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Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	2014_IJPSS_13067
Title of the Manuscript:	An understory comparison of the exotic <i>Phellodendron amurense</i> Rupr. (RUTACEAE) and adjacent native canopy species in an urban and suburban woodland
Type of the Article	Original Research Article

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>The authors compared understory species abundance under an exotic <i>versus</i> native canopy tree cover at two urban/suburban woodlots. While an article of this nature could certainly be useful to the forest ecology research community, it is difficult to draw any conclusions from the research given the lack of transparency. In particular, more information is required on site conditions and the methods used. Moreover, some of the mechanisms that may be responsible for the observed distribution would require just a little more analysis of the data already gathered; given that 'all vascular plants were identified to species and the number of individuals recorded' (L110-111). The added work would provide for a more informative discussion, & more of the conclusions could be drawn from the research itself.</p> <p>Below is a list of questions & comments decomposed according to Line (L) number that should be addressed prior to this manuscript being considered for publication.</p> <p>L90 Is <i>B. lenta</i> also a dominant species present in Forest Park, NY? If not, then would what be found under <i>B. lenta</i> canopy there be</p>	



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	<p>representative of what would be found at the location as a whole? i.e., would similar results have been observed if examining vegetation under a <i>Quercus</i> canopy? Are these forests homogenous in terms of age structure? i.e., were the <i>B. lenta</i> & <i>P. amurensis</i> canopy trees roughly the same size/age? When was the last major disturbance to the woodlots? Did you sample under trees close to the forest edge or were all trees utilised from the forest interior? i.e., how did you control for any structural differences among sampling locations?</p> <p>L94 How old were the canopy trees? Again, sampling under trees at least 5 cm dbh doesn't provide the reader enough information on stand structure. Thus, it doesn't necessarily mean you were sampling under the same conditions. Further, there is also a temporal component needing consideration. While LAI could have been similar, one tree may have been in a mid-succession community & another in an older community. Species composition under these conditions can vary considerably, particularly if some canopy trees were considerably taller than others &/or crown thickness varied. Differences in diffuse light could be considerable. Thus, establishment may be more a function of differences in community structure & temporal differences in community development rather than what species of</p>	
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	<p>overstory was present. Moreover, if the forests are in fact mature, I imagine that the <i>P. amurense</i> used in the study were mostly in sub-canopy positions in the woodlot. Was this always the case or were only overstory trees selected? What about <i>B. lenta</i>?</p> <p>L95 What was the purpose of obtaining data from each cardinal direction? It would have been interesting to include this as a factor to see if any differences occurred, & may have provided more insight to regeneration patterns. This could at least be tested indirectly by nesting 'aspect' as a factor in your design.</p> <p>L110 Also, it is unclear if you looked at herbaceous groundcover only &/or also woody vegetation including tree seedlings. It would have been useful to provide information on the vascular plant species present in a table.</p> <p>L136 This may be more of a function of differences in seed production strategy by the 2 species. <i>B. lenta</i> produces 1000s of seeds in catkins while <i>P. amurense</i> produces 2-3 viable seeds per drupe.</p> <p>L140 Please be explicit with the statistical analyses used. I'll assume that t-tests were run. However, looking at the degrees of freedom it looks like you used 'plot' as a sampling point. Given that 4 quadrats were drawn from under the same tree, I question the <i>independence</i> of each plot (nb., a stipulation of any parametric</p>	
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	<p>analysis). It would perhaps be better to obtain the mean from the four plots under each tree & run your t-tests using these averaged values. Thus, 72 plots at Bartlett becomes n=18; & the 96 at Forest Park becomes 24, etc. As before, you could nest cardinal direction (aspect) into your design to see if any differences in regeneration patterns existed. You could then perhaps respond to some of your Qs concerning mechanisms.</p> <p>L158 It would perhaps be better to simply state that <i>no significant differences</i> in Richness estimates were observed between canopy types; n.b., rather than stating one was higher than the other (nb., as statistically this is not a correct statement). It would also be beneficial to include Standard Error (SE) information for each value.</p> <p>L174 Most trees produce an abundance of seeds & also drop 90 to 95 % of their seeds very close to the trunk. I imagine the main reason why there were more exotic species of understory vegetation under <i>P. amurense</i> canopy is because of establishment from seed of conspecifics. The same could be said of under native canopy as it is likely much of the vegetation under <i>B. lenta</i> canopy was <i>B. lenta</i> (but we do not know as the information was not provided); and hence, one reason why it would be good to provide the species distribution information. Moreover, what</p>	
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	<p>would potentially be more interesting is if you determined what other species (i.e., besides conspecifics) managed to establish under each canopy & if differences in abundance & distribution were present under the exotic vs native canopy tree species. You could then perhaps establish what species were able to adapt to competition with this exotic species (if any differences occurred in establishment success)... & again, respond to your question of some potential mechanisms involved....</p> <p>L191 Please provide SE (nb., 95% confidence interval) information here as well</p>	
<u>Minor</u> REVISION comments	N/A	
<u>Optional/General</u> comments	The text was fluid & well written.	

Reviewer Details:

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Department, University & Country	Canada