

Birds and Building a Backyard Pond

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In 1993 I made a freshwater pond and waterfall in my backyard in Providence, Rhode Island. Since that time I have had numerous interesting birds visit, including a Northern Waterthrush, Blackburnian Warbler, Wilson's Warbler, Yellow Warbler, Yellow-rumped Warbler, Black-throated Green Warbler, Black-throated Blue Warbler, as well as numerous other warblers; and Carolina Wren, Rose-breasted Grosbeak, Northern Oriole, Cooper's Hawk, grackles, sparrows, and a host of other songbirds.

My backyard is small, maybe one-quarter acre at most. I live in a residential neighborhood, and most of the yards are small. The back area was shaded by maple trees, and there was a slight depression in the lawn. Grass never grew well in this section, and cutting the lawn in the depression was always a problem. I decided to dig out the area, build a pond, and plant native trees and shrubs that would attract birds and wildlife.

To begin, I used a pickax and shovel to remove the soil and many large rocks that I encountered (Figure 1). The excavating was difficult, even with the help of my son. I took about a week to dig the basin to a depth of about two and a half feet. My pond is somewhat oval shaped, but you can make your pond whatever shape and size you want as long as it is about 2.5 feet in depth. Ponds that aren't deep enough may freeze solid during the winter months. I left a one-foot shelf along the entire edge of the pond so that I could put containers of water-loving plants along the perimeter.

The next step was to remove any roots or small rocks from the basin and smooth it out. I went to a local sand and gravel company and was able to purchase inexpensive stone dust which I used to line the entire surface of the pond basin. This moist stone dust packs in place and insures that no sharp objects will pierce the liner. You can obtain a flexible plastic liner from most garden shops. There are several grades, from thick to thin, and I selected a medium-grade liner which lasted for about seven years. The thickest PVC liner on the market today is about 45 mil, and that type should be a good choice. A 10 x 15-foot liner costs about \$120.00. If you measure your pond for length, width, and depth, the store can



Figure 1. Excavation of the pond in progress, showing the basin and the shelf around the edge (photographs by the author)

advise as to what size liner you need. I also bought a pump and hoses that would circulate the water and make a waterfall. The sound of running water is a big attraction for many birds, especially on hot summer days. While I have always had birds in my yard, especially in spring, the pond attracts more birds, and many come to drink right at eye level. In fall and winter, birds hide under the hemlock trees and in the thick bushes that I planted. Juncos, and Song and White-throated sparrows are usually there every fall and winter. Within a week of building the pond, I had a Least Flycatcher that landed on a dead tree branch I erected over the water. Also, last year I had a large flock of about twenty Cedar Waxwings in the trees next to the pond.

After placing the liner in the pond, I used large rocks around the edge. I scavenged these from various locations to make the pond look natural and to hide the liner (Figure 2). Then I placed water-container plants along the pond shelf. I used a layer of gravel on the bottom and top of the pots to keep the soil from washing out. My pond is lined with wild irises and cattails. I also put some cinder blocks in the bottom and put a plastic washtub on them which I filled with waterlilies. You can buy numerous aquatic plants from a local pet store, or you can order plants from several of the outfits that deal specifically with pond plants and fish. There are floating water plants such as water hyacinth and water lettuce. The water plants not only add to the overall appearance of the pond but also serve to filter and aerate the water and to cut down on sunlight, which causes algal growth. The floating water plants multiply quickly so it is not necessary to buy a large number. I added a few fish to the pond, including Japanese Koi, Shebunken, Comets, and Fantails. I think the koi are the hardiest, and I have some that have been living since I started my pond. There are Japanese and domestic koi; the domestic are less expensive. Koi are generally sold based on size and run from about five to thirty dollars per fish. The fish require little care except for feeding with floating food sticks. Your local pet store or aquarium will help you to get started and tell you if you need to add any chemicals to your water when you start.



Figure 2. Completed pond showing waterfall, stones along edge, marginal plants, and floating plants

The final process was building a waterfall, which I constructed out of several large rocks that were carefully positioned so that the water would flow over them and ultimately splash into the pond. My main concern with the waterfall was the sound, so

I kept adjusting it until it made as much bubbling and gurgling as possible. The hose from the pump was placed at the top of the waterfall to keep recirculating the water.

The final touch was planting native trees, shrubs, and plants around the pond. Since my backyard is partly in shade, I had to select shade-tolerant species. I planted those species that would be found in the wild as well as plants that bear fruit and berries to attract birds. The plants I selected include: Sweet Pepper Bush (*Clethra alnifolia*), Swamp Azalea (*Rhododendron viscosum*), Shadbush (*Amerlanchier* spp.), several types of viburnum, dogwood, hemlock, May-Apple (*Podophyllum peltatum*), and Solomon's Seal (*Polygonatum biflorum*). Every year I add a few more plants. You can check the *Sierra Club Naturalist's Guide* (Jorgensen 1978) for the native plants that grow in various types of habitats.

A few words of caution. If you build a pond, make sure that you have it fenced in, and check your local town ordinances. Also be prepared to drain and clean the pond at least a few times a year. I clean mine every spring, summer, and fall. You can buy pond filters and even UV lights that will cut down on the sediments and algae and will save you the hassle of some of the cleaning. In the fall, I stretch netting over the pond to trap the leaves before they fall into the water. One year I didn't get to clean out the leaves and after the winter the pond stunk, the water was black, and my fish were dead. So a pond in your yard is not totally maintenance-free. I keep the pump running in winter so the water doesn't completely freeze over. Again, before you undertake a pond project, be sure to consult your garden or pet shop about all of the details. The result is worth it. I enjoy sitting by the pond and listening to the waterfall, watching the fish, and seeing the birds come to my backyard. What started off as a problem area has now become the neighborhood showplace.

June is a good time to start a pond, after all of the maple flowers fall off. The weather is warm enough to put fish in and to get it all established before the winter. It takes a few months to get everything in balance. ↗

Reference

Jorgensen, Neil. 1978. *A Sierra Club Naturalist's Guide to Southern New England*. Sierra Club Books, San Francisco.

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