

FLYCATCHER BOX



About your new nest box

Congratulations! You have Tucson Audubon Society's flycatcher nest box. This box is a medium size, and may be used by Ash-throated or Brown-crested Flycatcher. The floor is 6" by 6", and it is 9" tall, with a hole on the front which is 2" in diameter. It has a hinged side panel for easy monitoring and cleaning.

More information on Tucson Audubon Society's Nest Boxes for Desert Birds Program is available at www.tucsonaudubon.org/nestbox.

Below you will find information on where and how to put up your box. Nest boxes have not been widely used here due to heat issues but we believe that, if properly mounted, nest boxes can be useful to several species of desert birds. Therefore, it is very important to Tucson Audubon to track which species use your box and when. Read the information below on monitoring your box and please communicate with us when there is a nesting attempt in your box!

About the species that may use this box

Ash-throated Flycatcher (*Myiarchus cinerascens*)

Ash-throated Flycatcher is one of the species Tucson Audubon hopes to support with its nest box program. This flycatcher is a common species in warm months in rural and wild areas of the Southwest and northern Mexico. It is migratory and spends winters mostly in the Pacific coastal plain of Mexico, Guatemala, El Salvador and Honduras. Some also winter on the northeast Atlantic slope of Mexico. A few over-winter in southern Arizona.



Ash-throated Flycatchers are difficult to distinguish from other members of the genus *Myiarchus*, including our local Brown-crested Flycatchers and the Dusky-capped Flycatcher of mountain canyons, with which the Ash-throated Flycatcher overlaps. However, compared to Brown-crested Flycatcher they have proportionately smaller bills and more blending of the ash-gray and dull yellow colors on the breast and belly. It is a little bigger than the Dusky-capped Flycatcher, which lacks the orange-brown tail of the other two. They also can be separated by their calls.

Ash-throated Flycatcher is rarely seen in urban and suburban areas of central and southern Arizona, except where there are edges of natural open space. One study at the University of Arizona found that in the greater Tucson area Ash-throated Flycatcher was associated with large natural areas and washes, rather than with particular characteristics of neighborhoods. This may result from lack of foraging habitat in suburban areas but it also may simply result from a lack of suitable nesting cavities. (The Brown-crested Flycatcher—see below—is more likely to occur within suburbs.)

Tucson Audubon's nest box program seeks to support populations of Ash-throated Flycatchers on the urban fringe and create new nesting opportunities in the rest of suburbia. They are highly opportunistic nesters and adapt easily to human activity. With this flexibility, Ash-throated Flycatchers provide ample opportunities for people to learn about the needs and habits of nesting birds. Their noisy whistles and acrobatic insect catching make them an enjoyable species to study as they go about their nesting rituals.

HABITAT Ash-throated Flycatchers nest in both sparse desert scrub and riparian corridors but are less tied to tree canopy than their cousins the Brown-crested flycatcher and the Great-crested Flycatcher. When nesting in riparian woodlands they are more likely to forage out into desert scrub. That makes them easier to find and see in open desert areas. They build nests in woodpecker holes and natural cavities of saguaros, mesquite, and palo verdes.

FOOD PREFERENCES During breeding season the main food sources is arthropods (insects, spiders and others). These are usually caught in low foliage, on the ground or on short flights between perches rather than on the wing in open areas. Sometimes they also eat fruit, and rarely small reptiles and mammals.

NESTING FACTS After migrating to Mexico for the winter, Ash-throated Flycatchers return to their breeding grounds in Arizona in late February and early March. Because Ash-throated Flycatchers arrive on the breeding grounds after some birds are already choosing holes in which to nest, they are often forced to choose nest-cavities with larger entrance holes. This leaves their nests more vulnerable to predators.

They lay eggs from late March to mid-May with peak activity in April. They can reproduce quickly, with time from pair formation to fledging of young ranging from 30 to 42 days! After laying begins, there is typically one egg laid per day. Most nests have 4 or 5 eggs but as many as 7 have been reported. Eggs are cream to ivory colored with thin or thick streaks usually brown or reddish-brown.

Researchers are uncertain as to whether Ash-throated Flycatchers in southern Arizona commonly raise more than one brood. If you have a successful nest box with Ash-throated Flycatchers, please inform us if they nest a second time.



Ash-throated Flycatcher egg and chicks.
Credit: Harriet Meador

BOXES AND BOX MOUNTING Ash-throated Flycatchers readily use wooden nest boxes. They use the size of box that Tucson Audubon promotes for them but also are known to use somewhat smaller bluebird boxes. Boxes larger than those we promote may not exclude European Starling. Our box will not exclude House Sparrows so when you put up this box you should be vigilant and evict them as well as starlings.

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.

Experiments using boxes to increase nesting density by Ash-throated Flycatchers have been successful in other areas, though it is not unusual for several of the boxes to go unused. If your box gets infested with House Sparrows or goes unused, experiment with moving it to a different location to see if this helps. However, beware that it may not be used in its new location until the following spring.

Brown-crested Flycatcher (*Myiarchus tyrannulus*)

This flycatcher tends to spend warm summer months in areas of the Southwest and northern Mexico. Its migration is not well understood, but there are records of spring arrival and fall departure dates in Mexico and the US.



Figure 1: Brown-crested Flycatcher (John Hoffman)

A member of the family *Myiarchus*, the Brown-crested Flycatcher can be difficult to distinguish from other members of the same family, such as the Ash-throated Flycatcher and Dusky-capped Flycatcher. They have an olive brown color on the head and back, with a significant crest and a large, heavy bill, which helps distinguish it from the Ash-throated Flycatcher. The throat and breast are a pale gray, and the belly and undertail coverts are yellow, paler than those of the Ash-throated Flycatcher. They have two dull wingbars and rufous (reddish brown) remiges (primary and secondary flight feathers). The inner webs of their tail feathers are also a rufous color, which extends to the tip—another difference between them and the Ash-throated Flycatcher. They can also be distinguished by call.

HABITAT The Brown-crested Flycatcher is most commonly seen in giant-cactus and riparian communities, and less commonly in pine-oak woodlands and desert-mesquite areas.

They are less widespread in dry desert habitats than their cousin, the Ash-throated Flycatcher, and depend more on larger trees for nesting. Brown-crested Flycatchers are more likely than Ash-throated Flycatchers to nest suburbs in southern Arizona cities. They typically build nests in woodpecker holes, and also commonly use other natural cavities, such as in saguaros and dead or dying limbs of sycamore, cottonwood, and willow trees. They have also been seen nesting in artificial cavities, such as holes in fenceposts, tin cans placed in trees, or nest boxes.

FOOD PREFERENCES During breeding season the main food source is arthropods (insects, spiders and others). These are usually caught in low foliage, on the ground or on short flights between perches rather than on the wing in open areas. Sometimes they also eat fruit, and rarely small reptiles and mammals.

NESTING FACTS They lay eggs from late March to late July with peak activity in May and early June. Most nests have 4 or 5 eggs but as many as 7 and as few as 2 have been reported. Eggs are slightly glossy, cream or buff colored with thin or thick streaks or blotches usually brown or purple.

BOXES AND BOX MOUNTING Brown-crested Flycatchers are relatively elusive in our local nest-box community, but have been seen nesting in a suburban nest box. The Tucson Audubon flycatcher box

is the ideal size for this species. Boxes larger than those we promote may not exclude European Starling. Our box will not exclude House Sparrows so when you put up this box you should be vigilant and evict them as well as starlings.

Boxes should be placed between 5 and 30 feet high, facing any direction. 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.

If your box gets infested with House Sparrows or goes unused, experiment with moving it to a different location to see if this helps. However, beware that it may not be used in its new location until the following spring.

Monitoring your nest box

We encourage you to let us know if birds use your box. If a nest is started, please register your box at www.nestwatch.org and follow the instructions in the following monitoring document, which will share your data with Tucson Audubon:

Set Up A NestWatch Account

Follow this link: <http://nestwatch.org/nw/join/tucsonaudubon>

If you have a NestWatch account sign in. If not, click “Need an account?” and set up a NestWatch account.

In NestWatch, Set up a Nest Location

To set up a new nest location:

1. At www.nestwatch.org, go to “Your Data” and click “Add New Nest Site”
2. Type in an address close to where your nest box is located. Next, using the map, zoom in and drag the



icon to the exact spot the nest box is located.

3. Scroll down and fill out all the information about your nest box that you can. If you don't know some of what they are asking, elevation above sea level for example, then you can just skip that question.
4. If you are monitoring multiple nests then you can separate out the nests into groups by selection “Add this nest to groups.”
5. Click save when you are finished. You can always come back to change or add more information to this nest site later on.
6. You cannot link this nest box to the Tucson Audubon Society until birds have attempted to nest in the box.
7. Once the nest site is saved, then continue to monitor the nest box regularly (minimum once a week) until you see birds (or other animals) attempting to nest.

Occupied Nest:

When monitoring, if you see that the nest box is occupied then take the following steps.

1. Identify the occupant. If the occupant is not present then record the nest's shape, what it is made of and the number and appearance of eggs if they are present. The most important reason for identifying the occupant quickly is so that invasive, unwanted species can be removed before becoming established. Non-native, invasive species, like House Sparrow and European Starling, compete for nesting spaces with our native species. Native species often need to be supported because they are

declining. Starlings and House Sparrows have adapted to most parts of the globe where humans live, and do not need our help to survive.

- I. Use binoculars and a field guide to birds to try to identify adult birds that using a box. Consult the Tucson Audubon Nature Shops if you need a field guide or binoculars.
 - II. Nest identification help is available from NestWatch: <http://nestwatch.org/learn/how-to-nestwatch/identifying-nests-and-eggs/>. Bird identification help is found at National Audubon's online field guide: <http://www.audubon.org/bird-guide>.
 - III. This page shows European Starling and House Sparrow nest and egg examples: <http://www.chuckspurplemartinpage.com/starspar.htm>
 - IV. If you are having difficulty identifying a nest or bird you can take a picture of the bird, or the nest when the adults are gone. Send the photos to kkroesen@tucsonaudubon.org and we will try to make the identification.
2. If the nester is positively identified as an invasive or unwanted species such as a House Sparrow, European Starling, or non-bird, remove all nesting material. Continue to come back to the nest daily to make sure they do not try to rebuild their nests. If unwanted birds repeatedly build nests despite being cleared out, then moving the nest box might be helpful.
- I. If you find a wasp or bee colony in your nest box, do not have any sort of pesticide sprayed into the nest in order to remove it as this will poison any future bird residents.
 - i. If you notice bees swarming (or clumped in a ball) around your nest box but they have not yet built their nest you can have the swarm removed through an environmentally friendly live bee trap. Find an environmentally-friendly bee removal expert or contact one of the following companies: <http://www.americanbeecontrol.net/>, http://www.azpest.com/bee_control.asp, <http://www.essentialpest.com/residential-bee-removal/>
 - ii. If the bees or wasps have already built a nest then ABC American Bee Control (first link above) should be able to remove an established bee hive without using any insecticides or killing the bees. Some people "do it themselves" by waiting for a very cold morning when bees are inactive, and then plugging up the hive or covering it in a burlap sack then submerging it in water. However, it is best to assume that any honey bees in this region are Africanized—do not take chances unless you are sure of what you are doing.
 - iii. Once the hive is cleared out then scrub the inside of the nest box with soap and water so that future bees will not be attracted to it.
 - iv. You can keep the nest box covered when it is not nesting season to prevent hives.
 - II. If a mouse nests in your nest box then make sure to wear gloves and masks while removing the nest to avoid hantavirus.
 - III. If you find eggs or live young then make sure they are positively identified as pests before removing and disposing of them (usually by dropping eggs on the ground some distance from the nest).
 - Laws in Arizona protect squirrels as non-game animals unless they are causing damage. Therefore it would be recommended to leave live squirrel young alone. Try to remove any squirrel nests before they have young.

NestWatch Resources:

<http://nestwatch.org/learn/nest-box-resource-center/controlling-competitors-non-natives/>
<http://nestwatch.org/learn/nest-box-resource-center/managing-house-sparrows-and-european-starlings/>

3. If you identify your nester as a non-pest species then you are ready to log a nesting attempt into your NestWatch account!

Recording a Nesting Attempt:

1. Sign into NestWatch and go to “Your Data” then click “Nest Site List.” If your nest box is not listed, follow the instructions above to add a nest site. Otherwise, find the correct nest side and click on “Add Attempt.”
2. Record what species is nesting and under “Connect This Nest To a Community” select “Tucson Audubon Nest Boxes for Urban Birds Pilot Project”
3. If you want to fill out the sheet by hand while in the field, you can print out this sheet from NestWatch: http://nestwatch.org/wp-content/uploads/2012/05/DataSheet_20120516_final.pdf
4. Each time you monitor the nest fill out each section of the nest visit table which looks like this. If you think that this table is too small or hard to read then you can switch over to “Change to Single Entry Mode.”

DATE & TIME				HOST SPECIES ?			STATUS & ACTIVITY CODES				COWBIRD ACTIVITY ?			MORE INFORMATION	
Month	Day	Year	Time:	Eggs	Live Young	Dead Young	Nest Status ?	Adult Status ?	Young Status ?	Management Activity ?	Eggs	Live Young	Dead Young	Observer Initials	Notes

5. For status and activity sections two letter codes are used to succinctly describe the status of the nest, adults and young. Click on the box and select the code that best describes the status and activity of each. (Ex: ba if adults are observed building a nest)

STATUS & ACTIVITY CODES			
Nest Status ?	Adult Status ?	Young Status ?	Management Activity ?
in	ba	no	no
	no - no adult		
	ba - building nest		
	ra - remained on nest		
	aa - at/on, then left		
	va - remained in vicinity		
	fa - feeding young		
	da - dead adult		

6. If you are in the field you can find a list of codes and their descriptions on the print out mentioned above. They are listed under breeding data on the second page.
7. Cowbirds are parasitic birds that lay their eggs in other bird’s nests. If you find cowbird eggs in your nest you can remove them but make sure not to disturb the nest in the process. More information about cowbirds can be found here: <http://nestwatch.org/learn/general-bird-nest-info/brown-headed-cowbirds/>
8. You should not leave any blank spaces in the nest visit box and a new line should be filled out for each time the nest box is monitored. You can put a “u” for unknown if you are unable to count eggs or young.
9. If you noticed anything additional to what is covered in the table then record that in the notes section.
10. Once you record all information for a visit then scroll down to the bottom of the page and click “Save All Data.”
11. Do not fill out any nest summary information until all the young and adults have left or have died.