



Episode 42: The Cave Punan

Link to audio file: <https://radiopublic.com/origin-stories-6VPVbG/s1!4f9fd>

**Meredith Johnson:** This is Origin Stories...The Leakey Foundation podcast, I'm Meredith Johnson.

Before we get into today's episode I just want to say that I hope you are safe and well. I know that podcasts can be a source of comfort and escape during difficult times like these. They certainly are for me ...and so I'm working to bring you some extra episodes over the coming weeks and months.

I'd love to hear from you to learn if there's anything in particular you'd like us to cover on this podcast. We've set up a voicemail line and I'll share the number at the end of the story. It will be so nice to hear from you.

We have a very special episode for you today. It's a story that hasn't been told anywhere else.

And it takes place in the country of Indonesia. Indonesia is made up of thousands of islands and it's located in Southeast Asia, between the Indian and Pacific oceans, just north of Australia.

It's one of the most biodiverse places on earth. It has the most mammal species of any country, more than 1600 species of *birds*, and 10% of all the world's known species of plants. Indonesia is the *only* place where you can find orangutans, elephants, rhinos, *and tigers* in the same forest.

It also holds a deep human history. Recent research suggests that *modern* humans arrived in Indonesia around 73,000 years ago. Fossils of extinct human species' have been found there as well, including the small fossil hominin nicknamed the Hobbit - which was found on the island of Flores. And another species discovered recently - with support from The Leakey Foundation - *Homo luzonensis*.

[sounds of getting started with the interview, friendly chit chat]

A few months ago, I sat down with Leakey Foundation grantee Steve Lansing - to hear about his work in Indonesia - and a chance encounter that changed the direction of his life.

**Steve Lansing:** My name's Steve Lansing. I'm an anthropologist, and I've been working in the islands of Indonesia since 1971.

Indonesia, it's the breadth of Europe or the United States, but it's relatively narrow. It's 17,000 islands at low tide, about 600 populated islands. It has the greatest diversity of human genes and also human languages anywhere on the planet, and it's a wonderful place. It's an utterly fascinating place. Great place to be an anthropologist.

**Meredith Johnson:** In 2018, Lansing was working with his colleagues as part of their long term study of the genetics and languages of the Indonesian people - when something extraordinary happened.

**Steve Lansing:** Well, the story goes like this. All of the work with genetics and languages that I've done has been with Herawati Soduyo, who's the executive director of the Institute for Molecular Biology in Jakarta that's in charge of any kind of genetic research in Indonesia. Hera is a medical doctor and a geneticist, and she's also a very keen anthropologist. We've been going from island to island, community to community, collecting genetic and language and clinical... all kinds of information for a long time.

**Steve Lansing:** With those tools for the last, it's now 17 years, I've been working with Indonesian geneticists whose job it is to map the diversity of the entire archipelago for two reasons. One is to figure out where their ancestors came from because they don't know, and secondly, because it's the basis for the next wave of medicine. We can test for susceptibility to diseases and look for appropriate medicines for people with different phenotypes.

We hadn't done anything much in Borneo, and Borneo's interesting for lots of reasons. But one of them is that there were hunter-gatherers in Borneo, and until a generation or two, they were still living as hunter-gatherers.

There's a longstanding controversy among the anthropologists as to whether the hunters and gatherers whose descendants still live in Borneo go back to the earlier population, to ancient times, or the other hypothesis is that they're the descendants of farming peoples, who arrived just within the last few thousand years.

**Meredith Johnson:** This was the central question that Lansing and his colleagues have been working on. Just who were the ancestors of the indigenous people of Indonesia?

**Steve Lansing:** That's been debated for a long time. We thought, well, with genetic information we could probably answer that question, so off went to Kalimantan, to Indonesian Borneo.

**Meredith Johnson:** So Lansing and Dr. Sudoyu went to visit the most remote communities they could find, where a group of indigenous people called the Punan were living in resettlement villages.

**Steve Lansing:** Then we were in a resettlement community, the largest of them, called Malinau. We provide medical care for people while we're there, and a man came and introduced himself as we were having our medical clinic. We provide medical care for people while we're there.

He introduced himself as the elected head of the Punan people of northern Kalimantan, and he shyly mentioned that he had in the past here come in contact with some people who were still living as mobile hunter-gatherers in caves.

**Meredith Johnson:** Scientists thought that the hunter-gatherer way of life in Indonesia had ended long ago with the resettlement of the Punan people.

**Steve Lansing:** We said, "Really?" And he said, "Yes. I have." I expressed an interest in coming to see them, and he thought about it and came back and said, "Okay, but maybe you and one other person because they're shy, but it could be organized." As an anthropologist, you can imagine my answer was, "Yes." And within a few months we went back to this village, from which one can take a boat to go upstream and to locate those people. It was because of that invitation by the Punan leader that I was put in contact with these guys, the Cave Punan.

**Meredith Johnson:** The Punan elected leader's name was Tomas Meeta, He brought Steve and his two Indonesian colleagues by boat, towards where the Punan Batu or *Cave Punan* people were living.

**Steve Lansing:** We went upriver and camped out. The following day we were ready to join some Punan. They were Punan who were at kind of a transit of a place where barter happens, so there were a couple of little shacks by the side of the river.

**Steve Lansing:** We set forth to go in to find people in a cave, but it wasn't long before having navigated just a bit of the jungle, there was a loud noise and a tree collapsed. They said, "Well, that's a bad omen. Probably we shouldn't go on." So we discussed that, and I said, "Oh yes, but please, please, couldn't we go on?" They agreed to persevere, and we continued on in the forest. Then we came to a place where there was a big log crossing a ravine with a stream and some rocks below. Halfway across, I fell off and fortunately I fell into some mud and some water. I was rescued, but at that point there was no question that we would not continue that day. It was clear that that was not a good idea, so back we went to the camp.

**Steve Lansing:** The following day we decided, or the Punan decided for us, okay, we can forward. We'll do it. So we walk for a few hours in the jungle and then we come to an overhanging cave. It's limestone. It's a jagged limestone karst cave and lowland forest, very dense forest, creepers, and jungle and so forth everywhere. There were some people sitting on bamboo kind of platforms underneath the overhang dressed some in bark cloth and some others in tee-shirts and things like that.

We came up and started to... Tomas began to talk to them. Then I realized that he was speaking Malay, which is a language that I speak. So I asked a couple of questions and there was a young mother there and an older man who began to answer my questions.

[sounds from a recording of the first meeting with Marnyi and the other Cave Punan people]

Turned out they speak quite fluent Malay, so to my astonishment and delight I could carry on a conversation with Marnyi. I know her very well now, Marnyi, and her daughter, Nyin, and Marut.

**Meredith Johnson:** Steve filmed his first meeting with Marnyi on his iPhone. In the video, you see her - a young-looking woman, wearing a pink tshirt and shorts. She's sitting - leaned against a large basket on a bamboo platform in the shade of a rock overhang. Her smiling baby is playing happily beside her. Marnyi's older daughter sits directly in front of her. She's concentrating on carving a piece of wood with a large knife. There's a small boy who's watching from a few feet away - smoking a fat hand rolled cigarette.

[sounds of meeting and people speaking Malay]

**Steve Lansing:** I asked the questions that the anthropologist in me was just dying to ask like, "Well, is it really true, do you live in the caves?" "Yes." "Would you rather live in town?" "No. We've been to town, but there's nothing for us there. Here we're free. We are the Cave Punan. This is our world." I asked about hunting and gathering and how do you support yourselves, how can you live? Marni says, "Well, men hunt and women gather all kinds of plants." She showed me some. This is right out of the anthropology textbook, and we share the food. Wow, really. They must be reading the anthropology textbook to give that answer, but in fact, that's the case.

**Steve Lansing:** Anyway, so we started to talk and they were very friendly. It turned out to be easy, and they were keen to talk to me. The reason appeared quite soon. The older man and then other people explained that they are very alarmed by the intrusion of palm oil plantations, these oil palms that replace the forest. And the following day they took me to see one, and it's very close. They're asking for help. They're trying to find a way to stop that.

**Meredith Johnson:** Steve realized they had chosen to talk to him for this very specific reason.

In 2007, the United States Senate passed an energy bill to promote clean and sustainable biofuels, made from American crops. This created such a huge demand for American soybean oil for fuel that there was no longer enough soybean oil to use in food. So food manufacturers started looking for a different kind of oil to replace it. And what they landed on, was palm oil.

And much of it comes from Indonesia. By 2017, 54 million acres of land in Indonesia had been converted to industrial palm oil plantations. As these plantations have spread, they've driven indigenous people from their land. The plantations have also destroyed the habitat of critically endangered animals like the orangutan. The Indonesian government issued a moratorium on new plantations in 2018, but the crop is so lucrative, that people are now illegally clearing forests to plant secret patches of oil palms.

[transitional music]

Steve Lansing told me he *could not believe* he'd met a still-surviving group of hunter-gatherers in Indonesia. And the Cave Punan people weren't interested in being passive study subjects, they had requests. They asked him and his colleagues to come

back for another visit. To hold a clinic where they could receive medical care. They also wanted the scientists to learn about their origins, livelihood and their health. They said they hoped Lansing would share their story, to enlist outsiders to help them save their forest home and their way of life.

[song begins softly at first]

The first night Steve Lansing spent with the Cave Punan, he set up a tent

**Steve Lansing:** I camped by the cave, and at night I heard singing, happy singing, kind of a duet. It went on for a long time and it didn't sound like any of the Austronesian languages that I know, that I recognize. So the next day I asked them, "What is it?" They said, "Well, that's the Song Language." And I said, "Well, could I record some of it? Could I record some on the video recorder?" They said, "Yes, but we have to be lying down and we should be in the cave. It's usually done at night. We need to be lying down." So we recorded that. We recorded the Song Language. That turned out to be a very interesting language, and I've been pursuing what that language means, what it's about since then.

[song is still continuing]

**Meredith Johnson:** This is one of Lansing's recordings of the song language. It's sung by a young man named Marut, who sang it in a place the Cave Punan call the Great Cave. This is the first time this recording has been shared publicly - hasn't aired publicly - so you are one of the first people to hear it.

[song continues]

The singer tells of how he used to be invincible, like a porcupine. "But now," he says, "it seems that I am weak. Yet even though I may no longer have strength to travel far, to distant places, I hope that will be my destiny. I ask for my journey to be successful."

[a little more song in the clear]

**Steve Lansing:** We've been using kind of a rough and ready way to classify the tribal languages of Indonesia, something we can do in a few days, and that method is the standard method that historical linguists use, which is to record 200 core vocabulary words that can be compared from one language to the next. That gets taken apart, and you can just analyze how closely related two languages are one to the other.

[start language tape]

This is one of Steve Lansing's recordings of some of the core vocabulary words in the tribal languages of Indonesia. - Here people are saying their words for the English phrase 'to fly'

[more language tape]

**Steve Lansing:** We did that for the spoken language of the Punan, and it's sort of what you might expect. It's a typical language of that part of Borneo, but the Song Language was utterly different.

**Meredith Johnson:** The words from the Cave Punan song language shared no connection to words from other languages in the region. Those connections between words, that's what Lansing usually looks for, to trace the migration of Indonesian people back through time.

**Steve Lansing:** It's like they're carrying little flag, which is the language flag, and we can ask, when did that transmission break? How far back in time do we see different branches appearing?

The answer is a long, long time. In some cases, it looks like longer than the language could conceivably have existed as a separate language. We see that it's a beautiful... Language is just a wonderful way to look at the movement of people who share a culture. If you speak the same tribal language, you share a lot more than a collection of words. You share a culture. That looks to be very old.

**Meredith Johnson:** The Song Language also appears to be totally unrelated to the language the Cave Punan people speak in the daytime. It's also unrelated to Malay or any other Indonesian language - or to any language in the world.

It's like if you were speaking Spanish or English during the day and then composing song poems in Mandarin at night.

**Steve Lansing:** A few months ago we went to visit another Punan group which seemed like the most likely candidate to have relations in the past and to also have song language. They could understand not a word of it.

That's just the beginning. We'll have to go further to see where else it might possibly exist.

**Steve Lansing:** Then the other thing that in some ways is even more fascinating to me is the way they use it. Because there are song languages elsewhere in Borneo, but they're used in a ritual context. That's not unusual for hunter-gatherers, languages where they have formulaic prayers and invocations of secret languages. They're formulaic, let's put it like that.

**Steve Lansing:** The Cave Punan express themselves in the first person. They use it to give a commentary on what they're thinking about or what's going on, and often they do it as a duet. I mean it's sung back and forth. As far as I know, that's not...

**Steve Lansing:** I'm looking for parallels. I'm trying to find out how unusual that is, but that's very much what they do. So I've been recording examples, and they've been singing examples to me because they have things they want to say. They have things they want to communicate with their song language. Only a few people speak it. It's a very different language. You have to study it. You have to have a mentor who will teach it to you. Everybody kind of knows some of it, but only a few people can actually compose in it, can speak and compose in that language.

**Steve Lansing:** And there's another language. Would you like to hear about one more language?

**Meredith Johnson:** Yes.

**Steve Lansing:** Okay. Can I have your pen?... Well, I'm not going to write with it though

**Meredith Johnson:** Oh, okay.

**Steve Lansing:** I'm going to use a pen and pretend that it's a stick. I'm sticking it in the ground next to the cave, and then I'm going to attach a leaf or something like a leaf in it and maybe make some marks on it. I could write Meredith. You would have a name. You'd have a Punan name. It could be symbolized on that stick, and then you could attach leaves with signs that would say something. It could say, well, the most important for them is, "Come to my aid. We're hungry."

**Meredith Johnson:** Steve says they place these stick signs outside their caves when they leave.

**Steve Lansing:** The direction of the stick is which direction they went, and the length of it is how far, is this a long or a short journey. That's how they keep track of each other



and the network of caves that they move around in. These are pretty difficult forests. I mean they're extremely difficult forests to get around in, but that's their world. That's what they move around in.

For anthropologists, I think the interesting thing about the stick language is that even Punan will tell you, "If you see the cry for help plant sign, then you must come and help. You will come and help. You do come and help." That doesn't depend on whether it's a relative. If it's another Punan, that's what you should do.

**Steve Lansing:** That's the whole community will share, and they take that very seriously. That's what I've learned from the conversations that I've had about it, and that's a kind of level of cooperation and sharing that I'm not aware of existing elsewhere. I mean this is a system for seeing to it that people will go to the aid of others. In that forest, I mean for some period you're running out of food, it'd be very good to have that as backup.

**Meredith Johnson:** Steve says there are about 50 families of Cave Punan people. One of the ways he and his colleagues are trying to help them save their forest, is to track how far they travel while they're foraging.

**Steve Lansing:** What we've done is to ask people to wear cloth belts with GPS units that last for a couple weeks and accelerometers which tell you not only how much energy you're spending as you move your arms and legs but how close you are to other people who are also wearing the same gadget. They very kindly have worn these things, and the main purpose was to discover what is their range, their geographic range, because that will be vital for showing their claim to the forest where they live.

**Meredith Johnson:** From their research, They've discovered that for most of the year, the Cave Punan travel in small multi-family groups between rock shelters, caves, and forest campsites.

The caves aren't personal property. Anyone in the group can stay at any cave or rock shelter.

They hunt in the forest with dogs, blowguns, and spears. The forest floor floresces and glows in the dark, so they're also able to hunt at night.

Meat is shared by everyone, and so are the plants they gather. Everyone in the group gets what they need.

Within a few weeks, the food options near one cave start to run out, so people travel along a network of caves, going from one to another as they follow the seasons of fruiting trees, wild honey, animals, and the seasonal nesting of swiftlets in a large cave where the underground river that defines their territory emerges to the surface.

They collect the birds' nests - which are used to make perfume and soup - and trade them for tobacco, salt and rice, and also for things like knives and pans and clothing.

**Steve Lansing:** All over Borneo this is happening, but their little patch... We have Google Earth images and so forth. You can just see the encroachment of the oil palms. It would be heartbreaking.

**Meredith Johnson:** Since Lansing's first visit with the Cave Punan in 2018, he's put all of his focus on their plight.

**Steve Lansing:** I've been a professor forever, but I stepped down finally a couple months ago to be free to do this. Within a few months I'll be back in Indonesia, and I need to be sort of boots on the ground with my Indonesia contact finding out exactly how we can make this thing work with NGOs on the ground in that region and just sorting it out. I've been fluent in the language for years. I mean I can do that.

**Meredith Johnson:** As part of this effort, Lansing and his colleagues have also been working to figure out how long the Cave Punan have been living as hunter-gatherers in Borneo. Which is part of that big question we talked about in the beginning, about whether indigenous people in Borneo are descended from ancient Indonesian hunter-gatherers, or whether they come from more recent immigrants, farmers, who transitioned to hunting and gathering once they arrived in Indonesia.

**Steve Lansing:** It's clear that they've been hunters and gatherers for a long time. Exactly how long is a subject that population geneticists address by building models. The models require parameters, and models can always be criticized. But I think we can easily set a floor to say there's really very solid evidence that for at least 5,000 years they have functioned as a separate community.

How much further into the past? Don't know..

**Steve Lansing:** You can ask the question, what might we learn from the Punan? Now, in general anthropologists are very interested in hunters and gatherers because our ancestors were all hunters and gatherers not so long ago. We evolved to be hunters and gatherers, and so what we can still learn from hunters and gatherers is kind of precious knowledge that will not be available for us much longer. It's really important to understand who we are.

**Steve Lansing:** These guys are Asian hunter-gatherers in Borneo. They lead very different lives than the peoples of, for example, the Southern African or the Hadza, the classical hunter-gatherers who've been so important for what we know about human evolution, about the evolution of humans. But they are not primitives. I mean these guys, their knowledge of the forest is extraordinary.-They have an extraordinary knowledge of the uses of plants. They have an extraordinary knowledge of the environment, which is kind of priceless knowledge. In some ways it's a very advanced culture. I mean to be able to live as they do, reliant on each other and their knowledge of the forest and entertaining themselves with classical poetry which they compose at night. I mean they are extraordinary people. They are extraordinary people. I think we have much to learn from them.

**Meredith Johnson:** Lansing is working with the Cave Punan to find ways to preserve their forest and their culture.

**Steve Lansing:** That's what they want, and it's not a lot. It's not a very large area. It's maybe 50, 60 families, something like that, so it's not enormous. There's a lot of Borneo. There are plenty of oil palms elsewhere.

**Steve Lansing:**We think it's very doable, but it needs to be done. The Punan have no clue how it could be done. They need help to set that up. There are good NGOs in Indonesia. I think it's just a question of putting the pieces together.

Aside from preserving the forest, the Cave Punan people have also asked for access to healthcare and possibly some kind of education for their children.

**Steve Lansing:** They travel mostly, if they're not on foot, then they're in little dugout canoes that go up and down the river. It would be pretty easy to make it possible for the kids to get some education. All this should be chosen by the Punan, but step one is to give them the option, right. I mean the first thing to do is to create the opportunities so that they can make their case for their forest and preserving their way of life.

[song comes up and then under]

**Meredith Johnson:** Lansing recorded this song that's a message from the Cave Punan people to all who might help. It was sung by an elder, well respected member of the community by the name of Ogot.

[up again and then under]

**Steve Lansing:** He sang it in the great cave, the cave that's sort of the origin cave for them. His song, I can't quote it completely, but what he said is, "You've been coming, and we have spent much time with you. We've had many visits, and we hope that you will be able to help us, that this will bear fruit. That you will be able to help us retain our forests, get our forests, keep our forests."

**Meredith Johnson:** Steve Lansing is in now in Singapore. He recently returned from Borneo where he has been working on local community partnerships to help the Cave Punan keep their forest home. He sent this hopeful message just a few days ago.

[audio from his new iphone video recorded outside a resettlement village of some other Punan people, these people want the Cave Punan to come visit and learn about the village how they have worked with organizations to preserve the forest around where they live. These Punan people say they want to help the Cave Punan.]

**Meredith Johnson:** Thanks to Steve Lansing for sharing the story of the Cave Punan, and to the Cave Punan people who were willing to share their language and song with Steve so he could share it with us.

I hope *you'll* share this story with your friends. As we navigate through these uncertain times, we'll need to pull together and come to the aid of our fellow humans however we can.

As I mentioned at the top of the show, we set up a voicemail line because we want to hear from you. Call in - just to say hi, ask a question, or let us know if there's a story you want us to tell. The number is (707) 788-8582.

Do you want to hear stories about health and evolution? Or would you prefer to hear stories that have nothing to do with our current situation? Is there a specific scientist or topic you want us to feature on this show? Call us at (707) 788-8582.

Origin Stories is a project of The Leakey Foundation. A nonprofit dedicated to funding human origins research and sharing discoveries.

During this crisis, online learning is more important than ever. The Leakey Foundation is raising money to pay teachers to develop lessons and curriculum to go along with our show. These lessons will be made available for teachers to use for free. Leakey Foundation trustee Mark Jordan and Jennifer Gomersall have offered a matching

challenge to help raise funds for this project. Any donation helps and every donation will be quadruple-matched! Turn \$1 into \$4 toward educational resources for teachers and students. Go to [leakeyfoundation.org/learningfund](http://leakeyfoundation.org/learningfund). That's l-e-a-k-e-y foundation.org/learningfund

There are other ways to help - we'd love to have more ratings and reviews on Apple Podcasts or where ever you listen. It helps other people find the show and we really appreciate it.

This episode was produced by me, Meredith Johnson. I want to welcome back editor Audrey Quinn and share my deep gratitude to Julia Barton who edited our show for the past few years. I feel so lucky to have worked with her. Julia is executive editor for Pushkin Industries where she edits amazing shows like Dr. Laurie Santos' Happiness Lab, Malcolm Gladwell's Revisionist History, and Against the Rules with Michael Lewis.

Music in this episode is from Blue Dot Sessions. Our theme music is by Henry Nagle. Our closing credits music is by Lee Roservere.

Thanks for listening!