

Upper Somme Creek cryoplanation terraces

Location: 62.422701°N, 138.246433°W

DETAILS:

Cryoplanation terraces have formed on the unglaciated northwestern slopes of an unnamed peak east of the headwaters of Somme Creek in the Dawson Range (10 km southwest of Apex Mountain). These step-like landforms occur between 1450 m and the 1500 m summit. Cryoplanation terraces form by periglacial weathering along joints, beds, and/or contacts in the bedrock over extended periods of time (Lipovsky and Bond, 2013). The distribution of the terraces predominantly on the northwest side of the peak may be due to several interconnected factors. Slope direction (aspect) controls insolation which in turn influences the degree of periglacial weathering and cryoturbation. There may also be an optimal relationship between the structure of the bedrock and the direction of the slope for the formation of the terraces. The bedrock geology of the entire ridge system consists of basalt and andesitic flows of the Upper Cretaceous Carmacks Group (Ryan et al., 2013).



Figure 1. Aerial photograph of cryoplanation terraces on an unnamed peak east of Somme Creek in the Dawson Range. Note their distribution is predominantly on the northwest-facing slopes leading from the peak (Airphoto A27517-036).



Figure 2. View looking north of cryoplanation terraces on an unnamed peak east of Somme Creek in the Dawson Range. These features require extended periods of time to develop and occur on unglaciated peaks in the Yukon.

REFERENCES AND FURTHER READING

- Lipovsky, P.S. and Bond, J.D., 2013. Surficial Geology of Apex Mountain. Government of Yukon, Open File 2013-12, scale 1:50,000.
- Ryan, J.J., Zagorevski, A., Williams, S.P., Roots, C., Ciolkiewicz, W., Hayward, N. and Chapman, J.B., 2013. Geology, Stevenson Ridge (northeast part), Yukon. Geological Survey of Canada, Canadian Geoscience Map 116, scale 1:100,000.