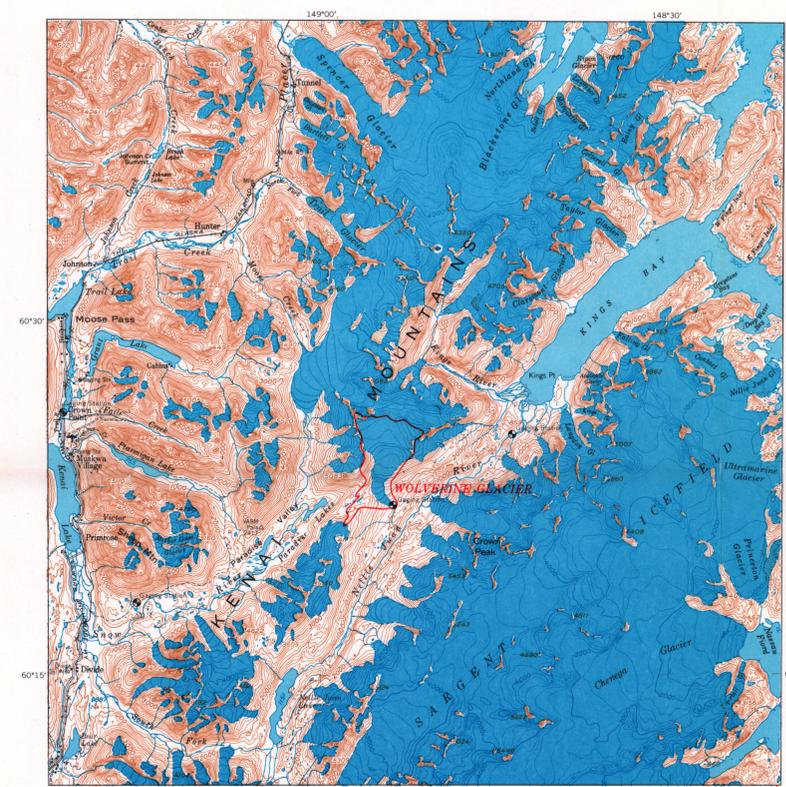


Gulkana Glacier
Photograph shows conditions on August 31, 1967. Ice flowing from four tributaries unites to form the main glacier. Irregular and folded medial moraines suggest that this glacier surges, but no recent advances have been observed. In recent decades the glacier has been shrinking rapidly; note the large barren area in front of the terminus recently exposed by the melting ice

Base from U.S. Geological Survey
Mt. Hayes, Alaska, 1955

A. GULKANA GLACIER, ALASKA RANGE, CENTRAL ALASKA

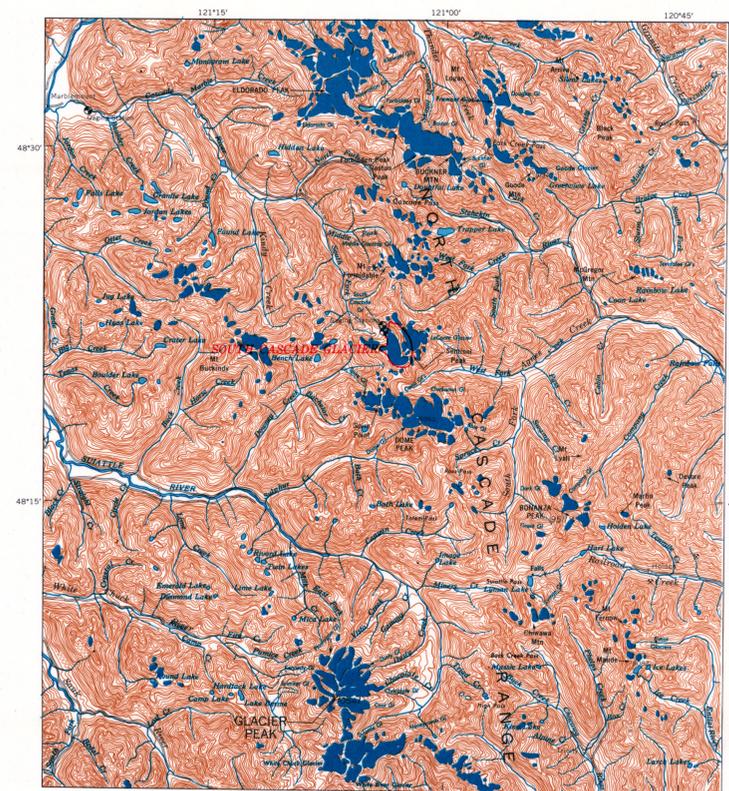


Wolverine Glacier

Photograph shows conditions on September 3, 1966. The glacier heads in a broad basin but terminates in a narrow gorge. Crevasses indicate this glacier is flowing quite rapidly. Relatively little retreat in recent decades is demonstrated by the narrow areas of recently exposed bedrock along the margins of the ice

Base from U.S. Geological Survey
Seward, Alaska, 1953

B. WOLVERINE GLACIER, KENAI MOUNTAINS, ALASKA



1928



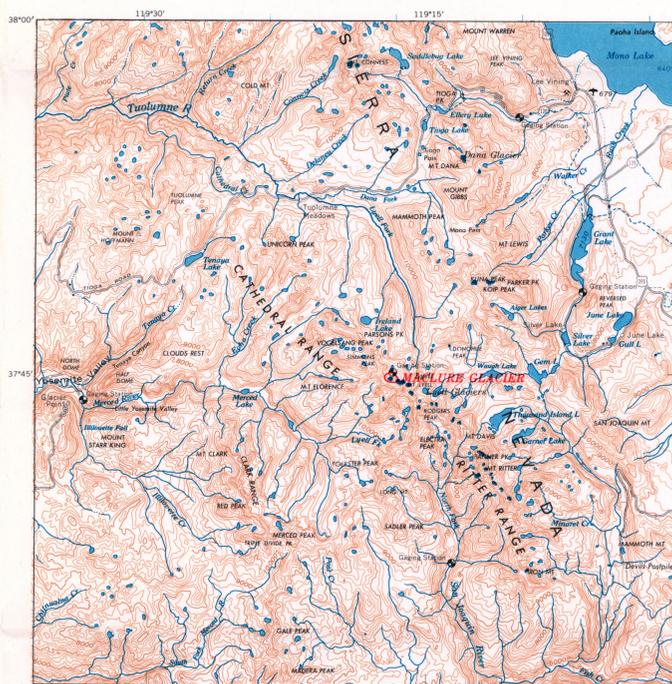
1965

South Cascade Glacier

The 1928 photograph is by Lage Wernstedt, U.S. Forest Service, and was taken presumably in the autumn. The 1965 photograph was taken September 23, 1965. Note that the transient snowline is very near the same position in 1965 as in 1928, so that accumulation areas for both years are similar in size. The higher altitude glaciers and perennial snowfields shown in these photographs have changed very little in size. However, because the exposed ice areas below the equilibrium line were much larger in 1928, ice loss would be much greater in 1928 than in 1965 even with similar meteorological conditions. Most of the mass loss in the 1928-65 interval occurred below the present equilibrium line

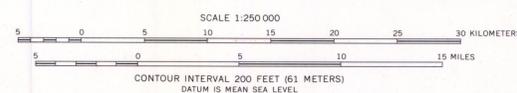
Base from U.S. Geological Survey
Concrete, United States; Canada, 1962

C. SOUTH CASCADE GLACIER, NORTH CASCADE RANGE, WASHINGTON



Base from U.S. Geological Survey
Mariposa, California-Nevada, 1957

D. MACLURE GLACIER, SIERRA NEVADA, CALIFORNIA



MAPS AND PHOTOGRAPHS SHOWING PHYSICAL SETTING OF GULKANA, WOLVERINE, SOUTH CASCADE
AND MACLURE GLACIERS, WESTERN CONTINENTAL UNITED STATES