

Deadwood and Dying Trees: A Matter of Life and Diversity

Report from the first international symposium on the *Dynamics and Ecological Services of Deadwood in Forest Ecosystems* by Stephen Pawson, Scion, Christchurch, New Zealand, Coordinator of IUFRO 8.02.02
<http://www.iufro.org/science/divisions/division-8/80000/80200/>

Deadwood is a critical component of forest ecosystems that provides habitat for a range of deadwood dependent (saproxylic) invertebrates, birds, mammals, fungi and plants. Forest management alters the recruitment dynamics of fine and coarse wood debris, and dead standing trees. The reduced volume of deadwood in managed forests negatively impacts the population dynamics of species dependent on this resource. Many species, particularly those in fragmented forest landscapes, are now regionally or globally threatened.

Conference details

The first international symposium on the *Dynamics and Ecological Services of Deadwood in Forest Ecosystems* was held in Rouyn-Noranda (Quebec, Canada) from May 15-19th 2011. The theme of the conference was: *Deadwood and Dying Trees: A matter of life and diversity.*

The meeting was sponsored by IUFRO Working Party 8.02.02 (Forest Biodiversity and Resilience) and the Chaire industrielle CRSNG-UQAT-UQAM en aménagement forestier durable, the Université du Québec en Abitibi-Témiscamingue, the Université du Québec à Montréal, the Centre d'étude de la forêt, the Forêt du lac Duparquet, and Natural Resources Canada.

More than 110 presentations were given by the 120+ people that attended from 18 countries (Canada, Sweden, Germany, France, Spain, Ireland, USA, New Zealand, Australia, Switzerland, Japan, Estonia, Italy, Poland, Finland, Netherlands, Belgium and the Czech Republic).

Deadwood is declining

Global volumes of deadwood are declining. Forest management tends to promote shorter (and even aged) rotations that reduce the production of deadwood as trees are generally cut before they become old, die, and fall to the forest floor as deadwood. The demands on deadwood resources are increasing, new uses for wood, such as wood residue recovery for bioenergy, are placing additional pressure on deadwood.

Conference presentations began by examining deadwood recruitment processes and the impact of forest management on deadwood availability in forests. Presentations then outlined the huge variety of saproxylic organisms (defined as species that are dependent on deadwood at some point in their lifecycle). Saproxylic species include invertebrates, fungi, birds, e.g., cavity nesters, mammals, and plants such as bryophytes. The conservation requirements of many of these groups were discussed, issues such as forest fragmentation, substrate availability, the role of natural disturbance were considered. As part of the conference a



*Photo (by Steve Pawson):
Nest scope camera inserted into a cavity 10 m above the ground. Note the polypore fungi on the side of the aspen tree, fungal infected aspens are favoured by yellow bellied sap suckers as the fungus softens the internal wood for cavity formation.*

full day fieldtrip visited the Lake Duparquet Research and Teaching Forests where a number of scientists and graduate students presented their research on the ecology and management of deadwood in eastern boreal mixed wood forests.

Outlook

The conference concluded with a plea for “deadwood-ologists” to take their message of the importance of deadwood to policy makers.

As a follow-up to the conference there will be two special issues of selected papers in the Canadian Journal of Forest Research and Ecoscience. Looking to the future it was decided that more regular ‘deadwood’ meetings should occur, and a new email list server will be established with working party 8.02.02 that will now include a special focus on the ecology and dynamics of deadwood.