


From: **Connie Barlow** conniebarlow52@gmail.com 
Subject: FOIA FWS-2018-00613 proposed win-win solution
Date: August 3, 2018 at 6:39 AM
To: Tiffany McClurkin foiar4@fws.gov

CB

RE: Proposed win-win solution and the larger ESA imperative.

Ms McClurkin -

1. SEED DATA. On July 26, a new posting pertaining to ex-situ seed production appeared in the "Conservation Updates" section of the [Torreya taxifolia page of The Center for Plant Conservation](#). Much of that I already knew; I simply wanted to seek that kind of report via the FOIA process. The data pertains only to ex situ plantings by the Atlanta Botanical Garden (ABG property plus Blairsville State Park). There is nothing yet published on the Smithgall Woods site, where Torreya Plantings are administered by the University of Georgia. **Both sites demonstrate very problematic inattention to seed production (which is necessary for "recovery"), as the management concern apparently has been limited to genetic "safeguarding."** Ergo, so long as the individual trees in the ex situ plantings remain alive, the Georgia institutions administering the Recovery Plan likely regard that there is no genetic gain or loss by doing anything in particular with the seeds. The seeds, thus, can be ignored, and possibly not even counted. In contrast, a citizen regard for ESA management, such as my own, would deem any management goal that simply seeks to "prevent extinction" and "safeguard plant materials" (rather than aim for "recovery") as far from adequate.

2. USF&WS CRITICIZED AT JULY 17 SENATE HEARING. The CNN video post of the **2-hour hearing on the "Recovering America's Wildlife Act"** includes strong criticism of federal implementation of the ESA during the first three minutes. The committee chairman charges that endangered species are being **"kept on life support."** *Torreya taxifolia* (listed in 1984) could easily be demonstrated as a case example of such — but it doesn't need to be.

3. TOWARD A WIN-WIN SOLUTION. **The USF&WS could encourage Atlanta Botanical Garden and University of Georgia to join hands with Torreya Guardians to present a stunningly successful example of what it could be like** for other endangered plants to be managed into the uncertain future. This would especially apply to listed plants in which seed dispersal impediments likely account for their current small geographic ranges and thus put them in the greatest danger with ongoing "weather disruptions." Note that both the 1986 and the 2010 recovery plans for Torreya point to its "glacial relict" status as the likely cause of its exceedingly small and isolated range in n. Florida. Read [the quotes at the top of this page](#). The seed-dispersal impediment for Torreya taxifolia is that, while the Chattahoochee River is an excellent delivery system for moving seeds southward from the southern Appalachians toward the Gulf Coast, vertebrate dispersers (squirrels) are the only modes of transportation for getting seeds back north. (See my ["Paleoecology and Assisted Migration Debate"](#) post.) Measurements taken by Torreya Guardians at [a 90-year-old private grove of Torreya taxifolia nearly Highlands NC](#) indicates that it took the trees nearly a century to establish offspring (with the help of squirrels) out to a distance of 40 yards. As well, such data indicates that there should be no fear of Torreya taxifolia becoming invasive if assisted to migrate back up into the Appalachian Mountains.

4. FOCUS ON THE LEARNINGS. Because no other glacial relict species is being managed with a deep-time understanding, **it would be unfair to charge the creators and implementors of the 2010 recovery plan update for Florida Torreya as being negligent.** There was no precedent for utilizing assisted migration for an endangered plant. And because no other citizen group had made use of [the intentional loophole \(just for plants\) in the 1973 Act](#) **it would be wrong to focus on the conflicts that have arisen between the official plan implementers and the citizen volunteers** (over whom the officials have no jurisdiction). Instead, we should focus on the learnings.

I can easily report in hindsight the **mistakes that I made** in organizing and playing a leadership role in Torreya Guardians. While I do maintain a detailed account (private document) on all the seeds we distribute, year-by-year, numbers, where the seeds came from, and to whom we send them, and while many of the volunteers have eagerly reported results ongoingly, I have not been perfect in my record-keeping. As well, my encouragement to planters starting in 2013 to ["freeplant" seeds into their regrowth forests](#) experimentally to discern favored habitats and plant associations, largely resulted in significant seed predation by rodents — until volunteers began reporting successes by planting seeds 4+ inches deep (beyond the reach of rodents). Thus, **the official implementers of the recovery plan are not alone in "wasting" seeds.**

The **ABG recent effort to determine how to undertake long-term storage** confirmed that drying or freezing are not options for intact Torreya seeds. Hence simple storage of seeds for use at a later time is not possible without high-tech "somatic embryogenesis," necessarily performed seed-by-seed — and thus very expensively.

From the perspective of learnings, all pieces are in place for finally launching a combined institution-citizen effort to ensure that no seed goes to waste. We citizens *are* needed. The seeds surplus to ex-situ safeguarding or storage need not go to waste, and we Torreya Guardians do not need to be primary recipients. Crucially, very little, if any money needs to be allocated to USF&WS or the states in order to accomplish such partnerships.

5. ENLIST CONSERVATION ORGANIZATIONS AND GARDEN CLUBS **to create plans and to recruit private landowners for receiving seeds produced in ex situ orchards that are deemed surplus** to the official federal/state recovery projects. In effect, that is how ABG and Torreya Guardians inadvertently collaborated before 2016.

6. ACCOMPLISH THIS REVISION THROUGH ESA AMENDMENT. Several days ago I reached out to a Senator's office to suggest a specific provision for plants in the amendment process. (Notice the appeal to Libertarian legislators and the language of "weather disruptions" rather than "climate change.") I wrote:

PROPOSED AMENDMENT: For listed threatened or endangered plants that are encountering abnormal weather disruptions (notably, extreme droughts, intense and/or long-lasting heat stress, and/ or unusually mild winters conducive to population increases or range expansions of diseases and/or insect vectors of diseases), citizens may choose to volunteer their private lands for ex situ plantings in less stressful locations as specified by the [USDA Plant](#)

[Hardiness Zone Map](#). Citizens will engage via their regional land trusts, botanical garden clubs, conservation organizations, etc. Such organizations will submit to the USF&WS requests for seeds or other plant materials within the context of their own species-specific recovery plans. Such plans will include, at minimum, (1) scientific certification that the species is (or almost certainly is) non-invasive in the proposed recipient locales and ecosystems, (2) a preliminary statement of best practices for planting and nurturing the species in their particular region and for determining suitable habitats and micro-climates for experimental plantings, (3) a description of how the plantings will be monitored, (4) a commitment to report results ongoingly to the USF&WS, (5) potential alliances with regional educational or research institutions that could aid in developing scientifically robust "citizen science" experiments so that ex situ citizen plantings can advance not only the numbers of individuals "safe-guarded" but also improve management practices toward the goal of species recovery and resultant de-listing. Organizations submitting species-specific local or regional recovery plans will attest to their ability to proceed without need for funds from federal, state, or local governmental entities.

7. ... OR BY REGULATORY REVISION. This recruitment of citizens and supervising institutions could equally be accomplished within the regulatory revisions now under consideration. Note that this regulatory shift would encourage non-profit institutions to lead, thus replacing the conflictual binary of either the official recovery plan implementers or a lone or loose group of citizens paying their own way.

8. I WILL BE SUBMITTING COMMENTS BY SEPTEMBER 24 AS TO REGULATORY REVISIONS. I would dearly love to do so in a way that elevates **the Florida Torreya case as demonstrating that such partnerships can be viable** — and will surely work better when regional conservation groups and garden clubs step forward to play the intermediary role between citizen planters and those who implement the official recovery plan. The free labor of students and interns supervised by a regional university should be easy to engage. The opportunity for academics to create degreed projects (and publish papers) should be attractive to universities, not only in environmental studies programs but also in communications, horticulture, etc. **I wonder if Atlanta Botanical Garden might be inclined to submit recommendations** along these lines, too. I wonder if an informed, neutral party might play a role in our two groups being able to trade ideas, and hence converge somewhat on our recommendations. I wonder if we can be on the same team.

9. SUPPLEMENTAL POINTS ON USF&WS STAFF:

- **Vivian Negron-Ortiz** in the USF&WS Panama FL office has deftly tried to manage the tensions. Notably, she reached out to invite Torreya Guardians to participate (phone conference call) in the final meeting of scientific and stakeholder advisors toward the 2010 recovery plan update). Two of us participated. She expressly asked the group to vote on whether to include an assisted migration pilot project. The two of us Torreya Guardians were the only participants to vote yes. Note: Although "critical habitat" has never been designated for Torreya, the nearby landowners who had Torreya on their properties not only were eager to cooperate; they seemed to feel such pride of ownership that they, quite naturally, were not willing to say "goodbye" to Torreya by voting to have northward locations tested as possibly more suitable.
- **Donald W. Imm**, USF&WS State Supervisor (Georgia) was among the 6 signatories to a May 2016 memo of understanding titled "2016 Torreya Caution Statement to GPCA Botanical Guardians", which I received as an attachment from ABG Emily Coffey in her email to me February 2018. I was unaware of the accusations (and thus the hostility and unwillingness to communicate) prior to Coffey's email. I attach that pdf at bottom

10. BE AWARE OF THE UNIVERSITY OF FLORIDA'S ENTRY INTO PROMOTING GENETIC MODIFICATION OF FLORIDA TORREYA. This past March, the university hosted an invitation-only meeting that resulted in a glowing press report of the Forest Pathology program moving ahead with **using CRISPR technology to nudge a fusarium-resistant wheat gene into Torreya**. The press highlighted the participation of **E.O. Wilson** at the gathering. At first I was livid; then I realized that enviro groups will swarm in at recovery plan update time, protesting that the most endangered conifer in the world is being handled this way. So I don't need to worry about it. But USF&WS does. Learn more about this turn of events by going to [this page](#) and scrolling down to my March 2018 entry.

I look forward to working with your office to turn this FOIA problem into a win for the USF&WS in the ongoing "modernizing" of the Endangered Species Act and/or its regulations.

Sincerely,
Connie Barlow, Founder of Torreya Guardians

5 May 2016
GPCA and Botanical Guardians:

As members of the GPCA and Botanical Guardians we can feel justifiably proud of our ethics, our teamwork, our mutual support and open sharing of information. But in light of a recent occurrence, we would like to remind the entire group of our official GPCA Safeguarding Policy Statement. It outlines basic best practices and our code of ethics.



None of us have permission to remove propagules or any plant material from state or federal lands for our own purposes or for projects that lie outside those sanctioned by GPCA at our project planning meetings.

We mention this because in the last several months, someone removed all of the fruits from the *Torreya* safeguarding collections at Smithgall Woods State Park. All of the fruits had been bagged for a GPCA seed-collecting project. Nevertheless, every fruit was methodically removed at some time after the park was closed. This would have required a great deal of time and planning.

We have no information about where these fruits went, but we press upon all of you to take seriously any stories you hear about taking from public lands. And, if you have a chance, please correct anyone you hear even joking about taking plant material. This is serious and can slow or even halt our careful and planned work with imperiled plant species.

While we have no knowledge of who was responsible for the above action, we would like to point out that the *Torreya* Guardians and their volunteers are not members of the GPCA. They have been linking their work to ours but they are not partners of the GPCA. The GPCA does not sanction assisted migration of *Torreya* outside its range, and we do not support the movement of *Torreya* outside the state of Georgia. Furthermore, we have grave concerns about the fusarium disease present within all *Torreya* tissues and its potential for spread.

The assisted migration and the outplanting of plant material with no plans, monitoring, reporting methods, or permission from public landowners is counter to the GPCA's methods and philosophy. Our safeguarding plans for *Torreya taxifolia* have been very specific, carefully monitored, planned with iterative feedback from colleagues outside our organization, and are currently being revisited as our knowledge grows regarding the fungal pathogen.

GPCA members and Botanical Guardian volunteers are advised to be cautious when speaking to any members of *Torreya* Guardians. They have taken advantage of professional courtesies, making broad claims from simple correspondence, and linking their work with members of the GPCA. GPCA is publicly distancing itself from *Torreya* Guardians and their methods of rewilding an endangered species outside its range.

Our thanks go out to you all for your hard work and support in safeguarding and advocating for threatened and endangered Georgia species. The above incidence has been extremely troubling, but with your help we hope it is an isolated one. For questions or comments, please send an email to GPCA Coordinator, Jennifer Ceska (jceska@uga.edu).

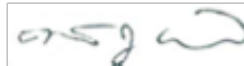
Sincerely,



Donald W. Imm, Ph.D.
State Supervisor/Project Leader
U.S. Fish & Wildlife Services



Henning Von Schmeling
Senior Director of Operations
Chattahoochee Nature Center



Matt Elliott
Program Manager, Georgia DNR
Nongame Conservation Section



Jennifer Ceska
GPCA Conservation Coordinator
State Botanical Garden of Georgia, UGA



Jennifer Cruse-Sanders, Ph.D.
VP for Science and Conservation
Atlanta Botanical Garden



Heather Alley
GPCA Botanical Guardians Coordinator
State Botanical Garden of Georgia, UGA

