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Urban forested parks and tall tree canopies contribute to macrolichen epiphyte biodiversity in urban landscapes

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Abstract

Land use changes through urbanization can dramatically impact floral and faunal species-specific survival and alter patterns of regional biodiversity. These changes can lead to complex, ecosystem scale interactions that yield both positive and negative impacts on urban and ex-urban biota. The Pacific Northwest region is one of the most rapidly urbanizing areas of the United States, with the human population estimated to increase more than fifty percent by 2050. Despite rapid population growth in the Pacific Northwest and a forest system known to provide extraordinary ecosystem services, relatively little is known about how human activities affect urban tree biology and the services these trees provide. Specifically, little is known about how urbanization impacts tall tree canopy epiphyte communities, a unique and sensitive component of Pacific Northwest trees which are known to contribute essential ecosystem functions. Here,