



"Our environment is our future"

RESEARCH COLLOQUIUM SERIES

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UBC / UNBC

Unfaithful fungi: lichen as a symbiosis



Whether one ascribes to a mutualistic or a more parasitic paradigm, lichens are a symbiotic relationship. Under appropriate climatic conditions, this relationship provides a somewhat reliable source of fixed carbon for fungal metabolism in return for a conduit for mineral nutrients to, and a protective shell of hyphae for, the photosynthetic partner. The widespread success of this arrangement implies that these are reasonable trade-offs for the fungus, particularly when no other carbon source is readily available. Cyanolichens are a special type of lichen in which the photosynthetic partner is a nitrogen-fixing cyanobacterium. These species are generally restricted to wet forests and form a distinct assemblage of epiphytes strongly associated with old forests in inland British Columbia. Cyanolichens are disproportionately abundant and species-rich on conifer saplings beneath mature cottonwoods and aspens, and are often observed beneath *Populus* even in stands that are otherwise too dry to support them. These observations suggest that *Populus* facilitates cyanolichens by providing some factor that is critical to establishment or growth, however the factor remains unknown. This talk will explore potential climatic and chemical factors governing the strong relationship between cyanolichens and poplar and present a hypothesis related to the chemical secretions of the poplar tree itself.

Friday

Dec. 4, 2009

3:30 - 4:30

LECTURE THEATRE

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LIGHT REFRESHMENTS
SERVED AT 3:20 PM