



Oases for Wildlife

Animal-friendly ponds transform ordinary backyards into vibrant mini-ecosystems

by RUTHANNE JOHNSON

Tom Gatz's yard in Phoenix, Ariz., bustles with the comings and goings of wild visitors. Birds nest in the mesquite tree and cactus plants, carpenter bees burrow into dried agave stalks, geckos dart behind rocks, and the occasional hawk swoops in to grab a meal. And then there are the unique Couch's spadefoot toads, who bleat like sheep as they emerge from their underground burrows once a year, after summer rains have softened the scorched earth.

The desert terrain seems an unlikely place for such a rich community. But since Gatz replaced a manicured lawn with native plants and an L-shaped pond, he's counted among the visitors to his yard seven mammalian species, eight species of reptiles and

amphibians, six dragonfly species, and 73 bird species.

Building the pond took 10 days of backbreaking excavation with a pickaxe, but the retired wildlife biologist viewed the work as a labor of love. For homeowners like him, creating and maintaining a pond is about more than aesthetics; it's a way to nurture wildlife and perhaps help compensate for human activities that have destroyed wetlands and depleted natural water sources.

Gatz notes that rivers in his area once served as a kind of highway for migrating birds who aren't adapted to desert living. But many of the rivers have been dammed and are dry at least part of the year, meaning

that "instead of having a ribbon of green, [the birds] really depend on islands of habitat. They have to hopscotch across the desert in the spring and fall." Collectively, he says, backyard ponds can make a difference for these animals—"like a string of pearls."

Wetlands have been in decline nationwide, depleted mainly by agriculture, poor forestry practices, development, and dam construction. The lower 48 states in the U.S. once contained more than 220 million acres of wetland habitat; today, only about half that amount remains, says Tom Dahl, senior scientist for wetland status and trends with the U.S. Fish and Wildlife Service.

Even with recent gains due to restoration and conservation projects, the net loss remains substantial. Dahl believes that water features can at the very least provide habitat in wetland-depleted areas. "In reality, most of our created and restored wetlands start off as ponds," he says. "Then vegetation fills in around the edges and an ecological succession starts to take hold."

In Minneapolis, Minn., Oralee Kirk and her husband, Timm Weiss, have seen nature's pageantry unfold over the last 30 years while transforming their suburban yard into a north woods landscape. They have replaced grass, petunias, and pansies with native plantings like wild ginger, trillium, bloodroot, and Solomon's seal, as well as brush piles, pine needle mulch, and—the jewel of the property—a wildlife pond.

Since the metamorphosis, the couple has received visits from deer, wild turkeys, foxes, rabbits, and a plethora of birds and butterflies. Kirk has even observed a hawk bathing in the sandy shallows along the shoreline: "It takes a bath like I've seen robins do. It walks in one foot at a time, it steps and then looks around, steps and looks around ... maybe a hundred times before it will dip its head in the water and flap its wings."

Animals in the vicinity of wildlife ponds don't make themselves at home just in the water. At the nonprofit Desert Botanical Garden in Phoenix, birds roost in trees on the edge of the 50-by-30-foot pond, making a feast of the desert hackberry, and



Putting a Pond in Place

Creating a wildlife-friendly pond isn't as simple as putting a prefabricated container into the ground and filling the hole with water. Before you put shovel to dirt, carefully consider the needs of the wildlife you'll be attracting.

► **KEEP IT LEGAL** Check with your local government and homeowners association. Building codes may have restrictions regarding depth, safety, and other aspects, while some HOAs may prohibit certain types of water features. Have underground utilities and other potential obstacles such as tree roots marked before excavating.

► **CHOOSE A LOCATION** The area for your pond should have good drainage away from potential hazards such as a road or chemical runoff from a neighboring lawn. Consider locating it in a spot with safe access to electricity and supplemental water, as well as a good sun/shade ratio to keep your aquatic plants happy.

► **SIZING IT UP** While small ponds less than 2 to 3 feet deep can sustain a variety of life, they tend to invite fewer layers of wildlife. Shallow ponds also are more vulnerable to evaporation, overheating, and freezing.

► **SAFETY FIRST** The pond should have gently sloping sides, shallows, and ledges to keep pets and wild animals from falling in and drowning. Commercial products like the Skamper-Ramp (available at humanedomain.org) and Froglog can help animals scramble to safety, as can partially submerged rocks and logs. Loose rocks on the edge of Phoenix resident Tom Gatz's pond contain nooks and crannies where animals can hide from predators and find respite from the heat, while native yerba mansa plants provide cover for lizards, frogs, and other desert creatures.

► **LINERS, FILTERS, AND PUMPS** Ponds that don't naturally hold water need a liner, which can be cement, clay, or a flexible or preformed synthetic material. Filters help screen out particles and break down waste, while pumps move water and circulate oxygen to keep mosquitoes at bay. A pond expert can advise you on the choices to best fit your needs.

► **PLANT IT UP** Experts recommend covering about 60 to 65 percent of

the surface with plants, which help cool the water and thus prevent algal blooms that can deplete the water of oxygen. Plants also provide food, shelter, and platforms for wildlife to rest, lay eggs, and escape from drowning. To get aquatic plants started, plant them in pots and submerge them along the bottom.

► **GO NATIVE** Nonnative plants can become invasive depending on the region, and backyard ponds are some of the worst vectors for spreading them, says pond expert Brad Kerr: "The seeds and spore[s] can easily hitch a ride on visiting wildlife or get naturally dispersed through the air and by water." Local native nurseries, botanic gardens, and university cooperative extensions can provide advice on which regional native plants to use.

► **BUILD IT, AND THEY WILL COME** Many fish and other animals sold at aquatic stores are nonnative and may be bred, raised, and shipped in inhumane conditions. But there's no need to stock your pond with store-bought animals; ponds are a natural attraction to native wildlife, including aquatic creatures.

► **COLD WEATHER CONCERNS** Northern ponders sometimes opt to overwinter aquatic plants inside or maintain deeper ponds (at least 3 feet) that are less likely to freeze. Minneapolis ponders Oralee Kirk keeps her pump going year-round, which prevents the water from freezing and ensures a winter water source for wildlife.

► **JOIN THE CLUB** By joining a local pond society, you can gather a wealth of advice on pond building and maintenance, as well as information on the types of wild animals you can expect to see and tips on what plants to use—and possibly even some specimens to take back to your own yard.



► **LEARN** how to convert a swimming pool into a wildlife pond at humanesociety.org/magazine.



rabbits, roadrunners, and lizards all come to visit, says horticulturalist Ray Leimkuehler. “If the animals don’t use the water directly,” he says, “they definitely utilize the vegetation planted nearby.”

The pond also beckons insects who provide food for the birds and other animals—and endless fascination for the garden’s staff and visitors. Bees climb down cattail blades to collect water, and they land on splotches of algae where they can take a sip before buzzing away, Leimkuehler notes. Dragonflies lay their eggs while skipping across the surface; the eggs settle to the mucky bottom where they hatch into nymphs, molting several times before climbing out of the water to become adults.

Wildlife lovers don’t need a big space to attract activity, says pond expert Brad Kerr; even a 5,000-square-foot urban lot has room for a 5-by-10-foot pond. As senior fishery biologist at Spring Creek Aquatic



Concepts, an Oregon company that builds water features across North America, Kerr can attest to the possibilities of small spaces.

On his parents’ deck in Portland, Ore., he built a small fountain and surrounded it with Indian paintbrush, forget-me-not, shooting star, and Jacob’s ladder. “It looks like a little miniature Columbia Gorge,” he says. “It’s naturally beautiful and the birds are all over it.” Avian visitors even build nests using material from a moss meadow Kerr planted nearby.

Well-filtered ponds with pumps to prevent water from stagnating don’t necessarily require a lot of maintenance—or chemicals to keep them clean. Leimkuehler rakes algae from the surface periodically, while Gatz vacuums muck from the bottom once or twice a year and uses it to fertilize his plants. He also cleans a skimmer of leaves and debris every week, and once a year he rinses a biological filter that breaks down animal waste.

As he and other backyard ponders have discovered, nature provides rich rewards for these efforts. From an open dining room window, Gatz and his wife can enjoy “surround sound without a stereo system.” They listen to the cascading waterfall, watch birds take refreshing sips, and spy colorful dragonflies clinging to the lilies planted along the shoreline. “Just sitting out here on hot summer days is kind of cooling itself,” he says. “It touches all of the senses—sight, sound, smells.”

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2009 Grand Prize Winner
Rob Palmer's cover shot of Bald Eagles.
Right: Amateur First Place Winner
Adam Felde's diving Brown Pelican

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A Rocky Road to Sweet Success

RECIPE
BOX

When Sara Sohn cut animal products from her diet nearly two decades ago, the then-13-year-old New Yorker was forced to give up her favorite food—Rice Krispie Treats. At the time, all commercial brand marshmallows contained gelatin, a common thickening agent derived from animal bones, tissues, organs, and other slaughterhouse byproducts of animals kept on factory farms.

Sohn pined for the sticky confection for years before deciding to create a cruelty-free version. She had no background in food science, but the result was so delicious that her friends urged her to make marshmallow production a full-time job. In 2005, Sweet & Sara was born and quickly made a splash in vegetarian circles.

Then disaster struck: Sohn and other animal-friendly confectioners discovered they'd been victims of false advertising. The gelatin "substitute" they were using—touted by its makers as free of meat and dairy—tested positive for high levels of animal protein. The discovery almost forced an end to Sweet & Sara, but Sohn was determined to persevere. After 10 months of trial and error, she hit on the gelatin-free marshmallow formula that she's used ever since.

The goal of her business, says Sohn, is to make animal-free diets appealing by whipping up popular products as tasty as their more mainstream counterparts. Sweet & Sara's marshmallows, Rice Crispy Treats, and Smores cookies are popular with herbivores and omnivores alike and have won accolades from Martha Stewart, Rachael Ray, *VegNews* magazine, and the Food Network. Three of the company's signature treats are the crowning jewels on this rich cupcake recipe created specially for *All Animals* readers. (For a full list of Sweet & Sara products, visit sweetandsara.com.)



— **Arna Cohen**

Rocky Road Cupcakes—makes 12 servings

CUPCAKES

1¼ cups flour
¾ cup sugar
½ cup cocoa powder
1 teaspoon baking soda
¼ teaspoon salt
¼ teaspoon instant espresso powder (optional)

1 cup nondairy milk
1 teaspoon vinegar
⅓ cup vegetable oil
1 teaspoon pure vanilla extract
½ cup vegan chocolate chips (optional)
Sweet & Sara Vanilla Marshmallows

1. Preheat oven to 350°.
2. Line one 12-cup muffin tin with cupcake papers. Set aside.
3. Sift together the flour, sugar, cocoa, baking soda, salt, and optional espresso powder. Mix in the milk, vinegar, oil, and vanilla. Mix together until smooth. Add optional chocolate chips.
4. Carefully spoon the batter into the cupcake liners, filling them about two-thirds full. Add one Sweet & Sara marshmallow in the center of each. Bake for 16 to 20 minutes or until a toothpick inserted in the center of the cupcake comes out clean.
5. Cool the cupcakes completely before icing with chocolate frosting (recipe at right).

FROSTING

½ cup soy margarine, melted
⅓ cup cocoa powder
½ cup soy, rice, or almond milk
1 teaspoon vanilla extract
3 cups confectioners' sugar

1. In a large bowl, mix margarine and cocoa together until combined.
2. Add milk and vanilla; beat until smooth.
3. Gradually beat in confectioners' sugar until desired consistency is achieved. Adjust with more milk or confectioners' sugar if necessary.
4. FOR ROCKY ROAD CUPCAKES: Top with Sweet & Sara Mini Marshmallows, Sweet & Sara Rocky Road Bark pieces, or Sweet & Sara Cinnamon Pecan Marshmallows.
5. FOR SNOWBALL CUPCAKES: Top with coconut flakes (for a special touch, add natural coloring made from beets).

TOPPINGS

Sweet & Sara Mini Marshmallows
Sweet & Sara Rocky Road Bark (chopped into pieces)
Sweet & Sara Cinnamon Pecan Marshmallows
coconut flakes (optional)

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