

Cosmic Background: Lynx

Jordan: Hi, I'm Jordan.

Kit: And I'm Kit.

Jordan: Welcome to Starry Time. Where stars plus lines

Kit: equal stories.

Jordan: In today's episode we'll be talking about the astronomy and other cosmic background of the constellation Lynx

Kit: for the first time on Starry Time, I believe here in season three we have a constellation that was not identified by Ptolemy in his second century Almagest And also one where the Bayer designations were made by someone other than Johann Bayer

Jordan: Kit, into the wilds we go. Lynx was proposed and identified by Johannes Hevelius not to be confused with Johann Bayer Johannes was a Polish astronomer, slash counselor, slash mayor, no idea whether or not he was a lawyer or not as well. And he lived between 1611 and 1687.

Kit: So a little bit after Bayer they did overlap because Bayer lived between 1572 and 1625. But certainly working at a very different time than Bayer

Jordan: Johannes came from a wealthy family in the business of brewing. But despite

working in local government, he really seemed to love astronomy. He started becoming quite active in this area around 1640. And in 1641 he built himself an observatory on top of his house. The observatory known as Sternenburg, Star Castle.

Kit: Yes. Star Castle. Uh, I obviously love this. Shout out. To our mom's maiden name, which is Star Castle Adjacent. But we won't say so, you know, we could keep that for our security questions.

Jordan: Great point, Kit. Some of Johannes claims include being the quote founder of Lunar Topography. Not bad. And discovering four comets. Among some other accomplishments. He proposed 10 constellations, seven of which are now part of the IAU's official 88 constellations.

Kit: Another thing of note which we might want to explore in a futureterism is that his second wife, Elisabeth Koopman, was also an astronomer and is considered one of the first women astronomers.

Jordan: Kit, a whole new bio for the pod.

Kit: Mmmhmm. absolutely. So Johannes proposed this constellation in 1687 and he named it Lynx because the stars in it were so faint that one would need to be lynx eyed to see it.

Jordan: Okay, it's a bit of a stretch. I mean I'm familiar with the term lynx eyed, which means you have very good vision. But. But, uh, let's just say, Okay, sure,

Kit: you'll be uh, even more unhappy to find out that in 1612, 1613, this area of the night

sky was actually called Jordanus after the Jordan River.

Jordan: You gotta be kidding me. We gave up Jordanus, just because Hevelius's eyesight is bad? Come on, bring Jordanus back.

Kit: Yeah. So this constellation Jordanus spanned from lynx across a number of other constellations, including Leo Minor and Camelopardalis but it fell out of use leaving this opening for Hevelius.

Jordan: Lynx itself is a moderately sized constellation coming in at 28th out of the 88 modern constellations recognized by the IAU.

Kit: All right, so Jordan, um, what did this one look like to you?

Jordan: Well Kit, to be honest, it looked a lot like a river. You know, like a long river delta. Almost as if it could be the Jordanus of all rivers if I had to choose one. Um, no. It looks like a zigzag. It looks like some steps. It doesn't not look like a river. It looks like a snake. There's absolutely nothing about it that looks like a mammal or an organism to me.

Kit: No, yeah, absolutely not. Uh, river? Definitely. Zigzag? Definitely. No lynx that I don't, I don't see it.

Jordan: It doesn't seem like Lynx would be one of my top 500 guesses for what this constellation was supposed to be. No.

Kit: Which means we get to get technical to find this one.

Jordan: Kit, are you saying that maybe our descriptions weren't super helpful?

Kit: Not this time. It's not our fault though.

Jordan: I blame it on Hevelius.

Kit: Mhm

Jordan: Alright But Kit, if it's time to get technical, let's get right to it. The right extension of this Constellation is about eight hours and it has a 50 degree north declination.

Kit: It's a northern hemisphere constellation visible to everyone north of 28 degrees south latitude. So it falls between Ursa Major and Auriga.

Jordan: Auriga!

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Kit: Yes, uh, it is also a bit north of Gemini. And all these constellations, Ursa Major, Auriga, Gemini. We've covered them before. So be sure to check out those episodes to learn more about the astronomy and locations of those constellations.

Jordan: Our back catalog. Our star catalog. It's growing.

Kit: Mmmhmm.

Jordan: Alright, now that we know what it looks like lsh. And where to find it, lets talk

about the stars of this constellation. As you mentioned, Lynx was established post Bayer. But Bayer's system lives on.

Kit: It does. But maybe everyone wasn't quite as detail oriented as Johann Bayer

Jordan: Hard to believe

Kit: I know. But this constellation has only one star with a Bayer designation.

Jordan: So I guess you know, things do entropy. You know, things decay. But who was the lazy astronomer who only gave one Bayer designation?

Kit: This astronomer's name is Francis Baily. Uh, he lived between 1774 and 1844. Was an English astronomer. He is an astronomer of some note. He was one of the founders of the Royal Astronomical Society and held the office of president of the Royal Astronomical Society four times.

Jordan: All Right, Francis? Not so lazy. Maybe, uh, one Bayer designated star was enough. I mean, let's hope if he only did one, he at least got that one right. Is Alpha Lyncis the brightest star in the constellation?

Kit: You betcha.

Jordan: Ah, Baily, you got it right.

Kit: Yes, got it right. Alpha Lyncis is the brightest and only Bayer designated star in this constellation.

Jordan: One for one.

Kit: Yes. It's around 200 light years from Earth. It's a K type orange giant star. It's likely some kind of variable star but it usually has a visible magnitude of 3.14, so it's quite dim and honestly, there's not really anything super special about it.

Jordan: Well, Alpha Lyncis perhaps our expectations were a little too high which brings us to Bayer's variable star where we well, usually we follow the Greek Alphabet to explore the Bayer designated stars of the constellations and we would be on Delta But Kit, we're into the wilds. There aren't any.

Kit: Yeah,

Jordan: Well, Kit, fear not.

Kit: Hmm?

Jordan: I got creative.

Kit: Oh, uh, dear,

Jordan: I decided let's just give a shout out to 16 Lyncis which used to be in the constellation Auriga and have the Bayer designation Psi 10 Aurigae as far as I can tell psi Aurigae is shared by 10 stars in the Auriga constellation. Well, I guess technically one in Lynx,

Kit: MHM,

Jordan: 16 Lyncis and nine in Auriga. Most of these stars are part of a constellation that was known as the Telescopium Herschelii or Tubis Herschelii Major, which of course stopped being used in the late 19th century.

Kit: Yeah, I guess that's why we need the IAU to standardize right? We've already seen lynx to change the names and so yeah, I guess we needed some standardization.

Jordan: It just goes to show how ambiguous this constellation is. It could be a telescope, it could be a Tubis. Is that a tuba? I'm going to hope so. 16 Lyncis this formely psi Aurigae is an A type main sequence star about 240 light years from Earth with a visible magnitude of 4.90. So unfortunately again, nothing super exciting here so I hope after a quick break you'll be able to really bring it with your Gold Star of the month. Welcome back. This segment is called Gold Star In this segment we alternate picking the star or space object in our constellation of the month that captures our mind, our heart, perhaps even our soul. Alright, Kit, we've had two kind of dull ones so far so no pressure but uh, what was your pick this month?

Kit: Okay, so There are actually a lot of very beautiful galaxies in this constellation, including the very famous NGC 2 419, which has the wonderful name of the Intergalactic Wanderer. So this is a globular cluster which is 300,000 light years from the solar system and 300,000 light years from our galactic center. It's orbiting the Milky

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Kit: Way, but it got its name because originally astronomers didn't think it was orbiting the Milky Way. They thought it was just some, um, floating out their globular cluster. And I think it's pretty obvious why they thought this. It's orbiting way, way out there. It's

orbiting even further out than Magellanic Clouds.

Jordan: And the Magellanic Clouds are two, irregular dwarf galaxies that orbit the Milky way and around 160,000 ish and 199,000 ish light years away.

Kit: Yeah. So they're way far out there. But even though this globular cluster is beautiful, I will be posting it over on our socials at starrytimepod on the Universeodon server of Mastodon. Something else caught my eye and it is something explosive.

Jordan: Explosive?

Kit: So I ended up picking NGC 2770 It doesn't have as good of a name, but it is a beautiful spiral galaxy located 88 million light years away. And aside from it just looking nice, it's notable because we've documented four supernovae events there due to stellar collapse between 1999 and 2015.

Jordan: Kit, that sounds like a lot. Is that a lot?

Kit: It's a lot. For some context, we have a lot of supernova remnants here in the Milky Way. Maybe three or 400 that we've documented, including the Crab Nebula in Taurus and Cassiopeia A and Cassiopeia.

Jordan: Former Gold Star winners. Get into the back catalog, people.

Kit: Yeah. So even though we have hundreds of these supernova remnants, we've only documented six in the last thousand years in our galaxy.

Jordan: Wow. So the rate of supernovae in NGC 2770 is pretty, pretty, pretty prolific. If you need an explosion, here's the spot.

Kit: Absolutely.

Jordan: Welcome to the Gold Star of the Month Club. Kit, I think this was an excellent pick. NGC 2770 or as well call you now Supernova Central. This brings us to the end of our exploration of the cosmic background of the constellation Lynx. Next week we will be exploring the lynx in folklore and creating our own myths for this constellation. Since it doesn't have a Greco Roman myth that's already been associated with it.

Kit: This has been Kit

Jordan: and Jordan

Kit: sisters who love stars and stories

Jordan: and we'll see you next time

Kit: on Starry Time.

Jordan: In the Magellanic Clouds.

Kit: [chaotic mispronunciations] I can't say it. It's impossible. But I can say Magellan.

Jordan: Magellanan ic. Like Magellan gives me the ick.

Kit: Magellanic.

Jordan: Yeah, there you go. Ew.

Kit: Ew.

Jordan: Megellan -- ICK

Kit: Magellan -- ICK

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