

# AMERICAN KESTREL OR SCREECH-OWL BOX



## About your new nest box

Congratulations! You have Tucson Audubon Society's nest box designed for American Kestrel or Western Screech-Owl. This box is the largest size that we offer, and may be used by American Kestrel or Western Screech-Owl. Its floor is 9 5/8" by 9 5/8", and it is about 18" tall, with a hinged side for easy, safe monitoring, and a hole on the front panel. For Owls, the hole is circular and 3" in diameter; for the Kestrel, the hole will be 3" by 4" and ovular. There is also a perch on the inside of the front panel.

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

### Western Screech-Owl (*Megascops kennicottii*)

Screech-owls are well known for their tolerance of humans, adaptability to semi-urban landscapes, and willingness to nest in boxes. In fact, they often take over nest boxes intended for American Kestrels. Though screech-owl populations are not immediately threatened, they suffer from loss of habitat and are susceptible to severe decreases, especially in suburban and urban environments. With their intense, bright eyes, strange "bouncing ball" calls, and nocturnal hunting habits, these owls are highly charismatic and can provide a fascinating study of unique avian habits for bird enthusiasts. Owls also provide important environmental services in their roles as rodent predators.



**HABITAT** Western Screech-Owls of the Sonoran Desert prefer mesquite riparian zones, nesting often in woodpecker holes in saguaro cactus. They are common in Arizona suburbs with at least half-acre house lots and natural vegetation.

**BOX MOUNTING** Boxes should be placed at least 10 feet high, though heights of 12 to 20 feet may prove most successful.

**NESTING FACTS** Courtship begins for screech-owls as early as January and February, when male owls begin calling near their nest sites. Nests may be occupied by mid-March with fledglings present by mid-April. Peak breeding occurs late April through late May. Nests may be occupied into August. Three to five eggs are incubated for 33 or 34 days. Owlets may be observed peering out of the nest hole about ten days prior to fledging. Screech-owls will protect their nests by “dive-bombing” humans, so box-mounting sites should be carefully considered.



### **American Kestrel (*Falco sparverius*)**

The brightly colored American Kestrel is North America’s smallest falcon, measuring just 8 to 10 inches in length. Although formerly known as the sparrow hawk, kestrels feed primarily on insects and small rodents. This fierce hunter adapts well to human-influenced habitats and urban settings, but the species’ population is declining in many regions of the United States, including Arizona. Tucson Bird Count data show a sharp reduction in numbers locally since 2010. Kestrels suffer from habitat loss and a lack of available nest cavities. Fortunately, this species readily accepts human-crafted nest boxes. Nest box programs are currently supporting the American Kestrel around the country. Watch for these birds perching on utility wires or hovering in the sky as they search for prey below. You may hear them calling: *killy-killy-killy*.

**HABITAT** Kestrels prefer semi-open country of all kinds, especially with available hunting perches providing views of surrounding land. In the Sonoran Desert, kestrels frequently nest in flicker holes in saguaros. They also nest in urban and suburban palm trees, underneath untrimmed fronds.

**BOX MOUNTING** Boxes should be placed between 10 and 20 feet high with a northern or eastern orientation. They can be affixed to houses or other buildings. Boxes should not be placed among dense trees or shrubs, though low, open vegetation is welcome.

**NESTING FACTS** Kestrel pairs in Arizona deserts begin breeding in late winter. During courtship, the male often performs impressive feats of aerial display. As the time for egg-laying draws near, the male provides more and more of the female’s daily food. Kestrels lay eggs as early as March, but the peak of the breeding season is in June. The birds use no nesting material, though eggs deposited on bare surfaces can sometimes lead to poor hatching and breakage. Kestrels occasionally produce more than one brood in a single year. They may return to reuse the same nests, year after year. During the winter, kestrels sometimes roost in nest boxes and cavities.

### **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](http://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](http://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](mailto: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.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](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 |
|             |     |      |       |                |            |            |                         |                |                |                       |                    |            |            |                   |       |

- 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

- 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.
- 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/>
- 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.
- If you noticed anything additional to what is covered in the table then record that in the notes section.
- Once you record all information for a visit then scroll down to the bottom of the page and click "Save All Data."
- Do not fill out any nest summary information until all the young and adults have left or have died.