Introduction

Which trees cost us most? Which trees benefit us most? Many people have proposed mitigating climate change and alleviating air quality issues by planting trees in order to sequester carbon and provide shade to other uses (Parker-Flynn, 2018). Traditionally, many urban areas have been filled with highly allergenic deciduous and evergreen trees (Frigor, 2018), with early efforts on the West Coast focusing on the development of botanical GIS and public awareness of this reality (D’Amato, et al, 2013). Today, there are ongoing efforts to map the presence of urban and suburban allergenic trees. These efforts are important as they provide a mechanism to assess potential carbon sequestration benefits (Gaudieri, 2012) as well as extend pavement life.

Managing or replacing allergenic trees so we can benefit from carbon sequestration and shading benefits is important for the health and wellbeing of all urban and suburban ecosystems. Pollarding, pollarding and removing male flowers for 5 to 10 years while new trees are allowed time to get established, using the allergenic trees as nurse trees. This same approach could have better protected power lines and better informed SCE managers who rendered this decision in the presence of power lines. This tree data and maintenance approach could have better prevented power lines and better informed SCE managers who rendered their decision in the presence of power lines. (Tierney, L. (2018, January 4). 2017 was California’s largest and most destructive fire season in a decade. Retrieved June 5, 2018, from https://www.scientificamerican.com/article/climate-change-expands-allergy-risk/)

Results

Olive Forest Arborists have questioned the impact of this approach upon urban forest biodiversity, so that impact remains unclear in many regions of the world. (Frigor, 2018) with early efforts on the West Coast focusing on the development of botanical GIS and public awareness of this reality (D’Amato, et al, 2013). Today, there are ongoing efforts to map the presence of urban and suburban allergenic trees. These efforts are important as they provide a mechanism to assess potential carbon sequestration benefits (Gaudieri, 2012) as well as extend pavement life.

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Validating of Trees’

- allergenic pollen production,
- risk of striking power lines, and
- damage to pavement

using Survey 123

Evaluation of Trees’

- allergenic pollen production,
- risk of striking power lines, and
- damage to pavement

using Survey 123

Conclusions

In the pilot study of over 100 city trees, no adverse events were observed in any of the species and the lowest allergenicity ratings in each tree species were revealed. This led to pollarding and removing male flowers for 5 to 10 years while new trees are allowed time to get established, using the allergenic trees as nurse trees. This same approach could have better protected power lines and better informed SCE managers who rendered their decision in the presence of power lines. (Tierney, L. (2018, January 4). 2017 was California’s largest and most destructive fire season in a decade. Retrieved June 5, 2018, from https://www.scientificamerican.com/article/climate-change-expands-allergy-risk/)

Materials and methods

Vineyard Oak (Quercus lobata) trees, pecan, and field data gathered with Survey123 on 222 areas with male dioecious species followed by the replacement of trees with various levels of allergenicity: 10, 9-10, 8-10, etc. with hypoallergenic species. This led to pollarding and removing male flowers for 5 to 10 years while new trees are allowed time to get established, using the allergenic trees as nurse trees. This same approach could have better protected power lines and better informed SCE managers who rendered their decision in the presence of power lines. (Tierney, L. (2018, January 4). 2017 was California’s largest and most destructive fire season in a decade. Retrieved June 5, 2018, from https://www.scientificamerican.com/article/climate-change-expands-allergy-risk/)

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References


