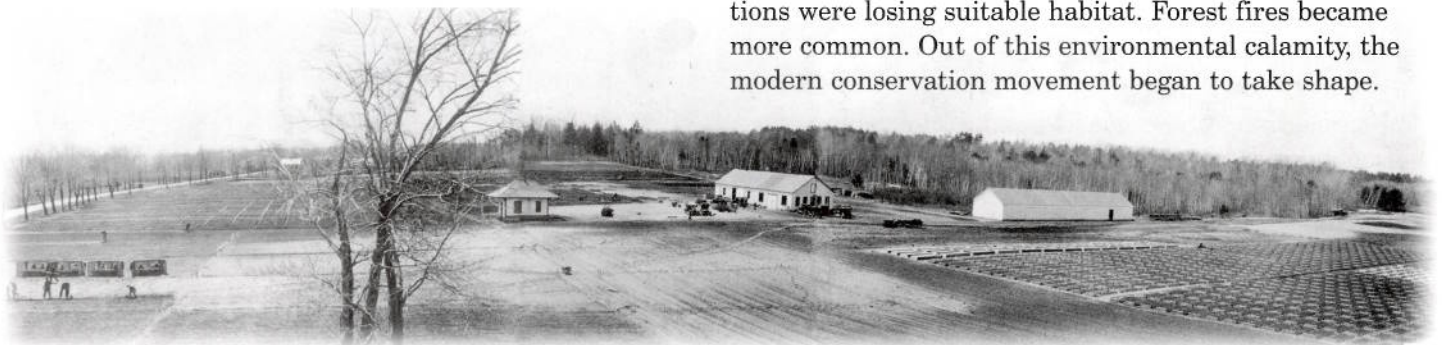




## The Saratoga Tree Nursery

has survived wars, the Great Depression, budget cuts, and other obstacles to become the last remaining nursery operated by New York State. It remains an ambitious enterprise — the 250 acre nursery produces a range of 38 different tree species and a total of 1.5 million seedlings annually. The state opened its first tree nurseries in 1902, and in this article the *Conservationist* looks back at the pioneering efforts of the nursery program — and the modern day Saratoga Tree Nursery — to mark the centennial.

The Saratoga Nursery, pre-1945.



# Nursing Forests Back to Health

By John Solan

Photos DEC archives

The history of forest management in New York dates back to the late 19th century, a time when New York State began a boom in development. Forests were cleared to make way for farms, houses, churches, and stores for the many small communities that dotted the landscape. Industrialization began to kick in with the construction of the Erie Canal and the development of railroads, and wood was needed for fuel and for the construction of homes and factories. As development continued, the lack of foresight and the adverse effects of many years of logging began to emerge. Hillsides began to erode, clogging streams, and wildlife populations were losing suitable habitat. Forest fires became more common. Out of this environmental calamity, the modern conservation movement began to take shape.

In 1885, The New York State Legislature took action to reduce forest degradation across the state by creating the Adirondack and Catskill forest preserves. In addition, pioneers like Gifford Pinchot—believed by many to be the Father of American Forestry—developed programs to educate individuals on the wise use of forests. Pinchot believed in the European tradition of managing forests for the continued production of wood products; if a tree was cut, three were planted to replace it. This tradition became part of American forest management and with it came an increased demand for seedlings.

Before 1902, nurseries were small and located near reforestation sites. Production was labor intensive and seedlings could not be distributed easily because of the limitations of transportation at the time.

In 1902, to supply the enormous amount of seedlings needed to re-stock New York's landscape, the State developed a series of larger nurseries, starting at Brown's Station in Ulster County. Other state-operated nurseries soon followed in the Adirondacks at Saranac Inn, Lake Clear, Indian Lake, and Lowville. Other nurseries were sited in Saratoga Springs and Tully, and in the southern tier in Salamanca, Painted Post, and Horseheads. A nursery was also developed in Central Islip, Long Island. The pioneer foresters running these nurseries soon became adept at raising seedlings, enabling larger and more mechanized operations. The vast railroad network in New York was used to deliver seedlings throughout the state.

### The History of Reforestation in New York

Through the years that followed, social, political and economic factors influenced nursery production. In 1907, the state began offering seedlings at cost to private landowners. The Free Tree Bill of 1920 made seedlings available to municipalities and school districts for planting on government land. The intent of

the bill was to stabilize and protect watersheds. During the Great Depression, many farms in New York were abandoned as people moved to cities looking for a better way of life. Most of these farms were in southern counties of the state and located on hillsides with shallow soils subject to severe erosion. As a result, the State Reforestation Law of 1929 and the Hewitt Amendment of 1931 were passed, allowing the state to purchase abandoned lands and create State reforestation areas. The reforestation areas, consisting

of not less than 500 acres of contiguous land, were to be forever devoted to "reforestation and the establishment and maintenance thereon of forests for watershed protection, the production of timber, and for recreation and kindred purposes."

### 1933-1936:

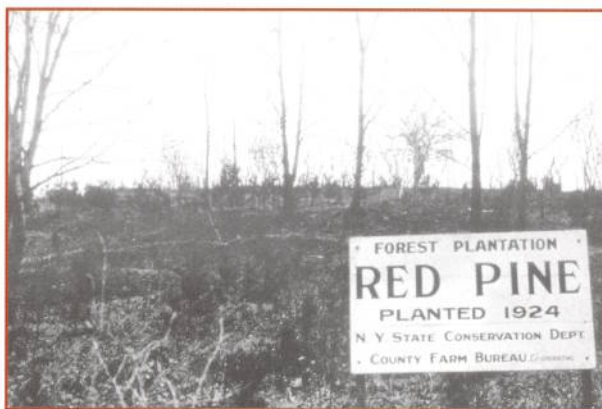
#### 200 million seedlings

In 1933, a Forest Investigation Unit was formed to conduct research in seed handling, nursery practices and tree improvement. The unit's goal was to produce the best possible planting stock for the state's reforestation program, and it was a success. In 1936, the state nurseries' production peaked at 72 million seedlings—and 200 million seedlings were planted between 1933 and 1936. It was a shortlived boon—funding problems caused a dramatic decrease in production beginning in 1937, and New York State began consolidating the nursery program. By 1938 only the Lowville and Saratoga nurseries were still in operation.

During World War II funding was scarce and the labor shortage made it difficult to operate the nurseries and to plant seedlings. Civic groups, school children and women's organizations planted many state and private lands during the war years. Nursery operations ceased for one year in 1942. After World War II, the New York State Conservation Department began acquiring land for reforestation, and nursery production and tree planting began to increase in the late



Glens Falls, NY circa 1904: This log boom is estimated to have contained more than 699 million board feet of timber.



Some of the earliest planting of seedlings in New York State occurred in Chatauqua County. Management of forests at this time consisted mostly of planting seedlings, stopping forest fires, and controlling insect and disease epidemics.

1940s and early 1950s. In 1956, the federal government—through the Federal Conservation Reserve—began the Soil Bank program. The program paid private landowners to take land out of agricultural production and plant trees; as a result more than 130 million seedlings were planted on private land before the Soil Bank program ended in 1960.

### Reforestation in Decline

There has been a steady decline in reforestation efforts since the Soil Bank program ended. Land use was changing in New York. As idle land and abandoned farms became housing developments, shopping areas and highways, the demand for land that had previously been considered worthless increased. Due to decreasing demand for seedlings and the state budget cuts, the Lowville nursery was closed in 1972. The development of modern forest management practices in New York State—focusing on natural regeneration—has more than doubled the state's forested land in this century. Today, more than 60 percent of land in New York State is forested.

### The Saratoga Nursery Today

The Saratoga Nursery has kept pace with modern forestry practices. Though the days of large reforestation planting have ended, there is still a demand for nursery stock. Approximately 30 percent of the stock grown at the Saratoga Nursery is used on public land supervised by the Department of Environmental Conservation. The remaining stock is available for purchase at cost to the general public. The traditional uses for seedlings still exist, and new uses for trees



### Plant A Tree, Learn Important Lessons

DEC's School Seedling Program can provide students with important experience. Every school in New York State is eligible to receive 50 free tree seedlings or 20 wildlife shrubs to plant on school grounds or on other public lands. For additional information contact the Saratoga Nursery at (518) 581-1439.

and shrubs have been discovered. For example, efforts to improve water quality have prompted planting programs aimed at increasing vegetation along rivers, streams, lakes, ponds, and reservoirs to naturally filter pollutants from surface and ground water.

### Modern Day Projects

The Saratoga Nursery is also working on a variety of other initiatives, including a joint project with State University of New York College of Environmental Science and Forestry involving the use of willow biomass for energy production.

Nursery staff are also cultivating the American chestnut. The hope is to maintain the original genetic strain of the species, which has been ravaged by blight disease. Working cooperatively with the American Chestnut Foundation, the long-term goal is to produce a genetically engineered, blight-resistant American chestnut.

Finally, the Saratoga Nursery now has the facilities necessary to grow seedlings in a greenhouse, a method that allows climate control and protection from weather and animal damage. There are many benefits to this method, all contributing to the efficiency of growing and planting seedlings.

Conservation planning requires innovation and readiness to meet the challenges of an ever-changing environment. The Saratoga Nursery is ready to meet those challenges, just as foresters and nurseries responded to the conservation crisis of a century ago.

**John Solan** is a Forester with DEC's Division of Lands and Forests and Manager of the Saratoga Nursery.



A young tree plantation in the eastern Adirondacks circa 1950.