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ASTRONOMICAL ASSUMPTIONS

WITH COVERAGE FROM
nature

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LIFE, UNBOUNDED

The First Alien

When did we start talking about life from elsewhere?

In an age where we take the search for signs of life beyond the confines of Earth very seriously—as a scientific frontier—it’s interesting to consider a little of the history of the very concept itself. This isn’t entirely frivolous. The ways that we think about the natural world and the ways that we formulate our questions are always going to be biased and orientated by our preconceptions and speculations. Having a better appreciation of those predispositions may help us avoid obvious pitfalls.

Besides, the history of our ideas about aliens is plain fascinating in its own right.

One of the very earliest recorded examples was written in 200 A.D. by Lucian of Samosata (in eastern Turkey), a writer of satire and a practitioner of rhetoric of Assyrian descent (it is thought). Among his works is a novel called *Vera Historia*, or *True Story*, that details a journey to the moon and the discovery of a multitude of life there. That lunar life includes three-headed vultures, birds made of grass with wings of



leaves, humans sweating milk, and fleas the size of elephants.

Clearly, the story is far from “true,” and Lucian didn’t hide that this was fantasy. In fact, he was in part making a philosophical point about the impossibility of real truth and the fallacy of other thinkers for claiming to be arbiters of truth, including hallowed folk like Plato.

But the tale is one of the earliest known where detailed alien life is imagined. The beings of the

moon are even at war with beings on the sun. Aliens, it seems, would be susceptible to our kinds of flaws. Interestingly, the possible existence of solar life was still doing the rounds in the late 1700s and early 1800s thanks to astronomer William Herschel. Except Herschel wasn’t writing fantasy: he really suspected that there could be living things on the sun, on a hypothetical solid surface.

The moon has always been a good incubator

for ideas about other life. The 10th-century Japanese narrative (or *monogatari*) of *The Tale of Princess Kaguya* has versions where the titular princess has been sent to Earth from the people of the moon during a celestial war. But this story has the aliens as human in form.

In fact, it's interesting to see that from the earliest days, including the ideas of the ancient Greeks on cosmic pluralism, people have tended to either assume extraterrestrial life would be like us or go for the full, bizarre alien treatment. Despite that split, more often than not there's been a bias toward human forms, all the way up through the 1700s and 1800s when writers like Voltaire in his *Micromégas* has aliens from Saturn who (despite being 6,000 feet tall) are basically human.

It wasn't really until Darwin's theory of evolution broke ground that anyone tried to imagine aliens as living things with lineages that related to the environments of their origins. Up to this point, anything nonhuman was, like Lucian of Samosata's funky beasts, more often than not arbitrarily fantastic.

One of the slightly more forward thinkers was French astronomer Camille Flammarion (although he was also a pretty far-out advocate of a blend of Christianity and pluralism in which souls passed from planet to planet). In 1864 he wrote a book called *Real and Imaginary Worlds* and in 1887 a fictional piece called *Lumen*. Between these he concocted aliens that, in many ways, had a basis in the scientific thinking of the time. There were sentient plants whose digestive and respiratory systems were combined.

Mermaidlike creatures swimming in rose-colored oceans and humanlike beings with extra toes on the heels of their feet and a single, conical ear on top of their heads.

Altogether, the history of our ideas about alien life has many anecdotes and side alleys. But one of the most striking facts is that while we've been thinking about these things for a very long time, we've really struggled to combine our imaginative fantasies with "workable" biology without just turning to the defaults of what we know on Earth.

Evolution is an astonishingly inventive phenomenon. We might look at a planetary environment and propose what kinds of strategies life could adopt, but beyond basic function (using sunlight, for example, or exploiting reducing and oxidizing chemistry), guessing what tricks and quirks life is going to experiment with is supremely difficult.

In other words, any aliens we find, whether microscopic or 1,000 feet high, are probably going to appear very, very strange at first.

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