

Recommended Plantings for Migratory Songbird Habitat Management

By Susan Smith & Scott McWilliams, Dept Natural Resources Science, URI



Seasonal fruits are an important food resource for migratory songbirds as they migrate south each fall along the east coast of the U.S. This region is a major migration corridor for songbirds as they travel from their northern breeding grounds to their southern wintering areas. During these annual migrations songbirds require habitats that contain easily located and nutritionally adequate foods because these birds must rapidly replenish their energy and protein stores before continuing migration. Thus, the availability of high-quality, abundant food resources, like fruits, in coastal regions of the eastern U.S. is critical for successful migration of songbirds.

Most songbirds can utilize seasonal fruits that ripen in late summer and are available throughout the fall season. The ideal fruit diet for migratory birds would allow birds to rapidly replenish their energy and protein stores in preparation for their next migratory flight. However, fruits differ in their nutritional and energy content and most are relatively low in protein. Therefore we recommend offering birds a diversity of fruits so they can satisfy their nutritional needs (**Table 1**). Although a few invasive, non-native plant species produce fruits that may satisfy the nutritional requirements of wild birds, we restrict our recommendations to native plant species. These recommendations are based on measured nutritional composition of fruits, estimated nutritional requirements of birds, and bird preference experiments in which birds choose between several choices of fruits. Some of the recommended fruits such as Arrowwood are high-energy fruits that allow birds to rapidly refuel but have inadequate dietary protein (**Table 1**). Other recommended fruits such as Pokeweed or Virginia Creeper have more carbohydrate than fat (and so have less energy than Arrowwood) but have adequate dietary protein. Some waxy fruits, like Northern Bayberry, or less palatable fruits, like hollies, may only be utilized by a subset of migrants (i.e. Yellow-rumped Warblers, Cedar Waxwings) but these fruits persist and thus may also provide a good food resource for overwintering birds. This is why we recommend planting a variety of bird-consumed fruiting shrubs to create the best habitat for songbirds.



Arrowwood Viburnum

Pokeweed

Shadbush

Highbush Blueberry

Virginia Creeper

Table 1

Recommended native fruiting shrubs that can enhance habitat for migratory songbirds in southern New England. Given a diversity of plant species is needed to satisfy the requirements of migrating songbirds, we suggest planting at least two species from the “Highly recommended” list plus other species from the list when possible. Please consult your local greenhouse or horticulturist for advice on which plant species are best for your growing area.

Highly recommended and preferred by migratory songbirds:

Common Name	Scientific Name	Nutrient Content ¹		
		Fat	Carbohydrate	Protein
Arrowwood Viburnum	<i>Viburnum dentatum</i>	High	High	Inadequate
Pokeweed	<i>Phytolacca Americana</i>	Low	High	Adequate
Virginia Creeper	<i>Parthenocissus quinquefolia</i>	Low	High	Adequate
Highbush Blueberry	<i>Vaccinium corymbosum</i>	Low	High	Inadequate
Shadbush	<i>Amelanchier spp.</i>	Low	High	Adequate

Recommended and eaten by many migratory songbirds:

Common Elderberry	<i>Sambucus canadensis</i>	Low	High	Adequate
Red Elderberry	<i>Sambucus racemosa</i>		Low	Adequate
Chokecherry	<i>Prunus virginiana</i>	Low	High	Inadequate
Spicebush	<i>Lindera benzoin</i>			Adequate
Silky Dogwood	<i>Cornus amonum</i>	Low	High	Adequate
Gray Dogwood	<i>Cornus racemosa</i>			Inadequate
Red Osier Dogwood	<i>Cornus sericea</i>	N/A		
Maple-leaved Viburnum	<i>Viburnum acerifolium</i>	Low	Low	Inadequate
Black Raspberry	<i>Rubus spp.</i>	Low		Adequate

Recommended and eaten by a few migratory songbirds:

Northern Bayberry	<i>Myrica pennsylvanica</i>	High	High	Inadequate
Winterberry	<i>Ilex verticillata</i>	Low	High	Inadequate

¹Nutrient Content for fat and carbohydrate is “High” if >40% dry wt and “Low” if <10% dry wt. Nutrient Content for protein is “Adequate” if >5% dry wt and “Inadequate” if <4% dry wt. “N/A” means information is not available on nutrient content. From Smith et al. 2007 (Wilson Journal of Ornithology 119: 419-428), and Langlois and McWilliams 2010 (The Auk 127: 850-862).