Video Transcript

Hello there. My name's Colin and I'm here at Presqu'ile Provincial Park in a beautiful hardwood forest. It's a lovely place, isn't it? All these mature maples and beaches, oaks and birches, spruce, even a cedar like little green jewels amongst all those fall embers. There's logs and stumps scattered amongst the forest floor, home to all kinds of woodland creatures.

But what if I told you this was more than just a forest? In fact, it's a nursery. A whole family of trees, young and old, working in harmony to create an ecosystem that supports thousands of species, from plants, mammals, and insects to birds, fungi, and even humans. It's cooperation that spans generations.

Trees are hearty beings; tenacious, too. A maple like this can live for some 400 years, but to do so, a balance must be struck. And unfortunately, our forests are in big trouble. Today, I'd like to tell you just how that disruption has happened and what Presqu'ile Provincial Park is doing to tip the scales back to harmony. Let's go.

Chapter 1: A Forest in Peril (1:25)

The forests of Presqu'ile face many threats. A range of impacts from climate change to invasive species to even human development all put pressure on the forest. Trees are increasingly falling victim to lethal diseases such as Dutch Elm disease, a fungus that kills American Elms, and Beech Leaf and Bark Disease, an ailment that can kill fully mature beech trees in just a matter of a few years.

But perhaps the most devastating of all these pests is the Emerald Ashborer, a small beetle which devours the vital tissue of ash trees, and the results are lethal. While exploring the park, one will find no shortage of dead ash trees. Their bare and skeletal limbs reaching for the sky, a broom of fresh green leaves sprouting from the base of its trunk in one last ditch effort to capture sunlight and live. Ash trees make up around 40% of the forest here at the park. So, their decline leaves a great void in the woodlands, a void that is eagerly filled by aggressive invasive plants like the Common Buckthorn. Buckthorn, like its namesake, is a small, thorny tree. It's hearty, it grows fast, and with no competition or pests to keep it at bay, Buckthorn can run rampant through any vacant patch of soil the park may offer.

Other invasive plants, like Garlic Mustard and Dog Strangling Vine, follow the buckthorn's lead, invading the land and turning once biodiverse woodlands and meadows into ecologically destitute scrubland. Not even the White-tailed Deer, the

largest herbivore in the park, likes to eat these invaders. And who can blame them? After millennia of munching on tasty acorns and yummy birch leaves and twigs, this buckthorn and its cronies are a bitter taste indeed. But in that pickiness lies a certain irony, for the native White-tailed Deer is in and of itself a huge pressure on the forest.

The problem doesn't lie in the deer themselves. They are a native species after all and valuable in their own right. The problem is in their sheer numbers. Simply put, Presqu'ile has more deer than its ecosystem can handle. Deer have a broad diet, eating the leaves and twigs of dozens of native trees in addition to acorns, grasses, and much more. They're large animals, too, which means they've got to eat a lot of food to sustain that biomass.

A great example that demonstrates the deer's eating habits is the White Cedar. You'll notice many large cedars are pruned to a certain level called the browse line. Needless to say, we've got many gardeners around to keep this line neat and tidy. Now, like any good host, the forest can provide to a certain extent. But if there are too many guests or too many deer, they end up eating the vegetation faster than the forest can regenerate. Only what the deer are eating is more than just food. It's the next generation of trees. All those young saplings that hope one day to replace these old mature maples. It's also wildflowers like Trillium and Jack-in-the-Pulpit which can take years just to produce one single bloom.

The forest is a nursery, yes, but it's also a bit like an investment. It's got a lot of money in the bank right now, but in its current state, it's not able to add anything to it, and the resources in that account aren't growing. In fact, they're being spent at an alarming rate, and soon enough, there may be none at all. We as stewards of the park must act to balance these books to ensure that this forest is a place that all can enjoy for years to come. So just how does one do that?

Well, first you've got to pinpoint the problem. And the problem is that there's no natural recruitment occurring in this forest. Young trees are dying before they can replace the older ones. So in the 1990s, a nursery was started to help with that natural recruitment, growing trees so that they could be placed into the forest. Let's head there now.

Chapter 2: The Nursery and Seeds (5:14)

So, here we are. Welcome to the nursery. Each year, hundreds of trees are taken from this man-made nursery and planted throughout the park, filling the void left by the White Ash. All whilst defying the hungry appetites of the deer. I'd like to show you just how that's done.

It all starts with seeds. And it's incredible the diversity of seeds. There are some like tiny grains with wings, innocuous as oatmeal. You've got sleek samaras that fly on the wind. There are seeds that hide away in cones, waiting for the next gust to set them loose. In these containers here, I've got all different kinds of seeds. In the red, I've got White Pine. In the glass pasta jar, I've got some White Spruce. In this little one is some White Cedar. In the glass bottle are some lovely Red Oak acorns. And finally, in our large tray, I've got White Birch and Yellow Birch.

It's important that we collect seeds from Presqu'ile itself and not from elsewhere. And this is because the seeds found in Presqu'ile have the genetic predisposition to the climates of Presqu'ile. They know what our summers are like and how cold our winters can be. They know when the ice thaws in spring and when the first frosts come in fall. They know how long the days are and when leaves drop. If one were to plant an acorn from a tree grown in Alabama, it's going to expect much milder weather with longer days. It cannot compete with local vegetation and is at an inherent disadvantage. That is why seeds are collected locally.

Chapter 3: The Humble Acorn (6:50)

But the most precious of all seeds revered by squirrels and deer alike is the acorn. It's highly sought after, so you have to be quick in order to collect them. But oftentimes, even then, you're too late. You see, not every acorn that has fallen is necessarily a good one. But there are a few visual cues that'll help indicate its integrity.

First, take a look and see if it's got a cap. If it does, toss it. Yes, the iconic symbol of the capped acorn is pretty, but it's also misleading. Perhaps it should keep its job as a symbol, for this acorn will never become a tree. The mother tree abandoned it, perhaps due to distress. Perhaps because it could detect a nefarious intruder hiding inside, and perhaps you can, too.

The second clue is the presence of a tiny hole. That means there's someone living inside there. That someone is a weevil larva. It has drilled inside while the acorn was still in the tree and has since been having acorn for breakfast, lunch, and dinner. Now, when you're out there collecting, it's easy enough to avoid the ones that have got a cap. They're easy to see after all, but it's impractical to have to sit there and look at each and every angle looking for a tiny little pinhole. Thankfully, there's a method to root out these weevil-infested acorns, and it's called the float test.

There we have it. It looks like some of these acorns float and some sink. Now, remember I said that when the weevil gets in there, it's leaving nothing but air and poop in itself. I think that'll float a whole lot easier than an acorn that's full of healthy flesh. Let's cut one open and see what they look like inside. The weevil has completely corrupted this acorn. A big difference compared to a healthy acorn.

Seeds are collected in the fall and generally planted the following spring. But how does one store those seeds over the winter? Well, generally they're not very picky. For the conifers, a winter in the freezer will suffice. For deciduous trees like birch, this tray is even better. Regardless, you're going to need some tight security. Winter is a hard time for rodents like chipmunks and squirrels, and they'll do anything they can to get at these precious treats. The beloved acorn is kept in an even thicker vault, a metal barrel to be precise.

Seeds are always kept in cold environments, preferably outdoors. And this is to ensure that the seeds will actually sprout come spring. That's because some species like Red Oak and White Pine require a process called cold stratification. Cold stratification is exposure to a cool, moist environment over a certain period of time. Without that exposure, the seed will never germinate. Think of it a bit like sleep. Just like we need 8 hours of sleep every night, so too do these seeds need a period of hibernation in order to start their spring off right.

Chapter 4: Sowing the Seeds (9:51)

So after we've collected the seeds, it's time to plant them. Their journey to 'treehood' begins when the seeds are planted in flat trays. They grow in these flats for one season before graduating into tube trays. They grow into these larger trays for two to three more years until they've grown about 6 inches in height. These are the sorts of saplings you'll see the tree planters in the north working with. They'll plant thousands of these per day, regenerating the landscape after a logging operation.

It would be wonderful if we could employ the same technique here at Presqu'ile, but the abundance of deer prevents that. This little guy is just the perfect winter salad for a hungry deer. And one chomp and his life has ended. We must continue to nurture these saplings for another 5 years at least or until they've grown at least 5 feet tall, which is the maximum height which a deer will browse. To do so, the trees are planted into beds, long rectangular patches of soil that are dedicated to growing trees. They can either be bucket beds or inground beds, and there are benefits and drawbacks to each method.

Trees grown in buckets can be easily transported and when planted there is minimal disturbance to the root system. However, they grow very slowly. Trees grown on the ground grow much quicker, but when the time comes for planting, they must be dug out for transportation, severing roots and shocking the tree in the process. In addition, some species, particularly hardwoods like maple and oak, favor growing in the ground. They
cannot bear having their roots restrained by the bucket for too long.

In fact, park grown oaks spend no time in the nursery whatsoever. Red Oak are unique in that they spend the first several years of their life developing a complex root system with really no emphasis on above ground growth. It can take decades for a red oak to grow even 1 foot above ground. It could be fatal to disrupt that effort with a shovel. Oaks are planted in the spot that they're going to live at forever. But of course, that means protection because everybody loves an acorn. Deer love snacking on them and rabbits like chewing on their gnarly twigs once they've sprouted. So, they're planted straight into the ground and then a bottomless ice cream pale is put around them almost like a wall. This prevents mice and voles from coming across them when they're foraging, especially in the winter. In addition, an orange screen is put around on top. And later on, when the oaks have grown above this screen, a proper full-size cage will be put around the bucket.

Chapter 5: The Planting Process (12:25)

Once they've reached their 5 feet in height, it's time for their graduation out of the nursery and into the real world. But first, one must consider the time of year. Tree planting is done in the spring and in the fall when the trees are still dormant and when the ground isn't frozen. It's best not to disturb a tree in the summer when it's busy growing new leaves and new roots or fighting off pests and diseases. Save planting for the off season when the tree is at rest. And come summer when the tree wakes up, it can take stock of the roots it's lost during the planting process as well as the quality of the site.

It's important to consider your site before you actually go out and plant the tree. Presqu'ile's geography is highly variable with many different habitats from forests to meadows, sand dunes, and even a pan. There's no one single tree species that'll survive on all those habitats, but you can take a tree's preferences into consideration.

Take for instance maple and White Birch. They like moist, well- drained soils, while Red Oak and White Pine like drier areas, but really don't do well in wet areas. No, you can save those swampy spots for White Cedar who don't mind having wet feet. Planting is

dense and this is to create competition amongst the trees which encourages them to grow taller and not wider. This helps get their foliage out of the reach of hungry deer faster.

If the tree has lost a lot of roots when it was dug up, some of its foliage will be pruned. If the tree has too many leaves and not enough roots, the tree can die of dehydration. This is because leaves are constantly sweating and respirating, and you need to have enough roots to water them.

Chapter 6: Growing a Bright Future (14:07)

So, the trees are planted and in their new home, but that doesn't mean that work is over. No, these trees will require support and protection in order to thrive. That can mean supporting trees with ropes and stakes to prevent toppling during that important first year when the tree is planting new roots. Cedars in their tasty fronds are guarded behind cages. For while these trees have grown above that magical 5-foot browse line, there's value in protecting the vulnerable foliage, lest these cedars become green pompoms.

Birch are often given guards to prevent buck rubs. In fall, male White-tailed Deer scrape their antlers against young trees to mark their scent and to rub the velvet off the antlers. This can seriously harm the tree and perhaps even kill it. Sometimes even whole plantations can be fenced off, totally relieving them from the threat of deer. So, the trees have been grown in the nursery and now they've been planted. Maybe they've been given a stake or a fancy cage. Now, it's time to wait.
There's an old phrase in the gardening world that perfectly describes the next few years for these trees. And it's very simple. Three words: sleep, creep, and leap. In that first year, the tree will sleep. Won't really seem like it's doing very much above ground. Really, only making miniature leaves. Really, most of its effort is underground where it's re-establishing itself and building a new network of roots. In that second year, it'll creep. Still quite cautious with itself. It puts on a little bit of new growth, but is still spending a lot of its time underground developing those roots. It's in that third year that the tree truly leaps. And with that leap comes rapid growth. It's confident in itself and it's eager to grow new leaves, new foliage while continuing to develop its network of roots.

And then, well, that's really it. The work is done. And now it's time to wait. As the years go by, many of the planted trees will die, but many will also live, surviving to reproduce and continue this natural nursery onto the next generation. Meanwhile, in the park's

nursery, work continues. Volunteers with the Friends of Presqu'ile, as well as park staff, continue to plant hundreds of trees throughout the park each and every year.

But talking about trees is one thing. Seeing them in person is another. Why not visit the park and see the wild nursery for yourself? You can visit the Friends of Presqu'ile website for more information about the forests, as well as what makes this park special beyond them. Until then, be sure to take a walk through the woods and cheer on our leafy or needly friends. Thank you so much for coming along as we explore the park's nursery program. Take care.

Friends of Presqu'ile Park, 2026
www.friendsofpresquile.on.ca