluation of Gray Whale (*Eschrichtius robustus*) Mortality Incidental to Fishing Operations in British Columbia, Canada', *Journal of Cetacean Research and Management,* 4 (2002), 289-296 (p. 289).
[122] The BC Marine Mammal Response Network (BCMMRN) was established in 2008 as a regional network within the larger Canadian Marine Animal Response Alliance. The BCMMRN is led by the Department of Fisheries and Oceans Canada (DFO). Strawberry Isle Marine Research Society, established in Tofino in 1991, is one of the BCMMRN organisations. Rod Palm who founded the organisation responded to gather samples from the dead gray whale in Ahousaht territory in 2000. See Strawberry Isle Marine Research Society, 'Rescue and Response', <https://www.simrstofino.org/rescue> [accessed 15 May 2021].
[123] Frank Zelko, 'Scaling Greenpeace: From Local Activism to Global Governance', *Historical Social Research*, 42 (2017), 318-342 (pp. 328-39); Gerry Nagtzaam, 'Gaia's Navy: The Sea Shepherd Conservation Society's Battle to Stay Afloat and International Law', *William & Mary Environmental Law and Policy Review,* 38 (2013), 613-694. Sea Shepherd has been vehemently (and controversially) opposed to the 1999 Makah gray whale hunt revival.

short, the period from the late nineteenth century through to the late twentieth century was one of drastically shifting sets of relationships with gray whales and other cetaceans, in both life and death: an upheaval which happened in a relatively short space of time, just over two centuries, in comparison to the longevity of Nuu-chah-nulth ways of relating to these animals.

Yet through all of this, whaling remained an important part of Nuu-chah-nulth cultures, even though it was eventually outlawed and aspects of the tradition faded in cultural memory or were actively eroded by colonial institutions. Whaling lives on today through the intergenerational oral transmission of knowledge, memories and stories, cultural memory of the near and far past, spirituality, ceremonies, songs and dances, cultural objects, and the names of people and places.[124] Whaling lineages and the status of individuals within them are perpetuated to the present day, for example, the Atleo family represent the Ahousaht whaling lineage.[125] This raises an important point about the role of the individual within the collective. As Karl Kroeber contends, the individual is at the core of Vizenor's conception of Native survivance. For Kroeber, 'Speech always requires an individual speaker, so uniqueness is built deeply into such cultures'. He continues: 'This characteristic is why Vizenor observes that conventional descriptions of native cultures too often exaggerate their communal character. His point is that the communal strength of native societies concentrates on empowering individuals'.[126] As I have been suggesting in my turn, survivance as it relates to the individual is embodied by individuals like Umeek Richard Atleo, Chief Earl George Maquinna, Chuuchkamalthnii, Charlotte Coté or Chief Jerry Jack. Kroeber eloquently describes how:

[124] Coté, 'Maintaining the Cultural Link to the Whaling Ancestors', in *Spirits of Our Whaling,* pp. 69-114.
[125] Atleo, *Tsawalk,* p. x; Atleo, 'Strategies for Equities', p. 134; Black, *Ḥuupuk^{w}anum,* p. 33.
[126] Kroeber, p. 35.

> Core beliefs and commitments are dynamically renewed chiefly through verbal performances, that is, the imaginative sharing of traditions by storytelling. The core is thus constantly being remade, made differently, as traditional words [such as *cheesum*] are rearticulated and heard now in a configuration of circumstances that had never previously existed.[127]

Survivance inheres in the fact that a culture imbues the individual with the means to transcend its boundaries. Umeek Richard Atleo, too, emphasises the importance of the individual within the community or collective.[128] It is individuals who have helped pass down knowledge about whales and whaling for many generations, and individuals who have held onto and shared that knowledge in the face of colonisation, death and cultural destruction. Of course, the gray whale did not completely disappear, which would have meant the total severing of a connection with these animals in the physical world, and would have forever deprived the Nuu-chah-nulth of that relationship. The species recovery has meant the restoration of a past relationship with these whales and a revival of the spiritual and physical dimensions of that relationship. This reflects the Nuu-chah-nulth worldview, *heshook ish tsawalk* or 'everything is one', which is the underlying concept I aim to examine in the following part of this chapter.

Part 2: Boundaries of existence

The gray whale found drowned in Sydney Inlet was brought ashore as expeditiously as possible by the Ahousaht so that it could be cut apart between high tides. Before the butchering began, the animal was blessed and 'a traditional prayer chant was performed to honour the life of the whale'.[129] This short sentence encapsulates a complex dimension of Nuu-chah-nulth ontology and cosmology, as well as history. It distils the fundamental Nuu-chah-nulth philosophy of *heshook-ish tsawalk, '*everything is one', which involves the

[127] Kroeber, p. 35.
[128] Atleo, *Tsawalk*, p. 117.
[129] Ambrose, 'Ahousaht Feasts', p. 1.

acknowledgement of nonhuman individual spirit. The incantation, as Umeek Richard Atleo writes, encompasses the entirety of existence in a complex tapestry of mutual exchange 'that is inclusive of all reality, both physical and metaphysical'. [130] The material and the spiritual cannot be separated from one another, and nothing is excluded from this oneness. Humans, animals, plants, weather, mountains, oceans, rivers, and so forth all exist relationally in the physical and metaphysical continuum. While western environmental sciences and the broader eco-cultural movement have increasingly progressed to the position of interconnectivity between different lifeforms – be it within a specific ecosystem or indeed the general biosphere – this is an understanding firmly rooted in the physical realm. But as Atleo insists, *heshook-ish tsawalk* 'means more than the unity of the physical universe. It means more than the empirically based meaning attached to the word "holism"'.[131] The experience of witnessing whales in the wild has inspired feelings of awe, wonder and transcendence, such as those expressed in Russell and Peterson's writings, or those which Rosie's skeleton represents (see Chapters 1 and 2). Encounters with whales might trigger ideas about our place in the cosmos and dimensions of nature. But this experience is fundamentally different from the religious and spiritual *cosmology* that *heshook-ish tsawalk* implies.

How is this oneness mediated? The spiritual process of *oosumich (?uusumc'*) is a way of mediating the spiritual world and involves acts like 'fasting, cleansing, celibacy, prayer, and isolation' over different periods of time. *Oosumich* can be understood as a kind of vision quest. Umeek Richard Atleo explains that 'a finding of the *oosumich* is that all life forms require the developments of protocols if balance and harmony are to be achieved. These are the protocols of *tsawalk* (one)'.[132] In other words, the Nuu-chah-nulth approach the interconnected physical and metaphysical realm through the application of guiding protocols,

[130] Atleo, *Tsawalk*, p. ix.
[131] Atleo, *Tsawalk*, p. xi.
[132] Atleo, *Principles of Tsawalk,* p. 83.

which can be understood as a system of rules or 'law[s] of life', with the ultimate aim of maintaining harmony and balance at all times.[133] Kyle Powys Whyte, Joseph P. Brewer and Jay T. Johnson define protocols as 'attitudes of how to approach the world'.[134] We can thus understand the response to the dead gray whale of performing a prayer chant, honouring its life, and blessing the non-consumable remains buried on the beach as the enactment of appropriate protocols in the physical/metaphysical encounter between human beings and whales.[135] Marlene Atleo explains how in the Nuu-chah-nulth understanding of the world, 'The social and mythic dimensions of reality interpenetrate each other to the extent that protocol is required to manage their interpenetrations and interactions'.[136] Just as everything is encompassed in *heshook-ish tsawalk*, protocols apply to every part of existence. To mediate the multitude of existence, the system of principles is grounded in the foundational understanding of 'respect for all life forms'.[137] Respect or *isaak* (*iis?*ak) is at the root of Nuu-chah-nulth worldviews. According to Ahousaht Elder Roy Haiyupis, 'It is the very core of our traditions, culture and existence. It is very basic to all we encounter in life … Respect for nature requires a healthy state of stewardship with a healthy attitude. It is wise to respect nature. Respect the spiritual'. [138] Respect functions across the web of life, dismantling hierarchical relationships between different life forms. The Creator in Nuu-chah-nulth cosmology is *Qua-ootz*, Owner of Reality, and embodies respect, which is a horizontal

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[133] Atleo, *Tsawalk*, p. 130.
[134] Kyle Powys Whyte, Joseph P. Brewer and Jay T. Johnson, 'Weaving Indigenous Science, Protocols and Sustainability Science', *Sustainability Science,* 11 (2016), 25-32 (p. 25). There is commonality in the systems of mutual protocols with other First Nations, Indigenous and Aboriginal people in other parts of the world. Mi'kmaq scholar Margaret Robinson reinforces that 'There is no view on animals that is shared by all Aboriginal people. Aboriginal is an umbrella term combining three distinct groups of people – first nations, Inuit, and Métis – each with different histories shaping their worldview, their food practices, and their relationship with animals'. First Nations alone constitute more than '600 governments or bands with unique histories and geographic locations'. See Margaret Robinson, 'Animal Personhood in Mi'kmaq Perspective', *Societies,* 4 (2014), 672-688 (p. 672).
[135] Ambrose, 'Ahousaht Feasts', pp. 1, 8.
[136] Marlene R. Atleo, 'Learning Models in the Umeek Narratives: Identifying an Educational Framework Through Storywork with First Nations Elders' (unpublished doctoral thesis submitted to the University of British Columbia, 2001), p. 10.
[137] Atleo, *Principles of Tsawalk,* pp. 108, 150, 155, 159, 162, 169.
[138] Haiyupis, quoted Clayoquot Sound Scientific Panel, pp. 6-7.

relationship that incorporates all life forms.[139] All life has the shared origin of *Qua-ootz* and therefore respect and equal standing must be given to all.[140]

Living beings exist in relational entanglements that are navigated via mutual protocols, including reciprocity, recognition, responsibility and consent.[141] These protocols are learned and shared by each generation through the telling of origin stories, Elders' teachings, and accounts of the near and far past, as well as through individual experiences and memories.[142] Using Umeek Richard Atleo's two major works on *tsawalk*, I will now attempt to describe some of the key principles grounded in respect. Each of these is inherently connected and there is much crossover between them; they do not exist in isolation. The protocols are channelled through petitions, prayers, songs, chants, ceremonies, fasting, feasting, celibacy, cleansing and bathing. First, *reciprocity* is laid out in cosmological beginnings, where each life form is intended 'to help one another in order to fulfil the requirements of wholeness, balance and harmony'.[143] Accountability of one life form to another is agreed 'through a reciprocal form of communication' via the *oosumich* (vision quest).[144] Not only are relations with other nonhuman species nurtured in the physical world, but they are negotiated through interspecies communication through the metaphysical *oosumich* process. For example, reciprocity allows humans and nonhumans to agree that an animal might give itself up in return for public recognition in a ritual.[145] Second, *recognition* is an acknowledgement of co-existence and commonality between life forms as well as a recognition of inherent being. To recognise is to see (observe) that other lives are entangled

[139] Umeek E. Richard Atleo, 'A First Nations Perspective on Ecosystem Management', *Wild Foresting: Practicing Nature's Wisdom*, ed. by Alan Drengson and Duncan Taylor (Gabriola Island: New Society Publishers, 2009), pp. 126-129 (p. 128).
[140] Atleo, *Tsawalk,* p. 15-16.
[141] Atleo, *Tsawalk*, p. 46, 89, 92; Atleo, *Principles of Tsawalk*, p. 76.
[142] Atleo, Tsawalk, p. 73; Atleo, *Principles of Tsawalk,* pp. 85*,* 151.
[143] Atleo, *Tsawalk,* p. 35.
[144] Atleo, *Principles of Tsawalk,* p. 143.
[145] Atleo, *Principles of Tsawalk*, p. 143.

in one's own, and that the relationship is a shared one.[146] Umeek Richard Atleo summarises this as follows:

> When two neighbouring nations shared the same resources, whether cedar, salmon, or human [or whale], then it was obvious to the ancient Nuu-chah-nulth that to neglect the act of recognition would open the way to conflict, while to observe the act of recognition, through what I refer to as "mutual concern," would open the way to balance and harmony.[147]

Third, understandings of mutual *responsibility* regulate Nuu-chah-nulth relations between humans and nonhumans alike. Each living thing fulfils its responsibilities towards others; if humans take care of the natural world, it will take care of humans in turn, in a constantly flowing state of reciprocity.[148] Finally, *consent* speaks to the 'free will' and 'freedom of choice' that each life form has, emphasising that participation in the system of protocols is an autonomous choice. In return, 'the great personage of the whale demand[s] the honour of extended ceremony'.[149] In 2000, the Ahousaht and Makah would fulfil this protocol to the dead gray whale through the public prayer chants honouring its life that were conducted on the beach. Umeek Richard Atleo presents the rituals surrounding salmon as a way of encapsulating the protocols of the Nuu-chah-nulth: 'Each season, the salmon [are] formally welcomed and recognized according to mutually agreed upon protocols'.[150] If humans tend to their responsibilities by caring for salmon ecosystems by ensuring the quality of water and returning the salmon bones to the river, the salmon will also keep to theirs by reincarnating and returning to provide for humans.[151] When I read about the returning the salmon bones to

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[146] Atleo, *Principles of Tsawalk*, p. 84.
[147] Atleo, *Principles of Tsawalk*, p. 81.
[148]Atleo, *Principles of Tsawalk*, p. 58.
[149] Atleo, *Tsawalk*, p. 17.
[150] Atleo, *Principles of Tsawalk*, p. 82.
[151] Atleo, 'Ahousaht Law and Chinook Salmon', p. 26; Kyle Powys Whyte, 'Critical Investigations of Resilience: A Brief Introduction to Indigenous Environmental Studies & Sciences', *Dædalus,* 147 (2018), 136-47 (p. 147).

the river, I could not help but think of the damaging consequences of the loss of gray whales' and other cetacean species' nutrient-rich bodies from the marine environment as a result of commercial whaling. The ocean has been deprived of these bodies breaking down, recycling nutrients into the ocean and offering life and energy to other species (see Chapter 1). In the case of Rosie, the blubber, flesh and soft tissue in the bones were given back to the environment to nourish other species and decompose into the shoreline. In the case of the gray whale in Ahousaht territory, the bones and other parts that are were not consumed were returned, buried on the beach to feed back into the coastal ecosystem.

To sum up, in Nuu-chah-nulth cosmology the continuity of all living things is maintained by the strict application of a matrix of protocols, and this mutual contribution perpetuates the cycle of constant regeneration of life and a network of interspecies kinship. Mutual survival depends on mutual protocols. The commitment to protocols both looks to and secures the future; it also acknowledges that the present was secured by following them in the past. This worldview collapses the linear, forward-moving time continuum dominant in Euro-Canadian conceptions of the temporal, and is best understood instead as rolling reciprocal acts of consideration across time and space. Protocols roll into the present and on into the future, perpetuating a sense of continuity. However, without the rolling protocols there is fragility. Ronald Trosper (Confederated Salish and Kootenai Tribes of the Flathead Indian Reservation), who has focused on the Nuu-chah-nulth, points out that one of the ways that 'resilient social ecological systems' are manifested is by carefully organising responsibilities so as to 'buffer', 'self-organize', and 'learn' when faced with changes or issues in the environment.[152] The Nuu-chah-nulth peoples have traditionally created and sustained a socio-ecological resilience through protocols.[153] These have become embodied

[152] Ronald Trosper, 'Resilience in Pre-Contact Pacific Northwest Social Ecological Systems', *Conservation Ecology*, 7 (2003), <http://dx.doi.org/10.5751/ES-00551-070306>; Whyte, 'Critical Investigations', p. 140.
[153] Trosper refers to 'social ecological systems': Trosper, 'Resilience in Pre-contact'.

and embedded generation after generation, sustaining communities for thousands of years in a rolling process of what Kyle Powys Whyte calls 'collective continuance'.[154]

As we have seen, the Nuu-chah-nulth approach to nonhuman animals is guided both by respect for the singular animal's spirit as well as by the cultural significance of the species. The gray whale that was towed to shore at the turn of the twenty-first century was honoured for its life as well as for its death, and the significance of both for the community. In Nuu-chah-nulth cosmology, animals, along with plants, form part of origin stories, offer sustenance, supply moral guidance, and operate as powerful signs. Large whales (*iih tup*) are part of ancient Nuu-chah-nulth stories. Origin stories about Thunderbird, Son of Raven, Wolf, Deer, and Wren both exemplify and transmit Nuu-chah-nulth protocols. According to Umeek Richard Atleo, 'the theory of *Tsawalk* not only begins with these "tales," or origin stories, but also depends on these "tales" both as the foundation of knowledge about the state of existence and as a guide for its interpretation'.[155] These are ancient stories that circulate through the present, operating across both far- and near-past dimensions. The ancient and supernatural Beings that feature in them encompass the multidimensionality and nonlinearity of the Nuu-chah-nulth time and space continuum.[156] In this respect at least, settler-colonial attempts to sever the fourth person and what Wiese calls 'ancestral time' did not, and could not, work.[157]

The European extractive industries that interrupted Nuu-chah-nulth lifeways from the 1800s onwards did not share the protocols of the people on whose territories they encroached. The ensuing disruption to this system of protocols triggered the collapse of the socio-

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[154] Whyte, 'Justice Forward', p. 10; Whyte, 'Critical Investigations of Resilience', p. 140; Atleo, *Principles of Tsawalk*, p. 83; Atleo, *Tsawalk*, p. 5; Robin Wall Kimmerer, 'The Covenant of Reciprocity', in *The Wiley Blackwell Companion to Religion and Ecology,* ed. by John Hart (Hoboken: John Wiley & Sons, 2017), pp. 368-81.
[155] Atleo, *Tsawalk,* p. xi.
[156] This time and space continuum echoes the Maori concept of 'spiral time'. See Elizabeth Deloughrey, *Routes and Roots: Navigating Caribbean and Pacific Island Literatures* (Honolulu: University of Hawai'i Press, 2007), pp. 45, 161-162.
[157] Wiese, p. 58.

ecological web of interdependence, and Nuu-chah-nulth human societies began to experience destabilisation, as did the nonhuman communities around them, including gray whales. Human societies suffered devastating loss of life, while nonhuman species like the gray whale faced steep population declines. The recovery of both is ongoing in the region, though it has been altered, in some instances irrevocably, by the impacts of colonialism. As Umeek Richard Atleo writes: 'A First Nations perspective on the current environmental crisis on earth must speak about the disharmony and imbalance between people and nature. More importantly, this perspective implies that the earth's environmental crisis has been created by disrespect'.[158] The near extinction of gray whales was similarly caused by disrespect and a lack of protocol by Euro-American whalers – by a society in which 'planning, preparation, and execution take place exclusively within the physical realm without any communication with the spiritual realm'.[159] In Nuu-chah-nulth cosmology and philosophy, by contrast, each life form is reliant on the other, and the existence of the one necessitates the existence of the other.

Heshook ish-tsawalk and the protocols developed around it underpin the entire Nuu-chah-nulth belief system and define the interrelationship between humans and whales. In March 2000, the treatment of the whale through blessings, prayer and chants can be understood as the re-articulation of a worldview that the Nuu-chah-nulth had not been able to experience in this context for many decades. The traditional ceremony, prayer chant, and burial of remains all paid respect to the whale, acknowledging what had been given up and what was in turn being offered to humans. As Nelson Keitlah, a political leader for Ahousaht and the Nuu-chah-nulth Tribal Council, put it, 'the whale gave up his life so that the hunters could live, so that our people could live. Even the greatest whalers were very humble'.[160]

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[158] Atleo, 'First Nations Perspective', p. 126.
[159] Atleo, *Tsawalk,* p. 84.
[160] Nelson Keitlah, quoted in Black, *ḤuupuKʷanum,* p. 32.

Thus, while the whale may no longer have been necessary for the subsistence of the Ahousaht at the turn of the twenty-first century, in its life's ending it offered a reconnection with the whaling past and a way to revive core aspects of Ahousaht culture.[161]

For example, preparation through prayers and other cleansing practices, some of which were performed in 2000, were all very much part of the original hunt. The whaler would prepare through the process of *oosumich*, which could last eight months or more, sometimes even years. [162] Similarly, the secret whaling shrines were of absolute spiritual importance for the balancing rituals the whaling *ha'wiih* performed (see section above). This process to reach the highest levels of spiritual preparation ensured that the whaler was ready for communion with the whale's spirit when the time came. In this and other ways, the Nuu-chah-nulth relationship with gray whales was defined by their cosmological beliefs, to the point that 'a person was closest to the Creator when he was whaling'.[163] A predestined relationship was constructed when the hunter identified and communed with the spirit of the whale before the hunt through *oosumich*; then the hunt itself became a relational process of mutually seeking each other, as summarised by the Huu-ay-aht Elder, Willie Sport:

> A whaler believed that a specific whale gave itself to him, through a mysterious power. Prayer and cleansing the mind and body made the whaler worthy of the great whale's gift of life. When the whaler went out to sea and reached the place where thousands of whales were migrating up the coast, when he got there he didn't harpoon the first whale he saw, he identified the one that he was intended to kill. That one was looking for him, too. They recognized each other. The whale gives himself to the hunter who has been praying and who is clean.[164]

If the whaler was spiritually prepared, the whale would choose to give itself up to the hunter. In *Poó witsa (Whaler's Dream)* (1977, Museum of Anthropology, Vancouver: figure 74), a

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[161] *Behind the Masks.*
[162] Atleo, *Tsawalk*, p. 17; Willie Sport, interviewed by Chuuchkamanthlii (Ḳi-ḳe-in), quoted in Black, *ḤuupuKʷanum*, p. 32; Coté, *Spirits of Our Whaling*, p. 6.
[163] Black, *ḤuupuKʷanum,* p. 32.
[164] Sport, quoted in Black, *ḤuupuKʷanum*, p. 32

print by prominent Nuu-chah-nulth creator, storyteller and poet Chuuchkamalthnii, a dreamscape of the whaler communing with the whale is vividly portrayed. We see the predator (whaler) at the top and the prey (whale) at the bottom, surrounded by various whaling motifs such as seal skin floats, a harpoon, a paddle. The image recalls the powerful pull or draw encapsulated in *cheesum,* and represents the relationship established between whaler and whale through the *oosumich* process. It also captures the tangible and spiritual aspects of this relationship. The work's title suggests the dream of the whaler identifying and communicating with a specific whale spirit. This connects again to Native survivance, in which Vizenor outlines the importance of individuals' dreams and vision quests. Vizenor describes this as 'visionary sovereignty', and sees it is core to the continuation of collective life.[165]

A further example comes by way of Umeek Richard Atleo, who is the great-grandson of the whaling chief Keesta, the last generation of Nuu-chah-nulth to have whaled. Atleo includes a whaling account of his great-grandfather's in the introduction to *Tsawalk* (2007):

> Every protocol had been observed between the whaling chief and the spirit of the whale. Keesta had thrown the harpoon, and the whale had accepted it, had grabbed and held onto the harpoon according to the agreement they had made through prayers and petitions. Harmony prevailed, whaler and whale were one, *heshook-ish tsawalk.* [166]

This passage demonstrates the commitment to protocols between human and whale both before and during the whaling voyage. As Coté describes it, if 'the proper rituals and utmost respect [were] shown to the whale, it would give itself up to the whaler and to the people who had shown it most esteem' in an act of consent. Coté again: 'Songs and prayers were sung by the whaling crew during the hunt to demonstrate to the whale their appreciation for its gift of itself'.[167] We might think of the entangled whale of March 2000, in these terms, as a gift from

[165] Kroeber, pp. 35-36.
[166] Atleo, *Tsawalk,* p. x.
[167] Coté, *Spirits of our Whaling,* p. 32.

the ocean that offered not mere *sur*vival but the opportunity for cultural *re*vival in a post-whaling era. Moreover, the eight-month preparation that Atleo and others refer to may suggest the timing of the gray whale migration. The gray whales always arrive at certain times of the year, and the regularity of their arrivals might be interpreted as a kind of intentionality or pre-knowledge on their part. In turn, humans mirror the whale's absence through lengthy preparations for the encounter upon the whales' arrival.[168] Parallel processes take place in the multidimensional *tsawalk* physical/metaphysical realm.

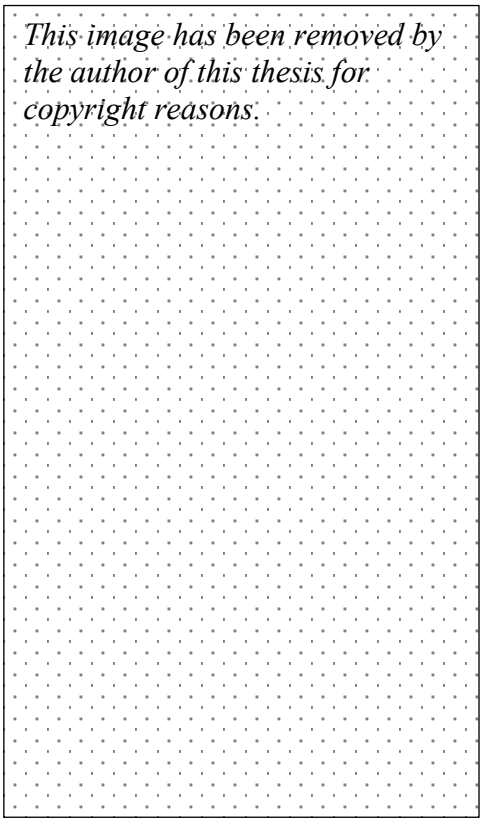

Fig 74. Chuuchkamalthnii (Ḳi-ḳe-in, Haa'yuups, Ron Hamilton), Huupasacath, *Poó witsa (Whaler's Dream)* (1977) print, ink on paper, University of British Columbia Museum of Anthropology, Vancouver.

Chie Sakakibara, a cultural geographer who has worked extensively with the Arctic whaling communities of the Iñupiat, describes human-whale relationality as *cetaceousness*, a fusion of *cetaceous* and *consciousness*. According to Sakakibara, it is 'a whale-centric

[168] Atleo, *Tsawalk*, p. 84; Sport, quoted in Black, *ḤuupuK^{w}anum,* p. 32.

worldview based on the notion of collaborative reciprocity'.[169] Kyle Powys Whyte, reflecting on Sakakibara's work, responds that cetaceousness can be understood as 'whale-consciousness'.[170] Cetaceousness speaks to the intertwining of the 'deep-rooted, spiritual, and material relationship the Iñupiat have with whales'. [171] I contend that cetaceousness and whale-consciousness might equally be applied to Nuu-chah-nulth whalers and extended to Nuu-chah-nulth societies past and present. The ceremony for the dead gray whale's spirit in March 2000, seen in these terms, demonstrates and maintains Nuu-chah-nulth cetaceousness by nurturing the connection of the Ahousaht with whales and continuing the cultural and cosmological aspects of the whaling tradition. One gray whale thus contains within it an entire human history, an entire belief system, the whale's place within that cosmology, and the ongoing spiritual vitality of a whaling tradition. It should be clear by now that what was lost when the gray whales more or less disappeared from eastern North Pacific waters in the twentieth century, and what returned upon their recovery, was more – much more – than simply a subsistence resource. The animals are part of a relational network of moral reciprocity with humans that is deeply bound through the spiritual realm. Huu-ay-aht whaling *Ha'wilth* Tom Happynook Mexis reflects, 'We recognize that we may never whale again the traditional way, but we will always practise the spirituality that has been passed down from generation to generation'.[172] Spirituality did not cease with the end of Nuu-chah-nulth whaling; on the contrary, it was practised by the Ahousaht in March 2000 on the beach.

If everything is part of the one and each living being is engaged in fulfilling their protocols, whales have agency like humans. Umeek Richard Atleo describes whales as 'great

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[169] Chie Sakakibara, 'Kiavallakkikput Agviq (Into the Whaling Cycle): Cetaceousness and Climate Change Among the Iñupiat of Arctic Alaska', *Annals of the Association of American Geographers,* 100 (2010), 1003-1012 (p. 1003).
[170] Kyle Powys Whyte, 'Indigenous Climate Change Studies: Indigenizing Futures, Decolonizing the Anthropocene', *English Language Notes*, 55 (2017), 153-162 (p. 157); Chie Sakakibara, '"No Whale, No Music": Iñupiat Drumming and Global Warming', *Polar Record*, 45 (2009), 289-303.
[171] Sakakibara, 'Kiavallakkikput Agviq', p. 1004.
[172] Tom Happynook Mexis, 'Whaling Still an Issue with Nuu-chah-nulth at Treaty Table', *Ha-Shilth-Sa,* 15 June 1995, p. 7.

personages'.[173] This statement suggests the endowment of personhood on nonhuman animals in Nuu-chah-nulth culture. Through the protocols of *heshook-ish tsawalk*, whales are imbued with personhood and they, like humans, are expected to enact respect, reciprocity, recognition, responsibility and consent. The Nuu-chah-nulth's is a worldview that broadens what it might mean to be nonhuman while eroding the normative boundaries of the human.[174] The principles of consent and reciprocity afford nonhumans the same agency and intentionality as their human counterparts. The whale is ready and willing to sacrifice itself in order to contribute to the ongoing generative cycle in what amounts to almost an act of self-abnegation. As Umeek Richard Atleo evocatively suggests, there is 'a secret agreement made between life forms, such as that made between Keesta and the spirit of the whale'.[175]

The protocol of recognition acknowledges further that animals and plants have intelligence and knowledge, and that they are capable of communicating. In this view whales, like other species, have intentionality. Migration is not simply triggered by instinct, but is rather an active decision based on knowledge acquired through observation and communication. We might interpret this as reflecting human societies' movements between different seasonal sites for hunting and foraging. Gray whales, like other nonhuman species, are active participants in Nuu-chah-nulth physical and metaphysical world making. They are endowed with personhood, and have both material agency and spiritual power. A short chapter in Peterson and Hogan's *Sightings,* in which Peterson provides an account of their trip to Vancouver Island during the UME in 1999, also suggests this.[176] The trip, which took place the year before the gray whale was found entangled in Sydney Inlet, offers a brief but illuminating insight into how the UME was experienced by the Ahousaht in Clayoquot

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[173] Atleo, *Tsawalk,* p. 114.
[174] Rebecca Macklin, 'Natural Violence, Unnatural Bodies: Negotiating the Boundaries of the Human in MMIWG Narratives', *Interventions* (2020), <https://doi.org/10.1080/1369801X.2020.1816848>.
[175] Atleo, *Tsawalk,* p. 84.
[176] Hogan and Peterson, pp. 207-217.

Sound. The chapter relates the time Hogan and Peterson spent in Clayoquot Sound with an Ahousaht guide, Qaamina Sam, which coincides (in autumn) with the southward migration of gray whales. Travelling by boat, Hogan and Peterson are on the lookout for resident gray whales, hyperconscious of the sudden surge in strandings that year. This passage suggests that the Ahousaht experienced the UME in 1999 through a conspicuous absence of gray whales.[177] An understanding of animal consciousness guides Qaamina's musings on these missing creatures. He speculates about what could have caused so few gray whales to be present in Clayoquot Sound, suggesting that the whales might have communicated to one another about the successful Makah hunt in the spring of that year. 'At 6.49 a.m. a message went out from that gray whale to all the others', he is reported as saying (217). Here, ancient Nuu-chah-nulth understandings of animal intelligence and communication are used to interpret the decline in gray whales, which would be declared the first UME for the species. Qaamina shares the knowledge his father, Stanley Sam Senior, an Ahousaht Elder, passed down to him: 'My father, the traditional Elder who was on the science council, told me that whales are intelligent and communicate over long distances. When they grieve it's like us grieving lost people we love'. He deliberately creates equivalences between human and whale emotions and interrelationships, going on to say, 'When that whale was killed it was probably already giving out a message to the other whales' (217-18). Qaamina's comments reflect Umeek Richard Atleo's reference to the movement of animals involving communication between individuals. Atleo offers the example of an anthropologist and three molecular biologists visiting the Peruvian Amazon to meet a shaman, and quotes the words of an Indigenous Peruvian who was present:

> But in their world, they are not animals, they too are human beings, and they can speak to one another. They make plans regarding where they are going to go. They check to see if their group is all together, or if one is missing, what happened. Each place where they sleep,

[177] Hogan and Peterson, pp. 207-217.

> they keep lists, they control things as they go. He said that animals and plants contain spirits[178]

Atleo includes this reference because of the similarity to Nuu-chah-nulth lifeways: 'Both experience plants and animals to have intelligence. Both consider plants and animals to be like people'.[179]

Seasonality and intentional migration are significant here. It is in recognition of the movements of gray whales and their numbers gained through lifelong observation that Qaamina is able to recognise the decline in gray whales that year. He worries that 'In all my years – 20 of them – watching the grays … I've never seen a summer this bad for the whales' (210-11). Through conscious observation of the cycles of the whales, the seasons and the ocean, Qaamina is able to notice the disruption to the network of existence. Samantha Chisholm Hatfield and others note that 'tribal understandings of time are defined by cues and patterns observed in the natural world' and these 'are also strikingly relational, so that seasonal patterns are observed as an intricate system of connectivity and integration among plant, animal, insect, and human experience'.[180] Qaamina's observations of the changes to the gray whales might be understood again in terms of what Vizenor describes in an arresting passage as survivance, which is

> prompted by natural reason, by a consciousness and sense of incontestable presence that arises from experiences in the natural world, by the turn of seasons, by sudden storms, by migration of cranes, by the ventures of tender lady's slippers, by chance of moths overnight, by unruly mosquitoes, and by the favour of spirits in the water, rimy sumac, wild rice, thunder in the ice, bear, beaver, and faces in the stone.[181]

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[178] Atleo, *Principles of Tsawalk,* p. 82; Jeremy Naby*, Intelligence in Nature: An Inquiry into Knowledge* (New York: Penguin, 2006), p. 1.
[179] Alteo, *Principles of Tsawalk,* p. 83.
[180] Samantha Chisholm Hatfield and others, 'Indian Time: Time, Seasonality, and Culture in Traditional Ecological Knowledge of climate change', *Ecological Processes,* 7 (2018), <https://doi.org/10.1186/s13717-018-0136-6>.
[181] Vizenor, 'Aesthetics of Survivance', p. 11.

This is embedded, lived experience of humans as part of a web of natural cycles, changing weather, and the rhythms of other species. It is rooted in a horizontal set of relationships and not just encounters with *representations* of nature. As Vizenor writes, 'Survivance … is not a mere romance of nature, not the overnight pleasures of pristine simulations, or the obscure notions of transcendence and signatures of nature in museums'.[182] As Peterson is moved to observe, 'our Nuu-Chah-Nulth guide seems as familiar and concerned with gray whales as with his own people' (209), a sentence which evokes interspecies kinship and ties the wellbeing of the whales to the wellbeing of the people. As previously noted, when gray whales were hunted to the edge of extinction, whaling as a bedrock of Nuu-chah-nulth communities was stopped, causing major destabilisation in these societies. For the Nuu-chah-nulth, human wellbeing was – and will always remain – entwined with the wellbeing of the gray whales: a formulation that also works in the other direction, suggesting a measure of intentionality as well as intelligence among the whales themselves.

The implication here is that the resident population were *choosing* not to dwell in Pacific Northwest waters. Writing in 2007, Umeek Richard Atleo reflects that modern scientific research is increasingly 'corroborat[ing] the ancient findings of the *?uusumč* [*oosumich*]' that nonhuman beings are 'capable of intelligent and meaningful communication'.[183] Indeed, since Atleo published his second monograph on *Tsawalk,* scientific research has expanded its conception of nonhuman cognition to take in, not just cetaceans and other mammals, but also fish, invertebrates and plants. In recent years scientific researchers have identified different sperm whale populations as having distinct regional cultures and dialects. More recently still, researchers suggest that sperm whales in the nineteenth century may have learnt to avoid whalers through social learning.[184] These

[182] Vizenor, 'Aesthetics of Survivance', p. 11.
[183] Atleo, *Principles of Tsawalk,* p. 82.
[184] Luke Rendell, Hal Whitehead and Shane Gero, 'Socially Segregated, Sympatric Sperm Whale Clans in the Atlantic Ocean', *Royal Society Open Science*, 3 (2016), <http://dx.doi.org/10.1098/rsos.160061>; Hal

types of understandings are increasingly entering the popular imagination of the Anglosphere through popular science writing and nature writing. Broadening perspectives of the nonhuman in these works is steadily learning from Indigenous worldviews, such as that of the Nuu-chah-nulth but still has a lot to learn. It is only from the 1970s onwards that the complexity of cetacean cognition has become understood, and twenty-first century scientific research has provided insights into these and other animals as individuals with social lives, familial ties, cultures, language and emotions, all of which we recognise as being shared with humans.[185] But while it is salutary that such understandings have developed in the last half-century or so, it bears remembering that in Ahousaht and broader Nuu-chah-nulth cultures, whales have been understood, and continue to be so, as having subjectivity, agency and cultures for thousands of years.

The archaeologist Alan D. McMillan has explored the concept of 'other-than-human persons' in the context of Nuu-chah-nulth whaling. As McMillan notes, 'peoples of the Northwest Coast of North America shared their environment with numerous sentient other-than-human persons'. Sentience is readily available to be interpreted through Nuu-chah-nulth worldviews, which include recognition of animals as having spirits, knowledge and cultures, and thereby subjectivity, agency and personhood. McMillan reflects that, in the Nuu-chah-nulth world, 'No rigid separation [has ever] existed between humans and animals; the boundary [is] permeable and fluid'.[186] The Nuu-chah-nulth world is a permeable one that destabilises strict boundaries between different species. In similar vein, Rebecca Macklin has considered Mel Y. Chen's notion of animacy when approaching Indigenous ontologies. Chen writes that animacy encompasses 'agency, awareness, mobility and liveness', and that it

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Whitehead, Tim D. Smith and Luke Rendell, 'Adaptation of Sperm Whales to Open-Boat Whalers: Rapid Social Learning on a Large Scale?', *Biological Letters* (2021), <http://doi.org/10.1098/rsbl.2021.0030>; See Whitehead and Rendell, *Cultural Lives.*

[185] Whitehead and Rendell, *Cultural Lives.*

[186] Alan D. McMillan, 'Non-Human Whalers in Nuu-chah-nulth Art and Ritual: Reappraising Orca in Archaeological Context'*, Cambridge Archaeological Journal*, 29 (2019), 309-326 (p. 309).

problematises the 'presumed superiority of humans'.[187] Eurocentric dualisms, such as that between human culture and nonhuman nature, are effectively dismantled by the liquid, fluxional borderlands of Nuu-chah-nulth worldviews.

A further implication of Nuu-chah-nulth attitudes towards the natural world is that humans and nonhumans alike are *liminal* creatures. The whaling tradition both exemplifies and embodies this. During the spiritual preparation for whaling, the *ha'wiih* would carry out ritual purification in their secret bathing pools. Coté refers to 'the underlying concept of imitative power' in these rituals, with whalers physically displaying movements of the whale in the ocean in order to affect the whale's future actions for a positive whaling outcome. For instance, during bathing whalers would exhale water like whale blow and try to imitate the way whales swim.[188] The role of imitation blurs the margins between humans and whales while establishing both as legitimate persons. At the same time, humans and gray whales are liminal figures, communing not only through dreamlike connections but also in their physical movements. Traditional Nuu-chah-nulth whalers would enter a peak state of liminality during the preparation for the hunt and while at sea.[189] In *Sightings*, Qaamina 'teases [Hogan and Peterson] that his brother has to don a gray whale disguise and swim in these clear, chilled waters to imitate the disappearing gray whales' (208). This is tongue in cheek, to be sure, but it also recalls the tradition of animal mimicry, not just to fill the absence of the resident gray whales, but also to call them back, emulating the rituals of Ahousaht whaling chiefs.[190] While

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[187] Macklin; Mel Y. Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Durham, NC: Duke University Press, 2012), pp. 5, 89.

[188] The whaler's wife would also imitate whale movements, for example, lying still during the hunt to ensure the whale was still. See Coté, *Spirits of Our Whaling*, p. 27. During whaling potlatches, people would mimic cetacean movements. See Coté, *Spirits of Our Whaling,* p. 39. Ahousaht Elder Peter Webster had a song in which he impersonates the sound of whales spouting. See Peter Webster, 'Whale Song', *Nootka Indian Music of the Pacific North West Coast,* Smithsonian Folkway Records, field recording by Ida Halpern (1974), FW04524, FE 4524.

[189] Adamson, p. 33; Steinwand, pp. 184, 128.

[190] The separation between different life forms is totally dismantled in the case of humans and orcas (*kakawin*). The porous boundaries between the human and nonhuman can be recognised in the Mowachaht/Muchalaht understanding of their *Tyee Ha'wilth* Ambrose Maquinna reincarnating after his death as Tsu-xiit (also known as Luna and L-98) the lone orca in 2006. See Emma. S. Norman, 'What Boundary? What Whale? Whose

it may seem light-hearted in Peterson's description, Qaamina's comments about his brother recall a significant part of the whaling ritual. This circling back to the ritual preparation of the *ha'wiih* underscores the vital role of the hereditary chiefs in Nuu-chah-nulth societies and culture. In the next part of this chapter, I aim to further explore this traditional and enduring role, the claims of the Nuu-chah-nulth hereditary chief system, and the implications of both for the gray whale that was retrieved – 'called back' – from Sydney Inlet in March 2000.

Part 3: Traditional claims

The taking of the entangled gray whale in March 2000 can be interpreted as a powerful moment in which traditional claims of the Ahousaht and the *ha'wiih* over their *hahuulthi* were exerted. According to Nuu-chah-nulth governance, the hereditary chiefs have ownership of and are responsible for the waters, land, animals and plants within their *hahuulthi* – their ancestral territory.[191] Drift whales are the property of the hereditary chief in whose territory they are found. In Canada, a dead stranded whale is considered the responsibility of different bodies depending on whose jurisdiction it is, whether municipality (the municipality), Crown land (provincial government), national park (Parks Canada), or shipping lane (Transport Canada). In the USA, however, the responsibility falls with whoever has jurisdiction over the beach, from private landowners to the municipality where it washed up.[192] During the 2019 UME, CPSMMSN asked private landowners to leave the gray whales to decompose naturally (see Chapter 2).[193] But as the gray whale found dead in Sydney Inlet in the spring of 2000

Responsibility? The Blurring of Political and Cultural Boundaries in Marine Governance', in *Governing Transboundary Waters: Canada, the United States, and Indigenous Communities* (London: Routledge, 2015), pp. 161-79.

[191] Haiyupis, quoted in Clayoquot Sound Scientific Panel, p. 9; Atleo, *Tsawalk*, p. 80; Maquinna, *Living on the Edge,* p. 12.

[192] 'Did a Dead Whale Wash up in your Town? There's a Program to Tap for That', *CBC,* 23 April 2018, <https://www.cbc.ca/news/canada/newfoundland-labrador/dead-whale-humber-arm-south-1.4631040> [accessed 23 May 2021]; Ian Crouch, 'What do We do with this Whale?', *New Yorker*, 2 May 2014, <https://www.newyorker.com/tech/annals-of-technology/what-do-we-do-with-this-whale> [accessed 23 May 2021].

[193] Dupernell.

was on the amalgamated traditional territory of Manhousaht, for which Chief James Swan is the hereditary chief, he was entitled to claim it as an enactment of his chiefly prerogative over his *hahuulthi* (hereditary territory) [see figure 75]. Since the mid-nineteenth century there have been repeated assaults by the settler-colonial state on traditional First Nations rights. Jodi A. Byrd and Michael Rothberg describe this as the 'sense of living under ongoing colonial projects',[194] while Nuu-chah-nulth law scholar Johnny Mack of the Toquaht refers to the more recent 'soft imperialism' of 'post-colonial liberalism'.[195]

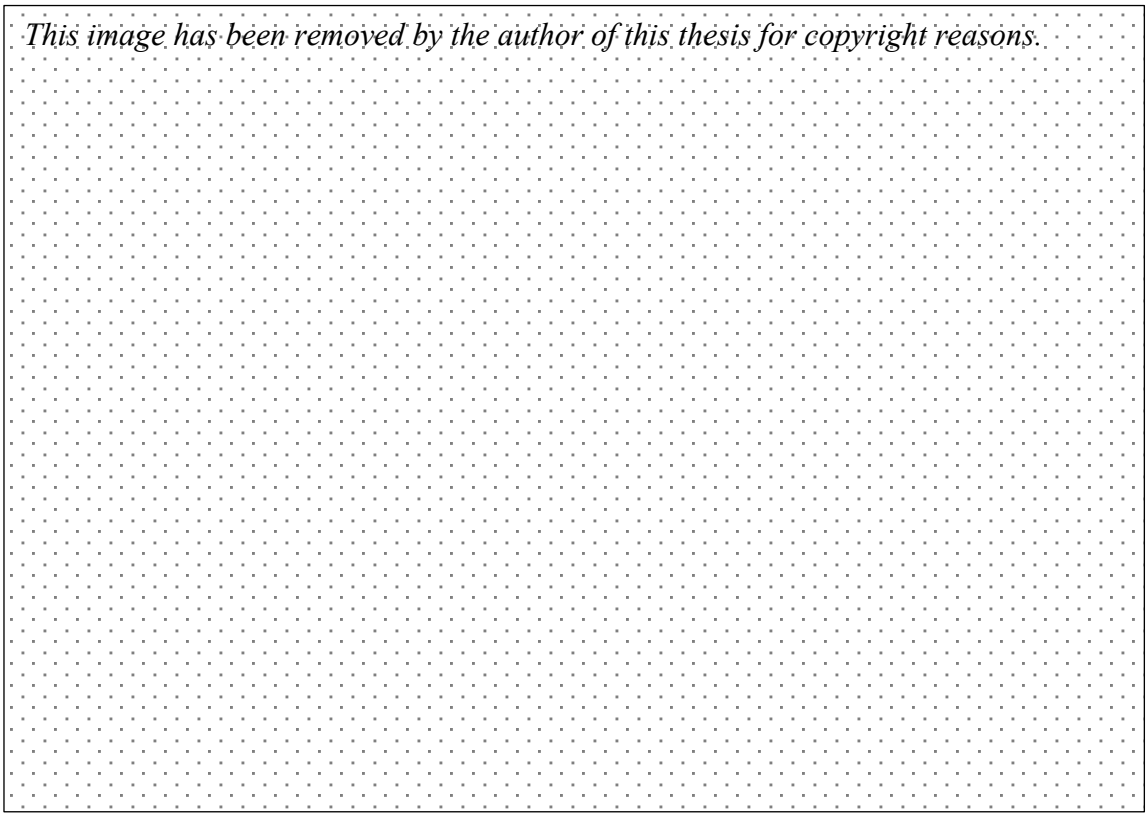

Figure 75. Chief Uukwaqum James Swan and the dead gray whale, March 2000. Source: Denise Ambrose, 'Ahousaht Feasts on Drowned Whale', *Ha-Shilth-Sa,* 23 March 2000, p. 8.

Nuu-chah-nulth conceptions of their *hahuulthi* and the rights of the *ha'wiih* must be explained in order to grasp the full weight of the enactment of traditional rights over the gray

[194] Jodi A. Byrd and Michael Rothberg, 'Between Subalternity and Indigeneity', *Interventions*, 13 (2011), 1-12 (p. 1).
[195] Johnny Mack, 'Hoquotist: Reorienting Through Storied Practice', in *Storied Communities: Narratives of Contact and Arrival in Constituting Political Community,* ed. by Hester Lessard, Rebecca Johnson and Jeremy Webber (Vancouver: University of British Columbia Press, 2011), pp. 287-387 (pp. 299–300); Paige Raibmon, 'Obvious but Invisible: Ways of Knowing Health, Environment, and Colonialism in a West Coast Indigenous Community', *Comparative Studies in Society and History,* 60 (2018), 241-273 (p. 243).

whale in March 2000. In Nuu-chah-nulth societies, there were and continue to be clear ownership rights. *Ha'wiih* have exclusive ownership of their traditional territories, where they have harvesting rights, responsibility to provide for their 'houses', and responsibility to manage and protect the terrestrial and aquatic spaces and resources within these territories. These includes trees, medicinal plants, rivers and mountains, hunting grounds, and fishing and whaling grounds on the foreshore and offshore.[196] Ownership does not override the fact that humans are considered to be a part of lateral interrelations with other species, which as we have seen is emphasised through the implementation of mutual protocols so as to maintain equilibrium.[197] Stewardship, therefore, is bonded to the notion of ownership. Chiefly stewardship is responsible to human and nonhumans alike. The responsibility of the chief to his people is shown powerfully in *The Washing of Tears,* where the central and uplifting role of Chief Jerry Jack to the community, and individuals within that community, is a major focus.[198]

The *hahuulthi* areas are strictly defined. Specific groups of people have access, while others are excluded.[199] According to Umeek Richard Atleo, the fact that 'grounds [are] owned by *hawiih* (chiefs), together with its attendant laws, [is] well understood among the several Nuu-chah-nulth communities'.[200] One of the best-known Nuu-chah-nulth artists, George Clutesi of the Tseshaht First Nation, describes how 'along the entire coast of Vancouver Island established areas were acknowledged to belong to tribes, with Kings who exercised plenary authority over that area'.[201] This was a fundamental way in which society and resources were managed to maintain socio-ecological resilience. Ronald Trosper points

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[196] Atleo, *Tsawalk,* pp. 80-81; Maquinna, *Living on the Edge*, p. 12, 149; Composite Nuu-chah-nulth voices of Ḳi-ḳe-in, Roy Haiyupis, Kathy Robinson, Caroline Little, Nelson Keitlah, Peter Webster, quoted in Black, *ḤuupuKʷanum,* p. 35.
[197] Atleo, 'First Nations Perspective', p. 128.
[198] *Washing of Tears*; Atleo, *Tsawalk*, p. 46.
[199] Trosper, 'Northwest Coast Indigenous Institutions', p. 33; George Clutesi, *Potlatch* (Sidney, BC: Gray's Publishing, 1969), p. 31.
[200] Atleo, *Tsawalk,* p. 81.
[201] Clutesi, p. 31.

to the role of ownership across Pacific Northwest First Nations as contributing to 'sustainable relationships with their homelands', and this has supported the existence of distinct cultures for many hundreds and often thousands of years. The *ha'wiih* and the *hahuulthi*, which can be understood as the 'institutions' used by the Nuu-chah-nulth, have contributed to both local ecosystems and general societal resilience, both in terms of limiting access to land and resources, but also as a system of 'proper use' in which protocols like respect, reciprocity and responsibility guide stewardship of the terraqueous *hahuulthi*.[202]

Above all, though, everything is ultimately owned by *Qua-ootz,* the Owner of Reality. As Ronald Trosper has written, 'The presence of animals to harvest is due to the ritual powers of chiefs', and feasts demonstrate the accountability of the chief to his people. Abundant feasts, according to Umeek Richard Atleo, were historically a sign that the whaling chief had 'been favoured with spiritual power'.[203] Seen in these terms, the whale found in Sydney Inlet can be read as an affirmation of Chief Swan's spiritual power and his prerogative as chief, publicly accounting to the broader community by sharing the harvest. While it is evidence of a chief's spiritual power and endorses his position, *ha'wiih* also comes with the responsibility to act in accordance with protocols towards his community by distributing the meat and blubber and arranging feasts. Atleo again: 'Sumptuous feasts reflect well upon the host chief's ability to provide for the well-being of his community'. Joshua Reid (Snohomish Indian Nation) explains similarly that traditionally whaling chiefs, 'as owners of the proprietary right to harvest this rich resource', had a duty to 'satisfy responsibilities within the human community'.[204] This began on the beach with the butchering of whales and culminated in feasts and potlatches. Such rituals reinforced the authority of the chiefs while also nurturing ties within the community. Ahousaht Elder Roy Haiyupus describes how the *ha'wiih* have a

[202] Trosper, 'Northwest Coast Indigenous Institutions'.
[203] Coté, *Spirits of Our Whaling,* p. 23.
[204] Joshua Reid, *The Sea is My Country: The Maritime World of the Makahs, an Indigenous Borderlands People* (New Haven: Yale University Press, 2015), p. 151.

double ‘responsibility to take care of the forests, the land, and the sea’ in their territory and to look after community members.[205] Traditionally, the division of meat and blubber and whale oil to their people and to other visiting communities ‘fulfilled [chiefs’] spiritual and material responsibilities of ownership’. In 2000, Chief Swan can thus be taken as fulfilling his responsibilities towards his people by organising the whale feast. As Reid summarises it, the sharing of whale bodies has historically ‘reaffirmed [chiefs’] authority, validated their spiritual prowess, and demonstrated ownership over specific resources’ – a patrimonial system, maintained over centuries, that applies equally to the gray whale harvested at the beginning of the twenty-first.[206]

European colonial incomers were not confronted by *terra* or *aqua nullius*, much though it was convenient for them to think so. Instead, they entered demarcated territories that were well defined by hereditary rights and clear conceptions of ownership. The lands and waters of western Vancouver Island were a web of Nuu-chah-nulth borderlands, defined by the different territories of each group. Wars were fought, land won and lost, and trespassing punished, and natural features like rivers or valleys demarcated the *hahuulthi* of nations and the chiefs. The region is further defined territorially by the Coast Salish in southern and eastern areas of the island, the Kwakwa̱ka̱’wakw (Kwakiutl) in the north, and the Makah on the Olympic Peninsula. As Umeek Richard Atleo notes, ‘The concept of *hahuulthi* was not unknown to the first trickle of European settlers’,[207] while James Cook, the early British explorer and fur trader, arriving on Vancouver Island was quick to recognise that ‘there was not a blade of grass that had not a separate owner’.[208]

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[205] Haiyupis, quoted in Clayoquot Sound Scientific Panel, p. 9.
[206] Reid, *Sea is My Country,* p. 151.
[207] Atleo, *Tsawalk,* p. 81
[208] James Cook, *The Voyages of Captain James Cook Around the World: A History of the South Sea Islands* 2 vols (London: Jaques and Wright, 1825), II, p. 38.

The *hahuulthi* contains significant sites on individual, familial and community levels, including sites used for harvesting food and medicinal plants, sites of religious and ceremonial significance, sites associated with oral histories, origin stories and encounters with the supernatural, and sites with cultural significance, for example, mountains where whalers would carry out *oosumich*.[209] Families had secret places, unknown to others within or beyond their community, where they would carry out rituals, collect medicinal herbs, and where their dead were buried. As George Nicholas and Claire Smith put it, 'familiar dichotomies that define a Western worldview – people/nature, natural/supernatural, and so on – may be absent in Indigenous perspectives. … Ancestral beings may be part of this existence, not some other realm'. This necessitates a more inclusive definition of 'heritage', which, in the case of the Nuu-chah-nulth, incorporates the philosophy *heshook-ish tsawalk* and the ubiquitous duality of the physical and metaphysical.[210]

Nuu-chah-nulth heritage functions in temporal and spatial dimensions other than those encoded within western conceptions. Ancestors' teachings and spirits are carried forward into the present, creation stories allude to deep time, and the spiritual transcends linear chronology. Territories are bound up in both tangible and intangible heritage, carrying subsistence, spiritual and religious, cultural, economic and political values. Sydney Inlet, for example, carries with it the history of the Manhousaht people and Chief Swan's hereditary lineage. Nicholas and Smith define 'heritage' as the 'objects, places, knowledge, customs, practices, relationships with other species, stories, songs and designs passed between generations, that define or contribute to a person's or group's identity, history, worldview and wellbeing'. It is vital, they assert, to emphasise both tangible *and* intangible heritage, otherwise we are left with 'skewed and incomplete means of acknowledging, respecting and

[209] Clayoquot Sound Scientific Panel, pp. 21-36.
[210] George Nicholas and Claire Smith, 'Considering the Denigration and Destruction of Indigenous Heritage Violence', *Critical Perspectives on Cultural Memory and Heritage: Construction, Transformation and Destruction,* ed. by Veysel Apaydin (London: UCL Press 2020), pp. 131-154 (p. 134).

protecting the intangible aspects of heritage'.[211] Seen in these terms, the claiming of the gray whale in 2000 represented both a tangible claim on territory and resources and the assertion of an intangible link to the spiritual and cultural heritage of whaling. The animal, huge in itself, symbolised thousands of years of land and resource ownership customs and hereditary lineages by the Nuu-chah-nulth peoples.

As noted, however, the claims of Nuu-chah-nulth hereditary chiefs and traditional territories were eroded by the imposition of colonial government in the nineteenth century. Clifford Atleo underscores that 'the role of the *ha'wiih* was central to the functioning of Nuu-chah-nulth governance', but this was undercut by the forced introduction of an elected governance system that was now 'centralized on specific and static reserves'.[212] In the nineteenth century, the federal government forced First Nations to elect a chief and council to enter treaty negotiations because the hereditary system did not correspond to the British governing system. Coté reflects how, 'As political and social power began to shift to the elected governing councils, the (hereditary) chiefs' control over the land and marine space was challenged [and] social obligations and a chief's authority were undermined'.[213] Notwithstanding, according to several Nuu-chah-nulth scholars, this imposition was actively resisted and the hereditary chiefs still held the main powers, making decisions and maintaining their status as leaders.

In addition to the assault on the *ha'wiih*'s role and status, a major tool used in the colonisation of the Nuu-chah-nulth was the creation of reserves by the federal government. In 1868, the British North America Act made 'Indians and lands reserved for Indians' fall under the jurisdiction of the federal government, while further resources were placed under the jurisdiction of provincial government, consolidated in the 1876 Indian Act. Living, fishing

[211] Nicholas and Smith, p. 134.
[212] Atleo, 'Change and Continuity', pp. 206, 207.
[213] Coté, *Spirits of Our Whaling,* p. 58.

and hunting were all placed within the reserves, the size of which represented significantly reduced territory for the different Nuu-chah-nulth nations.[214] Historically, Nuu-chah-nulth did not sign treaties with the Canadian government at the time, and their territories remain unceded.[215] Since British colonisation, First Nations' traditional territories and the reserve areas are on Crown land and this is one of the core components of the ongoing treaty negotiation process. Traditional territories of First Nations like the Nuu-chah-nulth have been (and continue to be) leased by the Crown to companies for resource exploitation.[216]

Another factor that undermined the *ha'wiih* and the *hahuulthi* is the exploitation of the natural world by Europeans, Americans and Canadians, including the decline in traditional whaling as a result of commercial enterprises. Harpooning whales, as Clifford Atleo stresses, was exclusive to hereditary chiefs and reinforced their status. This status placed them at the core of the Nuu-chah-nulth governing system. Whaling and governance were intertwined.[217] Michael Harkin has pointed to the fact that 'One diagnostic quality of the chief is his … territorial and resource prerogatives, and obtaining whales is one dimension'. There was understood to be a strong connection between whaling magic, *cheesum,* and chiefly prerogative, which connected successful whaling and the appearance of drift whales

[214] Cora J. Voyageur and Brian Calliou, 'Various Shades of Red: Diversity within Canada's Indigenous Community', *London Journal of Canadian Studies,* 16 (2000), 109-124 (p. 106); Cole Harris, *Making Native Space: Colonialism, Resistance, and Reserves in British Columbia* (Vancouver: University of British Columbia Press, 2002); Courtney Jung, 'The First Nations Land Management Act: Twenty Years of Reconciliation', *American Review of Canadian Studies,* 49 (2019), 247-261 (p. 249).
[215] In 2011, five Nuu-chah-nulth Nations signed the Maa-nulth Treaty. The Maa-nulth Nations are the Huu-ay-aht First Nations, Uchucklesaht Tribe, Toquaht Nation, Ucluelet First Nation and Ka:'yu:'k't'h'/Chek'tles7et'h' First Nations. See Vanessa Morgan Sloan, Heather Castleden and Huu-ay-aht First Nations, '"Our Journey, Our Choice, Our Future": Huu-ay-aht First Nations' Self-Government Enacted through the Maa-nulth Treaty with British Columbia and Canada', *Antipode,* 51 (2019), 1340-1364; Coté, *Spirits of Our Whaling,* pp.146-49.
[216] David Haley and Harry Nelson, 'Has the Time Come to Rethink Canada's Crown Forest Tenure Systems?', *The Forestry Chronicle,* 83 (2007), 630-641; Ronald L. Trosper and D. B. Tindall, 'Consultation and Accommodation: Making Losses Visible', in *Aboriginal Peoples and Forest Lands in Canada,* ed. by D. B. Tindall, Ronald L. Trosper and Pamela Perreault (Vancouver: University of British Columbia Press, 2013), pp. 313-325; Marie J. Zahn, Matthew I. Palmer and Nancy J. Turner, '"Everything We Do, It's Cedar": First Nation and Ecologically-Based Forester Land Management Philosophies in Coastal British Columbia', *Journal of Ethnobiology,* 38 (2018), 314-332 (p. 315).
[217] Atleo, 'Change and Continuity', p. 206

to *ha'wiih* rule.[218] Drift whales were traditionally associated with a chief's spiritual power. The end of traditional whaling as a consequence of Euro-American and Euro-Canadian overexploitation might thus be understood as a contributing factor in the erosion of the *ha'wiih*'s position and affluence, undermining the hereditary chiefs' central role in governance and economics.[219]

These two aspects – the reserves and the elective system – were major targets of the colonial apparatus in the protracted attempt to weaken the hereditary chief system and Nuu-chah-nulth societies, and to assert the dominance of Canadian rule. Both aspects remain in place today. Traditional claims to the *hahuulthi* are central to ongoing efforts towards self-determination, the treaty negotiation process and sovereignty claims.[220] In this context, the claiming of the gray whale at the beginning of the twenty-first century can clearly be seen as an attempt by the Nuu-chah-nulth to exert authority over their terraqueous territory. It offered the community a positive example of the maintenance of Ahousaht and Nuu-chah-nulth pre-contact rights, expressed their concepts of hereditary ownership, and underscored Chief Swan's position as an Ahousaht chief and the *ha'wilth* of the amalgamated Manhousaht. Sandra Busatta refers to the fact that 'natural resource ownership and management are currently the paramount issues' for the Nuu-chah-nulth and the Makah.[221] For some time now, the Nuu-chah-nulth have been pursuing the reclamation of traditional territories, hunting and fishing rights, and protesting against commercial exploitation of resources through litigation in BC courts.[222] The Declaration by the *Ha'wiih* of the Nuu-chah-nulth Nations is unwavering in its claims of *ha'wiih* as owners of ancestral territory, insisting that

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[218] Michael Harkin, 'Whales, Chiefs, and Giants: An Exploration into Nuu-Chah-Nulth Political Thought', *Ethnology,* 37 (1998), 317-332 (p. 329) Sandra Busatta, 'Capitalists and Whalers: The Makah Indians', *Journal of Historical Archaeology & Anthropological Sciences*, 1 (2017), 125-137 (p. 132).
[219] Atleo, 'Change and Continuity', p. 206.
[220] *Ha'wiih* of the Nuu-chah-nulth Nations, quoted in Black, *ḤuupuK^{w}anum,* p. 143.
[221] Busatta, pp. 132-33.
[222] Atleo, 'Change and Continuity', pp. 218-220; Judith Sayers, 'The Nuu-chah-nulth Just Won a Huge Ruling for First Nations Fisheries', *Tyee,* 21 April 2021, <https://thetyee.ca/Analysis/2021/04/21/Nuu-Chah-Nulth-Just-Won-Huge-Ruling-First-Nations-Fisheries/> [24 June 2021].

no treaty, governance system or law has supplanted this. In their negotiations with provincial and federal government the Nuu-chah-nulth continue to seek to 'agreements and/or treaties which will recognize and reaffirm our ownership and governing authorities over our respective *Huautli* (territory)'.[223] While the traditional systems of Nuu-chah-nulth governance, Clifford Atleo maintains, do not have the same power and influence as prior to the onset of colonialism, they have not been lost entirely, and more recently the hereditary chiefs have recovered to some extent, resuming 'influence on economic and political activities in their territories'.[224] In *The Washing of Tears*, Mowachaht/Muchalaht *Ha'wilth* Jerry Jack refers to 'where we come from', which suggests both the physical environment and the cosmological beginnings of the Nuu-chah-nulth.[225] The *ha'wiih* are bound to territory, to place; the gray whale harvested in 2000 is both a material and a symbolic marker of that relationship.

The Washing of Tears documents the aftermath of the Mowachaht people's relocation from their settlement at Yuquot (Friendly Cove) to a different reserve at Gold River because the Canadian government ended funding for the school. The Mowachaht were threatened that if their children did not attend school, they would be taken into residential schools, forcing the people into an impossible situation. *Tyee Ha'wilth* Ambrose Maquinna discusses his own move from Yuqout, unreconciled to the decision that he felt had forced him to leave. He laments that he ignored his uncle's admonition that a chief never moves away from his territory: 'We moved … 'cause we had a hard time. It was sad. ... that sadness was that my uncle, he used to tell me that … a chief should never break his roots, grassroots, I mean, off of the reserve. And then I went against his saying … I had to go because there's nothing there'. There is a heavy sense of sorrow and regret in his words, as well as disturbance caused

[223] Declaration by the *Ha'wiih*, quoted in Black *Ḥuupuk*^{w}*anum,* p. 160.
[224] Atleo, 'Change and Continuity', p. 207; Atleo, *Tsawalk,* p. 98.
[225] *Washing of Tears.*

by this physical separation: ‘I don’t seem to feel right that I’m here. But what can I do? I want to be home in Friendly Cove. I’ve been feeling like this for about 20 years now, so since I’ve moved here. I want to be home’.[226] The binding to place circulates powerfully.

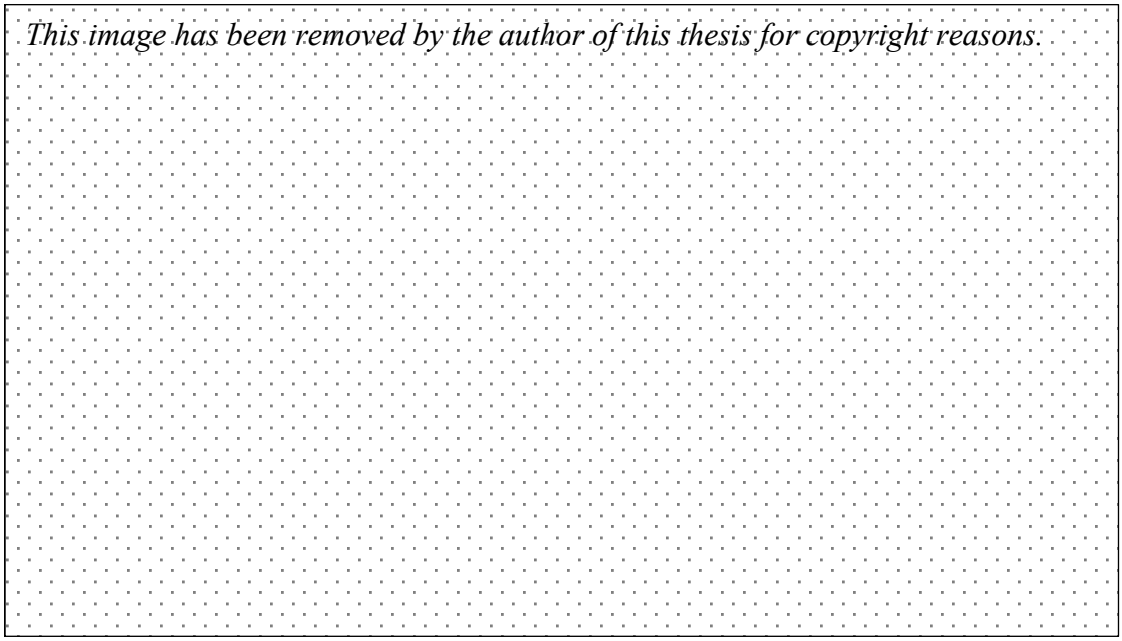

Figure 76.

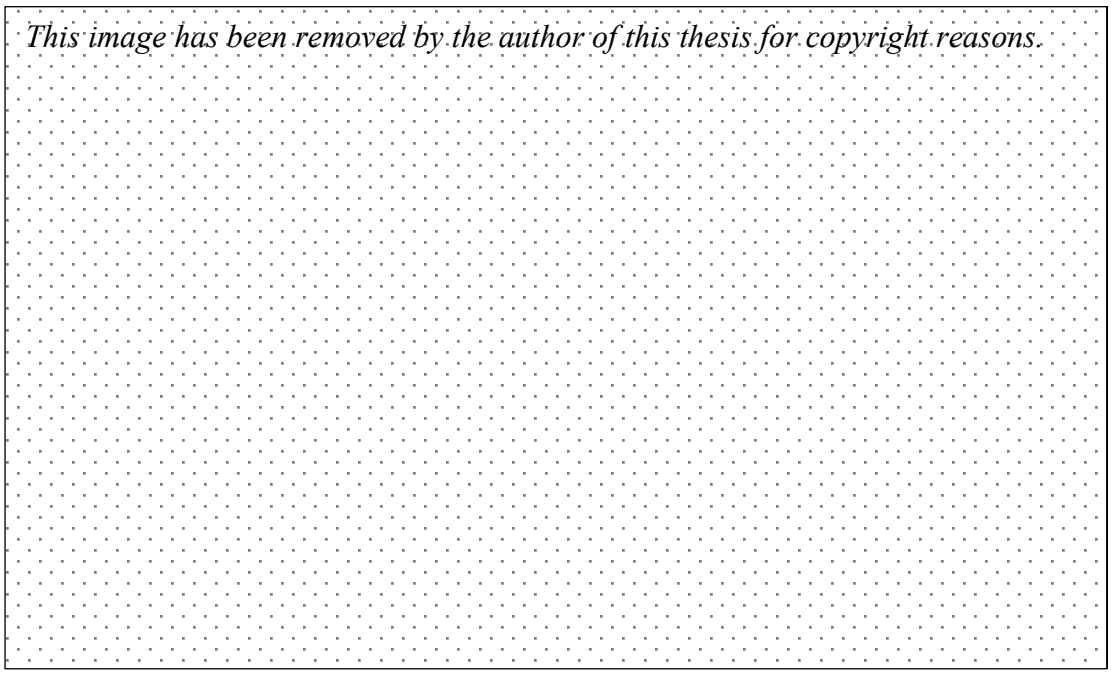

Figure 77.

Figures 76 and 77. Chief Ambrose Maquinna in his relocated home. Stills from *The Washing of Tears.*

[226] *Washing of Tears.*

Just as *ha'wiih* are bound to place, so too was the Ahousaht whale, which can be understood as having become an embodiment of Chief Swan's *hahuulthi* and his *ha'wilth* rights. The animal was cut up and divided in a strict order 'in keeping with tradition'.[227] Different parts of the whale were removed in a particular sequence and distributed to specific people according to rules followed by the whaling generations before them. Following custom, 'the "saddle" portion of blubber', found between the head and the tail, was removed first and offered to Chief Swan because the dead whale was found in his territory. The saddle is the most valued part of the animal. In the case of a whale caught by whaling, the saddle portion would belong to the harpooner. In *Living on the Edge*, Chief Earl George Maquinna explains that the famous whaler Keesta (both his and Umeek Richard Atleo's great-grandfather) 'as the man who had killed the whale … [took] the very rich pieces of meat and blubber'.[228] Coté explains that 'The chief kept the saddle of the skin and blubber from *chakwa'si* [the saddle], which was considered the prize part of the whale', not only because of its physical properties as food but also because 'It was believed that the whale's anthropomorphic spirit resided in the dorsal fin'.[229] This exemplifies the entwining of the corporeal and the metaphysical in a perpetually circulating loop. The whale would be accorded an afterlife through its nourishment, mediated by the chief, of human body and spirit.

[227] Ambrose, 'Ahousaht Feasts', pp. 1, 8.
[228] Maquinna, *Living on the Edge*, p. 54.
[229] Coté, *Spirits of Our Whaling,* p. 35; Tseshaht First Nation, p. 40; Atleo, 'Ahousaht Law and Chinook Salmon', p. 9.

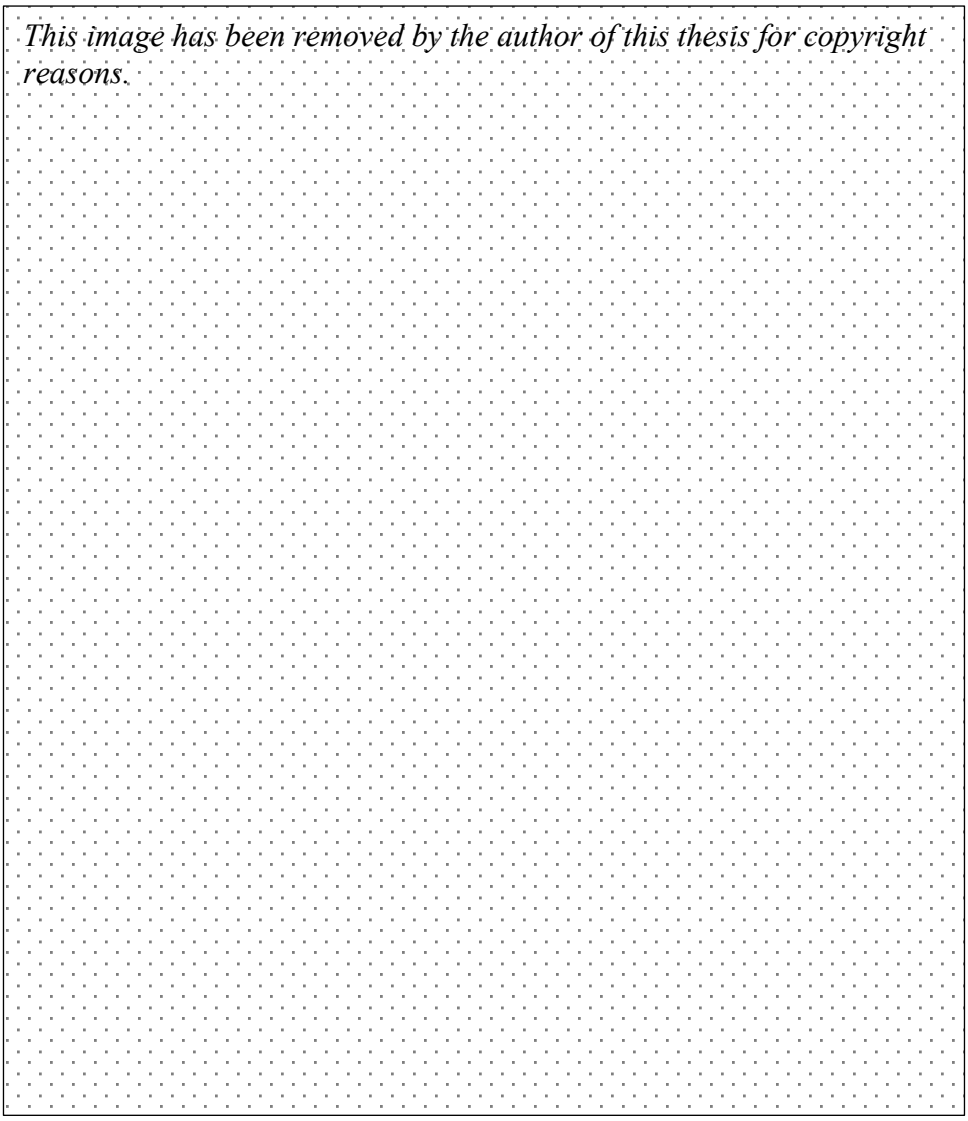

Figure 78. The wooden dorsal fin sculpture inlaid with marine mammal teeth found at the Makah village of Ozette. Source: Richard Daugherty and Janet Friedman, 'An Introduction to Ozette Art', in *Indian Art Traditions of the Northwest Coast*, ed. by Roy L. Carlson (Burnaby, BC: Archaeology Press, Simon Fraser University, 1983), pp. 283-195 (p. 184).

Kirk Wachendorf's research at the Makah Research Centre has further revealed that oral history records the ceremonial significance of the saddle. As Wachendorf notes, it would be 'hung, decorated and treated ceremonially for days. Apparently, whaling-related ceremonies took place in the presence of the whale's saddle or in the presence of a wooden

effigy of the saddle'.[230] Dorsal fins are a prominent part of Nuu-chah-nulth and Makah visual and material culture. A dorsal fin cedar wood sculpture, inlaid with more than 700 sea mammal teeth, was excavated at the Makah village site of Ozette, on the Olympic Peninsula and is now on exhibit at the Makah Research Center [see figure 78]. The significance of the saddle is also demonstrated in the stirring sequence in *The Washing of Tears* when a group from the Mowachaht/Muchalaht travel to where the shrine is being kept in the store room of the American Museum of Natural History. One member of the group runs his hands over the wooden carving of the whale that was once held in the shrine at Yuquot. He places his hands over the saddle area and carefully moves around this part [figures 79 and 80]. The spirit of the whale contained within the saddle is bound to the *ha'wilth* who has claim to the whale. Only once the ceremonial parts have been divided up to the chiefs can the whale's body pass into mass community hands to be carried away, stored safely, and carefully prepared for a feast organised by the chief who had claim to the whale.

[230] Kirk Wachendorf, *Voices of a Thousand People: The Makah Cultural and Research Center* (Lincoln, NE: University of Nebraska Press, 2002), p. 207.

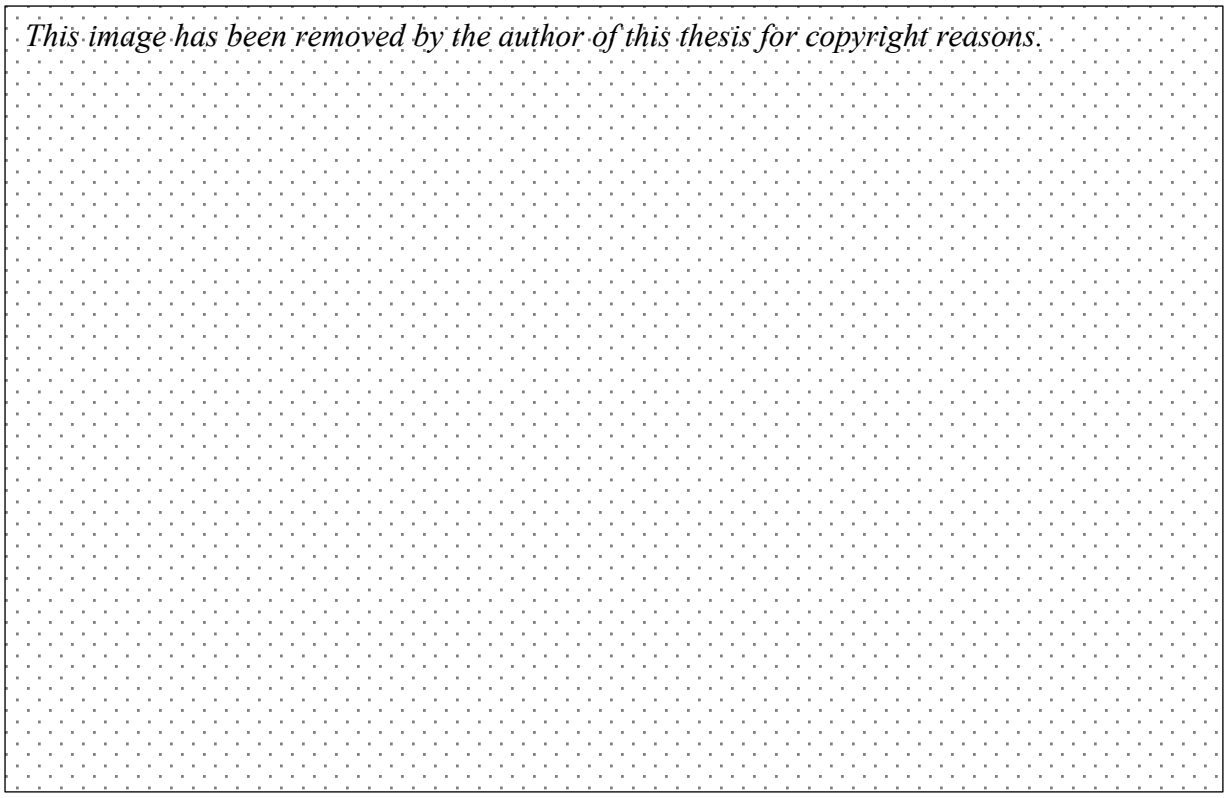

Figure 79.

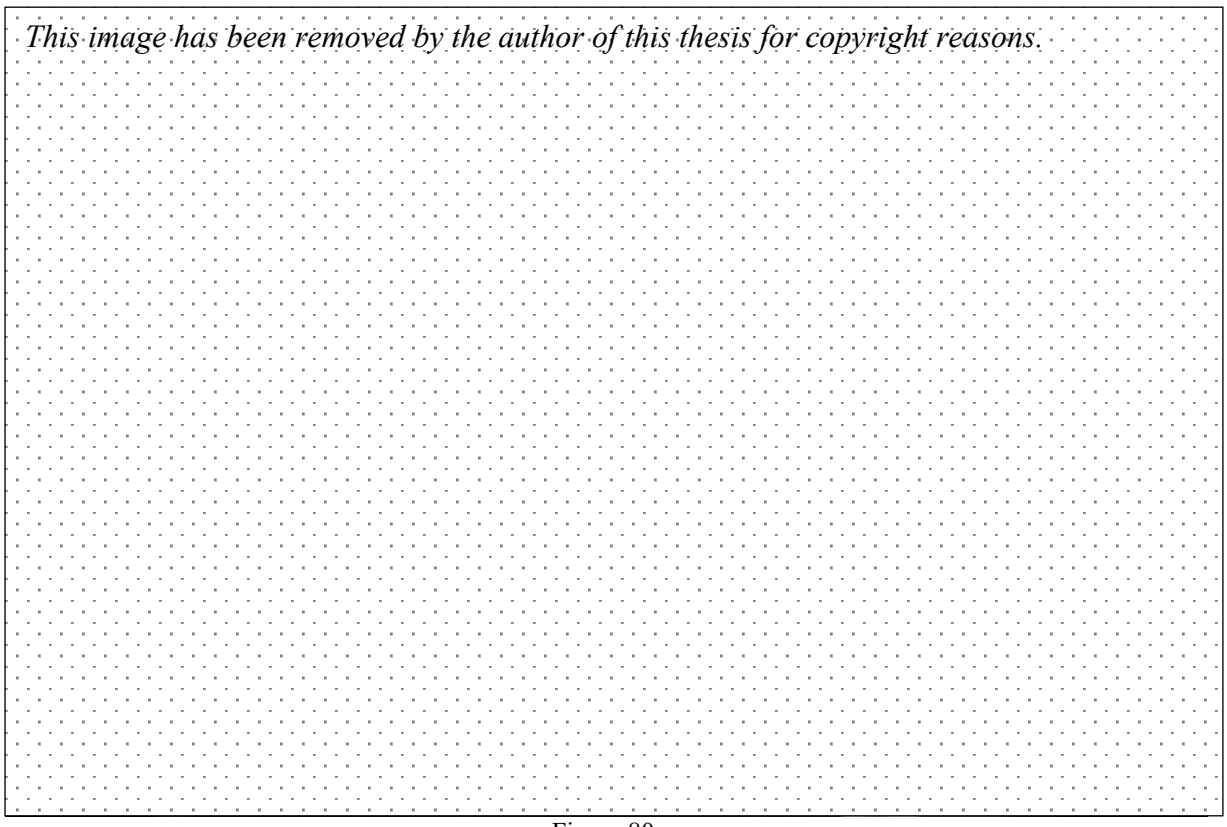

Figure 80.

Figures 79 and 80. A member of the Mowachaht/Muchalaht group runs his hands carefully over the saddle area of the wooden sculpture of the whale in New York. Stills from *The Washing of Tears*.

Nor is it just the saddle that has ritual importance. Each part of the whale signifies a different aspect of the *ha'wiih* and the boundaries of *hahuulthi*, which are mapped onto the whale's body. Huu-ay-aht Elder Willie Sport has emphasised the meaning of the whale body in Nuu-chah-nulth customs: 'We want you to understand what the whale represents to us. When the whale was cut, it represented every inch of our chief's territory, every cut had to be precise. You could not cut into another chief's portion, because that meant part of his … [traditional territory] was being cut off'.[231] As Mowchaht/Muchalaht Chief Jerry Jack explains, 'Our people didn't just go down to the beach and cut a piece of meat off. There was a certain cut for each chief'.[232] Sandra Busatta has similarly discussed the role that whaling had in codifying 'place and rank' in Nuu-chah-nulth society. As she explains, the strict ritual butchering and distribution of whale meat 'reinforce[s] the analogy between the whale and the chief' and also the 'analogy between the whale's body and the social body'. Here, Busatta applies the concept of the body politic to the division of the whale's body, which is symbolic of societal structure.[233] It is clear from what happened in March 2000 that the cessation of whaling did not bring to an end the symbolic significance of whales and their constituent parts.

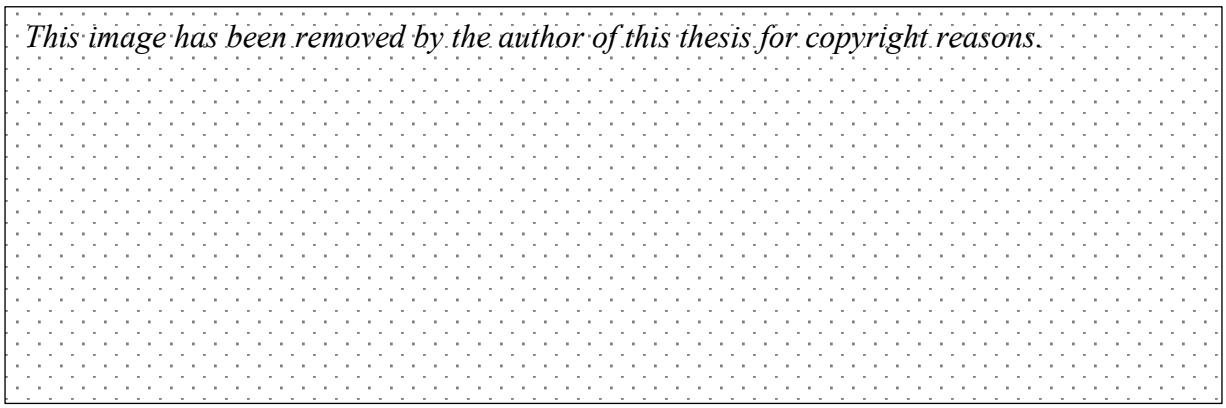

Figure 81. Chuuchkamalthnii (Ḳi-ḳe-in, Haa'yuups, Ron Hamilton), Huupasacath, pencil drawing on the back of a bookmark depicting a whale dorsal fin or saddle surrounded by Nuu-chah-nulth whaling symbols, including a harpoon and seal bladder floats (c. 1968-2015), object number: 3223/42, University of British Columbia Museum of Anthropology, Vancouver.

[231] Sport, quoted in Black, *ḤuupuKʷanum,* p. 34.
[232] 'Native Whale Hunt Raises Ire and Hope', *Nanaimo Daily News,* 1 October 1998, p. 5.
[233] Busatta, p. 132.

The assertion of Ahousaht control over their relationship to a traditional marine resource also shaped the interface with scientific specialists who wished to investigate the death. Arthur Charlie, one of the Ahousaht who tried to rescue the whale, informed the Department for Fisheries and Ocean (DFO) about the dead whale and their intentions to harvest the animal.[234] Rod Palm, the principal investigator at the marine mammal conservation organisation Strawberry Isle Research Society, Tofino, was contracted by the DFO to attend the dead whale to carry out post-mortem investigations. Permission had to be granted by the Ahousaht Fisheries Officer, Darrell Campbell, before they were able to attend the site of the entangled whale at Sydney Inlet on 8 March.[235] As we have seen (see previous chapter), marine mammal conservation is a relatively new layer in the stratum of human history in this region, and government and non-government bodies focusing on marine mammal conservation exist in a sometimes precarious relationship of negotiation, consultation, cooperation and collaboration with First Nations. They seek to balance issues around cultural sensitivity with the aims of science and the federal government.[236]

In this particular case, scientific specialists from Strawberry Isle Marine Research Society led by Palm were able to take samples from the whale, but only after blessings and prayers had been said and the Ahousaht and the Makah had butchered the animal. Palm and his colleagues were told to stand down two days in a row, as the Ahousaht and Makah had

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[234] Keven Drews, 'Dead Whale Caught in Net', *Alberni Valley Times*, 17 March 2000, p. 1.
[235] Susan Payne, 'Gray Whales: Field Notes from Susan Payne', *Journey North* (2000), <https://journeynorth.org/spring2000/species/gwhale/Notes051700.html > [accessed 12 February 2021]; Drews, 'Ahousaht Dine', p. 1.
[236] First Nations will be informed of dead cetaceans and sometimes the remains will be handed over so that traditional ceremonies, blessings and burials can be carried out to honour the life of these animals, and to also traditionally harvest animal parts. Permissions must be gained to respond to dead cetaceans on First Nations territories or to conduct research. In turn, the Nuu-chah-nulth have actively reported stranded and dead cetaceans to the appropriate bodies. See, for example, Randy Shore, 'Vancouver Island First Nation Holds Ceremony for Dead Baby Killer Whale', *Vancouver Sun,* 19 November 2018, <https://vancouversun.com/news/local-news/vancouver-island-first-nation-holds-ceremony-for-dead-baby-killer-whale> [accessed 14 April 2021]; Mike Youds, 'Whale Died 'Excruciating Death,' Researcher Says', *Ha-Shilt-Sa,* 15 April 2020, <https://hashilthsa.com/news/2020-04-15/whale-died-excruciating-death-researcher-says> [accessed 14 April 2021]. There have also been instances of conflict, including in the case of Tsu-xiit (Luna) the lone orca. See Norman, 'What Boundary?', pp. 161-79.

not finished the traditional rituals and cutting up. Palm has described how 'the dead whale was tied off on one of the pond's anchor lines' while Ahousaht community members explained what had happened. The following day, at the beach site where the animal would be cut up, Palm and his colleagues introduced themselves to Chief James Swan, explaining precisely what they needed to do in terms of investigations. In turn, the scientific investigators were informed of Chief Swan's claim to the whale because it was found in his *hahuulthi*. This meeting brought the traditions, needs and priorities of the Ahousaht into dialogue with the scientific requirements of the investigation. Palm stated that the 'meeting went well', suggesting mutual respect and acknowledgement.[237] The death of the gray whale was understood as having multiple significances to different human groups in the Clayoquot Sound region.

During the butchering process, Palm asked if it would be possible for his team to begin their work sooner because the process was taking a long time and they needed to retrieve samples before the body was too degraded. Concessions were made, and the scientific experts were given permission by Chief Swan to begin their investigations as the Makah finished cutting up the animal. While samples from the whale's lungs, liver, kidneys and intestines were successfully taken, red blood cell count, which is needed to determine whether the animal died due to drowning, was not retrieved.[238] However, it was concluded that drowning was the most likely cause because the animal was in a healthy condition otherwise. Under the circumstances, this was a successful outcome, balancing scientific interests with Chief Swan's responsibilities towards his people in ensuring that the ceremonial proceedings occurred without being disturbed. As Ed Lochbaum, the DFO Regional Marine Mammal Manager who contracted Palm, explained, 'If Ahousaht or any

[237] Payne, 'Gray Whale'.
[238] Payne, 'Gray Whale'; Drews, 'Dead Whale Caught'.

other band want [gray whales] for food or ceremonial purposes, they don't even have to ask us', as they are not an endangered species in Canada. The reporting of the death and the welcoming of scientific specialists by Chief Swan and the Ahousaht community members thus revealed a respectful exchange of knowledge that recognised the needs and values of different interest groups. [239] Before the feast took place, Chief Swan received confirmation from the DFO that the whale 'was found to be a healthy specimen' and the meat was safe for human consumption. This is important because, as I discussed in Chapter 1, there is increasing concern about the impact of human pollution and contaminants like heavy metals on cetacean bodies. The chief duly relayed this information to his people, and the preparations for the feast could begin.[240]

In both the case of Rosie's death on Whidbey Island and the circumstances surrounding this animal's, there were two main interest groups gathered around the bodies of the whale. In Rosie's case, there were those interested in retrieving the bones for display and those who wished to gather scientific samples for research. In the case of the Ahousaht whale, there was likewise a scientific motive, but alongside a desire to assert communal and proprietary rights. In the second case, there were rights on both sides, and it is significant that Chief Swan and the Ahousaht conceded rights to the scientists to take data without carrying out a full necropsy. The different cultural constructs are not necessarily opposed, and might be understood as feeding into one another. Science, too, can serve a community, as we saw in the previous chapter. But in the final part of this chapter, I want to focus on the *Ahousaht* community and the significance for that community of the claiming of the whale.

[239] Drews, 'Ahousaht Dine', p. 1
[240] Louise Amos, 'Treaty Planners Discuss *Taxing* Issues in Campbell River', *Ha-Shilth-Sa,* 18 May 2000, p. 3.

Part 4: Community

According to the *Ha-Shilth-Sa*, the gray whale's death became a communal event: 'nearly the entire community came to the beach to witness the butchering of the whale'.[241] The gray whale represented an important moment for the Ahousaht, as a whale had not been brought ashore since the 1960s and they had not actively whaled in around 100 years. The whale's death and its presence on the beach drew the community together. For many on the beach in March 2000, this would have been the first gray whale butchered in their presence in their lifetime. Others had perhaps witnessed the previous event (in 1963) but could hardly remember it. For older generations, in any case, whaling hadn't occurred since their grandparents' or great-grandparents' generation. This was a rare opportunity, then, to witness the traditions of the near past and distant past *alive* in the present. The beach became a site of congregation, with children and adults coming 'to satisfy their curiosity and take part in an historic event'.[242] For many, it was the first time they would see their community's whaling customs enacted in the forms of witnessing hereditary claims of the *ha'wilth* James Swan on his *hahuulthi*; the first time they would hear the traditional prayers, chants and blessings, and watch the strict division of the whale's body according to ceremonial rules. Moreover, the Makah's 1999 hunt was a recent memory, and may have instilled excitement in some Ahousaht community members for such a momentous event in their own community.[243]

Despite the buzz, community members were not practised in the traditional techniques and communal memory had been chipped away at by colonial institutions.

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[241] Ambrose, 'Ahousaht Feast', p. 1.
[242] Ambrose, 'Ahousaht Feasts', pp. 1, 8; Kevin Drews, 'Gray Whale Feast on Menu', *Alberni Valley Times,* 30 March 2000, p. 1.
[243] 'Indians Want to Resume Tribal Hunt', *Independent Online*, 27 April 2000, <https://www.iol.co.za/news/world/indians-want-to-resume-tribal-hunt-35798> [accessed 18 February 2021]; Alex Tizon, 'Second Tribe Rejoices, Considers its Own Hunt', *Herald Review,* 23 May 1999, p. 43; David Wiwchar, 'Whaling Culture Celebrates Revival', *Ha-Shilth-Sa,* 3 June 1999, pp. 1, 10; Denise Ambrose, 'Thousands Enjoy Makah Traditional Feast', *Ha-Shilth-Sa,* 3 June 1999, pp. 1, 10; Denise Ambrose, 'Makah Whale Hunt Dominate NCN Treaty Planning Talks', *Ha-Shilth-Sa,* 3 June 1999, p. 3. See also, Atleo, 'Ahousaht Law and Chinook Salmon', p. 14.

Adapting to the problems faced by gaps in community knowledge and memory, the Ahousaht were joined by 'seven Makah brothers and sisters … to teach us how to butcher the whale'.[244] In 1999, the Makah had successfully hunted a gray whale for the first time since the 1920s, which meant they had recent experience of cutting up a whale for consumption and could be on hand to teach the community the customs shared across these whaling Northwest tribes.[245] The Nuu-chah-nulth and Makah are closely related cultures and share unique whaling traditions in this outer coastal region, which is divided (or connected) by the ocean waterway of the Juan de Fuca Strait. Common customs have developed in response to the ecological features of the region, with many shared species and similar ecosystems. The presence of the Makah to assist in the butchering of the whale demonstrates the close ties and interconnected customs between the two tribal confederations. The traditional ceremony to bless the whale's spirit was carried out by both Ahousaht and Makah. The presence of the Makah on the beach in March 2000 also represented the co-evolution of ancient lifeways shared by these communities. The cross-tribal transmission of knowledge was vital to the process being carried out as close to tradition as possible, and to the preservation and renewal of customs that had been disrupted for many decades.

Moreover, the Makah shared not just inherited knowledge but their experiences from the 1999 hunt and the opportunistic butchering of other stranded gray whales in the 1990s. In this way, they helped the Ahousaht to bridge fractures in their knowledge. It was simultaneously a revival and a recrafting of tradition. The Makah themselves had to fill in their own breaks in knowledge. Rob Van Ginkel has suggested that they had to 'reinvent and recreate … interconnected expertise and culture'. This included learning butchering

[244] Ambrose, 'Ahousaht Feasts', pp. 1, 8.
[245] Denise Ambrose, 'Ahousaht Feasts on Whale', *Raven's Eye,* 3 (2000), p. 11.

techniques from Inuit whalers – techniques then passed on to the Ahousaht.[246] The beach at Sydney Inlet thus became a site for the Ahousaht and Makah to share and co-create, to (re)discover and (re)learn, to gather and produce knowledge. This involved reconnection with something simultaneously ancient and new to their respective communities; and it involved the coming together of the two communities in a sequence of actions that illustrated the social resilience and adaptive capacity of both.[247]

But the presence of the Makah in March 2000 went beyond shared customs. It also reflected the roots of kinship between themselves and Nuu-chah-nulth peoples, with the gray whale becoming a focal point of that relationship. The article in the *Ha-Shilth-Sa* refers to the Makah as 'our relatives'. Kinship ties between different Nuu-chah-nulth nations and the Makah pre-date European contact, have developed over thousands of years, and are sustained to this day.[248] The societies have historically created extended communities of cross-territorial culture and kinship. Traditionally, a whale caught by hunters would bring different bands together and the Makah's presence at Sydney Inlet in 2000 contained within it a long history of intertribal communality. Catching a whale fostered and strengthened bonds beyond the borders of a single community or nation, while the associated celebratory potlatches and feasts helped to consolidate kinship ties and allegiances.[249] Invitations were sent to the Makah and the Nuu-chah-nulth to join the whale feast in 2000, and it was announced that 'Hundreds of Ahousaht and Nuu-chah-nulth band members are expected to descend on the small Flores Island … for a rare and significant cultural event'.[250]

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[246] Rob Van Ginkel, 'The Makah Whale Hunt and Leviathan's Death: Reinventing Tradition and Disputing Authenticity in the Age of Modernity', *Etnofoor,* 17 (2004), 58-89 (p. 65); Reeves, 'Origins and Character', p. 94.
[247] Kyle Powys Whyte, 'Food Sovereignty, Justice, and Indigenous Peoples: An Essay on Settler Colonialism and Collective Continuance', in *The Oxford Handbook of Food Ethics,* ed. by Anne Barnhill, Mark Budolfson and Tyler Doggett (New York: Oxford University Press, 2018), pp. 345-66 (p. 347).
[248] Kinship between the different nations on Vancouver Island and across to the Olympic Peninsula evolved through marriages, potlatching, trade, allegiances and warfare. See Atleo, 'Ahousaht Law and Chinook Salmon', p. 11.
[249] Maquinna, *Living on the Edge*, p. 55; Reid, p. 11.
[250] Drews, 'Gray Whale Feast', p. 1.

Community members were also actively involved in moving the meat and blubber from the beach after the whale had been butchered, as they carried away 'their share' to their homes, echoing the activities of previous generations, when the broader community would help transport the consumable parts. While it took approximately two hours to remove the blubber, people worked through the whole night transporting many tonnes worth of nutritious meat and blubber from the shoreline, to be stored 'in freezers across the small west coast community' and eventually eaten at the whale feast.[251] The sheer size of the gray whale, and of the task at hand, necessarily brought community members together. This, too, invokes tradition, as when the whalers would return to shore with the whale, the whaler's wife and community would welcome the men and the whale on the beach and help to distribute and prepare the meat. Coté suggests that the whole community 'had a stake in the whaling tradition'.[252] In *The Washing of Tears* Elder Terry Williams, the daughter of the last Mowachaht whaler and the last inhabitant of Yuquot Cove with her husband Ray, explains that when her father brought whales up onto the shoreline, all the men in the community would join in. She points out of the window towards the beach where the whales would be pulled up, which she can see from her home [see figure 82].[253] The gathering of the Ahousaht community on the beach in 2000 recalls these collective experiences. In anticipation of the feast, Cliff Atleo states that 'it's going to be pretty important' as 'it's been a long time since we've had one of these. It's been about 70 years'.[254]

[251] Ambrose, 'Ahousaht Feasts', p. 1, 8; 'Whale Caught in Net Divided for Food', 18 March 2000, <https://www.theglobeandmail.com/news/national/whale-caught-in-net-divided-for-food/article1037829/> [accessed 12 May 2020].
[252] Coté, *Spirits of Our Whaling,* p. 39.
[253] *Washing of Tears.*
[254] Drews, 'Gray Whale Feast', p. 1.

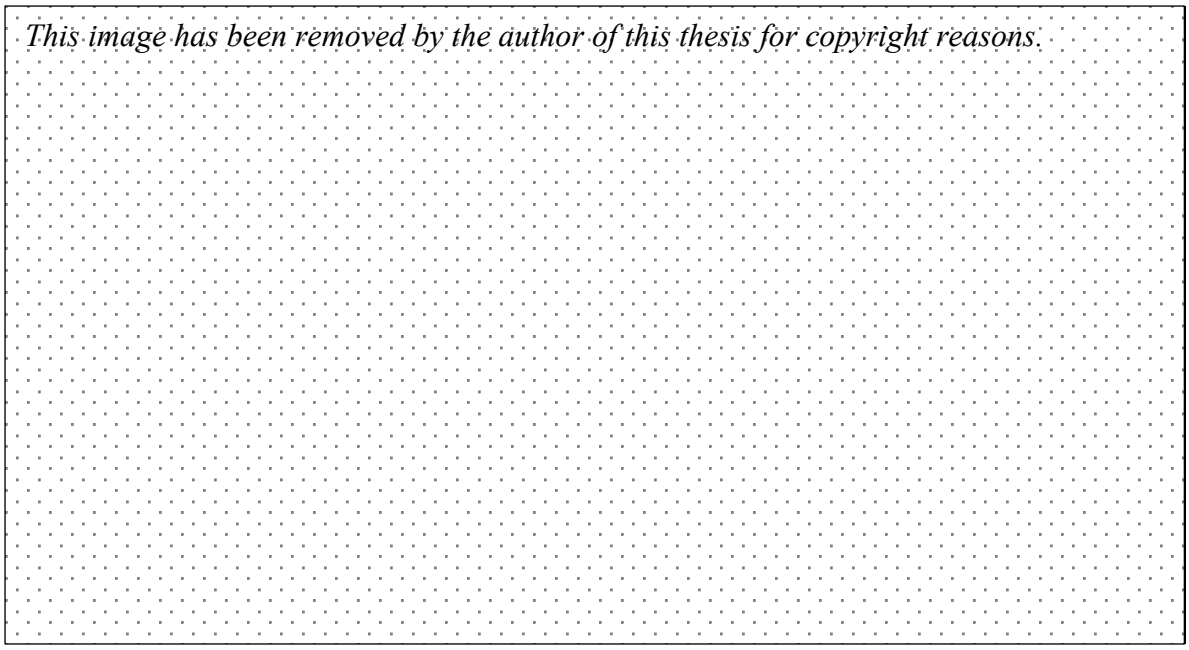

Figure 82. Mowachaht/Muchalaht Elder Terry Williams points out of her window to where her father and other generations of whalers would bring the whale onto the beach to be blessed and butchered. Still from *The Washing of Tears*.

The process of cutting up a whale is a labour-intensive task. The Ahousaht had the benefit of 'a heavy-duty truck and towrope' to help turn the whale body onto its stomach – technology that would have been unavailable to their pre-twentieth-century predecessors.[255] This suggests the strength of Nuu-chah-nulth whalers in the past and gives insight into the physical as well as spiritual preparation that would have been necessary prior to the hunt. It also implies the loss of skills and of specially trained individuals from the society. The entire whaling process from start to finish was demanding. Clifford Atleo has written how, 'Paddling in canoes in the Pacific Ocean, finding and ultimately capturing the great whales and towing them to shore was a tremendous undertaking'.[256] Whalers and their crew would sometimes have to tow one or more gray whales for many miles and, once on land, they relied on human power and non-mechanised techniques to cut up the body and process its individual parts. This suggests the need for both collective work and community spirit, both of which were reinvigorated by working on the whale. Similarly, the work afforded the

[255] Ambrose, 'Ahousaht Feasts', pp. 1, 8.
[256] Atleo, 'Change and Continuity', p. 165.

opportunity to renew and strengthen a sense of identity and community life through the revival of traditions, such as potlatches and other ceremonies.[257] Whaling traditions were invoked, but channelled in new contexts, for example, Nuu-chah-nulth 'paddle songs that were used during the pursuit of the whales are now used with dances that show our deep cultural admiration for such historical events'.[258] Communal events of this kind are also an act of witnessing and recognition, taking place with the active involvement of all ages, and with intergenerational collaboration. The passing down of knowledge to younger generations through oral histories, personal memories and experiences, and origin stories sits at the heart of Nuu-chah-nulth societies. As Elder Terry Williams recalls in *The Washing of Tears*: 'I could mention from one end of the reserve to the other end of the reserve which Elder lived where because I used to go visit every one of them just to listen to them. It was so interesting just to listen to them'.[259] While familial long houses were banned, Nuu-chah-nulth communities now have community centres where these collective activities take place. In *The Washing of Tears*, Chief Jerry Jack refers to the community centre as the 'big house', a recasting of the traditional big (or long) houses. The documentary focuses on this particular community's revival with footage of multiple generations singing in their language, drumming and dancing, wearing traditional clothing, and performing gift-giving ceremonies.[260] In the film, community participation in cultural, ceremonial and ritual revitalisation brings healing, bestows self-esteem and pride, and gives purpose and identity. Seen in this wider context, the events surrounding the death of the gray whale in 2000 – from the events on the beach to the feast – can be understood as offering a positive story of celebration, continuation and the resilience of traditions that feeds into collective wellbeing

[257] *Washing of Tears*.
[258] Art Thompson, quoted in Black, *Ḥuupuk*^{w}*anum,* p. 33.
[259] *Washing of Tears.*
[260] *Washing of Tears.*

and embodies survivance.[261] The fourth person is physically re-enacted in order to create new memories for younger generations who see their traditions in action (see also Chapter 1). The fourth person also anticipates new memories, for, as previously explained, Nuu-chah-nulth time is not linear and the enactment of rituals and customs in the now creates new, fourth-person narratives for future generations.

While some who came to the beach did not take away any whale meat, for others, the opportunity to consume whale meat added another layer of significance to events. On Whidbey Island, the soft tissue of flesh and blubber was left to decay into the littoral zone and be eaten away from the bones, as we saw in the previous chapter. But here, it was the meat that was highly valued and the bones that were returned to the intertidal world. The *Alberni Valley Times* describes how 'whale blubber was eaten by everyone from babies to elders, some of whom had not tasted whale meat for 35 years'.[262] This draws the focus to the blubber and meat itself, consecrating the afterlife of the whale as communal sustenance – as food. The remains of gray whale have many different symbolic meanings, but the animal's materiality – its physical body – is above all else a source of nourishment: gray whale meat is protein rich and the blubber is high in nutrients. The entangled whale in March 2000 thus represented a huge influx of energy into the human community on several different fronts. Whaling was once vital for the health and survival of the Ahousaht, while for the Nuu-chah-nulth and Makah peoples more broadly it provided important sustenance along with other ocean resources. A central value placed on gray and humpback whales was the calorific content of their meat and blubber, which provided the basic energy for a whole host of activities: from hunting and fishing to the everyday rituals of family life. As Cynthia Chou writes, 'Food is a universal basic necessity for the very sustenance of life. No one can do

[261] Atleo, *Tsawalk,* p. 94.
[262] Drews, 'Ahousaht Dine', p. 1.

without it. … it intermingles with different spheres of life'.[263] The status of gray whales as food intersects with understandings of these animals as individual persons, each with a singular spirit. In difficult seasons or years, a whale hunt or a drift whale could help an entire community survive, as enshrined in the Nuu-chah-nulth creation story. Whale meat has nutritional value alongside its cosmological resonances. The consumption of the whale that died in March 2000 allowed individuals to taste and experience the food that their ancestors once ate as part of their traditional diet. In this sense, the Ahousaht were consuming the whale as both new and old food, a traditional food source and the rediscovery of a novel taste.

Whale meat and blubber do not simply represent nutrition, but are embedded in the cultural identity of the Ahousaht, reconfirming their status as a whaling people. Food and foodways carry multifaceted meanings.[264] According to Gary Alan Fine in *Kitchens* (1996), 'the connection between identity and consumptions gives food a central role in the creation of community, and we use our diet to convey images of public identity'.[265] The flesh that the Ahousaht and other Nuu-chah-nulth and Makah community members ate contained within it the ancient origins of whaling, signalling the revival of a culture as well as its traditional subsistence source. Oral histories and archaeology have revealed First Nations foodways stretching back millennia, but these were essentially ended by European and American whaling industries.[266] The collective eating of gray whale meat and blubber on the beach and, later, at the feast, serves as an example of *commensality,* the nourishing of cultural and community identity. As Chou remarks, 'Food and foodways together form an important

[263] Cynthia Chou, 'How Chicken Rice Informs about Identity', in *Commensality: From Everyday Food to Feast,* ed. by Susanne Kerner, Cynthia Chou and Morten Warmind (London: Bloomsbury Academic, 2015), pp. 139-50 (p.140).
[264] E. N. Anderson, *Everyone Eats: Understanding Food and Culture*, 2nd edn (New York: New York University Press, 2014), p. 6; Chou, p. 140.
[265] Gary Alan Fine, *Kitchens: The Culture of Restaurant Work* (Berkeley: University of California Press, 1996), p. 1.
[266] Atleo, *Principles of Tsawalk*, p. 83; Atleo, 'Nuučaaṅuł Plants', pp. 51-64; McMillan, 'Whales and Whalers'.

social barometer to reveal who we are, our origin, and our aspirations'.[267] Eating traditional foods fosters connectivity between individuals and their contemporary community, connecting both to their ancestors in both the recent and more distant past.

The consumption of the raw whale meat and blubber by adults and children on the beach was also a powerful act because, as well as reconnecting the community to a food that had sustained their ancestors for thousands of years, it implicitly pushed back against the infiltration of western diets and foodstuffs. Traditional food and foodways were actively disrupted by colonising agents, and the ramifications of these disturbances are still being experienced today.[268] Species of marine mammal, fish and shellfish (along with terrestrial species) that helped make up the core diet of the Nuu-chah-nulth plummeted with the arrival of the European, American and Canadian extractive industries, impacting not only the accessibility of these foods, but also the cultural practices enacted around them. New food were imported and imposed from other parts of the colonised North American continent, including those of European origin.[269] In early encounters in the late 1700s and early 1800s, some of these foodstuffs were well received while there was also transmission in the other direction, with certain local and Indigenous foods being taken on by European incomers. It was only later, with the full-blown colonisation of the Nuu-chah-nulth, that there was a clear attempt to dislocate these communities from their traditional foods.[270]

One of the most callous ways in which food was utilised against the Nuu-chah-nulth by colonial forces, and which had a profound impact on traditional diets, was within the residential schools. Nuu-chah-nulth children, like other First Nations and Native American children across the continent, were strictly forbidden from eating their own foods, forced into

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[267] Chou, p. 140.
[268] Coté, '"Indigenizing" Food Sovereignty'.
[269] Coté, '"Indigenizing" Food Sovereignty'.
[270] Coll Thrush, 'Vancouver the Cannibal: Cuisine, Encounter, and the Dilemma of Difference on the Northwest Coast, 1774–1808', *Ethnohistory*, 58 (2011), 1–35.

new diets, and judged and ridiculed for the food that their communities lived on.[271] The restrictive diets in the residential schools were part of the neglect and abuse carried out, and hunger is a common recollection.[272] In extreme cases, children had pseudo-scientific eugenics experiments involving food carried out on them unknowingly, including at the residential school at Alberni which Nuu-chah-nulth attended.[273] Clifford Atleo points out that 'Students also reported no longer liking fish or wild game, having been taught that it was degrading to eat traditional Indigenous foods'.[274] Food was utilised to create shame in belonging to the community, and as a way of undermining the relationship between grandparents and parents with children by making children ashamed of the practices of their own families. This is another example of the attempt to sever the relationship of the individual, not just with direct family and community members, but also the fourth person in oral stories.[275] Food and foodways, that is to say, what you eat, how you prepare it, when and how you catch it, and what rituals you perform around it, are all passed down orally through generations.

Food was further exploited as a tool of colonial assimilation. Among the food practices targeted were potlatches and feasts, which were banned by the Indian Act in 1885 (and remained so until 1951). Needless to say, whale feasts were not (knowingly) held during this period. Potlatches and feasts brought people together over food to enact core Nuu-chah-nulth protocols, where there was mutual exchange between *ha'wiih* and guests, redistribution of wealth and food, and public acknowledgement and witnessing of 'social status and spiritual power'.[276] In this context, the feast that followed on the retrieval of the dead whale

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[271] Nuu-chah-nulth Tribal Council, *Indian Residential Schools,* pp. 158-59; Atleo, 'Change and Continuity', p. 173; Trudy Frank (Ahousaht), quoted in Coté, *Spirits of Our Whaling,* p. 194; Coté, '"Indigenizing" Food Sovereignty'.
[272] Coté, '"Indigenizing" Food Sovereignty'.
[273] Coté '"Indigenizing" Food Sovereignty'; Shayne Morrow 'Canada Must Apologize for Nutritional Experiments at Residential School: Tseshaht', *Ha-Shilth-Sa*, 17 July 2013, <https://www.hashilthsa.com/news/2013-07-17/canada-must-apologize-nutritional-experiments-residential-school-tseshaht> [accessed 18 June 2021].
[274] Atleo, 'Change and Continuity', p. 173.
[275] Vizenor, 'Aesthetics of Survivance', pp. 2-3, 21.
[276] Thrush, p. 10.

in 2000 was nothing short of historic, recalling the ritual eating of generations before but also reasserting traditional lifeways in the face of the dominance of European and North American dietary practices. From the late twentieth century through to today, restrictions continue to be placed on traditional harvesting, for instance closures of fisheries due to collapsed populations or industrial pollution, as well as the widespread imposition of quotas.[277] In the late twentieth and twenty-first centuries, it is no longer necessary for gray whales to be hunted for subsistence as other food sources have entered Nuu-chah-nulth societies, as both a legacy of Empire and through the expansion of food markets on a global scale. A number of researchers have considered the impact of colonialism on diets, highlighting the shift away from protein, sea mammal oil and fish oil rich diets and active traditional marine mammal hunts, and the implications of this shift for human health. This is part of an increasing focus in Indigenous Studies on the path forward for food sovereignty and security in First Nations communities and other Indigenous societies around the world.[278] For the Nuu-chah-nulth, traditional food carries with it these layered histories. The drift gray whale in 2000 may have been a one-off event, but it represented a powerfully symbolic reconnection with a traditional food all but lost from Nuu-chah-nulth diets today.

Conclusion

In this chapter, I have emphasised the far-reaching importance of the events surrounding the gray whale's death in Sydney Inlet, which together constituted a cultural and spiritual revival

[277] See, for example, Clare L. S. Wiseman and Frank A. P. C Gobas, 'Balancing Risks in the Management of Contaminated First Nations Fisheries', *International Journal of Environmental Health Research,* 12 (2002), 331-342 (pp. 332-33); Jennifer J. Silver, 'From Fishing to Farming: Shellfish Aquaculture Expansion and the Complexities of Ocean Space on Canada's West Coast', *Applied Geography*, 54 (2014), 110-117; Suzanne von der Porten, Jeff Corntassel and Devi Mucina, 'Indigenous Nationhood and Herring Governance: Strategies for the Reassertion of Indigenous Authority and Inter-Indigenous Solidarity Regarding Marine Resources', *AlterNative: An International Journal of Indigenous Peoples,* 15 (2019), 62-74.

[278] Most prominently, Charlotte Coté has argued that a return to whaling and whale meat offers Indigenous communities like the Makah and the Nuu-chah-nulth a return to food sovereignty and community health. See Coté, *Spirits of Our Whaling*; Coté, '"Indigenizing" Food Sovereignty'.

that demonstrates survivance: a powerful restatement of who the Nuu-chah-nulth are and where they come from. The significance of these events was that they opened a gateway to access the traditional concepts of relationality and mutuality embedded within their core belief of *heshook-ish tsawalk*, while also recalling their whaling traditions and the material and spiritual protocols at their core. The disappearance of gray whales from eastern North Pacific waters would have robbed Nuu-chah-nulth peoples of the chance to revitalise that cultural relationship with the whale, and would have threatened their very identities. In that sense, the continuing presence of the gray whale registers the continuity of the culture, while also acting as a living reminder of the rapacious nature of European colonisation, which took almost everything from these communities: land, status, children and very nearly the whales themselves. The whales have not disappeared, nor have the people who previously depended on them. In that sense, the events in 2000 reconfirm what Umeek Richard Atleo calls the cardinal error 'in prognostication about the vanishing people'.[279] As *Ha'wilth* Jerry Jack recounts at the beginning of *The Washing of Tears*, Nuu-chah-nulth peoples have survived everything and are now able to reconnect to and re-establish their core beliefs and identities:

> some tribes in our Nation got wiped right out. *There isn't one survivor!* Not one. … We're here to celebrate that we survived through that smallpox, we survived in drug and alcohol, we survived genocide, or whatever they call it you know, they outlawed our potlatch way so that we lose our Indian power.[280]

Cultural practices and the traditions behind them remain active in the lives of the Nuu-chah-nulth, as does their relationship with the whales that surround them. This explains why the random encounter with one dead gray whale in 2000 came to trigger a concatenation of events and meanings that stretches into the distant past, but continues to resonate to the present day, and potentially establishes precedent for the future.

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[279] Atleo, 'Policy Development', p. 49.
[280] *Washing of Tears.*

Concluding Remarks

A return to the past, or the new normal?

I could never have imagined that a second gray whale UME would begin to unfold halfway through my research for this thesis. As I mentioned briefly in my introduction, by extraordinary chance, just a few months before my fieldtrip to the west coast of the USA in the summer of 2019, news started to filter through that dozens of gray whales were being found stranded along their migration route in the USA, in Canada, and in Mexico. Less than one month before I was due to travel, these deaths were officially declared an unusual mortality event. It was almost exactly 20 years after the first UME for the species. I arrived in California and Washington just after a spate of deaths in each state, and the UME was a major topic during my interviews with specialists. In 2019, a total of 216 gray whales were found stranded across the three countries; in 2020 a further 172 were discovered; and at the time of writing (July 2021), NOAA has just announced a further 92 stranded gray whales. Signs of malnutrition and starvation have been reported in a significant proportion of these animals, which points once again towards issues in the species' food source.[1]

As discussed in Chapter 1, gray whale strandings in the first UME (1999-2000) were associated with a wider population decline. Following this significant die-off, numbers rebounded to approximately 27,000 by 2016. This appears to confirm the theories of specialists in the early 2000s that the carrying capacity of the Arctic feeding grounds is this peak population of around 27,000 (see Chapter 1).[2] The question remains, though, as to

[1] Calambokidis and Huggins; Klope, interview; Berta and Howard; Gulland, Flannery and Grieg; NOAA Fisheries, '2019-2021 Gray Whale Unusual Mortality Event along the West Coast and Alaska', <https://www.fisheries.noaa.gov/national/marine-life-distress/2019-2021-gray-whale-unusual-mortality-event-along-west-coast-and> [accessed 20 July 2021].

[2] NOAA Fisheries, 'West Coast Gray Whales Declined During Unusual Mortality Event, Similar to Past Fluctuations in Numbers', <https://www.fisheries.noaa.gov/feature-story/west-coast-gray-whales-declined-during-unusual-mortality-event-similar-past> [accessed 20 July 2021].

whether these numbers are close to pre-whaling population levels, or whether they reflect the impacts of whaling and climate change on ecosystem productivity, making this a depleted population relative to historic abundance. Moreover, what is the long-term impact of global warming and rising sea temperatures in the Arctic on benthic prey species? Since 2013, there have been a series of record-breaking weather events and marine heatwaves in the eastern North Pacific. Between 2013 and 2016, there was a powerful marine heatwave in the Pacific Northwest, otherwise known as the 'Blob'. In 2015, there was the record-breaking El Niño event which caused warming sea surface temperature across parts of the Pacific Ocean (and around the world); then, four years later, there was another major marine heatwave in the northeast Pacific.[3] What role might weather events in the Pacific be playing in the lives of gray whales, and how does this intersect with anthropogenic climate change? If human-caused degradation of the gray whales' ecosystem is the cause of the two separate UMEs, then the stranded whales may be sentinels of issues in places far removed from where they are dying and appearing on the shore.

While the mortality event in 1999-2000 was the subject of major research, which I in turn have been able to draw upon and extend in this thesis, during the subsequent twenty-year period specialists have turned their attention to different marine issues: for instance, other marine mammal UMEs or the declining numbers of critically endangered southern resident orcas in the Pacific Northwest. The eastern North Pacific population of gray whales is now considered to be relatively stable, and the 1999-2000 unusual mortality event and investigations into it had inevitably been shelved. However, the more recent gray whale

[3] Eli Kintisch; Tim Stockdale, Magdalena Balmaseda and Laura Ferranti, 'The 2015/2016 El Niño and Beyond', *European Centre for Medium-Range Weather Forecasts (ECMWF)*, 151 (2017), <https://www.ecmwf.int/en/newsletter/151/meteorology/2015-2016-el-nino-and-beyond> [accessed 20 July 2021]; NOAA Fisheries, 'New Marine Heatwave Emerges off West Coast, Resembles "the Blob"', 5 September 2019, <https://www.fisheries.noaa.gov/feature-story/new-marine-heatwave-emerges-west-coast-resembles-blob> [accessed 20 July 2021]; NOAA Fisheries, 'String of Marine Heatwaves Continues to Dominate Northeast Pacific', 2 December 2020, <https://www.fisheries.noaa.gov/feature-story/string-marine-heatwaves-continues-dominate-northeast-pacific> [accessed 20 July 2021].

deaths have brought the events of 1999-2000 back to the surface again. Indeed, this second mortality event was the main reason that specialists in the USA were so willing to talk to me.[4] My research thus took on a new significance that I could not possibly have foreseen.

It is important to understand that, in both mortality events, each gray whale death recorded had and still has individual significance. An animal's death, like its life, is its own, and post-mortem investigations offer us information about both of these. At the same time, a single gray whale death feeds into the generality, contributing specimens and data that can shed light on the wider population as well as giving insights into the species in the past. In the case of a UME, each stranded whale is tied to the hundreds of others that are found, and to the thousands of deaths if we take into account the wider population declines observed.

In this thesis, I have approached *both* the generality of the UME that occurred in the 1999-2000 period *and* the unique set of responses that individual gray whale deaths can trigger when found close to human societies. What happens to a whale's remains depends on where it has last swum, what the circumstances behind the end of its life were, and where the ocean currents washed its body ashore. The afterlives that emerged around each of the two whales that have featured in these pages are down to chance, that is to say when and where their bodies appeared. Their deaths in each case triggered a series of activities that, both geographically and conceptually, went far beyond the two animals' ocean-going lives. The Whidbey Islanders' decision to salvage the bones of the stranded gray whale that would later become known as Rosie, and the Ahousaht's traditional harvesting and butchering of the gray whale discovered drowned in their fishing nets, are both in themselves extraordinary events. Most gray whale carcasses will have samples taken from them and some will be necropsied. But many will be left to decompose on the beach, while some will never be discovered. In this sense, Rosie and the Ahousaht whale are hardly typical stories. The various events and

[4] Calambokidis and Huggins; Gulland, Flannery and Grieg.

meanings that surround them, reflecting the values and lived realities of two very different societies, are as outsize as the whales themselves.

The differences between the two cases probably outweigh the similarities. Whidbey Island is a settler society that has been present for less than 200 years, and the values associated with it reflect that. The preoccupation with marine conservation issues, which emerged in the latter half the twentieth century, has come to dominate the attitude of many Islanders towards gray whales and the ocean more generally. Indeed it was the mixture of community concern and scientific expertise that came to shape the Islanders' response, inspiring the project to salvage Rosie's bones and, later, the initiative to create a formal stranding network. The Ahousaht whale, by contrast, was found in the territory of a people who have a whaling culture that is more than four thousand years old and whose interpretation of cetaceans is embedded in ancient cultural, spiritual and cosmological traditions. European colonisation caused major disruption to the lifeways of the Ahousaht and all Nuu-chah-nulth peoples. This included the end of traditional whaling as a result of the destabilisation of the social fabric as well as the decline of gray and humpback whales caused by commercial whaling. Despite this, the cultural and spiritual traditions of the Nuu-chah-Nulth have endured, and the death, subsequent retrieval, and ritual preparation and consumption of the gray whale in 2000 would become a focal point of cultural revival.

I want to return briefly here to the major concepts that arose during the course of my research: endings, afterlives, conservation and survivance. Each of these asks us to turn towards the past and to consider what is its stake in and what follows on from an ending. My research has shown that the ends of gray whales' biological lives, in certain circumstances, may lead to multi-layered cultural *after*lives: as scientific specimens and data, as items for community museum display, and as cultural memories and legacies that demonstrate the capacity of embattled human societies to survive *and* flourish (survivance). However they are

perceived, the legacies of Rosie and the Ahousaht whale are far-ranging. Although commercial whaling of gray whales ended almost a century ago, the shockwaves of this brutal industry are still being experienced today. If the conclusions of genetic testing are correct that the pre-whaling population was much higher, and that the carrying capacity may have declined as a result of the near extinction of the species, then the species' reality today carries with it these physical legacies of whaling. The notion of 'afterlife' does not just apply to humans, nor does it just apply to individuals. In some cases, as with the gray whale, it can open on to entire species and illuminate their present and future, as well as their past. The history of European commercial whaling is interwoven with the physical makeup of the species. Its implications are also still felt by the Nuu-chah-nulth people today, whose societies changed so dramatically because of the impacts of European colonialism, including the end of their traditional subsistence whaling. While whaling has not been practised since, the Ahousaht and other Nuu-chah-nulth First Nations have kept the spiritual and cultural aspects of whaling alive and circulating through the present. This was vividly enacted when the gray whale was found entangled in Ahousaht nets in 2000. The extent to which gray whales have recovered may be moot, but at least they have avoided extinction, and their conservation remains a paramount concern, not least in the residential waters of the Pacific Northwest. But dead whales, too, can produce recoveries, as is the case with the multifaceted cultural revival prompted by the Ahousaht whale.

My work has shown that the deaths of gray whales, whether individually or collectively, mean often markedly different things to different groups of humans. Gray whales are not fixed in cultures or in minds, and their status has transformed as humans and the species itself have experienced profound changes. In the case of the whales, these changes include rampant over-exploitation during whaling, their consequent near extinction, their subsequent conservation and relative recovery, the occurrence of UMEs and the rise of

other anthropogenic threats. For humans, it is still more complex. For some, like the people of Whidbey Island, the end of commercial whaling would lead to a rise of concern for the health and protection of the ocean and its inhabitants. For the Ahousaht and other Nuu-chah-nulth groups, there is their own protection to consider after an ongoing history of colonialism in which an axe was taken to their societies, their value systems, and their spiritual beliefs.

The material and semiotic significances of all species, not just the human species, defy simple definitions. The gray whale consequently sits at the centre of a spiral of meanings that have been projected onto it, both in the present and stretching thousands of years back into the past. To explore these meanings properly requires interdisciplinary work, which presents its own challenges. In order to come close to understanding past life in the oceans as well as the current significances of marine species like the gray whales to human societies, cross-disciplinary approaches are essential. The natural sciences are key, although as I have shown, arts and social sciences – especially the crossover disciplines of history and anthropology – are needed as well. After the first unusual mortality event, scientists offered a range of explanations, while a certain level of ambiguity remained. When the second UME took place in 2019, rather than confirming earlier theories, further questions were raised about this particular population of whales. For example, while the more recent mortality event appears to confirm that the current carrying capacity of the feeding grounds is less than 27,000, it sheds little light on what the pre-whaling capacity was, or on any consequent limitation of abundance. Researchers are still unclear about whether mortality events may represent a return to pre-whaling cycles of mortality that are typical for this species, or whether they represent a new normal in response to the reduced carrying capacity caused by whaling and warming sea temperatures as a result of climate change. Researchers only have two mortality events to work with, which is a small dataset. While we may never know if unusual mortality events are a return to a pre-whaling state for this population, we do have

evidence of the impact of warming oceans on Arctic ecosystems as we move through the twenty-first century. We are also increasingly understanding the devastating impact that whaling has had on oceans through the loss of vital nutrient recycling by living whales and the removal of millions of tonnes of biomass in the form of whale falls: dead whale bodies that sink to the ocean floor. At the same time, gray whales are also opportunistic foragers. As sea ice melts for longer in the Arctic, will gray whales find new foraging places further north, helping them to withstand the worst effects of future climate change? Things become even more complicated with growing understanding about the population dynamics of the Pacific Northwest resident gray whales. In such circumstances, the future of the species is uncertain and recovery is not necessarily secure.

Whatever conclusions we might draw, the world that the gray whale returned to is emphatically not the same as the one that existed two hundred years ago. The gray whale may have returned from Merwin's 'black garden', but it is not the same world that they were taken from by nineteenth-century whalers.[5] The world which gray whales have re-entered is one that has been irrevocably transformed by industrialisation. Gray whales are now threatened along their migration route by hazardous fisheries gear, dangerous shipping lanes, and environmentally unsustainable coastal developments, while their benthic food source is vulnerable to the impacts of rising sea temperatures. Nor, for that matter, are the oceans the same place they were two hundred years ago. We may never return to the superabundance that earlier whalers and other explorers have described.[6] In spite of this, many human communities, such as those of Whidbey Island and the Ahousaht in the Pacific Northwest, continue to maintain a close relationship with local marine environments and their inhabitants, to monitor and respond to the changes they are witnessing, and to keep cultural,

[5] Merwin.
[6] Roberts, *Unnatural History.*

spiritual and emotional ties to marine species, including gray whales. The unusual mortality events that have afflicted gray whales in the Pacific Northwest are disturbing, but they offer a chance to gain greater understanding of possible past abundance in the ocean, future degradation as a result of human activity, and the richness and complexity of animal lives.

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