

When it comes to naming things that repeat themselves, majority will rule

By Atlas Obscura, adapted by Newsela staff on 10.19.18

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Image 1. The lunar terminator — the divide between sunlight and darkness on the moon. Photo by: NASA/Thomas Campbell

Two astronomers have asked a fascinating question: Can moons have moons? The interesting answer is yes, a moon can have its own moon.

This adventure in science began with a question from Juna Kollmeier's son. Kollemeier is an astronomer, a scientist who studies outer space. She works at the Observatories of the Carnegie Institution of Washington, D.C. She asked another astronomer, Sean Raymond, to help her answer the question.

They wrote a paper explaining why they thought moons can have moons. The conditions have to be right. The main moon has to be big enough and far away enough from the planet it's orbiting for the smaller moon to survive. They found that four moons in our very own solar system are big enough and distant from their planets to have their own smaller moons. They are two of Saturn's moons and one of Jupiter's. The fourth is much closer to home. It is the Earth's moon!

People Like Things That Repeat

There's a good reason to determine if moons are able to have their own moons. Kollmeier and Raymond say it can help give us clues about how planets and their moons were formed. There is also some fun in it. People find it pleasing when something repeats itself.

A fun example of this is islands within islands. A good example is Vulcan Point, which is an "island in the middle of a lake, in the middle of a volcano, in the middle of a bigger lake, in the middle of a bigger island." There are also countries-within-countries, like Dahala Khagrabari, "a piece of India inside a piece of Bangladesh inside a piece of India inside a piece of Bangladesh." Or how about a volcano in a volcano? There's also something truly mind-boggling about bodies of water within other bodies of water. How can that be, you ask? They exist as a lake under a sea, or an underwater river, or a sea surrounded by ... more sea.

One of the great challenges of talking about these kind of places is deciding what to call them. Adding the letter group "sub" before a word can help with the name. We call islands within islands "subislands." Kollmeier and Raymond call a moon's moon a "submoon."

So Many Options

There are other choices. New Scientist, a science news magazine, notes that "moonmoon" has been suggested as a name for a moon's moon. This is also the name of a silly wolf on the Internet. Moon Moon the wolf shows up in memes, or pictures with funny sayings on them.

So, a moon's moon might be called a submoon or a moon-moon, but why stop there? Other suggestions include mini-moon, second-order moon and nested moons.

Is there a way for us to all use the same language when we talk about these kinds of places? Because if a moon's moon is a moon-moon, shouldn't an island in an island be an island-island? And a volcano in a volcano be a volcano-volcano?

As in all things having to do with language, the majority will rule: Whatever the most people decide to call these interesting places, that's what will stick.