



Summary of the 2008 IUFRO Conference

International meeting focuses on

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Increasing recognition that successfully conserving biodiversity requires a better understanding of threats and opportunities across the landscape and a focus beyond local sites motivated the 2008 IUFRO Conference theme of biodiversity in forest ecosystems and landscapes.

Hosted at Kamloops' Thompson Rivers University in August, nearly 100 participants from 16 different countries shared their insights and passion for the natural world. This world-class event was organized by the International Union of Forest Research Organizations (IUFRO), Thomson Rivers University (TRU), the BC Ministry of Forests and Range (MFR), the BC Ministry of Environment, and FORREX.

Much of the world's biodiversity lives in forests and because forest habitats continue to be deforested and fragmented, they are among the most endangered habitats in the world. The forests around Kamloops, along with the research that has been undertaken in the area for several decades, provided an ideal setting for an international conference that also examined the conflicts between forest conservation and management/harvesting, and the interactions with natural disturbance agents such as the mountain pine beetle.

A group of participants discuss natural disturbance, forest succession, and implications for biodiversity in a dry grassland/ponderosa pine/Douglas fir ecotone at the Tranquille Ecological Reserve during the in-conference field tour.



Pedro Lara Almuedo photo

This conference covered the following topics:

- Monitoring of forest biodiversity at different spatial scales
- Biodiversity and forest ecosystem functioning
- Biodiversity conservation in forested landscapes
- Biodiversity and ecosystem goods and services
- Biodiversity in managed forests
- Mountain forests and biodiversity management

The conference opened with a warm welcome, as well as a prayer for the natural world, by Simpcw First Nations elder **Harold Eustache**, who also discussed his concerns over ailing mother earth and his hopes that British Columbia may be well-positioned to achieve conservation goals that other parts of the world may find elusive.

The blend of participant backgrounds, ranging from research to academic, government, environmental non-government organizations, First Nation, and corporate, provided a very rich context for knowledge exchange and discussion, making every session an appealing experience for participants who also enjoyed the distinct international flavour of the conference.

Opening address and keynote speakers

Dr. Chris Elliott of the World Wildlife Fund gave the opening address "Muddling through in forest landscapes: Reducing deforestation and degradation of the world's forests." British Columbia's Great Bear rainforests are a good example of forest conservation, said Elliott. However, he added that such expansive conservation is probably not possible in other more populated areas of the world where wilderness is rare and highly fragmented, and where land-use pressures are much greater. He concluded on the sad note that although we are winning some battles, we are losing the war to conserve biodiversity.

Participants also had the opportunity to hear from five keynote speakers throughout the conference. During an evening lecture, **Dick Cannings** gave a passionate account of his favourite birds, which are the subject of his new book entitled, *An Enchantment of Birds: Memories from a Birder's Life*. **Dr. Marc-André Villard** made a case for using rigorous data on sensitive bio-indicators and their habitats to determine conservation targets, instead



biodiversity in forest ecosystems

of using “seat of the pants” analysis. **Dr. Stan Boutin** provided a critical view of current research on biodiversity, arguing that such research is usually focused on only a few species that are charismatic, exploited for human use, or endangered. Dr. Boutin presented an alternative approach which aims to monitor a diverse group of life forms in a systematic way over large portions of Alberta.

Dr. Tom Sullivan presented research from several long-term studies that revealed a variety of biotic responses to incremental silviculture treatments. Dr. Sullivan emphasized that such work requires researchers look at treatment extremes, use real-world scales, have regional replicates, and create a long-term vision. **Dr. Geoff Scudder** gave participants an overview of the current status of biodiversity in British Columbia. This work has recently been published by Biodiversity BC and is available online at: <http://www.biodiversitybc.org/>. Dr. Scudder also touched on the paradox that although the need for information on biodiversity in the world has never been greater, we are steadily losing expertise in the field of taxonomy as experts retire and are not replaced. This, he said, is an urgent issue if we are going to attempt to monitor our impacts on biodiversity.

Diverse topics addressed


Biodiversity is typically defined as the diversity of life, including diversity of species, ecosystem structure and function, as well as genetics. The conference reflected this diversity by having presentations on the kingdoms Monera, Fungi (Chlorolichens, cyanolichens, microlichens, mycorrhizal fungi, and networks) Plantae (bryophytes, vascular plants of the forest understory and overstorey, and genetic diversity of wild cherry trees), and Animalia (focusing on several mammals including mountain caribou, mule deer, shrews, lynx, squirrels, rabbits, voles; many birds including song birds, woodpeckers, owls, amphibians in streams; several arthropod groups, including soil microarthropods, carabid beetles, saproxylic beetles, spiders, and defoliating insects). Ecosystem features examined included landscape structure, forest structure, tropical rainforests, coastal and inland temperate rainforests, boreal forests, broadleaved forests, riparian forests, cloud forests, dry coniferous forests, and Mediterranean forests.

The quality and diversity of speakers and presenters addressing such a wide range of topics provided many key messages during this conference, including the following:

- Biodiversity is a complex and important topic not well understood in all its aspects. Important information gaps include genetic biodiversity and landscape-level processes.
- Long-term monitoring and the use of key species as environmental indicators needs to be further supported.
- Research needs to be redirected to better address biodiversity (i.e., toward invertebrates, fungi, and algae).
- Habitat fragmentation and landscape connectivity are areas of increasing concern that are not yet fully addressed.
- There still are knowledge gaps in many areas such as: effects of forestry on biodiversity, management implications, role of silviculture, partial retention, promotion of mixed woods, and how to increase the resilience of managed forests.

Further areas of concern are related to climate change, including: flora and fauna community shifts; management to facilitate species migration; key Biogeoclimatic Ecosystem Classification zones and ecosystems (i.e., coastal, dry grasslands, Ponderosa Pine, Interior Douglas-fir, riparian, and wetlands) and geographic migratory bottlenecks (e.g., BC’s Southern Interior); reassessment of the representation role of protected areas networks, role of natural disturbances (MPB, fire); and the impacts of invasive species.

The Southern Interior Forest Region served as an ideal context for discussions during an in-conference field tour that touched on topics such as: natural disturbances; management of dry forest ecosystems; ecosystem restoration; prescribed burning; avian, amphibian, and reptile community responses; silviculture systems; harvesting; stand structure; plant community response; wildlife habitat; soil productivity; mountain pine beetle epidemic; and hydrologic issues, among others.

Finally, 20 participants attending the post-conference field tour to the Sicamous Creek study site had additional opportunities to explore the high-elevation forests in the area. 

More information and acknowledgements

For more information, please refer to <http://www.tru.ca/iufro>. **html** to check out the program of this event and to download the presentations of the different sessions in PDF format. Presentation abstracts and selected written papers will be also published in the coming months as part of the Proceedings of this international conference.

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