

Alaska Division of Geological & Geophysical Surveys

MISCELLANEOUS PUBLICATION 145

**WILLARD B. JEWELL (1899–1969):
SOUTHEAST ALASKA PHOTOGRAPHS, 1924–1925**

compiled by
Franklin Pond



June 2012

Released by

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
Division of Geological & Geophysical Surveys
3354 College Rd., Fairbanks, Alaska 99709-3707





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WILLARD BROWNELL JEWELL, PhD

1899–1969





Willard Brownell Jewell was born on a small farm in Little Compton, Rhode Island, in 1899. He attended local schools (some of them one room) and more than one teacher noticed his quickness and eagerness to learn. This led to his being sent to Mount Hermon, a working preparatory school in nearby Massachusetts. On graduation he volunteered for the U.S. Navy. World War I was winding down but Jewell managed one year to “see the world,” minesweeping harbors in Europe before his discharge from the Service.

Returning to Rhode Island, he applied for, and received, a small scholarship to Brown University in Providence, RI. To make up the remainder of his tuition, Willard worked as a baker, getting up at 4 AM to bake pies, then on to class. Despite a grinding class schedule, he excelled in his studies and earned a Phi Beta Kappa key on graduation. He then entered the graduate student program at Princeton University. Willard had already chosen his favorite subject: Geology. As part of his Ph.D. thesis he joined several men being sent to evaluate the commercial potential of several small gold mines in the extreme southern section of the Alaska Territory during the summers of 1924 and 1925.

Upon receiving his Ph.D. from Princeton, Dr. Jewell was offered a teaching position in the Geology Department of Vanderbilt University in Nashville, Tennessee. Some highlights of his years at Vanderbilt include:

- In summer 1937, he conducted a survey of several mineral prospects in southeastern Newfoundland.
- In 1942 he was appointed Head of the Geology Department at Vanderbilt. During the war years (1941–1945), he volunteered to learn meteorology in order to teach the subject to students in an Army program at Vanderbilt.
- During those years he also surveyed and evaluated several small zinc mines in middle Tennessee. He theorized and prophesied that a large zinc ore body existed in the subsurface. In the 1960s, the New Jersey Zinc Company tested his theory by core drilling and discovered a large zinc deposit at a depth of approximately 1,500 feet in the Gordonsville–Elmwood–Carthage area of Tennessee. This discovery and subsequent mining operation placed Tennessee into the second place in zinc production in the U.S.A. after Alaska.

Dr. Jewell retired in 1967 as head of the Geology Department after a distinguished 40-year career at Vanderbilt.



Willard B. Jewell received his PhD in Geology from Princeton University in 1925. He wrote his dissertation on the geology of Alaska, for which he spent the summers of 1924 and 25 in Southeast Alaska. During that time, he took quite a few pictures of glaciers and mountains and other surface images, which are documented in this publication. Dr. Jewell later became the Dean of the Geology Department at Vanderbilt University.



This publication was created from scanned prints of summer 1924–25 field photos taken by Dr. W.B. Jewell, along with captions he provided at that time. The Division of Geological & Geophysical Surveys (DGGS) is grateful to his family for allowing us to publish these historical photos so that they can be archived for future generations. A special thank you to Dr. Jewell's son-in-law, Franklin Pond, who carefully scanned each of the photos and provided them to us; and to the DGGS Geologic Materials Center Curator Ken Papp, who suggested the publication and participated in its creation.



View of Kogish Mountain from the south end of Tuxekan Island,
west coast of Prince of Wales Island.



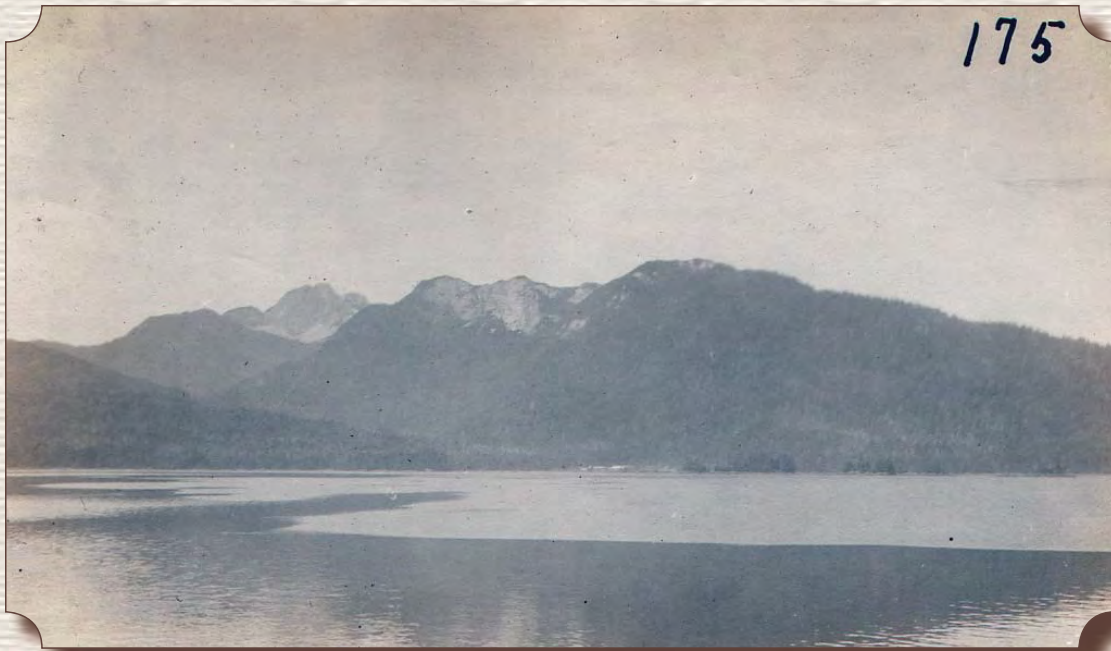
Greenstone reefs near Steelhead cove, on west coast of Heceta Island.



Uplifted wave-cut terrace on red sandstones on Staney Island,
west coast of Prince of Wales Island.



Uplifted wave-cut bench on island east of San Pedro, Maurelle Islands,
west coast of Prince of Wales Island.



Bald Mountain with Swift-Crosby cannery at its foot, on Heceta Island;
Bald Mountain is Silurian limestone.



San Fernando Island viewed from San Lorenzo Island,
west coast of Prince of Wales Island.



Klawock Lake, west coast of Prince of Wales Island.



Lowland at mouth of Klawock salt lake, west coast of Prince of Wales Island.



Landslide on Hamilton Island, west of Shakan, Prince of Wales Island.



Falls near Martin Saxe's claim, behind Klawock, Prince of Wales Island.



Looking south toward Baker Island from Port San Antonio;
glacial facets can be observed along fjord.



Looking northwest toward Baker Island from Port San Antonio.



Looking northwest from Martin Saxe's claim, Klawock,
west coast of Prince of Wales Island.



Head of Port Santa Cruz, Suemez Island.
Note forest destroyed by sea encroachment.



Sea stacks in platy Tertiary andesite resting on uplifted wave-cut terrace, Arena Cove, Suemez Island.



Cliffs of Permian limestone, east side of Saginaw Bay, Kuiu Island.



Hydrostatically pressured water emerging from top of terminus of Baird Glacier, Thomas Bay, mainland.



Flat at head of east arm, Pybus Bay, Admiralty Island.



Mountain peak at back of cannery, Pybus Bay, Admiralty Island.



South side of terminus of Baird Glacier, August 29, 1924,
shows trees overthrown by glacial advance of 1923.



Wave-cut bench at low tide on
platy andesite, Arena Cove,
Suemez Island.



Sea stacks near Cape Addington,
Noyes Island.



Islands of Devonian graywackes in Saginaw Bay, Kuiu Island.



Cliff of Middle Triassic limestone south of Point Cornwallis, Kuiu Island.



W.B. Jewell in skiff in Ulitka Bay, in front of Cape Ulitka, Noyes Island.



Tarn Mountain at head of Cann Creek, Lisianski Inlet, Chichagof Island.



Rock sill or dam at lip of tarn at head of Cann Creek,
Lisianski Inlet, Chichagof Island.



Glacial lake in rock basin, Mount Robert Barron, Admiralty Island.



Weathered pyroxenite, Kame
Peak, Kupreanof Island.

Cirque, Kame Peak,
Kupreanof Island.





Comb ridge between two
cirques, Kame Peak,
Kupreanof Island.

Grand Pacific Glacier, as
seen from its west side
near the front.





View of Grand Pacific Glacier, looking northeast from
the west side near front of glacier.



Looking north 10° east from delta on east side a little
below front of Grand Pacific Glacier.



Looking to the southwest toward hanging glacier from delta on west side a little below front of Grand Pacific Glacier.



Looking south toward Gilbert glacier from delta on the east side and a little below the front of Grand Pacific Glacier.



Grand Pacific Glacier, viewed from delta on its east side a little below its front.



Bedded deposits clinging to sides of cliffs in gulch below Grand Pacific Glacier.



View of Grand Pacific Glacier, Glacier Bay, from east side
about 4.5 miles below front.



Gilbert glacier, Glacier Bay.

1924



Gilbert glacier, Glacier Bay.



Old glacial lake deposits incised by the White River since
the retreat of Adams Glacier, Glacier Bay.

W.B. Jewell at Malcolm
Smith's Cabin on the West
Fork Texas Creek.



Rendu Glacier, Glacier Bay, as
seen from 500 foot nubbin.





Rendu Glacier, Glacier Bay.

Glaciated diorite hills on
west side of Rendu peninsula,
Glacier Bay.





Moraine on Carroll Glacier, Glacier Bay.



Carroll Glacier, as seen from Triangle Island, Glacier Bay.

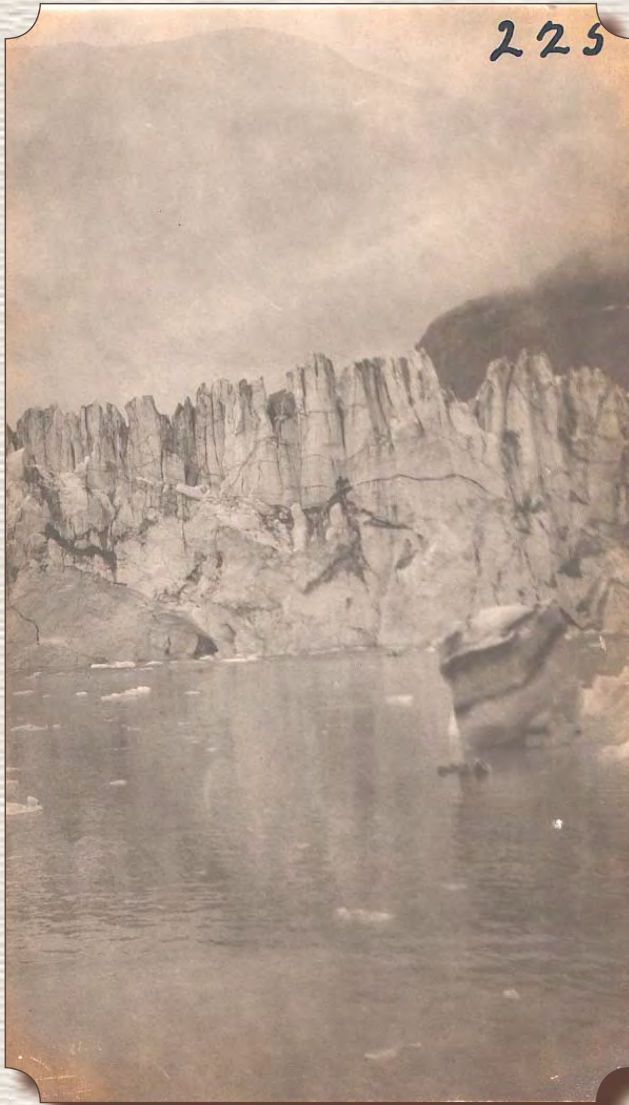


View of Funter Bay from open
cut on Heckler blanket vein,
Admiralty-Alaska property,
Admiralty Island.



Gilbert glacier, Glacier Bay.

1924



Closeup of Gilbert glacier.



Reid Glacier, Glacier Bay.



Gilbert glacier, Glacier Bay.



Kame terrace in process of formation, east side of Grand Pacific Glacier.



Steelhead Harbor, west side of Heceta Island.



Top of Mount Robert Barron, Admiralty Island.



Beds on east side of Saint Joseph Island, off west coast of Prince of Wales Island.



Islands in Saginaw Bay, and Kuiu Island.



Noyes Island, viewed from the east.



Mill lake, as seen from the Lake claims, back of Wrangell.

1924



Muir Arm, Glacier Bay.



Scene on the west coast of Prince of Wales Island.



Terminal moraine in front of Baird Glacier.



Iceberg seen in Glacier Bay.

1924



Iceberg, Glacier Bay.



Rendu Glacier, Glacier Bay.



Sea stacks, on south side of Suemez Island.



One of the smaller glaciers in Glacier Bay.

1924



Looking toward Muir Glacier from the vicinity of Francis Island, Glacier Bay.



Rendu Glacier, viewed from south side of Rendu Inlet, Glacier Bay.



Quartz vein, west side of Hawk Inlet, Admiralty Island.



Sea arch on south side of Baker Island.



Part of Grand Pacific Glacier, Glacier Bay.



One of the smaller glaciers in Glacier Bay.



Iceberg, Glacier Bay.



Rock wall and lateral moraine, Glacier Bay.



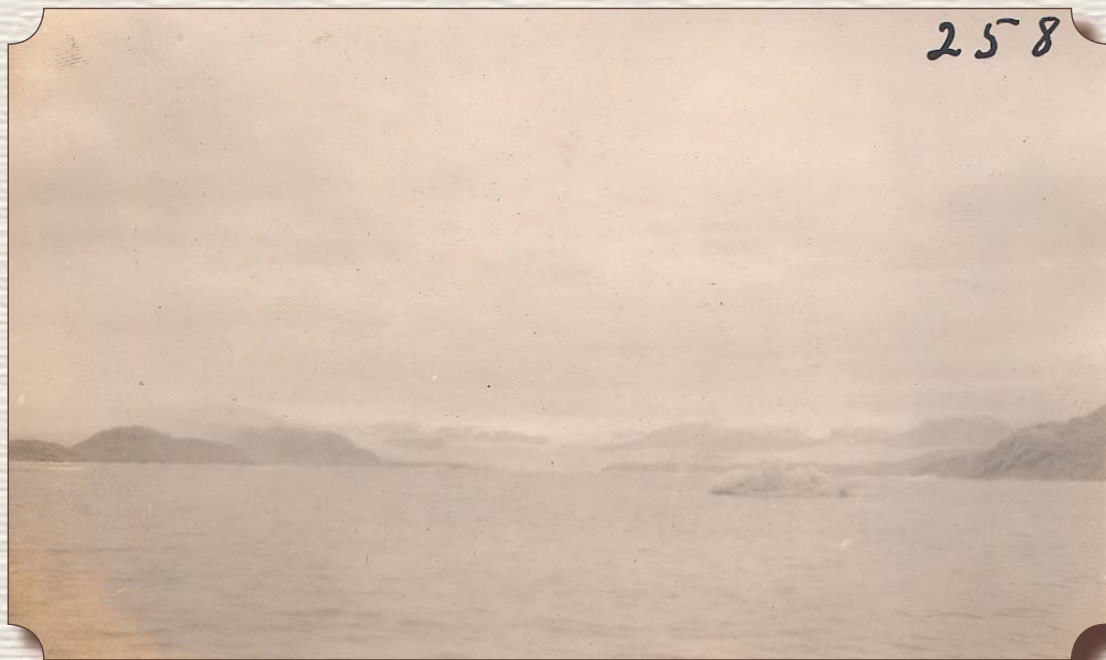
W.B. Jewell in skiff off front of
Carroll Glacier, Glacier Bay.



Looking east over the Coast Range
from Kame Peak, Kupreanof Island.



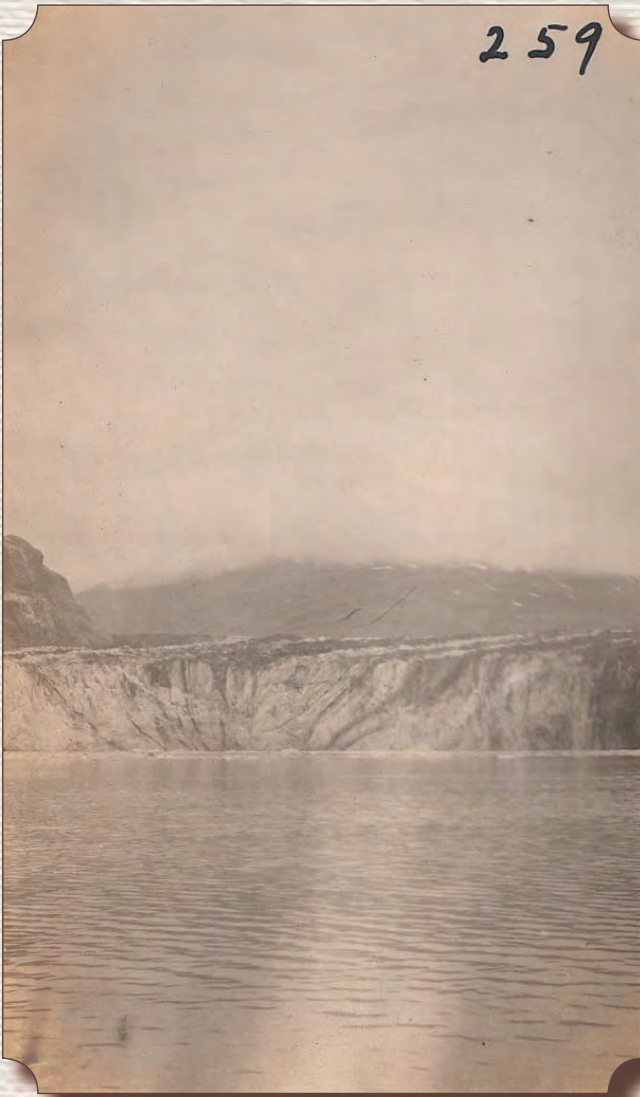
A.F. Buddington and W.B. Jewell in skiff off front of
Grand Pacific Glacier, Glacier Bay.



Iceberg and fog in Glacier Bay.

1924

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West side of Grand Pacific
Glacier, showing character of
medial moraines, Glacier Bay.

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Johns Hopkins Glacier,
Glacier Bay.



Rock wall and iceberg covered with detritus, Glacier Bay



Mount Baker, Baker Island.



Looking down from 1,400 feet elevation on Funter Bay side of Mount Robert Barron, Admiralty Island.



Wave-cut terrace, west coast of Prince of Wales Island.



Looking west to Kame Peak from Thomas Bay, mainland.



Near Klawock, west coast of Prince of Wales Island.



Looking down, to the southeast, from
2,750 feet elevation on Kame Peak,
Kupreanof Island.

Looking northwest from Kame
Peak, Kupreanof Island.





View of Gilbert glacier from a distance, Glacier Bay.



Johns Hopkins Glacier, Glacier Bay.



Waterfall at Martin Saxe's claim, back of Klawock, Prince of Wales Island.



W.B. Jewell waves from boat, the Beilby, in Glacier Bay.



Rendu Glacier, viewed from north side of Rendu Inlet, Glacier Bay.



Rendu Glacier, Rendu Inlet, Glacier Bay.

1924



East side of northwest arm of Glacier Bay.



View of Casey Glacier from the north side of
West Fork Texas Creek, elevation 4,000 feet.



Photo of peak on west side of Casey Glacier, taken from 4,000 feet above sea level, on north side of West Fork Texas Creek.



Oil well, Mackenzie River field, Canada.



Sea arch in Permian limestone near Hamilton Bay, Kuiu Island.



View of Zimovia Strait from Wrangell.

1924-1925



Baird Glacier, Thomas Bay, Southeast Alaska.

1925



W.B. Jewell rests on Texas Glacier, elevation 4,000 feet.



311
Salmon glacier and Big Missouri and Bear River ridges from
mountain northwest of Texas Creek and its west fork.



312
Gravels deposited by high water of Thumb Creek behind a rock obstruction.



Mouth of Thumb Creek gorge.



Looking down Texas Creek valley from slope above foot of Texas Glacier.



Looking up Texas Glacier from near the foot of its east portion.



Cascades on Texas Glacier, east branch.



Icefalls on east branch of Texas Glacier, Hyder district. Photo taken from ridge between the glacier and the West Fork Texas Creek at 4,000 feet elevation. Glacier drops 500 feet in icefalls.

Photo showing view from Cantu Mountain, Hyder district, with Hidden Glacier in background.



Hidden Glacier as seen from top of ridge to its north.



Photo from above Murphy's claims, Ferguson Glacier, Hyder district, showing contact of granodiorite and slate-graywacke beds, with aplite and pegmatite dikes above contact.



Cathedral and Jewell mountains, on north branch Chickamin Glacier.



Texas Comstock vein, West Fork Texas Creek.



North wall of valley of Texas Glacier, carved from icefalls, with east branch showing over 4,000 feet vertically.

Crevasses in icefalls of east branch of Texas Glacier.





Stratified snow in snowcap on top of mountain
on north side of Texas Glacier.



Foot of Salmon glacier showing tunnel from
which the Salmon River emerges.



Looking up the Monroe glacier from the Salmon glacier.



Icefalls at head of Monroe glacier.



Head of Monroe glacier.

Ibex Creek draw from
foot of Casey Glacier.



Looking up Casey Glacier from 3,500 feet elevation.



Ibex and Homestake gulches, viewed from
3,200 feet elevation on Casey Glacier.



Mountain above Joe Conner's claims, as seen from Casey Glacier.



Looking north from the mountain above Joe Dugass's claims, on the north side of West Fork Texas Creek, Hyder district. Texas Glacier is in foreground and Chickamin Glacier in background.



Looking southwest from the south branch of Chickamin Glacier.



Hanging glacier in cirque, south branch of Chickamin Glacier.

1925



Surface of Chickamin Glacier.



Looking south and down on Ferguson Glacier.



Looking north toward Texas and Chickamin glaciers.



View from the west-northwest of Chickamin Glacier and Jewell Mountain.



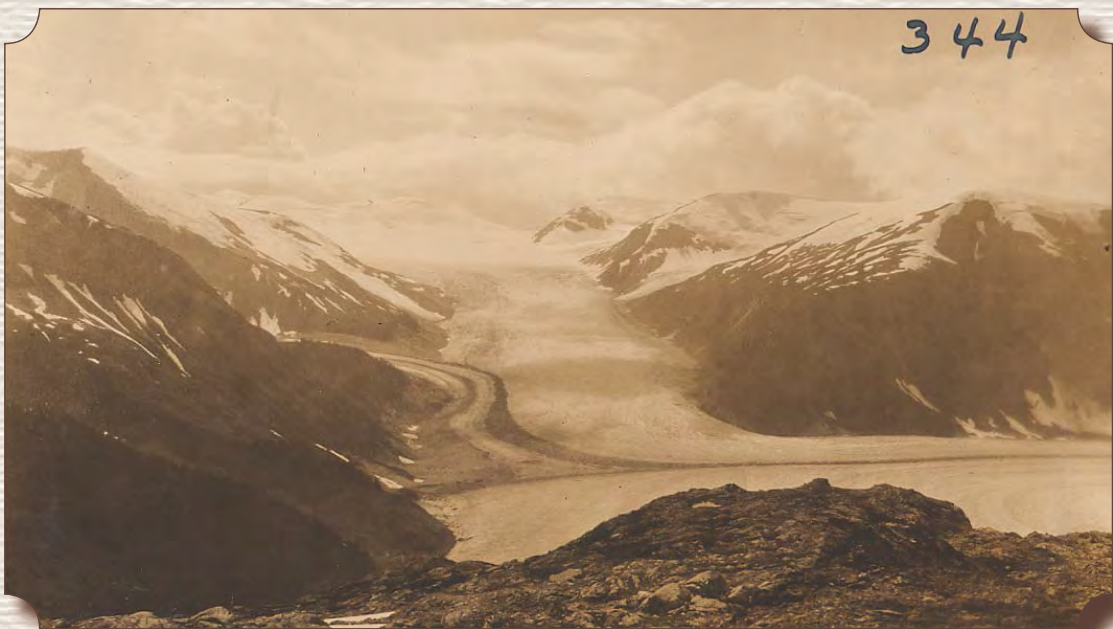
Looking southwest toward Banded Mountain and Chickamin Glacier.



Texas and Chickamin glaciers, as seen when looking north from top of ridge on north side of West Fork Texas Creek.



Looking south toward Comstock and Ferguson glaciers.



Looking southwest toward the south branch of Chickamin Glacier.

1925



View to the north of Chickamin Glacier.



North side of Wilson glacier.



Head of Wilson glacier.



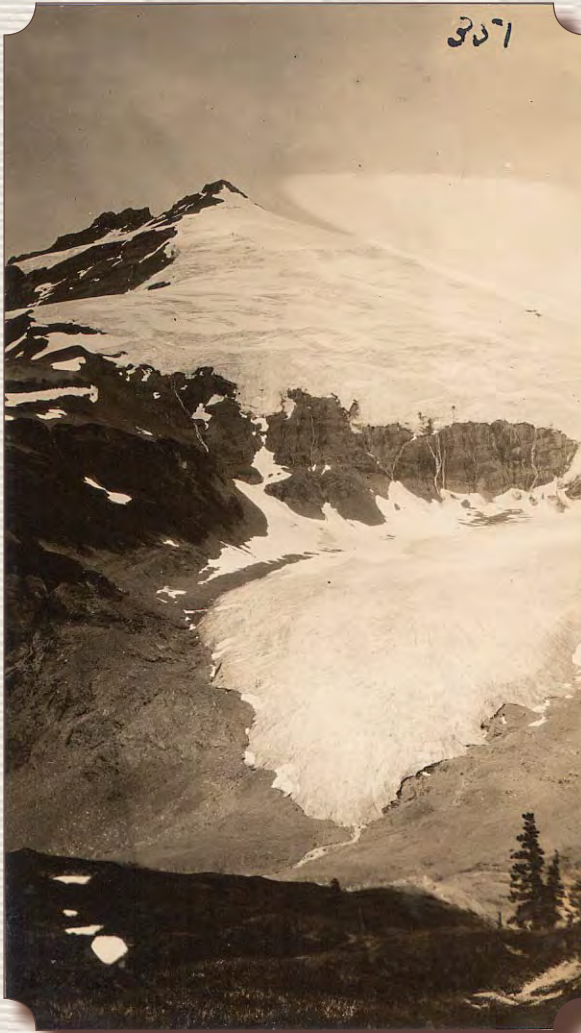
Granite Mountain (3,153 feet elevation), on south side of Wilson glacier.



View of Coast Range, looking south from Wolf Mountain.



View of Coast Range, looking south from Wolf Mountain.



View of Jewell Mountain (7,400 feet),
looking northwest.



Looking north across the north branch of the Chickamin Glacier
toward Cathedral Peak (Canada—8,000 feet).



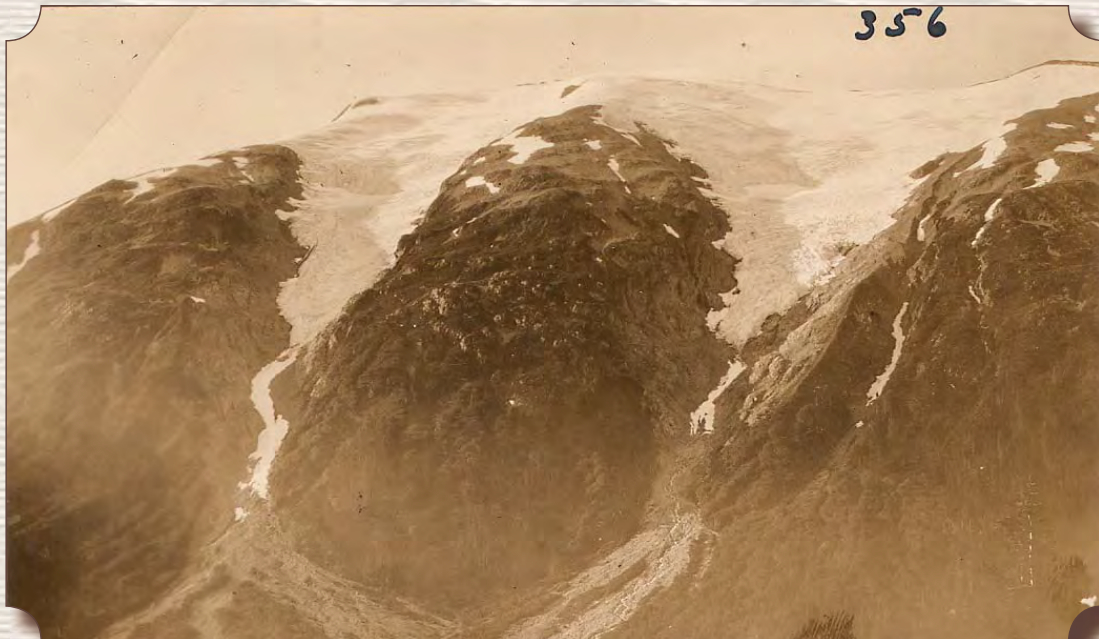
Chickamin Glacier and Jewell Mountain, looking northwest
from 3,700 feet elevation west of Texas Comstock.



Chickamin Glacier, looking north-northwest
from west of Texas Comstock.



North side of valley of West Fork Texas Creek, as seen
from Texas Comstock.



Texas Comstock ridge.



South branch of Chickamin Glacier, as seen from ridge north of disappearing lake, West Fork Texas Creek.



Chickamin Glacier and Banded Mountain, viewed from ridge north of disappearing lake, West Fork Texas Creek, .



North branch of Chickamin Glacier and Jewell Mountain, looking northwest from ridge north of disappearing lake, West Fork Texas Creek. .



North fork of Chickamin Glacier, looking north from ridge north of disappearing lake, West Fork Texas Creek.



Ferguson Glacier, looking south from top of ice cap
on north side of West Fork Texas Creek.



Looking north toward Boundary Mountain from top of
ice cap on north side of West Fork Texas Creek.



Looking west at north branch
of Chickamin Glacier and
Jewell Mountain from top of
ice cap on north side of West
Fork Texas Creek.



Texas and Chickamin glaciers
and Jewell Mountain.



Looking north at Boundary
Mountain from top of ice cap
on north side of West Fork
Texas Creek.



Looking up the Chickamin River valley toward its junction with the Leduc River,
from about 5 miles below the mouth of the Leduc River.



Junction of the Leduc and Chickamin rivers. Leduc River valley at left.



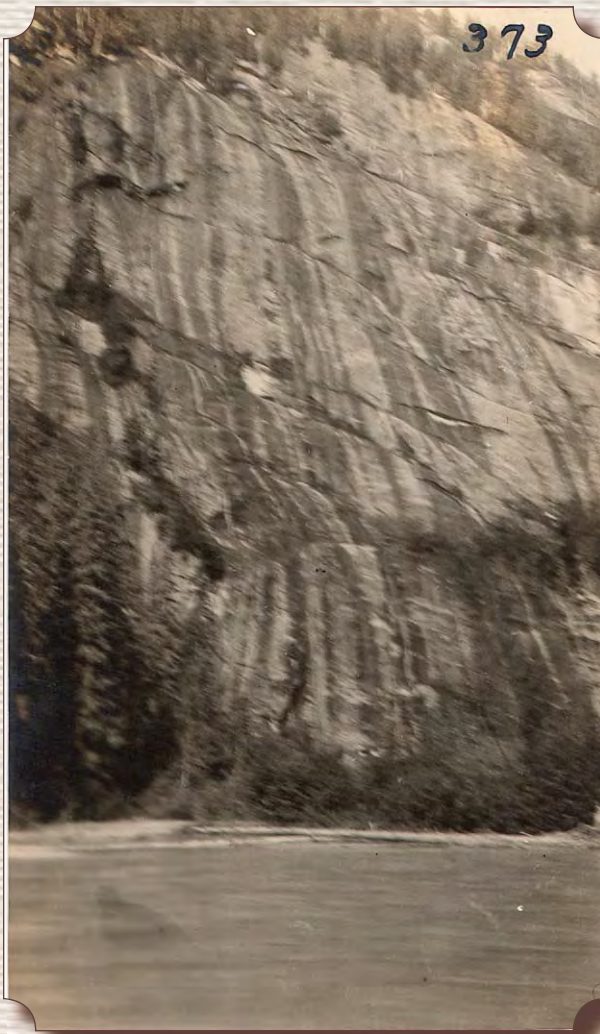
Glaciated wall of Chickamin River valley. Looking downriver from about 500 yards below the mouth of the Leduc River.



Looking up the Chickamin River valley toward the valley of the South Fork Chickamin River from about 2 miles above the mouth of the Leduc River.



Looking up the Chickamin River toward Indian Creek from about 4 miles above its south fork.



View of the north wall of the Chickamin River valley 4 miles above its south fork, bare of vegetation and showing intense glacial action.



Looking down the Chickamin River from 4 mi above its south fork.

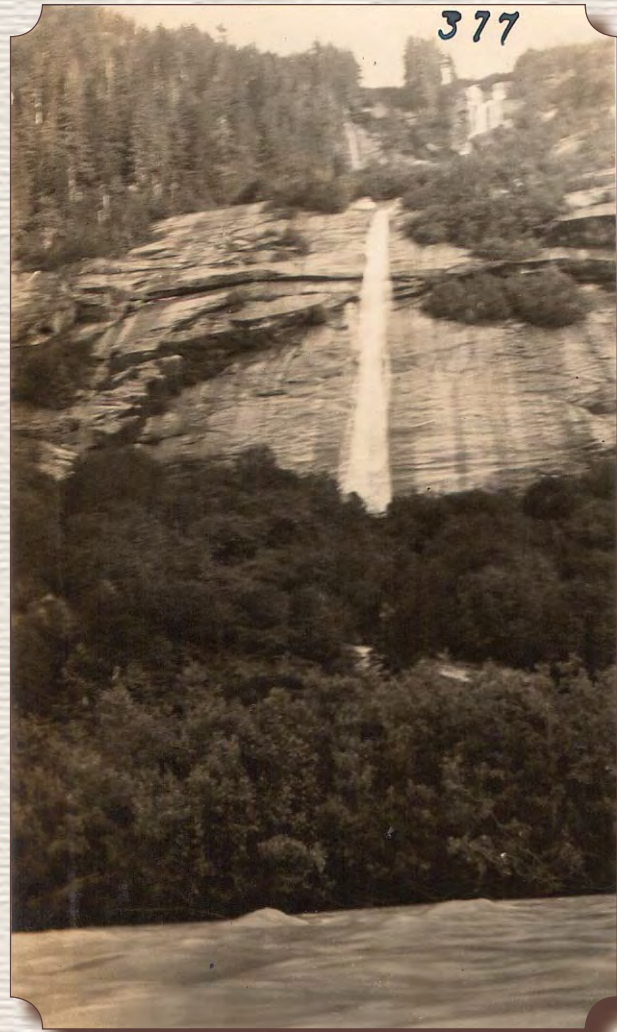


Looking across the Chickamin River valley toward the south side about 5 miles above its south fork.



Looking up the Chickamin River toward Indian Creek.

View of the south wall
of the Chickamin River
about 1 mile below In-
dian Creek.



Looking up the Chickamin River toward mouth of
canyon from mouth of Indian Creek.



Looking up Indian Creek from about 4 miles above its junction with the Chickamin River.



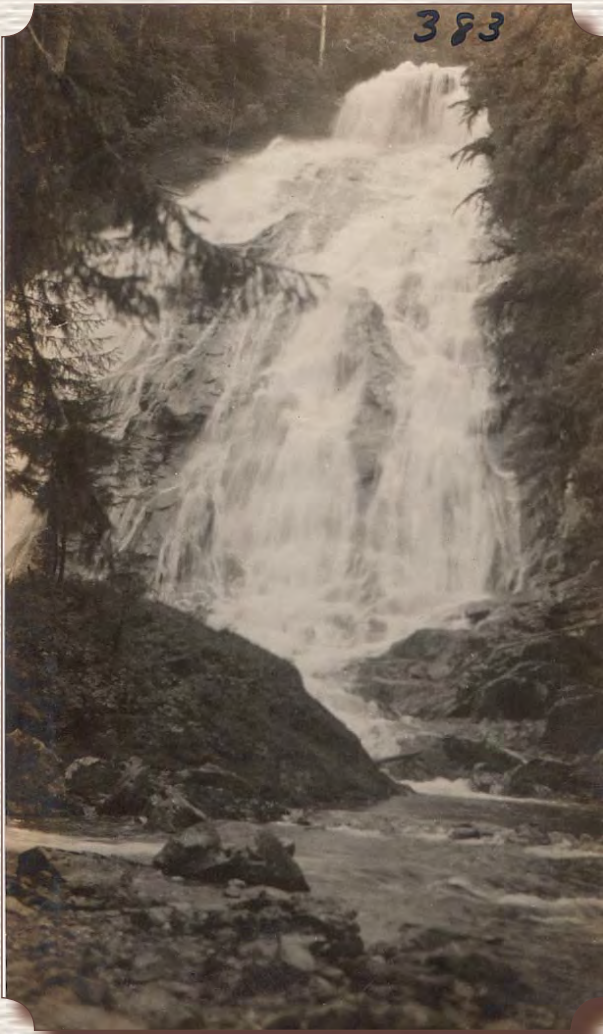
Looking down Indian Creek from about 4 miles above its junction with the Chickamin River.



Looking down Indian Creek from about 2 miles above its junction with the Chickamin River. The Chickamin valley in the distance is showing the straight, steep valley walls and five truncated spurs. The mountains in the far distance form the southwestern wall of the valley of the South Fork Chickmin River.



Falls at foot of Indian Creek, Chickamin River.



Falls on creek tributary to South Fork Chickamin River about 3 miles above the Pratt cabin on the west side of the valley. Falls have about 200 foot drop.



Foot of Chickamin Glacier with Jewell Mountain in background. Photo taken from Goat Mountain, at an elevation of 4,000 feet.



Looking west across the Chickamin River valley and the Coast Range from Goat Mountain, at an elevation of 4,000 feet.



Looking through the pass at the head of Goat Creek into the drainage of the South Fork Chickamin River. Pass is approximately 3,800 feet above sea level. Photo taken from Goat Mountain (elevation 4,000 feet).



Mountain (~7,000 feet above sea level) off the map in country between the south fork of the Chickamin Glacier and Goat Creek. Photo taken from lateral moraine, elevation 4,800 feet. Must be 500 feet above glacier that formed moraine that lies between mountain in picture and location where picture was taken.



Looking up the snowfield that feeds the south fork of the Chickamin Glacier, from 5,500 feet elevation on Goat Mountain. This country has never been mapped in any way.



Looking west from 5,600 feet above sea level on Goat Mountain.



Rock with schist inclusions composed of gneissic diorite and pegmatite. Photo taken from north side of the Chickamin River about 2 miles above its south fork.



Looking up the Chickamin Glacier toward Wolf Mountain (6,400 feet), from the area where the glacier turns and flows south.



Front of Chickamin Glacier, where the west branch of the river emerges from under the ice.

U valley on Chickamin Glacier side
of Jewell Mountain.



Looking down Chickamin River valley
from 200 feet above ice on east wall.
Picture shows old terminal moraine now
covered with small alders, which was
at ice front in 1902. Glacier has receded
4,600 feet since 1902.





View of Gooseneck Harbor from top of mountain at
head of Grace Harbor, Dall Island.



Port Bazan, Dall Island.



Petrel Island, at south end of Forrester Island.



Security Cove, Dall Island.



Looking northwest from mountain at head of Grace Harbor,
Dall Island, toward Silurian Dall limestone ridge.



Twin peaks (Dall limestone, Silurian) from Waterfall Bay, Dall Island.



Top of the interior of Dall Island.



Interior of Dall Island.



W.B. Jewell tending the campfire at the head of Port Bazan, Dall Island.