

January 25, 2005

Peter -

Wow! So you actually experienced *Torreya yunnanensis* in the wild. No rush, but if you could eventually type a paragraph or two on your experience of them for me to post on the website, that would be great. And any digital photos you have of them and their surrounds.

I am cc-ing Anatheia Brooks on this, as she is planning to visit *Torreya* in China.

Together for *Torreya*,
Connie

On 1/25/05 6:49 PM, "Peter Wharton" <peter.wharton@ubc.ca> wrote:

> Dear Connie,

>

> Sorry to have been out of touch - it is not of disinterest I can assure
> you, just a titanic amount of responsibilities. All the field work in
> Vietnam and Yunnan this fall has caught up with me - data management!
> Thanks so much for the article 'Assisted Migration for an Endangered
> Tree' - will look at both sides represented by the two articles you
> mention. The new web site looks good. Very excited to see *Torreya*
> *yunnanensis* in the wilds of central southern Yunnan (Ailao Shan, 2475m).
> Will be in touch soon -

>

> Kind regards,

>

> Peter

> --

> A. Peter Wharton
> Curator of David C. Lam Asian Garden

>

> peter.wharton@ubc.ca
> Ph: (1) 604-822-5497
> Fax: (1) 604-822-2016

>

> UBC Botanical Garden and Centre for Plant Research
> 6804 SW Marine Drive
> Vancouver, British Columbia, Canada
> V6T 1Z4

>

> <http://www.ubcbotanicalgarden.org/>

--

January 4, 2005

Great idea, Lee -

Run with it!

For Torreya,
Connie

On 1/3/05 7:58 AM, "LEE R BARNES" <lbarnes2@earthlink.net> wrote:

Connie and Sara-

The Bryan Native Garden would be a great spot for torreya seedlings - it's located in a shady ravine area with good fire protection (surrounded by Junaluska community.) Folks have created a wonderful wild plant garden so I applaud the many volunteers esp. Maxilla! I'm guessing that there will better success with transplanting seeds to pots and growing them to a better size for transplanting.(guarded from squirrels for the first season). I'd be happy to help anyway which I can- collect seeds, suggest planting areas, etc.

I still like the idea of planting numerous seeds and steward a mature grove of seed-producing trees- may take 15-25 years before regular seed production. Public display will help develop more public interest and help find folks interested in wild plantings in the area. Nearby Haywood Community College would be a another local choice.

Thanks and Happy Trails! Lee Barnes 452-5716 feel free to call

Nov 25, 2004

Thank you, Sharon, for letting me know!

I apologize for the long delay in responding, but I wanted to get an edited pre-pub draft of the pro-assisted migration finished and back from Wild Earth before sending it out to all again.

So, you will find that new version (should be very close to final) attached.

Also, note that at the very bottom I mention a new website, www.TorreyaGuardians.org. I just designed and put up the home page a few days ago (that is all that exists as of now), and look forward to adding pages during the holidays. If there is anything you'd like to see there, and especially anything on an existing website you'd like me to hotlink, send me a brief para describing the link and I will get it linked.

For Torreya,
Connie

On 8/23/04 12:13 PM, "Sharon Hermann" <hermasm@auburn.edu> wrote:

> Connie,
> Recently I was asked to lead a session of an upper level conservation
> biology course (seniors and grad students) at Auburn University. It may
> interest you to know that I've elected to focus the two hour discussion

> on Torreya, in part because of the recent exchanges and draft essays on
> assisted migration ... it should make for an interesting topic for the
> students to consider.
> Sharon
>
>
> Sharon M. Hermann
> Department of Biological Sciences
> Funchess Hall
> Auburn University
> Auburn, AL 36849
> Office phone: 334-844-3933

Leigh -

I apologize for the long delay in responding to your August email, but I wanted to get an edited pre-pub draft of the pro-assisted migration finished and back from Wild Earth before sending it out to all again.

So, you will find that new version (should be very close to final) attached. Unfortunately, because this essay is to be paired in a forum, and Mark Schwartz's anti-assisted migration piece is so short, the editor at Wild Earth had to cut a lot out to get it down to size. Including a lot of quotes from our email group. And entirely cutting out the "Proposed Standards for Assisted Migration."

Not to worry: I have just designed and uploaded a homepage for www.TorreyaGuardians.org that I will continue to add to thru the holidays and beyond. So I can eventually get the proposed standards and a lot of other stuff, plus hotlinks to sites, up there. You will see that I mention this new website at the bottom of the document attached, which is the latest version (and should be very close to final) for Wild Earth.

If there is anything you'd like to see me add to the site, and especially anything on an existing website you'd like me to hotlink, send me a brief para describing the link and I will get it linked.

For Torreya,

Connie

On 8/25/04 8:24 PM, "Leigh Brooks" <leigh_brooks@tnc.org> wrote:

> Hi Connie,
>
> Comment on 9. Institutional Inaction. I wouldn't limit it to inaction, or
> lack of inertia, just in doing assisted migration. You might consider: The
> institutional scientific community is not actively working toward the
> recovery of the plant in question or has not attempted recovery of the plant
> in its native range, and most of the native habitat is institutional land.
>
> Leigh Brooks

> Volunteer Coordinator/Community Relations Manager
> The Nature Conservancy, Northwest Florida Program
> PO Box 393
> Bristol, FL 32321
> 850-643-2756 phone
> 850-643-5246 fax
> leigh_brooks@tnc.org
> nature.org

Hello Leigh -

See my other email, the one with an attachment. And thanks for the clarification on needle palm, which I included in the final Wild Earth draft for pro assisted Migration of T. tax.

Unfortunately, owing to severe cutting in length, a lot of the choice "expert opinions" you mention below had to go. But I plan to include much fuller treatment of the issue and our discussions (subject to each author's approval) up on the new www.torreyaguardians.org website I just designed.

Great question you raise: "How does a palynologist live in the present?" Deep time awareness actually has motivated me to more activism. A couple months ago I visited a huge outdoor endangered herbivore breeding sanctuary in southern Ohio, and convinced the staff to allow me to test ripe Kentucky coffee tree pods on their likely disperser from earliest co-evolutionary times (pre-dating arrival of elephants in North America just 17 million years ago. Rhinos were here from 50 to 5 million years ago. It was thrilling to actually have a rhino out on the grounds scarf them up, and staff there now moving toward revegetating this damaged strip mine recovery land by having the rhinos disperse KY coffee pods and the hugely nutritious honey locust pods!

I love your reflections on SE fire ecosystems. For a lot more to contemplate on the role of humans, absolutely read the fire section in Tim Flannery's book "The Future Eaters" which deals with the biodiversity effects of human colonization of Australia, NZ, etc.

Together for Torreya,
Connie

On 8/25/04 8:25 PM, "Leigh Brooks" <leigh_brooks@tnc.org> wrote:

> Hi Connie (not for public consumption),
>
> What you refer to as stubby palmetto palm is probably needle palm. It grows
> on slopes of some of the ravines where torreya grows. Our other palm,
> bluestem palmetto, grows in the river floodplain below the bluffs. What we
> call palmettos in Florida are saw palmettos. They don't occur near the
> ravines or on the hills above them, but do occur in flatwoods throughout
> Florida.
>
> I saw beautiful flowering Franklinia at Arnold Arboretum near Boston last
> October, and I think I also saw one flowering at Smith College in western
> Massachusetts on the same trip. So it's happy even in New England.
>

> The article covers all the points well, and I like how you incorporated
> "expert" opinions. I think your arguments hold regardless of the past
> range. If climate change is pressuring species and they won't have time,
> means, or access to safe passage, they could be candidates for A.M.
> consideration. Floraforming sounds like a sci-fi concept. Would love to
> read more about this idea, and in general what our responsibilities should
> be in adapting species to climate change.
>
> Your writings have inspired me to read about paleontology and ecological
> history. One of the interesting things I picked up was that plant
> communities don't necessarily migrate. Species do. So assemblages can be
> completely different past, present and future. Looking at things from the
> perspective of geologic time, life is pretty resilient. It may take on
> different forms, but it continues. As was said in Jurassic Park, "life
> finds a way." But all this reading has got me kind of apathetic and
> philosophical. If continents are going to continue rifting and colliding,
> species are going to keep invading, migrating, outcompeting. Looking at
> things this way makes our struggles to suppress invasive non-native species
> seem futile. How does a palynologist or paleontologist live in the present?
>
> One large question that's looming in my mind, and for which I haven't yet
> figured out the answer, is when and how the grasslands of the southeast
> coastal plain came about. The longleaf pine/wiregrass community that used
> to cover 93 million acres is fire adapted, or fire dependent. I think
> wiregrass seed must have been dispersed by large mammals because the seed
> drops close to the parent plant and is not dispersed by wind, but readily
> sticks to fleece clothing. So, humans may have had a hand in exterminating
> wiregrass seed dispersers and are today serving as proxies in restoring this
> habitat. I haven't been able to research enough to discard silly thoughts
> yet. One of the silly thoughts is that the ecosystem could have been
> created by humans. If they were using fire as you presented below, burning
> would have favored longleaf pine with an open understory or grasses and
> herbaceous plants. So what came first, the chicken or the egg? Maybe this
> will be another topic for you to explore in the future :)
>
> Long live the cockroaches, I mean torreya,
>
> Leigh Brooks
> Volunteer Coordinator/Community Relations Manager
> The Nature Conservancy, Northwest Florida Program
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Connie-

I'm willing to help with *Torreya* seed collection and distribution. I've been thinking about the seedlings offered by Biltmore- I think it would be best for folks to plant several trees in one location to insure males/females for pollination. I'm running out of town for the next week so will be out of touch

until October 28th. Thanks and happy Trails, Lee

----- Original Message -----

From: Connie Barlow <<mailto:cbtanager@bigplanet.com>>

To: lbarnes2@earthlink.net

Sent: 10/19/2004 7:17:26 PM

Subject: Re: Torreya seeds at Biltmore

Lee -

Thanks for the update. I apologize for being so long to reply. Bill Alexander left me a long phone message on the same. I have been keeping track of those who I know wish to plant T. tax on private lands, and I will send you that list when next I can spend a few days doing nothing but T. tax (I need to create the www.torreyaguards.org website, for which I have already purchased the domain name). Fall issue of Wild Earth is delayed. Will let the whole list know when it comes out.

Have you got any folks in the Asheville/Waynesville area that might want to plant T. tax, so that those seedlings need not go to waste? The folks I have are SE Cumberland Plateau, western Tenn, southeastern Ohio, and somewhere in Pennsylvania. I imagine that when the Wild Earth piece is published (with its solicitation of private land owners at the end), we will get a lot more.

Since you are

Connie-

I spoke with Bill Alexander yesterday- he has been out of town and backed up at work. He says that there was only a small seed crop this year in mid-September and these were scattered by tropical storms- his staff has been extremely busy cleaning up so they didn't catch the seeds this year. He did offer 10-12 seedlings but felt they could not be easily mailed but might go to local sources who can offer long term stewardship. Did you have specific requests for the seeds, etc. Also, has the Wild Earth articles on Torreya come out yet? I hope all goes well with you'all! Happy Trails, Lee 828-452-5716

LEE R BARNES

lbarnes2@earthlink.net

Lee -

Sorry for the long delay in response. Attached is a near-final version of the pro-assisted migration essay, which was way shortened by Wild Earth editors

to make it more the same length as Mark Schwartz's anti-essay. Will be published in December. Notice 2 things near the end:

1. I mention you as the local contact and Bill Alexander as the supervisor of collecting T. tax seeds at the Biltmore autumn 2005.
2. I direct volunteers and interested land owners to the new website I just got up (only the home page thus far; it will take me a while to make the pages for all the buttons). Check out the webpage, and let me know any hotlinks, etc. you'd like me to add. I do all the code and the design myself.

Especially, I would love to put up some pages on how landowners, etc. get involved, so when you get a chance, let me know. I definitely want to have something up along those lines as of Wild Earth pub date. Right now, the most someone can do is press the contact button, and an email comes to me.

Having so much extracted from the published article is not depressing, because I plan to get more details and arguments up on the website.

On 10/23/04 8:17 AM, "LEE R BARNES" <lbarnes2@earthlink.net> wrote:

Connie-

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LEE R BARNES
lbarnes2@earthlink.net

DEC 1

Hello *Torreya* folks!

This is Connie Barlow after a long absence.

1. WILD EARTH FORUM:

Attached is a pdf format of the text of the PRO-ASSISTED MIGRATION essay by me and Paul Martin, which will appear in the connectivity issue of WILD EARTH magazine, coming out this month (which will likely be the final issue of Wild Earth), along with the ANTI piece written by Mark Schwartz.

2. TORREYA GUARDIANS WEBSITE:

I finally got up a WEBSITE: WWW.TORREYAGUARDIANS.ORG. Check it out! The rudiments are there now. I needed to get it up by the time Wild Earth went to press because in the Wild Earth essay, we solicit private landowners to offer their natural forested lands for *Torreya* test plantings, and we also solicit volunteers (especially teachers who can assign monitoring to students through the years) to volunteer in assisted migration of *T. tax.* And we direct them to the website to learn more about the effort and who to contact (me and Lee Barnes).

3. THINGS TO LOOK FOR ON THE WEBSITE:

A. STANDARDS FOR ASSISTED MIGRATION. In the Wild Earth Forum, there was no room to include the proposed "Standards for Assisted Migration" that we worked on as a group, so I've got a draft up on the website. As I am the webmaster, I can make changes in an instant, so let's still consider that draft in process.

B. LIST OF NAMES ON LIST OF "TORREYA GUARDIANS". Everybody please click on the "Who Are Torreya Guardians?" page and see if you do or do not want your name listed, and how I've got it listed (some as "advisors" from particular botanical gardens, Nature Conservancy "liaisons", academic advisors, etc. As of now, the only names that are hotlinked to ready email correspondence are my own as volunteer webmaster, and Lee Barnes as volunteer coordinator of "Private Lands Initiative." Let me know if you want on, off, want to be hotlinked, how you want to be listed, etc.

C. EFFORTS TO SAVE. Note that on this page of the website, I briefly describe the cuttings/cloning project and results, and try to link pages of the participating botanical gardens.

D. REWILDING NOW! I tried to ensure that this page conveys that only a subset of "Torreya Guardians" support assisted migration, so that even Mark Schwartz will feel like I wants to be associated with this website.

E. WILD EARTH FORUM IN PDF. Eventually, after Wild Earth is published, I will get the pro (and with Schwartz approval, anti) papers up on the website in pdf.

F. RECRUITING LANDOWNERS PAGE. Bill Alexander at the Biltmore told me that the hurricane season, coupled with an off-year for fruit production, meant that there was no fruit to harvest this fall. So efforts to harvest T. tax seed at the Biltmore and to begin the assisted migration process will begin autumn 2005. So plenty of time to discuss, recruit land-owners, help with easy protocols for citizen naturalists to follow, recruit leagues of students for monitoring, etc.

G. IMPROVING THE WEB PAGES. Lots of work still to be done to make the web pages more useful, and to hotlink to elsewhere on the web. LET ME KNOW OF ANY SUGGESTIONS.

H. SOLICITING DIGITAL PHOTOS. Notice how I have the website photo-rich, and easily viewable even with dial-up access. Those of you who have never seen the grove at the Biltmore can now see it on this website, and those who would like to see how diseased resprouts look in Florida can see that too. I would love to be able to post some photos of groves in California, and anything from the cuttings/cloning project. Please do not send me by email hi-resolution digitals, as it will take me forever to download on my dial-up. Email me in advance so I can request low-res/size or ask you to burn into a CD to mail to me.

I. OTHER PLANT GUARDIAN WEBSITES? Perhaps this will set a trend for ease of communication, and other guardian websites for other plant species will spring up. You will notice on the "Recruiting landowners" page that I end with some photos of Florida yew and speculate that perhaps it might too benefit from assisted migration -- but that would be a whole different (linked) website!

J. ARCHIVAL CORRESPONDENCE? At some point in the future I would like to think about getting some of our archival email correspondence up on this site (with permission of each contributor), and also making it possible to add important new communications. Threaded discussion is beyond my capabilities right now.

K. PLEASE CONSIDER THIS OUR/YOUR WEBSITE! AND HELP ME MAKE IT BETTER!

Together for Torreya,
Connie Barlow

Thanks, Stan -

As soon as I can get a dial-up access to the secure web-server I will upload the small changes suggested by you.

Together for Torreya,
Connie

On 12/3/04 4:23 PM, "Stan_Simpkins@fws.gov" <Stan_Simpkins@fws.gov> wrote:

> Hi Connie,
> I have one comment on the website. I recommend the following change as per
> below:
>
> As explained in the Saving Torreya section of this website, a lot of effort
> is being expended to attempt (1) to preserve the few trees that remain in
> the wild in Florida, (2) to clone genotypes for safe-guarding in "potted
> orchards" in various botanical gardens, and (3) to replant progeny from the
> potted guardians in or near Florida native habitat. All this effort is
> These three actions are taking place under the auspices of a legally
> sanctioned recovery plan for this endangered species, as administered by
> the U.S. Fish & Wildlife Service.
>
> My name as listed as the USFWS Contact is fine "as is".
>
> Thanks for continuing to keep us advised of your efforts and progress.
>
> Stan Simpkins
> USFWS Ecologist
> Panama City Field Office
> 1601 Balboa Ave.
> Panama City, Florida 32405
> (850) 769-0552 x234
> Fax (850) 763-2177

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December 7, 2004

Leigh -

I really value hearing your on-the-ground experience/insights with fire there in the humid east. Also, when I was googling around on sites about California Torreya, I recall running across info about how the California Torreya resprouts from rootstock after fire. I suppose that would explain the near even-age stand I encountered in the coastal mtns of northern Calif, mixed in with mostly pine upslope above the creek bed, and more of a mix near the creek itself.

Together for Torreya,
Connie

On 11/29/04 5:17 PM, "Leigh Brooks" <leigh_brooks@tnc.org> wrote:

> Hi Connie,
> I will publicize the Torreya Guardians web site in my next volunteer
> e-newsletter. Might attract some people who would like to participate.
> Developing the web site is a powerful idea.
>
> Thanks for sending the article draft. I do have a reservation about the
> differences between this interglacial and previous ones from my experience
> burning here, though I am not suggesting you make any changes to the
> article. Not sure the arguments that fire could have prevented northward
> migration of torreya are convincing. I still am attached to the argument
> that the tree lost its natural seed disperser, an anachronistic fruit.
>
> Loss of big browsers and the resulting brushier landscape of hardwoods would
> have impeded fire, not encouraged it into the ravines unless it was a
> catastrophic, high intensity fire. Fire doesn't carry across accumulations
> of hardwood litter on the ground, which typically act as a fire break unless
> the air is super dry and hot, or there are drought conditions with very low
> fuel moisture. Similarly, moist areas along ravines are not fire prone and
> just won't burn unless conditions are extreme. So I don't see a brushier
> landscape causing fires that limited torreya from migrating north along
> ravines. On the other hand, I could envision a brushier landscape limiting
> torreya migration because of direct competition (for light, space,
> moisture).
>
> Thanks for the stimulating ideas and conversation. It's too bad the
> standards for AM will not be included in the article. This is worthy
> material and should receive publication somewhere.
> Leigh

Hi Lee -

Paul Martin and I just had the following exchange pasted in below (his in lower case, my response in ALL CAPS).

I am thrilled that Paul wants to be in on the first harvest of T. tax seed at the Biltmore next fall, as do I, and it would be really cool to ritualize some aspects of it (bring in a deep-time ritual), perhaps gather first in a room at the Biltmore and invite press etc. for a regular launch and then head to the grove, doing some sort of circle gathering before we begin the work and then some sort of gathering afterward to admire what we collect and speak to the future. Lots of possibilities. Would be great to recruit an environmental studies teacher at Warren Wilson College to commit to bringing multi-year brigades of students, as that Asheville college attracts very green, earthy students.

As to the ritual side, Paul and I co-presented a "Mammoth Memorial Service" at the big Mammoth Site in the Black Hills a number of years ago (written about in the final pages of my Ghosts book), with me playing the role of Honey Locust,

and we recruited someone to play Thomas Jefferson, etc. Perhaps we could ask Paul, who is a great writer, to deliver a talk/essay as the elder of the group, which could serve very much like Aldo Leopold's dedication talk in Wisconsin in 1946 when the Monument to the Passenger Pigeon was dedicated. His essay, "On a Monument to a Pigeon" is my favorite in Sand County Almanac, and we began the Mammoth Memorial service by reading from it.

What do you think?

Background note for the email below: Paul got polio in his 20s and dragged himself on crutches to all sorts of out of the way botanical and Pleistocene ecological haunts for decades in his fieldwork. Now in his late 70s he is pretty much wheelchair bound, but fortunately the grove is right along a road.

--

OUR EMAIL EXCHANGE:

3. Whenever the Biltmore meeting is to take place, I want to be there, gods willing. That might also be a good time for me to get a designated driver to go look at the Apalachicola trees, if they can be seen anywhere within 100 yards from a road or track.

PAUL - GREAT! ACTUALLY THE MEETING WILL PROBABLY BE MORE OF A WORK-CREW GATHERING TO ENJOY THE HISTORIC MOMENT OF INTERACTING WITH THE TREES IN THIS NEW WAY. I WANT TO BE THERE TOO. LEE BARNES IS OUR LOCAL COORDINATOR, AND AS HIS PHD THESIS WAS ROOTING T. TAX FROM BRANCH CUTTINGS, HE KNOWS A LOT ABOUT THIS SPECIES AND PROPAGATION. HE WILL NEED TO KEEP AN EYE ON THE SEED CROP AT THE BILTMORE AND SQUIRREL ACTIVITY AS THE TIME APPROACHES IN ORDER TO GIVE US A DATE WHEN ALL SHOULD GATHER -- THAT IS, WHEN THE SEEDS ARE RIPE BUT BEFORE THE SQUIRRELS HAVE HARVESTED THE MAJORITY OF THEM. LEE WILL ALSO BE DECIDING WHETHER ANY NATURALLY OCCURRING SEEDLINGS AT THE BILTMORE, WHICH WILL OTHERWISE BE PULLED OR MOWED BY STAFF, SHOULD BE POTTED AND MADE AVAILABLE FOR REWILDING. AS TO BEING ABLE TO GET THERE IN A WHEELCHAIR, NO PROBLEM! A ROAD GOES RIGHT ALONGSIDE THE PLANTED GROVE OF A DOZEN 60 YEAR-OLD T. TAX AND RIGHT BY THE HEAD AND NORTH-FACING SLOPE OF THE RAVINE OF ESCAPEES, SO THAT SHOULDN'T BE AN ISSUE. AND ON THE SOUTH-FACING SLOPE, WHERE THE T. TAX YOUTH ARE, THERE IS A SIDEWALK THAT GOES RIGHT ALONGSIDE DEMARCATING WHERE NATURE IS LEFT TO GO WILD ON ONE SIDE AND THE LAWN IS MOWED ON THE OTHER.

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