Karen Chin has a large collection of preserved feces, called **coprolites.**

Dung Detective

Meet a scientist who studies dinosaur poop!

Karen Chin peers into a microscope at her office at the University of Colorado, Boulder. Chin is a **paleontologist**, a scientist who studies **fossils**, or the preserved remains of living things. But she's not looking at a typical fossil, like a bone or shell. She's inspecting a **coprolite** (KOP-ruh-lite)—a piece of fossilized poop!

Coprolites come in many shapes and sizes, from small sausages and spirals to large square blocks. Chin specializes in the largest coprolites of all—dinosaur dung.

Rock Solid

The coprolites that Chin studies formed in much the same way as fossilized bones. Droppings were buried under sand, mud, or other sediment. Over time, the sediment hardened into rock, preserving the poop's shape and perhaps parts of the poop itself.

Fossilized feces are a rare find. That's because poop is soft, so it's often squished or broken apart before it can be covered by sediment. But if the dung is buried quickly and under the right conditions, it hardens over time—and loses its stinky smell.

To determine if a coprolite came from a dinosaur, Chin looks at the age of the rock where it was deposited. Dinosaur dung is found only in rock that formed during the Mesozoic era, between 225 million and 66 million years ago. That's the time period when dinosaurs lived.

Size is another clue. The coprolites Chin studies are sometimes the size of basketballs. Only a very large animal could produce feces that big. If a huge coprolite came from Mesozoic rocks, Chin can conclude that it's from a dinosaur.

Digging Deeper

To learn more about the dinosaur that produced a piece of poop, Chin takes a look inside it. Using a special blade covered in super-strong diamond grains, she cuts very thin slices of the coprolite.

Looking at those slices under a microscope, Chin can see evidence of the dinosaur's diet. In dung produced by **herbivores**, or plant eaters, she finds bits of wood or other plant material. In coprolites from **carnivores**, or meat eaters, Chin finds shards of bone.

"Dinosaurs didn't live on Earth all by themselves," says Chin. "Coprolites can tell us who ate what—or whom."