Conifers: Prominence, Use, and Benefits in the Urban Landscape

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There is a distinct lack of information in the scientific community, within the realm of urban forestry, which pertains to the use and benefits of evergreen coniferous trees in the urban landscape. Indeed, the scientific tools used in quantifying urban forest benefits, such as iTree, do not account for the year-round benefits of evergreen conifers. This project will calculate the prominence of conifers in the urban landscape and identify how their increased use could increase benefits in the areas of rainwater interception, thermal protection during winter months, and functional design use. Finally, this project will identify what the best management practices (BMPs) are for using conifers in the urban landscape across North America. Methods used will include an extensive review of urban and traditional forestry publications to identify gaps in the literature and to synthesize how evergreen conifers can have a greater benefit over the course of a whole year than deciduous broadleaf trees; an analysis of street tree inventories from cities across the United States to identify the prominence evergreen conifers have in urban landscapes; and an interpretation of literature to compile BMPs. I anticipate finding that conifers make up a comparably small minority of street trees, thus showing they are underrepresented in the urban landscape as street trees. I also plan on finding that tree benefit research is heavily skewed towards deciduous broadleaf species, thereby creating a large flaw in the estimation of urban forest benefits. If the anticipated results are realized, this report will shed light on an area that is in need of research, and will allow for the BMPs to be widely useful as a first step in addressing that issue.

I would present my initial findings for this project at the 2013 ISA Conference AREA Session. I do not anticipate on having the best management practices completed by this time, but the information they are to be based on will indeed have been compiled and able to be summarized in a ten minute presentation.