Modeled distributions of 12 tree species in New York
Rachael R. Siemens, Barry T. Wilson, Andrew J. Lister, John Cook, and Sierra Crum-Murdoch

Map Description
There are maps of the distribution of 12 tree species across the state of New York. The maps show where these trees occur most frequently, and also show the total area covered by these trees. The maps are arranged to group species that commonly occur together. Each map has an associated histogram in which the colors and the range of values they span serve both as the legend for interpreting the map and provide additional information about the distribution of that species in New York. Each species is shown in a different color on the maps, and the colors are used to identify the range of values that correspond to the dominance of that species in the forest. For example, red oak is shown in red, and the histogram corresponding to the red oak map shows the range of values corresponding to the dominance of red oak in the forest. The histograms are arranged to show the distribution of the species across the state, and the x-axis extends to the limit found in the data. The y-axis is percent of forested land area. The forested land area is defined as forest land that is suitable for growing trees. The forested land area is measured by its coverage of forest land. All forested land is included in the calculation of the forested land area. The forested land area is not calculated for areas where trees are not growing due to lack of suitable soil or other factors.

Map Data
The data were modeled from tree data collected on U.S. Forest Service Forest Inventory and Analysis (FIA) plots, climate data derived from daily surface weather data by the Oak Ridge National Laboratory, topographic data from the National Land Cover Database, and climate data derived from daily surface weather data by the Oak Ridge National Laboratory. The data were modeled using a spatial statistical model that takes into account the spatial distribution of the species and the environmental factors that affect their distribution. The model was developed using a bootstrap approach that involves resampling the data to estimate the uncertainty in the model predictions. The model predictions were then used to create the maps that show the distribution of the species across the state.

For more information, contact:
Barry Wilson (barrywilson@fs.fed.us) or Rachel Riemann (rriemann@fs.fed.us)

Suggested Citation

End Notes
The USDA is an equal opportunity provider and employer.

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Modeled distributions of 12 tree species in New York

Rachel I. Riemann, Barry T. Wilson, Andrew J. Lister, Oren Cook, and Sierra Crane-Murdoch

Map Description

These maps depict the distribution of 12 tree species across the state of New York. The maps show where these trees do not occur (gray), occasionally occur (pale green), are a minor component (medium green), are a major component (dark green), or are the dominant species (black) in the forest, as determined by live tree basal area and neighborhood accuracy assessment results. Regionwide means that each grid cell in the modeled datasets contains close to the same mix of per-pixel model uncertainty to accompany the datasets.

The tree species distributions were modeled at a 250-meter grid cell size using interpolation and ensemble correction analysis techniques. Much of the species information in the forest inventory plots is retained in the datasets, which means that each grid cell will be the modeled species’ continuous (not in the same unit and proportion of species as found on the ground for the first time. Regionwide accuracy is assessed using a 500-meter grid cell size.

Methods:

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Map Disclaimer

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