The biology and control of an invasive weed (Daphne laureola) threatening Garry Oak – Arbutus ecosystems in British Columbia

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The global spread of plant species represents one of the major environmental challenges of this century. The potential impacts of invasive plants on ecosystem structure and functioning make their presence often incompatible with the ideals of sustainable management or conservation. Once an exotic species is established it is important to know its potential to invade and influence natural systems. Thus the factors influencing rates of invasion are important both for understanding the dynamics of range expansion and to begin to address urgent questions of management and control of exotics. Daphne laureola has recently (1970's) escaped cultivation as a preferred ornamental and has the potential to pose a serious threat to the sustainability of the Garry Oak - Arbutus (Quercus garryana - Arbutus menziesii) ecosystems on southern Vancouver Island and the southern Gulf Islands of British Columbia. A study was initiated to identify stages and processes most promising for reducing the incursions and viability of D. laureola. Observations on its mode of dispersal, population dynamics, and impacts on the native ecosystems will be reported. Results on an integrated management strategy using mechanical control, cultural control, herbicides and bioherbicides will be outlined.