

BERING DISCOVERS ALASKA
A Story from Alaskan History
Written on Sixth-Grade Level

By

AIMA HALL GRABER
"

Bachelor of Science

Central State College

Edmond, Oklahoma

1948

Submitted to the faculty of the Graduate School of
the Oklahoma Agricultural and Mechanical College
in partial fulfillment of the requirements
for the degree of
MASTER OF SCIENCE
May, 1954

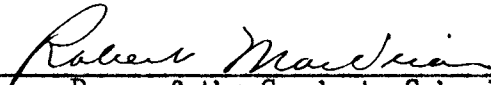
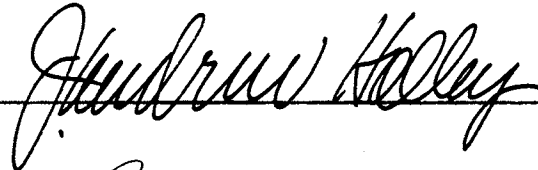
OREGON
AGRICULTURAL & MECHANICAL COLLEGE
LIBRARY
JAN 10 1955

BERING DISCOVERS ALASKA
A Story from Alaskan History
Written on Sixth-Grade Level

Thesis Approved:



Thesis Adviser



Dean of the Graduate School

333816

PREFACE

This story of the discovery of Alaska is written as a protest against the presentation of history for grade children as a collection of facts and dates. History, if presented in a form that a child can understand, naturally appeals to his love of action; yet a recent survey shows that history is one of the most disliked school subjects of seventy-two per cent of the children questioned. Forty-seven per cent place history as their most disliked subject. Their main objections are as follows: History involves too much memorization; the material lacks continuity; and the subject matter is dull, uninteresting, and unimportant. None of these conditions is intrinsic in history itself. The trouble lies in the selection and presentation of the material.

The content of the story developed in this study was judged by two basic criteria: Is it historically accurate? Will it be interesting to sixth graders? In considering the presentation of the story, the question was constantly asked: Can sixth graders understand this? No attempt was made to assign space to a topic according to its importance. Details were included which were not historically significant, if they added to the interest of the story. No apology is made for this procedure. If children can read the story, understand it, and like it, the purpose of this thesis will have been accomplished.

In working on this project, encouragement was received from so many people that it is impossible to name them all. Special thanks are due to the following persons: Mrs. Vernon C. Johnson, Librarian,

Central State College, Edmond, Oklahoma, for her kindness in lending materials when the study was first started; Mr. Edmon Low, Librarian, Oklahoma A and M College, and his staff, for their efficiency and courtesy in obtaining materials, even to procuring them from other libraries and purchasing some of the newer histories; Dr. Stuart R. Tompkins of the University of Oklahoma for his suggestions regarding available sources of materials; Dr. Alfred Levin, Professor of History, Oklahoma A and M College, for his courtesy in acting as a consultant; Clinton L. Grimes, Graduate Assistant in English, Oklahoma A and M College, for his interest, encouragement, and constructive criticism; Dr. J. Andrew Holley, Dean of the School of Education, Oklahoma A and M College, for reading the manuscript and suggesting improvements; Miss Lois Morey, Education Supervisor, Territorial Department of Education, Juneau, Alaska, for valuable suggestions; and, finally, Dr. Ida T. Smith, Associate Professor of Education, Oklahoma A and M College, for the hours of time she devoted to discussing this problem, reading the manuscript, and correcting it, and for her never-failing patience and kindness.

TABLE OF CONTENTS

	Page
Part One Introduction	vii
Part Two BERING DISCOVERS ALASKA	
Chapter	
I. Bering's First Expedition.	1
II. Bering and Chirikov Sail Again	10
III. The Voyage of the <u>St. Paul</u>	21
IV. The Voyage of the <u>St. Peter</u>	29
BIBLIOGRAPHY.	40

LIST OF MAPS

Maps	Page
1. Route of Bering's First Expedition	Opposite page 1
2. Route from Yakutsk to Okhotsk.	4
3. Route from Okhotsk to Lower Kamchatka Fort	6
4. Course of the <u>Gabriel</u>	8
5. Course of the <u>St. Paul</u>	Opposite page 21
6. Course of the <u>St. Peter</u>	Opposite page 29

INTRODUCTION

"The importance of a rich and plentiful supply of books other than the textbook has long been recognized in connection with social-studies instruction....Furthermore, research has repeatedly shown that existing supplies of books were inadequate."¹

This situation is particularly true in the field of Alaskan history. Only one text (Marietta Shaw Pilgrim's Alaska: Its History, Resources, Geography, and Government) has been published for use in this important area, and it is generally believed that this book can serve best as a reference for the teacher. Books which tell the history of Alaska in narrative form for elementary school pupils are not available; yet few courses in local history can excel that of Alaska in incidents that are intrinsically and fundamentally interesting to children--stories packed with action and adventure.

The problem then was the production of a historically accurate story which contained material suited to the interests of grade school pupils and presented it in a form which they can read and understand. This thesis is the result of the author's attempt to produce a story of early Alaskan history which meets these requirements.

Such an attempt involved two problems. The first was the historical research for the material; the second, the study of the research concerning readability and how to write for a specific grade level.

¹Edwin W. Carr, Edgar B. Wesley, and Wilbur F. Murra, "Social Studies," Encyclopaedia of Educational Research, Revised Edition, 1932.

Previous to 1925, students who did not read Russian, German, or French had difficulty in studying Russian-Alaskan history, for, with the exception of Golder's Russian Expansion on the Pacific, books written in English covering this period were not generally available. Golder's translation in 1925 of Bering's and Chirikov's log books, their reports of the expeditions, and Steller's account of the second expedition made a wealth of hitherto unknown material readily usable. Two years ago additional information was released to English-speaking people when Sven Waxell's account of the second expedition was translated into English. In recent years some histories of Alaska have been published for adults, but the field of making this material available for children remains untouched.

Facts for the story herein presented were based upon materials taken from histories of Alaska, source materials, and translations of source materials. From this wealth of information the author selected incidents believed to be interesting to children and details which would answer many of their questions and add to their understanding and appreciation of Bering's tremendous undertaking.

The author then studied the problem of presenting the material in a fashion suitable and interesting to children. Articles written by professional authors, vocabulary studies, and research made in the field of improving readability of writing were studied. Thorndike's word list, a compilation of the twenty thousand words which adults most commonly use in writing for children, was checked. Most of the words in the story are in the first five thousand of this list. Rinsland's list, a study of the words which children use in their own writing, was also used in judging the difficulty of the vocabulary. The writer

then used Rudolph F. Flesch's The Art of Plain Talk and his revised formula for measuring reading ease and human interest as a basic guide for the story produced in this study.

In writing the story, the author used various devices for gaining and holding pupil interest. Short, direct sentences were used in conversation to improve the readability of the selection.² Repetition of ideas has been frequently employed to make learning easier. Shades of meaning have been sacrificed in order to simplify the vocabulary. Diacritical markings and phonetic spellings of unusual names have been placed adjacent to the words as they occur in the story so the child need not interrupt his reading to look them up.

The Columbia Lippincott Gazetteer of the World has been used as the authority for the pronunciation of most of the proper names. The few Russian family names not found in this reference have been marked according to the pronunciation approved by Russian-speaking instructors at Oklahoma A and M College.

Although this story was planned for use in the sixth grade, measures were taken to insure a reading difficulty below that of sixth grade. According to Dale and Chall,

In the subject matter areas, selecting a book that will be within the comprehension of the lower half of the class is even more important. Since our chief purpose is to impart information rather than to give practice in reading, we must make certain that no unnecessary difficulties keep the less able readers from learning their history, geography, and science.³

²Julian Alden, "Lots of Names--Short Sentences--Simple Words," Printer's Ink (June 29, 1945) p. 21.

³Edgar Dale and Jeanne S. Chall, "Techniques for Selecting and Writing Readable Materials," Elementary English (May, 1949), p. 255.

Beginning with the first paragraph of each chapter, a one-hundred-word sample from every other page was measured for reading ease by the revised Flesch formula.⁴ These scores were averaged. On the Flesch scale of reading ease, scores of 90-100 indicate very easy material; 80-90, easy material; 70-80, fairly easy; and 60-70, standard.

The first one hundred sentences of each chapter were measured for the quality of human interest by the same formula. On the Flesch scale, a score of 40-60 is rated as highly interesting and a score of 60-100 as dramatic.

The reading ease and human interest of this story, thus measured, are as follows:

	Reading Ease	Human Interest
Chapter I	Fairly easy	Highly interesting
Chapter II	Fairly easy	Dramatic
Chapter III	Easy	Highly interesting
Chapter IV	Fairly easy	Dramatic

As a final check on the difficulty of the material, Chapter I was hectographed and presented to a sixth-grade class of Jefferson School in Stillwater, Oklahoma. After the pupils had read the story, they were asked to answer questions testing their comprehension of and attitude toward the narrative. These questions were grouped in two divisions, although the divisions were not marked on the sheets given to the pupils.

The questions were as follows:

Comprehension questions.

1. What was the aim of the expedition?

⁴Rudolph Flesch, "A New Readability Yardstick," Journal of Applied Psychology (June, 1948), pp. 221-233.

2. Who was in command of the expedition?
- 3,4. Who were his lieutenants?
5. Why did it take so long to go from St. Petersburg to Kamchatka?
6. Why did Bering cross the Peninsula of Kamchatka rather than sail around it?
7. Why did Bering want to make another expedition?

Attitude questions.

1. What do you like best about this story? Why?
2. Is there any part you wish had been left out? Why?
3. Is there any part you thought was hard to understand? If so, which part?

The children's responses on the questions were as follows:

<u>Question Number</u>	<u>Number of Responses*</u>	<u>Number of correct responses</u>	<u>Per cent of correct responses</u>
1	30	29	97%
2	29	27	93%
3	29	20	69%**
4	29	23	79%
5	29	27	93%
6	28	21	75%
7	28	23	82%

Although the pupils were not asked if they liked the story, some volunteered remarks as follows, "I thought the whole thing was good;" "There is not any part that should be left out because it was all so good and interesting;" "I think any sixth grader should be able to understand it;" and "I liked it all because I like exciting stories."

*Some pupils left class early and did not have time to finish. If a question was left unanswered for any other reason, it was counted as an incorrect response.

**Probably the hard Russian name "Chirikov" made this question difficult.

One pupil said he found the large map hard to understand. This map has been simplified.

The incident concerning Spanberg, the loss of his boats, and his adventures until he was rescued proved most popular, even with the girls.

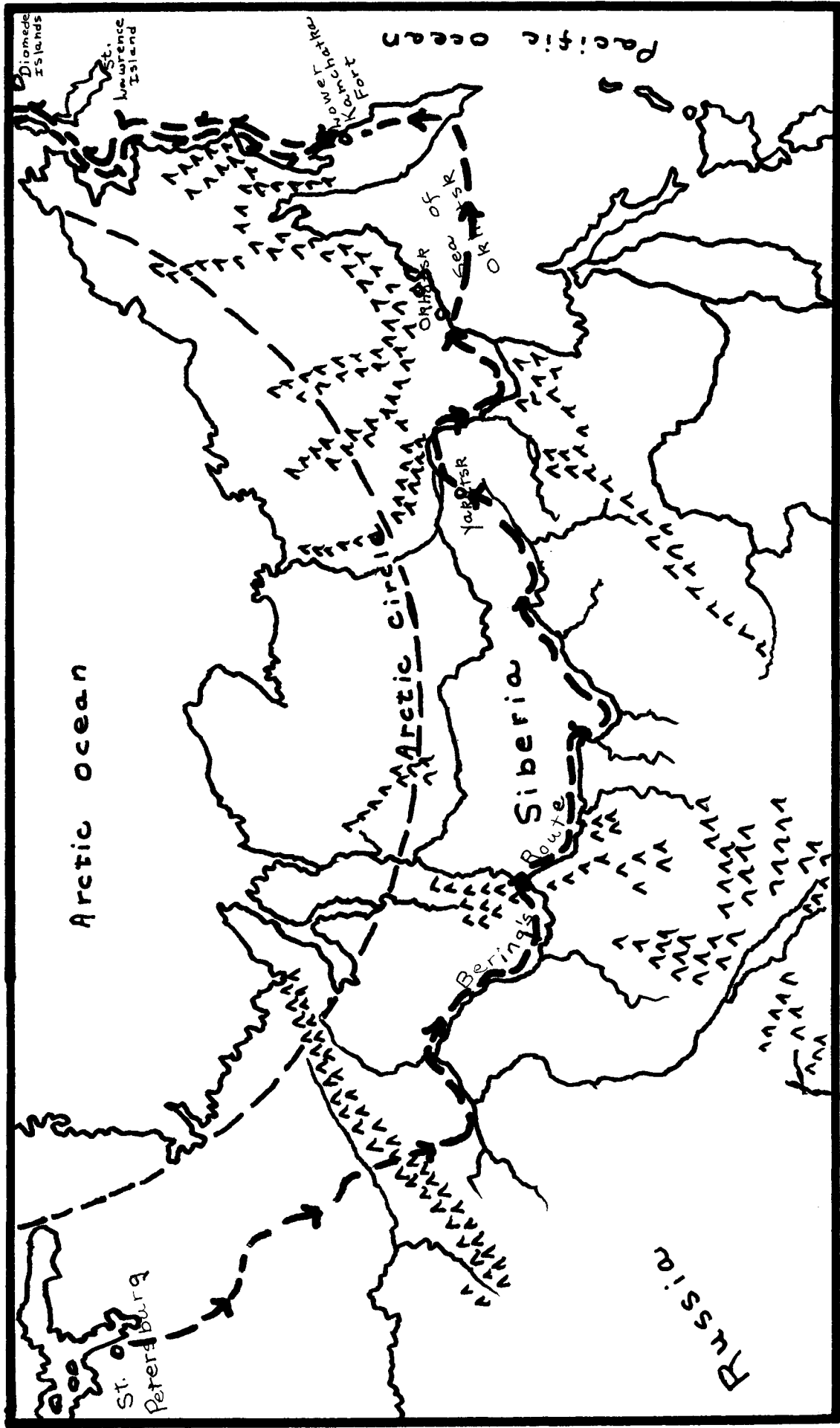
From the children's responses to the questions and from the informal discussion, the conclusion may be drawn that the story presented was understood and enjoyed by this sixth-grade class.

The writing of Alaskan history in story form for children is a virgin field. Everything remains to be done at this level. This is but the first of many stories that could and should be written in order that American children can learn, enjoy, and appreciate the colorful figures and exciting experiences of the makers of Alaskan history.

It is the recommendation of the writer that this story, if published, be illustrated with action pictures and pictorial maps, preferably by an Alaskan artist.

Much remains to be done in the field of determining what makes materials more readable for children, listing the vocabulary which children comprehend in reading, and analyzing the reading difficulty of words used as different parts of speech. Studies have been made to see what words adults use in writing for children and the words that children themselves use in writing; but neither of these is a guide as to the words children can understand when they see them in context. Likewise, we know that "man" is understood by the very young when used as a noun; but at what age does a child understand the expression "man a boat"? No studies have been made to determine the relative difficulty of words used as different parts of speech. Here is an area in which

numerous studies could be made which would contribute appreciably to teachers' knowledge of reading difficulties. All such studies would contribute to the efforts of those who are trying to write for children.



1/16" = 500 miles 1. Route taken by Bering's First Expedition

Chapter I

BERING'S FIRST EXPEDITION 1725-1730

"So we are to go at once," Vitus Bering (Vi'tūs Bě'ring) said to his two companions, "to Kamchatka (Kām chăt'kü) and-----"

"Kamchatka!" Martin Spanberg and Alexei Chirikov (Ä lěk'sā Chi'rī kōf) looked at each other in amazement.

"Yes," Bering repeated, "to Kamchatka. There we will build a ship and sail northeast along the coast. Our purpose is to find out whether Asia and America are joined in the North Pacific Ocean."

"But," said Spanberg, "it is six thousand miles from this city of St. Petersburg to Kamchatka!"

"And," added Chirikov, "there are no boat-building materials in Kamchatka except timber. Everything else, sails, ropes, carmons, powder,—yes, and even part of our food—we will have to take from Yakutsk (Yū kōōtsk')."

"Yes, all of these things are true," Bering agreed. "But Peter the Great, ruler of Russia, has signed the order for the expedition, and he has chosen us to head it. You two are to act as my lieutenants."

"Now," interrupted Spanberg, "exactly what did you say this expedition is expected to do?"

Bering explained, "The world knows little about the geography of the North Pacific Ocean. We are to find out whether Asia and America are one continent or two. And we are to set out at once. You, Chirikov, will leave this month and go overland to Okhotsk (Ō kōtsk')."

"But there are no roads, no bridges--not even a trail--from Yakutsk to Okhotsk!" said Chirikov.

"Then we will build them, just as we will build rafts and barges and boats to use on the rivers! At Okhotsk we will build a ship so we can sail across the Sea of Okhotsk to Kamchatka. Then we will cross the peninsula to Lower Kamchatka Fort. There we will have to build still another ship so we can start on our voyage," answered Bering.

"How long do you think it will take us?" asked Chirikov.

"Well--let me see. It will take us three years to reach Lower Kamchatka Fort with all our supplies. Since the North Pacific Ocean is free of ice such a small part of the year, we will do our exploring in the summer. Then we will return to Kamchatka, winter there, and the next year start back to St. Petersburg with our report. We should finish some time in 1730."

"Five years to find out whether Asia and America are connected!" exclaimed Chirikov.

Bering answered, "The expedition will be neither short nor easy. But you, Chirikov, will want to bring honor and glory to your native Russia. And you, Spanberg, left Denmark four years ago to join the Russian Navy. At that time you promised to serve Russia to the best of your ability. I made such a promise in 1704."

Bering stood silent, thinking of his childhood in his native Denmark. He remembered his father who, though poor, had held offices of trust in his town. He recalled his mother and her family of famous lawyers and ministers. He wondered what had become of his many brothers and sisters, for he had heard little of them since going to sea.

"I thought my sea-going days were over when I resigned from the Russian Navy last year," continued Bering. "But when Peter the Great asked me to head this expedition, I could not refuse."

"I didn't join the navy to take a six-thousand mile hike across Siberia!" growled Spanberg. But Bering knew that the big Dane, though rough, ill-tempered, and uneducated, would do his work well. Moreover, he knew that Spanberg's ability, energy, experience, and courage would be valuable in this tremendous undertaking.

It would be no ordinary expedition. The starting point was on the edge of a country known only to fur-hunters. It was in a bleak, barren region six thousand miles from the capital of Russia. The route went through one of the most desolate parts of the world. Over this route must travel not only the men making the voyage but also hundreds of ship carpenters, sail makers, blacksmiths, and laborers.

The men lost no time in starting. The towns of Siberia were small and far apart. The country itself produced little food. For these reasons, the expeditions traveled in three groups. The young Chirikov, pride of the Russian fleet, was first to leave. He left the last of January, 1725, with twenty-six men and twenty-five wagon loads of material. Within a few days, the other two groups followed.

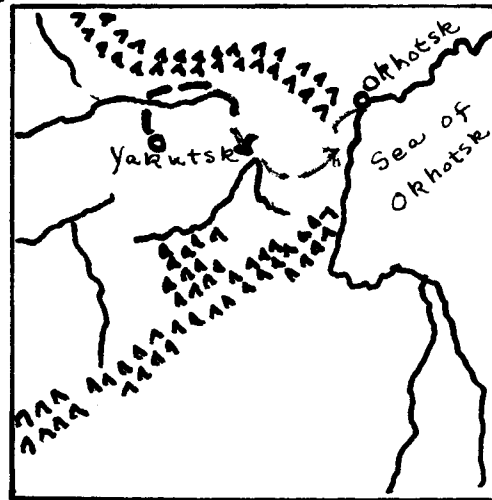
Season after season the men worked their way eastward. They traveled in the blistering heat and the choking dust of summer. They crossed vast snow fields during the bitter cold of winter. They abandoned their wagons and carried their supplies when the horses could not draw their loads through the deep mud. They hacked their way through dense forests. They crossed Siberia building countless rafts, loading their supplies on them, going up and down rivers, skirting hidden rocks

and dangerous rapids, unloading their supplies, carrying them to the next stream, again building rafts, and repeating the process.

In this way the weary expedition reached Yakutsk during the summer of 1726. The carpenters went on to Okhotsk to start building a ship to use in crossing the Sea of Okhotsk. Bering tarried to buy supplies which could not be bought in the villages farther east.

Yakutsk and Okhotsk were seven hundred miles apart--seven hundred unmapped miles of dangerous swamps, thick forests, and steep mountains cut by deep streams.

In August, Bering and his men left for Okhotsk with two hundred pack horses carrying food and other supplies. Without even a trail to follow, men and animals quickly became exhausted. They had no shelter except a space cleared in the snow. Here they cooked, ate, and slept. When blizzards raged, a few steps from camp could prove fatal. The horses, small and hardy, searched in vain under the snow for food. Many of them starved, and their dead bodies dotted Bering's route.



2. Route from Yakutsk to Okhotsk

After forty-five days of suffering and hardship, this group reached Okhotsk, a village of ten huts. They first built houses in which to live during the winter. They then worked on the Fortuna, the ship which the carpenters had started before Bering's arrival. Because so many of the horses had died, the men had to carry or drag timber for distances as great as six or seven miles. Often they stopped their ship-building and went hunting or fishing to keep from going hungry. They had no feed

for the cattle which the natives brought to them. Neither had they salt to use in keeping the meat. So while the weather was still cold enough that there was frost at night, the men filled boats or hollowed-out logs with sea water. Each morning they removed the layer of ice which had formed during the night. When the water no longer froze, the men boiled the brine until the salt separated. Pouring off the remaining water, they had pure, white salt. Then the men killed the cattle and salted and dried the beef. But these extra tasks, the work of building the boat, and the hardships combined to make the men rebellious. They sometimes refused to obey Bering's orders, saying that they had not received their pay. Then Bering would remind them that the government, not he, was to blame for that condition.

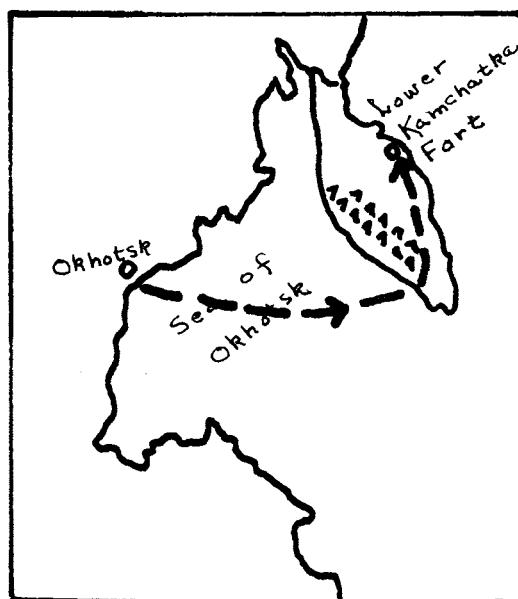
Meanwhile, Spanberg had left Yakutsk with two hundred workmen and thirteen rafts of heavy supplies. Much of his route lay against the current of the streams. The men had to walk along the rough, slippery banks and pull the flat-bottomed vessels upstream. In places, thirty men, standing in water to their waists, could scarcely move the rafts against the swift current. It swept away barges and supplies; men deserted or were drowned.

A severe winter set in unexpectedly early. Spanberg's boats were frozen fast in a river three hundred miles from Okhotsk. He left seven men to guard the boats and their contents and sent a messenger to tell Bering what had happened. The rest of the men put supplies on sleds. They harnessed themselves to the sleds and continued on foot. The weather became colder and colder. Progress was almost impossible. The men ran out of food. Exhausted, they abandoned their sleds. Without food or shelter they struggled on. At night they wrapped themselves in

all the furs they could find and slept in the snow. In an effort to satisfy their gnawing hunger, they chewed leather straps and the tops of their boots. They were saved from starvation when, by accident, they came across Bering's trail. There they found the sacks of flour which Bering had been forced to leave behind when his horses had starved or frozen. They ate not only the flour but also the dead horses. By these means they managed to live until the relief party sent out by Bering reached them and helped them into Yakutsk.

The last of the groups, Chirikov and his men, arrived in Okhotsk in the middle of the summer of 1727. A month later they sailed for western Kamchatka in the Fortuna. Part of the crew freighted additional supplies across the Sea of Okhotsk in a government boat. They unloaded the supplies on the west coast and took them overland on sleds to Lower Kamchatka Fort. Natives were brought from far and near to help in the work. Many men died before the supplies were all moved to the Fort.

The expedition did not sail around the peninsula and into the harbor at the Fort because no one had ever taken that route. Therefore Bering did not know how far it was, and he was unwilling to risk his precious cargo in unknown waters. Moreover, his ships were hardly seaworthy.



-3. Route from Okhotsk to Lower Kamchatka Fort

When Bering reached Lower Kamchatka Fort in March, 1728, he found a settlement consisting of a church, a fort, and forty huts scattered

along the river bank. The town, twenty miles from the sea, was surrounded by forests of larch. These trees provided excellent timber for ships.

More than three years had passed since Bering and his men had left St. Petersburg. They had traveled six thousand miles through wild, desolate, hardly-known regions of the world. They had endured the extremes of blistering heat and biting cold. Men had frozen, drowned, starved. Those who were left could now start the work with which most expeditions begin. They ignored the past and set about building their vessel and stocking it with food and other supplies.

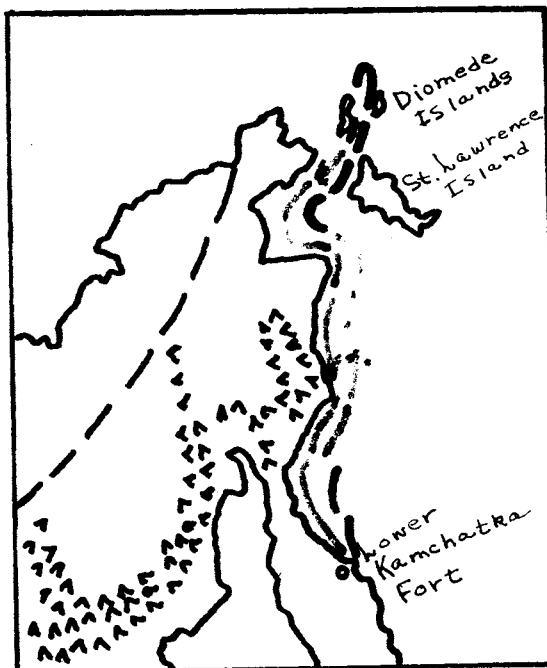
At Lower Kamchatka Fort there were no mills, no factories, no foundries--no industries of any sort. Bering had to use in building and supplying his ship only the materials he had dragged two thousand miles from Yakutsk and those he could make from the local resources. And the local resources were few.

Trees were hauled out of the forests on dog sleds. From this timber a ship sixty feet by twenty feet by seven and one-half feet was built. In June she was named the Gabriel; but because tar had to be made by boiling larch trees, she was not ready to sail until July. She was stocked with food for forty men for a year's voyage. Included were dried fish and beef, fish oil for use as butter, salt which had been obtained from the sea, and flour which had been brought from Yakutsk. To prevent scurvy,* a liquor was made of a wild sweet grass.

On July 14, 1728, the Gabriel sailed with a crew of forty-four. The route followed the coastline, and most of the time the men could see land to both the north and the west.

*Scurvy--A disease caused by lack of Vitamin C.

One day eight natives rowed out from the Siberian shore. Because they were too far away to talk with the crew,* the natives put one man out of their boat. With the help of large seal bladders filled with air, he swam close. He told them that a short distance away the coast of Asia turned west. Bering regarded this remark as evidence that Asia and America were not connected. The native also told of an island not far away.



4. Course of the Gabriel

On August 10, Bering sighted this island and named it St. Lawrence in honor of the day.** He twice sent men to the island; they found a few huts on it but saw no people.

Four days later, Bering had reached latitude 67° north and could no longer see land to the north. He decided that Asia and America must be separated at this point. He realized that if winds blew from the wrong direction he could not return to Kamchatka for the winter. So he turned back at once. The following day he saw and named the Diomede (Di'ū mēd) Islands. On two different days he was close to the Alaskan mainland, but he did not see it because of cloudy weather.

*Russian fur hunters and government men had met natives of Siberia before. It is likely that some of the crew had in this way learned the language of the Siberians.

**St. Lawrence Day--August 10, named St. Lawrence Day in honor of a Roman martyr.

On the return trip, Bering and his men were again approached by natives from Siberia. Forty of them came close in four boats. They offered to trade meat, fish, fox skins, and walrus tusks for needles and similar articles. They too told Bering that the Asian coast turned west and that islands were to be found a short distance away.

Two days before Bering reached port, a storm overtook the ship. It tore the weather-beaten sails and broke the anchor cable. The anchor was lost in the sea.

Bering spent the winter of 1728-29 in Kamchatka. The following year he carried to St. Petersburg a report of what he had done. He himself was convinced that Asia and America were not joined in the North Pacific Ocean. However, the scholars at St. Petersburg declared that he had no proof of his claim. They considered the belief of the natives unimportant. They said they would doubt the accuracy of his report until they had proof.

Because the scholars did not accept Bering's report, he asked the Empress Anne (Peter the Great had died and Anne was now ruler of Russia) to let him make another expedition. He wanted to find the mainland of America and chart its coastline. He thought that in this way he could prove that Asia and America were not joined.

Chapter II

BERING AND CHIRIKOV SAIL AGAIN

When Empress Anne had heard Bering's story, she looked at him thoughtfully. "But, Bering," she said, "only a year ago--in 1730--you returned to St. Petersburg from an expedition to discover whether America and Asia are connected in the North Pacific Ocean. You say you are sure they are not. Why, then, do you want to make another voyage?"

"Your Highness," answered Bering, "I am convinced that the two continents are separated, but the scholars here at St. Petersburg are not. They say I have brought back no proof of my claims. I know that America lies not far east of Kamchatka!"

"How can you be so sure?"

"I spent the winter of 1728 in Kamchatka, and in 1729 I sailed around the southern tip of the peninsula. I saw many signs of land to the east--a large body of land. When an east wind blew, it brought ice to Kamchatka in three days. A north wind did not bring ice until five days had passed. Since ice forms near the shores, we should reach land by sailing east from Kamchatka. Too, at times I saw land birds come from the east and fly back in the same direction."

"Have you other reasons for believing that America is near Kamchatka?"

"Oh, yes! Sometimes I found trunks of fir trees which the waves had washed up on the shores. As you know, no fir trees grow in Kamchatka. And once when I was walking along the beach, I found a whale

with a strange spearhead in its back. None of the natives we know make such spearheads."

"So you believe that these things--the ice, the land birds, the trunks of fir trees, and the strange spearheads--are proof that America lies east of Kamchatka?"

"No matter what others think, I think they are proof that some land lies to the east. It is most likely that the land is America. I want to make another expedition to find the mainland of America. I want to chart its coastline. Then those scholars who question my report must admit that what I have said is true."

"You have convinced some people, Bering. Friends of yours have asked me to send out another expedition. I have already given thought to it and made plans for it. But I insist that the expedition be a scientific one."

"Do you mean that scientists are to go along?"

"You will take along surveyors, a naturalist, an astronomer, a landscape painter, and scientific assistants, with all their equipment. You will chart the coastline--if you find the mainland--and study the plant and animal life of any country you reach. This expedition must be for the benefit and glory of Russia."

"Have you made further plans?" asked Bering.

"Yes. At Okhotsk you will build two ships. You will command one. Chirikov will command the other. I have ordered the governor of Okhotsk to make ready for your arrival. He will settle natives near there to plant grain and raise sheep, cattle, and horses. Still others will cut timber so that the ship-building can start before you reach Okhotsk."

"Your Majesty, this expedition will be long and hard. Men will be absent from their homes for years. They will endure many hardships on the way to Kamchatka. And on the voyage they will face even more dangers. It will be hard to get men to go."

"I have thought of that. And because this expedition will be the hardest and the longest ever undertaken, I will promote in rank and give double pay to those who make the voyage. Officers may draw two years' pay in advance and may take their families to Siberia with them."

"Where will I get laborers?"

"As you travel through the country, you will hire natives and exiles. At the forts you will add soldiers to the expedition. At Yakutsk are many strong young men in prison for debt or crime. You will take three hundred of them to do heavy labor. I shall want to know of your progress, so I will establish a mail service between St. Petersburg and Kamchatka. Mail carriers will bring me your reports and carry my orders to you. Have you thought how long such an expedition will take?"

"I believe we can finish in six years," answered Bering.

"And what do you think it will cost?"

"I have spent some time figuring the expense. If we do not include salaries and the cost of supplies taken from here, it should not be more than 10,000 to 12,000 rubles (\$10,000 to \$12,000)."*

The well-made plans, however, were not carried out. A year passed before an official announcement of the expedition was made, and another six months had gone by before the orders were issued. All the problems

*In those days, a pound loaf of bread cost 3¢ and a lower middle-class family of five persons spent \$1.50 a week for food.

of the first expedition were magnified. More men and greater loads of supplies had to travel over those torturous thousands of miles. More than three thousand men worked moving the supplies, mining and smelting iron ore, felling trees, and building roads, bridges, houses, and ships. The country through which this small army marched could not furnish food for so many men. In fact, it supplied only rye flour and groats.* The local rulers of Siberia often had to choose between giving food to the expedition and starving their own people. Many of the delicate instruments required a special handling. The astronomer had nine wagon-loads of equipment, including twenty-seven barometers, twenty thermometers, and several telescopes, some of them thirteen and fifteen feet long. Other supplies included several hundred books, enormous amounts of paints, and seventy reams of writing paper.

In February, 1733, Spanberg left St. Petersburg to go to Okhotsk to hasten the building of the ships. Bering left two months later. The Ob (Ōb), the Yeniesei (Yēn ĭ sã'), and the Lena (Lē'nu)--these rivers form a network of streams by means of which the men crossed Asia. Travel was a matter of building scores of boats, rafts, and barges, loading the tons of supplies on them, piloting the vessels up and down rivers which crossed steep mountains and wide plains, unloading and abandoning the boats, finding some way to take the supplies cross-country to a second stream, and repeating all the slow, discouraging labor. In summer, the men hauled their supplies from one river to the next one in wagons. In winter, a man on foot would drag one hundred eighty pounds of supplies on a long, narrow sledge. Sometimes reindeer were found to pull these sledges, but a deer could pull no more than a

*Groats--The part of oat kernels used as food.

man could. Thus the expedition slowly crossed the vast Siberian wasteland. In six years' time Bering had gone only as far as Yakutsk and had spent more than 300,000 rubles instead of the 10,000 to 12,000 rubles which he had expected to spend on the entire voyage.

The lack of food, the extreme cold, and the hard work exhausted the men. Many deserted. In a last effort to discourage deserters, the leaders built a gallows every thirteen miles. Thereafter, few men deserted.

The members of the expedition quarreled among themselves. The scientists refused to recognize Bering's authority. Bering's officers sometimes sided with him; at other times, they agreed with the scientists. Both groups loaded down the mail carriers with charges and complaints addressed to the Empress. She, in turn, held Bering responsible for the lack of progress. She cut his pay in half from January, 1738, to July, 1740. Bering felt that the Empress expected him to do more than he--a man almost sixty years old--could possibly do.

When Spanberg reached Okhotsk, he found that the governor had not obeyed the Empress' orders. He had made no preparation for the coming of the expedition. Not a seed had been planted, not a head of livestock raised, and not a tree cut. The only food the men found there was salmon which came up the river from the sea in the spring and garlic which grew wild.

At Okhotsk two ships were built. Each was eighty feet by twenty feet by nine feet, had two masts, and carried fourteen two- and three-pound cannons. The St. Paul, with Chirikov in command, carried seventy-six men, while seventy-seven men sailed with Bering in the St. Peter. In 1740 these ships rounded the Kamchatkan Peninsula and went to Avacha

(Ů vā'chū) Bay. There the men built a town. And because the St. Peter and the St. Paul were the first sea-going vessels ever to use its harbor, the settlement was named Petropavlovsk (Pět ů pāv'lufsk).

At the same time the St. Peter and the St. Paul sailed, two freighters left Okhotsk for the eastern side of the Kamchatkan peninsula. There their supplies were to be unloaded and taken overland to the town because Bering did not believe that his cargo vessels could stand the stormy trip around the peninsula.

In Petropavlovsk, Bering waited for the men to bring his supplies so he could make final preparations for the voyage. Weeks passed, but the men did not arrive. Bering grew impatient; then he became worried. He began to wonder whether he would ever start on the expedition. Finally one day one of the lieutenants came excitedly into Bering's cabin and said, "Captain Commander!* Levachev (Lě vā'chěf) is here!"

"And who is Levachev?"

"Levachev, the soldier. He has come with the first of the supplies from the freight boats."

"Bring him in without delay."

But Bering was too excited and too impatient to wait for Levachev to come. He went out to meet him. "God be praised!" he exclaimed. "I was beginning to fear that all of you were lost! What happened? I expected you fully a month ago."

"Captain Commander, we have had a terrible time. To begin with, we lost one of our boats in the Sea of Okhotsk."

"What! Which one? Was the crew saved?"

"Fortunately, not a man was lost."

*"Captain Commander" was Bering's official title.

"I thank a merciful God for that! But which boat was lost? What was its cargo? Was any of it saved?"

"We lost it all—the extra rigging and the sea biscuits for the voyage."

"The extra rigging and the bread for the voyage gone! What else can go wrong before this ill-fated expedition starts!"

"Sir, we could not prevent the disaster. The storm came up so quickly we were helpless. It was all we could do to save the crew."

"Well," said Bering slowly, planning as he spoke, "we can't buy a piece of rope this side of Yakutsk. We will have to sail without extra rigging. And we won't be able to get much flour here, but perhaps we can buy some. I fear, though, that this means that we will have to return to Kamchatka for the winter. I had hoped that we could find the mainland of America and spend the winter there."

"Then, sir, we had trouble with the natives."

"What kind of trouble?"

"Well, sir, you know that we needed their help in moving the supplies overland. So we went inland for thirty or forty miles and got all the natives we could and told them to bring their dogs to pull our sleds of supplies."

"Yes. Go on."

"But many of these people had never before been more than five miles away from home. And they did not seem to care for the money we paid them for the use of their dogs."

"True," said Bering. "They have no use for money and no idea of what it is for."

"Moreover," continued the soldier, "they love their dogs above all other things. We tried to treat them kindly, sir, but they just would not work! They are never so happy as when they are idle. They have no ambition or pride. And we, of course, were desperate to get our supplies moved. We knew you were waiting for us. At last we had to use force. Then they rebelled, and--why, sir, they killed several of our men!"

"And then what?"

"Well, sir, I was sent to round up the natives, for they had retreated with their wives and children to some rocky islands. I saw no other way to subdue them, so I threw some hand grenades to the islands. Heaven forgive me!"

"What happened?"

"I never realized, sir--but those natives did not know what grenades are! Laughing, they ran over to the shells just as they exploded. Never shall I forget that horrible sight! Some were killed; others were wounded."

"Yes, and then what?" asked Bering.

"The others surrendered. We took them to headquarters for questioning and punished the guilty ones. After that, the natives and their five thousand dogs moved our supplies without more trouble. But that's why we are so late."

"I was afraid you had had trouble, but I never dreamed of rebellion. I fear the Empress will be very angry when she hears of this. But it can't be helped now. We will have to make the best of a bad situation."

"Can we get food here so we can save for the voyage the supply that we now have?" suggested Levachev.

"Fortunately, several hundred reindeer have been brought here for our use. We can buy dried fish from the natives. We'll live on fish, reindeer meat, and a half ration of bread until we sail."

The men followed this plan. But the loss of the freight boat and the rebellion caused Bering to sail a month late, without any extra rigging. Moreover, he had scanty stores of food for five and one-half months instead of an ample supply for two years.

In those days, the captain of a Russian ship did not make the decisions concerning a voyage. He called a council of his officers to help him solve problems which arose. So one day in May, 1741, Bering called such a council. When all members had arrived, he addressed them, "We are here to discuss the course we should follow on our voyage. In which direction do you think we should sail?"

One officer replied, "We officers have discussed this question time and again this winter, and all of us think that land lies to the east or the northeast."

"That's right," agreed another officer.

"But," said the astronomer, "this map, which a European geographer drew for me, shows land to the southeast."

"Had that geographer ever made a voyage in this region?" asked one of the mates.

"No," admitted the astronomer, "but the Empress expects us to follow the map. Moreover, the North Pacific Ocean is dangerous early in June because of floating ice. If we first sail southeast and locate the land there--if there is land there--we can then turn northeast and try to locate the American mainland."

Despite the fact that all the seamen believed that land lay to the east or the northeast, they agreed to the course suggested by the astronomer. In addition, they planned that, once America was found, they would sail to latitude 65° north, then go west to the coast of Asia, and return to Avacha Bay in September, 1741.

Then Chirikov asked, "Are the two boats to keep together?"

"By all means. Our orders state that we are to do so," said Bering.

"Then we need some way to send messages from ship to ship when we are not close enough to use the speaking trumpet,"* said Chirikov.

"Yes, we will have to work out a system. I will talk with you about it at a later time."

Three weeks later Bering called Chirikov to him and gave him a code of signals to use on the voyage. Among other instructions, he said, "When we find it necessary to anchor, we will fly a red, white, and blue flag and fire one gun. If we are to hold religious services, we will fly a white flag with a blue cross and fire one gun."

"What shall I do if the ship should spring a leak?" asked Chirikov.

"In that case, stop and fire two guns."

"And how shall we signal each other in fog or at night?"

"In fog, use the guns. For example, if you decide to anchor during foggy weather, fire two guns, one after the other. At night we will use the guns and the lanterns. If you find it necessary to drop behind us at night, fire once and put up three lanterns."

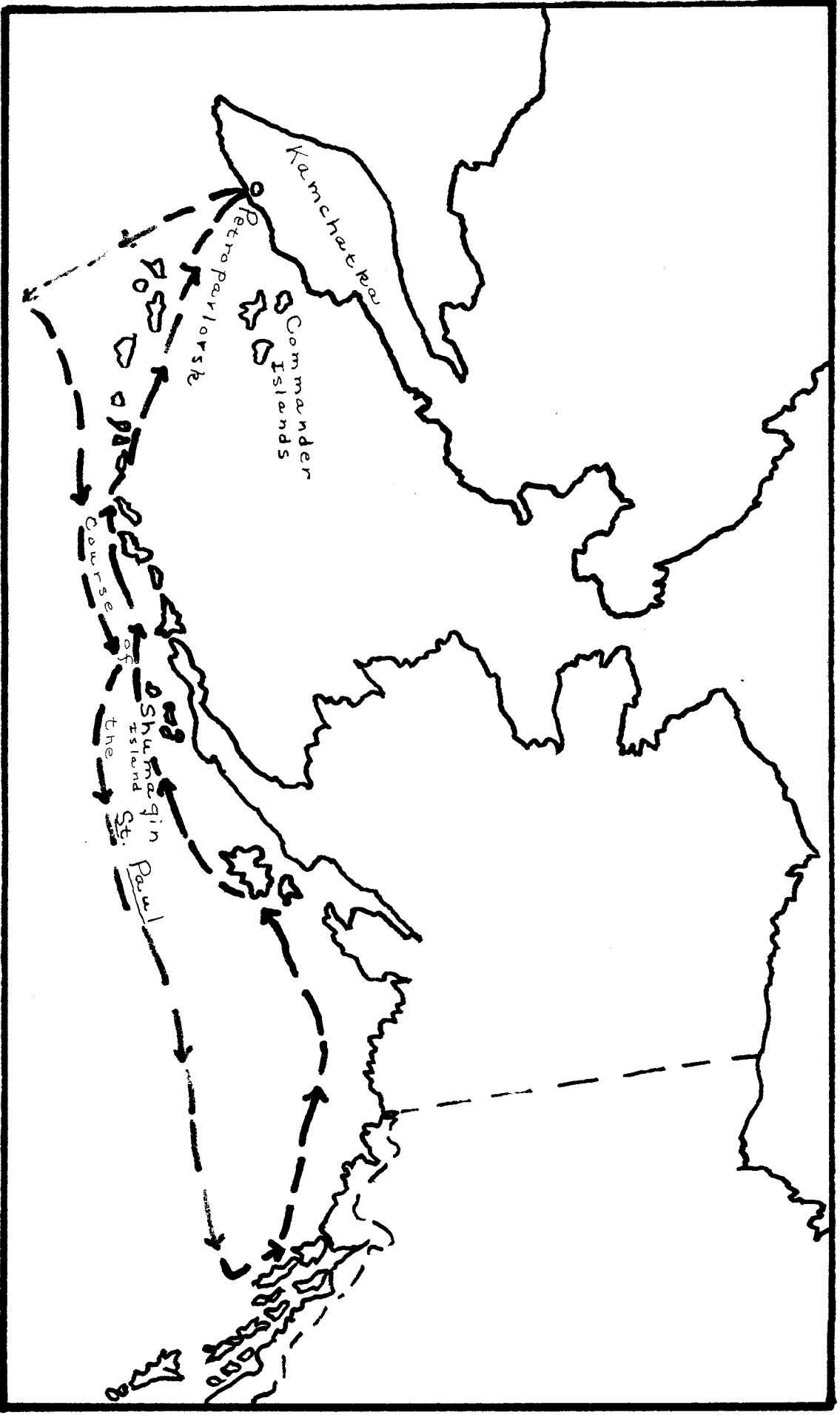
"And if we should become separated from each other?"

*Speaking trumpet--A trumpet-shaped instrument used to make the sound of the human voice louder.

"If that should happen, from which misfortune may God preserve us, each of us will cruise for three days about the spot where he last saw the other. If at the end of that time one has not found the other, he will continue on the course which we have agreed upon."

On June 4, 1741, the St. Peter, commanded by Bering, and the St. Paul, with Chirikov as commander, sailed out of Avacha Bay. For eight days they sailed southeast. By that time it was clear that the land shown on the astronomer's map did not exist. They changed their course to the northeast. During the night of June 20 occurred the misfortune which Bering had feared. In the dense fog, the ships became separated. Bering tried to return to the spot where he had last seen the St. Paul, but strong head winds kept him from doing so. Dismayed and disheartened, he neared the place and searched the area. And though Chirikov likewise hunted for Bering, neither found the other. On the third day, each continued on his course, according to the agreement which they had made. These two brave explorers were doomed not to see each other again.

5. Course of the St. Paul



CHAPTER III

THE VOYAGE OF THE ST. PAUL

After an earnest but vain search for the St. Peter, Chirikov set the St. Paul on a course of east by north and continued on his voyage. They saw no signs of land until on July 14, he and his crew sighted a large number of shore ducks, gulls, and pieces of driftwood. Then the men knew that land was near. The next day they sighted Cape Addington on the west side of Prince of Wales Island. They saw sea lions on the rocks near the water's edge. They saw snow-capped mountains, on which grew large fir, spruce, and pine trees. But they saw no human beings.

Finding no good place to anchor, Chirikov sailed along the coast for three days. By this time he noticed that the mountains had more snow on them. He realized that the farther north he went the harder the task of exploring would be. So he dropped anchor south of Lituya (Lí tōo'yū) Bay. He then called to him a sailor named Dementiev (Dě mĕn'tĕf) and said, "I am putting you in charge of the small boat. You will take ten armed men with you and try to go ashore."

"What shall I do after I land?"

"Look for human beings. Give those you see presents of the kettles, beads, tobacco, and needles which you will take with you. If your interpreter can understand the natives, tell him to ask them what kind of land this is. Find out what country governs it and see whether some of the natives will come aboard our ship."

Dementiev asked, "What shall I do if the natives are unfriendly?"

"Return to the ship as quickly as you can," answered Chirikov. "Do not harm the natives, and do not allow your men to do so. Remember that the Empress has commanded us to treat all natives kindly."

"And what shall I do if a storm comes up while we are ashore?"

"Stay on land until the storm dies down. Take with you food enough to last for a week. Take two rockets with you. Signal us with one of them as soon as you land. While you are ashore, keep up a big fire so we can see the flame or the smoke. When you leave, fire the other rocket."

So Dementiev and his ten men got into the small boat and started ashore. They rounded a wooded point and disappeared from sight. Chirikov waited, expecting to see a rocket, to hear the firing of a gun, or to sight a fire. But no signal came. For five days Chirikov anxiously awaited the return of his men. He then decided that the small boat must have been damaged and that it was impossible for the men to leave the mainland.

He called the boatswain and said to him, "This is the sixth day since Dementiev and his ten men left in the small boat to go ashore. They have neither returned nor signalled us. Surely they are unable to get back to the ship."

"Do you want me to see whether I can find them?"

"That is exactly what I want you to do. Take the other small boat, and take with you the carpenter, the calker, and a sailor. When you come close to the shore, make a landing unless you see hostile natives."

"What shall I do when I find Dementiev?"

"If his boat is damaged, set the carpenter and some of the other men to work on it. You return to the ship with Dementiev. Bring with

you the men who are not needed to help with the repair work," ordered Chirikov.

"What shall I do if the boat is beyond repair?"

"Return at once with as many of the men as your boat will hold. Tell the others that you will make another trip as soon as you can."

"Am I to signal you in any way?"

"Yes. If you find Dementiev and his boat in good condition, build two fires. We will be able to see the smoke in the daytime and the blaze at night. If the boat needs repairs, build three fires. And if the boat is beyond repair, build four fires some little distance apart. But, above all, do not delay in returning."

Following the small boat, the St. Paul went as close to the shore as it dared go. The small boat rounded a wooded point and disappeared from sight. Chirikov again waited anxiously for a signal. But he saw no rocket. He heard no gun. He located neither the blaze nor the smoke of a fire. The men did not return.

The next morning Chirikov thought he saw all fifteen of his men returning to the St. Paul, for he sighted two boats coming out of the bay. But, as they drew near, he noted that they were strange canoes filled with natives. The natives stood up, motioned, and called, "Agai! Agai! (Come here! Come here!)." Then they turned and headed for the shore. But Chirikov could not follow, for the wind was not blowing, and he had no small boat. Although his crew waved handkerchiefs and invited the natives aboard the St. Paul, they continued toward the bay.

No one has ever learned what became of the fifteen men of Chirikov's crew. Some people believe that both boats went down in the strong tidal rips of Lisianski (Lĭ sē an'skē) Strait. Others think that these men

were the first white people to set foot on Alaskan soil and that the answer to their disappearance is found in an old Indian legend. According to this tale, at one time an Indian chief, dressed in a bearskin, lured white men into the forest and killed them.

Chirikov now found himself more than two thousand miles from Kamchatka. He had lost fifteen of his crew. Of the original one hundred casks of water, he had but forty-five left. This amount was hardly enough for the return voyage, even if all the barrels were full. He later found that seven were empty. His supply of food was running low. He had lost both of his small boats and could not go ashore to get food or water. So he and his officers decided to head for Petropavlovsk without delay.

But the winds blew continuously against them. The St. Paul made little headway. The situation was desperate. So on August 1 Chirikov called his officers together. "We must decide," he told them, "what to do about food and water. Our supplies of both are low, and we have no way of knowing how long it will take us to get back to Kamchatka. If the fogs and the contrary winds continue, our return may be delayed for many weeks. All of you realize that we cannot go ashore, for we have lost both of our small boats. What do you suggest that we do?"

One of the lieutenants answered, "Since the crew does the hardest work, I suggest that they be given the greater part of the food."

"That's fair," said the astronomer quickly.

"Then," said Chirikov, "let's give them cooked food--buckwheat mush--and an extra cup of wine once a day for two days. On the third day we can give them two cooked meals. We and our servants can live on one cooked meal a day."

The officers agreed to that arrangement. Then one asked, "What can we do to make out supply of water last?"

"When it rains," suggested another, "we can set out buckets to catch the water that drips from the sails."

"But the sails and ropes have been covered with tar to prevent their rotting," objected a third. "Won't the water taste like tar?"

"This is no time to be particular," reminded Chirikov. "Moreover, it may be that the tar we get this way will help cure cases of scurvy--for you may be sure that scurvy will develop if our return to Kamchatka is delayed and we have to live long on the food we now have."

"But don't we have a medicine chest full of supplies to use for such illnesses?" asked the navigator.

"Yes, we have a medicine chest--a well-stocked one," said Chirikov bitterly. "But it is stocked with plasters, ointments, oils, and surgical supplies. If we were going into battle, they might help us. But we have nothing to treat scurvy, and I see no possibility of our getting herbs, roots, or fresh meat until we reach Kamchatka."

The plans regarding the food were put into effect. But the winds continued to blow from the wrong direction. Chirikov realized that he would have to cut the rations still further. He ordered that the crew be served mash only every other day, with an occasional additional meal of salt meat cooked in sea water. This inadequate diet soon began to affect the health of the men. Many fell ill of scurvy and became so weak they could scarcely do their work.

Often the men saw signs of land, such as shore birds, animals that stay close to land, and floating grasses. Because of fogs, only occasionally did they see land.

When the St. Paul was anchored off Adak (Ā'dāk) Island, the Russians saw natives rowing toward their ship. The seamen observed every detail, for this was the first time they had been so close to the natives of this strange land. They saw that each boat was about fifteen feet long and three feet wide. It had a sharp bow, a rounded stern, and was covered entirely with hair seal and sea lion skins. The deck also was covered, except for a hole in which one man sat. Around this hole was a leather strip which tied around the waist of the man. The head and the arms of each native were covered with a water-proof shirt made of the intestines of whale. The men used light double paddles made of birch. They were expert in handling their boats and neared the ship rapidly.

Approaching the St. Paul, the natives gestured as if praying that no harm might come to them. The crew threw them presents of cups, cloth, small boxes, bells, needles, tobacco, and pipes. The cups and the needles the natives let sink in the water, and the cloth they threw away. However, the crew noticed that the natives held one hand near the mouth and with the other made a quick motion as if cutting something. From these actions, the crew decided that the natives wanted knives, for the Kamchatkans cut their food near the mouth. Chirikov ordered the crew to give the natives a knife. Although they received it with great joy, they still refused to come aboard the St. Paul.

When the crew tried to persuade the natives to fill a small barrel with fresh water, the natives indicated that they had seal bladders in which they put water. Three of them paddled to the beach and brought back water. Holding the bladder of fresh water up, one indicated that he wanted a knife in payment for it. When the knife had been given him,

he passed the water to the second native, who likewise demanded a knife. When he, too, had received a knife, he handed the water to the third native, who also demanded a knife before he handed over the bladder of water.

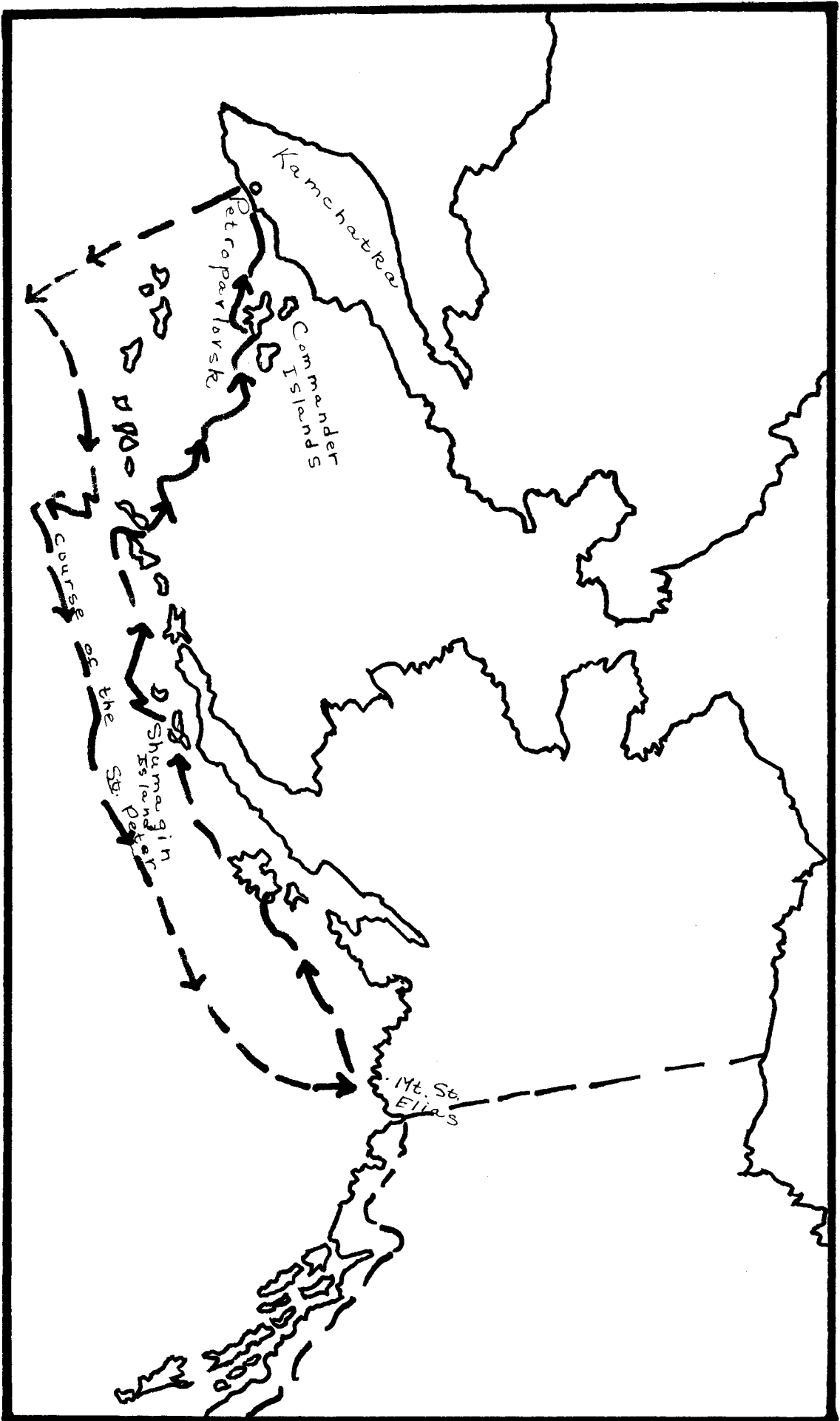
In the afternoon, more natives approached the St. Paul. But before they could be persuaded to come aboard, a strong wind came up. To avoid being blown ashore, Chirikov cut the anchor cable. With difficulty he got his boat out to sea and proceeded on his way to Petropavlovsk.

The voyage westward was continued under great handicaps. The water supply ran so low that the crew tried to distill the salt out of sea water. Cooked mush was served only once a week. The other six days the men lived on cold sea biscuits and butter. Officers and crew alike, weakened by lack of water and proper food, became ill of scurvy. Not one man escaped this disease. Chirikov worked out the course of the ship and gave orders to the crew, though he was so ill he expected death at any minute. Those who could dragged themselves on deck and pooled their strength to perform the essential tasks. Seven of the crew and officers died and were buried in the sea before Kamchatka was sighted on October 8. Two days later the St. Paul sailed into Avacha Bay. The astronomer died just as the anchor was dropped. He was the twenty-third man lost on this voyage of the St. Paul. Of the officers, Chirikov alone lived to return to his native country. But these men had not died in vain. In spite of tremendous hardships, they had touched southeastern Alaska. One must admire them for accomplishing so much with such crude equipment.

On reaching Kamchatka, Chirikov was greatly disturbed to find that Bering had not returned. Nor did he return during the winter. Where

could he be? What could have happened to him? By May, 1742, Chirikov was well enough to make another voyage, so he sailed east in search of Bering. He found Attu (Ä'tō̄) and Atka (Ät'kü) Islands. He came close to Bering Island, but he did not find Bering and his men.

6. Course of the St. Peter



CHAPTER IV

THE VOYAGE OF THE ST. PETER

When Bering, hampered by fog and wind, failed to find the St. Paul, he again set the St. Peter on a course toward the southeast. Day after day he sailed in that direction. The men watched eagerly for signs of land, but they saw only sky and sea. They began to wonder how they could have been so stupid as to believe that they would find land by sailing southeast from Kamchatka. They changed their course to the northeast; but they still saw no signs of land for almost three weeks. Then, on July 16, they saw Mt. St. Elias and four days later anchored near Kayak (Kī'āk) Island.

The men were greatly excited. After all those long years of preparation and weeks of tiresome sailing, they had at last found Alaska! In their happiness, they congratulated Bering. But he, of all those on the St. Peter, remained calm and indifferent. Indeed, he said to them, "We think we have discovered everything. But we do not stop to think where we are, how far we are from home, and what may yet happen. Who knows but that contrary winds may keep us from returning? We do not know this country, and we do not have enough food for wintering here." Bering, broken in both health and spirit, may have thought of the previous sixteen years spent in exploring and getting ready for expeditions. Perhaps he recalled the hardships, the discouragements, and the unjust criticisms of that long period of time. It may be that he even anticipated the unhappy fate that yet faced those who were on the St. Peter.

"How lucky we are, though," said Bering, "that we have found land, for our water supply is low. Lieutenant Waxel, send some of the men ashore to fill the empty water barrels. Have the fleet master* take the other small boat and explore. Tell him to see whether he can find a better harbor. Should a storm arise, our ship would not be safe here."

"May I go with him?" asked Steller, the naturalist.

"No."

"But, sir, studying the plant and animal life here is my job! That's why I came on this expedition! I am not a seaman. I am a scientist."

"You may not go," repeated Bering.

"How can I do my work if I can't even get off the ship?" asked the naturalist angrily. "You are forcing me to neglect my duty."

"Lieutenant Waxel, tell the fleet master to shove off," ordered Bering, ignoring the furious naturalist.

"Captain Commander," continued Steller, "you know that I came on this voyage at your request. I had planned to go to Japan, but you told me that my services would be important on this expedition."

"You wanted to come, didn't you?" asked Bering.

"Yes," admitted Steller, "but you promised to give me every opportunity to do something worthwhile. You said you would see that my work was appreciated by our ruler. If you don't let me go ashore, I swear that I will report you and all your officers to the Empress!"

"Well, then," said Bering reluctantly, "you may accompany those who are going after water."

"May I have help?"

*Fleet master--The seaman directly responsible for the crew.

"Only your own assistant."

Seeing that it was useless to argue further, Steller and his assistant got into the boat and went ashore. While the crew filled the empty water barrels, the scientist explored. He was soon convinced that people lived on the island, for he found a hollowed-out log in which someone had used red-hot stones to cook meat. He found bones from which the meat had been eaten, the remains of a fire, and heaps of shells. A little later he found a cellar in which were stored dried salmon, herbs, ropes made of seaweed, arrows, and wooden tools for lighting fires. He sent these things to Bering and asked for a boat and men to help him find the people who lived on the island. While waiting for a reply, he climbed a hill and saw smoke in the distance. Here was his opportunity to find the natives! At last he could make a real contribution to the scientific knowledge of the world! However, Bering sent him word that if he did not return immediately to the St. Peter, it would sail without him. Bitterly disappointed, the naturalist returned to the ship.

Early the next morning Bering came on deck and ordered the crew to make ready to sail at once. "But, sir," protested Lieutenant Waxel, "our water barrels are not full. We still have twenty empty ones."

"Am I to have no other chance to explore this land?" asked Steller.

"Do you realize how far we are from Kamchatka?" countered Bering.

"We will need all one hundred barrels of water for the return trip," insisted Waxel. "Why not let the council decide what we shall do?"

"There will be no meeting of the council this time," said Bering firmly. "We are heading for Kamchatka at once."

"But," said Steller, "no one has even set foot on the mainland. We have seen no natives, though we know that these islands are inhabited."

I have had no chance to explore the mineral resources of the land."

"Regardless of all that, we are sailing without delay. It is already late in the season, and we know little of these waters and the kind of weather to expect. We haven't enough food to stay here for the winter. We must be satisfied with our discovery and return to Kamchatka."

"Ten years we spent in preparing for this voyage! Now that we have found America, we spend ten hours in exploring it! Was all this preparation made so that we could carry a cupful of water from America to Asia?" asked Steller bitterly.

In spite of Steller's and Waxel's protests, the St. Peter headed for Kamchatka within the hour. Bering wished to avoid the coast because it was unfamiliar and he feared the sand banks, the heavy fogs, and the violent winds. Before a month had passed, however, he saw he would have to find land and get water, for he had only twenty-five barrels of it left. So he changed his course to the northeast, and on August 29 sighted a group of five rocky islands. He anchored the ship near one of them. The next morning the fleet master, the naturalist Steller, and some of the crew went ashore. As soon as he landed, Steller hunted for fresh water. Having found some springs of pure water, Steller said to the sailors, "There is a spring of good, wholesome water just beyond that huge black rock."

"We've found a watering place nearer the beach," answered one of the sailors.

"Where?" asked Steller.

"Right there," said the sailor, pointing to the place. "We've already started filling the water barrels."

"From that stagnant puddle!" exclaimed the naturalist in horror.

"Well, what's wrong with it?"

"Just look at the water hole. See the water marks on the sides. They mean that the depth of the water rises and falls with the tide. So this water must contain salt."

"Do you mean to say that you want us to carry water from way over there when there is water right here close to the beach?"

"But this water isn't safe! Already twenty-one of our crew are sick with scurvy. If those men use this water, they will become worse, not better," protested Steller.

"This water is good enough for anyone."

"You will find it will not make good tea. Soap won't lather in it. And the longer it stands, the more salt it will contain, for some of the water will evaporate. The water from the springs beyond the rock is perfectly safe. I beg you, fill the water barrels from them."

"Carry these barrels all that distance! That's a lot of unnecessary work. Go ahead, men, fill up the barrels here!" ordered the sailor in charge.

Steller, unable to influence the men, spent his time in gathering herbs to cure scurvy.

The same day the first of the crew died and was buried on the island. And because the sailor's name was Shumagin, the island was named Shumagin (Shōō'mā gĭn).*

Leaving the islands after a few days, the St. Peter again sailed toward Kamchatka. However, misfortune after misfortune befell it on its

*Today the entire group is known by this name and the island on which the sailor was buried is called Nagai (Nū gĭ').

westward journey. Fogs and cloudy weather were so continuous that often it was impossible to see the sun or the stars for weeks at a time. The navigator had no chance to correct his calculations. Winds blew with such terrific force that no one could control the ship. Men who had been sailing for fifty years said that never before had they seen such storms. To add to these difficulties, many of the crew became so ill of scurvy that they could scarcely move a hand or foot, much less perform their usual duties. The herbs which Steller had gathered on Shumagin Island gave relief, but the supply of them was too small to cure the men. The sails of the ship had been rotted by the years of exposure when they had been transported across Siberia. Now they were torn, and no one was well enough to mend them. The wind shrieked through them and threatened to break the masts, for there was no one either to take in or to hoist the canvas. Only by combining their strength could the crew manage the ship. Two men, themselves so weak that they staggered when they walked, would drag a man to the helm and place him at the wheel. He would sit there and steer as long and as well as he was able. Then he would be replaced by another man who was just as ill. More than half of the men were unable to leave their bunks at all, and those who could still walk were so exhausted that they begged to be excused from duty. Indeed, they prayed for death and a speedy deliverance from their pitiful condition.

By the first week in November, 1741, the men aboard the St. Peter had no bread and only small supplies of flour, butter,* and meat. Only six barrels of water remained. Already twelve men had died. Of the remaining sixty-five, only eight were able to be up at all, and only

*This "butter" was probably a spread made of fish oil.

three could go on deck. So a council decided that they must look for an anchoring place, go ashore, and spend the winter there, wherever it might be.

Imagine, then, the joy of the men when, on the morning of November 5, land was sighted! The men were sure that they had reached Kamchatka. Even the very ill laughed and sang at the thought of having returned to Russian soil. Some brought out brandy from hiding places and drank it in celebration of the occasion. All talked of the good care they were going to give themselves, now that they had lived through this terrible experience. Men who were half dead dragged themselves on deck to see land and to thank God for His goodness in delivering them from death in those stormy waters so far from their beloved homes.

The men anchored the ship and, as soon as they were able, lowered the small boat and went ashore to see how they could live there until they could get help from Petropavlovsk. But the men's expectation of help from Petropavlovsk was based on a false belief, for they actually were not in Kamchatka at all. They were on one of the Aleutian (Ü lōō'shūn) Islands. They found themselves in a hilly country in which grew no trees or bushes of any kind except a few willows. They knew, therefore, that they would have only driftwood for fuel, and that they would have to dig it from under the snow. However, a small river of pure water ran between the hills. Close to this river were many sand-hills with hollows of varying depths between them. By covering these holes with canvas or driftwood, the men would have shelter for the winter. So they prepared these places as living quarters and, during the following two weeks, moved all persons from the St. Peter. A few

days later, a violent storm broke the anchor cable, drove the St. Peter up high on the beach, and wrecked her beyond repair.

When the men were ashore, they looked about to see what food they could obtain. In the hold of the ship was some rye flour, but the leather sacks in which it was stored had been soaked with salt water in which gunpowder had been dissolved. However, food was so scarce that the men used the flour to make small cakes which they fried in seal fat or whale oil. At first ptarmigans, sea otters, and hair seals were plentiful on the island or in the nearby waters. Moreover, they were unafraid of men, as if they had never before been in contact with humans. But, as the men amused themselves by killing these animals, they were driven farther and farther from camp. Before the winter had passed, the men had to go as far as eighteen or twenty miles to find meat. The men ate the flesh of the sea otter with reluctance, for it was almost as tough as leather. The fresh meat, however, helped them overcome the effects of scurvy. Once a dead whale was washed ashore, and, though it was rather rank, the men welcomed it as a change in their diet.

When the men first landed, the blue foxes were so numerous they were a plague. They stole clothing, chewed up shoes, and carried away all kinds of objects, even iron ones. They sniffed at the helpless sick and gnawed the hands and feet of the unburied dead. So many foxes were killed that the men used their carcasses to fill in gaps in the coverings over the dwellings.

To add to the men's distress caused by their poor, inadequate food, their lack of fuel, and the long distances they had to go for both food and fuel, there was hardly a pleasant day between December and March.

The temperatures were not extremely low, but the wind blew violently and almost without ceasing, and often blizzards raged. With the coming of spring, there was almost continuous fog and dampness. Altogether, the men were thoroughly miserable.

More of the men died after they were taken ashore. Bering was extremely ill when he was carried from the St. Peter on November 8. For weeks he lay in a hollow, half-buried in sand, for he said that the deeper he lay in the sand, the warmer he was. And in that bleak, barren land, far away from his native Denmark and far from the country he had served so long and so well, he died on December 8, 1741. He was buried on a hillside among four members of his crew. Over his grave the men erected a simple wooden cross. And later, when they left this island, they named it Bering Island in his honor.

Slowly the dark, dreary winter days passed. The men no longer held any idea of rank. Each man did as much as he was able, whether he was a servant or the lieutenant in command. There was but one division between the men—the sick and the well. No other difference was important.

The men learned to value little things which had previously meant nothing to them. They treasured knives, axes, needles, thread, and twine. At first they let the blue foxes chew up the skins of the sea otters, for they had neither the strength nor the time to stretch and dry them. As soon as the men got well, however, they took care of these pelts.

During the winter scouting parties had gone out and returned with evidence that the voyagers had landed on an island. But many of the men clung to the belief that they were in some remote part of Kamchatka. Not until April, when several men had gone completely around the island,

did all the men face the fact that they were not in Kamchatka and that they could expect help from no one but themselves.

Having recovered their health, the survivors faced this fact with courage and determination. They decided to break up the St. Peter, build a new, smaller ship, and try to reach Kamchatka during the summer. Though all of the ship carpenters had been lost on this tragic voyage, there remained twelve men skilled in the use of the axe. These men were assigned to the task of building the new ship. The determination of the men and the long hours of daylight hastened the work. On August 8, 1742, the hooker* St. Peter was ready to launch, and the forty-five men boarded it with their baggage. However, they found that this vessel, forty-one feet by eleven feet by five feet, was extremely crowded. They threw overboard their bedding and clothing, but the previous sea otter pelts they kept. Still, only two-thirds of the men could rest at one time.

On August 14, after a special service to ask God's guidance on their return to Kamchatka, the men sailed away from Bering Island. Three days later they sighted the mainland of Kamchatka, and ten days later they sailed into the harbor of Petropavlovsk. Great was the surprise of the inhabitants. They had long since considered all of Bering's men dead or lost. Believing they would not return, Kamchatkans had taken the property of the voyagers and sold it.

In the old church of Petropavlovsk used to hang two silver images of Peter and Paul. On one were written these words: "An offering in memory of our miraculous rescue from a barren island and our return to

*Hooker--A Dutch sailing vessel with two masts.

the coast of Kamchatka by the whole company, August, 1742."

The expedition of 1741 had not answered the question of whether Asia and America were joined. It had lasted eleven years instead of six, and had cost many times the estimated amount. Fifty-three men had lost their lives on this voyage. But the expedition had found Alaska. And the nine hundred sea otter pelts that the men brought back to Petropavlovsk started a new fashion in furs. The demand for these pelts sent fur-hunters scurrying to the North Pacific regions. It led to the establishment of towns on the islands, and it caused a bustle of activity in that region that was to last for more than a hundred years.

BIBLIOGRAPHY

Primary Sources and Translations
of Primary Sources

- Coxe, William. An Account of the Russian Discoveries Between Asia and America. London: T. Cadell, 1787. Third Edition.
- Golder, Frank A. Bering's Voyages: An Account of the Efforts of the Russians to Determine the Relation of Asia and America. New York: American Geographical Society, 1925. 2 Vols.
- Lauridsen, Peter. Vitus Bering: The Discoverer of Bering Strait. Chicago: S. C. Griggs and Company, 1889.
- Stejneger, Leonhard. "An Early Account of Bering's Voyages," Geographical Review, Vol. XXIV (October, 1934) 638-42.
- Waxell, Sven L. The American Expedition. London: William Hodge and Company, Limited, 1952.

Historical References

- Andrew, Clarence L. Story of Alaska. Caldwell, Idaho: The Caxton Printers, Ltd., 1943.
- Bancroft, Hubert H. History of Alaska. San Francisco: The History Company, Publishers, 1890.
- Clark, Henry W. History of Alaska. New York: Macmillan Company, 1930.
- Golder, Frank A. Russian Expansion on the Pacific, 1641-1850. Cleveland: The Arthur H. Clark Company, 1914.
- Henderson, Daniel M. From the Volga to the Yukon. New York: Hastings House, 1944.
- Hulley, Clarence C. Alaska, 1741-1953. Portland, Oregon: Binford's and Mort, 1953.
- Lamb, Harold. The City and the Tsar. Garden City, New York: Doubleday, Doran and Company, 1948.
- Mirsky, Jeanette. To the Arctic! New York: Alfred A. Knopf, 1948.

- Tompkins, Stuart R. Alaska. Norman: University of Oklahoma Press, 1945.
- Young, Arthur. The Farmer's Letters to the People of England. London: W. Nicoll, 1768, 2d Edition.

References on Writing Readable Materials for Children

- Berry, Erick and Herbert Best. Writing for Children. New York: The Viking Press, 1947.
- Coblentz, Catherine C. "Some Problems in Writing for Children." The Writer's Handbook. Boston: The Writer, Inc., 1947.
- Dale, Edgar and Jeanne S. Chall. "Techniques for Selecting and Writing Readable Materials." Elementary English, 26 (May, 1949), 250-258.
- Flesch, Rudolph F. The Art of Plain Talk. New York: Harper and Brothers, 1945.
- Flesch, Rudolph F. "A New Readability Yardstick," Journal of Applied Psychology, 32 (June, 1948), 221-233.
- Gray, William S. and Bernice E. Leary. What Makes a Book Readable? Chicago: University of Chicago Press, 1935.
- Hall, May E. Writing the Juvenile Story. Boston: The Writer, Inc., 1939.
- Hall-Quest, Alfred L. The Textbook: How to Use and Judge It. New York: The Macmillan Company, 1918.
- Kelty, Mary G. Learning and Teaching History in the Middle Grades. Boston: Ginn and Company, 1936.
- Lorge, Irving. "Reading and Readability," Teachers College Record, 51 (October, 1949), 90-97.
- McKee, Paul G. The Teaching of Reading in the Elementary School. Boston: Houghton Mifflin Company, 1948.
- Preston, Ralph C. Teaching Social Studies in the Elementary School. New York: Rinehart and Company, Inc., 1950.
- Rinsland, Henry D. A Basic Vocabulary of Elementary School Children. New York: The Macmillan Company, 1945.
- Thorndike, Edward L. Teacher's Word Book of 20,000 Words. New York: (Bureau of Publications, Teachers College, Columbia University, 1932, revised.)

VITA

Alma Hall Graber
candidate for the degree of
Master of Science

Thesis: BERING DISCOVERS ALASKA: A STORY FROM ALASKAN HISTORY WRITTEN
ON SIXTH-GRADE LEVEL

Major: Education

Biographical and Other Items:

Born: December 10, 1906, at Ponce de Leon, Missouri

Undergraduate Study: Central State College, 1923-1925; Summer
1946, 1948; University of Alaska, Summer, 1947

Graduate Study: O. A. M. C., 1952-54

Experiences: Teaching, 13 years, in public schools of Oklahoma,
Montana, Colorado, and Alaska; teaching in Air Force Clerk-
Typist School, University of Oklahoma and Oklahoma A and M
College, 1951-52

Member of Delta Kappa Gamma and Phi Kappa Phi.

Date of Final Examination: May, 1954.

THESIS TITLE: BERING DISCOVERS ALASKA: A STORY FROM
ALASKAN HISTORY WRITTEN ON SIXTH-GRADE
LEVEL

AUTHOR: Alma Hall Graber

THESIS ADVISER: Dr. Ida T. Smith

The content and form have been checked and approved by the author and thesis adviser. The Graduate School Office assumes no responsibility for errors either in form or content. The copies are sent to the bindery just as they are approved by the author and faculty adviser.

TYPIST: Victor L. Van Hook