

## Prothonotary Warbler *Protonotaria citrea*



**Folk Name:** Golden Swamp Warbler, Swamp Canary

**Status:** Breeder

**Abundance:** Uncommon to Fairly Common

**Habitat:** River and lake edges, bottomland floodplain forests, especially with standing water and stumps

The Prothonotary Warbler is a spectacularly exquisite, bright yellow-headed denizen of quiet riversides, large creeks, and stump-filled swamps in the Carolinas. It is known for its clear, resounding song, often characterized as *sweet-sweet-sweet-sweet-sweet*; the song usually being heard long before the bird is seen. For many years, this bird was called the “Golden Swamp Warbler,” and it has always been an icon of cypress swamps throughout the Deep South.

This handsome golden-orange or orange-yellow bird has an olive-green back and blue-gray wings and tail. Watching one of these birds in flight has often been described as a “spellbinding” experience. This warbler is the only warbler in the eastern United States that nests in cavities. It lays its eggs in holes in trees or tree branches, preferably those overhanging water. Ideal nesting sites are often few in number—a truly limited resource.

Prothonotary Warblers generally arrive in the Central Carolina region in April and depart by late August or early September. Our earliest spring report is a bird that was spotted at Pee Dee NWR on March 16, 1997. One was found singing on territory at the McAlpine Park wetland in Charlotte on the surprisingly early date of 30 March in 2016. Ken Kneidel reported a late Prothonotary lingering at the Ribbonwalk Nature Preserve in Charlotte on September 23, 2014. We have no acceptable reports of this warbler present in the region from October through February. Our peak one-day count is 21 birds in the spring of 1988.

The Prothonotary Warbler has been reported present in the Central Carolinas for the past century. Roy Blalock reported the Prothonotary Warbler along the Yadkin River in Stanly, Montgomery, and Richmond counties in 1917. Elmer Brown reported finding a Prothonotary Warbler in Greensboro on April 13, 1929. Katherine Stewart reported one in Thomasville in Davidson County on April 13, 1924. The first report of a Prothonotary Warbler in Mecklenburg County was recorded on May 24, 1941. Elmer Brown reported finding a total of 21 species of warblers around Charlotte that month. This date is late for a migrant, but no sign of breeding was recorded there at the time.

In 1942, Mack Owens found the Prothonotary Warbler present during breeding season at the mouth of Cane Creek on High Rock Lake in Rowan County. Elizabeth



J F M A M J J A S O N D

Clarkson noted only two records of Prothonotary Warbler had been recorded in Mecklenburg County by 1944, and she listed this bird as a “migrant” in the first edition of her local checklist. However, it may have been breeding along the Catawba or Rocky River corridors at the time. Little field work had been done in appropriate habitat there. John Trott confirmed breeding on the Yadkin River in 1951. Trott wrote:

I had the good luck on Saturday June 23, 1951 of seeing final proof of the Prothonotary Warbler nesting near New London, some two hundred miles from the coast. I had heard them for several years at that location and was fully convinced they nest there but I had no proof. On this particular Saturday I was seated at a spot on the Yadkin River when a flash of brilliant orange appeared before me in a low bush near the water. Soon a very ratty and mottled looking young bird came by and was fed by his brilliant father. I believe that this place on the river, five miles northeast of New London, is one of the finest places for birding at practically any season in this area. . . . This year alone I have found four nests of Hooded Warblers at this place. Besides these, Kentucky, Yellow-throated, and Pine Warblers and Redstarts are nesting here.

From 1951 through 1953, Homer Autry reported finding singing Prothonotary Warblers in Anson County. He notified David Wray at the North Carolina Museum

and told him he felt “sure they were nesting there,” but he had not confirmed a nest. In 1954, John Trott reported that the Prothonotary Warbler was a “fairly regular” nesting bird along the banks of the Yadkin River, “where stands of Black Willow occur and stumps stand in the water.” He observed another fledgling being fed in June 1954. In the summer of 1960, Frank Ramsey sighted a pair of Prothonotary Warblers carrying food along the banks of the Catawba River in Mecklenburg County, but he was unable to find a nest.

On May 14, 1961, Frank Ramsey and his father returned to the site and heard a male Prothonotary Warbler singing. They searched the bank of the river and soon Frank saw the bird enter a hole about 4 feet up in the trunk of a Black Willow at the edge of the water. The Ramseys recorded the activity at this nest with a 16 millimeter motion picture camera at a distance of 12 feet. They watched the adults carrying insects and larvae in to feed the nestlings and could hear the young birds in the hole. They reported that the adult birds would “come out of the hole head first, hang on the edge of the hole head down, and then drop off and fly away.” By 21 May, the young had fledged, and the nest hole was vacant. Mark Simpson found a singing male at the same site in May 1963.

H. Lee Jones noted the “very early” arrival of a Prothonotary Warbler in Mecklenburg County on April 14, 1964. The next month this warbler was documented on the Charlotte Spring Bird Count for the first time. This species has been reported regularly on this annual spring count since. Special efforts are made to visit the appropriate habitat to find it.

Mark Simpson reported a pair of Prothonotary Warblers on a pond on the campus of Davidson College in May and June 1966. Chris Sawyer discovered a nest in a cove near the town of Southmont on the Davidson County side of High Rock Lake in June 1966. In May and June of 1967, Mark Simpson conducted extensive field work throughout the Yadkin Valley in search of the



Prothonotary Warbler. (Jeff Lemons)

Prothonotary Warbler. He also researched known records of this warbler in the Carolina Piedmont. He published his findings (including many of the reports stated above) in the June 1969 issue of *The Chat*.

Simpson provided a full summary of records through that date for the Catawba-Wateree River System and the Yadkin-Pee Dee (plus Rocky River) System. He provided maps illustrating the known breeding range of this bird in the Central Carolinas. Simpson concluded that his study revealed this warbler is:

strictly limited to thick deciduous woods bordering large streams, rivers, and lakes. The birds are distributed in a linear fashion along the water’s edge, with singing males consistently spaced from 800 to 1,000 feet apart. The birds are absent from waterways where the woody border is less than 100 feet deep, although they will tolerate sites where one bank is completely cut over so long as the opposite side has a sufficiently deep woodland edge. Nests are placed almost exclusively in stumps and snags, usually standing in water or within 2 feet of it, and at heights from 2.5 to 11 feet.

Today, nests have been confirmed as far west in North Carolina as the Linville River at Lake James in Burke County in 1985, and on Lake Adger in Polk County at an elevation of 1,000 feet, with males on territory in 1989 and adults feeding young there in 2014. *The South Carolina Breeding Bird Atlas* documented probable breeding in most Piedmont counties “along larger rivers and streams.”

The breeding population of Prothonotary Warbler in North America is currently considered to be in serious decline. In 2008, the U.S. Fish and Wildlife Service designated this warbler a Bird of Conservation Concern in the United States. It is now considered Endangered in Canada. Habitat loss is a primary concern. In 2014, it was placed on the Yellow Watch List of birds of the continental United States. It is a species with both “troubling” population declines and “high threats” and is in need of conservation action.

The Prothonotary Warbler is a neotropical migrant. A recent research study has been implemented to monitor this species “full life cycle” to learn more about limiting factors at its stopover habitat (migration sites) and its wintering grounds. Preliminary geolocator data tracking Prothonotary Warblers—migrating from breeding sites in southeastern states—indicate these small birds migrate around 5,000 miles through seven or more countries each year. Migration in the spring from the Neotropics to their breeding sites is completed in a span of 3–4 weeks, while fall migration back to Central or South America may take as long as 3 months. The Yucatán Peninsula appears to be the main migration corridor. Designing a successful conservation strategy for the full life cycle of this warbler will be a great challenge indeed.

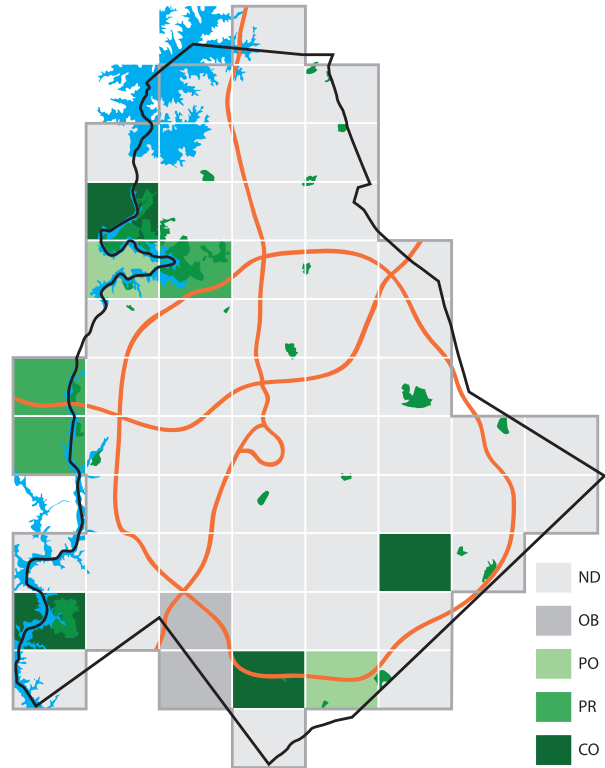
Since 1998, staff with MCPRD and volunteers with the Mecklenburg Audubon Society have teamed up with local scouts, civic clubs, and other conservation-minded groups to provide special assistance to the Prothonotary Warbler population along the Catawba River below the Cowan's Ford Dam. Hundreds of nest boxes have been built and placed in appropriate habitat to provide additional nesting opportunities for this bird throughout Mecklenburg County. Two decades of data has been collected and hundreds of nestlings successfully fledged.

In 2013, heavy spring rains resulted in rapid flooding along the Catawba River. All nest boxes installed at Cowan's Ford Wildlife Refuge were submerged. An inspection of the boxes on 12 May found that several adults had remained on their nests with the nestlings, and all nests were entirely inundated and lost.

Data collected during the Mecklenburg County Breeding Bird Atlas indicate a breeding code of confirmed or probable in 6 to 10 survey blocks for this species in the county. It was therefore designated as a "vulnerable" breeding bird.



*Prothonotary Warbler nestlings (above—Seriff) and eggs (below—MCPRD staff).*



**Mecklenburg County Breeding Bird Atlas:**  
*Local (PR/3, CO/4)*