A little over 100 years ago, James Pinchot, his son Charles Pinchot, and Yale University began a collaborative scientific forestry research project, based in Milford, called the Milford Experimental Forest. It is believed to be the first forest research station in the United States, comprising approximately 3,000 acres. The site was selected as the model for what was to become the Yale School of Forestry and Environmental Studies, and the research was conducted under the direction of Frank H.UFF, who was one of the first students at the school.

The school was established in 1901 and has since grown to become one of the leading forestry schools in the world. The original forest was later expanded to include over 20,000 acres, and today the school is home to over 400 students and an active research program. The forest continues to be used for research and education, and is a testament to the importance of scientific forestry and the work of Pinchot and his son.

The first step of good forest management is to create a complete inventory of what is on the ground. The next step is to develop a management plan that considers timber production, wildlife habitat, water quality, and other ecosystem services. The Forest is managed in a way that ensures that timber production is sustainable, and that the forest remains healthy for future generations.

Snyder: What is the forest like today?

Pinchot: The forest today is a mix of different types of trees. There are hardwoods, pines, and conifers. The forest is healthy and diverse, and provides a habitat for a wide variety of wildlife.

Snyder: Can you describe some of the research that is being conducted in the forest?

Pinchot: Research at the forest includes studies on forest ecology, wildlife management, and forest health. Scientists are working to understand how climate change is affecting the forest, and how best to manage it for the long term.

Snyder: How can people visit the forest?

Pinchot: The forest is open to the public for hiking, birdwatching, and other outdoor activities. It is also possible to arrange guided tours of the forest with a naturalist or a trained guide.

Snyder: What is the future of the forest?

Pinchot: The forest is managed to ensure that it remains healthy and productive for future generations. The Forest is also a valuable resource for research, and scientists will continue to study the forest and its ecosystem to better understand how to manage it sustainably.

Snyder: Thank you for your time.
values that you mentioned. You would have different attitudes about the importance of the economic value.

Pinchot: That is why it is so hard to get to a consensus. What that means is that sometimes you have to buy out certain parts of peoples’ interest. We ended up setting aside a small piece of land that had very high commercial value and paying, that’s off the table that will be something we can sell later on and raise some money to address the financial issues.

Snyder: What sort of outside help did you have? Obviously there were the tax and legal issues but was there other assistance available for this process?

Pinchot: The Land’s Trust was of considerable help. We worked with Andy Pitts in the Natural Land’s Trust. He is very bright and understands human dynamics. Mostly, this was a process of the family talking to itself. We set up an e-mail discussion list. We had lots of conference calls. We got together. It would get out of hand then get back in hand. People said things they may regret later. It took about four years to get through this discussion.

Snyder: I would guess this was a resolution that satisfied people in the family and I would assume they are even more the outcome?

Pinchot: Very much so. Proud, because we are still a family, which is always a good thing.

Snyder: Had conservation easements been around 100 years ago, would your grandfather or great-grandfather have used them?

Pinchot: I do not think there is any question that James would have wanted the land to have been maintained as a family asset, as an intact place for people to come, enjoy and do research. Those were his clear intentions.

Snyder: It would have been very difficult to project 100 years into the future. You could not have imagined the circumstances of the development. The concept of a Home Depot did not exist.

Pinchot: One of the downsides of the conservation easement is that you have to be really careful that you do not lay into it restrictions which you would like to see for the next 20 years, but you have no idea of what is meaningful for the next 200 years. You have to put in the least restrictions that with which you can comfortably live. That is the object lesson of conservation easements. You cannot predict what the economic and social conditions are going to be and what people’s needs are going to be.

Snyder: Where exactly is the Milford Experimental Forest? Does it all surround Grey Towers?

Pinchot: There are 200 acres next to Grey Tower and there are 1,200 acres on Schoeppee Road bordering the Delaware State Forest. The good part is that our 1,200 acres are part of 14,000 acres of public land, and surrounding that land, there are a lot of hiking clubs, so there are about 25,000 acres that are protected right now as contiguous forest land.

Snyder: What is the Experimental Forest trying to find out?

Pinchot: Trying to find out is one objective, but let’s look at the threats to the forest 100 years ago. The original forest was gone, cleared by our species. We had pretty much wiped out most of the wildlife species. People were eating anything and everything, including small mammals. There were no deer, no turkeys. The beavers were gone. Most animal populations were very suppressed. It wasn’t just trees. Nature was beat up the land. The problem was clear: bring back the forest because that was the habitat of most species. Bring the forest back and nature will come back with it. Now, we have a different set of problems. One of the major problems in this landscape, and it is ubiquitous around the world, is loss of habitat and habitat fragmentation, which is really the basis here from an ecological perspective. That is being driven by development. This is the fastest growing county in Pennsylvania and one of the fastest in the nation. Only about 10 percent of Pike County has been put into big subdivisions. Over 30 percent is in public lands, and that is good. Another 10 or 15 percent, or more, is in big blocks of land owned by hunting clubs, or private owners who hold big blocks and have no intention of developing it. We are not going to see a lot of subdivisions in the next five years, I do not believe, because there are so many lots in the existing subdivisions.

Snyder: What could change?

Pinchot: That will change in 20 to 30 years, and could change in 10 years. We will start going into that phase in the next 10 or 15 years. That will mean further fragmenting of the landscape. That is one issue. Another issue is exotic species that have had a profound impact on the landscape. By exotic species I mean any organism that is not native to this region. The ones that have had the biggest impact here, for the most part, have been diseases such as the chestnut blight and insects such as the wooly adelgid and the gypsy moth.

With the loss of the chestnut, which was the dominant tree species, because of its prolific nut production—much more so than oaks or hickories—it was also the best timber species. It is gone from the landscape, except for saplings that sprout up and die back, but in terms of a functional part of the landscape, the species is gone.

Snyder: What is the dominant species now?

Pinchot: We are at the break between what used to be the chestnut oak forest and what is now called the oak hickory forest. The hickories were always there, but were a lesser element. We are at a boundary between the northern hardwoods such as the sugar maple, red maple, beech and ash.

Snyder: Could you see a circumstance where the oak and hickory become as dominant as the chestnut?

Pinchot: If the Asian longhorn beetle came through, it could happen, but I do not see it. There are several species of the oak and hickory. The gypsy moth came through and hammered the oaks, and before mortality. Now, we are in the process of losing our hemlocks to another Asian insect, the wooly adelgid.

Snyder: One of the biggest threats is not from an exotic species but one that has enjoyed changes in habitat that humans have brought to this area. In fact, subdivisions are not a problem for the white-tailed deer.

Pinchot: They love it. They have corn and all the horticultural crops they can eat.

Snyder: And, they have protection from their only predators—humans. We can’t hunt in subdivisions.

Pinchot: Deer, ecologically, are at the top of the list right now.

Snyder: What do they do to the forest?

Pinchot: Deer eat all the regeneration of most species of trees. There is very little oak or hickory regeneration left in the forest. White pine, birch and red maple can in some cases get above the deer, but the deer are having a profound impact.

Basically, we have relic forests—the old-time trees that matured before the proliferation of deer. The trees have no children. You cannot do a timber sale in this forest without building a fence, which can cost more than the net value of the timber you will be getting 50 years from now by having put the fence up. The only people who are doing fences are the state Bureau of Forestry, because they can justify a small to have good forests. You put the fence up for five years to allow the regeneration to get above the ability of the deer to wipe it out.

Another impact from the loss of groundcover because of the deer is that most of the wildflower species are in heavy decline. Any organism that has used that as a protective cover such as ground nesting birds, are not succeeding in getting a lot of surviving offspring because without protective cover, the predators come in and eat the eggs.

Management programs are extremely important. Up until this last year, Pennsylvania has been way behind the times compared to other states, in terms of deer management. The theory has been to protect the does and produce as many bucks as you can. The result has been to produce a population that has five to 10 does for every buck. You are hammering the bucks but that does nothing for the population, which continues to grow beyond the food supply.

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Snyder: This does not result in a healthy deer population.

Pinchot: The deer are small and sometimes starve in the winter. The bucks are not big, and that does not please the hunter. Many hunters have to understand what the problem is. They complain that there are too few deer. In a sense, they are right, in that there are too few healthy bucks. On our own land, we have instituted a managed hunt. We are using the phrase “catch deer lower.” We are encouraging our hunters to take as many as possible. We were constrained, until this year, by the fact that you could only get two deer permits and have only three days to hunt deer with a rifle. Only a very good hunter could take two deer in three days. Bow and arrow, and muzzle-loaders extend the season a bit, but the efficiency of the harvest goes way down. We have permanent plots for vegetation sampling so we know how much of which species are being browsed by the deer and as we start reducing the population the inventory of plants comes back.

The bigger answer to what we are trying to do is that we are working with the Bureau of Forestry, Penn State University and a number of departments to establish about a 35,000-acre area surrounding the Delaware State Forest. This includes in Route 209, our land, part of the Drane Town and several landowners, to do a community visioning process to figure out how landowners come together to address this. We cannot manage deer on just 1,400 acres. Deer have big home ranges.

Snyder: How about reintroducing the mountain lion?

Pinchot: I would love it if you would be the person to propose reintroducing mountain lions. I would not be that person.

Snyder: I am informed that there are mountain lions in Pike County.

Pinchot: I believe that.

Snyder: I know a person who is quite sure that she saw one that her dogs had smelled, and it was clearly a mountain lion.

Pinchot: If you talk to wildlife biologists who work for the state or federal government, they will tell you that these are likely pets that are released. I find that to be a myth. If there are a few mountain lions around, there may or may not be a breeding population. They are not controlling the population of deer. As for reintroducing the mountain lion, that may be politically difficult. They like things that move fast, like bicycles and running. We, basically, are the carnivores. The system is out of balance because of what we did 100 years ago.

Snyder: Back then, people taught their children to hunt. Now perhaps the “tumbler factor” comes from city folks who have come to Pike County with a view that somehow hunting is wrong. What other experiments do you expect, beyond being part of the larger deer management program?

Pinchot: The original project we wanted to get going on was chestnut restoration. Chestnut is a charismatic species. It is such a dominant species with short- and long-term benefits to both the economy and aesthetics. It is a long-term process and very important. We wanted to get chestnuts going on the deer, but deer turned out to be a critical part of what is going on with the chestnuts.

Snyder: Is it not correct that the chestnut blight continues, even though the chestnuts are gone, because there is another host?

Pinchot: Yes, but the chestnuts are not gone. There are still plenty in the forest. The blight does not kill the roots. It affects the trees above the ground. The trees grow six to eight inches in diameter, but now pokes its head through the canopy. It lives for 10 years, dies back, then sprouts up again. What is happening now is that the deer are eating the shoots and that is killing the roots. We either have to fence off all the chestnuts, or we will lose them. That project, and most of the other ecological projects we worked on, is off the books until we can get the deer under control.

Snyder: What optimistic are you at being able to do that?

Pinchot: I am pessimistic if we cannot create a community-based response. There is no way to do it by landowners or other than to fence your entire property.

Snyder: What would they do?

Pinchot: They would encourage hunting, especially does. They would do the same thing we are doing on our land but do it on several pieces of land simultaneously. There is no solution to the deer problem that I know of, other than bringing the deer back into balance. That could bring the whole population down to where you start regeneration of the forest. There are not many places where this has happened, but one is the Quabbin Reservoir in central Massachusetts. It is the water supply for Boston. There are about 75,000 acres of land around the reservoir and the issue became water quality because of the diatomics in the vegetation. There was a huge public outcry against hunting. It took five years to get the idea through but it happened about four years ago. The result was a two-week rifle season, with three does per hunter. They had an average of three hunting permits on 100 acres. In three years, they brought the deer population down to a level where the vegetation started regenerating. This is similar to what is now possible in Pennsylvania.

Strub: Perhaps an education program is needed to get people to see their own hypocrisies. People who put out corn in their back yard to feed the deer do so at the expense of other species, including the chestnuts, hardwoods, wildflowers, ground-nesting fox and owls.

Pinchot: The deer issue is so overwhelming that it is keeping us from other projects. I am really interested in the forest as an economic resource, just in terms of standing timber. In order to manage it, you need to bring back the business of secondary processing locally. You do not make a lot of money by selling the timber to a mill and having it go to a furniture manufacturer down south. We need secondary product manufacturing here. One way is through landowner cooperatives. They are doing this in Wisconsin, Vermont and other areas. Here, our primary values in the forest are aesthetic and wildlife and recreation. Very secondary is timber income; it is way down on the list. We need to harvest red maple to allow the cubs to come back. We need to find a way to bring landowners together to get the kind of scale necessary. We can not have practical timber sale on a one-acre lot, but if you have 15-acre lots grouped together, you can have a forest come in and do a management plan. A kind of cooperative venture like that is something I would hope comes out of our deer management effort. Deer may be the first thing you must hunt to deal with because it is hard to deal with deer individually on your own land. What the cooperatives are doing in Wisconsin is fascinating. They use portable sawmills. They build solid kilns to dry the wood with high energy input. They take small red maples, six or seven inches in diameter, and make hardboard flooring out of them. Very often, the cooperative itself installs the flooring. This way, they get the complete income stream coming back to the cooperative and distributed to the landowners. The use of portable sawmills means that a lot of cut timber that big operations would leave behind is now being put to economic use.

Strub: Can people or property owners’ associations have a forest management plan done for their own property? Who does it and how much does it cost?

Pinchot: We did a forest management plan on our 1,400 acres and it cost $1,500, which is not terribly expensive. You can get some help from the Bureau of Forestry, including getting someone to look at your property, tell you some things about it, and give you a list of forest management experts.

Snyder: The idea of cooperatives is intriguing because it becomes a communication and education process and can open the door to information on a wide range of subjects.

Pinchot: The way these are set up allows them to be certified through the program certifying that the wood is grown locally and is not being taken from the forest. The landowners know they are making money, but also can feel good that they are being good stewards of the land. The forest benefits from the economy of landowners banding together and doing a good management plan. These are being done by for-profit ventures without public funding. In one example, in Michigan, participating landowners agreed to put up the first $200 of timber per acre to get stock in the co-op. That generated about one million dollars. That enabled them to go to the Farm Credit Bureau for an $850,000 loan.

Snyder: This takes someone with the entrepreneurial drive, and the initial funding.

Pinchot: This initial funding is from the participants, not from an outside source. A lot of organization is needed.

Snyder: It all goes back to having enough individuals wanting to make this happen.