



## AAC Publications

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### Shrinking Summits on Rainier and Other High Peaks in Washington

Washington, Cascades

Eric Gilbertson with the differential GPS at the new summit of Mt. Rainier on the southwest rim, with Columbia Crest in the background. Photo by Ross Walette.

**Between August and October, with the help of climbing partners Saulius Bračiulis, Alden Ryno, Josh Spitzberg, and Ross Walette, I conducted ground surveys of the current elevations of Mt. Rainier and the other four ice cap peaks in the Lower 48 states: Liberty Cap, Eldorado Peak, Colfax Peak, and East Fury (all in Washington). This work was funded by a Research Grant from the American Alpine Club.**

I discovered that Columbia Crest, the historical summit of Mt. Rainier, has melted down 21.8' since the last ground survey in 1998 and is no longer the summit. The new summit is a rock on the southwest rim at 14,399.6'. The melting began in the early 2000s, and the summit likely switched to the southwest rim around 2014. Measurements were conducted in August and September using professional surveying equipment and reviewed by Larry Signani, the geodesist for the 1988, 1998, and 2010 Rainier surveys conducted by the Land Surveyors' Association of Washington.

I discovered that only two of the original five ice cap peaks still have ice cap summits. Eldorado Peak's ice cap has melted down 20', and the mountain now has a rock summit at 8,873.3'. East Fury has melted 30' and also has a rock summit (8,321.5'). Liberty Cap has melted 26.3', but the top is still an ice cap (14,090.7'). As of the survey, Colfax was at 9,439.9' and still had an ice cap summit.

—Eric Gilbertson

Read a longer article about Gilbertson's research on summit ice caps in the AAC's Guidebook publication.

## Images



Eric Gilbertson with a differential GPS on the summit of Liberty Cap.



Eric Gilbertson with the differential GPS at the new summit of Mt. Rainier on the southwest rim, with Columbia Crest in the background.

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