The Importance of Fall Fruits for Songbirds

HUNDREDS OF SPECIES OF SONGBIRDS migrate to warmer regions of the world for the winter—a task that requires huge amounts of energy. To prepare for their long journey, birds must first bulk up with a high energy diet and find high energy food sources along the way. Luckily, fall-ripening fruits tend to be relatively high in both fat and overall energy (think calories), the two most important factors for selection by migrating birds. Though fat content and overall energy tend to be the most important nutritional factors, other nutritional components also play an important role in migrating bird diets.

Protein is an essential nutrient at any time of the year, but it is especially important during migration as a lack of protein can hinder birds' ability to maintain body mass, which can then require longer layovers as birds stock back up on nutrients. During the breeding season, most birds consume insects for protein, but as the season comes to an end and there are fewer insects to eat, they must turn to other sources for protein. Unfortunately, the amount of protein in fruit is generally low. This makes plants like American bittersweet and pokeweed quite valuable; despite their low fat and energy levels, both plant species provide a relatively high percentage of protein.

For many bird species, migration is a feat of endurance. Some birds fly twelve hours or more without stopping. This energy-intensive activity is associated with high levels of oxidative stress, damaging muscle tissues at a molecular level. A diet rich in antioxidants, which tends to be highly concentrated in dark-colored berries, appears to reduce these oxidative stresses and help maintain overall health.

The combination of habitat loss and invasive species dominance in our degraded natural areas has led to a significant decrease in native plant populations and, in-turn, a significant decrease in high-value food sources for birds.

Our avian friends need our help! The table on the opposing page lists 10 native plants that produce high-value fruits for migrating birds. The list is based primarily on the nutritional factors described above and was created after a review of the research cited below. We hope this list is helpful to you as you create your own bird-friendly garden. Remember, diversity is key... plant them all!

The 10 Best Fruiting Plants to Support Migratory Birds

NAME	RATIONALE
ARROWWOOD VIBURNUM *Viburnum dentatum*	Arrowwood viburnum is perhaps the single most valuable fruit source for migrating birds. The berries contain very high levels of both fat (between 40–50%) and total energy (28.06 kJ/g). They are also loaded with antioxidants and are highly favored by numerous bird species.
VIRGINIA CREEPER *Parthenocissus quinquefolia*	Virginia creeper berries have a medium fat content (20–25%) but are high in antioxidants and have a very high selection rate by birds.
NORTHERN BAYBERRY *Myrica pensylvanica*	The fruits of Northern bayberry have the highest fat content of all species researched (50%+), though the type of fat is not easily digestible by most bird species. For the birds that can digest bayberries, it is an extremely valuable source of energy.
POKEWEED *Phytolacca americana*	Though pokeweed berries are fairly low in fat (2.9%), they are high in carbohydrates (>35%) and protein (5.8%) and have a high selection rate by birds.
AMERICAN BITTERSWEET *Celastrus scandens*	American bittersweet berries have fairly low energy value (2.6 kJ/g) but they are very high in protein for a fruit (8.6%). If using this species, however, it is important to ensure proper identification as it can easily be confused with the highly invasive Oriental bittersweet.
FLOWERING DOGWOOD *Cornus florida*	Flowering dogwood berries have a high energy value (21 kJ/g) and have a very high selection rate by birds.
GRAY DOGWOOD *Cornus racemosa*	Gray dogwood berries have a high fat content (35–40%) and high total energy value (27.16 kJ/g) and are readily eaten by numerous bird species.
BLACK ELDERBERRY *Sambucus canadensis*	Elderberries are reported to be high in fat (30%+), protein, carbohydrates, and antioxidants and are readily eaten by numerous bird species.
NORTHERN SPICEBUSH *Lindera benzoin*	Spicebush berries are very high in both fat content (40–50%) and energy value (28.61 kJ/g) and are readily eaten by numerous bird species.
STRAWBERRY BUSH *Euonymus americanus*	Strawberry bush berries have a very high energy value (26.13 kJ/g) and have a high selection rate by birds.

Nutrient content for fat is "High" if >35% dry wt, "Medium" if between 10–35%, and "Low" if <10%. Energy density is "High" if >21 kJ/g dry wt, "Medium" if between 18–21 kJ/g, and "Low" if <18 kJ/g.

NOTE: All the plants listed here are native to the eastern US. Generally speaking, fruits from non-native plants have lower nutritional value than native plants. This can cause birds to eat until they are full but get very little benefit from it, leading to a variety of health problems. Though there are some non-native plants that provide high value fruits, many have become aggressive invasives, reducing biodiversity in our landscapes and natural areas. It is best to stick with these, and other, native plant species.

Photo credits (clockwise): Liz Pettit, Sharon Torello, Toni Genberg, and Russel Tree Experts.