

## Hubbard Brook Committee of Scientists Meeting

January 3-4, 2019

### Cary Institute of Ecosystem Studies

#### Thursday Afternoon January 3

1:00–1:15 Welcome and Introductions

#### Evaluating the effects of multiple interacting disturbances in northern hardwood forests

(Organizer: John Battles)

This session will discuss the LTER synthesis topic: How will simultaneous and interactive effects of climate change, air pollution, plant succession, and invasive species alter the structure, function and biodiversity of forests of Hubbard Brook.

- 1:15–1:30 A framework for evaluating interacting disturbances (John Battles)
- 1:30–2:00 The ED2 modeling approach: Initial simulations of invasions by hemlock woolly adelgid and emerald ash borer (Jackie Matthes)
- 2:00–2:20 Emerald Ash Borer (Matt Ayres)
- 2:20–2:40 Interactive effects of acid rain legacies and beech bark disease (BBD) in northern hardwoods (Nat Cleavitt)
- 2:40–3:00 Spe-CN modeling approach (Gary Lovett)
- 3:00–3:15 Break
- 3:15–4:15 Discussion topics (Moderator: Tim Fahey)
1. Incorporate BBD into ED2 simulations
  2. Leveraging results from alternative modeling approaches
  3. Strategy for including climate change in future simulations
  4. Priorities for model assimilation
- 4:15–5:00 Brainstorming ideas for future projects at the Hubbard Brook Ecosystem Study (Moderator: John Campbell)
- 5:00 onward Reception and Dinner at Cary Institute.

#### Friday January 4

**8:30 AM – 12:00 PM Why is the nitrogen cycle misbehaving?** (Organizers: Gary Lovett, Peter Groffman, Christy Goodale)

This session will involve presentations and discussions on the following topics:

1. Do we know why the N in streamwater is currently low?
2. Can we predict if and when it will increase?
3. How close are we to being able to model this phenomenon with our current models?
4. How close are we to quantifying elusive terms in the ecosystem N budget such as gaseous N loss and mineral soil N exchange?
5. Are there new measurements or other novel approaches we can use for answering these questions?
6. Will nitrogen “oligotrophication” continue and what will be the consequences for the ecosystem, including forests, streams, microbes, and animals?

- 12:00–1:00 Lunch
- 1:00–2:00 COS business meeting
1. Discussion: recruitment of new external advisor
  2. Future COS meeting topics
  3. Next steps for workplace safety at HBES
  4. Updates
    - USFS
    - HBRF
    - Data Management
    - Sample Archive
    - Others
- 2:00–2:30 Preparing for the NSF Mid-term Review (Gary Lovett and Peter Groffman)
- 2:30–3:00 Wrap up and adjourn