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Researchers watch how scrub jays react to development

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DEEP CREEK -- From the top of a scraggly oak, a Florida scrub jay surveys its domain: a small grass field, scattered trees and shrubs, and homes under construction in the burgeoning Deep Creek community.

On a nearby cul-de-sac, Florida Fish & Wildlife Conservation Commission researcher Karl Miller plays a tape of rasping bird noises -- a territorial call. He scatters raw peanuts on the ground and emits his own cheep toward the sentinel bird.

Soon four scrub jays arrive. They're on utility lines overhead, in a wax myrtle, on the pavement.

Some birds take the handouts without hesitation. One, an unbanded bird, hops about before snatching a nut off the ground and fluttering off.

"See, you can do that," Miller sweet-talks the jay.

Since last summer, Miller and a team of assistants have captured and banded about 170 birds in Deep Creek and Harbour Heights. Those birds, living in about 55 family groups, make up Southwest Florida's second-largest population grouping of the threatened species. Countywide, their total

population was counted at 419 birds in 2002. South Sarasota County has the region's largest "metapopulation" of the scrub jay, which is the only bird unique to Florida.

Those Charlotte County subdivisions are also among the county's most popular for home construction. With every new home, every shrubby oak replaced with a palm tree, and every sandy patch covered in grass, the bird's habitat is being chipped away.

That's why Miller is here.

He hopes to have all of the birds banded by the summer's end. For at least three years, he will monitor their ability to survive and reproduce in a suburban environment. Each bird is banded in a unique sequence of colors, allowing Miller to track individuals.

The research could determine if the birds are like fish out of water -- still alive but doomed in the long run -- or if they can reproduce enough to keep up with mortality.

"They're hanging on now and we don't know how much more development they can take," Miller said.

Construction halted

For years, the county granted construction permits for single-family lots in scrub-jay habitat without review from state or federal wildlife agencies. Only larger development applications got the added review.

But after a 2002 survey showed birds living in some of the county's most popular subdivisions, the U.S. Fish & Wildlife Service demanded to see permit applications for those areas.

The county began forwarding those applications to the agency in mid-December. The extra scrutiny could add six to eight months to permit review times and cost an individual lot owner thousands of dollars in mitigation expenses.

To streamline the permitting process -- both for private development and county projects such as roads -- county officials are working on a scrub-jay habitat conservation plan. The plan would identify large swaths of habitat that should be bought and preserved. If a plan is adopted and approved by wildlife agencies, development in "expendable" habitat can go on without the extra hassles.

The plan is projected to cost \$38.4 million.

Miller's research isn't part of the habitat conservation plan. But it could possibly help track the bird's success here and hint at the dynamics of populations in other developing areas.

"We don't know the answer to whether these suburbanized populations can be viable or how they can be managed," Miller said.

In fact, no one knows for sure whether the scrub jay's numbers in Deep Creek and Harbour Heights are going up or down. Until 2002, a thorough survey of the birds in the area hadn't been completed.

County environmental specialist Cathy Olson said past research shows that once about 60 percent of the lots in a subdivision are developed, the birds "crash." Luckily, the parts of Deep Creek and Harbour Heights where scrub jays live aren't near that mark, she said. She said she didn't know what percentage is developed.

Scrub jay numbers in suburban environments could even increase in lightly developed areas. Elliot Kampert, the county's natural resources director, said that handouts from people and mandatory lot-clearing -- scrub jays like open spaces -- may keep more birds around.

An uneasy coexistence

"Come on babies, come on!" Lillian Ross calls out from a sidewalk near her Deep Creek home.

As if on cue, a blue bird zips down from its perch on a power line 50 yards away and lands in Ross' hand.

"I've had them on my head, my shoulder, my hand, and one standing at my feet" at the same time, Ross said.

At a glance, the birds might seem to get along peacefully with humans. But Jon Thaxton, a Sarasota County commissioner who has banded and studied scrub jays in Southwest Florida for 15 years, said it's a false sense of security.

"You don't actually see the results of habitat destruction until 10 or 15 years after the habitat is destroyed," he said.

Over millennia, the birds have adapted to life in a hostile, semi-arid environment, the remnants of ancient sand dunes left by retreating seas.

Scrub is a mosaic of short, stunted oak trees, patches of open sand, saw palmetto or other scattered shrubs. Sometimes, there are also scattered pine trees. Periodic wildfires keep the scrub open, which allows the jays to spot predators and alert the others.

The birds live in family groups of two to eight, which typically need about 25 acres of good habitat to survive.

They require the short oaks, which provide nesting sites and acorns. An individual scrub jay may bury 6,000 acorns in a year, usually in the autumn, and retrieve them in winter or early spring.

Each family group has just one pair of breeders. A male and female mate for life -- "divorce" is rare -- and sometimes "grandparents" are part of the group.

The others, known as helpers, assist in feeding the young, defending their territories from other family groups, and spotting and "mobbing" predators. Helpers don't breed when they "disperse" and establish their own territories, often at the age of 2 or 3. Sometimes they inherit the territory where they were born.

"The scrub jay's strategy has always been to produce a few young, just a few, and then watch over them meticulously," Thaxton said.

It's the bird's specialization in this environment that has doomed it when confronted with change. Even as their native habitat is destroyed, the birds normally don't go far.

"They are some of the most sedentary birds in North America," Miller said.

In the suburbs the birds, especially the young, fall prey to house cats. Others are hit by cars as they forage on roadsides. And acorns become more scarce with every shrubby oak that is removed.

Fire suppression alone is enough to run the birds out, Thaxton said.

Scrub jays once inhabited 39 Florida counties, as far north as near Jacksonville. But Miller estimates the birds are gone, or almost gone, from 15 of them.

The last statewide survey of scrub jays, conducted in 1992 and 1993, counted 11,000 birds, or about 15 percent of the pre-settlement estimate.

Once development pushed scrub jays out, the birds aren't likely to come back.

Thaxton said that he has recorded 1,000 dispersals of scrub jays in the past 15 years.

"We've never had a bird that was born in a preserve disperse and breed in a suburb," he said.