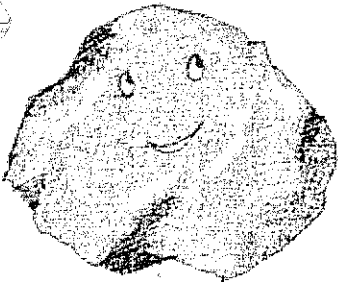


The Adventures of Carla Calcite



In the boot-shaped country of Italy stands what's left of a marble statue of Minerva, the Roman goddess of wisdom. Down near Minerva's foot, in the fold of her robe, is a small bit of mineral called Carla Calcite.

Carla wasn't always a part of the marble statue. In fact, she's been through a lot of changes in her lifetime. Where did she come from? And how did she end up in a marble statue? To find out, we'll have to travel back many millions of years – to a time when the world looked very different from the way it looks today.

If you went to northern Italy right now, you'd see a group of mountains called the Alps. But long ago in that very same spot, there were no mountains at all. There wasn't even an Italy. Instead, there was a great sea. Carla was around then, but she was not part of a rock statue. She was part of a shell.

① The shell Carla Calcite was part of was the shell of a tiny creature that had lived in the great sea. When the animal died, its shell settled on the bottom of the sea together with the shells of many, many other sea animals. The shell – and Carla – then sat on the sea floor for thousands of years. As they sat there, layers of other shells, along with other sediment, slowly piled on top of them.

All those layers were very heavy and the weight packed and squeezed Carla and other bits of minerals together.

② Chemicals in the seawater seeped into the tiny spaces around Carla and the other bits of minerals, cementing them together. All of this pressing and cementing hardened the layer of shells Carla was in until it finally turned into a kind of rock called limestone. Millions of years passed by and the layers kept right on piling up.

③ During this time the whole Earth was changing – just as it always has. The pieces of land that were north and south of the great sea were slowly moving toward each other like huge rafts. The movement crumpled the old sea bed Carla was in until all the rock layers in it – including Carla's layer – were folded together like an accordion.

④ All of this folding caused mountains to form where the sea had once been. The heat and pressure from forces inside the Earth gradually changed Carla's limestone layer into a new kind of rock. Now Carla was part of a layer of rock called marble. And after many millions of years, Carla's marble layer was pushed up until it was near the top of a huge hill.

⑤ One day, there was the chink, chink sound of sharp tools chipping away at the hillside. All of a sudden, a huge block of marble fell away from the hill. A group of men tugged and heaved as they hoisted the block up onto a cart. Carla was inside this block and she was about to start a new journey.

⑥ The cart carried Carla and her block to a little town where a sculptor lived. He bought the block and soon began to chip away at it with his stone-cutting tools. As he sculpted, the shape of the goddess Minerva gradually took form. That's how Carla came to be in the fold at the bottom of the robe near the foot of the marble statue.

⑦ But our story of Carla doesn't necessarily end there. For over a thousand years, the sun beat down on Minerva and so did the rain. The rainwater dissolved small bits of the statue. Bit by bit, tiny pieces of rock fell away from Minerva and were washed into a river.

⑧ One day Carla may wash into the river, too. Eventually she may fall to the river bottom, becoming covered with layers of silt and rocks. The layers may slowly become cemented together. And it may only be a matter of time before Carla finds herself inside a layer of rock once more.

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