REPORT GUIDELINES

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**EXECUTIVE SUMMARY**

* significant points of the report

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* **Results**
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* Appendixes

STUDENT COPY

Dahlberg A., *Population ecology of Suillus variegatus* in old Swedish Scots pine forests. Mycological Research 101 1997, pgs 47-54

Dahlberg A. & Stenlid J *Size, distribution and biomass of genets in populations of Suiluus bovinus.* Roussel revealed by somatic incompatibility New Phytologist, 1994, 128:225-234………………….

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Architecture of the wood-wide web: *Rhizopogon spp. genets* link multiple Douglas-fir cohorts

New Mexico Supercomputing Challenge Final Report

April x, 2016

Team 25

Canadian High School

Team Members:

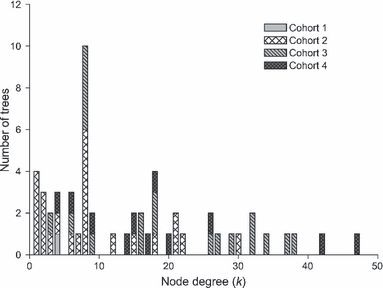
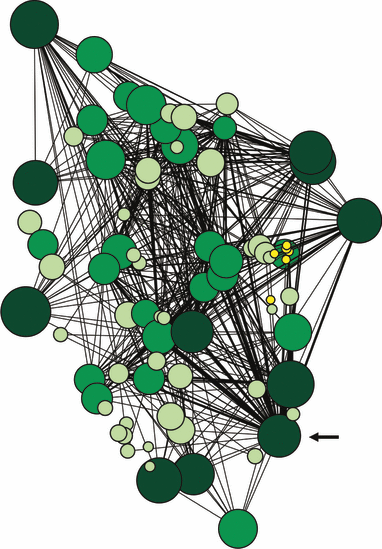
Kevin J, Beiler

Daniel M. Durall

Suzanne W. Simiard

The role of mycorrhizal networks in forest dynamics is poorly understood because of the elusiveness of their spatial structure. We mapped the underground distribution of the fungi *Rhizopologon vesiculosus* and *Rhizopogon vinicolor* and Douglas-fir trees to determine the architecture of a mycorrhizal network in a multi-aged old growth forest. We collected the mycorrhizas within a 30 x 30-meter plot. We identified them by DNA analysis and then matched them to above ground satellite image trees. We considered them linked if they shared the same fungus. The fungal network colonized approximately 19 trees in a plot. Multiple trees were linked with young saplings within the mycorrhizal network of Douglas-firs. We feel that if we represent trees as nodes and the Mychorrhizal Network as the connections, then a mathematical network model is appropriate. We found a strong relationship between tree size and connectivity, creating a robust network.

The architecture of our network suggests that MNs are a robust system where it would be protected from random changes, but would be affected if the hub trees (mature) were removed from the network. This poses a problem for forest management and clear cutting for logging. It appears that it is important to conserve large trees or groups of trees and the MNs. ………………………

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\*information summarized, and excerpted from:

**New Phytologist**  
[Volume 185, Issue 2,](http://onlinelibrary.wiley.com/doi/10.1111/nph.2009.185.issue-2/issuetoc) pages 543-553, 29 OCT 2009 DOI: 10.1111/j.1469-8137.2009.03069.x  
[http://onlinelibrary.wiley.com/doi/10.1111/j.1469-8137.2009.03069.x/full#f2](http://onlinelibrary.wiley.com/doi/10.1111/j.1469-8137.2009.03069.x/full)

EXAMPLE OF CORRECT VERSION FOR FINAL REPORT

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SUMMARY

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CONCLUSIONS

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BIBLIOGRAPHY

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APPENDICES

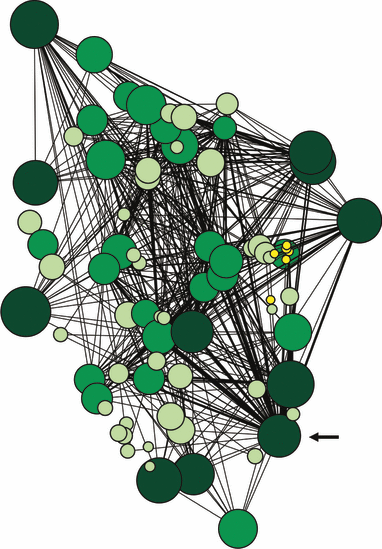
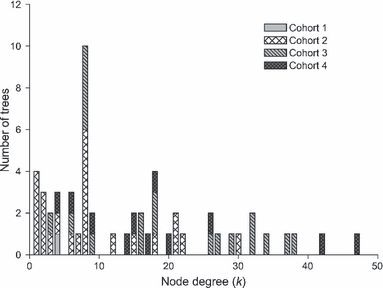
Diagram 1 

Diagram 2 Diagram 3

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