What is Coprolite?

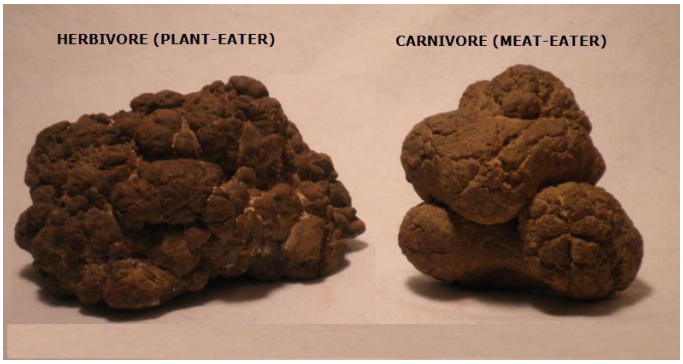
The scientific word for fossil feces is coprolite, which comes from the Greek words kopros for "dung" and lithus for "rock." Coprolites are categorized as trace fossils along with footprints, skin impressions and eggs. This means that they're not an actual preserved part of an animal or plant, like a bone or tooth, but rather something that a creature left behind.

Why is Coprolite important?

Coprolites are very important because they are the only things, other than footprints, that are left by an animal when the animal is alive. Coprolites from dinosaurs and other animals can tell scientists a lot about the plants and animals in the environments where the dinosaur lived. Coprolites from meat-eating dinosaurs contain fragments of bones and teeth from the animals they consumed. Coprolites from plant-eating dinosaurs are even rarer and equally compelling. They can contain seeds, stems and leaf tissue of the dinosaur's last meal.

Do you know what type of dinosaur the coprolite came from?

Unfortunately, it's easier to find out what the animal ate then who took the dump. However, by examining the texture and shape of coprolite we're able to determine whether it was produced by a herbivore (plant-eater) or a carnivore (meat-eater). Notice the distinctions below.



What is a scientist called who studies coprolite?

A scientist who studies coprolites including dinosaur ones, is called a "Coprologist."

Who was the first Paleo-poop scooper?

In the 1820's, Rev. William Buckland was one of the first paleontologists to identify dinosaur bones but also the world's first paleo-poop scooper. While searching for fossils along Lyne Beach in Southern England, Buckland discovered some odd looking fossils with a distinctive spiral shape. After closer examination, he noticed bits of bones in the spiral specimens and declared them to be "coprolites."

How do you know whether it's real coprolite or an ordinary rock?

To sort the real poop from the pretenders, scientists use a coprolite checklist.

1. Location: Where did you find the specimen? Was it in a fossil deposit along with fossil bones and teeth? If so, then you have evidence that there were animals around who could have been the poopers.
2. Shape: Having a poopy shape is often the first sign that a rock is a coprolite. But not always. A specimen might just be a piece of a larger coprolite and so not look at all like dung.
3. Contents: Does your specimen contain the last meal? Are there bones, fish scales or pieces of plants? If yes, you're one step closer to determining that it's a coprolite.
4. Chemistry: A coprolite has a different chemical composition than surrounding rocks. For example, a carnivore's coprolite should contain more phosphate (from the calcium phosphate in the bones of its prey) than nearby rock.
5. Burrows: Has something been eating that excrement? Yuck! But evidence of dung beetle burrows makes it an almost open-and-shut case that you've got a coprolite. Look for signs of burrowing – tiny holes or circles of different colored rock on the surface, which are evidence of in-filled holes.