

# CACTUS WREN SURVEY GUIDE

## The general procedure for Cactus Wren surveys is:

- After arriving at the survey location, stand quietly for 1-2 minutes looking for new nests and listening for wren vocalizations.
- If no wrens are detected and no new nests are detected, play the Cactus Wren vocalization for 30-40 seconds, at intervals of at least 1 minute of silence in between broadcasts.
- If no wrens are detected but new nest(s) are found, play the Cactus Wren vocalization as above but focus attention on the nests to detect silent birds that may be busy building or attending a nest.
- At each location, broadcasts shall be discontinued once a wren is detected.
- Total survey time during which vocalizations are broadcast shall not exceed 10 minutes. Total time spent collecting information when Cactus Wren(s) present should not exceed 30 minutes.
- Attempt to re-sight all Cactus Wrens to determine banding status and read color band combinations.
- Attempt to determine breeding status by identifying pairs, dependent fledglings, or active nests.
- Do not approach nests or broadcast vocalizations if you detect Western Scrub-jay, Common Raven, American Crow, Greater Roadrunner, Sharp-shinned Hawk, Cooper's Hawk, or other nest predators (snakes, etc.) in the immediate vicinity.

As a general rule, songs should not be broadcast during Cactus Wren surveys if birds are singing on their own - this makes the broadcast unnecessary for locating birds. As long as you are within hearing distance of a singing bird, you should not need to broadcast the song. However, if you are surveying habitat well beyond the range of the last singing wren you encountered, and you are not picking up birds, you may play the tape to elicit response. In this way you can "confirm absence" in areas where you're not detecting birds. As a rule of thumb, broadcast songs no closer than 400 m from the last bird you heard singing. Cactus Wren vocalizations can be heard from a long distance but may also be muttered quietly from within a cactus clump, so you should use care to determine whether your last bird is following you. One way to gauge this is by the length of time that passes between broadcasting the song and having a bird pop up before you. Also pay attention to the direction from which the bird approached you. Be aware that Cactus Wrens can drop out of view into vegetation and move a long distance before coming back into view.

One more comment on using broadcast songs to attract birds for the purpose of viewing legs: if the Cactus Wren does not respond within a minute or so, stop broadcasting and attempt to approach the wren carefully and silently. If birds are going to respond, they usually do so quickly. If they don't respond, they are more than likely occupied with nest-site searching, nest construction, nest attendance, or other activities that we definitely want to avoid interfering with.

## **Prioritizing Your Activities in the Field**

### **Survey Priorities**

1. Fully cover your survey site and determine the area being used by the Cactus Wrens (could be multiple plots).
2. Resight adult Cactus Wrens.
3. Resight juvenile Cactus Wrens.
4. Determine breeding status (pair, single, transient).
5. Detect nests.

A common issue that occurs in the field is that in our excitement to be working with the birds we can get side-tracked. Becoming "side-tracked" can manifest itself as spending too much time looking at legs for color bands, spending too much time trying to determine whether a nest is being used as a roost or for a brood, etc. This can result in surveys taking longer than they should. So, here are some suggestions as to how to prioritize your time:

1. The first priority is to determine presence or absence of Cactus Wrens within the survey plot. If Cactus Wrens are present, and you follow the protocol above, you should be able to detect Cactus Wrens within 15 minutes of arriving at your survey plot. Be sure to move around the plot to survey from several different vantage points.
2. Once you've confirmed presence of Cactus Wrens at your survey plot, it's time to put effort into leg checks - do this systematically by keeping a list of who you need to check, and who you've confirmed - so you don't spend time looking at a bird you've already checked (this is where your Juno comes in, it's a little database in your hands). Both adults should be re-sighted to determine whether or not they are banded, and what their band combos are.

It's worth looking for nests as they can be an indicator of the presence of Cactus Wrens. Unless you are monitoring the Cactus Wren pair, don't check the nest. Nests can be difficult to approach and your presence could attract predators to the nest or damage the nesting substrate. Only females incubate, and they easily flush from active nests, so be careful not to disturb a nest if your survey route (safe path) passes near a nest. Be aware that both males and females will carry nest material to the nest while it's active (building, incubation, and nestling periods). You can notify a nest monitor who may be able to check the nest if they have time. Most likely we're not going to get any "useable" nest data from nests on survey sites; the best we can hope for is to band nestlings (typically a rare event on survey sites due to logistics).

### **First Site Survey**

Surveys should be started as early as it is safe to move through the cactus. While Cactus Wrens are active throughout the day, they are most easily detected in the morning under calm, cool conditions. You will need the following equipment: MP3 player and speaker, Juno, batteries, binoculars, compass, and a walking stick.

#### **Before Beginning Your Survey**

1. Enter the general data into your Juno in Forms51.

Highlight **General Data** and click

Enter Location, Date, Start Time, % Cloud Cover-start, Temp-start, and Wind-start. Click

2. Enter survey data into your Juno in ArcGIS.

Open the CACW2017 ArcGIS Project and view map.

Tap on the "i" button at the upper right and select your survey point.

Select the record that says "Survey 1" if you are doing your first survey, or "Survey 2" for the second survey and tap "Edit Feature".

Fill in the appropriate fields (date, time start/end, observer, number of CACW observed, comments).

Save the record and close.

#### **Cactus Wren Detection**

1. Name Cactus Wren territory using the 3 number plot code, underscore, and number, and "c" e.g. 263-01c.

2. Enter territory visit data into your Juno.

Highlight **Monitoring Data**. Click . Enter data into all fields.

- Number of birds detected should be the total number of adults detected. Record the number of juveniles observed in the Comments2 field (e.g., 2J).
- Enter Resight Data

Click  next to "Resight Data". Click

NOTE: If you detected a wren and did not see the legs, enter "Unknown" in the "Banded" field.

If you partially resighted a banded bird, enter the bands that you are sure of in the corresponding field (Left Top, Left Bottom, etc.). Add comments for a partially resighted bird e.g. saw silver band but don't know which leg, bird has full combo and one band is yellow. Try to resight the full combination on upcoming surveys, or if you have time, come back and try other vantage points or bring a spotting scope. You can also notify Suellen or Alex if you have a banded bird and are having trouble resighting the full combination and they'll come help.-

53. Enter GPS data into your Juno.

While in **CACW2017** project in ArcGIS

Tap **Collect Features** and select **CACW species**

Tap <Tap to use GPS Position> if you want your point to be where you are standing. Otherwise, tap **Location** and tap the map where you want to put your point. Then tap **Attributes** to return to the data collection form and fill in the requested data (user name, date, etc).

Tap **Save** (bottom right).

4. Enter Cactus Plot data into your Juno

While in **CACW2017** in **ArcGIS**, zoom in to the CACW plot that you are surveying and tap the "i" button in the upper right corner of the screen.

Tap the polygon that represents your survey plot

Select the record of your corresponding survey plot and tap "Edit Feature"

Fill in data in the blank fields (<Not Defined>).

Dominant\_1 – What is the dominant non-cactus shrub species (>50% cover)? If not on drop-down, enter in comments.

Dominant\_2 – only enter this if there are two species sharing dominance.

Elderberry – is Elderberry present? Yes/No

Shrub\_Vine\_Crowd\_Overtop – What percent of the cactus is crowded/overtopped by shrubs and vines?

Non\_native\_Annual\_Cover – What is the percent cover of non-native annuals? Does not include native bunch grasses or native annuals.

Percent\_Cactus\_Dead – What percent of the cactus is totally dead (black, shriveled, or decayed)?

Percent\_Cactus\_Unhealthy – What percent of the cactus looks stressed/unhealthy (affected by disease/drought, shriveled and dark gray but not dead, white scale)?

Comments – Any comments about other fields, etc.

Tap **Save** (bottom right).

### End of Survey

1. Enter the general data into your Juno.

Highlight **General Data** and click . Click on the survey that you just completed.

Enter End Time, %Cloud Cover-End, Temp-End, and Wind-End. Click .

**Hotsync your Juno DAILY and use the backup function often.**

### Nest Monitoring

1. Enter territory visit data into your Juno Forms51 (See Juno manual for graphics).

Highlight **Monitoring Data**. Click . Enter data into all fields.

- Enter Resight Data. **You should attempt to fully resight both adults at least one time for each nesting attempt**

Click  next to "Resight Data". Click .

NOTE: If you did not see the legs, enter *Unknown* in the 'Banded' field.

If you partially resighted a banded bird, enter the bands that you are sure of in the corresponding field (Left Top, Left Bottom, etc.), "?" in the fields where you did not see the leg, or any color that you are unsure of followed by a "?". Add comments for a partially resighted bird (e.g., saw gold band but don't know which leg, bird has full combo and one band is metal purple).

- Enter Nest Check Data.

Click  next to "New Nest Check".

Add comments to note as much information as possible (e.g., Female incubating, flushed. Adults scolded.

No adults on nest. Adult singing nearby). These comments will be extremely helpful in determining the stage of nesting activities when you fill out the end-of-season chronologies.

2. Make a GPS point for each nest you find and label with territory and date. Change the label to N1, N2, etc. only when confirmed as a brood nest. Then add comments to that point every time you visit the nest. This is the only convenient way to share nest monitoring data between monitors.