

Asterism: The Nereids in Astronomy and Mythology

Intro

Jordan: Hi, I'm Jordan.

Kit: And I'm Kit.

Jordan: Welcome to Starry Time.

Kit: Asterisms Edition.

Jordan: Where stars plus lines equals stories

Kit: with an asterisk.

Jordan: In today's episode, we'll be focusing on the Nereids in Greek mythology and in space.

Nereids in Mythology

Kit: In our coverage of Cassiopeia, we learned that Cassiopeia was, of course, punished for claiming to be more beautiful than the Nereids. But who were the Nereids and how beautiful were they really?

Jordan: Okay, so the Nereids were the 50 daughters of Doris and Nereus, who's also known as the old man of the sea.

Kit: 50 is a lot of children. And when I, when I read 50, I was like, are we thinking like they had multiples? You know, it's like triplets and then like quintuplets and then. Or is it like individual births? To be fair, Nereus is an old god. You know, he said to be the child of Pontus.

Jordan: The primordial Greek god of the sea, which is sometimes depicted as a giant floating head in the ocean.

Kit: Which is not creepy at all. It's totally normal.

Jordan: Yeah, we don't really need to worry about how that procreates or what sort of, uh, nightmares and inspired in ancient Greek children. But yes, okay, Pontus, giant floating head of the ocean.

Kit: Right.

Jordan: Primordial. Anyways, Nereus, Doris. Lot of time to produce offspring.

Kit: Right, because Nereus's mother was Gaia, who was the Earth. And so Gaia, of course, again, really sort one of these like primordial beginning gods. His wife Doris, also a goddess slash sea nymph. And she, Doris is the daughter of two titans, Oceanus, who is a Titan of the ocean, and Tethys, who is the Titan of fresh water.

Jordan: Yeah, there are a lot of ocean and water gods in this religion, which definitely

makes sense considering this is an island society, an archipelago society, a peninsula society, a hydraulic society. And I think it's probably helpful to do a little reminder of the Greek mythology family tree here.

Kit: This is gonna be you're-- everybody get out a piece of paper. Get ready cause this is gonna get messy.

Jordan: All right, we're gonna do the best we can here. I'm drawing from the Greek family tree of T-H-E-O-I dot com . I'm thinking that may be pronounced Theoi. Theoi. But it was super helpful. Basically, we start with Gaia, Chaos, Eros and Tarturus. Gaia gives birth to Uranus and Pontus, while other primordial beings have their own stuff, you know, going on on the side. Gaia then gets with Uranus, her son. Don't think about it too hard. Don't think about it too, too hard. Who gives birth to Oceanus, Tethys, Kronos and Rhea among others. Meanwhile, Gaia and Pontus give birth to Nereus, old man of the sea. And Oceanus and Tethys have the Oceanids and Kronos and Rhea have Poseidon and some of the other OG original Olympians. Meanwhile Nereus and Doris who's an Oceanid, together, they give birth to the Nereids.

Kit: Yeah, so I think that it's most helpful to sort of think about Nereus as being like the generation before Poseidon and Zeus, even though his wife Doris is technically of the same generation of Poseidon and Zeus. And I will definitely post the family tree, um, for everyone on our socials because it is complicated and you know, it doesn't really still make sense to me how Poseidon and Nereus get along with each other. Something I read was that maybe Nereus is sort of like more regional and associated with like the Aegean Sea, specifically, so maybe that's like part. Maybe it's like Poseidon all oceans and Nereus is this one particular sea. I'm not really, I'm not really sure.

Jordan: Yeah, I like the idea that like Nereus old man in the sea, like his retirement home is the Aegean Sea, you know, like the nice coast of Greece. Yeah, yeah. But maybe help that Poseidon marries one of the Nereids and then Zeus basically supplants all the Titans that we've been talking about here, Tethys, Kronos Rhea, etc etc with the new gods.

Kit: Yeah. So it's probably some combination of events. Um, and there is more to the Nereid Poseidon mythology which um, we'll hear about

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Kit: when we get to the Delphinus or Dolphin constellation. But yeah, so you know what, honestly, maybe 50 Nereids isn't really that many kids considering they're all immortal.

Jordan: Doris was an Oceanid and she was in fact 1 of 3000 Oceanids. But back to the Nereids. They are sea nymphs that represent various aspects of the sea. For example, here's a few of their names and meanings. We have Galateia, who represents the milky white sea foam. We have Halimede, the lady of the Brine. We have Keto, the Nereid of sea monsters, Leagore , Assembling of the School of Fish, Limnoreia the Sea Nymph of the Salt Marsh and Speio , you may have heard of that speleology, the caves. So each of these nymphs embodies certain aspects of this very tumultuous ocean environment.

Kit: Yeah. And so we were talking about this earlier that when you sort of look up the names of the Nereids, you'll actually see more than 50 because they vary across sources. And the three sort of most common sources where we see this is in Homer's Iliad, um, Hesiod's Theogony, the Bibliotheca of Pseudo Apollodorus actually, I guess

this is four things. And then Fabulae by Hyginus. And so we have these four different sources, they all provide names of the Nereids. Some of these sources overlap with each other and some of them don't. Um, so yeah, lots of, lots and lots of uh, Nereid names out there. Probably the best known Nereid is Thetis, who was the mother of Achilles.

Jordan: And as to the question of whether Cassiopeia was more beautiful than all of them, maybe she was, maybe she wasn't.

Kit: Even, okay, okay, let's say, let's say you know it is true and Cassiopeia is more beautiful or that it isn't true and it was just total hubris. This does not seem like a murder your entire family level offense.

Nereids in Astronomy

Jordan: Alright, Kit, obviously we don't have a Nereid planet, but we do see Nereid representation in astronomy, correct?

Kit: Yeah, we actually see it in a couple of places. So two of them um, are related to the planet Neptune, which I know is your favorite planet. So before we get to the Nereids of it all, do you want to offer up any fun facts about the ice giant Neptune?

Jordan: Kit, I'm really grateful that you remember. Yes, Neptune is my favorite planet. There's a few reasons why I love it or find it fascinating. The first I think is that it was discovered through math. I hate math. I'm horrible at math. But the idea that they theorized this planet Urbain Jean Joseph Le Verrier and then they were able to

calculate its existence and then mere months later they found it. So my other favorite facts about Neptune was that it was first observed close up in August of 1989, which is also the time and place of uh, something else that was very important in my life. But around August 1989, August 25th was when Voyager 2 flew past Neptune. It's about 3,000 miles away. But the majority of the data that we have about Neptune, how many moons it has, which is about 13 or 14 depending on your, who you ask and um, whether or not it has rings or not, was all discovered the same year as someone who's very important to me's birthday, so Neptune's always had that sort of special place in my heart. It's also beautiful to look at, although the reason you might not want to look too deeply into it's blue, of course, because of methane. And we know methane when I, uh, when we look it up, uh, it told me today in a website designed for children that methane is what comes out when humans toot.

Kit: Yeah, that's true.

Jordan: When humans have the toots

Kit: Toots.

Jordan: But yeah, a large amount of the atmosphere is made up of this substance that makes it absorb all the red light and reflect blue back out.

Kit: Excellent. We are definitely pro Neptune on this podcast. Um, so, yeah, so now

Jordan: Toot Toot!

Kit: Neptoot... There's something there.

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Kit: So Neptune has, as you mentioned, um, 13 or 14 moons. I think we're settled on 14 these days. But, you know, could always change. Many of these moons are named after sea nymphs more generally and then after some Nereids specifically. So those named after Nereids include Galatea and Halimede, who you mentioned earlier, as well as Laomedea, Neso, who is, um, the sea nymph of the islands, uh, Psamathe, who is the, uh, sea nymph of sand, and Sao, who is the sea nymph of safe passage or the rescue of sailors. For some reason that was really hard to say. And, um, another one of these moons of Neptune is just called Nereid.

Jordan: Yeah. So we have 14 moons here, lots of moons. And from the research I did on Triton, it seemed to be the only large spherical shape moon. The rest of them are pretty small and irregular, correct?

Kit: Yeah. So the largest of the Nereid based moons is Nereid, and it is the third largest of all the Neptunian moons after Triton and, uh, Protus. So Nereid is 10 times smaller than our moon. Um, by contrast, um, Psamathe, which is another Nereid named moon that was discovered in 2003, is 80, almost 87 times smaller than our moon. So, yeah, so some of these moons are really, really, really small. Nereid is one of Neptune's outermost moons and it requires 360 Earth days just to make one orbit around Neptune. Because it's like way out there. Way out there.

Jordan: Way, way, way out there. Yeah. I read that it has, if not the most eccentric orbit, one of the very most eccentric orbits of any celestial body in our solar system.

Kit: Yeah. And sort of like you were saying about Triton, some astronomers think that it

might be a captured asteroid or Kuiper Belt object because of this very, very strange orbit. So that's one of the hypotheses that's out there.

Jordan: We got to get another Voyager out there, check things out.

Kit: Yeah, I don't know. I don't know what the plans are, but I wish we'd send some. Some more probes out in that neck of the solar system.

Outro

Jordan: Thank you for joining us today for this asterism on the Nereids.

Kit: This has been Kit

Jordan: and Jordan,

Kit: Sisters. Lovers of stars and stories.

Jordan: And we'll see you next time.

Kit: On Starry Time.

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