Unit 09 GeoClips: Mudcracks

[MUSIC PLAYING]

Look at this picture. You've got all these cracks developed over here. Imagine a second flood coming through here, a relatively gentle flood, water slowly flowing in here, a new layer of silt and sand and shales and clays. What's going to happen? All of that new material is going to filter down into these cracks and it's going to solidify in there as the water evaporates out of it.

So now 100 million years goes by. And we come along and we cut this open and we look at this layer and we look at these, and you'll see mud cracks. And we'll be able to tell that that layer of rock was oriented this way, because these mud cracks all start wide at the top and get narrow going downwards. And it quite often happens that these strata of rock, because of the incredible forces of nature of plates coming together, will take these layers and just flap them over upside-down. And we come along and we look at them, and you can't tell which way is up, which way is down until you find one of these mud cracks.

And then, even if the layer's upside-down, then you'll have these mud cracks teepeeing upwards. And you'll say, whoa-ho, this thing must've been flopped over and turned over upside-down. And it's the same processes-- I'm doing a Richard here. It's the same processes that produce these mud cracks, will fill them in, and then maybe after 100 million years, they'll get fossilized, turned into a hard clay layer, and then turned upside-down. But we'll still be able to tell what we call the stratigraphic relationship, the time relationship, which is older, which is younger, because clearly this is older than whatever would lay on top of it.

[MUSIC PLAYING]