



CAVITY-NESTER

1. Learn
2. Plan
3. Install
4. Monitor
5. Maintain
6. Certify

1. LEARN

WHO USES CAVITIES FOR NESTING?

BIRDS

In our area, we have a variety of cavity-nesting birds, including the Gila Woodpecker, Gilded Flicker, Ladder-back Woodpecker, Western Screech-owl, American Kestrel, Ash-throated Flycatcher, Brown-crested Flycatcher, Lucy's Warbler, and Bewick's Wren. Among these, only the Gila and Ladder-backed Woodpeckers and the Gilded Flicker are primary cavity nesters, meaning they actively excavate their own cavities. The other species are secondary cavity nesters, which rely on using vacant cavities created by the primary nesters. Due to the high demand for nesting sites, Tucson Audubon's Nestbox Program has developed specialized nesting boxes and installation methods tailored to the climate of Southeast Arizona, providing crucial support for these bird species.



Lucy's Warbler nestbox

NATIVE BEES

30% of native bee species build their tunnel nests in tree snags and dead, pithy stems of perennials, agave, and yucca.

BATS

Bats will roost in caves, rock crevices, old buildings, bridges, mines, or trees depending on the species.



Native bee nesting block

2. PLAN

WHY ARE MAN-MADE CAVITIES IMPORTANT?

Cavity nests are hollow chambers where certain birds, native bees, and bats raise their young. Habitat loss and disturbance have negatively affected these cavity-nesting species. The removal of large trees such as willow, cottonwood, walnut, oak, hackberry, pine, and mesquite, along with saguaro cacti and dead tree snags, and excessive pruning of mature trees have significantly increased demand for the remaining cavities. This scarcity has led to increased competition both within and between bird species.

Similarly, cavity-nesting native bees, which use dead snags and the dried, pithy stems of annuals and perennials like agave and yucca, are also struggling due to the loss of nesting sites. For bats, factors such as cave vandalism, mining, bridge reconstruction, and even minor disturbances can be catastrophic, potentially destroying entire colonies.

3. INSTALL

LUCY'S WARBLER

It's best to install your nestbox in or near mesquite trees for the highest chance of attracting a Lucy's Warbler family. Hang the box between 6 and 15 feet high, opting for higher of the range when there is foot traffic next to the box. For example, a backyard setting. Install it within smaller branches but without obstructing the exits. This provides concealment that these birds prefer.

ASH-THROATED FLYCATCHER | BROWN-CRESTED FLYCATCHER | BEWICK'S WREN

ASH-THROATED FLYCATCHER

Ash-throated Flycatchers readily use wooden nestboxes. Boxes should be placed between 4.5 and 20 feet high, with 8 feet being ideal. Boxes mounted in mesquite trees or in the vicinity of other shade sources should help to keep nest temperatures from rising too high.

BROWN-CRESTED FLYCATCHER

Boxes should be placed between 5 and 30 feet high. Boxes mounted in mesquite trees or in the vicinity of other shade sources should help to keep nest temperatures from rising too high. They may be mounted on dead or live trees, or poles or posts.



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BEWICK'S WREN

Nest heights range from 2 to 24 feet, but the average is 5.9 feet above ground. Wrens appreciate dense vegetation near their nests

AMERICAN KESTREL | WESTERN SCREECH-OWL

AMERICAN KESTREL

Boxes should be placed between 10 and 20 feet high with a northern or eastern orientation. They can be affixed to houses, trees or poles. Boxes should not be placed among dense trees or shrubs, an open flight path to the entrance of the box is a must.

WESTERN SCREECH-OWL

Boxes should be placed at least 7 feet high, though heights of 10 to 20 feet may prove most successful.

NATIVE BEES

- Height: ~3' off the ground, just enough to prevent water from entering the box during storms.
- Direction of entrance: South to Southeast, emerging bees need the warmth of the sun to warm and prepare their muscles for flight.
- Foliage: Place near bee nectar sources. Smaller native bees, cannot travel long distances between their nesting and foraging sites. Placing them within your pollinator garden is perfect and allows bees to save their energy.

BATS

- Size: Bat boxes in southeast Arizona need to be at least 3' in height to be successful. Anything smaller prohibits temperature fluctuations. (See our Bat-Approved Guidelines for more information)
- Height: At least 10', 12-20' is preferred.
- Direction: If mounted on the side of a building, place the box facing east to southeast. If mounted on a pole, face the box East with shade to the West.
- Color: Leave boxes natural or paint white.

4. MONITOR

- Register your Lucy's Warbler nest box at tucsonaudubon.org/lucyboxregister
- Register any other nest boxes with Nestwatch at <https://nestwatch.org>
- Find out how to set up a NestWatch account here: <https://tucsonaudubon.org/wp-content/uploads/2022/10/Nest-box-monitoring-2018.pdf>

5. MAINTAIN

- Clean out your nestboxes after birds have left. When cleaning out boxes use gloves and dust mask to avoid inhaling particles. This is especially important when cleaning out owl boxes because of rodent carcasses.
- Always check nestboxes for structural problems every season: any cracks in the walls and broken mounting screws.

6. CERTIFY YOUR CAVITY NESTER-APPROVED HABITAT

Once you have completed your habitat, email habitat@tucsonaudubon.org to receive your certification sticker.



RESOURCES

Tucson Audubon Nestbox Program:

- <https://tucsonaudubon.org/nestboxes-for-desert-birds/>

Buy your bird and bee boxes through our Nature Shop:

- <https://tucsonaudubonnatureshop.com/>

