Unit 5 Geoclips: Formation of Delicate Arch, Arches National Park

Here we are at Delicate Arch. With the possible exception of Old Faithful, this is the most famous feature, the symbol of the parks. This is one of the very many, more than 2,000 arches, that are in Arches National Park, and it shares with them the same origin. These are not carved by running water shooting underneath them. Nor are they carved by wind blasting a hole through it. They're carved mostly by some very odd processes.

Down below, there's a layer of salt that was deposited in a sea a long time ago that was drying up here. Salt, when it's down deep and there's something sitting on top of it, is soft, and it flows. And the salt has flowed into sort of a mound, something like a lava lamp bulging up, and that mound has warped the rocks. And if you take rocks and sort of warp them up, they crack. And so there are these cracks that have made standing vertical walls of rock.

Well, the next thing that happens, if we look at that running along towards the bottom, there's a line on both sides of it. That's a soft layer, and it weakens things. Well, when you start undercutting a cliff-- we have these cliffs, and they get undercut by water leaking out along these little cracks-- then what happens is pieces fall off. And enough pieces fall off that eventually one of the pieces breaks through, and then it's an arch.

This arch is not long for the world. We see on the left, about halfway up, how thin it's getting. And we also see at the top a whole bunch of cracks that are developing. That layer across the top is trying to sag, and as it does, there's cracks that are forming. And some of those cracks sort of look like Pennsylvania keystone sitting up there.

And so it might last thousands of years. It might go in the next big storm. But it is not terribly long for the world. We know that many of the prominent and famous features in the park have changed in the time people have been watching. It will be a loss, but an educational one, when this very famous feature of the Park Service also changes.