Following lengthy phone call with Catherine Phillips, USF&WS Panama City FL

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From: Connie Barlow <conniebarlow52@gmail.com>
Subject: Torreya docs - 1 - FOIA sequence
Date: August 21, 2018 at 4:18:55 PM EDT
To: catherine_phillips@fws.gov

Catherine -

Here is the win-win proposal I sent to ABG CEO on Aug 7, which includes my original FOIA request, the docs I was sent in partial fullfillment of it in attached pdf (notably, Carrie Radcliffe and Emily Coffey responses to my original email).

Connie

From: Connie Barlow <conniebarlow52@gmail.com>
Subject: win-win proposal to ABG for solving Torreya problem
Date: August 7, 2018 at 10:59:23 AM EDT
To: Mary Pat Matheson <mpmatheson@atlantabg.org>
Cc: Tiffany McClurkin <foiar4@fws.gov>, "Negron-Ortiz, Vivian" <Vivian_NegronOrtiz@fws.gov>

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From: Connie Barlow <conniebarlow52@gmail.com>
Subject: Torreya docs - 2 - Emily Coffey statement on ex situ
Date: August 21, 2018 at 4:24:39 PM EDT
To: catherine_phillips@fws.gov

Catherine -

Go to this url on Torreya on The Center for Plant Conservation website and scroll down to the Ex Situ Collections reports:

https://saveplants.org/national-collection/plant-search/plant-profile/?CPCNum=4295

Most recent is this:

Contributor: Elvia Ryan Updated: 08/14/2018	The current estimate of Torreya taxifolia is approximately 730 plants down to 0.22% of the original population size primarily due to the Fusarium outbreak that occurred back in the mid-20th century. The ABG Gainsville ex-situ collection consists of 428 accessioned trees (45% increase from the 2008 collection) that can actually be traced back to a specific tree they were collected from in the wild spanning over the past 30 years. The main focus of ABG's recovery action plan is to genetically safeguard via seedlings and cuttings every known wild individual from both public and private properties. There are 323 wild individuals safeguarded at ABG and throughout the 21 partnering institutions with approximately 407 left to safeguard which should occur this fall. In 2017, the main focus was the cage installation of over half of the population on both public and private lands. A total of 4000 seeds and 2000 seedlings were distributed to the 21 institutions across 8 states including Royal Botanic Garden Edinburgh, Scotland. This year, ABG also performed in-situ experimental trials: 7 trials in Torreya State Park in Florida, 4 trials on private land, 3 sets of 7 maternal lines (21 seeds per cage to protect from squirrels and hogs). The Torreya Tree of Life Event was held this year at the Torreya State Park with the University of Florida for the purpose of strategizing the next steps for in-situ conservation and ex-situ research. (Coffey 2018)

Carrie Radcliffe has this:

Contributor: Carrie Radcliffe Updated: 12/13/2017	In 1990, Atlanta Botanical Garden (ABG) received 155 clones of *T. taxifolia* propagated from the remaining natural population. Since then propagation efforts have increased ABG's collection to include almost 1,000 individuals, including nearly 500 accessions from the wild. ABG has increased representation of wild individuals through extensive field surveys, which have located additional trees, along with continuous collection and propagation efforts. Allozyme analysis was used to evaluate multiple populations within the five ravines in which *T. taxifolia* occured in 1994. Genetic diversity detected using allozyme markers in the *ex-situ* population of Torreya maintained at ABG was found to be higher than that in wild populations. Differences are likely due to the bottleneck effect and decline in genetic variation in the wild. One of the limiting factors to *ex situ* conservation of this species is that *T. taxifolia* produces recalcitrant wet seeds that cannot be dried for storage in freezers. Therefore, until recently the only way to maintain *ex situ* germplasm was through living collections. ABG in collaboration with Georgia Institute of Technology, developed a somatic embryogenesis tissue culture system to initiate cultures, produce somatic seedlings, and cryogenically store cultures of *T. taxifolia*. Large numbers of somatic embryos and resulting seedlings can be developed in culture from a single seed which can be used for disease research, restoration or establishment of seed nurseries for conservation. Atlanta Botanical Garden and the University of Georgia have also established a Torreya seed orchard, where nearly 5,000 cones were harvested in 2016. Seed has been shared, and seedlings are being distributed to other botanic gardens to use in developing additional ex situ collections and another seed orchard. ABG is currently sharing seeds and seedlings with conservation institutions

From: Connie Barlow <conniebarlow52@gmail.com>
Subject: Torreya docs - 3 - Historic groves prove non-invasive
Date: August 21, 2018 at 4:28:18 PM EDT
To: catherine_phillips@fws.gov

Catherine -

This is the new webpage I put up last week on our documenting Historic Groves of Torreya taxifolia:

http://www.torreyaguardians.org/historic-groves.html

• **SUMMARY:** Based on observations and documentation by Torreya Guardians of "historic groves" (where one or more trees were planted north of Florida before the 1984 designation of Florida Torreya as an endangered species), **it is reasonable to conclude that *Torreya taxifolia* is non-invasive and can thrive in locations substantially north of its peak glacial refuge.**

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From: Connie Barlow <conniebarlow52@gmail.com>
Subject: Torreya docs - 4 - reports page
Date: August 21, 2018 at 4:35:15 PM EDT
To: catherine_phillips@fws.gov

Catherine -

The best way to quickly scan the history of our involvement is via the Torreya Guardians Reports/Comments page:

http://www.torreyaguardians.org/comments.html

Scroll down to my July 2018 post on **Summary of papers (2010 - 2016) identifying the lethal disease of Florida Torreya**

Then scroll to my March 2018 **Scientists choose genetic manipulation for Torreya; ignore assisted migration**

February 2018 is my post of the video of my California Torreya site visit in 2005.

Scroll to December 2017: **Our efforts featured in an editorial in a top science journal (Nature)**

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From: Connie Barlow <conniebarlow52@gmail.com>
Subject: Torreya docs - 5 - Assisted Migration scholarly links page
Date: August 21, 2018 at 4:39:20 PM EDT
To: catherine_phillips@fws.gov

Catherine -

I've been building this Annotated Scholarly links page since 2007. Notice in the near-top linked Table of Contents that a Paleoecology section exists and a huge section dedicated to scholarly papers and news by forestry researchers.

http://www.torreyaguardians.org/assisted-migration.html

Connie

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From: Connie Barlow <conniebarlow52@gmail.com>
Subject: Re: [EXTERNAL] Torreya docs - 5 - Assisted Migration scholarly links page
Date: August 22, 2018 at 11:17:41 AM EDT
To: "Phillips, Catherine" <catherine_phillips@fws.gov>

Catherine -

Thanks for letting me know that all the emails arrived.

Connie

On Aug 22, 2018, at 10:31 AM, Phillips, Catherine <catherine_phillips@fws.gov> wrote:
Hi Connie. Got your message. These were received. You found my email address!

Catherine

Catherine T. Phillips, Ph.D.
Field Supervisor
Panama City Field Office
1601 Balboa Avenue
Panama City, Florida 32405
850-769-0552 ext.242
850-348-6497 (cell)

On Tue, Aug 21, 2018 at 3:39 PM, Connie Barlow <conniebarlow52@gmail.com> wrote:
Catherine -

I've been building this Annotated Scholarly links page since 2007. Notice in the near-top linked Table of Contents that a Paleoecology section exists and a huge section dedicated to scholarly papers and news by forestry researchers.

http://www.torreyaguardians.org/assisted-migration.html

Connie