



Season 1 Episode 8—What’s Wrong with My Tree?

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Announcer

Welcome to the *Southern Ground* podcast provided by Alabama Extension through Auburn University. Extension educators Shane Harris and Dr. Chip East discuss seasonal lawn and garden topics, address common questions, and provide the practical solutions you want to know. Let's dig in to our southern ground.

Shane Harris

Hello again everyone, and welcome to the *Southern Ground* podcast. I'm Shane Harris and with me again partner with this podcast is Chip East. How's it going today, Chip.

Chip East

Oh, doing good. Shane, how are you?

Shane Harris

I'm doing well. Hey, we've got another great topic here. And this is a big topic. What's wrong with my tree? Especially in the springtime when we get a lot of new growth coming out. Maybe in the wintertime, when people are looking at these trees or just when there's limbs after a storm, we get calls. People about concerned about their tree is dying or declining.

Shane Harris

They ask, what's wrong with my tree?

Chip East

There's a lot of trees species that I like better than others. But when a tree's been there a long time and it's big and a huge shade, and we like it, even if it's a species I don't like as much. I'm thinking I want to do whatever I can do to save this tree if it's in decline. So, I respect the age of that tree because we may never see one, you know, if we plant a new one, we may not see it that big ever.

So, if there's anything wrong with it. Yes. I want to see what we can do to fix it, if at all possible. And there's things we can do to encourage tree growth. And we don't have to get into that in this podcast. We're just looking at what might be wrong with the tree.

Shane Harris

It does take a trained eye to look at a tree and do a full evaluation. Almost like a health checkup. When we looking at the potential for decline.

Chip East

Like a physical evaluation like a doctor might do on someone, is look at everything. That's correct.

Shane Harris

It's just hard when a tree is 50, 60, 70 feet tall. We're talking about some of the big, maybe some of the big, majestic oaks out there. You can't see what's in the very top, and you definitely can't see everything that's in the ground. A lot of times when the trees are beginning to show decline, it is a slow death.

Shane Harris

And so, what we tell homeowners, landowners is you're going to evaluate the whole tree. And the easiest part is to look up and start with a canopy. But even looking at the canopy, what the results are seeing are the effects we're seeing in the canopy is a result of the defects in the roots.

Chip East

The roots or the trunk. That's absolutely right. And you'll see the, the problems in the top, the tree's, limbs dying, leaves falling off prematurely. I don't know that there's several issues that could be not putting on a lot of new growth, and yet it can be something from the trunk or the roots that's the problem. But people will see, that's the part that showing, they're going to see that crown or that canopy, and we'll go from there.

Shane Harris

It's usually takes some type of episode. Maybe it's a large limb that has fell, maybe it's, after a storm, that or maybe the trees begin to lean or they begin to notice some type of unusual around the, the base of the tree. Before we get into diagnosing the tree and doing a full evaluation, there's, there's lots of things, bottom line you just have to know tree biology, there's lots of things that can cause a tree to decline. It could be age. It could be

species. It could be environment. It could be storms. Most of the time it's stress. And unfortunately, a lot of trees that decline and do eventually die is due to human activity. And when I say that, especially around the roots, we'll talk about more about roots.

Shane Harris

Roots is the most important part of that tree. And when we have construction activities, we have trenching, we have digging, we have grading. We even have soil compaction from maybe parking cars along there. Over time, that's going to have a negative effect on that tree.

Chip East

It'll have a negative effect, and you'll see it in the top growth that we're not getting it as good. If you think about the different species. And just like when my tree's losing its leaves, we get that sometimes, certain trees like, black gum, they drop their leaves or like early in, in the fall, southern magnolia. Oh, that's one of my favorite trees.

Well, they can drop leaves 12 months a year, but during the month of May, they'll drop leaves more than any other month. And all, and that's when they're blooming and we get a lot of calls. What's wrong with my tree? Well, nothing might be wrong with that tree, but that's when we notice it.

Shane Harris

So, let's start with the canopy. And especially in the spring, let's look up and see. Well, how many new leaves do we have that are emerging? A healthy tree should have a full canopy of leaves, but if we look up and we begin to notice some areas of limbs and twigs that do not have leaves, those could that could be dieback, those could be some dead areas.

Shane Harris

And so that's where we want to start is what percentage of our canopy is actually intact, 50 percent, 75 percent, hopefully 90 percent or greater. You're always going to have a, a twig or two die. But does it look healthy, from the ground?

Chip East

And how much new growth are we getting? If I could get in a bucket truck, or if it's a tree that's 20ft tall and I can climb a ladder and get in the top of that tree, the branches close to the ground may not, they're in the shade they might not have as much new growth, if I can get the top of that tree.

And maybe I use binoculars, I don't know, but I can actually look and see how the tree grew last year, and then I can see how it's currently growing this year to tell me, am I on track or not? That's something that could be done. It's easy to say remove the broken branches like the wind may break a branch.

Chip East

It's so easy when you can reach it. I've got a pole saw. I mean, we can climb up things to and saw, but if it's up 80ft tall in a tree, bucket truck or somebody, I've seen people climb trees and cut limbs. The limb does need to come out. It can be a hazard about falling. But, if that tree just the, the branch just dies, what happens is the, the bark doesn't cover that, I'll say wound, but if that branch broke out or the wind blew or whatever, if it doesn't heal properly, water is going to eventually get inside that the base of where that limb was and into the trunk. And we're going to get to it later. But we cause problems all the way down the trunk. When water gets in, and it all might have caused from a broken branch.

Again, if we could have cut that branch from the ground easily, that's simple. But when it's 80 feet up in a tree, that is not the easiest thing to do.

Shane Harris

Yeah. So, it may be having to walk around, look up different angles, different times of the year, but especially in the spring when the trees have been put out new leaves, new growth is there. If you don't have a lot of leaves when you should, then that tree can either be declining, it is beginning to die, or it could be portions of the entire tree may be, actually be, dead. And some of that is different species come out faster than others. You need to start looking up first, and then we'll move our way down as we look at other areas.

Chip East

Dead wood and dieback is not a good thing, and it certainly needs to be addressed. And we need to figure out why that is happening. Sometimes we may have a weak branch. I just think about that from storm damage. Whenever the storm blows a branch off and breaks it, I can't do anything about it then but try to make a smooth cut there, but a big branch is hard to heal over.

But my point to this is narrow crotch angles on a tree. Maybe you've got the tree --two central leaders competing to be that dominant central leader. Well, when you have, and sometimes there's three trying to be three central leaders, but when you've got more than one competing, we have narrow crotch angles at that point in time where the, these branches are attached to the trunk.

And it doesn't take much of a wind and you'll see this driving down the road for half that tree to be laying on the ground. Sometimes it's way up in the tree, Shane, when we see that, and maybe we couldn't do anything about it because it was too high up, but oftentimes I'll see that it started when it was knee high, and that could have been corrected easily when that tree was young.

Chip East

Now the nursery, they fix all this when you're buying a tree. They look good. So, it's from that point forward you've got to look. But if we planted, I plant a lot of acorns, I plant a lot of seeds and I grow my own trees. Well, I have to start that training process way early on. But we can have these broken branches because of narrow crotch angles, because we didn't train our tree right from many years ago.

Shane Harris

And could also be from improper pruning, even as a mature tree, such as topping, creates, weak growth, something that's not recommended anymore. So, you've got to look at the also look at the full history, how how that tree has been maintained as well as, as well as maybe the natural storms and, and things that caused the damage.

Shane Harris

So, as we move down from a canopy, we let's, let's first look at the leaves see how many leaves we got and then begin to move down the trunk and look for any type of trunk splits or cracks, rotting areas, dead limbs, holes, cavities. You know what, what are we seeing? There may be plenty of leaves in the top, the leaves may be good, but what are the, what are some other signs and symptoms of things along the trunk, the branches, in the limbs, that could be of concern?

Chip East

Large pruning cuts, a lot of people cutting a big branch. And I don't like doing that because the bark doesn't heal over that cut very well when it's large. And eventually water again gets in that trunk, just like if a branch I described earlier broke at the top of the tree. Eventually water can get inside. We'll see all those holes in the tree, and we think, well, that's good for wildlife. It is wildlife, love it. But that is the stability, the strength of that tree. We've lost it when we lose the inside, the woody part of a tree.

I think about your house. A lot of wood in that house. That wood's dead. It's not growing. It's just dead wood. But it is strong. But when we lose the top of that tree. When we lose the top of our house, for instance, in the storm, or shingles, for whatever reason, water gets in on the house, we're rotting in our house. The wood can rot, is strong when it's dry.

Same thing in that tree. When water gets in there, it can rot and we see this often and not a easy solution to that. When the, the hopefully that wouldn't happen in the branches. But when, when we have the holes in the trees, we just open it up the weather to get in and start decaying.

Shane Harris

Yeah, those are areas Chip mentioned for, for decay and rot. And so, as that opening continues to get moisture over time, then that decay can move into the, the central part of the trunk, leading to rotting. We've all heard of hollow trees, especially the mature trees. A mature tree is nice and strong. I mean, can be it could be hollow.

Shane Harris

The example I use a lot is a is a steel pipe. It's nice and strong. Until that decay breaks through. Or you actually physically cut that pipe somewhere. Then you have a weak point. So, a lot of mature trees over time have decay. They naturally have decay. But it's that when that rot expands, down into the roots, begins to break through the, the trunk and the bark of itself. Those creates weak areas.

Chip East

They do. And it's hard to go back in time and, and fix that. And I'll say again we call it a bark inclusion, or it's included bark when you have two branches growing side by side. And again, they don't have to be competing for a central leader, but just two of them growing beside each other. You have bark. It's not just wood attached to wood; it's a lot of bark touching. And that might be for several feet. And that's not a strong union. And it's easy for that to break and once that breaks over again it doesn't heal over like it should. And when I say heal over, the tree's not healing. Bark is growing over the wound.

And then that protects it. And we just don't have that when we have these rough. I say a rough cut, but it's really a rough from, the wind or something breaking it instead of being cut smooth. And again, you could cut it smooth. If it's a big branch, it may never bark, may never grow over that spot. So, I really want to train these trees when they're young. So, we hopefully won't have this problem when they're older.

Shane Harris

If you're making a pruning cut or hiring someone to remove large limbs, they have to be properly trimmed in the right location so that you get that growth to callus over and heal. A large wound is not likely going to heal over, but that again allows an entry point for rot. So, Chip, as we go down the trunk, we're still looking for those splits and cracks.

Shane Harris

Any particular areas of rot? Maybe some areas that, animals such as squirrels or birds have hollowed out. Even carpenter ants can get up there and do some of that. Do we have any bark shedding off? Falling off? Especially those that are, don't do that naturally. Do we have any kind of leans? We get a lot of calls, "My tree is leaning." Is it their immediate lean? Is that over time trees have the ability to stabilize themselves. So, a lean is not always a bad thing. They're not always straight. The you know, look for that root rot or any type of things of, of concern.

Chip East

Sometimes we'll have the woods, and we cut all the trees around it and leave this tree where that tree might have been growing towards the light. So, it's growing toward the light. It might not be exactly straight, but if a tree was grown in the open and it's leaning because the wind blew it over, I would have more of a concern with that tree than I would just because one wasn't exactly straight, because I cut a tree that was beside it or something.

Now I will say usually I don't like having the woods and cutting all the trees, but this one and that one and this other one, because I really like. And leaving those a lot of times they don't make pretty trees. That crown is, there's no branches near the bottom, there's just branches in the very top of the crown and the wind can blow those so easily. It's a tall, slender trunk and to me it's just not strong. So, a lot of times I'd rather plant one, but if I leave one, I'd rather leave a young one.

Shane Harris

So, we moving on down to the most important part of the tree, the most sensitive. And for homeowners and landowners, this is the part that you can take action if you want to have a mature tree, you have to protect the

roots. Because the roots are, a lot of cases, when they become damaged or harmed or even begin to rot, that leads to the other problems that we were talking about earlier.

Shane Harris

You're talking about leaning trees. I had one recently, a mature pine tree that was 20 years old that suddenly began to lean and eventually fell over, just a plain calm day. And going back and look at it had root rot. Some of the roots failed because of the rot. And so, we look at the roots. A lot of these issues that we're talking about are due to root problems, root injury and root damage.

Shane Harris

What caused that damage? And again, if you're trenching around the house or putting a new water line or you're doing construction and you having a grade change, or you're adding soil on top of roots, or if you're even cutting the grass and the lawnmower keeps hitting those roots in the lawn, that can lead to, to problems, especially human activity around that. If you're cutting a root, severing root, digging around a root, chopping up a root, all that eventually causes stress on that tree, which leads to potentially a slow death.

Chip East

When you're looking at how much roots can you see from the ground without digging and removing soil, there's only so much you can look at. We had an oak tree in the back yard at my grandparents, and we, as kids, would see how far we could walk away from the trunk and still be stepping on root Shane. We could walk, depend on what direction we could walk, a long way out. Well, why are those roots on top of the ground? Well, roots were going to grow in the best environment suited for them, and that was a compacted site. I can tell you. And we had a lot of roots on top, because I'll see that same species of tree in a better location and I see no roots, it's just not a characteristic of that tree. It's a characteristic of compacted ground.

Well, that's something I can see by looking at the ground, you see. Is that compacted area? Well, what can I do about it? Well, maybe I can do something, maybe I can't. And if we plant a tree in that area, we just know that it's compacted ground here and it could be a shallow soil, or it could be rocky down below a layer of slate or something under you, that no matter what we do, we're going to have shallow roots and they're not going to go. And I will say most of it, 90 percent of a tree's roots, even a tap root, are in the top 18 inches of the soil, even a tap rooted tree and all we up. But they do go deeper. But we're very much concerned with those, the top 18in of that ground.

Shane Harris

And most people don't understand that root zone is 1 to 2 times that canopy. It's not just around the base as you described. It's further out. It's beyond the drip line of the canopy, possibly even beyond that.

Chip East

Beyond—a lot of people think they'll fertilize out to the drip line if they're fertilizing a tree or one or tree, we can go 1.5 or more past the drip line of a tree is where the we call them the feeder root to the root hairs that take in nutrients or water can be, yeah, they're close to the tree, just like a leaf is on the tip of a branch.

But those branches, if you're under tree, they're not just all out on the end. You got the branches cross and they're everywhere when you're under that tree. And that's the way the roots are. They're everywhere, under, under your feet.

Shane Harris

So, keep in mind that for an example, you have a tree in the lawn. Just think about the activity around that tree. Do any type of digging in that root zone can ultimately sever tree roots, and it can limit the tree's longevity. So, any human activity can cause harm, especially cutting larger, larger roots. You know, that's the lifeblood of that tree.

That's where all the food and water and nutrients that are coming through there, that's the stability in the tree or anchorage itself from those storms, helps it stand up nice and tall. So, when you're cutting roots, damaging roots, not only are you hurting the tree from a physical standpoint, you're hurting it long term.

Chip East

Absolutely. And where to me, I go back to when we top a tree. I don't want to cut a big branch out of the top of a tree. And I got new branches grow from that point. They're not attached well. When I cut big roots, yeah, I might have some other roots to grow, but it is not strengthened in that tree to a storm like that Big Root did. So, I'd rather not do that.

I'll tell you something else I look for, Shane, when I'm evaluating a tree. You're looking at the roots, and I look at the trunk to for this. But are there any mushrooms growing on the conks? Another thing, it's mushroom-like that grows on dead wood. And if you see that, that just tells you you've got dead wood.

Is the tree healthy? No, it's not healthy. Can I do anything about it? Well, it's hard to once that part is dead and that bark and it can be there's a canker that we. Hypoxia and canker is something that'll be on the all the way on one side of a tree, all the way up. It can be tough on an oak tree. I can't fix that. And I'll see a lot of decay there. So those are things we're looking at on the roots.

Shane Harris

Even on the base of the tree, the at the bottom of the trunk that touches the ground are we see any bark beginning to split, loose and falling off? Are we seeing type of insect feeding damage? Maybe sawdust. In addition to those fruiting bodies. Chip was talking about open wounds, rot. You know, things of concern that that are not natural could mean there is a problem here.

Chip East

I want to see a nice root flare at the base of the tree where the trunk meets the roots. It should be a, we call it a root flare, but it's a wider point. The trunk will come down, it gets wider as it meets the ground. Oftentimes, if a tree's planted too deep, it'll look like a post in the ground.

The trunk just comes straight down into the ground, there's no flare, and it can be several years before we see the decline of a tree because of this. And it's just-a good soil is got some nutrient holding capacity. It's got water holding capacity. It's some kind of mineral there clay, silt, sand- something like that. And air holding capacity.

Well, when it's standing in water or it's compacted because we parked cars on it, we're pushing our air out. And when they're planted too deep, or maybe they're not planted too deep, we might of hauled in soil around it and, and now it's too deep for whatever construction. Why, we might of planted a flowerbed there and added several feet of soil. I don't know, but we've gotta we don't see that root flare. I know I'm starving for oxygen when we get to that point.

Shane Harris

And again, that's going back to the roots. The roots need oxygen. They need water. They need nutrients. They're there for stabilizing that tree. Those roots are highly critical, very important for the for the lifetime and longevity of that of that tree. So, we want to look up, evaluate the canopy of the tree, move your eyes down along the trunk and the limbs to see anything or any kind of problem areas, anything that you make can control or, or correct.

And then you know, what are the signs and symptoms along the base of the ground. That's easy because we're, we're on the ground. Basically, any kind of rot, any kind of rot, a decay, defects, deformities, cracks, bark splitting. Now, now we're beginning to get a little more concerned.

Chip East

Sometimes we see a girdling root, and a lot of people have that as they stake or guide a tree. They'll tie a wire and hopefully put a piece of a rubber hose or something there, so you don't cut into the tree with the wire. But a root can grow over the around the trunk and girdle a tree and really reduce the growth of that tree.

And that's not a rot. That's not an insect. That's not a disease. It's a root that might have done that. Well, it can happen below ground too. But oftentimes we'll see it right there at the soil line. Sometimes, Shane, we're looking at this tree and it's in decline, but we can't see anything visibly wrong with it. I always ask a client what about possible herbicide injury that what's been put on this yard.

Because there are a lot of herbicides that are perfectly safe, and some of them that can really slow a tree's growth rate. Something to think about when we're evaluating a tree may have nothing to do with the disease.

Shane Harris

And Chip along those lines. We're looking at trees and why they have declined or died. Sometimes these things are hidden. They're hidden reasons why we can't really tell what happened to this tree. We don't know why it

died. We don't know why it's declining. But when a storm comes through and blows it down, a lot of times there's the evidence.

There's root rot, there's problems, there's a hollow tree there. It reveals the weak points. We thought the tree was healthy, but it had all these weak points in the tree, and the storm knocked it down.

Chip East

We have evaluated some pecan farms before hurricane come through and blow this tree over. But not this tree. Well, it was the same wind, same strength come through. Well, we get to looking at the root system, and then we can tell, yes, that's why this tree blew over and why this other one didn't. And part of it came back to how that tree was planted in the first place, which is another podcast. We'll talk about that another time.

Shane Harris

We hope your trees don't fall down. Hopefully you have a chance to, to remove them or take them down which leads to our final comment, on this podcast episode, A Hazardous Tree. We do have that question as well. People get concerned and when they talk to us about these problems, the issues, specially when we begin to point out your tree has rot is got, only 50% canopy, there's cracks and splits along the trunk.

At some point, the tree may had to be declared hazardous. Well, it has a tree is defined as any tree that may fall or cause property damage or bodily harm. That sounds bad, right? We don't want a tree falling. Especially a big, big, mature tree falling on a car, falling on the house, falling on ourselves or family members, neighbors, fences. We don't want that property damage. So, at some point it's going to be up to the homeowner, the landowner, to decide, when do I take this tree down?

Chip East

And we've got great information online about hazardous trees that you can read and evaluate the tree on your own. You can also hire a certified arborist, can give you a second opinion on whether you should take the tree down or not. In my experience, whenever someone calls about a tree, sometimes it's already too far gone. When, when they notice that, or at least when they call, it's, it's in bad shape.

Chip East

If a tree needs to be removed, get someone licensed to do the job. Someone that has had training in this area. It is expensive to get trees removed. It's expensive to get the tree cleaned up after it's taken down. Cutting trees is the most dangerous job in the country and certain people are qualified to do that and certain people are not.

Chip East

If it's a small tree, a homeowner could go cut a 20ft tall tree, but if it's something big that can damage your house or other people's houses, it, it is a extremely dangerous job. Hire a professional to do that. Yes, it's expensive, but it's worth it.

Shane Harris

We love our trees, but they all have a lifetime, a longevity. They have problems. They may decline. They may die. Hopefully. This podcast, we pointed out some things for you to look at as a homeowner, landowner, for you to be educated, then you can make the appropriate decision to decide what's wrong with my tree, what do I need to do about it?

I will point out that when trees begin declining and dying, we do get this question. In addition to the additional questions, we get asked, what can I do about it? Nothing. When trees begin, have rot, have problems, have decay, have cracks, have all these issues that we just described, it likely will need to be removed.

Chip East

Very little could be done oftentimes.

Shane Harris

So, as we wrap up another podcast here on what's wrong with my tree, we've described a lot of things that we've seen over the years, but these are things that people need to pay attention to.

Chip East

Absolutely. It's a, it's a hazard. It can hurt you. So having a healthy tree is very important.

Shane Harris

So, look up. Go check out those trees. Need to evaluate them on a regular basis. Things change. Problems arise. Could be healthy, could be declining as well. So, look up and check out those trees.

Chip East

What's wrong with my tree? A very common question we get here at the Extension office. We appreciate you listening to this episode of *Southern Ground*.

Announcer

Southern Ground has been a production of Alabama Extension at Auburn University.