

Mountain Madness: Episode 4

Rockfall vs. Rockslide What is the difference?

by International Mountain Connection

Hi, I'm Michelle Onofrey with International Mountain Connection.

Welcome to Mountain Madness!

In today's episode, I'm going to talk about the difference between rockfall and a rockslide.

So, let's start with rockfall. The rock can be as small as this rock here or it can be really, really, really, really, big like a boulder.

And let's pretend this is our cliff or the side of the mountain and here is where the rock is normally attached, and the rock detaches from the cliff and it falls down. Rockfall.

Now if the rock or the slope is vertical or slightly less than vertical, the rock is going to free fall. That means that when it falls it's not going to actually touch anything and that means that the rock is falling very, very fast.

If the slope is still steep, it's a moderate slope, but the rock cannot free fall, the rock is going to bounce down the mountain. So to bounce means that the rock flies into the air, touches the ground, and rebounds. So it bounces back into the air, touches the ground, and it keeps doing that until eventually it runs out of momentum and stops.

Now if the slope is not very steep, so it's a gentle slope, the rock is just going to roll until it no longer has the momentum to keep going.

So these are three different types of movement that you will see with rockfall and because the slope between the rock and the valley, it might change between a vertical cliff, to something that's moderate, to something that's a gentle slope, you can have all three types of movement with a rockfall.

Now rock fall can be one rock it can be two rocks, or it can be several rocks.

Okay and for example, I saw rockfall this last summer. I was hiking and I heard a sound like this [sound of rocks hitting each other]. And I thought, "What is that? Why are rocks hitting each other? That's really bizarre!" And I look up the mountain and I see this boulder that's like this size bouncing down the mountain towards me.

And so I yell, "Rock!" and then my eyes were fixed on this rock because as the rock bounces down the mountain the trajectory can change and it can bounce toward you or away from you, but you don't know what will happen.

And luckily the rock kept the same trajectory and it bounced about two meters from where I was standing. So obviously that was a very scary experience because if you are hit by a rock like that, it's... it's game over. You do not win against the rock.

I don't know if you are familiar with the Mont Blanc, but when you take the normal route from the refuge up to the top you have to traverse a couloir. And this couloir has been nicknamed or called the "coulure of death" and that's because there is a lot of rockfall every day.

These boulders are falling from the top of the mountain and it comes across the path and it's really scary and people do die. So rockfall is something that is very dangerous and you know, you always have to keep your eyes open to make sure that you aren't hit by a rock in areas that are not very stable. So [with] rockfall, the most important thing to remember is that it's one rock or two rocks or several rocks. They can be small, or they can be big. Okay and they're falling.

But with rockslide, we have our mountain, and this entire area or section is going to break away from the mountain and slide down. And the most important thing to remember with rockslide is that this is not one rock, or two rocks, or several rocks this is an entire area of the mountain that is coming down so rockfall is obviously very dangerous but rockslide is... is even more dangerous just because there is so... there are so many rocks that are falling.

If there are trees in the way, the trees are completely flattened. They're knocked over. If there are houses or a village, then they can be covered in rock because there's that much rock that is falling with a rockslide.

Think of a rockslide like a landslide except with rock. And rockslide will move more slowly because there are so many rocks and there's that friction from the rocks as they fall.

So, it's not as fast as rockfall, however it can go pretty fast. And when that happens, then it's called a rock avalanche because the the rock moving or sliding down the mountain has the same look as a snow avalanche.

So obviously something very dangerous and I hope none of you have actually witnessed rockslide because it is very scary.

But now you know the difference between a rockfall and a rockslide and if you want to be notified of when the next International Mountain Connection video is released, all you have to do is click on the subscribe button and the bell.

And why trust International Mountain Connection with your English training?

Because Brian isn't in the kitchen. He's in the mountains! I will see you next week! Bye!