

Stop 7 Weathering

[00:08] So here we are at the top of Carmi, um also called the Garnet Trails Interpretive Site, so there's a bunch of stops that talk about um the wildfires of 1993.

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[00:23] Words on screen: *The power of vegetation*

What we can see here is a tree growing out of the rock and it's actually displacing chunks of rock; and has lifted them up from a relatively flat position to quite an inclined position. Quite a large tree it's probably the order of 60 to 100 years old and so over time it's managed to displace these chunks of rock. So, what kind of weathering is this an example of?

[01:02] Words on screen: *The power of water freezing and thawing*

So, we're up again above Ellis Creek Canyon just outside of Penticton and we're going to look at another type of weathering today. Here we have some frost shattering or frost weathering. So, we have this um metamorphic bedrock it's very hard um but when we get water down into the cracks and we naturally get some cracks and fractures associated with the foliation of these rocks. Water can infiltrate into these cracks and we know that when water freezes it increases in volume by about nine percent and so over hundreds or thousands of years freezing and thawing of water has expanded these cracks and broken these rocks apart.

[01:57] Words on screen: *The power of water + vegetation + time*

Here we have another example of a frost shattered rock. Um so we've got a bit of a boulder probably a glacial erratic though the rock wasn't moved very far because it's similar bedrock to what we see here. And we can see down in the crack in between lots of organic material has accumulated over time we've got strong surface coverage of lichens. Um so again chemically breaking down the rock um and then if we get vegetation growing in this crack, in this organic derived soil we could see trees growing up potentially and forcing those rocks apart