

Steve Spangler's Science at Sea
Alaska-In-Depth

Alaska – The Great Land
By John Scheerens

The origin of Alaska's name is unclear. Athabascan peoples of Alaska's vast interior called their homeland *Alyeska*, meaning "the great land" which may later have been altered to "*Alaska*". Aleut peoples of the Aleutian Islands called their rugged island homelands *Aguanalasksh*, meaning "where the sea breaks its back". The Russians distorted the Aleut *Aguanalasksh* to "*Unalaska*" which may later have been shortened to simply "*Alaska*". By any name Alaska is a vast, rugged, and stunningly beautiful chunk of country.

Comprising nearly 586,000 square miles Alaska is by far the largest state in land size in America – cut Alaska in half and both halves would be still larger than our next largest state (Texas of course). Alaska contains more coastline, more lakes, more streams and rivers, more National Parks, more wildlife refuges, more natural resources, more forests, more glaciers, and more wildlife than any state in the Union. Seventeen of North America's twenty highest mountains soar to the skies in Alaska, including the tallest, Denali, at over 20,000 feet. The largest National Forest and largest National Park in the United States both call Alaska home. And surely some of the most spectacular scenery on earth is to be experienced in Alaska.

Despite Alaska's vast landscape, its population is by far the smallest in America. Only about 650,000 hearty souls call Alaska home, making Alaska the second smallest state in population. Twice as many tourists visit every year than live here. It's not an easy place to live – long, dark, cold winters, a high cost of living, limited year round employment opportunities, isolation, difficult and expensive travel, and volatile politics all make living here a challenge. And, of course, the weather is unpredictable and frequently bad, especially in the long winter.

Alaska is not an easy place to get to know either. It is so vast, so inaccessible, so rugged, and so remote that travel here is difficult at best. Few roads, few railroads, bad weather, and enormous distances create huge transportation challenges. Particularly in coastal Alaska, where we will be traveling, the lack of roads is distinct. Our travel, accomplished on the lovely cruise ship, *Carnival* ????, provides us the best method of exploring this scenically stunning water world. We will get to know a lot of Alaska on our brief adventure together.

Geography

Geographers commonly split Alaska into six fairly distinct areas. These areas generally share common ethnic and cultural heritage, common economies, and common geographical features, and somewhat common histories.

The vast and nearly inaccessible *Arctic*, or North Slope, covers the northern portion of Alaska above the Arctic Circle. The massive Brooks Range, northernmost mountain range of the Continental Divide, split the Arctic region – Yukon River Valley to the south, and the austere North Slope to the north bordered by the Beaufort Sea and Arctic Ocean. The Arctic is somewhat desolate with few trees and mostly scrublands and tundra. Despite its austerity, millions of birds summer on the tundra, hundreds of thousands of caribou migrate the area, and countless other wildlife rely on this enormous yet empty country. There is little population here – scattered Native communities and oil development areas account for the few people who share this mostly wilderness part of Alaska with the enormous wildlife populations. Oil production dominates the economy of the North Slope.

The *Western Peninsula* borders on the Bearing Sea, and is just as vast, empty, unpopulated, austere, and wildlife rich as the Arctic. One mountain chain after another creates a varied landscape of mountain and valley plant and animal communities throughout the area. Several major rivers drain the many mountain valleys, creating some of the finest salmon-breeding habitat in the world. Indeed, commercial fishing dominates western Alaska's economy, and provides both subsistence and employment for most of its residents. Various Native communities and fishing villages rely on salmon almost exclusively for their living, although mining and mineral developments are important as well.

The *Interior* comprises perhaps the largest chunk of land, the highest mountains, the most lakes and rivers, and the second highest populations in Alaska. Fairbanks, the second largest city in Alaska (about 78,000), built on the promise of gold and sustained on the reality of oil, is the heart of the Interior. The Interior boasts Denali National Park too as its most popular feature, and indeed, *The Mountain*, as it's known locally is impressive. A magnet for climbers, wildlife lovers, birders, hikers, and adventurers of all kinds, more tourists visit Denali than any other place in Alaska save Southeast. Mining, oil pipeline administration, and tourism dominate the economy here. The original and home branch of the University of Alaska is in Fairbanks.

Most of Alaska's population live and work in *South Central* Alaska. South Central borders the Gulf of Alaska, and houses Anchorage and the greater Anchorage area, home to nearly 400,000 hearty souls. Despite the rural and wilderness gestalt of Alaska, nearly two thirds of the population lives in the urban and cosmopolitan setting of Anchorage. Anchorage is a city, with all the perks and problems of most cities – professional sports teams, the largest branch campus of the University of Alaska, shopping, cultural events, the arts, and the best employment opportunities conflict with typical the typical city downsides of traffic, pollution, crime, and noise. But, Anchorage is easy to escape – the most commonly heard phrase to justify living in Anchorage is “it's a great place to make a living and you can get to the “real” Alaska easily. There are more roads in and around Anchorage than anyplace else in Alaska, so indeed, traveling is easier. The lovely Kenai Peninsula is a popular getaway for Anchorage folks. Government, oil administration, tourism, and services dominate the economy of South Central.

The *Aleutian Islands* stretch from close to Japan nearly to Anchorage, a distance of thousands of miles extending across the international dateline. A clever party riddle asks what the northern, southern, eastern, and western extremes of America are – most get that the northern and western extremes are in Alaska, but many don't get that since Alaska's Aleutian Islands cross the dateline that the eastern most point of the United States is in Alaska too! The Aleutians provided the Russians, Alaska's first European explorers and settlers, a stepping stone road to Alaska. The Aleutians were the first parts of Alaska settled by Europeans. The Russians were, of course, here to trap and export sea otter fur. The Aleutians were also bombed and occupied by Japan during World War II, and Japanese occupation spurred massive military deployments into Alaska and not coincidentally, the building of the Al-Can Highway, the first road access (and still the only one) to Alaska from the continental United States. The only major battles of WW II on American soil occurred in the Aleutians. Today, there is still a military presence in the Aleutians, but commercial fishing dominates the economy. Dutch Harbor and Kodiak are two of the largest seafood producing communities in the world.

Lastly, the part of Alaska we will explore, is *Southeast Alaska*. Thousands of islands, islets, fjords, and inland waterways make up the Alexander Archipelago, the basis of Southeast Alaska. Southeast Alaska, also known as the *Panhandle*, is the odd looking appendage that hangs down along the coastline south of the main body of Alaska, bordered by the Gulf of Alaska to the west, and British Columbia to the east. The Tongass National Forest, the largest national forest in the country at over 17 million acres comprises almost all of Southeast Alaska. Logging, commercial fishing, mining, government, and tourism provide the basis for the economy in Southeast Alaska. Juneau, the third largest city in Alaska and also its capital, is found in Southeast. Juneau was founded on the discovery of gold, and sustained on that discovery for over fifty years. Until surpassed by some South African mines recently, Juneau for many years laid claim to having the largest producing gold mines in the world. Today, government service employees nearly half of the town's population of 32,000. We will enjoy ports of calls in Sitka, Skagway, and Ketchikan.

Natural History

Geology, like most places, dictates the natural history environment of Alaska. Alaska, particularly Southeast Alaska, is one of the most geologically active places on earth. There are more earthquakes, more volcanoes, more glaciers, more mountains than anyplace in North America in Alaska. The largest earthquake ever recorded in North America happened in Anchorage in 1964. Geologic activity made Alaska look and operate like it does today.

Plate tectonics created the original landscape and continue to create it today. The North American Plate collides with the Pacific Plate under what we know as Alaska. The larger and thicker North American Plate is riding over the top of the Pacific Plate in a process called subduction. In addition, the Pacific Plate moves north and counterclockwise against the west moving North American Plate creating a shearing action. The subduction process creates Alaska's massive mountain features and volcanic activity

while the shearing action creates land accretion along the coastline and many and continuous earthquakes. Alaska's mountains are still growing taller as a result of the tectonic activity, some at a rate as much as an inch or more per year.

Alaska sits at the western edge of the North American continent. The Pacific Ocean stretches thousands of miles to the west, and prevailing winds blow west to east picking up large amounts of moisture before hitting landfall on the Alaskan coastline. Moisture saturated air hits the impossibly high coast range (built by the plate tectonic action) and drops large amounts of rainfall, in some parts of Alaska over 200 inches per year. Of course, in the high country, much of the precipitation falls as snow year round. These conditions are perfect for the formation of glaciers, and Alaska has a bunch of them. There have been many periods of glaciations in Alaska's geologic history, and each time glaciers covered the landscape, the country was polished and shaped. Glaciers are responsible for the thousands of islets, fjords, and waterways of Southeast Alaska we will be traveling through. We will visit some of Alaska's largest and most spectacular glaciers during our voyage together..

Alaska's location fairly far north on the globe means long daylight hours in the summertime. Lots of daylight spurs lots of vegetation growth in the summertime on land, and lots of algae (plankton) production in the water. In turn, substantial food and habitat resources mean ideal conditions for abundant wildlife. Wildlife and Alaska have long been synonymous. Marine wildlife teems in our oceans, mammals large and small thrive in our forests and tundra, birds upon the millions nest and summer in Alaska's rich habitat. Alaska offers some of the finest habitat and food resources on the planet to support some of the largest wildlife populations anywhere in the world.

Cold, mostly unpolluted water enriched by the concurrence of several opposing currents and some of the largest tides in the world generate one of the most productive fisheries on earth. Alaska produces more seafood than any state, and most countries. The variety of commercial, game, and general fish species is surpassed nowhere else. Of course, Alaska is most well known for wild salmon, but the list of commercially caught and processed fish species here is lengthy.

Weather in Alaska is epic. Its extreme northern location, its mountainous terrain, its maritime influence combine to create weather patterns that are both extreme and hard to predict. Weather varies dramatically from one area of Alaska to the other – extreme cold in the Arctic and Interior, to wet and mild in Southeast and the Aleutians. On our journey through Southeast Alaska and British Columbia, we can expect cool and probably wet weather. Parts of Southeast Alaska generate over 200 inches of rain annually, with about 110 inches the average. Summer temperatures are cool averaging between fifty and sixty degrees, with winter temperatures mild averaging from about 10 to 35 degrees (more than half of winter days in Southeast Alaska are above freezing).

Native Cultures

It's hard to know when and how humans first came to Alaska. The prevailing theory suggests hunters followed game animals from Siberia to Alaska's North Slope at some point during the last great ice age, the Wisconsinian. The Wisconsinian covered most of the upper third of North America with ice – we could have gotten onto a glacier in Alaska and walked to Cape Cod then and never gotten off ice. However, the northern slope of Alaska was uncovered by ice. The production of all that ice lowered sea levels several hundred feet from what we know today exposing the land bridge between Asia and North America known as Beringia. Several hundred miles wide, the land bridge allowed game animals and their human hunters to cross into North America. As the ice began to recede about ten thousand years ago, corridors were created in the ice sheets allowing people to drift southward and populate not only Alaska, but also the rest of North America. There are of course several other theories out there, and like the Bering Land Bridge theory, essentially unproved. Our oldest archeological finds in Alaska date to about ten thousand years ago, which does juxtapose nicely with the Land Bridge theory.

Alaska's Native populations split roughly along geographical areas, and today they mostly live in traditional homelands. Eskimo peoples, the Inupiaqs and Inuits live in the Arctic along the North Slope. They were able to live in the extreme conditions of northern Alaska and their culture survives to this day. They hunted whales and caribou, foraged berries and herbs from the tundra, and lived in partially underground homes constructed of whalebone and sod. They didn't live in igloos, a popular misconception.

Yupik Eskimo people reside in the Western Peninsula. Also cold climate dwellers, they hunted walrus, whales, and caribou. They lived in similar dwellings as their Inupiak cousins. Populations centered on food sources, especially along the rivers.

The Aleut and Alutiq and Eyak people resided in the Aleutian Islands and Southcentral Alaska. They were a maritime people, vastly skilled at hunting marine mammals and fishing from kayaks and baidarkas. They would be exploited heavily by first the Russians, and then the Japanese and Americans during WW II. Their cultural heritage, almost lost, is slowly making a comeback.

The Athabascans peopled the vast Interior of Alaska. They were, and remain the largest of the Native groups in Alaska. They were hunters, relying on the abundance of caribou, moose, and smaller mammals of Interior Alaska. They also traded extensively with the Coast Natives of Southeast. The language stock of the Athabascans is traced far south to the Pueblo tribes of the southwestern United States, and even farther south into Central America.

In Southeast Alaska, where our travels take us, the Pacific Coastal Indians enjoy a presence that goes back perhaps eight to nine thousand years. In Alaska, the principal Native tribe is the *Tlingit* (pronounced cling-git). Small groups of Haida and Tsimshian occupy the very southern reaches of Southeast Alaska. In British Columbia, closely related tribes are the Kwakwaka'wakw, the Nu Sha Nuhl, the Bella Coola, and the Coast Salish. The Pacific Northwest peoples enjoyed a culture every bit as complex and lavish as the

Incas, Aztecs, or Mayans. And unlike those groups, the Pacific Northwest people are still here, still flourishing, still practicing their culture. They were a maritime people, skilled in navigation and harvesting the rich marine resources of Southeast Alaska. They traded up and down the coast in their large dugout canoes, perhaps as far as Vancouver Island, as well as into the interior. They lived in solidly constructed permanent dwellings in villages that still remain to this day. We will enjoy a tour by Native Tlingit guides and a traditional Native dance ceremony in Sitka. Here you have an opportunity to learn much about the culture from Native guides and local villagers.

History

While Alaska's Native history is as extensive as any in North America, its European history is shorter than much of America's.

Peter the Great commissioned a Danish explorer, Vitus Bering to conduct the first European exploration of the Pacific Northwest in 1729. Bering traveled across the breadth of Russia and the Kamchatka Peninsula before establishing what is now Petropavlovsk and launching his expedition. His mission was three-fold: to search for a northwest passage, to determine if North America and Asia were linked at any point, and to find new sources of fur as Russia's four hundred year fur economy was in decline. Bering's initial mission was unproductive, and he was commissioned along with Alexis Chircoff in 1741 by Czarina Catherine to try again. Bering didn't find the fabled and much sought after Northwest Passage, but he did become the first European to sight and land on Alaska. And he did find substantial populations of sea otter and fur seals, which triggered a fur rush of sorts, and eventually the establishment of the Russian American Company in Alaska.

The Russian American Company remained in Alaska as the representative of the Russian government and a privately owned fur trading company for a bit over 100 years. In the meantime, Spanish explorers, Juan Perez and Bodega y Bodega, and the famous English explorers James Cook and George Vancouver explored Alaskan waters through the 1700's. Yankee whalers and Yankee traders, known as "Boston Men" illegally traded, whaled, and trapped in Russian territory during the 1800's. In 1867, faced with dwindling fur resources, dwindling revenues, increasing encroachment from the Hudson's Bay Company, and a treasury drained by the seven year Crimean War, Russia arranged to sell Alaska to the United States for 7.2 million dollars, about two cents an acre. Although at the time it looked to be a foolish purchase by the United States, it turned out to be perhaps one of the shrewdest and one sided land sales in history.

The Russians left Alaska following the sale, and there was little non-Native population in Alaska until the late 1800's. Commercial whaling was mostly over by then, the fur trade had virtually collapsed due to massive over hunting, and trading had diminished considerably with the Natives. Several gold rushes around the turn of century would change all that. Substantial numbers of Americans came into the country then, and the subsequent lawlessness would promote the establishment of the Territory of Alaska.

Large-scale commercial fishing and logging also brought increased numbers of settlers and businessmen to the area.

The next event triggering mass migration to Alaska would be World War II. To counter the threat of Japan invading America via the Aleutian Island chain and then the Alaskan mainland, enormous numbers of military troops moved rapidly into Alaska. The campaign to re-take the Japanese occupied islands of Kiska and Attu more than tripled Alaska's population almost overnight. Following WW II, large numbers of military troops remained in Alaska to guard against a possible Russian attack during the Cold War.

As populations increased, and Alaska became more attuned to the rest of the country, a push for statehood began after the War. Statehood was granted in 1959 when Alaska became the 49th state of the Union.

The last large-scale population boom occurred in the 1970's as the Prudhoe Bay oilfields and the Alaskan Pipeline were developed. Good wages, readily available employment, and inexpensive land and housing drew thousands more to the Great Land. Alaska, with its extensive energy resources, became a major player in the country's economy.

Today, Alaska remains principally dependent on the extraction of resources for its economy. It has always been so. First, it was fur – then gold – then fish and timber – and now oil. Commercial fishing, logging (although much less in recent years), mining, and of course, energy (oil and natural gas) are Alaska's bread and butter. In recent years, a new economic driver has emerged – tourism. Alaska is a scenic wonder filled with abundant wildlife populated by mostly friendly people, so has become a significant draw for those wanting to see what real wilderness still looks like.

Alaska's politics are as volatile as those anywhere else probably. In general, the state remains fairly conservative with the last several presidential elections going Republican. For the last several years the legislature and governor's office have also predominately went Republican. Native issues, oil development, commercial fishing, and subsistence use seem to be our main issues, with a significant rural – urban divide complicating things. Large quantities of oil keep our treasury fairly solvent, but Alaska has many of the same problems all states do cutting costs, balancing budgets, and generally finding enough for everyone. The hugeness of Alaska and the inherent inaccessibility of so much of the state do create problems for government that probably don't exist other places and make governing here somewhat different.

For Further Reference or Information:

The following books are recommended for further research or information regarding Alaska. All are current and can be purchased on-line or ordered at a local bookstore. A good library will have many of them. Try the Alaska Natural History Association for many of them (alaskanha.org) or Amazon (amazon.com).

Alaska's Southeast – Touring the Inside Passage – Sarah Eppenbach

This is an outstanding reference and introduction to the Inside Passage and Southeast Alaska. Ms Eppenbach not only references ports of call, but also incorporates history, geology, wildlife, Native culture, weather, and local lore into her outstanding narrative.

Ports of Call of Southeast Alaska – Sherry Simpson

Ms Simpson, a creative writing professor at the University of Alaska details many of the local communities visited by travelers to Southeast Alaska from cruise ships to tour boats to private yachters.

Alaska's History – The People, The Land, and Events of the North Country – Harry Ritter

This small pocketbook is an easy to read, easy to carry pocket reference to Alaska history. It doesn't get into much detail about any specific event, but does reference all the major ones briefly.

Travels in Alaska – John Muir

John Muir, one of America's most famous conservationists, visited Alaska several times in the late 1800's and penned perhaps the original first-person account of traveling in Alaska. The book chronicles Mr. Muir's adventures in Alaska.

Alaska – James Michner

This book is, of course, a fictional account of Alaska in its history, but it's a good read and there is a ton of useful information about Alaska in it.

The Blue Bear – Lynn Schooler

One man's account of a life spent commercial fishing, guiding, and leading adventure tours in Southeast Alaska. It's a beautifully written poignant memoir of life in Alaska.

Southeast Alaska – Kim Heacox

This beautiful coffee table book details life in Southeast Alaska with the lovely photographs of renowned scenic and wildlife photographer Kim Heacox. The informative narrative, written by Sherry Simpson, a local writer and professor of creative writing provides background information.

The Alaska Almanac – Nancy Gates

A classic now in its 30th edition, this little handbook contains thousands of facts, figures, and gems about Alaska, its people, and its lifestyle. A fun and easy read even if you never see Alaska, and a great little resource if you do.

Cruising Alaska – A Traveler's Guide to Cruising Alaskan Waters – Larry Ludmer

A recent guide to cruising Alaska, Ludmer's book is comprehensive and accessible.

Alaska – Saga of a Bold Land – Walter Boreman

This recently published history of Alaska is sweeping in its comprehensive review of Alaska's history, and reads like a novel. It's quite engrossing.

Russians in America – Lydia Black

Written by a professor of Russian History, this descendant of a member of the Russian American company provides perhaps the most comprehensive history of the Russian American era.

The Native People of Alaska – Steve Langdon

Langdon provides a good general introduction to the Native peoples of Alaska in short form.

Where The Sea Breaks Its Back – Corey Ford

This is the epic story of the Bering's exploration of Alaska and the men who joined him to become the first Europeans to touch Alaskan shores.

Frigid Embrace – Politics, Economics, and Environment in Alaska – Stephen Haycox

The story of Alaska's history and dependence of extraction of natural resources and the effect on the land and its Native people. It's current, so has merit if you're interested in politics.

Sculpted by Ice – Glaciers and the Alaskan Landscape – Michael Collier

An outstanding explanation of glaciers, how they work, why they are important, their impact on the landscaper, and what they mean to global climate.

The Last Giant of Beringia – The Mystery of the Bering Land Bridge – Dan O'Neil

Myth, mystery, and theories about how the first humans may have come to the Americas.

Alaska Native Arts and Crafts

Alaska, The Great Land

Alaska's Southern Panhandle

These three books are all part of the Alaska Geographic Society Series, and have great photographs as well as outstanding narratives by various contributors.

Guide to Alaskan Seabirds – Nancy Stromsen

Black and white illustrations and excellent descriptive narration make this a good little guide for those interested in seabirds.

The Nature of Southeast Alaska – O'Claire, Armstrong, and Carstensen

Three of the better known naturalists of Southeast Alaska put together this wonderful, easy to read book packed with details of how the natural world of Southeast Alaska operates.