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* MA-TACF 2009 Annual Meeting November 15, 2009
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Morning Board Meeting with Elections: 10:30 am

Present: Brad Smith, Rich Hoffman, Rufin Van Bossuyt, Mike Meixsell, Mike Novack, Denis Melican, Lois Breault-Melican, Jamie Donalds, Yvonne Federowicz, Charlotte Zampini, Guy Shepard, Kathy Desjardin, Bruce Spencer, Brian Clark, John Meiklejohn

Kendra Gurney
Roy Najecki
(Others entered during meeting)

- 1.) Motion Jamie, seconded Mike M. Suspend term limits for re-election of the following Board members:
John Emery
Mike Novack
Rufin Van Bossuyt
Charlotte Zampini
- 2.) Vote on Slate of Director positions that are expiring as of 1/1/2009 as well as officers

Everyone was elected as on the ballot:

Terms beginning 1/1/2010:

Kathy Desjardin
John Emery
Yvonne Federowicz
Lois Breault-Melican
Denis Melican
John Mirick
Roy Najecki
Mike Novack
Rufin Van Bossuyt
Charlotte Zampini

Officers:
Jamie Donalds – President
Yvonne Federowicz – Vice President
Kathy Desjardin – Secretary
Mike Novack – Treasurer

People continuing for next year, not up for election until 11/2010 for 2011:

Brian Clark
Jamie Donalds
Richard Hoffman
Gary Jacob
John Meiklejohn
Mike Meixsell
Guy Shepard
Brad Smith
Bruce Spencer

We need to update our bylaws at the Secretary of State's office

John Mirick would be a good person to ask

We would like to send a letter to our retiring Board members Jim and Frank

We had National make Plaques

Kathy knows someone in Mendon that does wood plaques – we would give them a photo of what we want – formerly this was done up in VT by Daphne's contact

Jim Garland and Frank Howard both started in 2000?

We could also invite them to the meeting at which we give them the plaques – perhaps at spring

Kendra has a date and location for a regional meeting:

March 20th, Urban Forestry Center in Portsmouth, NH

Workshop-style

Purchase of a new projector for chapter?

We will try to get Mike N.'s laptop together with the existing laptop and see what we can do or Yvonne's (Yvonne ended up taking the existing projector home to experiment with it and her Mac)

Nankings – how many will we do? Fred thinks 10-15, we have a lot going on – are there other options than the standard ~20 line one?

We can talk about this more in January, Fred may be coming

Annual Meeting 11 am **INFORMAL NOTES**

Brad Smith – former MA/RI TACF President

“Chestnut 101”

went over very well as we had numerous new attendees

Kendra Gurney, New England Science Coordinator
New England Chapters Update

Maine – mostly done with Clapper & Graves
Blue jays stealing a lot of open-pollinated seeds

Orchards at Penobscot State Forest, Merryspring, Groce

Seed orchards: Penobscot Experimental Forest in Bradley, ME
two 5-acre plots (5 blocks for each resistance source)
Is it too far north? North of Bangor

VT/NH: goal is 20 Graves
have 3 orchards

CT: goal is 20 lines of Clapper
have 12 lines so far

Predictive mapping project: GIS data used to start developing predictive model for finding native chestnuts in CT

Duke U. Stanback Intern, Christine Cadigan
She started this for one county, CT chapter would like to do more
soil type, aspect, drainage, then overlay on road maps

Had a TV interview – ORTV, Hartford, CT

Atkinson Grove update: Northeast Wilderness Trust working to purchase land – including 15 acre parcel containing Atkinson grove; would become part of the Piscataquis Preserve.

Glen Rea likes to show this to visitors.

Saturday March 20, 2010 Regional New England meeting
Urban Forestry Center in Portsmouth, NH
Workshop of panel-discussion style meeting

Jamie Donalds, President MA/RI TACF

- National Board Meeting overview

National Board Reps can be chosen, not just chapter presidents, 3 year term

Mary Bell Price to pay balance of construction costs – send thank-you notice

Restoration branches: way to get people involved – party to learn about chestnut

- put together a committee, sign people to come, \$40 to come – gets you annual membership
- donated things for evening, able to ask questions
- PA had good response

Nut distribution to membership

Last year distribution was 2000 to oldest members

Half go to U.S. Forest Service

What do we call the product?

First name is “foundation chestnut”

Latest is Restoration chestnut

Phytophthora testing:

two of our lines so far have good resistance

AB247 – Medway orchard

JB575 – Granville orchard

Joe James found several good ones from MA

Some of John Mirick's pure Chinese

Adam Wiskofske Presentation

Suppression of Chestnut Blight using agri-fos

Adam worked with Charlotte Zampini this past year

agrifos

complex mode of action, not completely understood

causes direct fungal inhibition in high doses

affects host/pathogen interaction

increases elicitor molecules released from pathogen

increases the plant's immune response

increases lignification and other compounds that might kill fungus directly

Phosphites -

persistent in plants

not harmful to ecosystem

not harmful to microbes or animals
minor negative side effects only in excessive doses
phytotoxicity from dehydration if spray all over leaves
reduces reproduction rates; immune response might be getting more of plant's resources

Adam Rufin and Charlotte – marked trees in Upton, MA
Treated with Agrifos & Pentrabark

Also inoculated with same strains we use in inoculation

cork boring
also scalpel incision – smaller wound on lateral branches

let cankers develop about 3 months

Most treated trees look very different – walled off by bark, much smaller

Removed bark, sanded, traced canker on transparencies, superimposed on graph paper

Treated trees had large, significant differences in canker size (much smaller)

True for both types of blight

No significant difference between inoculation techniques
several possibilities why
The aluminum might remain on the tree bark and inhibit fungal growth also

Did work systemically but possibly also by direct inhibition

Phosphites most effective against severe infections
Need to be explored further

Also – only done for 3 months

Might reduce nuts – did reduce avocado production, but not eliminated
Don't know how long treatment lasts, might try every year
For sudden oak death, suggested twice a year application

Used 40 trees: 20 treated, 20 control

LUNCH

with chocolate chestnut ice cream, courtesy of Denis and Lois, as well as many other wonderful treats

Dr. Charlotte Zampini, MA-TACF Breeding Coordinator
2009 MA/RI Harvest & Orchards Update

Nut harvest from MA/RI Mother Trees 2009

E.Greenwich
527
Exeter
214
Coventry
149

Tower Hill –Graves redo lots of nuts

Valuable new mother tree in Conway MA and good access to it, Brian coordinated this

* Total lines in existing MA/RI Orchards:

Have 20 good Clappers plus 8 small lines

21 good Graves plus 5 small

Two Nankings in ground, both rather small

Have nuts for two new Nanking lines plus

Wrentham and Tower Hill did seconde evals of resistance

Lincoln, Wayland first

Research:

Nut test plantings at DCR Properties in Boyleston

Test of Agrifos/Pentrabark for treatment of Chestnut Blight

– inoculation and treatment of local stump sprouts

How do BC3s look relative to pure Americans in forest planting – Boyleston Wachusett Reservoir

How do seedlings do if plant first, then clearcut area around

Next year – looking for some more mother trees for Nanking but also need to spend more time on seed orchards

Most of our current mother trees are eastern MA – would like more western MA, northern

PA has seed orchards started; 1 block seems about the same work as a regular breeding orchard.
1 block = 1 acre

Kendra Gurney misc. updates

Fagaceae Project

She just came back from the conference; has booklet of abstracts

Technologies are improving very quickly; a lot more information available faster

New York chapter had mostly been using wheat; starting to use Chinese chestnut now; tissue culture techniques improving

Able to make progeny from a bud

Trying to take leaves, put blight on leaf – lesion sizes vary depending upon resistance

Dr. Paul Shaberg of U.Vt. Keynote Speaker
American Chestnut Cold Tolerance – an Added Consideration for Restoration in the North

- Kendra's advisor

Historically, American chestnut was not as common in New England as it was farther south

Northern limit is confined to areas of more moderate climate – low elevations, near large water bodies
– prone to freezing and cold damage, historically

Little breeding in VT/NH until 2006

Chinese chestnut not very cold tolerant – what about crosses?

Also introducing genes from southern chestnuts

Cold injuries can provide blight vectors

Hypovirulence has trouble in cold

Chestnut shoot study – winter of 2006-7

Gurney et al. Restoration Ecology in Press

Chestnut Nut Study – winter of 2006-7

Schaberg et al. Ecological Restoration in Press

Test cold tolerance in lab
Measure leakage out of cells

“T_m” is midpoint temperature – halfway between death and start of leakage

Nature can be much harsher – faster temp drops etc. whereas lab was very controlled

Chestnuts damaged at a somewhat warmer temperature than native red oak or sugar maple

In VT, -35 rare but possible

Straight VT American plus two backcrosses w/VT mother trees tested

Backcrosses a little more vulnerable, one about 7 degrees, other just a few

Injuries: terminal shoot dieback
Shrublike growth habit

Terminal shoot winter injury:
Maple, Oak 0
American 30%, Bcs 60% ish

Nuts of oak, chestnut not very cold tolerant

varies by region but not predictably – so survival depends on burial of some sort

Possibility for selection – probably have to test each source

about 9degree min to about 18 max (PA vs MD)

Ways to augment cold tolerance – some nutrient regimes might improve tolerance

GMNF Study
Range-wide examination of PURE American chestnut nuts and shoots

Green Mountain National Forest

Test nuts and grow seedlings to test shoots, include sources from entire range, focus on northern sources

Planting under various silvicultural treatments

Closed canopies vs open vs partial

Light avail

More sun allows more sugar production, which helps cold tolerance

Best scenario in North?

How do sources differ in growth etc.

Can get % open area above each seedling

Implications of a warming climate

Cold can be a limitation:

Warmer climate predicted – winter warming of 2-3C

Lots of controversy over species shifts – will whole communities move?

Chestnut might be more likely to be found up into VT/NH

Likely a great species for carbon sequestration, rot resistance

Long-term carbon sink

Note to self:

Send to Paul, Tom Webb's work that was presented to MATACF in annual meeting (online tree pollen map etc.)