

# THE MIGRANT



A QUARTERLY JOURNAL  
DEVOTED TO TENNESSEE BIRDS

PUBLISHED BY  
THE TENNESSEE  
ORNITHOLOGICAL  
SOCIETY

DECEMBER 2017  
VOL. 88, No. 4

**THE MIGRANT**  
**A QUARTERLY JOURNAL OF ORNITHOLOGY**  
**PUBLISHED BY**

**THE TENNESSEE ORNITHOLOGICAL SOCIETY**  
The TOS is a non-profit, educational, scientific and conservation organization.

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Tennessee Ornithological Society, 274 Beech Grove Road, McMinnville, TN 37110

Printed by: Russell Printing Options, 1800 Grand Ave., Knoxville, TN 37916

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Published by the Tennessee Ornithological Society  
to Record and Encourage the Study of Birds in Tennessee  
Issued in March, June, September and December

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VOL. 88

DECEMBER 2017

NO. 4

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*The Migrant* 88(4): 137-140, 2017

## FIRST ROANE COUNTY RECORD OF PURPLE GALLINULE IS CAPTURED ON TRAIL CAMERA

W. Kelly Roy<sup>1</sup>, Elizabeth Znidersic<sup>2</sup>, Sarah E. Darling<sup>3</sup>, and Jamie M. Herold<sup>3</sup>

<sup>1</sup>Oak Ridge National Laboratory, Environmental Sciences  
Division, Oak Ridge, TN 37831-6036

<sup>2</sup>Institute for Land, Water and Society, Charles Sturt  
University, Albury, NSW 2640, Australia

<sup>3</sup>Oak Ridge National Laboratory, Facilities & Operations  
Directorate, Oak Ridge, TN 37831-6415

While collaborating on detection methodologies for secretive marsh birds, researchers from Oak Ridge National Laboratory (ORNL) and Charles Sturt University (Albury, New South Wales, Australia) captured a photograph of a Purple Gallinule (*Porphyrio martinicus*) on a trail camera at the Heritage Center Greenway Powerhouse Trail (HCGPT). This public greenway trail, located in the eastern portion of Roane County, Tennessee was designated an eBird (Sullivan et al. 2009) “birding hotspot” in May 2015. Prior to that date this area was commonly referred to as the “ETTP Beaver Ponds,” ETTP being the abbreviation for East Tennessee Technology Park, the main campus of which lies approximately 2 km north of this greenway trail.

On 8 May 2017 the researchers deployed 11 trail cameras (four Stealth Cam STC-G42NG cameras and seven Reconyx HC600 cameras) at HCGPT. At approximately 0954 on 11 May 2017 one of the trail cameras was triggered, capturing three consecutive partial images of an adult Purple Gallinule. The camera-indicated temperature at the time was 28°C; GPS

coordinates for this camera were 35.91446, -84.40294; and the previous day, 10 May 2017, was a full moon date. All 11 cameras were retrieved on 17 May 2017.

A black and white version of the second photograph of the three-shot sequence appears in Figure 1. The original color version of this picture clearly shows a rather large bird with a purplish gloss to its neck and a heavy bright red bill, distally colored yellow and proximally bordered by a pale bluish-white frontal shield. Bill color clearly distinguishes this bird from American Coot (*Fulica americana*) and forehead shield color distinguishes it from Common Gallinule (*Gallinula galeata*). There are no other North American bird species likely to be confused with Purple Gallinule.

Purple Gallinule is the 232<sup>nd</sup> bird species to be recorded on the U.S. Department of Energy (DOE) Oak Ridge Reservation (ORR) since 1950. Two hundred twenty-eight species were documented on the ORR by Roy et al. (2014). Since that time, Cackling Goose (*Branta hutchinsii*, 25 November 2014), Wood Stork (*Mycteria americana*, 13 August 2016), American Bittern (*Botaurus lentiginosus*, 19 April 2017) and Purple Gallinule (11 May 2017) have all been photographed on the ORR.



**Figure 1. Trail camera photograph of adult Purple Gallinule captured at the Heritage Center Greenway Powerhouse Trail, Roane County, 11 May 2017.**

According to eBird (a citizen-based online bird database) Purple Gallinule was not among the 253 bird species recorded in Roane County prior to the date of our trail camera photograph. Though somewhat more common in West Tennessee, there are three counties in the eastern half of the state (to date) with eBird reports for Purple Gallinule: Knox (9 May 2010, 14 May 2010), Putnam (18 May 1990), and Hamilton (10 April 2005, 4 May 2011).

Alsop (1971) reported Purple Gallinule sightings from five East Tennessee counties: Blount (26 May 1970); Knox (12 October 1958, mid-April to 5 May 1962, 1 May 1962, a probable sighting on 6 May 1965, 18 May 1970); Sevier (2 April to 5 May 1967); Greene (7 July 1968); and Anderson (22-24 April 1968). Purple Gallinules have also been reported from Hamblen County (7 July 1968) by Campbell (1968) and Washington County (13 June 1973) by Nicholson (1973).

Fall records of Purple Gallinule in Tennessee are very rare (Somershoe and Sloan

2015). East Tennessee Fall records include Knox County – 12 October 1958 (Alsop 1971; Somershoe and Sloan 2015) and an immature bird at Chickamauga Lake – 8-10 September 1982 (Dubke and Dubke 1982).

Breeding has been reported in the Brewer's Bar area of Reelfoot Lake – 17 June 1923 (Ganier 1933) and 21-24 June 1984 (Pitts 1985); in Grundy County – 26 May 1935 (Ganier 1952) and 1 June 1964 (Dubke 1974); and an empty nest was found in Warren County – 30 July 1952 (Ganier 1952). These records, as well as additional reports (without confirmed breeding) from late May – late June in Hamblen, Hamilton, Haywood, Maury, Stewart, and Washington counties are all reported by Nicholson (1997). The Reelfoot Lake records are believed to be from Obion County, though county is not specified, and Brewer's Bar is near the Obion/Lake county line. Pitts (1985) also reports Ganier found nests in this area subsequent to his 1923 record.

Interestingly, the 1968 Anderson County record, reported by J. M. Campbell, occurred "on the grounds of Union Carbide Corp.'s purchasing and employment office on Oak Ridge Turnpike, Oak Ridge" (Alsop 1971). At the time, Union Carbide was the prime contractor for DOE operations on the ORR, though that Purple Gallinule observation actually occurred outside the boundaries of the reservation.

Vegetation (species: % cover, approx.: height, approx.) within a 50 m radius of the camera location was characterized on 2 June 2017 and consisted of silky dogwood (*Cornus amomum*; 30%: 2-4 m), cattail (*Typha latifolia*: 25%: 2-3 m), common rush (*Juncus effusus*: 20%: <1 m), prairie rose (*Rosa setigera*: 10%: 1-2 m), and sedges (*Carex* sp., including *C. vulpinoidea*, and *C. lurida*: 10%: 1 m). An additional five percent of cover was dominated by indigo bush (*Amorpha furticosa*), rice cutgrass (*Leersia oryzoides*), grassleaf rush (*Juncus marginatus*), duckweed (*Lemna minor*), and other species, and the remaining five percent was open water. Most of the site is wet year-round, with few locations >0.3 m deep. This characterization is consistent with some known breeding habitat for Purple Gallinule (e.g., West and Hess 2002).

Based on extensive literature search, eBird database search, and personal communications with Dean Edwards, Ron Hoff, and Rick Knight, we are confident this is not only the first ORR record of Purple Gallinule but also the first record in Roane County, Tennessee.

#### ACKNOWLEDGMENTS

We thank Neil Giffen for comments on an earlier version of this manuscript. We also thank the Community Reuse Organization of East Tennessee for development and maintenance of HCGPT, as well as other public greenways on the ORR. This research was supported by UT-Battelle, LLC, DOE Oak Ridge Office - Reservation Management Branch, and DOE ORNL Site Office.

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*This manuscript has been authored by UT-Battelle, LLC under Contract No. DE-AC05-00OR22725 with the US Department of Energy. The United States Government retains and the publisher, by accepting the article for publication, acknowledges that the United States Government retains a non-exclusive, paid-up, irrevocable, world-wide license to publish or reproduce the published form of this manuscript, or allow others to do so, for United States Government purposes. The Department of Energy will provide public access to these results of federally sponsored research in accordance with the DOE Public Access Plan (<http://energy.gov/downloads/doe-public-access-plan>).*