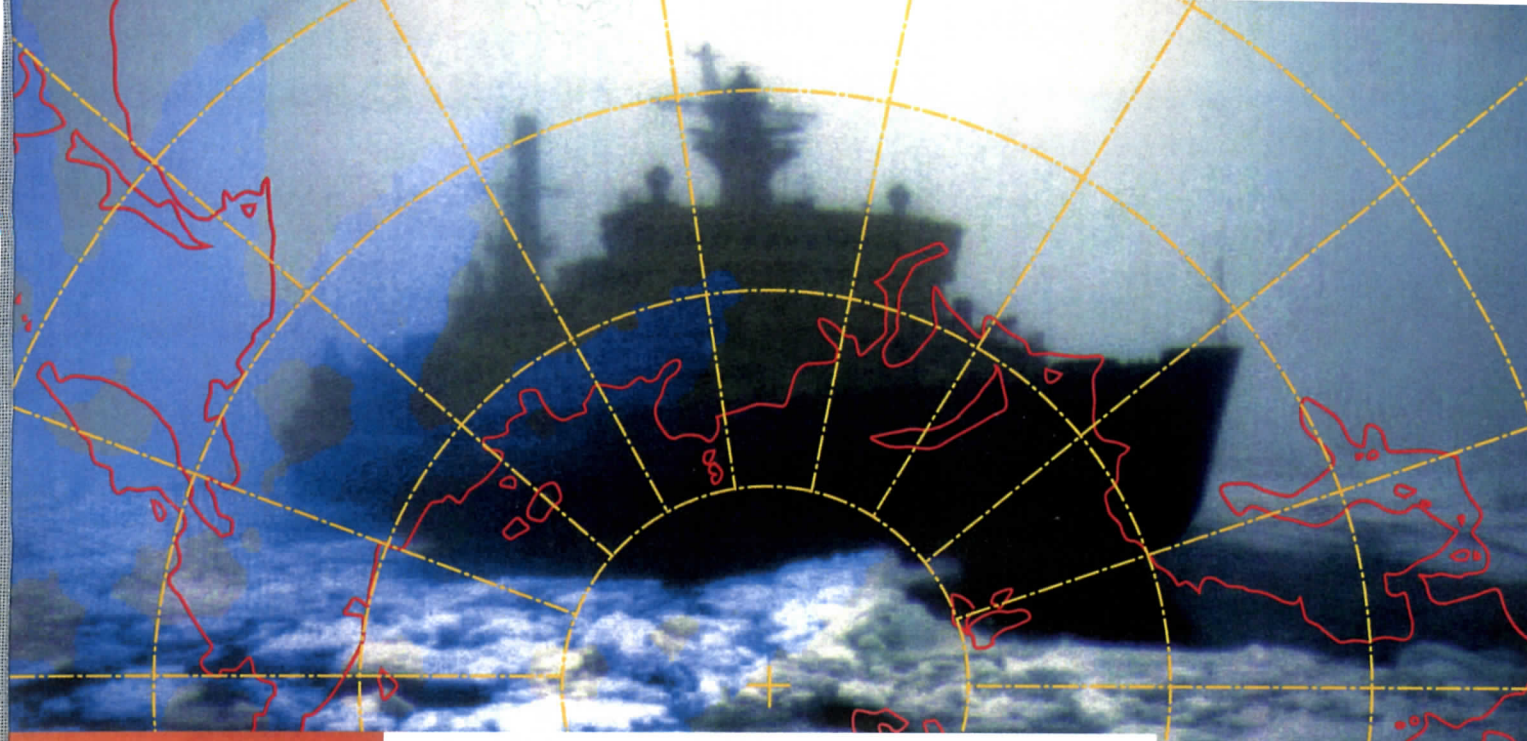

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Historical and Current Uses of the Northern Sea Route. Part II: The Period 1745-1855.

By Edwin Okhuizen

INSROP International Northern Sea Route Programme

Central Marine Research & Design Institute, Russia

The Fridtjof Nansen Institute, Norway

Ship and Ocean Foundation, Japan

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Supervisor: Jens Petter Nielsen, University of Tromsø, Norway

Title: **Historical and Current Uses of the Northern Sea Route. Part II: The Period 1745-1855.**

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What is an INSROP Working Paper and how to handle it:

FOREWORD - INSROP WORKING PAPER

INSROP is a five-year multidisciplinary and multilateral research programme, the main phase of which commenced in June 1993. The three principal cooperating partners are **Central Marine Research & Design Institute (CNIIMF)**, St. Petersburg, Russia; **Ship and Ocean Foundation (SOF)**, Tokyo, Japan; and **Fridtjof Nansen Institute (FNI)**, Lysaker, Norway. The INSROP Secretariat is shared between CNIIMF and FNI and is located at FNI.

INSROP is split into four main projects: 1) Natural Conditions and Ice Navigation; 2) Environmental Factors; 3) Trade and Commercial Shipping Aspects of the NSR; and 4) Political, Legal and Strategic Factors. The aim of INSROP is to build up a knowledge base adequate to provide a foundation for long-term planning and decision-making by state agencies as well as private companies etc., for purposes of promoting rational decisionmaking concerning the use of the Northern Sea Route for transit and regional development.

INSROP is a direct result of the normalization of the international situation and the Murmansk initiatives of the former Soviet Union in 1987, when the readiness of the USSR to open the NSR for international shipping was officially declared. The Murmansk Initiatives enabled the continuation, expansion and intensification of traditional collaboration between the states in the Arctic, including safety and efficiency of shipping. Russia, being the successor state to the USSR, supports the Murmansk Initiatives. The initiatives stimulated contact and cooperation between CNIIMF and FNI in 1988 and resulted in a pilot study of the NSR in 1991. In 1992 SOF entered INSROP as a third partner on an equal basis with CNIIMF and FNI.

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HISTORICAL AND CURRENTS USES OF THE NORTHERN SEA ROUTE

PART II: THE PERIOD 1745-1855

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CHAPTER 1: THE SEARCH FOR A HIGH-LATITUDE NORTHERN SEA ROUTE AND THE CONCEPT OF AN 'OPEN POLAR SEA'

1.1 THE RUSSIAN TRANSPOLAR EXPEDITION OF 1765-1766

The Great Northern Expedition (1733-43, see Part I) did not quite come up to the high expectations placed upon it, since it had explored much but not all of the north Siberian coastline. The Expedition's negative experiences with the power of the pack ice near the north Siberian mainland coast had prevented the rounding of both Cape Dezhnev (Mys Dezhneva), as a result of which a gap of hundreds of kilometres of Arctic coastline remained to be explored in northeast Siberia, and the Taymyr Peninsula (Poluostrov Taymyr), although its northernmost point had been reached overland. These negative experiences caused a hiatus of a generation or so in the exploration of the Eurasian Arctic by the Russian authorities. When it was eventually officially followed-up it was by the first and only Russian attempt at a transpolar expedition. In the mid-1760s the Russian central authorities launched an expedition from Svalbard directly across the Pole to Bering Strait, thinking they could take advantage of the ice-free waters of a supposed 'open polar sea'. The desire to establish a high-latitude northern sea route between European Russia and the North Pacific Ocean was both politically and commercially motivated. 1)

The instigator of the expedition following this unorthodox route was the eminent Russian scholar Mikhail Vasil'yevich Lomonosov. Already in the 1750s, and again in 1763 he had expounded his belief in the existence of an open polar sea in treatises and a map. Lines marking the presumed routes to Bering Strait over an ice- (and apparently also land-) free polar ocean are clearly visible on his MS. circumpolar map. One starts from Svalbard (the route that was actually followed), another from the northernmost tip of Novaya Zemlya (the route originally proposed by Lomonosov). In his presentation of the Arctic Ocean as an open sea Lomonosov had been preceded in Russia by Ivan K. Kirilov who had drawn a polar map as a small inset on the MS. original of his general map of Russia of 1734. 2)

In 1764, Catherine II (the Great), Empress of Russia (1762-1796), decreed the fitting out of a naval expedition to find this sea route. Preparations for the organisation of the expedition were seriously taken in hand by the Russian Navy, with Lomonosov himself also taking part in it, as he provided scientific instruments and drew up a variety of instructions for navigation. Plans for the voyage included an extensive programme of scientific measurements. A preliminary expedition of six ships landed a wintering party on the west coast of Svalbard in 1764 to establish a base. In 1765, having set out from Archangel and then sailed north from the Svalbard base, Captain Vasiliy Yakovlevich Chichagov made an attempt at reaching the Pole but was blocked by ice at 80°26'N. The Navy gave orders for a second attempt in 1766 which managed to reach 80°30'N, a new record, although only slightly exceeding that set by Willem Barents in 1596 and Henry Hudson in 1607 in the same area. Charts of Svalbard and the sea route to it were drawn up. The expedition was kept strictly secret, even after its return (its proclaimed purpose had been the renewal of the whaling, hunting, and fishing industries on Svalbard). The first official report did not appear until 1793. 3)

Apart from Chichagov's failure and Lomonosov's death in 1765, not long before the launching of the first expedition, the search for a northern sea route was certainly not helped by the criticism of influential public figures and scholars such as the academician Gerhard Friedrich Müller, a life-long opponent of Lomonosov. Müller did in fact believe that a northern sea route was a geographical possibility, as his map of 1754/58 (see Part I) clearly shows, and it was he who first discovered the reports of Dezhnev's voyage in the Yakutsk archive in 1736. But he was even more convinced of the impracticability of any northern sea route, and so argued strongly that the search for one was unprofitable. According to Müller, trade with China could be carried out along the traditional and far less dangerous overland route, and goods could be taken from the Russian Pacific coast via sea routes on to ports in all the lands of the Pacific basin. It is also likely that Müller viewed an effective northern sea route as a danger to his own preoccupation with the

colonisation of Siberia and development of its rich resources. The combined failures of the Great Northern Expedition and Chichagov's expedition convinced Russian naval authorities of the impractibility of a northern sea route. Thus, the Russian interest in the search for a northern sea route at a high latitude was short-lived. Arctic exploration was left to private Russian expeditions, and as a rule no government subsidies were provided. 4)

The English merchant William Gomme presented an individual scheme for finding an Arctic passage at a high latitude to Catherine II in the early 1770s. He had held monopolistic rights for the timber trade of the Onega region since 1760. However, Western competition bankrupted him at the end of the 1760s. He then proposed establishing a line of communication from the White Sea to Kamchatka by way of a high latitude sea route, believing in an open polar sea north of 82°N. Gomme intended to dispatch an expedition in 1773, to be financed partly by himself and partly by the Russian government. Catherine II did not take Gomme very seriously, and turned his proposition down in 1772. Instead the government decided on a reward of ten thousand rubles for the one who succeeded in opening an Arctic sea route between Archangel and Kamchatka at his own expense. 5)

1.2 THE CONCEPT OF AN 'OPEN POLAR SEA' AND THE EARLIEST WESTERN TRANSPOLAR VOYAGES

Lomonosov was not alone in believing in an open polar sea. The true geophysical nature of the polar basin remained a mystery right up until the beginning of the 20th century and was a source of much speculation and many theories, the hypothesis of an 'open polar sea' being one of the most popular in Western Europe. It postulated a polar sea which was free of ice and also of land, or at least sufficiently so for ships to sail across it. The arguments in favour were based on the global distribution of land and water masses and on reports of open water in the Arctic Ocean, and were supported by climatic, oceanographic and biological theories. Wishful thinking about

commercial benefits was the predominant driving force in Western Europe; an 'open polar sea' would mean that an alternative sea route could be opened to the rich markets of South and East Asia, going northwards from the North Atlantic into the North Pacific. It was presumed to be shorter and more economical than the traditional routes through the southern seas, with the additional attraction that the country which discovered it would have no competition from the other European sea powers. The vanity of individual theorists and explorers and the national ambitions of the countries they represented also played a part. It was non-scientific motives such as these which prevented the parties to the discussion from giving proper consideration to the arguments for and against, and eventually led to defective reasoning. 6)

The hypotheses of an 'open polar sea' dates back to 1527, when the English merchant Robert Thorne suggested three alternative northern sea routes, all of which were supposed to lead to the spice-markets of the East Indies, thus circumventing the Spanish / Portuguese control over the southern sea routes. In addition to Northwest and Northeast Passages via the Arctic (rounding the American and Eurasian continents) he proposed a route due north over the Pole, based on the assumption that there was a navigable polar sea. Of these three routes, it was the Northeast Passage which was chosen for the first English expedition to the Arctic in 1553. Another proponent of the theory of an 'open polar sea' was the Dutch geographer and theologian Petrus Plancius. Proceeding on Plancius' instructions, a Dutch Arctic expedition piloted by Barents followed a route leading due north out of the North Atlantic in 1596 (after Dutch expeditions had failed to find a Northeast Passage either to the south or north of Novaya Zemlya in the two previous years). Having reached a latitude of c. 80°N Barents then became the first Westerner to be blocked by pack ice west of Svalbard, from whence he decided to continue his journey to Novaya Zemlya where heavy pack ice forced him to winter on the northeast coast. Unlike most 16th century maps which depicted the prevalent theory of a polar continent, Plancius' maps published in the mid-1590s clearly expressed his belief in the

existence of an 'open polar sea'. In 1607, the 'Muscovy Company' sent Hudson on an expedition in search of a transpolar passage to the Orient. He too was blocked by pack ice in the waters between Greenland and Svalbard, only slightly more north than Barents. In 1674, the Royal hydrographer Joseph Moxon published a discourse and map on a passage to the Pacific by way of the North Pole. In 1676 the English Captain John Wood tried to find a sea route to the north of Novaya Zemlya. His failure led him to draw the erroneous conclusion that Svalbard and Novaya Zemlya were part of the same continent. Then for the next hundred years no expedition was undertaken in search of either a transpolar or Northeast Passage. This despite the fact that some English business men attracted the attention of the English authorities in the middle of the 18th century and again in the early 1770s by proposing a renewed quest for these Arctic passages. However, these plans came to nothing due to the rather ambiguous official response. There were also no reliable reports of 17th and 18th century European whalers exceeding 80°N to any significant extent. Time and again this latitude was found by whalers to be the southern limit of the pack ice. Nevertheless the idea of an 'open polar sea' continued to survive. 7)

1.3 BRITISH (TRANS)POLAR EXPEDITIONS

From 1765, the year Lomonosov died, the theory of an 'open polar sea' was revived in Western Europe by the Swiss geographer Samuel Engel, the French explorer of the Pacific Louis-Antoine de Bougainville, and the Englishman Daines Barrington, Vice President of the Royal Society. Only in the latter case did this lead to an expedition to the Arctic in search of a transpolar route. Barrington was convinced that it was possible to sail over the North Pole to the Pacific, and early in 1773 he proposed to the Royal Society that a British expedition be sent to the Arctic. The proposal was passed on to the Admiralty, and it was decided to send an expedition to the waters between Spitsbergen and Greenland that very same year to determine the limit of practicable navigation from there to the North Pole.

The success of James Cook's first circumnavigation (1768-71) and a temporary setback in the search for a Northwest Passage contributed to this decision. Although the commander, Captain Constantine John Phipps, was instructed to return after having reached the Pole, the voyage was organised as part of a long term plan to find a short cut across the Pole to the Pacific. Not surprisingly, pack ice prevented the expedition from achieving its goal. Phipps' farthest north (80°48'N) only just exceeded Chichagov's record, as can be seen from one of the charts of the expedition which shows the various courses of the ship through the drift ice. The edge of the pack ice is also delineated. Although several British whaling captains claimed to have sailed further north in these waters in the same year, Phipps' record was not to be exceeded with certainty until the whaling captain William Scoresby Senior reached 81°30'N in 1806. 8)

Barrington continued to press his case being wrongly convinced that Phipps had been stopped by a most unfortunate but temporary barrier of ice. He entered into correspondence with Engel, and published a treatise in the mid-1770s. It would have given him great posthumous satisfaction to know that this was republished in 1818, the year in which a repetition of Phipps' voyage was attempted. Neither Phipps' failure nor Cook's unsuccessful attempt to find a passage through the pack ice north of Bering Strait in 1778 on his third circumnavigation, which had also been instigated by Barrington, was sufficient to put an end to the theory of an 'open polar sea'. The British authorities also maintained a positive attitude. The British Parliament voted in the mid-1770s and again in 1818 to reward any British subject who discovered a northern sea passage between the Atlantic and Pacific Oceans, or who came within certain degrees latitude of the North Pole. 9)

After the end of the Napoleonic Wars the by then superior British Navy cast around for new tasks and challenges. Protecting world-wide British interests, and improving scientific knowledge on hydrographical exploration and survey were foremost. In respect of the northern North Pacific and northwest America there was a need to counteract Russian

expansion (see below), and to prevent them possibly finding a Northwest Passage (from the Pacific Ocean). Therefore the British Navy mounted a two-pronged naval expedition to the Arctic in 1818. The expedition was planned by Sir John Barrow, Second Secretary of the Admiralty and the moving spirit behind the resumption of British exploration in the Arctic, a man convinced that the way to the North Pole was by sea. A party led by Commander John Ross and Lieutenant William Edward Parry was to search for a Northwest Passage (see below), while the other, made up of two ships commanded by Captain David Buchan and Lieutenant John Franklin was to seek a transpolar passage from Svalbard to Bering Strait. The organisers were so convinced the expedition would succeed that they planned that the two parties rendezvous in the North Pacific. The transpolar party's optimistic expectations of favourable ice conditions, similar to those enjoyed by whalers in the seas east of Greenland, were disappointed. The ships were beset at an even lower latitude than Phipps, not to mention Scoresby. This was the last attempt by the British Admiralty to reach the Pole by ship. Parry commanded another polar expedition in 1827 using sledge boats to continue his voyage over the ice and across stretches of open water north of Svalbard. Although he had set out late in the season and was working against the southward drift of the ice, he managed to reach a latitude of about 82°45'N, a farthest north that was not exceeded for fifty years. 10)

1.4 THE CONCEPT OF THE 'OPEN POLAR SEA' FROM THE MID-19TH CENTURY

After the failure first of Phipps and then of Buchan, the protagonists of the 'open polar sea' theory came to realise that even if it did exist, it was encircled by a barrier of ice which at best could only be penetrated in certain areas thanks to favourable warm ocean currents. Stretches of open water in the ice ('polynias') had in fact been discovered to the north of the vast land ice along the Siberian coast by the Russian explorers M.M. Gedenshtrom, P.F. Anzhu and F.P. Vrangel in the first

quarter of the 19th century (see below). Motives and destination were also changing. Up to and including Buchan's expedition the motivation behind the Western belief in an 'open polar sea' had been largely commercial, and the search had been for a navigable passage over the Pole and into the Pacific. Buchan's failure highlighted the fact that a transpolar route would not be commercially viable. From this time on the theory was only used as part of the search for a navigable route to the North Pole itself. Genuine scientific interest in solving the geographical issues which remained unanswered in the Arctic became a prime reason. The personal pride of the theorists and the national ambition of the countries they represented also played a role. Its new protagonists were first and foremost American: the Arctic explorers Elisha Kent Kane and Isaac Israel Hayes, and the oceanographer Matthew Fontaine Maury. In 1853-55 Kane and later Hayes in 1860-61 started out by ship from the American mainland in search of the pole, and thus revived the dying theory of an 'open polar sea'. During 1875-76, Captain George Nares of the Royal Navy attempted to reach the North Pole. However, instead of discovering an open polar sea, he met with indefinite ice just north of the channel that separates Ellesmere Island from Greenland. He did reach a record latitude for both ship and men, using sledges over the ice. 11)

The German geographer August Heinrich Petermann developed a hypothesis which combined the theory of an 'open polar sea' with that of an Arctic continent. The notion of an Arctic continent had been widespread in the 16th century, and died hard, as it was taken up again every time real or imaginary land was reported in the Arctic Ocean. Petermann saw the Polar regions as having open water on the Eurasian side, not completely free of ice but definitely navigable at certain times of the year. A land barrier which extended from Greenland past the North Pole to Wrangel Island (which in his opinion was not an island) separated these waters from the less accessible American side. He expounded these views repeatedly in the internationally influential geographical journal which he published, the 'Geographische Mittheilungen', and supported them with maps such as his circumpolar map of 1869. Around 1870

Petermann even initiated German and Austrian expeditions to the Arctic in an attempt to prove his hypothesis, and thus the Austro-Hungarian expedition of 1872-74 under Karl Weyprecht and Julius Payer discovered Franz Josef Land (Zemlya Frantsa Iosifa) while navigating a northern route between Svalbard and Novaya Zemlya. 12)

Petermann's ideas also exerted a strong influence on the American naval officer George Washington De Long, who undertook an Arctic voyage in 1879 by way of Bering Strait (see below). His westward drift in the pack ice to the north of Wrangel Island disproved much of Petermann's theory, and was to be the inspiration for Fridtjof Nansen's 1893-96 expedition in which he set out to let his ship drift in the pack ice (see Part III). Having reached 84°N, Nansen left the ship and continued by dog-sledge, eventually reaching a point beyond 86°N. Nansen's drift dealt a great blow to the theory of an 'open polar sea', though it was not finally disproved until 1909, the year the area of the North Pole was at last attained. 13)

CHAPTER 2: THE SIBERIAN ARCTIC

2.1 INTRODUCTION

Russian expansion into Asia had already reached the Pacific Ocean by the middle of the 17th century. Half a century later, the annexation of Siberia was practically complete when the tsarist government was at last able to gain outlets to the Sea of Azov and the Baltic Sea in European Russia. The conquest and colonization of the vast territory, and the pacification of most of its native population, took place without much military action or cost, and tsarist sovereignty was soon established. 14)

The government's main interest in the occupation of Siberia was economic, namely the search for fur. Pelts were obtained from fur-bearing animals such as the sable, ermine, squirrel, and the Arctic fox. Fur was an essential source of revenue for state finances because of the extremely high market value. The private fur seekers were followed by the representatives of the central authorities. The high speed of the Russian conquest of Siberia in the 17th century is first of all explained by a continuous advance into new, 'full' regions of fur-bearing animals after traditional ones had been exhausted. 15)

Government interest in northern Siberia was especially intense in the 17th century, and again in the last years of Peter the Great's reign. This culminated in the organisation of the Great Northern Expedition that surveyed the whole length of the north Siberian coast in 1733-43 (see Part I). Thereafter a hiatus of a generation or so blocked further official exploration in Arctic waters, and official interest in governing Siberia also declined, the administration of the area becoming a matter of routine with no consistent policy. This was all the more true for the northern regions of Siberia, where government operations were of minor importance compared to activities in the southern regions. 16)

This is not to suggest that no relevant activities and significant processes (in the field of economy, politics, and

geography) took place in the Siberian Arctic in the period 1750 - 1850. The great abundance of fur in northern Siberia naturally remained a source of great profit to the state 17), despite the relative depletion of fur in all traditional areas. The continuous search for new fur territories, again led by private merchants, resulted in a profitable fur trade beyond the mainland, first of all in the northern North Pacific Ocean (see Chapter 4), but also on the newly discovered New Siberian Islands, which proved to be also rich in mammoth ivory. The economic exploitation of the resources on this large archipelago was further boosted by the abolishment of the internal customs barriers in the early 1750s. The trade on the islands went hand in hand with geographical exploration, executed firstly (starting in the early 1770s) by private merchants and later also by official expeditions. The latter were organised firstly by the local authorities (in the mid- and late 1770s), and later by the central authorities (during the first quarter of the 19th century). The Bear Islands, a small offshore archipelago to the east, was another section of the eastern part of the Siberian Arctic which was discovered and explored by the authorities. Furthermore, the government organised military campaigns against the Chukchi, living in the extreme northeast, in order to subdue what was at that time the last free aboriginal people of Siberia.

By using the term "Siberian Arctic" I mean to include both the northern regions of the Siberian mainland and the neighbouring waters and islands of the Arctic Ocean (as far north as it was known those days), incorporating the area that later would belong to the Northern Sea Route. From west to east it involves the territory east of the Taymyr Peninsula as far as Bering Strait. Although the Taymyr Peninsula is undoubtedly part of Siberia, its history is treated in Chapter 3, because of its closer connection with the topics dealt with there. The Bering Strait region is treated separately in Chapter 4, including the expeditions in search of the last leg of a northern sea route from the mouths of the great east Siberian rivers to the strait. The expedition of Vrangel as well as the history of Wrangel Island are treated separately in Chapter 5.

2.2 RUSSIA'S GOVERNMENT POLICY

Russian colonialism meant that Russian citizenship was imposed on the indigenous inhabitants of Siberia, and that the lands they lived on were annexed officially by the Russian State. Furthermore, the natives had to pay a tax, as a rule levied in the form of a fur tribute ('yasak'). In general the natives were not enslaved, or exterminated, neither were they deported or deprived in any way of their hunting grounds. The authorities favoured assimilation not Russification. Real interference in tribal communities was irrelevant, since the main concern of the authorities was to extract regular tribute from the native peoples. So, a relatively liberal official policy was pursued towards the natives. Nonetheless, Russian rule had a great disintegrating impact on the social and economical system of the native communities (see below). 18)

Except for two enactments there was almost no legislation created in this period referring particularly to the administration of Siberia. New directives concerning tribute were prepared in 1763. Michael Michaelovich Speransky, former Governor-General of Siberia (1819-1821), drew up a reform code in an attempt to protect the rights of the native peoples and to preserve their economy and culture. The reform code became law in 1822 and was repeatedly amended in the course of the 19th century, up until 1892. 19)

In 1708, Tsar Peter the Great introduced an administration system of provinces ("gubernii") and districts ("uyezdy"). Siberia as a whole became one province, out of the eight for the entire Russian empire, with its capital at Tobolsk. For the period 1763-81 Catherine II instituted the "Siberian kingdom" ("Sibirskoye tsarstvo"), in an attempt to stress the autonomous character of Siberia. In 1764 Catherine II divided Siberia into two provinces: Tobolsk province for west Siberia, and Irkutsk province for east Siberia, with the former as the seat of the Governor-General of whole Siberia. Further subdivisions were created in the 19th century, for instance Irkutsk province was split in two in 1805 and Yakutsk, traditionally the centre of

all action in northeast Siberia, became the administrative capital of the northern half of eastern Siberia. 20)

2.3 COLONIAL SETTLEMENTS AND SETTLERS

2.3.1 Colonial settlements

Russian colonization of Siberia was carried out by way of a policy of settlement. Catherine II displayed a sincere interest in the promotion of settlement in Siberia, particularly southern Siberia, although some attention was paid to the north too. 18th century Russian settlements in northern Siberia were concentrated along the main rivers such as the Ob', the Yenisey, the Lena, and the Kolyma. There was only one Russian settlement east of the Kolyma, a fort at Anadyrsk. Only two large territories in the coastal regions of northern Siberia escaped Russian settlement. The Chukotskiy Peninsula was one of these. The other was the Taymyr Peninsula which was largely uninhabited. There was therefore no fur-tribute to collect, besides which natural conditions prevented easy penetration. 21) The islands in the Siberian Arctic that were discovered and explored from 1750 - 1850 were never settled in this period.

2.3.2 Colonial settlers

2.3.2.1 General remarks

Very few settlers, if any, came to Siberia out of conviction. They came in quest of profit or simply because they had to for other reasons. Most settlers originated in the north of European Russia, and were poorly educated. They were 'people with a reputation for toughness, independence of mind, self-reliance and initiative' 22). Other characteristics were a capacity to withstand hardships, patience and endurance, and ingenuity. These qualities turned out to be of great advantage in the struggle with a harsh environment and potentially hostile

natives. They helped to make Siberian settlement an effective political instrument, and economically profitable. 23)

In this period all the trade and much of the exploration in the Siberian Arctic, in fact the whole private part of it, was accomplished by Russian settlers in northern Siberia. The character of the Russian settlers, so suitable for coping with the hardships of frontier life in Siberia as a whole, and their ability to adopt specific elements of the northern natives' way of life (see below) made them extremely adept for Arctic trade and exploration.

Private fur traders had been the pioneers in the penetration into (northern) Siberia in the 17th century. As a rule, they were followed (in a few remote regions preceded) by military and political agents of the state, known as "service people" as they served the interests of the government. Other people who settled the area were exiles and convicts, religious people, peasants, and miners 24). Many of the representatives of these categories had some relation or another to the trade and exploration of the Siberian Arctic in this period. For this reason their background and involvement are sketched below.

2.3.2.2 Merchants

Private merchants were more responsible than any other settlers for the penetration of Siberia from the very start of Russia's eastward expansion. Almost all of them were involved in the fur trade, since until the middle of the 18th century fur was the only natural resource in Siberia worth exploiting on a large scale, especially in the northern regions because fur was so abundant there, and of excellent quality. These private fur seekers occupied themselves with trading rather than hunting. They were out for self-enrichement by exploitation of the land and the natives living on it. Although the central government issued herself many exclusive rights in relation to the fur trade, private fur trading was never stamped out entirely. 25)

After the 17th century 'fur-rush' into the vast Siberian mainland had resulted in a relative depletion of fur, the continuous demand for fur led to a search for new hunting-

grounds beyond the Siberian mainland in the period after 1750. This process was strongly influenced by the fact that the the central government abolished the centuries old internal customs barriers throughout Russian territory in the early 1750s. The immediate result was that private commerce and manufacturing boomed, and merchants became a power nation-wide. This development was important first of all for the central provinces of Russia. However, it was also of great benefit to merchants in Siberia, including those operating in the northern parts, right from the middle of the 18th century. One region that proved to be very profitable to private merchants, not only of fur, but also because of large deposits of ivory, was the great archipelago of the New Siberian Islands, located to the northeast of the mouths of the Lena and Yana rivers, an area unknown before 1770. Their search for new economic opportunities pushed some seafaring merchants to a most stimulating mixture of economic exploitation and geographic exploration in this part of the Siberian Arctic (see 2.7). 26)

2.3.2.3 Cossacks

For the Cossacks, the military men who were the first agents to serve the tsarist government in Siberia, the 17th century had been a period of glory. When the Russian advance into Siberia was consolidated by the turn of that century, their traditional role of frontier guardians securing a network of outposts sank to minor importance, and they settled down in the towns of northern Siberia. From about the middle of the 18th century, when the last conflicts with the natives were over, a period of irreversible decline set in for the Cossacks. 27) Thus, the Cossacks' prominent role in the conquest and exploration of northern Siberia in the 17th century, personified by men like M. Stadukhin and S. Dezhnev (see Part I), came to an end. What's more, they were almost totally absent from Russian exploration of the Siberian Arctic in this period. Cossacks, such as N. Daurkin, who was, by the way, of Chukchi origin, were employed only incidentally in exploration (see Chapter 4).

2.3.2.4 Administrators

Administrative officials were responsible for law and order, and the collection of fur tribute. The great distance between the metropolis and the colony, and the meagre interest displayed by the central government, resulted in a loose central control over colonial administration. As rulers of Siberia the colonial officials, first of whom were the autocratic Governors, possessed great power. The notion of Siberia being largely autonomous from the tsarist government, to a certain degree officially supported by the institution of the "Siberian Kingdom" in the period 1763-81, encouraged some Governors to treat parts of Siberia as separate entities. Given the low payment, the severe climate, and other difficult natural conditions they had to contend with, it is hardly surprising that corruption and inefficiency were rife in colonial administration. The victims who suffered most because of this were, naturally, the natives. Despite a liberal official policy, in reality immoderate exploitation of the natives was no exception, due to large scale violation of formal regulations. The 1822 reform-law (see above) was not effectively implemented. 28)

Colonial administration was quite significant in the exploration of some parts of the Siberian Arctic in this period. The colonial officials and a few groups of exiles were the only settlers that could be considered as educated. This might explain their initiatives. Together with the high degree of autonomy for the colonial administration, especially for the most peripheral, northern, regions. The period 1760-80 was the hey-day of regional involvement in the exploration of the Siberian Arctic. It was probably no accident that this coincided with the period of greatest autonomy of the area, that of the "Siberian Kingdom".

2.3.2.5 Exiles and convicts

Siberia had been used as a penal colony from the earliest years of Russian occupation. The number of persons that were deported

to Siberia increased in the first half of the 19th century. However, at no time did it exceed 5 % of the total Siberian population. This most unwilling group of settlers consisted of a mixture of criminals, political and religious dissidents, Jews, scholars, noblemen, and prisoners-of-war. 29) As a group they were never employed for Arctic exploration or exploitation. Neither were they individually, at least not until the 1870s, with the possible exception of M.M. Gedenshtrom (see below).

2.3.2.6 Religious groups and Christianisation

Religious motives drove another sort of settler, namely monastic and sectarian groups. In the first century of Russian occupation monasteries had already been founded on the lower Ob', the lower Yenisey, and the Lena, in northern Siberia. During this period monasteries functioned as centres of settlement since they performed various sorts of colonizing activities. 30)

The Russian orthodox Christianisation of all aboriginal peoples, who were considered "heathen", was officially decreed in 1706 and 1710. The government of Catharine II was characterized by religious tolerance. Missionary activity was low during her reign. After 1815, during the government of Alexander I, conversion was encouraged to some extent. In general, however, no systematic organized campaign of Christianisation was enforced upon the natives. The authorities were simply not interested in it, they even saw their main interest, the collection of fur tribute, endangered by it. Since natives were considered Russian citizens after being baptized and thus exempt from paying fur tribute, Christianisation entailed a conflict of interests between church and state. The conversion that did take place was generally tolerant and formal in intention and procedure, and without any apparent far-reaching or long-lasting effects on their traditional nature religion ("shamanism"), which they continued practising throughout the 19th century. 31)

As with the colonization of (northern) Siberia, Christianisation was never a driving force behind the

subjugation of the Chukchi, or in the discovery and exploration of the Siberian Arctic islands, where there were no signs of native inhabitation. Nor was any permanent Russian settlement of these islands considered. It would probably have been too harsh a place to settle even for the most extreme dissenters.

2.3.2.7 Peasants and miners

Peasants occupied a crucial place in the Russian colonization of Siberia. Due to their work Siberia was already self-supporting in grain by the end of the 17th century. However, no attention will be devoted to them here since they hardly played any role in relation to the Siberian Arctic, their agricultural fields being located too far to the south. Siberia was a leading mineral producer during this period. Among others there were mining centres in the basins of the Yenisey, the Lena, and the Ob, all located too far to the south to be of interest here. 32)

2.4 NORTHERN NATIVE PEOPLES

2.4.1 General background

Everywhere in the vast Siberian mainland Russian settlers encountered native peoples, even in the most remote and severe northernmost parts. The northern native peoples were by no means a homogeneous whole, as they were geographically and ethnologically divided, and linguistically and culturally distinct from each other. 33)

In this period, the main groups of aboriginals living in northern Siberia were the Samoyeds (now called Nentsy or Nenets) 34) inhabiting the coastal region between the White Sea and the Taymyr Peninsula (especially the Ob' and Yenisey basin), the Tungus (later called Evenki) populating the territory south and east of the Taymyr Peninsula (itself virtually uninhabited), the Yakuts, the largest and most developed group, and still further east in an area bordering on Siberia's northeasternmost peninsula named after its inhabitants: the Chukchi.

These northern native peoples were essentially nomadic inland reindeer herding or hunting societies, migrating annually north and south in their territories. There were also those who had settled on the coast and lived by catching fish and hunting sea-mammals (whales, walruses, seals). In the event, except for the Chukchi (see below), the northern natives were not able to resist Russian subjection in the course of the 17th century. Despite the fact that they easily outnumbered the Russian settlers, they turned out to be too weak, too unorganized and too widely scattered in distinct groups over the vast territory. Some aboriginal groups readily submitted, others retreated or migrated further northward across the mainland, inevitably leading to major changes in the etnographical map of Siberia. 35)

Once pacified and with their lands formally annexed by the Russian state, tribute was enforced upon the natives. Despite a liberal official policy, the natives were at the mercy of the malpractices of local officials and other settlers. Trade came alongside the collection of tribute and seems to have had an even more devastating impact on native communities. The combined consequences of tribute and trade greatly affected aboriginal tribal life. One of the most significant changes was the loss of economic self-sufficiency, because of the gradual but forced shift from reindeer hunting and herding to fur hunting and trapping, which satisfied the needs of the colonial power rather than their own needs. In general Christianisation made no great impact on the natives who remained largely faithfull to their shamanist religion. 36)

Despite the fact that the number of Siberian natives had increased gradually in the 18th century, they were outnumbered by the Russian settlers. Only on the periphery of the Siberian Arctic, did the natives remain in the majority right into the 20th century. During the 19th century, the majority of the Siberian aboriginals sank to a state of near-destitution, which might very well have led to their complete extermination. At the turn of the 19th century, some voices expressed the need of establishing special native territories modelled after North American Indian and Australian Aboriginal reserves, but all in

vain. Nevertheless the effect of Russian colonialism on the Siberian natives proved to be far less destructive than the impact of the white men's oppression on the indigenous peoples in America. 37)

2.4.2 Relation to Russian exploration

The (northern) native peoples not only generally passively accepted their pacification, and the trade with Russian settlers that went along with it, sometimes they even supported or cooperated with the Russians in carrying out exploring expeditions, thus furthering the penetration of their aboriginal lands and waters. Without doubt they never fully realized what the impact would be in the long run, namely the strenghtening of their subjugation. Some examples are given below.

As they had to face more or less similar conditions, Russian settlers in northern Siberia gradually tended to adopt certain elements of the northern natives' way of life, which were subsequently employed by Russian exploring expeditions into the Siberian Arctic in order to help cope with the harsh conditions encountered underway. Many customs and technical skills concerning transport were taken over from the northern natives. The use of dogs and reindeer as draught animals, sophisticated sledge types, and native boats (which in fact were lightweight canoes covered by the raw hide of sea mammals) considerably facilitated the Russian exploration of the Siberian Arctic. In some extreme cases Russian settlers even showed evidence of Yakutisation. 38)

It was 18th century Chukchi information about their own experiences in sailing along the north Siberian coast between Bering Strait and Chaun Bay (Chaunskaya Guba), and their reports about land north of this coast, that influenced the course taken by J. Billings' expedition in the 1790's, and which stimulated the organisation of the F.P. Vrangel expedition in the 1820s (see below). Some individual natives, such as N. Daurkin (who was of Chukchi origin and became a Cossack), even rendered specific services to Russian exploration in the northeast

extremity of Siberia, as leader, guide, and interpreter of several official expeditions (see below).

2.5 RUSSIA'S IMPERIALIST POLICY AND CHUKCHI RESISTANCE

By the middle of the 18th century, the Chukchi were the sole remaining representatives of the (northern) native peoples of Siberia that had not yet been subdued by the Russian government. Most of the Chukchi were nomadic reindeer herders and hunters moving around in the extreme northeast of Siberia, more specifically the Chukchi Peninsula (Chukotskiy Poluostrov), also named Chukotka, and some of the land bordering to it. A minority group had settled in more or less permanent bases on the coast, fishing and hunting sea-mammals. The groups traded with one another, bartering seal skins and walrus ivory for reindeer products. In addition there had been a tradelink between the Chukchi and the American natives via the 50-mile-wide Bering Strait from early times. 39)

No matter how primitive their tribal life may have been, some aspects of the Chukchi way of life were known and appreciated by Nordenskiöld and other well-respected late 19th century Western' experts on the Arctic 40). Most Russians, however, generally labelled them as the most primitive and warlike of all Siberian inhabitants. 41)

The fact that the Chukchi lived in the most remote region of Siberia with a most severe climate, that was moreover thought to have little economic value since it did not produce any valuable animal skins, explains why the Russians hesitated to conquer it. Neither was any Russian settlement established there, despite the fact that Russian expansionism had reached the Anadyr' river, which is to the southwest of the Chukchi Peninsula, as early as the mid-17th century. Immediately a frontier fortification ("ostrog") had been founded at Anadyrsk, on the middle reaches of the river, some distance away from present-day Anadyr' which is located at the mouth of the river. It became the military base for Russian expeditions into the northeastern tip of Siberia. The Chukchi's stubborn resistance,

relatively high number, good organisation, and great mobility, beside their use of fire arms, explains the Russian failure to take them by force, once they had decided to try to do so in the early 18th century. Initially the prime motive was to secure the Anadyrsk fort against the frequent sieges of the Chukchi. In the middle of the 18th century the central authorities seemed to have been seriously troubled by an alleged threat to the northeastern extreme of Siberia from the joint forces of the Chukchi and American natives. Other motives may have been to safeguard the exploring parties of the Great Northern Expedition that were planning to survey the coast of the Chukchi Peninsula, and to secure Russian interest in the North Pacific Ocean against any potential foreign influence in that region. 42)

Therefore, from about 1730 until the 1750s, military campaigns were frequently launched from the fort at Anadyrsk into the interior of the Chukchi territory. Of these, the expeditions commanded by the officer Dmitriy Pavlutskiy in 1731 and 1744-47 were the most notorious. Despite the relatively small scale of the wars they led to what might be called the most escalating confrontation since the beginning of Russian expansion into Siberia. Contrary to standard colonial procedure a genocidal war was officially decreed by the tsarist government in 1742. However, even an undisguised policy of total extermination turned out to be ineffective when it came to subduing the Chukchi, their population even increased during the 18th century. The Anadyrsk fort was soon abandoned as a recognition of failure, and a deliberately less agressive attitude was adopted instead. However, the object of subjecting the Chukchi was still secretly pursued, and the authorities continued gathering information on the Chukchi from various exploring expeditions organised from the 1760s onwards (see Chapter 4). 43)

A more moderate policy led to some trade between Russians and Chukchi; the organisation of what grew out into annual markets started in 1788. The Chukchi proved not to be insensitive to the material benefits of this trade. From the end of the 18th century the Chukchi also acted as middlemen in the trade with the American natives of the Bering Strait region in

order to satisfy increasing Russian demands for American fur, as a substitute for the decreasing fur production in Siberia. Their virtual monopoly of this trade was not overcome by the Russian - American Company until the early 1830s. 44)

The development of trade relations proved to be a more successful means of exerting governmental power. In 1789, Russian citizenship was imposed on the Chukchi by ukase of Catharine II. It is not clear if they were themselves aware of this. The Chukchi were accorded a number of special rights confirmed later by treaty. They were given the official status of "peoples not completely subdued", being allowed to maintain the social and political structure of their society. No Russian bases were permitted on their territory. Nevertheless, in the very same year cast iron plates bearing the imperial double-headed eagle were placed along the coast of the Chukotsky Peninsula to signify Russian sovereignty. In reality, however, for the greater part the Chukchi remained out of reach of imperial influence, and of Christianity. It was the Bolsheviks who first established effective control over the land and the people of the peninsula. 45)

2.6 PACIFICATION AND RUSSIAN ACTIVITIES IN THE SIBERIAN ARCTIC

After 1750, both private (hunting) voyages and official (exploring) expeditions to the Arctic Ocean set out from several colonial settlements in the Siberian interior, by sailing down the larger rivers that all flowed to the north. The establishment of an almost complete peaceful status quo in all of Siberia by 1700 / 1750, enabled the Russians to carry out their expeditions undisturbed by potentially hostile natives. One can say that the combination of settlement policy and the generally pacified state of the area was a pre-condition for the increasing Russian exploration and economic exploitation of the Siberian Arctic in the period 1750 - 1850. Had the (northern) natives been successful in resisting Russian domination, and been able to besiege the Russian settlements, and control the large Siberian rivers as well as the shorelines of the Arctic

Ocean, it is not hard to imagine that the Russians would have accomplished much less, if anything at all, in the field of exploitation and exploration of the Siberian Arctic. Private merchants would have gone elsewhere, and the Russian authorities would have been permanently occupied in military campaigns instead of organising exploration expeditions. Chukchi resistance was the exception to the rule in the general pacification of northern natives. For that matter, it is no accident that the Chukchi Peninsula remained unexplored by Russians for so long, although other factors contributed to this situation. On the other hand, Chukchi resistance provoked not only Russian military campaigns but in a way also triggered the organisation of official expeditions of exploration into this largely unknown peninsula from the 1760s up to and including Billings' expedition. However, too many resistance movements would have altered the picture fundamentally, the authorities then being chiefly occupied by striving for military mastery.

When Billings commanded the first Russian exploring expedition through the interior of Chukotka in 1791-92 (see below: Chapter 4), that is to say shortly after the formal subjection of the Chukchi in 1789, his route seems to have been dictated for the greater part by his Chukchi escorts, and the Russian participants even had to fear for their lives. Billings' experience was a completely new phenomenon, accustomed as Russian exploring expeditions, particularly official ones, were to carrying out their plans undisturbed by natives. The Chukchi may have something to do with the fate of the merchant N. Shalaurov's voyage in the early 1760s. Vrangel, who led an expedition in the early 1820s, took great care in convincing the Chukchi of his peaceful intentions. 46) Such incidents might have happened all over the Siberian Arctic had not the Russian pacification of the other northern natives been so complete.

2.7 RUSSIAN DISCOVERY AND EXPLOITATION OF THE NEW SIBERIAN ISLANDS

2.7.1 The second half of the 18th century

In 1770, whilst on a fur hunting trip on the mainland coast near Mys Svyatoy Nos, the northernmost point of land between the Yana and Indigirka rivers, the Yakutsk trader Ivan Lyakhov noticed a large herd of reindeer coming over the frozen sea from the north. This chance encounter which was evidence of the existence of land offshore induced him to follow their tracks. Lyakhov crossed the ice of what is now called Proliv Dmitriyeva Lapteva (Dmitry Laptev Strait) using dog sledges and found land some dozens of miles northwards from the mainland. The two `islands discovered were subsequently named after him, Ostrov Bol'shoy Lyakhovskiy and Ostrov Malyy Lyakhovskiy, as was the little archipelago itself: Lyakhovskiye Ostrova (Lyakhov Islands). Together they form the southernmost group of islands of the archipelago which is now called the New Siberian Islands (Novosibirskiye Ostrova). Although Lyakhov was officially credited with the discovery of the islands, his visit to the southernmost island had in fact been preceded by that of the Cossacks Merkuriy Vagin and Yakov Permyakov in 1712, and also by that of the Yakut promyshlennik Eterikan during 1759-60. The island had probably been sighted by Shalaurov in 1761 (see below). When Lyakhov revisited the islands by boat in 1773-74, he discovered a third island farther north: Ostrov Kotel'nyy where he overwintered. 47)

The islands discovered by Lyakhov turned out to be specially rich not only in fur (the Arctic fox) but also in fossil mammoth ivory. The large finds of ivory in the permafrost can be explained in short as follows. Mammoth had been widespread in the northern part of the Siberian mainland during the Pleistocene. Towards the end of this period, during the last ice-age, the archipelago must have been connected to the opposite Siberian mainland by a land- or ice-bridge. Mammoth crossed this bridge and made the islands their new homeland. At the end of the ice-age, some 10,000 years ago, this bridge

disappeared under the rising sea. Subsequently, the mammoths on the islands were cut off from the mainland and died out. The result was an enormous graveyard with mammoth remains buried in the permanently frozen soil for thousand of years (mammoths also died out on the mainland because they could not adapt to the relatively sudden change of climate at the end of the ice-age).

As mentioned earlier (see 2.3.2.2), it was this region of the Siberian Arctic that was to be exploited firstly and most intensively by Siberian merchants subsequent to the abolition of the internal customs barriers in the early 1750s. After Lyakhov had notified the central authorities of his discoveries, he was granted exclusive rights to exploit the resources he found on the islands. Lyakhov had to pay the treasury ten percent of the derived income. This commission was collected by a representative of the Yakutsk authorities at Ust'Yansk, a nearby place on the delta of the Yana River. The exploitation soon proved profitable, not least because of the system of winter camps and overnight huts that Lyakhov introduced. This provided a safe and direct line of communication and transportation between the islands and the coastal mainland. Strangely this unique method was not imitated anywhere else in the Arctic, not even in the 19th century. 48)

In 1775-78 an expedition was sent by the authorities at Yakutsk to carry out the first official survey of Ostrova Lyakhovskiye, collecting at the same time the treasury's dues from Lyakhov's trade. This expedition led by the geodesist Stepan Khvoynov resulted in the first map and description of these islands. This map has not survived but the cartographic results were incorporated in later maps, including the one showing the region of the Irkutsk government in an atlas of the Russian Empire published in 1792. In 1795-96 the landsurveyor Yefin Kozhevin, on his homeward journey, having participated in Billings' expedition, seems to have surveyed the deltas and lower reaches of the Yana, Lena, and Olenek rivers. In the early 19th century there were Russian settlers at the mouth of the Olenek living from hunting and fishing. 49)

2.7.2 The early 19th century

The huge finds of mammoth ivory did not diminish throughout the 19th century and thus a flourishing trade continued. The local natives also took part in the ivory trade. Yakutsk was the most important annual marketplace. After Lyakhov's death at the very end of the 18th century, his rights to hunting and trading on the islands which he had discovered passed to the Yakutsk merchants Semen and Lev Syrovatskiy. In 1800 their chief foreman Yakov Sannikov discovered Ostrov Stolbovoy, as he named it, the third island of the archipelago of Lyakhovskiye Ostrova. In 1805 Sannikov discovered Ostrov Faddeyevskiy, which is in fact joined with Ostrov Kotelnyy as he himself found out in 1811. In 1806 Sannikov headed another hunting expedition for the Syrovatskiy merchants during which he discovered Ostrov Novaya Sibir', an island in the northeast of the Novosibirskiye Ostrova archipelago. The eventual discovery of the last of the larger islands of the archipelago was made in 1808 by Nikolay Bel'kov, a foreman hunter for the Yakutsk merchant Stepan Protod'yakonov. This island in the north-west of the archipelago was named after its discoverer. Protod'yakonov petitioned the central government to grant him trading rights in the archipelago, thus hoping to break the Lyakhov - Syrovatskiy monopoly, and to allow him to search for a supposed northern continent. In return he promissed to provide the authorities information on geography and navigation. Syrovatskiy in turn asked for new claims, based on Sannikov's latest discoveries. Before a definite decision on this matter could be taken by Count Nikolay Petrovich Rumyantsev, who at that time was not only Minister of Commerce but also Minister of Foreign Affairs of the Russian government, it was decided to organise an official exploratory expedition to the archipelago to gather more information of all kinds. There was more at stake than commerce and science alone. Rumyantsev was convinced that in future the Arctic regions of northeast Asia and North America (the Russian - American Company had been founded in 1799; see below), would be the scene of conflict between Russia and Great Britain. It was his official policy therefore to claim both the archipelago of the New Siberian

Islands and a possible northern continent (extending, as was believed by some, perhaps all the way to North America) for Russia. It might very well have been this political motive, which induced Rumyantsev to order the Siberian Governor-General Ivan B. Pestel to finance the expedition no matter the cost. 50)

This expedition that would last from 1808 until 1811 was commanded by Matvey Matveyevich Gedenshtrom (originally Matthias F. Hedenström), a well-educated Russian civil servant of Swedish descent residing in Siberia. 51) The expedition was divided into three parties headed in turn by Gedenshtrom, Sannikov and the geodesist Ivan E. Kozhevin. All used dog-sledges. The expedition received help from the Yakuts when still on the mainland. Its instructions were to explore and survey the northern group of islands, and to determine whether or not it was connected with a supposed polar land, which, if it existed, was to be explored as far as possible. The belief in such a northern continent was widespread in Russia at the time. Russian maps of the 1760s and 1770s, and again that of 1807, as well as a map published by Joseph Nicolas de L'Isle and Philip Buache in 1752, show a polar land linked in the east with a northwestern extension of the American continent. During their survey, the expedition repeatedly reported the sighting of land to the north. In 1810, both Gedenshtrom and Sannikov believed that they had sighted a distant land northeast of the archipelago. Although his search came to nothing, Gedenshtrom went on believing that some sort of land did exist to the north of the archipelago. When he proceeded eastward over the sea ice he was halted by open stretches of water instead of discovering a vast landmass. Sannikov in the mean time thought he had sighted another polar land northwest of the archipelago. On Gedenshtrom's return to Yakutsk at the beginning of 1811, the authorities decided that the survey of the islands would be continued on a smaller scale that same year by Gedenshtrom's geodesist P. Pshenitsin, who had replaced Kozhevin, assisted by Sannikov. During this expedition Sannikov once more reported the sighting of land to the north of the archipelago, and again in a different location. His attempt to reach it failed. However, Sannikov was fully convinced himself and therefore requested ownership of these lands in the

event that they were found. The repeated sightings of land north of the archipelago, which became known as 'Sannikov Land', induced many subsequent expeditions to go in search of it over a century, starting with Anzhu and his 1820-24 expedition. So, 'Sannikov Land' turned out to be as firm a myth as 'Andreyev Land', the polar land reported to have been sighted northeast of the Bear Islands by Andreyev in 1763-64 (see below). It is believed by some that one or more of the small islands belonging to De Long Islands (Ostrova De-Longa) which were discovered as late as 1881, must have been the land sighted by Sannikov and Gedenshtrom. Others are convinced that no such place ever existed and that those who reported it were deceived by a mirage. Another theory is that 'Sannikov Land' disappeared due to thermal abrasion by the sea, since it consisted entirely of ice-rich sediments. 52)

By combining the information gathered by Gedenshtrom's and Pshenitsin's expeditions, the first scientific description and a more or less accurate map of the entire archipelago and the adjacent coastal mainland, between the Yana and Kolyma rivers, was compiled, thus greatly improving the cartography of the region. An amended version of this 1811 map was drawn up in 1820 this time including the outlines of the polar lands sighted by Sannikov. The expeditions had determined that all the land explored was part of the New Siberian Islands archipelago, and that no connection existed with a possible northern continent, whose existence as such was doubted for the first time, despite the sighting of 'Sannikov Land'. The stretches of open water (polynias) encountered around the archipelago between the limits of the polar drift ice and the continental shore ice, whose presence was first established by Gedenshtrom, suggested possible suitability for navigation. 53)

In 1815 two very small islands, Ostrov Semenovskiy and Ostrov Vasil'yevskiy, lying west of the archipelago, were discovered by chance by the Yakut trapper Maksim Lyakhov, giving rise to the belief that more islands in the area were yet to be discovered. 54)

2.7.3 The early 1820s

The Admiralty Department organised an expedition to the New Siberian Islands in 1820-24 on the instructions of the Russian government. It was commanded by Lieutenant Petr Fedorovich Anzhu (also sometimes spelled as Anjou). It had the double aim of completing the exploration and of improving the accuracy of the cartography of the archipelago on the one hand, and to check out the possible existence of 'Sannikov Land', or any other supposed nearby Polar lands on the other hand. Officially part of a double-expedition, of which Vrangel's expedition operating east of the Kolyma during the same years was the other detachment (see below), Anzhu's activities in fact were independent of those of Vrangel. The local authorities were instructed to assist Anzhu's expedition in every way. The expedition was accompanied by several Yakut guides, while Yakut traders were instrumental in delivering food supplies. Anzhu's survey of almost all the islands of the archipelago by dog-sledge, and the exploration of the adjacent mainland coast between the Indigirka and Olenek rivers, including the lower Lena river and its delta, carried out for the greater part by Pyotr Ivanovich Ilyin, resulted in a considerable improvement in the cartography of these regions. Another small island, Ostrov Figurina, named after the doctor and naturalist of the expedition, Aleksey Yevdokimovich Figurin, was discovered off the north coast of the archipelago. Astronomical and meteorological observations were also carried out. Possible trading opportunities were reported, and notes were made on the sea ice conditions in the waters around the archipelago. Anzhu correctly concluded that there was no vast land mass verging on the sea north of the archipelago, so further discrediting the notion of a northern continent. On several separate occasions Anzhu's searches for 'Sannikov Land' were brought to a halt by thin ice and open water (polynias), whichever point on the north coast of the archipelago he set out from. Anzhu's suggestion of using a large boat instead of dog-sledges was refused by the authorities. The mysterious 'Sannikov Land' was not found, nor were any new polar lands discovered. This to the great displeasure of the Admiralty. The results of

Anzhu's expedition found an early represention in a circumpolar map issued by the Russian Admiralty Department in 1820, but updated in 1824. Anzhu's results were also incorporated in a map of northeastern Siberia inserted in Vrangel''s expedition journal, published in various languages around 1840. Anzhu's name has been immortalized in Ostrova Anzhu, the collective name for the group of islands north of Proliv Sannikova, which divides it from the southern group of the Lyakhovskiye Ostrova, which commemorates the other explorer of the archipelago. Anzhu's expedition turned out to be the last one in this region until the late 19th century. 55)

2.7.4 Conclusion

The discovery of all the major islands of the New Siberian Islands was the work of private merchants. The official policy of granting exploitation rights to those who discovered unknown regions in the vicinity of the archipelago must have surely stimulated the Siberian merchants in their searches. When the area proved to be rich in resources its discovery and exploration turned out to be worthwhile and therefore proceeded at a relatively fast pace. This private mixture of discovery and trade was soon to be followed by the exploration and charting of the archipelago organized firstly (in the 1770s) by the Siberian and later (during the first quarter of the 19th century) by the central authorities, and carried out by officers and geodesists, who also extended the knowledge of sea ice conditions and other natural phenomena. The Yakuts were most cooperative in the execution of the official exploration. Whether they did so out of free will or were forced is not easy to say; as a subjugated people their choice was never completely free. The desire to establish political or legal control over the archipelago seems at times to have been a contributing reason for the organisation of official expeditions, since the Russian government feared British expansionism in this part of the central Siberian Arctic region, and their non-acceptance of, what was believed to be, Russian natural sovereignty over it.

2.8 RUSSIAN DISCOVERY AND EXPLORATION OF THE BEAR ISLANDS

In 1763-64 a small party under the geodesy Sergeant Stepan Andreyev was sent by the Siberian governmental authorities to the north of the mouth of the Kolyma to search for a vast land mass which, it was believed, might extend all the way to the American continent, as well as to explore a rather small archipelago situated off the river delta. The party travelled by dog-sledge over the sea ice. The archipelago's existence, soon to become known as the Bear Islands (Ostrova Medvezh'i), so named because of the numerous bear tracks that were found, had been recognized since at least the middle of the 17th century but the islands had never been described and surveyed accurately. However, Andreyev's survey of the archipelago turned out to be unreliable. An expedition by the geodesists Ivan Leontyev (commander), Ivan Lysov, and Aleksey Pushkarev, was sent to the island group to re-survey it during 1769-71. Their survey was so accurate that Vrangel found only slight differences compared with his own measurements taken during his expedition in the early 1820s. As a result quite accurate charts were sent to the Admiralty in St. Petersburg, such as a MS. map drawn by Leontyev in 1771 showing the tracks of their dog-sledge expedition. 56) However, instead of shedding light on this matter, Andreyev caused even more confusion with his ambiguous report claiming to have sighted and even approached a large land mass northeast of the Bear Islands. Although Andreyev's claim could not be confirmed by Leontyev's party, which was on a secret assignment, yet another legend concerning polar lands was born. The first Russian expedition to be instructed to look out for 'Andreyev Land', as it became known, was that of Billings in 1785-94. In 1820-24 Vrangel went in search of it. The search would last well into the 20th century. Subsequently, 'Andreyev Land' found its place in cartography. The rough outlines are marked on the 1811/20 map which was drawn as a result of the Gedenshtrom and Pshenitisin expeditions to the New Siberian Islands (see above), the map inserted in Burney's historical work on voyages in search of the Northeast Passage published in 1819, a circumpolar map published by the Russian Admiralty in

1820-24 57), and the general map included in Nordenskiöld's account of the voyage of the Vega, published in various languages in the early 1880s. Since it is now known that there is no land in this part of the Arctic Ocean, it is thought that Andreyev was deceived by a mirage or that he sighted an ice island. In the 19th century other explanations were put forward. Vrangel believed Andreyev had seen a northern extension of the mainland and therefore did not make any reference to it in his map. Nordenskiöld's assumption that 'Andreyev Land' was the south-western continuation of Wrangel Island, thus mistakenly crediting Andreyev with being the true discoverer of this island about a century before its actual discovery, will not have been taken too seriously once the relatively small size of Wrangel Island was determined in the early 1880s (see below). Although both Andreyev's and Leontyev's parties had searched for a polar land in vain, a vast land mass extending all the way from the American continent to the north of eastern Siberia was put on the Russian map in 1765 and again in the 1770s 58). 59)

2.9 REGIONALISM AND SOVEREIGNTY

2.9.1 Regionalism

During our period the imperial authorities never gave any encouragement to the concept of Siberian regionalism, with the exception of a short period of formal recognition of Siberian autonomy: the "Siberian Kingdom" during 1763-1781. This does not automatically mean, however, as the Soviet authorities later claimed it to be, that 'Siberia was an integral part of Russia'. 60) A high degree of informal autonomy for Siberia was permitted by the imperial authorities throughout, as has been described before. Besides, in the 19th century, and right up to the 1917 Revolution, the idea of separating Siberia from Russia, giving it autonomy or independence, was widespread among various political (mostly non-official) and intellectual circles in Russia. By the early 20th century, a political movement in Siberia called "Oblastnichestvo" ("Regionalism") was striving

hard for self-government and the establishment of a separate regional parliament for Siberia. 61) Even if all campaigns for Siberian regionalism were of no avail, Siberia as a whole was certainly not a fully incorporated part of the Russian Empire at this time, and the Siberian Arctic as its periphery even less.

2.9.2 Sovereignty

'The process of penetration and subsequent annexation was able to take place, as it were, out of sight of any rivals Russia might have had'; 'there was never a direct threat by another country capable of taking and occupying large parts of the territory'. Armstrong 62) was referring first of all to Russian expansion in (northern) Siberia in the 17th century, but his words can easily be applied to the Siberian Arctic in our period, including the Russian discovery, exploration and subsequent domination of the islands north of the Siberian mainland (the New Siberian Islands and the Bear Islands), and the political subjugation of the Chukchi. Principally because of this absence of foreign threats the Russian government felt no urgent need for legal or military protection of the Siberian Arctic.

Theories of a "Mare Clausum" for the Northern Sea Route, developed later in order to defend Russia's juridical claim or justify Russian sovereignty over what it considered as its rightful possessions in the Siberian Arctic, had not yet been proclaimed in our period. 63) It seems evident that as a result of the discovery and exploration of the Siberian Arctic islands, the subsequent economic exploitation, and the final subjugation of the Chukchi, the government was fully confident of its legitimate rights over these newly acquired territories, not to mention the older possessions, even if there was a certain lack of interest in the continuation of exploration after the early 1820s. Claiming legal sovereignty over these territories, therefore, does not seem to have been an issue at all for the Russian authorities in this period, and so no claims were explicitly put forward.

This also explains why Russian exploration expeditions in Siberian Arctic waters were in general not organized, or directly afterwards used, as a means of exerting political control or announcing legal claims to the outside world. The exception to this was Gedenshtrom's expedition to the New Siberian Islands, which was partly directed against a potential future British threat. The military expeditions to the Chukchi Peninsula, on the other hand, seemed to have been organised not only to subdue the Chukchi for internal reasons, but also to defend the increasing Russian interest against potential foreign influence in this northeastern extreme of Siberia and the surrounding waters (see Chapter 4). Right after the formal subjugation of the Chukchi in 1789, the authorities apparently felt compelled to underline their sovereignty rights by placing border plates along the coast of the peninsula. But this was the exception to the rule. On the whole no military or legal measures were taken to protect the Siberian Arctic against the outside world.

To the Western point of view in the mean time, however, the waters of the Northern Sea Route were without doubt considered free for navigation, in accordance with the generally accepted principle of "Mare Liberum", the freedom of navigation on all high seas. In this period there was a virtual absence of Western navigation in Siberian Arctic waters, so the potential conflict was not brought out in the open. But in the second half of the 19th century Western ships could not be legally prevented from sailing the waters of the Northern Sea Route (see Chapter 5.2 and Part III), since the Russian government had failed to claim the Siberian Arctic waters formally as a closed sea for foreigners in our period, and if it had put forward such a claim it probably would not have been readily accepted.

CHAPTER 3: THE NORTHERN AND ARCTIC REGIONS OF EUROPEAN RUSSIA

3.1 INTRODUCTION

Almost all Russian commercial activities in the northern and Arctic regions of European Russia in our period originated in the White Sea area, and were instigated by its inhabitants the Pomors. The name "Pomor" derives from "Pomorye", which is Russian for coastland, and stands for the White Sea littoral. Shortly after the middle of the 18th century, an influential group of regional maritime businessmen emerged among the Pomors, who increasingly gained control of trade and industry, at the expense of the nobility and foreigners, traditionally the most powerful groups and for a long time favoured by the Tsarist government. Although far from being primarily concerned with matters connected to the north of European Russia, the central Russian authorities created favourable preconditions for private Russian commerce in these regions, by the proclamation of two enactments in the early 1750s. The first enactment, the abolition of the internal customs barriers throughout the Russian Empire (already mentioned in more detail in Chapter 2), strongly encouraged private economic activities on the White Sea coast, despite its peripheral location. The second enactment was the Senate's decision to raise the ban on seafaring into the Kara Sea in 1753. The ban had been decreed in 1704, reinforcing the first ban of 1619 that closed the old Mangazeya sea route (see Part I). Although the traditional view that the 1619 decree interrupted all trading and hunting into the Kara Sea for two and a half centuries cannot stand, the formal lifting of the ban certainly promoted Pomor navigation and trade in these waters. 64)

Consequently, a new era of maritime based economic exploitation of the northern and Arctic regions of European Russia began for Russia at the beginning of our period. Various trades were revitalized, others started up for the first time, although not always, or instantly, profitably, such as Pomor sea mammal hunting (walrus and seals) and fishing (3.2.1), Pomor trade with northern Norway (3.2.2), whaling (3.2.3), and silver

ore exploitation on Novaya Zemlya (3.2.4.1). The search for the ancient sea route into the Kara Sea (3.2.4.2) was resumed. There was also some fur trapping (3.2.4.3). Private geographical exploration accompanied most of this trading, especially in connection with Novaya Zemlya. These private activities triggered the interest of the authorities, which organised several official exploration expeditions in response (3.3 and 3.4). Scientific institutes also sent out a number of expeditions (3.4). They included an expedition to the Taymyr Peninsula (3.6). Though this peninsula, like the Kara Sea (3.5), is undoubtedly part of Siberia, both regions are included in this chapter because of their close relation to the history of the geography and navigation of Novaya Zemlya and the Barents Sea in the period under discussion. The intense exploration by both private voyages and official expeditions explains the considerable extension of geographic and hydrographic knowledge of the northern and Arctic regions of European Russia at this time. This chapter concludes with paragraphs on politics (3.7) and sovereignty (3.8).

3.2 RUSSIAN TRADE AND INDUSTRY

3.2.1 Pomor hunting and fishing

From early times the Pomors were engaged in hunting walruses and seals, as well as in fishing in certain northern and Arctic regions of European Russia. In the early 18th century, Tsar Peter the Great's high-placed protegé Prince A.D. Menshikov formed the first company to obtain a monopoly for hunting and fishing off the Murman coast. The produce from these activities were sold with profit to Western trading ships arriving annually at Kola, a Russian settlement founded in the 1570s that had served as a trading-post with Western ships continually since then. After the break-up of Menshikov's company in 1721, the Pomors got back their rights of hunting and fishing but lost them again in the years 1748-67 when a company ran by another nobleman, Count P.I. Shuvalov, was granted privileges by the

authorities. Acting on the initiative of Shuvalov, the Senate lifted the 1619/1704 ban on using the old Mangazeya sea route in 1753. The Pomors were now officially permitted to sail to the Ob and the Taz rivers by way of the Kara Sea. Naturally, Shuvalov himself profited most, even obtaining official permission to set up trading-posts along the way. Around 1760 he organised some hunting and fishing voyages to the Kara Sea and the Ob. At least one vessel seems to have reached the Ob. However, this early attempt to revitalize the Kara Sea route proved not to be profitable enough and the trade was soon given up. As a result of Shuvalov's privileges the overall economic situation among the Pomor population declined rapidly, leading to migration and the import of fish. As a counter measure, Catherine II withdrew the privileges of the company and proclaimed free trade in hunting and fishing for the entire Pomor merchant community. This was much to its benefit given the overall success of hunting in the Svalbard waters, and the increase in the number of hunting-vessels and fishing boats sailing to the coasts of Novaya Zemlya, in the late 18th century. New applications for monopolies were declined, whether petitioned by merchants or by noblemen. The partial exception to this rule, after Catherine II's reign, was the short-lived "White Sea Company" in the early 19th century (see below), whose terms included whaling, and fishing in addition to sealing and walrus hunting. Pomor hunting in the Svalbard archipelago seems to have been discontinued in the middle of the 19th century for reasons that are not at all clear. Norwegian sealers took over the hunting in this region. 65)

Until the 1860s Pomor hunting seems to have been concentrated in the waters around Novaya Zemlya, with an emphasis on walrus hunting from the early 1830s onwards. Unfortunately, there is a great dearth of records for most of these years. Around 1880 Nordenskiöld stated that the hunt for walruses was and had been the most important of all sea-mammal hunting for the past fifty years in that region, valuable as it was 'for its skin, blubber, and oil' 66). In some years around 1830 some Russian walrus-hunters sailed far into the Kara Sea, passing Novaya Zemlya both to the south and the north (see

below). Statistics for 1865 show that hunting and fishing in the waters off Novaya Zemlya were quite profitable that year. The Pomor sealers may have used the uninhabited islands of Novaya Zemlya, Vaygach, and Kolguyev for establishing temporary shore bases now and then. From the second half of the 1860s Russian hunting was outstripped by the sudden rise of Norwegian hunters in these waters (see Part III). 67)

3.2.2 Pomor trade 68)

The maritime-based Pomor trade with northern Norway proceeded in short as follows: annually Russian trading-vessels from the White Sea littoral visited many places in northern Norway to exchange Russian grain and wood products for the fish caught by Norwegians in their coastal waters. In the 18th century the exchange of goods was based primarily on bartering; a money economy only grew in the 19th century.

The Pomor trade formed the cornerstone of Russian - Norwegian relations in the period considered here. The traditional view is that the Pomor trade started in the 1740s, and enjoyed a strong impetus after around 1760 (if true, this impetus is no doubt due to the sudden rise of the merchants as a wealthy and influential group: see introduction). Another view assumes that the Pomor trade sprang from Russian fishing in the coastal waters of eastern Finnmark (which is the northernmost province of Norway, bordering Russia) as early as the end of the 17th century, spreading gradually westwards and southwards during the next century. The region of the Finnmark and Murman coasts should be considered in fact as an integrated economic whole. There are many examples of both Russian and Norwegian fishermen fishing in each other's waters when catches were poor off their own coasts. To their great disadvantage, however, the Pomors entered the fishing grounds later in the season than the Norwegians, since the White Sea was ice-bound until the early summer, and they had to come a long distance. Permanent Russian settlements on the Murman coast, which might have overcome this problem, were lacking, the town of Kola being situated too far inland. Norwegian fishermen gradually took over most of the

fishing off Finnmark from the end of the 18th century, and more and more Pomor fishermen went over to trade with them.

The Pomor trade was in essence a logical interplay between the local populations of northern Norway and northern Russia, based upon complementary natural resources. At first both governments had second thoughts about the Pomor trade, which neither of them had devised. But in the end the Danish Crown (which held sovereignty over Norway) legalized the Pomor trade by founding commercially privileged market towns in northern Norway, such as Hammerfest (1789), Vardö (1789), and Tromsö (1794), and so introducing free trade in this part of Norway. The Russian authorities granted special concessions concerning import rules, thus acknowledging the crucial importance of the Pomor trade, which was much more than a mere peripheral phenomenom. It took care of Russia's rising need for fish products. Besides, most of Russia's grain came from the Russian interior which was also the final destination of most of the Norwegian fish. This trade made it possible for the Pomors to act as middle-men using the White Sea area as a transit place between the Russian interior and northern Norway. The Pomor trading-vessels, although only used for cabotage, constituted the nation's only merchant fleet, and were run without any state subsidy. Around 1840 about 350 ships were involved in this trade. Trade began increasing after about 1840, and continued flourishing until at least the 1870s.

A more or less regular trade had existed between Russia and Western Europe (particularly the Dutch Republic and England) via the White Sea from the second half of the 16th century. However, this is beyond the scope of this essay.

3.2.3 Whaling

When Tsar Peter the Great first decreed that there should be Russian whaling in the Arctic waters of European Russia, he envisioned the formation of a sound national whaling fleet. In 1725 the first Russian whaling company was formed by a Russian nobleman. Captains and specialized whaling personnel were hired from the Netherlands for voyaging to the whaling grounds in

Svalbard waters (the Barents Sea as a whole was never a prime whaling ground; although there was some whaling in the western and southern sections), to compensate for the lack of Russian experience in this trade. Quarters were built at Kola where crews could overwinter and the catch could be prepared. As the operations of this company proved to be unprofitable, the authorities decided to transfer the monopoly of the whaling industry to Russian merchants in 1731. However, this was no real improvement, although a few Russian whaling vessels seem to have reached high latitudes. Another official initiative, the setting up of a merchant company in 1768 also failed: during the next two decades all applications by Pomors and others were declined. By the end of the 18th century Russian whaling had come to a complete halt. 69)

Nonetheless, in the first years of the 19th century the "White Sea Company", a Pomor merchant company for whaling, fishing, sealing and walrus hunting, was founded by imperial decree for a period of 25 years. The creation of this company seems to have been partly politically motivated. Heavy competition by English whalers, and the interruption of the Napoleonic Wars ended this adventure prematurely in 1813. Some whaling companies were founded again in the 1840s. Altogether some incidental or local whaling may have continued throughout the 19th century. Now and again Novaya Zemlya, as well as Vaygach, and Kolguyev may have been used as temporary bases. Nordenskiöld reported of Russian whaling in the waters off the southern part of Novaya Zemlya by hunters from the Russian settlement at the Pechora River in the late 1870s. These whalers used a base on the south coast of the Yugor Strait. He also mentions some previous whale hunting at the mouth of the Yenisey. All in all, however, the Russian attempt to counter Western whaling, that had already become established in this area in the 17th century, failed. Western reluctance to allow Russian competitors into the lucrative whaling business certainly did not help. Western whaling in Svalbard waters had passed its peak around 1800, and went into steady decline during the 19th century, to die out at the beginning of the 20th century. 70)

3.2.4 Economic exploitation of Novaya Zemlya and the Kara Sea

Beside the regular visits to the shores of Novaya Zemlya for fishing and sea-mammal hunting (see above), other economic activities took place on and around Novaya Zemlya. These will be dealt with here primarily for their commercial relevance. In the case of a relation with the discovery and exploration of Novaya Zemlya and the Kara Sea the reader will be referred to these chapters also.

3.2.4.1 Silver on Novaya Zemlya

Archangel merchants in the second half of the 18th and early 19th centuries maintained a persistent belief in the presence of silver ore on Novaya Zemlya. This may have led to the organisation of an expedition as early as 1757, of which nothing further is known. The expedition to Novaya Zemlya commanded by F. Rozmyslov in 1768-69 was financed by the Archangel merchant A. Barmin for this explicit reason (see also 3.2.4.2 and 3.3.2). In 1787 Count A.R. Vorontsov, the President of the College of Commerce, urged the founding of a permanent settlement on the uninhabited island to exploit the assumed silver deposits. The idea was repeatedly discussed throughout the 19th century but was never put into practice. In 1807, Count N.P. Rumyantsev, the Minister of Commerce outfitted a mining expedition commanded by Vasiliy Ludlov, a high-ranked administrator in the organisation of the Ural mines, and Grigoriy Pospelov for prospecting for silver ores on the west coast of Novaya Zemlya at his own expense. However, although some places at the western entrance of Matochkin Shar were given promising names such as Silver Bay (Guba Serebryanka), the search for silver turned out to be fruitless (see also 3.3.3). The hope of finding gold on Novaya Zemlya were never fulfilled either. Coal was found in various coastal areas in the 1830s. 71)

3.2.4.2 The Kara Sea route and alternative inland waterways

After the formal lifting of the 1619/1704 ban on seafaring into the Kara Sea in 1753, a number of voyages and expeditions were organised to search for a navigable sea route to the Ob and the Yenisey, as a first step to reestablishing trade relations between the White Sea and these rivers. The venture undertaken by Shuvalov around 1760 was soon given up, despite reaching the Ob at least once (see above: 3.2.1). The expeditions by way of Matochkin Shar by F. Rozmyslov in 1768-69 (see below: 3.2.4.1 and 3.3.2), and V.A. Krotov in 1832 (sponsored by the Archangel merchant company W. Brandt and Son) (see below: 3.3.3) were not capable of entering the Kara Sea. The optimistic ideas of these Russians as to the feasibility of a profitable sea route to the west Siberian river estuaries were shattered time and again by pack ice in the Kara Sea. Although none of these undertakings achieved their objectives, they should still be considered as early attempts to revitalize the traditional sea route across the Kara Sea, and as such they were the precursors of the expeditions of Kruzenshtern and Sidorov in the 1860s (see below: 3.4.3).

Projects for inland waterways along and between the Pechora (or even the Northern Dvina) and the Ob rivers, which flanked the Ural mountains, were drawn up by the merchants Dengin, and V.N. Latkin in the first half of the 19th century as an alternative to the ice-bound waters of the Kara Sea route. Latkin himself explored the Pechora in the early 1840s (see 3.4.3). In 1847, a group of Tobolsk merchants headed by Latkin formed a joint-stock company for transporting Siberian products to the Barents Sea and beyond by this inland route. However, the whole idea proved to be impracticable (see also Part III). 72)

3.2.4.3 Fur trapping

Not much is known about the history of fur trapping in the areas under consideration here. Only some fragmented pieces of information have come down to us. Loshkin's voyage around Novaya Zemlya (see below: 3.3.2) might have involved the hunt for fur,

and Shuvalov's activities on the shores of the Kara Sea also included some trade in the Arctic fox skins. 73) This fur trade no doubt benefitted from the lifting of the ban on seafaring into the Kara Sea in 1753. Even less information is available about the search for fur from the mainland. In 1778 the Tobolsk merchant Y. Obrosimov got permission from the central authorities to carry out a voyage to unknown islands in the Arctic Ocean and to establish trade with any peoples he might encounter. While sailing down the Ob he was to engage in trapping the Arctic fox along the shores of the Gulf of the Ob, since he was already familiar with the lower reaches of this river. Nothing further is known about this undertaking. 74)

3.3 NOVAYA ZEMLYA: GEOGRAPHICAL CONCEPTS AND RUSSIAN EXPLORATION

3.3.1 The geographical concept of Novaya Zemlya as a peninsula up to the middle of the 18th century

The geographical concept of Novaya Zemlya as a peninsula connected by way of its undiscovered northeastern part to an equally undiscovered part of the Siberian mainland, and hence of the Kara Sea as a gulf, dates back to the turn of the 16th century. It was wholly a Dutch/Western European notion. It was never even discussed in Russia, as the Russians always seem to have been convinced of the insular nature of Novaya Zemlya. The concept was born of indirect and, as it turned out, defective reasoning which based itself on very scanty actual knowledge and a lot of wishful thinking rather than empirical evidence. It would probably never have seen the light of day if it had not been used as an argument in the Dutch controversy as to where the best sea route in search of a Northeast Passage to the Pacific was to be found; should one sail south or north to get past Novaya Zemlya? The Dutch sent expeditions to search for a Northeast Passage in the mid 1590s and again around 1610 (see also Part I). The idea that Novaya Zemlya was a peninsula was put forward by the Dutch geographer Plancius so that Dutch

expeditions should be sent to the north of Novaya Zemlya. This was the same geographer who, for much the same reasons, advocated the concept of an 'open polar sea' (see above). Plancius used this as a geographical argument for ridiculing his opponents' efforts to find a route along the coast to the south of Novaya Zemlya and from there into and across the Kara Sea. If Novaya Zemlya was a peninsula it would block all attempts at sailing eastward out of the Kara Sea. Plancius, who had drawn up the geographical contents on a globe published by Pieter van den Keere (Petrus Kaerius) in Amsterdam in 1612-14, showed Novaya Zemlya as a peninsula joined to the Siberian mainland. Numerous Dutch and other foreign maps made in the following years depict Novaya Zemlya as a peninsula. From the middle of the 17th century the concept became less popular, probably due to lack of empirical evidence, and it would probably have died out completely if another Dutch geographer, Nicolaas Witsen, had not revived it in a sketch map of Novaya Zemlya published in England in 1674. The material on which Witsen based this map had been sent to him by one of his Russian correspondents, possibly in order to mislead both Witsen and the planners of a forthcoming English expedition in search of a Northeast Passage. Witsen corrected his representation of Novaya Zemlya in his wall map of Siberia dated 1687, in which he showed it as an island. But although this later general map was considered authoritative it was not widely distributed, and the Dutch/Western European concept of Novaya Zemlya as a peninsula in some shape or form died hard. It can be found on maps right up until the middle of the 18th century, and was particularly prevalent around 1680, as evidenced by the world maps of the English cartographers M. Pitt and J. Seller. Among other map-makers to show it in this way were Guillaume de L'Isle in several maps from the beginning of the 18th century; Philip Johann von Strahlenberg in a map of Siberia published in 1730; and Johann Matthias Hasius in both the first (1739) and subsequent editions of a map of Russia. 75)

Only once, it seems, has Novaya Zemlya been represented as a peninsula on a Russian map. This was on a small world map in two hemispheres, part of the first Russian atlas of the world published by the St. Petersburg Academy of Sciences in 1737. The

atlas was a kind of popular - scientific atlas compiled for the benefit and use of the youth and general public. I assume the representation of Novaya Zemlya as a peninsula was copied without much criticism from an early 18th century Western map, probably French. 76)

Conclusive evidence that there was in fact no land linking Novaya Zemlya to the mainland was provided by the Great Northern Expedition of 1733-43, during which the coastal parties that explored the shoreline between Yugorskiy Shar and the Taymyr Peninsula discovered no land link. However, the results of the expedition were not all, or immediately, fully incorporated into maps published in Russia. The insular nature of Novaya Zemlya was finally proved beyond doubt by Loshkin's circumnavigation in 1760-62.

3.3.2 Russian exploration in the second half of the 18th century

It was in 1760 that Savva Loshkin, from Olonets on Lake Ladoga, sailed south of Novaya Zemlya and into the Kara Sea while on a hunting expedition. He worked his way along the hitherto unknown east coast of Novaya Zemlya and wintered twice, making good use of the plentiful driftwood. He rounded the northernmost tip of the island in 1762, thus completing the first recorded circumnavigation of Novaya Zemlya, (in an anticlockwise direction). Although many attempts were made to repeat this achievement, none succeeded until a voyage by the Norwegian walrus-hunter Edvard Holm Johannesen in 1870. Loshkin however did not produce a detailed survey of any part of the coastline. 77)

Loshkin's achievement was followed up in 1766 when Yakov Chirakin conducted a hunting expedition to Novaya Zemlya. He sailed through Matochkin Shar, the narrow strait dividing the north and south islands of Novaya Zemlya. Although he was probably not the first hunter to pass through this strait, his was the first recorded voyage. He submitted a report and plan of Matochkin Shar, which attracted the attention of the authorities in Archangel. 78)

Chirakin's voyage had been a private venture. In 1768-69 the governor of Archangel, E. Golovtsyn, responded to it by sending an expedition authorised by the central authorities and financed by the Archangel merchant A. Barmin to explore the possibility of a route through Matochkin Shar to the Obskaya Guba (Gulf of Ob') (see also 3.2.4.1 and 3.2.4.2). The government's real interest seems to have been in this way to open up a northern sea route all the way to North America. The leader of the expedition was Fedor Rozmyslov, and Chirakin was listed as a pilot. There was great optimism about the viability of the route when the Kara Sea at the end of the strait was found to be ice-free during a reconnaissance by boat in 1768. However, after a hard winter at the eastern end of the strait, this mood was tempered when heavy ice forced the expedition to turn back after sailing some distance along the east coast of Novaya Zemlya. Moreover, they found none of the deposits of silver or other precious metals which they, and especially Barmin, had hoped for. Since Rozmyslov found Chirakin's 1766 chart of Matochkin Shar inaccurate, he submitted his own chart of the strait from measurements taken in 1768. 79)

As a result, I.F. Trusscott (also spelled in many corruptive variants), cartographer at the St. Petersburg Academy of Sciences, produced a map of Novaya Zemlya and northern Russia in 1772, which to my knowledge is the first map that included Matochkin Shar. In the late 16th century some loose references to the strait appeared on a few Western maps, but since Willem Barents in the mid-1590s sailed along the entire west coast of Novaya Zemlya without noticing its western entrance this was removed from the map thereafter as a rule.

3.3.3 Russian exploration in the first half of the 19th century

In 1807 the Minister of Commerce Count N.P. Rumyantsev fitted out a private expedition to Novaya Zemlya to prospect for silver at several places on the west coast (see also 3.2.4.1). The mining official V. Ludlov was in command, with G. Pospelov as steersman. Their search for silver proved fruitless, and apart from surveying the west coast of Novaya Zemlya from Kostin Shar

to the entrance of Matochkin Shar, it produced no scientific results. The survey is shown in a MS. map of Novaya Zemlya and the coast of the mainland opposite, and in particular in a large inset which depicts the coastline explored and the ship's course. 80)

In 1819, the Admiralty Department of the Russian Ministry of the Navy organized an expedition to explore and survey Novaya Zemlya in addition to Vaygach and the Kolguyev islands and the northern regions of the Poluostrov Kanin at the entrance to the White Sea. The expedition was under the command of Lieutenant Andrey Petrovich Lazarev, but its achievements were negligible due to bad weather and unfavourable ice conditions and added to which sickness among the crew. Lazarev obtained only occasional glimpses of Novaya Zemlya and landed only once, at Mys Krestoviy at its southern tip. 81)

Far from being discouraged by this unsuccessful first attempt, between 1821-24 the Admiralty Department proceeded to send four more expeditions from Arkhangel'sk to explore and survey the coasts of Novaya Zemlya, all of them under the command of Lieutenant Fedor Petrovich Litke (also sometimes spelled, especially in older literature, as Lütke). The first expedition, in 1821, was given the task of charting Matochkin Shar and in particular of ascertaining its precise length in order to help determine its navigability. Heavy ice and thick fog prevented Litke from even locating the western entrance to Matochkin Shar. He was obliged to limit himself to a survey of parts of the west coast of Novaya Zemlya, and on his way back to Arkhangel'sk fixed the exact geographical location of Mys Kanin Nos (Cape Kanin) at the entrance to the White Sea. In 1822 Litke carried out a survey of the north coast of the Kola Peninsula before returning to Novaya Zemlya to continue his survey of the west coast to just north of 76°N, i.e. just north of Mys Nassau, where ice prevented him from proceeding any further. On his way south, he briefly entered Matochkin Shar at its western end. Litke's third expedition in 1823 set out to complete the survey of the north coast of the Kola Peninsula, before sailing to Novaya Zemlya where he surveyed both shores of Matochkin Shar and determined its length, as well as fixing the geographical

location of Ostrov Vaygach, and exploring Yukorskiy Shar. The main objective of Litke's fourth and last expedition in 1824 was to survey the as yet uncharted east coast of Novaya Zemlya and circumnavigate the double-island. However, his attempts to enter the Kara Sea by sailing both north and south around Novaya Zemlya were thwarted by ice. Litke also described and charted the eastern side of the Gorlo, the narrow entrance to the White Sea. Although he did not succeed in reaching farther than his predecessors in any direction, the cartography of the regions he explored on Novaya Zemlya was greatly improved as a result of these voyages. Litke's map of Novaya Zemlya, which was published as part of his journals in 1828, was considered very useful as it corrected many important mistakes. Furthermore, it showed the limit of the pack ice to the west of Novaya Zemlya in 1824. He did, however, show the northernmost part of Novaya Zemlya beyond his own farthest north as being much too elongated in an easterly direction, which representation was soon questioned by Ber. This elongation was already reduced on a map by Tsivolka in 1836. The representation as such was not actually corrected until Norwegian sailors had made a number of voyages around the north of Novaya Zemlya in the 1870s. 82)

In sharp contrast to the generally unfavourable ice conditions Litke had encountered, extremely favourable conditions around Novaya Zemlya were reported by private walrus hunters in 1826, so good in fact that one hunting expedition was able to sail south of Novaya Zemlya and 160 km. into an ice-free Kara sea. In the mid-1830s, another walrus hunting expedition, led by Captain Isakov, reported having rounded the northernmost point of Novaya Zemlya and having discovered two large islands to the northeast. Although these islands do not actually exist, they nevertheless appeared on some maps, for instance on Tsivolka's map of 1836, and on Erman's map of 1865 (see below). 83)

In 1832 no less than three expeditions set off to explore Novaya Zemlya, all organised by the Archangel forest official P.I. Klokov and sponsored by the Archangel merchant company of W. Brandt and Son, and all with the permission of the Archangel authorities. Foremost among their aims was to find out whether

Matochkin Shar might become a viable shipping route from the Barents into the Kara Sea, for the purpose of re-establishing trade relations between the White Sea and the Siberian rivers Ob and Yenisey. Among other objectives the founding of a series of trading-posts on the coast and islands of the Kara Sea was planned. It was the particular task of Lieutenant Vasiliy Andreyevich Krotov to sail by way of Matochkin Shar and across the Kara Sea all the way to the Yenisey. Krotov, however, never made it that far, presumably his vessel was shipwrecked at the western entrance of Matochkin Shar on the outward voyage. More successful was the expedition of 1832-33 under the command of the explorer and hydrographer Petr Kuz'mich Pakhtusov, who had served previously under Ivanov and Reineke (see below). After spending the winter of 1832-33 on the south-east coast of Novaya Zemlya he successfully charted the entire east coast of the southern island. He then sailed westward through Matochkin Shar, which he resurveyed to find that Rozmyslov's 1768-69 survey had been quite accurate, and thus completed the first circumnavigation of the southern island of Novaya Zemlya. 84)

Brandt does not seem to have shown interest in continuing the undertaking. The success of Pakhtusov's expedition rekindled hopes of surveying the as yet unexplored east coast of the northern island of Novaya Zemlya, and this was to be the main objective of the expeditions mounted by the Hydrographic Department of the Ministry of the Navy in the mid to late 1830s. The first of these expeditions took place in 1834-35 under the command of Pakhtusov and August Karlovich Tsivolka (in older literature also sometimes spelled as Zivolka). After wintering in Matochkin Shar, Tsivolka's party travelled by sledge along the east coast of the northern island. After having resurveyed Matochkin Shar yet again, a MS. chart of which has been preserved, Pakhtusov provided a sea-based check for Tsivolka's overland survey by sailing north from Matochkin Shar. Having slightly exceeded Tsivolka's furthest north, Pakhtusov's ship found some small islands at 74°24'N, which were named after him, before his ship was crushed; Pakhtusov and his men were rescued by a Russian trapper. In addition to a greatly improved understanding of the geography of the area, various

meteorological and astronomical observations were made, and the expedition returned with the first collection of minerals from Novaya Zemlya. Pakhtusov died on his return to Archangel. The results of the geographical exploration were incorporated in Tsivolka's map of Novaya Zemlya of 1836. 85)

In 1837 Tsivolka was given command of a scientific expedition sponsored by the Imperial Russian Academy of Sciences of St. Petersburg. Its purpose was to revisit previously explored parts of the Kola Peninsula and Novaya Zemlya, and to investigate the natural environment of the interior. The well-known Russian naturalist and Academician Karl Maksimovich Ber (also known as Karl Ernst von Baer, as he was of Baltic-German descent) was on the scientific staff of the expedition. This meant that botanical, zoological and climatic investigations had a high priority. It became clear that Novaya Zemlya was to be regarded as a northern prolongation of the Ural mountain chain. Indeed one might argue that this was the first wholly scientific expedition to the Eurasian Arctic. In order to complete the exploration of Novaya Zemlya, the Hydrographic Department of the Ministry of the Navy sent an expedition led by Tsivolka, with Stepan Andreyevich Moiseyev as his second in command in 1838-39. However, their efforts to complete the charting of the still unsurveyed north and north-east coast of Novaya Zemlya came to nothing, as Tsivolka died while they were wintering on the west coast, along with many of his men. However, Moiseyev carried out hydrographical, astronomical and meteorological measurements and also surveyed some of the principal inlets on the west coast, such as Krestovaya Guba, establishing that these were in fact gulfs and not channels running through Novaya Zemlya. 86)

The optimism displayed by the Russian Ministry of the Navy in the 1830s with regard to the possibilities of exploring the unknown parts of Novaya Zemlya was not fully borne out by its achievements. Taken together with the negative opinions on the usefulness of continuing to send expeditions to Novaya Zemlya expressed by highly authoritative figures such as Litke and Ber (see below), this would explain why Russian official exploration in this part of the Eurasian Arctic came to a standstill.

Apparently the on-going private Pomor hunting in the waters of Novaya Zemlya made no discoveries either.

Cartographic expressions of the Russian explorations of Novaya Zemlya from the 1820s onwards were presented by the Russian Hydrographic Department in a map of Novaya Zemlya in 1844, and by the German naturalist A. Erman in 1865. The latter map gives two alternative versions of the unexplored northeast of the island, one with and one without Litke's erroneous assumption of an extensive projection to the east. 87)

After incidental exploration in the 1760s had established the insular and double-island nature of Novaya Zemlya, later more detailed exploration of the island resulted in greatly increased knowledge of the geography of its coastline, with the exception of the northern and northeastern shores, of which a large part had been discovered by Barents as early as the end of the 16th century but never since explored. The hundred years between about 1750 and 1850 saw a generally successful pattern of discovery and exploration of Novaya Zemlya. This was the result of a fruitful combination of privately financed voyages for commercial gain and official expeditions organised in response by the Russian authorities, both the local and regional government and the central administration, the latter mainly meaning the Ministry of the Navy. These official efforts were devoted to geographical and hydrographical discovery and exploration, and to a lesser extent to the natural sciences with the participation of the Academy of Sciences. Further discovery and exploration of the northeast coast of the island was left to Norwegian sealers and walrus-hunters, who from the late 1860s onwards abandoned their now exhausted hunting grounds around Spitsbergen and moved to the waters around Novaya Zemlya. Matochkin Shar had been surveyed on many occasions, and time and again explorers had found an ice-bound and unnavigable Kara Sea at its eastern end. It was not until the 1870s that Matochkin Shar was tried again, when both it and the straits between Novaya Zemlya and the mainland (Yukorskiy Shar and Karskiye Vorota) came into use as a regular shipping route carrying a more or less steady trade to the Siberian rivers, and opening up the Siberian interior (see Part III).

3.4 RUSSIAN EXPLORATION OF THE NORTHERN AND ARCTIC COAST OF EUROPEAN RUSSIA

In addition to the Russian exploration that was an integral part of some of the Novaya Zemlya expeditions (see above), there were separate Russian expeditions organised from the 1820s onwards, both by sea and overland, to explore the northern and Arctic waters and coastal regions of European Russia, as far as the Ob.

3.4.1 Naval surveys

To continue the work started by Litke's expeditions to Novaya Zemlya and the Kola Peninsula in 1821-24, the Admiralty Department of the Russian Naval Ministry gave orders for a hydrographical survey of the White Sea and the coasts of the Kola Peninsula. This was carried out under the supervision of Captain-Lieutenant M.F. Reineke in the years around 1830. The cartographic results were used to produce an atlas, published in St. Petersburg in 1833-34. Reineke's work had been necessitated by the many imperfections of earlier survey work. Naval surveys during the second half of the 18th century had only came up with MS. charts of some sections of the coast. The first general survey had been carried out around the turn of the century by L.I. Golenishchev-Kutuzov, one result of which was the compilation of a general map and an atlas. 88)

At the beginning of the 1820s, the Naval Ministry laid plans for an official survey of the mainland coast eastward from the Pechora region as far as the Olenek River, an area which included the still little-explored Taymyr Peninsula. The steersman Ivan Nikiforovich Ivanov commanded a series of expeditions for this purpose between 1821-28. In 1821-22 Ivanov carried out a hydrographic survey of the lower reaches of the Pechora River. In 1824 he was sent once again to the Pechora region, where he surveyed the coast east of the mouth of the Pechora as far as Yugorskiy Shar, including parts of Ostrov Vaygach, and from the river mouth west to Kolokol'skaya Guba. From 1826-28 Ivanov used reindeer sledges to continue his survey of the mainland coast east of Yugorskiy Shar along the coast of

the Kara Sea and up to the western shore of Obskaya Guba. However, he was unable to take his survey as far as the Taymyr Peninsula. During the same period, a separate detachment led by Ilya Avtonomovich Berezhnykh surveyed the coast to the west, between the Pechora River and Mys Kanin Nos. Ivanov's expeditions resulted in a number of MS. charts, which together presented the most accurate cartographic picture to date of the coast between the entrance to the White Sea and the River Ob. However, the cartographic results were not published separately, but were only incorporated in other maps, as those of Litke (see above) and E.K. Gofman (see below). 89)

3.4.2 Scientific expeditions

In the late 1830s and 1840s, the Imperial Russian Academy of Sciences sponsored several scientific expeditions to the northern and Arctic coastal regions of European Russia. In 1837 Aleksandr Ivanovich Shrenk (or Aleksander Schrenck) was sent on a botanical mission to the coastal mainland of northeast European Russia. In 1839, Shrenk, accompanied by the geologist G.N. Betling (Wilhelm Böhtlingk), was sent to the Kola Peninsula to examine its coastline. The Kola Peninsula was also visited by Ber and A.F. Middendorf in 1840, first off all to increase the natural science knowledge of its northern coastal regions. Novaya Zemlya, as second destination, could not be reached in time, due to contrary winds and the lateness of the season. Instead, the party split up and Middendorf crossed the peninsula from north to south overland, contributing greatly to the geographical and hydrographical knowledge of the interior. For instance, he proved that the Kola River flows from south to north, correcting the general view that the course ran from east to west. There was another scientific expedition to the coast east of the White Sea in 1841, led by Frants Ivanovich Ruprekht (Franz-Joseph Ruprecht) and Aleksandr Stepanovich Savel'yev. This expedition was largely devoted to botanical studies and magnetic observations on the Poluostrov Kanin and Ostrov Kolguyev. In 1848, a geographical expedition to Poluostrov Kanin, led by Konstantin Ivanovich Grevingk (Konstantijn-Kaspar

Andreas Grewingk), added a great deal to the understanding of this little-known peninsula. In 1844-45, the central authorities sent V. Islavin on a geographical - etnographical expedition to the Pechora region. 90)

In 1845 the Imperial Russian Geographical Society was founded. The first in a long series of expeditions, was soon dispatched to explore the little known northernmost part of the Urals, the mountain range that divides the continents of Europe and Asia, as well as the lower reaches of the Pechora and the Ob. The expedition was led by the geologist Ernst Karlovich Gofman, or Ernst Hofmann as he was of German descent, and carried out in the years 1847, 1848, and 1850. The scientific results, especially in the fields of geology, geography, hydrography, and the natural sciences, were enormous, making Hofman the founder of scientific knowledge of the northern Urals. In 1852 Hofman published a general map of the regions he had explored, based on the many geographical and altitudinal measurements, apart from the scientific report of his expedition. The map also incorporated the results of the expeditions of Ivanov from 1821-28 (see above), and Kruzenshtern in 1843 (see below). 91)

3.4.3 Private ventures

In 1840 and 1843 the merchant Vasiliy Nikolayevich Latkin himself explored the Pechora River in the hope of finding links with the Ob. He did so for commercial reasons, to examine a projected inland water route between these two rivers, which might serve as an alternative for the route across the ice-bound waters of the Kara Sea (see 3.2.4.2). 92)

The Russian naval officer Pavel Ivanovich Kruzenshtern, son of the famous circumnavigator I.F. Kruzenshtern (see below), spent much of his time in 1843, together with the geologist Aleksandr Andreevich Keyzerling (alias Aleksander Keyserling), and several times again alone in the early 1850s in exploring the Pechora basin. Important contributions were made to the fields of geology, geography, and hydrography. He fixed the coordinates of many geographical points, enabling the course of

the Pechora River to be determined quite exactly. His map was the first more or less accurate one of the region. 93)

In 1860 Kruzenshtern laid plans for a private expedition eastwards along the mainland coast setting out from the Pechora river. However, in the event only his son, Lieutenant Pavel Pavlovich Kruzenshtern sailed with the expedition. After entering an ice-free Kara Sea, he decided to turn back, apparently due to the lateness of the season and defective equipment. The younger Kruzenshtern made a second attempt in 1862. This time the expedition had an extra objective, namely to demonstrate the feasibility of a passage across the Kara Sea between the Pechora River and the Ob and the Yenisey. Also involved in the organisation of the expedition was the Siberian mine-owner Mikhail Konstantinovich Sidorov, a relentless advocate of a commercial Arctic sea route between European Russia and the western Siberian rivers of the Ob and Yenisey (see Part III). Since he entered Yugorskiy Shar rather late in the season, Kruzenshtern's ship was soon beset, and drifted eastwards with the ice across the southern Kara Sea before it finally sank. Barely managing to reach the mainland coast of the Yamal Peninsula 20 km north of Mys Marre-Sale, Kruzenshtern was rescued by the local Nentsi, and returned south overland. His journal gives a detailed description of the journey. The course of the ship and his return route overland are marked on the afore-mentioned map of Novaya Zemlya and the neighbouring coastal regions published by Erman in 1865. Kruzenshtern did not organise any further Arctic expeditions. 94)

3.5 THE KARA SEA: 'ICE CELLAR' OR NAVIGABLE SEA ROUTE?

Along with the demise of the geographical notion of Novaya Zemlya as a peninsula connected to the Siberian mainland in the West in the 18th century, came the realisation that the Kara Sea was in fact part of the Arctic Ocean, which indeed it is, and which in Russia it had always been known to be. Until the 1830s, the prevailing idea about the Kara Sea was that it was frozen over for the greater part of the year but open for navigation at

certain periods. This view was repeated time and again by the organizers and explorers of the numerous Russian expeditions to Novaya Zemlya and into the Kara Sea previously mentioned. After years of exploring in the ice-bound waters around Novaya Zemlya with no possibility of crossing the Kara Sea or surveying the northeast coast of Novaya Zemlya, opinion became more pessimistic as demonstrated first of all by Ber and Litke, two former leaders of expeditions to Novaya Zemlya.

In 1837, shortly before he left for his own expedition to Novaya Zemlya, Ber labelled the Kara Sea an 'ice cellar'. Following the fatal outcome of the expedition of Tsivolka and Moiseyev during 1838-39, Litke became an opponent of continuing further exploration of Novaya Zemlya. This authoritative unfavourable opinion expressed by Ber and Litke was and still is considered as a great discouragement to further expeditions to Novaya Zemlya and into the Kara Sea. Apparently, Middendorf's favourable report of 1843 of an open sea with no hint of ice at the eastern part of the Kara Sea (see below) had no noticeable counter effect. 95)

Kruzenshtern, in the early 1860s was the first to attempt the Kara Sea route again (see before: 3.4.3). Litke, now Admiral and vice-president of the Geographical Society refused to support his (and Sidorov's) expedition in 1862. According to Litke, the possibility of a sea route across the Kara Sea was out of the question, or in his own words it 'belongs to the realm of the impossible'. Kruzenshtern's failure seemed to prove the 'ice cellar' idea, in the interpretation of an impenetrable barrier of ice, to be correct. Even Kruzenshtern himself was converted to this view, being now convinced of the impracticability of the Kara Sea route. The short-term effect was a hardening of the official Russian opposition to Sidorov's continuous campaign for a commercial Kara Sea route. His plans indeed came to nothing until the end of that decade (see Part III). 96)

It was left to foreign endeavours in around 1870 to prove the 'ice cellar' idea to be erroneous after all, or at least not worth considering at this moment in time. Norwegian walrus-hunters and sealers, who moved their hunting grounds from around

Spitsbergen to the waters east of Novaya Zemlya from the late 1860s onwards, proved that the Kara Sea was navigable, even for long periods of the year. The British captain Joseph Wiggins was convinced of the navigability of the Kara Sea in the summer and was eager to demonstrate the feasibility of the Kara Sea route for commercial purposes. In the first attempt since Kruzenshtern, he made a privately funded voyage to the northern part of Obskaya Guba in 1874, the first ever recorded to have set out from Western Europe. The following year, Nordenskiöld penetrated as far as the Yenisey (for more details on these foreign endeavours see Part III).

Not surprisingly, in the early and mid-1870s Ber was criticized by foreign geographers such as Petermann and F. Hellwald for having once labelled the Kara Sea an 'ice cellar'. In 1876, the year he died, Ber felt forced to defend himself by writing to friendly fellow-academicians that his statement had not been intended to mean that the Kara Sea could not be navigated at all, as it was generally taken to mean by his critics. He further explained that the navigability of the Kara Sea as such was not the main issue here, and that the comparison with an ice cellar was primarily meant to stress the fact that this sea had a lower temperature and contained ice for a longer period than the Barents Sea. 97)

Leaving aside the matter of the original meaning and interpretation of the 'ice cellar' notion, no one in the 1870s could have been aware of what we now know, namely that a dramatic climate change had taken place between the statements of Ber in the late 1830s and those of his critics in the 1870s. This change brought an end to what has become known as the 'Little Ice Age', thus greatly favouring the possibilities of Arctic navigation from the seventies onward, also in the Kara Sea.

3.6 RUSSIAN EXPLORATION OF THE TAYMYR PENINSULA

3.6.1 Conflicting views on the geography of the peninsula's north and interior

Prior to the Great Northern Expedition, the Taymyr Peninsula (Poluostrov Taymyr) had been one of the most remote and unknown coastal sections of the Eurasian Arctic mainland. During 1741-42 the coastal exploration by dog-sledge across the sea-ice carried out by Khariton Prokof'yevich Laptev and Semen Ivanovich Chelyuskin completed the survey of the shoreline of the Taymyr Peninsula, including its northernmost extremity (see Part I). Many maps and reports resulted, such as a MS. map of the entire peninsula compiled by Laptev in 1743. Their findings were also later to be incorporated in some general Russian maps. However, other Russian maps showed conflicting representations and the cartography of both the coastal sections and the interior of the peninsula thus remained unclear: first of all there was disagreement concerning the existence and interrelationship of two northern capes, one northwest and one northeast of the mouth of the Taymyr River, the course and the length of the Taymyr River, and the existence and precise location of the Taymyr Lake. Around 1840 serious doubts arose concerning Chelyuskin's achievements in the extreme north. Vrangel and Ber, as his main critics, questioned the measurements taken by Chelyuskin. Ber even found it hard to believe that Chelyuskin had reached the northernmost cape, since he had failed to define its latitude. 98)

During 1842-45, on the instigation of Ber, the Russian Academy of Sciences, sent one of its most prominent future members, the naturalist Aleksandr Fedorovich Middendorf (or Alexander Theodor von Middendorff, since he was of Baltic German descent) on a scientific expedition to both northern and southeast Siberia, first to the Taymyr Peninsula to explore its virtually unknown interior, and to descend one of its rivers down to the shores of the Arctic Ocean. As for the geographical issue, the Academy of Sciences instructed Middendorf to clarify the conflicting cartographic views on the peninsula. Thus, after

100 years of inactivity, the peninsula was revisited by an official, though small, expedition. Eventually, Middendorf became known as the first scientific explorer of the Taymyr Peninsula and the chief authority on the scientific study of Siberia. 99)

In the summer of 1843, Middendorf crossed the mainland of the peninsula by sailing down the Taymyr River all the way to its mouth on the northwest coast of the peninsula where it empties in the eastern Kara Sea, carrying out hydrographical surveys en route. He almost died of exposure and starvation on the return trip. The atlas published by Middendorf in 1859 in association with the scientific report of his travels includes a number of maps reflecting the achievements of his expedition to the Taymyr Peninsula: among them three interlinking regional charts of the river system in the peninsula's interior showing the results of his hydrographical survey. Two of these river charts reveal a section of Middendorf's route through the tundra to the upper part of the Taymyr River. 100) The third chart shows a section of the upper and the whole of the lower parts of the Taymyr River as far as the point where it empties into the Kara Sea and includes the southwestern corner of Lake Taymyr which connects both parts. 101) The entire route of Middendorf's expedition was traced on an ethnographic map of the whole peninsula, which, however, was geographically speaking out-of-date as it presented the cartographic view of before his departure. 102) Another map represents the northwestern coastline of the peninsula. 103) This map is based on Middendorf's critical interpretation of the journals of Laptev and Chelyuskin. His major correction concerned the following: what was thought by Laptev, and widely accepted by many others, to be a long promontory i.e. a second northern cape to the northwest of the mouth of the Taymyr River, was split up by Middendorf in a shorter promontory and an island. This was indeed a step in the right direction (in fact this area consists of a small coastal extension and a large group of offshore islands: Taymyr Island and the Nordenskiöld Archipelago. Apart from the accomplishment of the first more or less accurate geographical and hydrographical survey of the interior of the

peninsula, the flora and fauna were described and some geologic and ethnographic observations were made by Middendorf's expedition. He also gave the peninsula the name Taymyr, which it has kept. Thus, Middendorf was able to give definite answers to most of the geographical questions put forward by the Academy of Sciences. 104)

Although Middendorf had not been able to check out Chelyuskin's apparent successes in the peninsula's far north himself, he did credit Chelyuskin with all the achievements he claimed to have made. Middendorf did so on the basis of his general appreciation of Chelyuskin's measurements. This was accepted by Ber, and by most people ever since. It was Middendorf who named the northernmost cape of the Taymyr Peninsula (and also the Eurasian mainland) after Chelyuskin, in admiration. It was in fact Nordenskiöld who provided the evidence for Chelyuskin's claims. As he was passing Cape Chelyuskin (Mys Chelyuskina) in 1878 on his voyage through the Northeast Passage, Nordenskiöld checked his own observations against those of Chelyuskin and found only negligible differences. 105)

3.6.2 The peninsula's reputation of being impassable by ship

Over the years, the northern part of the Taymyr Peninsula had become not only notorious for its undefined geography, but also for its reputation as being impassable by ship. It was not so much a geographical issue but rather a navigational matter since it was a supposed permanent barrier of ice, not of land, which caused the obstruction. This navigational reputation had grown slowly but surely as time went by without any reliable record of a successful attempt at passing the cape (archaeological finds suggesting that a Russian expedition had wintered on an island offshore the north coast of the peninsula in the first quarter of the 17th century were not made until the 1940s: see Part I, and were therefore probably not known in this period). During the Great Northern Expedition coastal parties approached the Taymyr Peninsula from both west and east but failed to round the northern tip by ship due to enormous ice barriers. As said

before the northern coastal region of the peninsula would only be traced by the dog-sledge parties of Laptev and Chelyuskin across the ice in 1741-42. Expeditions sent out to Novaya Zemlya from the 1760s onwards never managed to sail far into the Kara Sea, let alone double the Taymyr Peninsula even when they wanted to. Moreover, Ivanov's coastal party in the 1820s did not succeed in proceeding eastwards of the Ob', although he had been instructed to carry out a coastal survey as far as and even beyond the Taymyr Peninsula.

Therefore, when Middendorf was sent to the Taymyr Peninsula he was also instructed by the Academy of Sciences to find out whether or not, and if so how, the peninsula could be rounded by a future expedition, larger and better equiped for that purpose than his own. Middendorf was not instructed to round the peninsula himself. He was only to investigate the potential for a future expedition. This expedition-to-be (a naval one was considered as most appropriate) would scientifically survey the entire northern coast including its northernmost cape. By sailing out of the mouth of the Taymyr River on the peninsula's northwest coast in 1843, Middendorf had reached his official goal, namely the Arctic Ocean. Since he found an ice-free Kara Sea as far as the eye could see (through a telescope) he was very tempted to take advantage of these favourable climatological conditions, and to carry out his own secret plan of proceeding northwards along the coast in an attempt to round the peninsula's northernmost point, and to reach the Khatanga River on the east coast. However, contrary winds and shallow waters prevented this the very first day of his attempt. His decision to return by the way he had come was also motivated by a shortage of supplies, the lateness of the season, and the worsening condition of the crew. Besides, it is questionable whether his self-constructed river boat would have been fit to make this trip into the unknown. When Middendorf later reported to the Academy, he put forward the opinion that a successful rounding of the peninsula by ship by a future expedition should not be excluded, but that a dog-sledged journey across the coastal sea-ice would have much better prospects. However, since Middendorf himself had given full

credit to all of Chelyuskin's achievements, a judgement which was generally accepted, the peninsula's north coast was considered to be measured well enough in any case, and no need was felt to organize another expedition. 106)

Thus, the long-standing reputation of the Taymyr Peninsula as being impassable by ship persisted for some more time. It would last until Nordenskiöld accomplished the first recorded rounding of Cape Chelyuskin during the first year of his voyage through the Northeast Passage in 1878-1879. Although he expected Cape Chelyuskin to be one of the main obstacles during his coastal voyage, he was able to round it without meeting any great difficulties since no heavy ice was encountered (see also Part III).

3.7 POLITICS AND STRATEGICS

3.7.1 Russia's relations with Britain and Norway 107)

After years of relative inactivity in the first decades after Peter the Great's death (1725), an active Russian foreign policy was again pursued by Catherine II. At the beginning of her reign Russia's powerful western neighbours (Sweden, Poland, and Turkey) were greatly weakened. One result was that Russia was able to get hold of parts of the Black Sea littoral again, even acquiring the Crimean Peninsula in 1783. Russia also challenged the British naval omnipresence on the seas. All this was much to the distress of Great Britain which at that time was the world's greatest maritime and colonial power. In response, Britain countered Russian maritime expansion everywhere.

Repercussions of this Russian - British rivalry were found in the northern regions of European Russia. In the 1770s, Russia felt obliged to demonstrate her naval strength in the White Sea, on the Murman coast, and even in parts of the Norwegian Sea (charting even parts of the Norwegian coastline). In 1810, during the continental blockade against Britain (the Continental System), which was supported by Russia, the British navy attacked Pomor vessels, and set fire to the Kola-settlement in

retaliation. However, the importance of Kola had already been greatly diminished since the garrison was transferred to Archangel around the middle of the 18th century, after which the fort and settlement went rapidly into decline. After Napoleon's defeat, the British were seriously concerned with the prospects of Russian expansion in northern Norway.

During the second half of the 18th century the political relationships between Russia and Denmark - Norway were in general good. The formal land boundary that was agreed upon by treaty between Norway and Russia in 1826 proved quite stable. Occasionally mutual distrust flared up in the 19th century. In the post-Napoleonic age a supposed Russian danger in the north was taken very seriously by the Swedish - Norwegian authorities (in 1814 Norway had been transferred from Denmark, which had sided with Napoleon, to Sweden), as it was by the British. The supposed threat was connected with the alleged Russian desire for an ice-free harbour in northern Norway, but turned out to be ill founded. Even if there had been plans for Russian naval bases in the north, the Russians did not really need Norwegian territory since several ice-free fjords were available on the Murman coast, which had been Russian territory for centuries. There seems to have been more truth in allegations about a certain Norwegian penetration into Russian land and sea territories. Since this did not come to a head in our period, it will not be dealt with here. 108)

The Crimean War (1853/4 - 1855/6) was not a mere isolated regional conflict fought out in the Crimean Peninsula between Russia and Turkey. The theatres of action were scattered over various parts of the world. Great Britain and France had allied themselves with Turkey. The allied (mostly British) naval operations in the White Sea and the Kola Peninsula, although not unimportant, were in fact one of the minor military confrontations in this war. A sea blockade at the entrance of the White Sea was established in order to eliminate Russian trade from the White Sea ports, especially Archangel and Onega. Kola was destroyed, and the monastery on the Solovetskiy Islands (Solovetskiye Ostrova) in the White Sea, which was the principle Russian defense bastion in the north, was attacked. Since the

Russians defended themselves vigorously from the landward side, neither Archangel, nor any other White Sea port, was captured. The final outcome was no more than some temporary disruption of Russian trade and hunting industry, next to some strategic advances for the allies derived from the opening of an extra war front.

3.8 SOVEREIGNTY

The military attacks by the British Navy on Russian possessions in the White Sea and the Kola Peninsula showed that the Russian North was highly unprotected, and strategically vulnerable. In fact, however, these confrontations proved to be no more than incidents, the side-effects of conflicts in more southerly latitudes. They did not cause any serious or direct threat to Russian sovereignty over these areas. Therefore, no real need was felt by the Russian authorities to take any special or structural legal protective measures for the Russian North.

Moreover, British operations did not extend into the Barents and Kara seas or to Novaya Zemlya, where Russia's legal rights might have been more uncertain. There are scarcely any official statements or acts from our period about the legal status of these regions. An exception to this is the statement of the Russian government that Novaya Zemlya 'has from times immemorial belonged to the Russian possessions', which was made in connection with granting the "White Sea Company" the right to hunt for sea mammals on Novaya Zemlya. 109) It is probably safe to assume that the Russian authorities considered these regions to be a natural part of their territory. Although the lifting of the 1619/1704 ban prohibiting shipping in the waters east of Novaya Zemlya in 1753 was first of all meant to legalize free navigation of Russian ships, it may be explained too as a symptom of confidence in her undisputed rights in these regions in relation to other nations. In the century thereafter, more Russian private journeys than ever exploited the region commercially (see 3.2), and an unprecedented series of official exploration expeditions took place in this region, for non-

political reasons (see 3.3). This resulted without doubt in an even greater Russian confidence in their legitimate claim to these territories, not likely to be affected by the ending of the exploring expeditions to Novaya Zemlya in the late 1830s.

In the West, however, international law demanded freedom of navigation on all high seas according to the principle of "Mare Liberum" (see also Chapter 2.9.2), and it is hardly likely that an exception would have been made for the Barents and Kara seas. Not much is known about the official attitude in the West concerning the legal status of Novaya Zemlya in this period. If this question had been put on the agenda at all, there is probably no reason to believe that the attitude would have been much different from the one expressed by some Western governments by the late 19th century. They considered Novaya Zemlya "no man's land", an international territory, as Svalbard had been all the time (and Franz Josef Land which was discovered later would be for some time to come). In any case there was no unanimity about Novaya Zemlya belonging to the Russian empire. 110) However, this was after the late 1860s when a sudden omnipresence of Norwegian seal and walrus hunters in the waters around Novaya Zemlya had changed the situation dramatically (see Part III).

However, until the middle of the 19th century all Western whaling and hunting in this part of the Arctic took place in the Svalbard for obvious natural reasons. No structural forms of Western commercial activities took place in the Barents Sea or further east. Neither did any Western exploration expedition sail into the waters east of Svalbard. Thus, since there was no regular Western navigation in this region, Western and Russian interests did not collide in practice and therefore there was no reason for any political or commercial conflict, or for official statements on sovereignty issues. Since there were no regular Russian activities beyond the western sections of the Barents Sea, which might have been to some extent comparable to the Russian presence in the northern North Pacific and North America, no conflicts with Western states arose from that source either.

CHAPTER 4: THE BERING STRAIT REGION

4.1 INTRODUCTION

The exploration of the southern Bering Sea by Bering and Chirikov in 1741-42 (see Part I) ushered in an era of private Russian maritime fur hunting and trading: the so-called sea otter fur trade, largely for the Chinese market. The maritime fur trade of the northern North Pacific Ocean was a continuation of the continental fur trade, which became less and less profitable because of the increasing depletion of fur (see Chapter 2). During the next half-century dozens of private Russian commercial voyages are known to have sailed from Okhotsk and Kamchatka to the Komandorskiye Ostrova (Commander Islands) and along the Aleutian Islands chain in the southern Bering Sea, as well as to the southern coastal mainland of what is now Alaska. This led to a progressive though highly haphazard discovery and exploration of this region. The Russian authorities permitted private merchants to discover new (is)lands, and to subjugate any indigenous peoples found on them, although they did not give them any military back-up. The state profited financially by collecting fur-tribute (yasak) from the natives, and, for a time, levying commission on the merchants' fur trade. 111)

Throughout our period, the bulk of the Russian and Western activities in the northern North Pacific took place in the southern Bering Sea and along the south coast of present-day Alaska, thus in regions not belonging to the later Northern Sea Route. This omnipresence in the southern regions, however, was the main reason behind the events that occurred in the neighbouring northern waters that are within the eastern extreme of the Northern Sea Route: the Bering Strait region and the Chukchi Sea. So, these Arctic events should be studied as part of the general history of the Russian and Western presence in the northern North Pacific.

These private commercial activities triggered Russian official interest in the northern North Pacific for commercial, political, and scientific motives. In the second half of the

18th century this led to a number of Russian exploration expeditions to the Bering Strait region, both from the south and the west (the Arctic expeditions of Shalaurov and Billings are, therefore, treated here instead of in Chapter 2) (see 4.2.1, 4.2.2, 4.2.5 and 4.2.6). In response to the ever-increasing Russian influence in the northern North Pacific, colonial powers in North America and the Pacific Ocean organised expeditions to this region too (see 4.2.3, 4.2.4 and 4.2.7). After the founding of the Russian - American Company in 1799 (see 4.3.1), the Russian exploration in the Bering Strait region was carried out by what were called round-the-world expeditions, and by local voyages organised by the company. The early 1820s was Russia's most imperialistic period in Pacific waters. This expansion, however, was primarily directed to the south of Russian America, and was countered diplomatically by Great Britain and the United States, who forced Russia to withdraw her claims, and even to permit free navigation in Russian - American waters (see 4.3.3). Thereafter, further Russian expansion in the region was blocked for good. The Russian - American Company went into decline, and Russian America was sold to the United States in 1867 (see 4.3.4). Last but certainly not least, some general remarks about the overall interrelationship between the Russian North Pacific venture and Russian activities in the regions belonging to the eastern extreme of the Northern Sea Route conclude this chapter, together with a comment on the idea of a northern sea route as such (see 4.4).

4.2 THE SECOND HALF OF THE 18TH CENTURY

4.2.1 Private Russian activities

The steady growth of the private Russian maritime fur trade in the northern North Pacific from the middle of the 18th century, based primarily on sea otters but also on fur seals, resulted in about a hundred voyages by forty-two companies over the next half-century. At first a number of small, private companies directed by Siberian merchants with considerable financial

resources carried on this trade. Many of these merchants, no doubt, belonged to the new wealthy group of merchants that had arisen in Siberia as a consequence of the abolition of the internal customs barriers in the early 1750s (see Chapter 2). The traditional route from inner Eastern Siberia to the northern North Pacific led from Yakutsk overland to Okhotsk, Russia's base on the Pacific Ocean, and from there to Kamchatka and beyond, crossing the Sea of Okhotsk. The Russian Far East (the Okhotsk Seaboard and the Kamchatka Peninsula) grew significantly in importance as springboard for the maritime fur trade. However, the route to Kamchatka still proved to be quite exhausting and hazardous even though it had replaced the much longer and dangerous overland route via Anadyrsk in 1716-17. This prompted Siberian merchants to consider alternative routes to the maritime fur trade areas. 112)

4.2.1.1 The expeditions of Shalaurov and Pribylov

In 1748-49, the Siberian business partners Nikita Pavlovich Shalaurov and Ivan Bakhov established a sea route through Pacific coastal waters from the river Anadyr to Kamchatka. In the late 1750s, they were planning a maritime fur hunting expedition to the Aleutian Islands but instead of taking this route again, they chose the Lena river as their point of departure. They wanted to test the commercial feasibility of a completely navigable route down the Lena to the Arctic Ocean and then along the largely unexplored north coast of the Siberian mainland via Bering Strait and into the Pacific Ocean, which was considered very promising. It was the first attempt to explore this sailing route, which in fact is the last leg of the northern sea route, after Dezhnev in 1648 (who, however, set out from the Kolyma River), and Dmitriy Laptev in 1740 during the Great Northern Expedition (see Part I). Their petition to the Senate was officially approved in 1755. Their request was supported by the Governor-General of Siberia, Admiral Vasily Alekseyevich Myatlev, who showed particular interest in establishing this sea route. He himself had submitted a comparable plan to the Senate in this period. The central

authorities by no means objected to the benefits to the interests of the Russian empire which resulted from privately sponsored exploring expeditions to remote places. So although the venture was privately sponsored some official aid was promised. In return the authorities required the expedition to explore, map and describe new lands and islands, and to establish trade relations. The vessel was built on the Upper Lena in 1756-57. Between their setting out in 1757 and 1761, ice and a succession of disasters and setbacks, among which a premature departure from Bakhov due to disagreement, prevented Shalaurov from sailing further than just east of the mouth of the river Yana. Leaving the mouth of the Yana in the summer of 1761 and having succeeded in sailing eastward along the coast, Shalaurov sighted what must have been the southern island of the archipelago of the New Siberian Islands, which was later to be discovered by Lyakhov in 1770 (see above). Having passed by the Bear Islands, Shalaurov overwintered in the Kolyma river delta. Resuming his voyage in 1762, he sailed by Mys Bol'shoy Baranov (Great Cape Baranov), the easternmost point reached by Laptev in 1740, and proceeded along the coast as far as the western side of Cape Shelagskiy where his ship was forced to turn back due to strong contrary winds, the lateness of the season, and shortage of food supplies, and to winter again in the mouth of the Kolyma. In 1763, after persistent objections from the local authorities, Shalaurov in person sought and obtained official support including funds from the government in Moscow, and from the Siberian Governor Soymonov in Tobolsk. This meant that Shalaurov's expedition was now sanctioned by the central authorities, making it something between a private undertaking and a government venture, which was expected to strengthen Russia's interests in the area. Soymonov drew up a set of instructions concerning the examination of the coast between Cape Shelagskiy and Bering Strait, which included hunting for whale and walrus in Chaun Bay. Shalaurov continued his expedition in the summer of 1764, never to be seen again. Several reports and various theories about his fate have been put forward ever since. Since none of these could be backed up with conclusive proof it is not clear whether or not Shalaurov

succeeded in passing Cape Shelagskiy. 113) The achievements for which he surely is to be credited are the improved mapping of the coast between the Lena river and Mys Bol'shoy Baranov, and the first exploration of the coastal waters from this cape to Cape Shelagskiy, including Chaun Bay. The considerable extension of geographical knowledge of the north Siberian coastline was reflected in several accurate maps drawn up by the cartographers on board. Some of these maps show the route followed in 1761-62. Both a report and a distant copy of one of these maps found its way into an English work by William Coxe on Russian discoveries between Asia and America published in 1780. Valuable observations on the local Chukchi supplemented all this, much to the interest of the authorities. 114)

During and also shortly after Shalaurov's expedition more Siberian merchants planned to round the Chukchi Peninsula either from the east or from the west. Although official permission was obtained in most cases, no results were achieved. The potential commercial feasibility of this route was not examined again. 115)

In 1786-87 while on a fur hunting expedition sponsored by the major company of the Yakutsk merchant Pavel S. Lebedev-Lastochkin that lasted from 1781 until 1789, by sailing northward from the Aleutian Islands Captain Gavriil Loginovich Pribylov came upon two small islands in the Bering Sea at a latitude of 57°N. The islands, one of which showed evidence of earlier exploration, were named after him, and proved to be rich fur seal rookeries. This appears to have been the northernmost location in the Bering Sea reached by a private Russian fur hunter. 116)

4.2.2 Russian official interest

Until the reign of Catherine II, the tsarist government did not take much interest in the extension of Russian trade and political power across the Bering Sea to North America. Catherine's interest in establishing formal control in this area led to the organisation of a few official expeditions into these waters in the early period of her reign. This was not so much to

make another attempt at rounding the Chukchi Peninsula; a discussion in 1773 by the Irkutsk authorities about the organisation of an expedition for this purpose was brought to an end with a reference to the failures of the Great Northern Expedition and of Shalaurov. The purpose was rather to explore certain lesser known coastal regions of northeast Siberia and the Bering Sea. Colonel Fedor Plenisner (or Friedrich Christian Plenstner as he was of Baltic German origin), a veteran of Bering's second expedition, was appointed by the Senate as Commander of the easternmost territories of Siberia in Okhotsk in the early 1760s, in which function he served until 1772, to supervise a programme for this purpose among other things. This appointment was at the intercession of the Siberian Governor General Fedor Ivanovich Soymonov (1757-63), himself once a renowned hydrographer and cartographer, who had served a term in exile. Plenisner was to work under Soymonov and his successor Denis Ivanovich Chicherin (1763-81). This concern for the eastern Siberian Arctic explains the official interest in Shalaurov's second voyage as well as the official exploration of the Bear Islands in the 1760s (see above). Concern for the Chukchi Peninsula and the Bering Sea led to the expeditions of Daurkin, Sindt, and Krenitsyn, which all set out from the Pacific side of the Siberian coast. Their voyages are described below. 117)

4.2.2.1 The expedition of Daurkin

Plenisner organised an expedition to gather information on the land and the people of the Chukchi Peninsula around 1764. This reconnaissance expedition set off from the Pacific side and was carried out by Nikolay Ivanovich Daurkin, a Cossack of Chukchi origin. Daurkin left from Anadyrsk and reached the south coast of the Chukchi Peninsula. He was long thought to have made an overland journey from here to Bering Strait, and then to have crossed the frozen strait to Ostrov Ratmanova, the westernmost of the Diomede Islands. This traditional view must be reconsidered in the light of Belov's new theory. In his view Daurkin, after having visited what probably was St. Lawrence

Island, must have crossed the peninsula from its south coast to Kolyuchinskaya Guba and Ostrov Kolyuchin, a small island at the entrance of the bay, on the Arctic coast and thence continued his expedition westward all the way to Chaun Bay. Belov based his belief on a map completed by Daurkin in the early 1770s, in fact his second one, and the "explication" on it. Especially the drawing of the track of, what must have been no doubt, the route followed by Daurkin is evidence in favour of this opinion. According to the marked route, which is, however, not mentioned by Belov in so many words, Daurkin travelled from Kolyuchinskaya Guba across the peninsula's interior to Chaun Bay, and back into the interior by a slightly different route. 118)

4.2.2.2 The expedition of Sindt

A naval exploration expedition in 1764-67/68 to the Bering Strait region was organised by Plenisner on direct instructions from the Siberian Governor General and the central government. Maritime exploration of this region had only been preceded by the expeditions of Dezhnev in 1648, Bering in 1728, and Gvozdev in 1732. The expedition was commanded by Lieutenant Ivan B. Sindt (or Sind; another Baltic German in Russian service), who had been a participant of the Second Kamchatka Expedition. Setting out from Okhotsk in 1766, he sailed north parallel to the Russian Pacific coast as far as St. Lawrence Island, discovered and named by Bering in 1728, which he mistook for quite a number of separate islands. After having proceeded some distance further north, Sindt was forced to turn back at the southern entrance of Bering Strait, just short of 65°N, because of bad weather. This prevented him from accomplishing the task of surveying and mapping the shores of the strait. On his way back he discovered St. Matthew Island. A MS. chart showing the route of his voyage has been preserved, as has the ship's journal. Neither of these have ever been published. 119)

4.2.2.3 The expedition of Krenitsyn

In 1764 Catherine II ordered the Russian Admiralty to organise a naval exploration expedition to the Aleutian Islands. It was the first government expedition into this area since Bering's second voyage of 1741. It's aim was to confirm Russia's control over the archipelago. It was to carry out the first official cartographical survey, and some other investigations, of the farthest and largest islands, and to verify the geographical reports of the Russian fur hunters who had progressively reconnoitred and discovered the fur-rich archipelago since Bering. Chicherin was appointed as the official head of the venture, Plenisner was also involved in the preparations. The expedition was commanded by Captain Petr Kuz'mich Krenitsyn, assisted by Lieutenant Mikhail Dmitriyevich Levashev (or Levashov). It lasted from 1766 to 1770. They departed from Okhotsk, and again from Kamchatka. For various reasons the results proved to be less than was expected from this very large and costly expedition. Nevertheless, quite a number of regional and general MS. charts, sometimes rather inaccurate, were compiled following the expedition's survey of the easternmost islands in 1768-69. Newly published Russian general maps of the North Pacific Ocean soon incorporated the results. Despite the secrecy of this undertaking, the expedition's material was soon to be included in geographical and historical works, both in Russia and in England. 120)

4.2.3 International rivalry

The expeditions of Sindt and Krenitsyn were naval ones, proving that Catherine's policy of strengthening the Russian Navy also enabled Russia to exert more influence in the northern North Pacific as well. The expeditions were kept secret. Confrontation with other European powers with interests in the North Pacific was to be avoided at all costs. Although the Russian government took actions to secure its own interests it never claimed sovereignty over these territories in the 18th century.

At first sight, direct confrontation between Russia and Western colonial powers already present in the American continent and the Pacific Ocean did not seem likely since none of their possessions bordered directly on the northern North Pacific Ocean. Great Britain and France occupied large northern American territories bordering on the Atlantic shore. Spain was a colonial power in Mexico (then called New Spain), but its effective control did not extend north beyond the Californian peninsula (Baja California: Lower California). After the Declaration of Independence in 1776, the Republic of the United States of America had to fight a War of Independance before the territory east of the Mississippi in 1783 was assigned to the U.S., still far from the Pacific.

Nonetheless, tensions between Russia and the European powers present were destined to rise anyhow. The Spanish feared that Russian expansion might very well reach as far south as California. They were also concerned about a renewed British interest in the search for a Northwest Passage. Since Spain claimed sovereignty over the entire Pacific coast of North America, and considered the Pacific Ocean a Mare Clausum, basing both claims upon historical rights, it felt impelled to respond. From the late 1760s, Spain started to expand its power to the northwest of New Spain by establishing new settlements, such as San Diego (1769), Monterey (1770), and San Francisco (1776), on the coast of Upper California (Alta California). A series of maritime exploration expeditions to the northwest coast of America was secretly organised for similar strategical reasons in the period 1774 - 1793. Although these were instructed to sail up as far as the 65th parallel (which would have brought them to the southern entrance of Bering Strait), in fact the Bering Sea was never entered. A Western expedition that did enter the Bering Sea, even passing through Bering Strait into the Arctic Ocean, was the British expedition commanded by James Cook. 121)

4.2.4 The British expedition of Cook (1776-1780)

4.2.4.1 Introduction

In 1776, the British Admiralty organised a naval expedition to search for a passage from the Pacific Ocean to the Atlantic Ocean north of 65°N. The idea was inspired by Barrington (see also Prologue) and the Royal Society. The expedition consisted of two vessels named the 'Resolution' and the 'Discovery', and was commanded by the English sea captain and explorer James Cook. Cook was already famous because of his explorations in the South Pacific Ocean during his two previous round-the-world voyages in 1768-71 and 1772-75. The finding of a Northwest Passage through British North America, or round its northern coast, had a clear priority. In addition to its geographical and navigational missions, the expedition was probably motivated by commercial and strategic considerations too, alarmed as the British government was by the increasing Russian presence in the North Pacific. The discovery of a Northwest Passage at this latitude, of course, would have stimulated British overseas trade. The Northwest Passage, jůst as the Northeast Passage, had been searched for from the Atlantic side since the 16th century primarily for commercial reasons. A short and safe trade route to the Orient would also have been welcomed by the East India Company (EIC), which had a British trading monopoly in this part of the world, especially in respect of her increasingly significant trade with China. The strategic relevance of a Northwest Passage should not be underestimated either; it would have offered the British the possibility of making a surprise attack on Spain's, or for that matter Russia's, possessions in the Pacific Ocean. Like Spain, Britain had a far-from-clear claim to certain sections of the west coast of North America since the visit of Francis Drake to this coast in the late 1570's. As was common practice for European expeditions into hitherto unknown regions, Cook was instructed to take possession of certain territories which were not already occupied or claimed by other European powers. He was also to avoid causing them any offence. When new territories were found to be

inhabited by indigenous peoples, possession of the land was only to be taken with their consent. These provisions obviously referred to the North American continent. There was no specific mention of Russian territory in the instructions. 122)

The Admiralty had ordered Commodore John Byron to search for a more southerly Pacific entrance to the Northwest Passage along the coast of North America as early as 1764. Byron, however, changed course of his own accord as soon as he entered the Pacific Ocean. Cook's search on the other hand was only really to begin at 65°N. From that latitude on he was 'very carefully to search for, and to explore, such rivers and inlets as may appear to be of a considerable extent, and pointing towards Hudson's and Baffin's bays'. 123) Why 65°N? On the charts of those days the continents of Asia and America veered away from each other somewhat north of 65°N suggesting possible northern passages (65°N is in fact the latitude of the southern entrance to Bering Strait). A high-latitude Northwest Passage was thought to lead to the sea at the mouth of the Coppermine River, which is at the central part of the north coast of the North-American mainland, which Samuel Hearne had reached in 1771 as first white man. He did so without crossing any substantial waterway running west-east on his overland journey from the west shore of Hudson Bay. This of course was a conclusive reason for denying the existence of any low-latitude Northwest Passage. The fact that he placed his northernmost position four degrees too far to the north, nearly 72°N instead of the true nearly 68°N, was not ascertained until 1789. Since Barrington was convinced that the Arctic Ocean was an ice-free sea most of the year, an ice-free passage into Hearne's sea was expected to exist somewhere north of 65°N. Cook's other option was to sail to the Atlantic by a northern sea route round Asia and Europe. In about the middle of the 18th century and again in the early 1770s, some English merchants showed revived interest in the search for a Northeast Passage, inspired by the ideas of Engel (see 1.3), by its traditional route from the Atlantic into the Pacific. Though negotiations with the authorities and the EIC led to nothing, it might have somehow influenced the plan for Cook's search for both ways out of the northern North Pacific making

Cook's expedition the first to seek the northern sea route from its eastern end. 124)

4.2.4.2 The voyage

Leaving England in 1776 and proceeding around the Cape of Good Hope and south of Australia into the South Pacific Ocean in 1778, one year behind schedule, Cook sighted the North American coast somewhat south of the designated 45°N latitude. This was still well enough north of the Spanish settlements on the Californian coast to avoid conflicts. Thereafter, Cook sailed north, tracing the largely unexplored northwest coast of North America, and trying not to lose too much time by making landings. In fact in latitudes south of 65°N he only permitted the voyage to be interrupted for restocking with wood and water, and for checking on potential entrances of legendary low-latitude Northwest Passages, such as those of Juan de Fuca, and Bartholomew de Fonte. Though Cook gave little to no credence to these questionable reports, he did lose precious time on the coast of south Alaska in searching for an opening to the north. Had it existed it would have led him straight to Bering Strait. This false concept, suggested by the map of Jacob von Stählin, Secretary of the Russian Academy of Sciences, represented Alaska as a large island, separated from the American continent by a wide strait at about 65°N. This map based its representation of northeast Siberia on Müller's map of 1754/58, which was published in an English version in 1761. Both maps, which were present on board, were published by the Russian Academy of Sciences, and were therefore given a lot of credit. Stählin's map was originally published in a Russian edition in 1773, and in an English version in 1774. 125)

The instructions were that, after having finally reached 65°N, and having named the western extremity of the American mainland Cape Prince of Wales, they should search for rivers and inlets leading into the American continent. Contrary to the planning, however, unfavourable weather conditions forced the expedition over to the opposite, Asiatic side of Bering Strait, passing by the Diomede Islands in the middle of the strait. Cook

sought shelter in St. Lawrence Bay (Zaliv Lavrentiya) landing at a native village and trading with the local inhabitants. He correctly supposed them to be Chukchi. He was not entirely certain of this because according to Stählin this should have been the east coast of the island of Alaska. This first Western encounter with the peoples of northeast Siberia took place in a friendly atmosphere, despite the natives mistaking Cook for a Russian. It resulted in a detailed account, describing the differences with the American natives encountered. Resuming the examination of the American coast, Cook steered away from the bay to the northeast, and out of Bering Strait into the Chukchi Sea, until he was stopped by close ice at his farthest north at 70°44'N, naming a nearby point on the Alaskan coast Icy Cape. No one was to reach further north in these waters until the 1820s (see below). 126)

From Icy Cape, Cook sailed westward along the edge of the pack ice, at about latitude 69°30'N, without finding a passage through the ice to the north. Having encountered seals and whales in lower latitudes, they met with numerous walruses in the ice of the Chukchi Sea, and even killed some for food. Eventually they sighted land on the north coast of the Chukchi Peninsula at a point which was named Cape North (now Mys Shmidta). At that point they 'had a pretty good view of the coast which in every respect is like that of America, that is low land next the sea with elevated land farther back'. 127) It was the first sighting and description of a part of the north coast of the Chukchi Peninsula since Dezhnev. No landing was made. Cook was anxious to move further west along the coast. However, he was prevented from doing so due to unfavourable ice and weather conditions, and to the advanced season. Besides he needed more wood and water. So, all further attempts to find a northern passage in any direction were abandoned that year. Intending to return the next summer, Cook then sailed southeast along this hitherto unexplored Arctic coastline of the Chukchi Peninsula (again the first since Dezhnev) back towards Bering Strait, carrying out the first more or less reliable survey. The coastline proved to be full of lagoons. Soundings were frequently taken: 'in general the soundings is no bad guide in

sailing along these coasts in the night or foggy weather'. 128) Coming upon Ostrov Kolyuchin, named 'Burney's Island', halfway, he happened to overlook Kolyuchinskaya Guba. No inhabitants, nor any dwellings, were sighted during the coastal trip, except at the very end just before entering Bering Strait again. After three weeks of sailing in the Arctic waters north of Bering Strait, now named the Chukchi Sea, Cook arrived at what was named 'East Cape', now Cape Dezhnev (Mys Dezhneva), of which Cook was now convinced that it was the easternmost extremity of the Asian continent. 129) Cook fixed its exact position, produced the first accurate description, and determined its distance from the American cape of Bering Strait, Cape Prince of Wales. Observations on tides and currents (or their non-existence) were also made in the Bering Strait region. A close examination of the east coast of the Chukchi Peninsula led Cook to approve of Bering's delineations thereof. Crossing over to the American coast again, Cook discovered a large bay named Norton Sound, thus disproving the insular nature of Alaska and the existence of Stählin's straits. Cook's landing here, after already having landed on Sledge Island off Point Rodney on the American coast on his way north, made him presumably the first European to set foot on both the continents of Asia and America in the Bering Strait region, and also to have encountered the natives of both sides. 130)

The expedition spent three weeks at Unalaska, one of the Aleut islands, on its way south to winter at Hawaii, which resulted in a most valuable and detailed account. Though no one on board was familiar with the Russian language, they met with Russian traders who provided interestin`g commercial data on their fur trade, their way of life, and their relation to the Aleut natives whom they had subjugated. Information about Russian affairs in Kamchatka was also obtained: military presence, location of harbours for larger vessels, and production and supplies. Since the Russian traders in the Aleuts were there for the sole purpose of fur-trading they were totally indifferent to anything happening at latitudes higher than c. 60°N, which was the limit of the hunting-grounds for furs in the Bering Sea, also after Cook's exploration. An exchange of

geographical data took place, including the copying of each other's maps, with one of the most prominent Russian fur traders present, the pilot Gerasim G. Izmailov. Izmailov concurred with Cook and his men 'in opinion that there never was nor could be a communication with any part of Siberia round by the north with Kamchatka because of the constant ice upon these northern shores' 131). 132)

Cook was killed by the natives of Hawaii in February 1779 while wintering, after which Captain Charles Clerke assumed overall command of the expedition. Though a dying man, Clerke explored the Chukchi Sea once again that same year, according to Cook's plan and instructions. From Hawaii course was set to the harbour of Petropavlosk in Avacha Bay on the east coast of Kamchatka. After having met with initial distrust from the local authorities, the expedition received great support from the liberal Governor of Kamchatka Major Magnus von Behm, (or Bem in transliteration from Cyrillic). Behm supplied the expedition with provisions from Bolchoretsk on the west coast, his place of residence. The expedition was also offered the opportunity to copy Russian maps, but turned it down since they contained nothing they did not know already. On their part, the expedition presented the Russians with the charts from the 1778 exploration. Behm was of the opinion that it was highly unlikely that the expedition would be able to find a northern passage. Local Russian pilots did not believe it practicable that the expedition would push farther north this time than Cook had in the previous year. This belief was shared by the officers of the expedition. Sailing north along the east coast of Kamchatka, they deliberately entered Bering Strait and the Chukchi Sea a month earlier than in 1778. This turned out to be unexpectedly disadvantageous: heavy ice was encountered much further south in the Chukchi Sea than the year before. Again they tried the American shore first, reaching 70°33'N as their farthest north. They ended up again on the north Asiatic coast, again finding no passage to the west either. Having not improved upon the results of the previous year after another three weeks, they were now convinced of 'having fully proved the impracticability (though not perhaps the non-existence) of any northwest passage'. 133)

We may add that the same could have been said about the Northeast Passage (northern sea route), or any other northern passage for that matter. Or in the last words that Clerke put on paper: 'for this sea [the Chukchi Sea] is now so choked with ice that a passage I fear is totally out of the question'. 134) Clerke died on the way back to Kamchatka, where he was buried. The expedition returned home in 1780. 135)

4.2.4.3 The scientific results

Both detailed and general charts as well as views, including many coastal profiles, were compiled by various crew members and submitted to the British Admiralty. Many of these included the courses followed by the expedition's ships in Bering Strait and the Chukchi Sea in both seasons. Furthermore, drawings and paintings were made of topographical subjects as well as of scenes of native life and flora and fauna. Many of these MS. materials were engraved as illustrations for inclusion in the official publication of the expedition's report, which was delayed until 1784 mainly because of the complicated and time-consuming process of producing the plates. Cook's geographical results were incorporated in both MS. and printed Russian maps prior to the official publication of the account and map, as a result of the exchange of maps during the expedition's open dialogue with the Russians. Cook's reputation as a navigator and surveyor was highly appreciated by the Russian Navy. 136)

This 'first thorough, truly scientific survey' 137) cleared up many of the major geographical unknowns about the Bering Strait region. Cook crossed Bering Strait from one coast to the other, and charted long stretches of the hitherto unexplored coastline along the northern extremities of both the American and Asian continents to the north of Bering Strait. In doing so Cook achieved what Bering himself had failed to do in 1728, namely he proved beyond doubt that the continents were in fact separated by Bering Strait. Furthermore, Cook was able to make the first reliable estimate of the width of Bering Strait by determining the position of the capes on either side of the strait by using a new method of making astronomical observations

138). The question of the true easterly extent of northeast Asia was finally settled, and thereby the exact length of the Asian continent. On the other hand, there were serious omissions too: the failure to notice the inlets of what later became known as Kotzebue Sound and Port Clarence on the American coast, and Kolyuchinskaya Guba on the Asian side. Next to that the true nature of St. Lawrence Island, at the southern entrance of Bering Strait, could not be established, despite four sightings of the island, which added to the confusion created by Sindt and his expedition in the 1760s. Furthermore, the expedition renamed Sindt's St. Matthew Island under the mistaken impression of having made a discovery.

All in all Cook's expedition contributed so much to the geography of this part of the Arctic, that existing charts were no longer useable. Cook's expedition 'marked the end of the period of early cartography of the Bering Strait region' 139), which included first of all the maps of Müller and Stählin, which had been proven quite wrong in more than one respect, to Cook's great irritation. Perhaps Cook had put too much faith in these products of theoretical cartography. Now, Stählin's island of Alaska and the two straits on both sides of it disappeared from the map. Also Müller's 'mushroom appendage' in the north of the Chukchi Peninsula (copied by Stählin) was replaced by a more or less horizontal straight line, dotted for the undiscovered coastline west of Cape North. 140)

Most geographers were clearly convinced now of the impracticability of a navigable passage out of the waters north of Bering Strait in any direction. Even Barrington seems to have agreed. No further attempt was tried until around 1820. Reflecting on their failure, one of the expedition journals said about the voyage of Dezhnev in disbelief, it would not have been 'credited by the Russians themselves, who are entirely ignorant of the land and sea as high up as 70° North latitude'. 141)

Cook's exploration of the Chukchi Sea did not mean a definitive end to the cartographic representation of an American continent extending to the north of eastern Siberia, or even further to the west (see above). At least not on Russian MS. maps. On the MS. circumpolar map compiled in 1779 by Second-

Major Michail Tatarinov, which is one of the first Russian maps incorporating the geographical results of Cook's expedition, the American coast makes a sharp turn from Icy Cape in a westerly direction running parallel to Siberia's north coast, eventually linking up with Greenland. An American extension is still to be found on a Russian MS. map compiled as late as 1807. Cook can hardly be blamed for leaving the geographical question of whether or not land existed beyond the pack ice - that had kept him from proceeding further northward - , unresolved as well as whether or not this land was connected to one or both continents. During the voyage in the Chukchi Sea a number of observations such as ducks flying southward; the shallowness of the water; the lack of currents; the presence of a regular tide and smooth water; and the flat coast of both continents, gave some crew members (among them Cook himself) reason to believe in the vicinity of land beyond the pack ice. This would have presented another obstacle, apart from ice, to any northern passage. If this supposed land were connected to both continents, it would make the Chukchi Sea a large bay, thus preventing any northern passage by an all water route. The idea of a land bridge was later elaborated into a theory by James Burney, a member of Cook's voyage (see below). 142)

The limit of the pack ice in the Chukchi Sea was determined, and the want of safe harbours was noted. In his reflections on the nature of the ice, Cook was right in assuming that the ice 'had been all formed at sea', but erroneous in thinking that it was 'entirely composed of frozen snow'. 143) The then generally accepted concept that seawater could not freeze, and thus that polar seas were in general ice-free, not in the least propagated by Barrington, was still too strong. Partly for this belief as such, and partly because Bering had not encountered any ice in the same area, and Phipps had met pack ice in the North Atlantic only after reaching a latitude as north as 80°N, it was reasoned that ice would not cause a great danger to navigation at a latitude well beyond 65°, and therefore there was no need to strengthen the ships for ice navigation. However, Phipps' achievement was quite an exception, influenced by the warm North Atlantic Ocean current, and Cook

sailed well beyond Bering's farthest north (67°18'N). And more than anything else, seawater can freeze after all. The limit of the pack ice seems to have been quite average in those two seasons. 144)

Cook's sailing through the strait dividing the Asian and American continents and connecting the Pacific and Arctic oceans led to the need for a proper name for it. The old name of 'Strait of Anian' was generally found no longer suitable, and 'Dezhnev Strait' never really came into common use. The name 'Bering Strait' was used for the first time in the early 1750s on an English map and had been in regular use in England since then, and was also used occasionally in Germany and France. In Russian cartography the strait was unnamed (Müller, Stählin), or named after Cook (P.S. Pallas's map of Cook's discoveries, published in 1781). The name 'Bering Strait' was mentioned in the text and map of the official report of the expedition. Since then this name has been in common use in England and most other countries. The name 'Cook Strait' was introduced in German geographical circles, and a debate developed there between the names 'Cook Strait' and 'Bering Strait'. The first name was predominant until around 1815/1820, after which a definitive shift took place to the latter. An extra complication about using 'Cook Strait' was that this name had already been given to the strait that separates both islands of New Zealand, discovered by Cook on his first voyage. 145)

4.2.5 Russian response

The act of taking possession of land areas in the name of the British King was restricted to some landing places on the American coast south of 60°N. This was to cause some dispute with the Russians in the 1790s. Many features of the coastlines explored were named during the expedition. Cook's findings improved greatly on published information and existing hypotheses, and many new data were presented, not least about Arctic regions. For this reason one could say he had a right to name the places he discovered and explored. The Russian central authorities, as echoed later by Russian and Soviet authors,

complained that Cook had no right to give English names to the places he visited, since they believed many of these places had been discovered, given Russian names, and put on the map by Russian seafarers long before Cook's expedition took place. However, one can state in Cook's defence that he was generally unaware of the existing Russian names, and that he was hardly to blame for this since detailed geographical information of the area had not been disclosed or evaluated by the Russians themselves, since many Russian voyages and their results had been kept secret. 146)

According to the expedition's journals the encounters in the northern North Pacific with both Russians (Aleut fur traders as well as Kamchatka authorities) and natives (North American as well as Siberian) took place in a friendly and respectful way. Russia and England were allies at the time, which may at least partly explain this as well as the positive official response by Catherine II. The English ambassador at St. Petersburg reported in January 1780 that she 'feels the great utility which must result from such a voyage, & is eager to promote its success'; furthermore 'she was greatly concerned at the untimely death of Captain Cook', and moreover she 'expressed a very earnest desire of having copies of such charts as may tend to ascertain more precisely the extent & position of these remote and unexplored parts of her empire' 147), which the ambassador was most willing to present. So much for diplomatic friendliness. Apart from scientific results Cook's expedition produced very valuable etnographical, commercial and political information. As the first Western expedition to traverse the waters of the Bering Sea, Bering Strait, and the Chukchi Sea, Cook's expedition highlighted the vulnerability of the Russian position there. During the voyage the Russian authorities were certainly on their guard, realizing the potential threat. Effective opposition was out of the question since Russia was without naval presence in these waters. In 1777, the Siberian Governor ordered Behm to prevent foreigners from entering the harbour of Petropavlovsk. The Russian trader at Unalaska, Izmailov, had reported on his meeting with Cook to the Petropavlosk harbour authorities. When Clerke entered the harbour for the first time

in 1779 he was unaware that the local garrison was prepared for armed defence. However, the encounter proceeded peacefully, and after the meeting with Behm the expedition was treated with due courtesy. Reinforcements and the erection of fortifications in the harbour were requested anyway. In particular Behm's assistant and later successor, Vasilyevich Shmalov, was quite suspicious of the aims of the expedition, not believing them to be purely scientific. Clerke's visit to Kamchatka, in particular, made quite an impression on the Admiralty College in St. Petersburg. The fact that the British had been searching for an Arctic passage out of the Pacific, which might have turned out to be a northern sea route along the Russian coast, and that they had landed on and sailed along the Chukchi coast, did not seem to have troubled the Russian authorities as such. This despite the organisation of Kobelev's expedition in 1779 (see below). Something else though was soon to be considered as a more serious problem. The valuable skins of the sea otter, occasionally harvested in the Gulf of Alaska, had not escaped the notice of the expedition. On their return voyage they sold these furs with great profit in Kamchatka and especially Canton. Soon thereafter, British as well as American fur traders became serious competitors of the Russians in the lucrative maritime fur trade with China. 148)

Political developments on Russia's western and southern European borders, together with the desire to keep Britain to the side in these affairs, dictated Catherine's (and most later Tsars') policy; thus in the 1770s and 1780s war with Turkey and Sweden had priority over Pacific affairs. Nonetheless, the tsarist government was impelled to respond to Cook's expedition and the after-effects, as well as to the French expedition to the Pacific Ocean which had departed in 1785 under command of La Pérouse (see below), since these activities were considered too serious a threat to Russia's rights in the Pacific to ignore. In order to secure these rights the decision was taken in the mid-1780s to counteract the increasing Western interest in the area by activating a Far Eastern policy. A more-or-less permanent presence of the Russian Navy in the North Pacific region was considered desirable. A memorandum was approved in 1786

(although never announced) claiming sovereignty over the American Pacific coast north of 55°21'N. The planning of several naval expeditions to the North Pacific, via the great oceans, was also considered. Among these were some with very agressive military and political intentions, as the G.I. Mulovskii expedition. However, all these projects came to nothing, first of all because of a renewed conflict with Turkey and Sweden, and later because of the Russo-British alliance against revolutionary France. The expeditions commanded by Kobelev and by Billings were exceptions. 149)

The Cossack officer Ivan Kobelev was sent out on a reconnaissance expedition to Chukotka in 1779. This was in response to reports of foreign ships off the coast of Chukotka, in fact those of Cook, but feared to be a French raid. He travelled from the Anadyr river northwards along the southern and eastern coasts of the Chukchi Peninsula to St. Lawrence Bay. Kobelev was the first Russian explorer to cross the waters of Bering Strait to the Diomede Islands, conveyed by the local natives in their boats, from where he could see both the Asian and the American coasts. However, the natives refused to take him to the American side. While crossing the strait Kobelev made observations on currents and tides. Both an account and a map of his voyage were published in 1784. The map, originally compiled in 1779, shows many details of both shores of Bering Strait, especially the American side from information from the local natives, thus supplementing Cook's general outline. Most interestingly, the map betrays knowledge of the sound discovered for the Western world by Kotzebue in 1816. 150)

4.2.6 The Russian expedition of Billings (1785-93) 151)

4.2.6.1 Introduction

In August 1785, 'Catherine II directed to the College of Admiralty, ..., appointing Captain - Lieutenant Joseph Billings to the command of "A secret astronomical and geographical expedition for navigating the Frozen Sea [Arctic Ocean], describing its coasts, and ascertaining the situation of the

islands in the seas between the two continents of Asia and America, etc."'. 152) Ironically, Billings was an Englishman who had served under Cook on his third expedition, and had been recruited into the Russian navy only shortly before. Lieutenant Gavriil Andreyevich Sarychev was second in command. Daurkin, as well as other Chukchi, and Kobelev were also enlisted as members of the expedition, which totalled over a hundred members. The costly expedition was fitted out on a very large scale, and would last from 1785 to 1793. This long period was needed to carry out the manifold and detailed instructions that were drawn up by the Admiralty College. The Commerce College and the Academy of Sciences were also involved. The expedition was supplied with charts and journals of former Russian navigators, and with all the necessary nautical and astronomical instruments, the latter ordered from England. In fact it was the largest single Russian exploration expedition into the Arctic and Pacific oceans since Bering.

Ostensibly organised with the aim of gaining better geographical and scientific knowledge of Northeast Siberia, and the Russian possessions in the northern North Pacific, the expedition also had political and economic motives. Billings was instructed to take possession of new lands, formally only with the consent of the indigenous peoples, and avoiding the use of force. This tolerant approach, however, was in fact another means of subjecting the Pacific inhabitants and compelling them to pay tribute. The expedition, which was meant to be very secret, was to operate with the utmost caution in order to prevent conflicts with other European powers present. 153)

4.2.6.2 The voyage into the Arctic

The expedition set off from St. Petersburg in 1785 and travelled overland to Okhotsk in 1786, where work began on building ships for navigating the Pacific Ocean. In 1787, Billings and Sarychev went to Verkhnekolymsk, where vessels were built for descending the Kolyma River to its mouth and attempting to sail eastwards along the Arctic coast of Siberia to Bering Strait. Billings was instructed to make a close examination of this coastline which

was, for the greater part, unknown. In addition, he was directed to look out for 'Andreyev Land', or any other polar land in these regions, to determine whether this land be an island or part of the American continent. Due to ice and fog, however, the expedition failed to advance much beyond Mys Bol'shoy Baranov, which had been Laptev's furthest point in 1740, but had been passed by Shalaurov in 1762. Billings refused Sarychev's offer to let him try to continue in an open boat with a small party, and decided to turn back instead. The instructions now left Billings the possibility of tracing the coast by travelling by dog-sledge over the sea-ice in winter. However, this was rejected as impracticable since it was feared that not enough dogfood could be carried to last such a long distance. Sarychev compiled a chart of the Kolyma river, and a chart of the coastal region east of the mouth of the Kolyma, including the ship's route, based on astronomical observations. Draughtsman Luka Voronin drew a coastal profile of Mys Bol'shoy Baranov. It was established that in fact the mainland had to be placed two degrees to the south compared to all former charts. Nothing new could be ascertained about any northern land. Notwithstanding this fact, Sarychev was convinced of the existence of some land to the north, from this time on, to the very end of his life. From the sight of a whale he concluded, correctly, that this was 'an incontrovertible proof, that the Frozen Ocean has some connection with another sea to the north or the east'. On the other hand, the failure to proceed by ship led Sarychev to question Dezhnev's voyage. 154)

4.2.6.3 Sailing into the Bering Strait region

Billings now headed south to Okhotsk where two ships had been completed, while Kobelev and Daurkin travelled overland across the Chukchi Peninsula to await the expedition at Bering Strait. At this stage the expedition was almost cancelled by the government because of a looming renewal of conflict with Turkey. 155) In 1789 the expedition continued by sailing from Okhotsk to Petropavlosk in Kamchatka. From there they sailed the next year along the Aleutian chain. In 1791 they began surveying the

Bering Sea and the Bering Strait region. St. Lawrence Island was determined to be one single great island, correcting Sindt's idea of many small ones. The second landing on the American side of the strait was effected by a Russian expedition, by visiting Cape Rodney at the southern entrance of Bering Strait (July 1791). 156) Only six weeks before (June 1791) Kobelev and Daurkin had preceded them by crossing Bering Strait by Chukchi boat, in a futile search for a legendary Russian settlement on the American side. In doing so, they were the first Russians to actually land on the American continent at this northern latitude. On that occasion they discovered the bay which Beechey named Port Clarence in 1827 (see below), which had been passed unnoticed by Cook. 157)

After having crossed Bering Strait to the St. Lawrence Bay on the Asiatic side, Billings continued the exploration of northeast Siberia. The original idea was to sail the expedition's ship from Bering Strait westward along the north coast of the Chukchi Peninsula all the way to Chaun Bay and the Kolyma River by rounding Cape Shelagskiy. This idea was abandoned due to the Chukchi assurance that it was utterly impossible to make progress in these ice-bound coastal waters in such a large vessel. Later Burney and Vrangel criticized Billings for this decision; Vrangel had a point when he stated: 'it is singular that Billings paid more attention to these [the Chukchi's] statements than to his own previous experiences'. 158) It is indeed a fact that in 1779 Billings had reached as far as Cape North as a member of Cook's expedition without having met much trouble from ice or otherwise. In defending the decision not to proceed, Sarychev, by contrast, mentions Cook's unsuccessful effort to penetrate through the ice west of Cape North as a further compelling reason for believing the Chukchi. In case a voyage by ship was found impracticable, Billings was instructed to proceed along the Chukotka coast by other means. Chukchi reports that they sometimes succeeded in coasting all the way to the Chaun Bay in their open boats obviously did not persuade Billings to attempt likewise. Apparently, no sledge journey over the sea-ice was considered either. 159)

4.2.6.4 The journey through the interior of Chukotka

Instead, in the winter of 1791-92 a small party under Billings, including Kobelev and Daurkin, made a most troubled overland journey by reindeer from St. Lawrence Bay through the interior of the Chukchi Peninsula and beyond, all the way to the Chaun and Kolyma rivers. 160) Billings' MS. map of Chukotka showing the track of the route he followed has been preserved. 161) Although he originally intended to follow the arctic coast to Cape Shelagskiy, the inland route which he took was quite distant from the coast he was appointed to survey. 162) Billings may have reached the north coast only once, at the settlement of Rir-Karpi, which was very close to Cook's Cape North; if he did then I believe it must be considered as a one-time side-track from the main inland route. 163) By taking the inland route, Billings failed to seize the opportunity to survey the final piece of unexplored coastline of the Siberian Arctic personally. Possibly Billings' party, which was exhausted, and harassed all the way by its Chukchi escorts, who treated the party members as hostages, was too weak to oppose a natural preference of the Chukchi to follow their own customary route. 164) In my view, the familiarity of the inland route to at least one member, but probably two members, of the party might have been another reason for taking the inland route. Kobelev had travelled by this inland route in 1790-91, when he had been sent from the Kolyma to Bering Strait by Billings. 165) He was probably accompanied by Daurkin on this trip. It is even more likely that Daurkin had used approximately the same route during his own expedition around 1764 (see above). Billings' overland journey resulted in the first more or less detailed accounts of the land and the people of the Chukchi Peninsula, and the mapping of its river system, much to the interest of the government.

Sent by Billings in August 1791, the geodesy Sergeant Aleksey Gilev was to survey the north coast of the Chukchi Peninsula from Bering Strait to Kolyuchinskaya Guba by Chukchi boat independently. At least two MS. maps of his trip have been preserved. 166) Since his coastal Chukchi guides suddenly refused to go any further somewhere halfway, Gilev was forced to

go inland instead, escorted by reindeer Chukchi. After he rejoined Billings in October 1791, they carried out the first more or less accurate survey of Kolyuchinskaya Guba.

Belov will have it that Gilev separated from Billings' main party at this stage again, this time to undertake an independent journey by reindeer to Chaun Bay, paralleling Billings' main party somewhere to the north, and possibly travelling along the coast. 167) Since it is not at all clear how close Gilev stayed to the coastline during all of this second trip, only that he crossed a number of rivers, it is hard to say to what extent he may have gathered new geographical data about the coastline. In any case, Gilev's report must either have been discarded by the authorities as useless or unreliable, or must have disappeared rather soon and lain unnoticed in the archives, much like Dezhnev's report once had, otherwise there would have been no need for Vrangel's journey along the north coast of Chukotka in the early 1820s. This is confirmed by the fact that neither Vrangel, nor Sarychev seem to have been aware of Gilev's second trip. 168) My belief that Gilev did not contribute to the geographical knowledge of the coastline between Cape Shelagskiy and Kolyuchinskaya Guba, is supported by the cartographical sources. Billings' MS. map of Chukotka does not betray a single reference to Gilev's second trip; not in the title (which refers to Gilev's first trip), neither in the map image itself (in contrast to the results of Gilev's first trip), nor in the legends about the northern coast that only refer to Chukchi activities. Only Billings' route has been drawn in, and the representation of the Arctic coastline as such is quite traditional. On the maps included in the accounts by Sarychev, and by Martin Sauer who was the Secretary to the expedition, published separately in 1802, the coastline east of Cape Shelagskiy is drawn with a dotted line, with the explanatory note on the latter map: 'coast not explored'. 169)

4.2.6.5 The results

In 1793 it was decreed that the expedition be ended, and the last members returned to St. Petersburg in the following year.

The expedition brought about a considerable extension of the geographical, hydrographical and ethnographic knowledge of all the regions visited. Accurate maps and plans, 57 in total, and detailed descriptions were compiled, of which some were published. Sarychev's published account included a general map, and was accompanied by an atlas of more than fifty engravings including fifteen maps and charts drawn by himself. Most of these concerned the Bering Sea and the Aleutian Islands, since this was where Sarychev concluded his surveying work, after Billings had set out for his journey through Chukotka. In 1804, using his experience as a surveyor on Billings' expedition, Sarychev compiled and published a first Russian handbook on executing hydrographic surveys and compiling charts, which was reprinted throughout the 19th century. In 1826, Sarychev published an atlas devoted specifically to the northern part of the Pacific Ocean, which was for a great part still based on charts made during Billings' expedition. 170)

Furthermore, greater knowledge was acquired concerning the activities of Russian traders in the northern part of the North Pacific, including their bad treatment of the Aleuts. Although difficult to quantify, the expedition must have surely contributed to the consolidation of Russia's dominion over the entire area. It may very well have hastened the subjugation of the Aleut and Chukchi peoples. It may also have accelerated the process of merging of private companies, which eventually led to the founding of the Russian - American Company (see below). It was also a clear indication to Western powers about Russian interest in these regions. 171)

Notwithstanding all this, Billings has been criticized for not having fulfilled the expectations placed on him, and has been accused of incompetence as well as other negative traits, by Russian, and later also by Soviet, as well as by Western critics, such as I.F. Kruzenshtern, Burney and Nordenskiöld. 172) Sarychev's achievements on the other hand were generally praised by the same critics. However, if blame is to be assigned for the expedition's failures, the most likely candidates would seem to be the official circles in St. Petersburg who, though ill-informed, 'assigned overly ambitious tasks to the

expedition'. 173) In relation to the northern sea route it is important to conclude that the expedition did not achieve the rounding of the Chukchi Peninsula, neither from the west nor from the east; that it left the greater part of the Arctic coast between the Kolyma and Bering Strait unsurveyed (both by sea and by land); and that nothing new was learned about 'Andreyev Land' or any other supposed northern land. In part, the elements prevented this, but certainly chances were missed as well. Ultimately, Billings stated in an official note that in his opinion the waters to the north of Chukotka were not suitable for seafaring. 174) Billings' expedition would turn out to be the last attempt to reach Bering Strait by sailing from the west, until Nordenskiöld's.

4.2.7 Western reaction

Disturbed as they were by Billings' and Cook's expeditions, and the increasing Russian and British commercial activities in the North Pacific, both France and again Spain sent maritime expeditions to the North Pacific. In 1785-88 a French expedition under the command of Jean-Francois de Galaup, Comte de la Pérouse was sent from France to explore the Pacific Ocean and to search for a western opening of the Northwest Passage. The northwest coast of North America was surveyed in detail, as far north as the southeast coast of Alaska, in order to explore those areas which Cook had deliberately not investigated. Spain resumed her expeditions to the North Pacific in 1788, again setting out from her colony in New Spain (Mexico), rather for sovereignty and missionary reasons than out of commercial motives. This time the British interfered, and in the end forced the Spanish to withdraw from the North Pacific, having them abandon their outdated claim to exclusive sovereignty over the northwest coast of America, under the Nootka Convention of 1790. Apart from this, the British sent out yet another naval expedition to the North Pacific. In 1791-95, naval commander Captain George Vancouver, a veteran of Cook's second and third voyages around the world, carried out a scrupulously detailed survey of the northwest coast of the North American continent up

to Cook Inlet on the south coast of Alaska. This once and for all disproved all theories of a Northwest Passage in temperate latitudes, the search for which had been renewed by various English fur traders, in the aftermath of Cook's expedition. No further Western expeditions were dispatched to the North Pacific until after the Napoleonic Wars. 175)

4.3 THE FIRST HALF OF THE 19TH CENTURY

4.3.1 Founding of the Russian - American Company

The ever-increasing commercial exploitation of the sea otter fur trade by Russian private merchants, the newly born foreign competition in this trade, and the looming extirmination of the sea otter demanded new structures in the organisation of the Russian maritime fur trade of the northern North Pacific. One of the most dynamic merchants was Grigoriy Ivanovich Shelikhov. It was his trading companies, organised on a more structural basis than others, that dominated the Russian fur trade in this area in the 1780s and 1790s. In the early 1790s Shelikhov planned the expansion of the fur trade to the shores of the Chukchi Sea, and the exploration of the American coastline to the north of Bering Strait, the latter for the sake of trading with the local natives and of finding an entrance to the Northwest Passage (see below 4.4). Furthermore, in the late 1780s he developed a grand scheme for a more permanent Russian presence in the region which, however, was not supported by Catherine II, who strongly opposed the idea of monopolistic companies. However, after some subsequent merging of private companies the Russian - American Company, or Rossiysko - Amerikanskaya Kompaniya, known as the RAK for short, was formed in 1799, i.e. after the death of Catherine II. Catherine's successor Paul I, did not share his mother's reservations about monopolistic companies, and in addition he was very anti-British. He granted the joint-stock company a monopoly of trade with "Russian America", as 'the northwestern coast of America from the 55° north latitude to Bering Strait and beyond' 176) was to become called. The tsarist

government also granted the RAK the right to exercise political control over the land and its inhabitants. With imperial patronage, the Company's colonizing activities were officially assured of military protection by the Russian Navy. Direct financial state support was not given. The Company's charter included the right to explore and take possession of newly discovered lands in the name of the Tsar; the right to establish new settlements; and the exclusive use of new hunting grounds. In fact, the RAK became more of an agent of state expansion in the North Pacific than the Dutch and English East Indian Companies in Asia. In contrast to the ad hoc responses of Catherine II, with the creation of the RAK the Russian authorities aimed to be structurally prepared to effectively counteract the increasing Western commercial and political interests in the North Pacific. 177)

4.3.2 Exploration in the waters of Russian America

4.3.2.1 Russian round-the-world expeditions and an English counter-example

Throughout the RAK's existence a series of Russian round-the-world expeditions was sent from the motherland to Russian America. During the period 1803 - 1864 at least 65 such voyages were organised by the central authorities (in fact the Navy), the RAK, and some others. Setting out from the naval base of Kronstadt in the Gulf of Finland off St. Petersburg, ships sailed either by way of Cape Horn or the Cape of Good Hope to the main settlements in the Russian American colony, and also to the Russian Far East, from whence they returned (mostly) by completing a voyage around the world. The expeditions were multipurpose in nature but mainly were to carry supplies since the colony, like the Russian Far East, was not self-supporting in food and other provisions, and the supply line from inner Siberia across the Pacific Ocean could not satisfy the supply needs. Some expeditions were of a more exploratory or scientific nature, while others were sent to consolidate Russian authority in the region. Additional motives were the marketing of fur at

Canton on the way back, and the excellent training opportunities for Russian mariners during an ocean cruise around the world. The idea of this route was first put forward by Admiral N.F. Golovin in 1732, in relation to the Second Kamchatka Expedition. Mulovskii's intended expedition in the second half of the 1780s would have been the first to go if it had not been forestalled by war in Europe. Around 1790, Shelikhov took up the idea of a sea route by circumnavigation from either Archangel or St. Petersburg, for supplying the Russian possessions in the North Pacific. The idea was put forward again with the formation of the RAK and soon officially approved. The first of these Russian circumnavigations took place in 1803-06 and was commanded by Ivan Fedorovich Kruzenshtern (which is the Russian form of Adam Johann von Krusenstern who was of German Baltic origin) and Yuriy Fedorovich Lisiansky. Among the many which followed, the naval expeditions commanded by Vasiliy Mikhaylovich Golovnin were of special interest from a political point of view. He was instructed to inspect the RAK possessions on his circumnavigation that departed in 1807, while he was a Lieutenant. As a result, Golovnin argued that administrative authority for the region should be transferred from the Company to the Russian Navy. In 1817-19, the Admiralty Department once again sent Golovnin, now a Captain, to the North Pacific for much the same reasons. None of these expeditions, however, sailed into Bering Strait. Golovnin was instructed to do so on his last voyage if time permitted, but he abandoned the plan in order not to duplicate Kotzebue's explorations (see below). In fact, very few Russian round-the-world voyages made any contribution to the exploration of the Bering Strait region, and even fewer went searching for a northern passage out of the Pacific and into the Atlantic. Those that did so are described below. 178)

The voyage of Kotzebue (1815-18)

The former statesman, Count Rumyantsev, privately financed the organisation of the first Russian expedition to search for a western opening of a Northwest Passage in the Bering Strait

region. The expedition took place in 1815-18 under the command of Lieutenant Otto von Kotzebue, an Estonian known in Russian as Otto Yevstaf'yevich Kotsebu. He had been recommended by Kruzenshtern, with whom he had sailed on the first Russian circumnavigation in 1803-06, and who also prepared the instructions. In 1816, Kotzebue sailed through Bering Strait and followed the Alaskan coast round to the north-east. This led to the discovery of the great inlet which is named after him: Kotzebue Sound, and to encounters with the local natives. The Sound was overlooked in 1778 by Cook, his only European predecessor in these waters, but indications of its existence had already been put on a Russian map on the basis of native information (Kobelev's map of 1779/84, see above 4.2.5.2). An extensive survey put an end to Kotzebue's high hopes that the sound might prove to be the western opening of a sea passage to the Atlantic Ocean. Determining to return the next year to continue the search with a more thorough investigation, he went on to examine the Asiatic coast from Cape Dezhnev south to St. Lawrence Bay, at which two places he landed and encountered the local Chukchi. Quite clearly his orders did not include a search for a Northeast Passage. In 1817, while still south of Bering Strait, Kotzebue decided to abandon any further Arctic exploration and to turn homeward, due to ill health. A detailed account of this expedition was published in Russian, German, and English editions in 1821(-23). Only the Russian edition was enlarged with a separate atlas of 21 charts. In his journal Kotzebue promoted the idea of establishing Russian settlements on the coast of Bering Strait. 179)

Kotzebue's search for a western opening of the Northwest Passage provoked the influential British Admiralty secretary, John Barrow, into expressing his concerns touching British interests, in 1817. Arctic exploration by the British was soon revitalized by the organisation of a naval double-expedition in 1818. One party (under Ross and Parry) was to search for a Northwest Passage from the Atlantic side, the other (under Buchan and Franklin) attempted a transpolar passage. Neither of these achieved the desired results (see also Chapter 1). The Russian government organised a naval round-the-world double-

expedition to both north and south Polar regions which set out in 1819. One party was to explore the Arctic by way of the North Pacific, the other headed for the South Pacific and the Antarctic. The two-vessel southern venture, commanded by Captain Fabian Gottlieb von Bellingshausen, a German Baltic (the Russian form of his first name is: Faddey Faddeyevich), and Lieutenant Mikhail Petrovich Lazarev, was recognized as an important success immediately on its return in 1821. 180)

The voyage of Vasil'yev and Shishmarev (1819-22)

The northern division of the double-expedition was sent to explore Bering Strait and the Chukchi Sea, and in particular to search for an Arctic sea passage to the Atlantic Ocean, and was carried out in 1819-1822. The search could be by way of either a Northeast Passage, at least a northern sea route as far as Cape Shelagskiy, or a Northwest Passage, (or some transpolar route in between). The two ships of the expedition, the 'Otkrytiye' and the 'Blagonamerennyy', were commanded respectively by Captain-Lieutenant Mikhail Nikolayevich Vasil'yev and Captain-Lieutenant Gleb Semenovich Shishmarev, a veteran of Kotzebue's expedition, under the overall command of the former. In 1820 the expedition sailed from Kotzebue Sound and headed north into the Chukchi Sea where they were stopped by ice just beyond 71°N, after surpassing Cook's farthest north. In 1821 Shishmarev sailed into the Chuckchi Sea at first holding a northwesterly course along the Asiatic coast before ice forced him to turn due north beyond Mys Serdtse-Kamen. Though Shishmarev eventually came closer to Wrangel Island than Cook had, he was still too far away to sight it. On the way south the ship took on supplies from the Chukchi in Mechigmenskaya Guba on the east coast of the Chukchi Peninsula. That same year Vasil'yev in 'Otkrytiye' followed the Alaskan coast to just beyond Cook's Icy Cape, where he too was halted by ice. This Russian search for an Arctic sea passage therefore did not meet with success. A number of MS. charts were drawn showing the courses taken by the ships in the Chukchi Sea. Neither the charts, nor the journals were published. However, their contribution to the geographical knowledge of the Bering

Strait region was incorporated in later Russian charts, and into Sarychev's atlas of the North Pacific published in 1826. 181)

The British voyage of Beechey (1825-28)

After the failure of Ross and Parry in 1818, the British continued their search for a Northwest Passage. Two naval expeditions were sent out in 1819-20 and 1821-23. They were both commanded by Parry, and both were unsuccessful. In 1823-26, Kotzebue undertook a second round-the-world voyage. It was feared by the British that he would follow up the Russian explorations on the American side of the Bering Strait region for commercial reasons. However, Kotzebue never even sailed into the Bering Sea and seems to have confined himself to protecting existing RAK-trade against foreign smugglers and to extending scientific knowledge. Parry's failures, together with the fear of losing influence to the Russians, impelled the British to send a large-scale naval expedition to the American Arctic with the Bering Strait region as its destination in the mid-1820s. Again William Edward Parry was put in command, this time as Captain of a two-ship Northwest Passage expedition from the Atlantic side, starting in 1824. Captain John Franklin was assigned to an overland expedition to survey the mainland north coast of America west from Mackenzie River all the way to the Bering Strait region, setting out in 1825 (in 1819-22 Franklin had explored the mainland coast east from Coppermine River in the same way). The third party of the expedition was to sail halfway around the world to the Bering Strait region. It was commanded by Captain Frederick William Beechey, and was sent out in 1825. Its task was primarily to await the arrival of the two other parties in the following year(s). Thus, Beechey was not instructed to search for a Northwest Passage from the Pacific side himself. Beechey was also to carry out geographic and hydrographic surveys, and other scientific work in the Pacific Ocean and on the northwest coast of Alaska. In 1826, after receiving news in Petropavlosk in Kamchatka that Parry had abandoned his attempt in the previous year, and finding no trace of Franklin in Kotzebue Sound, Beechey had ample opportunity for

exploring the sound. This resulted in the discovery and examination of Hotham Inlet on the north side. The country surrounding Kotzebue Sound proved to be impenetrable. This way the Russian surveys of the sound were completed. Thereupon, Beechey left the sound, and to the north he traced the Alaskan coastline until the limit of the pack ice was encountered in the vicinity of Icy Cape in hope of meeting Franklin. From there, a boat was sent ahead under command of Thomas Elson. Following the coast more than 200 kilometres of undiscovered coastline to the east was surveyed and Point Barrow was eventually reached, before ice and warlike natives forced him to return. Franklin had given up his attempts in the same period only 146 miles to the east on the same coast. Returning to the Bering Strait region the next year, Beechey had no greater success in getting further east along the Alaskan coastline. The expedition did, however, lead to the Western discovery of Port Clarence, the sound on the west coast of Seward Peninsula. Though the planned rendezvous of the different parties of the expedition never took place, the geographic and hydrographic knowledge of the Bering Strait region was greatly extended by Beechey, improving considerably upon the results of the explorations of Cook, Kotzebue, and Vasilyev. The official account was published in 1831. The general chart of the Bering Strait region inserted is of special interest since it shows the results of the extensive hydrographic surveys made in the coastal waters of Alaska between Cape Rodney and Point Barrow. Local natives must have provided geographical information for the compilation of this map, as appears from the inclusion of native names for the islands in Bering Strait. Despite the Anglo-Russian rivalry in these waters, cartographic information was exchanged with the Russian side in the name of the advancement of science. 182)

The voyage of Litke (1826-29)

In 1826-29 another Russian naval expedition was sent around the world to the northern North Pacific. It was commanded by Captain Litke, already well known for his expeditions to Novaya Zemlya in the early 1820s. In 1827 Litke examined the Pribilof Islands

and St. Matthew Island in the Bering Sea. In 1828 he made a survey of the east coast of Kamchatka north from Petropavlosk on his way to Bering Strait, which was his northernmost destination. Proceeding south from Cape Dezhnev he made the most detailed survey of the east and south coasts of the Chukchi Peninsula thus far. The accounts of his voyage in the Pacific Ocean and the many important scientific results of his research appeared in the mid 1830s. The nautical section includes a hydrographic description of the Bering Sea, and is accompanied by a maritime atlas of the Pacific regions explored by him, containing 51 charts and plans. 183)

4.3.2.2 Local voyages organised by the Russian - American Company

Throughout the existence of the RAK, local Russian voyages in the waters of Russian America were instigated by the Company, who had the necessary ships built in the colonial shipyards. There was ample exploration of the eastern coastal waters of the Bering Sea and of adjacent parts of the Alaskan interior. Some ships even sailed as far north as Bering Strait. Arvid Adolf (Adol'f Karlovich) Etholen (or Etolin) and Mikhail Dmitriyevich Tebenkov, both future governors of Russian America, visited the Chukchi at their coast for trading purposes in 1830 and 1833 respectively. This resulted in the establishment of the northernmost settlement in Russian America in 1833: St. Mikhailovskii Redoubt in Norton Sound. Only once, however, in 1838, did a RAK expedition sail north of Bering Strait. This was to survey the unexplored section of the Alaskan north coast. The ship under the command of the Creole Lieutenant Aleksandr Filippovich Kashevarov, penetrated north to Cape Lisburne; from there a party continued in boats, reaching 35 miles east of Point Barrow, Beechey's farthest in 1826, before further progress was barred by the hostility of the indigenous people. Valuable ethnographical observations were made. Unknown to the RAK, an expedition sent out by the Hudson's Bay Company (under Peter Warren Dease and Thomas Simpson) had navigated and surveyed the coastal waters from the mouth of the Mackenzie

River to Point Barrow in the previous year, thus completing the exploration of the western section of Arctic coastline of the American mainland. 184)

In 1843 Il'ya Gavrilovich Voznesenskiy passed through Bering Strait, and visited Kotzebue Sound and the Chukchi Peninsula. He had been sent on a one-man scientific expedition by the Academy of Sciences which was to last from 1839 to 1849. After having sailed with a round-the-world voyage to Russian America, he made long voyages on company ships to make systematic natural history and ethnographic collections from the American colonies and northeastern Asia for the Academy's museums. His many drawings of the places he visited were added to this vast collection. 185)

4.3.3 Russia's imperialistic policy and Western responses

After landing on the Upper Californian coast in 1805, the RAK founded a coastal settlement somewhat north of San Francisco in 1812, named Fort Ross. It was to serve as a centre for agriculture and fur-trade, as well as acting as a potential defence for Russian California, as the whole collection of small Russian settlements in the area was named. The campaign of the navy-officer and circumnavigator Golovnin to increase the influence of the Russian Navy in North Pacific affairs at the expense of the RAK's merchants in the 1810s, culminated around 1820 in the most imperialistic Russian policy ever to be implemented in the area. In 1819, the first charter of the RAK had lapsed, but two years later the Russian government renewed it and proclaimed sovereignty over the American Pacific coastal regions from Bering Strait as far south as the 51°N parallel. The RAK's monopoly was extended to this latitude too, and foreign ships were to be excluded. In this way Russia turned the entire Bering Sea into a Russian "Mare Clausum". In 1820 trade with Americans in RAK territory was banned. The launch of the highly ambitious naval round-the-world double-expedition to both north and south Polar regions under Vasil'yev and Bellingshausen in 1819 (see above) may be considered as another sign of expansionism. 186)

Russia's moment of glory did not last long, however. In the West the prohibition of free navigation in the Bering Sea was considered to be incompatible with international law. Vigorous diplomatic protests by Great Britain and the United States disputing the Russian claims soon followed. From 1815, after the Napoleonic Wars, Great Britain's position as a world power was unrivalled, not least because of her naval superiority. Her own special commercial and strategic interest in the northern North Pacific made the Russian claims unacceptable, just as the Spanish claim had been in the late 18th century. In this period the search for a Northwest Passage was revitalized again, by both the Russians and the English. The late 18th century explorations by Cook, La Pérouse, and Vancouver had made it clear that if a Northwest Passage existed its route had to pass through or around both Russian America and British America. Both countries were continuously pre-empting and responding to each other's expeditions, fearing that the other would make the first discovery (see above). 187)

At this moment the United States' newly fledged interest in the North Pacific seaboard was about to emerge. In 1819-20 there were some U.S. fur-trading vessels in the Bering Strait region. In 1818, the western section of the North American continent was divided along the 49°N parallel separating the United States and British North America. Only the Pacific slope remained undivided until this territorial dispute between the United States and Great Britain was resolved by treaty in 1846. In 1819 the northern limits of Spanish jurisdiction on the Pacific coast were settled at 42°N parallel by a U.S. - Spanish convention. As a consequence of her independance from Spain in 1821, Mexico held sovereignty over all former Spanish colonial possessions in Upper California, until war broke out with the United States in 1846. The protest by the United States against Russia's imperialistic policy was in fact one of the first manifestations of what would become known as the Monroe-doctrine: the non-acceptance of further European colonization of the American continent, which was made law in 1823. 188)

The fierce protests by Great Britain and the United States took the tsarist government by surprise. St. Petersburg had

evidently not fully realized all the possible implications of their expansion on the North American continent. As a result Russia had to withdraw her claims, and the disputes were resolved by a series of conventions concluded in 1824-25. The southern boundary of Russian America was pushed back northward to latitude 54°40'N (which in fact still is the present-day boundary between Alaska and Canada). Besides, U.S. and British citizens were granted rights to free navigation, fishery, and trade in Russian - American waters. The reasons for the Tsar's compliance were manifold. The Russian naval presence in the North Pacific was by no means strong enough to bolster the Russian claims militarily; the need to maintain good relations with Britain in order to assure its neutrality in European political affairs was still important; the 1820 ban on trade with Americans in RAK-territory came back on the Company's servants since it led to shortages of supplies, forcing a resumption of this trade. 189)

4.3.4 The last years of the Russian - American Company

This clear defeat blocked Russia's further expansion in the North Pacific for good, and its naval influence in these waters was soon radically reduced. The fur-trade became less and less profitable, and the RAK's financial situation more and more deplorable. Of no further use, Fort Ross was abandoned some years before it was sold in 1841. In that year the charter of the RAK was renewed once again, as it turned out for the last time.

Much like the White Sea, the North Pacific Ocean was a peripheral war-scene during the Crimean War. In 1854 the Anglo - French allied navies attacked and destroyed Petropavlovsk, the main Russian base on Kamchatka, and Ayan, which had replaced Okhotsk shortly before as the main port on the Sea of Okhotsk. This was followed by extensive displays of allied naval power followed in the North Pacific. However, since the Russian Navy kept retreating, not one single sea-battle was fought. In the mutual commercial interests of the RAK and the Hudson's Bay Company an Anglo-Russian understanding on the neutrality of the

northwest coast of America was agreed upon, and so military operations were avoided in Russian America. 190)

The Tsar's decision to sell Russian America to the United States in 1867 was no great surprise since it was dictated by quite a number of obvious reasons. The Crimean War had demonstrated quite clearly both the vulnerability of the RAK-possessions and the weakness of the Russian navy in the Pacific. In the end the RAK's financial position had become so unstable that it required continual subsidies from the government. The continuous internal struggle over North Pacific affairs between the RAK-merchants, the Russian navy, and other official bodies, did no good either. The RAK had also been severely criticized for its inhumane exploitation of the indigenous inhabitants. 191)

Furthermore, the establishment of regular lines of communication and transportation between the motherland and the colony had been a major issue throughout the existence of the RAK. The awareness that reliable provisioning of the colony was absolutely essential for its survival, explains why several methods were attempted to satisfy its food needs. At first, transport of supplies from inner Eastern Siberia was considered, which at the time was self-supporting in foodstuffs. This route was entirely under Russian control, and had already been in use for provisioning the settlements in the Russian Far East. The land track of the overland - oversea supply route to the colony was routed from Irkutsk via Yakutsk, both of which were prime sources of provisions, to the Pacific Ocean ports of Okhotsk and Ayan (the latter from 1845). Supply vessels could reach the settlements of Kodiak and the colonial capital Novo Arkhangel'sk by sailing across the Sea of Okhotsk, rounding the southern tip of the Kamchatka Peninsula, and proceeding along the southern side of the Aleutian Islands archipelago. The entire route was hampered by so many difficulties that delivery of supplies took up to two years from beginning to end, resulting in much loss and spoilage. Despite attempts to remove the main obstacles on the route, such as rerouting the long and hazardous track between Yakutsk and Okhotsk, and relocating the port of Okhotsk,

this method of supplying the colony remained inadequate throughout. 192)

A promising alternative way of supplying the colony was realized soon after the formation of the RAK: namely round-the-world expeditions (see 4.3.2.1). These circumnavigations, however, could not provide the definitive solution for the colony's food supply problem either, because the oceanic supply lines were very expensive, time-consuming, and sporadic. Besides, the tropical temperatures caused much spoilage of foodstuffs on the outward voyage, and some damage to the fur on the return voyage.

Another solution was sought in local agriculture. Local agricultural production was attempted first within Russian America proper (already from 1784), and later in the extraterritorial colonies in Russian California, from the establishment of Fort Ross in 1812, and in Russian Hawaii (the Sandwich Islands) during the occupation years of 1815-1817. Local farming was also introduced in the Russian Far East, from the second quarter of the 18th century, in an unsuccessful attempt to supplement sufficiently the supplies transported from inner Eastern Siberia. All in all, forbidding physical conditions, scarcity of labour, and cultural obstacles made this approach one of the least successful. 193)

Foreign trade prospered better. There was barter with visiting ships, primarily Americans from Boston; transactions with the rival Hudson's Bay Company; trade with the Spanish in Upper California, and with the natives of the Sandwich Islands. It goes without saying that this trade brought a considerable amount of dependency on commercial and colonial rivals with it. 194)

None of these approaches, nor any combination of them, could satisfy the food needs of the colony structurally or sufficiently. The distance from the mother country, and the harsh physical and cultural environment of the colony itself, proved to be too hard a reality to overcome, which helps to explain why the Russian colonial undertaking was destined to fail.

Thus, in the end Russian America was given up by the tsarist government with a sense of relief. In almost every respect, the colonial venture had turned out to be a fiasco. The extension of Russian imperial power from Siberia across the North Pacific to North America proved to be a clear case of over-extension. After falling back to the Pacific shores of eastern Siberia as a natural frontier of the Russian Empire, official interest in the northern North Pacific faded. Moreover, effective official control over the land and coastal waters even of northeast Siberia diminished greatly until after the turn of the 20th century.

4.4 RUSSIA'S NORTH PACIFIC VENTURE AND THE NORTHERN SEA ROUTE

Let us now look at the implications of the Russian North Pacific venture for the neighbouring Arctic regions which together form the eastern end of the northern sea route: the Bering Strait region and the Chukchi Sea, and for the idea of a northern sea route as such.

In the early 1790s, Shelikhov reported his plans for extending the fur trade and exploring expeditions to Bering Strait and even beyond if possible to the Siberian Governor-General Ivan Alfer'evich Pil. In 1790, Shelikhov expressed his 'hope to expand our settlements and our trade ... [and] our exploratory operations as far as possible in a northerly direction, ... on to the area above Chukotsk Cape [Cape Dezhnev]'. He 'formulated a plan ... to dispatch some boats from the mouth of the Lena, the Indigirka or the Kovima [Kolyma] straight to the opposite American shores to measure the width of the intervening body of water and to explore the sea-routes in that part of the Arctic Ocean and the Bering Strait; and, if there is a possibility, to enter into mutually friendly obligations and trade relations with the tribes living along those shores'. Thus, the Bering Strait region was to be entered by expeditions both from the northwest and the south. If islands were found, then settlements should be established. If not, the American coast was to be explored northwards for the purpose of

establishing trade with the local natives. Shelikhov repeated much of these plans in another report to Pil in 1794 in connection with his newly formed company. In addition, Shelikhov intended to explore the American coastline further to the north, especially with a view to finding an entrance to the Northwest Passage. 195)

Though Shelikhov suggested that preparations were under way, nothing is known about the realisation of his program. Like so many of his other plans, probably these too were left unfulfilled due to his death in 1795. Most of Shelikhov's Arctic schemes never seem to have attracted the attention of the RAK, and thus Russian commercial exploitation of the northern North Pacific continued to take place primarily in the southern Bering Sea. Only his idea of exploring the American coast north of Bering Strait in search of a Northwest Passage may somehow have influenced the expeditions by Kotzebue, Vasil'yev, and Kashevarov. The colonial capital and administrative centre of the RAK was in Novo Arkhangel'sk (now Sitka) in the far southeast of Russian America. The number of settlements and settlers in Russian America was never high, but no settlement at all was ever established in the Bering Strait region, despite the strong arguments for doing so by Kotzebue. 196) As mentioned earlier St. Mikhailovskii Redoubt in Norton Sound was the northernmost settlement. Although the RAK charter of 1799 also laid claim to the largely unknown regions beyond Bering Strait 197), the strait itself was in fact the northern limit of the RAK-operations. For the greater part of the entire period under consideration here the Bering Strait region and the Chukchi Sea were intentionally neglected by Russian trade and the Russian authorities, evidently both for commercial and political reasons. The expeditions that were organised by the authorities to these regions in the 1760s, and the later ones commanded by Billings, Kotzebue, and Vasil'yev, were all sent out during sudden and short-lived periods of close official interest in these areas. And when colonial expansion in the North Pacific was considered in the early 1820s, it was directed southward, not northward. Even after this southward expansionism had been checked by the conventions with Great Britain and the United

States in the mid-1820s, no alternative northward expansion seems to have been considered as a possible substitute, and not one round-the-world expedition has sailed through Bering Strait thereafter.

As explained, it was vital that direct and secure lines of communication and transportation be established between the motherland and the remote Russian American colony. In particular there was the continuous and urgent need to supply the colony (as well as the Russian Far East, and hence the entire northern North Pacific littoral) with foodstuffs, since these territories were not self-supporting in this respect. However, all attempts to solve this problem were to little avail. The question that remains to be examined is whether all possibilities were indeed exhausted. During the continuous search for suitable means of supplying the colony, the northern sea route does not seem to have been taken into consideration. Neither the Russian authorities nor the RAK planned or actually carried out a renewed search, trans-polar or coastal, for a northern sea route for that, or any other reason. Only once was the eastern end of the northern sea route partially investigated. There were many expeditions exploring various parts of the Eurasian Arctic, of which the naval expeditions organised in the early 1820s were quite successful. However, these expeditions were aimed at regional exploration rather than at establishing a northern sea route.

The lack of any attempt to sail the last section of the northern sea route is especially striking in the period of the RAK. All the more so because of the relatively short distance to the Pacific, and the relatively minor navigational and climatological problems involved compared to sailing the whole stretch of the coastal route or a trans-polar route. Furthermore, the Lena, which in many respects may be considered as the highway of Eastern Siberia at that time, could easily have transported supplies from Yakutsk in inner Eastern Siberia, downstream to its mouth on the Arctic Ocean. In this way, a practicable supply line to Russian America (as well as to the Russian Far East) which might truly have solved the colony's supply problem could have been established partially by river

route and partially by coastal Arctic route. It would have maintained all or most of the positive features of provisioning by circumnavigation, whilst at the same time replacing its negative sides by the unmistakable advantages which would have accrued from such a sea route entirely under Russian control for both Mother Russia and the colony, and from the preserving effects of the polar temperatures on the provisions on board.

Notwithstanding all this, the whole idea of this line of supply and communication via the Lena and the Arctic coast never seems to have occurred at all, despite the crucial fact that had it worked smoothly it could even have influenced the fate of Russian America. Leading authorities on polar issues whom one might have expected to promote the idea, favoured the circumnavigation route instead: the grand colonial designer Shelikhov (despite his Arctic schemes), the high-ranked diplomat and promotor of Arctic voyages Rumyantsev, the polar traveller and later admiral Sarychev, the Arctic explorer Litke, and last but not least Vrangel in his capacity as Governor of Russian America (1831 - 1836), despite having personally filled the last gap in the unexplored north Siberian coastline about a decade before.

The explanation for this cannot be other than that there was no true belief in the practicability of sailing the last leg of the northern sea route. The failures of the Great Northern Expedition, the expedition of the merchant Shalaurov, and the official expedition under Billings and Sarychev to get through the ice of the northeast Siberian waters in the 18th century, evidently convinced the authorities in the late 18th and early 19th centuries that it was indeed impossible to sail the last section of the northern sea route by ship. The results of the expeditions by Vrangel, who could only complete his coastal trip by using dog-sledges over the sea-ice (see below), and by Vasil'yev, must have confirmed this conviction in the early 1820s. Even in the mid-1820s, when the southward expansion of the RAK was neutralized by Great Britain and the United States, and the deliveries of supplies by way of circumnavigation were somewhat reduced because the effects fell short of the Company's

expectations 198), no renewed search for a supply line by way of the northern sea route was considered.

Furthermore, the 1824-25 conventions secured 'de jure' free navigation for Western ships in and through the Bering Sea and Bering Strait, in a time when Russia was in formal control of both shores of these waters. This was a pre-condition for all later Western ships dispatched to explore and to exploit the Bering Strait region and the Chukchi Sea, such as Beechey's expedition in 1826-27, the American whaling voyages, and the English search expeditions for Franklin, the two latter from the late 1840s onwards, and both instrumental in the discovery and exploration of Wrangel Island (see below). Thus, the conventions of 1824-25 rather than the sale of Russian America in 1867 laid the legal bases for a Western presence in the Bering Strait region and the Chukchi Sea during the second half of the 19th century.

CHAPTER 5: THE NORTHEAST EXTREMITY OF ASIA

5.1 GEOGRAPHICAL CONCEPTS

Until Vrangel's expedition to the northeast extremity of Asia in 1820-24, the geography of the sole undiscovered far eastern coastal section of northern Siberia remained unclear and was therefore the subject of much speculation. In order to understand the scope and significance of Vrangel's contribution to Arctic geography and the development of the northern sea route it is necessary to take a close look at the various geographical concepts of the northeast extremity of Asia that had developed through the centuries, before dealing with the expedition that put an end to them.

During the first half of the 16th century the realisation slowly but surely began to dawn that what Columbus had discovered in 1492 in his search for India was not the east coast of Asia but a new continent, America. However the Asian and American continents were often represented cartographically as being connected in their unexplored northern regions. With the Arctic and Pacific Oceans separated there was no possibility of any northern sea route. It was not until the 1560s that the existence of a strait separating the continents from each other came to be shown on most Western maps. This strait was generally known as the Strait of Anian, and was the forerunner of the present Bering Strait. It is no accident that this was the same period which saw the first European expeditions set off in search of a northern passage into the Pacific Ocean. For another hundred years or so European map makers showed northeast Asia as a rounded-off expanse of unknown land. In the mid-17th century Russian Cossacks reached the Pacific Ocean, and as a result compiled various regional maps showing parts of Siberia. However, as the Russians penetrated deeper and deeper into the area, demand for a general map of the whole of Siberia grew, resulting in the "Godunov map" of 1667, which was in fact drawn by U.M. Remezov (see also Part I). It was followed by numerous other Russian MS. maps, on which the Siberian coastlines of the Arctic and Pacific Oceans were shown as almost rectangular, with

a right angle in the northeast of Asia. However, a more detailed examination of these maps shows that there were conflicting views of the far north-eastern extremity of Asia. The outline of a long narrow promontory extending either from or near the northeast corner and running off the edge of the map, is included in some but omitted in others. This promontory gave the impression of an 'impassable cape' or left room for the belief in a land bridge between Asia and America. Some maps show two promontories, of which at least one is open-ended, and in some cases cut off by the edge of the map. S.U. Remezov, the leading Russian cartographer of his time and compiler of three MS. atlases of Siberia around 1700, showed all three of these variations. Some of these Russian MS. maps, though intended primarily for internal use in official circles, also trickled through into Europe and served as the basis for Western maps of these regions, one of which was the large wall map of Siberia dated 1687, made by the Dutchman Nicolaas Witsen. The northeast coast shows two promontories, but their ends are undefined. The text by one of them reads (in translation): 'The End of this Head is unknown'. The two-promontory concept started to die out soon after 1700, and maps showing one promontory replaced the previously elongated form with a broader one, somewhat reminiscent of the real Chukotskiy Peninsula. It was clear that the vague and often contradictory ideas about the geography of this area could only be clarified and improved by extensive observations on the spot. 199)

However, both the First and the Second Kamchatka Expedition (the second one also being known as the Great Northern Expedition) left the northeast extremity of Asia unexplored (see Part I). Bering, in 1728, indeed did pass through the strait that was later named after him, but Lieutenant A.I. Chirikov's plea to sail west to the Kolyma River was not answered. Notwithstanding that fact, any hint of a land link between the continents of Asia and America was soon to be removed from the map. This was largely due to Müller's discovery in 1736 of Dezhnev's report of the voyage he had carried out in 1648. Müller published his findings in the years which followed, most notably in an account of Russian voyages in the Arctic and

the North Pacific published in 1758. The book was published in conjunction with a map of the North Pacific, which had been printed in 1754, but not yet published (see Part I). Müller's interpretation of Dezhnev's reports was that Dezhnev had sailed all the way along the Siberian coast and through Bering Strait, thus providing indisputable proof of the separation of the continents of Asia and America. If his interpretation was accepted, the question of the overall geography of the northeast extremity of the Asian mainland was settled and agreed upon. The unexplored coastal section could contain at most some smaller promontories, but nothing to prevent a sea passage between the Arctic and Pacific Oceans. When Müller's interpretation of Dezhnev's voyage reached Western Europe in the 1760s, it was carefully noted and accepted by the Swiss geographer Engel, who started publishing geographical treatises on the northern parts of Asia and America in 1765. It confirmed his own ideas about the separation of the two continents which he had proclaimed as far back as 1735. Furthermore, Engel was convinced that a northern sea route was a practical possibility, and jumped to the conclusion that Russia was carrying on a lively trade with the Pacific by way of a coastal sea route. He even suspected the Russian authorities, and Müller in particular, of making unfavourable pronouncements on the practicability of a northern sea route to mislead the outside world about this trade. Other Westerners also gave Dezhnev credit for sailing all the way around the northeast extremity of Asia. These included the German historian and philologist Johann Cristoph Adelung, in a history of the Northeast Passage published in Halle in 1768; and the English scholar and traveller William Coxe, in a work on Russian discoveries in the Arctic and North Pacific first published in London in 1780. 200)

As long as Dezhnev was believed to have sailed all the way around the northeast extremity of Asia, there was no reason for any fundamental change to the cartography of the region, or to doubt the geographical feasibility of a northern sea route. However, since all attempts to round the Chukchi Peninsula since Dezhnev had proved futile, it was only to be expected that sooner or later doubts would be expressed about Dezhnev's

voyage, or at least about Müller's interpretation of Dezhnev's reports. The first to question it seems to have been the Scottish historian William Robertson in a work on the history of America published in 1777. In 1802, in his published account of Billings' expedition of which he had been a prominent member, Sarychev expressed doubt about the voyage of Dezhnev since Billings' expedition had failed to sail eastward along the north coast of Siberia to Bering Strait in 1787. However, since neither of them made any suggestion about a geographical barrier, this had little effect on cartography. Maps published in the latter part of the 18th century and the early 19th century usually showed a dotted, but straight line indicating the unexplored stretch of coastline of northern Chukotka. 201)

Another sceptic was the English Captain James Burney, a veteran of Cook's second and third expeditions around the world. During Cook's expedition in the Chukchi Sea in 1778, Burney, along with other expedition members, thought he had noticed several indications of the vicinity of land to the north. In 1817 he put forward his theory of a land bridge connecting the continents of Asia and America at a high latitude, somewhere north of the pack ice limit of 70°N. This land bridge was believed to extend from a point east of Cape Shelagskiy, Shalaurov's farthest east on the Asiatic continent, to a point east of Icy Cape, Cook's farthest north on the American side. Burney believed that Dezhnev had been forced to cross this isthmus on foot, thus interrupting his sea voyage. Burney may also have been influenced by the maps which showed a great western continuation of the American continent extending to the north of the northeast part of the Asiatic mainland (see above), a concept that was not entirely abandoned in Burney's time. In 1819, Burney recapitulated his ideas in his history of northeastern voyages of discovery. Remarkably the map included did not show the land bridge postulated in his text. Instead, the coastline between Cape Shelagskiy and Cook's Cape North was shown as a blank strip. Surprisingly, Burney disregarded information provided by the Chukchi, who had told Billings' expedition that they sometimes sailed the whole length of this section of the north Siberian coast. Burney's view was soon

attacked by his fellow-countrymen, among whom no less a person than John Barrow, and Captain John Dundas Cochrane, who travelled in northeast Siberia in the early 1820s. 202)

5.2 THE RUSSIAN EXPEDITION OF VRANGEL (1820-1824)

In Russia, Burney's theory was immediately rejected by I.F. Kruzenshtern, the first Russian circumnavigator and at the time serving inspector of the Naval Cadet Corps, who had been informed about it by Barrow. Rumyantsev on the other hand, now resigned from all formal duties, seems to have taken Burney's theory quite seriously. It was Rumyantsev who urged the Governor of Kamchatka, Pyotr Ivanovich Rikord, to fit out a small expedition to investigate this matter. Rumyantsev sent money for financing this expedition with Golovnin's second round-the-world voyage which left in 1817. Such an expedition actually did take place in 1819. It was headed by a Russian navigator, whose identity has remained unknown, probably assisted by some local Chukchi. They seem to have travelled about 200 kilometres across the ice straight north of Bering Strait, using dogs and reindeer, without finding any land. 203)

Sarychev, the prominent navigator and surveyor who had participated in Billings' expedition to the Arctic and northern North Pacific, was appointed Hydrographer-General of the Russian Navy in 1808, supervising the hydrographic survey in Russia. In 1818 he drew up a detailed and large-scale research program for geographical and hydrographical exploration of the Arctic and Pacific Oceans by the Russian Navy. This was in order to renew the outdated cartography of the Kamchatka expeditions nearly a century before, which had only been updated by the often incidental surveys of private hunters and official expeditions. Anglo-Russian rivalry in the Bering Strait region played a role too. The program was presented to the Ministry of the Navy at the end of 1818. One year later, the Russian government decided to order the Admiralty Department to send out a double-expedition to the eastern Siberian Arctic for the years 1820-24. Ample deliberations upon the instructions and extensive

preparations began immediately. Sarychev himself, the Minister of the Navy, Ivan de Traverse, and the twofold circumnavigator and influential high-ranking navy-officer Golovnin were all personally instrumental in the preparations of the project. The double-expedition as a whole was placed under the authority of the newly appointed Governor-General of Siberia Speransky. One party was to work in the New Siberian Islands, and was headed by Anzhu (see above). The naval officer Lieutenant Ferdinand Petrovich Vrangel (or von Wrangell since he was of Baltic-German descent) was given command of the other detachment, which was designed to work east of the Kolyma. 204)

Vrangel was instructed to investigate the possible existence of land north of Cape Shelagskiy as well as to survey the mainland coast east of the Kolyma, preferably all the way along the sole remaining unexplored section of the Arctic coast of Siberia east of Cape Shelagskiy. The expedition was to avoid situations where severe ice conditions would hamper progress by ship, as had repeatedly happened with previous Russian seaborne expeditions, especially in this part of the Arctic Ocean. The exploring parties were therefore supported by an impressively organised system of support dog sledges and caches. Nizhnekolymsk, near the mouth of the Kolyma, was chosen as base. Vrangel was accompanied by the midshipman Fedor Fedorovich Matyushkin, the mate Prokopy (or Prokofii) Tarasovich Koz'min, the physician and naturalist Alexander E. Kyber (also Kiber or Küber), and the Cossack Lieutenant Anton Tatarinov, in addition to a regular crew. Vrangel went in search of land in the East Siberian Sea every year in the period 1821-23, stimulated by reports of the coastal Chukchi, and in a way also by the reports of Andreyev. If natives were encountered upon discovering land they were to be treated with kindness. Instead of following the instructions from the Naval Department, to set out northward from Cape Shelagskiy, Vrangel set out northward over the land-fast ice from three different places: northeast of the Kolyma estuary, Mys Bol'shoy Baranov, and from a point just east of Ostrov Shalaurova (ca. 100 km east of Cape Shelagskiy) respectively. His advance was repeatedly hampered by high and rugged hummocks of ice. He was stopped eventually by open water

or dangerously thin ice at the outer edge of the land-fast ice, having reached distances of about 230 kms (71°43'N), 262 kms (72°2'N), and 150 kms (70°51'N 175°27'E) respectively as the crow flies from the mainland, all of which would have led him to the discovery of Wrangel Island had he made attempts further eastward. On his last attempt he was within tens of kilometres of the island. Later in 1823 Kozmin and Matyushkin tried once more independently from one another, setting out respectively west and east from Mys Yakan. However, they could only proceed a short distance through open water. When the island was discovered later that century it was named after Vrangel (see below). 205

After having explored the coast east of Cape Shelagskiy for a short distance on a preliminary journey in 1821, in 1823 Vrangel explored the entire coast east of Cape Shelagskiy, Shalaurov's farthest east, passing Cook's Cape North, as far as Ostrov Kolyuchin, where his survey reached ground covered by Billings' expedition in 1791. The cautious Vrangel experienced not the least hindrance from the local Chukchi en route, some of whom even accompanied him for a while. Vrangel felt compelled to abandon his original plan of proceeding all the way to Bering Strait, due to the want of supplies, the deteriorating condition of the dogs, and the lateness of the season, since he had to travel back the entire distance to the Kolyma. Thus, Vrangel covered the final gap of hundreds of kilometres of unexplored Siberian Arctic coastline. He disproved once and for all the possible existence of a landlink between Asia and America, at the same time providing the final evidence of a potential Northern Sea Route, at least geographically speaking. According to Sarychev, Vrangel's coastal journey was the 'prime achievement' 206) of his entire expedition. So, Vrangel provided the final rebuttal of Burney's theories. Burney died in 1821, too early to realize how short-lived his theory would prove. Surprisingly, perhaps, the controversy surrounding Dezhnev's voyage did not abate. Müller's later opponents suggested that Dezhnev had used some kind of overland route to reach his final destination on the Pacific coast, although nowadays Müller's

conclusion that Dezhnev sailed through Bering Strait is widely accepted by scholars both in Russia and the West. 207)

The data on polynias (stretches of open water in the ice) obtained by Vrangel on his travels (and supplemented by similar reports by Hedenström and Anzhu) led him to the important conclusion that a more or less continuous boundary existed, several hundred miles in length, marking the outer edge of the land-fast ice all year round. It extended from a few tens of kilometres north of the New Siberian Islands in the northwest of the East Siberian Sea to about the same distance off the mainland coast north of Mys Yakan in the southeast of that same sea. The thought did occur that navigation might be possible in this large space of open water. However, this does not seem to have stimulated the Russians to revitalize the search for a northern sea route in the polynias along the edge of the fast ice. Of course, it would not have been easy to solve the problem of how to reach these polynias by ship, starting from the ice-bound coast. 208)

The establishment of the existence of these polynias was felt as a serious blow to the belief in the existence of any great polar land. Vrangel defied the central authorities by stating that he was convinced of the non-existence of a vast northern land, or of Andreyev's Land for that matter. Vrangel did believe, however, in the existence of some other land, probably an island, due north of Mys Yakan. He even marked this land on his map, placing it some distance west of the true position of Wrangel Island discovered later. His belief in this land depended entirely on reports of the local Chukchi, gathered during his coastal journey in 1823, who reported that the mountains of this land were visible from Mys Yakan on a clear summer's day. Vrangel himself had failed to sight it from the mainland coast, and his assistants Kozmin and Matyushkin had set out for it in vain. Vrangel's persistent belief in a land north of Mys Yakan is also clear from his plan, which, however, was never put into effect, to fit out another expedition in quest of the land north of Mys Yakan. In 1828, Sarychev, who still held the position of Hydrographer-General, requested that another expedition in search of the supposed land north of Mys Yakan be

fitted out. In accordance, the Admiralty ordered new inquiries among the coastal Chukchi, which were carried out by the authorities in East Siberia. The Chukchi confirmed their earlier reports, but fact and fiction were hard to distinguish from one another. Besides, the reports do not seem to have been studied seriously by the naval authorities. After Sarychev's death in 1831, his successor as chief of the hydrographical service, Colonel Villamov, cancelled the project the following year. And thus Wrangel Island was left for Westerners to discover some decades later (see below). 209

Other results of the expedition were that the known coast between the Indigirka River and Cape Shelagskiy was resurveyed, this time including detailed charting of some of the Kolyma's tributaries, the Bear Islands, Ostrov Ayon at the entrance to Chaun Bay, and the Chaun and some nearby rivers. Matyushkin carried out two inland journeys independently; one in 1821 along the Anyuy River, the other the following year across a vast expense of tundra to the east of the Kolyma River. Geographical, hydrographical, astronomical, meteorological, and magnetic measurements were made. As a result far more accurate charts were compiled. A general map of Vrangel's voyages was inserted in his journal that was published in several language editions, first of all in German (1839), and subsequently in English (1840; an American edition in 1841), Russian (1841), and French (1843). Vrangel was the first to discover the existence of ice islands. In his journal he describes these and other sea ice conditions. Descriptions of climatology and ethnography were also included. 210)

However, the accurate processing of the geographical results of Vrangel's expedition, and of Anzhu's for that matter, seems not to have taken place in general maps published in Russia before 1884, when a military map of Siberia was published in St. Petersburg. The Siberian expert and traveller Gergard Maydel (Gerhard von Maydell) improved on the northeastern part of this map and designed a more accurate map of this area, which was included in his scientific report published in 1893-96. This was based upon his sledge journey along the Arctic coast between the Indigirka River and Mys Yakan as part of his Russian

scientific expedition to northeast Siberia in 1868-70, sponsored by the Russian Geographical Society, which found Vrangel's coastal survey to be highly accurate. 211)

5.3 THE WESTERN DISCOVERY OF WRANGEL ISLAND AND THE EXPLOITATION OF THE CHUKCHI SEA FROM THE MIDDLE OF THE 19TH CENTURY

Of the many British naval expeditions that were sent around 1850 to search for John Franklin's Northwest Passage expedition, which had disappeared shortly after having set out in 1845 for the Atlantic approach, several operated in the Bering Strait region conducting a search from that end. In 1849, one of these search parties, under the command of Captain Henry Kellett, having penetrated north through Bering Strait, then sailed west from Alaska across the Chukchi Sea. Kellett discovered a small island north of the Siberian mainland. He landed, and took possession of it for Britain, naming his discovery Herald Island (Ostrov Geral'd) after his ship. He also sighted land farther to the west which in time received the names 'Plover Land', 'Plover Island', both after his companion ship (though she was not present on the spot), and 'Kellett('s) Land'. In doing so, Kellett was probably the first white man to sight the land whose existence was first surmised by Vrangel in 1823, after whom it was later named. However, its existence was questioned because Kellett might have been deceived by a mirage, and the US Captain John Rodgers failed to find the land sighted by Kellett during his expedition in 1855, despite visiting Herald Island, and cruising extensively in the nearby waters. The first undisputed sighting of Wrangel Island is attributed to the American whaling Captain Thomas W. Long who sailed along its south coast in 1867. A claim by the German Captain Eduard Dallmann that he had been the first to visit the island as early as 1866 was, and still is, widely disputed. 212)

The presence of US whalers in these waters needs an explanation before describing Long's discovery in detail. During the 1820s and 1830s, American whaling fleets operated throughout the Pacific Ocean up to 40°N. By 1840 the search for whales had

moved further north. The first whaling ship to pass through Bering Strait into the Chukchi Sea did so in 1848 under the command of the American Captain Thomas Welcome Roys. Roys had bought Russian charts of these waters and obtained information from a Russian naval officer in Petropavlosk. 213) This enabled Roys to exploit the rich whaling grounds of the Chukchi Sea to the full. News of the greatest whaling discovery of the 19th century quickly spread and started an international oil rush to the Bering Strait region. By the time the whaling industry in this area closed at the beginning of the 20th century, 2700 whaling voyages by ships from various Western nations but mainly American, had been sent out to hunt the 'polar whale', as the bowhead whale came to be known, for its oil and baleen, almost to extinction. Compelled as the Russian authorities were to adhere to the terms of the 1824-25 conventions with Britain and the US, they could do nothing to prevent or reduce Western whaling activities in the Chukchi Sea. Russia, moreover, had no permanent navy in these waters, nor any Alaskan settlements in or north of Bering Strait that might have needed protection or could have served as a base. Russia could also not prevent the Western naval presence in the Bering Strait region. The British Navy's Franklin search expeditions around 1850 were in no way hindered or restricted in their search of the Chukchi Sea. The US Captain Rodgers (see above) sailed the first American federal ship into the Arctic Ocean, by way of Bering Strait, on a surveying expedition in 1855. He penetrated the Chukchi Sea further north (to a point just beyond 72°N), and further west (beyond Cook's Cape North) than any other ship up to that time. 214)

While unable to prevent Western vessels from whaling in the Bering Strait region, Russia itself played no part in the whaling at all. Being unable to compete, the Russians restricted their whaling operations to the Sea of Okhotsk and the Sea of Japan. But even in the former sea, they were greatly outnumbered by Western whalers, even though this was a Russian inland sea. The authorities had seriously considered setting up a whaling industry in Chaun Bay in connection with Shalaurov's second Arctic voyage in the early 1760s (see above). No doubt nothing

came of this because of the ill fate of Shalaurov, and the disappointing results of subsequent expeditions. 215)

When Western whaling started in these waters in the 1850s, the whalers confined themselves to Bering Strait and the southern Chukchi Sea. At its peak in 1852 there were more than 220 ships operating in the area. Because the whalers did not as a rule exceed 70°N their presence added little to the understanding of the region's geography. This was to change in the 1860s, when empty seas forced the whalers to extend their hunting grounds into the northern and western parts of the Chukchi Sea, encouraged by exceptionally favourable ice conditions. In the early and mid-1860s several whalers claimed to have sighted Herald Island and the land sighted by Kellett. In 1867, there were dozens of whaling vessels in the vicinity of Herald Island and several reported sighting what must have been Wrangel Island, without attempting a landing, however. One American whaler went so far as to establish a northern record for a sailing ship in these waters, reaching 74°30'N and 173°W, which would have located him northwest of Wrangel Island. Another whaling ship sailed further west from Bering Strait than any ship before, eventually reaching a point in the East Siberian Sea sixty miles west of Cape Shelagskiy. As no whales were found, the waters around Wrangel Island were not often visited by whalers in the years that followed, as they had turned their attention to the north-eastern Chukchi Sea instead. 216)

Returning to Long's voyage, in the same year, 1867, this American whaler reached the mouth of Chaun Bay near Cape Shelagskiy by sailing along the mainland coast from a point west of Cape North. Later Long expressed his belief in the navigability of a northern sea route from Bering Strait to the Atlantic Ocean. Although shipping might not be commercially profitable all the way, he anticipated it would be at least for the part between the strait and the Lena River. His view was supported by English nautical circles, and by the German geographer Petermann who stressed the importance of steampower. Returning at a more northerly latitude, Long sailed eastward along the entire length of the south coast of Wrangel Island,

describing and mapping it quite accurately as he went. The strait between the island and the Asian continent was subsequently named Long Strait (Proliv Longa) after him. However, no landing was made, as the search for whales took precedence over geographical exploration. Though not the only one that year who indisputably sighted Wrangel Island, and reported about it, Long was credited with the discovery, or rediscovery of the island. Long's suggestion to name this land 'Wrangel Land' was accepted after a while, although it met with criticism too, not in the least from Petermann. Long's voyage ended more than forty years of speculation as to the existence of land in this region. At the same time, it aroused speculation over its geographical nature: was it an island, or was it connected to other lands, either known or yet to be discovered (note that it was named 'Wrangel Land' and not yet 'Wrangel Island')? Petermann thought 'Wrangel Land' was part of an Arctic continent stretching all the way to Greenland (see above). Nordenskiöld believed that it extended eastward 'as far as to the archipelago on the north coast of America', and westward as far as 'Andreyev Land', for which reason he credited Andreyev as the 'true European discoverer of Wrangel Land' (see also above). 217)

The American naval officer George Washington De Long unintentionally settled some of these questions on a voyage of exploration in this part of the Arctic Ocean in 1879-81, when he attempted to reach the North Pole by way of Bering Strait. Under the influence of Petermann's ideas, De Long believed that it would be possible to find and use a relatively ice-free passage to proceed along the coast of Wrangel Land towards the Pole. His ship, however, was soon beset in ice and drifted around the east and north coasts of Wrangel Island. Drifting further in a westerly direction he eventually discovered a small archipelago, in 1881, which he subsequently claimed for the United States, and which was named De Long Islands (Ostrova De-Longa) after him, consisting of Ostrov Zhannetty (Jeannette Island), Ostrov Genriyetty (Henrietta Island) and Ostrov Bennetta (Bennett Island). The location of the archipelago is northeast and due north of the easternmost of the New Siberian Islands. One or

more of the De Long Islands may have been the land which Sannikov, and Gedenshtrom, claimed to have sighted in 1810. De Long's tragic voyage, in which he and most of his crew perished in their attempt to reach the Siberian mainland after the ship was wrecked in the ice, proved that this part of the Arctic Ocean was made up almost entirely of ice and water, dotted with a few small islands. It also proved that the land named after Vrangel was in fact an island. Its insularity, and rather small size, were also ascertained by an American naval expedition under Lieutenant Robert Mallory Berry in 1881, which was dispatched to search for De Long's expedition, and which carried out the first survey of the entire length of the coastline. This brought the debate about a land connection from 'Wrangel Land' to an end, and the name was changed to 'Wrangel Island' (Ostrov Vrangelya). The voyages described here generally sailed along and visited the east and north coast of Chukotka. For instance, Kellett's companion ship 'Plover', commanded by Captain Thomas Edward Laws Moore, wintered in 1848-49 on the extreme southeast coast of the Chukchi Peninsula, in a large inlet now named Providence Bay (Bukhta Provideniya). The coastline up to Cape Dezhnev was inspected for traces of Franklin's expedition. Lieutenant William Hulme Hooper wrote a detailed account of the contacts with the Chukchi during their ten months' stay. Berry even searched the north coast from Bering Strait as far as the Yana River, finally meeting some survivors of De Long's expedition. The Royal Navy officer Lieutenant Bedford Pim proposed a dog-sledge expedition north across the sea ice from Chukotka in the early 1850s in order to search for Franklin. However, the Russian authorities refused to cooperate, and the project came to nothing. 218)

Thus an unsuccessful British naval rescue expedition, a fruitless American whaling voyage, a disastrous American voyage to discover a sea route to the North Pole, and a partly successful US Navy relief expedition were all accidentally instrumental in the discovery of Wrangel Island, and in ascertaining its insular nature and modest dimensions.

The Western discovery and exploration of Wrangel Island led to the complex question of sovereignty rights. Leaving aside

the disputed claim of the German Captain Dallmann, the first undisputed official landing on Wrangel Island was made in 1881 by the American naval officer Captain Calvin Leighton Hooper, shortly before Berry's visit. Hooper visited the island in the hope of finding traces of De Long's expedition as were his instructions. On this occasion the island was claimed for the United States. A party from the Canadian Arctic expedition under overall command of Vilhjalmur Stefannson unvoluntarily landed on the island in 1914. This party, commanded by Bob Bartlett, had been forced to abandon their wrecked ship near Wrangel Island after it had drifted away, from the Alaskan coast in the pack ice. On this occasion the island was claimed for Canada and the British Empire, on the grounds of Kellett's sighting. A private attempt of Stefannson to re-affirm Canadian and British rights by occupying the island in 1921 failed, but in 1922 the Canadian government claimed the island as part of Canada anyhow. The entire process of discovery, exploration, and statement of claims had been almost entirely a non-Russian affair. Maydell's expedition to the Arctic coast of Chukotka in 1868-70 (see above) might have been partly motivated by Long's sighting in 1867. A Russian plan to survey the island in 1876 came to nothing. The first Russian landing and exploration did not take place until 1911. The island was circumnavigated for the first time and a navigational beacon was erected on shore as part of a hydrographic expedition by ice-breakers, which explored the Northern Sea Route in 1910-1915 under overall command of B.A. Vilkitskiy (see Part 3). This visit was the basis for the Russian, and subsequently Soviet, government's claims to the territory. The Soviet authorities took possession of the island in 1924, and established a Chukchi colony two years later following an unsuccessful diplomatic protest to the Canadian government's decision of 1922. The Soviet claim was accepted by the British government, but is still challenged by the US government today. 219)

NOTES

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4. Belov, pp. 352, 380; Berg, pp. 25, 28-29; G.F. Müller, Voyages from Asia to America (London 1761; republished in Amsterdam 1967) pp. IV-VI, 19-25; J.L. Black, G.-F. Müller and the Imperial Russian Academy (Kingston 1986) pp. 133-150; Bagrow, p. 204.

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6. J.K. Wright, 'The Open Polar Sea'. In: The Geographical Review, vol. XLIII, 1953, no.3, pp. 338-365.

7. R.A. Skelton, Explorers' Maps (London 1958) pp. 99-111; Berg, pp. 11-13, 21; R. Vaughan, The Arctic. A History (Stroud [etc.] 1994) p. 71; Wright, pp. 339-340; Okhuizen, passim.

8. A. Savours, '"A very interesting point in geography": The 1773 Phipps Expedition towards the North Pole'. In: Unveiling the Arctic: Arctic, vol. 37, no. 4, December 1984, pp. 402-428; G. Williams, The British search for the Northwest Passage in the eighteenth century (London 1962) pp. 153, 162-165; P. Pulver, Samuel Engel. Ein Berner Patrizier aus dem Zeitalter der Aufklärung 1702-1748 (Bern / Leipzig 1937) pp. 221-241; Vaughan, pp. 142-143; J.C. Beaglehole (ed.), The journals of Captain James Cook on his voyages of discovery. Volume III. The voyage of the

'Resolution' and 'Discovery' 1776-1780. Hakluyt Society extra series no. XXXVI (Cambridge 1967) pp. XLIX-L. The chart mentioned is inserted in Phipps' journal of 1774, in the 1978 reprint between the pages 7 and 8; reproduction in Savours p. 415, and The Northeast Passage. From the Vikings to Nordenskiöld (Helsinki 1992) p. 163 (detail).

9. Beaglehole, pp. L, LIV-LV; Vaughan, pp. 144-145; Williams, p. 165; Savours, p. 422; L.P. Kirwan, A history of polar exploration (Harmondsworth 1962) p. 86.

10. Vaughan 142, 144-151; B.M. Gough, 'British - Russian rivalry and the search for the Northwest Passage in the early 19th century'. In: Polar Record 23 (144), 1986, pp. 304, 308-309; A. Savours, 'The British Admiralty and the Arctic, 1773-1876'. In: Malaurie 1987, pp. 156-161; Skelton, p. 308.

11. Wright, passim; Vaughan, pp. 165-174, 184-187; L. Zögner, 'Die kartographische Darstellung der Polargebiete bis in das 19. Jahrhundert'. In: Die Erde 109, 1978, no. 2, p. 145; C.R. Markham, The lands of silence. A history of arctic and antarctic exploration (Cambridge 1921) pp. 210-211, and the map between pages 196 and 197; C. Holland (ed.), Farthest North. The quest for the North Pole (London 1994) pp. 51-60, 75-86.

12. Wright, pp. 356-358; Zögner, pp. 146-149; U. Hübsch, 'August Petermann 1822-1878'. In: Polarforschung, vol. 48, 1978, (1/2), 183-187; Okhuizen, p. 44; Holland, pp. 61-74. For Petermann's map see Petermann's Geographishen Mittheilungen, Ergänzungsband 6 (1871), no. 26 (1869), plate 1. For reproductions of the map see: Wright, p. 358; Zögner p. 147.

13. Wright, pp. 342-343.

14. T. Armstrong, Russian settlement in the North (Cambridge 1965) pp. 9, 102; Ibid., 'Russian penetration into Siberia up to 1800'. In: C.H. Clough and P.E.H. Hair (eds.), The European Outthrust and Encounter. The first phase c. 1400 - c. 1700: Essays in tribute to David Beers Quinn on his 85th birthday (Liverpool 1994) pp. 119, 125, 129, 137; N. Vakhtin, Native Peoples of the Russian Far North (London 1992) p. 9; J. Forsyth, A history of the peoples of Siberia. Russia's north Asian Colony 1581 - 1990 (Cambridge 1994: first paperback edition [first published 1992]) pp. 109-111.

15. R.H. Fisher, The Russian Fur trade 1550 - 1700 (Berkeley 1943); Armstrong (1965), pp. 59, 61, 102; Ibid. (1994), pp. 122, 129; Forsyth, pp. 38, 40-41, 75, 111, 113.

16. Armstrong (1965), pp. 102-103, 105-106.

17. Ibid. (1994), pp. 120, 125, 130.

18. Ibid. (1965), pp. 116-118, 120; Vakhtin, p. 9; Forsyth, pp. 41, 61-64.

19. Armstrong (1965), pp. 117-118; Vakhtin, pp. 9-10; Forsyth, pp. 156-157; P. Vitebsky, 'The Northern Minorities'. In: G. Smith (ed.), The Nationalities Question in the Post - Soviet States (2nd ed.; London / New York 1996) p. 95.

20. E. Amburger, Geschichte der Behördenorganisation Russlands von Peter dem Grossen bis 1917 (Leiden 1966) pp. 47-54, 403-407; A.P. Okladnikov et al. (eds.), Istoriya Sibiri, vol. II (Leningrad 1968) pp. 233, 308-309; Forsyth, pp. 190-191, 199; Armstrong (1994), pp. 125, 133.

21. Armstrong (1965), pp. 46-54, 105-106.

22. Forsyth, p. 115.

23. Armstrong (1965), pp. 95-101; Forsyth, p. 115.

24. Armstrong (1965), p. 59.

25. Ibid., p. 62; Forsyth, pp. 41, 113, 160.

26. Markham (1921), p. 187; Belov, pp. 341-343, 403; Armstrong (1965), pp. 61-63; Ibid. (1994), p. 130; Forsyth, pp. 113, 131.

27. Armstrong (1965), pp. 65-70.

28. Ibid. (1965), pp. 70-72, 117; Vakhtin, pp. 9-10; Forsyth, p. 42; Armstrong (1994), p. 133.

29. Armstrong (1965), pp. 81-83; Ibid. (1994), pp. 135, 138; Forsyth, pp. 193-195.

30. Armstrong (1965), pp. 88-93.

31. Ibid., p. 90; Okladnikov, p. 324; Forsyth, pp. 51-52, 69, 147, 150-151, 154-156; Vaughan, pp. 277, 280-281; Vitebsky, p. 95.

32. Armstrong (1965), pp. 72-81, 93-95; Ibid (1994), pp. 123, 130, 132, 138; J.R. Gibson, Feeding the Russian fur trade. Provisionment of the Okhotsk Seaboard and the Kamchatka Peninsula (Madison / London 1969) pp. 155-157. The idea of using the Ob and the Yenisey as transport arteries by which agricultural and mining products could be exported via the Kara Sea to Europe emerged from the 1850s (see Part III).

33. G.V. Lantzeff and R.A. Pierce, Eastward to Empire. Exploration and Conquest on the Russian Open Frontier to 1750 (Montreal / London 1973) pp. 231-232; Forsyth, pp. 6-10; Vaughan,

pp. 10-11. In modern times the northern native peoples are also classified as "Northern Minorities", see Vakhtin p. 9, and Vitebsky.

34. For Nentsy see Armstrong (1965) and (1994). For Nenets see Forsyth, Vakhtin, and Vitebsky.

35. Armstrong (1965), p. 9; Ibid. (1994), p. 129; Forsyth, pp. 174-180.

36. Vakhtin, p. 9; Armstrong (1994), p. 137; Forsyth, pp. 61-64; Vaughan, pp. 269-270; Vitebsky, p. 95.

37. Armstrong (1965), pp. 117-120; Ibid. (1994), pp. 126-127, 137-138; Vakhtin, p. 10; Forsyth, pp. 156, 162; Vitebsky, p. 95.

38. Armstrong (1965), p. 121; M. Sauer, An account of a geographical and astronomical expedition to the northern parts of Russia (London 1802; republished in Richmond 1972) p. XV.

39. Belov, p. 416; Armstrong (1965), p. 178; J.R. Bockstoce, Whales, Ice, & Men. The History of Whaling in the Western Arctic (Seattle 1986) p. 180; Forsyth, pp. 69-74; Vaughan, pp. 3-4, 20; F. von Wrangell, Narrative of an expedition to the Polar Sea, in the years 1820, 1821, 1822 & 1823. Commanded by Lieutenant, now Admiral, Ferdinand von Wrangell, of the Russian Imperial Navy. E. Sabine (ed.) (London 1840) pp. 371-378.

40. A.E. Nordenskiöld, The voyage of the Vega round Asia and Europe (New York 1882) pp. 73, 451-510; Forsyth, p. 70; Vaughan, p. 20.

41. According to the Russian officer G.A. Sarychev, Account of a voyage of discovery to the north-east of Siberia, the frozen ocean, and the north-east sea. Two volumes (London 1807; republished in Amsterdam 1969) vol. II, p. 50 they were 'much inferior to them [their neighbours] in civilization of manners'. One of the few to express a divergent opinion was the Russian merchant N. Shalaurov, who made a first serious ethnographic study of the Chukchi during his voyage around 1760 (see below) and disapproved the sending of military expeditions to Chukotka, see Belov, p. 402. Also Wrangell (1840), pp. 371-378 expressed an interest in and appreciation of the Chukchi way of life.

42. Belov, pp. 408-409; Armstrong (1965), p. 108; Lantzeff and Pierce, pp. 218-219; Forsyth, pp. 79-83, 131, 145-146, 195.

43. Belov, pp. 408-409, 416; Armstrong (1965), p. 115; Lantzeff, pp. 214, 218-219; Forsyth, pp. 145-150; Vaughan, p. 269.

44. Bockstoce, pp. 180, 185.

45. Belov, p. 408; Lantzeff and Pierce, p. 219; Bockstoce, pp. 203-204; Forsyth, pp. 150, 260-268; Vaughan, p. 269; Sarychev, p. 50.

46. J. Burney, A Chronological History of North-Eastern voyages of discovery (London 1819; republished in Amsterdam 1969) pp. 294-295; Wrangell (1840), p. 362; Mirsky, p. 88.

47. Belov, pp. 245-246, 398, 403-404, 529; Vaughan 113.

48. Markham (1921), pp. 179, 187; Armstrong (1965), p. 63; Mirsky, p. 90; Vaughan, p. 113; Belov, pp. 403-404.

49. Belov, pp. 404-407, 439, including a reproduction of a relevant detail of the 1792 map on p. 406; Armstrong (1965), p. 77.

50. Amburger, pp. 26, 225; V. Pasetsky, The Land that never was (Moscow 1988) pp. 56-63, 66-70, 74; Ibid, Russkie otkrytiya i issledovaniya v Arktike. Pervaya polovina XIX veka (Leningrad 1984) pp. 43-45, 50-53; Belov, pp. 407, 494-495; Markham (1921), pp. 180, 187; Vaughan, pp. 261-262.

51. In Western literature he is sometimes mentioned as a Siberian exile: T. Armstrong, 'The British in Northern Siberia in the nineteenth century'. In: Publications of the Modern Humanities Research Association, vol. II, 1970, p. 19; Burney (1819) p. 201; Nordenskiöld, p. 552; Mirsky, p. 90.

52. Belov, pp. 495-502; Pasetsky (1984), pp. 50-66; Ibid. (1988), pp 69-101; Vaughan, p. 213; Nordenskiöld, pp. 552-556; Wrangell (1840), pp. CXIII-CXXXIV.

53. Belov, p. 500; Pasetsky (1988), pp. 100-101; Ibid. (1984), pp. 62-64, 66; Wrangell (1840), pp. CXXI-CXXIII, CXXVI, CXXVIII. For a reproduction of the 1811 map see Yefimov, p. 187. For a reproduction of the 1820 version of this map see Belov, p. 501. Pasetsky (1988), p. 69 reproduces a detail of another version of this map.

54. Belov, p. 502, 532. According to Pasetsky (1988), p. 124 note 'These two islands which consisted of fossil ice covered with a thin layer of soil, gradually disintegrated and were recently absorbed by the ocean'.

55. Belov, pp. 502-504; Pasetsky (1984) pp. 132-137, 146-150; Ibid. (1988), pp. 107-129; W. Barr, 'The Arctic Ocean in Russian history to 1945'. In: L.W. Brigham (ed.), The Soviet Maritime Arctic (London / Cambridge 1991) p. 18. For a reproduction of the 1820/24 map of the Russian Admiralty see Yefimov, p. 191.

56. For a reproduction of Leontyev's map see Belov, p. 415; for a reproduction of other contemporary maps showing the results of Leontyev's expedition see Yefimov, nos. 130, 133.

57. For a reproduction see Yefimov, no. 191.

58. For a reproduction of Daurkin's and Plenisner's maps see Yefimov, nos. 128, 131, 132; for a reproduction of Krasilnikov's 1777 map see ibid, no. 164. For other reproductions see Bagrow, fig. 82, p. 217, and Pasetsky (1988), pp. 38, 39.

59. Belov, pp. 410-416; Bagrow, p. 226; Pasetsky (1988), pp. 35-38; Vaughan, p. 213; F. von Wrangell, Reise des kaiserlich-russischen flotten-lieutenants Ferdinand v. Wrangel langs der Nordkuste von Siberien and auf den Eismeere, in den Jahren 1820 bis 1824. G. Engelhart (ed.) (Berlin 1839) pp. 79-87, 268-274, and map inserted; Nordenskiöld, pp. 551-552, and map inserted; see also map inserted in Burney 1819.

60. Forsyth, p. 197.

61. Vakhtin, p. 10; Forsyth, pp. 196-200; Vitebsky, p. 95.

62. Armstrong (1965), p. 107, see also p. 112; Ibid (1994), p. 119, see also p. 129.

63. For Soviet theories of jurisdiction concerning the Northern Sea Route, see W.E Butler, Northeast Arctic Passage. International Straits of the World (Alphen aan den Rijn 1978) pp. 71-91.

64. Belov, pp. 125-127, 341-343; J.P. Nielsen, 'The Barents Region in Historical Perspective. Russian - Norwegian Relations 1814 - 1917 and the Russian Commitment in the North'. In: O.S. Stokke and O. Tunander (eds.), The Barents Region. Cooperation in Arctic Europe (London [etc.] 1994) pp. 87, 90; Butler, p. 49.

65. Belov, pp. 125-127, 343-346, 349-352, 363-366, 370, 378, 460-461; Armstrong (1965), p. 43; Nielsen (1994), p. 90.

66. Nordenskiöld, p. 122.

67. A.H. Markham, A Polar Reconnaissance being the voyage of the "Isbjörn" to Novaya Zemlya in 1879 (London 1881) pp. 51, 56-57, 64; Nordenskiöld, pp. 117, 122; Belov, p. 475; Armstrong (1965), p. 46; K.E. von Baer, 'Voyages scientifiques. 8. Expedition a Novaia-Zemlia et en Laponie'. In: Bulletin Scientifique III, 1838, pp. 349-350; C. Holland, Arctic exploration and development c. 500 b.c. to 1915. An Encyclopedia (New York 1994) pp. 198-199, 210, 266.

68. This section is based primarily on Nielsen (1994), pp. 87-100, and E. Niemi, 'The Pomor trade from a Norwegian perspective'.

In: I. Björkland et al. (eds.), The Barents Region (Tromsö 1995) pp. 26-36.

69. Belov, pp. 346-348; R. Ellis, Men and whales (New York 1991) p. 93.

70. Nordenskiöld, pp. 62-63, 128-129; Belov, pp. 460-462; Armstrong (1965), p. 46; Vaughan, pp. 93-95; Pasetsky (1988), p. 69; Ibid (1984), pp. 29-33.

71. Markham (1881), pp. 39-41, 45-46; Nordenskiöld, pp. 208-209; Markham (1921), p. 184; Belov, pp. 348, 384-90, 467-469; Armstrong (1965), p. 46; K.E. von Baer, 'Voyages scientifique. 3. Expedition a Novaïa Zemlia et en Laponie'. In: Bulletin Scientifique II, 1837, p. 318; Ibid, 'Voyages scientifiques. 5. Expedition a Novaia-Zemlia et en Laponie'. In: Bulletin Scientifique III, 1838, p. 157; Holland, pp. 132, 173-174.

72. Pasetsky (1984) pp. 223-226; Belov, pp. 490-491; C. Krypton, The Northern Sea Route. Its place in Russian economic history before 1917 (New York 1953) pp. 10-11.

73. Belov, pp. 126-127.

74. Ibid., p. 354.

75. Bagrow, pp. 73-76, 136-138, 190-191, including a reproduction of Witsen's map of Novaya Zemlya on p. 76. Okhuizen, pp. 21-22, 30; A.Th. von Middendorff, Reise in den äussersten Norden und Osten Sibiriens während der Jahre 1843 und 1844. Vol. IV., Part 1 (St. Petersburg 1867) pp. 66-67. The globe has been preserved in the Maritime Museum Rotterdam; for a reproduction of a detail including Novaya Zemlya see F.C. Wieder, The Dutch discovery and mapping of Spitsbergen 1596-1829 (Amsterdam 1919) plate 2, no. 24.

76. For a reproduction of the whole map see Istoriya Akademii Nauk, p. 139. For a reproduction of the western and eastern hemispheres see A.V. Yefimov, Iz istorii velikikh russkikh grograficheskikh otkrytii v Severnom Ledovitom i Tikhom Okeanakh (Moscow 1950) p. 97 and p. 122 respectively. A reproduction of a detail including Novaya Zemlya was published by Nordenskiöld, p. 533 (however, with toponyms in Latin characters instead of the original Cyrillic), who wrongly calls it a map of Asia. V.M. Pasetsky, Pervootkryvateli Novoy Zemli (Moscow 1980), p. 40 incorrectly thinks that Novaya Zemlya is represented as a peninsula on a map of Russia in the atlas.

77. Belov, p. 349; Bagrow, p. 226; Pasetsky (1980), pp. 40-42; Nordenskiöld, p. 209; Markham (1881), p. 40.

78. Belov, pp. 382-383; Bagrow, p. 226; Pasetsky (1980), p. 42.

79. Belov, pp. 384-390; Bagrow, p. 226; Pasetsky (1980), pp. 42-45; Vaughan, p. 115; T. Armstrong, The northern sea route. Sovjet exploitation of the north east passage (Cambridge 1952) p. 29; Markham (1881), pp. 40-45; Nordenskiöld, pp. 209-212.

80. Belov, pp. 467-469; Pasetsky (1980), pp. 49-55; Markham (1881), pp. 45-47, Nordenskiöld, p. 212. Reproduction of map in Belov, p. 468.

81. Belov, pp. 469-470; Pasetsky (1980), pp. 55-58; Markham (1881), p. 47; Nordenskiöld, p. 212.

82. Belov, pp. 470-475; Pasetsky (1980), pp. 58-80; Markham (1881), pp. 47-51; Butler, p. 43; K.E. von Baer, 'Notes. Bericht ueber die neuesten Entdeckungen an der Küste von Nowaja-Semlja von K.E. v. Baer'. In: Bulletin Scientifique II, 1837, pp. 140, 154-159. Litke's journals were first published in a Russian edition in 1828, a German edition was issued in 1835. For Tsivolka's map see Baer, 'Notes' (1837), between pages 136 and 137; it was copied in the Journal of the Royal Geographical Society vol. 8, 1838, between the pages 14 and 15.

83. Belov, p. 74 [474 of 475!?]; Baer, 'Notes' (1837), p. 153; Holland (1994), pp. 198-199, 210.

84. Belov, pp. 475-481; Pasetsky (1980), pp. 81-103; Markham (1881), pp. 51-56; Nordenskiöld, pp. 212-215; Baer, 'Notes' (1837), pp. 141-146.

85. Belov, pp. 481-485, including a reproduction of the MS. chart of Matochkin Shar on p. 484; Pasetsky (1980), pp. 103-113; Nordenskiöld, pp. 215-216; Markham (1881), pp. 56-60; Baer, 'Notes' (1837), pp. 140-159.

86. Belov, pp. 485-488; Pasetsky (1980), pp. 113-127; Nordenskiöld, pp. 215-217; Markham (1881), pp. 60-64; Butler, p. 48; K.E. von Baer, 'Voyages Scientifiques. 5.' (1838), pp. 156-158; Journal (1838), p. 415; K.E. von Baer, 'Kurzer Bericht über wissenschaftliche Arbeiten und Reisen, ...'. In: Beiträge zur Kenntniss des Russischen Reiches und der angränzenden Länder Asiens. K.E. von Baer and G. von Helmersen (eds.) (St. Petersburg 1845) vol. 9, part 1, p. 25.

87. Belov, p. 488; Pasetsky (1980), p. 127; Erman's map was included in A. Erman (ed.), Archiv für wissenschaftliche Kunde von Russland, vol. 23 (Berlin 1865) Fig. I.

88. Pasetsky (1984), pp. 23-29, 110-111, 178-186; Bagrow, p. 224; J. de Schokalsky, 'A short account of the Russian hydrographical survey'. In: The Geographical Journal, vol. 29, 1907, pp. 630, 640, 642; Baer (1845), pp. 22-23.

89. Belov, pp. 491-492; Pasetsky (1984), pp. 174-177; D. Henze (ed.), Enzyklopädie der Entdecker und Erforscher der Erde (Graz 1983) vol. 2, pp. 602, 691.

90. Pasetsky (1984), pp. 208-218, 221-223; Holland (1994), pp. 218, 226; K.E. von Baer and G. von Helmersen, 'Nachtrag des Herausgebers'. In: Beiträge zur Kenntniss des Russischen Reiches und der angränzenden Länder Asiens. K.E. von Baer and G. von Helmersen (eds.) (St. Petersburg 1843) vol. 8, pp. 263-267, including a map (fig. V); for a summary report on this map see: K.E. von Baer, 'Rapport. 1. Ueber des Herrn Prof. v. Middendorff Karte von seinem Wege durch das Russische Lappland; ...'. In: Bulletin Scientifique, vol. 9, 1842, pp. 298-300.

91. Henze (1983), pp. 599-604; Pasetsky (1984), pp. 240-246.

92. Krypton, pp. 10-11; Pasetsky (1984), pp. 223-226.

93. Ibid., pp. 218-221, 226-228; Belov, p. 492; D. Henze (ed.), Enzyklopädie der Entdecker und Erforscher der Erde (Graz 1993) vol. 3, p. 91.

94. Nordenskiöld, pp. 217-222; Henze (1993), p. 91; Barr, p. 19; D.M. Pinkhenson, Problemy Severnogo morskogo puti v period kapitalizma. Istoriya osvoyeniya Severnogo morskogo puti, vol. 2 (Leningrad 1962) 64-67; Erman (1865), pp. 107-149, 179-181.

95. The exact expression used by Ber was: 'Das Karische Meer, das von drei Seiten von Land umschlossen ist, gleicht einem Eiskeller, ...'. It was expressed in: K.E. von Baer, 'Ueber das Klima von Nowaja-Semlja und die mittlere Temperatur insbesondere'. In: Bulletin Scientifique, Vol. II, 1837, no. 15, p. 233. References in modern literature: Armstrong (1952), pp. 1-2; Krypton, pp. 26-27; Barr, p. 19; Pinkhenson, p. 68. According to P. Horensma, The Soviet Arctic (London / New York 1991) p. 162 (see also p. 98), V.M. Pasetsky in a work published in 1967 'revised some of the cruder stories suggesting that Ber and Litke had opposed development of the Arctic'. I have not been able to consult this work of Pasetsky. In a later work, Pasetsky (1984), pp. 206-207, the same author is of the opinion that not Ber should be taken responsible for the lack of shipping in the Kara Sea in the 1840s and 1850s, but that a deep crisis in the Russian feudal society was the cause. Ber's 'ice cellar' statement is not mentioned by him at all.

96. Krypton, pp. 12-13, 28-29; Armstrong (1952), pp. 2-3; Barr, p. 19; Erman, pp. 341-342.

97. Letter from Ber to G. von Helmersen: 'Verdient das Karische Meer die Vergleichung mit einem Eiskeller?'. In: Bulletin de l'Academie Imperiale des Sciences de St-Petersbourg, vol. 21, 1876, pp. 289-292. This letter has also been published in Das

Ausland, vol. 49, 1876, no. 11, pp. 217-219. Letter from Ber to Litke without a title in Perepiska Karla Bera po problemam geografii vol. 1 (Leningrad 1970) pp. 163-168, see also p. 308.

98. Bagrow, p. 166, especially noot 29; Henze (1993), p. 468; Nordenskiöld, pp. 261 (noot 1), 544; A.Th. von Middendorff, Reise in den äussersten Norden und Osten Sibiriens während der Jahre 1843 und 1844. Vol. I., Part 1 (St. Petersburg 1848) pp. X, XIII-XV, XXXI-XXXVI ff; Ibid. (1867), pp. 65-68; K.E. von Baer, 'Kurzer Bericht über wissenschaftliche Arbeiten und Reisen, ...'. In: Beiträge zur Kenntniss des Russischen Reiches und der angränzenden Länder Asiens. K.E. von Baer and G. von Helmersen (eds.) vol. 9, part 2 (St. Petersburg 1855) pp. 368-369, 387, 418-419, 472-473, 494-497; the MS. map compiled by Laptev in 1743 has been reproduced in Yefimov (1964), no. 89.

99. For the instructions and the account of the expedition in extenso, next to notes on Middendorf's life, see Middendorff (1848), pp. XXX-XXXVI ff (this is the scientific report of his expedition, published only in a German-language edition in four volumes in 1848-75); Baer (1855), pp. 341-689; A. Th. von Middendorff, Auf Schlitten, Boot ond Rentierrücken. G. Alschner (ed.) (Leipzig 1956). See also Journal Royal Geographical Society vol. 14, 1844, pp. 247-259; Belov, pp. 509-514; Pasetsky (1984), pp. 229-237; W. Barr, 'The contribution of Alexander von Middendorff to the exploration of the Taymyr Peninsula in 1843'. In: Polar Geography and Geology, 1993, vol. 17, no. 3, pp. 167-184; Henze (1993), pp. 464-471.

100. A.Th. von Middendorff, Karten-Atlas zu Dr. A. v. Middendorff's Reise in den äussersten Norden u. Osten Sibiriens (St. Petersburg 1859) figs. IV and V.

101. Ibid.; fig. III.

102. Ibid., fig. II.

103. Ibid., fig. VII, reproduced by Belov p. 513; Yefimov, no. 120; Okhuizen, p. 43.

104. Middendorf (1859), text belonging to fig. VII. For all scientific results see the four volumes of Middendorf's official report. For the cartography see Middendorff (1867), pp. 72-73, 77; Henze (1993), p. 472; Barr (1993), pp. 181-184.

105. Baer (1855), pp. 371, 494-497, 500; Middendorff (1848), p. X; Ibid. (1867), pp. 68-69, 78-79; Bagrow, p. 166; Nordenskiöld, p. 544.

106. Baer (1855), pp. 370-371, 422, 485-487, 502-504; Middendorff

(1848), pp. X, XV-XVI, XXXIII; Ibid. (1867), p. 81; Ibid. (1956), pp. 263-266; Journal (1844), p. 256; Pasetsky (1984), pp. 232-233; Barr (1993), p. 178; Henze (1993), pp. 466-467.

107. For Russian-British relations see Belov, pp. 354-355; Armstrong (1965), pp. 43, 107-108; I.R. Stone, 'The Crimean War in the Arctic'. In: Polar Record, 21 (135), 1983, pp. 577-581.

108. For Russian-Norwegian relations see Nielsen (1994), pp. 89, 94-97.

109. Personal communication from Jens Petter Nielsen.

110. Horensma, p. 11; J.P. Nielsen, 'Novaya Zemlya - "No man's land"?'. In: I. Björkland et al. (eds.), The Barents Region (Tromsö 1995) pp. 4-17.

111. R.V. Makarova, Russians on the Pacific 1743-1799 (Kingston 1975: translated and edited by R.A. Pierce and A.S. Donnelly from the original Russian edition [Moscow 1968]), especially p. 2; Gibson (1969), pp. 24-26; P.A. Tikhmenev, A History of the Russian - American Company (Seattle / London 1978: translated and edited by R.A. Pierce and A.S. Donnelly from the original Russian edition [St. Petersburg 1861-63]) pp. 9-40; Russkie ekspeditsii po izucheniyu severnoy chasti Tikhogo Okeana vo vtoroy polovine XVIII v. Sbornik dokumentov (Moscow 1989), Forsyth pp. 151-153.

112. Belov, (1956), p. 352; Armstrong (1965), pp. 53-55; Ibid. (1994), pp. 124-125; Forsyth, pp. 136-137; Gibson (1969), pp. 11, 17, 141, 219.

113. According to older Western literature as W. Coxe, Account of the Russian discoveries between Asia and America (London 1787, third edition; reprinted New York 1966) pp. 269-271; J. Barrow, A chronological history of voyages into the Arctic regions (London 1818) p. 355; Burney (1819), pp. 189-190, the expedition members were killed by the Chukchi at the Anadyr. This would not automatically mean that Shalaurov did round Cape Shelagskiy and Cape Dezhnev, because he might have taken an inland route. Sauer, p. 97 mentions a report by Daurkin that the crew was found frozen to death near Great Cape Baranov. Vrangel (1840), pp. 356-357, 378 (and a sign on the map inserted) was under the impression that his expedition found Shalaurov's hut quite some distance east of Cape Shelagskiy, in which case the latter must have succeeded in doubling the cape. Nordenskiöld. p. 551 expresses doubt about this. Belov, in Belov (1956), p. 401, and M.I. Belov, 'Novye materialy o pokhodakh ustyuzhskogo kuptsa Nikity Shalaurova'. In: Geograficheskiy Sbornik, 1954, pp. 176-177, however, based on archive information by Billings, believes that the bodies were later found by Chukchi in a delta of one of the rivers emptying in the Chaun Bay, in which case it is very unlikely that Shalaurov had succeeded in passing Cape Shelagskiy.

114. Belov (1956), pp. 337, 352, 393-402; Belov (1954), pp. 160-184; Barratt, pp. 48-49; Barr (1991), p. 17; Makarova, pp. 43-44. For an overview of the maps which derived from Shalaurov's expedition see Bagrow, p. 226, noot 93. Reproductions a.o. in Yefimov, nos. 134, 135; Belov (1954) between the pages 178 and 179 (fig. 2); Belov (1956), p. 399 (detail). A distant copy of the general map was inserted by Coxe: Coxe (1787), between the pages 262 and 263. It includes an inset of the recent Russian exploration of the Bear Islands. For a reproduction of Coxe's map see The Northeast Passage, p. 96, no. 8 (English edition), and B. Dmytryshyn et al. (eds.), Russian penetration of the North Pacific Ocean, 1700-1797. To Siberia and Russian America. Three centuries of Russian eastward expansion. A documentary record. Vol. two (Portland 1988), p. 232 (French edition).

115. Belov (1956), pp. 402-403.

116. Dmytryshyn (1988), pp. XLI, XLIII-XLIV; Makarova, p. 117; Barratt, p. 84; Tikhmenev, p. 25.

117. Belov (1956), pp. 354, 408-409; Forsyth, p. 195; Barratt, pp. 54-61; Amburger, p. 405; Pasetsky (1988) p. 36; Bagrow, passim.

118. For the traditional view see a.o. Burney (1819), pp. 191-192; for Belov's view see Belov (1956) pp. 416-417. Belov does not mention Daurkin's first map of 1765 (for a reproduction see Yefimov, nos. 128, 129), which differs in some respects from his second map (for a reproduction see Yefimov, no. 130). S.G. Fedorova, The Russian population in Alaska and California. Late 18th century - 1867 (Kingston 1973; translated and edited by R.A. Pierce and A.S. Donnelly from the original Russian edition [Moscow 1971]) p. 52, and A.V. Postnikov, The mapping of Russian America. A history of Russian-American contacts in cartography (Milwaukee 1995) p. 14 seem to support Belov's view. Bagrow, p. 226 will have it that Daurkin reached as far as the Kolyma, although this is not supported by the route tracks on the map.

119. Belov (1956), pp. 417-421; Barratt, pp. 56-58; Dmytryshyn (1988), pp. XLVII-VIII; Postnikov, pp. 11-12; Bagrow, p. 228 (# 103). For a reproduction of Sindt's chart see Yefimov, no. 138; from there in Postnikov fig. 12 on p. 12. For a reproduction of a detail see Belov (1956), p. 419.

120. Makarova, pp. 3, 8-11, 24-25, 146-150, 166, 168; Dmytryshyn (1988), pp. XLVIII, LXIII; Russkie ekspeditsii, pp. 10-11 and several documents: nos. 23-47 passim; Barratt, pp. 56-66; Belov (1956), pp. 356, 373 (noot 1); Postnikov, pp. 11-13; Bagrow, pp. 204, 228; Lada-Mocarski, p. 117; For the reproduction of several of these MS. charts see Yefimov, nos. 151 (from which it has been reproduced by Postnikov, fig. 13, p. 12), 152, 154-156.

121. Williams (1962), pp. 161, 176-179, 181; Barratt, pp. 66-73; H. Beals, 'The Juan Pérez - Josef de Cañizares map of the Northwest coast'. In: Terrae Incognitae, vol. 27, 1995, pp. 46-56; F. Tovell, 'The Hezeta - Bodega voyage of 1775: its signifance for Spain's presence in the Pacific Northwest'. In: Terrae Incognitae, vol. 27, 1995, pp. 57-65.

122. J.C. Beaglehole (ed.), The journals of Captain James Cook on his voyages of discovery. Volume III. The voyage of the 'Resolution' and 'Discovery' 1776-1780. Part one. Hakluyt Society extra series no. XXXVI (Cambridge 1967), pp. LXV, CCXX-CCXXIV; Dmytryshyn (1988), p. LIII; Williams (1962), pp. 161, 179-183; Fry, p. 57. Belov's supposition that Cook's expedition had been organized by the British East Indian Company (EIC): Belov (1956), p. 356 is labelled by Armstrong as 'baseless', (see T. Armstrong, 'Cook's reputation in Russia'. In: R. Fisher and H. Johnston (eds.), Captain James Cook and his times (Vancouver / London 1979) p. 125 # 20). It seems to me, that Armstrong's view is supported by the fact that the Hydrographer of the EIC, Alexander Dalrymple, was not involved in the preparation for the expedition, see H.T. Fry, 'Alexander Dalrymple and Captain Cook: the creative interplay of two careers'. In: R. Fisher and H. Johnston (eds.), Captain James Cook and his times (Vancouver / London 1979) p. 52.

123. Beaglehole (1967), pp. CCXXI-CCXXII (cf. p. LXVI); J.C. Beaglehole, The life of Captain James Cook (Stanford 1974), pp. 490-491.

124. Beaglehole (1967), pp. XXIX-LXVIII, CCVIII, CCX, CCXX-CCXXII, 974, 1236; Ibid. (1974), pp. 472-505; Williams (1962), pp. 136, 157-176, 203, 214, 224; Gough (1986), p. 311.

125. Beaglehole (1967), pp. CXX-CXXXI, 288-290, 335, 342-343, 368; Ibid. (1974), pp. 571-614; Burney (1819), pp. 202-234; Williams (1962), pp. 192-202; Postnikov, pp. 15-16; R.H. Fisher, 'The early cartography of the Bering Strait region'. In: Unveiling the Arctic: Arctic, vol. 37, no. 4, December 1984, p. 586. For a reproduction of the English version of Müller's map, published in 1761, see Beaglehole (1967), plate 2 facing p. LXI. For a reproduction of the Russian edition of Stählin's map see Yefimov no. 157, for the English version see Beaglehole (1967), plate 3 facing p. LXIV.

126. Beaglehole (1967), pp. CXXV, CXXXI-CXXXIII, 407-18; Ibid. (1974), pp. 615-619.

127. Beaglehole (1967), p. 426.

128. Ibid., p. 430.

129. The name 'East Cape' was commonly used until Nordenskiöld suggested it be replaced by Cape Dezhnev, which name was

officially adopted by the Russian authorities in 1898 (in Russified form: Mys Dezhneva), on the occasion of the 250th anniversary of Dezhnev's voyage, and is now generally accepted: Nordenskiöld, pp. 450, 535 (and on the inserted map); Beaglehole (1967), p. LVI; R.H. Fisher, The voyage of Semen Dezhnev in 1648: Bering's precursor (London 1981) pp. 16-17, 217-218; J. Dörflinger, Die Namengeschichte der Bering-Strasse (Vienna 1975). Veröffentlichungen der Kommission für Geschichte der Mathematik, Naturwissenschaften und Medizin. Heft 14, p. 146.

130. Beaglehole (1967), pp. CXXXIII-CXXXV, 1131-1136, 416-444, 464, 469, 1439; Ibid. (1974), pp. 619-626; Burney (1819), pp. 243-251; Williams (1962), pp. 204-205.

131. Beaglehole (1967), pp. 1448-49.

132. Ibid., pp. 392, 447-470, 1138-1149, 1260, 1334-1337, 1357-1358, 1441-1454; Ibid. (1974), pp. 629-633; Burney (1819), pp. 252-253; Fedorova (1973), pp. 15-16, 111-114; Postnikov, pp. 16-17, 20.

133. Beaglehole (1967), p. 696, noot 2.

134. Ibid., p. CLXV, and ibid. (1974), p. 682.

135. Ibid., pp. 673-686; Ibid. (1967), pp. CLXII-CLXVII, 650-703, 1238-1280; Burney (1819), pp. 252-269; Postnikov, p. 17-18, 20-21.

136. Beaglehole (1967), pp. CXCVIII-CXCIX, CCIV, CCXI-CCXVII; Ibid. (1974), pp. 502, 691; R.H. Wagner, Cartography of the northwest coast of America to the year 1800 (Berkeley 1937; republished in Amsterdam 1968) pp. 188-190; Pasetsky (1988), p. 40,
S.G. Fedorova, 'Issledovatel Chukotki i Atlaski kazachiy sotnik Ivamn Kobelev'. In: Letopis Severa, 1971, vol. V, pp. 160-162; Fedorova (1973), pp. 250-251; Postnikov, pp. 16-21; A. David, 'Russian charts and Captain Cook's third voyage'. In: The Map Collector, issue no. 52, Autumn 1990, pp. 2-6; Armstrong (1979), p. 122. For reproductions see R.A. Skelton, The journal of Captain James Cook on his voyages of discovery. Charts and views by Cook and his officers and reproduced from the original manuscripts (Cambridge 1955) nos. XLIX, LIII, LVI-LVIII; Yefimov, nos. 161-163;
A. David (ed.), The charts and coastal views of Captain Cook's voyages. Volume Three. The voyage of the 'Resolution' and 'Discovery' 1776-1780 (London 1997) (Hakluyt Society Extra Series no. 46).

137. Fisher (1984), p. 587.

138. Bagrow, p. 229.

139. Fisher (1984), p. 586.

140. G. Williams, 'Myth and reality: James Cook and the theoretical geography of Northwest America'. In: R. Fisher and H. Johnston (eds.), Captain James Cook and his times (Vancouver / London 1979) pp. 59-80; Ibid. (1962), pp. 196-197, 200-202, 205-207; R.H. Fisher, Bering's voyages. Whither and why (Seattle / London 1977), pp. 101-102; Fisher (1984), p. 587.

141. Dörflinger, p. 136, noot 31; Quote from Beaglehole (1967), pp. 1268-1269.

142. Beaglehole (1967), pp. CXXXIX, 421-422, 1235, 1268-1269, 1532; Ibid. (1974), pp. 620, 634-635; J. Burney, 'A memoir on the geography of the north-eastern part of Asia, and on the question whether Asia and America are contiguous, or are separated by the sea'. In: Philosophical Transactions, vol. 108, 1818, pp. 9-23, especially pp. 17-20; Ibid. (1819), pp. 243, 246; Pasetsky (1988), pp. 38-40; Vrangel (1840), pp. CV-CVI; Fedorova (1971), pp. 160-163 (including a reproduction of the 1779 map on p. 162). For a reproduction of the 1807 map see Yefimov, no. 185.

143. Both quotes from Beaglehole (1967), p. CXXXIV.

144. Beaglehole (1967), pp. LXIX, CXXX-CXXXIV, 424-425, 690, 1532; Ibid. (1974), pp. 475, 494, 621-623; A. Savours, 'The British Admiralty and the Arctic, 1773-1876'. In: Malaurie, 1987, p. 156; Williams (1962), pp. 203-204, 208; Ibid. (1979), p. 78.

145. Dörflinger.

146. Dmytryshyn (1988), pp. LIII, LVI, 453, 486-487; Beaglehole (1967), p. CXXIII; Barratt, p. 92; Belov (1956), p. 356; Makarova, p. 151.

147. All three quotes from Beaglehole (1967), p. 1554; cf. Barratt, p. 75.

148. Beaglehole (1967), pp. CLXVII, 289ff, 371-372, 714; Ibid. (1974), pp. 636, 689; Dmytryshyn (1988), pp. LIII-LV, C, and various documents; Makarova, pp. 3, 125, 151-152, 166; Barratt, pp. 74-76, 92; Anonymous, 'The English in Kamchatka, 1779'. In: The Geographical Journal, vol. LXXXIV, 1934, p. 417; Russkie ekspeditsii, pp. 181-182; Williams (1962), pp. 210-240; B.M. Gough, The Royal Navy and the Northwest Coast of North America, 1810 - 1914. A study of British maritime ascendancy (Vancouver 1971: reprint 1974) pp. 8-9; Gibson (1976), pp. 9, 155.

149. Belov (1956), p. 357; Armstrong (1965), p. 28; Ibid. (1979), p. 122; Barratt, pp. 74, 89-96; N.A. Ivashintsov, Russian round-the-world voyages, 1803 - 1849, with a summary of later voyages to 1867 (Kingston 1980: edited by R.A. Pierce and translated by G.R.

Barratt from the original Russian edition [St. Petersburg 1848-49 / 1872]) p. VI; Vaughan, p. 267; Makarova, pp. 3, 126, 153-157, 166.

150. Burney (1819), pp. 269-270; Dmytryshyn (1988), pp. 253-258; Russkie ekspeditsii, pp. 188-189; Fedorova (1973), pp. 45-46, 250-251; Ibid. (1971), pp. 156, 159-163; Postnikov, pp. 18-19; M.B. Chernenko, 'Puteshestviya po Chukotskoy Zemle i plavanie na Alyasku kazachego sotnika Ivana Kobeleva v 1779 i 1789-1791 gg.'. In: Letopis Severa, 1957, vol. III, pp. 121-126; Armstrong (1979), p. 121; Bagrow, p. 232. For a reproduction of the 1779 original MS. map see Fedorova (1973), fig. 1, and Postnikov, p. 18; for a reproduction of the map published in 1784 see Yefimov, no. 174; Bagrow, p. 233; and Chernenko, p. 125.

151. For general data about the expedition I relied on: Sarychev; Sauer; C.H. Merck, Siberia and Northwestern America 1788 - 1792. The journal of Carl Heinrich Merck, naturalist with the Russian scientific expedition led by captains Joseph Billings and Gavriil Sarychev (Kingston 1980: edited by R.A. Pierce and translated by F. Jaensch from the original German manuscript); Vrangel (1840), pp. CVI-CXIII; Belov (1956), pp. 421-439; Pasetsky (1988), pp. 41-53; Makarova, pp. 3, 153-161; D.A. Shirina, Letopis ekspeditsii Akademii Nauk na Severo-Vostok Asii v dorevolyutsionnyy period (Novosibirsk 1983) pp. 36-48; Burney (1819), pp. 271-296; Barratt, pp. 76-89; Russkie ekspeditsii, pp. 14-18, and various documents; Dmytryshyn (1988), pp. XLIX-LI, and various documents. I will only give separate references for particular paragraphs and specific items.

152. Sauer, p. 1.

153. Belov (1956), pp. 421-424 ff.; Armstrong (1965), pp. 108-109; Sauer, appendix passim, especially pp. 30-31, 37-43; p. XIII; Barratt, pp. 75-78; Merck, p. XIII.

154. Quote from Sarychev, vol. I, p. 35, see also pp. 36-37; Sauer, p. 78, appendix pp. 38, 49; Burney (1818), pp. 20-21; Ibid. (1819), pp. 272-274, 277-278; Vrangel (1840), pp. CIX, CVIII; M. Lindeman, 'Die Nordküste Sibiriens zwischen den Lena-Mündungen und der Bering-Strasse'. In: Petermann's Mittheilungen, 1879, vol. 25, p. 166; Makarova, p. 154; Barratt, p. 79; Belov (1956), pp. 425-426; Fisher (1981), p. 10; Bagrow, pp. 229-230. For a reproduction of the expedition maps see Yefimov, nos. 167, 175; Belov (1956), p. 427.

155. Barratt, p. 80; Makarova, pp. 25-26, 157.

156. Sarychev, vol. II, pp. 44-45; Sauer, pp. 242-243; Merck, pp. 194-195.

157. Chernenko, pp. 131-135; Fedorova (1971), pp. 156, 166-168, 170; Postnikov, p. 23.

158. Quote from Vrangel (1840), p. CX. Burney (1818), pp. 21-22; Ibid. (1819), p. 289.

159. Sauer, p. 253; Sarychev, vol. II, p. 51.

160. For published reports see Merck, pp. 135-136; Sauer, pp. 255, 319-330.

161. For a reproduction see Belov (1956), between the pages 440 and 441; and Yefimov, no. 176.

162. For this intention see Sarychev, vol. II, p. 51. See also Vrangel (1840), p. CX; Burney (1819), p. 294; L.H. Neatby, Discovery in Russian and Siberian waters (Athens 1973), p. 91; D. Henze (ed.), Enzyklopädie der Entdecker und Erforscher der Erde (Graz 1978) vol. 1, p. 265.

163. For the time spent at the coast see Belov (1956), p. 436, based on Billings MS. journal which has never been published; also in Shirina, p. 41. This time spent at the coast, however, is not confirmed by Billings' MS. map. Furthermore, it is not mentioned in any of the other available accounts of this journey (see note 160), nor by Vrangel in his report.

164. Burney (1819), pp. 294-295; Neatby, p. 91.

165. Chernenko, pp. 127-131, 135, and the route tracks in the map on p. 137.

166. For a reproduction of these two maps see Yefimov, nos. 171-172, and Belov (1956), pp. 431, 433. In taking this coastal route Gilev might have been preceded by Kobelev shortly before, see Sarychev, vol. II, p. 47; Chernenko, p. 135, noot 31.

167. See Belov (1956), p. 432, for this new data derived from Gilev's MS. report discovered by him.

168. In any case Gilev's second trip is not mentioned in the reports of Vrangel (1840), and Sarychev. Hardly any Russian expedition was sent to the Arctic without the knowledge and supervision of Sarychev. If he had known about Gilev's trip he would surely have informed Vrangel about it.

169. For a reproduction of the maps inserted in Sarychev and Sauer see Yefimov, no. 177, and Dmytryshyn (1988), pp. 6-7, respectively.

170. Bagrow, pp. 229-230, noot 115 on p. 115; Postnikov, pp. 23, 25; Russkie ekspeditsii 17, 271 (document no. 15); Shirina, p. 24.

For reproductions of the maps see Yefimov, nos. 167-168, 171-173, 175-177; Belov (1956), pp. 429-431, 433, and between the pages 440 and 441; The Northeast Passage, p. 149 (fig. 30), and p. 161 (fig. 44); Postnikov, p. 24; Makarova, last of the illustrations (which are not numbered).

171. Sarychev, vol. I, pp. 69-70; Merck, p. XIII; Barratt, pp. 87-89.

172. Merck, p. XIII; Barratt, pp. 79, 87; Makarova, p. 161; Burney (1819), pp. 279-280; Neatby, pp. 91-92; Nordenskiöld, p. 558.

173. Dmytryshin (1988), p. L.

174. Belov (1956), p. 436.

175. Belov (1956), pp. 356-357; C.I. Archer, 'The Spanish reaction to Cook's third voyage'. In: R. Fisher and H. Johnston (eds.), Captain James Cook and his times (Vancouver / London 1979) pp. 99-119; W.A. McDougall, Let the sea make a noise. A history of the North Pacific from Magellan to MacArthur (New York 1993) pp. 90-96; Tovell, pp. 64-65; Williams (1962), pp. 212-268.

176. Tikhmenev, p. 54.

177. Belov (1956), pp. 358, 449-450; Tikhmenev, pp. 9-60; Makarova, pp. 4, 162-165; Armstrong (1965), p. 28; Gibson (1969), pp. 32-33; Barratt, pp. 100-107; B. Dmytryshyn et al. (eds.), The Russian American colonies 1798-1867. To Siberia and Russian America. Three centuries of Russian eastward expansion. A documentary record. Vol. three (Portland 1989) pp. XXX-XLIII.

178. Berg, pp. 79-87; J.R. Gibson, Imperial Russia in Frontier America (New York 1976) pp. 73-89; Tikhmenev, pp. 69-70; Ivashintsov; Barratt, pp. 107-142; 158-175; 185-199; Dmytryshyn (1989), pp.286-289; Belov (1956), pp. 450-451.

179. Ivashintsov, pp. 23-31; Barratt, pp. 176-181; A. von Chamisso, A voyage around the world with the Romanzov exploring expedition in the years 1815-1818 in the brig Rurik, Captain Otto von Kotzebue. Translated and edited by H. Kratz (Honolulu 1986) especially pp. 78-97, 159-179; Gough (1986), pp. 307-308; Belov (1956), pp. 451-453; Pasetsky (1984), pp. 66-82.

180. Gough (1986), pp. 308-9; Barratt, pp. 201-206; Berg, pp. 99-100, 105-113.

181. Ivashintsov, pp. 50-56; Fedorova (1973), pp. 257-259; Postnikov, p. 27; Barratt, pp. 200-206, 209; Belov (1956), pp. 453-454; Pasetsky (1984), pp. 129-132. For reproductions see Yefimov, nos. 188, 189, 193; and Belov (1956), p. 457 (unauthorized 1821 general map).

182. Gough (1986), pp. 301-317, especially pp. 308-315; Gough (1971/74), pp. 29-33, 41-42; Postnikov, pp. 29-30, including a reproduction of the map on p. 28.

183. Pasetsky (1984), pp. 161-164; Ivashintsov, pp. 91-101; Lada-Mocarski, pp. 344-351, 354-359.

184. Tikhmenev, pp. 158-159, 176-185, 220; Postnikov, pp. 27, 30-31, 33; Gibson (1976), pp. 15-17; Belov (1956), pp. 454-455; Pasetsky (1984), pp. 67, 150-156, 166; Fedorova (1973), pp. 253-257, 259-261.

185. Tikhmenev, p. 378; Shirina, pp. 77-83. For a reproduction of Voznesenskiy's drawing of the Pribilof Islands see Dmytryshyn (1989), p. 338.

186. Gough (1971/74), pp. 30, 32, 41; Barratt, pp. 207-209, 216-218, 223; McDougall, pp. 166-167.

187. Gough (1986), pp. 301-317; Ibid. (1971/74), pp. 29-31; Barratt, pp. 207-232.

188. McDougall, pp. 167-169; Gough (1971/74), pp. 33, 45-83; Ibid. (1986), p. 305; Barratt, pp. 207-232.

189. Armstrong (1965), p. 29; Barratt, pp. 219-220, 223, 228-230; McDougall, pp. 168-172; Gough (1971/74), pp. 30-33; Tikhmenev, pp. 164 ff.

190. Gough (1971/74), pp. 108-130.

191. Vaughan, pp. 181-184; see also Barratt, pp. 233-239.

192. Gibson (1969), pp. 59-152; Ibid. (1976), pp. 55-72.

193. Armstrong (1965), p. 80; Gibson (1969), pp. 155-215; Ibid (1976), pp. 93-149.

194. Gibson (1976), pp. 153-211.

195. Quotes from A.I. Andreyev (ed.), Russian discoveries in the Pacific and in North America in the eighteenth and nineteenth centuries. A collection of materials (Ann Arbor 1952) (translated from the Russian original Russkie Otkrytiya v Tikhom Okeana i Severnoi Amerike v XVII-XIX vekakh (Moscow - Leningrad 1944) by G. Ginsburg) p. 91, see also p. 103. See also Makarova, pp. 129-130; Bagrow, p. 232; Tikhmenev, p. 38.

196. Armstrong (1965), p. 57; Vaughan, p. 181; Gough (1986), p. 308.

197. Tikhmenev, p. 54.

198. Gibson (1976), p. 88.

199. Okhuizen, pp. 11, 14, 27, 30-31, 34.

200. Fisher (1981), pp. 4-9; Okhuizen, pp.0 35, 39; Pulver, p. 224; Belov (1956), p. 255; Barratt, p. 22./

201. Fisher (1981), pp. 10-12; for maps with a dotted line see for instance Kobelev's map of 1784, and the maps inserted in the journals of Billings' expedition published by Sarychev and Sauer both in 1802.

202 Burney's theory was put forward in a speech in 1817, and published the next year see Burney (1818). See also Burney (1819), pp. 63-76, 92-95, 242-250, 297-310. For critical comments on Burney's theory see J. Barrow in an anonymous article in The Quarterly Review (London), vol. XVIII, 1818, pp. 431-458. See also Fisher (1981), pp. 12-13; Nordenskiöld, p. 532; Pasetsky (1988), pp. 102-105 (including on p. 103 a reproduction of a relevant detail of the map inserted in Burney (1819), and on p. 163 a reproduction of a relevant detail of Cochrane's map inserted in his journal published in 1824); Armstrong (1970), pp. 15-16; Sauer, p. 253, appendix p. 48.

203. Pasetsky (1984), pp. 66-67, 133; Ibid. (1988), pp. 104-106. I found a contemporary reference to the planning of this expedition by Rumyantsev in The Quarterly Review (1818), p. 439, which means that English specialists must have known about this.

204. Pasetsky (1988), pp. 52-3, 106-109; Ibid. (1984), pp. 125-129, 132-136.

205. Vrangel (1840), especially pp. CXXIV, 84, 90, 129-165, 239-269, 332-354; 360, 378-380; Pasetsky (1988), pp. 109-111, 130-133, 137-161; Ibid, (1984), pp. 137-140; Belov (1956), pp. 504-507; C.R. Markham, The threshold of the unknown region (London 1876 [fourth edition]) pp. 205-208; Neatby, pp. 95-96.

206. Pasetsky (1988), p. 163.

207. Vrangel (1840), pp. 93-113, 354-371; Pasetsky (1988), pp. 132-136, 160-163; Ibid. (1984), pp. 137, 140; Belov (1956), pp. 505, 507; Neatby, p. 96; Mirsky, p. 93; Fisher (1981), pp. 14-22; Barr (1991), pp. 13-14.

208. Pasetsky (1988), pp. 143, 149-150, 161, 164-165; Nordenskiöld, p. 556; Markham (1876), pp. 209-212; Vrangel (1840), pp. 393-396.

209. Vrangel (1839), p. 274 (this appendix is not included in the English edition of 1840); V.M. Pasetsky, 'Neosushchestvlennye proekty'. In: Problemy Arktiki i Antarktiki, vol. 22, 1966; Ibid. (1988), pp. 163, 168, 171-4; Ibid. (1984), pp. 145, 150; Belov (1956), p. 507. The differences in Vrangel's belief regarding the existence and non-existence of polar lands has caused confusion in geographical circles more than once, both in Russia and in the West. Nordenskiöld, pp. 338, 556 for instance was under the impression that Vrangel did not believe in the land later named after him.

210. Vrangel (1840), pp. 183-210, 305-331; Pasetsky (1988), pp. 163-166; Ibid. (1984), pp. 140-143; Belov (1956), pp. 507-509.

211. G. Maydell, 'Reisen und Forschungen im Jakutskischen Gebiet Ostsibiriens in den Jahren 1861-1871. Part two.' In: L. v. Schrenck & Fr. Schmidt, Beiträge zur Kenntniss des Russischen Reiches und der angrenzenden Länder Asiens. Vierte Folge. Band II (St. Petersburg 1896) pp. 153-162, 286-291, 332-341.

212. Nordenskiöld, pp. 22, 347, 458, 558, 584; Mirsky, pp. 94, 139, 141; Lada-Mocarski, pp. 478-480; Vaughan, pp. 181-182.

213. It was, however, not the first time that someone Russian reveiled knowledge of this Arctic whaling. In the account of his expedition of 1820-24, of which an American edition was published in 1841, Vrangel mentioned the abundant numbers of whales, seals, and walruses in the coastal waters off northern Chukotka, and the hunt for them by the Chukchi: Vrangel (1840), pp. 373-375. Vrangel's remarks might very well have been overlooked by American whaling circles.

214. R.C. Kugler, 'Historical survey of foreign whaling: North America'. In: Arctic whaling: proceedings of the international symposium Arctic whaling; February 1983, ed. by H.K. s'Jacob et al. (Groningen 1984) pp. 149-157; Bockstoce, pp. 21-29, 93, 97-98, 102, 112, 299-300; Tikhmenev, pp. 315-321; Ellis, pp. 130, 223-242; Vaughan, pp. 168, 178-182; Nordenskiöld, p. 22.

215. Tikhmenev, pp. 321-326; Ellis, pp. 92-97, 130, 266, 270; Forsyth, p. 262; Belov (1956), p. 400.

216. Bockstoce, pp. 143-146, 93-102; Kugler, pp. 154-156; A.W. Greely, Handbook of Polar discoveries (London 1910) p. 190.

217. Nordenskiöld, pp. 22-23, 558-559, quotes from pp. 338, 551; Anonymous, 'Das neu entdeckte Polar-Land und die Expeditionen im Eismeere nördlich der Bering-Strasse von 1648 bis 1867'. In: Petermann's Mittheilungen, 1869, vol. 15, pp. 33-34, 36-37; Bockstoce, pp. 144-146; R.J. Diubaldo, 'Wrangling over Wrangel Island'. In: The Canadian Historical Review, vol. 48, no. 3, Sept. 1967, p. 202; Pasetsky (1988), pp. 187-190. For a reproduction of

Long's coastal view of the south coast of Wrangel Island see Bockstoce, p. 146.

218 Vaughan, pp. 20-22, 155, 187-189; Holland (ed.) (1994), pp. 87-106; Pasetsky (1984), pp. 253-257; Ibid. (1988), pp. 178-180, 201-210; Lada-Mocarski, pp. 476-477; U.S. Senate Resolution no. 279 ([Washington] December 1985) pp.1-4, especially p. 2; Henze: Berry; Holland (1994), p. 328; W. Barr, 'Franklin in Siberia? - Lieutenant Bedford Pim's proposal to search the Arctic coast of Siberia, 1851-52'. In: Arctic, vol. 45, no. 1, 1992, pp. 36-46.

219. Lindeman, p. 171; Nordenskiöld, p. 23; Pinkhenson, pp. 248, 607-608; S.L. Hooper, The discovery of Wrangel Island. Occasional papers of the California Academy of Sciences, no. XXIV (San Francisco 1956); U.S. Senate Report of the cruise of the U.S. Revenue Steamer Thomas Corwin, in the Arctic Ocean, 1881. By Captain C.L. Hooper, U.S.R.M., Commanding. 48th Congress, 1st Session. Ex. Doc. No. 204 (Washington 1884); Vaughan, pp. 201, 203, 266; U.S. Senate Resolution no. 279; Anonymous, 'Wrangel Island'. In: The Geographical Journal, December 1923, pp. 442-3; Horensma, pp. 22-26; B. Warren, 'The mapping of Wrangel Island. The story behind the name'. In: Mercator's World, vol. 1, no. 3, 1996, pp. 35-36; Diubaldo; W. Barr, 'A Tsarist attempt at opening the Northern Sea Route: the Arctic Ocean hydrographic expedition, 1910-1915'. In: Polarforschung, vol. 45, 1975, pp. 51-64, especially p. 57.

Review of "Historical and current uses of the Northern Sea Route, Part II: the Period 1745-1855" by Edwin Okhuizen

The century covered by this report was one of wide-ranging activity in terms of exploration of the Russian Arctic and of attempts at promoting and developing the use of the Northern Sea Route. Dr. Okhuizen has compiled a detailed and thorough study of all these developments, but his study does not stop there. He has also examined the geopolitics, the interactions with the indigenous peoples of Siberia, and the emergence, activities and demise of the Russian American Company.

A particularly useful contribution is a discussion of the history of cartography of the area. Clearly building on a detailed and specialized knowledge of the cartography of the Russian Arctic, Dr. Okhuizen almost invariably ends the discussion of the activities of each individual expedition with some account of the maps which emerged from it, and of the strength and weaknesses of each map.

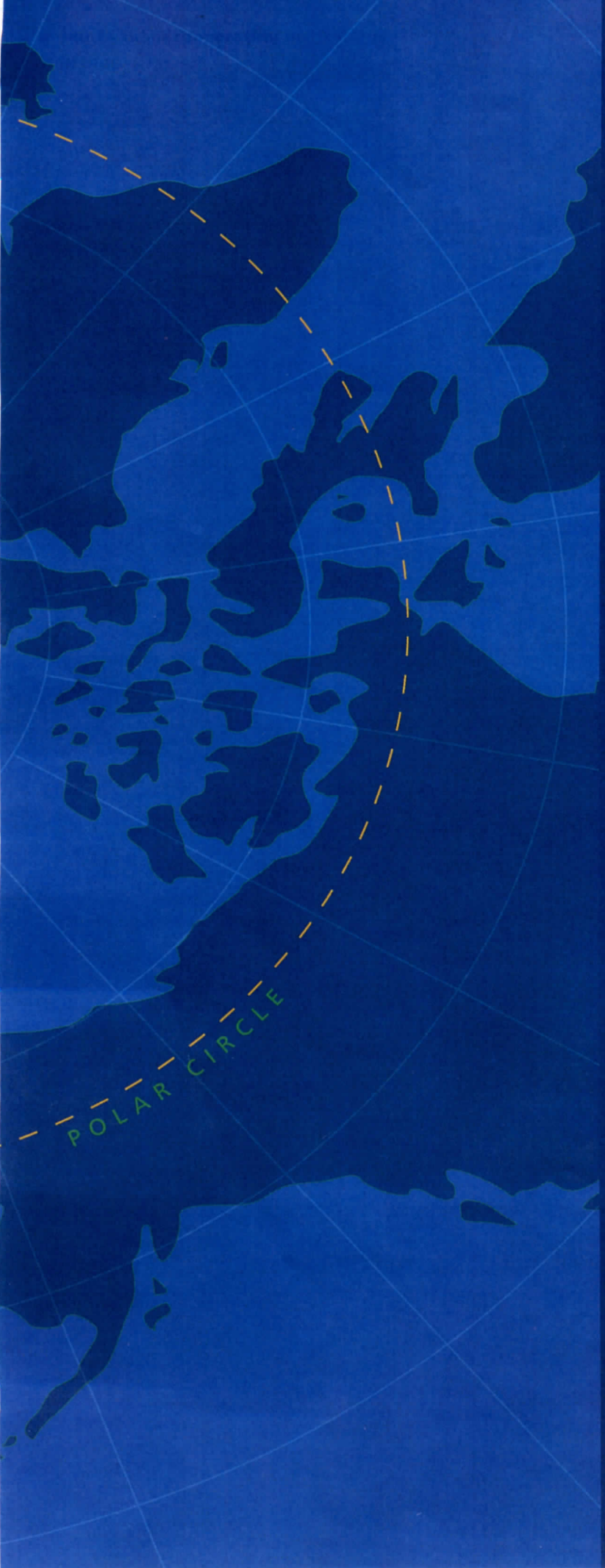
Given that English is not Dr. Okhuizen's first language, the report is well written; such minor errors as do occur will undoubtedly be corrected during the editorial process.

Until now there has been no reasonably detailed, comprehensive

account in English of exploration and development of the Russian Arctic during the period in question. Okhuizen's report thus fills a very major gap, and will prove of enormous benefit to scholars in the future.

William Barr

Saskatoon, 9 July '98



The three main cooperating institutions of INSROP

Ship & Ocean Foundation (SOF), Tokyo, Japan.

SOF was established in 1975 as a non-profit organization to advance modernization and rationalization of Japan's shipbuilding and related industries, and to give assistance to non-profit organizations associated with these industries. SOF is provided with operation funds by the Sasakawa Foundation, the world's largest foundation operated with revenue from motorboat racing. An integral part of SOF, the Tsukuba Institute, carries out experimental research into ocean environment protection and ocean development.

Central Marine Research & Design Institute (CNIIMF), St. Petersburg, Russia.

CNIIMF was founded in 1929. The institute's research focus is applied and technological with four main goals: the improvment of merchant fleet efficiency; shipping safety; technical development of the merchant fleet; and design support for future fleet development. CNIIMF was a Russian state institution up to 1993, when it was converted into a stock-holding company.

The Fridtjof Nansen Institute (FNI), Lysaker, Norway.

FNI was founded in 1958 and is based at Polhøgda, the home of Fridtjof Nansen, famous Norwegian polar explorer, scientist, humanist and statesman. The institute spesializes in applied social science research, with special focus on international resource and environmental management. In addition to INSROP, the research is organized in six integrated programmes. Typical of FNI research is a multi-disciplinary approach, entailing extensive cooperation with other research institutions both at home and abroad. The INSROP Secretariat is located at FNI.