Providing Water in Your Habitat at Home©

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When was the last time you saw a thumbnail-sized frog sitting among wet leaves in your yard? How about a neon-colored dragonfly basking next to a sparkling pool, a butterfly lapping minerals from a mud puddle, or a hummingbird preening its feathers after a rain? These animals—and a wonderful variety of others—are all prospective visitors to the environment around your home, but their visit will be limited by the quality of the habitat components found there. Unfortunately, water is one of those critical elements in nature that seems to be missing from most people's yards. Apparently we've become so obsessively focused on maintaining impeccable lawns that we've entirely forgotten about our wild neighbors. By draining wet areas, diverting water off the property, removing every fallen leaf, and keeping the grass close-clipped, we're manicuring nature right out of the landscape.

Birds, insects, reptiles, amphibians and mammals all need a reliable source of accessible water to drink and carry out their life cycles, from breeding and egg-laying to finding food and raising their young. If you want to welcome wildlife to your yard and can picture a softer, less barren landscape that includes the sound of trickling water, read on.

Keep it Simple

There are several ways you can provide water sources for wildlife, and a habitat which contains more than one source is ideal. Where to start? If you've ever visited a garden show and looked for new ideas to use in your yard, you may have felt somewhat intimidated by the beautiful water garden displays. The more classy the show, of course, the more sophisticated the displays, which can include

A simple and inexpensive way to supply water for a variety of wildlife species is to use an old garbage can lid. Flip it upside-down and place a few rocks inside the lid. This will help to hold the lid in place and will offer extra perching space.

elaborate waterfalls, multi-lighted fountains, and complex rock work under splashing streams. The good news for wildlife gardeners, thankfully, is that a Habitat at Home© water feature doesn't have to be elaborate at all. If we take our cues from nature, we find that even the smallest puddles of water attract a variety of life. A shallow depression at the base of a tree trunk caressed by ferns can be a mini-oasis for tadpoles or salamanders. Bird baths outfitted with a small drip system will provide the tinkling sound of water so attractive to birds. A small pool with an inexpensive bubbler and an adjacent patch of groundcover invites small mammals or passing insects to stop for a sip. Even a trash can lid placed upside-down on the ground can serve as a water feature. As long as there is enough plant material nearby for escape cover and a bit of shade from the summer sun, your water source is likely to be successful.

Make a Splash

Buying an inexpensive bird bath is a good place to start for a novice habitat gardener. Huge bird baths with deep bowls are unnecessary, however: We want a bird bath intended for small songbirds, not ducks! Choose a bird bath with a shallow bowl no deeper than two to three inches, and place a few stones in it that birds can easily perch on. Try suspending a bucket that has a small hole in the bottom over the bird bath, and fill the bucket occasionally when a garden hose is handy, to provide a tantalizing dripping sound that birds will want to investigate. Remember, too, that wildlife needs water year-round, not just in summer. To keep water from freezing, consider getting a bird bath heater or de-icer from a local garden shop or birding store. A good quality heater will shut itself off when the bird bath is empty, and it should have a built-in thermostat and grounded plug. Avoid heaters that gobble electricity, as they can range from 50 to 250 watts.

When you're ready to graduate from a bird bath to an in-ground water feature, the best options are either a prefabricated liner or a flexible plastic liner. Prefab liners look like black bathtubs and come in assorted shapes and sizes. Be aware that most of them have straight, steep sides, which can make it difficult for small mammals or amphibians to escape if they fall in the water. Therefore, it's prudent to choose a liner that has at least one or two built-in, shallow shelves or levels where you can put potted, bog-loving plants and rocks that small critters can crawl over. The deepest part of the liner should be an average of 18 to 24 inches to accommodate submerged plants and overwintering fish.

A flexible plastic liner, on the other hand, will provide opportunities for more creativity, because it can be shaped to any depth or configuration. The most durable flexible liners are 30 to 45 mil plastic. When you dig the hole for this type of liner, design it so that at least one side of the water feature is very shallow for birds and amphibians, and include a 4- to 6-inch shelf for submerged plants.

Left: Spring peeper, *Pseudacris (Hyla) crucifer.*

Rules of Thumb

Whether you use a prefab liner or flexible plastic, be sure to call Miss Utility first before digging, to locate any electrical or phone lines. Put the water feature where it will get at least five hours of sun a day as well as some shade in the afternoon. Also, a good rule of thumb is to cover two-thirds of the surface area with plants, which will minimize algae growth and provide cover for aquatic organisms. Circulating the water with a submersible pump will ensure adequate oxygen and minimal mosquito growth (see the "Did You Know" section on this page for more about mosquitoes).

Refrain from adding goldfish to your water feature, because goldfish will eat many of the native, beneficial aquatic organisms you're trying to attract. Also, goldfish waste products increase the water's organic matter which can in turn promote excessive algae growth. In addition, goldfish may escape during a storm or flooding event and enter a local water body or stream, potentially introducing these non-native species into the environment. For the same reason, never purchase tadpoles or snails from pet stores or other suppliers, as these are bound to be non-native. Besides, it's not necessary! A water garden with naturalized edges and native aquatic plants will attract native dragonflies, snails, frogs and other organisms that will keep the habitat balanced.

Choose the Site Wisely

Providing cover near the water source can not be over-emphasized. Most wildlife is wary of predators and stays on the constant lookout for signs of danger, which could be a hawk, a fox, or free-roaming cats and dogs. As we look for the best arrangement of food, water and cover, our goal is to avoid extreme conditions. At one end of this extreme is the "naked bird bath" syndrome, where the bird bath stands forlorn in an expansive ocean of lawn, nary a creature in sight. Birds are usually hesitant to venture far out into the open; instead, they prefer a shrub or tree near the water where they can land first and see if the coast is clear. At the other extreme is a tiny water source practically smothered by thick vegetation. This is a great place for a cat or other stealthy predator to lie in wait.

Therefore, strive for a "happy medium." If the yard is very small with only a few foundation plants, try siting the water several feet from the plants, on a side of the house that won't be absolutely baked by the afternoon sun. On the other hand, if the plant material is very scattered throughout the yard—"there's a bush over here and a tree way over there"—choose one shrub or tree to be the "anchor," and place the water feature about 5 to 10 feet away from it. If the yard is mostly grass with only a border of shrubs or trees, install the water feature near the edge of the vegetation. Constructing a brush pile or planting a couple of shrubs or small trees may be necessary to round out the habitat elements. Remember to include evergreens, which will provide winter cover as well.

Did You Know?— Mosquito Hot Spots

It takes a minimum of one week (or up to four weeks, depending on the species) for a mosquito egg to complete its life cycle and develop into a mature adult during the warmer spring and summer months when these insects breed. Since mosquitoes require quiet, still water for egg-laying and development, they are attracted to water that is allowed to stand or stagnate for an extended period of time. Contrary to popular opinion, however, wetlands are not entirely to blame, because these ecosystems are home to a wide variety of bird and insect species that form an intricate food web of checks and balances. Instead, the most prevalent—and probably least likely to be noticed—place for standing water around our homes is in the gutters, where leaves

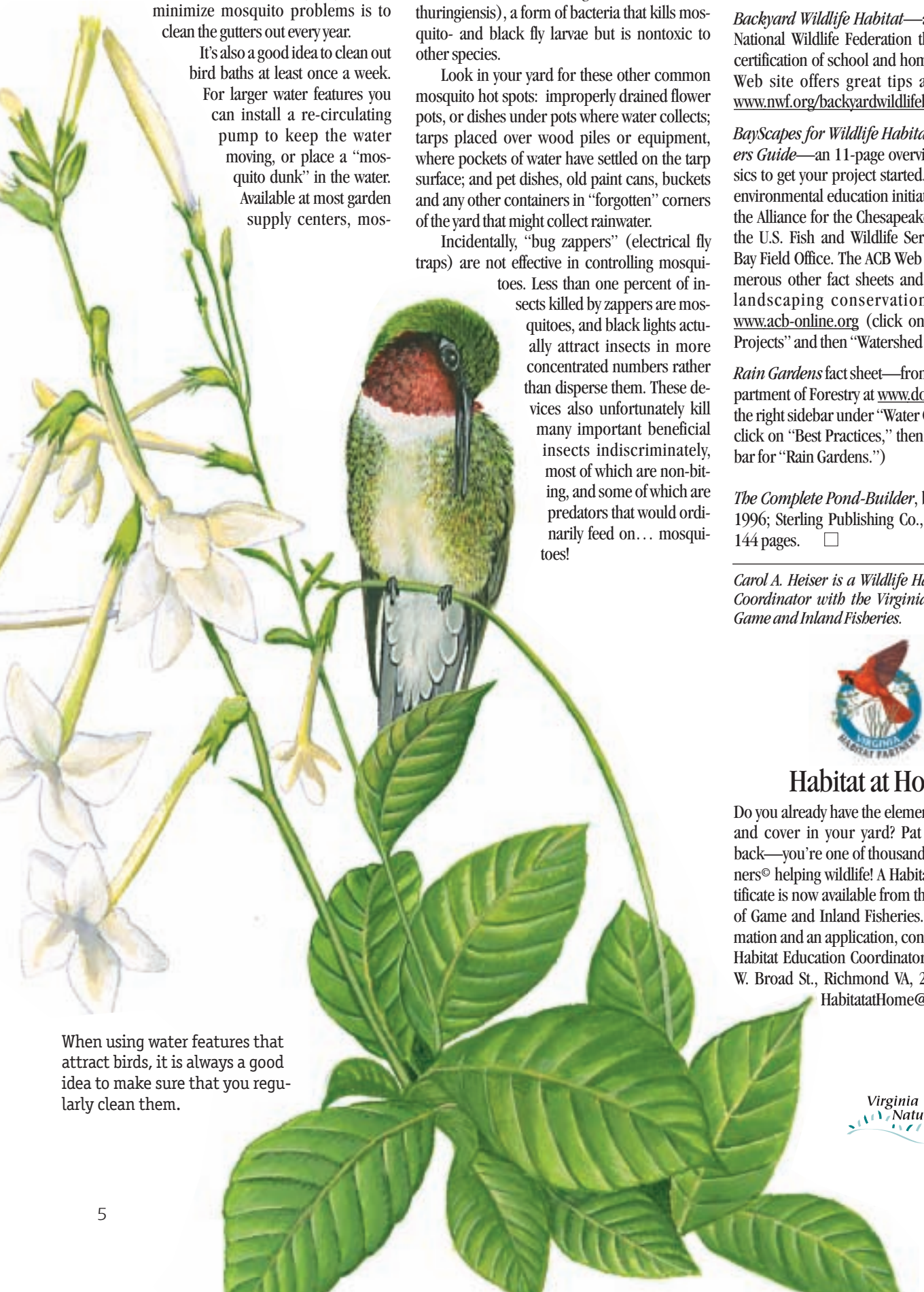
Above: Common whitetail dragonfly, *Libellua lydia*. **Right:** Pipevine swallowtail, *Battus philenor.*

and other accumulated debris trap roof runoff. Therefore, an easy way to help minimize mosquito problems is to clean the gutters out every year.

It's also a good idea to clean out bird baths at least once a week. For larger water features you can install a re-circulating pump to keep the water moving, or place a "mosquito dunk" in the water. Available at most garden supply centers, mosquito dunks are slow-release, pest-control disks which contain the active ingredient Bt (Bacillus thuringiensis), a form of bacteria that kills mosquito- and black fly larvae but is nontoxic to other species.

Look in your yard for these other common mosquito hot spots: improperly drained flower pots, or dishes under pots where water collects; tarps placed over wood piles or equipment, where pockets of water have settled on the tarp surface; and pet dishes, old paint cans, buckets and any other containers in "forgotten" corners of the yard that might collect rainwater.

Incidentally, "bug zappers" (electrical fly traps) are not effective in controlling mosquitoes. Less than one percent of insects killed by zappers are mosquitoes, and black lights actually attract insects in more concentrated numbers rather than disperse them. These devices also unfortunately kill many important beneficial insects indiscriminately, most of which are non-biting, and some of which are predators that would ordinarily feed on… mosquitoes!



When using water features that attract birds, it is always a good idea to make sure that you regularly clean them.

Learning More

Backyard Wildlife Habitat—a program of the National Wildlife Federation that offers online certification of school and home habitats. Their Web site offers great tips and how-to's at www.nwf.org/backyardwildlifehabitat.

BayScapes for Wildlife Habitat: a Homeowners Guide—an 11-page overview of habitat basics to get your project started. BayScapes is an environmental education initiative developed by the Alliance for the Chesapeake Bay (ACB) and the U.S. Fish and Wildlife Service Chesapeake Bay Field Office. The ACB Web site contains numerous other fact sheets and publications on landscaping conservation practices, at www.acb-online.org (click on "Programs and Projects" and then "Watershed Protection").

Rain Gardens fact sheet—from the Virginia Department of Forestry at www.dof.virginia.gov (in the right sidebar under "Water Quality" heading, click on "Best Practices," then look in left sidebar for "Rain Gardens.")

The Complete Pond-Builder, by Helen Nash; c. 1996; Sterling Publishing Co., Inc., New York; 144 pages. □

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Habitat at Home©

Do you already have the elements of food, water and cover in your yard? Pat yourself on the back—you're one of thousands of Habitat Partners© helping wildlife! A Habitat at Home© certificate is now available from the VA Department of Game and Inland Fisheries. For more information and an application, contact Carol Heiser, Habitat Education Coordinator, at VDGIF, 4010 W. Broad St., Richmond VA, 23230, or e-mail HabitatatHome@dgif.virginia.gov

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