

Emerald Ash Borer as a Constraint to Recreation?

Interviews with Visitors to Two Minnesota State Parks

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Background

Viewing scenery & being in nature are often cited motivations for outdoor recreation & nature based tourism. Changes in the landscape may serve as territorial constraints, as they inhibit or prohibit participation & enjoyment (Walker & Virden, 2005).

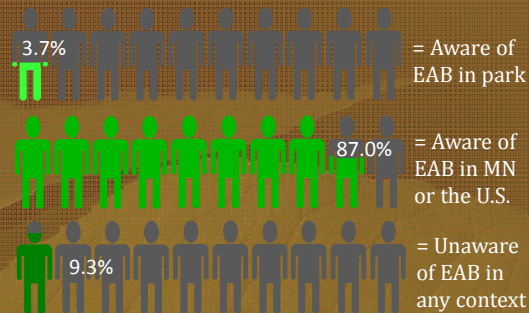
One change to the landscape comes from terrestrial invasive species. Emerald ash borer (*Agrilus planipennis*; EAB), an invasive forest pest native to Asia, was discovered in Minnesota in 2009 and is a potential threat to the state's 998 million ash trees. As of 2014, EAB has been confirmed in 4 counties: Hennepin, Ramsey, Houston, & Winona. Although weakened & unhealthy trees may be more vulnerable to EAB, the pest successfully infests & kills healthy trees as well, leading to safety hazards & aesthetic impacts from canopy loss & tree mortality.

The **purpose** of this study was to understand visitor *perceptions* of EAB's visual impacts & if EAB acts as a *constraint to recreation*.



Results

Awareness:



Perception of EAB-impacted photograph: The majority of responses to the EAB impacted photo were negative (Text box 1 below). Not all respondents felt it was negative, however: 2 respondents indicated the impact looked similar to Fort Snelling State Park's current state. Eight respondents compared impact to fire damage.

Text box 1: Emotional response to EAB picture

Awful Ugly Bothered Concerned
Unfortunate Disappointed Upset

Perception differentiated by source of impact?

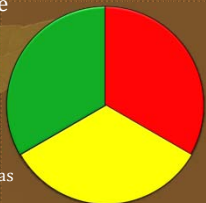
For the final 20 interviews at Fort Snelling State Park, response to the photo was assessed prior to informing respondent of the damage source. For 50% of respondents the source did not matter but for the other 50%, it was more acceptable that the impact was due to a natural disturbance (e.g. wind or fire) rather than an invasive species.

Constraint to visitation? Would visitor return to EAB-impacted site

Yes

No

Yes, but only when vegetation has recovered



Methods

Sample: Summer 2013 convenience sample of 54 trail-users in Fort Snelling & Great River Bluffs State Parks; both parks have confirmed local EAB presence.

Data collection: Participants viewed picture (below) of an EAB-impacted forest & were informally interviewed about their perceptions & responses.



Interview guide: Questions focused on awareness of & familiarity with EAB, reactions to impacts, concerns about EAB, & thoughts about what management should do.



Discussion & Implications

Research: Very little research exists on the human dimensions of EAB. This pilot study begins to address the gap & suggests visitors are aware of & affected by EAB. The negative reaction to EAB-impact by the majority of respondents reveals EAB may not only be a constraint to recreation, but also a threat to visitors' emotional connection with the forest. Future research ideas include: quantifying social impacts of EAB, comparing EAB impact to other constraints such as development and social density, & further assessment of visitor perceptions of EAB and its management.

Management Implications:

1. Evaluate educational messages & effectiveness

Though respondent awareness was high, knowledge may not be.

2. Consider interpretation of impacted sites

Some respondents were not able to differentiate EAB-impact from other impacts. Interpretation may be a valuable tool for management as various impact sources may produce different visitor responses.

3. Consider proactive mgmt. of possible visitor displacement

As about 1/3 of visitors reported they would not return to an EAB-impacted site, revenues & visitor impacts may decrease while staffing for substitutable sites would need to be addressed.

Hiking at Fort Snelling State Park

