

## PORTAGE LAKE AND GLACIER

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The following synopsis of what we will see at the Chugach National Forest visitor center at Portage Lake is adapted from Mayo and others (1977).

For centuries the low pass at the head of Turnagain Arm served as a surface transportation route between Upper Cook Inlet and Prince William Sound--prehistorically, for competing interior and coastal native groups, and subsequently for Russian traders and trappers and early miners in the region. During an early geological reconnaissance of the area, Mendenhall (1900) gave the broad, 600-ft divide the name Portage Pass. During the past 200 years, Portage Glacier has advanced and retreated markedly. According to reports from the Vancouver expedition, in 1794 the glacier did not occupy the valley below the pass, but Portage Lake may have been larger than it is today. The glacier then advanced strongly at least 5 km until about 1890, at which time Portage Pass and the lake basin were completely occupied by ice. The low rubble mounds which impound present Portage Lake are remnants of the terminal moraine left by this advance. In 1898, gold rush prospectors used the pass by climbing over Portage Glacier.

The approximately 4-km retreat of the glacier since at least 1914 has been documented by Barnes (1943) and Schmidt (1961) and apparently continues today, leaving 190-m deep Portage Lake in the glacial depression. Surface access to Portage Pass is difficult because the lake is subject to high winds and may be choked with icebergs, the lower part of the glacier is very crevassed, and the bedrock valley walls are very steep. From observations of pronounced glacial thinning in the terminus area and decreased input from tributary glaciers and from calculations of ice-balance data, Mayo and others (1977) forecast that Portage Glacier will continue to retreat. If it continues at the average rate of retreat since 1914, the terminus will disappear from view at the present Chugach National Forest visitor facility about 2020. However, the rate of retreat has had a sustained dramatic increase since 1970, and the glacier may be out of view from this point much sooner.

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