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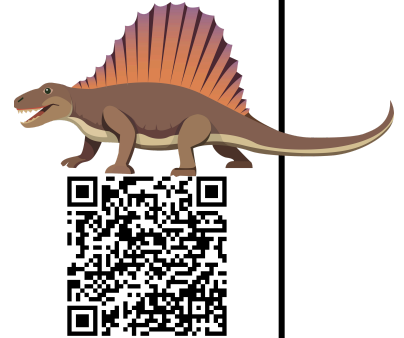
Science Friday Think Big



From “Earth’s Ancient Hydrogen, And Fossilized Vomit”

Can fossilized vomit tell you what prehistoric animals ate?

If you’ve ever eaten something you shouldn’t, you may have experienced feelings of nausea or thrown up. You may have seen your dog or cat vomit when something doesn’t agree with its tummy. Well, it turns out that ancient creatures puked sometimes, too. Arnaud Rebillard, a researcher at the Natural History Museum of Berlin, Germany, discovered “regurgitalites,” or fossilized vomit in January 2026. The discovery is providing new insights into ancient ecosystems!



1. Why is it important for researchers to have a definitive understanding of the timeline of coexistence with prehistoric animals?

2. In what ways do coprolites (fossilized poop) and regurgitalites (fossilized vomit) tell the same story for scientists? In what ways do they tell different stories?

3. Scientists just realized the significance of fossilized vomit. What other types of fossilized things do you think scientists may have missed while focused on bones?

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The audio for this story and the transcript can be found at:

<https://www.sciencefriday.com/segments/hydrogen-earths-core-fossilized-vomit/>

It is the second story at 12 minutes 50 seconds. It is about 10 minutes long.

This story aligns with the following NGSS standards:

- LS1.B: Growth and Development of Organisms - MS-LS1-5 - Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.
- LS3.A: Inheritance of Traits - MS-LS4-3 - Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy.
- LS3.B: Variation of Traits - MS-LS3-1 - Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.

Expected answers:

1. Layers in the earth can shift so knowing about which prehistoric animals coexisted helps us understand if layers have been disturbed or left undisturbed.
2. They both tell us what prehistoric animals ate. But they are different because coprolites have been digested whereas regurgitalites are parts of animals that couldn't be digested.
3. Answers may vary.