ANCHORAGE MUSEUM

Climate Change Photography Resource Guide

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This guide is intended to aid researchers in locating photographic and archival materials on climate change within Ward Wells Collection at the Bob & Evangeline Atwood Alaska Resource Center of the Anchorage Museum. It is not necessarily a complete listing of all materials in the Ward Wells Collection, nor all materials related to climate change within the ARC. Please contact ARC staff at resourcecenter@anchoragemuseum.org or 907-929-9235 for assistance in locating other collections of interest.

Description

Climate change refers to the warming of the environment and changing of weather patterns due to fossil fuel emissions, primarily carbon dioxide. Alaska, as well as other arctic areas, has been called "ground zero" for climate change, as warming temperatures and melting sea ice and permafrost change weather patterns and shape the environment. Using photographs and photographic negatives as primary source materials for the study of climate change, one can see the difference between the landscape of Alaska in the past and the present. Photographs capture specific moments in time, making these images important resources to demonstrate climate change prior to official scientific measurement.

This guide uses the Stock Series from the Ward Wells Collection to highlight aspects of Alaska that are transforming due to climate change. The Ward Wells Collection is one of the largest collections of negatives at the ARC, with over 120,000 negatives. Images in the Wells collection are in a time frame from 1948 through 1981. Born in 1920 in Rice Lake Wisconsin, Wells came to Alaska in 1946 and worked as a freelance photographer and commercial fisherman. Wells' wife, Barbara Kremer Wells, donated the bulk of his negative files to the Anchorage Museum after his death in 1982. While Wells was most likely not considering climate change while taking photographs during the twentieth century, we can look back on his work and consider the changes between when these photographs were taken and the environment today.

Using this Guide

This guide is divided into seven categories, each category representing one area within the Ward Wells Collection that can show climate change. Each category includes a description, which details how the subject matter relates to climate change, then lists specific materials from the collection that relate to that subject.

Subjects

Alaska Native Culture

Many Alaska Natives are seeing the effects of climate change sooner than people in the lower forty-eight and elsewhere. Warming temperatures, weather changes, and erosion have disrupted Native villages, changed centuries-old hunting patterns, and caused a crisis in the Alaskan north. The images below relate mainly to whale, seal, and walrus hunts that Wells photographed on St. Lawrence Island in the 1950s and 1960s. Today, these hunting patterns have been disturbed by a lack of thick sea ice, particularly during the spring hunt. Already, Alaska Natives are adapting practices due to climate change.

1867.C31-32	Seal hunt, St. Lawrence Island, 1953
3017.004, 27-28, 36-40, 58, 66-67/93	Walrus hunt, St. Lawrence Island, 1959
4077.168-169	Ice cellar, Anatuvuk Pass, 1963
4393.001-424	Whale hunt, St. Lawrence Island, 4/20/1966 to 4/29/1966
4706.001-215	Whale hunt, St. Lawrence Island, Apr-1969

Ecosystems

Climate change threatens vulnerable Alaskan ecosystems. The following images show Alaskan wetlands and tundra in the twentieth century. Alaskan wetlands and tundra currently serve as a carbon sink, holding nearly 30% of all terrestrial carbon in their permafrost. With warming temperatures, the permafrost will thaw, releasing carbon and changing their status to a carbons source, which will have a significant impact on Alaska's carbon footprint. Predictions say that wetlands, which now constitute about 40% of Alaska, will be gone by the end of the century. The current invasion of wetlands with shrubs and trees is unique in an 18,000 year history. The tundra will be overtaken by the boreal forest, making the area more active, and further increasing its carbon footprint, while allowing new animals and plants to thrive there.

1059.001	Lily pond, Herbert River, c. 1950
3421.061-69	Tundra including tree line, Anatuvuk Pass, 1962
4077.048-49	Mushing through the tundra, Anatuvuk Pass, 1963

4501.242-245	Melting tundra snow, Anatuvuk Pass, 1966
4606.001	Bogland on tundra, Jun-1968
4735.001-23	Spruce and bog areas, Tustemena Lake, Jun-1969
4792.001-24	Conservation experiments on tundra permafrost, Sep-1969
4827.087-88	Tundra river with ice jams, Anatuvuk Pass, May-1970
4827.141-144	Dog team on tundra, Anatuvuk Pass, May-1970
4827.209-210	Woman walking on tundra, Anatuvuk Pass, May-1970
4827.214	Distant views of tundra, Anatuvuk Pass, May-1970
5122.291-294; 307-310	Tundra, Anatuvuk Pass, May-1973

Ice

One of the most obvious ways that climate change is changing Alaska is its effect on ice and glaciers. The rate of recession for major glaciers has increased since the mid-twentieth century, and sea ice reached an all-time low in January 2018. Photos in this category show glaciers, sea ice, and other ice conditions during the 1950s, 1960s, and 1970s, allowing researchers to compare how the spread of ice throughout Alaska has changed over time.

Glaciers

Glaciers are one of the most visible ways climate change is shaping the state of Alaska. There are approximately 100,000 glaciers in Alaska, 616 of which have official names. As a general trend, Alaskan glaciers are receding and becoming thinner. Glacial melt is significant for multiple reasons. On a local scale, melting glaciers will effect tourism, as well as disrupt established waterways and infrastructure. In the long term, Alaskans who rely on glaciers as water sources will need to find alternative water sources when glaciers dissipate. On a larger scale, run off from glaciers will increase sea levels, putting costal communities around the world at risk of erosion and flooding. Further, white glacial ice reflects sunlight, rather than absorbs it. As glaciers melt, the uncovered land beneath them, as well as increased sea water, will absorb that heat, increasing overall temperatures around the globe. The loss of Alaskan glaciers will have global ramifications.

Throughout his career, Wells photographed many glaciers. These photos can be compared to current images of glaciers to show glacial changes over time.

Eklutna Glacier

Eklutna Glacier, the major source of drinking water for the city of Anchorage, is losing mass at an alarming rate. In hot years, such as 2013 and 2015, Eklutna Glacier lost 13% of its mass. Scientists predict that it will disappear almost completely within the next hundred years. This can be seen best from the narrow terminus near the Eklutna Lake trail in Chugach State Park, where users can see the change in the glacier from year to year.

107.R04 Eklutna Glacier, c.1950

Ellsworth Glacier

Ellsworth Glacier is both receding and thinning. Located off of Seward Highway, it is a popular tourist destination.

011.R01 Ellsworth Glacier, c.1950

Gulkana Glacier

Since 1966, scientists with the United States Geological Survey have collected mass balance data on Gulkana Glacier as one of the two "benchmark glaciers" in Alaska. Data from Gulkana Glacier is used to better understand glacier dynamics and how glaciers react to climate change. Gulkana Glacier has retreated significantly since the 1960s.

5224.001-7 Gulkana Glacier, Aug-1973

Kachemak Glacier

While data isn't available about Kachemak Glacier specifically, nearby Grewingk Glacier has receded about 50 meters per year since 1986.

3382.034-36; 82-94 Kachemak Glacier, Aug-1961

Kennecott Glacier

Located near the abandoned mining town and popular tourist destination, Kennecott, Kennecott Glacier is losing mass through shrinkage and ice thinning. It is thinning, rather than retreating, due to a layer of dark debris atop the glacier, which absorbs the sun's heat and transfers the heat to the ice, which then melts.

1723.073-74 Kennecott (or Root) Glacier, 7/4/1956

Knik Glacier

Perhaps best known as the filming location for the 1991 film, *Star Trek VI: The Undiscovered Country*, Knik Glacier has receded in recent years, causing a lake to form in front of it.

0118.R01 Knik Glacier, c.1950

Lake George Glacier

Like the other glaciers surrounding Lake George, the Lake George Glacier is receding. Prior to the Good Friday Earthquake of 1964, Lake George would have a glacial lake outburst flood each year, that would flood nearby roads.

0116.R01 Lake George Glacier, c.1950

1425.020 Knik River overflowing banks from Lake George breakup, 7/23/1953

1544.001-3 Breakup of Lake George Glacier, 7/24/1954

Matanuska Glacier

Called the number two tourist destination in Alaska, the Matanuska Glacier is not receding, but has stopped advancing, and has lost over 84 million tons of ice since 2002.

1138.001	Matanuska Glacier, c.1950
1330.001	Matanuska Glacier, 1952
1332.001	Matanuska Glacier, 1952
3286.001-3	Matanuska Glacier, Jun-1961
4436.001-31	Matanuska Glacier, Jul-1966
5327.001-24	Matanuska Glacier, Sep-1974

Mendenhall Glacier

The visible changes in the Mendenhall Glacier over the past thirty years have caused local park rangers to revamp their talking points for tourist visitors in order to highlight the impact of climate change on the Mendenhall Glacier. With over one hundred feet of recession in the past ten years, the Mendenhall Glacier will likely not be visible from the glacier's tourist center, built in 1962, by the end of the century.

1070.001	Mendenhall Glacier, c.1950

Mt. Denali Glaciers

The glaciers in this category are unnamed or unidentified glaciers on Mt. Denali. Researchers using map-grade GPS measurements have found that glaciers on Mount Denali have receded an average of 66 feet per year since their study began.

0133.R02-3; R05	Unidentified Glacier on Mt. Denali, c.1950
0136.R02	Unidentified Glacier on Mt. Denali, c.1950

Portage Glacier

The Portage Glacier is one of the icons of climate change, due to its intense receding. What was once a popular tourist destination accessible by land is now only accessible by boat due to how far back it has receded.

0127.R01	Portage Glacier, c.1950
2003.001-12	Portage Glacier, 8/2/1958
2075.001-12	Portage Glacier, 5/30/1959
3208.001	Portage Glacier, 1960
4064.001-6	Portage Glacier, Aug-1963
4089.001-3	Portage Glacier, Mar-1963
4938.001-4	Portage Glacier, Jun-1971
4939.001-48	Portage Glacier (Byron Glacier, Middle Glacier, Explorers Glacier), Jul-1971

5221.001-28	Portage Glacier, Aug-1973
5222.001-18	Portage Glacier and marsh, Aug-1973
5358.001-8	Portage Glacier and people walking on Portage Lake, Mar-1975
5360.00-22	Portage Glacier, Mar-1975

Taku Glacier

Taku Glacier, located in Taku Inlert near Juneau, is notably one of the few Alaskan glaciers that has not been retreating in recent years due to positive mass balance and a lack a lack of losing mass to icebergs. It is the only glacier in its icefield that is still advancing.

011.R01	Taku Glacier, 1950

Tazlina Glacier

The largest northward flowing glacier in the Chugach Mountains, Tazlina Glacier is both thinning and receding at a similar rate to other glaciers in the Chugach Mountains.

2079.001-3	Tazlina Glacier viewed from Tazlina Lake, 7/5/1959

Triumvirate Glacier

Located in Beluga Lake, specific information about Triumvirate Glacier is not publicly available.

0120.R01	Triumvirate Glacier, c.1950
1423.001	Triumvirate Glacier, 7/26/1953

Worthington Glacier

Worthington Glacier is one of the few Alaskan glaciers remaining that is accessible by paved highway. It has steadily been retreating for the past 150 years.

1166.001	Worthington Glacier, 1950
3013.001-4	Worthington Glacier, 6/9/1959
4117.001-20	Worthington Glacier, Jul-1963

Other Ice Conditions

These photos represent ice conditions that are separate from glaciers. They show sea ice, icebergs, and the breakup of ice around the state. Similarly, to glaciers, measuring other kinds of ice can show how climate change effects Alaska.

0173.R01	Ice conditions, Southcentral Alaska, c. 1950
1393.001-2, 004, 012-13	Nenana Ice Pool, 1953

1423.001	Iceberg, Portage Glacier, 7/26/1953
1719.001	Alaska Aggregate: Ice in Inlet showing city docks, 4/16/1956
3224.018/23-26	Iceberg, Igiugig, Jun-1960
4038.001-14	Ice conditions, Cook Inlet, City Dock, etc., 11/26/1962
4073.001-10	Ice conditions, Turnagain Arm, Jul-1962
4090.001-54	Winter breakup; creeks & falls, Seward Highway, Mar-1963
4091.001-33	Ice conditions, Turnagain Arm, Mar-1963
4415.001-10	Ice conditions, Knick Bay, Mar-1966
4919.001-2	Ice conditions, Cook Inlet dock, Feb-1971
4921.01-4	Ice conditions, City Dock, Anchorage, Feb-1971
5097.001-17	Ice conditions, Turnagain Arm, Feb-1973
5099.001-12	Ice conditions, Cook Inlet, Mar-1973
5278.001-24	Ice conditions, Cook Inlet, Mar-1973

Infrastructure

As climate change shapes the land, Alaskan infrastructure will become increasingly imperiled. Already, waterside erosion has toppled buildings, and melting permafrost has caused bridge foundations to fail. Northern Alaskan airports and airstrips are in particular danger from climate change, making needed shipments of food and supplies to remote areas more difficult. Repairing failing infrastructure will become a necessary, but expensive, endeavor as the earth warms.

Photos within this category show the kind of infrastructure that is vulnerable to climate change, including bridges, paved roads, and airports.

1142.001, 6	Matanuska River Bridge/Palmer Highway, 1950
1311.001	Knik Bridge, Matanuska Valley, Sep-1952
1318.001	Goat Creek Bridge, Old Glen Highway, 1952
1320.001	Campbell Creek Bridge, Anchorage, c. 1952
1652.002	Airport, Barrow, c. 1955
1867.A4-5	Airport, Nome, 1958
3044.001-4	International Airport, Anchorage, 11/19/1959
4081.001-11	Swiss planes, Bethel, Mar-1963
4130.002-3	Kenai River Bridge, Jul-1963
4451.001-5	Susitna Bridge, c. 1966

4827.097-104; 202-206; 209-210	Wein planes at airstrip, Anatuvuk Pass, May-1970
5122.047-48; 201-212; 396-407	Landing strip, Anatuvuk Pass, May-1973
5313.001-5	Sterling Highway at Kenai River, bridge near Russian River, Jun-1974

Plant Life

The changing environment will shape which plants survive and thrive throughout the different areas of Alaska. As the boreal forest moves upwards towards the tundra, trees and bushes will take over, changing the landscape of the Alaskan north. In the south, warmer summers mean a longer season for the Spruce Bark Beetle, a species that has already decimated spruce forests around Anchorage. The trees and plants in this category are species who are threatened, or whose habitats will change, due to climate change.

1177.001	Dogwood trees, Southcentral AK, 1950
1484.001	Birch trees, Anchorage, Jan-1954
3170.001-2	Spruce trees, Southcentral, AK, Jun-1960
3172.001-4	Birch trees, Southcentral, AK, Jun-1960
3303.001-4	Birch trees, Hope, Jul-1961
3326.001-18	Wild orchids, Southcentral, AK, Jun-1961
4096.001-14	Spruce, Seward Highway, Mar-1963
4097.001	Pussy willow, Southcentral, AK, May-1963
4126.001-3	Spruce in forest, Chitina, Jul-1963
4129.001	Pitchy spruce in forest, Chitina, Jul-1963
4452.001	Birch trees, Southcentral, AK, Aug-1966
4726.001-8	Spruce trees, Trail River Campgrounds, Jun-1969
4735.001-23	Spruce and bog areas, Tustemena Lake, Jun-1969
4736.001-9	Spruce fungi, Southcentral, AK, Jul-1969
4760.001-7	Spruce, Kenai Peninsula, Feb-1970
5003.001-3	Flowering pussy willow, May-1972
5010.001-2	Current blossoms, Finger Lake, Jun-1972
5074.001-2	Spruce forest, Ohmer campground, Oct-1972
5075.001-2	Spruce forest, Kenai Peninsula, Oct-1972
5118.001-6	Pussy willow, Southcentral, AK, Apr-1973

5131.001-3	Spruce, Southcentral, AK, Jun-1973
5147.001-3	Spruce, Bottinentin Lake, Jun-1973
5170.001-4	Geranium, Southcentral, AK, Jul-1973
5173.001-5	Colombine, Southcentral, AK, Jul-1973
5181.001-9	Dogwoods, Kenai Peninsula, Jul-1973
5187.001-3	Iris Skilak, Kenai Peninsula, Jul-1973
5193.001-26	Alaska Calla Lilies, Talkeetna, 7/3/1973
5292.001-10	Violets, Southcentral, AK, Jun-1974
5311.001-10	Dwarf dogwoods, Kenai Peninsula, Jun-1974

Weather

Climate change will effect weather patterns across the state of Alaska. Without sea ice to buffer storms, costal towns will be faced with harsher storms and the rate of erosion will increase. Interior Alaska will see increased precipitation all year, including increased snowfall. Perhaps most importantly, permafrost that has remained frozen for centuries will begin to thaw with warmer temperatures, changing river direction, causing infrastructure to fail, and releasing methane into the atmosphere. The weather conditions in this category show how the seasons – namely, winter – were in the past, and can be compared to weather patterns today.

1115.001	Winter conditions, Chugach State Park, 1/1/1949
1144.001	Winter, Anchorage, 1950
1262.001	Winter conditions along Seward Road/Turnagain Arm, 1952
1483.001-012	Winter conditions, Seward Highway, 3/8/1953
1703.001-13	Frost, Anchorage, 11/20/1955
1773.001	Snow, Turnagain Arm, 2/20/1956
1906.001-6	Chugach Mountains viewed from Seward Highway, Jan-1958
3043.001-11	Frost, Kenai River, c. 1959
3241.001-11	Winter conditions on 4th Ave., Anchorage, Oct-1960
3252.001-10	Frost, Anchorage, Jun-1961
3408.001	Winter conditions, Turnagain Arm, 1/7/1962
3422.001-15	Frost, Anchorage, 1/24/1962
4079.001-10	Winter conditions, Fourth Ave., Anchorage, 1962
4816.001-16	Winter scenes, Kenai River below Skilak Lake, Oct-1969

4969.001-8	Snow scenes, Skilak Lake, Nov-1971
5091.001-7	Frost on trees and grass, Anchorage, Feb-1973
5111.001-3	Winter, Kenai Lake near outlet of Trail River, Apr-1973
5257.001-6	Winter scenes, Kenai Peninsula, Nov-1973
5260.001-6	Frost and fog, Kenai River, Nov-1973

Wildlife

Most wildlife in Alaska are, or will be, impacted by climate change. As climate change shapes the Alaskan landscape, animals will need to adapt to changing environments, food sources, relationships with humans, and more. Almost all wildlife will see the changes of climate change, from the very small, such as the phytoplankton that makes up the base of the Bering Sea ecosystem, to the very large, such as the polar bear, whose disappearing habitat has made it the poster child for climate change activists. The following collections include images of Alaskan wildlife whose environment will change due to climate change.

Beaver

Beavers are actually a cause of concern in northern Alaska. As the boreal forest inches into the tundra, beavers dam up rivers, forming pools of water that thaw permafrost.

1540.001	Beaver, Brooks River Camp, 7/4/1954
3425.005	Beaver, Southcentral, AK, c. 1961

Birds

Many bird species come to Alaska as part of their migration pattern. One study found that, between 2010 and 2016, 97 species of migrating birds exhibited a later arrival date, earlier departure date, and shorter stopover as temperature increased, disrupting long-held migration patterns.

5377.003-4, 39, 45, 47-113	Unidentified birds, Pribilof Islands, Jun-1976

Boniface Gull

3467.001-26	Kittiwake, Boniface Gull & Tern, Paxson Lake, Jul-1961

Canada Jay

4407.001-9	Canada Jay, Kenai Peninsula, 5/40/1966

Gray Jay

4817.001-4	Gray Jays, Kenai River, Oct-1969

Kittiwake

3467.001-26	Kittiwake, Boniface Gull & Tern, Paxson Lake, Jul-1961

5482.043	Kittiwake, Whittier, c. 1980
5504.001	Kittiwake, Prince William Sound, c. 1980

Northern 3-Toed Woodpecker

5158.001	Northern 3-Toed Woodpecker, Southcentral, AK, Jun-1973

Ptarmigan

1774.001-4	Ptarmigan, Anchorage, c. 1956
3163.001-3	Ptarmigan, Iliamna Lake, May-1960
5122.319-320	Ptarmigan, Anatuvuk Pass, May-1973

Sandpiper

3332.S01-6	Sandpiper, Southcentral, AK, Jun-1961

Seagulls

1007.001	Seagulls, Stephens Passage, c. 1950
5022.001-8	Mew Gull, Kenai River, Jul-1972
5197.001-6	Seagulls, Skilak Lake, Jul-1973
5202.001-7	Seagulls and terns, Skilak Lake, Jul-1973

Terns

3102.001-10	Tern eggs, Kenai River, c. 1960
3467.001-26	Kittiwake, Boniface Gull & Tern, Paxson Lake, Jul-1961
4838.001-5	Tern lake, May-1970
5202.001-7	Seagulls and terns, Skilak Lake, Jul-1973

Black Bear

Many species of bears are threatened by climate change. Black bears are finding their hibernation patterns disrupted by weather and food changes caused by climate change.

4855.001-12	Black bear getting into tipped garbage cans, Portage Glacier, 1970
4862.001-24	Black bear robbing garbage cans, Skilak Lake, Jul-1970

Caribou

Longer tundra summers mean increased time that caribou run from parasitic flies, and less time they can spending feeding. Further, the northward expansion of shrubs with low nutritional value makes finding food more difficult. All in all, climate change is making caribou exert more energy for less reward, putting the species at risk.

0144.R01	Caribou in tundra, Alaskan interior, c. 1950

3421.050; 72-73	Caribou in tundra, Anatuvuk Pass, 1962
4827.014-16	Caribou in tundra, Anatuvuk Pass, May-1970

Foxes

Similarly to polar bears, Arctic foxes face challenges due to declining sea ice during the winter. Sea ice provides the foxes a respite from predators on land and more abundant food. A lack of ice will make foxes switch to foraging on land, putting them in closer proximity to predators and humans.

0148.R01-R02	Foxes, Pribilof Islands, c. 1950
5377.243-254	Foxes, Pribilof Islands, Jun-1976

Moose

Climate change brings both good and bad tidings for moose. Alaskan moose have been able to move northward into the tundra, where food is starting to grow. That being said, warmer temperatures fosters diseases that have killed moose in other areas, such as Maine and Minnesota. Further, moose moving northward puts pressure on at-risk species living in the tundra, like the ptarmigan, who share a food supply with moose.

2034.007	Moose, Kulik Lake, c. 1959
3099.001-10	Moose swimming, Kenai River, Jun-1960
3407.001-4	Moose & yearling in snow, Silver-tip, 1/7/1962
4572.001-2	Moose, Kenai Peninsula, Nov-1967
4812.001-2	Moose, Skilak Area, Feb-1970
5017.001	Moose, Hope, Jun-1972
5133.001-16	Moose, Matanuska River campground, Jun-1973

Salmon

A major source of food and cultural pride, climate change puts salmon at risk for a variety of reasons. Warmer water puts salmon at risk of infestation from the INSERT PARASITE NAME HERE. Larger fish that require higher energy reserves are having difficulty making necessary swims, causing them to die before spawning. Due to climate change, the future can expect smaller salmon in smaller with less predictable patterns.

0155.R01	Salmon, Brooks River, c. 1950
0156.R05, R08	Salmon, Bristol Bay, c. 1950
0159.R01	Salmon, Bristol Bay, c. 1950
1034.001	Salmon, William Henry Bay, c. 1950
1540.001-7	Salmon, Brooks River Camp, 7/4/1954
1542.001	Salmon, Brooks River Camp, 7/4/1954

3029.001	Salmon spawning in a creek, Valdez, 1959
3203.001-2	Silver Salmon, Kenai river, 10/2/1960
3229.001-4	Salmon, Kenai River, Sep-1960
3337.001	King Salmon, Ninilchik River, May-1961
3486.001-9	King Salmon, Deska River, Jul-1962
4464.001-2	King Salmon, Kenai River, Aug-1966
5033.001-10	Salmon, Kenai River below Skilak Lake, Aug-1972
5066.001-7	Spawned salmon dried on shore, Kenai River, Sep-1972

Seals

Sea ice is necessary for seals to give birth on and nurse their pups. When ice is not available, seals will give birth in water, where the pups die. If sea ice is thin, pups may become separated from their mothers and die. In addition, sea ice is necessary for seals who need to rest during journeys. Without ice, seals may become exhausted and die.

0181.R2, R5, R9, R11, R78	Seals, St. Paul Island, c. 1950
1867.C87-90	Dead seals in the Arctic, 1958
3017.030.145-149	Seals, St. Lawrence Island, 1959
5377.001-2, 27, 113	Seals, Pribilof Islands, Jun-1976

Walrus

With less sea ice, walrus colonies have taken to spending increasing amounts of time on Alaskan beaches. Walrus on these beaches are prone to stampedes, as they are easily spooked by things as benign as a plane engine or as dangerous as a hunting polar bear. Stampedes are dangerous, with walrus trampling each other to get into safer water. Further, beaching walrus attract polar bears, bringing them closer to human settlements and increasing risk associated with proximity to humans.

3017.030-32, 146-149	Walrus, St. Lawrence Island, 1959

Wood Frog

3324.001-4	Wood frog, Anchorage, Jun-1961