

Fossil-like traces found on Mars—How can we know if this is biological life?

In early January, NASA's Curiosity Mars rover [came across](#) what some researchers thought might be trace fossils on Mars.

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A strictly mineral origin was deemed to be the most plausible. Still, for some, the features suggested bioturbation—a process through which organisms living in sediments can disturb the very structure of those sediments.

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[I]f the ongoing work of detecting life proves positive, what protocols are in place to confirm such a verdict?

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Jim Green, NASA Planetary Science Division director, said to organize thinking and tackle the topic of direct detection of life elsewhere, NASA and the astrobiology community have crafted what's tagged as the "[Ladder of Life Detection](#)." The ladder categorizes features that indicate life, ordered from most to least indicative of life, and how they might be discovered.

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If something is eventually found that turns out to be biological, [professor Bruce] Jakosky suspects that such a conclusion would not be presented in a grand press conference where the discoverers announce that life has been found.

"The more likely scenario is that it will take multiple analyses by different investigators, and that a consensus will be built up over time as non-biological scenarios are either ruled out or deemed to be less likely," Jakosky concluded.

Read full, original post: [If We Found Life on Mars, How Would We Know?](#)