

Podcast Series, Holistic Nature of Us

Episode # 3: Gail Reynolds

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Hi, I'm Judith Dreyer. Thank you for joining me for this pod cast series; "At the Garden's Gate" presents the holistic nature of us.

My intent is to take us, you and I, into a better understanding of the concepts behind our holistic nature and how that ties directly to the holistic nature of the world around us. How can we connect the dots in practical ways that we are nature and nature is in us? I will be featuring authors and educators, practitioners and others whose passion for this earth helps us create bridges. We'll see what's trending, what's relevant to our world today, not just for land use but to connect the dots between ourselves and nature. It's time for practical action and profound inner change so our natural world is valued once again.

Today I'm delighted to introduce you to Gail Reynolds. She is the UCONN Master Gardener Co-Ordinator for Middlesex County here in Connecticut. Gail and I met through her radio show "Garden Chat" offered at the ICRV radio here in Deep River Connecticut. She is a wealth of knowledge on plant systems including; botany, environmental impacts and concerns, as well as a great resource for all of us involved in the Master Gardener Program here in Connecticut.

So, without further ado I'd like to introduce Gail Reynolds here today and we're going to begin our discussion.

Gail, could you tell us about your interest in plant science?

Gail: First I'd like to say Judith, thank you so much for having me. I really appreciate it.

But I studied plants both when I was an undergraduate and in graduate school. When I was an undergraduate I majored in biology. This was in the late 1970s and I concentrated on plants and ecology and evolutionary biology but at the time my university didn't have anything. You know you

did biology and that was it. And I studied, I took class on the recommendation of one of my friends, a fellow bio-major, it was called the phylogeny of the vascular plants (2:36). And it was a semester long class and I just loved it. It went through all the different plant families as they evolved starting with, well of course it talked about lower plants like mosses and liverworts and then it moved up to ferns and then gymnosperms which are mostly your conifers and then your angiosperms, your flowering plants. And of course, moving ahead 40 years a lot, well not a lot, but some of the evolutionary paths have changed due to the preponderance now of DNA evidence. But it was, I can just say it was magnificent. The professor who was James Rodman; he just did so much research and it was just wonderful. It changed my life. And I also studied some wildlife ecology when I was an undergraduate and then I worked as a chemist for a year, but I came back, and I studied terrestrial ecology. It was more outdoors, which is what I really wanted. But learning about New England ecosystems was just to really know what to look for, not just at the plants but also at the soil, at the inputs and outputs and you realize what a complex system from the macro level to the very micro level, say all the micro-organisms in the soil. And I just fell in love with it. And I, for two years I worked on a project called the New England Adirondack National Natural Landmark's Program. You've probably heard of historic landmarks. Well, this was a project, also from the Park Service, about the national natural landmarks in New England, most of New England except what's the coastal plain, which is Cape Cod and the islands and then the Adirondacks in New York State. And just looking at the natural systems both ecologic, geologic, educational and actually investigating them and ranking them. It was just, I didn't get paid much but I got to travel all over New England and just look at magnificent systems. Unfortunately, the book that I, one of my fellow students and one of my professors put together, it's over a 700 page book, I'm sure it's gathering a lot of dust.

Judith: Oh, that's too bad.

Gail: The Park Service it some place but it just, you know the scale of how things that were affected by human impact versus the things that really were not, were more natural. It just made such an imprint on me. And that's my background. That's how I got my interest. And I actually worked for many, many years in information technology because that paid the bills and I learned those skills when I was in graduate school. As I also did, I did a project on, there was a Red Pine plantation in Patchogue State Forest in

Voluntown and it had, part of it had a controlled burn and the other didn't and I studied the migration of heavy metals through the **duff?** and into the mineral soil to see if the burn had any impact on the migration. It turns out it didn't. But I needed, that was before there were packages that you could use for statistical analysis, so I had to program it all myself and you know, it was a payable skill. But I always kept my fingers in things by participating in my land trust and my conservation commission and other volunteer opportunities and now I'm actually being paid, not much but some, to work in a field I love.

Judith: You mean like the Master Gardner program?

Gail: Yes.

Judith: Yeah.

Gail: Plus, the focus is on science and on natural communities, not so much just "oh here, this is pretty. It doesn't matter, you know, if I have to dump a million pounds of fertilizer on it and water it constantly". You know that's definitely discouraged. You know our motto is, Right Plant, Right Place.

Judith: Right.

Gail: I feel very comfortable in the Master Gardner Program.

Judith: Well I know you're a great resource that's for sure.

So, in view of your background and all the places you've studied, and the wonderful opportunity to really get in the field to see how the mountains and the lakes and streams have all created our topography #1, but also how it's created Ecosystems #2. Let's look at the idea of sustainability in this framework. What do you feel is the most important issue facing sustainability today?

Gail: Well my thoughts on that, that so many people have no connection to nature. They don't know about the natural world. They don't realize all the different relationships among the plants, the microorganisms, the insects and everything else that you find in nature; the weather, the climate, the wild life. They don't, so they don't have that respect, so it doesn't really, when things are changed and developed, they don't have any sense of loss.

Judith: Yeah, and if we don't have a sense of loss than we're not really attached to it, are we?

Gail: Yes. That's my thought. I think if people are instructed somewhat they'll realize. And gardening has become more; sometimes it's a competition almost. Oh, I can grow this. Or this is the latest thing, and do you have that? Almost, based on my relationships with especially my sisters, you know what they do not really knowing that "yeah you know I put this butterfly bush in" and I tell them well, maybe if you put in a butterfly weed instead you'd really be helping things out a lot more.

Judith: Right, but people put the bush in because that's the perception out there that because it's called a butterfly bush it's the best thing in the landscape. When actually, it's not.

Gail: It's not. And in some states, it's even buddleia has even been declared an invasive plant, meaning it overtakes where ever it's planted and it spreads uncontrollably and it out competes the native plants. And the book that I would recommend is the Dough Tallamy book; of course, I'm having a senior moment and can't remember the name of it.

Judith: "Bringing Nature Home".

Gail: "Bringing Nature Home", that's right. He really shows how planting things that maybe pretty don't necessarily provide the habitat for insects and other pollinators and that insects are actually good things. They're not things to just be squashed and vacuumed up.

Judith: Well you know I went to a talk several years ago on the bees and the insects and I came away with a different awareness. Out of the insect population I think only 1 out of 10 is actually a pest or something to be managed differently.

Gail: Right.

Judith: But most of them are actually quite beneficial and again we don't quite have that awareness because our society wants to keep pushing the pesticides and you know, etc., in our landscape.

Gail: Both that and I find that having a squeaky clean suburban or urban upbringing just doesn't introduce people to the beneficial aspects of insects and what they actually do.

Judith: Your right, it doesn't, it doesn't. And we can see many examples of that in some of our more planned communities. You drive around, and you see a lot of Asian influences and it's not that the plants from Asia are bad, it's just that we have not adapted to them so therefore we are not providing food for many of our insect populations, or nectar for the pollinators.

Gail: That's right, that's right. And, um, it's an education thing.

Judith: It is.

Gail: I think that you know we just have to keep repeating what we think is important and keep repeating it and repeating it and eventually some of it will stick.

Judith: Well my Native American ancestors would say it takes seven generations.

Gail: Oh, I love that.

Judith: We have to keep at it, as you've said.

Well this leads us into one of my focuses and that is a partnership with nature. And for me it means being respectful, having even a sense of reverence for nature for the intelligent management and, I don't know the right word, but it's an intelligent operating system. That's what I'm trying to get at.

Gail: Oh, that's absolutely true. I couldn't agree with you more. And I think in my, what first drove this home for me, is when I was in graduate school and we went to the Branford supply ponds which were in Branford where there had been, well there were two incidents. The first one that really made a big impression on me was that on an abutting parcel a little subdivision of homes had been put in but they didn't really realize the power of the water or that they were built on the erodible soils, the reddish soils from the Connecticut Valley arkose and within a year or two of the homes

being put in, they had just put like you know, like culverts that just dumped the water into the woods which of course was the Branford supply ponds, which is a natural area and the water, the force of the water created an erosion gully that was over my head. I'm not that tall. I'm 5'3" but still that really reinforces the power of water, a natural force that people think can just be ignored or controlled. And I think that a natural force such as that and maybe others that maybe aren't as evident should be respected. And the second item I wanted to point out from that same trip there was, one of my professors was doing some plots, measuring for its flora material and then the Boy Scouts came in and to do their good deed they raked up all the forest flora material which really screwed up the forest relationships because if you want natural regeneration of plants, they require information the leaves that fall, the dead wood that decomposes and all of the insects there in and the microbes. That has to stay there, and you know it gives you thought, makes you think well; "Why did they think that this is a natural area. Why did they think that needed to be raked up?"

Judith: Well that's an interesting question because that gets us into maybe a statement about our own development.

Gail: Right.

Judith: Maybe we're not as developed as a species as we think we are, or/and we've lost our connection so much with nature that we don't even pay attention to the consequences of what we're doing. We want everything to look nice which is fine. We can co-create a beautiful forest with nature but there has to be some understanding of the relationship of all the parts to the whole, which gets us back to holism, gets us back to our holistic nature. The holistic nature of Nature requires all these components to be there, as you've just beautifully demonstrated, to keep the forest going.

Gail: Right. And I think that's such a great point. And I think that because there's so much development and sprawl that a lot of times backyards really are the natural ecosystem. Although they're mostly not natural, that's where nature has to live. I think people instead of trying to control everything, should just let nature do its thing and they would be pleasantly surprised.

Judith: Yes and with very little management they might be very surprised.

I took a backyards very typical suburban lawn, about a 1/3 of an acre and I just let it grow wild and all I did was, I did use a lawnmower, but I only put a couple of paths in. And the amount of wildlife that came in and other species of plants that came in was amazing. And, I have to tell you, my neighbors loved it. They didn't do it but they loved what I did and so did the kids. They were fascinated by it because nobody else had a backyard like this and it was a sanctuary. I asked them not to kill a spider because it was in their way, or not to kill a bee because it landed on them. To just be quiet and the bee will move on. And eventually they did respect that. But I think we've lost the understanding of the diversity that we have in our landscape. That's true and unfortunately, you know, a meadow growth like that, because I have one as well that I love, and I think in some cases there are even homeowner's association agreements that forbid those. Or, when people do things like that they are, if the place has a blight ordinance, people are considered to be creating blight, which is so far from the truth. But again, it's an education.

I know recently Maggie Redford, whose I think the Assistant Director at the Connecticut College Arboretum, she lives right in New London, and let her in her small urban plot, let it go back to nature and she was written up for a blight ordinance. But she did go in and explain to the powers that be and they understood and said, "Well okay, we're educated". I don't think that they have removed the blight ordinance but at least they were educated.

Judith: Yeah, and it's going to take us one garden at a time, in some respects, to make those changes. I know I've seen on the Internet front yard gardens in Canada and they really had to work very diligently to get it through. And the gardens were actually quite lovely. They weren't messy. And they had vegetables included in there and using up their land space to provide food. But it was organic. So, you're right. It is all about education.

I'm curious Gail, you've been out in the wild lots of times and you've had a chance to see so many different native plants and native landscapes; what is your favorite?

Gail: Well I collectively love native orchids. And I don't know why. There's just something about them. They're so delicate and there's such a range of them. There are the more common ones like Lady Slippers; the pink Lady Slipper is fairly common. And it has the beautiful pink flower and the really graceful leaves. And then there's also Rattlesnake plantain is

an orchid. You might be familiar with it if you've been in the woods. It has green and white leaves, which is unusual to have a native variegated plant, but it is. And in late July, early August it puts up spikes of bells. And orchids are also the most, one of the most, highly evolved plant families. But then there are other orchids that aren't as common and those tend to grow in bogs and bogs are, there's just nothing like a bog. Have you ever been in bog?

Judith: I don't know. I'm not sure. I had the wonderful pleasure up in Vermont where my herb teacher lives. She discovered in a marshy boggy area, I'm going to use the word boggy area, Lady Slippers and Gail there had to be 400 of them. It was one of the beautiful places to see.

Gail: And there are also yellow Lady Slippers and there are white Lady Slippers. You know they're different species but there are also, there are some bogs around here in Connecticut and not all the places are preserved but you'll find things like Rose pogonia which is just such a delicate plant. It has a lip that goes forward. It's pink and it has different shades of pink and little dots and there's a little yellow in there. And then this fringed lip and it's just dainty. And then there's grass pink, which is

Judith: Grass what?

Gail: Pink.

Judith: Okay.

Gail: It's really more purple but it's just a lovely plant and it's very uncommon. It's not rare but it's certainly not common. And then there are also other kinds of orchids called Orcasis and I have seen. Well actually I have seen some in Connecticut. You know the spots where they are, are not given away. But we own property up in Northern Vermont and there's a purple fringed Orcas and it's the most delicate, like these little tiny flowers with a fringed lip and they're light purple and then there's a white fringed Orcas and then there are others that don't have a fringe. They're just, plants are just so striking that if you've seen them, the whole bog environment – you have plants in there that are just uncommon. Like that's where you'll find cranberries growing natively. You'll find bladderworts. Okay that's where you'll find insectivorous plants; bladderworts, sundews and pitcher plants that are just amazingly adapted, and their flowers. They actually have

flowers and you can see where the insects get trapped. There are just all sorts of; like you have your swamp Milkweed, your *Asclepias incarnata* will grow there. If you have a peat bog sometimes what you'll have, is you'll have water with a mat of peat on top that you can actually walk across. But it's like walking; do you remember the old waterbeds where they used to ripple? It's like walking on a waterbed.

Judith: Oh that's cool.

Gail: I love orchids.

Judith: I can tell. You certainly gave us a few species that we can possibly look up ourselves. I know I tend to walk; I live near a lot of marshland so I'm going to keep my eyes open for some of these species.

But before we conclude, I would like you to give our listeners today some practical tips. One to three and give us something practical to do, something they can take home and maybe even think about. In New England here we're in winter so it's a good time to look at catalogues. It's a good time to think about our gardens for next year. What would you like them to go home with today?

Gail: That's such a great point. My first point is to look at what's growing in natural areas near you. And you know that those plants are adapted to your area. And it's not like these plants are not beautiful. Like there are all sorts of Dogwoods. And I was just thinking today because we got a few inches of snow. You probably did too today, right? Did you get a few inches?

Judith: Yes, we did.

Gail: We got some snow. It's lovely light powdery snow and I was looking at my Red Twig Dogwood, which is a nice native plant. The dogwoods have been changed. It's known as *Cornus sericea*. Although dogwoods have been moved to another genus but *Cornus sericea* works. And the twigs are red, and it just looks so beautiful against the snow. And *Ilex verticillata*, which is Winterberry Holly. It's a deciduous holly that is very common here and it's very nondescript. In the summer the flowers are little tiny things that you don't even notice. But now it has beautiful red berries and I know that's quite a contrast during the snow.

Judith: Gail, just repeat that name again. I always tell my listeners that knowing the common name is good but knowing the botanical name is great. So that berry is Ilex –

Gail – *Ilex verticillata*, Winterberry holly. And it's not the first thing that the birds will eat but I know there have been times when we've had like a few feet of snow and my shrub is just like, the berries are just on top of the snow, and then I've seen Bluebirds come and eat them. And it's just great to know that you're helping such a lovely bird like a Bluebird when the conditions for them aren't that easy because there's so much snow around that that's a food source for them. You can think of winter interest but then you can also think like, there are so many plants – especially I'm thinking of shrubs that are just really gorgeous. There's pinkster flower. It's called an azalea but it's really rhododendron. That's one of the first plants to flower in the spring. It flowers before Mountain Laurel. And if you just looked at it you might think it's Mountain Laurel, but the flower is really a rhododendron flower where it's lipped, and it has these huge stamens and it's quite pretty. And it grows along forest edges. And then of course there is Mountain Laurel, our state flower. There is spicebush, which is another lovely shrub. It's one of the first shrubs to flower, usually like at the end of April it has little yellow flowers. The leaves have a lovely smell. Also, not really, it's more of a tree, but early in the season there are Shadbush or Shadblow or Juneblow. It has a lot of names; Juneberry, Serviceberry. There are a lot of them. They're hard to tell apart but the genus is *amelanchier* and those flower before everything else, nice white flowers. You know if you didn't know what they were you might just think they're black cherries but they're not. And those are lovely, and they produce red berries.

Judith: That's great.

Gail: You get, in August when it's really hot a dry, they you should plant *clethra alnifolia* It's called sweet pepper bush or summersweet because that flowers in August.

Judith: Yeah, just like the Rose of Sharon, Summersweet, it flowers in August. Yes, we're also looking to keep a continuous color aren't we, in our landscape.

Gail: Yeah, a lot of people like flowers. You know the actual flower of the plant. If you like that, that's one way to do it. There are native plants that flower up until Witch Hazel, *Hamamelis virginiana*. That flowers October into November. It has this weird yellow flower.

Judith: Yes. Well that's great. Okay, so what's point number two?

Gail: Point number two is don't over-fertilize. Really, have your soil tested before you, you don't necessarily have to dump things in your soil. Because what happens is, you can listen to the commercials and put lots of fertilizer and what the nitrogen fertilizer really does is it promotes vegetative growth, green growth and it just can't be all used when it's dumped in such copious amounts all at one time. When it rains or when you water it gets washed away and it ends up in the water supply, town water supply and the surface water supply and it's not good for those aquatic ecosystems. It really puts them out of balance.

Judith: Right. And I know for myself as a Master Gardener I try to encourage people to get their soil tested and not to over fertilize it. Isn't there kind of a saying in the program, you know, less is more?

Gail: Yes, and actually if you leave your grass clippings in place that's really all the nitrogen you need if you grow grass. It really is. There are mowers that shred it up and just if you leave them there. And then also the same thing about lime; you don't really need to add that. In fact, some plants don't like lime, which raises the PH, and some plants like blueberries and rhododendrons don't like a high PH and they won't grow in it. It causes the nutrients they need to not be available to them.

Judith: Those are really good reminders. Okay, what's #3?

Gail: The third thing, and this is a little bit more arcane, but I think that people should realize that the plants, the ecosystems we have around here really evolved since the last Ice Age which has been such a long time ago. It's not like it was last year or 100 years ago, or a 1,000 years ago or 2,000 years ago. It was really long, long, long ago. If you think about that passage of time and how long it took for those things to just get to a point where they're living in harmony, shall we say? Although it's not like a tight rigid type equilibrium. It's something like, things are always changing but on a really slow pace and I think that just that acknowledgement of time and not

to expect things to happen overnight and actually changes that we make overnight can have drastic adverse impacts on our natural ecosystems.

Judith: Well you know Gail, I think that's the whole point of what I'm trying to get across to our listeners and into the world that we want everything yesterday, we have to work 24/7 in order to get something now, now, now, now yet Nature tells a different story. Nature tells us that things are changing but we have to pay attention to how and when they do change. You know a goldenrod is going to change differently from rose. But yet they live in harmony as neighbors. I really like that you stressed that point here for our listeners. I think that's wonderful because that's what I'm trying to get across too.

Gail: Right. And you know just like short-term gratification. I know a lot of the self-help books say forego that and I'm just saying give it a rest for ecological reasons.

Judith: Right. Well I know that our time is ending here and I'm really, really grateful and delighted that you could share some of your wisdom. I'd love to have you come back. We'll pick another topic, but I know that you're very involved with the Master Gardner Program. Is there anything else you'd like to leave our listeners with for yourself or for the program?

Gail: Well I would love to say a little bit about the Master Gardner Program. It's a science-based program that has a classroom that is I think 16 weeks long and then projects after that and you're really helping the public spread the word about good gardening practices that are based on science. And you know once people take it they're usually addicted for the rest of their lives. And we also have Advanced Master Gardner classes. Judith, you've taught some of those, where we give our students and the public, because anyone can take the Advance Master Gardner classes, insight into other topics. And our website is, www.matergardner.uconn.edu and please check it out and when you're looking through your catalogues while we have snow on the ground, you should keep an eye open for native plants and native plant sales. I think that when you start to stock up for the spring, you know, just think about what we've talked about today about the fertilizer, about the native plants.

Judith: That's great. The other thing I want to mention about the Master Gardner Program, because some of our listeners may not be from

Connecticut, but it's a nation-wide program offered by the state universities. So, I highly recommend that our listeners who are interested in learning more and believe me people have a variety of interests. I can only tell you from my own experience I've met some really terrific people who are passionate about their particular interests in gardening. Whether it's becoming a member of the Iris Society or the Butterfly Society or growing vegetables. There is such a variety of ways to meet people and to become more informed through the Master Gardener Program.

Gail: That's absolutely right, and also to educate the public.

Judith: Yes, exactly.

Gail: You can never have enough of that.

Judith: Well Gail what I'm going to say is thank you so much for joining us. I hope my listeners feel as inspired as I do by you, your talk, your expertise and your very practical advice.

Gail: Well thank you so much for having me.

Judith: Yes, my delight definitely. I'm going to conclude this pod cast by reminding all of you that I'm the author of "At the Garden's Gate" book and blog. My book "At the Garden's Gate" is available through my website. Go to judithdreyer.com or you can find it on Amazon, Nook, Kobo, Indigo as well as Ingram Distribution. You can visit my website for a replay of this pod cast and it will be on other platforms.

Thank you again everyone, have a good day!