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Subject: info for Ed's talk at Torreya Symposium March 1
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CB

Kathleen -

If you were Ed's assistant in the early 90s (a long braid?), then I met you when I interviewed him there for my 1994 book, "Evolution Extended: Biological Debates on the Meaning of Life" (1994). He also may recall me from my final book as a science writer, 2001, "The Ghosts of Evolution."

Anyway, **could you do a little background research to alert him to what may be some "politics" at the March 1-2 Florida Torreya Tree Symposium**, where he is both the featured speaker and doing a guided hike. Here is the symposium page: <https://www.torreyatreeoflife.com/>

SCIENCE background to be aware of: In 2004, after I learned that the USF&WS was unwilling to add an "assisted migration" project into its recovery plan for the endangered species *Torreya taxifolia*, I co-wrote a paper with the (late) Pleistocene ecologist, **Paul S. Martin**, titled, "Bring *Torreya taxifolia* North Now". It was published as a Forum piece in *Wild Earth* journal, with an oppositional paper by Mark Schwartz. Both papers are accessible here: <http://www.torreyaguardians.org/forum.pdf>

From the get-go, the foundational basis for our disagreement on best conserving this species is that Paul Martin and I came from a **paleoecological** viewpoint — that is, we recognized the tiny endemic range of *Torreya taxifolia* along the Apalachicola River as having served as one of the 3 most important refuges for eastern North America temperate plants during peak glacial episodes (the large seed of this yew-family species had probably **floated south from the Appalachian Mtns via the Chattahoochee River**, but then could not get back upstream during the interglacial). Since then, I have fleshed out the paleoecological argument for regarding *Torreya taxifolia* as a "left behind" glacial relict here: http://www.torreyaguardians.org/assisted_migration_paleoecology.html

IF ED PERUSES THE ABOVE LINK, that will be the quickest way for him to access the up-to-date paleoecological argument.

Now, for the POLITICS:

In 2005 I founded a loose group of horticulturalists and plant lovers, called **Torreya Guardians**, which began legally acquiring seeds for planting in private forests in North Carolina and Tennessee (and later as far north as OH, MI, and NH experimentally), We got seeds donated to us from botanical gardens north of Florida (primarily the Biltmore, but also private estates of mature trees in Clinton NC and Highlands NC). Here is the page on the HISTORY OF TORREYA GUARDIANS: <http://www.torreyaguardians.org/guardians.html>

There you will see that we've been **the dominant activist group re the poleward assisted migration controversy** (most recently mentioned in an editorial in the 4 Dec 2017 issue of *Nature* journal). I am the main communicator (and the webmaster and videographer) for our group.

We have not yet been invited to the Torreya Symposium, and probably won't be. That isn't my concern. What concerns me is that, **absent a shift in policy in which *Torreya taxifolia* will finally be treated as a climate refugee** (even more imperilled than the poster plant out West, Joshua Tree), then conservation biologists working officially with this species will be, in a way, climate deniers. Declaring the tree "imminently extinct in the wild" is on the agenda for that meeting, but that would be factually wrong. *Torreya taxifolia* has been "rewilded" by us into a variety of regrowth forest sites in northward states, and it is doing well in a number of those locations (first seeds produced in Ohio were just recorded this past November). All those can be accessed state-by-state on our Torreya Guardians homepage. Bottom line: *Torreya taxifolia* may face imminent extirpation in its historically native range — but it has an experimentally confirmed good prognosis in its **deep-time native range** well to the north.

Also, Ed should know that I spoke on the phone today with the Director of Research, Jared Westbrook, of the **American Chestnut Foundation**. (One of our Torreya planters on the Cumberland Plateau also plants ACF chestnut trees.) Jared agrees with me overall on how native trees (including recovered Chestnut) will have their ranges moving far to the north this century, and he knows about our group. So he will be letting his boss, Lisa Thomson, know about my concerns, as she will be a speaker at the Torreya Symposium.

Info for Ed's HIKE in Torreya State Park:

1. I mentioned to Jared that **Hazel Delcourt** (now retired palynologist and author of "Forests in Peril") told me a dozen years ago that it was imperative for conservation biologists to begin collecting seeds from the southernmost populations of even common native trees now and begin moving those genotypes north. So, when on his hike Ed walks up to a big **American beech tree with needle palm** growing alongside it, he should think about whether that tree might have something precious to offer northward states — if only someone starts collecting those seeds. Know that Torreya Guardians is entirely volunteer; surely volunteers in Florida can be found to attend to beech-nut collecting.

2. In 2016 I compiled into a video posted on youtube my 15 years worth of photos and videos of site visits to the forest that Ed will be hiking in. In that video he can see the cumulative disease problem, and get a look at the surrounds. That **video, "Site Visits to Florida's Endangered Torreya and Yew Trees"** can be accessed as Episode 17 on my Torreya Guardians videos page here: <http://www.torreyaguardians.org/video.html>

If Ed wants to see a video of an untended grove of mature Torreya trees under a deciduous canopy — and how well squirrels seem to distribute their progeny into the surrounding forest — then he should click on Episode 11, the Highlands NC video.

disintegrate them properly into the surrounding forest – then he should click on Episode 11, the Highlands HD video.

The video at the bottom of that page is a technical talk I gave at the Forestry School of Michigan Tech in 2015, where I get deep into the politics: "**Foresters Outpace Conservation Biologists in Climate Adaptation.**"

Thank you for your assistance. I will be happy to talk with you or Ed about any of this.

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