

AirSpace Season Four Episode Five: Say My Name

Theme Music in and under

Matt:

Welcome to AirSpace from the Smithsonian's National Air and Space Museum. I'm Matt.

Emily:

I'm Emily.

Nick:

And I'm Nick.

Emily:

We've been looking up to the sky for millennia observing and naming planets, moons, and other objects.

Matt:

As technology has advanced, and we've been able to see more, we've also named geological formations on planets, as well as craters and mountains on the moon.

Nick:

Way back in the day, there wasn't really a process for officially naming things, which led to a lot of inconsistencies and renaming and confusion. But since the 1920s, there's been an international organization that approves naming conventions and keeps a comprehensive list of all the names.

Emily:

We're exploring the various ways that space stuff gets named and talking about some of the interesting ones today on AirSpace.

Theme music out

Emily:

The majority of the names that, I would say kind of everybody knows, are really based in sort of this Western mythology, Western literature. It's really based in kind of a pretty narrow perspective of the selections you could actually make.

Matt:

Yeah. You could probably call it sort of Eurocentric in its approach to choosing names, right? It's all of these things that seem to be connected to a history of Western culture.

Emily:

Yeah. And there was a lot of different groups of people looking at the sky, studying the sky, making scientific discoveries, but there really wasn't any convention to use to name stuff. So you could essentially name stuff kind of whatever you wanted. And even though different cultures have their own

names for the same things, when naming conventions and lists come around, it was the Eurocentric names that were declared the official names.

Matt:

Yeah. The Europeans were sort of the inheritors of a view of the cosmos that had developed centuries earlier. The Babylonians and the Egyptians were the first to actually leave written records of observations of the stars and planets, but then that got sort of handed down to other cultures. The Indians had it, the Islamic world took it from India, and then it was ultimately passed on again to Europe, right?

So over that time, the amount of knowledge tied to astronomy was growing, but the names of everything were changing, even though nobody had really observed anything new in the sky for thousands of years, by the time the Europeans inherited all of that work in the 12th century. So, like, they were giving everything new names, but nothing new is actually seen until Tycho Brahe saw the nova of, whatever year that was, 15 something, and then 1609, when Galileo points his telescope at the sky and can see new stars for the first time ever. So for a long time, it was just naming and renaming the same things over and over again for thousands of years.

Emily:

So as Matt mentioned, there was this kind of, in some ways, increase of knowledge and this transfer of knowledge between different cultures across the globe. And I think along with that, we get an increase in technology. And as Matt mentioned Galileo, I think for obvious reasons, my favorite example of Galileo's discoveries are the Galilean moons, which are the four large moons of Jupiter; Europa, ocean world. Galileo discovered those four large moons because he was able to create these innovations in telescopic observations, but he didn't name them; Io, Europa, Ganymede, and Callisto. He named them after the Medicis.

Nick:

And the Medici were a family he was trying to flatter to get them to be his patrons so they would support and pay for his research.

Emily:

Right. And so there was this constant naming and renaming, even though he discovered them and so he decided he could name them. Certainly we don't evoke the names of the Medicis these days. We harken back to this sort of Eurocentric mythology that we used to name those moons instead. So I don't want to necessarily skip centuries of astronomical history, but it wasn't until very recently that we see the emergence of the International Astronomical Union, which I'm guaranteeing you, we are all going to start calling the IAU. They form in 1919. And this is the sort of organizing body that takes control of naming stuff in space, and by stuff we're talking planets, surface features, et cetera. And it's become this kind of big organization. It's really complicated. You know, they do a lot of things and they have a really great reach, but their job is really important because no longer are we stepping on each other's toes and wasting a lot of time naming things differently, depending on who discovered it.

Nick:

So the IAU, that's the organization that bestows official names on things in space. On things in space that are not launched into space by us, is that right?

Emily:

I mean, yes and no. Something that I think is kind of misleading about what the IAU does, they're not the ones who name things. They're the ones who keep track of the names and approve the names, and to a degree, make the rules about the names of things. So there isn't this group of people behind the curtain coming up with names and like, "Oh, okay, let's set a theme of blue, and we're going to come up with all the names for blue things that people can then choose for this thing."

The IAU is really more of a... I don't want to say it's a governing body, but it's kind of the governing body that tracks the rules, decides whether or not the rules need to be modified, and then they're the ones that scientists and even members of the public can propose names to, right? So if we, maybe a good example would be to use the planet Mercury. The IAU already had themes approved for Mercury, like naming mountains after words for hot and valleys across Mercury named after abandoned cities of antiquity. So researchers came up with a list of names within those themes.

The IAU doesn't just come up with this stuff on their own. The people who are studying Mercury are the ones who come up with it, following a series of rules set by the IAU about how do you determine what a theme is? How do you submit that theme to the IAU for acceptance? And then for each individual feature that you want to give a name to, proposing your name and showing that it fits into that box that the IAU has already approved. So the point being that the IAU is kind of the keeper of the things and not the creator of the things.

Matt:

Yeah. And fun fact, it was also the IAU, or at a meeting of the IAU, where the vote was held to demote Pluto, right? To take away its planetary classification. So it does do other things other than just naming and keeping track of names.

Emily:

Well, but along with names comes the classification of things, because you have to have a classification of a thing in order to name it because that's how the rules get defined.

Nick:

Well, it's important that they didn't strip Pluto of its name, just its status. And before we dive into the themes and the groupings and the way that we name things and what some of those names are, the IAU is the key organization here. And something that the IAU doesn't do is place ads in the backs of comic books, and on late night television asking you for \$25 to name a star after your dog, or your boyfriend, or your mom.

Matt:

I did that, by the way. I named a star after my dog. But umm

Nick:

Really?

Matt:

Yeah. Just for fun.

Nick:

Serious.

Matt:

It obviously doesn't mean anything because it's-

Nick:

Well, you're a well-connected guy. I figured your name might

Matt:

Oh, well, this was long before I ever worked at the Smithsonian and became a celebrity. So nobody probably will care that I wanted to name a star after my dead dog, Auggie.

Nick:

Auggie. Auggie's star.

Matt:

Yeah.

Nick:

It's nice.

Matt:

Yeah. It's nice.

Emily:

It's not real, but it's nice.

Musical transition

Nick:

So when you start talking about features on planets, well, there's a lot of them, so features on planets is where things start to get a little bit more creative and fun.

Matt:

Yeah. My two favorites actually have to do with exploration. In 1964, the U.S., NASA, sent Ranger 7 to the moon, and it was our first successful crash landing spacecraft that took thousands of pictures while it was crashing into the surface of the moon, and the area that it landed in or crashed in was named Mare Cognitum, the sea that has become known, and it was because it had now been explored that it got that name. And the other one that I love is on Mars, Valles Marineris, which was named after the spacecraft that discovered it, Mariner 9, which after previous fly by missions that had seen almost nothing but craters on the surface of Mars, Mariner 9 suddenly opened up Mars as a whole new world with volcanoes and this huge trench that they ended up naming Valles Marineris after the spacecraft.

Emily:

So lest you think we only name things after things you've never heard of, more recent discoveries have started to reflect more recent pop culture and art references. So there's a couple of craters on Pluto's moon Charon named after different kinds of explorers. So we have Dorothy from the *Wizard of Oz* and Crater Nemo after Captain Nemo from *20,000 Leagues Under the Sea*, or there's a hill on Saturn's moon Titan named Bilbo, after Bilbo Baggins. There are also a lot of unofficial names for things in space that come from science fiction, but the IAU has not accepted a lot of these yet. But because we need names in order to know that we're talking about the same thing, there's a lot of names that scientists use anyways, even if they're not yet official.

Nick:

Right. And a little bit closer to home, the Apollo astronauts all have craters named after them, but some of them took the liberty of being the first people to the moon to name things on the moon. And there is famously a Mount Marilyn, which is the wife of Apollo 8 and 13 astronaut Jim Lovell, and that took decades and decades for the IAU to confirm. Not all of the labels that they gave features on the moon stuck. Some of them remain unofficial to this day, but Mount Marilyn at minimum is the official name of that mountain on the moon.

Musical transition

Nick:

We said that you can't exactly write a check to an organization and get a star named after you. That's not the way that it works, but there are a lot of things in space, and there are a lot of ways to get something named after you. And one of them for the last several years has been to be a successful student in a science fair. There's a partnership between MIT and Intel and NASA that names asteroids after the top several finishers in a science competition each year, which is how we ended up with the asteroid 23238 Ocasio-Cortez.

Emily:

I had no idea.

Matt:

I hadn't heard that one either.

Nick:

Oh yeah. In high school.

Emily:

'Cause not to be morbid, generally speaking, if you're going to name something after a human, they have to be dead. Asteroids are an exception. There's a lot of asteroids named after people that are not dead.

Music under

Nick:

Take your science festivals and science fairs seriously kids. There's no telling where they will lead.

Emily:

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