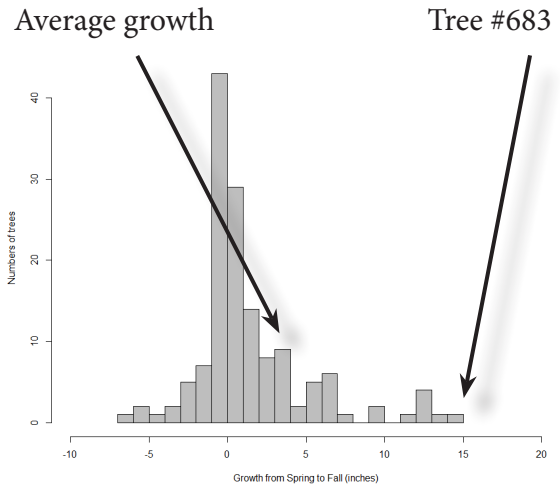
# CRAC News

Citizens Restoring American Chestnuts

SPRING 2014

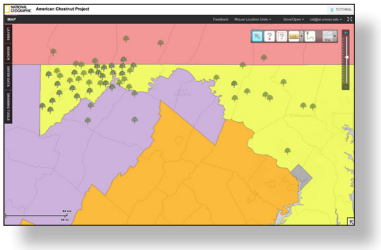
## What's happening with the Citizens Restoring American Chestnuts (CRAC) project?

Over 107 CRAC volunteers planted 534 American chestnut seeds and seedlings at 128 sites and submitted information about their plants on our National Geographic American Chestnut Project FieldScope website. And, we are getting a treasure trove of data! Most trees were planted in western Maryland and on mowed lawns and fields. Ninety-one died after they were planted, primarily because seeds didn't germinate or seedlings and seeds were eaten (herbivory). But most of our trees survived! The average growth was about 4 inches. Some trees lost height likely due to herbivory, wind damage, or settling in the soil after planting. So, which tree grew the most? *Drum roll please*… Tree #683, which grew 14 inches! Is this your tree? How do your trees compare?




## How can I see these observations on the American Chestnut FieldScope website?

You can explore all the CRAC observations by going to **http://chestnut.fieldscope.org** (this is the same site where you enter your observations). Each point (shown as a tree) identifies one or more sites where volunteers planted trees. When you see a number on a tree, it means several sites are close together. Zoom in and pan to find the site you want. Under the *Layers* tab, you can select a thematic data layer, such as *Boundaries and Places* to help you find a site. You can also change the background map from *Terrain* to *Satellite* or *Streets* using the pull-down menu in the upper right-hand corner. Or, under the *Search* tab, you can type in an address to find a site of interest. You can also look at patterns in the data by filtering it by site or tree characteristics. To do this, under American chestnut site in the layer list, select *Filter Layer Data*. Use the calendars to select start and end dates if desired, and then use the pull-down menus to select a constraint, such as "tree height greater than (>) 12 inches." For more details on exploring these observations or entering observations, see your CRAC Online Chestnut Map Instructions or contact us at chestnut@al.umces.edu or 301-689-7134.



## Should I submit more observations this spring?

YES! We would like all CRAC volunteers to provide observations of their seedlings this spring. You will need to complete a new Spring/Fall Tree Datasheet. You will record the dates when "most spring leaves out" for each of your trees, as well as the height and tree ID number. Remember that you must complete a separate row for each seedling. Please (1) record the date that each tree leafs out (if you have more than one tree, this will likely be on different dates), (2) hold your seedlings vertically and measure to the tallest part of the main stem, and (3) take care to enter each tree ID correctly. Please both post your observations on our National Geographic American chestnut online map, and mail your datasheet to us. Your efforts are greatly appreciated!

*Please turn the page.*

## Who are the CRAC volunteers?

Based on our CRAC fall survey, we learned some interesting facts about YOU. Most of you are men, were born before 1970 and have a graduate and/or bachelor degree. Many of you came to the project with a strong interest in science and activities, like the CRAC project, that protect and restore our natural environment. Most of you felt the CRAC project improved your understanding of the difference between native and exotic organisms and the role of native trees, like American chestnuts, for healthy forests and streams. It also has improved your interest in

native organisms and your confidence to contribute to tree restoration/a science research project. Overall, you have enjoyed participating in the CRAC project, and almost all of you plan to continue to submit your data every spring and fall. YEAH!!.

## What will happen to our trees this spring?

In the spring, you may have noticed that forests closer to the coast turn green before forests in the mountains and that some forest species, like honeysuckle and Norway maple, "green up" before others, like oak and locust trees. The timing of the emergence of new leaves in the spring is part of a tree's phenology. It is controlled by the environment (day length, air temperatures) and by genetics. A tree that produces its leaves early in the spring can get a jump on growth, but it does run the risk of getting damaged by a hard freeze. A tree that produces leaves later in the spring may be safe from frost but could get shaded out by trees that emerged earlier. Therefore, leaf emergence is a fine-tuned process involving the environment and genetics that sets a tree up for success or failure. For our CRAC research, we are looking at the relative importance of genetics and environment on spring leaf out for your American chestnut trees. This is why we ask you to report when leaves emerge in each of your trees. Recall your trees are from different genetic sources. We would like to know how these different sources of American chestnuts differ in leaf emergence and how this varies with the environment (that is, characteristics of your planting sites). So, look around this spring and notice how the environment shapes tree phenology, and share your observations (and wonder) with others and us!

Chris Evans, Illinois Wildlife Action Plan, Bugwood.org

## Could I get more trees?

YES! We will be distributing more American chestnut seedlings and seeds on Saturday May 3, 2014, at the Appalachian Lab Open House. Seedlings and seeds will be distributed first-come first-served between 10am and 2pm. Current CRAC volunteers are encouraged to come to the event and pick up more seedlings and seeds. We have four new sources! If you cannot attend the Open House event, please call or email us to make other arrangements to get more trees (chestnut@al.umces.edu and 301-689-7134).

**AL Open House**

Get additional American chestnut seedlings and seeds.

May 3 2014, 10am-2pm

The Citizens Restoring American Chestnuts project is supported with funding from the Chesapeake Bay Trust.