**Attracting Solitary Bees**



**B**ees are some of our best pollinators, and 30% of our food supply is dependent on bees for pollination, as well as the fruits and flowers in our home gardens. Right now the Honey bee is in decline due to mite infestation, however, this bee is not our only pollinator - other bees, known as "Solitary" bees are just as hard working but because of their small size they go unnoticed and due to lack of knowledge about these fascinating insects, are greatly under appreciated. In most cases, mention the word "Bee" and most people will be squirming, recalling tales of bee stings and thus labeling all bees as bad. Unfortunately the bees that do sting, such as the wasps, hornets, yellow jackets and occasionally the honeybees, give these other Solitary bees a bad name and instantly cause fear. 85% of all bees are "Solitary" and they are called this because they do not live in hives and do not have a Queen. Instead they will nest in their holes, one female per hole, but will live alongside other bees. Some of the different species include - Orchard Mason bees (known as Mason bees), Leafcutter bees, Aphid bees and Carpenter bees.

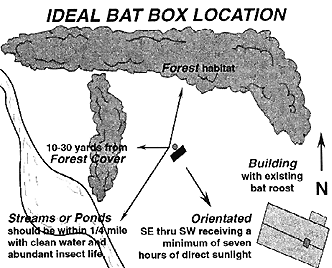
Once finished, place the box in an East or preferably Southeast facing position. They like the morning sun which enables them to fly early and collect pollen. You can attach your box under the eaves of your house where it is sheltered, or attach it to a stake and place in the ground among preferably native plants. Plants that have been hybridized to not produce much in the way of pollen and nectar, having been bred for showy blooms instead, so try and stick to the native plants or old varieties. The height would be approximately 3 feet off the ground to avoid water from splashing up. Also tilting the box downwards slightly will help to protect from rain. You can also place a roof on the top of the box to shelter it. Make sure you place your box in a spot where you can observe the bees at work but in a spot where it will not be disturbed or knocked. Do not worry about standing near the box while they are nesting - they will fly around you and pay you no attention!   
Finally - DO not place near plants that have had pesticides sprayed on them and do not use any pesticides or herbicides until at least after the bees have finished nesting.

Source: <http://www.wingsinflight.com/gardbees.html>

**Attracting Bats**

Will a bat house in your area attract bats? Bats are constantly on the prowl for suitable alternate roosts. If a bats can be seen occasionally at dusk, then likely the area should support a new bat house. Having a known roost nearby is even better, but be aware that bats will not abandon The box should be placed at least ten feet above the ground in an open area orientated south-southeast (135° azimuth is optimal) where it receives at least seven hours of direct sun. Seven hours of direct morning sunlight is of paramount importance and outweighs all other factors. After the second year of occupation, the box may be moved off the structure and onto a pole several hundred feet away. Box disturbance during the initial summer may cause bats to abandon the box.

The box will be more attractive to bats if it is within 1,500 feet of a permanent stream or pond. Bats need a drink on very hot summer days, and the fresh water guarantees a nearby feeding zone. Habitat diversity will also attract bats. A combination of forests, clearings, and wetlands will produce different types of insect activity at different times throughout the summer, assuring a constant supply of food. The box should be within 10-30 yards of a tree line to provide quick cover from predators, such as owls. If there is an existing roost nearby, the bats may not move into the box unless something happens to the existing roost (i.e. it becomes sealed). These installation directions are specifically for attracting little brown and Indiana bats to bat boxes where the average summer daytime temperature is below 95° F. Bat houses can be installed at any time of the year, but they are more likely to be used during their first summer if installed before the bats return in spring. When using bat houses in conjunction with excluding bats from a building, install the bat houses at least two to six weeks before the actual eviction, if possible.



Source: <http://www.batmanagement.com/Batcentral/batboxes/choosingsite.html>

**Attracting Blue Birds**

by Carol A. Heiser, Habitat Education Coordinator

* **Ideally the box should be installed by mid-February**, but you can still install one throughout the month of March and as late as early April when breeding begins. Because bluebirds begin their seasonal movements in February and male bluebirds begin establishing territory by mid-March, the box should be up as early as possible to increase the chance that it will be used. Once the female has arrived and chosen the nest site, it may be several weeks before the pair actually begin nest building.
* Don't be discouraged if a bluebird pair does not choose your box right away or if you get the box up a little late in spring. Because of the shortage of suitable nesting sites, there's still a chance that a pair may come along in early summer that has been unsuccessful elsewhere. Also, **you might get a tree swallow, chickadee or wren using your box instead**. That's okay! These are native species, and they're using your box because there are not enough tree cavities in your area to go around. Put up more boxes!
* **Face the opening of the box away from prevailing winds** and in the direction of a distant tree if possible. The tree will become a landing point for young bluebirds when they first leave the box; they'll need a safe haven to avoid landing vulnerable on the ground.
* **Mount the box on a sturdy pole between three and six feet off the ground**; eye-level is usually fine and makes it easier to monitor the box. Avoid placing the box near shrubby areas where wrens may dominate. Do not install the box on a tree where black snakes can easily access it.
* Since bluebirds are territorial, you will need to **space bluebird boxes at least 300 feet apart from each othe**r. When boxes are spaced too close together, bluebirds will divert energy defending territory that would be better spent on reproductive success.
* **Do *NOT* allow HOUSE SPARROWS to use the box!** The house sparrow (weaver finch) is a non-native, aggressive species that will drive bluebirds away. House sparrows are known to kill parent birds on the nest as well as their young, if given an opportunity. Since house sparrows tend to prefer nesting near buildings, you can deter them in part by **locating the bluebird box away from buildings** and out in an open field instead. Bluebirds generally breed between April and the end of July. They may lay from three to six pale blue eggs per clutch, with an average of four or five. (Bluebirds often have at least 2 clutches and sometimes even 3 over the course of the breeding season.) The female incubates the eggs for 12 to 16 days, while the male assists in feeding her.
* **You can check on the eggs and the nestlings once a week until the young are about 12 days old. Contrary to popular opinion, human "scent" does not cause the parent birds to abandon their young, because birds have a poor sense of smell.** Take notes about what you find! After the birds are 12 days old, it will be best to observe the box from a distance, because disturbing the young later than this may cause them to "fledge" or leave the nest prematurely, which might reduce their chance of survival. Young bluebirds generally leave the nest between the 17th and 20th day after hatching.

**Attracting Owls**

The barn owl is a nocturnal species which occurs in open habitats where it preys on rodents and other small mammals. Although they are one of the most widely distributed birds in the world (found on all continents except for Antarctica), they are listed as a species of greatest conservation need in Kentucky’s State Wildlife Action Plan, due to local decline. Nest site availability is a major limiting factor for barn owl populations and providing nest boxes to barn owls has been found to successfully increase populations.

Large, contiguous tracts of land which contain open habitats (grassland, fallow fields, hayfields, open marshes, savannah, and to some extent, cropland/pasture) are ideal for barn owls. Abandoned or seldom-used barns are probably the best location to install a nest box. However, if you have no barn or outbuilding in which to install a barn owl box, you may consider mounting one on a pole or tree.

**Site Selection:**

Site selection is highly important when installing your barn owl box, thus please see the recommendations listed for the specific type of box you choose to set up. Still, there are some general site selection guidelines no matter where you mount your box:

􀂾 The barn owl box should face an area where you would expect a barn owl to hunt so that it is noticeable. When mounting a box, be sure it has a very open, conspicuous entrance. Barn owls do not prefer forested habitat, so do not face the box towards the woods.

􀂾 It is better to face the box entrance north or east to avoid the afternoon heat.

􀂾 Foraging habitat is essential. The chance of a barn owl using the box increases if open habitat is plentiful in the area.

􀂾 Be sure to consider future access to the box. Future repairs may be necessary.

**What to expect if your nest box becomes active:**

Barn owls usually select their nest site from mid-March to early April. They lay 5-7 eggs and incubate for 32 days. Minimize or eliminate disturbance around the nest site during the incubation and nestling period (approx. March 15th to June 15th). Young fledge when they are 8 to 10 weeks of age. Barn owls will usually return to the same nest site year after year. Boxes can be cleaned out between September and February (when the owls aren’t nesting), but this is not required.

Source: [http://fw.ky.gov/More/Documents/barnowlboxes2010[1].pdf](http://fw.ky.gov/More/Documents/barnowlboxes2010%5b1%5d.pdf)