

Love What You Love Podcast

Episode 29: Mineral and Fossil Hunting with Yinan Wang

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Hey, I'm Julie Rose. Welcome to *Love What You Love*. I'm an author, creator, and enthusiast, and I've always been intrigued by the things that people are super into, so every week I'll introduce you to another fascinating human who's into really interesting stuff.

Welcome back! Or, Welcome! A quick heads up before we get started that the show will be on a break for the first two weeks of January and will be returning on the 19th. But of course, during that time you'll have 30 episodes of *Love What You Love* to binge, or time to catch up on any episodes that you've missed. And before we close out the year, I'll let you know about my favorite podcasts so you can check those out as well while we're on break.

Without any further ado, let's get right to this week's guest. Yinan Wang is a Princeton-educated geologist, natural historian, and avid fossil and mineral collector. In this conversation recorded back in November, we talk rock tumblers, how to get your hands on one of the rarest minerals in the US, the rules around fossil and mineral hunting, meteorites, finding fossils in your own backyard, and so much more. So find out why Yinan loves mineral and fossil hunting, and why you might learn to love it too.

Julie: Yinan, thank you so much for joining me today!

Yinan: Hi!

Julie: I'm so glad you're here. I'm excited to talk with you. You are known as @FossilLocator on Twitter. How long have you been collecting fossils and minerals?

Yinan: I started collecting rocks when I was a kid, probably age seven or eight. I found a fossil in a stream and it turned out to be a crinoid stem.

Julie: What is that?

Yinan: A crinoid is... They're also called sea lilies. They're echinoderm - related to sea urchins, and starfish, and stuff like that - except they look like plants because they're all feathery, and have long stalks, and they live underwater. And yeah, these have been around in the fossil record for, I think, at least 400 or 500 million years and they are still alive today. I found a small piece of one in a river and that's where I got my start in fossil and rock collecting.

Julie: So when you found the rock and the fossil, did you know what it was? Or did somebody say, "Hey, that looks like a fossil."?

Yinan: I knew it was a fossil, I just didn't know what it was a fossil of.

Julie: Yeah! And was this just, like, in a riverbed near your house? Where did you grow up?

Yinan: I grew up in upstate New York; this would've been Middletown. This was just in a housing development. There was a small creek that ran through the development, and I was just playing in the creek and found it.

Julie: People think that you have to go on big digs or something, but you can find it in your backyard, literally. That is so cool.

Yinan: Yep.

Julie: Now, was your family into rock collecting, or were you just a really curious kid?

Yinan: I was just a really curious kid. [laughs]

Julie: Did you have other interests when you were a kid beyond fossils and rock collecting?

Yinan: Coin collecting, a little bit of that. I was very much into nature, and the outdoors, and stuff like that. All this natural world stuff just comes along naturally.

Julie: Sure, and did you end up going to school for that?

Yinan: Yeah, eventually I went to Princeton University and majored in geosciences with a focus in sedimentology.

Julie: Oh my goodness. So what is that?

Yinan: Sedimentology, it's basically how things deposit, how layers of rock are formed, like what sediments make up different layers. And I also specialized in mass extinctions, so like, what was then the K-T, now the K-Pg mass extinction, and what killed the dinosaurs, stuff like that.

Julie: That's what you specialized in?

Yinan: Yes.

Julie: Oh my gosh! Okay, cool! So, that's not a big subject at all. [laughs] Now that you're an adult, have you continued doing fossil and mineral collecting, and how do you go about doing that?

Yinan: These days, let's see... Yes, after college I did a lot of random odd jobs and stuff, but I still kept a foot in rocks and minerals. Every year I would go on a fossil-mineral collecting trip across the country and try to hit up sites and stuff like that. I also went to a lot of fossil and mineral trade shows.

Julie: Do they always, kind of, come together? There's not a separate mineral show and a separate fossil show? It's always a joint thing?

Yinan: Yep, they are a joint thing. They're considered part of the same, like, rock collecting category.

Julie: Okay! Got it. When you're doing mineral collecting, do you go digging? Is it in a quarry? Is it different in every state?

Yinan: It's basically different in every situation. Growing up, I used to do a lot of, like, collecting in what's called road cuts. If you're driving along a road or a highway and you see the rock exposed on the side of the road, that's a road cut. Oftentimes it goes through really interesting rocks and you can find really interesting minerals and fossils there. There's road cuts, streams, a lot of quarries and stuff, but you usually need to get permission to dig in quarries. Collecting in road cuts has its own dangers because of cars and traffic, and in some states you're no longer allowed to collect in road cuts.

Julie: So you've gone to every single state then to find rocks. Is that right? To every single state?

Yinan: No, I've not been to Alaska or Hawaii.

Julie: Okay, [laughs] but almost every single state. So, obviously the geology is very different across the country; it's such a huge country. What differences, especially in minerals, do you find from one part of the country to the other?

Yinan: Well, let's start with fossils because that's easier to talk about differences.

Julie: Yeah, totally!

Yinan: So, a lot of fossils are time dependent, so if a location you're in only has rocks from a specific time or era, then you're only going to find fossils from that time. And then, some states like New Hampshire, which contains a lot of granite, and granite is an igneous rock, which means it's volcanic in origin, and therefore you're not going to find *any* fossils there. So, it really depends area by area.

Along the East Coast you find a lot of fossil shark teeth, and in the Midwest, in shallow... like usually within the top soil of the earth, you might be able to find lots of mammoth remains or Ice Age fossils. And towards the Rocky Mountains you start getting into, like, older rocks and you find dinosaurs, marine fossils, stuff like that. And on the West Coast you have fossil walrus, and sharks, and stuff like that. So, for fossils it's all time dependent.

For minerals, it's also dependent on the type of rock you have. So on the East Coast you have a lot of granites, and metamorphic rocks, and some sedimentary rocks, so you have an assortment of stuff, but nothing too gem-worthy. Except for in, like, the Blue Ridge Mountain areas of North Carolina where you can find emeralds and things. And then you find more gemstones on the West Coast. And in between, like in the Midwest, you don't really get any gemmy minerals, but you do get *some* minerals.

But then you have some places like North Dakota where it's mostly, like, prairie and you don't really have any interesting minerals. So, there's a lot of variance just depending on the terrain, the rocks, and the history of the place.

Julie: This is a very dumb question, but what's the difference between a mineral and a gem?

Yinan: A mineral is very specific. Let me pull up the proper definition so I can read this out. So, as defined by the International Mineralogical Association, a mineral is "an element or a chemical compound that is normally crystalline and that has been formed as a result of a geological process." So minerals are compounds that have crystalline atomic structures, so various crystals and elements can be minerals, like gold is a mineral and an element. Quartz is a mineral that's composed of silicon and oxygen, so that's what a mineral is. And minerals have to be formed geologically and not by hand. If I grow, say, a salt crystal in a bottle, that's not a mineral because I grew it.

Julie: Oh, so it's just a crystal at that point.

Yinan: Exactly. A mineral has to be naturally formed. As for a gemstone, basically a gemstone is any mineral, or occasionally organic material, that's attractive and has worth.

Julie: Oh, okay. So that's kind of a subjective definition.

Yinan: Exactly. It's like, I could take glass and polish it into a really nice, pretty object, and it could be considered a gem by some people.

Julie: And what is it about gems? I mean, people love collecting them. Is it just the visceral experience of them?

Yinan: I don't know. It's like, part of it is visceral... Humans, like crows and ravens, we're attracted to shiny objects. I mean, I don't have enough of the psychological, evolutionary background to dive into that, but I'm pretty sure, humans, as part of our forming of intelligence, are attracted to things that are shiny, things that attract our attention. It's like, why have we treasured gold for 5,000 years and gemstones for at

least 3,000? We've always had this interest in things that are pretty. It's just part of our nature.

Julie: Sure. In terms of the history of gemstones, do you know... Obviously we don't know the first time someone saw a mineral, and polished it up, and said, "That's pretty," but do we know the earliest example of a gemstone?

Yinan: I know that humans have worked ivory, like woolly mammoth ivory, since at least the Ice Age, probably 30-40,000 years ago. So, would you call it a gemstone or would you call it, like, a gemmy object? But it's something we turned into a necklace, polished things into beads, or pearls, or other organic things. We just turned objects into jewelry. So, the jewelry aspect has been around for a while. Polishing into a gemstone, where you polish several surfaces and make it into, like, a crystal, I believe that's been done since the Roman era.

Julie: When you collect minerals, do you also polish them into gemstones? What do you do with the things you find?

Yinan: There's a variety of things. Sometimes I just prefer objects in their natural... what I consider their natural, perfect state. And then there's other things, like recently I bought a whole bunch of rough gemstones that I've been sending away for faceting by, like, gemstone makers. So it all depends; some I like in the original shape and some I like better as a gemstone.

Julie: Is it just kind of dependent on how it looks, or where you found it?

Yinan: Exactly. If something has a natural crystal shape and it's perfect, I don't really see a need to change it. But if something's broken and fractured but has enough clarity in it that it can be turned into something else, then I send it away to be polished into a gemstone.

Julie: Let's say somebody who's listening says, "Hey, I want to go find some minerals and turn them into gems." Would you say, like, get a rock tumbler? What's the best way for people to get started on doing that?

Yinan: I would say, actually, a rock tumbler is probably one of the easier ways to do so. It's like, you just put things in there, you put some grit in there, and then just leave it on for a few days, yeah. Or one of the easier things to try is, you can actually get sandpaper and then get some softer gemstone material, for example amber, and you can actually hand polish amber on pieces of sandpaper.

Julie: I'm sure it's difficult to choose, but do you have a favorite mineral or gem?

Yinan: My favorite mineral is rhodochrosite. It's a manganese mineral and it's also the state mineral of Colorado. It's Jolly Rancher Cherry red, that's the best way to describe it, and it's beautiful. It's found in probably a few... There's probably only about six places in the world that's produced it in any quantity, and the material from Colorado is the best in the world. That's my favorite mineral.

As for favorite gemstone, I'm a fan of diamonds just because they're... Well, humans have been interested in diamonds for a while, and with the history of marketing and such diamonds have become very popular. Also, diamonds come in a variety of colors, including blue, green, pink, red, orange, basically every color of the rainbow. It's just fascinating and rare.

Julie: And so what causes those different colorations? And are they found in different parts of the world?

Yinan: Yes. Sort of. The different colorations are caused by just... One, impurities like a little bit of... nitrogen's a good one. A little bit of extra nitrogen inside the crystal lattice itself will give it a different color. Also occasionally there's damage from just natural radiation, and that'll change the color as well. So yes, nitrogen's a good example. Just a little bit will change... Say a perfect diamond is clear without any color; nitrogen, I believe, will make it a slightly brown color. But if you heat treat it, the nitrogen can also cause the diamond to change colors from brown to more brown, or to white, or to blue. Different things like that can happen.

As for location, in general... for example, the Argyle region of Australia has more pink diamonds than some other regions. Or like Arkansas has more white and yellowish color diamonds than other regions. So there's some minor differences in the regions, but you have the potential to get any color in any area.

Julie: You've gone all over the country and presumably around the world to find fossils and minerals. What is the most amazing place that you've found a fossil or a mineral?

Yinan: Hmm... That is an interesting question. Let me think about that. Actually, probably my favorite mineral, fossil, and gem collecting was in this place in Nevada. It's called Virgin Valley. It west of this middle-of-nowhere area called Denio. If you look just west of there it's just empty desert. In this area is some of the best opal in America. It's gem quality black opal. It was formed as silica-rich water replaced fossil tree limbs, so you find these chunks of opal that are shaped like tree limbs. So it's both a fossil *and* a gemstone.

Julie: Oh my gosh! So when you find something like that, do you just take the whole... Obviously you don't want to break it up, so how do you get it out of there?

Yinan: It's going to break. It's going to break into smaller pieces and then you'll have to, like, piece it back together. That's just the nature of it. Most of the sites there... It's all plain by this point, so you have to pay, like, mine owners a small fee to go and dig the stuff, and you just dig usually in piles of stuff, so it's already a little bit broken. But you still find a lot of really good material.

Julie: And that leads me to another question, which is, if folks want to go out and just search for fossils and minerals, what are the rules around that?

Yinan: Ah, good question. For the United States, for fossils, if it's found on private property it belongs to the landowner. So if you go collecting and you want to go on someone's land, you need permission to go collect. If it's fossils found on federal land, it belongs to, I guess, technically the government or the people. It depends on where you are, and what your intentions are, and what you're trying to collect.

So for example, some of the current rules are, if you're trying to collect on Bureau of Land Management land, if you're trying to collect some common invertebrate fossils for your own collection, that's usually allowed. But you are not allowed to collect vertebrate fossils, like a dinosaur bone. That's illegal. And collecting for commercial purposes or barter is also illegal of any type of fossil. As for national monuments or national parks, it's completely illegal to collect anything there, including minerals.

Now for minerals, on BLM land, it varies depending on the jurisdiction, I believe, and what you're trying to do with it. In some places you're allowed to file mining claims. If you find something interesting you can file and claim and then start mining it.

Julie: So it's kind of first come...

Yinan: First come, first served, file your paperwork. And as a disclaimer, always check the rules and check the current laws before you go out there because laws change all the time. So, my preference is still to collect on private land where I have permission to collect.

Julie: And usually does the landowner let you keep what you find?

Julie: Oh yeah. Most landowners, as long as you work something out with them where... like for example, I've never discovered a dinosaur, but this is very common. If you want to go dinosaur hunting you work it out with the landowner so that they get 25% of the final selling price if you find something valuable and sell it.

Julie: Is there a preferred way to sell it? I'm sure there's probably a black market, [laughs] so where would you actually sell fossils that you find?

Yinan: Well, let's see... If you've done everything legally and stuff you can just sell it on eBay. There's an entire fossils and minerals section on eBay.

Julie: eBay is kind of notorious for... I mean, it has everything and there's a lot of fake stuff there too, so how would you recommend people confirm that something is actually a legitimate fossil?

Yinan: That's a very tough question. That's something you just have to learn from experience, look into the reputation of the seller, and things like that. One, there's a lot of fake fossils out there, and there's also a lot of fake minerals out there, and especially fake gemstones. There's fakes in all three categories. I usually recommend buying only from dealers in the US, that way they have a little more standing behind them. If you buy from someone overseas, it's going to be difficult to do a reverse credit charge or something like that.

So, one, buy from US dealers; two, check the reputations if you can. And it's always fine to ask questions. Most of the mineral and fossil dealers, if something's legit and you have a question, they'll be happy to answer it, and tell you where they got it, and stuff like that.

Julie: I'm sure you've amassed quite a collection over the years. What do you do with these things when you find them or purchase them?

Yinan: What starts happening is, like, first I keep all of it. And then I get something better... Like for example, say I have a rhodochrosite; it's like a nice, 10-gram rhodochrosite, and then next year I get another rhodochrosite except this one's 20 grams and much nicer. Then I end up selling the previous one. It's like a game of continuously upgrading.

Julie: Okay, you're leveling up every time. Got it.

Yinan: Yeah.

Julie: So how... Do you display them? Do you keep them... How do you just keep them?

Yinan: Let's see, I have some of my better pieces in a nice display cabinet. Everything else is in what's called flats. If you've ever gotten, like, a whole bunch of beer or a whole bunch of cans, you have this really flat box at the bottom with, like, four sides. That's called a flat. That's what all mineral and fossil collectors keep their stuff in. For the stuff that's not top grade, they just sort of keep it in boxes.

For most rocks, they're completely fine; you don't really have to do anything. For some, you have to make sure they stay dry. For some you also have to make sure they stay

moist. For example, some opals will dry up fairly easily and then crack, but then there's some minerals, like a lot of metallic minerals where you don't want it to get wet, so those you have to keep dry. Yeah, it varies a lot.

Julie: And so, you said rhodochrosite is your favorite. Does that get polished into a gem state or it just depends on the specimen?

Yinan: I've never sent a rhodochrosite to be polished. Part of this reason is because rhodochrosite likes to cleave, which means it breaks along the internal crystal lattice. So if you try to polish it, it wants to break into little pieces. You rarely see it as a gemstone just because it likes to break so much.

Julie: What is the most... I don't want to say rare, but what's the hard-to-get-your-hands-on mineral?

Yinan: Benitoite is pretty rare. Benitoite is the state gemstone of California, and it's only found in one place in the world; in California. And the place it's found is one quarry probably about, like, 100 yards across. So whoever owns that quarry at the time controls the world's supply of benitoite.

Julie: What is the quality of benitoite?

Yinan: It's this blue triangular mineral and it cuts into a nice gemstone with a super high dispersion, so there's a lot of nice color from it. It looks like a diamond once it's cut. It's rare, and attractive, and it does what's called florescence, which is, if you put it under a blacklight you can see the bright blue color of it. It has a lot of interesting properties, and it's just really rare because of location.

Julie: You've written a couple of books, and your next one is coming out next month. What compelled you to write these two books?

Yinan: Well, I started on the first one, *The 50 State Fossils*, because one day I was thinking, "Hey, there's not a book about the official state fossils that's for kids." There's another one that's done but it's, like, for adults, and with a lot of pretty good words, but very few pictures. I was like, "There really should be a kid's version of this," so I just went ahead, pitched it, and then wrote it.

Julie: Nice! Same thing with the gems and minerals then?

Yinan: Yeah, I decided I needed a follow up book because I did the fossil book as, like... I don't know, I hate the process of writing it, but afterwards I kind of miss the process. So it's like, "Hmm, I kind of want to write another book because now I'm not doing as much as I was."

Julie: Right! So is there another topic, another book that you...?

Yinan: Yes. My next book is going to be on meteorites.

Julie: Ooh! Tell me about meteorites. How common are they, really?

Yinan: Meteorites are fairly rare, but they're also fairly common, so it's hard to describe how rare they are. Can you find a meteorite? Yeah, if you're in the right location with the right conditions, you can probably find a meteorite. Technically you could find a meteorite almost anywhere except for, like, in the ocean. But meteorites are easier to find in desert locations just because they get preserved longer there. Meteorites don't like moisture, so if it landed in, like, the Pacific Northwest or the East Coast forest, they're only going to last probably a few months until they're destroyed. Unless it's,

like, a big metal meteorite or something that could last a few thousand years, eventually most meteorites get destroyed just from erosion.

Julie: What is the actual definition of a meteorite? Are they lots of different kinds of makeups of different chemicals, minerals, etc.?

Yinan: Meteorites are, essentially, rocks from space. Now, there are a lot of different types of meteorites. There's, like, the iron meteorites, which are essentially iron and nickel, and they represent the core of destroyed planets and such; stony meteorites, which are made up of small rocks; there's pallasites, which are a mixture of in between but they're like iron meteorites with gem crystals of olivine. And then there's Lunar and Martian meteorites, which are chunks of the Moon and Mars that were knocked out into space by larger meteor impacts and then they drifted their way to Earth.

Julie: Your book then will be kind of like a field guide to figuring out what's what.

Yinan: Yep, indeed.

Julie: Cool. That's really cool. When is that going to be coming out?

Yinan: That one's probably at least a year and a half away.

Julie: So what was the most surprising thing that you learned or rediscovered when you were researching the gems and minerals book?

Yinan: One thing I've been learning about is how much the Native Americans and Indigenous people were already using these resources before we started using them. In a lot of state guides, for example, like turquoise and stuff, or copper... There's multiple. Lead minerals, turquoise, copper. A lot of this material, various guidebooks or state guides will say, "This was first discovered in 1836." But if you actually look into it, the Native Americans of that region were already using it and quarrying it for hundreds of years before we colonized it.

I put a lot of that into the book just indicating that, yes, Indigenous people were mining copper in what is now Michigan for probably hundreds if not thousands of years before we started doing so. Or copper, because it's a metal, it's useful; whereas for turquoise, it's pretty and it's used for jewelry. It varies depending on the material.

Julie: So you've done work for *The 50 States*. Have you any plans to do books or guides for international mineral hunting or fossil hunting?

Yinan: Uh, maybe. Probably international is... part of it is the market. If I did a book internationally, it's like, "How many people in another market are going to be interested in this book?" So there's a lot of thought that goes into writing a book because of what the publisher's going to think about it. Writing a book, it's been this huge learning curve, which has been very interesting.

Julie: Have you gone fossil or mineral hunting outside the US?

Yinan: I did some research back in undergrad in Morocco for some of the fossil-bearing deposits there, but that was, like, more of a scientific thing rather than for fun.

Julie: So what would you say is the biggest misconception people have about minerals or fossils?

Yinan: A lot of people think fossils are rare, you're not going to find a fossil, or every fossil belongs in a museum. But throughout the US there's a *lot* of fossils, and a lot of them are very common. For example, fossil brachiopods, which are these shells that look like

seashells but they're a completely different family of organism. There's a lot of them, for example, in the state of Kentucky. You could stop at most road cuts in Kentucky and probably find a brachiopod. Or some fossil fish, there's a fossil fish called *Knightsia*, which is the state fossil of Wyoming, and there's literally billions of these. There are several quarries you can pay to go collect at. For like \$40 for half a day you could just sit there and break rocks open and find these fossil fish. You'll probably find one every, like, 15 minutes.

So it's like, yes, some fossils, dinosaurs and things, are rare and do belong in museums, especially anything that's new to science certainly belongs in a museum. But if it's something where you literally have thousands of it, I'm all right with people being able to collect it and own it.

Julie: And the way people can check that is...?

Yinan: Researchers are happy if you reach out to them, especially these days on Twitter. That's one of the things I did. One of the things I do is... I'm very much into amber. I buy a lot of amber for various collection and jewelry purposes from the Dominican Republic. What I do is I keep an eye out for interesting fossil insects in amber, and if I find something that looks really funky, I reach out to some researchers I know. And either they'll know what it is, or they won't know, or they'll point me in the right direction. If it's something completely new, we usually partner together, and write a paper on it, and I donate it to a museum of their choice. I've done this several times, and it's a great way to both participate in a hobby and participate in a science. I get to work on a paper and introduce something new to the world, and science gets a new piece for the scientific record. So, to me it's a win-win situation.

Julie: Yeah, that's thrilling. So if people... they go out and they're doing some fossil collecting or mineral collecting, they don't know what they've got, how would they find the right researcher? You're a scientist, you're kind of in the community, you know where to look, but how would a newbie... where would they go?

Yinan: Reach out to various paleontologists on Twitter. They'll point you one direction or another eventually until you get to someone who knows what you're looking at. They are even welcome to, like, go and tag me, and if I know something about it or know who they should talk to, I can point them in the right direction. This actually happens fairly frequently.

Julie: Cool! That's exciting for you too because you get to see new stuff.

Yinan: Yeah. Just yesterday someone reached out to me in a DM on Twitter and was like, "Hey, I found this fossil in a creek and it's really weird because it's an ammonite and I don't think it's supposed to be here." So I take a look and I'm like, "Yep, that's an ammonite. That looks like a *Dactyloceras*, it's from the UK or Germany. Where did you find it?" He's like, "I found it in a creek in San Jose." [laughs]

So it's like, here's this person who's just happily looking at rocks in a creek and they pull out this ammonite, and... My speculation is either someone accidentally dropped it or someone, like, used it in a magic ritual and then tossed it into the creek or something like that because it has a polished base on the bottom. The rock it's sitting on is polished, so it used to be a display piece.

Julie: Right, got it. So it wasn't some new discovery. It was just somebody... a human brought it over.

Yinan: Yep. Somebody had it and they either lost it or tossed it away, but hey, it's a UK ammonite or a German ammonite found in California. It's a fun story and someone gets to bring home a UK ammonite that traveled halfway around the world.

Julie: I love it. That's so cool. So if some wants to get started in fossil collecting or mineral collecting and they're a little intimidated, how would you recommend they get started?

Yinan: My best suggestion is to either join a local rock collecting club – and there's usually little rock collecting clubs in probably every major town in the country – or go to a local gem/mineral/fossil show once covid is over and stuff like that. About every year... pre-covid, there's usually about a dozen gem shows every weekend around the country. So eventually they'll be able to find one that's somewhere near them and they can, like, go in person and learn more about rocks and minerals there, and they can also buy rocks and minerals there.

Julie: And usually the vendors there are pretty on the up-and-up?

Yinan: Most of them. I would say 90% are. I've been to gem and mineral shows and, like, 90% are good and then there's some guy who will have, like, a tray of fake fossils from Morocco or something like that. So it's like... it's still buyer beware, but it's easier for you to ask questions in person.

A way to figure out if something is legitimate or not is: if it's too good to be true, it probably is. If you're looking at this piece of amber the size of your hand and it has a perfect scorpion in it and the guy wants \$20, it's not real. Same with a mineral. If you see a really nice, pretty, giant mineral thing, an absurd color like neon blue, and it's \$20; yeah, it's not real.

Julie: And when people are collecting, do you recommend that they just, like, collect what looks interesting to them, what's pretty to them? Do you collect in categories? How do people usually do that?

Yinan: That's a good question. Well, initially everyone starts off collecting, like, all sorts of things that they just like. Eventually they gravitate to things. I gravitated to, like, certain classic American minerals, like benitoite, rhodochrosite, stuff like that. That's stuff that's mined in the US and starting to become hard to get. So, everyone will start off and then eventually they'll find what they're passionate about and then start focusing in on that.

Julie: So a mineral show is a good way to, kind of, get an overview.

Yinan: Yeah, that way you see a lot of things in person.

Julie: Cool. Thank you so much for taking so much time to talk with me about this. This is absolutely fascinating, and I'm so excited that you have two books for people to read because I know people are going to get really excited about this too. Thanks for coming on the show.

Yinan: You're welcome.

He is so passionate and so knowledgeable. That was a huge treat. Don't forget, Yinan's new book *The 50 State Gems and Minerals* is available now wherever you get books. You can find him on Twitter [@FossilLocator](#), and he's got a [Mineral of the Month Club](#) on Patreon. I'll include those links in the show notes as well as links to the Goodreads pages for his books.

Just a reminder that you can find this podcast on Instagram [@LoveWhatYouLovePod](#), and on Twitter, [@WhatYouLovePod](#), and the website is [LoveWhatYouLovePod.com](#).

Zeke Rodrigues Thomas at Mindjam Media provides amazing editing assistance. You can find Zeke at [MindjamMedia.com](#). Also, all of the episode transcripts for *Love What You Love* are available on the website. Many, many thanks, as always, to Emily White for the fantastic transcripts. If you need transcripts yourself, reach out to her at [HireEmilyWhite@gmail.com](#). The music for *Love What You Love* is called "Inspiring Hope" by Pink-Sounds. A link to that artist is included in the show notes.

Okay y'all, that's it for this week. Get out there, love the hell out of whatever it is that you love. You need it, and we need it. Thanks for listening. Let's hang out again soon.

Links:

Find Yinan on [Twitter](#) and [Patreon](#)

Yinan's books: [The 50 State Fossils](#) and [The 50 State Gems and Minerals](#)

Yinan supports [Michelle's Earth Foundation](#), a charity that supports science and the environment through orchestrating coastal marine ecology investigation and outreach

My favorite nonprofits:

[FairFight.com](#)

[World Central Kitchen](#)

Love What You Love [Merch is Here!](#)

Additional editing by [Mindjam Media](#)

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Check out my books at [JulieKRose.com](#)

LWYL Music: [Inspiring Hope by Pink-Sounds](#)

Transcribed by Emily White: [HireEmilyWhite@gmail.com](#)