Restoration Committee Meeting

SW Virginia Higher Education Center, Abingdon, VA
April 5, 2019
2:45-4:00pm

In Attendance

Members: John Wenderoth, Rex Mann (Co-Chair), Allen Nichols, Bruce Wakeland (Chair), Yurij Bihun, Brad Stanback, Carolyn Keiffer, Kim Steiner

Guests: Thomas Klak, Glenn Kotnik, Cathy Mayes, Kathy Patrick, Hill Craddock, Jeanne Romero-Severson, Yvonne Federowicz, Mark Double, John Dougherty, Robert Sypolt, Michael Doochin, Cartter Patten, Jim Searing, Larry Grossman, Brian Clark, Don Willeke, Karen Jones, Greg Miller, Lewis Lobdell, Debby Delmer, Paola Craddock, Brian McCarthy, John Scrivani, John Hemple

Staff: Kendra Collins (Recorder, notes), Ben Jarrett, Tom Saielli, Eric Jenkins, Sara Fitzsimmons (Staff Liaison, by phone)

Meeting Minutes

Call to Order – *Bruce Wakeland*

Minutes from the October 25, 2018 meeting were approved as written.

Restoration Research - *Committee*

The main focus of this meeting is to collect research needs for restoration, such that the committee can then prioritize them. This is an action item from the TACF Strategic Plan as well.

Suggested topics (summarized):

- Site selection
- Gap studies/silviculture
- Population establishment
- Planning/preparing for transgenic diversification
- Pioneer and climax species - in relation to reintroduction
- Regional adaptability
- Climate change
- Current forest conditions' impact on reintroduction
- Biocontrol – super donor HV
- Allelopathy of chestnut?
- Mycorrhizal associations
- Wildlife dispersal

Suggested topics, with additional notes from discussion:

- Site selection: Wakeland's personal opinion - our biggest restoration research need is on proper site selection. This is crucial. There are enough mistakes you can make with planting, but a good site solves a lot of mistakes. And a bad site ruins an otherwise perfect planting.
    - Sara has a spreadsheet of historic articles on chestnut sites (see supporting docs). Research was done as part of a habitat suitability project. Purpose was to look at similarities across geographical areas - soil type, slope, soil pH, etc.
    - Helpful for others to look at this list and see if we're missing any geographical areas, or resources that are not on the list.
    - The group was encouraged to share any historic resources they are aware of. Romero-Severson brought up the NNGA newsletters as a resource to mine for more information.
    - Steiner brought up that a lot of site information is available on-line and it might not be too difficult to do a range-wide habitat suitability model. Perhaps something for an external grant project? A lot of local mapping has been done already, and the existing landscape scale models are less specific. There is a trade-off between processing power and level of resolution. There are several student projects that have been done recently on smaller scales, and more in the works. Steiner advocated for something more than piecemeal.
- Gap studies – these are something Saielli, and others, have been looking at to some extent already.
- How many trees do we need to plant to establish a population? Need enough nut production to also over-power the critters, too.
- Where are we in regard to the production of transgenic trees and a diversified population relative to regulatory timing? How many trees/nuts do we need per T-generation? Pollen production needs? Acreage to use for production? Perhaps something a smaller group could take on.
- Chestnut is a pioneer species, and a climax species. How do we take these into account for planting establishment if nut production and species spread is the goal?
- We don't need to establish a planting and then walk away. We could plan for adding to it.
- Regional approach to breeding (conventional and transgenic), should have overlap with selecting the best material to plant in a given region.
- How will climate change impact us? Models predict a lot of species' range shift over the next 100 years. Suitable habitat is moving, but trees don't move. This could be an opportunity for chestnut reintroduction and assisted migration.
- How do current forest conditions (invasive pests/pathogens, deer herd, etc.), impact restoration planning? The forest we're working with today is very different than what we had 100 years ago.
- Biocontrol – how can we incorporate hypovirulent strains of the fungus in our plantings right off the bat? How does the super-donor strain perform as a biocontrol? This is being trialed in MD under permit, but needs to get through a regulatory pipeline. We could start deployment research on this in our existing plantings, as a tool for GCOs, etc.
- Allelopathic impact of chestnut? This is mentioned from time to time, but could be worth investigating in more detail.

- Mycorrhizal populations and application? We know a fair amount, but could learn more.
- Chestnut dispersal by wildlife? Some studies in-process, but more could be done.

Germplasm Agreement - *Committee*

There was not much time for discussion of this topic. Willeke shared some brief insights. TACF didn't invent the GPA, we copied it from a University agreement. We were small, worried about unscrupulous nurserymen, and others that would profit off our work. This kind of agreement is now used widely by other federal and state agencies, and universities. This scares a lot of people into thinking they could get sued, but we're not interested in chasing down honest people. The agreement is in place to protect our small organization, not hurt honest people.

Meeting adjourned at 4:04pm.