

The New Zealand sealing industry

History, archaeology, and heritage management

Ian W.G. Smith

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Contents

Abstract	v
<hr/>	
1. Introduction	1
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1.1 Objectives	1
1.2 Scope	1
1.3 Organisation of this study	3
2. International context	3
<hr/>	
3. Historical investigation of the sealing industry	5
<hr/>	
3.1 Historical records	5
3.2 Limitations of the historical record	6
3.3 Methods of analysis	7
3.4 Sealing cargoes	8
3.5 Sub-regions	8
4. Development of sealing in the region	10
<hr/>	
4.1 The earliest sealers 1792-1802	11
4.2 Sealing for skins 1803-07	13
4.3 Skins and oil 1808-12	13
4.4 Decline 1813-22	16
4.5 Revival and mixed trade 1823-29	16
4.6 Diversification and decline 1830-39	16
4.7 Sporadic local sealing 1840-71	17
4.8 Macquarie revival 1872-94	17
4.9 Illegal sealing 1895-1913	18
4.10 Occasional open seasons 1914-46	18
5. Sealing activities	20
<hr/>	
5.1 Sealing procedures and equipment	20
5.1.1 Extraction	20
5.1.2 Processing	22
5.1.3 Logistical support	23
5.2 Sealing strategies	25
5.2.1 Shore-based sealing gangs	25
5.2.2 Ship-based sealing gangs	27
5.2.3 Boat-based sealing gangs	28
5.2.4 Resident sealers	29
6. Sealing locations	30
<hr/>	
6.1 Westland	31
6.1.1 Kahurangi-Wekakura	31
6.1.2 Cape Foulwind	32
6.1.3 'Open Bay'	32
6.1.4 Cascade	34
6.2 Fiordland	34
6.2.1 Milford Sound	35
6.2.2 Sutherland Sound	35
6.2.3 Bligh Sound	35
6.2.4 George Sound	36

6.2.5	Looking Glass Bay	36
6.2.6	Caswell Sound	36
6.2.7	Nancy Sound	36
6.2.8	Doubtful Sound and Thompson Sound	37
6.2.9	Dagg Sound	37
6.2.10	Coal River	37
6.2.11	Breaksea Sound	37
6.2.12	Dusky Sound	38
6.2.13	Chalky Inlet	39
6.2.14	Preservation Inlet	41
6.3	Foveaux Strait	43
6.3.1	Gates Boat Harbour	43
6.3.2	Solander Islands	44
6.3.3	Ruapuke Island	45
6.3.4	Waikawa	45
6.3.5	Other localities	45
6.4	Stewart Island	45
6.4.1	Codfish Island	46
6.4.2	Mason's Harbour	46
6.4.3	Doughboy Bay	47
6.4.4	Easy Harbour	47
6.4.5	'South Cape'	47
6.4.6	Broad Bay	48
6.4.7	Port Pegasus	48
6.4.8	Lords River	49
6.4.9	Port Adventure	49
6.4.10	Pattersons Inlet	49
6.4.11	Port William	49
6.4.12	Other localities	50
6.5	Otago	50
6.5.1	'Isle of Wight' and 'Ragged Rock'	50
6.6	Other regions	51
6.6.1	Canterbury	51
6.6.2	Cook Strait	51
6.6.3	North Island	52
7.	Discussion	53
7.1	Definition of place	53
7.2	Representation of variation	56
7.3	Threats to heritage values	57
7.4	Opportunities for interpretation	58
8.	Conclusion	58
9.	Acknowledgements	59
10.	References	59
Appendix 1		
	New Zealand maps and charts of the sealing era	63
Appendix 2		
	Shore-based and boat-based sealing gangs in New Zealand	64
Appendix 3		
	Inventory of Historic Places of the sealing industry	66
Appendix 4		
	Heritage management recommendations	71

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ABSTRACT

A detailed examination of historical and archaeological records of the European sealing industry in New Zealand outlines its development through ten phases from 1791 to 1946. Modes of activity within the industry and specific areas of operation are identified in order to locate specific historic places that can be associated confidently with sealing. Prioritised recommendations are developed for the management of these places.

Keywords: fur seals, elephant seals, sealing industry, history, archaeology, heritage management, New Zealand, subantarctic islands, Macquarie Island

1. Introduction

1.1 OBJECTIVES

Commercial exploitation of seals for fur and oil was the first European industry on New Zealand's shores and the major stimulus for sustained European presence here during the late 18th and early 19th centuries. Sealing continued sporadically throughout the 19th and early 20th centuries. Despite its historical primacy and longevity, little is known of specific historic places associated with this industry.

The 'Historic resources national thematic study—Historic sealing sites' was a project designed to redress this situation. Its aim was to undertake a definitive study of historic places associated with the European sealing industry in New Zealand to provide a basis for informed prioritisation of protection and conservation work, interpretation, registration and statutory advocacy. Its primary objectives were to:

- Define specific eras in the history of the industry, establishing methods of operation and locations of activity through detailed analysis of historical sources
- Compile an inventory of all known and probable historic sealing sites, using historical and archaeological information
- Identify the range of site types and archaeological features associated with the industry, noting temporal and regional differences
- Recommend and prioritise further management and research work

Following the statutory definition of the term, **historic places**¹ of the sealing industry are identified here as terrestrial locations for which there is historical and/or archaeological evidence of a direct association with sealing activities. This includes both general localities where sealing is known to have occurred, and **historic sites** where historical and/or archaeological evidence discloses the precise location of past sealing activities. It also includes several cases where an inter-related set of closely adjacent sites can be identified as an **historic area**. The varying levels of precision in identifying historic places are taken into account in framing recommendations for future management and research.

1.2 SCOPE

Seal hunting was an important subsistence activity from the time of first human settlement in New Zealand (Smith 1985, 1989), and some of the early European explorers also took seals for food, used their skins to repair rigging and rendered their fat for lamp oil (McNab 1907: 24). However the focus of this study is exploitation for commercial gain rather than subsistence need.

¹ An historic place is 'any land (including an archaeological site) or any building or structure ... that forms part of the historical or cultural heritage of New Zealand ...' (Historic Places Act 1993)

As an industry, sealing began in New Zealand in 1791 or 1792 and continued until 1946. Although the principal concern of this study is with sealing on the New Zealand mainland, it is essential to consider this within a broader regional context (Fig. 1). Patterns of activity in New Zealand were strongly influenced by the discovery and exploitation of sealing grounds on islands further south, and sealing voyages 'to New Zealand' often also visited these subantarctic islands. There were also close links with Bass Strait and the south-eastern coast of Australia, particularly during the earliest phase of sealing (Hainsworth 1967).

The **New Zealand sealing region** is defined here as the New Zealand mainland and the Antipodes, Auckland, Bounty, Campbell, Chatham, Macquarie and Snares Islands (Fig. 1). Although Macquarie Island was, from 1825, a dependency of Tasmania, it is included here because it was clearly viewed by the sealers as part of the 'New Zealand grounds' and the vast majority of voyages touching there operated from or via the New Zealand mainland (Cumpston 1968). Evidence from throughout this region is utilised in reconstructing the historical development of the New Zealand industry in sections 3 and 4 of this study, but the more detailed consideration thereafter concentrates solely upon the New Zealand mainland coasts.



Figure 1. The New Zealand and Bass Strait sealing regions.

1.3 ORGANISATION OF THIS STUDY

This study uses both historical and archaeological information to identify historic places associated with the New Zealand sealing industry. There is a pronounced imbalance between these two sources of data. Primary historical records have been compiled, reviewed and synthesised at regular intervals since the 1860s. While these previous studies have some deficiencies in relation to the objectives of this study, they do provide a valuable starting point. In contrast, there has been no previous examination of the archaeological data, and prior to this study only eight recorded archaeological sites had been positively or tentatively associated with the sealing industry.

The approach used here involves reassessment of the historical record to identify when sealing took place and how it developed over the century and a half of its operation. Particular attention is focussed upon the nature of sealing activities and the strategies through which these were put into operation in order to evaluate their potential for leaving physical remains in the archaeological record. Consideration is then given to the locations in which sealing is reported to have taken place, and the available archaeological evidence is assessed to identify sites that can be positively or tentatively related to the historically documented or inferred activities. Finally, these sites are assessed in terms of priorities for future management and research.

2. International context

The international sealing industry had its origins as early as 1610, when Dutch sailors took African seals for both oil and hides, and by the early 18th century Russian traders were shipping fur seal skins from the Aleutian Islands to China (Busch 1985: 7-9). However it was not until the 1770s that sealing became a major commercial enterprise. In 1775 a fleet of American whaling ships congregated at the Falkland Islands to complete their cargoes with oil taken from elephant seals for sale on the English market (Busch 1985: 6). In 1778 both seal skins and oil were brought back by English sealers from South Georgia and the Magellan Straits (Jones 1986: 254).

Elephant seal oil was valued as an odourless and smoke-free fuel for lighting, and was also used as a lubricant. The skins of these animals were sometimes used for making leather, but those of the fur seals were most highly prized (Fig. 2). The fur could be removed from the skin and used in making felt, but the pelts could also be used for clothing as long as the coarse outer guard hairs were separated from the soft under-fur. An economical method for doing this was first developed in China about the middle of the 18th century (Busch 1985: 8), making this country the earliest major market for seal skins. Development of the American and European fur trade with China was stimulated largely by publication in 1783 and 1785 of accounts of James Cook's last Pacific voyage which described the enormous demand and high prices for furs in North China. By 1786 American traders were selling dried fur seal skins in Canton, as were

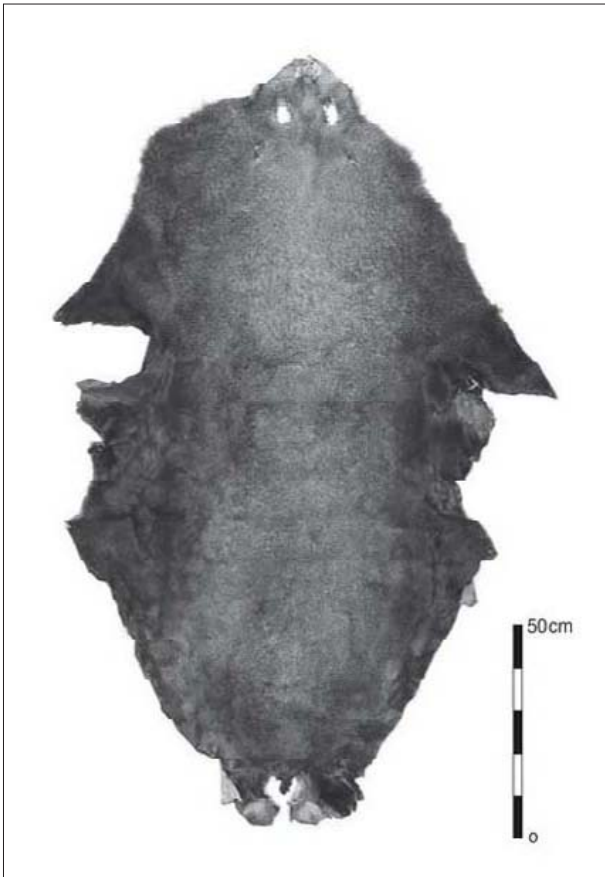


Figure 2. Skin of adult male fur seal. *Otago Archaeological Laboratories Reference Collection* No. FA975

British East India Company ships by 1793. Canton remained the major market until 1803 when oversupply caused a significant drop in price (Hainsworth 1972: 148; Richards 1995: 20).

The London market was being supplied regularly with seal skins and oil from the early 1790s, mostly by British South Sea whalers, as duties imposed on foreign cargoes discouraged American merchants from sending vessels there (Busch 1985: 6). Prices obtained for skins improved dramatically after 1796, when Thomas Chapman invented a process for separating fur from guard hairs, salt, and oil, which enabled their use in industrial processes, particularly the manufacture of hats (Hainsworth 1972: 149). This not only increased their commodity value, but also made it possible to preserve the skins for storage and transport by salting, rather than drying. Except in the first few years of the New Zealand sealing industry, its major market was in London, even after the 1808 financial crisis there and oversupply of skins brought sharp reductions in prices (Richards 1995: 20).

The high prices that could be obtained in the early years of the sealing industry led to intensive

exploitation and rapid depletion of known colonies, and an equally rapid search for new sealing grounds. Almost all of the places in which fur seals and elephant seals could be found were discovered and exploited between 1790 and 1810 (Busch 1985).

The establishment in 1788 of the Port Jackson convict settlement in what was to become Sydney, Australia provided the principal base from which this search extended into the southern Pacific. The first explorations in this area in 1791–92 were by British ships transporting convicts to the penal colony and seeking return cargoes that could be exchanged in Canton or Macao for spices, teas and silks for on-sale in Europe (Richards 1996: 41). American vessels involved in the fur trade are reported in Port Jackson from at least 1793, although probably only provisioning there en route to or from sealing grounds elsewhere (Busch 1985: 29). However the development of sealing in Australian and New Zealand waters was largely the work of Sydney-based merchants sending ships and men from Port Jackson.

3. Historical investigation of the sealing industry

3.1 HISTORICAL RECORDS

The earliest accounts of the New Zealand sealing industry by Heaphy (1863), Chapman (1893), and Carrick (1903) are valuable, but limited in temporal scope and by the information then available. A much more substantial body of primary data was located and drawn together by McNab (1907) for his history of southern New Zealand and the subantarctic islands to the end of the 1820s, and this has formed the basis of most subsequent accounts (e.g. Turbott 1952; Gaskin 1972). More recently several authors have provided additional data and revisited some of McNab's interpretations (e.g. Kerr n.d.; Molloy n.d.; Richards 1995, 1996; Salmond 1997).

More detailed localised studies include Cumpston (1968) on Macquarie Island, Richards (1982) on the Chatham Islands and Molloy (1987) on Westland, as well as the relevant portions of various local histories, especially Howard (1940) on Stewart Island, Entwistle (1998) on Otago, and Allan (1965) on Nelson. There have been detailed studies of some participants in the industry (e.g. Begg & Begg 1979; Bowden 1964; Hainsworth 1972; Ross 1987; Starke 1986; Steven 1965), and also several more popular treatments of the subject (Begg & Begg 1973; Hall-Jones 1976, 1979; Grady 1986).

These analyses have focussed largely upon the historical development of the industry, or less often its impact upon seal populations, the role of specific participants, or the interactions between sealers and local Maori populations. Although often providing relevant information, they have not closely considered precisely where and how sealing was conducted. To address these issues it is necessary to return to primary data.

There are very few primary descriptions of the activities of sealers on the New Zealand coast. Best known are the memoirs of Jorgen Jorgenson's brief visit in 1804-05 (Richards 1996) and the 1826-28 portion of John Boulton's journal (Starke 1986), along with relevant sections of Fanning's (1924) and Morrell's (1832) voyaging accounts, and the recollections of Reg Taylor's activities during the 1946 open season (Scadden 1996). There are also fragments drawn from contemporary newspaper reports (e.g. McNab 1907: 84, 102; Richards 1995: 105), and from transcripts of court proceedings (e.g. Entwistle 1998: 144-148) and evidence presented to the 1821 Bigge Commission on the state of the New South Wales colony.² Sealing vessels did not usually maintain logs, but several charts and maps compiled during the early years of the industry have survived (Appendix 1).

The most important primary sources of information on the New Zealand sealing industry are records of the movements and cargoes of sealing vessels. There is a

² Bonwick Transcripts, held in the Mitchell Library (ML), Sydney. Relevant portions are referenced separately.

partial surviving official record of shipping and customs returns from relevant ports, but a much better record is provided by shipping arrivals and departures information reported in Australian, British, American, and New Zealand newspapers. The essential details for most of these can be drawn from Cumpston (1964, 1968), Jones (1986), Nicholson (1977, 1983, 1985), Richards & Chisolm (1992) and Richards (1998). The most complete summary of this information for the New Zealand region, at least of that which was available up to the mid 1970s, was compiled by Ross (n.d.).

3.2 LIMITATIONS OF THE HISTORICAL RECORD

The value of this historical record is limited by both generic problems, common to any kind of historical analysis, and some that are specific to the sealing industry. Some data are always missing. It is certain that at least some of the ships that operated in the New Zealand sealing region didn't enter any of the ports for which data are available, and it is clear that others slipped in and/or out of port without being noticed. Prior to March 1803 there were no newspapers published in the region, and the most significant early source, the *Sydney Gazette*, was not produced between 19 April and 7 June 1807 or 30 August 1807 and 15 May 1808; nor were any official customs returns made between 26 June 1808 and 1 January 1810. A major deficiency is that there has not yet been a systematic published analysis of shipping data in relevant New Zealand newspapers.

The records usually note **reported** intended destinations and **reported** locations from whence returned. These cannot necessarily be relied upon. The sealing industry was highly competitive. Business interests frequently did not wish to reveal precise data on where they had been working, and sometimes provided clearly false or misleading reports.

Furthermore various legal restrictions encouraged silence or duplicity. Initially, there was a ban on shipbuilding in the Port Jackson penal colony, and the East India Company's monopoly prohibited any kind of trade by British vessels without a licence. When American ships first began to work Bass Strait and New Zealand waters they were prohibited from embarking Sydney men for sealing gangs. By 1805 these rules began to relax under New South Wales Governors keen to promote a viable income for the colony. But labour regulations were introduced to ensure adequate logistical support for sealing gangs; and as they defined the area under which these applied as 'north of latitude 43° 39' S', the coast of New Zealand south of Banks Peninsula was officially placed off limits for the Sydney sealers. While these restrictions did little to slow the growth of the industry in the New Zealand sealing region, they certainly impacted upon the quality of information available for its earliest years.

In 1873 concern for the conservation of seals prompted the New Zealand Government to legislate restrictions on their exploitation throughout New Zealand and its subantarctic islands. However these regulations did not apply to Macquarie Island which was a territory of Tasmania, and it is also clear that some illegal sealing continued in the New Zealand territories. The 1873 Seal Fisheries Act limited the capture of seals to an annual season between 1 June

and 30 September each year, and the Seal Fisheries Protection Act of 1878 provided for a complete ban on sealing to be imposed by regulation for up to three years at a time (Cumpston 1968: 80, 120). Closed seasons were declared in 1886, 1887 and 1889 and then continuously from 1894 to 1913. Sealing was again permitted between 1 July and 30 September throughout the region in 1914 and 1915, on Campbell Island in 1922 and 1924, and in 1946 on parts of the Otago, Southland and West Coasts (Sorensen 1969; Scadden 1996).

3.3 METHODS OF ANALYSIS

Historical data has been organised primarily around a database of sealing voyages in the New Zealand sealing region, compiled from the sources listed in section 3.1. Where possible this has recorded the name, tonnage, and rig of the vessel; its owner(s), and any charter arrangements; name of the master, and numbers of men and boats being carried; port and date of departure, and intended destination; information on locations visited; port and date of return, and reported location returned from; details of cargo; evidence of the kind of sealing activity undertaken; information on the activities of any sealing gangs with which the voyage may have been associated; and any other pertinent data.

This database facilitated the cross-checking of information from different data sources and provided a basis for quantitative analysis of some aspects of the sealing industry. At the same time it highlighted the existence of historical information that could not be associated with specific voyages. Such additional data were located for almost all periods of the sealing industry, but become more prominent after 1840, and by 1890 comprised almost the entirety of the historical record. For this reason the quantitative analyses reported below are confined only to the period up to 1890.

A total of 343 voyages during which some kind of sealing activity is known, suspected, or conjectured to have taken place have been included in the database. For 313 of these there is definite evidence of sealing activity, and there are another 19 for which it seems highly probable or at least possible. The remaining 13 have been suggested elsewhere as possible sealing voyages, but in my assessment there is sufficient doubt about the dates, itinerary or activities undertaken to exclude them from present consideration.

The most important data from these voyages for developing a general understanding of the development of the sealing industry are those concerned with the nature and quantities of **cargoes** carried on sealing voyages and the **subregions** in which they operated. Several general features of this evidence are summarised here, before they are used to develop an historical overview.

In the analyses that follow it should be noted that for quantitative purposes each voyage is counted only in the year of its commencement.

3.4 SEALING CARGOES

At least some information on cargoes is available for 87% of the voyages considered here, although this is not always in quantified form (Table 1). There were two major products of the sealing industry—skins and oil. The former were predominantly from New Zealand fur seals (*Arctocephalus forsteri*), which occurred throughout the New Zealand sealing region although small numbers of ‘hair seal’ skins, from the New Zealand sea lion (*Phocarctus hookeri*), were also reported. Most oil was derived from Southern elephant seals (*Mirounga leonina*), which occurred in greatest number on Macquarie Island. Although it is hardly mentioned in the cargo returns, there is evidence that on occasion oil was also recovered from fur seals (see 5.1.2 below). Other cargoes listed on voyages associated with sealing include whale oil, flax, timber, and pork. Those for which no cargo is listed were usually engaged in setting down, provisioning, or uplifting sealing gangs, although occasionally they represent unsuccessful sealing missions.

The figures in Table 1 demonstrate that skins were the major target of the industry. They were listed for 61% of voyages for which data is available, while oil was listed for just 39%. It is also apparent that there is a much higher survival rate of information on the quantities of skins (c. 90%) than there is for oil (c. 70%), even when both were returned on the same voyage. Thus some caution must be exercised when considering the relative productivity of the two main components of the industry.

TABLE 1. NUMBER OF VOYAGES WITH DATA AVAILABLE ON THE TYPE AND QUANTITY OF CARGO.

CARGO TYPE	NO. VOYAGES WITH TYPE LISTED	QUANTIFIED DATA	% QUANTIFIED
Skins	94	84	89
Skins and oil	34	for skins: 32 for oil: 27	94 79
Skins, oil and other	5	for skins: 3 for oil: 2	60 40
Skins and other	42	39	93
Oil	67	47	70
Oil and other	5	2	40
Other cargo	7	-	-
No cargo	35	-	-
No data	43	-	-
Total	332		

3.5 SUB-REGIONS

For all but two of the voyages under consideration there is some evidence of the general area(s) in which they operated, although in some cases there is not a great deal of certainty (Table 2). At least 24% of the voyages visited two or more island groups, and at least one called at five or more.

TABLE 2. NUMBERS OF VOYAGES TO EACH ISLAND GROUP IN THE NEW ZEALAND SEALING REGION.

	DEFINITE	POSSIBLE	TOTAL	%*
Macquarie Island	142	12	154	46.4
New Zealand	119	35	154	46.4
Auckland Islands	29	8	37	11.1
Campbell Island	24	5	29	8.7
Antipodes Islands	16	7	23	6.9
Chatham Islands	11	8	19	5.7
Bounty Islands	7	2	9	2.7
Snares Islands	5	2	7	2.1

* Percentage of the total number of voyages (332).

Macquarie Island and the New Zealand mainland and offshore islands stand out as the two major centres of activity, and changing patterns in the development of the New Zealand sealing industry can be attributed largely to the course of activity in these two areas. Also of importance, however, were the short bursts of activity at each of the other island groups within the region (see Fig. 4).

4. Development of sealing in the region

The New Zealand sealing industry commenced in either 1791 or 1792, but remained a sporadic activity until 1803 (Fig. 3). It reached an initial peak in 1809, but declined dramatically in 1813, persisted at a lower level through to the early 1820s, then underwent a major revival in the following decade before coming to a standstill in the early 1840s. There was only sporadic activity throughout the middle decades of the 19th century, until a further revival commenced in 1872 and continued into the 1890s. After 1894 seals could be taken only illegally, except during brief open seasons, the last of which was in 1946.

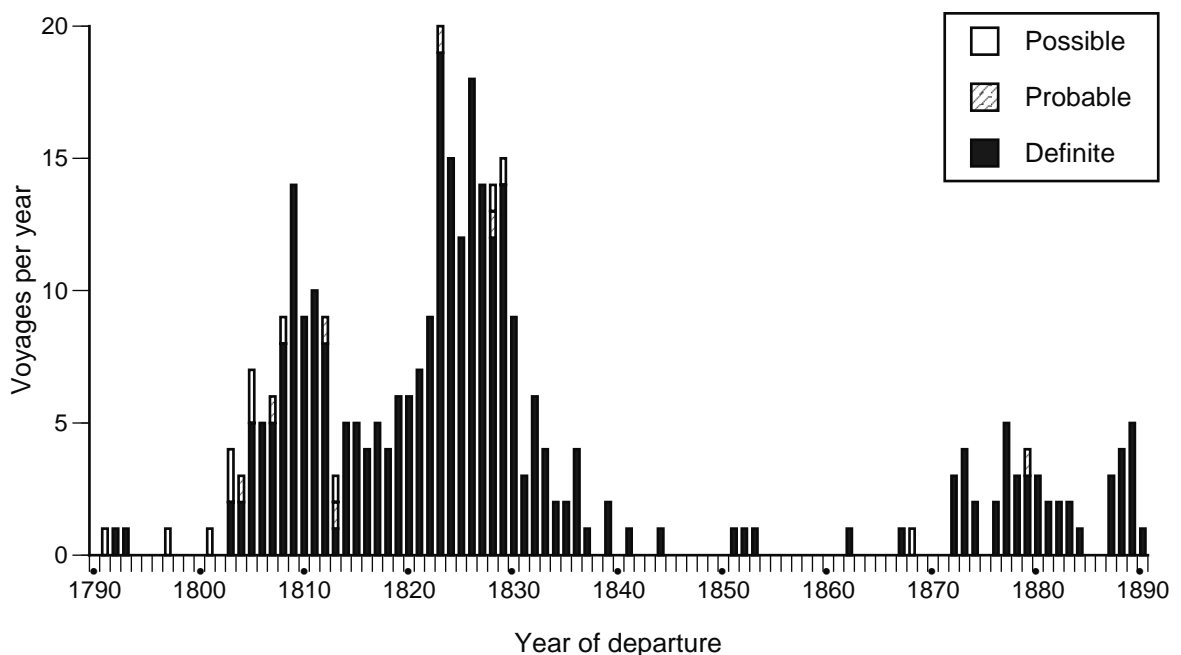


Figure 3. Sealing voyages per year in the New Zealand sealing region, 1791-1890.

The following review outlines ten phases into which the sealing industry can be subdivided in the period up to 1946. Although definition of these necessarily relates to the entire New Zealand sealing region, particular attention is given to the implications during each period for activity on the New Zealand mainland and immediate offshore islands.

Except for the first phase, where the evidence is most diffuse, details of specific voyages are not related here. These are held in a Sealing Voyages Database in the Anthropology Department, University of Otago.

4.1 THE EARLIEST SEALERS 1792 - 1802

The earliest phase of sealing was conducted entirely on the New Zealand coast (Fig. 4). It may have begun with the British convict transport and whaler *William and Ann* sailing out of Port Jackson in November 1791 and reputedly whaling off the New Zealand coast (Entwhistle 1998: 10-11). On returning to London its cargo included 68 tons of sperm whale oil and 8468 seal skins from 'New South Wales and Fishery' (Richards 1996: 89), but there is no clear evidence that these were taken in New Zealand.

The first confirmed activity commenced the following year. In October 1792 another convict transport and whaler, *Britannia*, deposited a sealing gang at Luncheon Cove, Dusky Sound, where they took 4,500 skins before the ship returned to collect them in 1793. It has also been suggested that skins may have been collected at Dusky Sound by *Mercury* when it rescued the last castaways from the *Endeavour* in 1797 (Richards 1996: 42-43), and by *Venus* which took ironwork from the *Endeavour* in 1801 (Salmond 1997: 295-296), but there is no confirmation of this.

Other possible indications of activity in New Zealand at this time include: Molloy's (n.d.: appendix 1: 1) unsourced reference to American ships leaving sealing gangs on the Murihiku coast in 1798-1800; Baudin's 1802 suggestion that one Port Jackson firm was operating in New Zealand (McNab 1907: 79); and Carrick's (1903: 56, 57, 59, 60) listing of five vessels apparently departing Port Jackson for China with New Zealand seal skins in 1802. However none of these has been independently confirmed.

With so much uncertainty about sealing activity during this period it is probably unwise to infer too much about sealing cargoes, but the limited data that is available suggests that seal skins were the only product recovered (Table 3).

TABLE 3. NUMBERS OF VOYAGES LISTING TYPES OF CARGO IN EACH TIME PERIOD.

CARGO	PRE-1803	1803-07	1808-12	1813-22	1823-29	1830-39	1840-71	1872-90
Skins	1	13	22	12	37	3	1	5
Skins/whale oil	1	2	1		1	2		
Skins/whale oil/other						5		1
Skins/seal oil			11	7	12	3		1
Skins/seal oil/other			1			4		
Skins/other cargo			1	1	18	9		
Seal oil				22	27		1	15
Seal oil/other cargo						1		5
Seal oil/whale oil								1
Other cargo	2		4			1		
No cargo	1	8	7	8	2	2	3	4
No data		2	5	4	11	3	3	14
Total	5	25	52	54	108	33	8	46

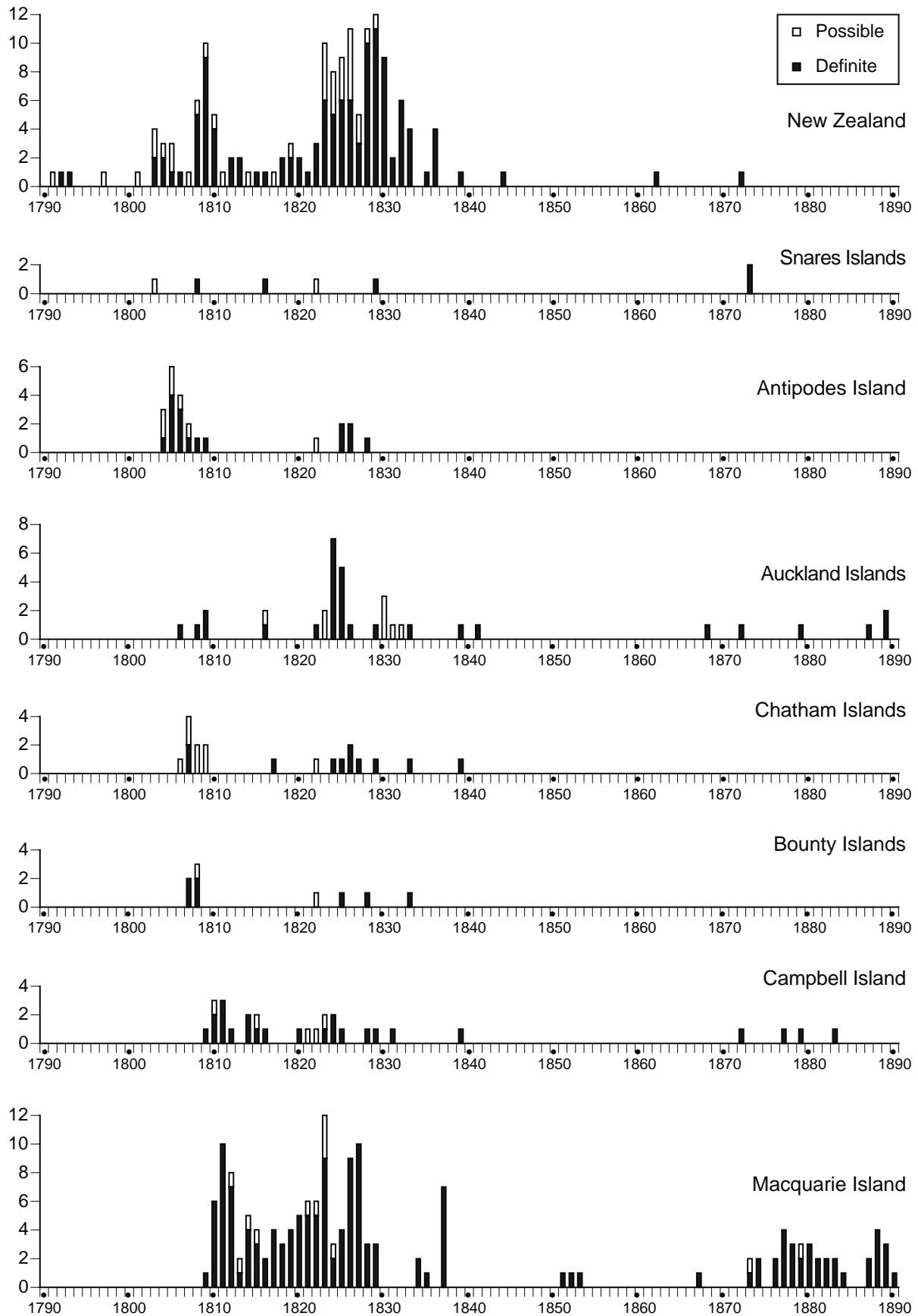


Figure 4. Voyages per year to island groups in the New Zealand sealing region, 1791-1890.

4.2 SEALING FOR SKINS 1803 - 07

The industry began in earnest in 1803 with two definite and two possible voyages operating on the New Zealand coast, one of which almost certainly visited the Snares as well. These voyages all appear to have concentrated on the Fiordland coast, and perhaps also the western and southern shores of Stewart Island. All voyages the following year appear to have visited the same parts of New Zealand and probably also the Antipodes Islands, beginning a rush to the latter area which dominated sealing activity for the next three years. More than 70% of voyages between 1804 and 1807 called at the Antipodes, while only 38% visited New Zealand. However as the Antipodes trade began to slacken in 1806-07 the first exploratory ventures to the Auckland, Chatham, and Bounty Islands took place.

With much better data for this period, it is clear that the initial phases of sealing were directed exclusively to the recovery of skins (Table 3, Fig. 5). Reported returns between 1803 and 1807 averaged more than 45,000 per year and just over 15,000 for each of the voyages for which quantities are listed. The only other cargoes listed for these voyages were whale oil, indicating that some whaling vessels were engaged in the initial stages of the sealing industry.

4.3 SKINS AND OIL 1808 - 12

With the decline of the Antipodes trade there was a significant shift back to New Zealand, which saw 64% of all voyages in 1808-10. Most of this activity was around Stewart Island and in Foveaux Strait, although the first confirmed voyages to Otago and Westland also occurred at this time. No more than 20% of voyages visited any other island group. However the discovery of Campbell Island in late 1809 and Macquarie Island in mid 1810 again drew most sealing activity away from New Zealand shores. All but one of the 19 voyages commencing in 1811-12 called at Macquarie, with four also visiting Campbell Island, and only two or three to New Zealand.

All of the voyages reporting cargoes during this period returned skins. The average annual return increased to just over 50,000 per year, but while the number of voyages per year more than doubled the return per voyage declined to about 7,000, suggesting depletion of fur seal stocks in the areas under exploitation. However declining prices for seal skins may also have contributed to merchants turning their attentions elsewhere (Hainsworth 1972: 148; Richards 1995: 20).

Recovery of seal oil began during this period, with the first reported returns from the Bounty Islands in 1809 (from a voyage commencing in 1808). There is one possible indication of elephant seal exploitation in New Zealand (Fig. 6), but the rise in this trade was due largely to the discovery of immense populations of this species on Macquarie and Campbell Islands. Oil returns during this period averaged 31 tons per voyage and 80 tons per year, but it should be noted that all of this was delivered by vessels that also returned skins. The strong focus of the industry on these two primary products is indicated by the small number of voyages listing other cargoes, such as logs, spars, or timber (4) and whale oil (3).

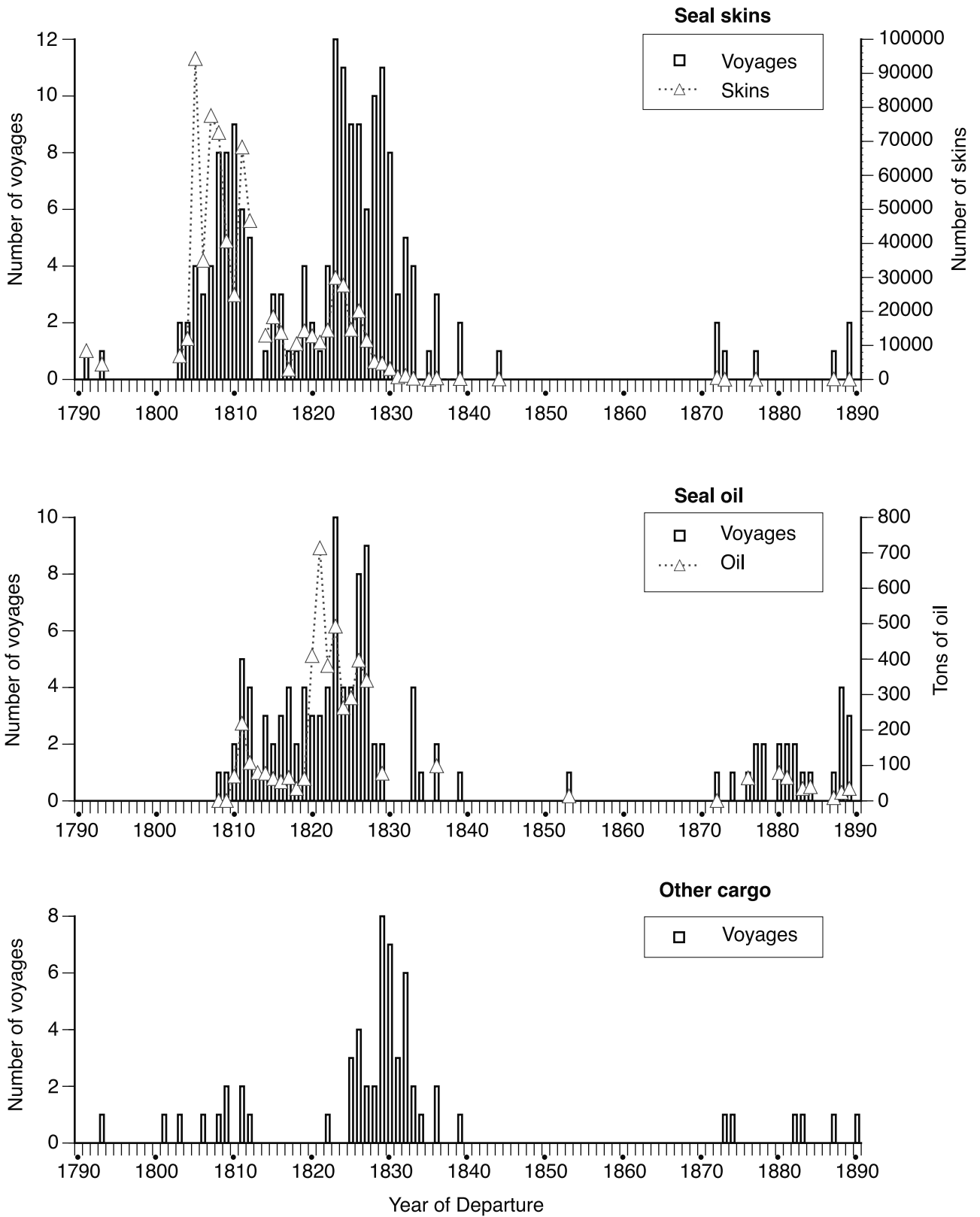


Figure 5. Numbers of voyages listing particular cargo types, and volumes of cargo reported per year, 1791-1890.

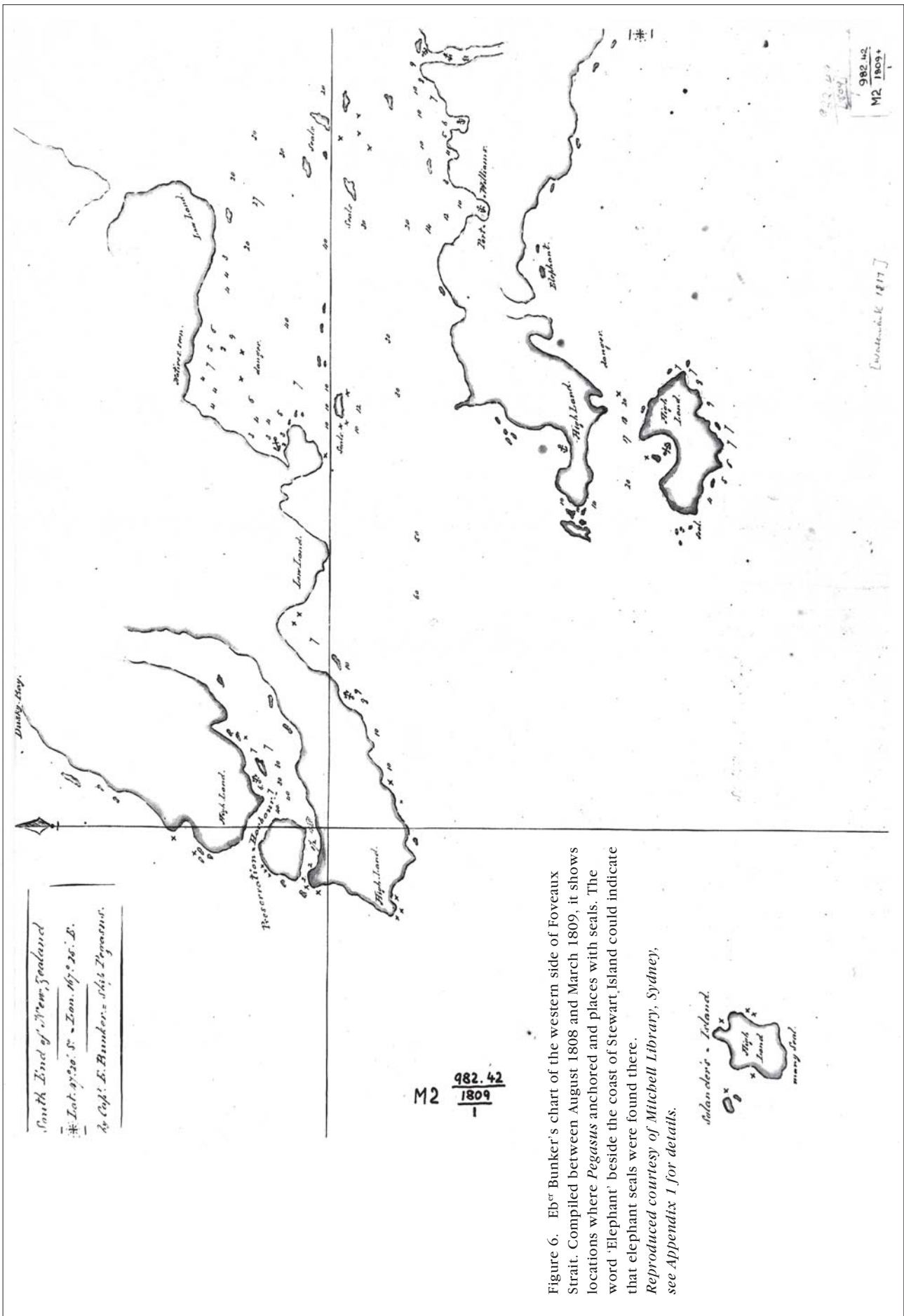


Figure 6. Ebner Bunker's chart of the western side of Foveaux Strait. Compiled between August 1808 and March 1809, it shows locations where *Pegastis* anchored and places with seals. The word 'Elephant' beside the coast of Stewart Island could indicate that elephant seals were found there. Reproduced courtesy of Mitchell Library, Sydney; see Appendix 1 for details.

4.4 DECLINE 1813 - 22

In 1813 there was a marked decline in all sealing activity, with just two voyages to New Zealand and one or two to Macquarie, and in the ten years after 1812 there were about half the number of voyages per year that had occurred in the previous five years. In part this may have been due to continuing poor prices, but it was probably also a response to Maori attacks on southern New Zealand sealing gangs in 1810-11. It was the Macquarie trade that kept the sealing industry alive during this period, with 78% of the voyages between 1813 and 1822 calling there. New Zealand was probably visited every year, but seldom by more than one vessel until the final years of the decade. Fiordland, Foveaux Strait, Stewart Island, Otago, and Westland were all visited during this period.

The concentration on Macquarie led to a significant shift to oiling, with almost half the voyages focussed solely on this pursuit, and another 13% combining this with the recovery of seal skins. Reported returns of oil more than doubled to 195 tons per year and 67 tons per voyage. However returns of skins declined to about 5,500 per voyage and only c. 11,000 per year. The only other cargo reported from a sealing vessel in this period was a shipment of flax and potatoes from New Zealand in company with seal skins in 1822-23.

4.5 REVIVAL AND MIXED TRADE 1823 - 29

The final voyage of the preceding period signaled both a revival in sealing and a new focus for the industry. Between 1823 and 1829 there was a three-fold increase in the number of voyages per year (to 15.4), making this the period with the highest frequency of visits to the New Zealand region by sealing vessels. Every island group saw renewed activity, with a particularly strong burst of action at the Auckland Islands in 1824-25 and a slight increase in the number of voyages per year to Macquarie. However the greatest area of renewed activity was New Zealand which was visited during 61% of all the recorded voyages. Again, all of the New Zealand mainland sealing regions were visited with most voyages focussed on Stewart Island and Foveaux Strait.

In terms of cargoes, the most significant feature of this period was the rise of mixed trade. Shipments of seal products were supplemented by flax (on 17 voyages), salted pork (8), potatoes (2) and timber (1). Also notable was a revival of interest in seal skins which were reported from more than a third of all voyages, although returns amounted to just 1,700 per voyage and 16,000 per year. Returns from oiling also declined per voyage by almost a third to about 48 tons, although on an annual basis they reached about 266 tons per year.

4.6 DIVERSIFICATION AND DECLINE 1830 - 39

Diversification increased in the 1830s, as did the focus on the New Zealand mainland. At least 82% of recorded voyages called there, compared with about 20% at the Auckland Islands and 12% at Macquarie. On the New Zealand

mainland most of these voyages were directed towards Fiordland and the Westland coast.

Only three voyages were focussed solely on skins, another three on both skins and oil, while there were none that returned only seal oil. Instead skins and/or oil were brought in with various combinations of other cargoes including flax (11 voyages), whale bone (9), whale oil (7) and planks or spars (4). In part this signals an association of sealing with the newly formed shore whaling stations in southern New Zealand, but more importantly it reflects the diminished availability of seals. Voyages for which quantified data are available brought in an average of only 242 skins or 12 tons of oil at a rate of 629 skins or 9.9 tons of oil per year.

4.7 SPORADIC LOCAL SEALING 1840 - 71

Only eight voyages are recorded for the period between 1840 and 1871; four to Macquarie, three on the New Zealand coast, and one to the Auckland Islands. However there are scattered references to sealing activity at this time which cannot be associated with specific voyages (e.g. Carrick 1903: 158-159; Brunner 1959: 280, 287-288; Bathgate 1969: 367; Richards n.d.) so it is clear that the present data under-represents the extent of sealing activity during this period. However it seems unlikely that it was either frequent or highly productive. The two voyages for which quantified data are available brought in 14 tons of oil from Macquarie Island and 150 skins from New Zealand.

What is significant about this period is that virtually all of this sealing activity was being undertaken from New Zealand ports. Prior to 1840, 96% of recorded departures and 92% of returns from the New Zealand sealing region were from or to Australian ports (predominantly Sydney), with only one voyage commencing and finishing in New Zealand—that of *Harriet* from Te Awaiti to north Westland and back in 1836. In contrast, only one of the eight voyages between 1840 and 1871 operated out of Sydney, while at least four began and/or finished in Riverton or Bluff. Furthermore nearly all of the indications of other sealing activity listed above refer to the same ports.

4.8 MACQUARIE REVIVAL 1872 - 94

The revival of sealing in 1872 was focussed predominantly on the Macquarie oiling trade. Almost 80% of the voyages up to 1890 called at Macquarie, along with just five visits to the Auckland Islands, four to Campbell Island, two to the Snares and one to New Zealand. In part this was due to the introduction of legislation restricting the sealing season in New Zealand territories (section 3.2), but it also reflects the continued availability of elephant seals at Macquarie and the massive decline of fur seals elsewhere.

More than two thirds of the voyages for which data is available brought in seal oil either as sole cargo, or in conjunction with bone (5 voyages), whale oil (2), skins (2), live penguins (1) and a sample of penguin oil (1). Where data is available average returns were about 15 tons per voyage and 19 tons per year. In

contrast the seven voyages that returned skins averaged just 139 at a rate of 51 per year. Almost all of these voyages operated out of Dunedin, Invercargill, and Riverton.

In 1890 the Macquarie trade diversified into the production of penguin oil, and from this point onward it becomes very difficult to determine what proportion seal oil contributed to incoming cargoes, and no attempt has been made to extend the quantitative analysis beyond this point. Although 'elephanting' did continue after this time, it was reported in 1894 that 'the slaughter of sea elephants has practically ceased' (Cumpston 1968: 171).

4.9 ILLEGAL SEALING 1895 - 1913

No open seasons for sealing in New Zealand territories were permitted from November 1894 until 1 July 1913, although oiling continued on Macquarie Island until 1919 (Fig. 7). However, there are a small number of accounts that demonstrate that fur seals continued to be taken. During his residency in Dusky Sound from 1894 to 1910 Richard Henry regularly commented on the activities of vessels that he knew or suspected of sealing on the nearby coasts (Hill & Hill 1987: 150, 210, 214, 220-222, 266). Kerr (1976: 52-54, 86) notes that in 1910 and 1912 two Nova Scotian vessels were poaching seals in New Zealand waters and also purchased skins taken illegally by sheep farmers on Campbell Island. It is impossible to be sure of the extent of these activities or the methods used and locations at which they took place.

4.10 OCCASIONAL OPEN SEASONS 1914 - 46

The open seasons from 1 July to 30 September of 1914 and 1915 did not require hunters to obtain a licence and no official record was made of either the numbers of seals or where they were taken (Sorensen 1969). At least one ship operated in Fiordland and at Solander Island in 1914 for a return of only 91 skins, and in both 1914 and 1915 seals were also taken at Macquarie, Auckland, and Campbell Islands (Cumpston 1968: 271; Kerr 1976: 53, 57, 75).

Limited seasons were allowed on Campbell Island in 1922 and 1924, with 284 and 66 fur seals taken in each of those years (Sorensen 1969: 1).

The final open season (from 1 June to 30 September 1946) allowed sealing under licence in an area from Nugget Point to Long Point in the Catlins; the islands east, south, and west of Stewart Island; and on the west coast of the South Island from Windsor Point to Jackson Head (Sorensen 1969: 16). A total of 43 licences were issued and 6187 fur seals taken; 6123 in the Southland region, 11 in Otago and 53 in Westland (Sorensen 1969: 2). About 4000 of these were taken on the several voyages by Harry Roderique's *Kekeno* to Fiordland and Solander Island (Grady 1986: 37-40). There are detailed accounts of two of these voyages (Sorensen 1969: 30-42; Scadden 1996).

Figure 7. Notices advertising closed seasons for seal hunting were placed at many potential seal hunting localities. This example was found at the Port Ross castaway depot, Auckland Island. *Photo courtesy of Southland Museum and Art Gallery*

