

The Barn Swallow: Friend of the Farm

Introduction

The Barn Swallow has the distinction of being the most abundant and widely distributed swallow in the world. It can be found on every continent except Antarctica. Historically, Barn Swallows nested in the entrances of caves, but like its relative, the purple martin, it has almost completely shifted to using artificial structures.

Many people across the United States can set their calendars to the exact day the Barn Swallows will return each spring. They are a common bird around farms and other areas with adequate nest sites and insect availability.

Watching Barn Swallows hunt for insects while they fly is an amazing and enjoyable spectacle. Barn Swallows are one of the most acrobatic of birds—not only do they put on a good show, but they eat insects almost constantly. For this reason, attracting Barn Swallows to your property may be one more positive step in an integrated approach to managing agricultural and garden insect pests.

Identification

Like most swallows, the Barn Swallow's flight is distinctive. They swoop up and down and dart back and forth in their efforts to catch insects. Barn Swallows can fly at various heights from just above the ground to over 75 feet high.

Barn Swallows can be identified by their chestnut forehead, rufous and blue underparts, and dark, shiny blue backs. The one feature that sets the Barn Swallow apart from other swallows is its deeply forked tail. No other member of the swallow family has such a forked tail.

Distribution and Habitat

Barn Swallows are common throughout Maryland, but prefer some habitats to others.

Open, relatively treeless landscapes, such as fields, marshes, and large yards, are preferred by Barn Swallows because they are aerial insectivores. This means they catch insects while flying, but they will sometimes take insects off the ground. Barn Swallows are very common around barnyard areas and often follow farm equipment, eating the insects that are flushed into the air.

Diet

Not only is the Barn Swallow a great performer in flight, but it also benefits humans. Barn Swallows eat a wide range of both agricultural and community insect pests. Insects make up, on average, 99.8 percent of their diet. For this reason, farmers and gardeners do not need to fear swallows eating their fruits and vegetables, because the swallows are primarily targeting insects.

The Barn Swallow is considered an opportunistic eater—its diet normally reflects locally available insect species. Research indicates Barn Swallows, along with other members of the swallow family, consume large numbers of flies, which can plague livestock. Cows and horses are susceptible to many problems that can arise from different species of flies, including horn flies, face flies, horse flies, and deer flies. Barn Swallows are often seen flying around livestock, where they eat flies that are attracted to the animals. Incorporating Barn Swallow nesting habitat with a livestock operation may enhance an overall integrated pest management strategy; potentially decreasing losses in yield from the various pests that Barn Swallows will consume.

In addition to flies, Barn Swallows consume beetles, leafhoppers, wasps, ants, moths, grasshoppers, and crickets. The Barn Swallow's menu is full of many agricultural and community garden pests. Barn Swallows may help prevent losses in yield from vegetable, hay, orchard, and grape operations, along with livestock.

Attracting Barn Swallows to Your Property

Steps can be taken to attract Barn Swallows to your yard or farm. First, they require wide-open areas where they can catch insects while in flight. Second, an available water source is always an important factor when providing habitat for any wildlife. In the case of the Barn Swallow, a water source nearby will also provide them with the mud they need to construct a nest.

Barn Swallows often nest in barns, which is where they got their name. Accommodations can easily be made on the outside of a building that will allow Barn Swallows to construct a nest. Dictating where the Barn Swallows nest is one key to receiving their insect-eating benefits. Determine areas suitable for installing Barn Swallow shelves. It is important to determine a spot where bird droppings can be tolerated when planning nest shelves. Dedicate this area for them to nest and hopefully a successful colony will develop over time. The larger the Barn Swallow colony, the greater the number of flies and other agricultural insect pests that may be consumed.

Many people do not want birds nesting in barns or other buildings because of the mess that can result from the bird's droppings and nest building materials. Barn Swallows can be dissuaded from using areas in barns by hanging netting in the areas where they are not welcome.

A plan for a Barn Swallow shelf that may be attached to the inside or outside of a building is included in this fact sheet and is probably the simplest of birdhouses to construct. Of course, if you choose to attract Barn Swallows to the inside of a building, it is important that the birds have 24-hour access in and out of the building.

Older barns designed with an overhanging side are excellent locations for providing additional Barn Swallow nesting shelves. Additional nest shelves can be installed by simply attaching a board in between the two support joists. Be sure



Figure 1. Barn Swallow nest.

to allow enough space between the shelf and the ceiling to allow a nest to be built up several inches. As seen in Figure 1, a board attached to the joists is an easy way to provide nesting opportunities for Barn Swallows and is also located in an area where bird droppings are not a concern.

In addition to simple shelves, Barn Swallows are often found constructing a nest on a rough vertical wall. Usually, the nest is started on top of a nail, electrical box, or some other object protruding from the wall. Barn Swallow nests will not adhere well to smoothly planed or painted wood, plastic, or aluminum siding. Some farmers nail narrow wooden ledges to walls or under eaves to provide birds support for their nests.

Richard Van Vleck of Taneytown, Maryland, has developed another type of artificial barn swallow nest. Van Vleck's design (pictured in Figure 2) is made out of plaster and formed into the shape of a natural Barn Swallow nest. Van Vleck's research on the use of artificial nest sites by his colony suggests that the swallows prefer these new



Figure 2. Van Vleck nest design.

artificial nests over shelves as well as over reusing natural nests. This is not to suggest that Barn Swallows will not use shelves, because research clearly suggests they do; however, Van Vleck's nest design, when offered next to alternate nest types, seems to be significantly more effective.

Barn Swallows can be considered colonial nesters, although research is not completely clear on how close artificial nests/shelves can be placed together. Some research suggests that Barn Swallows will rarely nest closer than 20 inches apart from one another. This has been observed along the same face of a board or beam.

Observations of birds nesting closer to one another have been recorded, but the nests were on opposite sides of the board or beam.

Important details need to be considered when providing nesting habitat for Barn Swallows. The birds return to the Maryland area each spring around the end of March into April. With these dates in mind, it is important to have artificial nesting habitat established before the end of March.

The height of the nest shelf is also important. Barn Swallows have been documented building nests on structures up 100 feet above the ground; however, research suggests that most nests are constructed between 6 and 10 feet.

Farms and other wildlife friendly areas are also great places for Barn Swallow predators. Protection from predators will help in establishing a Barn Swallow colony. In many cases, the nests will be on a vertical wall that can not be reached by cats, raccoons or snakes, but if swallows are allowed to nest inside barns, predators may reach the nests via support poles. If it is feasible, slick, metal flashing can be nailed tightly around poles to prevent creatures from climbing the poles. Of course, in many older barns, it may not be possible to prevent all predators from gaining access to a nest. This is one reason why it is important to monitor the nests frequently.

An additional incentive to attract Barn Swallows is to provide grit material (crushed eggshells or crushed oyster shells) for the birds. These materials may be used to help in digestion and/or provide needed minerals in the bird's diet.

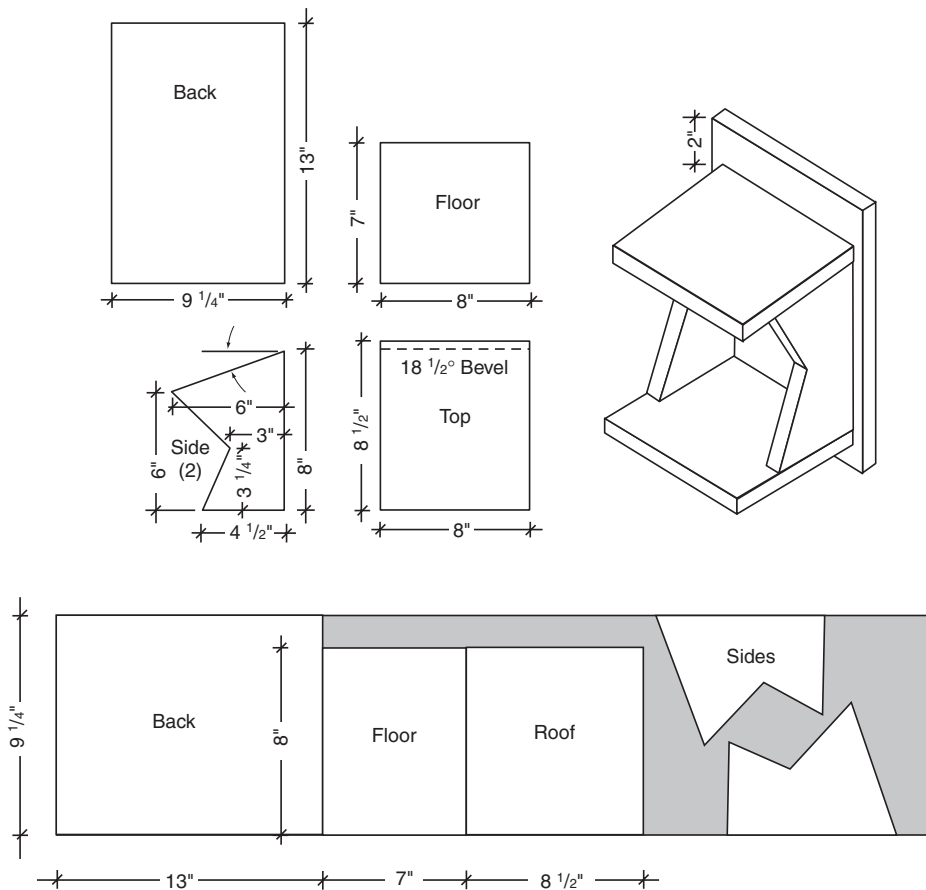


Figure 3. Barn Swallow nest shelf plans. Reprinted with permission of the Minnesota Department of Natural Resources.

The grit material may be scattered on bare ground or placed on a platform.

Monitoring and Maintenance

All wildlife habitat provided by humans should be monitored and maintained. It can be more harmful than good to establish nesting habitat and then neglect it. Unfortunately, there are non-native or exotic species in North America that if allowed, will out-compete native birds and, in many cases, kill the native adults or young to take over the nest.

The bird most responsible for significant damage to Barn Swallow colonies is the house sparrow. Research conducted in Maryland found that house sparrows reduced the fledging success rate of a Barn Swallow colony by 45 percent. For this reason, we must do everything possible to discourage house sparrows from nesting in any human-constructed nesting habitat. The house sparrow is not protected by law in Maryland; therefore, its nests need to be removed, eggs destroyed, and if possible, the adults exterminated. The Barn Swallow is not endangered, but is protected by the Migratory Bird Treaty Act.

Monitoring your nest sites on a weekly basis will let you know if house sparrows are trying to invade your colony. Regular monitoring is a must to minimize the chances of house sparrows establishing nests in or around your Barn Swallow colony.

Also, when young Barn Swallows have hatched, monitoring will help determine if predators are reaching the nest(s). If you notice baby birds disappearing, then a predator is likely gaining access to the nests. If predators are impacting your colony, try to determine what type of predator it is and then determine how to properly baffle the nest(s) to prevent the predators from gaining access.

An obvious reason to monitor your colony is to determine if more artificial nest sites need to be provided. If more birds are flying around in the spring than are actually nesting, this may be an indication that more artificial nesting structures should be added.

Artificial nest sites should be cleaned out after each nesting attempt, but if this is not possible, they should definitely be cleaned at the end of each breeding season. Various parasites may be left in a nest after the young have fledged (left the nest), but minor cleaning can remove the parasites from the nest. Nest materials, including grass, feathers and any dried feces remaining in the nest after the young have fledged, should be removed. A 2 percent bleach solution should be sprayed into the nest to kill any remaining parasites. It is recommended to use a dust mask when cleaning out bird nests.

Playing an active role in monitoring and maintaining Barn Swallow colonies will likely improve the number of young that are fledged and may help to keep the birds coming back each year. A healthy Barn Swallow colony may provide you with low-cost, natural help in combating many different insect pests.

Additional Resource

Maryland Department of Natural Resources
website: www.dnr.state.md.us

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