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Richmond Times-Dispatch

Published: August 02, 2010

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Warblers' arrival might carry environmental message

By Rex Springston | TIMES-DISPATCH STAFF WRITER

Scientists say as prothonotary warblers arrive earlier each year, they provide living evidence of a warming environment.

Twenty-three years ago, a husband-and-wife team of biologists at Virginia Commonwealth University began studying golden birds called prothonotary warblers.

Each spring, the little warblers migrate from the tropics to wooded riversides in North America, including spots along the James River in the Richmond area.

The first of the warblers arrived here April 20, 1987. The biologists, Charles and Leann Blem, since have retired, but the birds keep on coming -- earlier and earlier. This spring, the first arrived April 7.

Scientists say the birds are living evidence of a warming environment.

Studies of other birds around the globe show similar trends, said Cathy Viverette, a VCU ecologist now overseeing the warbler study.

"Many species are responding in a behavioral way to temperature change," Viverette said as she steered a canoe in the James recently.

Viverette and other scientists were checking the birds' wooden nest boxes on poles in the water at Presquile National Wildlife Refuge, an island near Hopewell.

When the birds flew from their boxes, the scientists caught them in small nets made from plastic-mesh orange sacks. They weighed and measured the birds and put leg bands on the ones that didn't have them.

Amid the greens and browns of the swampy island, the birds stood out like canary-size fireflies -- banana-yellow bodies, pewter wings and, on some males, heads the color of tangerines.

"The colors just draw you in," Bryan Rhodes said moments after he examined one of the warblers. The

former VCU student now is an adjunct biology instructor at J. Sargent Reynolds Community College.

The birds' name, the story goes, refers to a long-ago Catholic Church official, the protonotarius, who wore golden robes. The water-loving birds also are called golden swamp warblers.

The VCU study follows the inhabitants of about 600 nest boxes from Dutch Gap near Chester to Charles City County. This year's field work concluded last week.

While the earliest warblers this year returned April 7, one showed up in 2007 on April 1.

"There is variation year to year, just like there is in temperature, like there is in anything," Viverette said.

But the early-return trend is clear, and climate change is the best explanation, she said.

As springs get warmer, the bugs the warblers eat are out earlier. The first warblers to arrive are males. The early bird gets not only the worm -- or caterpillar, in the warblers' case -- but the best breeding territory.

On average, the planet has warmed about 1.5 degrees during the past century, in part because of the burning of oil and other fuels that release heat-trapping gases, scientists say.

But not all parts of the globe have warmed equally.

Patrick Michaels, a climatologist with the libertarian Cato Institute, said spring temperatures in Virginia have gone up and down during the past century and show no overall trend.

However, a slight warming trend began about the time the Blems began their study, Michaels said. The birds could be responding to that warming or to something else.

"I don't think it's a good idea" to blame global warming for the warblers' changing behavior, Michaels said.

Still, global warming has been linked to other changes in nature, such as the northward movement of butterflies on the West Coast and in Europe, Michaels said.

Like many songbirds, prothonotary warblers are in decline, largely because of the destruction of wild lands in the U.S. and the tropics.

That decline was the major reason the Blems began the study, Charles Blem said in an e-mail from the couple's retirement home in Polson, Mont.

"[The] point of the project in the beginning was not climate change," he said.

Just this year, the current VCU researchers found that the percentage of warbler pairs that "double clutch" -- raise two families in one season -- declines during the hottest summers.

The cause is not clear. But for birds already living on the edge and exposed to warming temperatures, that's potentially a troubling sign, Viverette said.

In their quiet way, these yearly visitors seem to be telling us the natural world is changing.

Whether or not you care about little yellow birds along the James, Viverette said, that's a message worth heeding.

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