

NOVUS NEWSLETTER

SEPT 2014, ISSUE 4



The Novus RCN

*Ecosystems and
Disturbance from Tens
to Millions of Years*

RESEARCHERS MEET IN COLORADO FOR SECOND NOVUS WORKSHOP

Earlier this month, twenty-five scientists spanning twenty-one institutions from three countries met near Estes Park, Colorado to discuss biogeochemical consequences of disturbance. Attendees split into working groups to focus on temporal, spatial, biogeochemical, or biotic components of disturbance, and changes in disturbance agents or regimes.



Workshop participants at Estes Park, CO



Workshop participants hike the tundra

In addition to building conceptual diagrams, populating them with data and case studies, and enjoying the incredible scenery of the YMCA of the Rockies, the workshop group went on a hike through Rocky Mountain National Park and the Rock Cut Tundra Overlook.

A manuscript resulting from the workshop is currently in prep. Watch the [Novus Blog](#) for continued updates on its progress.

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NOVUS Scientist Exchange Program

In its third year, the Novus RCN will host a scientist exchange program (SEP) to link early career scientist with more senior researchers currently working on biogeochemical or ecological impacts of disturbance across decadal and millennial time scales.

Successful applicants for the SEP will receive a \$1200 stipend to work with a more senior researcher with the intention of producing a deliverable project (dissertation chapter, funding proposal, or publication). Funding from the Novus SEP must be used in

the 2015 calendar year, and may be put towards travel to visit a particular lab, institution or field station; to facilitate training on a particular methodology or technique; and/or to gain expertise in the running of a particular software package, scientific equipment or machinery.

A formal call for applications will be released this month, with a deadline for applications of December 1, 2014. Watch the [Novus blog](#) for details on the program and application process.



Novus Postdoc: Dr. Bérangère Leys

We are pleased to announce a new addition to the Novus network, post-doctoral researcher Bérangère Leys. Located at Kansas State University, Bérangère will be working with Novus steering committee member Kendra McLauchlan. Her background in charcoal, pollen and isotope analysis of lake sediments, including reconstructing paleo-fire regimes makes Bérangère an exciting addition to the Novus network.

You can review Bérangère's previous work [here](#).



Novus II Workshop: Hike to Chickaree Lake

As part of the second workshop, local host and Novus Steering Committee member Phil Higuera took the group on a hike through Rocky Mountain National Park, to his field site at Chickaree Lake.



Fire scars in RMNP from the 1872 fire

Along the way, we saw evidence of the forest's complex disturbance history, including scars from a stand-replacing fire in 1872 and bore-holes from the mountain pine and *Ips* bark beetles.



Ips bark beetle main tunnel (vertical) and larval tunnels (horizontal)



Research Highlights: Stable Nitrogen Isotopes in Wood

Novus steering committee members Kendra McLauchlan and Laci Gerhart (Kansas State University) recently published a review of nitrogen isotope analysis of tree rings in the journal *Biogeochemistry*.

The review summarizes the current state of knowledge on wood nitrogen isotope analysis, including analytical concerns, spatial and temporal coverage of wood nitrogen records, and the behavior of nitrogen translocation in wood tissue.

The review also provides recommendations for future research, including standardized methodological approaches, integration of wood nitrogen records with other ecosystem proxies, and public archival of data.

Full citation: Gerhart LM, McLauchlan KK (2014) [Reconstructing terrestrial nutrient cycling using stable nitrogen isotopes in wood](#). *Biogeochemistry*, 120: 1-21, DOI: 10.1007/s10533-014-9988-8

PAGES Workshop: Scaling Forest Insect and Pathogen Disturbances Across Temporal Scales

Novus Steering Committee member Jesse Morris (University of Idaho) is coordinating a workshop through Past Global Changes ([PAGES](#)) focused on integrating neo- and paleo-ecological research on bark beetles and other non-fire forest disturbance agents.

The goals of the workshop are to 1) provide a synthesis of the antecedent landscape conditions and ecosystem outcomes related to bark beetle outbreaks across temporal and spatial scales; and 2) identify and prioritize key areas of uncertainty to motivate future research agendas.

Participants at the workshop will include paleoecologists, ecologists, biologists and land managers from around the globe.

Details of the timing and location of the workshop are currently being developed. The workshop is tentatively planned for May 19-21, 2015 in McCall, Idaho. As details become available, they will be advertised via the [Novus blog](#).

Interested researchers are encouraged to contact [Jesse Morris](#) for more details and review the [workshop website](#) for additional information on the workshop.

PAGES

PAST GLOBAL CHANGES

Research Highlight: Plant Succession as an Integrator of Contrasting Ecological Time Scales

Novus network member David Wardle and colleague Lawrence Walker recently published a paper in *Trends in Ecology and Evolution* describing how plant succession can be integrated with ecological processes over time scales of seconds to millions of years. This framework also highlights the impacts of human perturbations on successional trajectories, ecosystem recovery, and global change.

Full citation: Walker LR, Wardle DA (2014) [Plant succession as an integrator of contrasting ecological time scales](#), *TREE*, 29:504-510

Share Your Ideas for the Novus Blog and Novus Newsletter!

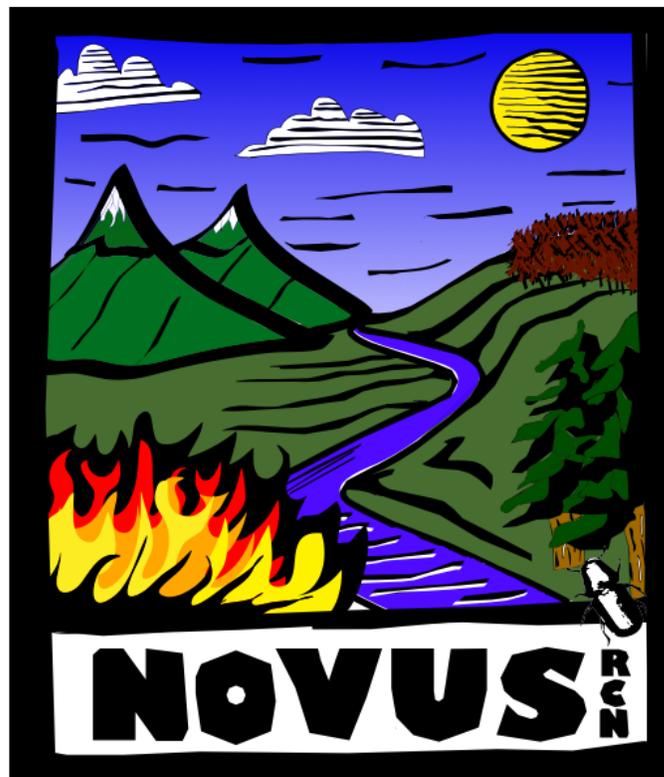
We are always looking for new content for the Novus blog and newsletter. If you have new information to share, please send it to Laci Gerhart-Barley at rockchalk@ksu.edu

Topics for newsletters include:

- Publication highlights
- New projects and grants
- New Novus products or personnel

Topics for blog posts include:

- Job announcements (all levels)
- Funding opportunities (grants, fellowships, stipends)
- Conferences and workshops



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