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## Volunteers fight chestnut blight

*By Connor Boals  
Free Press Staff Writer*

COLCHESTER -- The American chestnut tree population got a helping hand Thursday when members of the American Chestnut Foundation and Green Mountain Power visited Colchester and hand-pollinated one of the endangered trees.

The volunteers pollinated trees as part of an effort to restore the American chestnut population that has been nearly destroyed by chestnut blight, an invasive fungus that came to the United State from Asia in the early 1900s, according to Kendra Gurney, New England regional science coordinator for the foundation.

Hand-pollination of trees in Vermont has been going on since 2004, Gurney said. This was the first time that chestnuts received help. Gurney, a Winooski resident who recently completed her master's in forestry at UVM, estimated that the American chestnut population along the Eastern Seaboard was about 4 billion. Today, she estimates that there are fewer than 100 breedable trees in the state.

The pollination process begins at one of the foundation's farms in Virginia where the Chinese variety, an apple tree-sized plant, is crossbred with its towering cousin, the American chestnut. The offspring of that breeding is crossed with more American chestnuts in a process called back-crossing, Gurney said. These breedings are repeated until the resulting offspring are almost entirely American but possess a moderate resistance to the blight from the Chinese parents.

The offspring are infected with the blight. The trees that show the most resistance and the most American characteristics go through one more backcross with local trees.

"We want the local genetics in the last cross," Gurney said. Gurney stores the seeds of the half-Vermont trees for the winter. They are then planted and grown for five to six years. In the final year, the trees are infected again.

Based on the size of the cankers caused by the disease, Gurney selects the pollen from the fittest trees and, in a process called intercrossing, breeds them. "The idea is that if we breed two moderately resistant trees, we can hopefully get some highly resistant ones," she said.

The operation in Colchester on Thursday took place at Edgewater Camp, a family camp consisting of seven family vacation plots. Several residents looked on as chapter member James Powers pollinated buds from the top of a donated Green Mountain Power bucket truck while volunteer and Edgewater resident Tom Simmons pollinated the lower-lying buds. The group was using pollen from the final intercrossing to pollinate 70 buds they had covered earlier to prevent foreign pollen contamination.

## Why all the fuss about chestnuts?

"It's a very charismatic tree," Gurney said. "A lot of times we get invasive species and there's not a lot we can do but this time there has been a lot of research and it's proven to be successful."

The Vermont/New Hampshire chapter of the American Chestnut Foundation started last year and has five pollination projects in Vermont and three in New Hampshire. The foundation also has orchards in Shelburne and Perkinsville, and Peterborough, N.H.

The program works through donations, volunteers and partnerships with other institutions. To learn more, contact Kendra Gurney at 951-6771 or e-mail [kendra@acf.org](mailto:kendra@acf.org)

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