

# A pest of trees or just of taxpayers?

Mystery surrounds the Brown spruce longhorn beetle

by Christopher Majka

Like the cat that keeps coming back in Harry S. Miller's comic song, the Brown spruce longhorn beetle (BSLB) seems destined to keep appearing unexpectedly on Nova Scotia's political and forestry landscape. Since the year 2000 when *Tetropium fuscum* (the scientific name of the species) first appeared on the North American radar, it's become one of the most newsworthy beetles in the country. From the Canadian Food Inspection Agency's (CFIA) plans to cut large swaths of Point Pleasant Park, the lawsuit to stop this program, the CFIA quarantine zones, the difficulties in salvaging wood fallen during hurricane Juan, to recent reports by the CFIA that the beetle has now been found in Pictou County, it has seldom been far from the headlines.

How long has the BSLB been in Nova Scotia? What is the extent of its distribution and is it spreading? If so, how quickly? Is it an invasive species? Does it attack healthy trees? Could it spread to other portions of Canada and the U.S.? Can it be eradicated? Are there natural biocontrol mechanisms? How cost-effective are current regimens of detection and eradication? Are quarantine zones warranted? What are the costs and who is to pay? There are a plethora of seemingly vital questions crying out for answers.

Given the ocean of ink spilled on this issue, those interested might feel swamped by the information, debate, and controversy. However, from a public policy and forestry perspective, the information can be reduced to one simple question: is the BSLB in Nova Scotia behaving any differently than many of the native longhorn beetles (92 species have been recorded in the province)?

In particular, are they attacking healthier trees and in greater numbers than native longhorn, jewel, and bark beetles, and horntail wasps? If so, then there may be a problem, and we can then discuss what should be done. If not, then there is no problem. The BSLB would join the countless other saproxylic insects (those associated with the decomposition of wood) that help

recycle dead and dying wood in forest environments – a vital task to maintain the health of forests soils, and of forests themselves. Foresters and the general public can forget about the BSLB and the CFIA can spend its money on other pressing matters.

Due to the central importance of this question most people would assume answering it would have been the number one priority of regulatory agencies like the CFIA – and they would be wrong. In the last eight years the

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CFIA has done almost nothing to address this issue. In its recently-published compendium of research on the BSLB, the CFIA lists 13 studies it has undertaken. These relate to BSLB detection, its fungal associates, potential control mechanisms, parasitic wasps, and host tree preferences.

One preliminary study (conducted in 2000) found that red spruce with reduced growth rates and low vigor (i.e., "unhealthy" trees) were more susceptible to infestation than faster growing, more vigorous trees (i.e., "healthy" ones), but this research was discontinued. No studies have been conducted that compare the behavior of BSLB relative to native longhorn beetles in spruce stands of varying health.

Science (both here and abroad) indicates that the probability of the BSLB being an invasive species that attacks healthy trees is slight. Like most longhorn beetles, the BSLB feeds on dead and dying trees in the Old World where it is native. The trees found there, the climate, and the predators and parasites are all similar to those found in North America. Moreover, in Nova Scotia there are already two native species, *Tetropium cinnamopterum* and *Tetropium schwarbianum*, remarkably similar in appearance and ecology to the

BSLB. Neither attacks healthy trees or is a problem from a forestry perspective.

The small amount of ecological research that has been done on the BSLB in Nova Scotia indicates the beetle is found on trees of already compromised vitality, and that parasitic wasps are playing an important role in controlling its population. This doesn't exclude the possibility that the BSLB is a pest but, at first glance, there seems little reason to suppose that it is significantly different in its effect on Nova Scotia forests from native wood and bark-boring insects.

The same claims made in 2000, that the BSLB is an invasive insect and is a threat to North American forests, have been recycled without supporting evidence. The CFIA came out of the gates in 2000 convinced the BSLB was a problem and never looked back.

One could reasonably ask why, after all this time, has such research not been conducted? Particularly since low-cost, low-tech, short-term experiments to answer the question are readily at hand. If the BSLB is not a problem for healthy trees, why is the CFIA spending taxpayer dollars battling it? If there is no evidence the BSLB is a threat, why have quarantine zones been set up, and why are the lives of foresters, woodlot owners, and sawmill operators bedeviled with regulations relating to its detection and control?

For the past eight years Nova Scotia has been gripped by an eradication juggernaut. The science to support such a campaign is almost entirely lacking. If the BSLB is a problem, the research to verify this needs to be done. If it's not, the containment and eradication campaign should be scrapped. There are many of other pressing environmental problems that require our attention and funding. If this isn't done, these unsupported claims will continue to bedevil Nova Scotia, its forestry sector, and its citizens from now until the hereafter.

(Christopher Majka is an ecologist, entomologist, woodlot owner, and member of Friends of Point Pleasant Park.)