



## Why Shrubs?

Shrubs are vital to **a healthy urban forest ecosystem**. They typically have multiple woody stems branching from or near the ground and occupy the understory, where the majority of bird and animal species live. They are key to re-establishing woodlands in our **city parks and ravines**: *a great return on investment!*

### Shrubs Capture and Sequester Carbon

- ▶ Large shrubs can have the same above-ground wood volume as a small tree and an even larger area of photosynthetic tissue in the vascular cambium area of the stem and in the epidermis or bark.
- ▶ When a shrub sequesters carbon, it also absorbs and filters air pollutants – a big win for city dwellers.

### Shrubs Capture Rain and Storm Water

- ▶ Some native species can span three metres across (trees average 4.5 across) intercepting rainfall and reducing and filtering the amount of storm water entering our city's aging municipal water systems. *Toronto has witnessed three 50 year storm events in recent years!*



### Shrubs are a Friend to Wildlife

- ▶ Wildlife habitat is very fragmented in urban areas and shrubs provide protective bridges and corridors for wildlife – especially in restoration projects where young trees take 3 to 5 years to establish. *And their dense, irregular branches are favoured by nesting birds!*
- ▶ Carefully selected native shrubs provide an abundance of flowering nectar, fruit and seeds – vital to the diversity of pollinators, birds and mammals living in our city.

### Shrubs are a Friend to Young Trees

- ▶ Shrubs provide a windbreak, browse protection and cover for young trees as they get established.

### But NOT a Friend to Invasive Species

- ▶ Shrubs can prevent buckthorn, dog strangling vine and other invasive species from getting established in the understory. *Invasive species present one of the biggest challenges in restoring Toronto's ravines and parks!*

### Shrubs are Fast Growing...

- ▶ Because shrubs can establish quickly, shrubs provide soil cover and stability and prevent soil loss and erosion caused by storm events. Leaf litter enriches the soil as trees get established.
- ▶ The faster production of twigs and canopy means carbon and rain capture kicks in earlier than trees.
- ▶ The fast maturity of shrubs enables earlier seed production and provides shelter and habitat for wildlife.

### ... And Resilient.

- ▶ Some multi-stemmed shrubs can afford to lose a stem or two and still survive, unlike a single-stemmed tree that faces a lethal risk if its stem breaks and dies. *High wind conditions and ice storms are much more frequent!*

