Ask-a-Biologist Vol 050 (Guest: Beth Judy)

Flora Delaterre - Plant Detective

It's the mysteries of plants that has detective Flora Delaterre (a.k.a. Beth Judy) pounding the beat. She travels the world investigating how some plants are used as medicines. Dr. Biology and high school students learn about plants that can do everything from making your stomach ache feel better to treating cancer.

Transcript

Dr. Biology: This is Ask-A-Biologist, a program about the living world, and I'm Dr. Biology. For today's program we are on the campus of Texas A&M in College Station, Texas, where the Botanical Society of America, BioQUEST and Texas A&M are running a very cool workshop for high school educators as well as high school students.

And today we have a detective story for you, but not the usual bloody mystery type of story. Instead I have a chance to talk with Flora Delaterre, plant detective. Flora's been investigating plant mysteries around the world, from Sri Lanka to Siberia, from high in the Appalachian Mountains to the rain forests of the Northwest. She's been in research laboratories and maybe even your very own backyard.

Flora, I want to thank you for coming and being on Ask-A-Biologist.

Flora Delaterre: Well, thank you.

Dr. Biology: All right, plant detective, hmm. What type of plant mysteries have you been investigating?

Flora: Medicinal plants.

Dr. Biology: Oh, medicinal plants, OK. So, medicinal - we're talking about - sounds like medicine, so we're talking about plants that we use in treatment of people and maybe even animals, right?

Flora: That's right. You know, one of the mysteries involving medicinal plants is how did we find out about them. People have used them ever since we first began. We didn't have anything else. We had plants and other natural substances. But one way, I think, that people found out about what plants were medicinal was by watching animals.

Dr. Biology: OK. Now I was doing some research on you and I came across a really cool term. It's called phytomedicinals. So this is what we're talking about, right?

Flora: Right. "Phyto" means plants and so these are plants that contain medicine. They have chemicals in them - compounds - that affect our bodies just like drugs. Some people think that natural means safe, but plants with the chemicals in them have just the same kind of range of safety as drugs that you buy in the drugstore. And, of course, there are all those warning labels and caps that children can't open; well, it's the same kind of thing - natural doesn't necessarily mean safe. You have to know what you're doing.

Dr. Biology: Right, arsenic is natural and the last time I checked, it would kill you if you took arsenic.

Flora: That's right and, of course, I'm talking about plants using them as if you would pick them and just use them, but a lot of medicinal plants that we talk about on the radio show "The Plant Detective" are found in prescribed and over-the-counter drugs in your drugstore. So I'm not just talking about herbal remedies.

Dr. Biology: Oh, OK. So give me a few examples.

Flora: Well, in the drugstore you can get drugs for the heart that come from digitalis, or foxglove. Actually digitalis, I think, is the compound and foxglove is the plant. There are cancer drugs from a kind of periwinkle and also from a North American plant called mayapple. It was found to be a cancer plant because people used to use it as a home remedy, mostly for warts, and so some scientists thought, well, if you can use it for warts and if it makes those little growths go away, maybe it would make tumors inside the body go away. And in fact they were right.

Dr. Biology: We talked about you going off to exotic places, but we also mentioned the backyard - even my backyard. How about giving us some examples of some plants, just a few names of these phytomedicinals, that are found in places like, well, anything in your backyard?

Flora: Yeah, I live in Montana - that's where the radio show is produced - and we have in my backyard and, I think across the country, plantain. It's a tough little plant with spiky seed heads, and I'd seen it for years before I did this radio show, but I came to find out that many of us - well, I won't be naming names - but many people have Metamucil in their homes. Some people use Metamucil every day and they go and buy it. Well, all Metamucil really is is the seed husks of the little plantain plant. Psyllium is what it's called; psyllium is the kind of generic name for it. And that's a substance that helps in both constipation and diarrhea. It's an interesting little plant, and it's been used that way for centuries. Another one is dandelion.

Dr. Biology: Oh, I have dandelions in my backyard. Matter of fact, I'm always out there trying to kill them.

Flora: Who doesn't have dandelions in their backyard? But dandelions affect us in several ways: the flowers and the leaves are diuretics. Sometimes you have too much water in your body and you need to get it out of your body. And actually the word in French for dandelion is "pis-en-lit" and that means "wet the bed." And that's what dandelions do to you; they make you want to go to the bathroom.

Dr. Biology: OK, anybody out there been eating or doing anything with dandelions? [laughter] OK, no dandelions out there, OK. No one's going to admit it, that's for sure. OK, to use some old fashioned language, what got you working on the plant beat, since you're a detective?

Flora: Plants are just so mysterious. They have these effects on us and they just look like plants when you pass them. Who would think they have all of these properties? So that got me interested in them and I wanted to kind of go inside and find out more about them.

Dr. Biology: Now, your name alone is intriguing: Flora Delaterre. Now, if I break that apart, "Flora" I'm thinking flowers and "Delaterre" means of the earth. So are we talking "Flower of the Earth"?

Flora: We are, generally. I kind of tend to think of it as "Vegetation of the Earth" because it's not just about flowers. There are trees that are medicinal: Slippery Elm is one of them, Cedar, Yew - that's a source of a really good breast cancer medicine.

Dr. Biology: I see, so this goes back to our science, flora and fauna. So the flora are the plants and fauna are the animals. OK, cool, I like that. Well, you're a detective; are you also a trained scientist?

Flora: I'm actually not a scientist. I'm a writer. So what I try to do is work with scientists - people who do know about the content - and then take it and say how can I make this interesting to someone who doesn't know anything about the science of this? How can I share this science story with the layperson?

Dr. Biology: Hmm. So, while doing my own detective work I found your website, floradelaterre.com. And on the website you have some really great information including amazing phyto-facts. What else can a person find on the website?

Flora: Well, I chose some plants that I thought it would be fun to have pictures of, and recipes, and poems. So, I have specific plant pages that actually you can see the plant, you can find out what medicinal effects it has, what part of the plant is used, sometimes the roots, or the leaves, or the flowers, or the bark. And so it's got all this information about certain plants. Now we have many more radio shows than we have pages like that. They're pretty intensive to make. So, then we have our audio archives where you can actually listen to the show. Since it's actually broadcast out of radio stations, you can see where in the country that you might be able to listen to it.

I've done a coloring book, and so there's a page about that.

Dr. Biology: Coloring books. We have those on Ask-A-Biologist as well. But even though someone might go up to your site now and find out where they can listen to you on the radio, they also can listen to them by going to your website, right?

Flora: Right, they can just find a plant that they want to know about and click on it, and they will get the story.

Dr. Biology: All right. So, now our masks have to come off. You and I have something in common. I introduced you as Flora Delaterre, and I'm Dr. Biology, but those are actually just our on-air personalities. Who are you really?

Flora: My name is Beth Judy and I live in Montana, and I have a background really in translating science for people without a background in science.

Dr. Biology: I see. Well, we're looking out at a sea of faces.

Flora: Is it a sea, or is it a pond or a lake?

Dr. Biology: OK. Well OK, I'll go with a pond. A big pond. They're here for our workshop. It's myPlantIT at Texas A&M. So, I've traveled down here just to meet with you and to work with them. They came up with some questions, and I have to say I think they're better than some of the ones I came up with. So, I'll have to cut that out of the broadcast because I wouldn't' want anyone to know that, right? [laughter]

Dr. Biology: What drew you into writing and broadcasting these plant facts and stories?

Flora: It was actually something that was offered to me. I didn't even know what a medicinal plant was. What I did was radio, and I had done a show before this about herbs and spices. Because all of the herbs and spices that we cook with, salt, and pepper, and oregano, and onions, and all of that, they all have their own stories. So, I had done kind of a fun show where I interviewed people about their favorite spice and then I went into the history of it. And a guy at the pharmacy school, I live in a town with a university and they teach people how to be pharmacists. And a guy there who specializes in medicine from plants heard my herbs and spices show and he said, "I want to do a show on medicinal plants."

So, he contacted the radio station and the radio station contacted me and said, "Would you like to do this?" And I said, "Sure!" and then only later did I say, "Medicinal plants, what is that?" [laughs]

But as I was saying to somebody earlier, you know that puts me in the shoes of the listener. And so I see what interests me about the plant, and I make sure that if I understand it then I know that the person listening, there's a good chance that they will understand it also. And so, I feel like that helps me be a good translator of science.

Dr. Biology: Right. So, number one rule, know your audience as a writer or a communicator. In this case, you are your audience, so it makes it even easier.

Flora: Yes, that's absolutely right.

Dr. Biology: OK, so another great question from our audience. How do you get creative ideas, or what inspires you to write? But not just write, write fun, creative ideas?

Flora: Well, yeah, the plants that I write about, I can't write any thing. I have to focus on one plant. But I guess often one way that I choose the plants that I do are, what are the plants that I know about, but I don't know about? For example, I use cinnamon. Cinnamon is medicinal, by the way. It's anti-diabetic. There's still research going on about that. But where does it come from?

Or outside my house there's a tree, and it's a linden tree. And I lived in France for a little while, and I know that people there use linden for upset stomach, and they'll make a tea out of it.

But that's all I really know about lindens. So, I myself am curious and that's what often drives me to choose the plants.

And then for the creative and fun twists, again I'm often using myself. What amuses me? What do I think is fun? And that's kind of how I came up with the plant detective in the first place,

actually. OK, I want to talk about this information, but I don't want it to be like other shows that are just scientists droning on and putting people to sleep.

How can I make this fun? How will this be something that I want to work on for years. I have worked on it for I think it's like 14 years, I've done this show. I haven't been bored yet.

Dr. Biology: Along these lines, what are your favorite plants? Because when I look at the list on the web there must be maybe 100 or so.

Flora: Yeah, yeah, there are. I think each time I'm writing a plant it's my favorite plant, I have to say. Because I'm just like, "Wow! That's so cool!" But let's see, I can try and choose some. One of them is ginger. And I don't know if you know this about ginger but it sooths your stomach. And how it does that, it actually works on the muscle of your stomach.

So, you can take it for motion sickness. In the early stages of pregnancy when women feel sick, it can help sooth their stomachs. People who are taking chemotherapy, when they feel all that nausea, ginger can help them with that.

All you have to do is just eat it. I mean just eat it in your meal, or I even carry it in my purse. I have some that is candied and I always just can pop it. I just carry it around in a little jar and I can pop it.

But, what's cool for motion sickness, the other remedies that you get in the drugstore, actually, work on your nervous system. So, they can make you drowsy. Let's say you're in a car and you're driving, or you're anywhere and you take a pill, and all of a sudden, you're drowsy. That's not very good. Well, ginger can be as effective but it just is working on the muscles. That's not going to affect your nervous system or your brain or your vision or anything.

Dr. Biology: That's interesting. I wonder how long we've known this. I know when I was younger; my mother always brought me ginger ale when I wasn't feeling well. That's back when, I think, they were using real ginger in the actual ginger ale.

Flora: That is why we have ginger ale, that's exactly why. People grew to like it just for itself and not use it medicinally anymore. That's why there is, hardly, probably, any ginger in like Canada Dry or some of those brands. But, they have brought back ginger ale with real ginger in it now. I'm sure it will help your stomach.

Dr. Biology: Wow! OK, I'm taking a slight break because I dropped one of the last lists. I like this, first question out. This is someone is really thinking about a career. Do you make money from doing what you do?

Flora: Yes, I do. It is a portion of my income. I don't make all of my livelihood from this show, but I do make a portion of it. I do writing on the side, other kinds of writing - articles and stuff like that.

Dr. Biology: They, actually, wanted to know, what do you call yourself?

Flora: Alright. I call myself a writer and a radio producer. I guess, if I had to be more specific about this show, I would say I'm a science writer.

Dr. Biology: A science writer, OK. How many years did you have to spend in college to get where you are?

Flora: I spent four years in college as an English major. It was hard for me to choose because I was interested in other things, too. I didn't know if I would be doing anything with it in the future. Then, I spent two and a half years in a creative writing program. So, I got a master's in creative writing.

Dr. Biology: Let's see here. So, would you rather have the job that you have now or another one? Why?

Flora: I am really happy doing what I do. The only other job...there are a couple of other jobs that might tempt me. If I could write totally fiction stories, that would be fun. As it is, I get to mix fiction and non-fiction. So, I'm working with facts, but I'm having fun with Flora and kind of that creative part of it.

Dr. Biology: I'm going to take away all your writing. You can't be a writer, you're not going to be any kind of the communicator. A lot of people slide in to the teaching realm, which is great, because we like to have more teachers. So, I, usually, take that away. If you could be anything - don't worry about constraints - what would you be or what would you do?

Flora: I'd be a singer.

Dr. Biology: What kind? Pop, you're going to do opera or what?

Flora: Definitely, not opera. I have a lot of types of music that I like. I go by the songs that I like. I, actually, just did starting singing lessons to work on my voice. I doubt I will ever be a singer. But, at least, it's sounding OK.

Dr. Biology: Sounding OK. Well, my family won't even let me hum. When did you first know you wanted to be a writer or maybe even a plant detective? Was there a calling for you or something that you're just like, "Oh, man, I love writing"?

Flora: Well, I always did like writing when I was a kid. But, I really did kind of wanted to do a radio show when I was a kid, just for a little while. I remember when I was young, I really like classical music, and that's not a genre that a lot of young people like. So, I really wanted to do a radio show that would share my passion for this music with other kids and explain why it was cool. Well, I don't know what kind of a radio show that would have been. Then, I, actually, started my radio show career on my answering machine. I'm not very good at reading instructions and I thought that I had 30 seconds to fill. So, I did a radio show about words and word origins. For people who called me had to listen to the radio show for 30 seconds before they left me a message.

Dr. Biology: Did you get less messages that way?

Flora: We did them up. Then I just kind of drifted in to radio later, and writing.

Dr. Biology: So, we have possible scientists. No, we're going to have all scientists, right? Everybody can be a scientist?

Audience: Yes! Shure! No!

Dr. Biology: [laughs] So, those that aren't going to be the scientists, maybe they want to be a plant detective or journalist. Is there any advice you have for them?

Flora: Keep asking questions. Even dumb questions like you might think, "Oh, that's a dumb question." But, sometimes, no one else is asking that question and that's a really good question to ask. Investigations are fun and helpful to other people. I guess, that's about it.

Dr. Biology: So, I want to thank you, Beth Judy and Flora Delaterre, for being here and visiting with us.

Flora: Thank you. It was very fun.

Dr. Biology: Actually, I want to ask. What's it like having two first names?

Flora: It's a challenge.

Dr. Biology: So, when you went to school, did they ever wonder and it was flipped around?

Flora: Oh, yes, yes. It is. I just have to answer to Beth or Judy.

Dr. Biology: Alright. You've been listening to Ask-A-Biologist and my guest has been Flora Delaterre, a plant detective. The Ask-A-Biologist podcast is, usually, produced on the campus of Arizona State University. For today's program, we're on the campus of Texas A&M in College Station, Texas. We're at the Botanical Society of America, Biquest, and Texas A&M are running a very cool workshop for high school educators as well as high school students. Detective Delaterre and I, I hope, will investigate more things in the future.

But remember, even though this program is not broadcast live, you can still send us your questions about biology using our companion website. The address is askabiologist.asu.edu, or you can just Google the words "ask a biologist." I'm Dr. Biology.

[applause]