



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

WIDENER LIBRARY



HX HHJI Z

Sci 1623.8



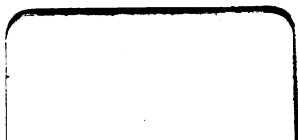
Harvard College Library

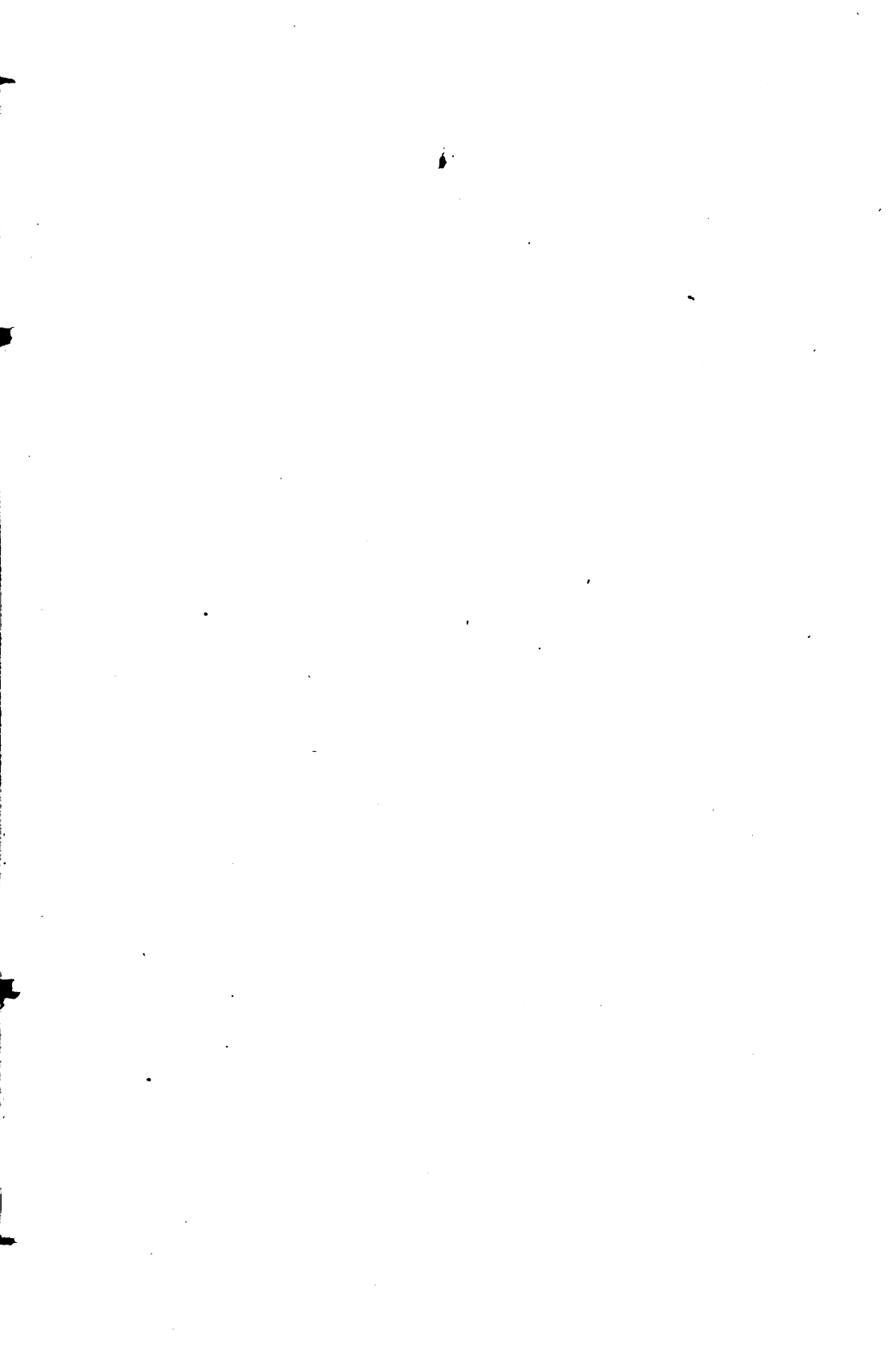
FROM THE

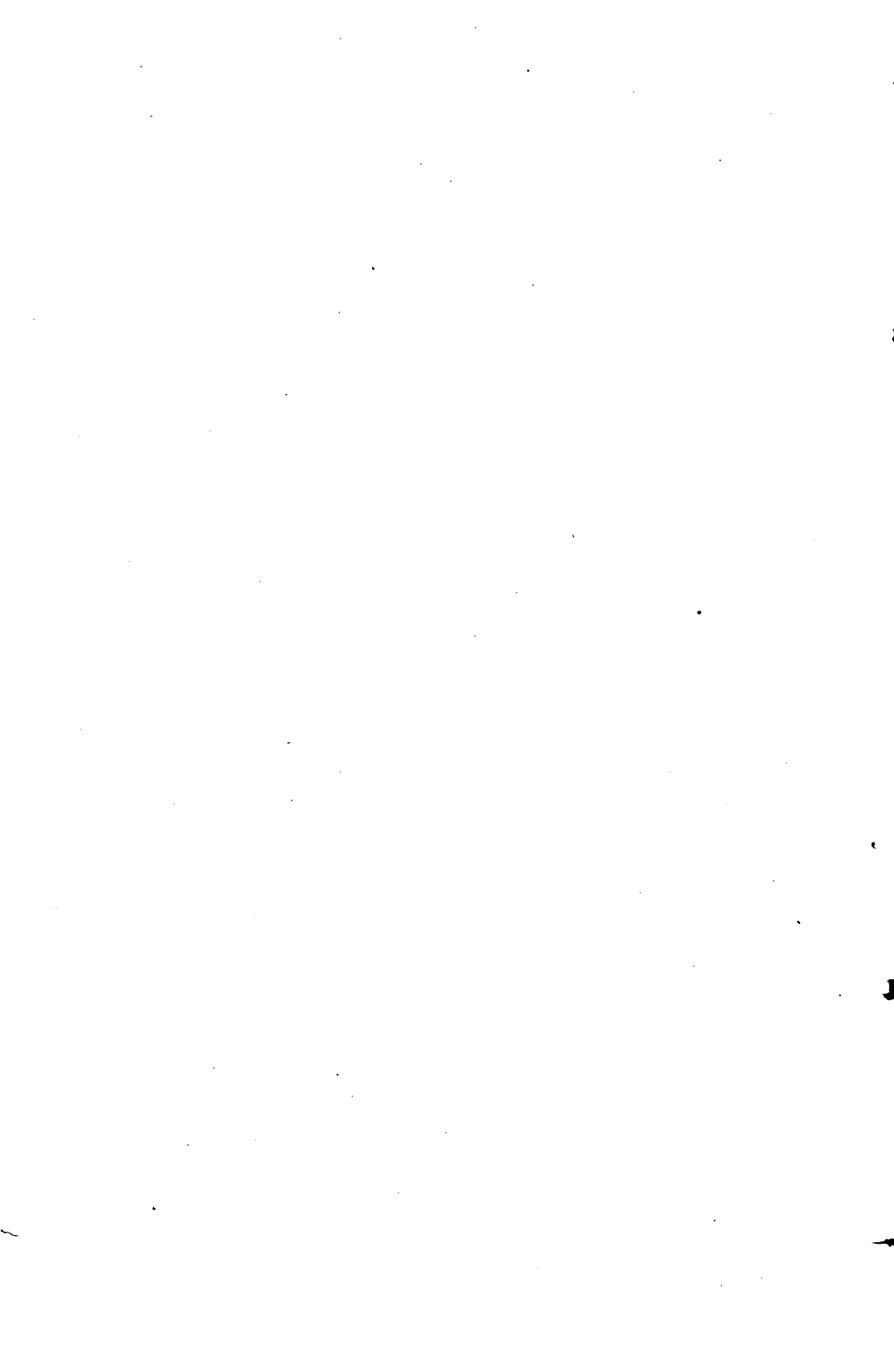
UNITED STATES GOVERNMENT

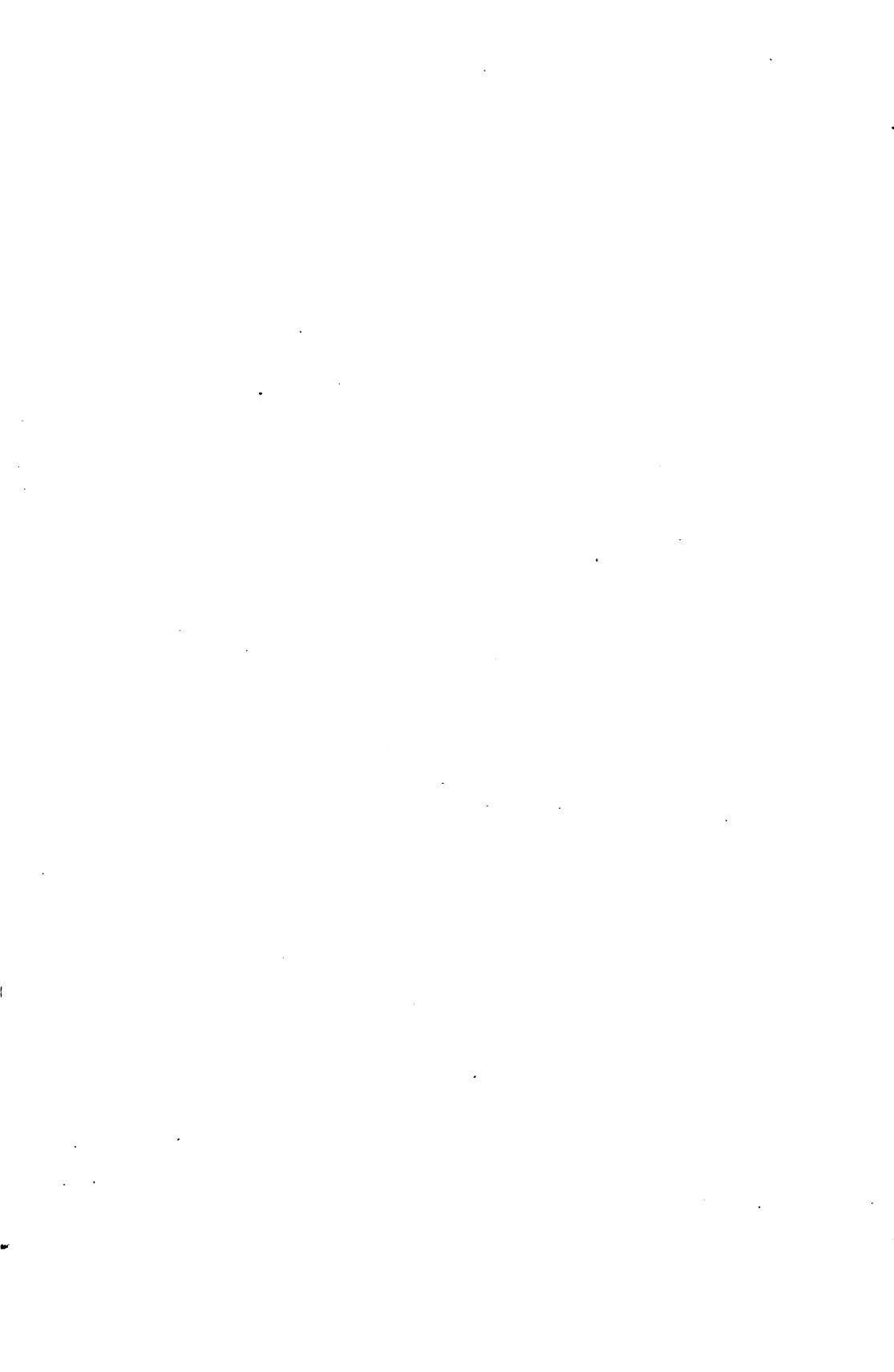
THROUGH

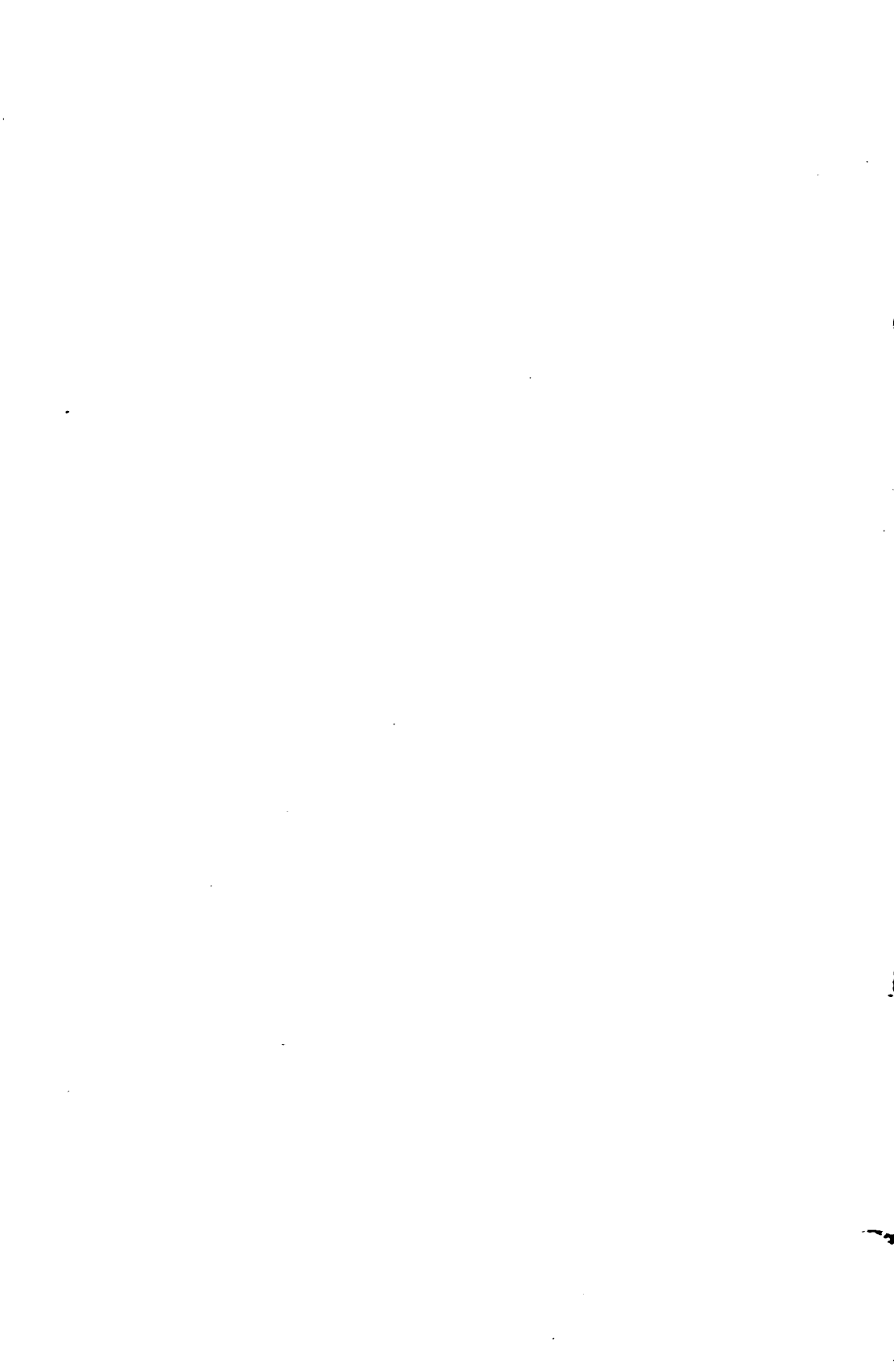
Bureau of Education











THIRTEENTH ANNUAL REPORT

ON

INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA,

WITH

MAP AND ILLUSTRATIONS,

BY

SHELDON JACKSON, LL. D.,

GENERAL AGENT OF EDUCATION IN ALASKA.

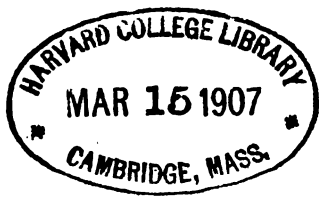
1903.

MARCH 16, 1904.—Referred to the Committee on Territories and ordered to be printed with maps and illustrations.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1904.

~~ed. V. 5721~~
S. 162.8.3



Business of Education



LETTERS OF TRANSMITTAL.

IN THE SENATE OF THE UNITED STATES,

March 12, 1904.

Resolved, That the Secretary of the Interior be directed to transmit to the Senate the report of Dr. Sheldon Jackson upon "The introduction of domestic reindeer into the district of Alaska."

Attest:

CHARLES G. BENNETT,

Secretary.

By H. M. ROSE, *Chief Clerk.*

[Indorsement.]

DEPARTMENT OF THE INTERIOR,

Washington, March 14, 1904.

Respectfully referred to the Commissioner of Education, for immediate compliance with the within resolution, with return of this paper.

THOS. RYAN, *Acting Secretary.*

DEPARTMENT OF THE INTERIOR,

Washington, March 15, 1904.

SIR: I am in receipt of Senate resolution of the 12th instant—

That the Secretary of the Interior be directed to transmit to the Senate the report of Dr. Sheldon Jackson upon "The introduction of domestic reindeer into the district of Alaska."

In response thereto, I have the honor to transmit herewith copy of a letter from the Commissioner of Education forwarding the report indicated in the above-mentioned resolution, together with its accompanying maps and illustrations.

Very respectfully,

E. A. HITCHCOCK,

Secretary.

The PRESIDENT OF THE SENATE PRO TEMPORE.

DEPARTMENT OF THE INTERIOR,

BUREAU OF EDUCATION,

Washington, D. C., March 15, 1904.

SIR: I have the honor to acknowledge, by reference from you, a copy of a resolution adopted by the Senate of the United States on March 12, 1904, "directing the Secretary of the Interior to transmit to the Senate the report of Dr. Sheldon Jackson upon the introduction of domestic reindeer into the district of Alaska for 1903."

In compliance with said resolution, I have the honor to forward herewith the report of the United States general agent for education in Alaska on the subject and covering the period named.

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner.*

The honorable the SECRETARY OF THE INTERIOR.

TABLE OF CONTENTS.

	Page.
Action of the United States Senate	3
Action of the Secretary of the Interior	3
Letter of transmittal, Commissioner of Education to Secretary of Interior.....	3
Letter of transmittal, Secretary of the Interior to the United States Senate....	3
Annual report of Dr. Sheldon Jackson	9
Arrangement with apprentices.....	10
Proposed purchase in Siberia.....	11
Personnel	11
Point Barrow reindeer herd	12
Kotzebue reindeer herd	12
Cape Prince of Wales reindeer herd.....	13
Gambell reindeer herd (St. Lawrence Island)	13
Teller reindeer herd	13
Eaton reindeer herd	14
Nulato reindeer herd	14
Kuskokwim reindeer herd.....	14
Supervisor of reindeer	15
Tabulated statement of reindeer in Alaska.....	15
Number and location of Eskimo apprentices.....	17
List of reindeer stations	17
List of reindeer stations needed.....	17
Increase from 1892 to 1903	18
Herds loaned to mission stations.....	18
Herds loaned to Laplanders	18
Congressional appropriations from 1894 to 1904	18
Expenditure of appropriations for the year 1902-3	19
Reindeer an important factor in the civilization of the Eskimos.....	19
Reindeer and the miners	21
Reindeer and the carrying of the United States mails.....	22
Reindeer in connection with relief expeditions.....	24
Reindeer for transportation and freighting.....	26
The itinerary of Dr. William Hamilton, assistant agent.....	31
Cooperation of State and Treasury Departments.....	34

APPENDIX.

Request to Secretary of the Treasury for the transportation of the agents of the Bureau of Education on the revenue cutters	37
Letter of instructions to assistant agent of education in Alaska	40
Itinerary of William Hamilton, Ph. D., assistant agent of education in Alaska.....	41

	Page.
Annual report—	
Point Barrow reindeer station	57
Kotzebue reindeer station	59
Cape Prince of Wales reindeer station.....	63
Gambell (St. Lawrence Island) reindeer station.....	66
Teller reindeer station	80
Golofnin reindeer station.....	85
Eaton reindeer station	86
Nulato reindeer station	103
Bethel reindeer station.....	104
Daily journal of the Teller reindeer station, by T. L. Brevig.....	110
Correspondence concerning the establishment of a new reindeer station in the neighborhood of Wainright Inlet	134
Correspondence concerning the purchase of reindeer in Siberia	137
Reindeer imported from Siberia subject to inspection and customs duties	151
Governor Brady on the reindeer.....	155
Brigadier-General Funston, U. S. Army, concerning reindeer.....	155
Judge James Wickersham on the reindeer.....	156
D. A. McKenzie, United States Commissioner, concerning the reindeer and Eskimos in Alaska.....	156
Mr. E. L. Bosqui, United States Commissioner, Alaska, concerning the use of reindeer	161
Paul Du Chaillu on reindeer in Alaska.....	164
A decennial review of the introduction of reindeer into Alaska, by Gilbert G. Grosvenor	165
American caribou, by Madison Grant.....	174
Index	191

ILLUSTRATIONS.

Subject.	Photographer.	Number.
Reindeer:		
Herd at the seaside	F. H. Wennberg..	1
Packing.....	do	2
Digging through snow for pasturage		3
Lassoing		4
Traveling		5
Traveling in a blizzard		6
Crossing the mountains.....		7
Laplander and wife on skees.....	F. H. Wennberg..	8
Caribou:		
Grant's.....		10
Newfoundland.....	Andrew J. Stone..	11
Swimming	R. T. Varnum	9
Greenland		12
Stone's		13
Osborn's		14
Grant's C.....		15
An Eskimo boy (from Mrs. S. Bernardi).....		16
An Eskimo girl (from Mrs. S. Bernardi).....		17
Public schools:		
Golofnin		18
Kotzebue		18
Gambell	Wm. Hamilton	21
St. Michael		22
Wales		19
Unalaska.....	A. B. Kinne	28
Unga	Joseph Say	29
Wood Island.....		30
Saxman		34
Kasaan		36
Klinquan		39
Wharf scene, St. Michael	Wm. Hamilton	21
Street scene in Nome	Nowell	25
Drying tom cod (from Mrs. S. Bernardi).....		24
Wild flowers, northwestern Alaska (from Mrs. S. Bernardi).....		23
Dr. E. O. Campbell and wife.....	Wm. Hamilton	20
Dutch Harbor.....	do	26
Wharf at Dutch Harbor.....	do	27
Baptist Mission, Wood Island.....	do	31
Chilkat dancing costumes (from Miss Mackintosh)	J. M. Blankenberg	32
Native school building, Sitka.....	Wm. Hamilton	34
Walk to Indian River.....	do	33
Rev. Edward Marsden and wife		38
Schoolhouse, Kasaan, Alaska.....		35
Group of Simpsonsean boys ready to start for school		37
Reindeer marks.....		40, 41, 42

THIRTEENTH ANNUAL REPORT
ON THE
INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION, ALASKA DIVISION,
Washington, D. C., December 31, 1903.

SIR: I have the honor to submit the thirteenth annual report on the introduction of reindeer into Alaska. The winter of 1902-3 was one of unusual severity, both as to the degree of cold and depth of snow. In many sections, especially along the coast, there was a succession of thawing and freezing of the snow until several layers of ice and crust had been formed so thick that even the hard hoofs of the reindeer could not dig down to the moss, and in those sections it became necessary to drive the reindeer farther away from the coast, where these conditions did not exist. Notwithstanding the unfavorable conditions, the reindeer did surprisingly well. During the spring of 1903, 1,877 fawns were born and lived. The reindeer multiply rapidly. From the 1,280 reindeer which have been imported from Siberia between the years 1892 and 1903 and from their natural increase, 7,983 living fawns have been born in Alaska. Commencing with 79 fawns surviving in the spring of 1893, over 500 were born in 1898 and over 1,000 in 1901, and it is reasonable to expect that over 2,000 will be born in the spring of 1904. Thus the herds are increasing by a progressive increment and doubling their number by birth every three years.

At present there are 6,505 reindeer gathered in eleven herds at nine central stations. Seventy-five persons have an ownership in these deer. They are distributed as follows: 2,841 belong to 68 Eskimo herders; 741 are loaned to missionary stations of the Norwegian Evangelical Synod, the Swedish Evangelical Union, the Presbyterian, Moravian, Roman Catholic, and Friends; 500 loaned to 5 Laplanders; 650 owned by 5 Laplanders; 1,435 are the property of the Evangelical Swedish Union, the Episcopal, Presbyterian, Norwegian Evangelical Synod, Moravian, Friends, and Roman Catholic mission stations; and 338 are still remaining in the Government herds to be hereafter loaned.

The reindeer are held by their owners subject to the conditions of a written agreement with the United States which prevents the slaughter

of the female deer for meat and the sale of female deer to any other party than the Government, and insures the instruction of the apprentice in the arts of training and breaking the deer to harness. Surplus male deer are allowed to be sold to miners or others for meat or transportation purposes. The Eskimo apprentice during the five years of his training is supported and clothed either by the Government, the mission station, or a herder, according as he is employed by one or the other of these parties. In addition to food and clothing he is allowed the loan of two female deer per year, upon which he must place his mark and consider the deer and her offspring as the beginning of a future herd, subject to Government limitations. If at the end of five years the apprentice is judged to be skilled in the training of reindeer, he is loaned a sufficient number of additional deer to increase his holding to 50 animals. These deer are usually retained in the general herd under the care of an experienced Lapp and the supervision of the mission station with which the herder is connected. This general supervision extends for twenty years, at the termination of which the Government or missionary station gives up all supervision or control.

If, however, during this period of twenty years the herder indulges in a protracted season of intemperance, abandons, or otherwise fails to care for the herd, the Government is at liberty to dispossess him of its loan, and reloan the same to other parties who may give evidence of making a better use of the loan. This works no injustice to the individual herder, as the herder during the five years of his apprenticeship has had from the Government or missionary station regular food and substantial clothing, far better than he would have had if he had remained away from the herd. The same is true after the years of his apprenticeship are ended; he will continue to receive food and clothing from his herd. When an apprentice becomes a herder he is expected to secure the support of himself and family by the sale of surplus male deer to butchers and miners, and expected to train some other apprentice. In most cases this apprentice is some member of the herder's family. There are now 25 Eskimo herders who have served an apprenticeship of five years or more, supported at the different stations. The herders have 61 Eskimos now under training as apprentices who do not own any deer. As many of the herders have families of growing children and relatives living with them, it is estimated that at least 300 natives are now obtaining their support from the deer.

Thus for the \$183,000 appropriated up to the present year by the Government for the introduction of reindeer into Alaska, the Government has to show 6,505 reindeer used for the instruction and support of about 300 Eskimos.

On January 3, 1903, the Commissioner of Education, with the approval of the Secretary of the Interior, made an agreement with the

Northeastern Siberian Company (Limited) for the delivery of 800 female reindeer by said company to the Government at the Teller reindeer station. The company is reported to have secured in Siberia 700 deer in fulfillment of its agreement with the Government, but before navigation opened in northern Bering Sea the Russian Government recalled its permission to export the deer to Alaska. On account of this action of the Russian Government no deer were exported from Siberia to Alaska during the year.

PERSONNEL.

General superintendent: Carl O. Lind, M. D., Unalaklik, Alaska.

Local superintendents: Samuel R. Spriggs, Point Barrow; Dana H. Thomas, Kotzebue; Hugh J. Lee, Cape Prince of Wales; Tolef L. Brevig, Teller; Edgar O. Campbell, M. D., Gamble (St. Lawrence Island); O. P. Anderson, Golofnin; Carl O. Lind, M. D., Unalaklik (Eaton); Adolf Stecker, Kuskokwin; Julius Jetté, Nulato.

Laplander teachers: Alfred Salmonsens Nilima, Kotzebue; Isak Andersen Bango, Nulato; Nils Klemetsen, Teller; Per Larsen Anti and Ole Pulk, Gamble; Ole Olesen Bahr and Nils Persen Bals Unalaklik (Eaton); Per Nilsen Bals, Nulato; Nils Sara and Per Spein, Bethel, Kuskokwim Valley.

Eskimo herders and apprentices:

Point Barrow: Ahlook, Electoona, Shoudla, Tokpuk, Panigeo, Segevan, Paneoneo, Powun, Ungawishok, Otpelle, Ingnoven.

Kotzebue: Okamon, Oghoalook, Minungon.

Cape Prince of Wales: George Ootenna, Stanley Kivyearzruk, James Keok, Thomas Sokweena, Frank Iyatunkuk, Joseph Enungwouk, Sinrok, Karmun, Oblee, Ongnalook, Masoak, Oknaklook, Teomok, Peter Ibiono, Okboak, and Erheruk.

Gambell (St. Lawrence Island): Sepilla, Putlkinhok, and Pinink.

Teller: Ablikak, Dunnak, Sekeoglook, Serawlook, Sagealook, Cox-rook, jr., Kotezuk, Neeluk, Mrs. Immuklina, Nunasarlook, Ehrnak, jr., Ahberina, Etugeeuk, Ahneemausook, Emausrook, Dora, Elahkan, Ogeelesook.

Golofnin: Constantine, Toktok, Tautook, Ahmahkdoolik, Pamakcheerk, Albert Angotak, Benjamin Jutmans, Peter Egelak, Mrs. Dexter.

Unalakleet: Moses, Okitkon, Tatpan, Nellagoroak, Stephen Ivanoff, Mary Andrewuk, Kotoak, Angalook, Sagoonuk, Accebuk, Avogook, Amikravinik, Sakpillok, Koutchok, Moses Koutchok, Big One.

Nulato: Stephen Annu, Alexander Kulana, and John Rorondelel.

Kuskokwim: Wasili and Robert.

STATIONS.

Point Barrow.—The annual supplies for the herders and apprentices at this station, shipped from San Francisco in May last, failed to reach Point Barrow on account of the unusual ice conditions. The schooner *Madsen* reached within about 100 miles of the station, when it was compelled to turn back; the supplies were returned to San Francisco. This would have left the station dependent upon the reindeer herd for almost its entire subsistence. Fortunately, however, some supplies were procured from the whalers as they were starting on their return trip to San Francisco. In view of the failure of the annual mail and supplies to reach Point Barrow, it has been decided to establish an additional station south of Point Barrow at the edge of the summer ice fields. Counsel was taken of Captains Tuttle and Healy, also of Lieut. D. H. Jarvis, of the Revenue-Cutter Service, with reference to the best point on the coast that could unfaillingly be reached every summer, and upon their suggestions Wainwright Inlet has been selected and this coming summer it is hoped to erect the necessary buildings and start the station.

This new station will be of much assistance in operating the new winter reindeer mail route, which has been established by the Post-Office Department at Washington between Kotzebue and Point Barrow, a round trip of about 1,500 miles.

It is recommended by Doctor Marsh, superintendent of the Point Barrow reindeer station, that Ahlook, Shoudla, and Paneoneo, with their reindeer, be sent to the new Wainwright Inlet station, and that Electroona and Otpelle be sent to the Kivalena River, near Point Hope.

Lieut. D. H. Jarvis, who was in charge of the famous reindeer relief expedition to the whalers at Point Barrow in the winter of 1897-98, suggests, as the result of his experience, that relay stations be established, commencing with Kotzebue, in the following order: First, at a point 100 miles north of Kotzebue (Corwin Lagoon); second, at Kivalena River, near Point Hope; third, in the neighborhood of the coal mines at Cape Lisburne; fourth, about midway between the coal mines and the Wainwright Inlet station; fifth, Wainwright Inlet; sixth, at a point between Cape Beaufort and Kukpowruk.

During the winter of 1902-3 an epidemic broke out among the animals in the neighborhood of Point Barrow, called by the natives "mullo kully" or crazy. The dogs died by scores; the mission station lost 7 dogs, the whaling station out of 70 dogs saved only 12; some families lost every dog they owned. The disease extended to the foxes and also to the reindeer. Natives out trapping could walk around and knock sick foxes in the head.

Kotzebue.—The winter of 1902-3 was one of unusual severity, the thermometer registering 54° below zero and the snow lying with an average depth of 7 feet. Notwithstanding the depth of snow and

the difficulty of the reindeer procuring food, the grown deer came through the winter without any losses from starvation and in fairly good condition. The effect of the difficulty of securing sufficient food was found in an unusual number of deaths among the fawns. The superintendent reports a growing interest in the reindeer upon the part of the natives, and he states that now without exception the young men are glad of the opportunity to be taken into the herd as apprentices. He recommends that the peninsula between Hotham Inlet and Kotzebue Sound shall be set apart by the President as a reindeer reserve.

Cape Prince of Wales.—Six of the herders at this station have accumulated a sufficient number of deer to be self-supporting. Next year another will enter upon self-support, and in the following year, 1905, there will be two others. Four of the Eskimo herders in the fall of 1902 ordered their supplies at San Francisco. These supplies were sent up during the past summer and aggregated in value \$4,200. This sum included lumber bought by one of the Eskimo herders for a five-room house, 30 by 20 feet in size. In addition to these independent Eskimo owners there are five mission apprentices and five herders apprentices, making 16 Eskimos who have an actual interest in this herd. The past winter was not a favorable one for the herds, there being an unusual depth of snow and an unusual amount of ice formed from the December rains, followed by severe cold. This icy crust to the snow made it difficult for the deer to dig through to procure moss.

Gambell (St. Lawrence Island).—The report notes that in many level places the snow covered the ground to a depth of 10 feet, an average, however, not being over 2 feet. During the season five sets of pack harness and two additional sleds were made. Frequent trips were made during the summer looking for stray deer and especially in familiarizing the herders with the best pasturage for the deer and good camping places for the men. During the winter of 1902-3 a long reindeer-sled trip was made around the island in search of wrecked sailors that were said to be upon the island. The report proved to be a canard. An epidemic of bronchitis and hydrophobia carried off a large number of dogs, and among them the Lapp herding dogs, so that now there are none in connection with the herd.

At this village there has always been a difficulty in securing apprentices that have taken any real interest in the reindeer.

Teller.—On the 20th of December, 1903, 100 reindeer belonging to the Government in this herd were loaned to Nils Klemetsen and removed to his station at Golofnin. With him were the Eskimo herder, Tautook, with 108 deer, and Ahmukdoolik, with 10 deer. Fifty-seven additional deer belonging to the Government were driven to Unalakleet and loaned to Nils Sara. In March, 1903, a white man

who had traded whiskey to the herder for reindeer meat was convicted and sentenced to jail for five months. The herder and his brother-in-law, both of whom had become drunk and disorderly, were convicted and sentenced. The orphanage of the Norwegian Lutheran Mission at Teller is reported as caring for 30 Eskimo children.

Eaton (Unalakleet).—On September 6, 1902, the two herds were driven from their summer quarters on the peninsula to their winter pasturage, the main herd under the supervision of Ole O. Bahr to South River, and the other in charge of Per Spein to a river still farther east.

On November 17, 1902, Nils Klemetsen, Nils Sara, and Nallagorook were sent to Teller to bring back the Government deer which were at that point. Returning to Unalakleet early in February, in accordance with contract, Klemetsen received the loan of 100 deer. On February 5 Nils Sara and Per Spein, with their families and herds, were started for their new station at Bethel, on the Kuskokwim. They were assisted on the journey by Nils Klemetsen and the native herder Tatpan. The two herds were fat and strong and said to have been the finest ever sent out from Eaton. Soon after they had left Unalakleet storms commenced that lasted through February, March, and April. After many hardships they reached the Yukon River in the neighborhood of Andreafski. Crossing the river on the ice they found that on the south side the moss was covered with such a heavy coating of solid ice that the reindeer were unable to secure pasturage, and they were compelled to retrace their steps to the northern side of the river and go into camp, where they have been compelled to remain, suffering much inconvenience, from the 1st of April to November 25. The 25th of November the journey was resumed and Bethel was finally reached December 3, 1903.

On the 5th of April the Eaton herd was driven from its winter quarters to the fawning ground on the south side of Shatolik Mountain, about 40 miles distant. The station reports an unusual depth of snow and severe cold, the thermometer registering at one time 72° below zero.

On the 26th of April Nils Bals and family arrived after a hard trip from the Kuskokwim, and later Mr. Bals was placed in charge of Mary's herd.

Nulato.—The station reports during the winter of 1902-3 that the usual winter pasturage was covered with 7 feet of snow and the herd was transferred 10 or 15 miles south of Nulato, where the snow was not so deep.

During the summer Isaak Bango, Laplander in charge, was transferred to the Teller station, his place being taken by Nils Persen Bals.

Bethel (Kuskokwim River).—Mr. Bals and his son, who had been in charge of the herd at this station for two years, in February last

resigned and returned to Unalakleet. Messrs. Sara and Spein, who were started in February last to take the place of the Messrs. Bals, were storm-stayed at Andraefski and detained there until November. It is hoped that they finally arrived in safety at Bethel about the close of 1903.

SUPERVISOR OF REINDEER.

Carl O. Lind, M. D., a medical missionary of the Swedish Evangelical Church, and a former teacher of the United States Bureau of Education in Alaska, has been appointed supervisor of the reindeer herds in Alaska, with headquarters at Unalakleet.

STATISTICAL TABLES.

Special attention is called to the gratifying progress of the reindeer enterprise, as exhibited in the following tables.

Herds of reindeer.—The following table shows the number of fawns born during the spring of 1903 and the number of domestic reindeer in the nine herds in Alaska, July 1, 1903:

Number, distribution, and ownership of domestic reindeer in Alaska.

OWNERSHIP AT POINT BARROW.

Owners.	Adults.			Fawns, 1903.			Total.
	Male.	Female.	Total.	Male.	Female.	Total.	
Mission and Government							138
Ahlook (Eskimo).....							140
Electoona (Eskimo).....							113
Shoudla (Ojello) Eskimo.....							55
Tokpuk and son Panigeo (Eskimo).....							38
Segevan (Eskimo).....							31
Paneoneo (Eskimo).....							25
Powun (Eskimo).....							21
Ungawishok (Eskimo).....							21
Otpelle (Eskimo).....							22
Ingnoven (Eskimo).....							8
Total			450			162	612

OWNERSHIP AT KOTZEBUE.

Government.....	50	145	195				195
Mission.....	19	17	36	22	22	44	80
Nilima.....	16	18	34	25	25	50	84
Okamon (Eskimo).....	1	2	3	1	1	2	5
Oglivalek (Eskimo).....	1	2	3		2	2	5
Wimungen (Eskimo).....	1	2	3	1	1	2	5
White miners.....							5
Total	88	186	274	49	51	100	379

OWNERSHIP AT CAPE PRINCE OF WALES.

American Missionary Association.....	122	303	425	94	75	169	594
Ootenna, George (Eskimo).....	53	119	172	31	34	65	237
Keok, James (Eskimo).....	60	98	158	27	36	63	221
Kivyearzruk, Stanley (Eskimo).....	39	100	139	38	24	62	201
Sokweena, Thomas (Eskimo).....	17	63	80	16	21	37	117
Enungwouk, Joseph (Eskimo).....	13	25	38	7	5	12	50
Iyatunkuk, Frank (Eskimo).....	14	23	37	7	6	13	50
Ebiana, Peter (Eskimo).....	4	11	15	1	3	4	19
Okbaok (Eskimo).....	6	12	18		2	2	20
Erheruk (Eskimo).....	5	11	16				16
Total	333	765	1,098	221	206	427	1,525

16 INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA.

Number, distribution, and ownership of domestic reindeer in Alaska—Continued.

OWNERSHIP AT GAMBELL (ST. LAWRENCE ISLAND).

Owners.	Adults.			Fawns, 1903.			Total.
	Male.	Female.	Total.	Male.	Female.	Total.	
Government			100			54	154

OWNERSHIP AT TELLER.

Government.....		25	25		1	1	26
Mission.....	94	103	197	51	33	84	281
Abllkak (Eskimo).....	43	74	117	24	16	40	157
Dunnak (Eskimo).....	23	32	55	11	18	29	84
Sekeoglook (Eskimo).....	25	23	48				48
Serawlook (Eskimo).....		1	1	2	5	7	8
Sagealook (Eskimo).....				14	11	25	25
Coxrook (Eskimo).....				1	5	6	6
Ehrnak (Eskimo).....				1	5	6	6
Total	185	258	443	104	94	198	641

OWNERSHIP AT GOLOFNIN BAY.

Mission.....	122	111	233	37	50	87	320
Constantine (Eskimo).....	13	16	29	3	2	5	34
Toktok (Eskimo).....	6	14	20	3	6	9	29
Nils Klemetsen.....	21	76	97	24	35	59	156
Tautook (Eskimo).....	45	55	100	19	22	41	141
Ahmahdoolik (Eskimo).....	1	8	9	4	2	6	15
Pamakcheerk, J. (Eskimo).....	1	2	3	1	1	2	5
Angotak, Albert (Eskimo).....	1	1	2		1	1	3
Benjamin Jutmans (Eskimo).....	1	1	2		1	1	3
Egelak, Peter (Eskimo).....	2	2	4	1	1	2	6
Mrs. Dexter (Eskimo).....	3	2	5	1	1	2	7
Hendrickson, K.....	1		1				1
Government.....		1	1				1
Ole Bahr.....	2		2				2
Ivanoff, Stephan (Eskimo).....	1		1				1
Nellagoroak (Eskimo).....	1		1				1
Okitkon (Eskimo).....	2		2				2
Lindseth, J. T.....	1		1				1
Total	224	289	513	93	122	215	728

OWNERSHIP AT UNALAKLEET.

Government.....	16	42	58	95	73	168	226
Swedish Mission.....	40	100	140				140
Episcopal Mission.....	16	60	76	22	16	38	114
Moses (Indian).....	24	26	50				50
Ole O. Bahr.....	50	90	140	32	25	57	197
Okitkon (Eskimo).....	48	84	132	4	12	16	148
Tatpan (Eskimo).....	30	51	81	17	10	27	108
Nellagoroak (Eskimo).....	8	19	27	5	10	15	42
Ivanoff, Stephan (Eskimo).....	14	19	33	5	4	9	42
Capt. E. S. Walker, U. S. Army.....	1		1				1
Golofnin Mission.....	2		2				2
Bethel Mission.....	8		8				8
Mary Andrewuk (Eskimo).....	84	131	215	17	20	37	252
Kotoak (Eskimo).....	8	12	20	3	6	9	29
Angalook (Eskimo).....	13	17	30	7	6	13	43
Sagoonuk (Eskimo).....	10	25	35	5	6	11	46
Acebuk (Eskimo).....	8	10	18		5	5	23
Avogook (Eskimo).....	3	2	5		2	2	7
Amikraviniik (Eskimo).....	3	3	6	2	2	4	10
Sakpillok (Eskimo).....	1	1	2		2	2	4
Koutchok (Eskimo).....	1	3	4	1		1	5
Moses Koutchok (Eskimo).....		1	1	1		1	2
Big One (Eskimo).....	1	2	3		1	1	4
Total	389	698	1,087	216	200	416	1,503

OWNERSHIP AT NULATO.

Mission.....	39	91	130			41	171
--------------	----	----	-----	--	--	----	-----

Number, distribution, and ownership of domestic reindeer in Alaska—Continued.

OWNERSHIP AT BETHEL (KUSKOKWIM VALLEY).

Owners.	Adults.			Fawns, 1903.			Total.
	Male.	Female.	Total.	Male.	Female.	Total.	
Government.....			176				176
Per Spein.....	40	87	127	31	33	64	191
Nils Sara.....	39	99	138			74	212
Mission.....			92			121	213
Total.....	79	186	533	31	33	259	792
Grand total.....			4,628			1,877	6,506

Table showing number and location of Eskimo apprentices, and number of reindeer owned by same.

Stations.	Number of apprentices.	Number of reindeer.	Number of sub-apprentices.
Point Barrow.....	11	474	11
Kotzebue.....	3	15	1
Cape Prince of Wales.....	9	931	9
St. Lawrence Island.....	3	9	3
Teller.....	7	334	17
Golofnin.....	12	249	4
Unalakleet.....	16	815	16
Bethel.....	4	8	
Nulato.....	3	6	
Total.....	68	2,841	61

SUMMARY.

Total number of Eskimo in Alaska owning reindeer.....	68
Total number of reindeer owned by Eskimo.....	2,841
Total number of subapprentices not yet owning reindeer.....	61
Total number of Eskimo owners of deer, and apprentices.....	129
Herders serving five years' apprenticeship.....	25

List of reindeer stations.

Place.	When established.	Total deer, 1903.
Teller (Port Clarence).....	1892	641
Cape Prince of Wales.....	1894	1,525
Golofnin.....	1896	728
Eaton (Unalakleet).....	1897	1,508
Point Barrow.....	1898	612
Gambell (St. Lawrence Island).....	1900	154
Bethel.....	1901	792
Kotzebue.....	1901	379
Nulato.....	1901	171
Total number of deer, October, 1903.....		6,506

List of reindeer stations needed, 1904.

[Number of reindeer required at each station, 100, at \$25 each.]

Place.	Cost of deer.
Wainright Inlet.....	\$2,500
Point Hope.....	2,500
Bettles.....	2,500
Copper Center.....	2,500
Total cost of deer.....	10,000

18 INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA.

Increase from 1892 to 1903.

Year.	To balance from previous year.	Fawns surviving.	Purchased during summer.	Total October 1.	Sold, butchered, died.	Carried forward.
1892			171	171	28	143
1893	143	79	124	346	23	323
1894	323	145	120	588	96	492
1895	492	276	123	891	148	743
1896	743	357		1,100	100	1,000
1897	1,000	466		1,466	334	1,132
1898	1,132	625	161	1,918	185	1,733
1899	1,733	638	322	2,693	299	2,394
1900	2,394	756	29	3,179	487	2,692
1901	2,692	1,110	200	4,002	538	3,464
1902	3,464	1,654	30	5,148	353	4,795
1903	4,795	1,877		6,505		

246 deer were killed in the relief expedition to the whalers at Point Barrow.

TABLE OF HERDS LOANED BY THE GOVERNMENT.

A number of reindeer have been loaned by the Government to missionary societies and natives, the Government reserving the right, after a term of three to five years, of calling upon the mission station or individual for the same number of deer as composed the original herd loaned.

Herds at mission stations in Alaska.

Mission.	Number loaned.	In herd, 1903.	When loaned.	When due.
Congregational mission, Cape Prince of Wales	118	594	Aug., 1894	Returned.
Swedish Evangelical Mission, Golofnin Bay	50	320	Jan. 16, 1896	Do.
Protestant Episcopal Mission, Golofnin Bay	50	114	do	Do.
Presbyterian, Point Barrow	100		Sept., 1898	Sept., 1903
Presbyterian, St. Lawrence Island	70	150	July 30, 1900	July, 1905
Norwegian Evangelical Lutheran, Teller	100	281	Sept. 1, 1900	Sept., 1905
Roman Catholic, Nulato	100	171	Mar., 1901	Mar., 1906
Moravian, Bethel	88	213	Feb. 26, 1901	Feb., 1906
Moravian, Carmel	88	188	do	Do.
Friends' Mission, Kotzebue	95	195	Sept. 2, 1901	Sept., 1906
Swedish Evangelical, Unalakleet	100	100	July 24, 1903	July, 1908

Annual loan of herds to Laplanders.

	Location.	Year.	Males.	Females.	Total.
Ole Olesen Bahr	Eaton	1901	25	75	100
Nils Persen Sara	Kuskokwim	1901	25	75	100
Per Mathisen Spein	do	1901	25	75	100
Alfred Salmonsens Nilima	Kotzebue	1901	24	75	99
Nils Klemetsen	Golofnin	1902	25	75	100

Congressional appropriations for the introduction into Alaska of domestic reindeer from Siberia.

1894	\$6,000	1901	\$25,000
1895	7,500	1902	25,000
1896	7,500	1903	25,000
1897	12,000	1904	25,000
1898	12,000		
1899	12,500	Total	188,000
1900	25,000		

Expenditure of appropriations "Reindeer for Alaska, 1903."

Amount appropriated	\$25,000.00
Salaries of six employees	3,247.29
Supplies for stations	6,408.05
Freight	691.50
Travelling expenses	139.00
Printing of annual report (1,000 copies)	471.13
Photographs and electros for report	18.95
Coal	1,650.00
Purchase of reindeer	5,727.12
Balance	6,646.96
Total	25,000.00

**REINDEER AN IMPORTANT FACTOR IN THE CIVILIZATION OF THE
ESKIMOS.**

For some months past the newspapers have from time to time published cases of destitution among the Eskimos and the natives of northern and central Alaska, also accounts of the ravages of consumption and other diseases, and the demoralization caused by the proximity to the saloons that are being established in the new mining settlements. While these newspaper reports are doubtless more or less exaggerated, yet from the official reports of Brig. Gen. Frederick Funston to the Adjutant-General United States Army, Washington, D. C., of Mr. James W. Witten, special inspector of the General Land Office, to the Secretary of the Interior, both of which reports are printed in the appendix of the report of the Secretary of the Interior, for the fiscal year ending June 30, 1903, from interviews had with members of the committee of the United States Senate that visited Alaska during the past summer, and from my personal knowledge, there is a certain amount of destitution, a prevalence of consumption, and demoralization from liquor that should receive attention from the General Government.

This raises the question what that attention should be and how these natives can be made valuable helpers and assistants in the development of the country by the white men now there engaged in mining operations.

Any successful method of accomplishing such desirable results must keep clearly before it the aim to prepare the natives to become a help to the immigrants who come from the States for the purpose of conducting mining operations. There are two things which the native may be taught to do which will enable him to help the immigrant: First, he may be taught how to create a supply of cheap food; second, he may be taught how to supply a cheap transportation by means of reindeer. It is known that in the river valleys certain garden vegetables may be produced in large quantities, even up to the Arctic Circle and for 50 miles beyond it. The native knows how to take fish from the rivers and from the sea for his family use, and with proper training can be made an equally successful fisherman for the market.

The experience of the past twelve years has proved that he can also become skillful in raising reindeer for food. With the gradual disappearance of the caribou and moose in sections of Alaska and the difficulty and expense of bringing beef and mutton from the States to the inland mining camps, it is of great importance that the Eskimo be trained to raise reindeer with which to supply the immigrant miner with fresh meat.

When in the winter of 1897-98 400 sailors engaged in whaling were imprisoned in the ice off Point Barrow and in danger of perishing with scurvy and starvation, they were saved by the reindeer herd driven by Eskimos from Bering Strait to Point Barrow and slaughtered for food.

Already 68 Eskimos and 1 Indian (many of whom have served a five years' apprenticeship learning the business) own 2,841 deer. Reindeer multiply rapidly. From the 1,280 Siberian reindeer imported between 1892 and 1903 and from their natural increase 7,983 fawns have been born in Alaska.

The Eskimo has always been skillful in driving dogs, and now under instruction he is proving equally skillful in driving reindeer, and upon various occasions when the opportunity has offered has invariably demonstrated his ability to successfully transport with reindeer mails, freight, and passengers between mining camps. Under contract with the Post-Office Department the United States mail has been carried by reindeer teams on the four postal routes between St. Michael and Kotzebue, Eaton and Nome, Teller and Deering, and Kotzebue and Point Barrow (this latter being the most northern mail route in the world). With the increase of reindeer and trained native teamsters such service will become universal in northern and central Alaska.

When the native has thus become useful to the white man by supplying the markets with fish and fresh meat, and when he has become herdsman and teamster with reindeer, he has not only assisted the white man in solving the problem of turning to the use of civilization the vast Territory of Alaska, but he has also solved his own problem. If useful to the white man as a self-respecting and industrious citizen, he has become a permanent stay and prop to civilization, and his future is provided for.

The conclusion resulting from this is that the native must be taught in school how to speak English and be trained in industrial schools in the simple arts of agriculture and of reindeer herding and teaming with a view to provide cheap food and cheap transportation for the use of the immigrant.

To accomplish such training it is important that an increased number of small industrial schools shall be established at centers convenient to the native population.

At these schools, in addition to elementary instruction in the English language, there shall be given special instruction (*a*) in making fish

nets and in adopting improved methods of catching and preparing fish for family use and for sale; (b) in the care and raising of reindeer, and in their breaking in and use in transportation; (c) and wherever the conditions of soil and climate will allow, in the cultivation of hardy vegetables.

While destitution is not at present very widespread among the natives, yet it may be wise to have at each of these schools a small supply of food and clothing to afford temporary relief for very special cases of destitution. The principal of the school can be made a bonded officer of the Government, and be charged with the care and distribution of such supplies without additional expense to the Government.

The Secretary of the Interior has again and again called the attention of Congress to the need of hospitals for the natives. These should be provided for at once. But when the hospitals are erected they will necessarily be accessible to comparatively limited areas. In addition to the proposed hospitals, very important service may be rendered and a greatly increased number of natives benefited by the employment of a physician in connection with each of the industrial schools. This plan has been in successful operation at several of the missionary stations in Alaska.

REINDEER AND THE MINER.

While the original purpose in the introduction of domestic reindeer into Alaska was to assist in the civilization of the natives and to help them to a better and more certain method of gaining a livelihood, yet the reindeer will prove equally important to the whites who may seek homes or engage in business in subarctic Alaska.

In the development of the rich mineral resources of that region he will find the reindeer and the Eskimo herder and teamster the connecting link between himself and the resources of nature—for his comfort and for his profit.

The ordinary white man is unwilling to undergo the drudgery of herding in that rigorous climate, and unwilling to work for the small compensation that is paid for such services. He can do better. His directive ability can be more profitably employed as merchant and manager of transportation, in employing and directing the trained Eskimo herders and teamsters.

With the increase of domestic reindeer in Alaska, it will become possible for white men to own large herds, but the men that will do the herding and teaming will always be Eskimos and Laplanders.

Thus the Eskimo, trained as herder or teamster, will prove valuable to the white man, and the white man in turn, as director and employer, will be valuable to the native.

Already the reindeer have given evidence of some of the ways in which they will prove an important factor in the development of the great north region.

As the reindeer is the only draft animal in arctic regions that is able to secure its own food while on a journey, the question of cheapness and speed will bring it into universal use.

They will carry passengers, mails, and freight between the mining camps and the trunk railways that will yet penetrate Alaska.

EMPLOYMENT OF REINDEER.

As the reindeer are more and more coming into use in the development of northern and central Alaska a recapitulation of their employment in mail carrying, relief expeditions, freighting, etc., is of interest.

In summer these enterprises are carried on with the aid of steamers along the water courses, but in the fall, winter, and spring recourse is had to reindeer and dogs.

REINDEER AND THE CARRYING OF THE UNITED STATES MAILS.

Reindeer mail between St. Michael and Kotzebue, with a branch line to Golofnin.—During the summer of 1899 the Second Assistant Postmaster-General gave to Mr. William A. Kjellmann, superintendent of the reindeer in Alaska, as subcontractor, the carrying of the mail on route No. 78110. This route called for three round trips during the winter of 1899, between December 1, 1899, and May 31, 1900, between St. Michael, Eaton, Golofnin, and Kotzebue—the latter place being north of the Arctic Circle. Mr. Kjellmann being compelled to return to the States on account of sickness, gave the work into the hands of Mr. David Johnson Elliott, who employed Johan Peter Johannesen, a Laplander, not in the employ of the Bureau of Education, as mail carrier. The service was successfully performed with reindeer, each round trip of 1,240 miles being through an unbroken wilderness without a road or trail. The Bureau of Education being very anxious to provide its schools on this route with mail facilities, and desiring to show what the reindeer could do, and at the same time give practice and experience to its apprentices in reindeer teaming, allowed the use of three or four deer with sledges manned by apprentices from the Eaton station without compensation.

Reindeer mail between Eaton and Nome (post-office route No. 78113).—In the fall of 1899 the Post-Office Department, wishing to expedite and increase the mail service along the Yukon River and to Nome to a semimonthly winter service, on the 23d of November, gave a contract for a semimonthly mail between Nome and Eaton to Mr. William A. Kjellmann, who had eight months previously severed his connection with the Government on account of ill health. Mr. Kjellmann, not having recovered his health, employed Mr. David Johnson Elliott, of Nome, to take charge of this mail route. Mr. Elliott was also taken sick and went to the hospital in Nome for the winter. To prevent a

failure in the delivery of the mail at Nome, the post-office inspector at St. Michael directed Dr. F. H. Gambell, Government superintendent of reindeer and postmaster at Eaton, to put on a service to Nome at the expense of the contractor. Mr. Newman Sherzer was relieved from his duties as assistant superintendent at the station and appointed manager of the reindeer mail service to Nome by Doctor Gambell. On the 1st of March, 1900, the reindeer started from Eaton with the mail for Nome. Five consecutive successful trips were made, thus completing the winter contract.

At the close of the service Doctor Gambell, in behalf of the Eaton reindeer station, made out a bill against Mr. Kjellmann, charging him with the wages of the men, station supplies, use of the reindeer, etc., amounting to \$1,863.50. Of this sum Mr. Kjellmann paid the carrier, Mr. Sherzer, \$500. He also sent to Sheldon Jackson his power of attorney and a check for \$1,000, with which to pay Mr. Kjellmann's indebtedness to the Eaton reindeer station for expenses incurred in carrying this mail, objecting to certain items on account of informality of the vouchers, which items aggregated \$363.50. Accordingly Mr. Jackson, as Mr. Kjellmann's attorney, with the advice and consent of the Commissioner of Education, expended the thousand dollars received from Mr. Kjellmann to replace supplies at the reindeer stations as follows:

Reindeer supplies from S. Foster & Co., San Francisco, Cal.....	\$257. 26
Reindeer supplies from Armour Packing Company.....	139. 50
To Mr. W. T. Lopp, for services of himself and assistants in transferring a herd of Government reindeer from Cape Prince of Wales to Kotzebue, by direction of the Bureau of Education.....	350. 00
To Nils P. Bals, in payment of wages as instructor of apprentices in the care and management of reindeer	253. 74

Reindeer, pack saddles, and sleds furnished Mr. N. V. Hendricks, subcontractor on mail route between Weare and St. Michael.—In the spring of 1900 Mr. N. V. Hendricks, a trader on the Yukon River and subcontractor on the post-office mail route between Weare and St. Michael, arranged with Doctor Gambell, superintendent of Government reindeer station at Nome, for the use of a few reindeer, saddles, and sleds for carrying the mail between St. Michael, Eaton, and Nulato, a distance of about 200 miles each way.

Reindeer mail route between Nome, Candle, and Deering.—During the winter of 1901-2 Mr. J. T. Lindseth secured the contract for carrying the United States winter mail from Nome, via Teller, York, Cape Prince of Wales, Shismaref Inlet, to Candle City and Deering, on the shores of the Arctic Ocean, a distance of 260 miles. His reindeer during the winter traveled 6,000 miles. The mail carriers were Amund Hansen, Isak Salamonsen Nikkila, and Johan Peter Johannesen. Johannesen lost his life near Candle City, being frozen to death while carrying this mail. His reindeer team was afterwards

found well and in good condition. He had previously carried the mail for the Norwegian Government many years in Lapland. Mr. Lindseth hired reindeer from their owners (Eskimo herders who had completed their apprenticeship at one or the other of the reindeer stations in Alaska). The Bureau of Education had no connection with the matter.

Reindeer mail route between Kotzebue and Point Barrow.—One of the great needs of Alaska is better communication and postal facilities. This is especially the case north of the Arctic Circle. Although at Point Barrow the Government has had a relief station and a public school, and the Presbyterians a mission station, and capitalists a whaling station for the past dozen years, yet the place has had but one mail a year, and on three occasions during the past twelve years the yearly mail failed to reach them. The conditions were so distressing that Mr. S. R. Spriggs, the Government teacher, while on a year's furlough with his relatives in New York, availed himself of the opportunity, and with the assistance of friends made application to the Post-Office Department for a winter mail, which was granted, and a contract for carrying the same was awarded to Mr. Spriggs. The distance from Kotzebue to Barrow via Point Hope is 630 miles, making a round trip of 1,300 miles, north of the Arctic Circle, over a country without a road or trail, and through a long winter night with the thermometer ranging from 20° to 60° below zero. He is allowed by the Post-Office Department \$750 for each round trip, a sum barely sufficient to cover the incidental expenses and allow a slight compensation to the hardy Eskimo drivers, who, at the risk of their lives, carry the mail on this northernmost postal route in the world. The time consumed in making each round trip will be between two and three months. There will be times when they will be storm bound in their snow huts for several days at a time. The Bureau of Education, to encourage and assist these pioneers of civilization, to furnish the Government employees at Barrow with mail facilities and to practice and train its apprentices in reindeer freighting, allows the use of a few deer without compensation.

Reindeer mail routes between Teller and Wales, and between Teller and Igloo are in operation during the winter of 1903-1904.

REINDEER IN CONNECTION WITH RELIEF EXPEDITIONS.

Transportation of United States troops with camp equipage and rations from St. Michael to Golofn'in and return.—In the fall of 1896 gold mines were discovered on Snake River, near Cape Nome, Alaska, and during the winter there was a stampede to the new mines from St. Michael, Kotzebue Sound, and the mining districts on the lower Yukon that received the information. The influx of a large population into a region where there was an insufficiency of supplies and shelter required the presence of United States troops to preserve the

peace. An application was made by Captain Walker, in command of the camp at St. Michael, to Mr. Kjellmann for transportation, in response to which Lapps and reindeer were sent from Eaton station to St. Michael, and transported troops, with their tents, rations, and camp equipage, from St. Michael to the Golofnin Bay mining region. When there was no longer any need for their presence at Golofnin Bay the Lapps and reindeer returned the soldiers to St. Michael without accident or difficulty.

Military expedition to Kotzebue.—In January, 1901, information having reached Nome that the Eskimos in the neighborhood of Kotzebue, 400 miles distant, were starving, the commanding officer at Fort Davis ordered Dr. J. Bevans, army surgeon at the post, to make a trip of investigation. He and his party were furnished at Teller by Superintendent Brevig with five reindeer, together with sleds and drivers, for a three months' trip.

Relief of soldiers engaged in building a military telegraph line.—In the fall of 1900 the War Department had three construction parties, aggregating about 110 officers and enlisted men, engaged in the work of building a Government telegraph line between Unalaklik and Kaltag, on the Yukon River. As the winter storms came on one after another, all work had to be suspended, rations began to fail, and mule transportation gave out. In this emergency General Randall, in command of the military department of Alaska, requested Doctor Gambell to take all the deer teams that could be spared and go to the relief of the Government party. Accordingly, on the 4th of December, Doctor Gambell started with three deer, leaving Mr. Lindseth, who had for about fifteen months been an employee at the Eaton reindeer station, to follow the next day with 32 deer and the necessary drivers and sleds.

The troops were found in camp 18 miles west of Kaltag, and with their camp equipage were brought through deep snow to a new camp established near Old Womans Mountain, a distance of 50 miles. The troops being left in a place of safety, the deer teams were sent, at the request of the commanding general, to St. Michael for the transportation of provisions for the men and telegraphic supplies, all of which they secured and delivered. They were also employed during a portion of the winter in drawing telegraph poles from the woods.

Relief of wrecked and ice-imprisoned whalers.—In the fall of 1897 word was received on the Pacific coast that 8 whaling ships and 275 men had been caught in the ice in the neighborhood of Point Barrow with only three months' provisions in their ships, and that the ships would necessarily be detained for twelve months, if not sooner crushed in the ice, before they could escape, and that starvation faced the whalers. A relief expedition, which ultimately cost nearly \$100,000, was instituted by the Government for the rescue of those men.

Lieutenants Jarvis and Bertholf and Surgeon Call were put ashore near Nunivak Island to move northward with dogs about 750 miles to Point Radney and Cape Prince of Wales, where the reindeer herds of the Congregational Missionary Society (in charge of W. T. Lopp, their missionary), and of Antisarlook (an Eskimo reindeer owner), were in pasture. With nearly 500 reindeer from these herds, accompanied by Messrs. Lopp and Antisarlook, the officers proceeded to Point Barrow, where as many reindeer as were needed were slaughtered and issued as rations to the destitute whalers. The total number of reindeer killed was 246.

In accordance with the promise made, the deer borrowed were returned during the summer of 1900, the second year after the expedition, together with the annual increase of fawns during two seasons, making a total of 1,042 reindeer.

REINDEER FOR TRANSPORTATION AND FREIGHTING.

A winter trip of 2,000 miles.—Since the commencement of the enterprise, in 1892, the obstacles that it was predicted would prevent the successful introduction of domestic reindeer into Alaska have either been proved to be groundless or have one by one been met and overcome. Having shown by actual experience that they could be bought, transported, and successfully propagated, it remained to give a practical demonstration of their ability to traverse any part of the country under the most unfavorable circumstances, and with a temperature at times lower than experienced by some of the Arctic expeditions.

This was done in the winter of 1896-97. At 3 p. m. on the 10th of December, 1896, with the temperature at 15° below zero, Mr. William A. Kjellmann, the superintendent, accompanied by the Lapps Per Aslaksen Rist and Mikkel J. Nakkila, started from the Teller station with 9 sleds and 17 head of reindeer to demonstrate the capacity of the hardy and swift animal for winter travel in Alaska. Native trails and well-known sections of country were ignored, to show the ability of the deer to traverse unbeaten tracks. The course, while traveled by compass, was a zigzag one, in order to better learn the extent and abundance of moss pasturage. Scaling high mountain ranges, shooting down precipitous declivities with toboggan speed, plodding through valleys filled with deeply drifted snow, laboriously cutting a way through the man-high underbrush of the forest, or steering across the trackless tundra, never before trodden by the foot of white man; gliding over the hard-crusting snow, or wading through slush 2 feet deep on imperfectly frozen rivers unknown to geographers, were the experiences of the trip.

The second day of the journey, with the temperature 43° below zero, and over a rough, broken, and pathless country, they made a distance of 60 miles.

After celebrating Christmas with Rev. Mr. Hultberg and the Swedish missionaries on Golofnin Bay, December 30 found Mr. Kjellmann's party crossing Norton Sound, an arm of Bering Sea, and getting into a crevasse filled with snow, from which they escaped without much damage.

The next day, keeping on the ice along the coast, hummocks were found so steep that steps had to be cut up and over them to enable the deer to cross.

On new year's day, coming to a flagstaff projecting from a huge snow bank, they found under it, completely buried in the snow, the comfortable home of the Rev. Mr. Karlsen and the Swedish missionaries at Unalaklik. On the afternoon of January 11, and morning of the 12th, 85 miles were made in twelve hours. The native guides at St. Michael being afraid to undertake a winter trip across the country to Ikogmute, the Russian mission on the Yukon River, and affirming that it could not be done, Mr. Kjellmann started on January 19 without them, traveling by compass.

On the 23d, while crossing a barren mountain range, they were overtaken by that dread specter of arctic regions, a Russian poorga.^a Neither man nor beast could stand against the blast. The reindeer were blown down and the loaded sleds overturned. The men, throwing themselves flat, clung to one another and to mother earth to keep from being blown away. Gravel and pieces of crushed ice flew by, darkening the air. A lull coming toward evening, with great difficulty a little coffee was made, after which the storm broke with renewed fury during the night, which, to the travelers, clinging to the earth with desperation, seemed endless. The following day a belt of timber was reached and rest and safety secured. January 25 and 26 found them cutting a way for the deer and sleds through a dense forest, from which they finally emerged to wade through snow and water 2 feet deep and the temperature at zero. On the 31st they encountered a succession of driving, blinding snowstorms while crossing the tundra south of the Yukon delta, being reduced to such straits that they were compelled to cut the railing from their sleds for fuel. On February 5 the storm passed away, leaving the temperature at 73° below zero, causing even the reindeer to break loose from their tethers and tramp ceaselessly around the tents for warmth.

Notwithstanding the severe cold, the journey was continued, and at 2 o'clock in the afternoon they found shelter and a warm welcome from the Moravian missionaries at Bethel. On the 10th of March, between the Kuskokwim and Yukon rivers, a lake 15 miles wide was crossed.

The struggle for life commenced, however, on the 11th, when they reached the Yukon, and, contrary to information, found no moss for

^a An arctic blizzard.

the deer. A push was made up the Yukon to reach, if possible, the Episcopal mission at Anvik. There being no food, the march was kept up all night, the men plowing their way through loose snow from 2 to 4 feet deep, and on through the 12th, with snow falling fast. That afternoon two of the deer fell dead and were left with their sleds where they fell, while the journey continued uninterruptedly through the blinding snow the second night. On the 13th two more deer dropped dead and were abandoned, as the party with desperate energy pushed ahead day and night for food and life. On the 14th another deer fell in his traces. That evening a native hut was reached and the continuous march of four days and three nights without sleep or rest and without food for the deer was over. Trees were cut down by the Lapps that the deer might browse on the black moss that hung from them, while Mr. Kjellmann, suffering with a high fever, was put to bed by the medicine woman, and dosed with tea made from some medicinal bark. On the 17th one of the Lapps, who had been scouring the country, reported moss upon a mountain 60 miles away. The deer were unharnessed and driven to the distant pasturage, while Mr. Kjellmann continued his journey to Anvik on skees. In the hospitable home of Rev. Mr. Chapman he was nursed back to health and strength.

The return journey to the Teller station was made without any special adventure, except, on the 16th of April, getting into a crack in the ice while crossing Norton Sound and soaking the load with salt water. On the 24th of April the Teller station was safely reached after a trip of 2,000 miles, the longest ever recorded in any land as made by the same reindeer.

The result of this trial trip has convinced missionaries, miners, traders, and others residing in northern and central Alaska that domestic reindeer can do for them there what they have been doing for centuries in Lapland; that when introduced in sufficient numbers they will supplant dogs, both for traveling and freighting, furnish a rapid means of communication between widely separated communities, and render possible the full and profitable development of the rich mineral interests.

At the Teller station the sled deer were kept in constant practice, both on their own account and also for the training of the Eskimo apprentices. Including the trip to the Kuskokwim Valley, the aggregate number of miles driven was over 10,000.

Reindeer freight line between St. Michael and Nome.—Late in the fall of 1898 gold was discovered on Snake River near Cape Nome, and during the following winter there was a miners' stampede from St. Michael, Kotzebue Sound, and the lower Yukon Valley to the new mines. As there was no adequate supply of provisions within 300 miles of the mines and an abundant supply in the warehouses of the large trading companies at St. Michael, at the request of said compa-

nies Mr. Kjellmann, superintendent of Eaton reindeer station, agreed, as an act of humanity, to transport for the companies a limited amount of food from St. Michael to Nome, which was done, and payment for the same was rendered by the trading companies by furnishing needed provisions to the Eaton reindeer station.

During the same winter of 1898-99 the Swedish Mission at Golofnin, using their own reindeer, freighted supplies to Nome on their own account.

During the winter of 1900-1901, there being a scarcity of provisions on the overland route between Dawson and Nome, Mr. Kjellmann, superintendent of Eaton reindeer station, freighted some provisions from St. Michael to Norton Sound for G. L. Stanley & Co. Payment for the same was made in supplies to the Eaton reindeer station.

During the same winter of 1900-1901 Mr. W. T. Lopp, missionary of the American Missionary Association, organized an express and freight line between Nome and Teller, in order that the Eskimo herders at Cape Prince of Wales, using their own deer and sledges, might have a way of earning a support, with a result that they secured \$600 in gold.

The same season the Eskimo apprentices at Teller, Synrock, and Golofnin reindeer station, using their own deer, did considerable transporting of miners and supplies to various outlying mining camps. In this connection especial mention is made of Kozebuk, a young man or boy about 17 years old, the youngest of the three mission apprentices at Teller station. In May he, with Johan Tornensis, took a train of eighteen loaded sleds to Tuttle Creek, on the Arctic slope, about 65 miles from the station; Kozebuk driving a string of five deer with loaded sleds, the last four being tied to the preceding sled. From there he alone took two harnessed deer with sleds and ten loose deer to Mr. Lopp's herd, 45 miles distant, returning to camp, and in a week taking ten more deer to Mr. Lopp's herd. Returning to camp on June 1, he started for the station with four deer and eight empty sleds during the worst possible condition of travel, the snow melting and the rivers opening, arriving at the station June 4, without accident and the deer in good condition, having traveled 245 miles.

In the winter of 1901-2 two miners at Nome purchased two sled deer from Mary Antisarlook. The deer were worked in harness like horses and hauled on sleds 790 pounds each from Nome to Good Hope, 250 miles. After reaching Good Hope they were used in delivering supplies from the stores to the miners' cabins in the neighborhood. During July, when supplies of provisions ran short, one of them was killed and sold for meat, and the other was made the pet of the camp.

The same winter from Cape Prince of Wales reindeer station, eleven deer were sold by the herders to the miners for transportation purposes; they were worked in harness like horses and each drew 700 pounds per load.

From the Teller station an apprentice, Kozebuk, made two trips to Shishmaref Inlet district, a round trip of 400 miles, and one to Golofnin Bay and return (400 miles), carrying supplies for the miners. Another, Serawlook, made one trip to Shishmaref Inlet and one to Golofnin Bay. In addition to the above five trips numerous trips were made by the apprentices between the winter camp and station, a round trip of about 120 miles.

From Eaton station the superintendent states in his report that two prospectors who attempted to freight their supplies from St. Michael to the Buckland River with dog teams, failed on account of not being able to procure food for the dogs. Returning to Unalaklik (Eaton) they hired Okitkon, who, with five of his deer and sleds, took them and their supplies to destination without difficulty.

On July 19, 1902, Judge E. L. Bosqui, who had been appointed United States commissioner for the valley of the Colville River, Arctic Alaska, left Nome on the U. S. revenue cutter *Bear* for Point Barrow, which place was reached in twenty-one days. At Point Barrow he had expected to be able to employ natives with their dogs to take him to his destination on the Colville, over 200 miles along the Arctic coast to the eastward of Point Barrow, but owing to an epidemic of sickness he was unable to secure the expected help and was obliged to remain at Barrow from August 12 to November 23, when Dr. H. Richmond Marsh, who was in charge of the Government reindeer at that station, came to his rescue. Thirty-six deer were taken from the herd and twenty sleds carrying about 250 pounds each were loaded with supplies for the judge, his deputy, and five natives, who accompanied the party. As a majority of the deer had not been broken to harness, it was a case of training while on the road, which greatly delayed the progress and added to the annoyance of travel. The Arctic night had commenced and the thermometer stood from 40 to 60 degrees below zero. The party kept closely along the coast, except where they came to bays and inlets, which they crossed upon ice from point to point. When they reached Harrison Bay they turned and proceeded inland before reaching their destination at the village of Jarvis on the Colville. Owing to their imperfect acquaintance with the route, and the difficulty of traveling with half-trained deer, and inability to travel over four or five hours during the twenty-four, on account of want of sufficient light, the trip, which should have been made in fifteen, consumed thirty days.

Dana Thomas, Quaker missionary at Kotzebue, writes, August 14, 1903, as follows:

The old prejudice of Alaskan miners, who have always heretofore used dog teams as beasts of burden in this work, is fast dying away before the very evident superiority of the reindeer for such work. Only those who have gone long journeys with dog teams, and have been compelled to load the greater part of the sled with food for the dogs or to pay very high prices for the same along the course of travel, can

fully appreciate the great advantage of using reindeer that are to be driven all day, knowing that when resting time comes the deer will find their own food in the deer moss that covers the tundra in this region.

The different white men who have used deer during the past unusually severe winter on the upper Kowak River, north of the Arctic Circle, have, without a single exception, been more than pleased with same.

Charles Dankurt left this place in December last with five deer, some of them not well broken. They were soon so well trained and so gentle that he and his wife had no trouble in driving them, going a distance of about 300 miles up the Kowak (north of Arctic Circle). His deer are so gentle that he tells us they will follow him or his wife about and take food from their hands.

In April of this year Doctor Benson, of Candle Creek, left that place with his two companions, using four deer which hauled the three men, together with sleeping bags, camping outfit, and four months' supply of food. They traveled a distance of about 500 miles over tundra and across mountain ranges. After snow disappeared they used the deer as pack animals, strapping the burden upon the willing little animal's back. At the last stage of the trip, when the men had to cross a river or to go down the same in boats, the deer had become so gentle that when turned loose they would swim the streams after the boat, or follow after the same along the river bank. Both of these gentlemen declare that reindeer are by far the best animals to use as means of traveling or as pack animals in this region.

During the year I have read with much interest "The Land of the Long Night," by Paul Du Chaillu. While written for young people, the book contains so much information concerning the reindeer industry in Lapland, told in an entertaining way, that it can not fail to interest and instruct older people as well, and I would recommend that a copy be sent to each of the reindeer stations in Alaska.

THE CRUISE OF DR. WILLIAM HAMILTON, ASSISTANT AGENT.

The extended tour of inspection of public schools and reindeer stations in Alaska was this season made by Dr. William Hamilton, the assistant agent. The following is an abstract of his itinerary:

Leaving Washington May 4, Doctor Hamilton joined the U. S. S. *Thetis*, at Seattle. On May 26 the *Thetis*, Capt. M. A. Healy, commanding, left Seattle with Unalaska, the largest settlement on the Aleutian Islands, as her objective point, where she arrived June 5. While the *Thetis* was coaling for her Arctic cruise Doctor Hamilton inspected the public schools at Unalaska and conferred with the teachers and with the members of the local school committee, who here, as elsewhere throughout Alaska, by acting as auditors and advisers, assist the Bureau of Education in carrying on the Alaska school service. Extensive repairs to the school building at Unalaska were authorized.

On June 11 the *Thetis* left Unalaska harbor heading for Nome in order to render assistance to merchant vessels, if necessary. The season was unusually late, and in approaching Nome the *Thetis* encountered a great deal of ice. Ice fields were drifting about off Nome, causing the large passenger steamers that had just succeeded in pushing their way to this important distributing point frequently

to shift anchorage in order to avoid being driven ashore by the pressure of the ice.

At Nome, which can be reached by steamer from Seattle in eight or nine days, letters and recent newspapers were received, fresh stores were obtained, and the mail for the remote places in the Arctic, whose only means of communication with the outside world is the annual visit of the cutter, was taken on board.

At Nome considerable anxiety was felt for the safety of the steamship *Portland*, which was long overdue. Captain Healy without delay started in search of the missing vessel. Three days were spent in the difficult work of pushing through the ice in that part of Bering Sea where the *Portland* had last been sighted, without finding any trace of the missing steamer. While in the neighborhood of St. Lawrence Island, where there is a public school, a Presbyterian mission and a reindeer station, an attempt was made to reach the island. St. Lawrence Island was found to be icebound and it was impossible to approach within many miles of land.

On June 20 the *Thetis* returned to Nome, where the *Portland* was found safely at anchor. On account of the unusually heavy ice in Bering Sea it was impossible to continue the cruise until June 26, when a second attempt was made to reach St. Lawrence Island. Heavy ice and almost continual fog were encountered, and not until June 29 did the *Thetis* succeed in reaching the village of Gambell, near Cape Chibukak, at the northwestern extremity of the island.

Dr. Edgar O. Campbell and Mrs. Campbell, the teachers on this remote island, were found to be in good health and spirits. A few hours were spent in exchanging the news of the past year, in visiting the school, in inspecting Government property, and in attending to miscellaneous business in connection with the station.

At Cape Prince of Wales, where the *Thetis* arrived July 2, on account of ice fields drifting rapidly northward on the strong current through Bering Straits it was impossible to communicate with the village, and the ship proceeded to a somewhat sheltered bay a few miles to the south of the cape. Mr. Rognon and Mr. Lee, the teacher and the missionary at Wales, came to the *Thetis*, and considerable business in connection with the school and reindeer station at Cape Prince of Wales was transacted, the visit of inspection being of necessity postponed until later in the season.

At St. Michael the *Thetis* was delayed for about three week awaiting the arrival of the Yukon River steamer having on board Senator Charles H. Dietrich, of Nebraska, who had received permission from the Secretary of the Treasury to make the arctic cruise on the *Thetis*. At St. Michael business connected with the school was attended to and supplies were purchased. The reindeer station at Unalakleet, on Norton Sound, was also visited, and Dr. Carl O. Lind, the superintendent of reindeer herds in Alaska, was consulted.

On August 2 the *Thetis* left Nome and started on its cruise to Point Barrow, the extreme northwestern cape of the continent, visiting the mission station of the Protestant Episcopal Church at Point Hope en route.

In the vicinity of Icy Cape, August 6, heavy ice was encountered. During the following days many unsuccessful attempts were made to proceed farther north. On August 8, near Point Belcher, about 80 miles southwest of Point Barrow, Captain Healy decided to give up the attempt to reach Point Barrow, hardly enough coal remaining in the bunkers to take the ship back to Dutch Harbor on the Aleutian Islands, the nearest coaling station, more than 1,400 miles distant.

The mail for Point Barrow was left at Point Hope to be forwarded by the overland mail route which is to commence operations during the winter of 1903-4.

While the *Thetis* was in Kotzebue Sound Doctor Hamilton had a consultation with Mr. Dana Thomas, in charge of the reindeer station at Kötzebue, near the entrance to Hotham Inlet. Here, as at every other station in Alaska, the wisdom of introducing reindeer to aid in the development of the country and as a future means of support for those of the natives who are intelligent enough to avail themselves of the opportunity to become owners of reindeer is being demonstrated.

After cruising along the Siberian coast adjacent to Bering Straits, where the villages of Whalen and Indian Point were visited, the *Thetis* returned to Alaskan waters, anchoring off Cape Prince of Wales August 16. This time it was possible to communicate with the shore. Several hours were spent in the village, the school and mission being visited. In the village is a store conducted entirely by natives, and several frame buildings are evidences of the ambition of the more progressive natives to improve their condition.

On August 17 Teller reindeer station, on the north shore of Port Clarence, was inspected. Since the commencement of the importation of deer, in 1892, Port Clarence has been the receiving station for the deer brought from Siberia and the distributing point for the other reindeer stations in Alaska.

On its way southward the *Thetis* called at King Island; the sea being unusually smooth it was possible for a party from the ship to land and visit this remarkable village of cliff dwellers and to explore the cave which from time immemorial has been used as a storehouse by the natives. At the time of the visit of the *Thetis* the island was deserted, the inhabitants being absent on the mainland.

On August 21 the final visit for the season was made to the teachers on St. Lawrence Island. During the summer Doctor Campbell had completed the erection of a building to be used as a hospital for the natives. Here Mr. Thomas Richards, who during the coming winter of absolute isolation will assist Doctor Campbell, left the ship.

St. Paul Island, the largest of the Pribilof or Seal Islands, was visited August 25, and its adaptability for the reindeer industry ascertained by a drive of about 30 miles over the tundra.

On August 27 the *Thetis* anchored in Dutch Harbor, completing the northern part of her cruise. The ship was thoroughly overhauled and coal was taken on board for the remainder of the cruise. Just before leaving Dutch Harbor the *Thetis* received for transportation to civilization the passengers and crew of the schooner *Deering*, which had been driven on the rocks by the strong currents in Akutan Pass.

Having an unusually large number of persons on board, it was desirable for the *Thetis* to make the voyage homeward with as little delay as possible. Valdez was the only place visited between the Aleutian Islands and Sitka, where the *Thetis* arrived September 17. While in Sitka Doctor Hamilton had frequent consultations with Mr. William A. Kelly, superintendent of schools in the Sitka district, and inspected the two public schools in Sitka. The *Thetis* returned to Seattle by the outside passage through the North Pacific.

By the courtesy of Capt. Francis Tuttle, Doctor Hamilton made the voyage from Sitka to Seattle on the U. S. S. *Perry* through the inside passage; he was thus enabled to visit and inspect the public schools at Killisnoo, Hoonah, Haines, and Saxman. The *Perry* arrived at Seattle October 11.

After attending to various matters of business with the firms in Seattle and San Francisco that had furnished supplies for the schools and reindeer stations in Alaska, Doctor Hamilton returned to Washington October 26, completing a tour of inspection that had covered about 16,000 miles.

COOPERATION OF STATE AND TREASURY DEPARTMENTS.

As in former years, the honorable the Secretary of the Treasury and Capt. Charles F. Shoemaker, chief of the Revenue-Cutter Service, granted Dr. William Hamilton, assistant agent of education in Alaska, transportation on the revenue cutters *Thetis* and *Perry*, where he received from Capt. M. A. Healy and the officers of the revenue cutter *Thetis* and from Capt. Francis Tuttle and the officers of the revenue cutter *Perry* many facilities in the work of inspecting schools and reindeer stations. Thanks are also due to the honorable the Secretary of State and the Hon. Charlemagne Tower, ambassador to the Court of Russia, for negotiations with the Russian authorities concerning the exportation of domestic reindeer from Siberia to Alaska.

All of which, with accompanying papers, map, and illustrations, is respectfully submitted.

SHELDON JACKSON,

General Agent of Education in Alaska.

The COMMISSIONER OF EDUCATION.

**ILLUSTRATIONS FOR REINDEER REPORT,
1903.**





HERD OF REINDEER AT THE SEASIDE.
Photograph by F. H. Wennberg.



PACKING WITH REINDEER.
Photograph by F. H. Wennberg.

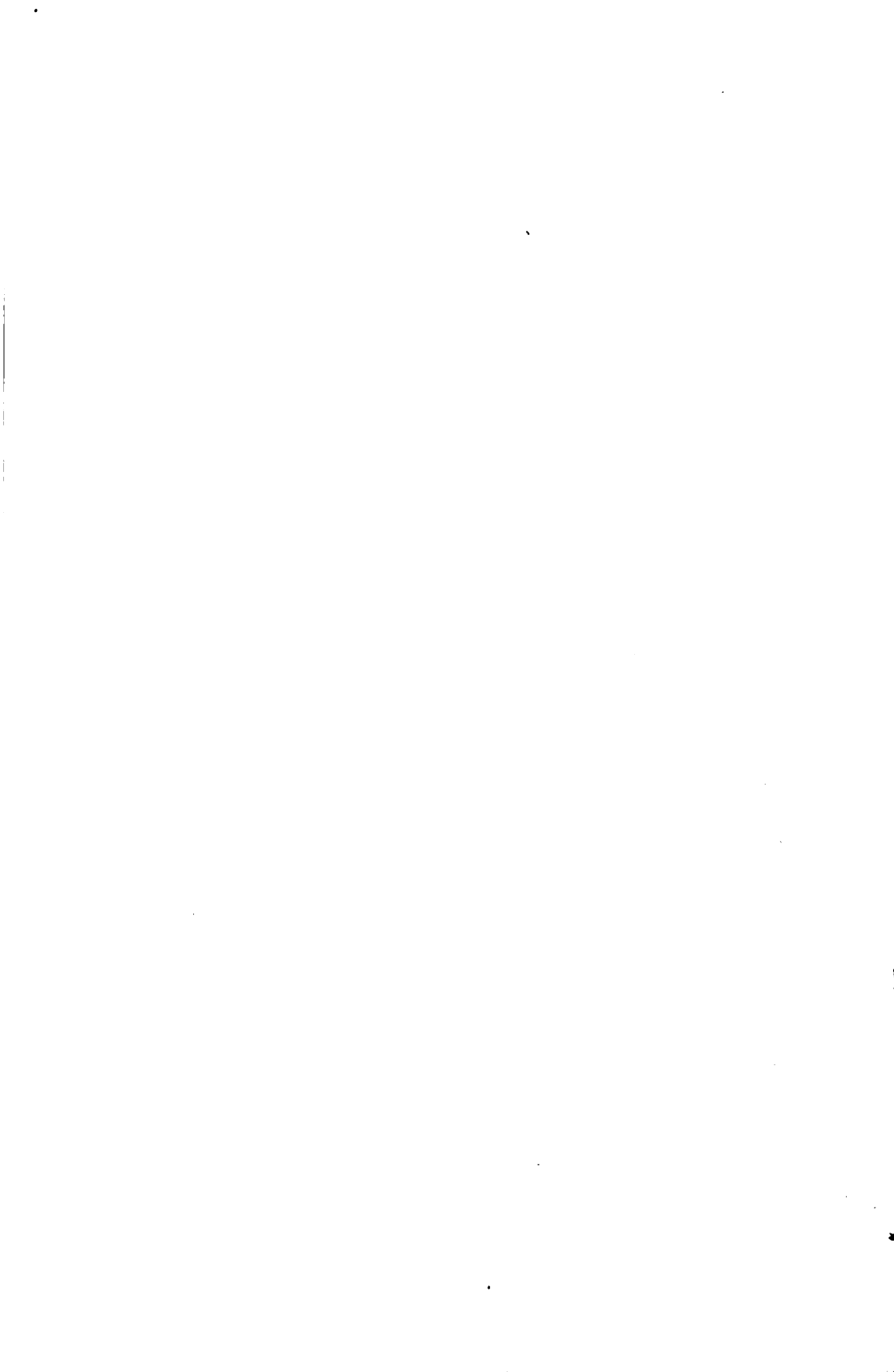




Copyright, 1899, by Charles Scribner's Sons.

REINDEER DIGGING UP THE SNOW TO GET THE MOSS BENEATH.

From "The Land of the Long Night," by Paul du Chaillu.



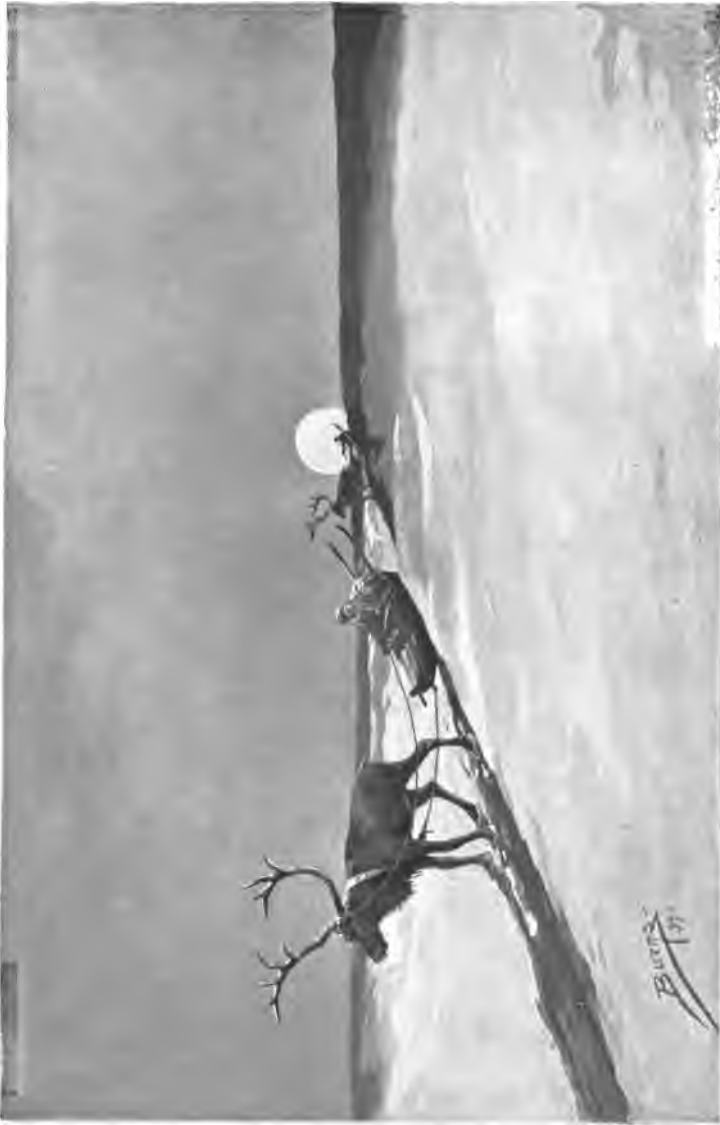


Copyright, 1899, by Charles Scribner's Sons.

LASSING REINDEER.

From "The Land of the Long Night," by Paul du Chaillu.



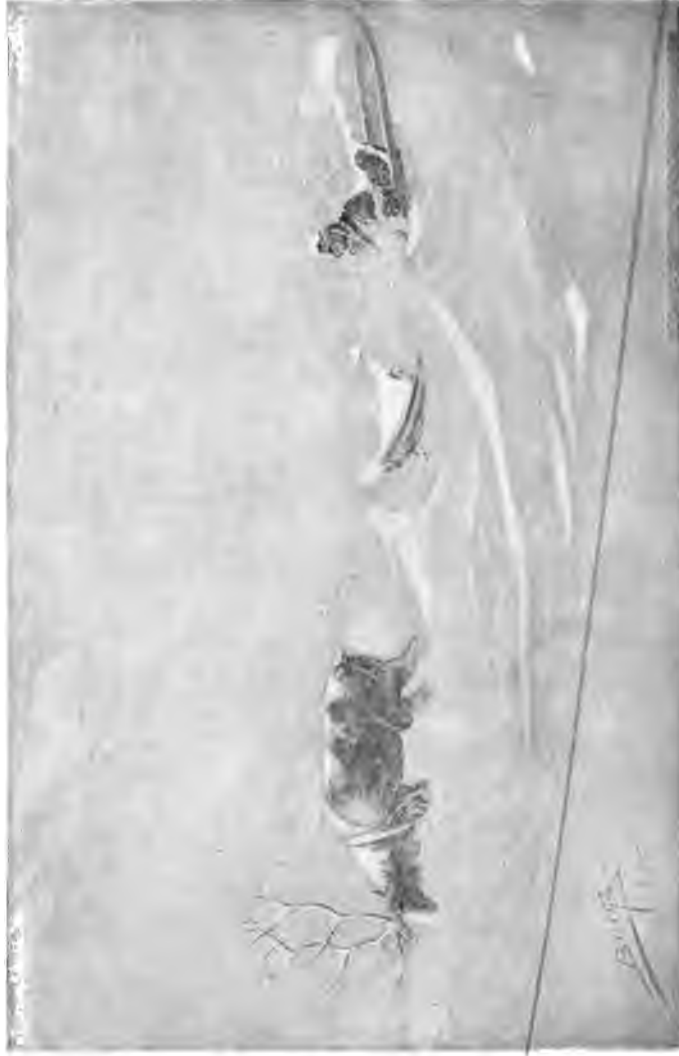


Copyright, 1899, by Charles Scribner's Sons.

THE COMMENCEMENT OF THE LONG ARCTIC NIGHT.

From "The Land of the Long Night," by Paul du Chailu.

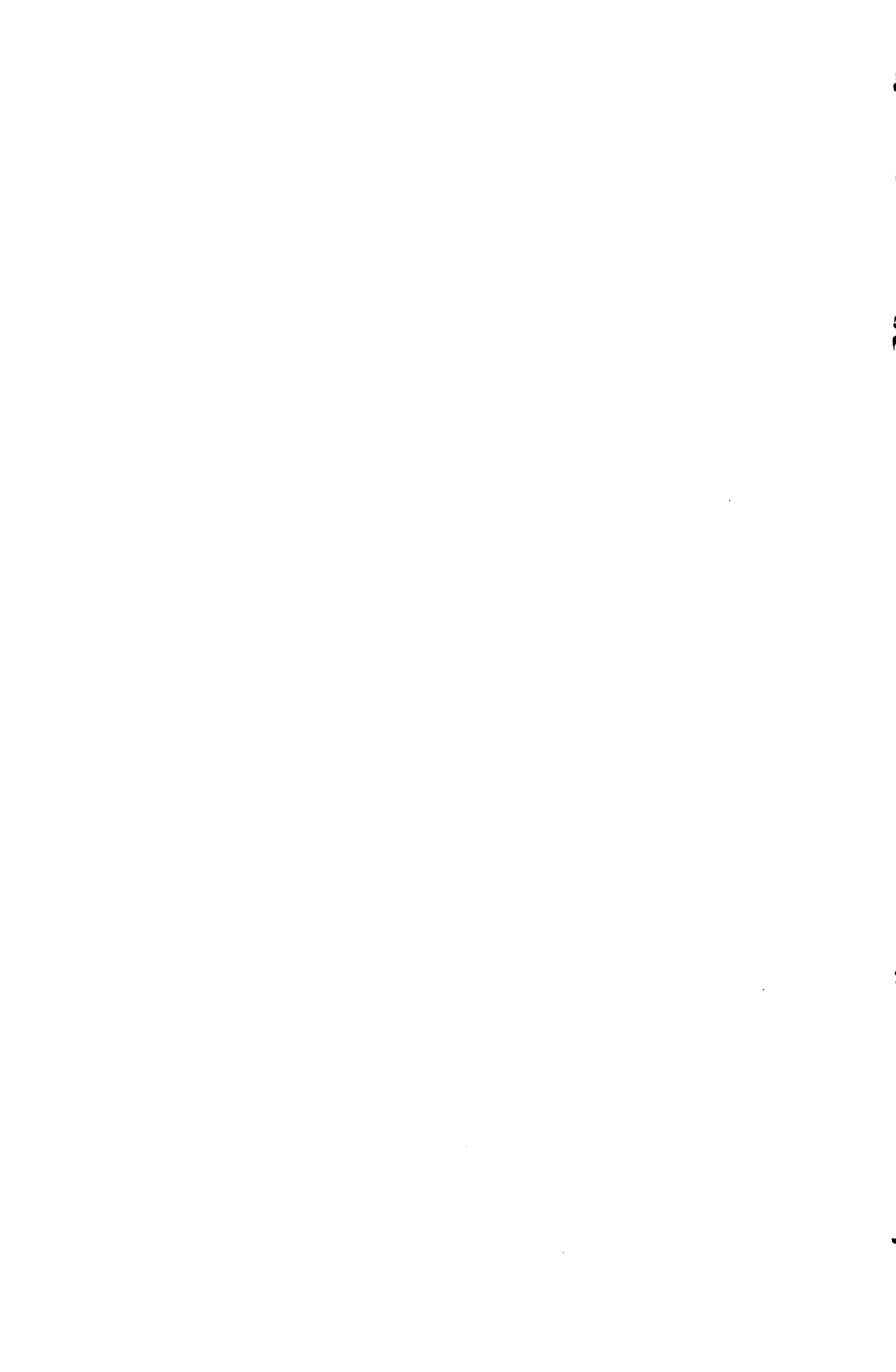




Copyright, 1899, by Charles Scribner's Sons.

TRAVELLING IN A BLIZZARD.

From "The Land of the Long Night," by Paul du Chaillu.





Copyright, 1899, by Charles Scribner's Sons.

CROSSING A MOUNTAIN RANGE.

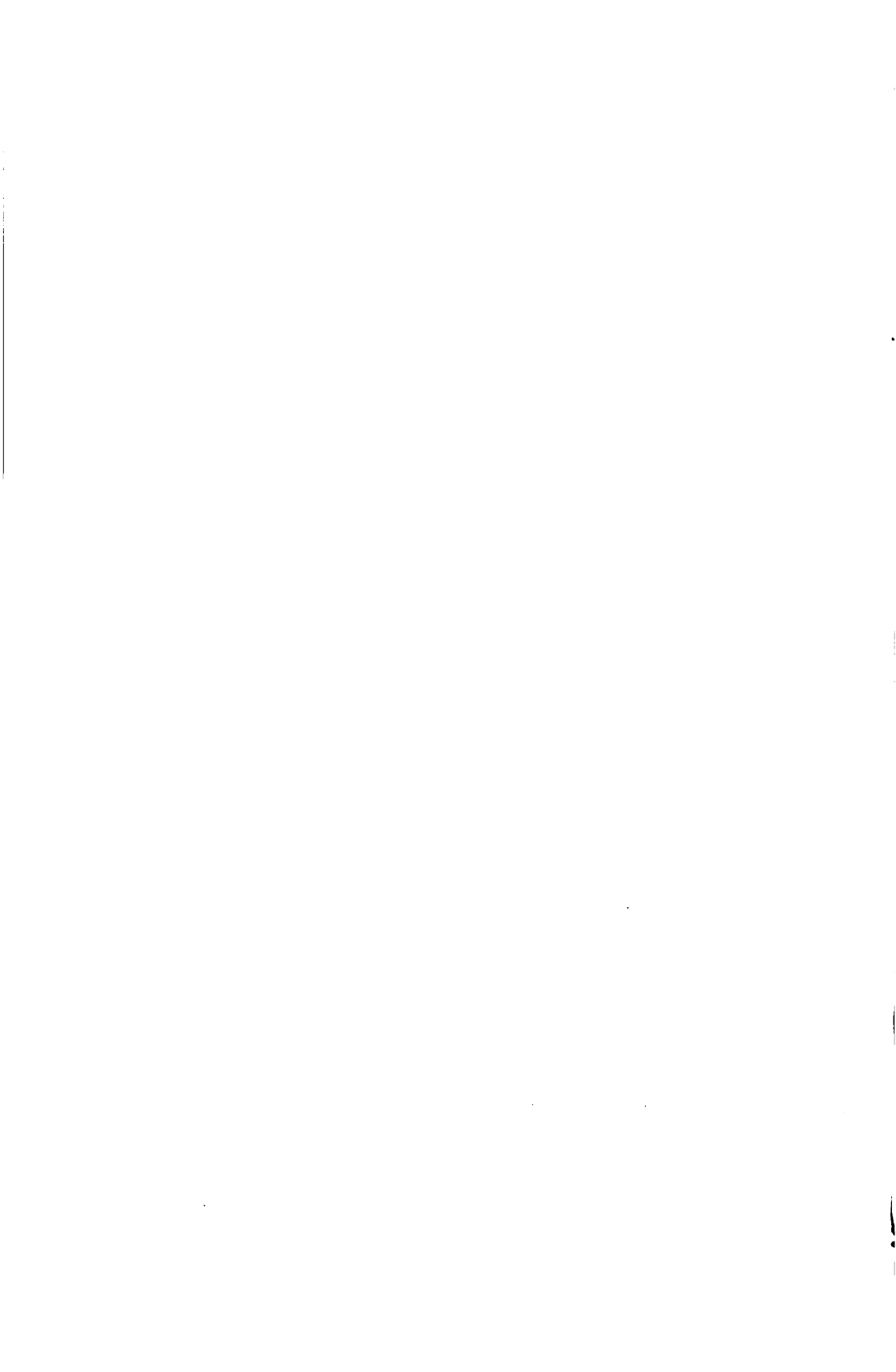
From "The Land of the Long Night," by Paul du Chaillu.





LAPLANDER AND WIFE ON SKEES, LAPP HERDING DOGS.

Photograph by F. H. Wennberg.





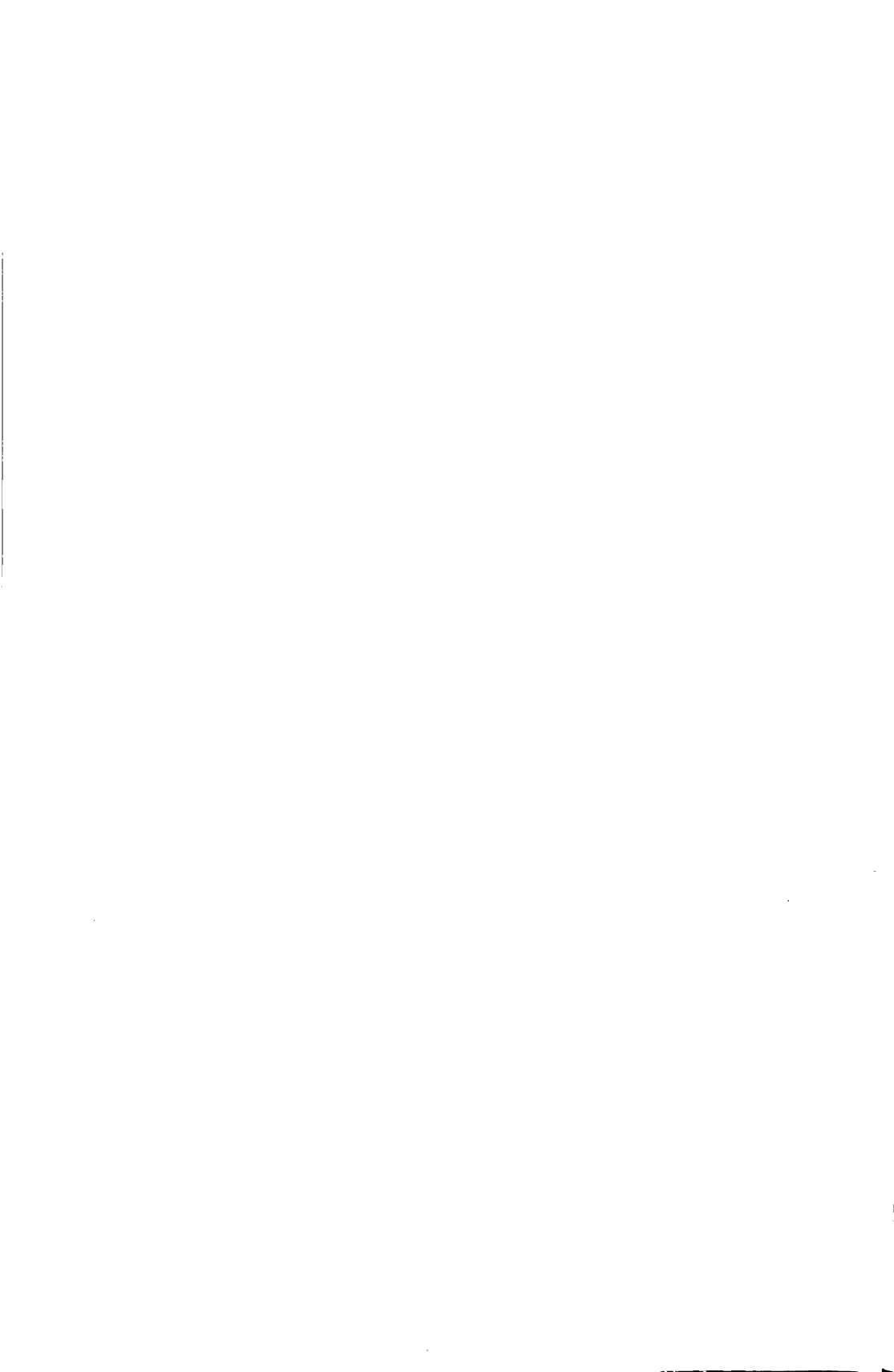
SWIMMING CARIBOU, BIRCHY PONDS, NEWFOUNDLAND.

Antlers of the stag on the right of the photograph, from which the velvet was stripped, were bright red, while from the antlers of the other stag, the velvet hung in strips. Photographed from a canoe, September 14, 1900, and copyrighted 1902, by R. J. Varnum. Courtesy of American Museum of Natural History.



GRANT'S CARIBOU (RANGIFER GRANTI, ALLEN).

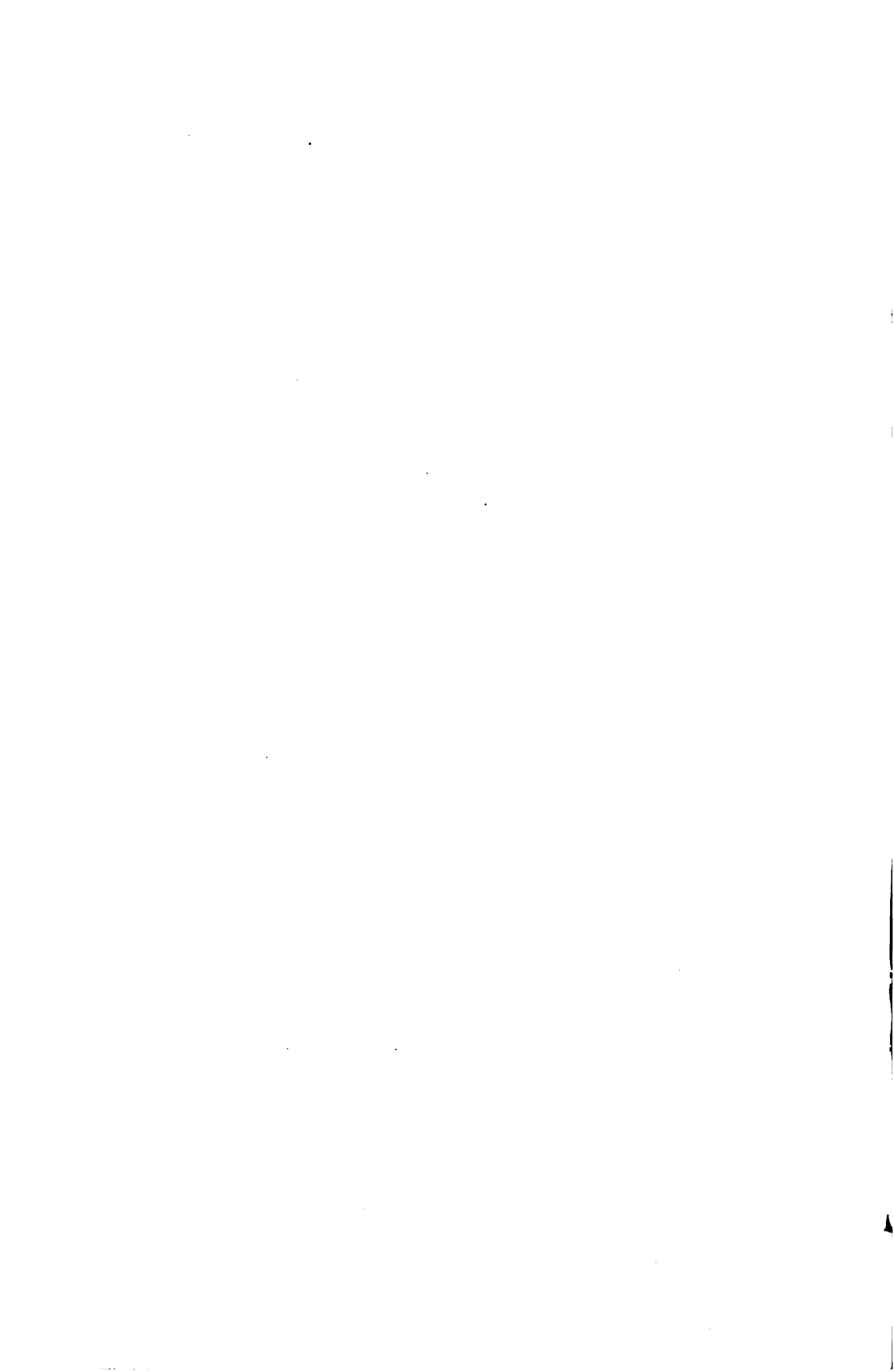
Length, nose to root of tail, 80 inches; height at shoulder, 44½ inches. Courtesy of American Museum of Natural History.





NEWFOUNDLAND CARIBOU (*RANGIFER TERRÆNOVÆ*, BANGS).

Showing development of brow and bez antlers. Length, nose to root of tail, $75\frac{1}{4}$ inches; height at shoulder, 47 inches. Antlers: Length of main beam, $29\frac{1}{4}$ inches; greatest spread, 28 inches; total points, 37. Courtesy of American Museum of Natural History.





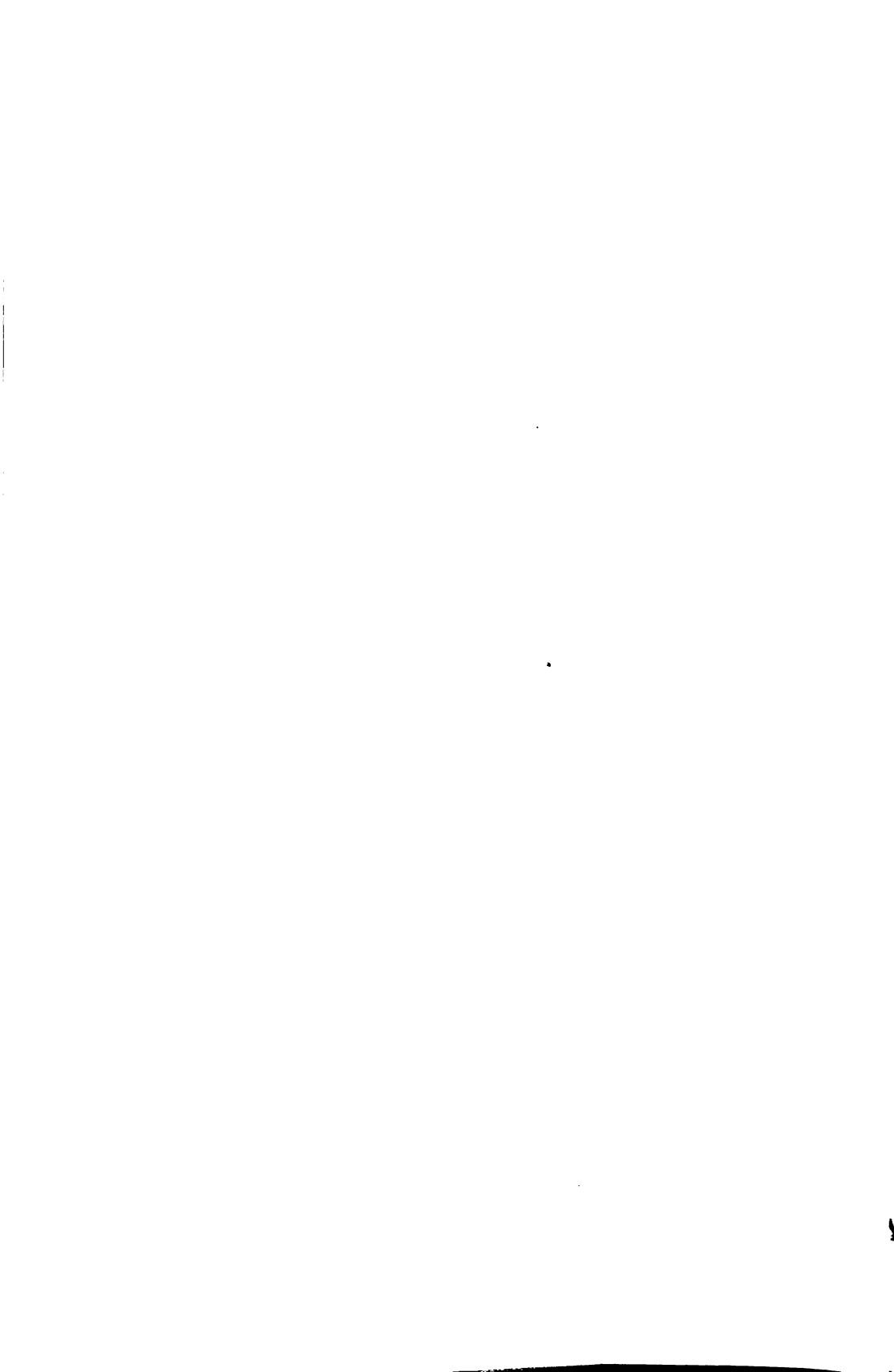
GREENLAND CARIBOU (*RANGIFER GRÖENLANDICUS*, GMELIN).

Specimen from west coast of Greenland. Antlers: Length of main beam, 49 inches; greatest spread, 39 inches; total points, 22. Courtesy of American Museum of Natural History.



STONE'S CARIBOU (TYPE) (RANGIFER STONEI, ALLEN).

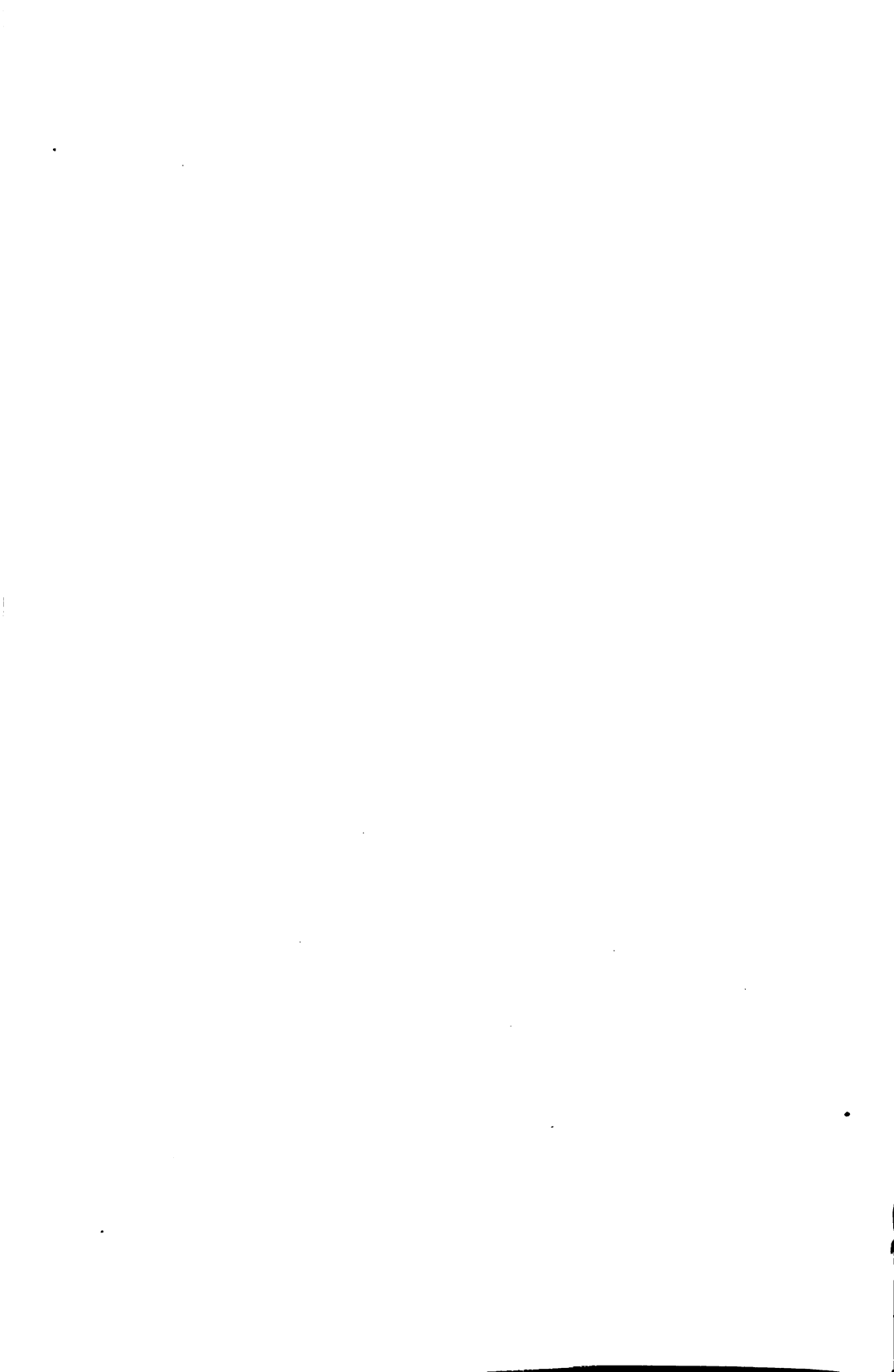
Antlers: Length of main beam, 49 inches; greatest spread, 34 inches; total points, 36. Courtesy of American Museum of Natural History.





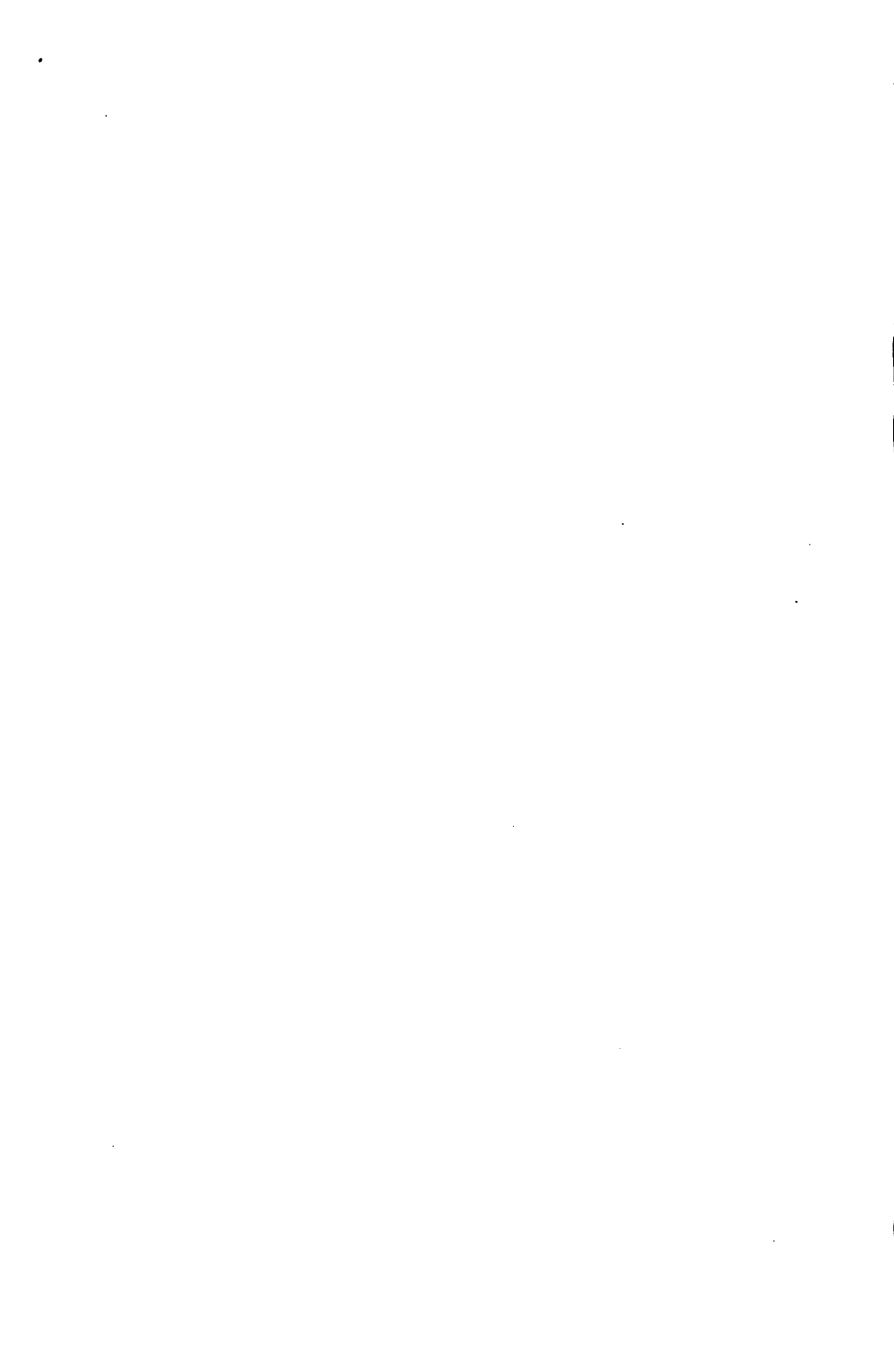
GRANT'S CARIBOU (TYPE) (RANGIFER GRANTI, ALLEN).

Specimen from Alaska peninsula. Antlers: Length along curvature, $33\frac{7}{8}$ inches; greatest spread, $35\frac{1}{4}$ inches; total points, 27. Courtesy of American Museum of Natural History.





AN ESKIMO BOY.





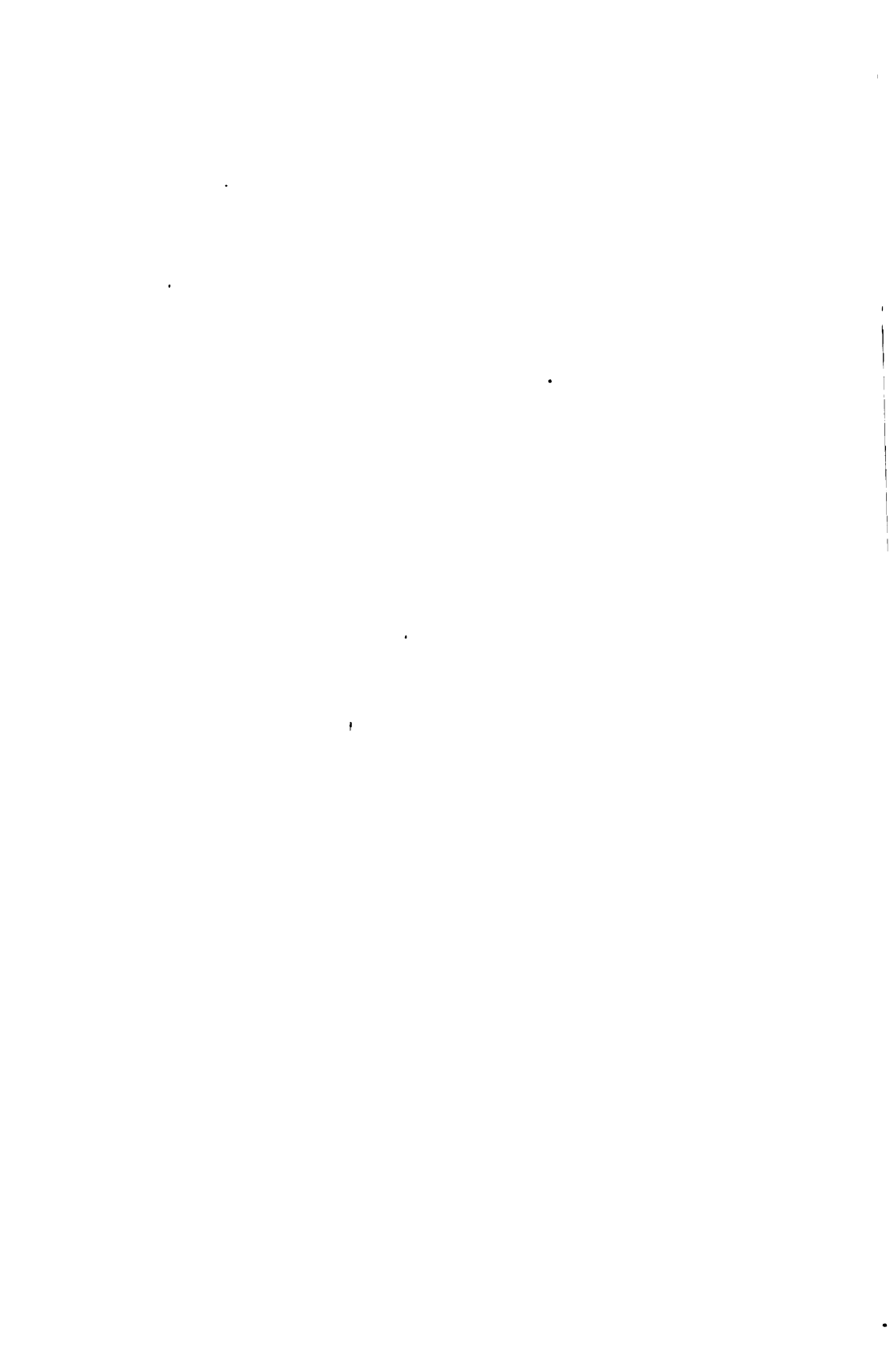
AN ESKIMO GIRL.



PUBLIC SCHOOL, GOLOFNIN, ALASKA (ESKIMOS). MRS. O. P. ANDERSON, TEACHER.



PUBLIC SCHOOL, KOTZEBUE, ALASKA (ESKIMOS). MRS. OTHA THOMAS, TEACHER.





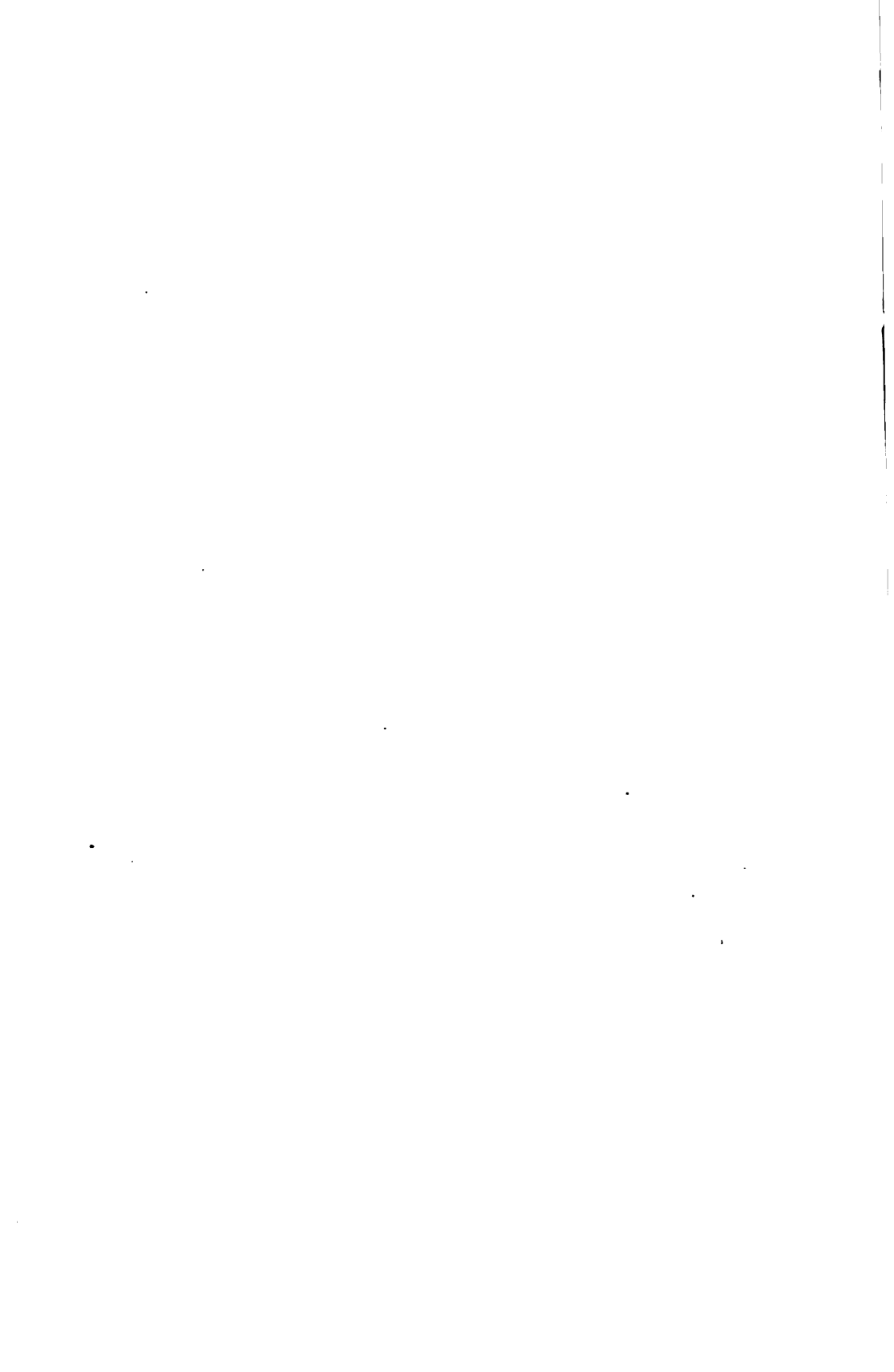
PUBLIC SCHOOL, CAPE PRINCE OF WALES (ESKIMOS). O. J. ROGNON, TEACHER.

Photograph by G. Nowell.





DR. AND MRS. E. O. CAMPBELL, GAMBELL, ST. LAWRENCE ISLAND.





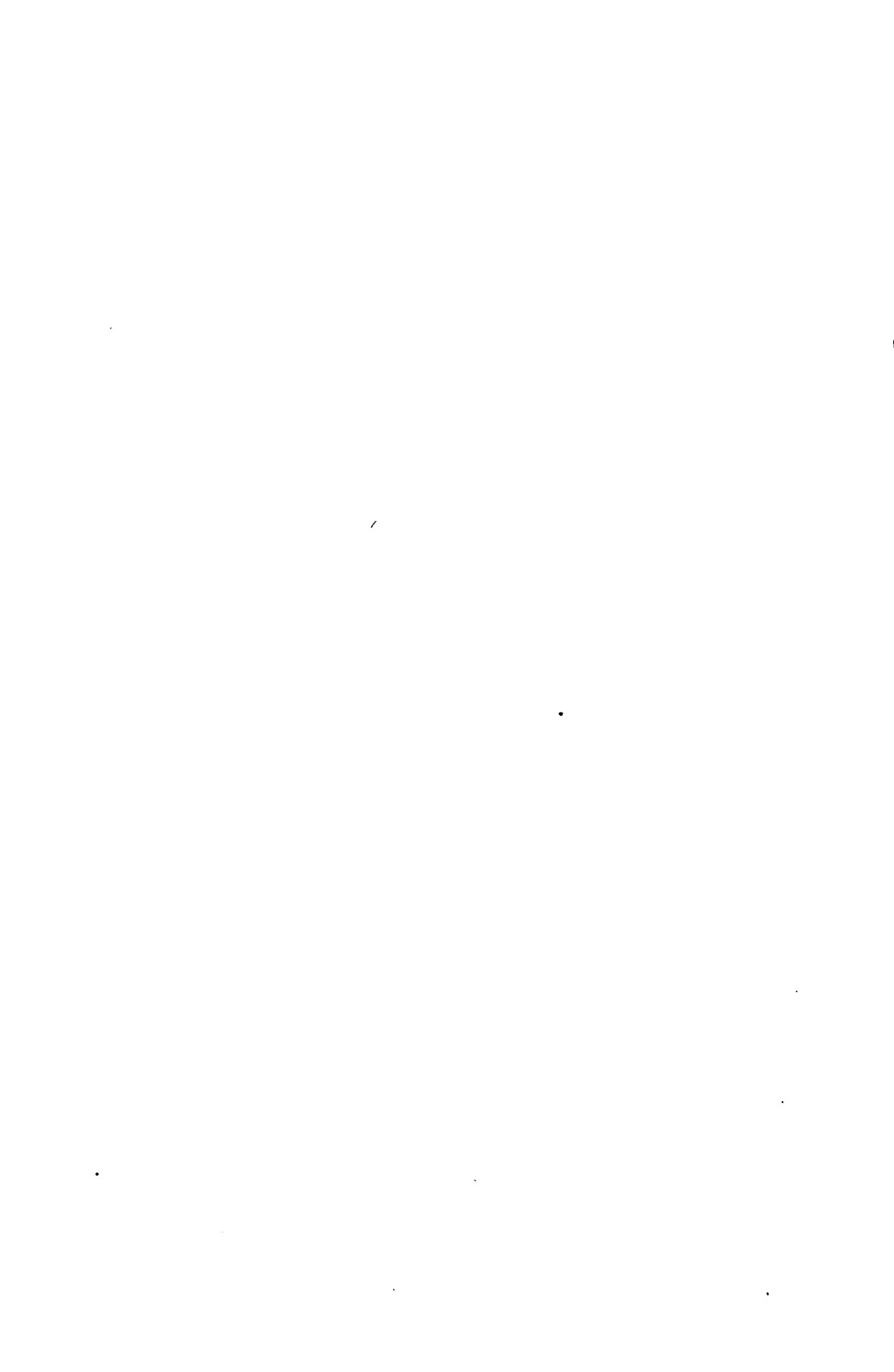
PUBLIC SCHOOL, GAMBELL, ALASKA (ST. LAWRENCE ISLAND—ESKIMOS). DR. E. O CAMPBELL,
TEACHER.

Photograph by William Hamilton.



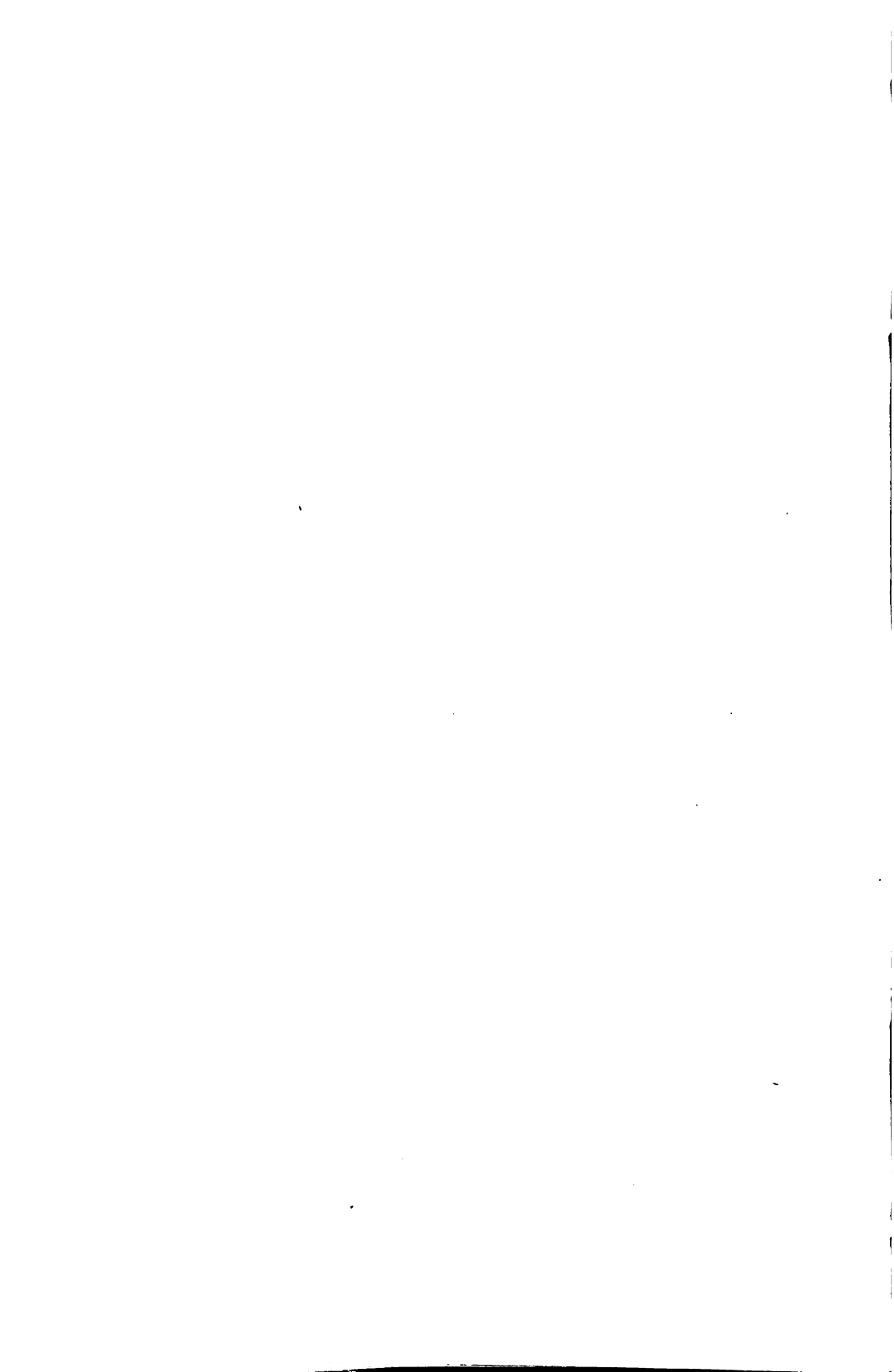
WHARF SCENE AT ST. MICHAEL.

Photograph by William Hamilton.





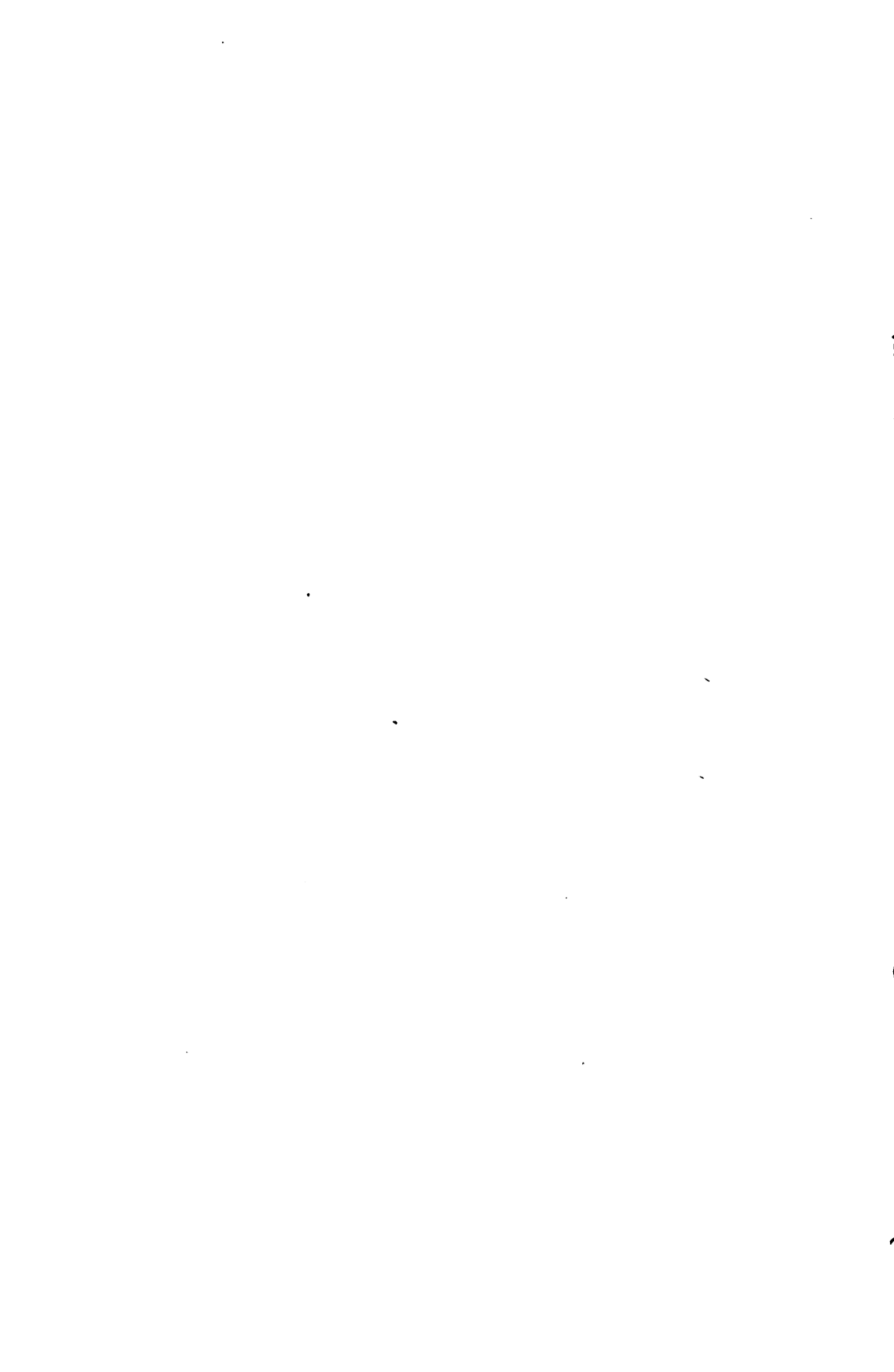
PUBLIC SCHOOL, ST. MICHAEL, ALASKA (ESKIMOS). FRANKLIN MOSES, TEACHER.





WILD FLOWERS, NORTHWESTERN ALASKA.

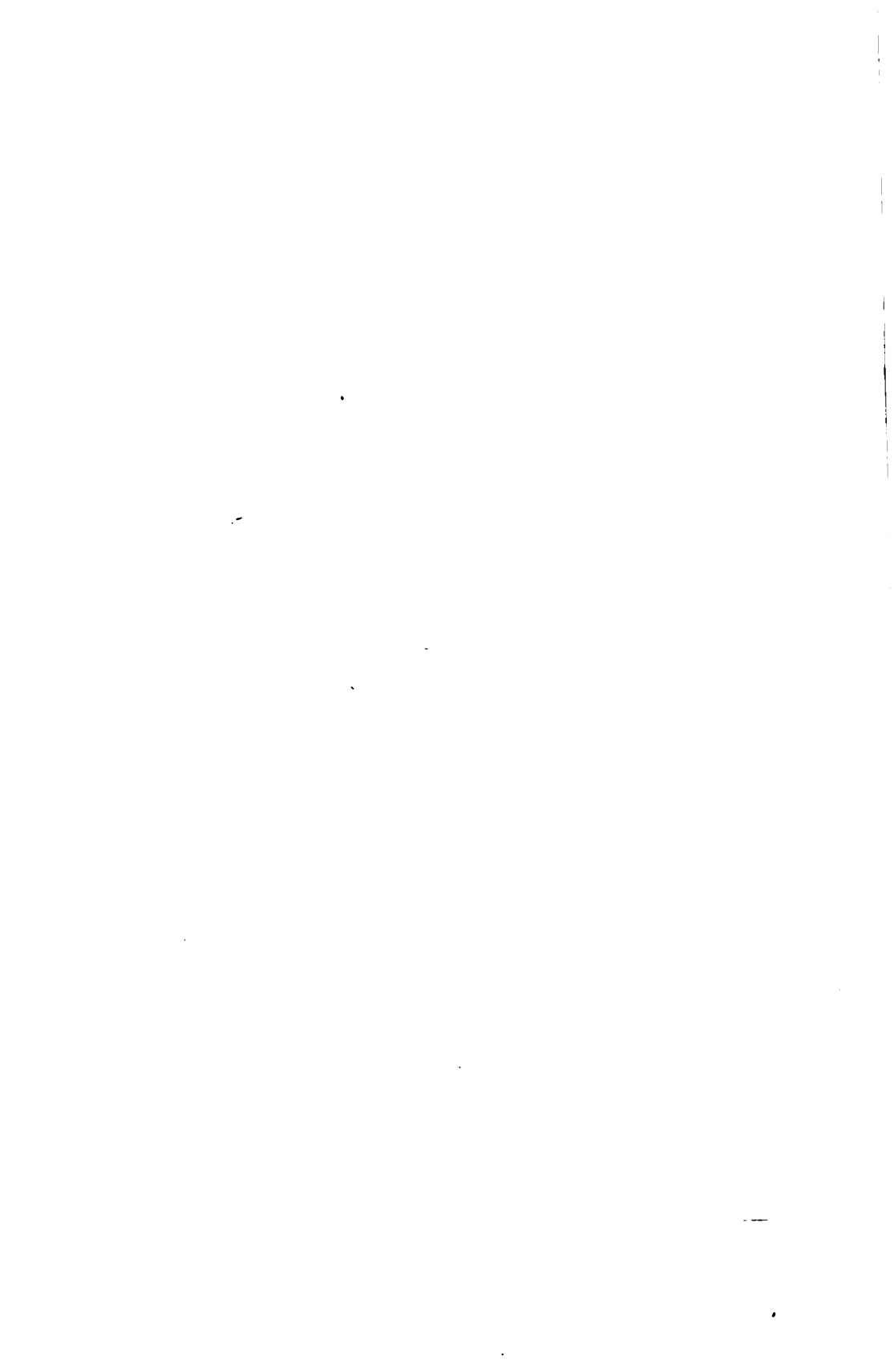
Photograph by B. B. Dobbus.





ESKIMOS DRYING TOM COD FOR WINTER.

Photograph by B. B. Dobbs.





DUTCH HARBOR, ALASKA.
Photograph by William Hamilton.





A WHARF SCENE, DUTCH HARBOR, ALASKA.
Photograph by William Hamilton.





PUBLIC SCHOOL, UNALASKA, ALASKA. MR. AND MRS. WM. A. DAVIS, TEACHERS.

Photograph by A. B. Kinne.





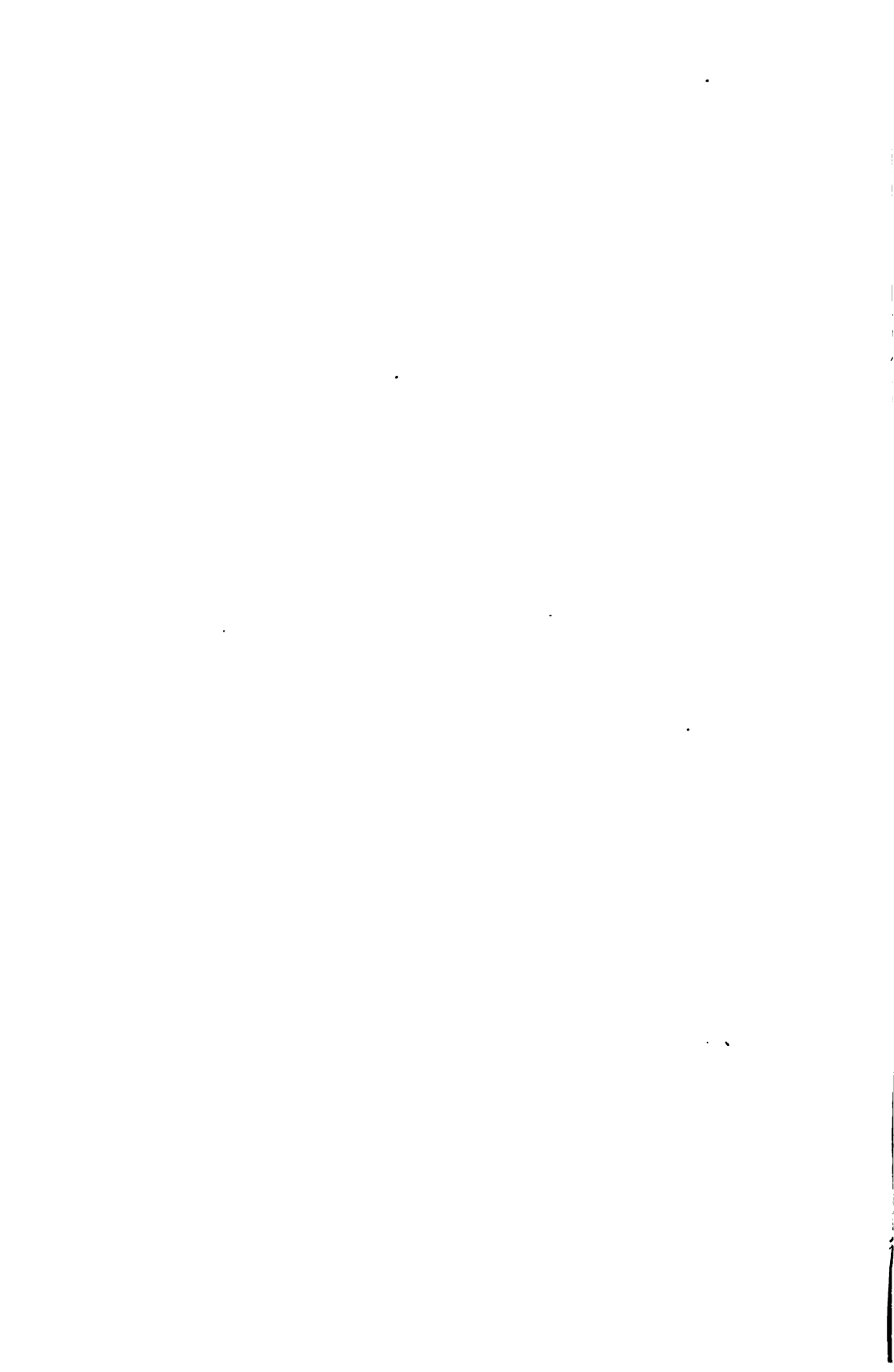
PUBLIC SCHOOL, UNGA, ALASKA (ALEUTS). F. A. GOLDER, TEACHER.

Photograph by Joseph Say.



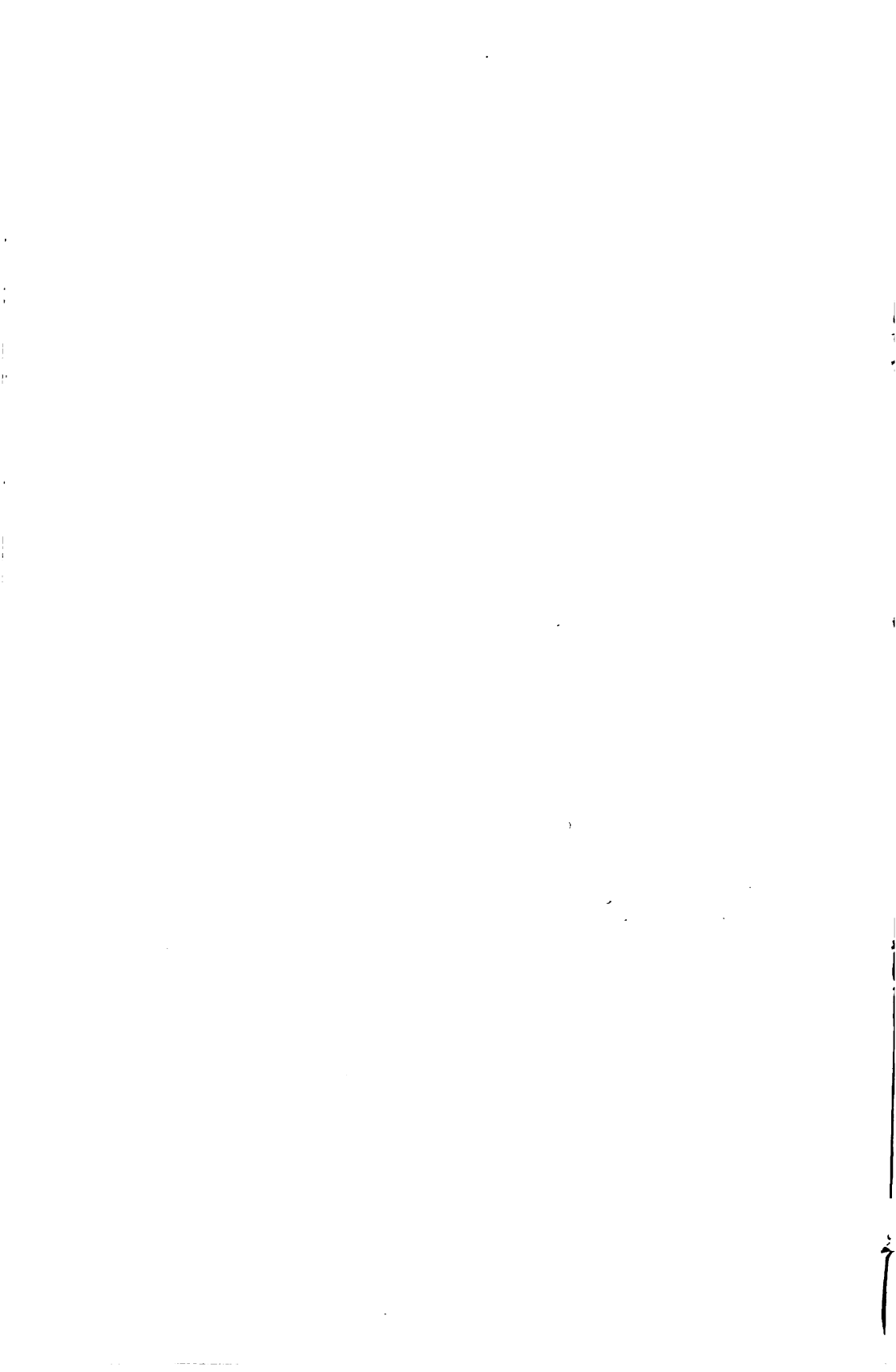


PUBLIC SCHOOL, WOOD ISLAND, ALASKA (ALEUTS). CHARMES F. MILLS, TEACHER.



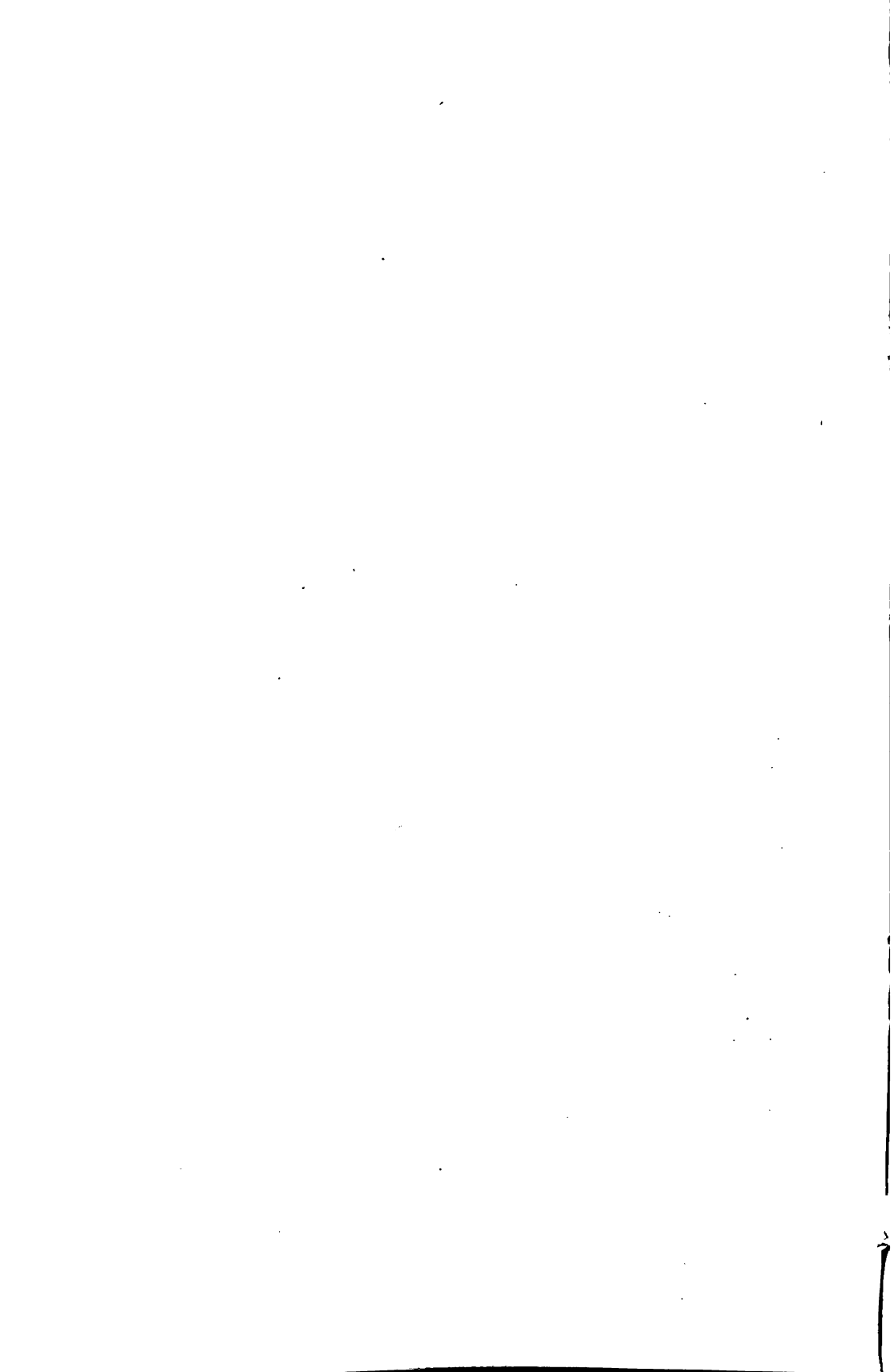


BAPTIST MISSION, WOOD ISLAND, ALASKA.
Photograph by William Hamilton.





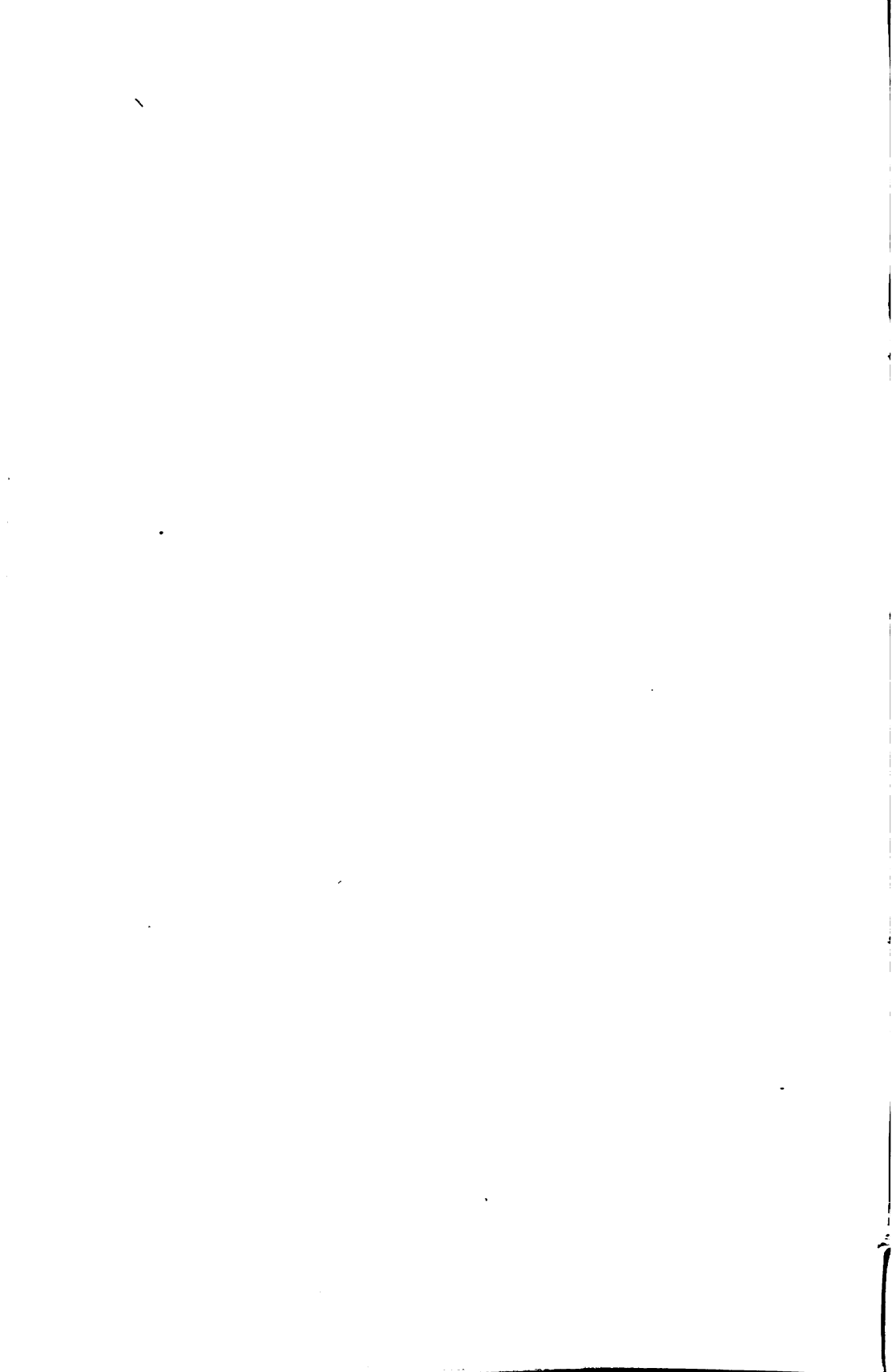
CHILCAT DANCING COSTUMES.
Photograph by J. M. Blonkenberg.





FOOTPATH TO INDIAN RIVER, SITKA, ALASKA.

Photograph by William Hamilton.



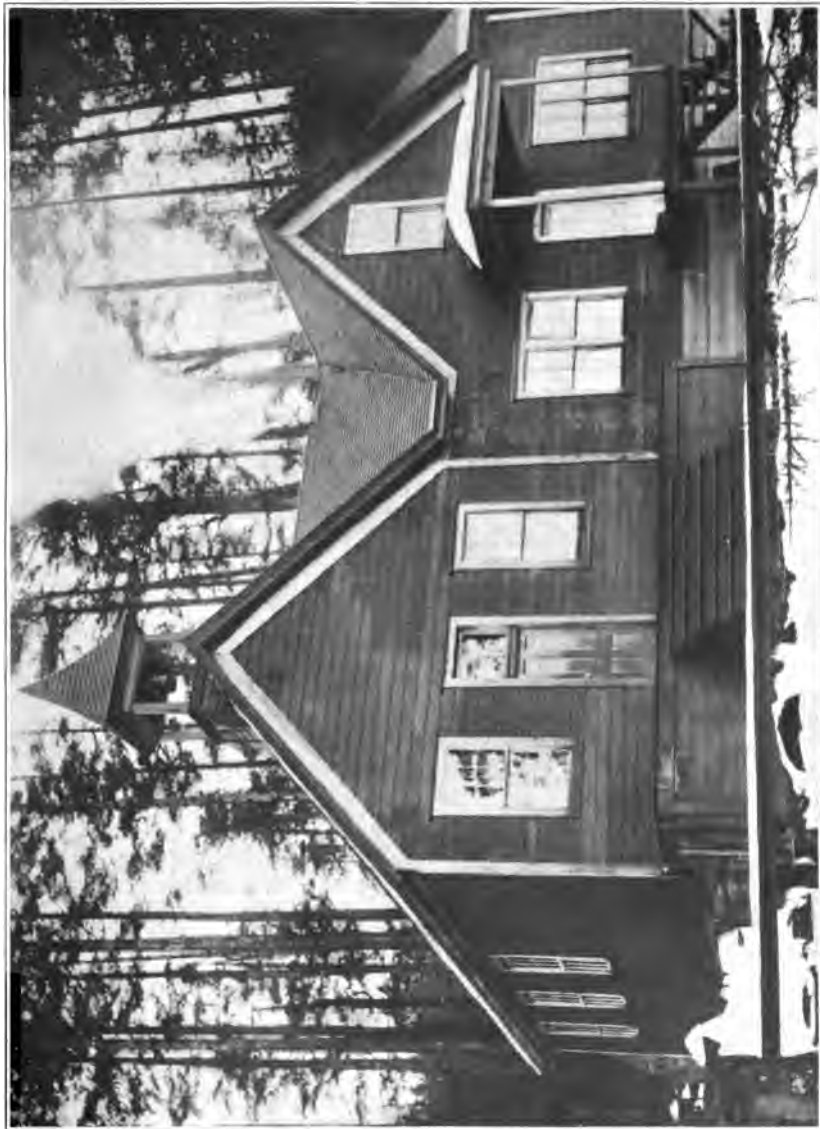


PUBLIC SCHOOL, SAXMAN, ALASKA (THLINGET). MISS SELMA PETERSON, TEACHER.

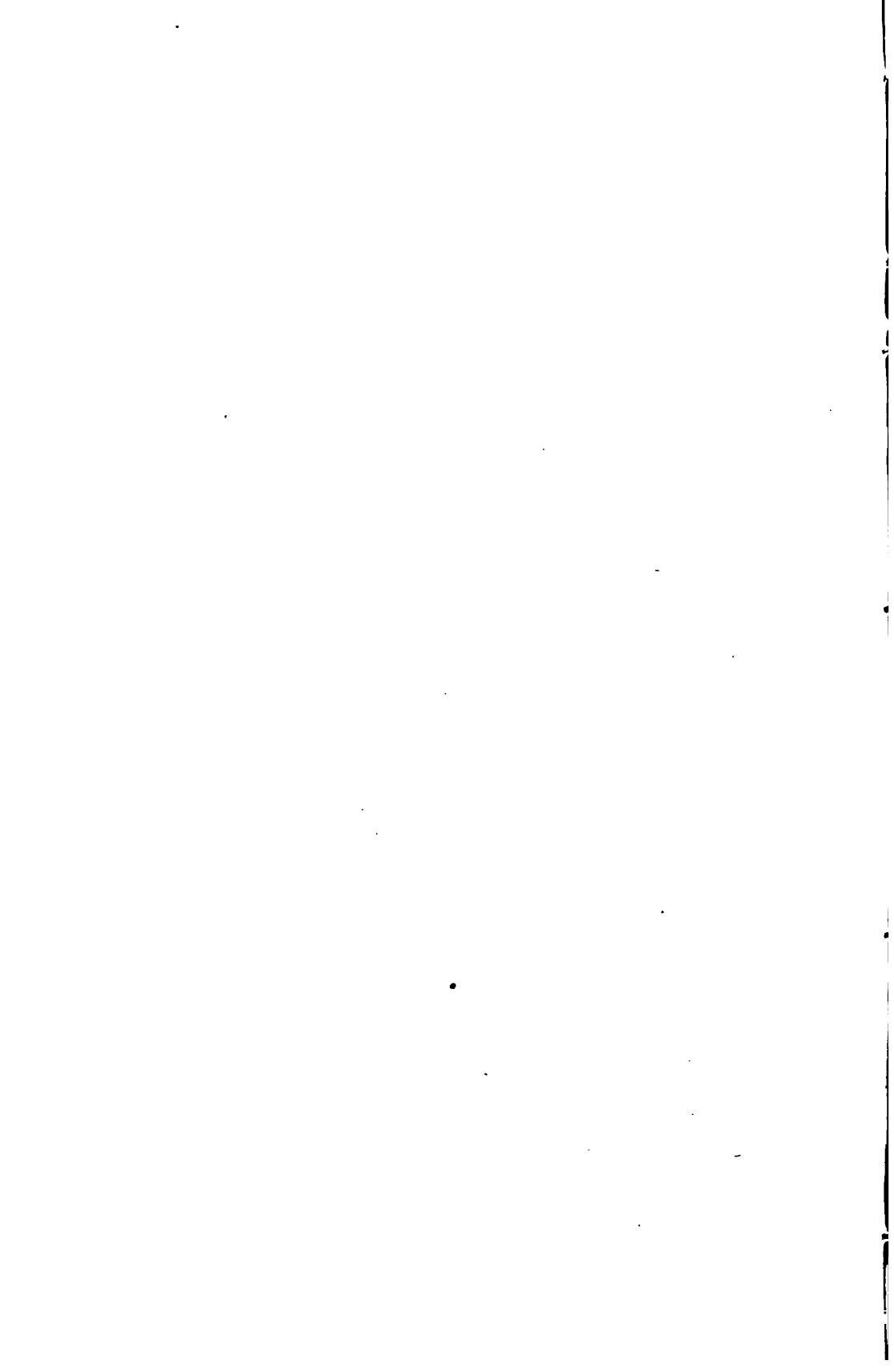


PUBLIC SCHOOL BUILDING, SITKA, ALASKA (THLINGETS). MRS. S. A. SAXMAN, TEACHER.



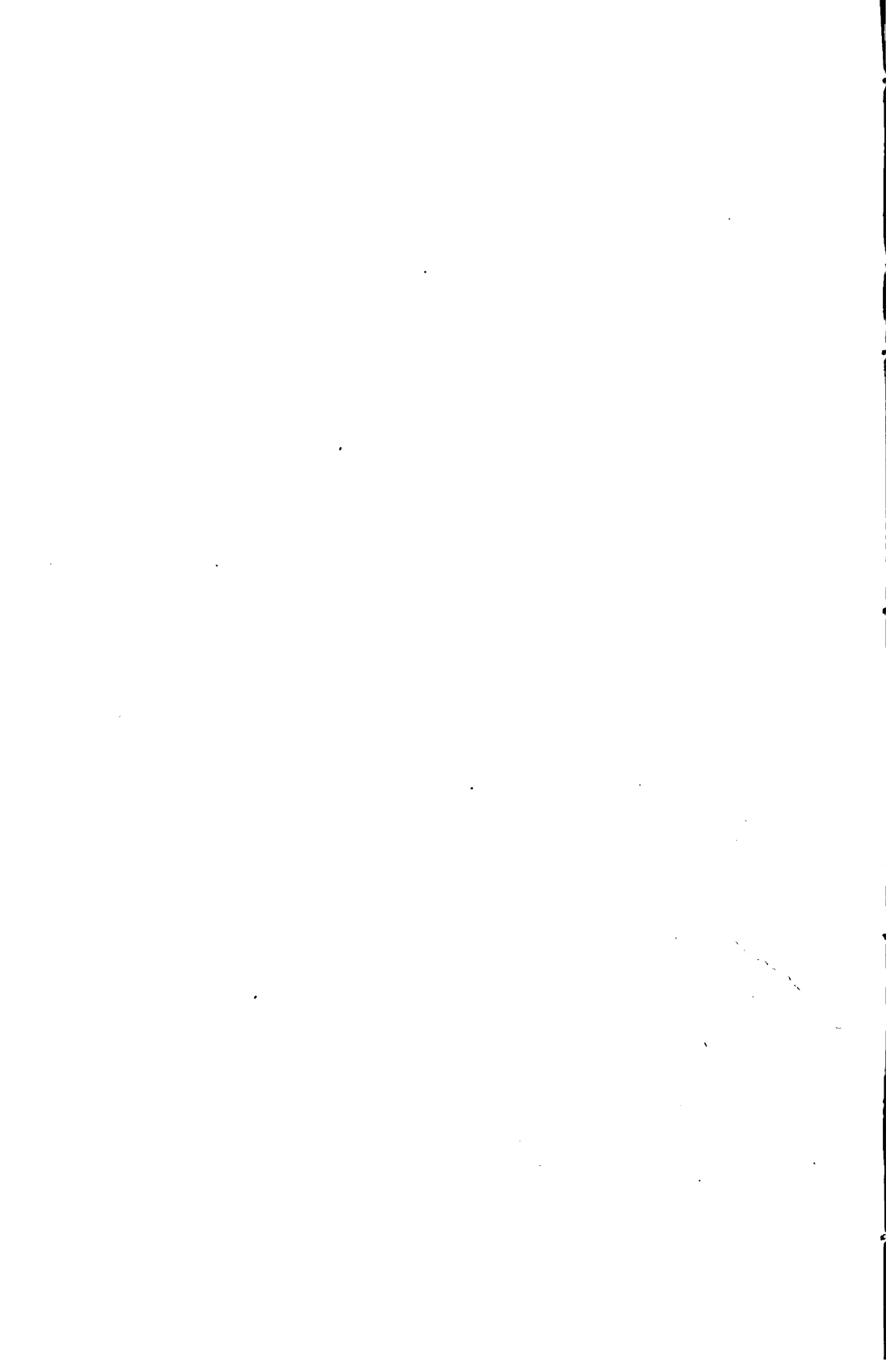


SCHOOLHOUSE AND TEACHER'S RESIDENCE, KASAAN, ALASKA.





PUBLIC SCHOOL, KASAAN, ALASKA (HYDAH). ARCH R. LAW, TEACHER.



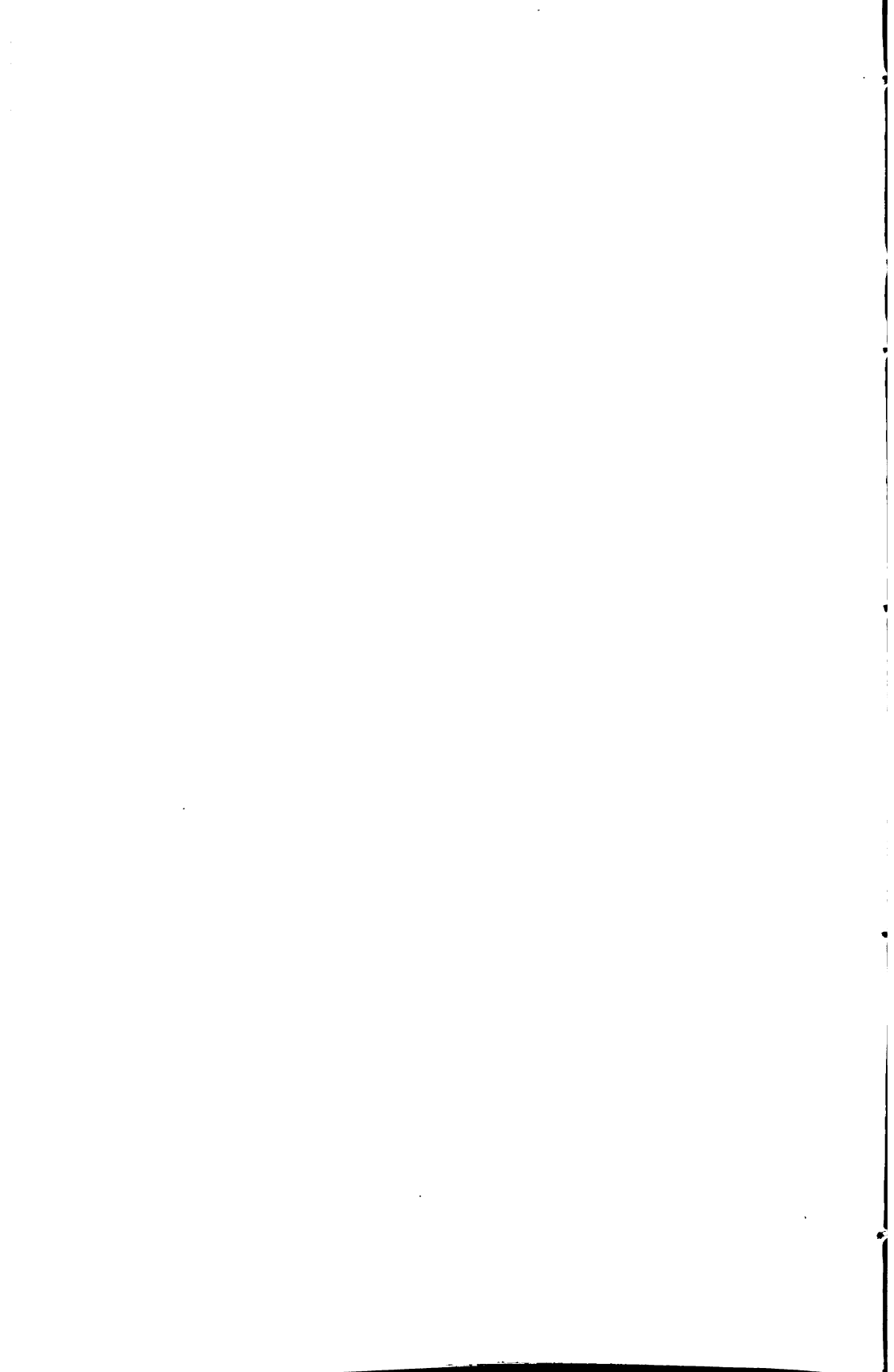


Sheldon Jackson.

William Duncan.

DR. SHELDON JACKSON AND A GROUP OF SIMPSON BOYS FROM METLAKATLA, STARTING FOR THE PRESBYTERIAN INDUSTRIAL SCHOOL, SITKA, ALASKA, MAY 4, 1888.

Photograph by Dr. Bluett.

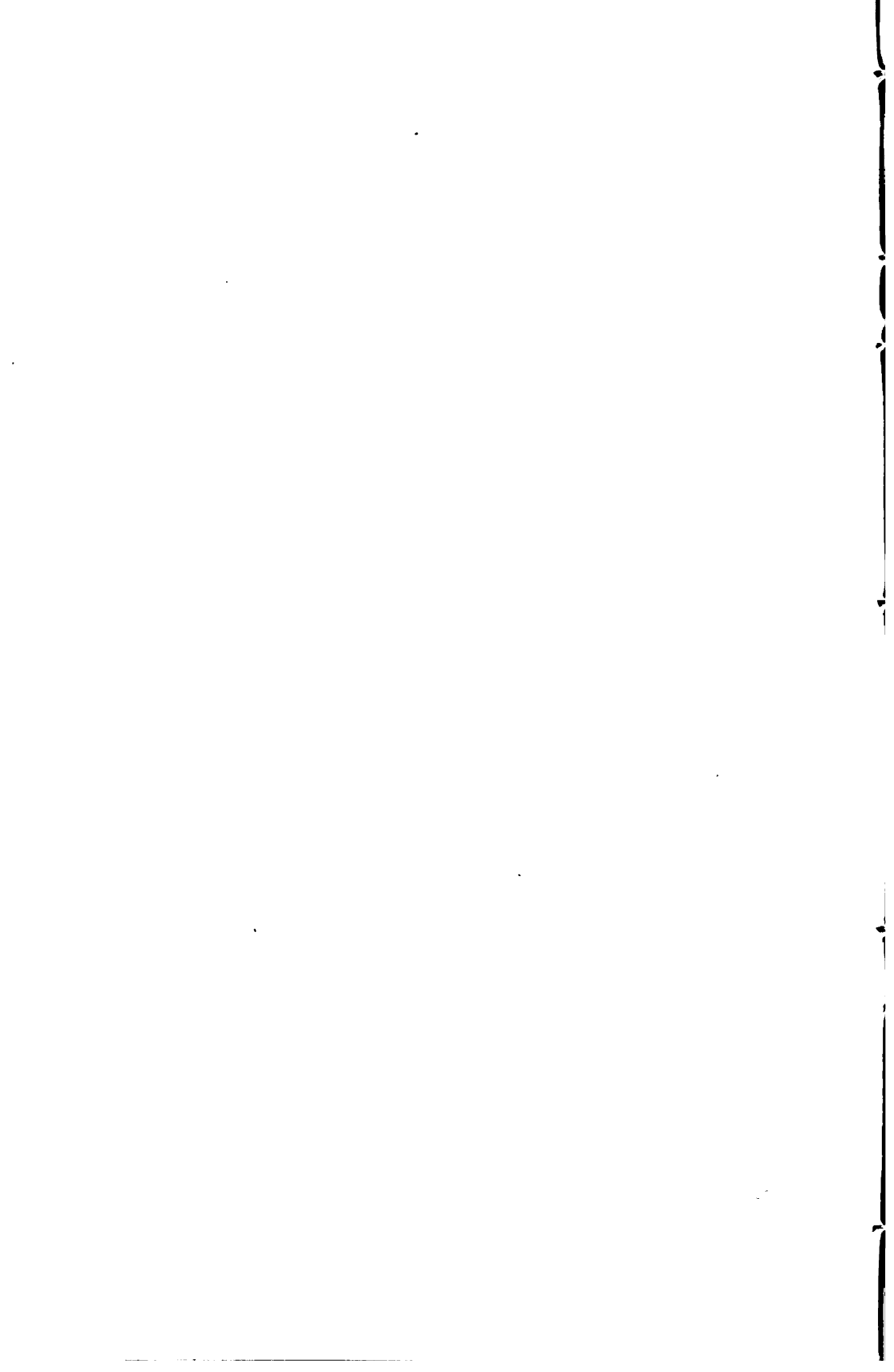




MRS. EDWARD MARSDEN (LUCY KININHOOK, FULL-BLOODED THLINGET).

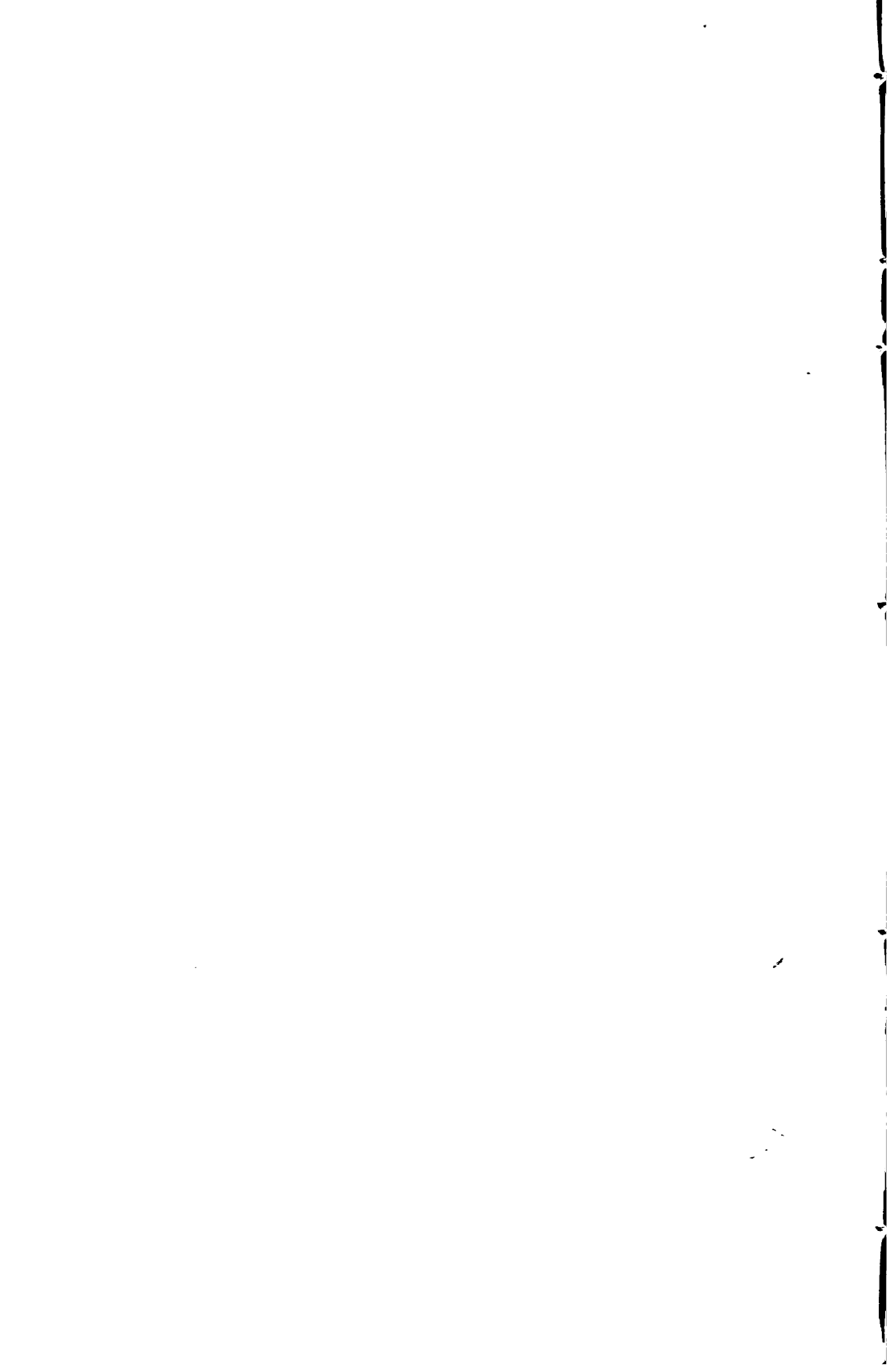


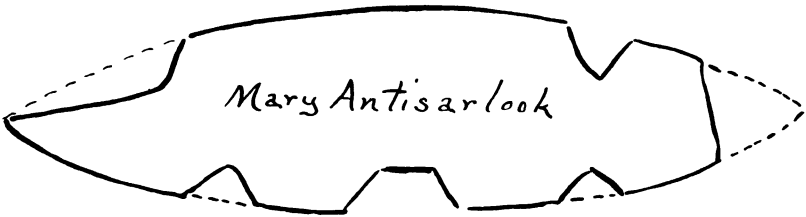
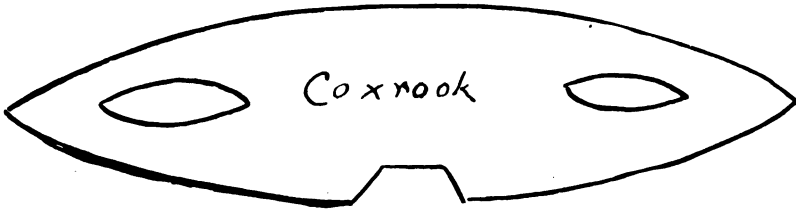
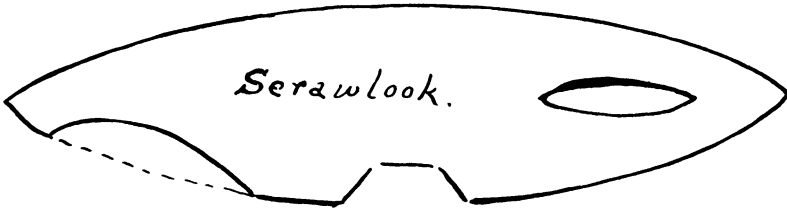
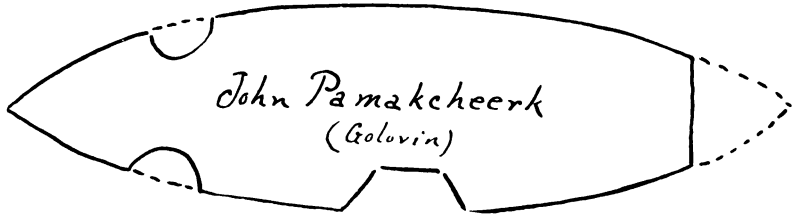
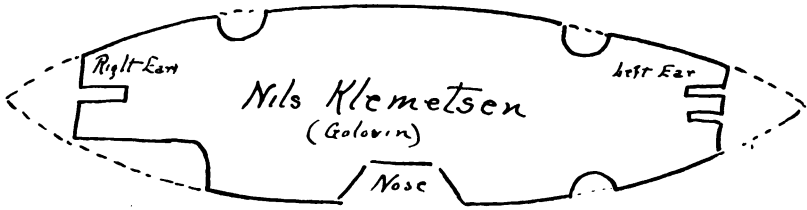
REV. EDWARD MARSDEN (FULL-BLOODED SIMPSEAN), PRESBYTERIAN MINISTER, IN ALASKA.

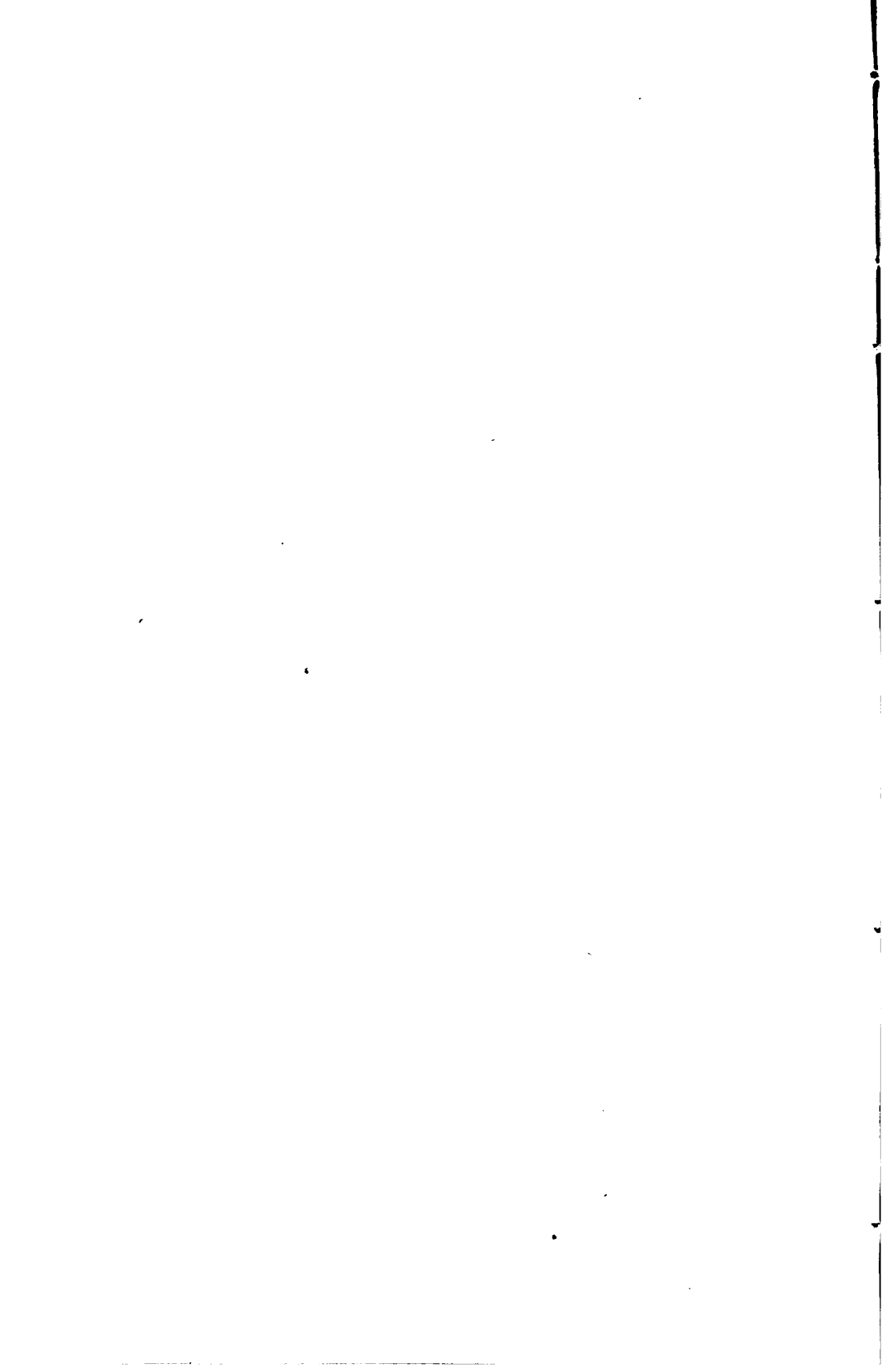


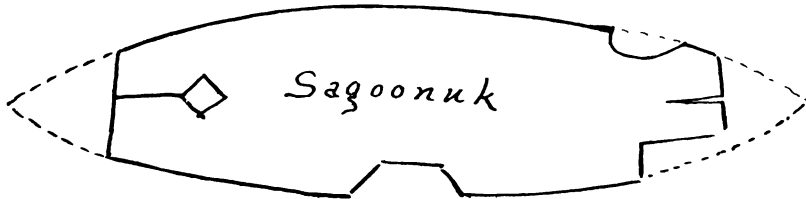
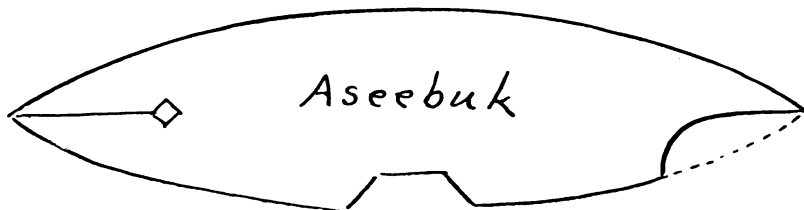
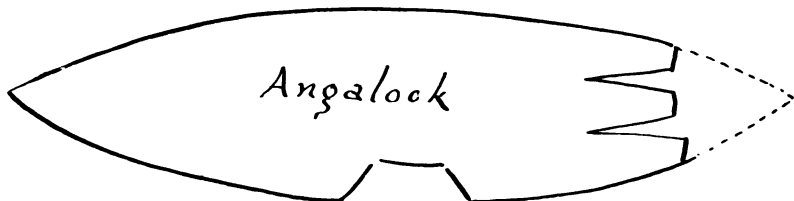
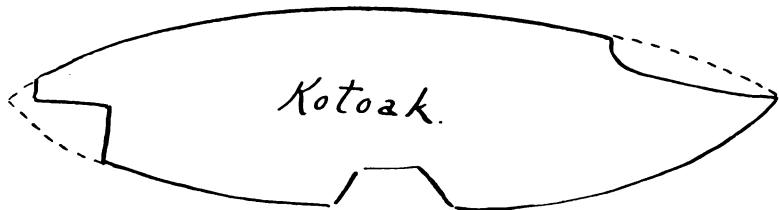
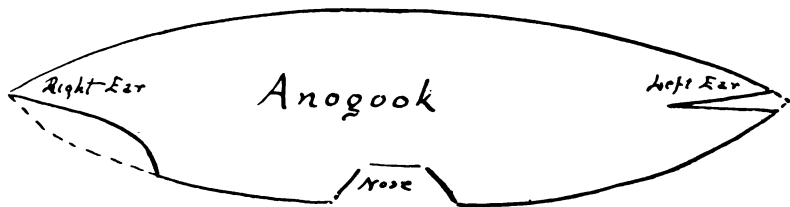


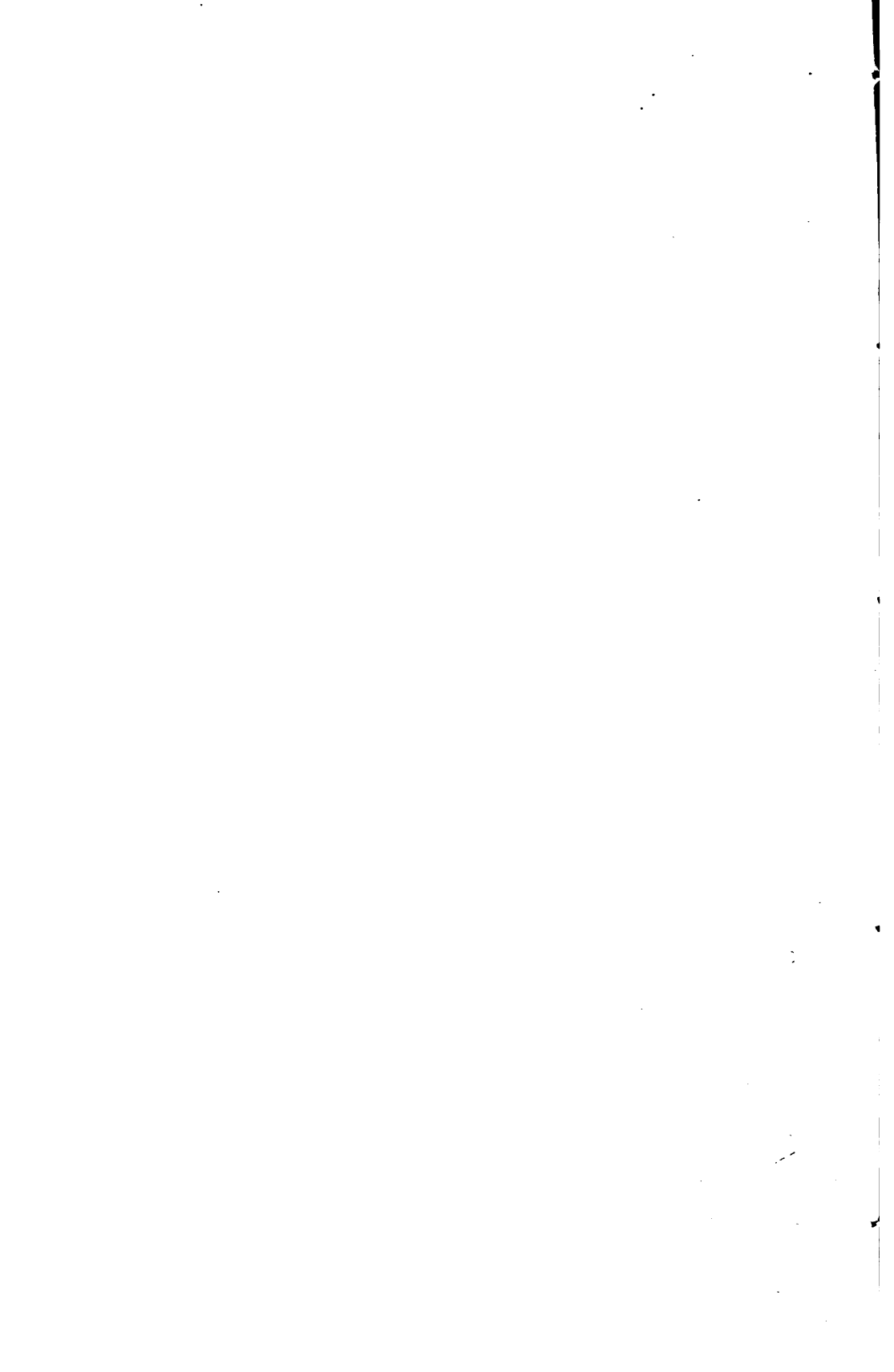
PUBLIC SCHOOL, KLINQUAN, ALASKA (HYDAH). SAMUEL G. DAVIS (NATIVE), TEACHER.

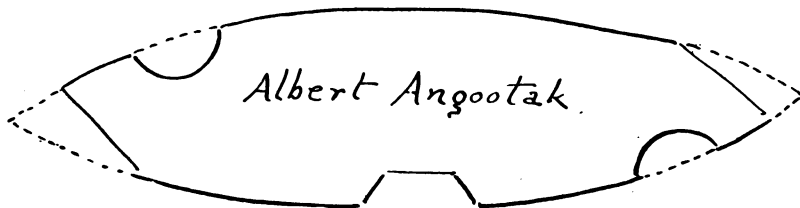
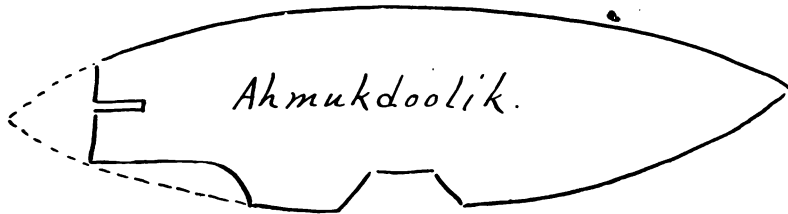
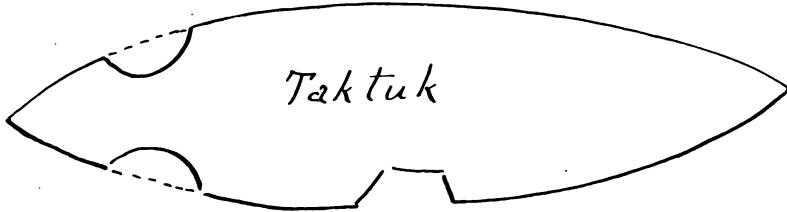
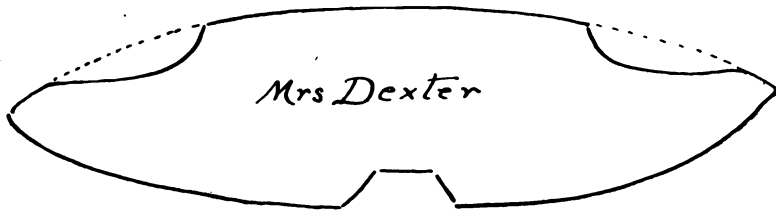
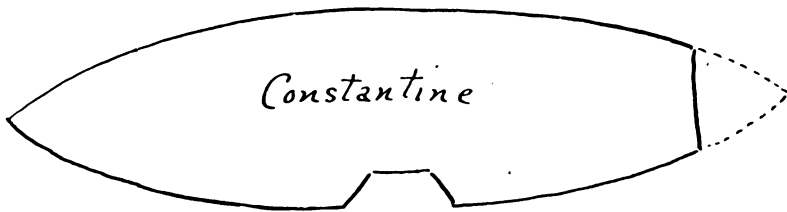


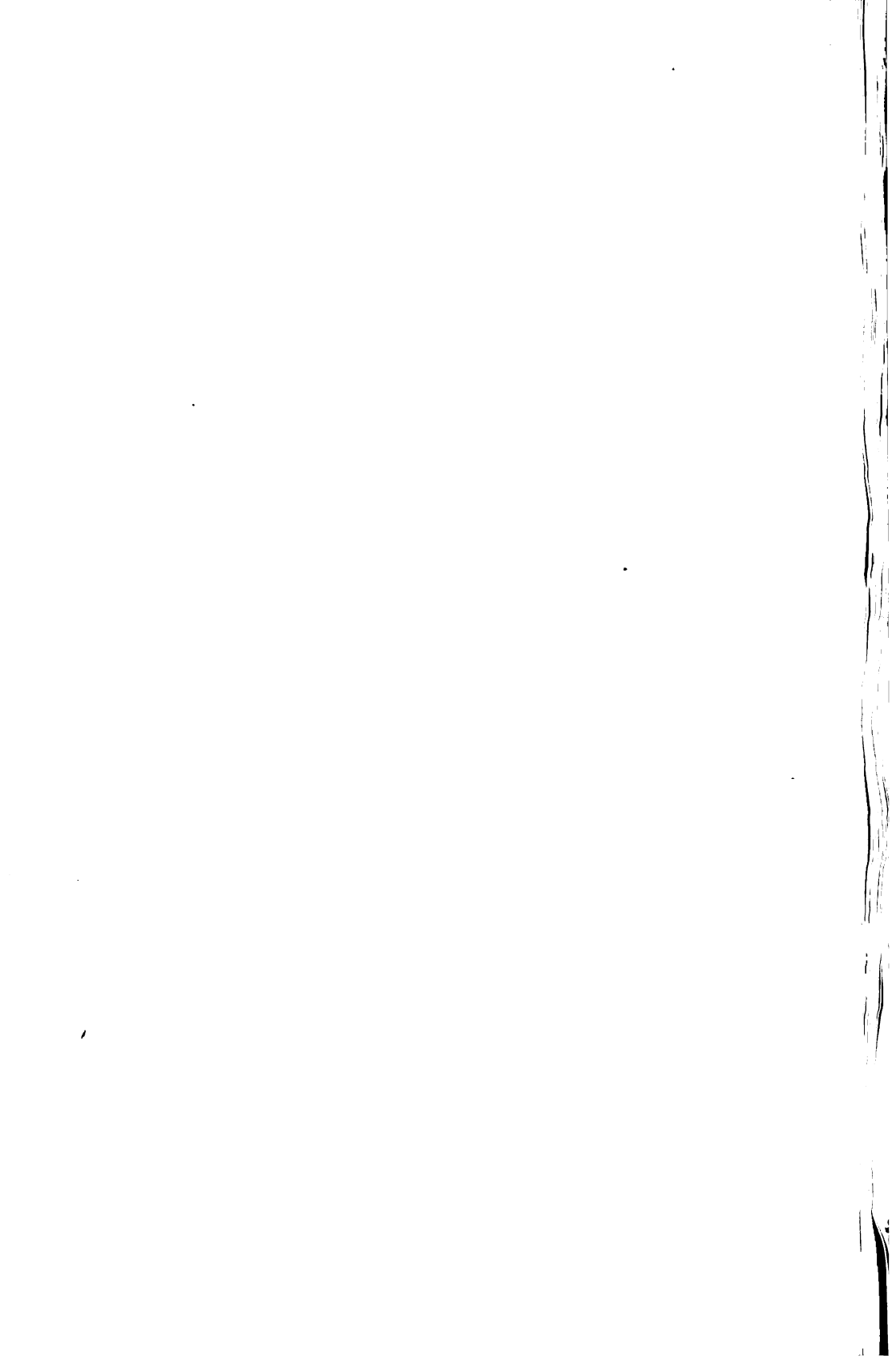


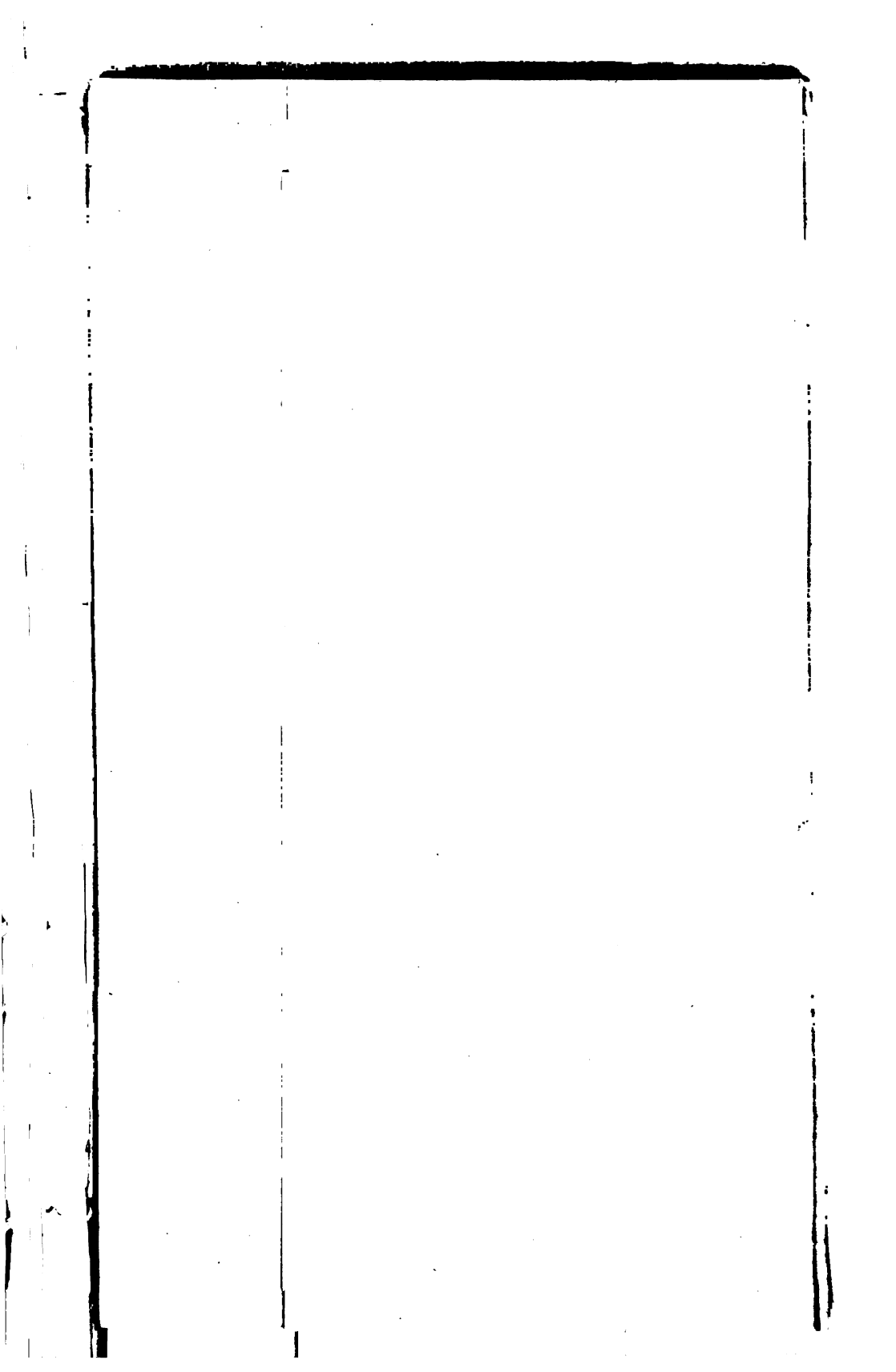


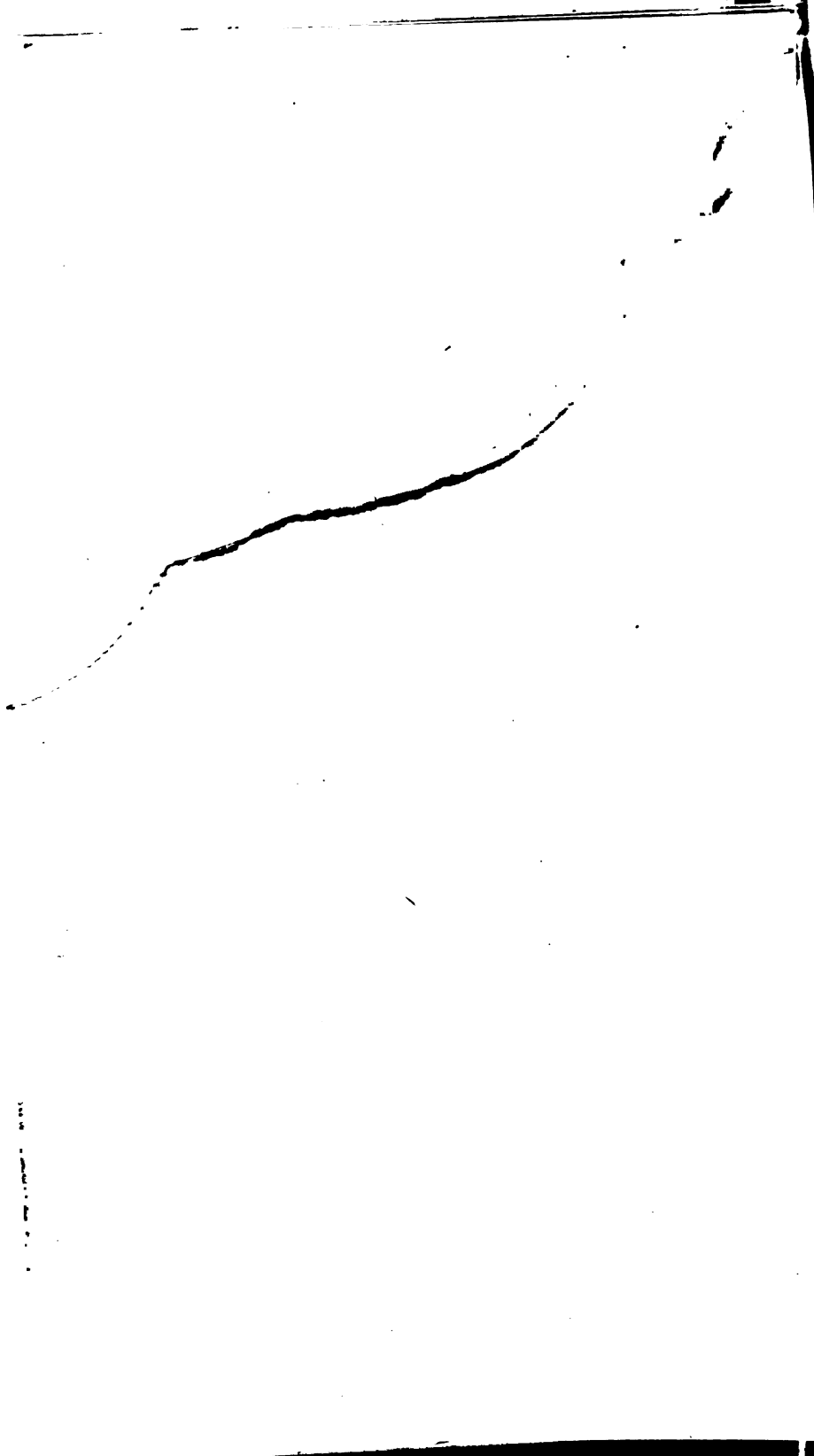












APPENDIX.



REQUEST TO SECRETARY OF THE TREASURY FOR TRANSPORTATION
ON THE REVENUE CUTTERS OF THE AGENTS OF THE BUREAU
OF EDUCATION.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., March 18, 1903.

SIR: Referring to the fact that for thirteen seasons past, with the single exception of the summer of 1898, through the permission of the Secretary of the Treasury and the courtesy of the Chief of the Revenue-Cutter Service, and of the captains commanding the cutters cruising in Alaskan waters, the general agent of education for Alaska has been able to establish and inspect schools, visit reindeer stations, and procure, purchase, and transport domestic reindeer into Alaska, and also to the fact that on account of there being no regular lines of steamers that furnish the necessary facilities for the prosecution of this work this Bureau has depended for the continuance of the important work in these distant regions upon the cooperation of the Treasury Department and the facilities afforded by its revenue cutters, I therefore respectfully suggest that a letter be written to the honorable the Secretary of the Treasury requesting, if compatible with the rules of his office—

First. That he will kindly instruct the commanding officers of the revenue cutters in Alaskan waters to extend to the agents of this Bureau such facilities as may be convenient to them and necessary for their work of inspection.

Second. As commercial steamers do not call at Gambell, on the northwest corner of St. Lawrence Island, it will be of special assistance if the commanding officer of the U. S. S. *Thetis* can be instructed to convey the agent of this Bureau to that place, either calling at Gambell on his way north from Dutch Harbor or making a trip from Nome to Gambell and return at such time as shall be convenient for the commanding officer of the vessel.

Third. Recalling the fact that in northern and western Alaska there are a number of teachers and schools at places where there are no courts of law or Government officials for the protection of property, and where the only semblance of Government control is the authority exercised by the captain of the revenue cutter, it is further suggested that you request the Secretary of the Treasury, if compatible with the rules of his office, to authorize the commanding officer of the cutter

Thetis to extend to the missionaries and Government teachers outside of the reach of courts, such protection as he can, and also that he give special attention to preventing unlawful encroachments upon the reindeer herds fostered by the Government in that region.

Fourth. That the commanding officer of the cutter which shall go north to Nome be instructed, if not interfering with the plans of the Revenue Cutter Service, to reach St. Lawrence Island at the same time with the whaling ships, as they follow the receding ice moving north, and prevent the landing of liquor for the natives on that island. In the absence of the cutter from the island the past two or three seasons during the visits of the whalers considerable liquor has been landed and much trouble created by consequent drunkenness of the natives.

Fifth. Mr. Samuel R. Spriggs, who has been a Government teacher at Point Barrow, between four and five hundred miles north of the Arctic Circle, for three years, came out last fall with his wife on the U. S. S. *Bear* for a temporary change of climate. Mr. and Mrs. Spriggs are ready this spring to return to that distant arctic post and take up their work in the Government service. As there are no suitable vessels upon which they can travel north of Port Clarence, I would suggest that the Secretary of the Treasury be requested to authorize the commanding officer of the cutter that visits that post to receive Mr. and Mrs. Spriggs on board his vessel at Port Clarence and convey them to their destination at Point Barrow.

Sixth. As Point Barrow is the most distant and difficult school station under the Government to reach, I would further ask that the Secretary of the Treasury instruct the captain of the cutter visiting that place to receive on board at Seattle, and deliver at that station for the use of the Government school, 15 tons of anthracite coal in sacks; also the annual mail for that station, and also a small consignment of medical supplies and surgical instruments for the use of the physician among the natives.

Seventh. That the commanding officer of the *Thetis* be instructed to convey from Seattle to St. Lawrence Island the annual mail for that place.

I have the honor to be,

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner.*

The SECRETARY OF THE INTERIOR.

THE SECRETARY OF THE TREASURY GRANTS PERMISSION FOR THE AGENTS OF THE BUREAU OF EDUCATION TO TRAVEL ON THE REVENUE CUTTERS IN ALASKAN WATERS.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, March 30, 1903.

SIR: I have the honor to acknowledge the receipt of your communication of the 21st instant, inclosing copy of a letter from the Commissioner of Education, in which the request is made that the general agent of education for the district of Alaska, and other representatives of the Bureau of Education, be furnished with transportation on the revenue steamer *Thetis* on her cruise in Alaskan waters to Nome and Point Barrow the coming season, etc.

In reply I have respectfully to state that the wishes of the Commissioner of Education, as expressed in his letter, will be complied with this season as in the past.

Respectfully,

H. A. TAYLOR,
Acting Secretary.

The SECRETARY OF THE INTERIOR.

INSTRUCTIONS FROM THE SECRETARY OF THE TREASURY TO THE COMMANDING OFFICER OF THE THETIS.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, April 20, 1903.

SIR: Referring to instructions of even date, you are further instructed as follows:

1. The honorable the Secretary of the Interior has requested as follows:

That commanding officers, Revenue-Cutter Service, in Alaskan waters, be instructed to extend to the agents of the Bureau of Education in the prosecution of their work, such facilities as may be convenient to them and necessary, for the work of said agents' inspections.

That the agent of said Bureau be conveyed to St. Lawrence Island, from Gambell, when bound north from Dutch Harbor, or by making a trip from Nome to Gambell and return, at such time as may be convenient to the commanding officer of the vessel.

That the commanding officer extend to the missionaries and Government teachers, out of reach of the courts, such protection as he can, and that he give special attention to preventing unlawful encroachments upon reindeer herds fostered by the Government in those regions.

That the cutter making the northern cruise reach St. Lawrence Island at the same time with the whaling fleet, as they follow the receding ice moving north, and prevent the landing of liquor for the natives at that island.

That Mr. and Mrs. Spriggs (the former being a Government employee) be conveyed from Port Clarence to Point Barrow.

That the *Thetis* be directed to receive on board at Seattle, Wash., 15 tons of anthracite coal in sacks, to be delivered at Point Barrow; also the annual mail and a small consignment of medical stores and surgical instruments for the use of the Government physician among the natives, and also the annual mail for St. Lawrence Island.

All of the foregoing requests being in the line of public service, and there being no other advantageous method of meeting the demands, you are directed to comply with the same as far as practicable.

* * * * *

Respectfully,

R. B. ARMSTRONG,
Assistant Secretary.

Capt. M. A. HEALY, R. C. S.,
Commanding U. S. Steamer Thetis,
Seattle, Wash.

LETTER OF INSTRUCTIONS TO ASSISTANT AGENT OF EDUCATION IN ALASKA.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., May 2, 1903.

SIR: With the approval of the Secretary of the Interior, you are hereby detailed to inspect the public schools and industrial schools in Alaska during the coming summer.

The Secretary of the Treasury has granted my request that you may be permitted to travel upon the revenue cutters during the discharge of your official duties. You will join the U. S. S. *Thetis* at Seattle and proceed northward upon that vessel. As occasion offers, you will secure transportation upon other vessels in Alaskan waters.

You are directed to visit and inspect, as far as possible, the schools at Wood Island, Kodiak, Afognak, Unga, Unalaska, St. Michael, Unalakleet, Golofnin, Teller, Port Clarence, Wales, Kotzebue, and Gambell (St. Lawrence Island).

Your actual necessary expenses on this tour of inspection—railroad and sleeping-car fare, steamship fare, and subsistence—will be paid from the appropriation "Schools outside incorporated towns, Alaska."

You are authorized and instructed on your journey across the continent to stop at all places where you have business in the interests of your work to transact.

Very respectfully, yours,

W. T. HARRIS,
Commissioner.

Mr. WILLIAM HAMILTON,
Assistant Agent of Education in Alaska, Washington, D. C.

ITINERARY OF WILLIAM HAMILTON, PH. D.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION, ALASKA DIVISION,
Washington, D. C., December 14, 1903.

SIR: In compliance with your instructions to join the U. S. S. *Thetis*, for the annual tour of inspection of United States public schools and reindeer stations in western and arctic Alaska, I left Washington on May 4 and arrived at Seattle six days later. The *Thetis* was still on the dry dock at the navy-yard at Bremerton, where the repairs required to put the vessel in perfect condition for the Arctic cruise were being completed. On May 11 the *Thetis* arrived and tied up to a buoy in Seattle Harbor, to await the arrival of the U. S. S. *Manning* with a quantity of stores from San Francisco for the use of the *Thetis* during her long cruise. There were unexpected delays, the *Manning* having encountered severe weather between San Francisco and Seattle. On May 26 the last details were complete—the ship's stores and the mail for the Arctic stations safely stowed away—and at 4 a. m. the *Thetis* steamed away from Seattle, northward through Puget Sound, turned into the Straits of Fuca, and at 8 p. m. rounded Cape Flattery and passed out into the North Pacific Ocean.

The roster of the officers of the *Thetis* was as follows: Capt. Michael A. Healy, commanding; executive officer, First Lieut. Charles E. Johnston; navigator, Second Lieut. Frank B. Goudey; Third Lieut. Hiram R. Searles; Third Lieut. Francis R. Shoemaker; chief engineer, Levin T. Jones; assistant engineer, William L. Maxwell; assistant engineer, Henry T. Powell; surgeon, Henry Horn, M. D. Mrs. Healy accompanied us during the entire cruise.

The voyage between Seattle and the Aleutian Islands was uneventful. At dusk, on June 3, land was sighted—the snow-streaked, rocky pinnacles of the Krenitzin group of the Aleutian Islands, jutting above the western horizon. Soon the fog came down like a blanket and for the next thirty-six hours the vessel was enveloped in an impenetrable cloudy world of very narrow limits, everything beyond the immediate vicinity of the ship being lost to view.

The Aleutian Islands, a series of partially submerged mountain peaks, 70 in number, extend westward from the Alaskan peninsula a thousand miles toward Asia. These volcanic peaks are entirely treeless, dwarf specimens of creeping willow being the nearest approach to timber found in this region. Grasses, moss, and wild flowers cover the hillsides and valleys during the summer months. The Aleutian chain forms a barrier between the North Pacific Ocean and Bering Sea, entrance being usually obtained through one of the three passes near the eastern end of the chain of islands—Unimak, Akutan, or Unalga. Tide rips and rocks are found in these narrow

passes and only in clear weather is it safe for a vessel to attempt to pass through them. While waiting off the islands for the fog to lift, the crew of the *Thetis* spent several hours in catching cod, with which these gloomy waters teem.

June 5, dawned bright and clear. During the days of fog the ship had drifted out of sight of land, but at about 8 o'clock in the morning land was again sighted many miles distant on the starboard bow. In a few hours we were coasting along the rocky shores toward Unalga Pass, enjoying the superb panorama of mountain ranges crowned with snow, their slopes intensely green, bold headlands and towering pinnacles against whose rocky bases the surf was beating. The precipitous cliffs are frequented by birds in enormous numbers; a shot fired from the deck of a passing vessel will bring them out of their nests in the clefts of the rock in myriads and the air will be white with fluttering wings; in foggy weather their harsh cries often warn the navigator of too near approach to land. Just before entering Unalga Pass we steamed over a smooth sea whose surface was black with countless whale birds that fled in great flocks at our approach.

About noon we rounded the familiar Priest Rock, an outlying pinnacle somewhat resembling a Russo-Greek priest in full canonicals, and entered Unalaska Harbor. Near the head of the harbor are two villages, Dutch Harbor (Udakta post-office) and Unalaska, trading posts and coal stations maintained by the North American Commercial Company and the Alaska Commercial Company, respectively. Dutch Harbor is the more recently established trading post and consists of a store, hotel, and houses occupied by the employees of the North American Commercial Company. The village of Unalaska was founded by the Russians about 1760, and it is intimately connected with the history of Russian occupation of the Aleutian Islands. The large Greek Church with its green Byzantine dome is a striking feature in the landscape. During the summer months Unalaska Harbor is the rendezvous for the shipping in that part of the world. The ships of the arctic whaling fleet call there for coal, water, supplies, and mail, leaving information of the movements of the ice in Bering Sea and receiving news of the busy world to the south. The large passenger steamers from Seattle or San Francisco en route to Nome stop there in order to obtain coal and to give their hundreds of passengers an opportunity to break the monotony of the long voyage by enjoying a day on shore. This harbor is the headquarters of the United States revenue cutters and of the British gunboats engaged in the Bering Sea patrol.

At 2 p. m., June 5, the *Thetis* tied up to the wharf at Dutch Harbor, and coaling for the arctic cruise commenced without delay. During the following days I visited and inspected the public school at Unalaska, and had frequent consultations with Miss Ann Mann and Mr. William A. Davis, the teachers; also with Mr. N. Gray, Dr. A. W. Newhall,

and Mr. T. Richards, members of the local school committee. Many urgently needed repairs to the school building were authorized.

Throughout this region of Alaska there are numerous waifs—children whose fathers are unknown. Here at Unalaska the Methodist Woman's Home Mission Society in 1889 entered upon the noble work of taking these destitute children out of their squalor and mental darkness and by surrounding them with the influences of a Christian home lifts them into a higher civilization. From a beginning with two orphan waifs from Attu, the westernmost island of the Aleutian chain, the Home family had in 1903 increased to about 40 children in two large and commodious buildings. Dr. A. W. Newhall is the superintendent of this establishment.

At 6.30 p. m., June 11, the lines were cast off and the *Thetis* started from Dutch Harbor on her cruise through Bering Sea and the Arctic Ocean, Nome being her objective point. On June 14 ice was encountered and until the 16th the ship steamed slowly in the direction of Nome through scattered floes or following leads in the ice fields. At 7 p. m., June 16, the *Thetis* came to anchor about 2 miles off the town of Nome. Seven large passenger steamers, the first of the season, had arrived earlier during the same day. Great masses of ice were drifting about offshore, causing the steamers frequently to shift their anchorage in order to avoid the danger of being driven ashore by the pressure of the ice or losing their anchors by the snapping of the anchor chains.

There is no harbor at Nome; the town lies along the unprotected beach open to the unchecked assaults of Bering Sea. The tented city of the days of the gold rush of 1898 has given place to a town of frame buildings lying on the flat tundra only a few feet above the sea. With the enterprise characteristic of new towns in Alaska, Nome has secured for itself almost all the comforts of civilization that are found in a town of its size in the thickly inhabited parts of our country; boarded streets, water supply, fire department, electric-light system, cold-storage plants, telephones, newspapers, and a suburban railway to the Anvil Creek mines. During the summer months it is only eight or nine days by steamer from Seattle and its stores are well supplied with provisions, clothing, and all the necessaries and many of the luxuries of life. At Nome we received much-appreciated letters, newspapers, and magazines from the States, and the ship's stewards purchased supplies of fresh provisions.

One of the duties of the Revenue-Cutter Service is to furnish assistance to ships in times of peril and disaster. During the past twenty years the vessels of this service, cruising in Bering Sea and the Arctic Ocean, have rescued and taken from those sterile shores more than a thousand shipwrecked sailors and destitute miners, and have saved from starvation the natives of many an arctic village. The U. S. S. *Bear* has made a magnificent record in this noble work.

The first news received at Nome was that the steamer *Portland*, with hundreds of passengers, was long overdue, and it was feared that she had been imprisoned by the ice fields in northern Bering Sea. Accordingly, as soon as the provisions for the ship and the mail for those places in the Arctic Alaska, whose only reliable means of communication with the outside world is the annual visit of the cutter, had been taken on board, anchor was weighed and the *Thetis* headed for that part of Bering Sea where the *Portland* had last been sighted. During the next sixty hours we followed many courses through the ice fields in the northeastern part of Bering Sea, and a sharp lookout was kept for the missing vessel. The captain had promised an extra month's pay to the man who first sighted the *Portland*; accordingly, in addition to the regular watch on deck and in the crow's nest at the foremast head, each of the other masts had its fringe of volunteer observers. The ice pack was found to extend in a solid mass from King Island, a short distance south of Bering Strait, to St. Lawrence Island. Having skirted the edge of the impenetrable ice along that entire distance, and having carefully explored the region where the *Portland* would be likely to be, without finding any trace of the vessel, Captain Healy decided to return to Nome. On the way, an attempt was made to reach St. Lawrence Island, where there is a public school and Presbyterian Mission, but the island was inclosed by heavy ice, and it was not possible to approach within 10 miles of the land. During this search for the *Portland* among the ice fields, schools of walrus were sighted, and the peculiar illusions caused by mirage were frequently seen. Upon our arrival at Nome, during the morning of June 20, the *Portland* was found safely riding at anchor in the roadstead.

On account of the unusually heavy ice in Bering Sea it was evident that it would be impossible to continue the cruise for several days to come. From June 20 to June 26 the *Thetis* remained off Nome, frequently getting up steam and shifting her anchorage in order to avoid the massive ice fields that drifted about, a constant source of danger—to navigation. During these days of waiting there were many drills, fire drills, abandon ship, muster and inspection, the manual of arms, and gun drill.

On June 26 it was thought it would be possible to work through the ice and make a landing on St. Lawrence Island, and the captain decided to make another attempt to reach the village of Gambell, near the northwest cape of the island. Once more we headed into the ice fields, and during the following days we were repeatedly stopped by the ice and fog. In the vicinity of St. Lawrence Island dense fog was encountered. The cliffs of the island might loom up before us at any moment, and the captain proceeded with great caution. About noon, June 29, there was a rift in the all-enveloping gray curtain and the forbidding dark coast suddenly appeared. For several hours we steamed slowly along the wide strip of ice that continuously fringed

the shore. On the surface of the ice we noticed great brown masses that in the distance we supposed to be piles of drift-wood tossed up by the waves. Closer inspection showed them to be hundreds of walrus lying on the ice; the difficulties of navigation in the vicinity of this ice-fringed, fog-bound, rocky coast precluded the possibility of securing any of these denizens of the frozen seas. At 9 p. m. we again ran into impenetrable fog, and the ship came to a standstill about 2 miles from shore. During the night we frequently had to steam out of the way of drifting ice fields.

Next morning the cruise along the deserted shore of St. Lawrence Island was resumed. About noon the *Thetis* anchored 3 miles from the village of Gambell, near Cape Chibukak, at the northwestern extremity of the island, where there is a settlement of from 300 to 400 Eskimos who eke out a precarious existence by hunting the whale, walrus, seal, and fish of the adjacent sea.

St. Lawrence Island is a long, narrow strip of land in northern Bering sea, 40 miles east of Indian Point on the Siberian coast, 110 miles south of Bering Straits, and about 120 miles southwest of Nome. Its surface is a rolling tundra with here and there a range of barren hills. It is a cheerless, desolate region, swept by the arctic gales; during eight or nine months it is an island in an icebound sea, absolutely inaccessible to the outside world. It is without a tree, without agricultural possibilities, and, so far as known, without mineral resources. On the island are large tracts of reindeer moss which, as grazing ground for herds of reindeer, redeem the island from absolute worthlessness. For the civilization of the natives, the Bureau of Education has since 1891 maintained a public school in the village of Gambell, and in order, if possible, to provide means of support for the natives, in 1900 placed a herd of reindeer on the island. A mission of the Presbyterian Church has been maintained here since 1892. During the short summer, when the island can be reached by ships, its only visitors are a few of the arctic whalers, en route to the whaling grounds of the far north, and the revenue cutter on its annual cruise. The annual mail is brought by the cutter and the provisions and other supplies for the teachers are delivered once a year by the ship which the Bureau of Education sends with supplies for all the arctic stations.

Very soon after the vessel came to anchor, Dr. Edgar O. Campbell, who is the public school-teacher, medical missionary, and superintendent of the reindeer herd on this island, came on board without delay. I accompanied Doctor Campbell back to his home in the village, where I met Mrs. Campbell. The next few hours were spent in exchanging the news of a year, in inspecting the school and Government property, in attending to the miscellaneous business connected with the carrying on of the school, and in taking photographs. Doctor Campbell's account of his work will be found elsewhere in this report.

At 7 o'clock the next morning the *Thetis* weighed anchor and headed for Cape Prince of Wales, the westernmost point of the North American Continent. At 4 a. m. July 2, we were abreast of the Cape Prince of Wales mountain, rendered remarkable by the jagged rocks extending for miles along its summit. The sea between the ship and the village was full of cakes of ice drifting rapidly northward through Bering Strait on the swift current. Communication with the shore by means of the ship's boats was impossible; steaming southward to a small bight between the highland of Cape Prince of Wales and Cape York, the *Thetis* came to anchor, somewhat sheltered from the ice fields. About 8 a. m. an oomiak load of natives, who had been out hunting came on board. After considerable persuasion they consented to take a letter to Mr. Rognon, and Mr. Lee, the teacher and missionary at Wales, requesting them to come out to the ship if possible. Toward evening these gentlemen arrived, and in the cabin of the *Thetis* considerable business was rapidly transacted, the visit to the village being postponed until later in the season. At 10 p. m. Mr. Lee and Mr. Rognon returned to the village with the mail and the supplies for the school. During July 3 the *Thetis* was joined off Cape York by several vessels of the arctic whaling fleet, and by the schooner *Laura Madsen*, of San Francisco, having on board the annual supplies for the schools and missions on the shores of Bering Sea and the Arctic Ocean; all these ships were barred by the ice from progress northward.

On the 4th of July, in honor of the day, the vessels were gay with flags, and at noon a salute of 21 guns from the *Thetis* sounded out over the ice fields. Captain Healy entertained the captains of the whalers and Capt. Philip H. Cook, of the *Madsen*, at dinner in the cabin. During the afternoon the sailors engaged in various games—masthead races, shoe races, and other frolicking. Captain Healy had intended to visit Teller reindeer station, on the north shore of Port Clarence, at this time. This great arm of the sea remaining fast locked in the ice, an entrance was impossible. Returning to Nome, July 6 and 7 were spent at anchor and sundry repairs to the engine were made.

At 8 a. m. July 8, we were under way, with the Swedish mission station on Golofnin Bay as our objective point. When we passed Cape Darby and Rocky Point, at the entrance to Golofnin Bay, a strong southwest wind was blowing directly into the bay and piling up great seas on the beach, making a landing impossible. Accordingly, the ship continued her course toward St. Michael through Norton Sound, tinged with the flood of fresh water which the rivers pour into it, and covered with driftwood brought down from the interior.

At 7 a. m. July 9, the *Thetis* dropped anchor under Whale Island, off the village of St. Michael, 60 miles from the mouth of the Yukon. At this place a stockade fort was established by the Russians in 1833. Until the completion of the White Pass and Yukon Railway three

years ago, St. Michael was the principal outlet for the Yukon trade and the only store of supplies for the interior of Alaska. During the season of open navigation—June to October—it is the point of transfer from ocean-going vessels to the river steamers. The village consists of an extensive army post, two hotels, the offices and lodging houses of the Northern Commercial Company and the North American Trading and Transportation Company, and a small native settlement.

The *Thetis* remained at anchor off St. Michael until August 1, awaiting the arrival of the Yukon River steamer having on board United States Senator Charles H. Dietrich, of Nebraska, and Miss Dietrich, who had received permission from the Secretary of the Treasury to make the arctic cruise on the *Thetis*. Senator Dietrich had expected to meet the *Thetis* at St. Michael about July 8, his steamer being due on that day; but sand bars and shallows play havoc with the schedules of the Yukon River steamers, and when one takes passage at either end of the river route it is a matter of mere conjecture as to when he will arrive at his destination.

During this period of waiting I had several consultations with the members of the local school committee for St. Michael, Maj. R. H. Wilson, U. S. Army, and United States Commissioner Merritt, regarding the affairs of the school. The teacher, Mr. Franklin Moses, was absent up the Yukon, having secured employment during his vacation in connection with the Quartermaster's Department of the Army. By the courtesy of Capt. I. N. Hibberd, in charge of the transportation department of the Northern Commercial Company, I was afforded an opportunity to visit Unalakleet, near the mouth of the Unalakleet River, at the eastern end of Norton Sound. At Unalakleet there is a public school and a mission of the Swedish Evangelical Union. It is also the headquarters of Mr. Axel E. Karlsen, who during the past year has had the oversight of the reindeer herds in the neighborhood of Unalakleet.

The upper end of Norton Sound is full of shoals and it is difficult of navigation for a vessel drawing more than a few feet. It was therefore deemed unwise for the *Thetis* to make the attempt to reach Unalakleet. It could, however, be reached by the small steamer *Meteor*, which is used by the Northern Commercial Company as a dispatch boat between headquarters at St. Michael and places in the vicinity. The services of the *Meteor* being in constant demand in St. Michael Harbor, it was possible for her to make the extra trip to Unalakleet only at such a time as she could be spared. It happened that on this occasion she left St. Michael at 8 o'clock in the evening, arriving at Unalakleet about 2 o'clock the following morning. As her time was exceedingly limited I hurriedly transacted my business with Mr. Karlsen and Mr. Carl O. Lind, who has just been appointed superintendent of the reindeer herds in Alaska, between 2 and 4 a. m.,

when it was necessary to return on account of falling tide and urgent business. Lieutenant Goudey, the navigating officer of the *Thetis*, accompanied me on this trip in order that he might obtain information regarding the upper part of Norton Sound which might be of service to him in future cruises. At this season of the year there is no night, and the transaction of our midnight business was not hampered by darkness. There were, however, swarms of mosquitoes which attacked us as soon as we landed and continued their operations unceasingly until we were out in the sound again.

Observations during our recent visit to St. Lawrence Island had led me to decide that it was not wise to leave Doctor Campbell and Mrs. Campbell alone on the island. This being also the opinion of Captain Healy, it was determined to send an assistant to Doctor Campbell, if a suitable person for that position could be procured in this region. At St. Michael, in the employ of the Northern Commercial Company, we found Mr. Thomas Richards, who had been boatswain on the U. S. S. *Bear* for eight years, and had also been assistant keeper of the refuge station at Point Barrow. He has had long experience in dealing with the Eskimos, and possesses a thorough knowledge of life in the Arctic. He was highly recommended by Captain Healy, who had been in command of the *Bear* during Mr. Richards' period of service. Mr. Richards accepted the position, and on July 13 came on board the *Thetis* for transportation to St. Lawrence Island.

During the afternoon of July 27 the Northern Commercial Company's steamer *Healy* arrived, having on board United States Senators Burnham, Dillingham, Nelson, and Patterson, the members of the Senate Committee on Territories, who were making an official visit to Alaska; also the Sergeant-at-Arms of the Senate and other gentlemen connected with the Senatorial party. During the remainder of this and the following day the Senators were busily engaged in interviewing the leading men of St. Michael, obtaining information at first hand regarding legislation needed for Alaska. On the evening of July 28 Capt. Omar J. Humphrey and Capt. I. N. Hibberd, in charge of the affairs of the North American Trading and Transportation Company and the Northern Commercial Company, respectively, gave a banquet in honor of the members of the Senatorial party, at which guests from the army post, the revenue cutters *Thetis* and *McCulloch*, and the village of St. Michael were also present. There were no speeches, and the informality and cordial spirit of the occasion were greatly enjoyed. After the banquet many of the guests accompanied the Senators on board one of the harbor tugs and escorted them to the U. S. S. *McCulloch*, on which they left for Nome at about 11 p. m.

On August 1 Senator Dietrich and Miss Dietrich arrived on the river steamer *Sara*, and were received on board the *Thetis*. They

were our fellow-passengers during the rest of the summer. At 9.30 the same evening the *Thetis* steamed out of St. Michael Harbor en route for Nome.

At Nome, on August 2, the Rt. Rev. Peter Trimble Rowe, who was making his official tour of inspection of the mission stations of the Protestant Episcopal Church in western Alaska, joined the *Thetis* for transportation to Point Hope. Bishop Rowe visits this remote station once every three years. It can be conveniently reached only on the annual cruise of the revenue cutter.

Upon leaving Nome, August 3, we encountered rough weather. During the night we passed through Bering Straits and entered the Arctic Ocean. On August 4 we anchored off Point Hope. From the high ground of the mainland a narrow strip of absolutely barren land, only a few feet above the sea, extends about 16 miles into the Arctic Ocean. Its shape gives this projection its native name, Tigerah (The Finger). It has evidently been formed by ice fields grounding and pushing up the sand and stones into a ridge before them. Near the ocean end of this narrow peninsula is the native village, a cluster of sod huts. About a mile to the eastward are the mission buildings, and about the same distance nearer to the mainland are several whaling stations, inhabited by white men.

A party from the *Thetis* accompanied Bishop Rowe ashore and visited Dr. John B. Driggs, the medical missionary in charge of the station. Doctor Driggs hospitably entertained us at a lunch in which the principal article of food was steak from the bowhead whale, prepared by native cooks. The cooking reflected credit upon the cooks and their instructor. Doctor Driggs has been in charge of this mission continuously since 1890, with the exception of a few months during the winter of 1895, when he visited the States. At Point Hope the sun sinks below the horizon about December 10 and rises again about January 3, giving Doctor Driggs and his associates a night of more than five hundred hours. In the long dusk of the arctic winter, lamps are required in the schoolroom continuously from November to February. The gales sweep unobstructed over the ice fields and the low-lying land; the snow flies in perfect sheets, almost blinding those who leave the shelter of their houses; it seems at times as if the mission building itself must be blown from its foundations. Sometimes, before the Arctic Ocean is imprisoned by the winter ice, great seas break upon the narrow strip of land, almost submerging it from shore to shore. Formerly the land extended farther into the ocean; during an autumn storm the ice pack came down upon it with such violence as to sweep away a considerable portion, submerging a number of native huts. The effects of mission and school work, here and at other places in Alaska where these beneficent influences have been at work, are evident

in the brighter, more intelligent expressions of the faces of the natives and in the greater amount of cleanliness to be found.

Near Cape Lisburne, a rugged headland 850 feet in height, coal has been discovered and has been mined to some extent. While searching for the missing steamer *Portland*, and during our almost constant troubles with ice, a great quantity of coal had been consumed by the *Thetis*, and Captain Healy wished to replenish the bunkers from this arctic mine. We were greatly disappointed on arriving at this place, August 6, to find that the few miners who had been there earlier in the season had ceased their operations, the mine was deserted, and no coal could be obtained.

During the following days we coasted through scattered ice fields northward along the coast, which for hundreds of miles is almost level with the sea. In thick weather it is almost impossible to distinguish the land from the water. On August 6, near Icy Cape, we sighted the beacon which the *Bear* had erected, in 1902, as an aid to navigation. At this point the lookout in the crow's nest reported impenetrable ice ahead and anchor was dropped about 4 miles from shore. For the next thirty-six hours we remained in this region, frequently shifting anchorage to avoid the drifting ice. During this period of waiting, several shooting parties left the ship and explored the neighboring beach and tundra.

Icy Cape was the northernmost point reached by Capt. James Cook, August 18, 1778, when searching for the Northwest Passage, and it received its name from him. From this extreme northern limit of his explorations he proceeded to the Sandwich Islands, where he met his death.

It was important for the *Thetis* to reach Point Barrow and deliver the annual mail to the teachers, missionaries, and whalers at that northwesternmost point of the continent. Accordingly, many attempts were made to penetrate the ice, but with little success.

On August 8, in the vicinity of Point Belcher, about 80 miles southwest of Point Barrow, it was found impossible to proceed farther north. The supply of coal was barely sufficient to take the ship back to Dutch Harbor, the nearest coaling station, about 1,400 miles away. It might be several weeks before the ice would leave the shore, making it possible to approach Point Barrow. On the evening of August 8 Captain Healy reluctantly decided to give up the attempt to reach Point Barrow this season and the *Thetis* headed southward.

On August 10, we arrived at Point Hope and left with Doctor Driggs the mail for Point Barrow, which Doctor Driggs agreed to forward to its destination by the overland mail route, which is to commence operations during the winter of 1903-4. Bishop Rowe returned on board and was with us until the ship reached Nome again. At 2 p. m. August 11, the *Thetis* anchored off Cape Blossom, in Kotze-

bue Sound. During the evening Mr. Dana Thomas, the superintendent of the Friends' Mission at Kotzebue, near the entrance to Hotham Inlet, came on board and I had a hurried interview with him. His report for the year is printed elsewhere in this appendix. At 9.15 the *Thetis* was again under way.

After making a detour to the Siberian coast, where the villages of Whalen and Indian Point were visited, we anchored off the village of Wales at noon August 16. Mr. Lee and Mr. Rognon at once came out to the ship and several of us returned with him to the village in an oomiak. From time immemorial the oomiak has been the general utility boat used by the Eskimos throughout this region. It is about 20 feet long, $3\frac{1}{2}$ feet beam, and 3 feet deep; it is constructed of driftwood, over which walrus or sea-lion hide has been tightly stretched. It is flat-bottomed and can easily be dragged through the surf over the shallows and high on the beach out of reach of the waves. When turned upside down on shore it affords the natives shelter from rain storms. These oomiaks are quite seaworthy, and in them during the summer men and women, with their children, dogs, cooking utensils, and the miscellaneous property acquired by these inveterate traders, make long voyages up and down the Alaskan coast. The natives of Cape Prince of Wales in their oomiaks frequently cross the 40 miles of rough water of Bering Strait and visit the villages along the Siberian shore.

The village of Wales has a native population of about 500; it is the largest village on the Alaskan coast. Since 1890 a station of the American Missionary Association (Congregational) and a public school have been maintained at this place. The mission at Wales was the first to receive a herd of reindeer. Eskimos now own hundreds of deer of their own, and if they retain the habits of thrift which the missionaries and teachers inculcate they will be the wealthiest natives in that region, and their influence will be increasingly felt far and wide among the Eskimos of the other villages.

At Wales is a store conducted by natives (Akbaok & Co.), and several small frame buildings among the driftwood huts are evidences of the ambition of the more enterprising natives to improve their primitive conditions. At the time of our visit the village was almost deserted, the natives being absent on hunting expeditions along the coast or engaged in the less praiseworthy occupation of loafing in the outskirts of Nome.

During the afternoon we visited Mr. Lee and his family in the mission house on the hill overlooking the village, inspected the school building, and paid short visits to some of the native huts. At 9 o'clock in the evening the *Thetis* was under way for Port Clarence. Very early in the morning of August 17 we arrived at Teller reindeer station, on the north shore of Port Clarence, an arm of the sea which indents the western end of the Seward Peninsula a short distance

south of Bering Straits. It was first visited and described by Captain Beechey, of H. M. S. *Blossom*, 1827, who named it Port Clarence after the Duke of Clarence. It is a good harbor, free from the ocean swell, and is the rendezvous for the arctic whaling fleet that here in July of each year awaits the arrival of the coal tender from San Francisco. As a rule, the bay is clear of ice about June 25. The season of 1903 was exceptional.

Port Clarence being the nearest harbor to that part of Siberia from which reindeer have been obtained since 1892, it has been the receiving point for the deer brought over season after season by the U. S. S. *Bear*. From Teller reindeer station, winter after winter, herds have been sent out over the frozen tundra to the other centers of the reindeer industry in Alaska.

August 17 was one of those perfect days which in midsummer sometimes gladden the traveler in the arctic regions. The sun shone brightly, the air was mild, and the sea smooth. Mr. T. L. Brevig, who has been the superintendent of Teller reindeer station for many years, came out to the *Thetis* before anyone on board was stirring, except those on watch, and reported that the reindeer herd was grazing about 5 miles distant from the station, but that a messenger had been sent to tell the herders to drive the deer to the station in order that we might see them. Going ashore, we walked several miles along the beach and met the herd coming to the station. On our way we passed the stump of one of the telegraph poles erected in 1867 by the expedition of the Western Union Telegraph Company, which endeavored to construct a telegraph line across Alaska to connect with the line across eastern Siberia. The success of the trans-Atlantic cable caused this project to be abandoned.

While we accompanied the herd back to the station we had ample opportunity to observe the deer at close range. A reindeer is usually brown in color, white spots appear on some, and a few are pure white. The average height at the shoulder is about $3\frac{1}{2}$ feet, and the weight of a full-grown deer is perhaps 250 pounds. Reindeer are very gregarious and are easily herded; two or three dogs easily keep a herd of several hundred from scattering. They do not have to be fed, grazing for themselves winter and summer on the reindeer moss (*Cladonia rangiferina*) and grass which abound throughout northwestern and arctic Alaska. In the winter they paw away the snow with their front hoofs and easily reach the moss and grass beneath, unless the snow is covered with a coat of ice, which herders must then break for them. They do not require the shelter of a shed in winter. During the calving season—March and April—the herds are kept under the lee of the hills, which furnish all the protection they require.

After a very enjoyable visit to the station we returned to the *Thetis*, and during the afternoon, in one of the ship's sailing cutters, made a voyage to the town of Teller, near the head of the bay. Teller was

formerly a flourishing town, the distributing point for supplies for this section of the country. The mining district in which it is situated not proving rich, there has been an exodus from Teller, and it is now a deserted town; streets of neatly built frame houses empty and going to wreck and ruin are a depressing reminder of the days of the town's prosperity. The Bureau of Education formerly maintained a public school at this place, but here, as elsewhere in the mining regions of Alaska, the school had to be discontinued on account of lack of pupils.

On August 18 we visited King Island, a mass of basalt about a mile in length rising 800 feet above the sea near the southern end of Bering Straits. There is no beach anywhere on the island, the sea breaking directly against the rocks, and it is seldom that a landing can be made with ship's boats. On this occasion the sea being unusually smooth, a party from the *Thetis* succeeded in exploring the cave to the right of the ravine on the south side of the island. Into the mouth of the cave the sea dashes. There is a shaft leading from the top of the island into the cave; through this cleft in the mountain the snow has drifted, forming a bank 40 or 50 feet high, a barrier between the outer and inner parts of the cave. By means of steps cut in the hard snow and a rope securely fastened near the summit of the snow bank, we overcame this obstacle and penetrated into the interior of the cave. From time immemorial this cavern has been used as a storehouse by the King Island natives. Walrus and seal meat are cached among the rocks. In the floor of the inner cave are entrances to shafts which appear to extend deep down into the island. The rocks are slippery with the slime of ages, and the air is indescribably foul from the putrefaction of masses of meat.

The cliffs of King Island rise precipitously from the ocean. Near the entrance to the cave a ravine rising from the ocean at an angle of about 45 degrees scars the cliff. On the sides of this ravine cluster the huts of these arctic cliff dwellers. Their winter homes are huts rudely constructed of unhewn stone; their summer dwellings are rectangular tents of walrus hide stretched over driftwood frames, guyed to the rocks to prevent them from being blown out to sea. This unique settlement was visited by Capt. James Cook, August 6, 1778, and named by him King Island, after Lieut. James King, a member of his party. At the time of our visit the village was absolutely deserted, the population having migrated to the mainland for the summer.

On August 19 Bishop Rowe left us at Nome, and here once more stores of fresh provisions were purchased.

An August 21 we made our second and final visit for the season to the exiled teachers on St. Lawrence Island. During the summer Doctor Campbell and the native carpenters had constructed an annex to the station building, which was to be used as a hospital. This building reflects credit upon the industry and ability of Doctor Campbell and his assistants. Here we left Mr. Richards, who, during the coming

winter of absolute isolation from the outside world, will assist Doctor and Mrs. Campbell in the work of the station.

The next place at which we touched was the village of St. Paul, on the island of the same name, the largest of the Pribilof group, consisting of St. Paul, St. George, Otter and Walrus, the so-called seal islands, in southern Bering Sea.

In 1786, when the supply of furs upon the Aleutian Islands began to decrease, efforts were made to discover the summer retreat of the fur seal, large numbers of which were observed going northward through the passes between the Aleutian Islands in June of each year. But so well were these small islands hidden in the almost perpetual fog of Bering Sea that the Russian navigator Gerassim Gabrilovich Pribilof cruised around them for three weeks in his vessel *St. George* without discovering them. At last the fog lifted and the green shores of the island were disclosed, its rocky beaches covered with myriads of seal. In after years these islands became the "bank" which supplied Baranof, the chief manager of the Russian-American Fur Company, with funds to pay the expenses of his establishment in Alaska. If he needed supplies for his trading posts all he had to do was to obtain them from the American and British ships which visited him at Sitka, and send their owners to the Pribilof Islands to take their pay in seal-skins. In order that the supply of seal might not be exhausted, in 1805 the Russian Government prohibited all killing of seal for a period of five years and the rookeries regained their former numbers. For a few years after the transfer of Alaska to the United States the slaughter of the seals was carried on without any restraint whatever. In 1869 the islands were declared a Government reservation and a company of soldiers stationed on them. In 1870 the seal fisheries were leased for 20 years to the Alaska Commercial Company, of San Francisco, at an annual rent of \$55,000, and a tax of \$2.62½ on each skin. In 1890, at the expiration of their lease, the Alaska Commercial Company had paid into the Treasury of the United States \$5,956,565.67. Since 1890 the lease of these fisheries has been held by the North American Commercial Company, also of San Francisco; the present annual rent is \$60,000 and the tax on each sealskin taken is \$10. Pelagic sealing and rookery raiding have so diminished the numbers of seals visiting the islands that about 20,000 is now the average number killed by the company each season.

At 9 a. m. August 25 the *Thetis* anchored several miles out from the village of St. Paul. Without delay a boat left the ship taking a party for a visit to the village and the seal rookeries. Mr. H. Chichester, the agent of the Treasury Department, kindly accompanied us from the village to the nearest of the rookeries, which is the name given to the tracts along the shores of the island which are frequented by the seal during the summer months. At these places the grass has long since disappeared, and the rocks have been worn smooth by the

successive generations of the amphibian millions that have clambered over them for an unknown period of years. Hundreds of seals were seen lying on the sand or frolicking in the adjacent waves.

Hearing that numbers of sea lions were to be found with the seal at the rookeries near Northeast Point, about 30 miles away, Senator Dietrich expressed a desire to visit this out-of-the-way spot. I wished to see as much of the island as possible in order to form an idea of its adaptability for the reindeer industry. Accordingly the two mules on the island were hitched to the company's buckboard, and Mr. Allis, of the North American Commercial Company, and Mr. Chichester very kindly escorted us on our drive over the rough tundra to this remote corner of the island. We were amply repaid. The number of seal at Northeast Point far exceeds the number at the rookeries near the village, and we had ample opportunity to observe the tawny sea lions. These huge animals once frequented Bering Sea in large numbers, but they are now becoming rare. The undulating surface of the island, covered with grasses and moss, with fresh-water lakes here and there, is admirably adapted for reindeer herding. Night had fallen by the time we returned to the village of St. Paul. During the afternoon Lieutenant Goudey and a boat's crew from the *Thetis* had come to take us back to the ship; meanwhile the wind had shifted, and it was not thought safe to attempt to pass in the darkness the reef which almost bars the entrance to the small harbor. However we decided to make the attempt, and rowed out from the wharf toward the mouth of the harbor. Soon the sound of breakers was heard and suddenly a line of gleaming surf appeared just ahead of the boat. The narrow passage between the rocks could not be distinguished. Having in mind the fact that some years ago a boat returning to the *Bear* under similar circumstances was capsized in these icy waters and several lives lost, we determined to return to the village. With the cordial hospitality characteristic of the employees of the great trading companies throughout Alaska, Mr. Allis and Mr. Chichester welcomed us again and entertained us for the night. From the cliff above the village Lieutenant Goudey signaled with a lantern to the *Thetis* lying offshore and conveyed the news that we would not return until daylight. The following morning we passed the reef successfully and returned to the ship.

During the afternoon of August 26 we were abreast of the village of St. George. On account of the heavy surf no landing could be made here. Signals were hoisted upon the flagstaff in front of the headquarters of the North American Commercial Company, requesting the *Thetis* to steam around the island to Garden Cove, a sheltered bay on the opposite shore, whither a runner carrying the mail would be at once sent. At 1 p. m. the *Thetis* anchored off this protected spot, and the mail for the States was received on board.

At 5 p. m. August 27 the *Thetis* anchored in Dutch Harbor, ending her summer's cruise in Bering Sea and the Arctic Ocean. The next ten days were spent in coaling, making extensive repairs to the engine, and in overhauling the ship preparatory to her homeward voyage. During this time I again inspected the public schools at Unalaska.

On the evening of September 5 a native in a bidarka made his appearance in the harbor and reported that the schooner *Abbie M. Deering* had been wrecked on the rocks near Akutan Pass and that immediate assistance was needed. The U. S. S. *Manning*, Captain McClellan commanding, at once steamed out of the harbor to the relief of the distressed vessel and returned with the shipwrecked passengers on the morning of the 6th. The shipwrecked people were received on the *Thetis* for transportation to the States. The *Deering* had left Nome August 27, with 39 passengers en route for Kodiak Island, where a rich gold find had been reported. She had been becalmed in Akutan Pass September 4 and driven upon the rocks by the strong current. The passengers, crew, and baggage were landed on the rocks and sheltered from the elements in tents made from the vessel's sails, and a letter was dispatched to Dutch Harbor, 30 miles distant, asking for immediate assistance.

At 7 a. m. September 7 the *Thetis* cast off from the dock at Dutch Harbor and commenced her eastward voyage.

During the morning we sighted the *Deering* lying on the rocks, apparently a complete wreck. For the next few days we coasted along the southern shore of continental Alaska, frequently sighting its barren cliffs and mountain ranges, but we did not touch at any point until we reached Valdez, in Prince William Sound, September 12. At this place the trail to the interior, constructed by the War Department, commences. Valdez has been selected as the starting point for one of the all-American routes to the Yukon Valley.

During the three days' voyage between Prince William Sound and Sitka we encountered rough weather, and the shelter afforded by Sitka Harbor, where we arrived September 17, was very welcome.

The voyage through the tortuous waters of the "inside passage" being dangerous for a vessel without a pilot, and no pilot being obtainable in Sitka, Captain Healy decided to return to Seattle by the outside passage through the North Pacific. Wishing to visit as many of the public schools in southeast Alaska as possible, I left the *Thetis* at Sitka, September 19, to await the arrival of the mail steamer which would touch at many of the villages in which our schools are situated.

Late in the evening of the 19th the U. S. S. *Perry* arrived at Sitka; having completed her summer's work in southeastern and western Alaska she was homeward bound and had come to Sitka for coal. Captain Tuttle, commanding the *Perry*, gave me a cordial invitation to make the rest of my voyage on the *Perry*.

While in Sitka I frequently visited the public schools, which are in charge of Mr. Grant Smith, Mrs. M. A. Saxman, and Miss Constance J. Stowell; also the industrial shops of the Presbyterian Industrial School, and greatly enjoyed the courtesies extended by hospitable friends in Sitka.

At 6 a. m., September 26, the *Perry* commenced her homeward voyage to Seattle. She was commanded by Capt. Francis Tuttle, and her officers were Second Lieut. Harry G. Hamlet, Third Lieut. William A. Whittier, Third Lieut. Thos. M. Molloy, Chief Engineer John B. Coyle, Asst. Engineer Lorenzo C. Farwell, Asst. Engineer G. A. Glover, and Surg. R. N. Hawley.

On the way to Seattle I visited the public schools at Killisnoo, Hoonah, Haines, and Saxman.

After a pleasant voyage we arrived at Seattle at 3 p. m. October 11. After purchasing and arranging for the shipment of certain school supplies that were needed in western Alaska without delay, I left Seattle for San Francisco October 15. In San Francisco I attended to various matters of business with the firm that had furnished the supplies for the stations in Arctic Alaska. On October 26 I arrived in Washington, completing a tour of inspection that had covered a distance of 16,000 miles.

I desire to express my appreciation of the numerous courtesies received from Capt. Michael A. Healy, commanding the U. S. S. *Thetis*, from Capt. Francis Tuttle, commanding the U. S. S. *Perry*, and from the officers attached to those vessels. By the cooperation of these gentlemen I was enabled to visit many schools in remote villages which could not have been reached in any other way.

I have the honor to be, very respectfully, yours,

WILLIAM HAMILTON,

Assistant Agent of Education in Alaska.

Hon. W. T. HARRIS, LL. D.,

Commissioner of Education.

(Through Sheldon Jackson, LL. D., general agent of education in Alaska.)

ANNUAL REPORT POINT BARROW REINDEER STATION.

BARROW, ALASKA, *July 1, 1903.*

SIR: I have the honor to report 612 deer at this station.

Our loss this year has been unprecedented—75, from a variety of causes. The greatest loss was in what the natives call “mullo-kully,” or crazy. All animals around here were affected—dogs, foxes, and deer. The dogs died by scores. I lost 7; some families lost every dog they owned. The trading station out of 70 dogs saved 12. People out trapping walked around knocking sick foxes on the head, and

merely a year passed without one of the deer succumbing. The most puzzling part about the deer was that the meat was not even good enough for the Eskimos to eat, although they eat seals thoroughly spoiled by the sun for four or five months.

In view of the milk route established this year, I would recommend that Ekeetoom and Ojello be sent to the Kuvukum River, near Point Hope, and Shoudla, Shoudla and Pansoonah near Jay Cape. Also that these two outfits receive the milk rations from now on and get the other milk from pay for using their deer and killing the surplus males. Ekeetoom and Ojello could be transferred to the Kotzebue District.

The members of my first year's expedition were Ojello, 22 deer, Segevat, 20; Pansoonah, 20; Torpak, 28, including his son's deer.

Torpak's son, Padigah, has been with the herd five years, three as "boy" and two as herder, and Torpak will leave his deer with Panigah at the central herd and spend what time he wants there himself. He has a frame house here and quite a number of natives trapping and working for him independent of his working for me with the deer. In a few years he will be the "big mannik" in this district. He and his wife are the two most reliable natives I know. I also want to keep Segevat at the herd without pay in deer and on half rations. I will give him the balance to have him work for me part of the time. As I have to stay here some years more, I have built a house on the Kulugaru River, 50 miles or so inland, and will have the deer there and spend as much time as I can spare working directly with the deer myself.

If it is at all possible, will you request the *Bear* to bring us five bucks from Kotzebue to exchange for five of ours, next summer. I think our strain is becoming too much interbred; many of the fawns were badly deformed this spring—hare-lips, one nostril, albinos, and some too weak to live.

I will have bucks, with moss enough to keep them, within access of the *Bear* next summer, so as to waste no time, if you can arrange it.

Two years ago you asked me to economize in the food requisition. I did so, but did it too well. The ocean seemed utterly barren last winter, and also the rivers, so that all the natives depended entirely on civilized food, and every fox caught by the boys had to be turned into food at the station. I doubt if 25 seals were caught by these 300 people last winter. We had 162 living fawns.

Ojello died during the measles epidemic, and I turned over the deer to his son Shoudla, who, though lame, is a very capable man. As soon as ice forms in the rivers we will count the deer individually by the brands.

Respectfully submitted,

H. R. MARSH, M. D.

DR. SHELDON JACKSON.

ANNUAL REPORT KOTZEBUE REINDEER STATION.

KOTZEBUE, ALASKA, *July 9, 1903.*

DEAR SIR: The past winter has been the severest ever known in this region, snow lying to an average depth of about 7 feet; a temperature of -54 degrees was reached in January, yet in spite of this the grown deer came through in fairly good condition, and among them we have no fatalities to record because of the severeness of the climate. The large death list among the fawns was no doubt due to the fact that the mother deer had not sufficient nourishment for them, though perhaps a severe blizzard that set in after they had commenced to fawn was the direct cause of a number of deaths.

The mission has been able to sell only one male deer during past year, receiving \$50 for same.

The white men who have used deer to travel about with in this neighborhood are, I believe, without a single exception, well satisfied with same.

We have not killed any of the deer yet for the purpose of eating them, though we used the meat of portion of two that had broken their legs and had to be killed. The natives are very much interested in the herd, and, without exception, the young men are now glad of the opportunity to act as herders.

Total number of deer at this station:

Male	143
Female.....	236
	379

Total number of deer owned by United States:

Male	50
Female	145
	195

Mungnok, another herder, has not earned any deer yet.

Mission deer trained to harness.....	8
Nilima's deer trained to harness.....	4
White miners' trained to harness.....	5
Number of fawns of this spring surviving (about).....	100
Number of fawns of this spring dead.....	31
Number of sleds.....	8
Sets of harness.....	8
Number of old deer dying during year (the majority from broken limbs, 1 killed by animals, 2 died in giving birth to young, 3 from unknown causes; none were killed for their meat).....	12

This year's fawns have not as yet been marked, and the number owned by Nilima and mission, and sex of same, is an estimate, but is approximately correct. I have no doubt but that the introduction of reindeer in this neighborhood will prove in years to come a very great blessing to the Eskimos.

Yours, most respectfully,

DANA THOMAS,
Superintendent Kotzebue Mission.

Dr. SHELDON JACKSON.

SUPPLEMENTARY REPORTS.

KOTZEBUE STATION, *August 14, 1904.*

The old prejudice of Alaskan miners who have always heretofore used dogs as beasts of burden in this north land is fast dying away before the very evident superiority of the reindeer for such work. Only those who have gone long journeys with dog teams and have been compelled to load the greater part of the sled with food for the dogs, or to pay very high prices for the same along the course of travel, can fully appreciate the great advantage of using reindeer that can be driven all day, knowing that when resting time comes the deer will find their own food in the highly prized deer moss that covers the tundra in this region.

The white men who have used deer during the past unusually severe winter on the upper Kowak River, north of the Arctic Circle, have without a single exception been more than pleased with the same. In April of this year Doctor Bensen, of Candle Creek, left that place with his two companions, using four deer, which hauled the three men, together with sleeping bags, camping outfit, and four months' supply of food; they traveled a distance of about 500 miles over tundra and across mountain ranges. After the snow disappeared they used the deer as pack animals, strapping the burden upon the willing little animal's back. At the last stage of the trip, when the men had to cross a river or go down the same in boats, the deer had become so gentle that they were turned loose and they would swim the streams after the boat, or follow after the boats along the river banks.

Charles Dankert left this place in December last with five deer, some of them not well broken. They were soon so well trained and so gentle that he and his wife had no trouble in driving the deer, going a distance of about 300 miles up the Kowak. His deer are so gentle that he tells us they will follow him or his wife about and take food from their hands. Both of these gentlemen declare that reindeer are by far the best animal to use as means of traveling or as pack animals in this region.

Concerning the Okhotsk deer, a few of which we have in our herd, I can not speak very definitely. I do not think their weight is much greater than that of the other reindeer; they do not seem to breed at as early an age, but they seem to be a bit more hardy and are much longer limbed. The Okhotsk deer in this herd can walk as fast as the others trot, and if they are superior to the Alaskan deer it lies in the fact that they can cover a greater distance in the same number of hours, and apparently without being as greatly tired out.

Most respectfully,

Dr. SHELDON JACKSON.

DANA THOMAS.

FRIENDS MISSION,

Kotzebue, Alaska, August 10, 1903.

DEAR SIR: I note in a recent letter from thee that the Government has not done anything as yet concerning prohibition of salmon cannery here. For some reason, probably a financial one, the proposed cannery has not materialized as yet, but I fear it is only a question of time when we shall be cursed with such an improvement.

Some white men are fishing here this season, and have such long nets that our natives have not been able to catch many fish in their short nets—probably less than 1 ton of fish has been caught and dried by our resident natives, and there will be a very great shortage of food here. If our goods arrive I shall have a pretty fair supply of flour, etc., so that there will not in all probability be any starvation in this immediate neighborhood.

We understand that our supplies have been sent on sailing vessel sent out by Foster & Co. We are very anxiously awaiting the arrival of same here, as we have had so many severe storms of late.

I have thought of the possibility of the Government setting aside this ground here as a "reindeer station reservation." A radius of 15 miles from Cape Blossom would probably suffice, though 25 miles would be better. This ground is unclaimed now, save that occupied by the mission. This will very effectually shut out any cannery in this neighborhood, and will insure future pasturage for deer. I don't know how feasible this plan is, but offer it as a suggestion for you to pass upon. If this can be done it should be soon, before anyone has established property rights here.

Most respectfully,

SHELDON JACKSON.

DANA THOMAS,

Kotzebue Reindeer Station.

KOTZEBUE, ALASKA, *August 14, 1903.*

DEAR SIR: The *Thetis* was here two days ago and I had the unexpected pleasure of meeting Mr. Hamilton aboard her. Only a short time before I had received word that he would not be able to get here this season. I spoke to him concerning the plan I had just written to thee about, i. e., the setting aside of a tract of land here as a reindeer reservation. He seemed to think the idea feasible and good and said it had been done elsewhere, and suggested that I write thee as to amount needed. Will say that 10 miles with Cape Blossom as the center would do, but twice that much would be better. Much of this is taken up in tide land and lakes, so there is not so much pasturage as the area included would seem to indicate. I believe that the future

welfare of the herd here will depend greatly upon this and would suggest the need of haste, as any day may bring some one with a homestead entry, etc. At suggestion of Mr. H., I write a supplementary report to be added to my yearly report of the Kotzebue reindeer station.

The *Madsen*, carrying our supplies, has not yet arrived here, but we are hoping for her early arrival.

Most respectfully,

DANA THOMAS.

Dr. SHELDON JACKSON.

KOTZEBUE, ALASKA, *July 28, 1903.*

DEAR SIR: I am in receipt of thine of the sixth month, 13. Replying to same, will say that other apprentices to be put on will be given two female deer only first year. I do not think there is any probability of our apprentices leaving us; they are our brightest, most reliable boys, and our natives are very honest and trustworthy. Out of some hundreds of natives here, during the past season we have not had a single case of drunkenness; whisky traders find no profit in coming here. At present, about 500 Eskimos are camped about our house, which is not locked at night; my tools lie about, yet nothing is ever stolen. We have never even smelt liquor on a native's breath. We have made tobacco so unpopular among them that they never smoke in our presence, and only about 5 per cent use it at all. They are the most wonderful lot of people I have ever lived among, and white men tell us they are far superior to the natives at Teller, Prince of Wales, and Point Hope, where they have in the past come in contact with vicious white men.

About 100 have been converted to the cause of Christ this past month, and we now have 296 members who are in good standing.

We will remain here at least one year longer; then as He wills it.

No one had any money in those places you spoke of (Candle and Durang) last winter. About five men, all told, were able to pay the price we would have to charge for reindeer meat.

We were very much pleased with our reindeer trip, my wife for the greater part of the 175-mile trip driving her own reindeer, handling same without difficulty.

With best wishes for thy continued good health, I remain,

Most respectfully, His and thine,

DANA THOMAS.

Dr. SHELDON JACKSON.

Concerning suggestion of I. H. Cammack, and which I believe he said came from thee, "that I sell Laplanders goods at cost," will say that I shall do so with pleasure; have indeed done so in the past when

they have bought of me, charging simply San Francisco prices, with freight added. Have not, in fact, been able to supply them with all they needed. Mr. Nilima has had three Laplanders besides his wife to keep the greater part of last season, so that he has used far more than the goods that came for him. He had had a very comfortable house built near the mission buildings, and I believe intends to make this his permanent home.

Am very short of official stationery; should be very thankful for same if none has been sent on revenue-cutter *Thetis*.

ANNUAL REPORT CAPE PRINCE OF WALES REINDEER STATION.

WALES, ALASKA, *July 1, 1903.*

DEAR SIR: I have the honor to submit the following annual report of the reindeer herd at the Cape Prince of Wales Congregational Mission Station for the year ending June 30, 1903:

The winter of 1902-3 was not a very good one, as the snow on the Arctic slope was very deep and the rains in December caused ice to form which was hard for the deer to dig through to procure moss. Then, too, the lateness of the spring kept the ground covered so long that the deer became very thin before the breakup, when they could get good food.

During the fawning season 479 fawns were born, but as the snow covered the ground at that time the young ones had a hard time of it, and 52 of them perished of exposure, leaving a total of 427 fawns to date. During last November a number of deer died—the herder boys say they went crazy, so they had to be killed. Just about that time there was a disastrous fire in my house and as all my attention was occupied in repairing the burnt places I did not get to the herd to see the “crazy” deer, so can give no idea of what the disease was like. During the year the total loss in the herd from sickness and slaughtering was 184.

I have adopted a new system in regard to the payment of apprentices—that is, new for this herd. The boys will not receive their deer until the end of five years of apprenticeship, when they will get 25, with a loan of 25 more from the mission. In this way the boys will devote better attention to mission deer than they would if they owned some of their own, as they did under the old rule of being paid every year. Sninoh and Karnum, two of the boys who owned a few deer, turned theirs back to the mission to await the end of their five years.

The following is a table showing the ownership of the deer at present:

Ownership of reindeer in American Missionary Association herd at Cape Prince of Wales, Alaska.

Name of owner.	Sex.	Old deer.	Fawns.	Total.
American Missionary Association	Male	122	94	216
	Female	303	75	378
George Ootenna	Male	53	31	84
	Female	119	34	153
James Keok	Male	60	27	87
	Female	98	36	134
Stanley Kivyearzruk	Male	39	38	77
	Female	100	24	124
Thomas Sokweena	Male	17	16	33
	Female	63	21	84
Joseph Enungwouk	Male	13	7	20
	Female	25	5	30
Frank Iyatunkuk	Male	14	7	21
	Female	23	6	29
Peter Eblana	Male	4	1	5
	Female	11	3	14
Okbaok	Male	6	0	6
	Female	12	2	14
Erheruk	Male	5	0	5
	Female	11	0	11
Total.....	Male	333	221	554
	Female	765	206	971
Grand Total		1,098	427	1,525

Respectfully submitted.

HUGH J. LEE,
Resident Missionary in Charge.

Dr. SHELDON JACKSON.

[Letter from Hugh J. Lee regarding progress of the reindeer enterprise at Cape Prince of Wales.]

EDITOR THE NOME NUGGET: So much has been said and written about the introduction of domestic reindeer into Alaska by the Government that tends to throw ridicule on the subject, that I feel impelled to say a little on the subject that may tend to change the present opinion of the public in regard to the usefulness of the reindeer to the Alaskan Eskimo.

I can only cite facts concerning the herd of the Congregational Mission at Cape Prince of Wales, where I have been for the past year.

We have at the Cape, or in that vicinity, about 1,500 reindeer. These deer are all owned either by the mission or Eskimo reindeer herders. A little more than half of the entire herd is at present owned by the natives, however, and to show that they are of benefit to the natives I will say that the bill paid to a San Francisco firm by four of them for their year's outfit this season amounted to about \$4,200.

This sum includes lumber bought by one of the four for a five-roomed house, 30 by 20 feet, which is a much better house than many of those in the city of Nome.

It is true that a limited number of natives have as yet become owners of a sufficient number of the deer to be self-supporting. At present there are but six of the herders who are self-sustaining. Next year there will be one more, and in the following year there will be two more graduates. The plan under which we are working now is this:

We take an apprentice who will receive his board and clothing for five years, or all through his apprenticeship. At the expiration of the five years he will be sufficiently well educated in the care of the deer to thoroughly understand handling

them, and, as he is taught English, he will be able to do business with the white population. He will receive his compensation for the five years that he has worked, the number of deer he will receive being 25, or 5 a year. In addition he will receive from the mission a loan of 25 more deer, so that he will have a good working capital.

The increase from these 50 deer will serve to maintain him in good shape, and his number will increase so that at the expiration of five years more he can pay back his loan of 25 and still have more than 50 deer with which to continue business. When his herd numbers 100 he will be in a position to feed and clothe an apprentice, who will receive the same opportunity as the mission apprentice.

In addition to the 6 independent owners, there are now 5 mission apprentices and 5 herder's apprentices, making 16 who have an actual interest in the herd.

In the past the owners have been nearly all related to each other, so that but a very few families have been benefited, but the rule now in vogue is that all new apprentices must be boys who are not related to other deer owners. I hope in this way to introduce the ownership of the reindeer into as many different families as possible.

This new rule was greeted with cheers by the population of the village, as they were beginning to feel jealous of the Kingegan reindeer aristocracy, and the new rule is that no boy shall become an apprentice until he shall have learned some English. There is no law to compel them to attend the Government school, and sometimes the boys are inclined to be irregular in their attendance; but as the reindeer boy will have to do business with English-speaking people a knowledge of the language is necessary, and the boys are so anxious to become partners in the benefits of the reindeer herd that the rule gives them an incentive to study.

There are already enough reindeer in Alaska to furnish the bulk of the meat supply for the country without depleting the number now in the various herds. The missionary representative will assist the native reindeer owners in disposing of their meat, and several times when I have received orders for meat I have let the boys fill the order, so that they could get the wherewithal to buy their flour and other supplies.

It is my purpose to sell enough of the mission deer to furnish the food and clothing for all the mission apprentices without calling on the missionary association for aid from the outside. This can be easily done by putting the meat on the market, and it is now my intention to see that the people of Nome are supplied with fresh meat all winter.

I am not familiar with the methods of the Government in regard to the management of their various herds, but I imagine they are similar to mine. If such is the case much of the criticism we have heard is unjust, for it will require but a few years to make the Eskimos a self-supporting and prosperous race.

Our deer came from the Government in the first place, and other missions have received deer which they handle on some similar plan to mine, so that the natives in various parts of the country are being benefited.

* * * * *

Promising to write you another letter about the reindeer as a beast of burden, I remain,

Yours, sincerely,

HUGH J. LEE.

ANNUAL REPORT GAMBELL (ST. LAWRENCE ISLAND) REINDEER
STATION.

GAMBELL, ST. LAWRENCE ISLAND, ALASKA,

June 30, 1903.

SIR: Herewith I have the honor to submit to you my second annual report covering the third year since the introduction of reindeer on St. Lawrence Island:

THE REINDEER.

Winter.—It has not been so cold, neither have we had the terrific wind that makes the cold so much more intense, but the snow for that reason has lain where it fell and has covered the ground in some level places to a depth of 10 feet. The average depth of snow, however, has not been more than 2 feet.

Breaking deer to pack saddle and sled.—Five sets of pack harness were made last summer, and used on one or two summer excursions looking for some lost deer and in reconnoitering the fields for good moss land and camping places. This was a new experience for the apprentices and much appreciated, for they saw that one could in this way go over most of the island without having to think of the dog-food question.

In the month of September the seven old bucks were altered for sled deer, making fourteen in all. Thirteen were caught up, named, and broken to harness and used in hauling wood and in trips to and from the station. The boys have made considerable progress in learning to drive. In the various trips the Lapps always took the lead, consequently few of the deer were trained for independent driving and the boys knew little else than to follow behind. After repeated instructions the boys were put in the lead and were taught how to drive.

Two new sleds were made last fall and shod with steel. One of them, according to Anti's suggestion, was made short and broad. Upon this one was put the heavy iron sent up, and it has stood some very rough usage. Two more sleds were built by the Lapps and the boys together from the wood I brought over from Port Clarence two years ago. We should have a fresh supply, as the other has partially rotted. The bark should all be removed before shipping. The boys have each shaped out a set of wood for harness.

Lapp or herding dogs.—At the close of last year we had one fairly good female—"Chappie" (a full-blood Lapp dog), and five half-breed pups. Two of the pups, a male and a female, with short tails, "Pike" and "Fannie," promising to make good deer dogs, were soon sent to the herd and learned rapidly. "Tim" died in July. It was later thought that possibly "Susie" might also learn, so she was sent to camp, and gave good promise. Captain Tuttle, November 12, brought us two full-blood Lapp puppies from Dunnak at Port Clarence, and

these were named "Bob" and "Lassie." Both were very poor and sick, which we soon found was due to tapeworms. "Bob" rallied under treatment and soon became a great favorite, very teachable and bright, and we had hopes of having a good breed of dogs for the herd. "Lassie," however, owing to a lack of proper attention in the camp, gradually weakened and died. "Sam," though possessing too much Eskimo blood for a herder, had broken in well as a sled dog, but was attacked by a disease resembling hydrophobia, from which so many dogs on St. Lawrence Island have died. Next an epidemic of bronchitis carried off "Pike," "Susie," and "Fannie" and it was only by vigorous treatment that we saved three of our sled dogs, having turned our kitchen into a dog hospital. This left only the original "Chappie" at the camp, and she was attacked with hydrophobia and died about two weeks later, so that since January 12 we have had no dogs in the camp.

Fawning.—Under the subtitle "Weather" we spoke of the anxiety we had lest there should not be sufficient moss for the deer until the spring thaw and the lack of any choice in the selection of a fawning place, but, by driving the herd a long way and with an earlier thaw than usual, the herd was preserved and fawning began April 17. By the 29th 35 were reported, and May 6 40. We feel that as regards the fawns we have been very fortunate indeed.

School.—This is one bright spot in our work and is a constant source of joy and encouragement to us. The books show the remarkable record of attendance, being an average of 52.5 for the one hundred and forty-six days of school taught, 9 of the entire enrollment of 59 being neither absent nor tardy during the year, 4 others being only one time tardy, 10 others were not more than five days absent at the beginning of the year when their parents had not yet returned from the summer hunt and camp. Still others have good and sufficient excuses for very slight differences between their records and that of those already named. A few were excused from attendance because they were needed at home in support and care of the family. Two or three others should have come, but their attendance could not have been secured without serious difficulty with the parents or guardian, and in one case the boy himself, who will surely grow into as troublesome a character as his father before him. His name is Enok. He persisted in hanging about the deer camp, though warned away, until at last the apprentices themselves attempted to drive him away, when he drew a knife. They took this away from him and tied him up, but this did not cure him. He has been a mischief-maker among the boys in our home, fighting some and inciting others to riot, lies, disobedience, and insolence.

The deportment of the scholars in school was all that we could ask. We have nothing but praise for the children, though some of the

grown people have caused us much trouble. Kolo, who gave us his youngest boy two years ago, has frequently countermanded our instructions to him and caused us more difficulty in managing an older son, Gootoomu, whom he loaned to Omogo, one of the big Indian Point men who assaulted me last spring while I was acting as customs collector. Kolo is also the father of the boy Enok, to whom I have just referred, and though he is himself afraid to make any demonstration he does a lot of outside talk and mischief when not watched. One day I had occasion to punish Gootoomu for laziness and disobedience. A report was soon made to his father, Kolo, who came to the schoolhouse, asked some questions of those near the door, then went out and told Omogo, who came in bristling with bigotry and insolence and demanded a stick and my hand that he might whip me. Then he talked Eskimo to the school and English to me, calling me all the bad things he could think of, defying the United States Government, saying, "I don't care! I don't care! my little baby all die." I quietly but very firmly denied him my hand, let him talk until he had run down, then began to talk about his little boy, who was a bright little fellow, the idol of a fond father's heart. At last he quieted down and took a seat on one of the desks, while I went on with school, which was then near closing time. As soon as all had gone our smallest adopted boy came running to meet me, and I took him up in my arms and walked past the now quiet Omogo into our private rooms and told Mrs. Campbell. Omogo's brother, Miukok, also kept another boy, Komoyi, in a state of insubordination, so we thought best not to insist on the attendance of these two.

We felt that the circumstances justified our punishing another boy, and soon after school the stepfather and several of his clan came in, full of wrath, ready to fight, but after a long talk went quietly out, and the boy attended school with better results ever after.

An address by the general superintendent and the captain of the revenue cutter, at the time of their annual visit, gently and firmly insisting on the attendance of all children on the roll and noninterference by parents or guardians would tend greatly to enhance the efficiency of the school and the general behavior. At this writing Omogo has gone to Indian Point, fearing the visit of the *Thetis* and Captain Healy, just as he ran away last year after assaulting me to avoid the *Bear* and Captain Tuttle.

The general deportment has been good. We have little reason to complain. If the people of civilized lands, enjoying the light of the truth as it is in Christ Jesus, were only half as well behaved there would be little need of jails, lawyers, courts, and insane asylums. There being no whale caught here last year, there was little material for the manufacture of liquor; the only case I could learn of being that of the father of my interpreter and two of his friends, who used flour that I had paid for interpreting.

A snowstorm experience.—December 16 word was brought us by natives of Southwest Cape that tracks were seen on the south shore of the island, as of hungry men seeking food and wood.

After a consultation with John Thomas Lopez, the whaleman wintering here, we decided to make an effort to go as far as the wreck of the *Balaena* or the *Eagret*. Securing two native young men to help us and as good dog teams as we could collect, we made about 45 miles along the north shore, when it began to storm. Some of the dogs gave out, others ran away, and the natives being afraid to go farther, we decided to return. When we reached the reindeer camp I consulted with Per Larsen Anti, who told me we had five sled deer near, so I decided to take them and one of the Lapps with two of our apprentice boys and make another attempt.

Mr. Thomas returned to the station with a note to Mrs. Campbell, and came down early the next morning, December 21, and went with me, the party consisting of Mr. Thomas Lopez, Ole Pulk, Sepillu, Putlkinhok, and myself. A storm came on soon after we started and we could not tell which way we were going, but we made the mountain pass all right, and the next night camped on the beach on the south side. Two days more brought us to the *Balaena* place, where we spent Christmas, exploring the coast, but looking in vain for signs of any one attempting to winter on the island. The return to the village at Southwest Cape took us four days, owing to a blinding snowstorm in which Thomas and the Lapp became separated from us two days and nights, and the boys lost from me on the second day, leaving me alone with three deer. On the morning of the third day Thomas and Pulk nearly ran over my camp in the snow, and we finished the trip to Southwest Cape village, where we found the boys had preceded us by twenty-four hours. Here we were treated very kindly by the people, who welcomed us as from the dead.

They did everything they could for us, and on the morning of the second day we secured a guide and returned home, reaching the station about 8 p. m., December 31, having been gone just two weeks lacking one day. In this trip I learned much of the topography of the island, but could not tell much about the moss or lakes owing to the heavy fall of snow.

Medical work.—In July of last year we had an unusual number of deaths due to bronchitis. As soon as the snow clears off the ground the people begin to uncover their warm winter sleeping rooms, to put on thin shoes and little or no stockings, and in short to cast off as much as possible of the warm clothing which they should continue to wear at this time of year, when the air is damp and chilly and the ground is wet and cold from fog, rain, and melting snow. Thus they fall an easy prey to a pharyngitis or bronchitis that would be successfully combated by a civilized being. But the great difficulty in this as in

all work with them is their obtuseness. They continue to follow the paths of their fathers in spite of all that has been told them. Many of them come for medicine, but consider it only as a fetish like that of their own doctors, and hang up the bottle in the house without taking it. Others take the medicine as they please and not as I direct, and yet they are anxiously inquiring why so many are dying. They are all so afraid to die that when death approaches they beg to be hung or shot or stabbed or to be allowed to do it themselves.

Vital statistics, St. Lawrence Island.

Year.	Births.	Deaths.	Popula- tion.
1897.....			365
1899.....	7	13	334
1900.....	9	44	299
1901.....	3	48	264
1902.....	11	9	264
1903.....	6	25	261

I know that the births and deaths for 1902 and all the figures for 1903 are correct, for I know nearly everyone personally.

LOG BOOK KEPT BY OLE J. PULK (NORWEGIAN), AT GAMBELL, ST. LAWRENCE ISLAND, ALASKA, 1903.

REINDEER CAMP, *February 2, 1903.*

P. L. Anti, Sippela, and Puttkenhok came from station for food with three deer. Ole Polk has been to see the herd and moved them a little, and Sippela and Puttkenhok made a hole to the lake.

Tuesday, February 3.—Cold weather, north wind strong, sky clear, but blowing hard. Mr. Anti and I, with two of the boys, went to see the herd; we turned loose one deer, a sled deer named Tundra, and caught one deer named Hartellar, but did not catch Roger because he is too wild for lassoing. Kalooka and his wife stayed overnight at the camp, and Peneyah remained in the house, cooked and split wood. He made a hole to the lake and shoveled snow.

February 4.—Cloudy weather; strong wind blowing. Mr. Anti and the boys fixed some sled bottoms and broke up an old sled into pieces, while Anti and Sippela and Peneyak split wood and made a hole to the lake; Ole cooked and fixed a handle to the Lapp butcher knife; Puttkenhok looked after the sled deer, but, not finding them, came back; Kalooka and wife stayed all night again.

Thursday, February 5.—Cloudy weather; north wind blowing hard. Peneyak and I went to see them break the deer and brought Hostella out and killed him; Ole butchered him. The native boys made a hole to the lake, which took three hours to make.

Friday, February 6.—Clear weather; little north wind. Sippela and I and Puttkenhok got the three deer and gathered wood with them, Sippela and Puttkenhok bringing the deer down to the post. Mr. P. L. Anti went to the lookout to see the herd and reported it all right. Ole and Peneyak split wood and Ole made a hole to the lake.

Saturday, February 7.—Clear weather; north wind blowing. Ole went to move the deer and to see the herd, which was at the same place it was left by Anti. Anti and the boys were busy about the house making a sled; two natives at the camp to-day; Puttkenhok cooked and Ole split wood, which Puttkenhok helped carry to the house.

Sunday, February 8.—Fine and clear. Anti and Ole, Puttkenhok and Peneyak went to see the deer and move them a little; also to look after the herd, which was going too far to the other side, when we caught Roger. Walked about 20 miles on the trip. Three Eskimos stayed at the camp all night. Peneyak's mother, Puttkenhok's brother, and another boy, caught a fox.

Monday, February 9.—Clear and fine weather. In the morning early I had to split the wood because the native boys stayed in the house all day and burned what dry wood was in our room. Afterwards Puttkenhok and I went to see the deer and move them, and took two deer to get wood. I teach Roger and load the wood all right with him. We have a little trouble at the camp; the boys came home before I did and tied the deer down to the post; I came later and tied Roger in the same way. Then we heard the dogs barking, and went out without cap and gloves to see Roger break his holder line and run away with five dogs running after him. I returned to the house, ate a few bites, and when I went to look after Roger he could not be seen, but saw his tracks. Anti stayed in all day and made a sled and split wood. Peneyak was cook and Puttkenhok killed another fox.

Tuesday, February 10.—Clear and fine; little wind southwest. Mr. Anti and Sippela went to see the herd and found it all right. Roger came in the herd, but had lost his horns. Anti found the harness and brought it to the camp. I remained in the house all day because my hands were very sore from having been frozen while splitting wood.

Wednesday, February 11.—Cloudy weather, strong northeast wind blowing. Peneyak went to see the deer and move them, while Per Larsen Anti made a sled. Anti and Puttkenhok split wood, made a hole to the lake, and got some water. Sippela was cook.

Thursday, February 12.—Cloudy weather, northeast wind blowing. Puttkenhok went to see the deer and move them to another place. Anti and Sippela made a new sled with the help of Puttkenhok; Ole Polk cooked and made a hole to the lake for water. Peneyak cooked in the evening; the wind changed about 6 o'clock.

Friday, February 13.—Cloudy, warm weather; don't know the direction. Anti and Peneyak went to catch the deer and Sipela, Anti, and Penayak went for wood; Ole and Sipela brought the deer to the post, and Puttkenhok split the wood and cooked. In the evening the weather became clear and smooth.

Saturday, February 14.—Cloudy weather, blowing a little north-east, and the water is not far off. Sipela went early this morning to hunt seal; he killed one and Peneyak went to see the deer and move them. Anti and Ole made harness and tugs ready for use. Mr. Anti split the wood and Sipela made a hole to the lake for water.

Sunday, February 15.—Cloudy weather, with northeast wind blowing. Puttkenhok went to see after the deer and found them all right, the rest of us staying in the house and had a church meeting, praying and singing. Peneyak cooked and made a hole to the lake for water. Ole also cooked and split the wood.

Monday, February 16.—Cloudy weather, northeast wind blowing hard; stormy. Everybody busy in the house—Anti softening a deer-skin all day long; the boys fixed their bunks, and Ole split the wood and he and Puttkenhok cooked.

Thursday, February 19.—Cloudy weather, northeast wind. Boys came from station. Mr. Anti looked for the herd and found it all right. Ole and Peneyak brought the deer down to the stake. Peneyak split the wood and cooked.

February 20.—Cloudy, with southeast wind blowing hard. Mr. Anti and Peneyak went to see the deer and move them. Ole split the wood; Anti got some ice and made the water; Sipela's mother stayed at the camp over night.

Saturday, February 21.—Cloudy weather, northeast wind blowing a little. Mr. Anti and Peneyak went to see after the deer and move; took two deer and a sack of coal and sled and left to go to the moss hill. The boys broke the sled, and Ole and Sipela took the deer to the post. Ole split the wood and got some water.

Sunday, February 22.—Cloudy weather, northeast wind blowing. This morning Puttkenhok went to see after the deer and move them. Anti and boy kept Sabbath day in church, praying and singing hymns; and the boys made the hole in the lake.

Monday, February 23.—Weather—first, light wind; later in the day, fog. Ole and S. Puttkenhok took two deer and got some wood. Mr. Anti, with Peneyak, went to see the herd and found it all right. They brought the herd nearer. Ole brought the deer and Puttkenhok split the wood, while Sipela stayed in the house with the "messenger woman"—Sipela's mother. Anti turned out a deer named Tuttle and got the water, which is quite a distance off.

Tuesday, February 24.—Cloudy weather; north wind blowing. Anti, Sipela, and Peneyak fixed the breaking sleds. Arizona, Alabama,

and Ole went to see the deer and move. Puttkenhok cooked, and Ongnoson came to the camp looking for traps and the "messenger woman," who went to the station. Ole J. Polk cooked and cleaned the house.

Wednesday, February 25.—Clear; east wind. New sleds made. Bottoms and Anti and Sipela split the burning wood and Peneyak cooked. Plenty of "messenger" boys and myself at the camp. •

February 26.—Clear; west wind. Made new sleds ready and S. Puttkenhok went to see the deer and move; Ole and Puttkenhok split the wood and Sipela cooked with my help. Ole made a hole to the lake and got water.

February 27.—Cloudy weather; smooth. Wind blowing a little. Anti and myself made harness. Sipela has been to see the deer and move them. Puttkenhok cooked and Mr. J. T. Boys has been at the camp, also Ongnoson.

Saturday, February 28.—Cloudy weather; south wind blowing hard. Anti made the harness and went to see the deer. Ole shoveled the snow on top of the house and around it; the afternoon was misty; rain and very strong wind blew and the water is open far off. Mr. J. Thomas Boya has been here. Ole split the wood.

A SAMPLE MONTH FROM THE LOG BOOK OF SEPILLA, AN ESKIMO REINDEER HERDER, AT ST. LAWRENCE ISLAND.^a

Saturday, 1.—March month. Peniuk cooked. Snowing day. Sipilla and Petenkuk went to move work deer. Peniuk shoveling snow. Sholook come from S. E. Cape and two women and one boy. Peniuk split wood. Petenkuk make hole lake. Sipilla got water, one barrel.

Sunday, 2.—Petenkuk cooked; clear day. Sipilla and Peniuk went go to station, got prevecan (provisions).

Monday, 3.—Petenkuk cooked; clear day. Anti and Sipilla and Peniuk came from village. Brought food and two sack coal. Kerappil and Blexen drug. Anti stay station one week; he sick. Petenkuk take two deer for head wood; make fast. Anti and Sipilla split wood.

Tuesday, 4.—Sipilla cooked; clear day. Anti and Petenkuk got wood, two driving deer. Peniuk went to see deer; all right. Anti and Petenkuk split wood. Sipilla and Peniuk take two driving for head wood.

Wednesday, 5.—Peniuk cooked; clear day. Four boys went to move work deer. Boys take lasso. Sipilla and Peniuk got deer behind work deer place; break one deer. Turn out Donder and

^aSepilla has had, perhaps, the advantage of a mission school for two or three winters.

Blexin. Anti split wood. Mr. Egan came from village. Mr. Egan take station deer meat. Sipilla and Petenkuk make hole lake.

Thursday, 6.—Petenkuk cooked; clear day. Anti and Sippilla went got after wood. Mr. Egan came from village. Peniuk and Mr. Egan went to see deer; all right. Mr. Egan count deer. Sipilla and Peniuk take two driving head wood. Mr. Egan go back station in evening. Petenkuk split wood.

Friday, 7.—Sipilla cooked; clear day. Anti and Peniuk and Petenkuk got wood, two driving deer. Sipilla split wood. Peniuk and Petenkuk take two driving head wood. Sipilla and Peniuk went to fox trape; no got. Petenkuk make hole lake.

Saturday, 8.—Peniuk cooked; clear day. Sipilla and Petenkuk got wood, two driving. Anti went to see deer all right. Peniuk split wood and made hole lake. Sipilla and Petenkuk came house, brought wood. Sipilla and Petenkuk take two deer driving head wood; make fast. Anti sick eye in evening.

Sunday, 9.—Petenkuk cooked; clear day. Anti and Sipilla and Peniuk went to move; work deer and other deer too. Some look moss; come house in evening.

Monday, 10.—Peniuk cooked; clear day. Sipilla and Petenkuk went to go station; got coal and 2 deer for food. Anti went to see for moss. Peniuk split wood.

Tuesday, 11.—Peniuk cooked again. Anti and Peniuk went to move one work deer. He run away for other deer. Sipilla and Petenkuk came from village; brought 2 sack coal and food. Sipilla and Peniuk take deer for driving behind head wood.

Wednesday, 12.—Sipilla cooked; clear day. Anti and Peniuk and Petenkuk take lasso for deer; like catch one deer; no can't catch, too wild. Came house in evening.

Thursday, 13.—Petenkuk cooked; little snowing. Sipilla and Anti catch one deer other day; run away for other deer. Sipilla and Peniuk take deer for other side lake beach. Anti split wood.

Friday, 14.—Peniuk cooked; blowing day. Petenkuk and Peniuk went to move work deer. Sipilla went to see wood other side mountain. Peniuk split.

Saturday, 15.—Sipilla cooked; clear day. Anti and Petenkuk went to move work deer and other deer too. Sipilla split wood. Peniuk went to go station; tell doctor something.

Sunday, 16.—Petenkuk cooked; stormy day. Sipilla and Peniuk went to move work deer. Mr. Egan came from village. Mr. Egan go back station; take papa's.

Monday, 17.—Peniuk cooked; stormy day. Anti and Petenkuk went to move work deer. Boys scrub floor. Sipilla split wood. Peniuk make hole lake.

Tuesday, 18.—Sipilla cooked; blowing day. Petenkuk went to move work deer. Boys fixed bed Anti rom, because boys rom to cold. Peniuk split wood and Petenkuk.

Wednesday, 19.—Petenkuk cooked; cold weather. Sipilla and Peniuk got wood two driving deer. Anti went to see deer; all right. Sipilla and Peniuk came house in evening; brought wood. Peniuk and Sipilla take deer for head wood; make fast. One woman and one boy came from S. E. Cape go from station.

Thursday, 20.—Sipilla cooked; stormy day. Petenkuk went to see work deer. Sipilla split wood. Anti fixed net.

Friday, 21.—Petenkuk cooked; clear weather. Anti and Sipilla went to go station for two driving deer. Take five sack moss. Petenkuk and Peniuk went to see deer; all right. Station man went to go S. E. Cape.

Saturday, 22.—Peniuk cooked; stormy day.

Sunday, 23.—Petenkuk cooked; clear weather. Peniuk and Petenkuk went to move one work deer. Sipilla and Anti came from village; brought four sack coal and one broom, and fox trape one. Petenkuk and Peniuk take two deer for sticks; made fast. Anti and Sipilla sleep station two night, and brought seven stove pipe.

Monday, 24.—Sipilla cooked; clear day. Anti and Peniuk and Petenkuk went got wood two driving deer. Sipilla split wood. Petenkuk and Peniuk take two deer for head wood; make fast.

Tuesday, 25.—Peniuk cooked; clear day. Sipilla went to see deer; all right. Anti went to move work deer. Mr. Egan came from village. Anti and Petenkuk went to got wood, two driving deer. Take deer for wood. Mr. Egan go back in the dark.

Wednesday, 26.—Petenkuk cooked; clear day. Anti and Sipilla and Peniuk went got three driving deer. Mr. Egan came from village; brought wire and waste pan, and flour kettle. Mr. Egan fixed holder for deer. Petenkuk split wood. Man came from village, got wood.

Thursday, 27.—Clear day. Anti and Petenkuk got wood with two deer. Peniuk went to see herd; counted 79. Sipilla cooked. Anti fix back band. Peniuk made halter. Petenkuk cut wood. Mr. Egan went to station in afternoon; fixed bed for boys and Anti.

Friday, 28.—Clear day. Peniuk cooked. Anti went to herd see deer; all right. Sipilla and Petenkuk got with one deer. Work deer plenty round rope. Petenkuk take deer for wood. Anti fix back band. Sipilla split wood. Sipilla and Petenkuk make hole lake. Petenkuk cut wood.

Saturday, 29.—Clear day. Petenkuk cooked early morning. Anti went to see work deer; all right. Sipilla cut it knife hand. Anti got wood with one deer. Mr. Egan and Mr. Thomas and Ahtiyuhuk came from village. Anti came house brought boys one deer. Peniuk

and Sipilla split wood. Anti and Peniu and Petenkuk went move work deer, no far from house. Mr. Egan went go station in afternoon. Boys find it good place for work deer.

Sunday, 30.—Sipilla cooked; stormy day. Anti and Peniuk and Petenkuk went move work deer; he didn't find it. Too stormy.

Monday, 31.—Clear day. Anti and Sipilla got two deer for house. Peniu and Petenkuk go to station with two deer. Anti got wood with one deer. Sipilla cut wood. Anti fix back band. Sipilla cook and make hole lake.

GAMBELL, ST. LAWRENCE ISLAND, *May 12, 1903.*

DEAR DOCTOR JACKSON: The whalers *Alexander* and *Jeanette* came in yesterday morning, the first ships this year, bringing our first mail, including your letter under date of March 3.

We were greatly joyed to learn that St. Lawrence Island had been set aside as a reservation. Now we hope that something more than talk or warning may be done to stop the importation and manufacture of liquor.

Without doubt our greatest fear of the entire year is the annual visit of the Indian Point Siberian people, when liquor changes hands one way or another. These incoming brigands have been a terror to the islanders for many years. They used to come in 8, 10, or 12 boats, each one carrying 10 or 15 people, mostly men, and would carry off anything of value they could see. Many and many a pound of whale-bone and ivory has been carried away from here, and these people would make no complaint. But last year the old chief from Indian Point threatened to kill Asshoonu unless he paid tribute, and another man went into Afkowan's house and loudly demanded some ivory he saw. This last fact was not reported to me until a few days ago. We do not know what is in front of us (He holds the key and we are glad), but shall breathe a sigh of relief when the annual visit has been completed. We trust it shall not be with broken bones as last year. It seems to me that the dignity of the representative of the United States of America requires an executive officer, and yet I know that I have been commissioned by a far higher power than the United States of America, even by Him who said, "Thinkest thou that I can not beseech my Father, and he shall even now send me more than twelve legions of angels?" Then, when thinking, and thinking, and thinking about the right course to pursue, and none to counsel or advise with as other missionaries have, I am reminded again of Him who had a far more lonely mission. How lonely and sad was the God of Glory, toiling against a mighty stream, rushing, tearing, plunging, stiff-necked humanity, that only He could save. Little wonder that it is recorded of Him, "He withdrew into a mountain apart, to pray."

If my faith were but more simple, I would take Him at His word, for He says, "If any of you lack wisdom, let him ask of God, that giveth to all men liberally, and upbraideth not."

We wish we had more means at our command, but feel on one hand that we are paid more than we are worth and on the other that you will allow us proportionately as much as the appropriations will admit. We have three boys with us now, and it is wonderful how the clothing and food goes. We had hard work to get the first one and it was several months before we got the others. Even now the elders—Eskimo—consider that we are feeding and clothing them, so they are that much ahead. Children are ordered about by anyone older than they are, regardless of relationship. Maskin is a full orphan about $5\frac{1}{2}$ or 6 years old, and has grown 2 or 3 inches since coming with us.

Itorogen is about 10 years old, and was our first boy. These two we have had turned over to us completely, as far as papers and witnesses are concerned. Itorogen's father, however, seems to think he may still have a hand in his training, and has caused us no little trouble. Imnungan is a full orphan about 13 years old and has no relatives here but a sister, and he has but one eye. I did a great deal for his father while sick a long time, taking him food and medicine and talking to him. The poor old man always listened very attentively, and tried to tell me he trusted Jesus, but he died and was buried as his fathers before him. I should like to send Imnungan and Itorogen to America (Carlisle) to school, if it could be arranged. It will be a great day for St. Lawrence when some of the boys or girls break away, and a greater victory if some from a native house should go than for my own boys. I may briefly state here that the average attendance for the year of 146 days taught has been 52.5. There were 9 who were neither absent nor tardy during the entire year, and more than as many more whose records are a very close "second." I have become somewhat used to the smell, but that does not annul its effects. Mrs. C. had a very severe eczema of both hands, due to her washing some poor suffering children. We should not mind it if the people were not so stubborn, and would only listen, think, and ask questions. But the more they resist the more we long to see some fruit among them for Jesus. Perhaps I am stubborn, too. I wish you would tell me what to do with those two refractory brothers who fought me last year.

I shall try to get an order down for a shuttle spring for the sewing machine (Domestic). The only one we had broke last fall and left Mrs. C. in sore straits all winter, with the boys and reindeer herders to provide for and a lot of her own sewing to be done by hand—both slow and expensive.

Lest I should forget it in my letter later, may I trouble you to see that my name is on the list of those to whom the Annual Report of

the Smithsonian Institution is sent! I have those for 1897, 1898, and 1899, and have some papers for them ere long. The people are very reticent about giving me any information, and I have not yet been able to make any good pictures. I should also like the reports of our home and foreign boards of missions. It is now time for my English-speaking young men in Bible study and I must go. "Constant dropping wears away great stones," and "While there's life there's hope," so we shall reap in due season for the Lord of Lords said, "Lo! I am with you." "If God be for us, who is against us!" May God bless you always.

Yours, in Christ Jesus,

EDGAR O. CAMPBELL.

Rev. SHELDON JACKSON.

DEPARTMENT OF THE INTERIOR,
Washington, January 9, 1903.

SIR: In a letter of the 22d ultimo, to the Department, you recommended that St. Lawrence Island, Bering Sea, district of Alaska, be reserved for the use of the Government in carrying on the reindeer industry.

As the island is subject to such action I have procured an order of the President, dated January 7, 1903, reserving and setting apart the island for a reindeer station.

The order has been to-day transmitted to the Commissioner of the General Land Office to be noted and filed and a copy of it is inclosed for your use.

Very respectfully,

E. A. HITCHCOCK, *Secretary.*

The COMMISSIONER OF EDUCATION.

GAMBELL, ST. LAWRENCE ISLAND, ALASKA, *July 7, 1903.*

DEAR DOCTOR JACKSON: Inclosed I send you signed vouchers and request for payment of salary from Anti, and accounts of both Per Larsen Anti and Ole J. Pulk, who have been with me this year. Anti has been a help to me, but I can not say so much for the other man. I am very much in hopes that some cheese can be made here this summer, that the boys may learn the process. Neither of these Lapps knows how to make glue from the horns and hoofs of the deer, nor do they understand tanning deerskins. Could you not furnish necessary information and apparatus for making glue? Anti says he wants some willow bark for tanning skins.

This spring we have had several deaths in the herd of reindeer from being "crazy" (of which I shall speak in a separate letter), and the skins of these deer will be of no use for clothing or bedding, because

the fur is loose at this time of year. If we could tan them a saving could be made. Also, you will find inclosed a more extended account of my last winter's trip in a snow storm. Perhaps you may not want it in your report, as I have included a summary covering the main points, in which case will you please undertake to secure its publication in some journal or magazine, the proceeds to be given toward the evangelization of Alaska.

Thanking you for your many kindnesses, I am,

Very respectfully,

EDGAR O. CAMPBELL.

Rev. SHELDON JACKSON.

GAMBELL, ST. LAWRENCE ISLAND, ALASKA, *July 8, 1903.*

DEAR DOCTOR JACKSON: Under separate cover I am sending you the reindeer camp log book kept by Ole J. Pulk.

In regard to the sickness among our deer, which has carried off so many this year, I am not able to come to any conclusion. It is simply called "craziness." In some cases the deer manifest symptoms akin to hydrophobia, fighting other deer, breaking up sleds, etc., and even chasing the herders, while in others they run away or become drowsy and lazy and poor, lag behind the herd and die. The period of sickness ranges from three to ten days, the probable average being about five or six days. Capt. M. A. Healy, R. C. S., commanding the *Thetis*, thought it might be due to bad water.

In the skull of one carcass we found on each side of the meatus auditorius internus a cluster or nest of eggs of some kind. Just above the meatus auditorius internus my knife separated quite easily a portion of the petrous part of the temporal bone, disclosing another nest of eggs. Some of the former nests adhered to the brain as the brain was removed, and I have preserved them in alcohol.

In another deer, which died June 26, I found, while the carcass was yet warm, four-branched growths filling up the valves and cavities of the heart. I left with Mr. Hamilton some specimens of these.

Dr. Henry Horn, of the R. C. S. *Thetis*, was of the opinion that these were simply coagulated fibrin. This could only be determined by a microscopical examination, and my stains and solutions are too old for good work.

In the other deer that have died we have not found any other signs that would give us a clue to the cause of this disease. If the Department of Agriculture intends sending a man to inspect reindeer imported into Alaska, I would suggest that he be a man of approved scientific experience, equipped with necessary supplies for examination of blood and other preparations from deer dying from this and other diseases. If he could come up on one of the first whalers he would reach this station when the disease is at its worst. The *Alexander*, Capt. James

They are bound to be killed. This has been the case since the first time the Government has been permitted to hunt. The Government has been permitted to hunt the sheep and deer since the first time they were allowed to be hunted. The Government has been permitted to hunt the sheep and deer since the first time they were allowed to be hunted.

The Government has been permitted to hunt the sheep and deer since the first time they were allowed to be hunted. The Government has been permitted to hunt the sheep and deer since the first time they were allowed to be hunted.

We had a very good time on St. Lawrence Island from the 1st of June and were very sorry that the presence of a year's accumulation of water made it impossible to continue our business in such a place as to make it the first step toward settlement or cultivation of agricultural lands. We had to go to make St. Lawrence Island more attractive for good and the people that they would come often and stay longer. Please thank Mrs. Thaw for that superb box of eye instruments, and yourself and yourself for the books. The instruments have a double pleasure to me being selected by my instructors, with whom I spent so many happy and profitable hours, and paid for by those who love the Deer and the Sheep.

Thanking you again very sincerely yours,

EDGAR O. CAMPBELL.

REPORTS FROM TELLER REINDEER STATION.

TELLER, ALASKA, *January 6, 1903.*

DEAR DOCTOR: Nils Klemetsen, Sara, and Nellernak, arrived December 11, and proceeded to the winter camp December 13 to prepare the corral for dividing the herd. On the 15th I left with one of my boys and two deer in a blizzard, 25°. The storm hindered us from crossing the divide and we camped in an abandoned miner's tent until 3 a. m. the 16th, when the storm had abated and we crossed over, arriving at camp at 5 p. m., cold and hungry. Despite the intense cold, 45°, we began work the next morning, and in two days had the herds separated.

On the 20th the party left the camp for Golofnin Bay. Two female deer belonging to the Government have been found in the herd since. The Government deer were first lassoed and separated, and during the second day three were found. After Nils and all the herders had scanned the herd in vain for half an hour, it was concluded that all had been picked out; 482 deer are left in the herd. The morning of the 18th we left the camp and were on the divide when darkness overtook us. We got down a little too far to the left, and instead of being home in three hours we spent the night, first, in trying to get in the course again; when we were unable to go any farther in the darkness we camped in the snow. I crawled into my sleeping bag wet from exertion. The natives dug a deep hole in a drift and sat down. At 2 a. m. the moon rose and we proceeded on our way, hungry and thirsty. At 4 a. m.

we struck Grantly Harbor, 16 miles from the station. In descending the steep hill and embankment near the sea with the deer tied behind the sled, I suddenly found myself going through space head first, and after getting up out of the loose snow I saw the deer standing on the edge of the embankment 20 feet above me, the sled suspended from its horns. The station was reached at 7 a. m.

Since I last wrote I have taken one small boy and a grown-up girl into the home. Alf. Ottis Brevig is growing fast.

With kind greetings from all,

Yours, truly,

T. L. BREVIG.

Dr. SHELDON JACKSON.

TELLER, ALASKA, *February 3, 1903.*

DEAR DOCTOR: We are not yet frozen up, but approaching the danger line. Since December 15, a period of fifty days, the thermometer has registered below zero. Generally clear, calm weather has prevailed, with two furious prolonged gales from N. to NNE.

In the vicinity of the bay there is about 15 inches of snow, but it is badly drifted over the divide. In the Ahgecapuk Valley there is about 4 feet of loose snow. At the last report from the herd no deer were reported sick.

In making rules for apprentices receiving herds there is one vital point not touched on in the draft of an agreement already agreed upon, and that should be considered in letting out deer. I have always mentioned it to my men and thought it was an established agreement well understood, but find it is not so even among the white men in charge of the herds. I refer to deermen staying with their herd and making it their home. There is a tendency among all to leave the herd and live on the beach with the rest of the natives during the summer, and have winter quarters in some native villages. Of course, I admit them the right to leave the herd for short visits to friends or to attend to other business, even to stay away for some length of time, but only with the knowledge and consent of the man in charge. These are simply my thoughts on the subject.

Carving and work with tools is continued this winter, even without a competent teacher in that line.

Thelma and Leonora are a little sick at present, but hope it will pass away. Otherwise we are all well, and all send their greetings to you and Mr. Hamilton.

Respectfully,

T. L. BREVIG.

Dr. SHELDON JACKSON.

TELLER, ALASKA, *February 9, 1903.*

DEAR DOCTOR: Yours of October was received the 7th when our first outside mail arrived.

Elingnuk was discharged by Sekeoglook soon after I wrote, and sneaked by the station in the night; since then I have not seen him or heard of him. Sekeoglook himself will, as inclosed letter will show you, give me enough to think about for awhile. I have sent out to investigate who sold him the whisky and got the deer, and if I can find out I will have him arrested; I think of removing Sekeoglook from the herd until your arrival in the summer. Elingnuk did not get the ten deer intended for him, and I have not assigned them to any yet, as I wanted to see how his new apprentice turned out, and think now that he, to some extent, will follow in Elingnuk's footsteps. Everything is quiet but the wind. A gale has been blowing for six days, and it is cold, -22° to -35° since I last wrote; to-day -35° . Everybody is well. We have no white persons with us this winter, and the work is telling on my wife. The boys are working at their carving and drawing.

With kind regards from us all to Mr. Hamilton and yourself, I remain,

Respectfully, yours,

T. L. BREVIG.

Dr. SHELDON JACKSON.

TELLER, ALASKA, *March 14, 1903.*

DEAR DOCTOR: To-day it is cold and blustering, but for a month we have had mild weather, with southerly winds, snow, and sleet.

I have now settled Sekeoglook's matter in a way. I swore out warrants against Sekeoglook for being drunk and disorderly, and against his brother-in-law for giving and selling him whisky. They were both convicted and sentenced. During the trial, evidence against a white man was brought forth, and I swore out a complaint against him. Sekeoglook denied having taken any deer meat from the herd when I asked him at the station. At the trial he admitted that he had given his brother-in-law a carcass, and traded the white man a hind quarter and \$1 for whisky. I will let it remain with this until the representative from the Bureau arrives in July. I have told all the natives (herders) that hereafter I will not talk, but if they get whisky or get drunk I will put them in jail. On March 4 a fawn was born that was living at last report, but was almost devoid of hair. All are well.

With kind greetings,

Yours, truly,

T. L. BREVIG.

Dr. SHELDON JACKSON.

TELLER, ALASKA, *March 23, 1903.*

DEAR DOCTOR: The case against the white man who sold Sekeog-look and other natives whisky was up the 20th, and despite the fact that he demanded a jury trial, and had an attorney, Mr. Price, he was convicted and sentenced to five months in jail. Mr. Evans, as prosecutor, did well and worked hard to convict.

To-day we have a howling blizzard from the southwest. All are well and send their greeting.

Respectfully, yours,

T. L. BREVIG.

Dr. SHELDON JACKSON.

TELLER REINDEER STATION, ALASKA, *May 26, 1903.*

DEAR SIR: I write this to Nome, hoping to reach you there with news before vessels can come in here. The fawning season is practically over and was favorable in all respects. Clear and even temperature; not warm and not cold. At last report we had 205 living fawns and 20 dead.

The Cape reports 350 fawns May 10. Since December, 1902, reports came in of deer being shot by natives and also who the natives were, but all was only hearsay evidence, and it was not until the 8th of May, 1903, that I was able to procure a little direct testimony. A native had seen the skin and eaten of the meat, and had heard the native say he had shot the deer. On this evidence I had him arrested, and on his trial he gave testimony against five more natives, who were also arrested and convicted. They confessed having killed in all 12 deer. I have been criticised severely for doing this by the people of Teller.

In May I took in five orphans from Cape Prince of Wales, 4 boys and 1 girl; the girl, about 13, having been forced to marry a year ago a husband who has left her now. She was about to be forced into another marriage, and she came and asked to be taken into the home. With the assistance of Mr. Lee we got her from the people she stayed with. The home now has 23 children and 7 adults, 30 in all.

With kind greetings,

Yours, truly,

T. L. BREVIG.

Dr. SHELDON JACKSON, OF

REPRESENTATIVE OF BUREAU OF EDUCATION IN ALASKA.

TELLER, ALASKA, *September 14, 1903.*

DEAR DOCTOR: Yours of August 17, 19, and 24 received the 12th.

I was a little surprised to hear Bango had been appointed to this herd, as I understood we would not be required to have a Laplander

at this herd, and I am not prepared with food or clothing for one or two extra people. Have not had any definite news of a successor yet—only that the board had notified me August 8 that a man and his wife had been called, but not yet accepted the call. If no successor arrived in time I must stay.

School was opened August 31, and as Mr. Hovick consented to stay with me for three weeks I gave him eight hours daily with the children in carving and drawing, especially to prepare some specimens of the children's work to be sent to the exposition. Mr. Hovick will leave on the 16th, and then the regular school work will be taken up. My wife had to go out, as her health failed her fast, and as it is not necessary for me to stay here with the successor I also will go out if they arrive in time. The children are all well and healthy.

The Government has now in this herd 22 females and 1 male fawn. On Mr. Hamilton's order 3 males were butchered and brought on board the *Thetis*, and as the Government had no males in this herd the mission exchanged 3 males for 3 females. The 168 females from the Cape will arrive some time during the winter. I advised Mr. Lee to bring them early, as lassoing and handling even in February is not advisable with females. If some females were exchanged for males, two herds could then be distributed from the Government deer. Isak Hatta wants a herd; he is a good Lapp. Fredrik Larson has also behaved very well this last year. The others I do not know anything about.

Mrs. Brevig's address is Stanwood, Wash., and if I go out that will will also be my address.

If I go out I will, if possible, take the schoolgirl from Unalaska with me. If I go I shall take Ablikak with me, to send him to our Indian school in Wisconsin, and in that case could take the girl as far as Chicago. I arranged with Mr. Hamilton to sell to the Government 20 females of the mission herd and 12 of Ablikak's.

With respectful greetings, yours, truly,

T. L. BREVIG.

DR. SHELDON JACKSON.

TELLER, ALASKA, *September 29, 1903.*

DEAR DOCTOR: Inclosed please find three new earmarks for this herd. Mr. Isak Bango and family arrived the 26th, and are yet at the station. Mrs. Bango is a little sick after the trip. They will soon be sent out to the herd and furnished rations and clothes according to the old list, as I do not know what their contract is. By this mail I also send five packages of carvings and drawings from the school.

My successor has not arrived yet, nor have I had any letters from my wife or others in regard to this; so it seems I am, nolens volens, bound for another winter. Mr. Bango also sends his vouchers and bills for transportation from Unalakleet to Teller.

All the children are well. With respectful greetings,
Sincerely, yours,

T. L. BREVIG.

Dr. SHELDON JACKSON.

Number of sleds at Teller station: Mission, 18; Dunnak, 6; Sekeoglook, 4; total, 28.
Sets of harness: Mission, 22; Dunnak, 8; Sekeoglook, 6; total, 36. Number of sled deer, trained: Mission, 14; Dunnak, 12; Sekeoglook, 6; Ablikak, 6; total, 38.

ANNUAL REPORT GOLOFNIN REINDEER STATION.

UNALAKLEET, *August 26, 1903.*

DEAR SIR: I hereby submit my annual report of Golofnin Bay herd for the year ending June 30, 1903.

I am sorry that I have not been able to send it before. The boys lost the account of the fawns last spring, and when we marked the old deer in May and June Nils Klemetsen thought the fawns were too young to mark. He promised to mark them as soon as he could and send me the account, but it did not come until a few days ago.

The winter has been very hard for the deer. The snow we had before Christmas covered the moss; then the ice and the continual snowstorms packed the snow very hard, so it was hard for the deer to find the moss. So I had to move them closer to timber. The herd has done well considering the hard winter; only a few were sick of hoof rot when I left.

The fawning began the 11th of April, and although the weather was hard the fawns did very well.

I hope the herd will be looked after better now, since Nils Klemetsen has come. I inclose a chart of earmarks adopted in the Golofnin herd. Have been very busy a few days landing our supply and lumber for the schoolhouse. It will be very late to build this fall, but we may have good weather, when I hope we will be able to do it.

With kind regards, yours, respectfully,

K. HENDRICKSON.

Dr. SHELDON JACKSON.

ANNUAL REPORT EATON REINDEER STATION.

UNALAKLEET, ALASKA, *June 30, 1903.*

DEAR SIR: I have the honor to submit the following report for the year ending June 30, 1903:

In accordance with your instructions of last summer I had the Eaton building repaired; also the warehouse, from which the posts underneath had slid away, and it was thus ready to fall down. The expenses incurred for same amounts to about \$45.

The herds have been in an excellent condition. On September 6 they were moving into winter quarters, the Denbigh herd at South River, and Mary's and P. Spein's at a river east of there.

September 8, Tatpan's apprentice left the herd and went to Golofnin Bay, giving as reason, "too little pay for work." Shortly after Tatpan's brother-in-law came from Golofnin and filled the place of Liby. He is a strong and able young man, and seems to like the work well.

On November 17 Nils Klemetsen, Nils Sara, and Nallagorook left for Teller in order to bring down the herd from there. They had each two deer and sleds. I wrote to Mr. Henrickson at Golofnin to let them exchange their sled deer for fresh ones from that herd, which was granted. January 18, herd and drivers arrived at Unalakleet, all well. The deer were poor on account of having been kept on ground where the moss was burned off. Nils Klemetsen reported that two old female deer and one fawn had died on the road from Teller to Golofnin, and that two sick females were left in Golofnin herd, together with Nils Klemetsen's 100 deer, 19 males, 62 females, and 19 female fawns; and the herd brought to Unalakleet consisted of 52 female deer. Thus the grand total brought from Teller was 157 deer. On February 5 Nils Sara and Per Spein with their families and herd, with Nils Klemetsen and native herder Tatpan, arrived at Unalakleet en route for Kuskokwim. They were all well and happy, and had been well provided for both in food and clothing, so that they should suffer no need. Their herd was fat and strong, probably one of the finest herds ever sent out from Unalakleet or Eaton. Shortly after the expedition had left Unalakleet bad weather commenced that lasted through February, March, and part of April. At Kiktaguk, a village about 18 miles on this side of St. Michael, their camp in one night was buried in snow. At the same time 50 deer were lost but found again; 1 was found killed, buried in the snow. Nobody knew who had done it, but two road-house men in the village were suspected. Having no evidence, nothing could be done toward bringing them to punishment.

Nils Klemetsen and Tatpan returned to Unalakleet on April 20, reporting Nils Sara and Per Spein with herd to be left at Andreaufski, Yukon River, unable to proceed any farther, as they found the moss

on the other side of Yukon all covered with ice. Klemetsen said they were gone two days on the west side of the River Yukon, but found themselves obliged to return. It was rather unpleasant news, especially as I had done all that could be done on my part to make it a success.

Nils Bals and family arrived from Kuskokwim with eight deer, April 26. He stated that the trip had been a very hard one. They had to use axes to chop through the ice before the deer could get at the moss. Young Mr. Bals has been working at the herd during fawning season, and the other has been fixing the roofs on the Government houses at Unalakleet, repairing boats, etc.

On April 5 the herd was driven from its winter quarters to the fawning ground on this side the Shaktolik Mountains. Mary's herd joined the Eaton herd, so as to have the proper care during fawning time. From the time Per Spein left Mary's herd in February until November it had been in charge of five native herders. I would not have put the two herds together if I then had known that the Bals family would have been here. There are sufficient herders here to take care of two herds if we only had one more experienced herder for Mary's herd. If no Lapp can be secured, I think Okitkon or Nallogorook would do well as head herder. They have both been doing very well in company with Ole Bahr.

By your instructions last year I put Ole Bahr's apprentice on Government ration, and I did the same with Per Spein's by the time he left for Kuskokwim. He desired to remain with the herd. It would be well if these two boys could each get some deer, as they are both anxious to become herders, and so far they have been doing very well. Moses's deer are still here. He did not come or send for them this winter. I would suggest to give these deer to some of the Eskimo herders, who have not received any deer yet, but are determined to make it their trade for life.

This spring 387 fawns were born. But there has been an epidemic among the young fawns—51 died. It seems to affect the head mostly.

The weather has been very nice in spring, though the winter has been very severe. The thermometer registered as low as 72° below zero. This is lower than any of the previous years, and we also had more snow. The people cut down green trees for firewood, which never happened here since I came to this country. All the driftwood was deeply covered with snow.

There has been an abundance of small game, such as ptarmigan and rabbits, so the natives have suffered no need. Peace and harmony have been among the herders, and the people in general.

Very respectfully, yours,

AXEL E. KARLSON.

Dr. SHELDON JACKSON,

United States General Agent of Education in Alaska.

UNALAKLEET, ALASKA, *February 3, 1903.*

DEAR SIR: I presume you are anxiously waiting to hear about the movements of the herds.

On January 18 the herd from Teller arrived at Unalakleet, and the drivers were all well. I was anxious for the old man Sara, because it was very cold part of the time they were up at Teller. We had as much as 72° below zero for some time. The herd they brought from Teller was in poor condition, on account of having been kept on the ground where the moss was burnt. Nils Klemetsen's herd was left at Golofnin, while he came down here himself. Klemetsen's herd consists of 19 male deer, 62 females, and 19 female fawns. Three females died on the road from Teller to Golofnin, and two Government deer were left sick at Golofnin. The herd brought here consists of 52 females, which makes the grand total of 157 deer brought from Teller. None of these deer could be driven any farther. Nils Sara has gotten a herd of fresh, good deer that doubtless will stand the trip to Kusko-kwim well. The herd is already separated and fixed for the trip. It will start from Eaton, maybe, this morning. Nils Sara has gotten 25 male deer, 75 females, 15 male fawns, and 25 females; total, 140.

I am sending supplies with them as per your request.

The station supplies are running low, so I have to get some from St. Michael. I have not yet received an answer from the board in regard to supplies for the herders, so maybe I had better send you a list of things needed for the present year. If I were to stay, I should on my own account supply the herders. But as my wife had to leave last fall on account of sickness, and I feel it my duty to go down and see her at the end of June, I don't know who will be in charge here. But by the time you will be able to give us a herd, I will be back in order to start that colony I mentioned to you last year, and then I would supply all the herders near Unalakleet.

Mary was asking me to write you for permission to go and see her son George the coming summer. I suppose he is at Unalaska, and it would not take more than two months for that trip. Mary is also sending you an ivory ring as a present. She has been very orderly and good this winter. Lindseth has not yet paid his debt, and I have not taken any further steps to take it by force. He wrote down from Nome to get his deer sent over there, and also stating that he had bought Captain Walker's sled deer. But I have told him that he can not take Captain Walker's deer before he can show a bill of sale.

Nils Sara and Per Spein were asking me how they will get their provisions where they now go. I told them that they will be provided for. If the Government sends us the material for a school building 28 by 40 we would be willing to put it up.

The provision lists for this station and for Nils Klemetsen I will send with a later mail.

With kind wishes, I remain, yours, truly,

A. E. KARLSON.

Dr. SHELDON JACKSON.

UNALAKLEET, ALASKA, *May 9, 1903.*

DEAR SIR: By orders from you I started the Kuskokwim herd from here at the earliest possible time, but I am sorry to say it never reached its destination. The weather was very bad from the time the herd left Unalakleet; the snow was unusually deep, and the ice covered the moss, so that after two days' traveling on the other side of the Yukon they could go no farther, but had to return back to Andreafski on the Yukon, where moss was to be found. Up to that time seven deer had died. Nils Klemetsen and the native Tatpan arrived at Unalakleet on April 20. Nils Bals and family arrived on April 26, having had a very hard trip. They had to chop through the ice with an ax in order to get at the moss. Still they made the trip across, having only eight deer to provide for. The younger Bals had frozen his face on the trip between the Kuskokwim and the Yukon, but not seriously. Bals said he would have remained at Kuskokwim, but the missionaries thought it better for them to leave during winter than in the summer. Rev. Adolf Stecker stated in a letter to me that there was not any danger for the herd, as they had some trustworthy native herders with the herd. This somewhat relieved me. I felt quite uneasy at first. I have done all that could be done on my part to make it a success, and I know Nils Klemetsen tried to do his best also.

With kindest wishes I remain, yours, truly,

A. E. KARLSON.

Dr. SHELDON JACKSON.

UNALAKLEET, ALASKA, *July 28, 1903.*

DEAR SIR: Long before this day I would have written again, but we have been waiting for Doctor Hamilton and Prof. D. Nyvall and provisions since the beginning of July, thinking to have something definite to relate.

Doctor Hamilton arrived here last Saturday, July 25, at 2.30 in the morning. He at once, when hearing what I had answered you in regard to the superintendency of the deer herds, appointed me from the first of July, this year. The more I think of the matter the happier I am, and think that the new field of work will be as much pleasanter as it is larger. In about an hour Doctor Hamilton had to leave us again. Conditions seem to work so that I am forced to act in the

capacity of superintendent at once, although not having any definite instructions to follow. Hope only that what needs to be done will be done right.

Isaak Bango, at Nulato, had written and telegraphed repeatedly to the effect that if he could not be relieved on March 1, 1904, he would leave at once. Doctor Hamilton, learning this, was of the opinion that it was best to let Bango go on August 1, 1903, as he did not want to stay the year out. In Bango's place Per Nilson Bals (Bals, jr.) was appointed, and when he now is ready to go to Nulato he wants a contract; and Mr. Karlson thinks that he has served his term out and that I should now take hold when appointed, so, consequently I will have to write said contract. I wrote it in triplicate, and, after Bals and I have signed the same, I will send them all with Mr. Bals to Nulato for the Rev. J. Jette to sign, after which he will be instructed to return one copy, which goes to you at the Bureau of Education.

The contract is an exact copy of the form Bals had in Kuskokwim. In getting Mr. Bals to St. Michael, so as to get to his destination as quickly as possible, we will have to pay an extra fare of \$10 from Unalakleet to St. Michael. It is this way: If he does not come to St. Michael before the 1st of August there will be no boat going up the river for some time, so a schooner has to go extra for Bals in order to be on time.

Bango has also asked to get a herd of his own, or to get something to do in or around Unalakleet. As to the herd, there will be only about 15 old female deer left when the promised mission herd is taken, together with this year's fawns. We have no work at the mission for Bango, and, as we understand, there is nothing for him to expect from the Department at present. Is not that so?

Doctor Hamilton had such a short time here that I could not remember all I wanted to speak to him about. In regard to the teachers' salaries at Unalakleet from February 1 to May 31, this year, there was nothing said. There is in the Government store some medicines and a case or two of bandages and some alcohol, some old and some new schoolbooks. Many of the medicines are spoiled, and others will certainly spoil if they are left there long. Neither is that damp place very good for the books. I intended to apply for the use of what yet can be utilized, but forgot all about it. Be it, for that reason, granted me the privilege of extending this same application to you, Doctor Jackson. May I take and make use of these things mentioned above?

I said we had been waiting for Professor Nyvall; we are waiting still. We hoped that he should have come while Doctor Hamilton was here, or about St. Michael or Nome, so that we could have conferred about the new position of mine, but it can not be done now, and I feel sure that it will be all right. I promised to teach the school as much as it is possible for me to do without neglecting my duties.

Mrs. Lind will also assist me whenever necessary. In addition Misha and Aaron are both quite well advanced, so they are both capable and willing to help as much as they can.

Thus you see, Doctor Jackson, that even if no other school-teacher be sent up this fall, I think that we will be able to do our work any way, if only God provides us with health.

In regard to the contracts sent me in quadruplicate, together with the oath, the one for the year past I will return with this on next mail, but the one for the coming school year I will keep, on Doctor Hamilton's advice, till we know whether anyone else comes or not.

Your letter concerning the exposition next year is also received, and what I am able to contribute thereto will certainly give me pleasure to send. I fear only that it can not be much now since it is so late, and most of our children will not be back to do any work hardly before the season is closed.

The provision boat is not here yet; consequently the lumber for our new schoolhouse can hardly be expected probably for a week or two yet, and it will soon be the 1st of September.

If no other teacher comes, I would suggest that I help with the schoolhouse and hurry it on as much as possible so as to get it ready that much sooner. If the old house is to be used at all this fall, there will have to be spent a good deal of work on it, and as things now are we can hardly afford it.

We are working on the foundation and cellar under the new school now. The Government had some old logs by the side of the store; these logs we are now using for foundation and for cellar walls. Hope that it will meet with your approval. These logs would soon be worthless if they should have continued to be, as they were, half buried in the sand.

I wish also to extend my heartiest thanks to you for all the good reading matter sent to the mission—the beautiful catalogue of the Indian Industrial School, Carlisle, Pa., and specially do I wish to express my gratitude for the personal thought given me in the sending of Saunders's medical publications. Best greetings follow these lines from my fellow-workers, but specially from Mrs. Lind, Angelica, and myself.

We are all well and happy, tilling the frozen fields of the north and sowing the everlasting seed.

Respectfully,

CARL O. LIND.

Dr. SHELDON JACKSON.

P. S.—Please forward me some penalty envelopes for correspondence with the Department.

C. O. L.

UNALAKLEET, ALASKA, *July 30, 1903.*

DEAR SIR: We had the pleasure of meeting Doctor Hamilton on July 25. He arrived early in the morning and transacted his business in a great hurry, and was off again on his way to St. Michael inside one hour. As I wrote you some time ago, Isaac Bango wished to leave Nulato, anyhow to be relieved from his duty the next coming March, so Doctor Hamilton thought it best to relieve him now. Young Mr. Bals was willing and happy to go and take the place of Bango. As you kindly promised last year a herd of deer for our station, we will take and mark it this fall, and retain Mr. Nils Bals and family to take care of our deer. Next year there will be deer for another herd to give out to somebody, maybe to Mr. Nils Bals. I suppose the Government will pay his salary for this year, and the mission supplies him with the rest. If you have no objection we will take Sakpillok to our herd, the boy who was with Per Spein before. From the time Per Spein left until now he has been kept on Government rations.

I have to leave during the first part of August, and, as Mr. Hendrickson is now here, I will turn over the Government property to him. I will send you a list of articles on hand at the time I took the inventory, which is now about one month and a half ago.

The supply vessel has not yet arrived, so we are running short of several articles. I hope it soon will come.

Mr. Nils P. Bals wishes you to put the money of the two inclosed checks and also the money for this year's service, into the bank of Trondhjem, Norway, where he had his money sent before.

Per Spein and Sara will not be able to make Kuskokwim before freezing up. I have written them to be ready to start as early as possible. In accordance with your promise to be allowed to occupy the Eaton buildings, we will now do so. And as we from time to time find suitable young men who are willing and desiring to devote their life to herding deer we will take them in here.

I also inclose the voucher you sent here to be signed by Messrs. Bals.

Trusting I shall see or hear from you sometimes, I remain,
Yours, truly,

A. E. KARLSON.

Dr. SHELDON JACKSON,
General Agent of Education in Alaska, Washington, D. C.

ST. MICHAEL, ALASKA, *August 18, 1903.*

DEAR SIR: Yours of July 13 is at hand. I am now on my way to Seattle. I am going on the *Ohio*, which sails from here to-morrow.

I met with Professor Nyvall here on his way to Unalakleet and Golofnin. He came the overland route. So far he had enjoyed his trip very much.

The deer brought from Teller last winter were not large-sized deer. They were smaller than our deer at Unalakleet. Doctor Lind will send you another account of the deer as soon as Bals and Ole Bahr have marked out the mission herd and payment been taken from all the herders for provisions. This will be done before the end of the month.

I met with Isaac Bango; he came down from Nulato. I asked him what he intends to do the coming winter, but he did not know. He wished to go to Unalaklik and see Bals, his father-in-law.

The supply schooner not yet arrived at the time I left Unalakleet.

With kind wishes I remain, yours truly,

A. E. KARLSON.

Dr. SHELDON JACKSON,
Washington, D. C.

P. S.—Mrs. Karlson felt better the last time I heard from her.

UNALAKLEET, ALASKA, *August 26, 1903.*

DEAR SIR: I have just arrived from a trip to the herds at Nuklit, or Cape Denbigh, and Golofnin. The moment I came home your telegram of August 22 was brought to my notice. It had been waiting two days for me. It had been forwarded and reforwarded so many times that there is no doubt but what the operators along the line have mixed up the contents somewhat, and making it very difficult to understand.

In order to know positively what is meant, I am obliged to ask by wire to-day if Bango is meant? He is at Unalakleet now, and when asked if he wanted to go he said yes, with same salary, provision, and clothing, as he had at Nulato.

I know not what arrangements Mr. Hamilton has made in regard to the herds at Andreafski, but I shall try to-day to find out from the quartermaster at St. Michael, and if there be any possible way of getting up and down on the river, I will at once go to Andreafski and find out the condition of herd and herders, and arrange for their provisions until we can move over to Bethel.

ST. MICHAEL, *August 27, 1903.*

Since I began this letter the steamer has come and made me discontinue writing. The trip from Unalakleet was a fearfully rough one, but I am safe in St. Michael, and have found out that Mr. Hamilton, on the 29th of July, ordered \$100 worth of goods for the herders, but can not from that feel sure that they have enough until the time they can begin to move toward Bethel, so I go to-day on steamer *Leah* to Andreafski, hoping to be able to be of some service.

After I was all ready to go yesterday another telegram was received from W. T. Harris concerning the same matter, and, in addition, asking me to accompany them to Kuskokwim next week. I will do so at first occasion when it freezes, making the river safe. I better then get me a guide from Unalakleet.

Respectfully,

C. O. LIND,
Unalakleet, Alaska.

Dr. SHELDON JACKSON, D. D.,
United States General Agent of Education for Alaska,
Washington, D. C.

UNALAKLEET, ALASKA, *September 8, 1903.*

DEAR SIR: Your wish is complied with. I started off for Andreafski the same day as your telegram was received. The trip up the Yukon was a very interesting one; if I had traveled for pleasure I would have thought that the trip paid; I enjoyed it the more because there certainly was a greater motive than pleasure.

Arrived at Andreafski, I hired a native and a canoe, and we rowed 12 miles up the Andreafski River, where the herders and their herd were found without any difficulty. The herders were simply beside themselves from surprise to see me there. They had very little to eat. In the latter part of July they had received a notice from the Northern Commercial Company that they were allowed \$100 worth of provision from Andreafski store with the prices of that place, which means of course very little provision. If the herders should live as they really ought to it would not have kept them over a month. They had already gotten some things before, and when the notice from the Northern Commercial Company came the balance was soon drawn with the exception of \$20 worth, which they dared not take yet, for fear that they should get no more.

Mrs. Per Spein had given birth to a baby four days previous to my arrival, and had not a drop of milk in the camp and none to be had in the store. Their flour supply was very scant; of fish was there very little in the river this summer, so they could get but little of that. They had some coffee, but sugar they had not had for months. Some time ago they had killed a wild deer, but now that meat was gone, and there was no ammunition left with which to kill any game. I made a note of articles needed and took their deer report, after which we returned to Andreafski with Michel Sara in our company, with the intent of buying some milk and a few delicacies for Mrs. Per Spein. To my great disappointment nothing of what I wanted could be had from the store, but happily the steamer *Leah*, on which I had arrived, was still there, and, on stating the condition of the woman to the steward, he let me have the following: One can of milk, \$1.25; 1 can extract of beef, 75

cents; 1 can chicken, 50 cents; 1 can sausage meat, 50 cents; 3 cans Hamburger steak, \$1.50; some boiled ham, 50 cents; 3 pounds crackers, —; total, \$5.

These articles Michel took home to Mrs. Per Spein the next morning, and I took their order for three months' supply with me to St. Michael, to have filled there and shipped upon first boat going to Andreafski. Arrived at St. Michael, I at once tried to find out if provisions could not be had from the military post. I had telegraphed there before, making inquiries, without any result, and now in person I had a great deal of trouble before they would sell me anything. No one seemed to know anything about any authority to sell goods for the herders. At last, however, a letter was found which solved the question, and my request was granted, but cost price plus 50 per cent had to be paid before the goods were taken from the warehouse.

Just as the Yukon steamer that brought me down came to port, the mail steamer was ready to leave St. Michael for Unalaklik, but to favor me they waited nearly one hour and a half, to give me time for my business. Thus you see how limited my time was, and with so much fooling about there was not enough time for getting the bought articles to the Northern Commercial Company for freighting before I had to go. The flour I took myself, with the help of a native, and the other things the army people were to see that two natives brought to the same place for shipping. I arranged with the natives myself—only the quartermaster should see that they did it properly.

With the Northern Commercial Company I made proper arrangement for the shipping of the goods, and home I went. Having been home two days I learned from natives that came from St. Michael that no more goods had been brought over for shipment. At once I had to telegraph both quartermaster and the Northern Commercial Company to attend to the matter at once, because of the fact that the season of navigation is rapidly drawing near its close, and that there is danger of the herders not having anything to eat. No reply is yet received, but I hope that everything is well and right by this time.

From Andreafski I wrote to Mr. Stecker that we intend to move the herd as early as it is safe to travel this fall, the middle or latter part of November.

There was also a man in Andreafski that was willing to go as a guide for us if he got his food and \$1 a day. Thinking that was reasonable, I told Stecker that if he wanted to send guides to meet us he could do so, but I thought the former would be the cheaper way, and just as safe.

I wish to have a herder with me from here when we go, and since Tatpan has been over the way before I prefer him. He is also willing to go. What would he be allowed for the trip? I understand that Klemetsen has also written to you concerning this matter. Of

course, it is beyond question that he is the better man, and much to be preferred, but I fear that probably it would take too much of his time from Golofnin, and at the same time he would be more expensive. If he be given the privilege of going I am thankful for it. But another thing while on this chapter: In going north this winter there is no one that I know now whom I would feel so safe in company with as I would with Klemetsen, therefore I will ask if I may take him with me on the trip around the Arctic coast? If it be granted, what may I promise him for the service?

Your telegram of September 1 was received here the same day, but I did not get home until the evening of the 2d instant; however, as soon as I saw the contents I informed Mr. Bango about it. He was willing to go. At first he thought it below his dignity to travel on a schooner at all; and secondly, he refuses to pay his fare for fear that he should not have it returned. I told him that we had no other means but the schooner, by which to get to Nome at least, and if going to Nome on a schooner he could as well go all the way. And further, that there was no way for me to arrange for forwarding from Nome to Port Clarence.

All the schooners of Unalakleet have now come home, except David's, but none of them is willing to go to Port Clarence so late in the season. Then Bango not being willing to pay his fare I know not what to do, because I have no spare money to pay out of my own pocket. In fact I have paid out so much for Bals, my own trips, herders' groceries, freight and telegrams, etc., that I have not enough for my own wants if no more money comes in this fall.

If it were possible to find out where the *Thetis* is, it might be that she would take the Bangos to their destination, but I dare not depend on that. On the other hand, it is possible to send him to St. Michael on the Northern Commercial Company's mail boat and have said company forward him all the way, but we certainly will have pretty heavy expenses to meet.

I shall certainly do my best and do what can be done, but I fear the heavy expenses.

The school was, by my instructions, begun September 1, although I was not home. There are not many children home yet. The new schoolhouse is coming up fast now. Hendrickson is putting up the rafters to-day.

Best greetings from us all at the station. My wife and Angelica wish especially to be remembered to you, Doctor Jackson.

Respectfully,

C. O. LIND.

Dr. SHELDON JACKSON,
Washington, D. C.

SEATTLE, Wash., September 19, 1903.

DEAR SIR: Yours of September 10 is at hand. I am happy to know that the basket has arrived and was accepted.

Have just returned from San Francisco, where I spent only a few days. During my stay there I called on Foster & Co. Those people are, as usual, very pleasant.

I have forwarded the account book to Washington to-day. It was packed up, together with my books, and have just now got at it.

Mr. Lindseth has not paid any on his account. Mary and the herders around Unalakleet have paid with deer. The number of deer taken from each can be seen from their account in the book. The book contains the accounts for both 1902 and 1903. Nils Bals has also an account there. Mr. Stecker, at Bethel, said in a letter to me that two months' rations given to Bals, from Government store at Unalakleet, would be paid at their home office, if bill for same presented there for payment.

Mary did not go to Unalaska to see her boy. She thought it would make him long for home and so she gave it up. Mr. Bango and family I met at St. Michael, coming down the river from Nulato. He was going to Unalakleet.

The new school building will be ready in the fall, though it may not be before October or November, as we got the lumber so late. I have sent Mr. Hendrickson the needed money for the building of same, that he may put on all the help he may need. I am sure the new school will be a joy to all the people of Unalakleet.

Rev. C. E. Ryberg, at Nome, was asking me to write you if he could get some school supplies from the Government. He has bought a place about 15 or 20 miles north of Nome for a mission and school for natives, and is trying to get the natives who are hanging round Nome to move over there. As you know Nome is not a very nice place for these people. It may now be too late to send any from here, but if you could let him have some from the school supplies you may have at Nome it will be an accommodation.

Mrs. Karlson seems to be a little better, and I hope she will improve right along. I am in hopes to be able to return to Alaska.

With kind wishes for yourself and family, I remain yours, truly,
A. E. KARLSON.

DR. SHELDON JACKSON,
Washington, D. C.

UNALAKLEET, ALASKA, October 5, 1903.

DEAR SIR: Your letters of July 16, August 7, 19, 22, 24, and 29, were all received in a bunch just two weeks ago, but until this day I have not been able to give you an answer to these communications. A week ago this morning I started off to Cape Denbigh to inquire

about everything concerning the herd and desired to enable me to give you some definite information in regard to these. After twenty-four hours of waiting we started at Noonah, but were not able to get away because of a very hard snow wind which continued to blow for nearly five days. Finally you became too restless entirely for me to stay any longer. So far I would not attempt to waste my time there. The herd was many miles off in the way to Unalakleet and I could not cross the river, enough snow was in going to the herd so on Thursday, October 1, I took two boys with me in a small boat and started off for Slatolik River, going an inland passage, the sea being too rough. But we did not go more than about 2 miles from the camp before we got stuck in the mud. The tide was going out and only one thing remained to do—to stay right where we were till next morning, because we could walk neither in the one direction nor in the other. Friday morning before 4 o'clock fire was started and breakfast prepared and eaten. At 5 o'clock we were off, though yet quite dark. After some pretty hard work we landed on the bank of Slatolik River at 10 a. m., and from there I took my pack on my back and walked along the beach to Unalakleet, where, after considerable struggle, I arrived shortly after 10 p. m. Friday evening. After all, it was quite an interesting trip. The only thing which was a little disagreeable was that I had to strip to the waist three successive times to wade around some points.

But now I am drifting too far away from the subject—excuse me, please.

In regard to the earmarks, allow me to return the same marked as you desired. In addition, I send the mark the mission has decided upon. The 25 fawns from Moses's herd of last year are marked for the Government according to Mr. Bahr's statement, and all of this year's fawns in Moses's herd were also marked for the Government, he said, but on close questioning it came out that they were not yet marked at all. It is now too late for any further marking this year, consequently the best we can do is to take all those fawns by themselves and put them in one of the herds—say the mission and Mary's, while the others remain in Bahr's until next spring, when they can be branded.

We are all well, and I enjoy the work in Alaska more and more. Angelica is growing greatly. She says almost everything she wants to, but has a special inclination for the Eskimo. Last night the thermometer fell as low as zero. The 18th of September there was much snow on the mountains, but it soon went off again, and since then no new snow has fallen.

(Greetings from Mrs. Lind, Angelica, our associate, and myself.

Respectfully,

C. O. LIND.

DR. SHIELDON JACKSON, D. D.,
*United States General Agent of
 Education for Alaska, Washington, D. C.*

SEATTLE, WASH., *November 9, 1903.*

DEAR SIR: Having just received a letter from you, written in August, wherein you mention about Mary's girl and the children from Unalaklik and Golofnin which were sent down to Unalaska last fall. I am sorry I did not receive your letter earlier. In regard to the deer taken as payment from herders for supplies will say that I instructed Mr. Bahr to take so many deer from each herder, whose names are mentioned here below:

	Female.	Male.	Total.
Ole Bahr	9	5	14
Tatpan	6	3	9
Okitkon	11	5	16
Nallogorook	5	3	8
Kohloak	6	4	10
Angalook	3	1	4
Avogook	1	2	3
Sageonuk	4	3	7
Mary	15	10	25

Mary's 25 are those that you ordered me to take from Mary this spring, and the 36 from the Episcopal mission are for herding of their deer for last year and this year. I did not know at first if they were to pay any for the herding of their deer or not. Moses, as I have written you before, did not come for his deer last winter, and so the Government took his whole increase for this year.

The reason why the Government was not paid with female deer altogether is this, and, as I believe, I spoke to you about that last year: If only female deer, their small herds of deer inside of a couple of years would give out and leave them on the bare ground. But if they would have some freighting to do that should improve it greatly.

I delivered a copy to Doctor Lind, also, of the deer Mr. Bahr was to mark for the Government, and I presume he has already informed you about this.

With kind wishes from Mrs. Karlsen and myself, I remain,
Yours, truly,

A. E. KARLSEN.

Dr. SHELDON JACKSON,
Washington, D. C.

UNALAKLIK, ALASKA,
December 26, 1903.

DEAR SIR: The Kuskokwim journey was begun on the 9th day of November. Seeing that it was a long journey we dared not travel fast in the beginning, but we took it rather easy. As I have written before, the party consisted of Bals, sr., Nallogoroak, Per Sara, and myself. We traveled with seven deer, two of these belonging to the

Government, two to the mission, two to Moses, and one to Mary. The necessary provision, clothing, and sleeping bags were enough to fill our seven sleds, so that we could ride but very little.

On the 12th, in the afternoon, we reached St. Michael. There we had to stop long enough for the purchase of a stove and some small articles which could not be obtained at home, for the trip. The deer were left on the mainland, about 6 miles in a southwestern direction from St. Michael, and while Nallogoroak together with Per Sara were to take care of the deer, Bals and I walked in to the village to buy and bring back our things for an early start next day, the 13th. A stove, however, could not be obtained in the evening, and so we had to wait there until the next morning. It became 10 o'clock or more the next day before we got away, and upon our arrival at the camp it was about noon. Still we ventured off, and did well that afternoon. It was clear, nice weather, and we traveled, I judge, about 15 miles until dark. On the 20th of November, in the evening, we reached Andreafski, after quite a hard journey. Mild weather set in, and the little snow which had come only two or three days previously went off again, leaving the bare, mossy ground for us to travel over, which of course was very heavy.

Having found a suitable place for camp, about 4 or 5 miles away from Andreafski, I walked in to the village to find out where Sara and Spein were with the herd, the other three men to meet me in the morning following and continue our way directly to the camp. To my great disappointment I there learned that the herders had not followed their instructions at all. Instead of having moved up the Yukon, which they so well could have done, and thereby saved us a week's time, they had left information with the Northern Commercial Company's agent that they still were and would remain exactly in the same place where I visited them in the fall. That place is 12 miles up the Andreafski River. As disappointing as this was, nothing remained to be done but to go back and then start from there. So the 21st we started off in search of the herd. It was a very dark and snowy day, so one could not see far. By the time we reached their old camp it was very dark and the snow was drifting, making it impossible to see or recognize anything. Then we had to seek some sheltered spot where we could put our tent and stay over night. The next morning the weather was clear and quite calm. Early we were all out looking about to see if the herd, or at least signs of it, could be found. But all our efforts were in vain. We had been exactly on the spot of their old camp the previous evening, without being able to recognize it on account of the weather, but there was now nothing at all that could guide us in finding them. They had certainly not been there for two or three weeks. But where were they to be found? That remained a question for yet a

couple of days. Every little gulch and creek that opened into the Andraefski River, as well as that river itself, was searched most carefully for a distance of about 16 miles, all in vain. There was a native in Andraefski village who claimed that he knew where the herders were. So he was employed to go along and show us the way. That native, however, soon proved himself ignorant as to where Spein and Sara were to be found, and so he was discharged with half his pay. The deer were given rest, and we—Bals, Per Sara, and I—started off again in different directions in search of the lost ones. After some 6 or 8 miles hard walking over a divide and down into a valley, and on the other side of the latter, a gulch was seen in which I finally found the camp a little after noon on November 23, about 8 or 9 miles away from their old camp, and on an altogether different river from the Andraefski. What their ideas or intentions were by such an action I never learned to know, because they never gave a satisfactory answer to my inquiries. Spein and Sara were not even ready to move yet. They had not trained any new sled deer, nor had they prepared anything in camp for an early break-up. Sara had not even counted his male and female fawns yet, although he was instructed to do so at once last fall, so that I could get a complete report now.

In the morning of November 25 we began to move the herd. Bals drove ahead, while Mickel, Sara, and I drove on the herd with the help of a dog. This latter was practically useless, so it made the task rather hard. Sometimes the dog would run right in among the deer, and instead of collecting them they were scattered far and wide. Under such conditions it became almost impossible to get anywhere after having traveled four or five days. The last three and a half days before we reached Bethel, Per Sara had to join Mickel and myself in driving the herd.

Nallogoroak always followed after the herd with our provisions, tent, and stove, etc. The journey was a perfect success. The deer had plenty of moss all the way, so they were all in the most excellent condition on our arrival at Bethel on December 3. Not one accident happened on the way and not one deer, as far as we know, was lost. On crossing a big lake near Bethel, one old male deer fell on the ice and hurt himself so we had to kill him, it is true; but that same deer had been lame for over a year and had with difficulty struggled along so far. In reality it was no accident.

The deer we drove from Unalaklik were exchanged for others in Andraefski so that the same deer should be able to go back again to Unalaklik. And on our arrival at Bethel they were all given a few days of perfect freedom. On December 8, Nallogoroak and Bals and myself began our return trip with four of the Unalaklik deer and three we exchanged for three others of those we drove from Andraefski. On the evening of December 23 we successfully finished the trip

by the arrival at Umanak. This to be true in which we made the trip from Bethel to Umanak was sixteen days, and that with deer which had gone the way on a few days previously. Still they all stood it very well, and with the exception of one traveled almost as well the last day as they did the first.

I knew it to be Doctor Dease's wish that we should have taken the herd farther up the Yukon and then to have gone right across higher up on the Kuskokwim to the Bethel deer camp. So I thought myself also, but on learning the true lay of the country I changed my plans at once. The deer camp at Bethel is most conveniently reached by way of the mission, because it is not on the main river, but on one of the tributaries to the Kuskokwim River. The crossing of the main river even is most conveniently done just half a mile above Bethel. While in Bethel it was my intention to go up to their herd myself, but that small river is so very swift that it was not yet frozen, and the mountains are so bad that one can hardly get over them. If I should have gone it would have taken at least two weeks more actual travel, and then the deer would have needed more rest. Now, seeing that I have to be at Nome for Mary's case on February 1, 1904, I dared not venture on the trip for fear, if bad weather should set in, of coming to Nome too late.

Thus the pleasure of seeing the Bethel herd was not given me. Two of their herders came down while we were yet there, and they had been on the road a little over seven days. It was with great danger they had passed some places. The herd we brought from Andreafski is just as safe now as it ever can be. Mr. Steiker took full charge of herd and herders, and guaranteed their safe arrival as far as people can help at their proper place. Steiker promised to go along himself and help in driving the herd. This is a work which might take quite a long time now, unless the weather turns colder so that the river becomes more safe. And with the deer alone they can always make it, even over the mountains, but it might take much more time. I found that Sara has the same mark as Bethel mission for his deer. To avoid trouble I advised Sara to make a hair mark on all his deer now before they let the herds together, and in the spring he (Sara) must select some other mark and cut all his deer over then.

The red dotted line on the map shows our line of travel, and the other continuous line beyond the Kuskokwim is supposed to show the tributary on which the deer are stationed.

The visit to Bethel was a most pleasant one. All the missionaries there are very earnest workers, and it gave me much pleasure to be with them a few days to see their manner of work and to learn the conditions under which they labor. Bethel is certainly a secluded spot, and conveniences and pleasures which we enjoy who live on the coast are not known to the missionaries at Bethel. Mr. Steiker asked

me specially to mention their poor communication with the outside world. The 28th of June, 1903, was the last and only time any mail was received during the last summer. Twice during the season did the missionaries send men over to the Yukon with their mail and to see if any mail was to be brought back. Both times did the men return without one line of any description. Such naturally makes the stay at Bethel rather lonely. But another thing over which Mr. Steiker worried was that you might think him very negligent in his correspondence concerning the reindeer, etc., while the matter of fact is that when he receives a letter it might be a year old, and then before an answer reaches you the matter to which it refers might belong to affairs of bygone ages.

The Katmai mail is taken by way of Bethel the three times per season it is carried, but there being no post-office it benefits them but little in that place beyond that they can more readily send their own mail out those three times in the year.

The letter I wrote Steiker from Andreafski he received the night before we left there for Unalaklik.

The mail being ready to go I will close, and by the next send the reports of the Sara and Speins as well as the Bethel herd, as near as known.

Respectfully,

DR. SHELDON JACKSON,
Washington, D. C.

CARL O. LIND.

ANNUAL REPORT NULATO REINDEER STATION.

NULATO, *July 7, 1903.*

DEAR SIR: I have the honor to report as above for the Nulato reindeer herd for the year 1902-3. I anticipate somewhat in reporting now, because I foresee that I shall not be here to do it at the regular time.

Of the 39 male deer mentioned, 3 are old ones, 17 are fawns of 1901, and 9 are fawns of 1902; besides these, 10 are altered, 7 of which are already broken to the sled; the 3 others shall be so next fall.

Of 91 females, as mentioned, there are 30 young ones and 61 old ones. The proportion of male and female among the fawns has not been yet ascertained by the herder.

In reply to your inquiry dated March 2 I may state that 25 deer, all males, were sold during winter to Messrs. Corbusier & Dimoska, contractors, who paid to the mission \$21 a head at Nulato. They had then the deer transferred to Tanana and Rampart, where they fetched a much higher price. I am aware of one of them having been sold for \$100 and 14 others for \$40 apiece. I do not know how much was obtained

14 INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA.

for the fall. The winter 1923-4 has been especially hard on the deer on account of the heavy snowfall. The winter pasture ground was covered with 5 feet of snow, and the deer, being unable to dig out the moss, began to starve. They were then transferred to another pasture some 10 or 15 miles south of Nulato, where the snow was not in such a quantity, and they have been kept there for the summer season.

Respectfully yours,

JULIUS JETTÉ

DR. SHELLON JACKSON,

Washington, D. C.

ANNUAL REPORT BETHEL REINDEER STATION.

BETHEL, ALASKA, July 25, 1923.

DEAR SIR: YOUR letters from January 23, April 6, April 15, and April 24, have all come to hand July 2. As I had to be at the coast to receive our goods, and only a short time ago arrived here, I could not answer them sooner. I will send this mail to the Yukon as soon as possible.

First, I want to express my own and my fellow-missionaries' heartfelt thanks for your friendly and encouraging letters and for sending us again some reading material and school supplies. The box sent by schooner *Viking* is in our hands.

Concerning your letter of April 6, I am glad I have acted in accordance with your wish. Unfortunately, last year no other letter came from you, except the one from Nome, dated September 8, 1902. In that letter you notified me that you had written by way of Nushagak and the Delta, but none has arrived yet. Also no copy of the contract with the new Lapps has arrived. I was anxiously waiting for the three winter mails from north and south, but not one line did I receive. I would have gone to the Yukon to receive the new Lapps and give a guide to them, and in March I was on the Yukon, but I could not hear anything of their coming. On April 8, we learned that they had come as far as Andreafski, and were 40 miles distant, but on account of too much snow, the deer not able to find food, returned and settled 4 miles from Andreafski until fall. I am not surprised it turned out this way. We had an unusual quantity of snow here, but there was far more on the Yukon. As there was a chance in spring to send a note to Andreafski, I asked Mr. Friedrichs to supply the Lapps with what they are in need of, and charge it to us. He is willing to do so, and I am quite confident he will look well out for them.

I think when the new Lapps come they will like it here. They could not wish a better country for the deer. The only drawback might be that they can not sell deer meat here as well as farther north until more white people come in.

Mr. Bals and son were very sorry to go away from here. They had a nice house; the native herders also had houses; the provisions had been plentiful. They admitted that they had made a mistake in expressing their desire to go home this year. But, as I expected the new Lapps to come any time, and the provisions would not be sufficient for all of them, and as I was not able to make any new arrangement with them, it was not advisable to keep them here.

I am quite confident that the native herders, Wasely and Robert, will do their best, and I have put one other young couple, Toney and his wife, and a big school boy, Henry, with the herd. Mr. Bals, his family, and son, left for Unalaklik on March 27. I gave them one month's provisions along. I wanted to give them two months' provisions, but it was too heavy; so I wrote to the superintendent in Unalaklik to give them one month's provisions and charge it to us; stating, also, that these Lapps came with our consent, and that the eight deer, harness, and one dog should be taken back to the Government's stock.

I was in the mountains just before Easter, instructing and encouraging the herders, and they were happy. While I was down at the coast Wasely was here, and said that all were well, and that they had 121 young deer. When I was with them I gave them the 3 deer for last year.

I am very sorry I can not comply with your wish to give an itemized account of the deer, how many male and female, how many belong to the herders, and other details. Seven weeks I have spent in teaching, and now, much against my will, I have to go down to the coast once more, although I have so much other work besides. I ask you to excuse me; in fall I will give a full account.

From the Government we received, male reindeer, 89; female, 87; total, 176, 20 of which were broken to the sled. Returned to the Government March, 1903, 8 deer, leaving in this herd 168 deer belonging to the Government. The number owned by the mission and native herders would then be 213.

A number of sled deer, and the best ones, too, died last fall, as I informed you last winter. Ten sled deer are now in herd; sleds, 8; Yukon sled, 1; harnesses, 24. Also much wood has been cut out for sleds and harnesses. I inclose some letters from our native herders, Robert and Wasely.

The vouchers for Mr. Bals and son I send back to you, as you wish them, but the old agreement young Mr. Bals wanted; I send it to Unalaklik, and it can be forwarded to them if they are not there.

School.—I thank you very much for promising us aid for the schools. We have not kept school in Ogavik, and can not well have school there. This winter Rev. B. Helmich and Mrs. Helmich will be stationed there, but to have school seems impossible, because there are no children there. Since the sickness of 1900, it is only a small village of 55

souls. If we would have boarding scholars from the village above Ralkagak and below Tuluksak, we might have 15 scholars, but we have not the buildings nor the men to keep a boarding school. Here we have the houses and the force to run a school, and although we have only three children of school age here at Bethel, we can get them from four villages this side of Ogavik, from the Tundra, and from below, and it is better to take the few children from Ogavik, if they could not be taught there, to Bethel. I am glad to say we have good results from our school. The two native herders, Wasely and Robert, are two former scholars.

There is one question that troubles me often, that is, the number of days taught. We can not well have school longer than seven months here. The first reason is, we have almost all our children from the outside; the second is, we do not want them to become strangers to hunting and fishing. After Easter the people go into the mountains and want the children, at least the bigger boys, for hunting squirrels. We think it is right for them to go; we send some old books with them and tell the parents and children to remember what they have learned. The question is now, Can you give us the directions or allowance to keep school for seven months instead of nine months? If you will do so I will be very thankful and we will do what we can to have our school as successful as possible. Mrs. Schoechert will be teacher in Quinhagak. I am happy to say our mission work is encouraging. There was much difficulty, of course, in mastering the hard language, but it is easier now than it was at first. What makes us still happier is to see the heathen coming into our Christian civilization.

Thanking you again for your kindness and interest in our work, I am, dear sir,

Respectfully, yours,

ADOLF STECKER,
Superintendent

Dr. SHELDON JACKSON, *Washington, D. C.*

Report of school and vouchers of teacher go with this mail.

BETHEL, ALASKA, *October 6, 1902.*

DEAR SIR: Your welcome letter of May 12 was duly received August 24; the one dated August 15 we received here October 2, both times by travelers from the Yukon. I thank you very much for the good news I find in your letters. First, with the schooner *Kadiak*, we received the books for the school, and in your first letter your promise to pay the teacher (Rev. Y. Weinlick) in our school, and I now only wish I could send our thanks as quickly as possible. I have forwarded the letter to Mr. Bals. He sent a man down with a short account about the deer. So far all was well, and 80 young deer were living. It is a good increase, and brings the whole number to about

550. If the Lord is willing, I will go there again in November and give a full account.

In your letter from Nome you inform us of two Laplanders coming to take charge of the herd here. We will welcome them when they come. Certainly we will do what is possible for the children to have them in school. Also about the provisions, we will do as you wished in your letter. Unfortunately, no provisions came this year for the herders. As our requisition list has come out so late (March 28) it may have been overlooked.

Mr. and Mrs. Helmick, on account of his sickness, had to go out, and we had their provisions at hand and put them aside for the herders. Thus we have all that is needed, except bacon, but we can get some at the trading post, and so everything will be satisfactory.

We opened our school at the beginning of September with 18 scholars. Some more will come when their parents or relatives come from the mountains. Many asked whether they could come; we could soon have had 40, but have not room for so many. We have all the children in the house, first, because many have no homes; second, because they are nearly all from distant villages, and, third, because only in this way can they learn order and be removed from heathen influences and superstition. They are all very happy, and we can not complain about them. The last three came from down river; one, a poor orphan, with hardly any clothes. When they went to bed the first night I wish I could have read their thoughts. Although we do not give them fine beds, but a good warm blanket, these three certainly thought they were in a very good place; we could see their joy in their faces.

We have also, with the schooner *Kadiak*, received the magazines and reading matter, for which myself and all the missionaries wish to express our heartfelt thanks. I can not tell you how much joy your letters have brought me. I am much encouraged to do the work of our Lord with joy.

Concerning Mr. Bals and son, I think they had better go out by the Yukon. We could bring them down river to meet the schooner which brings our supplies; that would be the first part of June.

With all good wishes, I am, thankfully, yours,

ADOLF STECKER.

Rev. Doctor JACKSON, *Washington, D. C.*

BETHEL, ALASKA, *December 12, 1902.*

DEAR SIR: Yesterday evening I returned from a visit to the herd, and expecting the mail every moment I hasten to give you an account of how I found the deer.

As mild weather set in again and the river had plenty of water I was twice on the point of turning back, but after going through deep

water and finding it better again I went on and reached their camp. It is a very nice place. They have built three splendid log houses, clean, white wood, warm and comfortable. All were well, and very happy to see me come. When I saw how happy they were I was very glad I had not turned back. I was there two days and we had several meetings, and beside that we would speak about everything. First, the Laplanders were sorry to go out next year; they would like to stay longer. If the Government would give them \$500 and the same provisions as now, they would only be too glad to stay longer. I said, well, you made your contract only for one year with the understanding to go out next year. Mr. Kjellmann had written that he would come and see them next summer; he, Mr. Kjellmann, wanted to start a colony somewhere in the mountains near Nushagak. The Lapps think Mr. Kjellmann might want them.

If you would let me know what you think, I would be glad. It seems that they would like to get some deer of their own. The native herders were well and did their work well. I have to give a poor account of the deer this time. Quite a number of them died.

There were 83 fawns in spring; 3 died. The number of deer now is 285. The sickness on the legs makes the deer almost unable to walk. Just above the hoof, about 6 inches, it was swollen terribly; full of matter coming out in many places. When cold it would freeze and the deer died.

The Lapps were very sorry to give such a bad account; they had never seen such a poor year, but they hope it will now be good again. They do not know the reason for so many dying. In June there was a big fire in the mountains, as well as in several places on the Tundra, burning for a whole month, and the smoke was sometimes terrible. From July to the end of October it rained a great deal, the latter part almost daily; the ground being wet all the time may have caused the sickness of the deer.

I left all well except two which were a little lame, but expect they will be well in a short time. The deer belonging to the native herders are included in the number. Wasely has three (the young one died), and Robert has four, one of the young ones having died.

Hoping to give a better account next year, I am, dear sir,

Yours, truly,

AD. STECKER.

Dr. SHELDON JACKSON,

Washington, D. C.

All the vouchers signed by the Lapps I send to you.

P. S.—The young Laplander has no contract at all. He asked me to write contracts and send them on to you, to be signed by you. He wants to have one, if he should go from Alaska, to show that he was in Government service.

Yours, truly,

AD. STECKER.

DECEMBER 15, 1902.

The agreement the young Laplander wanted I have just finished. If you will be so kind and send it to him he will be glad.

He asked me to write to you that he was willing to stay longer in Alaska, if possible in Unalaklik, if you could let him have deer, or if you would want him somewhere under the same condition as he is now. He did not know what his father would do, but he thinks his father too would like to stay.

Will you kindly let him know whether that is possible?

With all good wishes, yours truly,

AD. STECKER.

JUNE 30, 1903.

SIR: I have the honor to report the following statistics of the herd in camp at Andraefski while en route to Bethel, Alaska:

Name of owner.	Old deer and fawns of 1902.			Fawns of 1900.				
	Male.	Female.	Died or killed.	Male.	Female.	Died.	Total living fawns.	Total living deer.
Per Spein	40	87	6	31	33	1	64	191
Nils Sara	39	99	2			1	74	212
Total deer in herd								403

All the deer that are reported dead or killed perished during their travels last winter; since then no old deer have died from disease or been killed.

There were only three or four deer sick with hoof rot, so the herd was in a good condition and had plenty of feed.

N. Sara had not counted his male and female fawns. He only knew the sum total.

C. O. LIND, *Superintendent.*

Dr. SHELDON JACKSON,
Washington, D. C.

APPRENTICES AND HERDERS AT TELLER REINDEER STATION.

Independent herders, Dunnak, Sekeoglook, Ablikak. Apprentices, Serawlook, Coxrook, Kotzetuk, Keeluk, Immuklina, Nunasarlook, Ehrnuk. Other natives connected with the management of the herds at Teller Station, Etugeeuk, Ohberina, Ohneemausook, Emausrook, Dora, Elahkan, Ogeelesook (all women).

110 INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA.

Deer bought from herd for the Bureau of Education, all female.

Tautook	11
Sekeoglook	14
Dunnak	9
Total	<u>34</u>

Tautook's deer (11) were delivered to N. Klemetsen in the—

Deer bought of herders for the mission, all male.

Tautook	6
Dunnak	6
Sekeoglook	6
Total	<u>18</u>

DAILY JOURNAL, TELLER REINDEER STATION, 1902-3.

By T. L. BREVIG.

July 1, 1902: Clear and smoky, with strong north-northeast wind. Goods unpacked. At 7 a. m. Messrs. Percival, Calkins, Neeluk, and Zealook went into the mountains to look for tin. Serawlook came in from the herd for provisions.

July 2: Cloudy, with southwest wind and light rain in the evening. The inspecting party returning at 9 a. m., and left again for the Sawtooth Mountains at 1 p. m. Koztuk came in from the herd to work around the station.

July 3: Cloudy, with light west wind; fog in the evening. Some salmon was salted and some hung up to smoke. Nils and Elingnuk were in from the herd.

July 4: Foggy, with west wind. Salutes and flag raising. Mr. C. Gay and partner passed by in the afternoon on the way to York.

July 5: Clear, with strong north wind. At 11 a. m. Mr. and Mrs. Wilson, Mrs. Miles, Mr. Evans, and Mr. Howick came over from Teller in the *Dorothy*. At noon the prospecting party returned, short of provisions. Both parties left in the afternoon. A four-masted schooner went out. Tautook, Serawlook, and Coxrook came in for provisions.

July 6: Clear, light, variable winds. Two small steamers came in. Sunday school.

July 7: Light west wind, cloudy and foggy. At 8.30 a. m. the whole family, except Mrs. Brevig, Thelma, and Emma, left for the herd to mark the fawns; 130 were marked.

July 8: Isak Hatta arrived from Candle Creek, having walked the distance in seven days. He reports men at work on the different streams in the Ahgreapuk Valley. Cloudy, with medium strong southwest to west wind. Brevig, Hatta, and all the boys, except Neeluk, went to herd, marking 111; 241 the total now living.

July 9: Cloudy, nearly calm. Brevig and Hatta went to Teller in the afternoon. Heavy rain in the evening and during the night.

July 10: Clear, strong west wind, high surf; made two attempts to get home, but failed. The U. S. S. *Bear* came in late in the evening.

July 11: Clear, light west wind. Brevig returned at 9 a. m. Five male and 25 female Siberian deer were landed from the *Bear* during the morning; in excellent condition. Not a single deer had been lost on the six days' ocean voyage from Barankof Bay, Kamchatka, to Alaska. Provisions for native witnesses brought to Sitka were also landed. Mr. William Hamilton, assistant agent of education for Alaska, inspected the station. The *Bear* left at noon. Hatta took passage for Nome. Two steam tugs were over from Teller looking for business. Mrs. Brevig and the children went to Teller and returned at 8.30 p. m. in Mr. Kleinschmidt's launch, several people from Teller accompanying them. Mrs. Scroogs visited the herd. Doctor Meacham and Mr. Bovee called in the afternoon. McKenna's schooner took on water.

July 12: Clear, with strong southwest wind and high surf. Wood sawed, etc.

July 13: Showers, with strong southwest wind. Nils was in from the herd. Sunday school. The *Sadie* and another steamer came in. The *Sadie* went out in the afternoon.

July 14: Clear, with strong northwest wind in the evening. Serawlook and Tautook were in from the herd. Bervig and two boys went to Teller and brought back three bags of mail. The *Beluga* went out.

July 15: Cloudy and raining in the afternoon. Toothache reigns supreme. A boat load of wood was brought. Dunnak and Sekeoglook went to town.

July 16: Cloudy, with strong west wind. Nearly everybody at station and at herd is sick. Mrs. Brevig called at the herd to see the sick there.

July 17: Foggy and cloudy, with variable winds. The *Newsboy* passed in at noon.

July 18: Cloudy and calm; raining all day. Mrs. Brevig and Dagny were very sick during the night. All but Salgan, Cacklek, and Lucy are sick at the station.

July 19: Twenty-four hours steady rain; calm. Some patients are better and some are worse. At 12 noon a big steamer anchored 5 or 6 miles from Teller, and at 9 p. m. Mr. Lee, wife, two children, and mother-in-law were landed at the station from the *Centennial*. At 2 a. m. the *Sadie* passed in; a small steam schooner also passed in during the forenoon. Mr. Lee is going to Cape Prince of Wales as Mr. Lopp's successor.

July 20: Clear, strong southwest wind. Mr. Lofgreen came in from the American River at 10.30 p. m. Brevig quite sick during the night.

The *Bear* anchored outside the station at 11 a. m. Mr. Lee went on board. The *Bear's* launch went to Teller, and returned at 5 p. m. Tautook is in from the herd.

July 21: Strong southwest wind, with rain all day. In the evening a boat was sent on board for Mr. Lee, and later Mr. and Mrs. Scroogs were sent on shore in the *Bear's* surfboat, stopping at station over night.

July 22: Clear, light northwest wind. The Lees left at 8 a. m. on the *Bear*. Doctor Jackson came on shore and settled accounts all day. Nils and Tautook were in from the herd.

July 23: Clear, strong southwest wind. Contracts between native deer-men and the Government made and signed. Doctor Meacham and family came over from Teller in the forenoon and stopped until morning. Mr. Price, Miss Benson, and some children called in the evening and Mr. Lafgren went to Teller with them. Serawlook, Erlingnuk, and Ahmukdoolik each received 10 deer.

July 24: Clear, calm. Doctor Meacham left in the forenoon. Accounts were settled with Doctor Jackson. Nils came in from the herd to go with Doctor Jackson to Unalaklik.

July 25: Cloudy, medium strong south wind. Doctor Jackson, Brevig, Nils and some of the boys went to Teller in the morning. Brevig and the boys returned at 9 p. m.

July 26: Cloudy, with showers. Serawlook and Coxrook came in for provisions and boat, to move the camp 10 miles up the lagoon.

July 27: Cloudy and calm, with showers. Sunday school.

July 28: Calm, with frequent showers. Rumor of a shooting scrape at York. A schooner came in and one went out. The *Newsboy* came in and passed out.

July 29: Strong south wind. Cloudy, with showers all day. Wood sawing.

July 30: Cloudy, with north wind. Brevig and two boys went to Teller in the morning and returned at 5 p. m. Tautook visits friends in Nuk. A small white whale (beluga) was caught in a salmon net. Several of the herders were in from the herd.

July 31: Clear, calm, and warm, with thunder showers and several distinct peals of thunder; two or three quite sharp. Brevig and Neeluk visited in Teller in the afternoon. Wood was piled.

August 1: Clear, with light northeast wind. A canoe load of wood was brought. Doctor Meacham and family and Mr. Giddings came over from Teller in the afternoon and stopped over night.

August 2: Clear, with light, variable winds. Doctor Meacham and party left at 1 p. m. Mrs. Brevig and part of the family went over with Mr. Kleinschmidt and returned at 10 p. m. in the launch. Tellerites left at 11 p. m.

August 3: Clear, with strong north wind. Sunday school.

August 4: Partly overcast, with a gale from the east. Brevig and Neeluk went to Teller in the morning, but could not return on account of the storm.

August 5: Clear, with a gale from north-northeast. Brevig returned at noon. The *Sadie* came in early in the morning and left again at 10.30 a. m.

August 6: Clear, with strong north-northeast to north wind. The *Newsboy* called at the station. A canoe load of wood was brought.

August 7: Partly overcast, with a very strong southwest to south wind. The warehouse was arranged and wood carried in. Tautook and Coxrook were in from the herd, reporting one female very sick and two fawns crazy.

August 8: Clear; south to southwest wind. Neeluk went to Teller with mail. Wood was piled in the warehouse. Sekeoglook was in from the herd.

August 9: Partly overcast, with a thundershower in the afternoon. Sevaulook was in from the herd. The *Sadie* came in and passed out again.

August 10: Partly overcast, with changing winds and showers. Sunday school. The *Newsboy* came in and went out. Mr. Anderson, from York, came in very tired and hungry.

August 11: Cloudy and showers, with variable winds. One carcass was brought in.

August 12: Clear, with gusts of wind. Brevig, Anderson, and four boys went to Teller in the morning. Brevig and the boys returned at 4 p. m.

August 13: Partly overcast, with strong north wind. A boat load of wood was brought. A big steamer came in and passed out again.

August 14: Clear, with light west wind. Shoe grass was cut for winter use.

August 15: Strong northeast wind; cloudy. Shoe grass gathered and prepared. Mr. Rickmeyer came in at 7 p. m. from York.

August 16: Clear, with variable winds. Grass was brought in and prepared. The *Sadie* and a schooner came in.

August 17: Clear. Toothache is on the warpath again. Nunasarlook and wife and Sekeoglook were in from the herd.

August 18: Clear; light northeast wind. Brevig, Neeluk, and Kozeluk went to Teller in the morning and returned at 11 p. m.

August 19: Cloudy, with a strong southwest breeze in the afternoon, and high surf. The *Thetis* anchored outside the station at 7 p. m. last night. Brevig called on board and Doctor Horn visited on shore. The *Bear* was sighted at the anchorage, but disappeared while the *Thetis* was on the way out. Ole Pulk, a Laplander, was landed, to be taken by the *Bear* to St. Lawrence Island. Ahmukdoolik is reported very sick. Brevig sprained his knee launching a boat.

August 20: Cloudy, with strong northwest wind, abating in the evening. A heavy rain fell during the night. The *Tote* came in in the morning and stayed all day. Three carcases were sent on board. Doctor Horn visited on shore.

August 21: Strong south to southwest wind until 4 p. m., when changing to northwest. The *Tote* lifted anchor at 9 a. m., and headed in different directions, finally anchoring off Cape Riley. When the fog lifted she had vanished. Several of the children are very sick. Raining all day.

August 22: Clear; strong north wind. Wood sawing and grass fixing. Nearly all the children more or less sick. New snow in the mountains.

August 23: Clear, with snow flurries and hail. Brevig, Neeluk, Kozetuk, and Pulk went to herd at 9 a. m., and returned at 5 p. m. with the carcass of one deer. Erlingnuk was discharged for disobedience.

August 24: Clear; light north wind. A heavy frost during the night. Sunday school. The *Nearby* watered ship.

August 25: Clear, with strong northwest wind. Serawlook went to herd in the morning, and the deer were moved some distance up the hills. Brevig and Kozeluk went to Teller in the morning and returned in the evening. Shoe grass was brought in.

August 26: Partly overcast, with light variable winds. A berrying party was sent out. Shoe grass was fixed. Tautook, wife, and father-in-law passed in toward salt lake. Tautook and wife are to return in a few days.

August 27: Clear; variable winds. Brevig, Neeluk, Kozetuk, and Ahgoocook went to the herd in the morning and returned at 7 p. m. with a load of wood. Doctor Meacham and wife and Rev. H. Hosack came over from Teller and stayed over night.

August 28: Cloudy. Doctor Meacham and party left at 9 a. m. A canoe of wood was brought. Mr. Miles, wife, and several ladies of Teller visited the station. Mrs. Brevig went over to Teller with them.

August 29: West to northwest wind, with drizzling rain in the forenoon. Wood cutting. Kozeluk, Neeluk, and Pulk went to Teller at 1 p. m. for Mrs. Brevig, and returned at 9 p. m.

August 30: Cloudy; northwest wind. The log cabins were fixed with moss. Sekeoglook, Coxrook, and two women were in from the herd.

September 1: Cloudy; strong north wind. Mr. Dahlgren and partner camped on the beach.

September 2: Strong north wind. Cloudy. The boys went out berry picking and returned without any. *Sadie* went north.

September 3: Clear with strong north wind. Brevig and boys brought a boatload of wood.

September 4: The *Newsboy* came in and went out again. Wood sawed. Some tomcod were caught.

September 5: Clear. Northwest wind. Dahlgren, Giles, and Brevig visited the herd. At 7 p. m. Mr. Richardson, Hovick, Zalner, and Vatney arrived in a boat from the Arctic district.

September 6: Cloudy; strong northeast wind. Serawlook, Itugeluk, and Ablikak went to Teller in the morning. Richardson's party, Brevig, and Howick went in the afternoon and were kept in Teller by high surf. The *Sadie* came in from the north in the evening.

September 7: Cloudy, with a strong northeast wind. Serawlook and party, Brevig, and Howick returned from Teller at 1 p. m. The *Sadie* left at noon. Sunday school. Some tomcod caught in the evening.

September 8: Cloudy. Medium strong northwest wind. Howick and Neeluk went to Teller in the morning and returned at 4 p. m. in the *Dorothy* with Wilson and Sullivan going to York. Howick took Kozetuk along.

September 9: Partly overcast. Mr. Hawks went to York with two horses. The *Sadie* came in at 9 a. m. and left for the north at 4 p. m. with several passengers on board for York. Tomcod was caught and stringed and the cabins plastered.

September 10: Partly overcast with west to north winds. Cabin fixing, etc. Several small boats passed on toward York.

September 11: Partly overcast, calm. Brevig and Neeluk went to Teller at 2 p. m. and returned at 10 p. m.

September 12: Cloudy. Gale from east.

September 13: Cloudy, with a gale from east in the forenoon; calm in the afternoon. Sekeoglook, Ahmukdoolik, Coxrook and wife came in from the herd. Dunnak and wife came in from the Tooksook.

September 14: Gale from northeast over. At 1 p. m. Mr. Kleinschmidt came in the *Diamond* and stayed all night, giving the children an excursion in the evening. Sunday school. The *Sadie* and *Newsboy* came in from the north.

September 15: Partly overcast. Gale continued. Mr. Kleinschmidt left at 1 p. m. Tomcod was strung and the cabins plastered. Some wood was piled.

September 16: Clear; the gale from north-northeast continued. Some tomcod were caught. The cabins were whitewashed.

September 17: Clear and calm during the forenoon; strong northeast wind in the afternoon. Howick and Brevig visited the herd. In the afternoon Mrs. Steiner, Mrs. Hill, and Count Nystrom came in from York and stopped overnight.

September 18: Gale from east northeast all night and day. Howick and Kozetuk went to Teller in the morning and returned at 5 p. m. Mrs. Steiner's party left at 9 a. m. Wood sawed and split.

September 19: Clear, medium changing winds. Some tomcod was caught in the evening. At 7 p. m. Tautook Keok and friend came over from Teller, reporting Koveroock sick. Wood sawed and split.

September 20: Clear, with a gale from the north. The Cape Prince of Wales herder went to camp and visited the herd and left for Teller in the evening. Serawlook and Coxrook came in from the herd.

September 21: Cloudy, with light north wind. Sunday school.

September 22: Cloudy and calm. Ole and Kozeluk went after two deer seen by a native yesterday. Ole found the two. Double windows were put in. Four native canoes went up the coast.

September 23: A nice day. Brevig and Hovick went to Teller in the morning. Hovick came back at noon and went to the herd returning in the evening. Dunnak came in and felt cheap, losing so many deer. All the herders were out looking for more stray deer.

September 24: South wind. Hovick went to Teller in the morning and returned at noon. In the evening the cape herders and others were invited up, and games played. The croquet set was tried for the first time, but it was too cold to be enjoyed. Sekeoglook came in from the herd late in the evening.

September 25: Sekeoglook left for the herd in the morning. A stormy day.

September 26: South wind and rain. Mrs. Brevig and Neeluk visited the natives on the beach and got three orphans with the promise of more. Straw baskets were made.

September 27: Storm continued. Ehrnak came in from the herd. They brought in the carcass of a deer and the skin of one. The meat could not be used even by natives. Tautook and Ahmukdoolook also came in from the herd. All but Coxrook and Ahbrina went in to the herd.

September 28: Storm from east continued, abating at noon. Howick with four boys started for Teller, but meeting Brevig on the way, returned. The *Sadie* came in in the morning to get shelter, as the storm had swept Nome again, demolishing the water front and barges. Sunday school.

September 29: Cloudy with light east wind. All the natives camped on the beach left for their homes in the morning. Wood cutting. Sevawlook and Coxrook, with wives, left for the herd. Hovick and Kozetuk went to the herd also.

September 30: Clear; light variable winds. Hovick and Kozetuk went to Teller in the morning and returned at 2 p. m. Three miners from York passed through from York with samples of tin. Dunnak was in from the herd.

October 1: Cloudy; strong northwest wind. Brevig, Hovick, and Kozetuk went to the herd in the morning. Six sick deer were killed. Returned at 2 p. m. The *Newsboy* anchored outside the station at 5

p. m. The *Bear* came in a little later. Mr. and Mrs. T. Noyes called in the evening. Brevig and Hovick boarded the *Bear*.

October 2: Cloudy; strong north wind. Fifteen tons of coal were landed from the U. S. S. *Bear* in the forenoon. Mrs. Bernardi and brother called for a few minutes at noon. Many Cape Prince of Wales canoes were taken on board to be taken home. Neeluk's mother and her husband from King's Island visited on shore. The *Bear's* launch took 6 tons of coal into Teller. Anderson passed back to York. *Bear* left at 2 p. m.

October 3: Cloudy; strong northeast wind. All the coal was carried up. Hovick and two boys went to Teller and returned in the evening. *Bear* and *Centennial* anchored off Cape Riley at dark. At 8 p. m. Mr. Mountjoy, special agent of the Department of Justice, was landed by a boat from the *Bear*. Xavier came over from Teller in the evening. He had come in on the *Newsboy* from Nome and the Yukon.

October 4: A northeast gale. Brevig went to Teller in the morning. Hovick, Xavier, and Mr. Mountjoy visited the herd and returned at noon. Brevig at 3 p. m. Hovick and Mr. Mountjoy went to Teller at 3 p. m. Mr. Mountjoy to visit Marys Igloo, and Hovick to go to the States on the *Centennial*. The *Bear* had gone out during the night.

October 5: Cloudy; light northeast wind; mist at times. Serawlook and Ehrnuk went to the herd in the evening. Sunday school. The *Corwin* came in.

October 6: Cloudy, with strong north wind. Some coal was carried up from the beach. The *Centennial* and *Corwin* went out at 5.30 a. m. Kozetuk and Ehrlook went to Teller in the forenoon.

October 7: Light northeast wind, cloudy, with drizzling rain in the afternoon. Wood cut. Some tomcod caught.

October 8: Cloudy, with light east to southeast wind. Neeluk and Kozetuk went to Teller in the morning with Xavier. A boat passed up on the way to the cape. A letter received from Mr. H. Lee, Cape Prince of Wales.

October 9: Cloudy, strong southeast wind. Brevig and Kozetuk went to the herd in the morning, and came back again at 2 p. m. Sekeoglook came in with them. Three deer had died. One belonging to the Government and two belonging to Ablikak.

October 10: Cloudy, with a gale from south-southeast to south all night and day. A steam schooner anchored in lee of Cape Riley. A small boat passed by toward Point Jackson. Very high surf.

October 11: Cloudy, with showers. South gale and high surf. Two men were in from the boat which passed yesterday, now beached 5 miles from station. Sekeoglook engaged in fixing sleds.

October 12: Cloudy, medium strong east wind. Sunday school. Brevig and three boys went to Teller in the evening and returned at 10 p. m.

October 13: Cloudy, nearly calm. Mr. and Mrs. Benson, Walter Benson, and Mr. Maynard came over from Teller in the forenoon. Mrs. Benson remained at the station. The *Corwin* went out. Coxrook came in from the herd in the morning. He and Sekeoglook went to the herd at 3 p. m.

October 14: Cloudy, strong northeast wind. Irons were put on sleds. Mr. Kleinschmidt, Xavier, and Reverend Hosack came in at 5 p. m., and all but Hosack left at 6.30 p. m. for Nome in the *Diamond* steamer. The *Abler* also called and left at the same time. Serawlook, Tautook, and wife were in from the herd.

October 15: Mr. Hosack visited the herd in the forenoon and left for Teller at 3 p. m. The *Newsboy* anchored off the station at 10 a. m. and remained all day.

October 16: Cloudy, with gale from north to northwest. Two boat loads of wood were brought. The stove pipes on the main building were fixed. The *Newsboy* is watering.

October 17: Medium strong west wind. Snowing during the night; rain and sleet during the day. The *Bear* came in at noon. Doctor Weeks visited the station. Some coal and condemned Government supplies were landed. Ole Pulk and two deer dog puppies were taken on board to go to St. Lawrence Island. The *Newsboy* left for Teller at 2 p. m.

October 18: Cloudy and misty. Light variable winds. Stoves fixed. Brevig and two boys went to Teller in the afternoon and returned at 9 p. m.

October 19: Cloudy, with wind changing from west to north. The *Bear* came in the morning and anchored outside the station. Doctor Weeks returned on board. The master-at-arms was on shore. Two miners from Cape York stopped overnight in the first cabin.

October 20: Strong northwest wind. The *Bear* is ballasting. Doctor Weeks, Engineer Snyder, and the Japanese steward were on shore for a hunt. Sekeoglook is in from the herd. Dunnak and wife went to Teller. Coxrook and wife went to herd. The miners went to Teller. The coal was carried into the warehouse. Doctor McDonald went to York. Neeluk and Kozetuk went out hunting in the afternoon.

October 21: Cloudy, with very strong southwest wind. Doctor Weeks was landed from the *Bear*. Kozetuk, Dunnak, and Immuklena looked for stray deer all day.

October 22: Cloudy, with a gale from the south. Snow and sleet in the afternoon. Harnesses and halters were fixed and made. The *Bear* came in and anchored at 5 p. m.

October 23: Cloudy, with an easterly gale in the afternoon. The *Bear* took on a little water, and went under Cape Riley again at 3 p. m. Doctor Weeks called on board and returned on shore again. Sekeoglook and Ahmukdoolik are in from the herd.

October 24: Cloudy, variable winds. Blowing a gale unusually strong during the night; very high surf. The *Bear* took on some ballast. Neeluk and Immuklena went out hunting in the morning. Kozetuk and Zoatook went to the herd for sled deer. Amukdoolik also went to the herd.

October 25: Cloudy, with light northwest wind. Brevig boarded the *Bear* in the morning. Five sled deer were brought in, and Doctor Weeks and the chief engineer enjoyed a ride. The chief took dinner on shore. Sekeoglook came in with those sleds. The *Corwin* came in and took on some ballast. The *Corwin* coaled from the *Bear*.

October 26: Partly overcast; medium northeast wind. The *Corwin* coaled and the *Bear* ballasted. Butesuk, one of the orphans, died at 10 a. m. Doctor Weeks went on board and stayed until 4 p. m. Dunnak and Nunasarlook, with wives, came in from Teller, reporting an old native woman dead. Sekeoglook and Dunnak, with families, went to the herd.

October 27: Cloudy; strong north wind. The *Bear* and *Corwin* ballasted and watered ship. Doctor Weeks went on board and returned at 4.30 p. m. Butesuk was buried in the afternoon. Kozetuk and Zoatook went to the herd for a deer and brought the wrong one.

October 28: Gale from northwest; cloudy, with snow flurries. Wood was hauled. Mr. Rickmeyer arrived from York at 1 p. m., crippled with rheumatism; went on board the *Corwin*.

October 29: Partly overcast; northwest wind, medium strong. Wood hauled. Both ships taking on water. Some tomcod sold to the *Corwin*. Neeluk and Kozetuk went to the herd and did not return.

October 30: Partly overcast, light north wind. The *Corwin* went in to Teller early in the morning. The *Bear* finished watering at noon. Nunasarlook, Dunnak, Coxrook, Ahmukdoolik, Kozetuk, and Neeluk came in from the herd with four deer and a carcass. Neeluk and Immuklena went to Teller in the afternoon. A little Kings Island girl left us with some relatives at noon. Some of the *Bear's* crew were on shore fishing. Dunnak and Nunasarlook, Ahmukdoolik, Coxrook, and Tautook went to the herd in the evening.

October 31: Cloudy; light southeast wind. *Corwin* went out at noon. Tautook came in from the herd, and Zoolook and Kozetuk went to the herd to help move the camp. Neeluk and Immuklena came home from Teller at noon. Mrs. Brevig was sick all day.

November 1: Partly overcast; nearly calm. Lieutenant Mead was on the shore in the morning. The *Bear* went over to Point Spencer in the morning to take on some Kings Island people; returned at 3 p. m., and took Doctor Weeks on board. The *Corwin* is anchored at Point Spencer. The native girl is reported dead from exposure. All well.

November 2: Cloudy; strong east wind. Mr. Benson came over from Teller at noon.

November 3: Cloudy; with strong east wind. Koxetuk, Ehrmuk, and Zoolook came in from the herd. The camp is now under the mountains, 15 miles northwest from station. One of Tautook's sled deer broke its leg. Windows fixed for winter.

November 4: Cloudy; strong east-southeast wind. Mr. Benson went home after dinner. Wood sawed. Ehrmak went to the herd. Mrs. Brevig is not as well as was expected.

November 5: Light east wind. Cloudy. Wood sawing. Mrs. Brevig still low.

November 6: Cloudy; snowing until 3 p. m. East wind. Brevig and three boys went to Teller in the morning and returned at dark.

November 7: Cloudy. Thawing. Southeast wind. Wood hauled. Coxrook and wife were in from the herd.

November 8: Cloudy. Southeast wind. Coxrook and party left for the herd. Ehrmuk and Tautook came in from the herd. A boat load of wood was brought.

November 9: Clear; strong southeast wind.

November 10: Clear; east wind. Neeluk and Kozetuk went to Teller with Mrs. Benson in the afternoon and returned at 6 p. m. Nunasarlook and wife were in from the herd.

November 11: Cloudy. Nunasarlook and wife went to Brooblock (Dunnak's father) in the morning. Wood piled.

November 12: Cloudy; snow flurries in the morning. Kozetuk went hunting in the morning; missed the birds but found 12 deer. Neeluk is fixing gun.

November 13: Clear; calm until evening, when a strong northeast wind sprung up. Kozetuk, Zoolook, Immuklena, Elayokey, and Ahgookook left early in the morning to bring the 12 deer to the herd. Some tomcod caught.

November 14: Clear; a gale from the north. Sekeoglook, Ahmukdoolik and others returned from the herd with the carcass of a female deer which broke its leg on the ice.

November 15: Clear; medium north-northeast wind. Slush ice formed on the bay. A native sled came in from Marys Igloo.

November 16: Clear and calm; a thin layer of ice covering the bay. Sunday school.

November 17: Partly overcast. Brevig, Neeluk, and Immaklena went to Teller in the morning and stopped over night.

November 18: Cloudy. Tautook and wife came into Teller, and Tautook shot a dog that attacked his sled deer. Dunnak was also in. Brevig, etc., returned at 8 p. m.

November 19: Clear; cold; strong north-northeast wind. Tautook left for the herd.

November 20: Cloudy; -8° , calm. Nunasarlook and Sungoo came in from Tooksook.

November 21: Clear; nearly calm. Nunasarlook and Sungoo left for home in the morning. Mr. Hosack arrived at 2 p. m. and left again at 4 p. m. Kozetuk and Ehrnak were in from the herd.

November 22: Clear; light north-northeast wind. Serawlook was in from the herd and left again with provisions.

November 23: Clear and calm; -12° . Sunday school. Dunnak came in from the herd in the evening.

November 24: Clear; calm; cold. Dunnak and wife went to his father. Water hauled for the first time this season from the spring a half mile back of station.

November 25: Cloudy; calm. Dunnak returned from visiting his father. Stovepipes fixed.

November 26: Clear and calm. Dunnak and Brevig went to Teller in the morning and returned in the evening. Serawlook was in from the herd, reporting one male killed fighting.

November 27: Clear and calm. The flag was raised. Dunnak went to the herd at 10 a. m. Mr. Malony from Nook was in after medicine.

November 28: Clear, with gusts of wind. Coxrook was in from the herd.

November 29: Clear; calm; cold, quite.

November 30: Clear; cold; -18° . Light east wind. Sunday school.

December 1: Cloudy, with light east wind; some snow during the night. Mr. Benson visited the station.

December 2: Cloudy; -20° . East wind. Tautook, Sekeoglook, and Coxrook were in from the herd. The herd will move in two days.

December 3: Cloudy, with a gale from the south-southeast. Kozetuk, Sekeoglook, Ehrnak, Coxrook, Ahberina, and Bahneeknuk came in at 7 p. m.

December 4: Clear; strong south wind. Tautook, Serawlook, and Dunnak arrived at noon.

December 5: Cloudy; southwest wind. Brevig, Dagny, Tautook, Serawlook, Lucy Owoodluk, and Isaksrook went to Teller in the morning and returned at 4 p. m. The herd and herders, with the exception of Tautook and Dunnak, with families, left for the winter camp. Ahbrina will remain at the station to sew.

December 6: Cloudy; south wind; snow and sleet. Herders left for camp. Sahgahn, a 10-year-old boy, was received at the home. His two sisters and brother were here before.

December 7: Cloudy; east gale continued. Ahmukdoolik was in from camp. Snow and rain during the night.

December 8: South-southeast wind, very strong. Snow and sleet.

122 INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA.

December 9: Snowing until 4 p. m. Calm until 4 p. m., when a northwest wind sprang up.

December 10: Cloudy, with a gale from north-northeast. Beetuk went to Teller with mail in the afternoon.

December 11: Cloudy, with a gale from north-northeast. At 6.30 p. m. Nils-Kiemetson, Per Sara, and Neileruk came in from Unalakleet to remove the Government deer to Golofnin Bay and Unalakleet. Tautook will go with his herd to Golofnin Bay.

December 12: Clear. Blizzard from the north. Nils provisioned for the return trip. Kozetuk and Almutkoolik came in from the herd, now in winter quarters.

December 13: Cloudy. North wind. Blizzard. Nils et al. went to the herd at noon.

December 14: Cloudy. Northwest wind. Blizzard. Sunday school.

December 15: Clear, cold. Blizzard from the north continued. Brevig started for the herd at 11 a. m. A blizzard hindered us from crossing the mountains. We camped on Igloo Creek.

December 16: Cloudy, very cold. Camp was made on the Ahgeepuk at 5 p. m. The preparatory work for dividing the herd had not been done as ordered, and it was done in the moonlight.

December 17: Clear, calm, bright day, very cold; 139 deer were lassoed and separated from the main herd.

December 18: Clear, calm, cold; 136 deer were separated from the main herd; 275 in all belonging to Tautook and the Government.

December 19: Cloudy, calm. At 9.30 Brevig, Kozetuk, and Sekeoglook left the herd for the station, and reached the divide above Igloo Creek at 3 p. m., but thick weather and darkness led the guide astray, and a good part of the evening was spent traveling among the hills until camp was finally pitched on a snow bank; the outfit was one sleeping bag for the three, no tent and no stove.

December 20: Cloudy, calm; snowing in the afternoon. Brevig and party arrived at 7 a. m. Left snow bank at 3 a. m.

December 21: Cloudy; east wind, with a little snow. Mr. Hanson and Ubanks passed from York to Teller. Mrs. Brevig went to Teller in the morning and came home at 6 p. m.

December 22: Gale, with sleet from south all night and day. Sekeoglook and Kozetuk went to herd in the morning. Baking and fussing for Christmas.

December 23: Cloudy, with light west wind. Hanson and partner passed toward York at 10 a. m. Brevig and Neetuk, Zoolook and Ahgookook went to Teller and returned. Coxrook came in from the herd.

December 24: Clear and calm. Christmas festivities in the evening. Dunnak and Serawlook came in to celebrate. One strange native present.

December 25: Cloudy, cold; -20° . Games played.

December 26: Clear, strong northwest wind; -25° . Drifting snow. Festivities continued.

December 27: Clear, cold; -23° . Blizzard from north continued.

December 28: Clear, cold; -27° . Blizzard from the north. Sunday school.

December 29: Cloudy, cold; -26° . Frozen cheeks the order of the day. Blizzard from the north.

December 30: Cloudy; medium strong north wind; -21° . The herders left for camp.

December 31: Clear, calm, cold; -31° . Two sleds passed on to Teller and one stopped at station.

January 1, 1903: Clear, calm, cold; -34° . Service in the forenoon. Rev. and Mrs. Brevig's babe, born November 1, 1902, was baptized—Alfred Otis. In the evening Kozetuk and Sekeoglook came in with six deer at 10 p. m.

January 2: Clear and cold; -36° . Brevig and Kozetuk went to Teller and brought back Mrs. Price, Mrs. Elsworth, and Mr. Hosack in the evening.

January 3: Clear, calm, cold; -34° . Visitors from Teller taken home in the afternoon. Immuklena brought his wife from Nook; Dunnak's boy came in from the herd.

January 4: Clear, cold, calm; -33° . Sunday school. A sled passed each way.

January 5: Clear, calm, cold; -33° . Kozetuk, Sekeoglook and Dunnak's boy left for the herd in the morning.

January 6: Clear, calm, cold; -32° .

January 7: Clear, calm, cold; -32° .

January 8: Clear, calm, cold; -32° .

January 9: Clear, wind in gusts. Mrs. Brevig, Dagny, and Kozetuk went to Teller in the morning and returned at 6 p. m.

January 10: Cloudy, strong north wind, drifting some. Kozetuk went to the camp in the morning.

January 11: A gale from north; snowing a little. Sunday school.

January 12: Continued north gale. Blizzard. Doors and windows blockaded with snow.

January 13: Mild, a furious gale during the night. The house is entirely covered with snow, roof and all. A tunnel was made to the door.

January 14: Clear, calm, snow shoveling and other clearing-up work done after the storm.

January 15: Cloudy, calm.

January 16: Clear, calm, cold; nice day.

January 17: Clear, calm, cold.

January 18: Clear, calm, cold. Sunday school.

January 19: Clear, cold, calm; -23° . Immuklena and wife went to Teller in the morning and returned at night.

January 20: Clear, calm, cold. Kozetuk and Dunnak's boy arrived from the herd in the morning. At noon Mr. Lee arrived from the cape with eight deer and four carcasses on the way to Nome. Okbaok was with him. Brevig went with them to Teller.

January 21: Clear, cold, calm; -38° . Brevig and Mr. Price returned from Teller at 4 p. m. Mr. Price brought his graphophone and entertained the children and others.

January 22: Clear, cold, calm; -38° . Mr. Price went to Teller in the afternoon.

January 23: Clear, cold, calm; -36° . Kozetuk and partner went to herd in the morning.

January 24: Clear, cold, with a light east wind; -36° .

January 25: Cloudy, southeast wind in the afternoon; growing milder. Sunday school.

January 26: Cloudy, with a gale from south, drifting badly; -36° to $+18^{\circ}$.

January 27: Cloudy, light south wind. Sekeoglook came in from camp in the evening.

January 28: Cloudy, calm, a light fall of snow. Sekeoglook went to the herd at 11 a. m. Coxrook and wife came in from the herd.

January 29: Cloudy, calm, light snow in morning, clear and cold in the afternoon.

January 30: Clear, cold, calm; -38° . Okbaok and party returned from Nome at 5 p. m. Mr. Lee will come later.

January 31: Clear, strong northeast wind. Okbaok and party left for home in the morning; -35° .

February 1: Clear, cold; -27° . Northeast wind. Sunday school.

February 2: Clear, cold, strong north-northeast wind; -25° .

February 3: Clear, strong southeast wind in the afternoon, growing milder; -33° . Thelma is sick.

February 4: Cloudy, with a furious gale from northeast; -27° . Thelma is a little better.

February 5: Cloudy, with a furious gale from northeast; -36° . The minimum registered -52° in the morning, but, as it was set at 15° and set again at 36° in the morning, there must have been some mistake. Lamps have been burning since yesterday morning. The boys could not reach the spring. Entirely blockaded.

February 6: Cloudy, calm; -20° ; snow shoveling. Kozetuk and Dunnak's boy came in from the herd.

February 7: Kozetuk and party went to herd in the morning. Neeluk and Zoolook went to Teller and returned in the evening with some outside mail.

February 8: Clear, with a blizzard from the north. Sunday school. At 6 p. m. Mr. Lee and Mr. Meyer arrived; -33° .

February 9: Clear and calm. Mr. Lee and Mr. Meyer left for the cape in the morning; -36° .

February 10: Clear, calm, cold; -38° .

February 11: Hazy, cold, -31° ; a strong east wind all day. Mr. Christenson from York passed by at noon. Nunasarlook came in for provisions.

February 12: Storm continued. Nunasarlook stayed over on account of the storm. Nookoolina came in.

February 13: Mild, snowing, variable winds. Serawlook and wife came in from the herd at 1 p. m. with the carcass of a deer. Sekeoglook was reported drunk, and had procured the whisky from a white man. Nunasarlook and Nookoolina left in the morning.

February 14: Cloudy, calm. Sunday school.

February 15: Cloudy, calm, mild.

February 16: Cloudy, with a strong northeast wind, snowing and drifting badly. Serawlook and wife left for herd in the morning.

February 17: Cloudy, snow, a gale from the north. Sekeoglook in from the herd.

February 18: Storming from the north. Sekeoglook left for the herd in the morning. At noon Reverend Hosack came in from Teller in company with Mr. Leonhauser. Left again at 2 p. m. Miss Juneau Shepherd came with them.

February 19: Cloudy, calm. Blockade partly raised.

February 20: Brevig and six boys went to Teller in the morning. Brevig stopped over night. A very hard storm during the night. Cloudy, with variable winds.

February 21: Cloudy, with snow and storms from east to southwest. Brevig could not return on that account. Tautook, Ehrnuk, and a native arrived from Golofnin Bay, and Dunnak's boy from the herd.

February 22: Cloudy, snowing, variable winds. Brevig and Bensons returned at noon from Teller. Sunday school.

February 23: Light variable winds. Cloudy and mild. Ehrnuk and Dunnak's boy left for the herd in the morning. Tautook and party left for Golofnin Bay at noon.

February 24: Northeast wind, cloudy. Mrs. Brevig and Neeluk left for Teller with Mr. Benson's dogs in the forenoon.

February 25: Foggy in the forenoon, calm, clear; southeast wind began at 5 p. m. Mrs. Brevig arrived at noon. Mr. and Mrs. Benson left at 1 p. m. Mr. Lee and Mr. Rognon arrived from the cape at 2 p. m. with three natives and seven deer. Left deer and natives here and proceeded to Teller at 4 p. m.

February 26: Strong southeast to south wind; snowing and drifting. The cape boys and four boys from the station went to Teller in the

morning with the carcasses Mr. Lee brought, returning at 8 p. m. Mr. Lee and Mr. Rognon came in at 5 p. m. with Mr. McNeal. All stopped over night.

February 27: Clear, calm. Mr. McNeal left at 9 a. m. Mr. Sheldon, from Lanes Landing, passed the station at 9 a. m. Mr. Lee and party left at 10.30 a. m.

February 28: Cloudy, strong southeast wind and snow in the evening.

March 1: Cloudy, with a gale from south; snowing and thawing. Sunday school. Kummunksenna came in from wood choppers' cabin.

March 2: Cloudy. At times a gale from the south. Kummunksenna left for home in the morning. Neeluk and Ablikak went to look after the two deer in the afternoon.

March 3: Clear, calm; fine day. Wood was brought into the warehouse and doors and windows opened. At 7 p. m. Kozetuk and Ehrnuk came in from the herd reporting a female dead, belonging to Ablikak.

March 4: Cloudy, mild, calm. Kozetuk and Ehrnuk left for the herd at noon. Neeluk and Aggookook looked after Mr. Lee's deer and returned at midnight.

March 5: Cloudy, colder; -10° . Immuklena went to Teller for mail, but got none; the mail is expected in two days.

March 6: Cloudy, calm; light south wind in the evening. Neeluk and Elayoke went to look after Mr. Lee's deer in the afternoon. Wood was brought into the big storeroom.

March 7: Cloudy, southeast wind.

March 8: Cloudy, partly overcast, mild. Brevig went to Teller in the morning and preached in the evening.

March 9: Cloudy in the afternoon. Light south wind, clear and calm in the morning. Mr. McNeal brought Brevig home in the afternoon. Dunnak and wife, Coxrook, and Sekeoglook came in from the herd in the evening.

March 10. Cloudy, a blizzard from south to southwest, a very heavy snowfall in the evening. Brevig, Dunnak, Sekeoglook, Coxrook, and Zoolook went to Teller in the morning. On my complaint, Sekeoglook was committed to jail for thirty days for being drunk and disorderly, and Ahtkitetook was committed for two months for being drunk and disorderly and furnishing Sekeoglook with whisky. Testimony was also adduced implicating a white man, and I swore out a complaint against him for selling and giving whisky to the natives. Returned at 5 p. m.

March 11: Cloudy, with a gale from southwest; thawing. Dunnak and wife and Coxrook left for the herd at noon.

March 12: Gale continued from southwest. Two sleds from Topkok stopped over on account of storm.

March 13: The storm ceased during the night, the wind changed to north and it cleared up. Drifting some from the north. The Topkok sleds left for home in the morning.

March 14: Cloudy with a gale from the northeast. Neeluk and Immuklena went to move Mr. Lee's deer.

March 15: Clear, calm, cold. Kozeluk, Ehrnak, Dunnak and boy came in from the herd, having been out in the storm all day yesterday and night. Sunday school. Mrs. Brevig is suffering with a severe toothache.

March 16: Cloudy, with a gale from the east. Brevig, Ehrnal, and Dunnak's boy went to Teller in the morning and returned at 5 p. m.

March 17: Cloudy, snowing during the night, a gale during the day. Lee's deer were moved to new pasture ground.

March 18: Cloudy, north-northeast gale for twenty-four hours. Entirely snowed in.

March 19: Clear, cold, light northeast wind. In the evening Judge Hunton and Mr. Winfield called at the station. Brevig was summoned as the complaining witness against Mr. Shelton. Two domestic letters were received.

March 20: Brevig, Zoolook, Immuklena, Ablikak, and Isanituk went to Teller. Mr. Shelton was found guilty by jury trial and committed for five months. Mrs. Bernardi and Okboak came in at 7 p. m. Mr. Brevig and Winfield returned at 8 p. m. Clear, calm, cold; — 27°.

March 21: Clear and light south wind. Mr. Winfield and Mrs. Bernardi left for Teller in the morning. Thomas Elayoke and Okbaok left in the afternoon. Elayoke and Immuklena went to look after Mr. Lee's deer in the forenoon and returned at 8 p. m.

March 22: A gale from south-southwest, snowing and drifting badly. Sunday school.

March 23: The gale and snowstorm from south-southwest continued all day. The shovels were kept busy all day.

March 24: Gale continued and changed to northwest at 6 p. m. Blockaded.

March 25: Cloudy. Light north-northeast wind. The Cape sleds all left for home.

March 26: Clearing up toward evening, but the gale continued and drifted badly.

March 27: Clear, cold. The two Cape boys that came down for Mr. Lee's deer some days ago left for home, minus sleds and deer. Serawlook and Kozetuk came in with two carcasses.

March 28: Cloudy. Snowstorm from southeast to southwest, blowing a gale during the night.

March 29: Clear, cold; — 26°. Sunday school.

March 30: Clear, calm, cold. Serawlook and Ahgoolook went to the herd in the morning. Brevig and Kozetuk went to Teller in the morning and returned in the evening.

March 31: A northeast gale.

April 1: Clear and mild. Ehrnak came in from the herd.

April 2: Clear, calm. Ehrnak went to wood-chopper's cabin and returned.

April 3: Cloudy and snowing. Mr. Lee and Mrs. Lee came in at 11 a. m. Several men called. Mr. Corliss from Gold Run was in looking for his brother, who, in a demented state, had wandered off just before a storm set in. Many natives passed by. Kozetuk and Ehrnak left for the herd in the afternoon.

April 4: Cloudy and drifting; southwest to northwest wind very strong. Brevig and Lee went to Teller in the morning and returned at 6 p. m.

April 5: Clear, northeast gale. Soquina left for home early in the morning. Sunday school. Mrs. Brevig and the Lees left for Teller in the afternoon. Mr. Lee will talk on the Greenland Eskimos in the evening.

April 6: Clear until 5 p. m.; hazy. Frank Zaremba and Russian Mike passed by toward California Creek in the forenoon, Mrs. Brevig returned from Teller at 5 p. m.

April 7: Clear, calm, snow shoveling. Mr. and Mrs. Lee, Mr. Knowles, and Mr. Luther came in in the evening. Mr. Knowles and Luther went back to Teller at 8 p. m.

April 8: Cloudy. Snowing in the afternoon. At 4 p. m. two Cape herders came in with five carcasses to sell in Teller. Sekeaglook came in at 5 p. m.

April 9: Cloudy, with a howling blizzard from the north all day. Frank Zaremba and Mike came in from the creek at 6 p. m. nearly exhausted and frostbitten from battling with the storm. Their tent blew down and they had to pull out for the station, 14 or 15 miles away.

April 10: Clear, calm. Mr. Lee went to Teller with the deer meat. Serawlook, Kozetuk, and Dunnak's boy came in at 4 p. m. Zaremba left for his camp in the morning.

April 11: Clear and calm, -15° . Mr. and Mrs. Lee left at 9 a. m., Kozetuk taking them with deer to wood-choppers' cabin. The two boys left for the Cape herd across the mountains at the same time Mr. Lee did. Serawlook, Dunnak's boy Sekeoglook, and Elayoke left for the herd at 11 a. m. Zaremba went to Teller at 2 p. m. Kozetuk returned at 6 p. m.

April 12: Clear, with light east wind; -11° . Sunday school.

April 13: Clear, east wind. Kozetuk, Immuklina, and wife went to the herd. Annabuck went with them. Ehrnak came in at 6 p. m. Miss Benson came over in the forenoon to stay a few days. Mr. Luther came after flour.

April 14: Cloudy, a northeast gale blowing all night. Drifting and snowing. Ehrnak went to herd in the morning.

April 15: Clear, a gale from north, drifting bad. Kozetuk came in from herd with six deer and one carcass. Annabuck came with him.

April 16: Clear and calm. Kozetuk, Lucy, Ahwoodluk, Gubbemuk, Ag pah ook, Irrahlook, Esanetuk, Cocklik, and Sahgahu went to Teller in the morning and returned in the evening.

April 17: Cloudy, light northeast wind; -8° . Two Cape sleds passed in to Teller. Kozetuk went to the herd. Dagny's seventh birthday was celebrated.

April 18: Clear and hazy. Mr. Rognon, en route for Teller, passed the station. Mr. Winfield and Miss Benson left for Teller at 7 p. m. Light northeast wind.

April 19: Clear, calm. Sunday school.

April 20: Clear and calm. Ehrnak, Coxrook, and Ahbrina came in from the herd; 19 fawns reported born. Two females died in fawning.

April 21: Clear, strong north-northeast wind. At 6 p. m. Mrs. Bernardi, Mr. Rognon, and Mr. Armstrong came to the station, stopping until morning, en route to Cape Prince of Wales. Frank Zaremba passed out to the creek at noon; -14° .

April 22: Clear, blowing in gusts. Ehrnak Coxrook and wife went to Teller in the morning. Brevig went with them and returned in the evening; the rest went to the herd. The travelers left in the morning.

April 23: Clear, light northeast wind. Snow shoveling.

April 24: Light northeast wind. Roof cleared from snow. Clear.

April 25: Clear, light east wind. Mr. Winfield, Walter and Ethel Benson passed by en route to Cape Prince of Wales at 2 p. m. Sekeoglook, Serawlook, Kozetuk, and Dunnak's boy came in from the herd with 12 deer.

April 26: Clear, calm. Mr. Price, United States Marshal Evans, and Mr. Hirschberg came over at 8 p. m. to go to Cape Prince of Wales in the morning.

April 27: A beautiful day. Mr. Brevig and party with eight deer started at 6 a. m., eight persons going—Kozetuk, Sekeoglook, Dagny, and Ablikak.

April 28: Clear, mild. Light south wind. The big storeroom and cabins cleared of snow gathered during the winter.

April 29: Another fine day, calm and mild.

April 30: Beautiful weather. Dunnak came in from the herd with his family and will stay with his family until Brevig comes back. Zoolook and Esanetuk were sent to Teller to verify rumor of a white man's death very suddenly at 3 a. m. yesterday morning from an obstruction in the intestines.

May 1: Clear, calm, thawing.

May 2: Clear, calm. Fredrik Larson and Ivan from Golofnin Bay arrived in the evening.

May 3: Clear, bright, calm. Brevig and party returned at 1 a. m., having been thirty-one hours on the way from the cape here. Brevig brought three orphans, two boys, and one girl, about 13 years of age, who had been forced into marriage with a big slouchy man. She asked to come to the home as a protection. Adloat, Mr. Lee's interpreter, came along on a visit. Mr. Herchberg concluded to stay at the cape. Mr. Evans and Mr. Price left for Teller at 2 a. m. Fredrik, Ivan, and Adloat each addressed the natives; three services held. Fredrik and party left at 9 p. m. One boy arrived.

May 4: Clear, bright, + 44°. Adloat walked to Teller in the morning and returned in the evening. Dunnak and family, Kozetuk, Immuklina, Ablikak, Ehrnak, and Sekeoglook left for the herd in the morning.

May 5: Clear, strong northeast wind in the evening. Brevig and Adloat went to Teller in the morning, and returned in the evening accompanied by Reverend Hosack. Adloat had service in Teller at 4 p. m. for the natives. Mr. Winfield, Mr. and Miss Benson, and Mr. Rognon passed by from Cape Prince of Wales. Rognon brought an orphan.

May 6: Clear, strong northeast wind. Lucy's birthday. Mr. Winfield called.

May 7: Clear, strong northeast wind. Mrs. Brevig went to Teller in the morning and returned in the evening. Serawlook, Eloyoke, and Ahgookook came in from the herd, reporting 178 fawns.

May 8: Clear, strong north-northeast wind. Adloat, Neeluk, Zoo-look, and Esanituk went to Teller at noon and returned at 9.30. Adloat held service at 4 p. m. Mr. Rognon and Mr. Winfield came over in evening. Ogeelesook and partner stopped.

May 9: Clear, strong north-northeast wind. Mr. Rognon and Adloat left for home in the morning. Brevig, Winfield, and the two native boys left for Teller in the morning. Brevig swore out a complaint against Okkuk for shooting a deer during the fall. Kozetuk was in from the herd, reporting Tautook also at the herd.

May 10: Clear, strong north-northeast wind. Sunday school.

May 11: Clear, strong northeast wind. Brevig and Leonora went to Teller in the morning to attend the case. Okkuk pleaded guilty, admitting having killed four deer, and also gave testimony against five more natives having shot eight deer. A warrant was issued against them. Leonora also visited Teller. Ablikak and Ehrnak were in from the herd. Three of the warrants were served, and all pleaded guilty. Returned at 9 p. m.

May 12: Clear, strong northwest wind. Ablikak and Ehrnak went to the herd in the afternoon.

May 13: Clear, light northwest wind. Sand was hauled around the station.

May 14: Clear, light northwest wind. Gale during the night. Tau-took, wife, and brother-in-law came in from the herd at noon; also Serawlook and Ahberina, Winfield, and Gehrman passed by with a boat.

May 15: Clear, strong north wind, with light mist at times. Tau-took and family left for home by way of Teller at noon. Serawlook and Ahberina left for the herd at the same time. A Topkok native, who came down for medicine for a sick child, left for home in the morning. Sand was hauled around the house.

May 16: Cloudy, strong northeast wind, with snow flurries; a gale during the night. Dunnak's father and brother visited the station in the afternoon. Dagny and Neeluk went with them on a return visit.

May 17: Partly overcast; medium northeast wind. Several natives went out on the spit. Sunday school.

May 18: Clear, strong northeast wind. Soquina came in from Topkok. Mr. Estabrook and Mr. Bakhus passed by on the way to Cape Prince of Wales in the afternoon.

May 19: Clear until evening. At 6 p. m. Mr. Herchberg and Mr. McNeal came in from the cape. Koneeleek, Mr. Lee's girl, came with them on a visit. Kozetuk and Dunnak came in from the herd now on Bay Creek.

May 20: Clear, strong north wind. Neeluk went to the herd in the morning and brought in five deer. Kozetuk brought in six deer and with Zoolook went after wood with ten sleds at 10 p. m. Coxrook came in from the herd.

May 21: Clear, strong northeast wind. Eight loads of wood were brought, and the boys immediately left for more. At 1 p. m. Dunnak and Ogeelesook came in with seven deer and took Lucy and all the children on a visit to the herd, returning at 9 p. m.

May 22: Clear, light northeast wind. Ten big loads of wood were brought in at 9 a. m. Neeluk was entirely snow-blind. Kozetuk, Mrs. Brevig, Konaluk, and Ahblorahlook went to Teller at 11 a. m. and returned at 7 p. m. Some letters from the outside brought by Mr. Bartell came in. Seeki was arrested yesterday. Dunnak was in from the herd.

May 23: Clear, light northeast wind, strong in the evening. Brevig and Kozetuk went to the herd in the morning and returned in the evening. Serawlook, Immuklina and wife, Ehrnak, Ablikak, Ahgoosook, and Elayoke also came in for provisions and wood. The three boys stopped until Monday. Mr. McNeal and Konuleek left for the herd in the evening.

May 24: Clear, strong northwest wind during the night. Light during the day. Sunday school.

May 25: Clear, light north-northeast wind, with snow flurries in the forenoon. Sleds were fixed. At 6 p. m. Neeluk, Kozetuk, and Zoolook went after wood with ten deer. Ehrnak brought wood for camp.

May 26: Clear and calm, a little warmer. Ten loads of wood were brought in and the boys left for more in the evening. Coxrook and Nunasarlook came in from the herd.

May 27: Cloudy, calm, a light mist from the west. Eight loads of wood were brought in. Serawlook and Brevig went to Teller in the morning and found Ahblorahlook, who had run away in the night, in Ogmahhane's cabin, and by the aid of Judge Stanton was brought back. Letters from Mr. Lee.

May 28: Cloudy, fine day. Mr. Brevig, with all the children except Thelma and Alf, went to Teller in the forenoon. Dunnak took them there with 10 deer; they returned at 8 p. m. Serawlook left for the Cape with Ahblorahlook at 9 p. m. with two deer. Ehrnak was in from the herd.

May 29: Cloudy, calm. At 3 a. m. Mr. Herchberg and McNeal and Kozetuk, with three deer and a dog team, went to Ear Mountain to prospect for tin.

May 30: Clear, light north-northeast wind. Dunnak and family went to Point Spencer to hunt seal. Immuklina went after wood and on his return Neeluk went with him to the herd.

May 31: Clear, light northeast wind, thawing. Zoolook went to the herd in the morning. Sunday school.

June 1: Calm, foggy. Wood sawed. Coxrook, Ahberina, and Etugeeuk were in from the herd.

June 2: Clear, calm, warm. Thawing a little. Ehrnak was in from the herd. Wood sawing, cleaning up.

June 3: Cloudy, light southwest wind with snow flurries. At 6 a. m. Serawlook came from the cape reporting Ahblorahlook, now with Mr. Lee, having run away in a canoe for two days. Serawlook went to the herd in the evening.

June 4: Cloudy, light west wind. Brevig went to Teller in the morning and returned at 7 p. m. Wood sawing.

June 5: Clear, thawing some. Wood sawing, etc.

June 6: Clear, light east wind. Kozetuk returned from Ear Mountain, having seen three caribou. Brevig and Kozetuk went hunting in the evening and got six birds.

June 7: Clear, calm, warm in the afternoon. Sunday school.

June 8: Clear, fine day, with a northeast gale. In the evening Marshal Evans, Judge Shelton, and Reverend Hosack, Brevig, and Serawlook, with six deer, left for the sandpit for a pleasure trip. Freezing during the night.

June 9: Clear, cold. North-northeast wind strong.

June 10: Cloudy, some rain during the evening and night.

June 11: Partly overcast. The pleasure party returned at 6 a. m. and the visitors left for Teller at 8 a. m. Coxrook and Neeluk were in from the herd.

June 12: Clear until 7 p. m., when a heavy fog set in. Serawlook and wife went to the herd and Teller. Coxrook and wife came in to work around the station.

June 13: Clear and calm, foggy in the morning. At 11 a. m. Herchberg and McNeal came in from Ear Mountain with good reports. Clearing up and sawing wood.

June 14: Clear, strong north-northeast wind. Sunday school. Ablikak and Ahgoosook were in from the herd.

June 15: Clear, strong north-northeast wind. House cleaning, woodcutting, etc. Ehrnak and Nunasarlook were in from the herd for provisions. Two native sleds passed by toward Point Spencer.

June 16: Cloudy, calm, light rain in the afternoon; woodcutting, house cleaning, etc.

June 17: Foggy, calm; the graves were decorated. House cleaning, woodcutting, etc. Nunasarlook, Ehrnak, and Immuklina were in from the herd for a boat and flour.

June 18: Clear, warm, light southeast wind. Elayoke came in from the herd in the morning. Woodcutting, boat fixing. Mr. McNeal, Gehrman, and Kozetuk went to Ear Mountain overland in the evening.

June 19: Clear, warm, sultry. A gale from the north-northeast. A small garden planted. The dingey was fixed, and wood carried into the warehouse.

June 20: Clear, calm in the forenoon; strong northeast wind in the afternoon. The ice is opening up along the north shore of the bay. Neeluk was in from the herd with sleds and harness, leaving again in the afternoon.

June 21: Clear, strong north-northeast wind. Mr. Herchberg came over in the forenoon, and stayed all night. Mr. Miller came down from York nearly exhausted, being four days on the trip and two days without food. He slept five hours, and went to Teller in the evening.

June 22: Clear, strong north-northeast wind. Nunasarlook, Ablikak, and Ehrnak were in from the herd. Dunnak was reported back at the herd.

June 23: Clear, strong north-northeast gale. The second story of the house was cleaned. Zoolook and Esantuk went to Teller with Herchberg, and returned in the evening, reporting some herring caught.

June 24: Clear, very strong north-northeast wind. Boats fixed and painted. A few tomcod were caught.

June 25: Clear, a north-northeast gale. The ice moved outside the sandspit in the afternoon. Clear water as far as Cape Riley. At 4 p. m. smoke from two steamers was sighted and at 8 p. m. two steam

whalers were sighted. Neetuk came in from the herd. Ehrnak went after wood.

June 26: Clear and calm. Nets were fixed. At 5 p. m. Mr. Clauzough and partner passed up toward York with lumber for three houses. Mr. Hovick also arrived at the same time, having walked from Cape Douglass, leaving his party and boat there.

June 27: Foggy, calm; light drizzle in the afternoon. Nets fixed, wood cut, etc.

June 28: Cloudy, foggy; light west wind. Ice floating with the tide around the bay. Mr. Windt came in from Teller. Sunday school.

June 29: Cloudy, foggy; light west wind. The little boy is sick from cold. Windt and Zoolook started for the Arctic, overland.

June 30: Cloudy, foggy; light west wind. Zoolook and Windt returned at 9 p. m.; the fog too thick. Accounts summarized. Wood cutting and small work around the station.

CORRESPONDENCE CONCERNING THE ESTABLISHMENT OF A NEW REINDEER STATION IN THE NEIGHBORHOOD OF WAINWRIGHT INLET.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION, ALASKA DIVISION,
Washington, D. C., November 20, 1903.

MY DEAR MR. JARVIS: As you know, the cutter *Thetis* failed this summer to reach Point Barrow on account of the ice; also the supply schooner, which was sent up from S. Foster & Co., failed to reach that place. Captain Healy had on the *Thetis* the mail and some coal for the Government school; the mail he landed at Point Hope and the coal he used up. This experience has strengthened the purpose of the office to establish a reindeer station at a point as near Point Barrow as possible, and yet which can be reached every year during the open season. This station will be helpful as a stopping and supply station in the carrying of the winter mail. If such a station had been in existence the supplies for the reindeer station, missions, etc., could have all been landed and then during the winter transported to Barrow by the reindeer.

I have written both Captains Healy and Tuttle, but think that you will know better than either of them the best place for such a location. If there are any small native settlements where there is a good location, that would be an additional advantage. Is there a good place along Point Belcher, Wainwright Inlet, or Icy Cape? The winter that you went up the coast, did you find any villages through that section? Kindly write me your views with regard to the nearest station we can get to Point Barrow and then further give me a list

of places where it will be well to build a hut for establishing relay stations for carrying the winter mail between Barrow and Kotzebue by way of Point Hope.

With kind regards to Mrs. Jarvis, I remain,
Very truly, yours,

SHELDON JACKSON, *General Agent.*

Lieut. D. H. JARVIS, R. C. S.,
Sitka, Alaska.

SAN FRANCISCO, CAL., *November 25, 1903.*

MY DEAR SIR: YOURS of 18th instant, in reference to a new station to southward of Point Barrow, is just received. In the matter of a change of station from Point Barrow to a more southerly point, Wainwright Inlet would seem the most available point of landing. The matter of finding food for the reindeer in that vicinity must be taken into consideration; again, there are very few natives there, and, as it is not a favorable point for carrying on whaling, I imagine it would be difficult to induce the natives to leave Point Barrow and settle at Wainwright Inlet. Before the advent of steam whalers the sailing whalers always reached Point Barrow and passed to the eastward, returning in the fall; disasters were occasionally met, as they are elsewhere. When the steam whaler appeared the sailing whaler gradually disappeared, until at present there are none engaged in whaling beyond Point Barrow.

The fact that so many sailing vessels have reached and returned from those high northern latitudes proves it can still be accomplished by sailing vessels. The failure of the schooner to reach Point Barrow this season must be unusual, as I am informed by some of the whaling captains they had no trouble reaching Point Barrow; their ice troubles were met far to the eastward of that place.

I find in looking over my diaries the following dates of reaching Point Barrow: 1896, August 13, much ice encountered for nine days before reaching there; 1897, August 8, much ice for six days before reaching there; 1898, July 31; 1900, August 17; 1901, August 17; 1902, August 8.

My experience has been that from August 8 to August 20 is the most favorable time to reach Point Barrow. If a vessel's movements would be timed to reach there within those dates I see no reason for not reaching the station.

Yours, sincerely,

F. TUTTLE,
Captain, R. C. S..

Rev. SHELDON JACKSON,
General Agent of Education in Alaska,
Washington, D. C.

REPORT OF THE
 COMMISSIONER OF THE GENERAL LAND OFFICE
 TO THE GOVERNOR, FEBRUARY 1, 1905.

My first object in making a visit of November 22, 1904, to the coast between Cape Collie and Cape Barrow was to find a point as near Point Barrow as possible, which could be reached every year during the open season.

I was very sorry to learn that the Icy Cape and Icy Cape supply stations were closed for the season. Point Barrow was open to a number of icebergs and I know the establishment there would have been closed if it were not for the icebergs.

I think your proposed station is a good one, and the three points you mention—Point Belcher, Wainwright Inlet, and Icy Cape—would be good ones. Icy Cape is the farthest south, and I should say there would never come a year when vessels could not reach this point at least, but for your purpose it is hardly suitable. Landing is made upon the narrow sand spit with a wide lagoon separating it from the mainland. Moreover, the country back of the mainland is low and marshy, and we found comparatively little food for reindeer thereabouts. I would not advise Icy Cape.

Point Belcher is the farthest north of the three, and it is possible there may come a year when this place could not be reached with safety during the open season, but these years will be rare. The surrounding country is good for your purpose, reindeer food being the best we found north of Cape Beaufort. The country is more rolling and altogether better than at Icy Cape. There is a small native settlement, or at least there was, but it is at so low a state now that it can hardly be called permanent.

Wainwright Inlet is between Icy Cape and Point Belcher, rather nearer the latter. It has a large river emptying into it, where fishing and hunting are good, and furnishes good means of access to the interior country. The surrounding country is somewhat similar to that of Point Belcher, and I imagine a short distance up the river the food for reindeer will be found as good as anywhere in that region, for the wild caribou have always been more or less plentiful thereabouts. There is a considerable native village at Cape Collie, on the north side of the inlet, and another smaller one some 10 or 12 miles south at Kilimantavie. Altogether, I should say Wainwright Inlet would be the most desirable place, although of course the communication between there and Point Barrow would be longer. Still, for your second purpose—as a relay station for carrying mail—I should think it was better situated than Point Belcher, the distance being about 100 miles.

The winter I went up the coast I found two native families situated at the mouth of the Kookpowruk River, several more at Kilimantavie, a fair number at Cape Collie and also at Point Belcher. These were

all the villages between Point Hope and Point Barrow. The southern ones were miserably poor, and I doubt very much if they are in existence now.

With regard to the relay stations for carrying mail between Kotzebue Sound and Point Barrow by way of Point Hope, I do not exactly comprehend your intention. Do you mean these places for points to change your deer, or do you mean them simply as stopping or resting places? If the former, I should say that the south of the Kivelow River should be the first; second, Point Hope. Both these places, you will understand, are in good deer country, and where it would be well to establish them. From Point Hope the route would most likely go by the Koopok across the hills to the coal mine, where there might be the third station. The fourth would naturally come midway between the coal mine and Wainwright Inlet, but the reindeer food in that region is poor, and you would be compelled to place the station too far inland to support your deer. I would advise a point somewhere between Cape Beaufort and Kookpowruk. These, with Wainwright Inlet, should answer your purpose. It would be impossible for you to construct huts for the daily stops. Your men might, however, during their first trips, build snow houses at convenient places along the route easily and with no expense.

I will be very much gratified to see deer scattered along that part of the coast and the people broken up into smaller communities with their deer herds. I believe the country will support them and by these means can become populated and prosperous.

Trusting you are in good health, and with best wishes from Mrs. Jarvis and myself to Mrs. Jackson and yourself, I am,

Very truly, yours,

D. H. JARVIS,
Collector of Customs.

Dr. SHELDON JACKSON,
Bureau of Education, Washington, D. C.

CORRESPONDENCE CONCERNING THE PURCHASE OF REINDEER IN SIBERIA.

NORTHWESTERN COMMERCIAL COMPANY,
Seattle, Wash., November, 18, 1902.

MY DEAR SIR: Referring to our conversation at Nome, Alaska, in regard to purchase of reindeer on the part of the Government, and your suggestion that some representative of the company should meet you in Washington during the winter, I beg to state that I expect to leave for the East the latter part of December and will be in Washington early in January. Will you be in the city at that time, and will

138 INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA.

it be convenient to consult with you in regard to the reindeer question, and also to meet the Secretary of the Interior?

Awaiting your reply before definitely arranging my dates for an eastern trip, I have the honor to be,

Very respectfully, yours,

NORTHWESTERN COMMERCIAL COMPANY,
W. T. PERKINS, *Auditor.*

Hon. SHELDON JACKSON,

*United States General Agent of Education in Alaska,
Department of the Interior, Washington, D. C.*

JANUARY 3, 1903.

SIR: Referring to our conversation of January 2 concerning the purchase of reindeer from your company, I reply that the United States Bureau of Education will pay \$25 a head for 400 healthy female reindeer not over 6 years of age, landed at Teller reindeer station in good condition and turned over to the United States agent at that place, delivered not later than September 1, 1903.

They will be inspected by the Government expert on animal diseases, and his written statement will be accepted as to their healthy condition.

I have asked Congress, for the fiscal year commencing July 1, 1903, an appropriation of \$25,000 for the reindeer enterprise. If that appropriation is granted I shall be in a position to enter into another agreement for the purchase of additional reindeer between July 1, 1903, and June 30, 1904.

Very respectfully, yours,

W. T. HARRIS,

United States Commissioner of Education.

Mr. W. T. PERKINS,

*Auditor Northwestern Commercial Company,
Seattle, Wash.*

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION, ALASKA DIVISION,
Washington, D. C., January 3, 1903.

DEAR SIR: I have been unable to find a copy of the report containing the letter that you wanted; therefore I have had the letter copied for you.

With regard to the commercial value of reindeer, permit me to say upon my own account that the result of my reading, observation, and experience is that a good herd of reindeer in Alaska is as profitable as the ordinary gold mine. After the herd is once started the fawns born will cost, for care and keeping, an average of not more than \$1 between birth and 4 years of age. When 4 years old the surplus males

can be sold to the butcher for from \$25 to \$60, according to the state of the market and the time of year. They can be trained to harness and sold to prospectors for from \$60 to \$150, a few having been sold at the latter sum in Alaska.

With the multiplication of mining camps through Alaska there will always be a great demand for fresh reindeer meat, so that there will be a good market for the surplus males.

I do not know where you can get better interest on one dollar's worth of care than after four years to sell the same for \$25 or upward. I hope that your company will establish a large herd on the American side, and any assistance that I can render you in the way of suggestions as to places will be gladly given.

Very respectfully, yours,

SHELDON JACKSON,
General Agent of Education in Alaska.

MR. WILLIAM T. PERKINS,
Northwestern Commercial Company, Seattle, Wash.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., March 18, 1903.

SIR: I have the honor to submit for your information and approval the proposed plans of operations for the coming season as to education in Alaska and the introduction of reindeer into Alaska.

* * * * *

INTRODUCTION OF REINDEER INTO ALASKA.

I have made an arrangement with the Northwestern Commercial Company, of Nome, who this year are undertaking under a Russian concession to purchase reindeer for delivery to the agent of this Bureau at Teller station of as many as 400 head of female reindeer at \$25 each (see exhibit).

If any reindeer are received under this contract they will be distributed, in accordance with former practice, as loans to the several mission stations, both Protestant and Roman Catholic, engaged in teaching and civilizing the Eskimos of northern and western Alaska. This will strengthen the work that has already commenced of preparing the Eskimo young men for the care and management of reindeer and then assisting them to herds of their own.

The location of the several herds will be continued, as last year, in the neighborhood of Point Barrow, Kotzebue Sound, Cape Prince of Wales, Gambell, on St. Lawrence Island, Teller station, Golofnin Bay, Unalaklik, Nulato, on Yukon River, and Bethel, on Kuskokwim River.

FINANCES.

(a) *Education in Alaska.*—For the fiscal year ending June 30, 1902, there was received from license moneys covered into the United States Treasury, \$35,882.41. This was expended as follows:

Salaries of four officials	\$5, 066. 12
Thirty-three teachers	17, 192. 54

General expenses of 27 schools, including text-books, apparatus, fuel, lighting, repairs, rent, traveling expenses, and freight, \$4,219.06; leaving a balance June 30, 1902, \$9,404.69.

(b) Reindeer funds received from Congress, \$25,000, which was expended as follows:

Salaries of employees	\$4, 110. 03
Expenses connected with the importation of reindeer from Siberia to Alaska	13, 220. 48
Supplies and clothing for 27 apprentices.....	6, 044. 03
Traveling expenses in connection with the inspection and delivery of herds to mission societies	600. 33
Publishing the annual report (1,000 copies).....	440. 11
Balance of outstanding liabilities	595. 02

It is proposed, with your approval, for the coming season, in both the school and reindeer service, to continue along the same general lines that have been found successful in the past to extend the service as rapidly as the funds at the disposal of this Bureau will permit.

In past seasons this Bureau has depended upon the cooperation of the Treasury Department in the Revenue-Cutter Service for assistance in enabling the agent of the Bureau to visit the stations and localities not ordinarily reached by commercial vessels. And it is proposed the present season, with your approval, to again apply to the honorable the Secretary of the Treasury to allow the revenue cutter cruising in Alaskan waters to take on board the agent of this Bureau and give him such facilities as he may need for inspecting out-of-the-way stations, not interfering with the regular duties of the cutters.

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner.*

The SECRETARY OF THE INTERIOR.

[Indorsement.]

Approved on conditions specified in Department letter April 1, 1903.

E. A. HITCHCOCK, *Secretary.*

DEPARTMENT OF THE INTERIOR,

Washington, April 1, 1903.

SIR: Your letter has been received, submitting for consideration, pursuant to instructions from the Department, a statement showing the proposed operations for the fiscal year ending June 30, 1904, as

to education in Alaska and the introduction of reindeer into that district, together with the amount of money to be expended apportioned to each of the different subjects of investigation. The appropriation for the introduction of reindeer is \$25,000, the amount received from license moneys outside of incorporated towns in Alaska and available for educational purposes during the fiscal year ended June 30, 1902, was approximately \$35,882, and the expenditures for school service during the ensuing fiscal year is based upon the probable collection of a similar amount during that period.

In response thereto I have to advise you that I have this day approved so much of the plan submitted as relates to the ensuing fiscal year. As to the proposed purchase of 400 reindeer, not over 6 years of age, at a cost of \$25 per head from the Northwestern Commercial Company, to be landed at Teller reindeer station in good condition not later than September 1, 1903, in lieu of sending an agent of the Department to Russia to purchase reindeer and bring them to this country, as has been the custom heretofore, the plan meets with my approval as being in the interest of the better administration of the service. A form of contract has been prepared and is herewith transmitted.

The matters discussed, touching the extension of the school service, by the establishment of new schools in southeastern, western, and northern Alaska, and for the construction of schoolhouses at Point Barrow, Unalakleet, Wood Island, Wrangell, and Teller may be presented for consideration of the Department when there are funds available in excess of the approximate sum of \$35,882 authorized to be expended during the next fiscal year.

The matter of the free importation of reindeer and the providing for their inspection at Teller reindeer station will be at once brought to the attention of the Secretaries of the Treasury and Agriculture, respectively.

Very respectfully,

E. A. HITCHCOCK,
Secretary.

The COMMISSIONER OF EDUCATION.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., April 7, 1903.

SIR: I have the honor to acknowledge the receipt of a communication from you under date of April 1, 1903, giving your approval of the proposed plans of operations for the coming season as to education in Alaska, and the introduction of reindeer into Alaska.

As your approval seems to have reference mainly to the fiscal year ending June 30, 1904, I would respectfully ask a modification of the approval, in so far as it relates to the purchase of reindeer, in order

to enable this Bureau to purchase 400 head, or as many at the rate of \$25 as the unexpended balance of the reindeer fund for the fiscal year ending June 30, 1903, will allow. And, if the opportunity offers, that 500 additional deer shall be purchased from the reindeer fund for the fiscal year ending June 30, 1904.

The short season (June to October), during which northern Bering Sea is free from ice, and thereby the transportation of deer from Siberia to Alaska rendered possible, makes it convenient to use in the purchase of deer any available balance of the fund for 1903 remaining unexpended June 30, 1903, and that after July 1 to commence the purchase of additional deer from the fund of 1904.

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner.*

The SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR,

Washington, April 10, 1903.

SIR: In compliance with the request contained in your letter of the 7th instant, so much of the plan of operations of your Bureau in Alaska for the fiscal year ending June 30, 1903, as relates to the introduction of reindeer in that district, approved by me April 7, 1902, is hereby so modified as to authorize you to purchase from the Northwestern Commercial Company 400, more or less, of healthy female reindeer, not over 6 years of age, at a cost of not to exceed the sum of \$25 per head.

This action is substituted for the provision in said plan of operations authorizing you to send an agent to Siberia to make purchase of reindeer.

A form of contract in quintuplicate with the Northwestern Commercial Company, prepared in this Office, for the carrying into effect the authority above granted is herewith transmitted, and you are requested to have the same properly executed and returned to the Department for approval.

Very respectfully,

E. A. HITCHCOCK,

Secretary.

The COMMISSIONER OF EDUCATION,

Washington, D. C.

NORTH EASTERN SIBERIAN COMPANY (LIMITED),

PIONEER BUILDING,

Seattle, Wash., April 22, 1903.

DEAR SIR: Referring to the contract between your department and the Northwestern Commercial Company for the exportation of live reindeer from Siberia to America for the United States Government,

which contract was entered into on behalf of the North Eastern Siberian Company (Limited), I beg to state as follows:

At the time that Mr. Perkins was in Washington discussing this matter with you and entering into preliminary contracts the North Eastern Siberian Company (Limited), had secured a permit from the military governor-general of the Primorsk for the exportation of 400 live reindeer to America, and while I was in St. Petersburg this matter was discussed between myself and the members of the board of directors over there upon the basis that the permit for this exportation had been granted and that we would export the animals to America and deliver them to the United States Government, provided our agents in the peninsula were able to secure the reindeer from the natives in accordance with instructions that I had given them last fall, and in the original instructions to me as managing director for the company was incorporated this clause covering the exportation of these animals. Since my departure from St. Petersburg on the 28th of February, this year, it appears for some, to me unknown, reasons to have been a change, inasmuch as they have advised me both by cable and letter that the Imperial Government has forbidden this exportation, and that the governor-general of the maritime provinces will not grant the necessary permit. The reason advanced to me for this prohibition I consider neither correct nor sufficient, and therefore I have written to our board in St. Petersburg to take this matter up with the Government with the view of removing the embargo, and I feel hopeful in securing its removal, but am not positively sure thereof, and therefore can not at this time give any advice as to the probable dates when we will be able to deliver these animals in Alaska.

I very much regret this turn of affairs, and give you my assurance that I will do everything in my power to remove the embargo, more especially as I consider the exportation of these animals from Siberia to Alaska will produce very beneficial results to the natives by increasing the commercial value of the reindeer.

I am daily expecting advice from St. Petersburg by cable regarding this matter, and if the embargo is removed I will take the matter up with you at once by telegraph.

I beg to remain, my dear sir, yours, very truly,

JOHN ROSENE,

Managing Director for the North Eastern Siberian Company (Limited).

Rev. SHELDON JACKSON,

Bureau of Education, Washington, D. C.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., April 29, 1903.

SIR: Referring to the authority heretofore granted by the Department to enter into contract with the Northwestern Commercial Company for the furnishing of 800 reindeer for introduction into Alaska during the present year, I have the honor to transmit herewith for your information a copy of a letter from the said company, in which it appears that the permission heretofore granted them by the Russian Government to purchase and export reindeer from Siberia to the United States has been revoked.

It will be noted that they state they have taken steps to have their agent in Russia secure, if possible, a reconsideration of this adverse action, and that they will immediately telegraph me upon the final decision of the matter.

In case they do not succeed in securing reconsideration by the Russian Government I have the honor to suggest the advisability of bringing this matter to the attention of the Secretary of State with a view to instructing the proper representatives of this Government in Russia to intercede with the Russian Government to accord permission to this company to furnish to this Government at least 800 deer which they have contracted to supply.

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner.*

The SECRETARY OF THE INTERIOR.

[Telegram.]

SEATTLE, WASH., *May 12, 1903.*

SHELDON JACKSON,

Bureau Education, Washington, D. C.:

Important diplomatically to have State Department request show reindeer contract made with North Eastern Siberian Company through American agents.

NORTHWESTERN COMMERCIAL COMPANY.
PERKINS.

SAN FRANCISCO, *May 9, 1903.*

DEAR SIR: Your letter of April 30, inclosing copy of letter from Mr. W. T. Harris to the Secretary of the Interior, has been forwarded me here and contents of both these letters carefully noted by me. In reply I beg to state that I have at the present time had no communication from St. Petersburg relative to the exploitation of reindeers since

my letter to you of April 22. I beg further to state that I will have no objection to the matter being taken up with the Russian Government through the kind offices of the State Department at Washington, D. C. If this should be done, it will be well to remember that the Northwestern Commercial Company entered into this contract as the agent and representing the North Eastern Siberian Company (Limited), the latter corporation being organized under the laws of Russia, with headquarters in St. Petersburg, and well known to the Russian Government.

I shall not fail to advise you promptly of any information I shall receive from St. Petersburg relative to this subject.

Yours, very truly,

JOHN ROSENE.

Rev. SHELDON JACKSON,

General Agent Department Education, Washington, D. C.

DEPARTMENT OF THE INTERIOR,

Washington, May 13, 1903.

SIR: Referring to your letter of the 29th ultimo, inclosing a copy of a communication from the Northwestern Commercial Company, stating that the Russian Government had revoked the permit heretofore given it to collect and export reindeer from Siberia to Alaska, I transmit herewith for your information copy of a letter addressed by this Department to the Secretary of State, under date of the 11th instant, requesting that the Russian Government be communicated with through the proper official channels, with a view to securing a renewal of the permission given this company to procure at least 800 reindeer for the Government service in Alaska during the coming season.

Very respectfully,

THOMAS RYAN, *Acting Secretary.*

The COMMISSIONER OF EDUCATION.

DEPARTMENT OF THE INTERIOR,

Washington, May 11, 1903.

SIR: In carrying into effect the provisions of the statute authorizing the Secretary of the Interior to introduce reindeer in the district of Alaska for use in connection with the system of industrial education in that district inaugurated by the Department, it has been customary in previous years to purchase, with the consent of the Russian Government, reindeer in Siberia and bring them to Alaska on a Government vessel, free of duty and without inspection of the animals.

In the interests of the better administration of the Alaskan service it is the purpose of the Department during the present season, instead of sending its representative abroad to bring the deer to Alaska, to enter into contract with the Northwestern Commercial Company for the delivery in good condition at Teller reindeer station, Alaska, at a date not later than November 1, 1903, 800, more or less, healthy female reindeer, not over 6 years of age.

From the accompanying letter of the Commissioner of Education, who, under the assignment of business in this Department, has charge of educational matters in the district of Alaska, it will be seen that the permission heretofore given by the Russian Government to the Northwestern Commercial Company to secure reindeer in Siberia has been revoked, but that the company is endeavoring to secure a reconsideration of the matter by the proper authorities.

As it will be in the interest of the Government to secure the reindeer in the method indicated, I have the honor to request that this matter be brought to the attention of the proper authorities of the Russian Government, with a view to securing permission for the Northwestern Company to procure and take from Siberia another shipment for use in the Alaskan school service of at least 800 female reindeer.

Very respectfully,

THOS. RYAN,
Acting Secretary.

The SECRETARY OF STATE.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., May 14, 1903.

SIR: I have the honor to communicate for your information that, since writing my letter of April 22, asking that through the Secretary of State the Russian Government might be requested to accord to the Northwestern Commercial Company, of Seattle, permission to furnish this Government the 800 head of reindeer which they had contracted to supply, I have learned from them that the Northwestern Commercial Company, in executing the above contract with the United States, was acting as the American agents of the Northeastern Siberian Company (Limited), which has its general office at St. Petersburg, Russia, and American office at Seattle, and that the company is known officially at St. Petersburg, Russia, as the Northeastern Siberian Company (Limited).

I would therefore respectfully suggest that this name be communicated by the State Department to the representative of this Government at St. Petersburg. I would further suggest that, as the northern section of Bering Sea is free from ice but a few months during the year,

and therefore that the time available for the transportation of reindeer from Siberia to Alaska is short, that this information be cabled to the American ambassador at St. Petersburg.

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner*.

The SECRETARY OF THE INTERIOR.

DEPARTMENT OF STATE,

Washington, May 16, 1903.

SIR: I have the honor to acknowledge the receipt of your letter of the 11th instant, requesting that the United States ambassador at St. Petersburg may be instructed to use his good offices with the Russian Government to enable the Northwestern Commercial Company to procure and take from Siberia another shipment of at least 800 female reindeer for use in the Alaskan school service.

I have the honor to say in reply that the ambassador has been instructed as desired.

I have the honor to be, sir, your obedient servant,

JOHN HAY.

The SECRETARY OF THE INTERIOR.

[Indorsement No. 1.]

File 1708.]

MAY 16, 1903.

Secretary of State has instructed the United States ambassador at St. Petersburg to use his good offices with the Russian Government to enable the Northwestern Commercial Company to procure and take from Siberia a shipment of reindeer for use in Alaska.

[Indorsement No. 2.]

DEPARTMENT OF THE INTERIOR,

May 19, 1903.

Respectfully referred to the Commissioner of Education for consideration; note and return.

THOMAS RYAN, *Acting Secretary*.

[Indorsement No. 3.]

EDUCATION OFFICE, *May 20, 1903.*

Respectfully returned to the Department with the statement that the same has been copied for the files of this Office.

W. T. HARRIS, *Commissioner*.

DEPARTMENT OF STATE,

Washington, May 20, 1903.

SIR: I have the honor to acknowledge the receipt of your letter of the 16th instant, stating that the company which has the reindeer contract is the Northeastern Siberian Company (Limited), not the Northwestern Commercial Company.

The United States chargé d'affaires at St. Petersburg has been so advised, and the necessity of rapid action in the case has also been brought to his attention.

I have the honor to be, sir, your obedient servant,

JOHN HAY.

The SECRETARY OF THE INTERIOR.

[Indorsement No. 1.]

MAY 20, 1903.

Secretary of State has advised the United States chargé d'affaires at St. Peter-burg that the North-western Commercial Company, with whom the Department has contracted for the purchase of reindeer for Alaska, is known in St. Petersburg as the Northeastern Siberian Company (Limited), etc.

[Indorsement No. 2.]

DEPARTMENT OF THE INTERIOR, *May 22, 1903.*

Respectfully referred to the Commissioner of Education for consideration, note, and return.

THOMAS RYAN.

[Indorsement No. 3.]

EDUCATION OFFICE, *May 23, 1903.*

Respectfully returned to the Department with the statement that the same has been copied for the files of this office.

W. T. HARRIS, *Commissioner.*

No. 140.]

AMERICAN EMBASSY,
St. Petersburg, June 13, 1903.

SIR: In reply to your instructions Nos. 28 and 29, of May 18 and 20, respectively, relating to the reindeer contract between the Government and the Northeastern Siberian Company (Limited), I have the honor to inform you that I have called on Mr. Yermoloff, minister of agriculture and imperial domain, with a view to securing the revocation of the recent decision forbidding the exportation of reindeer from Siberia to Alaska.

The minister informed me that he would communicate on the subject with the governor-general of the Primorsk Province, whose authority in the matter was final, and whose advice would undoubtedly be followed by the central government in case he recommended that the further exportation of reindeer should not be allowed on account of their scarcity, or for any other reasons.

I have the honor to be, sir, your obedient servant,

J. W. RIDDLE,
Chargé d'Affaires ad interim.

The Hon. JOHN HAY,
Secretary of State, Washington, D. C.

DEPARTMENT OF STATE,
Washington, July 1, 1903.

SIR: Referring to the Department's letter of May 18 last, I have the honor to inclose copy of a dispatch from the United States chargé d'affaires ad interim at St. Petersburg, reporting his action in the matter of endeavoring to secure permission for the purchase and shipment of reindeer from Siberia.

I have the honor to be, sir, your obedient servant,

FRANCIS B. LOOMIS,
Acting Secretary.

The SECRETARY OF THE INTERIOR.

[Indorsement No. 1.]

JULY 1, 1903.

Secretary of State incloses copy of dispatch from the United States chargé d'affaires ad interim at St. Petersburg, reporting his action in endeavoring to secure permission for the purchase and shipment of reindeer from Siberia into Alaska.

[Indorsement No. 2.]

DEPARTMENT OF THE INTERIOR,
July 3, 1903.

Respectfully referred to the Commissioner of Education for note and return.

THOMAS RYAN,
Acting Secretary.

No. 41.]

AMERICAN EMBASSY,
St. Petersburg, July 6, 1903.

SIR: In reply to your instruction No. 28, of May 18, 1903, I have the honor to transmit to you herewith a copy of a note just received from the minister of agriculture and imperial domains, according to which, after communicating with the governor-general of the Amoor, the minister does not find it possible to enable the Northwestern Commercial Company to procure or take away from Siberia a further shipment of female reindeer.

I have the honor to be, sir, your obedient servant,

J. W. RIDDLE,
Chargé d'Affaires ad interim.

The Hon. JOHN HAY,
Secretary of State, Washington, D. C.

No. 763.] **MINISTRE DE L'AGRICULTURE ET DES DOMAINES,**
St. Petersburg, le 20 (July 3), 1903.

SIR: The general-governor of Amoor has just notified me that the there existing number of reindeer upon which rests the livelihood of the northern tribes is of late days somewhat inadequate to meet the local requirements.

Therefore, considering that any further decrease in the number of female reindeer would affect the said population's welfare, I regret to state in reply to your favor of June 2 (15) that I find it difficult to issue permits for the exportation of the above animals.

I have the honor to remain, sir, most truly, yours,

A. VERMALOFF.

Hon. J. W. RIDDLE,
Charge d'Affaires of the United States, St. Petersburg.

DEPARTMENT OF STATE,
Washington, July 21, 1903.

SIR: Referring to the Department's letter, May 18, I have the honor to inclose copy of a dispatch from the United States charge d'affaires ad interim at St. Petersburg, reporting the refusal of the Russian Government to allow the exportation of reindeer from Siberia.

I have the honor to be, sir, your obedient servant,

FRANCIS B. LOOMIS,
Acting Secretary.

The SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., July 18, 1903.

SIR: I have the honor to acknowledge that your favor of July 3 has been brought to my attention, together with a copy of the letter of Mr. J. W. Riddle, chargé d'affaires ad interim, American embassy, St. Petersburg, June 13, 1903, informing the American Government that the question of further exportation of reindeer to Alaska for the United States Government has been referred to the "governor-general of the Primorsk Province, whose advice would undoubtedly be followed by the central Government in case he recommended that the further exportation of reindeer should not be allowed on account of their scarcity, or for any other reasons."

The opportunity afforded of procuring deer this summer through the Northwestern Siberian Company (Limited) is so promising, and the time for action in northern Bering Sea so limited during the summer,

that I would respectfully suggest that the honorable the Secretary of State, if in accordance with the policy of his office, make another effort to secure a speedy decision on the part of the Russian Government.

With reference to the allusion that the exportation of deer to Alaska might unduly deplete the herds in Siberia, I find that since the commencement of the reindeer enterprise in 1891 up to the present time but 1,596 deer have been purchased in Siberia, an average of 133 deer per year. As the herds in Siberia range from three hundred to many thousand reindeer in a herd, it is evident that so small a number can have made no appreciable difference in the reindeer industry of Siberia, nor will the one or two thousand additional deer which might be secured make any difference. On the other hand, the sale of these animals at remunerative prices furnishes the natives of northeast Siberia with a large amount of provisions and clothing which they could not otherwise secure.

I have the honor to be, sir,

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner*.

The SECRETARY OF THE INTERIOR.

REINDEER IMPORTED FROM SIBERIA SUBJECT TO INSPECTION AND
CUSTOMS DUTIES.

TREASURY DEPARTMENT,

OFFICE OF THE SECRETARY,

Washington, October 5, 1901.

SIR: The attention of this Department has been called, by the honorable Secretary of Agriculture, to recent alleged importations of reindeer into your district from Siberia, presumably without inspection or quarantine, and stating that "there is great danger of introducing some of the worst animal plagues of the Old World by the importation of reindeer in this manner." He suggests that in the case of future importations of these animals an inspection should be made by an officer of the Bureau of Animal Industry to the end that a quarantine may be enforced, or exportation required, according as the animals may be found afflicted with disease, curable or incurable.

In this connection your attention is invited to the regulations of the Department of Agriculture of December 28, 1899, promulgated by this Department in its circular of February 16, 1900 (T. D., 22014), copy herewith for ready reference, which prescribes that all ruminants imported on the Pacific seaboard are subject to inspection and quarantine at San Diego, Cal., and you are informed that the ports of your district are not excepted from such requirements because of their geographical location.

The importation of these animals into your district, therefore, as allowed without inspection or quarantine at San Diego, was technically in violation of such regulations.

I will thank you to report fully as to the facts in the case, giving the dates of importations, names of importers, the condition of the animals on arrival, what inspection or quarantine, if any, was had, the destination of the animals and their present location.

In the case of future importations of this character into your district from Siberia or any other foreign country, you will at once notify the Department by wire to the end that proper inspection may be had, and quarantine enforced if found necessary. The Secretary of Agriculture states that in such event, an exception will be made to the regulations aforesaid, and that an inspector will be sent into your district to make the required examination. This Department concurs in the opinion of the Secretary of Agriculture that every precaution should be taken to protect Alaska as well as other parts of the territory of the United States from destructive animal diseases liable to be introduced by the unrestricted importation of reindeer from Siberia.

Respectfully,

O. L. SPAULDING, *Acting Secretary.*

THE COLLECTOR OF CUSTOMS,
Sitka, Alaska.

MANHATTAN, KANS., *March 9, 1903.*

DEAR SIR: I am in receipt of your favor of March 5, and thank you for the information therein contained.

I inclose you herewith a letter from the Treasury Department, which explains itself. From this you will observe that as soon as a private individual undertakes to engage in this business he will be required to pay duty on his deer. If the Government really wanted to have Alaska stocked with reindeer it would seem that herds for breeding purposes should be admitted free.

If it is not asking too much would you kindly refer this matter to the Secretary of the Treasury and request that an exception be made in the case of deer for breeding purposes.

Respectfully,

F. G. KIMBALL.

Dr. SHELDON JACKSON,
Washington, D. C.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., April 1, 1903.

SIR: In carrying into effect the provisions of the statute authorizing the Secretary of the Interior to introduce reindeer into the district of

Alaska for use in connection with a system of industrial education in that district, inaugurated by the Department, it has been customary in previous years to purchase, with the consent of the Russian Government, reindeer in Siberia, and bring them to Alaska free of duty and without inspection of the animals.

From the accompanying letter of the Commissioner of Education, who, under the assignment of business in this Department, has charge of educational matters in that district, it will be seen that he has been advised by the collector of customs at Sitka, Alaska, that hereafter reindeer imported for use in Alaska must first be inspected at San Diego, Cal.; furthermore, it has been intimated to the Department that reindeer imported into this country are subject to duty.

To transport reindeer from Siberia to San Diego, Cal., for inspection, a distance of between 3,500 and 4,000 miles, and thence to Alaska, means the expense of transportation of approximately 8,000 miles as against approximately 200 miles in bringing the animals from Siberia directly to Alaska. This would increase the cost of the animals fully 50 per cent, making the deer cost anywhere from \$100 to \$200 per capita.

In addition to the expense, which would be prohibitive, considering the fact that the entire appropriation for expenses connected with the introduction of reindeer is but \$25,000, it is quite probable that from one-fourth to one-half of the herd, in all likelihood, would be killed by the journey.

It is the purpose of the Department during the present season, instead of sending its representative to Siberia to bring reindeer to Alaska, to enter into a contract with the Northwestern Commercial Company for the delivery in good condition at Teller reindeer station, at a date not later than September 1, 1903, of 400 healthy female reindeer not over 6 years of age.

In the interest of this service, therefore, I have the honor to request that instructions be issued to the collector of customs for the district of Alaska to permit reindeer purchased by the Government to be landed at the Teller reindeer station in Alaska by direct importation from Siberia, they to be inspected at that point, and the requirements of the regulations as to the inspection at San Diego be waived in this respect.

It is understood that the Secretary of Agriculture, in event of an exception such as is herein desired, will send an inspector to make the required examination.

In this connection, it is further requested that if it is found that the reindeer imported by the Government for use in connection with the Alaskan school service are subject to duty, such instructions be given to the collector of customs for the district of Alaska as will result in the admission of the animals without payment of the duty at the place of entry, the bill for the customs duties covering the animals imported to be forwarded to this Department for adjustment.

I have this day called the attention of the Secretary of Agriculture to this matter, with a view to securing the detail of a representative of his Department to inspect the deer upon their arrival in Alaska.

Very respectfully,

E. A. HITCHCOCK, *Secretary.*

The SECRETARY OF THE TREASURY.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, March 6, 1903.

SIR: The Department is in receipt of your letter of the 2d instant, in which you inquire whether reindeer can be imported into the United States for breeding purposes without payment of duty.

In reply, I have to state that while paragraph 473 of the act of July 24, 1897, as amended by the act of March 3, 1903, provides for the free entry of animals for breeding purposes, it is also provided that no such animal shall be admitted free unless pure bred of a recognized breed, and duly registered in the books of record established for that breed. As no books of record are established for reindeer, such animals can not be imported free of duty for the purposes mentioned.

Respectfully,

R. B. ARMSTRONG, *Assistant Secretary.*

Mr. F. G. KIMBALL,
Manhattan, Kans.

NORTHWESTERN COMMERCIAL COMPANY,
PIONEER BUILDING,
Seattle, Wash., March 14, 1903.

MY DEAR SIR: In re reindeer in Alaska. Collector Jarvis, of Alaska, has just arrived in Seattle, en route to Washington, D. C., and I have had an interview with him in connection with our Siberian and Alaskan matters. Among other things, he informs me that there is a duty on reindeer imported into the United States which applies equally well to Government reindeer as to those to private parties. This was news to me, and the matter I had not investigated, and I should appreciate it very much if you will take up the matter with the proper authorities in Washington and either arrange for the rescinding of the duties so far as the Government importation is concerned, or, if that is not allowable, then for the payment of the same in Washington. I shall be very glad to hear from you in connection with the matter at your convenience.

Mr. Rosene has just arrived in New York, on his return from St. Petersburg, and informs us that the Russian Government has granted us a special permit covering Government reindeer for which you have

contracted with us. We wish, if possible, to cover every contingency that could arise in connection with this shipment, so that we may not be hampered or detained by any details left unarranged in the matter.

Any suggestions or information from you at any time will be acceptable. I have the honor to be,

Very respectfully, yours,

NORTHWESTERN COMMERCIAL COMPANY.
W. M. T. PERKINS.

Hon. SHELDON JACKSON,
Bureau of Education, Department of the Interior,
Washington, D. C.

GOVERNOR BRADY ON THE REINDEER.

The Hon. John G. Brady, governor of Alaska, in his annual report to the Secretary of the Interior for 1893, writes:

It is reported that on June 30, 1903, there was an aggregate of 6,150 domestic reindeer in Alaska, including 1,600 fawns born in the spring of 1903. These reindeer are kept in 10 principal herds and are owned in part by 82 persons, of which number 58 are Eskimos and 5 Laplanders.

This work of the introduction of domestic reindeer for that northern country has been from year to year the subject of hostile criticism and derision for some who really know as little about it or its processes as they know about the aurora borealis. It is reassuring, however, when one reads the opinions of men who have been in the country for a number of years and who are thoroughly independent of any outside influence.

D. A. McKenzie, United States commissioner at Coldfoot, who has once before been quoted in this report, says:

"Reindeer are perhaps the greatest practicable means of helping the natives. We have thousands of acres of reindeer ground. There has been a great deal of adverse criticism of Dr. Sheldon Jackson and his introduction of reindeer into Alaska. I will say that after investigating the reindeer farms I am convinced that their importation is the best thing that possibly could have happened far Alaska."

Congress has been criticised heretofore for making appropriations for this purpose, but we earnestly hope that it will wisely continue to foster this industry, until that whole northern region has become stocked with those animals, which are so wonderfully adapted to that country. No doubt, in years to come persons will rise up and bless the memories of those who have been so farsighted as to provide animals that have so much in them to make life endurable in those regions.

BRIG. GEN. FREDERICK FUNSTON, U. S. ARMY, CONCERNING REINDEER.

Brig. Gen. Frederick Funston, U. S. Army, in an official report to the Adjutant-General United States Army, referring to the present condition of the Eskimos in Alaska and their future, writes concerning the reindeer:

I was unable to visit the reindeer station at Port Clarence, and consequently can not speak of the success of that institution from personal knowledge. Full information regarding the introduction of the reindeer into Alaska can be had from the

reports of Dr. Sheldon Jackson, of the Bureau of Education, who for some years has had charge of the importation of those animals and their distribution among the natives and the instruction of the latter in their care and use. It is the general opinion of most of those whom I interviewed that this enterprise will, under favorable conditions, remove any cause which may now exist for destitution among those people, but the work is necessarily slow, and it must be years before the reindeer can be in general use throughout such portions of Alaska as are suited to them.

* * * * *

Obviously, if the Eskimos were placed under control of the Department of the Interior the work of introducing Siberian reindeer and instructing the natives in their care and use should be done by the same Department, in order to obtain the best results and avoid friction. The introduction of reindeer should be pushed as much as possible and the natives compelled to care for them.

Under no circumstances should rations be distributed gratuitously. So far as their mental development is concerned the Eskimo is a mere child, and should be treated as one. He should be compelled to obey, and his own whims and wishes ignored.

JUDGE JAMES WICKERSHAM ON THE IMPORTANCE OF REINDEER
FOR ALASKA.

DEPARTMENT OF JUSTICE,
UNITED STATES DISTRICT COURT,
THIRD DIVISION, DISTRICT OF ALASKA,
Eagle City, Alaska, August 16, 1903.

DEAR SIR: This letter will be handed to you by Mr. D. A. McKenzie, for many years a resident of Alaska and now the commissioner at Coldfoot, on the Koyukuk River. Mr. McKenzie is well known to me, and I recommend him to you as a man worthy of your confidence and esteem. He visits Washington upon business, but also to see you in relation to securing reindeer for one of his Indian friends on the Koyukuk. His friendship for the natives and his intimate knowledge of their needs leads me to believe that you can assist him in the matter which he will explain to you, and be assured that it is for the good of the Indians. Mr. McKenzie has no personal interest other than to help them become self-supporting. After a careful study of the reindeer question it is my judgment that they are the future live stock of this country. Your labors in that direction will be a lasting monument to you and greatly to the benefit of the future inhabitants of this region.

Respectfully,

JAMES WICKERSHAM, *District Judge.*

Rev. SHELDON JACKSON,
Washington, D. C.

UNITED STATES COMMISSIONER D. A. MCKENZIE CONCERNING REIN-
DEER AND ESKIMOS IN ALASKA.

FEBRUARY 16, 1904.

SIR: In 1898 the first permanent white settlement was made on the Koyukuk River, the territory and section of Alaska that I wish you

to take under consideration, embracing all of that land lying north of the Yukon River and west of the international boundary line extending through the mountain region to the mountains west of the Koyukuk, and the Arctic Ocean on the north. This territory is larger than the States of New York, New Jersey, and Pennsylvania.

The writer is one of the pioneers of this district, having located there in 1898, and has resided there continuously. We found the Eskimo Indians friendly, and, in fact, delighted to see the white men coming into their country. They were honest and hospitable, had very little idea of white men's ways and customs. We found them living in log cabins along the stream and depending upon hunting and fishing for food and clothing.

During my residence in this locality I became very well acquainted with the natives, and in many respects found them superior to the white man. Our Eskimos never use tobacco or liquor, and are honest people. I have never known an instance of theft committed by them. None of them have ever been in court on original charges. Their only appearance in court has been a few instances when they were witnesses for the Government against their white brother.

It would seem, inasmuch as our Government assumed the responsibility of looking after these people when it purchased Alaska from Russia, that it is certainly under some moral obligation to look after them to some extent, inasmuch as the white man has entered upon their hunting grounds and in a great measure has killed off caribou and moose, which furnished the larger amount of their food and clothing.

Assuming that the officials of our Government, realizing this obligation, are willing to aid the natives of Alaska to a reasonable degree, the question then arises, How can that best be done without pauperizing the natives, and at the same time be an aid to the white man in the development of this vast territory?

The occupation of the white man in this country is placer mining. The mineral belt now being worked extends over a territory of 80 or 100 miles, and the prospects are that it will take several generations to extract the wealth from this district alone, which is a very small part of the vast territory referred to. It is not fair to presume that this is the only rich piece of ground in this big territory, as the prospectors are constantly making new discoveries and extending the gold field.

The great drawback to development so far is the expense of food and mining machinery, tools, etc. Let me first explain the manner in which the freight is brought from the coast cities to this locality. Freight is taken by ocean steamers from Seattle to St. Michael, a distance of 2,725 miles, where it is reloaded on Yukon steamers and carried a distance of 630 miles up the Yukon River to the mouth of the Koyukuk, thence up the Koyukuk in a small but powerful steamer a

distance of 540 miles to Bettles, the end of steamer navigation. It is then transferred to small poling boats and taken 60 miles farther up the rapid current to Coldfoot, the headquarters of the miners of this region. The freight alone from Bettles to Coldfoot is 10 cents a pound. It is then perhaps necessary to carry these goods on the back of pack animals a distance of 10 to 40 miles, with an additional cost of from 10 to 30 cents a pound.

It is thus easy to be seen that with these necessarily large expenses for food and clothing the development of this country must be slow, unless some cheaper food and cheaper transportation can be arranged. This can be accomplished by our natives with the reindeer.

I wish again to refer to our responsibility to the native. There is no question in my mind that these people are capable of being educated to the highest degree of civilization. This is being demonstrated beyond a reasonable doubt at the Carlisle Indian School. I was the fortunate recipient of an invitation to attend the commencement exercises of this school on the 17th and 18th of this month. Here we find a thousand native Americans with bright and happy faces, indubitably proving by looks and actions that their hearts are fired with a determination to enter the great family of American citizens, and demand an honorable place among them. It has not been my fortune to visit any white school where better order prevailed; each individual student seemed to realize that he or she was regarded as one of an inferior race and a responsibility rested on each one to demonstrate to the white man that when given the opportunity they could climb as high in the intellectual world as their white brothers and sisters. They seemed to have great love and respect for their teachers, who, being inspired by the grand and humane work in which they were engaged, are capable of wonderful powers, and consequently a noble ambition has been inculcated which seems to permeate the entire school. We found here 80 Alaskans, and some of the Eskimo children from northern Alaska, but I could not recognize them as the natives of a neighborhood in which I have resided for the last six years; and had it not been for this personal observation, it would have been difficult to conceive how this wonderful transformation could be brought about.

But to lay aside sentimental consideration, I will attempt to show that it would be a first-class business proposition to establish a school in the Koyukuk Valley and teach the native children some rudiments of English, and show them how to produce the vegetables that will thrive in that section. Reindeer should be loaned to the natives, and they should be instructed in the management of them. They should be made to feel the responsibility of ownership as soon as possible; we should crowd upon them all the responsibility of every kind as fast as they will absorb it. With the knowledge of vegetable growing and with a herd of reindeer the native will be in a position not only to

feed himself and family, but also to supply the white miner with fresh vegetables and meat, which are necessary to insure health in this isolated community where this class of food can not be obtained. Before it had been ascertained that vegetables would grow that far north, I paid \$16 for 20 pounds of fresh potatoes. Thirty dollars was all the money I had at the time, and if the trader had held me up a little harder I would have given him my entire capital for that same 20 pounds of potatoes. I might add that at that time I had not tasted any fresh vegetables for three years.

Miners will not take the time in this country to tend a garden, neither will they herd reindeer; so with these industries in the hands of the native he will not be competing with his white brother.

I will offer this illustration to show what the reindeer will do for the miner: Suppose that two miners desired to prospect the territory on the outskirts of the Koyukuk mining camp this coming summer. It will be necessary to purchase two horses—say at Seattle—pay transportation to the Koyukuk. The animals would stand them in about \$500 or \$600 each, and if they should prove to be number one pack animals, the two horses will be able to move a small supply of food and tools, say 150 to 200 miles, after the summer work returning to the supply station in the fall, or at the end of the sluicing season, but owing to the great cost of hay and grain the horses must be killed.

Now suppose the two miners referred to, instead of purchasing horses at such great cost, had purchased say 10 reindeer at a cost of \$100 each; on the backs of these deer can be packed more than twice the amount the two horses could take. Then the miners having slaughtered a portion of the deer for food during the summer with the remainder of the team return with five or ten thousand in dust that these men were enabled to dig through the assistance of the reindeer. On the return of the deer to winter quarters they can be turned out with the general herd and at a trifling cost be wintered and ready for another season's work. The trained deer may be used during the winter before the sled.

We have millions of acres of the best kind of reindeer pasture going to waste and not doing anyone any good except to feed the wild game which now furnishes food for both white and red men. In a few years the game will be exhausted, then the reindeer will be indispensable.

I have heard many criticisms about the reindeer, but invariably by men that had no knowledge of the deer or by persons that reside in localities where the necessity for these animals does not exist.

If, Mr. Secretary, you were talking with a resident of southeastern or southern Alaska, he would probably tell you that the reindeer were not a necessity in Alaska. This person resides within the sound of a steamboat whistle and can purchase domestic meat and fresh vegetables at a trifle over Seattle prices. The people of Nome are not eager

for the deer as are residents in the interior, as they have the opportunity to get fresh meats from cold storage ships at a small cost; but all the people of the interior of Alaska need the reindeer, and without them immense territories will not be developed for many years to come, if at all.

I have also heard some criticism of the amount of money expended by the Government on the introduction of reindeer. I will challenge any individual or company doing business in Alaska to make a showing that they did not squander or waste more money buying inexperience than the Government has in establishing the reindeer industry. It must be remembered that we had no Americans experienced in reindeer raising prior to the time that the Government took hold of this industry, and it could not be expected that novices could produce the results that experience furnishes.

Now we have both white and native Americans who understand this industry, and future results will be satisfactory. Persons who have carefully inspected reindeer farms are well satisfied with the experiment.

In behalf of the miners who can not personally appear before you, I ask that you have a school for the natives established at Bettles, on the Koyukuk River; also that the reindeer and vegetable industries be introduced as soon as proper arrangements can be made. Surely central Alaska can offer stronger arguments for the deer than any other section, and the industry should be forced ahead as rapidly as possible. It should be remembered that in helping the Alaskan miner you are not aiding a competitor of the farmer or manufacturer in the United States. We will send him a new dollar that has never been used before for his bacon, corn, wheat, clothing, machinery, etc. We believe that the reindeer subject should receive your careful consideration, and that by proper nursing and encouragement it can be made of as much importance to Alaska as sheep raising is to eastern Washington and Oregon.

Post-office address, Coldfoot, Alaska.

Very respectfully, yours,

D. A. MCKENZIE.

The SECRETARY OF THE INTERIOR.

LETTER OF JUDGE JAMES WICKERSHAM, FORWARDING A LETTER FROM MR. E. L. BOSQUI, COMMISSIONER FROM COLVILLE RIVER.

DEPARTMENT OF JUSTICE,
UNITED STATES DISTRICT COURT,
THIRD DIVISION, DISTRICT OF ALASKA,
Valdez, Alaska, November 17, 1903.

MY DEAR SIR: Herewith I forward, for your information, a copy of a letter which I have just received from Mr. E. L. Bosqui, commis-

sioner from the Colville River, on the arctic shore of Alaska. I send you this copy by reason of your interest in the report which he makes in relation to the value of reindeer in that particular region.

Respectfully,

JAMES WICKERSHAM, *District Judge.*

Rev. SHELDON JACKSON,

Commissioner Education, Alaska, Washington, D. C.

LETTER OF E. L. BOSQUI, UNITED STATES COMMISSIONER.

JARVIS, COLVILLE RIVER,

March 3, 1903.

Hon. JAMES WICKERSHAM,

Valdez, Alaska.

MY DEAR JUDGE: As I have a chance to send mail out to connect with the *Bear* in August, I thought a few lines to you from this your northern district would be welcome. I left Nome on the *Bear* July 19, 1902, and after a delightful trip of twenty-one days reached Point Barrow. We made short stops at Port Clarence and Prince of Wales, and then steamed across to the Siberian coast and visited Indian Point, St. Lawrence Bay, and East Cape. At each point the ship was visited by natives. A more filthy lot of human beings never was seen; some few of our natives are bad enough, but nothing to be compared to these. The missionaries on our side deserve a great deal of credit, and to better judge a person should visit the villages on both coasts; a vast difference in the condition is then perceptible. At Point Barrow I met with my first setback. My intention was on reaching Point Barrow to employ natives to take my outfit into the Colville, but there was not an able-bodied native at the Point. An epidemic had been raging along the coast and several deaths had already occurred, and by October 15, sixty-seven days afterwards, the death rate was over 100. Doctor Marsh, missionary and physician, and Charles D. Brower, worked day and night assisting the poor creatures and no doubt saved a great many. I was obliged to remain at Point Barrow from August 12 to November 23, when Doctor Marsh, who has charge of the reindeer, came to my rescue and proposed a trial with deer, as they had never been used in Alaska for this purpose, especially such a long journey. He was anxious to prove to the Government that they could be put to other uses than food and clothing. About this time I felt somewhat discouraged, realizing that by remaining at Point Barrow all winter and starting out in the summer to reach my destination, I would lose the entire season of 1903. We immediately went to work, had sleds built, harness made, and on the 23d of November, 1902, we started out, 36 deer, 20 sleds (sleds carried about 250 pounds each, 1 deer

to sled), dog team of 8 dogs, 5 natives, my deputy and myself. It was a case of breaking deer for several days, and afterwards a case of keeping warm, a difficult thing with the thermometer ranging from 40° to 50° below zero. We expected to make the trip in about fifteen days, but it was just thirty days before we reached the Colville. It was not so bad during the day while traveling, but making and breaking camp was awful. We had but a few hours daylight, the sun having disappeared November 19 (to hide away for sixty days). This accounted for length of time on the trail, as it was impossible to travel more than four or five hours a day. We kept along the coast most of the trip, cutting from point to point, and struck inland at Harrison Bay, three days before reaching here, and this is where the deer had it hard. Soft snow does not agree with them, and we lost three, simply dropped and died; as dog feed had given out they were useful for feed. In a country like this, no road houses or settlements, I must say "give me deer in preference to dogs." This dog-feed proposition is a hard one; a man can not make a long journey and pack provisions for himself and sufficient dog feed. Altogether the deer were a success. We had deer four or five years old and broke them on the trail; this all took time and delayed us. With well-broken deer the same journey could be made in twelve or fifteen days.

Marsh has agreed to keep the deer on the trail until the whole outfit of 17 tons reaches me. Arriving here in midwinter has caused us many inconveniences. It was impossible to find any wood above the snow; so we were obliged to put up a 12 by 14 tent, banking it in with snow and brush, and I must say we have been very comfortable. But living in a tent in this country is no summer outing. Gathering wood gives us plenty of exercise, so I guess we will pull through until summer, when we will rebuild a good house. We are located at the Itkilik River, about 70 miles from the mouth of the Colville. Around us are several igloos^a containing 20 natives, and the town of Jarvis is now prepared to receive the summer rush. The river at this point is about a half mile wide and from indications carries an immense volume of water in the early summer. Willows in abundance can be found on the Colville and all its tributaries and coal in several localities. We will sample the coal early in the summer and I will send you report regarding same. The natives along the river are in a destitute condition, living solely on a fish diet from about December to July. At present I should judge that there are about 50 in all along the river. They leave here in July and gather at the mouth of the Colville or at Beechy Point, about 10 miles to the eastward, where they remain all summer trading with passing vessels. Instead of trading for flour, etc., it is whisky. Last year McKenzie (Captain Jarvis knows him of old) arrived there first and did a land-office business, his chief article of

^aNative huts.

trade being whisky. Leaving here as they do early in the season and returning in October, they fail to put up a supply of meat or fish for the winter. On our arrival here they crowded around and wanted everything in sight. I have given them several good talks and let them understand that they can expect nothing from the white man unless they do something for themselves. If we should start in to feed them our outfit would last but a few months and we would get no thanks for it. They bring around useless trinkets to trade for flour, sugar, etc., but no furs; these are saved for the summer trade on the coast. I intend next summer to explore as much of the upper river as possible; no white man and very few of these natives have been any distance from here. I will then be able to write you more intelligently regarding the country. We are but a short distance from the foothills. Clear days they can be seen from an elevation; from the coast to them I should judge the distance to be about 100 miles. At Camden Bay, about 120 miles from the mouth of the Colville River, the mountains reach the coast (Franklin Mountains), thus forming a half circle from Icy Cape to Camden Bay, forming a vast basin extending along the coast 400 miles and inland at greatest distance about 200. I expect to see a good many prospectors in here next summer. The country is a vast one and it will take years to thoroughly prospect it. We have provisions for a three years' stay, and I hope at the expiration of that time I will be obliged to go out for more. As soon as the ground commences to thaw we will start to dig our summer cache. In this we commence to pile ducks and geese, and later deer and fish for winter use. A hole is dug about 12 feet deep and 6 feet square and covered with willows and tundra about 4 feet above the surface; entrance is made by a ladder from a manhole at the top; in this way everything is kept frozen all summer. I will endeavor to induce the natives to follow our example, but I am afraid the work will not agree with them. At the present moment a couple of natives are watching me write or talk on paper. I have told them that I am talking to the big Umalik (chief or captain); they wanted to know when he would come in and if he had plenty of kowkow (food). We are getting quite proficient in the language, there is nothing like being obliged to make yourself understood. With the promise of writing you a more interesting letter at the close of next summer, I must close by wishing you every success in your new district.

* * * * *

Yours, very truly,

E. L. BOSQUI.

HON. JAMES WICKERSHAM,
Valdez, Alaska.

PAUL DU CHAILLU INDORSES THE INTRODUCTION OF REINDEER INTO ALASKA.^a

That same evening (it has to be called so for the sake of distinction) I stood out on the brow of the hill looking at the fjord and Arctic Ocean. Suddenly Alaska came to my mind * * * and I said to myself, "Why should not Alaska have its fishing towns, settlements, and hamlets, like those of Finmarken, and become as prosperous as the country I have traveled through?" There is a wonderful similarity between these two countries; they are both exactly in the same latitude; they have the same kind of barren coast bathed by a warm stream, and both have fjords.

Alaska has immense shoals of codfish and herring besides salmon. Both have their long nights, and then long days of midnight sun. We must give inducements to the people of Finmarken to come to Alaska. They will find in their new country something similar to the one they have left, and they will enjoy the same life. California and Oregon will provide the people with flour and send them delicacies and products of their State, and take in return the cod and herring. The southern American countries would be a great market for their codfish.

Then I thought that the only way to make Alaska prosperous eventually is to do exactly what the Swedes and Norwegians have done for their country in the far north. The fisheries must be protected, and the laws regulating them must be enforced. Then, as on the Finmarken coast, towns, hamlets, and fishing settlements will rise in the course of time, and the wealth of the people will come from the fish—their gold from the sea. Then we shall have more American-born sailors to man our ships. * * *

Then we must import many reindeer and establish the same laws in regard to them and their pasture as the Swedes and Norwegians have done. A great many of these reindeer must be broken and brought up to eat reindeer moss. Samoides and Laplanders must be induced to come to Alaska; they know how to take care of the reindeer; they are accustomed to law and order, and they are absolutely honest. * * *

Wherever there is a little good grazing land houses and farms of refuge and post stations where reindeer can be procured must be built by the Government in the interior, so that people can find refuge from the terrific storms that blow over Alaska, and I can not realize how they could be fiercer than those I had encountered in Finmarken. With reindeer and skees traveling will become easy and good distances will be made in a short time.

^a Extracts from "The Land of the Long Night." Published by Charles Scribner's Sons, New York.

DECENNIAL REVIEW OF THE INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA.^a

By GILBERT H. GROSVENOR, Editor of National Geographic Magazine.

Twelve years ago Dr. Sheldon Jackson brought his first herd of 16 reindeer across Bering Strait from Siberia and started his reindeer colony at Unalaska, off the bleak coast of Alaska. Many then smiled at the experiment and declared his plan for stocking the great barrens of northwestern Alaska with thousands of the animals which for centuries had been indispensable to the natives of Lapland and Siberia was impracticable and wasteful of time and good money. But the experiment prospered from the very first. Other reindeer, numbering nearly 1,000 in all, during the succeeding years were brought over from Siberia. To-day there are nearly 6,000 head in the various herds distributed along the Alaskan coast from Point Barrow to Bethel. The existence of the 20,000 natives of northwestern Alaska, as well as the success of the miners who are beginning to throng into the interior of the territory in the far north, are dependent upon these domestic reindeer; their clothing, their food, their transportation, their utensils, and their shelter are all furnished them by the reindeer.

The reindeer enterprise is no longer an experiment, although still in its infancy. There are 400,000 square miles of barren tundra in Alaska where no horse, cow, sheep, or goat can find pasture; but everywhere on this vast expanse of frozen land the reindeer can find the long, fibrous, white moss which is his food. There is plenty of room for 10,000,000 of these hardy animals. The time is coming when Alaska will have great reindeer ranches like the great cattle ranches of the Southwest, and they will be no less profitable.

The story of the inception and growth of the reindeer enterprise in Alaska is very interesting and is not generally known. During an extended trip of inspection of the missionary stations and Government schools in Alaska, in the summer of 1890,^b Dr. Sheldon Jackson was impressed with the fact that the natives in arctic and subarctic Alaska were rapidly losing the sources of their food supply. Each year the whales were going farther and farther north, beyond the reach of the natives, who had no steamships in which to pursue them; the walrus, which formerly had been seen in herds of thousands, were disappearing; the seals were becoming exterminated, and in winter the Eskimo had to tramp 15 to 20 miles out on the ice before he could catch one. The modern hunter, with his steam launches and rapid-fire guns, had found the whales, walrus, and seals such easy prey that he was ruthlessly destroying them. Also the wild caribou, that the native

^aReprinted by permission from the National Geographic Magazine for April, 1903.

^bDr. Sheldon Jackson first visited Alaska in 1877, in the interest of schools and missions. He made a second trip in 1879. Other visits followed, and since his appointment as general agent of education in Alaska, in 1885, he has made annual visits to the Territory.

had easily captured before, had been frightened away and was rarely seen.

Not only was the Eskimo losing his food, but what in an arctic climate is no less important, his clothing as well. The whalebone, the ivory tusks of the walrus, the sealskin, and the oil had given him means of barter with the Siberian traders across the strait, from whom he obtained reindeer skins to keep him warm in winter.

Doctor Jackson saw that unless something was done at once the United States would have to choose between feeding the 20,000 and more natives or letting them starve to death. The latter course was impossible; the former rather expensive, as supplies would have to be carried some 3,000 miles from Seattle. The more enterprising Siberian, living on the opposite side of the strait under practically the same conditions of arctic cold, got along very nicely, as he had great herds of domestic reindeer to fall back upon when game was scarce. The same moss which covered so many thousands of miles of the plains of arctic Siberia was seen everywhere in Alaska. The tame reindeer of Siberia was practically the same animal as the wild caribou of Alaska, changed by being domesticated for centuries. Could not the Eskimo be made self-supporting by giving him reindeer herds of his own?

On his return to the United States, during the winter of 1891, Dr. Sheldon Jackson, in his annual report to Congress, asked for an appropriation to provide the money for importing a few deer. Congress was not convinced of the wisdom of such action, but several private persons were so interested that they placed \$2,000 at Doctor Jackson's disposal to begin the experiment. The first deer were brought over that year. It was not long, however, before the Government realized the importance of the movement, and, in 1894, appropriated the sum of \$6,000 to continue the work. Later the appropriation was increased, and during the last several years has amounted to \$25,000 annually.^a

^a Congressional appropriations for the introduction into Alaska of domestic reindeer from Siberia are as follows:

1894.....	\$6,000	1900.....	\$25,000
1895.....	7,500	1901.....	25,000
1896.....	7,500	1902.....	25,000
1897.....	12,000	1903.....	25,000
1898.....	12,500		
1899.....	12,500	Total.....	158,000

Congress intrusts the general charge of the work to the Bureau of Education, of which Dr. William T. Harris is the distinguished head; the formulation of plans and their execution is intrusted to Dr. Sheldon Jackson, general agent of education in Alaska. Doctor Harris, in his annual reports to Congress, has vigorously urged the importance of the work, and to him credit is due for a large share of its success. Capt. M. A. Healy and the many officers of the Revenue-Cutter Service, whose vessels have year after year carried the agents of the Bureau back and forth and brought the reindeer from Siberia without charge, have also contributed to the success of the reindeer enterprise.

The Siberians were at first unwilling to part with any of their reindeer. They were superstitious and, above all, afraid of competition and loss of trade across the strait. Capt. M. A. Healy, who was commissioned to purchase the deer in 1891, was obliged to sail from village to village for 1,500 miles along the Siberian coast before he found an owner willing to barter his reindeer for American goods. None would sell the deer for cash. Of recent years the Siberians have been but little less reluctant to part with their deer, though they could easily spare many thousands from their vast herds without knowing it.

The first deer brought over were from the Chukches herds—a tough and hardy breed. Two years ago Lieutenant Bertholf was commissioned to go to Siberia and try to purchase some of the Tunguse stock, which are larger, stronger, and sturdier. Starting from St. Petersburg, after a long journey across Siberia, much of it by sled, he succeeded in purchasing several hundred Tunguse near Ola, hired a steamer, embarked the reindeer at Ola with 2,500 bags of reindeer moss, and finally landed 200 of the animals in good condition at Port Clarence. His experiences during his remarkable journey were most interesting, and are admirably described in his report to Dr. Sheldon Jackson, published in 1902.^a

THE ESKIMO AS HERDERS.

With careful training the Eskimos make excellent herders. They are by nature good imitators, though not inventive, and readily learn how to take care of the reindeer, to throw the lasso, to harness and drive the deer, and to watch the fawns. Siberian herders were at first imported to teach them, and later the more intelligent and efficient Laplanders, who have learned by centuries of experience to give to the breeding of reindeer the care that we give to the breeding of cattle. In the winter of 1898 63 Laplanders and their families volunteered to go to Alaska, the United States Government paying the expenses of their long journey of 10,000 miles. When their term of enlistment expired some reenlisted, some of them went home again, but the majority turned miners. Everyone will be glad to know that at least two-thirds of the whole number made large fortunes in the Cape Nome gold fields.

The reindeer herders have to be watchful. Now and then reckless miners try to plunder the herds, or by their carelessness set fire to the moss. A fire will sweep over the moss barrens, licking up every fiber of the moss, as it sweeps over our western prairies. A moss fire is even more destructive, for many years pass before the moss will grow again.

At the end of a year's service the Government makes a gift to deserving herders of two or more reindeer.

^aReport on the Introduction of Domestic Reindeer into Alaska. By Sheldon Jackson, LL. D., 1901. Appendix, Expedition to Siberia, report of Lieut. E. P. Bertholf, pp. 130-168.

REINDEER RAISING AS AN INDUSTRY.

When one considers that raising reindeer in Alaska is simple and the profits enormous, one is surprised that as yet no one has really gone into the reindeer business, especially at Dawson, where a rich market awaits the reindeer farmer.

A fawn during the first four years costs the owner less than \$1 a year. At the end of the four years it will bring at the mines from \$50 to \$100 for its meat, or if trained to the sled or for the pack, is easily worth \$100 to \$150.

The fawns are very healthy and but few die; the does are prolific, and after they are 2 years of age add a fawn to the herd each year for ten years. Last year, out of 50 does 2 years and more of age in one herd, 48 had fawns, and of these only 5 died, 3 of which were lost through accidents or by the carelessness of the herder.

The reindeer are so gregarious and timid that one herder can easily guard 1,000 head. The herder knows that if a few stray off he need not look for them as they will soon become frightened and rejoin the main herd.

The does make almost as good sled deer as the bulls and geldings. They are slightly smaller and less enduring.

The Chukches deer cost in Siberia about \$4 a head for a full-grown doe or bull. The fawns born in Alaska are larger and heavier than the parent stock.

The Tunguse deer cost nearly \$7.50 apiece. By the addition of the Tunguse breed it is hoped that the Alaska stock will be improved and toughened.

The reindeer cow gives about one teacupful of very rich milk, nearly as thick as the best cream, and making delicious cheese. Mixed with a little water the milk forms a refreshing drink. The Siberians and Laplanders save the blood of slaughtered deer and serve it in powdered form. From the sinews tough thread is obtained.

REINDEER EXPRESS.

The Alaskan reindeer can hardly equal the speed of the Lapland deer, which Paul du Chaillu^a describes as making from 150 to 200 miles a day, and sometimes 20 to 25 miles downhill in a single hour. A pair of them can pull a load of 500 to 700 pounds at the rate of 35 miles a day and keep it up weeks at a time. W. A. Kjellmann drove his reindeer express one winter 95 miles in a single day.

Reindeer teams during the past winter carried the United States mail from Nome to Candle City, on the Arctic Ocean, a distance of 260 miles. The teams had heavy loads of passengers and freight and made the distance in eight days. Dog teams would have required fifteen to twenty days for the trip.

^aThe Land of the Long Night, Paul du Chaillu. Chas. Scribner's Sons.

The reindeer can travel at night as well as in the daylight, and thus during the long arctic night when dogs are inefficient transportation is always possible with a reindeer team.

The reindeer make good packers in summer. One hundred and fifty pounds is a fair load. They also can be ridden in the saddle, but not with much comfort until the rider learns how to adjust himself. In the Tunguse country the natives use their deer in summer as we would a mule or horse. It is no uncommon sight to see a Tunguse trotting along the shore deerback.

Lieutenant Bertholf describes the caravans of reindeer sleds in northeastern Alaska. Over 1,000 sleds leave Ola (see map) during the winter in caravans of about 100 each. A caravan of 100 sleds is managed by 10 men. Some years ago the Russian Government used horses on the caravan route from Ola to the Kolima River, but recently substituted reindeer, and now save \$60,000 yearly by the change.

One of the illustrations shows the leaders of Lieutenant Bertholf's party breaking a path through snow that reached to the belly of the deer. A strong, wiry deer, unmounted, was driven first. In the deep snow he could advance only by jumps, but his leaps broke the way somewhat for the next few deer, who were also unmounted. After a dozen or more unmounted deer had passed by, deer ridden by a boy and girl broke the path still farther, until deer with heavy loads could pass. Lieutenant Bertholf in this way broke his path for 160 miles through the deep snow.

When the caravan halts the deer are turned out to pasture untethered and allowed to wander as they will. The driver uses a switch to touch up the slothful, but "some of the old deer do not seem to mind a switch any more than does an army mule."

Another illustration shows a number of reindeer digging up the snow with their powerful hoofs to get at the moss beneath the snow. As soon as spring comes the deer abandons his diet of moss, which seems to be most nutritive in winter, for willow sprouts, green grass, and mushrooms. The hoof of the reindeer is as wide as that of a good-sized steer and prevents him from settling down into damp snow or miry soil.

REINDEER LOANED BY THE GOVERNMENT.

The United States Government loans a certain number of the reindeer to the mission stations or to individuals who have shown their ability, reserving the right, after three or five years, of calling upon the mission station or the individual for the same number of deer as composed the original herd loaned. In 1894 the Congregational mission at Cape Prince of Wales was granted the loan of 100 deer. The mission has since paid back the loan and now possesses in its own right 1,000 head.

A few of the herds, notably that at Cape Prince of Wales, have grown so large that the owners are able to kill off some of the extra males for food for the families of the herders and to sell others to the butchers in the neighboring mining camps. Last year deer for slaughter brought from \$60 to \$100 each, while for male deer trained to harness miners gave as much as \$150 apiece. The herders at this same station earned last winter \$600 in gold for freighting with their reindeer to the mining camps. The deer were worked in double-trace harness like horses, and hauled on sleds 790 pounds each.

Of the 60 individual owners of domestic reindeer in Alaska to-day, 44 are Eskimos. Most of them have served a five-year apprenticeship, and, having earned their deer, are competent to care for them.

Each owner has his own individual mark, which is branded on the left or right ear of each of his deer.

IMPORTANCE OF REINDEER TO MISSION STATIONS.

The Bureau of Education hopes that in time each mission station will possess a herd of at least 5,000 head. A reindeer herd at a mission station in Arctic or sub-Arctic Alaska means, says Doctor Jackson:

First. The permanence of the mission. Without it the natives are away from home a larger portion of the year in search of food, and, since the advent of the miners, are inclined to leave their homes and congregate in the American villages at the mines, where they live by begging and immorality and soon disappear from the face of the earth.

Second. It affords the missionary the opportunity of rewarding and encouraging those families that give evidence of being teachable by establishing them in the reindeer industry and thus greatly promoting their material interests.

Third. With the increase of the herd it becomes a source of revenue through the sale of the surplus males at remunerative prices to the miners and butchers. In a few years this revenue should be sufficient to entirely support the mission and thereby relieve the treasury of the central Missionary Society.

Fourth. The possession of a herd insures to the mission family a continuous supply of fresh meat. This to a family which is compelled to live largely upon salted and canned meats and canned vegetables is of no small benefit, promoting their comfort, health, and usefulness.

Fifth. Reindeer trained to harness and sleds greatly increase the efficiency and the comfort of the missionary in ministering to outlying native settlements.

REINDEER FROM LAPLAND.

The vast majority of the American people have an idea that the reindeer experiment in Alaska proved a failure long ago, simply because of the widely advertised unsuccessful attempt in 1898 of bringing deer from Lapland. Only once have reindeer been brought from Europe for Alaska, and that attempt was unsuccessful, not because the reindeer could not live in their new home, but because of the wretched transportation given them from Seattle to their Alaskan destination.

In December, 1897, rumors were started that American miners in the Yukon Valley were in danger of starvation. Congress appropri-

ated a large sum for their relief, and commissioned Dr. Sheldon Jackson to go to Norway and Sweden to purchase 500 reindeer broken to the harness, with sleds, harness, and drivers, for hauling supplies from the head of Lynn Canal to the destitute miners, 1,000 miles away.

Doctor Jackson reached Europe in January, purchased 526 trained deer, gathered 68 Lapp drivers with their families, embarked them all on one ship, and sailed for New York from Trondhjem February 4. Only one deer died on the voyage of twenty-four days, though the trip was a most tempestuous one, and the deer in pens on the deck were drenched day and night by the seas that broke over them. At New York special trains met the expedition and carried them across the continent to Seattle without the loss of a single deer. Then the troubles began. The supply of moss brought from Norway became exhausted and the deer did not like the grass of Seattle. There was delay in securing a vessel to transport the expedition to the head of Lynn Canal, and further delays at Lynn Canal, and no moss to be found there. Nearly 300 of the reindeer died of starvation before the moss fields at the head of the Chilkat River, about 50 miles from Lynn Canal, were reached. The remaining 200 were too weakened to endure the long journey to the Yukon Valley, and the relief expedition had to be abandoned, but fortunately not before the country had learned that the miners in the Yukon had abundant supplies, and that the relief expedition had been unnecessary.

The Laplanders who had been brought over were distributed among the reindeer stations and employed to teach the natives.

RELIEF OF WHALERS AT POINT BARROW.

The first forcible realization of the wisdom of the Government in stationing reindeer herds in Alaska came to the American people in the winter of 1897-98. In the fall of 1897 word was received that eight whaling ships had been imprisoned in the ice near Point Barrow, and that the 400 American seamen aboard were stranded without food for the long winter, till the ice should open in July. No vessel of relief could get within 2,000 miles of the party, or nearer than Denver is to Boston. There was no known method by which provisions could be dragged overland. If the Government had not five years before commenced the introduction of the reindeer, most of these 400 men would have starved to death before help reached them. Fortunately there were large herds of reindeer at Cape Nome and at Cape Rodney, over 1,000 miles by land from Point Barrow, or farther than Chicago is from New York. The Government hurried the revenue-cutter *Bear* north from Seattle, carrying three brave volunteers—Lieut. David H. Jarvis, Lieut. Ellsworth P. Bertholf, and Dr. Samuel J. Call. The three men were landed December 16, 1897, at Cape Vancouver, obtained some dog teams from the natives, and commenced their dreary journey

of 2,000 miles through the arctic night to Point Barrow. They collected about 450 reindeer from the herds at Rodney and Nome, and then, with reindeer instead of dog sleds, and with Mr. W. T. Lopp, agent of the American Missionary Society at Cape Prince of Wales, and Charley Arisartook, a native, and several herders, they pushed on through the storms and bitter cold of an arctic winter, driving the deer before them. After a journey of three months and twelve days, on March 29, 1898, they reached the destitute whalers, just in time to save them from great suffering and death.

In heroism, pluck, and endurance the journey of these men has rarely been equaled. Congress voted its thanks to the gallant rescuers and awarded them special medals of honor, but in the excitement aroused throughout the country by the rapid succession of events of the Spanish-American war their work was almost unnoticed.

Since that time a reindeer herd has been kept at Point Barrow, so there is no longer danger of ice-imprisoned whalers perishing from starvation. The experience also showed the faithfulness of the Eskimo. Mr. Lopp had left his wife at his station, the only white person among 400 natives, but during his absence of nearly five months she received nothing but constant courtesy and kindness from them.

DEVELOPMENT OF ARCTIC AND SUBARCTIC ALASKA DEPENDENT ON THE REINDEER.

The original motive in bringing the reindeer to Alaska was purely philanthropic—to give the native a permanent food supply.

Since then the discovery of large and valuable gold deposits upon the streams of arctic and subarctic Alaska has made the reindeer a necessity for the white man as well as for the Eskimo. Previous to the discovery of gold there was nothing to attract the white settler to that desolate region, but with the knowledge of valuable gold deposits thousands will there make their home, and towns and villages are already springing into existence.

But that vast region, with its perpetual frozen subsoil, is without agricultural resources. Groceries, breadstuffs, etc., must be procured from the outside. Steamers upon the Yukon can bring food to the mouths of the gold-bearing streams, but the mines are often many miles up these unnavigable streams. Already great difficulty is experienced in securing sufficient food by dog-train transportation and the packing of the natives. The miners need reindeer transportation.

Again, the development of the mines and the growth of settlements upon streams hundreds of miles apart necessitate some method of speedy travel. A dog team on a long journey will make on an average from 15 to 20 miles a day, and in some sections can not make the trip at all, because they can not carry with them a sufficient supply of food for the dogs, and can procure none in the country through which they travel.

To facilitate and render possible frequent and speedy communication between these isolated settlements and growing centers of American civilization, where the ordinary roads of the States have no existence, and can not be maintained except at an enormous expense, reindeer teams that require no beaten roads, and that at the close of a day's work can be turned loose to forage for themselves, are essential. The introduction of reindeer into Alaska makes possible the development of the mines and the support of a million miners.

The reindeer is to the far north what the camel is to the desert regions—the animal which God has provided and adapted for the peculiar special conditions which exist. The greater the degree of cold the better the reindeer thrives. Last winter a party with a reindeer team made a day's journey with the temperature at 73° below zero. On a long journey through an uninhabited country a dog team can not haul sufficient provisions to feed themselves. A deer with 200 pounds on the sled can travel up and down the mountains and over the plains, without a road or trail, from one end of Alaska to the other, living on the moss found in the country where he travels. In the four months' travel of 2,000 miles, from Port Clarence to the Kuskokwim Valley and back, by Mr. W. A. Kjellmann and two Lapps, with nine sleds, 1896-97, the deer were turned out at night to find their own provisions, except upon a stretch of the Yukon Valley below Anvik, a distance of 40 miles.

The great mining interests of central Alaska can not realize their fullest development until the domestic reindeer are introduced in sufficient numbers to do the work of supplying the miners with provisions and freight and giving the miner speedy communication with the outside world.

The reindeer is equally important to the prospector. Prospecting at a distance from the base of supplies is now impossible. The prospector can go only as far as the 100 pounds of provisions, blankets, and tools will last, and then he must return. With 10 head of reindeer, packing 100 pounds each, making half a ton of supplies, he can go for months, penetrating regions hundreds of miles distant.

FUTURE OF REINDEER INDUSTRY.

Even if no more reindeer are imported from Siberia, if the present rate of increase continues, doubling every three years—and there is no reason why it should not—within less than twenty-five years there will be at least 1,000,000 domestic reindeer in Alaska. This is a conservative estimate, and allows for the deer that die from natural causes and for the many that will be slaughtered for food. In thirty-five years the number may reach nearly 10,000,000 head, and Alaska will be shipping each year to the United States anywhere from 500,000 to 1,000,000 reindeer carcasses and thousands of tons of delicious hams and tongues.

At no distant day, it may be safely predicted, long reindeer trains from arctic and subarctic Alaska will roll into Seattle and our most western cities like the great cattle trains that now every hour thunder into the yards of Chicago. Before the end of the present century Alaska will be helping to feed the 200,000,000 men and women who will then be living within the present borders of the United States.

THE CARIBOU.^a

By MADISON GRANT.

The name caribou is one of the few names manufactured by the American pioneers to describe an animal found here. Unlike the name moose, which is of Indian origin, caribou is a modern French-Canadian corruption of "carré-bœuf"—or square ox—a word not without a certain descriptive power. The Algonkin equivalent is an-en-a-dik.

The term "caribou" is properly applied to all the American species of the genus *Rangifer*, while the word "reindeer" is limited to the Old World forms. In Europe, however, the latter name covers the entire genus.

The origin of the word reindeer is of considerable interest. The first syllable, rein in English, raine in Dutch, renne in French, and renn-thier in German, are not only equivalents, but are also related to the Latin-French form rangi-fer. The Lapp word reino, meaning pasturage, should also be noted. Curiously enough, the second syllable of reindeer, rennthier, and rangifer are also of a common origin. Beginning with the Greek therion, a wild beast, we have Latin ferum by the metamorphosis of the th into f, and both equivalent to thier in German; and this latter by a similar transformation of the th into d, becoming deer in English.

CLASSIFICATION.

Before going into a detailed description of the genus, it may be well to briefly summarize the different classifications which obtain at present, but which will probably be subjected to considerable alteration in the future by new discoveries. Many of the species, especially those of the extreme north of America, are rapidly diminishing in numbers, and it is most important that they should be thoroughly studied at once.

In describing the genus *Rangifer*, European naturalists have until recently held that there was but one species with a circumpolar distribution. Lately, however, they have partly yielded to the American view, and admitted the existence of either two or three distinct species.

^a Reprinted from the Seventh Annual Report of the New York Zoological Society.

In the former case they identify the old world reindeer with the Barren Ground Caribou, to which indeed it is closely allied. Judge Caton made a very serious error in identifying the reindeer with our Woodland Caribou.

The most recent European classification is as follows:

1. *Rangifer tarandus tarandus*.
2. *Rangifer tarandus s. spitzbergensis*.
3. *Rangifer tarandus caribou*.
4. *Rangifer tarandus terraenovae*.
5. *Rangifer tarandus gr. s. indicus*.
6. *Rangifer tarandus arcticus*.

The differences between these types entitle them, under this system, only to subspecific rank. This classification separates the Spitzbergen form from the typical Scandinavian reindeer, chiefly on the ground of its smaller size, but ignores the existing Siberian forms, concerning which very little authentic information is available.

The writer believes that all the existing species should be divided into two groups:

- I. The Barren Ground Caribou.
- II. The Woodland Caribou.

and that the species should be classified as follows:

I. BARREN GROUND CARIBOU.

(a) European species.

- | | |
|-------------------------------------|------------------------------|
| 1. <i>Rangifer tarandus</i> , | Northern Europe and Siberia. |
| 2. <i>Rangifer spitzbergensis</i> , | Spitzbergen. |
| 3. Undescribed Siberian races, | Siberia. |

(b) American species.

- | | |
|------------------------------------|--|
| 1. <i>Rangifer groenlandicus</i> , | Greenland. |
| 2. <i>Rangifer parvi</i> , | Ellesmere Land. |
| 3. <i>Rangifer arcticus</i> , | Extreme north of America and the Arctic Islands. |
| 4. <i>Rangifer granti</i> , | Alaskan Peninsula. |
| 5. <i>Rangifer stonoi</i> , | Cook Inlet. |
| 6. Undescribed American races. | |

II. WOODLAND CARIBOU.

American species.

- | | |
|----------------------------------|---|
| 1. <i>Rangifer terraenovae</i> , | Newfoundland. |
| 2. <i>Rangifer caribou</i> , | Canada, Maine, west to Manitoba. |
| 3. <i>Rangifer montanus</i> , | Rocky Mountains from Idaho to Central British Columbia. |
| 4. <i>Rangifer osborni</i> , | Cassiar Mountains of British Columbia, northward. |
| 5. Undescribed American forms, | Alaska and Arctic Canada. |

These types will be considered in detail further on.

BASIS OF CLASSIFICATION.

All classification is, in the first instance, a question of definition. To-day nearly all the large North American mammals are undergoing a systematic revision. There is a wide divergence of opinion as to whether or not certain departures from accepted types should be recognized as species or merely as local races. The determination of this question naturally depends upon the importance attached by different zoologists to the characters upon which distinctions are based.

Most of the distinctions between caribou species are based on size, color, and antler development. The writer is perfectly aware of the uncertainty of any of these tests. Size alone does not often form a sufficient reason for specific distinction. Color, especially in an animal subject to seasonal variations, is apt also to be an uncertain factor, and the warning of Linneus—*ne nimium crede colori*—has been too often ignored by zoologists.

Antler development is, if anything, a more variable quantity than either of the preceding characters. There is a wide range of irregularity in the antlers of all deer, reaching what is perhaps its maximum among the various groups of caribou. Animals in the same herd may differ widely in this respect. Even the antlers carried in the successive years of an animal's growth may and often do vary, and the two antlers on the same animal may not be symmetrical. Nevertheless, within the extreme limits of this irregularity there are certain types of architecture which, though clearly defined, are difficult to describe. This is true of nearly all the genera of the deer family.

The antlers of the Scandinavian elk and of the two species of moose are generally distinguishable, as are also antlers of the Virginia deer from certain localities. Furthermore, it is often possible to pick out moose antlers from the Rockies from those of eastern Canada.

The above remarks apply to the caribou with peculiar force. The caribou from Newfoundland can be distinguished from those of the mainland by those who have sufficient experience in this matter, although the distinction might defy definition in words. The typical eastern forms of antlers could not possibly be mistaken for a typical antler from the northwestern United States or from British Columbia. Selected specimens from each locality might be found closely approximating, but, nevertheless, the main statement remains true that one familiar with the modifications of caribou antlers could, in many cases, name the locality of a typical set of antlers.

When the antlers are distinguishable, and the color of the pelage of two animals at the same season is in marked contrast, and still further when there is added to these two characters a third—size—sometimes extremely marked, as between the Barren Ground and the Woodland groups, sometimes less extreme, as between the British Columbian

forms and the Eastern Woodland, we have a group of variations clearly indicating that the extremes of the genus in the different portions of the range are at least well on the road toward forming distinct species.

When, in addition to the permanent variations in size, color, and antlers, well-marked anatomical features are found in the skulls or other part of the bony structure, the case in favor of specific rank becomes greatly strengthened.

When the ranges of two species adjoin or overlap, careful search must be made for intermediate and annectent forms. Such forms may be found among the western Woodland caribou, where it is within the possibilities that *R. montanus* and *R. osborni* merge, although there is as yet no evidence of this.

We have some twenty-odd specimens from the Cassiar Mountains, and all clearly indicate a species distinct from the southern form. We are not so fortunate in our specimens from the habitat of *R. montanus*. So far as known, all Alaskan caribou belong to the barren ground group, in spite of the general impression to the contrary. *R. osborni* probably crosses the eastern border for a short distance. On the south coast of Alaska *R. stonei* is an isolated and clearly defined species, and unless specimens are discovered on the mainland it will probably be exterminated before we know much more about it. *R. granti*, inhabiting the extreme west of the Alaskan Peninsula, has, thanks to the agency of man, been separated from its nearest relatives, so that we have lost whatever forms there may have existed intermediate between it and its close kindred on the Arctic coast.

This last example is very suggestive of the manner in which species originated. A group of animals spreading over a large and diversified area slowly evolves variations in conformity with local conditions. As long as there is a continuous intermingling of all the members of the original group, the development of distinguishing characters is held in check. When for any reason this distribution ceases to be continuous, as by a severance of land connections, by the disappearance of water or forest in some particular tract, or, by persecution by enemies, and the isolation caused thereby is maintained sufficiently long, the group is broken up, interbreeding ceases, and free play is given to tendencies toward divergence. Perhaps another change in local conditions occurs, resulting in the migration of one of the new groups back into the territory of another. If the isolation has continued sufficiently long to do its work, the two forms are distinct, and we have, side by side, two animals recognized as different species. Such is the case at the point where the range of the barren ground and the woodland caribou groups overlap. Such is the case in the West, where the ranges of the black-tail and the white-tail deer over-

lap. Such is the case in Alaska, where members of the grizzly and brown bear groups range over the same country.

The case of the Virginia deer (*Odocoileus virginianus*) is in point. This deer ranges from lower Canada and Maine, in varying abundance, to the Gulf States and Mexico. In this enormous extent of country local conditions have produced their expected results. As we go south this deer becomes a smaller and more delicate animal, the antlers simpler and lighter, until a Florida or Mexican specimen placed beside one from Maine or Canada would show a degree of divergence in size, color, and antlers clearly sufficient to constitute a separate species. As a matter of fact, these outlying types are recognized as subspecies, and I greatly doubt whether a hunter, starting in Quebec or New Brunswick, and securing a continuous series of specimens as he passed down through Maine and New England, through the Adirondacks and Pennsylvania along the line of the Blue Ridge to the Gulf States, and thence to Mexico, could at any point in his travels find the locality where one group ends and another begins. As he progressed one type would fade into another, new characters appearing in an ever-increasing percentage of individuals. If, by some convulsion of nature, the deer of the Central States were destroyed and the Maine deer driven into Florida or Mexico—and such migrations have been common since terrestrial life first appeared—two valid species would exist in Florida. The Columbian black-tail dwindling to the north into the Sitka deer furnishes a similar case.

These examples are parallel in the case of the caribou. Individuals taken from widely distant points on the Pacific coast show widely different characters. So do deer taken from Maine, Florida, and Mexico. In the case of the deer, we know that intermediate types exist, and yet different subspecies are recognized from the localities just mentioned. In the case of the caribou we do not know whether intermediate types exist or not. If they do not exist, the question of the specific distinction of the forms described in this article may be considered settled. If they are found to exist, their case will be analogous to that of the Virginia deer, and the so-called species will fall to the rank of subspecies or local races.

The distinction between a species and a subspecies is founded on this very point. Several groups of animals, presenting characters of a certain value, and without intermediate forms, constitute as many different species. Groups of animals with the same characters, but fading imperceptibly into one another, are recognized as subspecies. Many types recognized now as subspecies are being rapidly raised to the rank of full species through the agency of man and his repeating rifle, and long before the last word on this subject has been said the animals themselves, in many instances, will have disappeared.

DISTINCTION IN TYPE.

Before turning to the distribution of species, it may be well to briefly mention the several characters which distinguish the genus *Rangifer* as a whole from the other genera of the deer family.

All the members of this subdivision of the Cervidæ are extremely migratory in their habits, far more than any other deer, and consequently range over large areas. Their most distinguished character, however, is to be found in the structure of the bones of the foot, where the so-called dewclaws attached to the ends of the metacarpal bones are functional, and are of use not only on glare ice but in snow and in the soft mossy bogs and barrens the caribou frequent. If the development of the metacarpal bones be given much weight, the nearest allies of this genus would be the moose and the American deer (*Odocoileus*). With the former, further affinity is suggested by the palmation of the antlers. Both the metacarpal structure and palmation, however, are probably cases of parallel development, and would not indicate any close relationship. The palmated antlers of the fallow deer present another example of such parallelism.

The presence of small horns on the females of this genus is in striking contrast to their absence in all the other members of the deer family. An effort has been recently made to show that in the ancestral deer antlers were present in both sexes, in which case their persistence among the caribou should be considered a primitive character. I can not see any reason why this theory should be adopted in preference to the older view, which considered all antlers to be secondary sexual characters, and the antlers of the female caribou an acquired rather than a primitive character. This point remains, however, unsettled.

In the woodland caribou group one of the brow antlers is frequently enormously developed, projecting far down on the face, sometimes to the extremity of the nose, and serving as a guard to the eyes and face during the combats of the stags. This development of one or both of the brow antlers is considered by some of the European naturalists to be so characteristic of the American woodland caribou that they rely upon it alone to distinguish the American woodland from the barren-ground caribou as well as from the old world species. Several magnificent heads of the barren-ground caribou from Labrador, in the Smithsonian at Washington, show one heavily palmated brow antler, and consequently such palmation can not be confined to the woodland group. Among the Newfoundland species both brow antlers are occasionally heavily palmated and almost symmetrical. This double palmation occurs in one out of six or eight heads, but is much more rare in the woodland caribou of the mainland, and apparently occurs but seldom among the barren-ground caribou.

FOSSIL FORMS.

The distinction between the two types referred to above as the barren-ground caribou and the woodland caribou is found not only among the existing species but is clearly foreshadowed in the fossil remains found in the pre-Glacial and inter-Glacial deposits of the British Isles and continental Europe. The fossil reindeer found in the oldest Pleistocene deposits in Norway, Ireland, western and southern France, and in the Pyrenees are practically identical with the existing Scandinavian species. The Pyrenees were their extreme southern limit, and it is probable that they appeared there only as winter migrants.

In these deposits the antlers referable to the barren-ground group are round, slender, and long in proportion to the small size of the animal, and the beam and the tines, including the brow tine, are but little palmated. The antlers of the woodland caribou group, on the other hand, are flatter, thicker, and more heavily palmated, both on the beam and tines, especially the brow antler, while the tine immediately above the brow antler, and corresponding to the beztine in the red deer (*Cervus*), is elaborately developed, and palmated in marked contrast to the same tine in the barren-ground group. The development of this tine the writer considers to be the most distinctive character separating the two types. There are also important differences in the angle of curve in the main beam. In Stone's caribou this tine is of a somewhat intermediate character. The fossil remains of the woodland caribou denote a larger animal, and this contrast in size holds good to-day between the existing species of the two groups.

DISTRIBUTION OF THE VARIOUS SPECIES.

At the beginning of the glacial period there was a land connection between Greenland, Spitzbergen, and Norway, which was in turn joined to Scotland and to Ireland, thence across England to the Continent; and it was over this land connection that the Arctic barren ground caribou found its way into western Europe. At that period, those portions of Russia lying between the Black Sea and the White Sea and the major part of Sweden were entirely submerged, as well as a large part of northern and eastern Germany. This condition prevented the spread of this group into eastern Europe at that time. Its extreme eastern limit was near Berlin, where in one of the oldest Pleistocene deposits fossil remains of the barren ground caribou have been found. At a much later period, probably during the interglacial phase of the glacial period, a land connection was established across Russia, and an invasion of Siberian mammals took place, bringing with it the woodland caribou. This animal pushed as far west as England, the north and east of France, but never reached either Scan-

dinavia or Ireland, the latter having become detached from England at that time.

In the lands lying south of the Baltic this woodland type abounded, increasing in numbers toward the east, but vanished before the historic period. Some member of the genus, probably the existing reindeer, persisted in the forests of northern Europe until comparatively recent times, and were known to the Romans as inhabitants of the German forests. In fact, there is some slight evidence of the existence of reindeer in Caithness, Scotland, as late as the twelfth century.

All fossil remains found in Siberia and eastern Europe are of the woodland caribou type, but all existing species found in Europe or Siberia to-day belong to the barren ground group, with the possible exception of a race in eastern Siberia, which may be found to belong to the woodland group.

It thus appears that the separation of the two groups, the barren ground caribou and the woodland caribou, dates from preglacial times, and that the former entered Europe from the Arctic regions at a much earlier period than the latter. The woodland caribou, on the other hand, entered Europe from Siberia, and probably originated in northeastern Asia, together with much of the fauna common to the Eurasian and North American continents, so that although no woodland caribou exists to-day in Europe, and while there is very little evidence of their existence in eastern Siberia, it is probable that they entered North America from the Old World over the land connection, which, until recent times, existed across Bering Strait; and it was by this connection that North America received many of its best-known animals—the wapiti, the bison, the mountain sheep, the grizzly and brown bears, the wolverine, and the lynx.

It may be noted in this connection that the fossil remains give us no good clew to the place of origin of the genus as a whole, but there is much negative evidence to indicate that it was in some Arctic land. In fact, all deer are clearly of northern origin.

THE BARREN GROUND CARIBOU.

In contrast to the east Siberian origin of the woodland caribou, the original center of distribution of the barren ground caribou appears to have been in the north Atlantic region. Possibly this group entered America by way of Greenland. At present, species of the barren ground group are found throughout northern Scandinavia and Lapland, Spitzbergen and Nova Zembla, in suitable localities throughout Siberia, Alaska, the portions of North America east and west of Hudson Bay beyond the limit of tree growth, Greenland, and the Arctic lands lying to the north of the American continent.

The Scandinavian reindeer (*Rangifer tarandus*) is, of course, the earliest and best known, and is the type of the whole genus. The

domesticated race is smaller than the wild animals which still persist in the more inaccessible regions of Lapland. This relatively small size of the domesticated in contrast to the wild races also holds good in Siberia.

To the east of Lapland the reindeer extends throughout northern Russia and Siberia, in places as far south as the fifty-fourth parallel, and in the Ural regions as far south as the fifty-second parallel. Throughout this vast extent of country it is more than probable that there are well-marked and distinct species, which could be established by a careful comparison of specimens from different localities. In fact, recent discoveries indicate the existence of several distinct races of both the wild and domesticated reindeer in eastern Siberia.

In the Government of Kazan it is said that the reindeer are of an exceedingly large size and that the females are without antlers. A snow-white reindeer has been reported recently (1902) from the mouth of the river Lena. This may be a new species, or, more probably, merely the common form in its winter pelage.

To the north of the Old World reindeer are absent from Francis Joseph Land, but appear to abound in Nova Zembla and in Spitzbergen. The race in the latter islands (*Rangifer spitzbergensis*) has clear claim to specific rank, chiefly on the ground of its size, which is far smaller than the type race, but also on account of well-defined characters in the skull.

In America the different species of barren ground caribou all lie to the north of the various members of the woodland group. The Greenland race is a separate species (*Rangifer groenlandicus*). Nearly all of the Parry Islands and other large land areas lying between Greenland and the mainland are inhabited by barren ground caribou, formerly identified with those of the mainland (*Rangifer arcticus*).

A new barren ground caribou from Ellesmere Land was described by Dr. J. A. Allen on October 31, 1902, under the name of *Rangifer pearyi*. Its chief character is in the coloring, which is pure white, except for a large dark patch on the middle and posterior part of the back. The new species is thus sharply defined from the darker caribou of Greenland. Its nearest relatives will be found among the caribou now grouped together under the name of *Rangifer arcticus*. It is very probable that investigations among the Parry Islands, and other land masses to the north of the continent, will disclose intermediate forms between these two.

Caribou, probably of this species, have been found as far north as the neighborhood of Fort Conger, Grinnell Land, in latitude 82°. It appears to be the northernmost member of the genus, and shares with the musk ox and polar bear the distinction of being one of the few land mammals able to maintain existence at that latitude. The Newfoundland caribou had, before the discovery of this species, been considered the whitest of the caribou.

On the American mainland west of Hudson Bay the typical barren ground caribou (*Rangifer arcticus*) is found in large herds throughout the barren grounds, migrating in winter into the timber belt as far south as the neighborhood of the Churchill River, latitude 59° north, and the southern end of Reindeer Lake.

That a portion of the herds remain along the northern coasts throughout the winter has been demonstrated by Mr. Andrew J. Stone. The recent investigations of this explorer have brought to light the interesting fact that the Mackenzie River throughout its entire length, including a belt of land 100 miles wide along its banks, is uninhabited by caribou, and appears to form the western limit of the *Rangifer arcticus*. To the west of the river the caribou are nearly twice the size attained by those on the east, and further explorations in that country will probably show this west Mackenzie caribou to be a new species. The caribou on both sides of the Mackenzie River, however, are threatened with extinction, owing to the increased number of whalers wintering on the northern coast. The natives are employed to bring in immense quantities of meat, and are supplied with firearms for that purpose.

The portion of northern Alaska drained by the Colville River is inhabited by a caribou which probably will prove on investigation to be a new species, possibly identical with the West Mackenzie form above referred to. The mountains to the north of the Porcupine River in Alaska are said to contain a red caribou, extremely rare, if not already exterminated. The caribou of the Kuskokwim River in southern Alaska is said also to be distinct, but is probably closely related to or the same as *R. stonei*. All these undescribed Alaskan caribou will probably be found to belong to the barren ground group.

Some five thousand domesticated reindeer from east Siberia have been introduced among the Eskimos of northwest Alaska. It is well within the probabilities that some of these animals may escape, and in time form a wild race. At all events such a possibility must hereafter be borne in mind.

In the autumn of 1901 Mr. Andrew J. Stone discovered a new species of Barren Ground caribou on the Alaskan Peninsula, far beyond the western limit of tree growth. Fifteen fine specimens were secured, and described by Dr. J. A. Allen, of the American Museum, as *Rangifer granti*.^a A group of these animals is now being mounted at the American Museum. Mr. Stone states that this caribou inhabits the barren land of the Alaskan Peninsula, ranging well up into the mountains in summer, but descending to the lower level in winter, generally feeding on the low, flat lands near the coast and in the foothills. They formerly lived in considerable numbers on Unga Island, where they are now practically extinct. The only other island inhabited by

^a This species was named in honor of the author of this article.—EDITOR.

them is Unimak Island, at the western end of the Alaskan Peninsula. Formerly they were exceedingly abundant, but of late they have been greatly reduced in numbers through the agency of the market hunters. The habitat of *R. granti* is thus an isolated area in the treeless portion of the Alaskan Peninsula, and (formerly at least) some of the adjoining islands at the western end of the peninsula. The nearest relations of the *R. granti* are to be sought on the barrens of north-western Alaska, a district from which we have as yet no authentic specimens.

The caribou of the Kenai Peninsula, Alaska (*R. stonei*), is very much larger than *R. granti*, and appears to be the largest of the Barren Ground group. The animal has a totally different scheme of horn architecture, as may be seen from the accompanying cut, and shows signs of approaching the *R. osborni* and *R. montanus* toward the east and south. It is in fact an outlying member of the Barren Ground group, approximating to the Woodland group. Between *R. stonei* and *R. granti* there is no near relationship.

The caribou of the Kenai Peninsula, as stated above, constitute a well-marked species of the Barren Ground type. It was described in May, 1901, by Doctor Allen, and named from the discoverer, Andrew J. Stone. As yet only three specimens are known. On the peninsula itself this fine animal seems to be on the verge of extinction, being now limited to one small herd, but it is highly probable it is to be found on the mainland west and north of Cook Inlet. A heavy bunch of white hairs in the front of the head and throat constitutes one of the most marked characteristics of this animal. The antlers are clearly of the Barren Ground caribou type, but present two marked peculiarities. These are the extreme length of the tines on the upper part of the main beam, and a peculiar structure of the antler above the brow antler, which, taken alone, is not unlike the antlers of the American deer (*Odocoileus*). This animal is large and by far the handsomest known species of the Barren Ground group. Its relationship to the caribou of the north and east can not be determined until a full series of specimens is obtained.

Of the Barren Ground caribou group there remains to be considered those of Labrador, but the caribou of the barren grounds to the east of the Coppermine River and north of Chesterfield Inlet need careful investigation, as do those of Southampton Island.

We are indebted to Mr. A. P. Low, the Canadian explorer, for most of the knowledge we possess of the interior of the peninsula of Labrador, which includes one of the largest unexplored areas on the globe. Mr. Low states that there are three distinct herds of Barren Ground caribou on the barren and semibarren lands of the peninsula. These herds frequent the coast of Hudson Straits, Ungava Bay, and the

Atlantic coast as far south as Hamilton Inlet. On the Hudson Bay coast they are found only at present in small numbers to the north of Whale River, about the fifty-fourth parallel, and are being rapidly exterminated by the Indians. It is probable that the Barren Ground caribou of Labrador occupy at times the same area in the interior as the woodland caribou (*Rangifer caribou*).

An interesting question here arises as to whether the caribou of northern Labrador and those of Baffin Land are identical, and as to the possibility of crossing Hudson Straits, which lie between. Inasmuch as the Straits of Belle Isle appear to interpose a barrier sufficient to prevent the intermingling of the Newfoundland and mainland species, and as Hudson Straits are very much wider, and the probability of an ice bridge far more remote, it would seem that the two groups have been separated for a long period of time. It is highly probable, therefore, that future investigations will develop some distinctive features between the Labrador animals and those of Baffin Land and show a close relationship between the latter and the caribou of Ellesmere Land.

Mr. Arthur Moore, of New York, led an expedition into the Hudson Bay region during the summer of 1901 and obtained caribou on the mainland of Labrador and on Salisbury Islands, lying on the Baffin Land side of Hudson Straits. He writes me as follows:

The tides are so swift, and their rise and fall so considerable, that the ice does not afford a practicable road. This view is supported by the further fact that there is, and has been, no communication between the Baffin Land and south shore Esquimos. Moreover, where the land bridge is least broken, the shores are very bold, and consequently clear of permanent ice by reason of the most severe tide rips. The natural movement would be from the south northward, as at the time of the spring migration the ice conditions would be most favorable after the winter's freezing; yet fewer caribou are reported on the islands off the south shore than off the islands on the Baffin Land coast.

Salisbury Island is a large island, and is somewhat free from the strongest set of the Straits currents along its northern shore. The existence of Esquimos on this island proves that it must be accessible from Baffin Land shore; yet even here, on the nearest and most accessible large island, communication has been so uncertain and difficult that from evidence drawn from the Salisbury natives I should judge that many years had elapsed since their arrival, as I could gather from them no knowledge of Baffin Land or any inhabited land in any definite location.

Resolution Island, which is in sight of both Baffin Land and North Labrador, is never visited by Esquimos, on account of the dangerous ice, and I imagine that few caribou ever travel to it, as men who have landed there say nothing of caribou, and I should expect to find such an island stocked with caribou that had migrated there from the more disturbed land inhabited by Esquimos. In the latter case the hunters would soon follow, as the Esquimos always follow migrating deer, and often they can go where the caribou can not travel; consequently the absence of hunters on the south coast islands, even the larger land masses, would argue against the migration of caribou to these districts. The only argument in favor of migration across the Straits is the presence of caribou on Salisbury Island, which, as we have seen, is situated close to the Baffin Land coast.

WOODLAND CARIBOU.

The known range of the woodland caribou in North America extends from Newfoundland in the east, throughout Canada as far as the Cassiar Mountains of British Columbia and the Alaskan border in the west; and it is more than probable that the caribou known to inhabit the mountains west of the Mackenzie between the Dease and Pelly rivers belong also to this group. Passing over for the moment the Newfoundland species, the typical woodland caribou, *Rangifer caribou*, ranges from Nova Scotia through New Brunswick and Maine to the St. Lawrence River. In Maine their numbers have greatly declined in the last few years, probably from some unknown epidemic; and then, too, in spite of the excellent game laws of that State, which have adequately protected the other large mammals. It formerly existed in small numbers in northern Vermont and New Hampshire, but it may be stated in passing that there is absolutely no evidence of the existence of caribou in historic times in the Adirondacks, while there is much evidence of a negative character against it.

On the north of the St. Lawrence this animal extends throughout the entire province of Quebec as far as the East Main River in Labrador. In the country to the north and east of Lake St. John, and on the southern watershed of Labrador, it has been nearly exterminated, presumably by the devastating fires which have swept over this district in recent years. West of Lake St. John it is found to the height of land and northward to James Bay and Hudson Bay, and in small numbers between these bays and Lake Superior. It was found in northern Minnesota, but I have been unable to verify Judge Caton's statement that in the early part of the century they occurred in small numbers on the southern shores of Lake Superior.

The woodland caribou extends westward throughout suitable forest areas in Manitoba, Saskatchewan, and Athabasca, to Great Slave Lake on the north. In the neighborhood of the Churchill River, west of Hudson Bay, the range of this animal and the Barren Ground caribou from the north overlap at some seasons of the year, but there is no evidence of interbreeding. In west Canada it is holding its own well, owing to the fact that, unlike the Barren Ground caribou, it does not gather in large herds. Throughout most of the range the woodland caribou inhabits the same country as the moose, although in the East it is generally found somewhat to the north of the latter.

The caribou of western Canada have until recently presented some serious taxonomic difficulties.

The mountains of northern Montana, Idaho, and Washington and the provinces of British Columbia and Alberta are inhabited by a caribou which has long been known as the "blackface" caribou. This animal was thought to be identical with the eastern woodland caribou

until, in August, 1869, Mr. Ernest Thompson-Seton described it as a new species under the name of *Rangifer montanus*, the type being a mounted specimen from Revelstoke, in the Selkirk range of British Columbia. The northern limits of its range are at present unknown, but it is possible that it fades gradually into the next species, *Rangifer osborni*. Nearly two years prior to the discovery of *R. montanus*, Mr. Andrew J. Stone killed in the Cassiar Mountains of northern British Columbia six specimens of a very large caribou, which were shipped to the American Museum of Natural History in New York, but were delayed on the way and did not reach New York until after the description of *R. montanus* had been published.

This new caribou from the Cassiar Mountains was generally considered to be identical with *R. montanus*, but the writer believed, from antlers of the Cassiar animal he had seen, that further comparison would result in proving them to be distinct species. To this end he secured for the American Museum four caribou from the type locality of *R. montanus*. As a result, the Cassiar specimens were described as *Rangifer osborni*, in honor of Professor Henry Fairfield Osborn. The *R. osborni* are found living throughout the year in the high mountains above timber line, and are the largest and handsomest caribou known—large males weighing from 550 to 700 pounds, and consequently approaching the wapiti in size.

A specimen killed in the summer of 1902 measured 4 feet 11 inches in height at shoulder and 7 feet 9 inches in length. This is one of the largest individual caribou of which we have authentic record.

Like most animals of the damp Pacific coast, both the *R. osborni* and *R. montanus* are very dark, the latter in fact almost as black as a moose. The antlers of Osborn's caribou are large and sweeping, and are characterized by large size, often palmation and prongs at the end of the main beam. The posterior prong on the main beam is nearly always very heavy. The brow antlers also are sometimes greatly developed. The range of this animal is probably much the same as that of Stone's mountain sheep, the southern limit in each case being the Rocky Mountain divide separating the headwaters of the Peace and Fraser rivers. On the north this splendid animal probably extends into Alaska and the headwaters of the Yukon River.

Prof. J. A. Allen describes the relations of *R. montanus* and *R. osborni* as follows:

Rangifer montanus, in late September pelage, may be described in general terms as a black caribou, with the neck and shoulders, especially in the males, much lighter than the body and limbs; while *R. osborni*, in corresponding pelage, is a brown caribou, with much more white on the rump and posterior ventral surface, and the whole neck and shoulders, as well as the back and limbs, much lighter than in *R. montanus*.

The specimens of *R. montanus* are without measurements, but the species is apparently about the same size as *R. osborni*, as shown by the measurements of the skull.

In addition to the marked contrast in color, there are striking differences in the size and form of the antlers in the two forms, the antlers of *R. montanus* being of the typical woodland caribou type, and in their relative shortness and much-branched character recall strongly the antlers of *R. terraenovae*, but they are much lighter and more slender than in that species. They have the same abrupt upward curvature of the main beam, in contrast with the much longer and heavier and more depressed backward-sweeping main beam seen in *R. osborni*.

NEWFOUNDLAND CARIBOU.

Toward the end of the Pleistocene period the island of Newfoundland, extending over the now submerged banks to the southeast, was connected with Labrador over the Straits of Belle Isle, which even now are little more than 9 miles wide. Between Newfoundland and Cape Breton and Nova Scotia on the west, the present Straits of Cabot formed part of a deep sea which extended into the Gulf of St. Lawrence. This land connection to the north explains the distribution of fauna upon the island, especially the absence of moose, which on the north shore of the St. Lawrence appear to have never extended east of the Saguenay River into Labrador.

Until recently it was believed that caribou crossed the Straits of Belle Isle when they were occasionally frozen over, and that the type found on the island was considered to be identical with that on the mainland, forming at best no more than a well-marked local race. It is now known that no such crossings occur. Since 1896 they have been recognized as a separate species of woodland caribou (*Rangifer terraenovae*), and until the discovery of the Cassiar Mountain caribou were considered the largest and handsomest representatives of the genus. The nearest relatives of the *R. terraenovae* are of course the *R. caribou* of the adjoining mainland.

Two types of caribou are recognized by the natives of Newfoundland. The smaller variety, inhabiting the southwest portion of the island south and west of Grand Pond, where the country is timbered with hard wood, is locally known as the "mountain caribou," and is said not to migrate. The antlers are for the most part much smaller than those of the larger and better-known animal in the east and north of the island. There is no satisfactory explanation of the existence of these two types, but there are many similar instances among the various members of the deer family. Some moose are short legged and thick bodied, with widely palmated antlers, in contrast to others which are taller and more rangy. In the Adirondacks a similar contrast is found between the ordinary deer and the meadow buck, or swamp deer. The swamp deer has a thick body, short legs, and black dorsal stripe. Its antlers, which sometimes present the bifurcated prong of the closely allied mule deer of the West, have a heavy beam and burr thickly studded with small knobs. These variations, however, must be confined to individuals, as both forms mingle freely, and in fact these

special characters appear to be confined to the males. In Newfoundland, however, the smaller or mountain race inhabits a distinct locality.

The larger variety migrates annually, going north in the spring and returning in September, in bands of five to ten, seldom numbering over twenty-five. These bands are generally led by an old doe, while the "stags," as the bulls are called in Newfoundland, are usually found in pairs. Many of the finest stags, however, do not migrate, but remain on the high barrens of the south. The migratory habits of the animals have been greatly disturbed by the recently completed railroad, along the line of which a cordon of sportsmen formerly gathered in the fall, shooting at everything that passed. If this had continued a few years more the result would have been the separation of the caribou into two herds, as was the case of the buffalo when the Union Pacific Railroad first crossed the United States.

The velvet is shed during the first week of September, and for some time after the antlers are bright red in color, due not to dried blood but to the rubbing of the antlers against spruce trees and alders.

As a general thing, only those antlers which have a double-brow antler count high in points, a point being defined as a knob upon which a watch can be hung. One of the handsomest and most highly prized types of antlers is locally known as the "going-back head," belonging to old stags on the decline; the beam is extremely massive, and the points short and numerous.

Antlers with 30 points are considered to form a good head. Forty points are rare, and the days of the 50-pointers appear to have passed, even if they ever existed. In the future the finer antlers will become increasingly rare, as one of the first symptoms of the decline of any given race of deer is the deterioration of antlers. In proof of this, witness the increasing scarcity of handsome wapiti heads. This also holds good of the moose of Maine and New Brunswick, where the best heads scarcely equal the average of those taken along the Upper Ottawa River. The antlers of the Scottish red deer are as inferior to those taken in the German forest as the latter are in turn inferior to Hungarian antlers from the same species. In all those countries collections of antlers dating back several centuries show a tremendous decline in the best heads. Antlers in the castle of Moritzberg, near Dresden, dating from the sixteenth and seventeenth centuries, are so large that it is difficult to believe that the animals which bore them were of the same species as their degenerate descendants in the neighboring forests. This deterioration is chiefly brought about by long-continued elimination of the best stags, but too close inbreeding has probably aided the general decline.

A new game law was enacted in 1902 which shows a very earnest purpose on the part of the Newfoundland authorities to protect their magnificent herds of caribou. If the law can be enforced against the

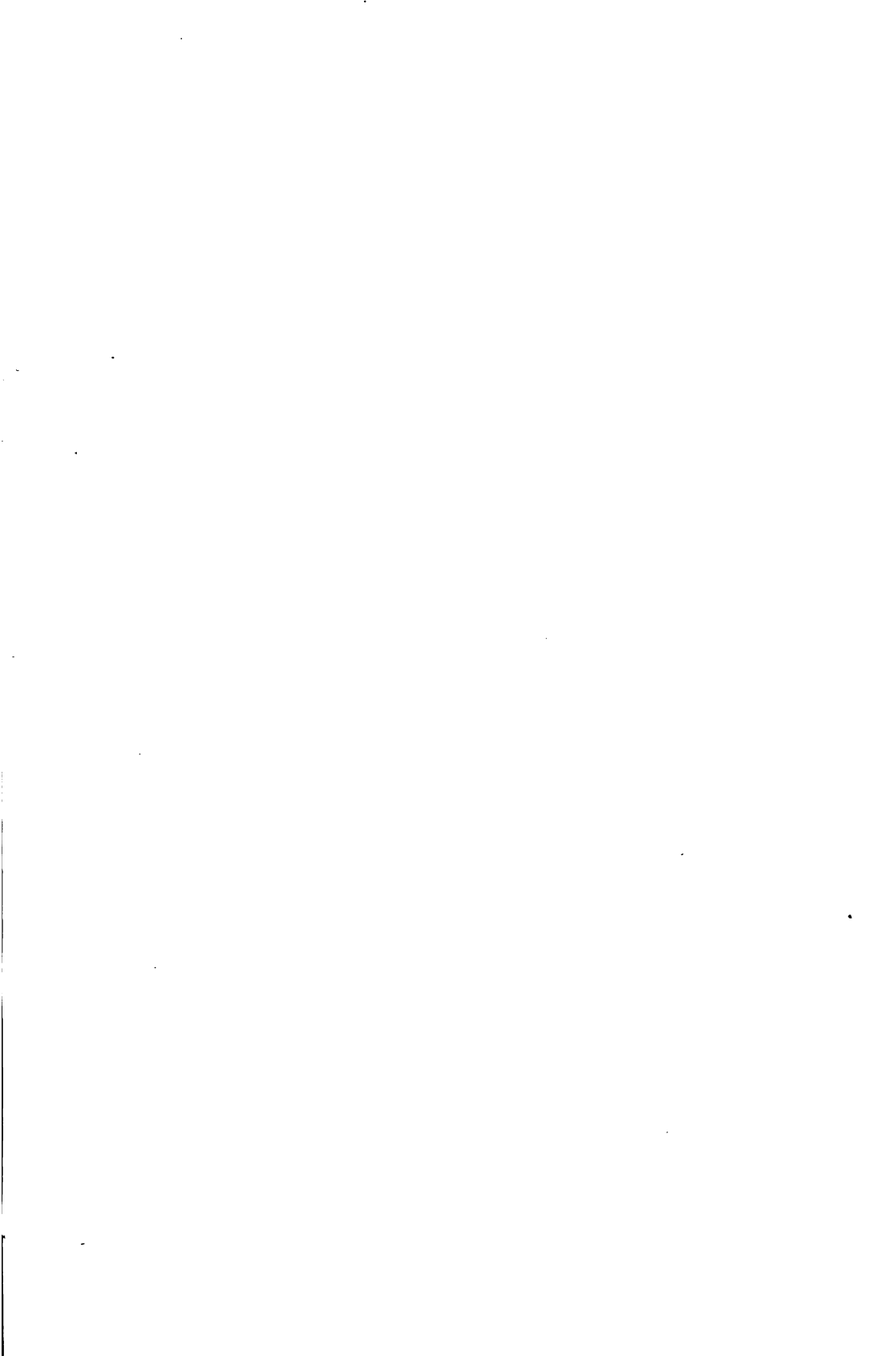
natives, as well as against the visiting sportsmen, the former indiscriminate slaughter of deer can be regulated, if not stopped. The difficulties of educating the natives of new countries to respect game laws are, it is needless to say, very great. The new law, however, organizes the local guides and makes them to some extent responsible for the observance of the law. This is, of course, a great step in the right direction. The prohibition of water killing, a special close time during the migrating season, and the prohibition of hunting within five miles of the railroad, are also features which commend the new law very strongly to all interested in game preservation. The deer, however, have been so abundant in the past that they are still regarded by the natives as their chief supply of fresh meat, and it will be some years before the Newfoundlanders themselves come to realize that intelligent and efficient protection is in their own interest. This, however, is the history of the enforcement of game laws everywhere. The law itself must be in advance of public opinion, and complete enforcement of the law can only be achieved long after the statutes are on the books.

In closing, the writer desires to acknowledge his indebtedness to Prof. J. A. Allen, to Mr. Andrew J. Stone for much of the information, and for many of the photographs which appear in this article, and to Mr. F. A. Lucas, of the United States National Museum at Washington, to Mr. A. S. Reed, of Victoria, British Columbia, to Mr. R. T. Varnum, Mr. Chas. D. Cleveland, Mr. Wm. T. Hornaday, Mr. C. Grant La Farge, and Mr. Arthur Moore, of New York, for illustrations.

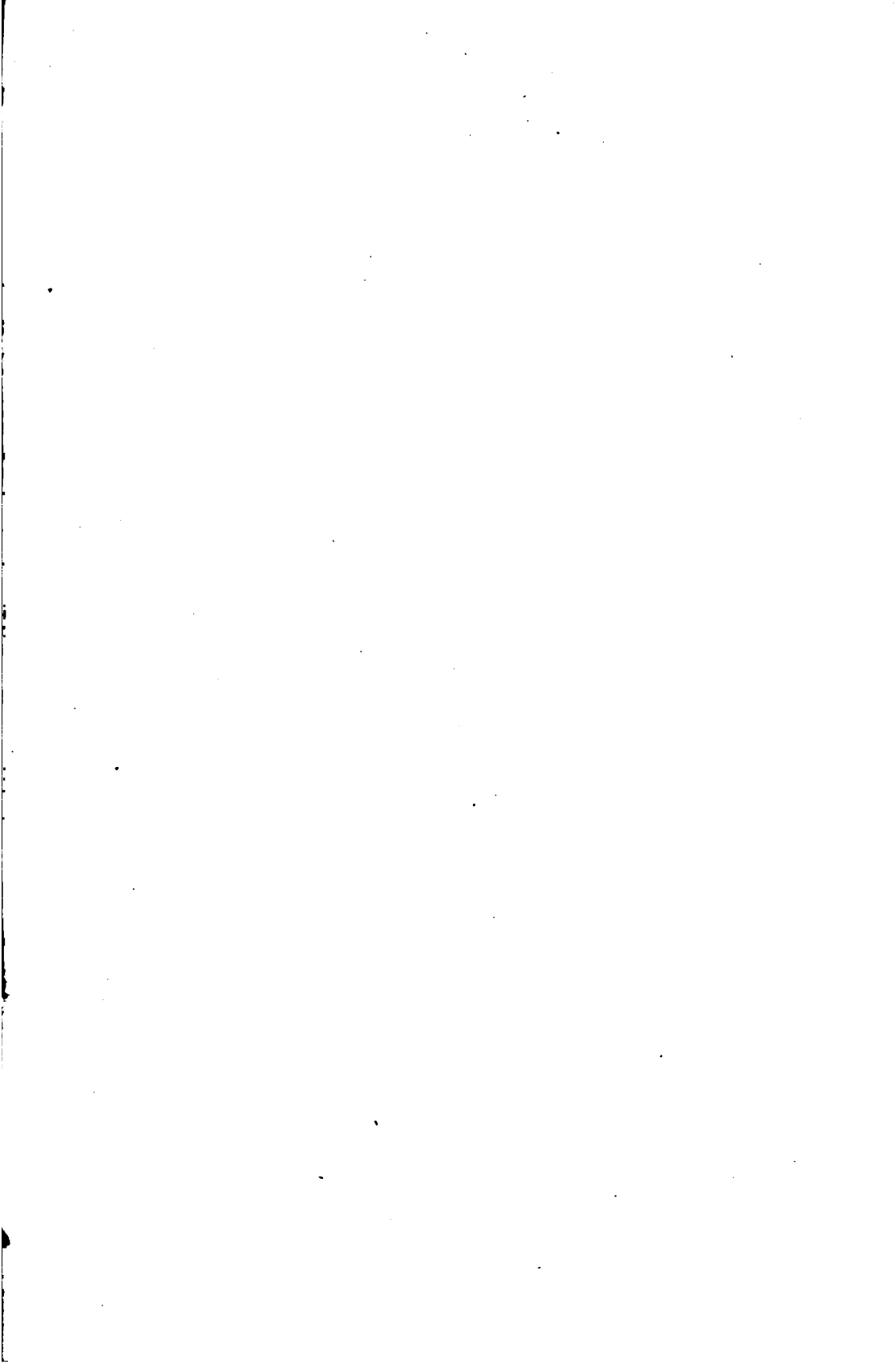
INDEX.

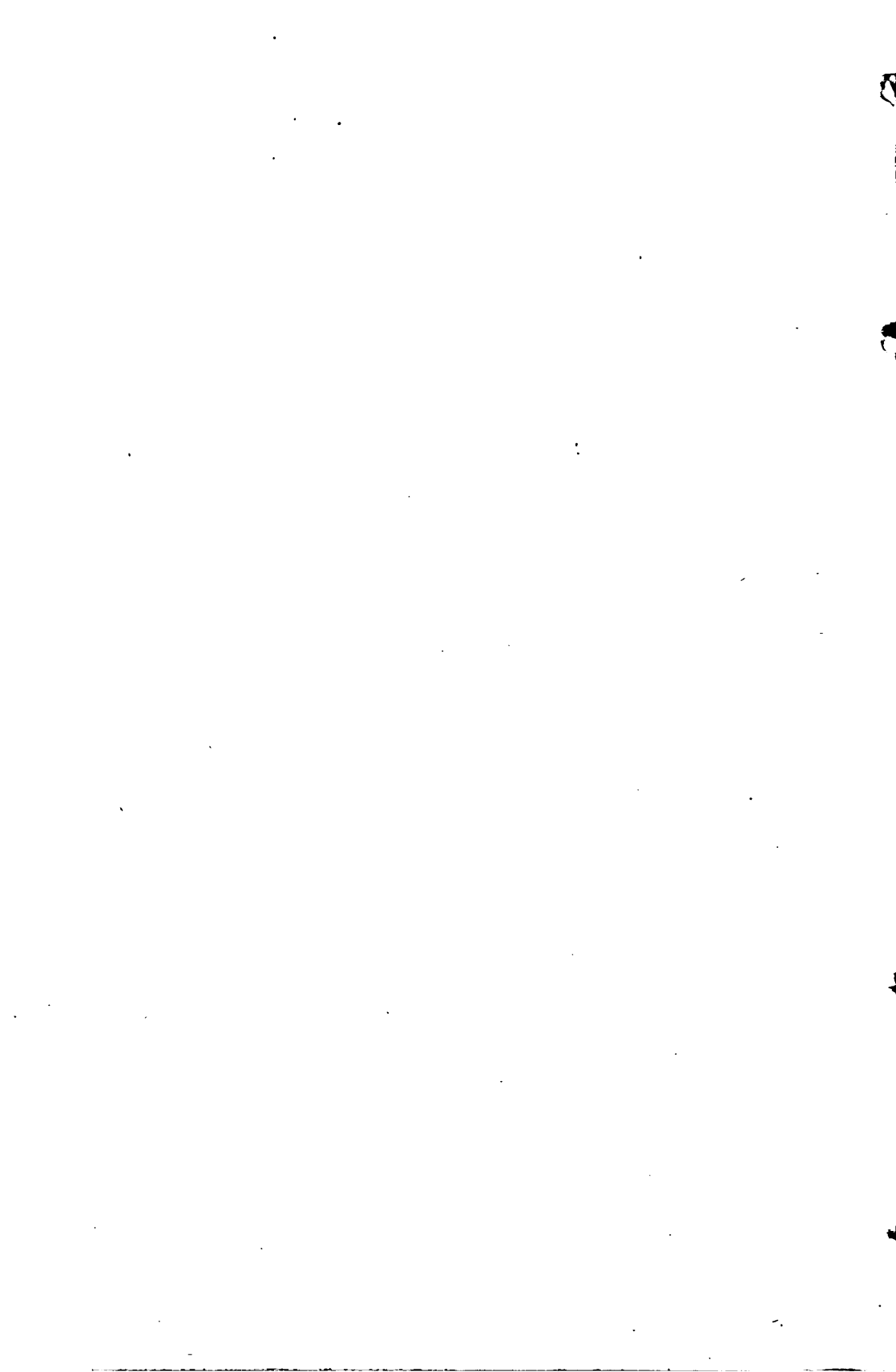
	Page.
Agents, transportation of, on revenue cutters	37-40
Annual report, Dr. Sheldon Jackson	9-34
Appendix	35-190
Apprentices, reindeer	11, 15, 109
Appropriations for reindeer	18-19
Bethel (Kuskokwim), reindeer	14, 15
Annual report	104-109
Bosqui, E. L., regarding reindeer	161-163
Brady, John G., Governor, regarding reindeer	155
Brevig, T. L., reindeer report	80-85
Bureau of Education, United States, letter of transmittal	3
Cape Prince of Wales, reindeer	13, 15
Annual report	63-66
Caribou	174-190
Commissioner of Education, United States, letter of transmittal	3
Du Chaillu, Paul, regarding reindeer	164
Eaton (Unalakleet), reindeer	14, 15
Annual report	86-103
Education, plan of operations	47, 140
Eskimos, reindeer a factor in civilization	19-21
Funston, Brigadier-General, regarding reindeer	155-156
Gambell (St. Lawrence Island), reindeer	13, 15
Annual report	66-80
Golofnin Bay, reindeer	15
Annual report	85
Grant, Madison, regarding caribou	174-190
Grosvenor, Gilbert H., regarding reindeer	165-174
Hamilton, Dr. William, cruise	31-34, 41-57
Harris, William T. (<i>See</i> Commissioner of Education, United States.)	
Herders	9-11
Herds, loaned by Government	18
Jackson, Dr. Sheldon, report	9-34
Kotzebue, reindeer	12-13
Annual report	59-63
Letters of transmittal	3
Lind, Carl O., supervisor of reindeer	15
McKenzie, D. A., regarding reindeer	156-163
Miners and reindeer	21-22
Nulato, reindeer	14-15
Annual report	103-104
Personnel of superintendents, herders, and apprentices	11

	Page.
Point Barrow, reindeer	12, 15
Annual report	57-58
Reindeer, apprentices	11, 15, 109
Appropriations	18-19
Carrying mails	22-24
Employment of	22
Factor in civilization	19-21
Freight line	28-31
Herds	9-10, 15-19
Increase from year 1892	18
Plan for introduction	139-154
Relief expeditions	24-25
Supervisor of	15
Transportation	26-28
Reindeer stations	12-15, 57-66, 80-134, 174-190
Schools. (<i>See</i> Education.)	
Secretary of the Interior, action of	3
Senate, United States, action of	3
Siberia, purchase of reindeer, correspondence	137-139
Soldiers, relief of	25
Stations, reindeer. (<i>See</i> Reindeer stations.)	
Teller station, reindeer	13-15
Annual report	80-85, 109-134
Treasury Department, cooperation of State and	34
Wainwright Inlet, correspondence regarding reindeer station at	134-137
Whalers, relief of	25-26
Wickersham, Judge James, regarding reindeer	156, 160-161









THE BOARD OF P. WILLIAMS & CO. LTD.
THE COMPANY

418

