

PRESENTATION SUMMARIES AND TAKE-HOME MESSAGES

Dr. T'ai Roulston | Year-Round Pollinator Habitat

Bees and other pollinators across North America are in decline. These declines are driven by factors including agricultural intensification, climate change, and the spread of invasive species. Many pollinator conservation efforts focus on the creation of pollinator habitats and providing floral resources through pollinator gardens and meadows. While these efforts provide for pollinators in the spring and summer, the needs of bees and other pollinators in the winter are often overlooked.



Dr. T'ai Roulston, a researcher at the Blandy Experimental Farm at the University of Virginia and Curator of the State Arboretum of Virginia, presented on the needs of bees in the winter. As spring and summer floral resources decline and fall approaches, bees "disappear into the landscape" as they seek places to nest for the winter. Some species burrow underground, some hollow out cavities in trees or meadow plant stems, some use the burrows of beetles or other animals, and others take shelter in holes in rotting wood or other plant material.

Dr. Roulston's talk emphasized the importance of varied habitat types, as many species of bees require both forest and meadow resources at different times of the year. Leafcutter bees, for example, rely on meadow flowers in the summertime but nest in beetle burrows in forest trees. Therefore, efforts to aid bee populations benefit from balancing access to both forest and meadow habitats. In addition, landowners can aid wintering bees by altering the timing and types of land management on their properties. For example, at Blandy Experimental Farm, only one-third of the pollinator meadow is managed each year. This prevents the destruction of the entire habitat at once and leaves dead plants standing for bees to nest in over the winter. By considering the changing needs of bees year-round, landowners can improve their efforts to sustain these precious pollinators on their properties.

Dr. Amy Johnson | Supporting Virginia's Wintering Birds

Recent research has shown that bird populations across North America have decreased by over three billion individuals since 1970. Grassland birds are particularly threatened, with a population loss of about 53%. While major threats include well-known causes such as agricultural intensification and climate change, the degradation of winter bird habitat is an often-overlooked but important threat.

Dr. Amy Johnson, director of Virginia Working Landscapes, presented on the threats birds face each winter and what individuals can do to help them. Winter threats include migration exhaustion, cold temperatures and extreme winter weather events, reduced availability of shelter from predators, and a lack of food and liquid water sources. A recent study published by Dr. Johnson and colleagues at the Smithsonian Conservation Biology Institute showed that planting native warm-season grasslands and leaving them unmanaged until early spring is best for supporting birds. Even if you can not plant a meadow, Dr. Johnson highlighted a variety of things people can do to help birds on their properties, which are summarized below.



Here are a few things you can do to help birds this winter:

Leave “Messy” Meadows

Waiting to mow until between February and April provides birds with varied habitat in which to take shelter, forage for food, and (for raptors) hunt for prey. The best meadows to leave standing are those filled with native plants, which provide edible seeds for birds all winter long.

Provide Liquid Water

Place sources of fresh liquid water near birdfeeders. Put tank heaters in birdbaths to keep them from freezing or place them in a sunny spot. As with bird feeders, keep them clean and put them near shelter from predators.

Use (Clean) Birdfeeders

Feeding a variety of seeds and protein sources such as mealworms can help birds survive harsh winter weather events. Place bird feeders away from cats and near bushes that birds can use to hide from hawks. Be sure to keep them clean to prevent spreading disease.

Support Birds Year-Round

Keep up with current bird research, get out and bird, or volunteer for local bird counts and other conservation efforts!

Build Brush Piles

Pile cut branches and yard waste in piles with larger branches at the bottom and smaller material on top, leaving spaces for animals to enter. These piles shelter birds from winter weather, especially if conifer branches are used. Plus, brush piles can be placed around saplings to prevent deer from eating them.

Plant Conifers (Or Put Out Christmas Trees!)

Conifer trees like pines and spruces provide great perches sheltered from winter winds. Plant clumps of conifers to provide for future winters. Or, put your old Christmas tree out on your porch or on a brush pile instead of throwing it away.

Plant Native Plants

Using native plants in your gardens and landscaping increases the availability of seeds for birds to eat in winter. Plant species such as monarda, purple coneflowers, and big bluestem and leave the dead stalks standing in the winter.

Field Trip | Jones Nature Preserve

After the morning presentations, workshop attendees were able to visit the privately-owned Jones Nature Preserve to see some winter wildlife support strategies in action. These included bee hotels, bird feeders, a pond with flowing water to prevent freezing, bird boxes, and pollinator meadows that were left un-mowed to provide food and shelter for both bees and birds this coming winter. Highlights of our walk included a close-up view of a native mantis egg case and a high-speed flyby from a sharp-shinned hawk!



To learn more about what you can do to help support local wildlife this winter, see our [Tips for Winterizing Your Yard for Wildlife!](#)