Forest structure but not tree diversity differ among urban woodlands with differing conservation

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Table S1. Table describing the park type, species, invasive status (according to the Eastern Temperate Forest region), and proportion of stems for each tree species (> 5.0 cm DBH) found in each park.

| Park | Park Type | Scientific Name | Species Status | Percent of Stems |
| --- | --- | --- | --- | --- |
| Angrignon | Non-Status | Fraxinus pennsylvanica | Native | 23.67 |
| Angrignon | Non-Status | Acer saccharinum | Native | 17.39 |
| Angrignon | Non-Status | Acer freemanii | Native | 16.91 |
| Angrignon | Non-Status | Populus deltoides | Native | 9.18 |
| Angrignon | Non-Status | Ulmus americana | Native | 8.21 |
| Angrignon | Non-Status | Rhamnus cathartica | Invasive | 6.76 |
| Angrignon | Non-Status | Acer saccharum | Native | 4.83 |
| Angrignon | Non-Status | Quercus rubra | Native | 3.38 |
| Angrignon | Non-Status | Salix sp. | Native | 2.90 |
| Angrignon | Non-Status | Quercus macrocarpa | Native | 2.42 |
| Angrignon | Non-Status | Rhamnus frangula | Invasive | 1.45 |
| Angrignon | Non-Status | Tilia americana | Native | 1.45 |
| Angrignon | Non-Status | Acer nigrum | Native | 0.48 |
| Angrignon | Non-Status | Fagus grandifolia | Native | 0.48 |
| Angrignon | Non-Status | Quercus bicolor | Native | 0.48 |
| Bois-de-Liesse | Nature | Rhamnus cathartica | Invasive | 30.59 |
| Bois-de-Liesse | Nature | Acer saccharum | Native | 18.43 |
| Bois-de-Liesse | Nature | Fagus grandifolia | Native | 16.47 |
| Bois-de-Liesse | Nature | Populus deltoides | Native | 8.63 |
| Bois-de-Liesse | Nature | Fraxinus pennsylvanica | Native | 3.92 |
| Bois-de-Liesse | Nature | Tilia americana | Native | 3.92 |
| Bois-de-Liesse | Nature | Ulmus americana | Native | 3.14 |
| Bois-de-Liesse | Nature | Acer freemanii | Native | 2.35 |
| Bois-de-Liesse | Nature | Lonicera periclymenum | Non-Native | 2.35 |
| Bois-de-Liesse | Nature | Ostrya virginiana | Native | 1.18 |
| Bois-de-Liesse | Nature | Quercus macrocarpa | Native | 1.18 |
| Bois-de-Liesse | Nature | Acer nigrum | Native | 0.78 |
| Bois-de-Liesse | Nature | Acer saccharinum | Native | 0.78 |
| Bois-de-Liesse | Nature | Prunus virginiana | Native | 0.78 |
| Bois-de-Liesse | Nature | Carya cordiformis | Native | 0.39 |
| Bois-de-Liesse | Nature | Cornus alternifolia | Native | 0.39 |
| Bois-de-Liesse | Nature | Fraxinus americana | Native | 0.39 |
| Bois-de-Liesse | Nature | Juglans cinerea | Native | 0.39 |
| Bois-de-Liesse | Nature | Pinus strobus | Native | 0.39 |
| Bois-de-Liesse | Nature | Populus tremuloides | Native | 0.39 |
| Bois-de-Saraguay | Nature | Acer saccharum | Native | 42.98 |
| Bois-de-Saraguay | Nature | Acer nigrum | Native | 26.38 |
| Bois-de-Saraguay | Nature | Rhamnus cathartica | Invasive | 5.11 |
| Bois-de-Saraguay | Nature | Carya cordiformis | Native | 4.68 |
| Bois-de-Saraguay | Nature | Tilia americana | Native | 4.68 |
| Bois-de-Saraguay | Nature | Acer freemanii | Native | 3.83 |
| Bois-de-Saraguay | Nature | Ostrya virginiana | Native | 3.40 |
| Bois-de-Saraguay | Nature | Quercus macrocarpa | Native | 2.98 |
| Bois-de-Saraguay | Nature | Acer saccharinum | Native | 2.13 |
| Bois-de-Saraguay | Nature | Ulmus americana | Native | 1.28 |
| Bois-de-Saraguay | Nature | Quercus rubra | Native | 0.85 |
| Bois-de-Saraguay | Nature | Betula alleghaniensis | Native | 0.43 |
| Bois-de-Saraguay | Nature | Fraxinus americana | Native | 0.43 |
| Bois-de-Saraguay | Nature | Quercus alba | Native | 0.43 |
| Bois-de-Saraguay | Nature | Quercus bicolor | Native | 0.43 |
| Boisé-de-Saint-Sulpice | Non-Status | Ulmus americana | Native | 34.23 |
| Boisé-de-Saint-Sulpice | Non-Status | Populus tremuloides | Native | 20.77 |
| Boisé-de-Saint-Sulpice | Non-Status | Acer freemanii | Native | 8.08 |
| Boisé-de-Saint-Sulpice | Non-Status | Populus deltoides | Native | 4.23 |
| Boisé-de-Saint-Sulpice | Non-Status | Acer saccharum | Native | 3.85 |
| Boisé-de-Saint-Sulpice | Non-Status | Fraxinus americana | Native | 3.46 |
| Boisé-de-Saint-Sulpice | Non-Status | Acer negundo | Invasive | 2.69 |
| Boisé-de-Saint-Sulpice | Non-Status | Acer saccharinum | Native | 2.69 |
| Boisé-de-Saint-Sulpice | Non-Status | Acer plantanoides | Invasive | 2.31 |
| Boisé-de-Saint-Sulpice | Non-Status | Picea glauca | Native | 2.31 |
| Boisé-de-Saint-Sulpice | Non-Status | Sorbus aucuparia | Non-Native | 2.31 |
| Boisé-de-Saint-Sulpice | Non-Status | Pinus resinosa | Native | 1.92 |
| Boisé-de-Saint-Sulpice | Non-Status | Juglans nigra | Non-Native | 1.54 |
| Boisé-de-Saint-Sulpice | Non-Status | Fraxinus pennsylvanica | Native | 1.15 |
| Boisé-de-Saint-Sulpice | Non-Status | Celtis occidentalis | Native | 0.77 |
| Boisé-de-Saint-Sulpice | Non-Status | Juglans cinerea | Native | 0.77 |
| Boisé-de-Saint-Sulpice | Non-Status | Quercus rubra | Native | 0.77 |
| Boisé-de-Saint-Sulpice | Non-Status | Carya cordiformis | Native | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Morus alba | Non-Native | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Ostrya virginiana | Native | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Prunus serotina | Native | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Prunus virginiana | Native | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Quercus macrocarpa | Native | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Rhamnus cathartica | Invasive | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Robinia pseudoacacia | Non-Native | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Tilia americana | Native | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Ulmus hollandica | Non-Native | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Ulmus pumila | Invasive | 0.38 |
| Boisé-de-Saint-Sulpice | Non-Status | Ulmus thomasii | Native | 0.38 |
| Cap-Saint-Jacques | Nature | Rhamnus cathartica | Invasive | 52.43 |
| Cap-Saint-Jacques | Nature | Acer saccharum | Native | 26.60 |
| Cap-Saint-Jacques | Nature | Fraxinus pennsylvanica | Native | 5.63 |
| Cap-Saint-Jacques | Nature | Ulmus americana | Native | 4.35 |
| Cap-Saint-Jacques | Nature | Ostrya virginiana | Native | 3.32 |
| Cap-Saint-Jacques | Nature | Celtis occidentalis | Native | 2.30 |
| Cap-Saint-Jacques | Nature | Fraxinus americana | Native | 1.53 |
| Cap-Saint-Jacques | Nature | Carya cordiformis | Native | 1.28 |
| Cap-Saint-Jacques | Nature | Tilia americana | Native | 1.02 |
| Cap-Saint-Jacques | Nature | Carya ovata | Native | 0.51 |
| Cap-Saint-Jacques | Nature | Cornus alternifolia | Native | 0.26 |
| Cap-Saint-Jacques | Nature | Populus tremuloides | Native | 0.26 |
| Cap-Saint-Jacques | Nature | Quercus alba | Native | 0.26 |
| Cap-Saint-Jacques | Nature | Quercus rubra | Native | 0.26 |
| Coulée-Grou | Non-Status | Acer negundo | Invasive | 44.74 |
| Coulée-Grou | Non-Status | Fraxinus americana | Native | 11.28 |
| Coulée-Grou | Non-Status | Fraxinus pennsylvanica | Native | 10.90 |
| Coulée-Grou | Non-Status | Robinia pseudoacacia | Non-Native | 10.90 |
| Coulée-Grou | Non-Status | Gleditsia triacanthos | Non-Native | 4.89 |
| Coulée-Grou | Non-Status | Lonicera periclymenum | Non-Native | 3.01 |
| Coulée-Grou | Non-Status | Populus deltoides | Native | 2.63 |
| Coulée-Grou | Non-Status | Celtis occidentalis | Native | 0.75 |
| Coulée-Grou | Non-Status | Tilia americana | Native | 0.75 |
| Coulée-Grou | Non-Status | Ulmus americana | Native | 0.75 |
| Coulée-Grou | Non-Status | Acer tataricum | Invasive | 0.38 |
| Coulée-Grou | Non-Status | Amelanchier arborea | Native | 0.38 |
| Coulée-Grou | Non-Status | Malus domestica | Non-Native | 0.38 |
| Coulée-Grou | Non-Status | Prunus sp. | Native | 0.38 |
| Coulée-Grou | Non-Status | Prunus virginiana | Native | 0.38 |
| Coulée-Grou | Non-Status | Rhamnus cathartica | Invasive | 0.38 |
| Coulée-Grou | Non-Status | Salix sp. | Native | 0.38 |
| Coulée-Grou | Non-Status | Ulmus pumila | Invasive | 0.38 |
| Jean-Drapeau | Non-Status | Celtis occidentalis | Native | 28.35 |
| Jean-Drapeau | Non-Status | Acer saccharum | Native | 15.75 |
| Jean-Drapeau | Non-Status | Tilia americana | Native | 15.75 |
| Jean-Drapeau | Non-Status | Ulmus americana | Native | 8.66 |
| Jean-Drapeau | Non-Status | Ostrya virginiana | Native | 6.30 |
| Jean-Drapeau | Non-Status | Pinus resinosa | Native | 4.72 |
| Jean-Drapeau | Non-Status | Acer saccharinum | Native | 2.36 |
| Jean-Drapeau | Non-Status | Crataegus succlenta | Native | 2.36 |
| Jean-Drapeau | Non-Status | Quercus macrocarpa | Native | 2.36 |
| Jean-Drapeau | Non-Status | Quercus rubra | Native | 2.36 |
| Jean-Drapeau | Non-Status | Acer plantanoides | Invasive | 1.57 |
| Jean-Drapeau | Non-Status | Fraxinus pennsylvanica | Native | 1.57 |
| Jean-Drapeau | Non-Status | Rhamnus cathartica | Invasive | 1.57 |
| Jean-Drapeau | Non-Status | Acer freemanii | Native | 0.79 |
| Jean-Drapeau | Non-Status | Aesculus glabra | Non-Native | 0.79 |
| Jean-Drapeau | Non-Status | Picea abies | Non-Native | 0.79 |
| Jean-Drapeau | Non-Status | Picea pungens | Non-Native | 0.79 |
| Jean-Drapeau | Non-Status | Prunus virginiana | Native | 0.79 |
| Jean-Drapeau | Non-Status | Thuja occidentalis | Native | 0.79 |
| L’Anse-à-l’Orme | Nature | Ostrya virginiana | Native | 39.77 |
| L’Anse-à-l’Orme | Nature | Acer saccharum | Native | 24.43 |
| L’Anse-à-l’Orme | Nature | Rhamnus cathartica | Invasive | 13.07 |
| L’Anse-à-l’Orme | Nature | Populus deltoides | Native | 3.12 |
| L’Anse-à-l’Orme | Nature | Tilia americana | Native | 3.12 |
| L’Anse-à-l’Orme | Nature | Ulmus americana | Native | 2.84 |
| L’Anse-à-l’Orme | Nature | Acer freemanii | Native | 2.56 |
| L’Anse-à-l’Orme | Nature | Carya cordiformis | Native | 2.56 |
| L’Anse-à-l’Orme | Nature | Fraxinus pennsylvanica | Native | 1.70 |
| L’Anse-à-l’Orme | Nature | Acer negundo | Invasive | 1.14 |
| L’Anse-à-l’Orme | Nature | Populus tremuloides | Native | 1.14 |
| L’Anse-à-l’Orme | Nature | Acer rubrum | Native | 0.85 |
| L’Anse-à-l’Orme | Nature | Acer saccharinum | Native | 0.85 |
| L’Anse-à-l’Orme | Nature | Carya ovata | Native | 0.85 |
| L’Anse-à-l’Orme | Nature | Fraxinus americana | Native | 0.85 |
| L’Anse-à-l’Orme | Nature | Betula papyrifera | Native | 0.57 |
| L’Anse-à-l’Orme | Nature | Quercus rubra | Native | 0.57 |
| Pointe-aux-Prairies | Nature | Acer rubrum | Native | 40.58 |
| Pointe-aux-Prairies | Nature | Quercus rubra | Native | 14.01 |
| Pointe-aux-Prairies | Nature | Acer freemanii | Native | 11.11 |
| Pointe-aux-Prairies | Nature | Carya ovata | Native | 4.83 |
| Pointe-aux-Prairies | Nature | Ulmus americana | Native | 4.83 |
| Pointe-aux-Prairies | Nature | Fraxinus pennsylvanica | Native | 3.86 |
| Pointe-aux-Prairies | Nature | Prunus serotina | Native | 3.86 |
| Pointe-aux-Prairies | Nature | Prunus virginiana | Native | 3.86 |
| Pointe-aux-Prairies | Nature | Acer saccharum | Native | 2.90 |
| Pointe-aux-Prairies | Nature | Fagus grandifolia | Native | 1.93 |
| Pointe-aux-Prairies | Nature | Populus deltoides | Native | 1.45 |
| Pointe-aux-Prairies | Nature | Betula alleghaniensis | Native | 0.97 |
| Pointe-aux-Prairies | Nature | Fraxinus americana | Native | 0.97 |
| Pointe-aux-Prairies | Nature | Quercus bicolor | Native | 0.97 |
| Pointe-aux-Prairies | Nature | Rhamnus cathartica | Invasive | 0.97 |
| Pointe-aux-Prairies | Nature | Robinia pseudoacacia | Non-Native | 0.97 |
| Pointe-aux-Prairies | Nature | Tilia americana | Native | 0.97 |
| Pointe-aux-Prairies | Nature | Acer plantanoides | Invasive | 0.48 |
| Thomas-Chapais | Non-Status | Ostrya virginiana | Native | 40.97 |
| Thomas-Chapais | Non-Status | Acer saccharum | Native | 16.45 |
| Thomas-Chapais | Non-Status | Carya cordiformis | Native | 14.19 |
| Thomas-Chapais | Non-Status | Tilia americana | Native | 10.00 |
| Thomas-Chapais | Non-Status | Crataegus pruinosa | Native | 4.84 |
| Thomas-Chapais | Non-Status | Fraxinus americana | Native | 2.90 |
| Thomas-Chapais | Non-Status | Ulmus americana | Native | 1.94 |
| Thomas-Chapais | Non-Status | Celtis occidentalis | Native | 1.29 |
| Thomas-Chapais | Non-Status | Populus deltoides | Native | 1.29 |
| Thomas-Chapais | Non-Status | Fraxinus pennsylvanica | Native | 0.97 |
| Thomas-Chapais | Non-Status | Quercus rubra | Native | 0.97 |
| Thomas-Chapais | Non-Status | Rhamnus cathartica | Invasive | 0.97 |
| Thomas-Chapais | Non-Status | Acer rubrum | Native | 0.65 |
| Thomas-Chapais | Non-Status | Acer freemanii | Native | 0.32 |
| Thomas-Chapais | Non-Status | Crataegus monogyna | Non-Native | 0.32 |
| Thomas-Chapais | Non-Status | Lonicera periclymenum | Non-Native | 0.32 |
| Thomas-Chapais | Non-Status | Pinus strobus | Native | 0.32 |
| Thomas-Chapais | Non-Status | Prunus serotina | Native | 0.32 |
| Thomas-Chapais | Non-Status | Quercus macrocarpa | Native | 0.32 |
| Thomas-Chapais | Non-Status | Tilia cordata | Non-Native | 0.32 |
| Île-Bizard | Nature | Acer saccharum | Native | 46.52 |
| Île-Bizard | Nature | Rhamnus cathartica | Invasive | 20.00 |
| Île-Bizard | Nature | Ulmus americana | Native | 10.00 |
| Île-Bizard | Nature | Tilia americana | Native | 6.96 |
| Île-Bizard | Nature | Robinia pseudoacacia | Non-Native | 4.35 |
| Île-Bizard | Nature | Fraxinus pennsylvanica | Native | 3.48 |
| Île-Bizard | Nature | Ostrya virginiana | Native | 3.04 |
| Île-Bizard | Nature | Fraxinus americana | Native | 1.74 |
| Île-Bizard | Nature | Lonicera periclymenum | Non-Native | 0.87 |
| Île-Bizard | Nature | Acer negundo | Invasive | 0.43 |
| Île-Bizard | Nature | Crataegus pruinosa | Native | 0.43 |
| Île-Bizard | Nature | Fagus grandifolia | Native | 0.43 |
| Île-Bizard | Nature | Thuja occidentalis | Native | 0.43 |

Table S2. Model summary table for the general linear model describing the relationship between tree species richness (dependent) and conservation status, park size, and proportion of invasive stems (independents).

| Term | Estimate | Standard Error | t-statistic | p-value |
| --- | --- | --- | --- | --- |
| Intercept | 17.19 | 2.95 | 5.84 | 0.00 |
| Nature Park | 1.53 | 4.16 | 0.37 | 0.72 |
| Park Size | 0.02 | 2.14 | 0.01 | 0.99 |
| Proportion Invasive | -0.12 | 2.03 | -0.06 | 0.96 |

Table S3. Model summary table for the general linear model describing the relationship between tree Shannon diversity (dependent) and conservation status, park size, and proportion of invasive stems (independents).

| Term | Estimate | Standard Error | t-statistic | p-value |
| --- | --- | --- | --- | --- |
| Intercept | 14.81 | 2.32 | 6.38 | 0.00 |
| Nature Park | 0.92 | 3.27 | 0.28 | 0.79 |
| Park Size | -0.47 | 1.68 | -0.28 | 0.79 |
| Proportion Invasive | 0.00 | 1.60 | 0.00 | 1.00 |

Table S4. Model summary table for the beta regression model describing the relationship between percent canopy cover (dependent) and conservation status, park size, and proportion of invasive stems (independents).

| Component | Term | Estimate | Standard Error | t-statistic | p-value |
| --- | --- | --- | --- | --- | --- |
| mean | Intercept | 0.80 | 0.24 | 3.33 | 0.00 |
| mean | Nature Park | 1.69 | 0.43 | 3.97 | 0.00 |
| mean | Park Size | -0.30 | 0.19 | -1.55 | 0.12 |
| mean | Proportion Invasive | -0.53 | 0.18 | -2.96 | 0.00 |
| precision | phi | 19.13 | 8.23 | 2.33 | 0.02 |

Table S5. Model summary table for the general linear model describing the relationship between mean vegetative complexity (dependent) and conservation status, park size, and proportion of invasive stems (independents).

| Term | Estimate | Standard Error | t-statistic | p-value |
| --- | --- | --- | --- | --- |
| Intercept | 2.22 | 0.16 | 13.73 | 0.00 |
| Nature Park | 0.54 | 0.23 | 2.36 | 0.05 |
| Park Size | -0.03 | 0.12 | -0.23 | 0.82 |
| Proportion Invasive | 0.04 | 0.11 | 0.37 | 0.72 |

Table S6. Model summary table for the beta regression model describing the relationship between the percent invasive species (dependent) and conservation status and park size (independents)

| Component | Term | Estimate | Standard Error | t-statistic | p-value |
| --- | --- | --- | --- | --- | --- |
| mean | Intercept | -1.95 | 0.19 | -10.28 | 0.00 |
| mean | Nature Park | -0.13 | 0.27 | -0.49 | 0.63 |
| mean | Park Size | 0.00 | 0.00 | -1.10 | 0.27 |
| precision | phi | 58.05 | 24.82 | 2.34 | 0.02 |

Table S7. Model summary table for the beta regression model describing the relationship between the percent invasive stems (dependent) and conservation status and park size (independents)

| Component | Term | Estimate | Standard Error | t-statistic | p-value |
| --- | --- | --- | --- | --- | --- |
| mean | Intercept | -1.95 | 0.49 | -3.94 | 0.00 |
| mean | Nature Park | 0.34 | 0.61 | 0.55 | 0.58 |
| mean | Park Size | 0.00 | 0.01 | 0.69 | 0.49 |
| precision | phi | 4.89 | 2.12 | 2.31 | 0.02 |