



Artificial Cactus Condo Attracts Wren Family

Birds opt for contemporary nest box...

Irvine Ranch Conservancy staff members are hailing a program that provides artificial nesting options for Cactus Wrens a success. In late May, IRC senior field ecologist Dr. Jutta Burger and biological consultant Robb Hamilton observed a Cactus Wren nest with very young chicks nestled in a nest box. By mid-June, three healthy chicks had fledged successfully from the nest. Nest boxes were installed as part of a larger study funded by a Department of Fish and Game Local Assistance Grant to test whether Cactus Wren would use cactus replicas to nest where nesting habitat is lacking.

Native to the southwestern United States southwards to central Mexico, the Cactus Wren is a local species of special concern in coastal and central Orange County. The prickly cactus spines of cholla and prickly pear, which Cactus Wren exclusively nest in, provide protection against predators and make for a safer nest. However, wildfires across the landscape have severely reduced cactus stands locally and cactus can take decades to mature to a height that is suitable for the Cactus Wren to nest in.

"If we are losing the cactus, we could be losing this bird species locally, solely because it has no place to nest," said Burger. "There are not very many Cactus Wrens on the Natural Landmarks today; they are not successfully maintaining their numbers." Based on a 2008 survey (Leatherman, 2009), only 65 occupied Cactus Wren territories were found within the central areas of the Irvine Ranch Natural Landmarks. Central and coastal southern Californian populations are only 10-20 percent of what they were 15 years ago.

The artificial nest substrate study began two years ago when the Irvine Ranch Conservancy (David Olson, former director of science & stewardship) and Robb Hamilton hatched a plan to provide the wrens with an alternative nesting option. The first generation of structures to be tested were built from lengths of PVC, steel pipes, and barbed wire to resemble the twists, turns, and spines of real cactus. Structures were placed in occupied Cactus Wren habit, but surveys from that first year indicated that the birds only used them as perches.

Last year, Burger and Hamilton opted to try another nest design. Burger recruited Laguna Hills High School teacher Tom Williams and his woodworking class to construct the structures. The students used a simple, rectangular shape and left two sides open. Wire mesh was added on the top and part of one side of each structure to provide protection against aerial predators, such as Cooper's Hawks. The nest boxes were then placed about six feet off the ground on metal posts. The design and placement of the structures was inspired by recent documentation of Cactus Wrens nesting under a transmission box on a utility pole adjacent to – and well above – dense cactus scrub in San Dimas, California.

Last December, 32 nest boxes were placed across 16 sites within the Irvine Ranch Natural Landmarks. Only nine Cactus Wren pairs were available to nest in these replicas across all sites. The nest box that attracted the Cactus Wren pair was placed in an established Cactus Wren territory within high-quality cactus scrub. Burger said the "wren condos" will be left in place for at least another year to see if they can attract more nesting pairs.

"The fact that these new boxes attracted a nesting pair was a great surprise," Burger said. "It makes us hopeful that if natural nest sites are not available while cactus scrub recovers, we can overcome the problem by providing artificial structures to tide the birds over. This study provides the 'proof of concept' that Cactus Wrens can, and will, nest in man-made nest boxes. In this case, the Cactus Wrens actually chose the nest box over adjacent high-quality cactus scrub dominated by prickly pear. The use of such structures to provide nesting sites where they are otherwise lacking, in poor quality or recovering cactus scrub remains to be determined."