

Understanding our role in managing human-environment interactions

Julie Schooling, *JEM* Managing Editor

Experiential and science-based knowledge equips us to undertake effective and responsible management of our ecosystems. An understanding of the dynamics of action—or inaction—and the related effects guides us in decision making at various scales. This issue of *JEM* explores the approaches to, and the challenges of, invasive species management, stand establishment, and caribou habitat protection. Layered into this issue is a Perspectives article on amalgamating traditional environmental knowledge and science-based resource management—the authors emphasize that we’re not just managing resources, we’re managing people and the valuable knowledge they bring to the table.

Tom Cottrell opens by illuminating the value of seed rain traps for tracking dispersal of exotic species in disturbed forests. Identifying invaders at the seed stage allows forest managers to prepare for future forest dynamics. This challenge is not only limited to forests, though; Don Gayton’s closing article on the relative proportion of native and non-native species in British Columbia’s grasslands highlights the need for managers to review and adjust current practices to discourage not only noxious weeds, but all non-native species.

John Muir, Jennifer Turner, and Kathie Swift put a microscope on hemlock dwarf mistletoe. Their synthesis, in the form of a Stand Establishment Decision Aid (SEDA), makes it clear that variable retention silviculture regimes may actually exacerbate the spread and effect of mistletoe in hemlock-dominated coastal forests.

Swift and Turner present the final installment of the Vegetation Complex SEDAs for the Southern Interior Forest Region, which describes considerations for Aspen, Cottonwood, Dry Alder, Mixed Shrub, and Pinegrass complexes.

Chris Johnson, Katherine Parker, Douglas Heard, and Dale Seip describe their hierarchical, scale-explicit approach to studying the processes governing movement and distribution of northern woodland caribou. In the interests of conserving caribou populations, the authors make recommendations related to land use planning and silviculture.

Reflecting an international shift in the perception and role of Indigenous knowledge, Alex Hawley, Erin Sherry, and Chris Johnson share their perspectives on establishing a unified natural resource management system based on respect and communication. The authors strive to communicate openly about the often divergent world views that impede effective co-operation, emphasizing “the diversity among First Nations and the need to understand the specific culture, language, spiritual connections, beliefs, social structures, institutions, and history of a particular people.” While this article’s focus is on cultural diversity, it reinforces the need to understand the complex interactions inherent in natural resource management, whether they are ecological, socio-cultural, or economic.

To truly understand our world and to generate controlled answers for the challenges that face us, we need to examine specific questions in almost microscopic detail. However, to ensure that our decisions are made with the fullest possible awareness of their consequences, we must then zoom out again so that the pieces all make sense in relation to each other.