

CACTUS WREN CONDOS: DOES URBANIZATION AFFECT THE CHARACTERISTICS OF CACTUS WREN ROOST NESTS?

A Preliminary Investigation

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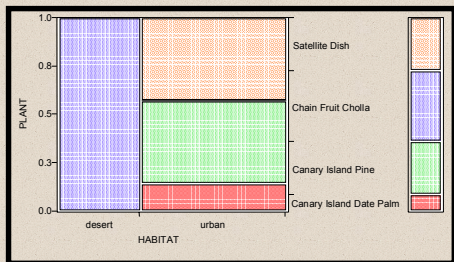
Cactus Wrens (*Campylorhynchus brunneicapillus*) are a common bird native to the Sonoran desert, and are also quite successful in the urban environment. A characteristic behavior of Cactus Wrens is they build and maintain roost nests in the winter (in addition to summer breeding nests), presumably to help with nocturnal thermoregulation. This was a preliminary investigation to determine if Cactus Wren roost nests serve to maintain an internal microclimate for thermoregulatory benefits. Roost nests in urban habitat are expected to be similar to those in natural habitat in terms of internal microclimate. On the other hand, nest site habitat characteristics in urban areas will be significantly different from those in undisturbed desert habitat. Two groups of active nests were examined: one located in undisturbed desert habitat and the other in urban habitat. Roost nest internal temperature, site characteristics and nest habitat characteristics were measured. Further investigation is planned to examine the hypothesis that urban habitats may have an effect upon the behavior and adaptation of resident nesting birds.



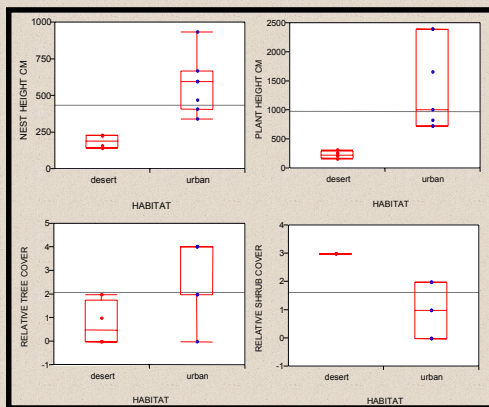
Two examples of Cactus Wren Nests. A typical roost nest in a Cholla Cactus (above left) in the Sonoran Desert and an example of Cactus Wren adaptability (above right) a roost nest built in a satellite dish in an urban setting.



Examples of the two habitats where Cactus Wren roost nests were located. Usery Park (above left) and ASU campus (above right).

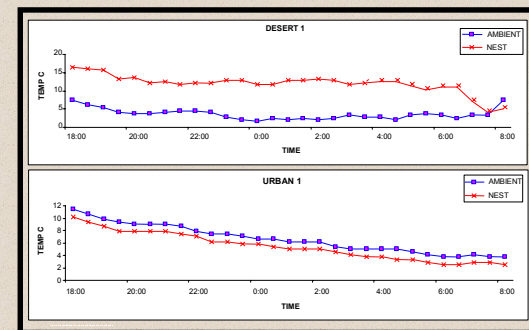


Comparison of the relative frequency of host plant for Cactus Wren roost nests. The desert habitat nests were all found in Cholla Cactus (*Opuntia* spp.). Urban nests were found in a variety of plants including artificial structures such as satellite dishes.

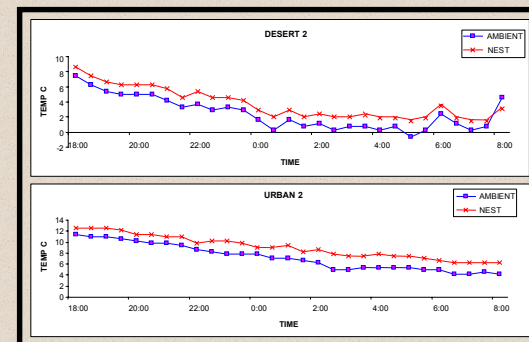


Comparisons of Desert and Urban Habitat Characteristics in Relation to Roost Nest Location.

Cactus Wrens typically build their nest in Cholla Cactus. As is shown above nests in desert habitat are characterized by lower nest height above the ground and lower average plant height when compared to nests in urban habitat. Desert habitat is also more shrub dominated while urban habitat has more trees.



This pair of graphs shows internal nest temp. compared with the ambient temp. The first graph indicates a Cactus Wren in its roost nest. The second graph indicated no apparent Wren activity in the nest.



This pair of graphs shows no apparent bird activity at all. Locating active nests and successfully measuring the temp. while the birds are using the nest is a major challenge to this investigation. Future efforts will use methods refined in this investigation. Key goals are increase sample size, improve randomness of sample and refine what type of information is needed from each nest.