

Eight Reasons to Remove Buckthorn

by Eileen Sutter

For most volunteers in our natural areas, common buckthorn, along with its relative glossy buckthorn, is an unwelcome presence. Much time and energy is spent removing buckthorn from our North Branch sites. Here are eight reasons why volunteers work so hard to give the common buckthorn the boot.

- 1) Common buckthorn has the ability to rapidly increase in numbers, and take over an area, especially where there has been prior disturbance, such as from grazing. These conditions currently exist in many of our natural areas. Although common buckthorn is not native to the United States, the Field Museum has found that it is the most common tree in the Chicago region. Some of the secrets to buckthorn dominance: shade tolerance, wide moisture tolerance, high seed production, and a high seed germination rate. Another factor: as a native of Europe and Asia, common buckthorn has left its predators and diseases behind. Lacking natural controls, it is able to multiply rapidly.
- 2) Buckthorn creates conditions that favor its increase in our ecosystems. As a shade tolerance plant, it has an advantage over sun loving natives once established. Its dense shade prevents oak reproduction, and inhibits our native ground layer plants. Its leaves, unlike oak leaves, are not flammable, so it retards fire which our fire dependent grasslands, savannas and woodlands require. Because common buckthorn alters the natural processes in our ecosystems, it functions as an invasive species.
- 3) It outcompetes native plants for nutrients, light and moisture, displacing native shrubs like nannyberry, hazelnut, and chokecherry; and small trees like ironwood and musclewood (and dogwoods further south), in the mid layer of woodlands. The ground under common buckthorn is often quite barren, devoid of significant plant life except for mosses and a few spring ephemerals, which are able to complete their life cycle before buckthorn leafs out.
- 4) It changes the soil chemistry by increasing nitrogen levels, and may facilitate earthworm invasions. These alterations are believed to favor the take over of garlic mustard and other weeds.

- 5) Common buckthorn seed is dispersed by birds, so the seed can end up far from the parent tree, wherever the bird poops. This seed is long lived in the seed bank. Seeds remain viable and able to produce new buckthorn for up to 5 years.
- 6) It contributes to soil erosion by shading out the grasses, sedges, and wildflowers whose roots hold soil in place.
- 7) Its berries are not nutritious; they are made up mostly of carbohydrates, and are low in protein. A chemical in the unripe fruit leads to diarrhea in birds. Although common buckthorn has a branching structure that makes it suitable for shrub nesting birds, when buckthorn is removed birds like goldfinches will use native shrubs to nest, as they have for thousands of years. Overall this plant has low wildlife value. Not surprising, since common buckthorn has been around our area since only around 1899 (in Grundy and Kankakee Counties since 1969), while our native animals have been around since the end of the glaciers, 10,000-12,000 years ago.
- 8) Common buckthorn is an alternate host of the soybean aphid, an agricultural pest. By removing buckthorn, we are actually helping farmers who are soybean growers. The State of Illinois officially recognizes the harms this plant does to our ecosystems and farmlands by prohibiting its sale within our state.