

General Field Notes

General Field Notes briefly report such items as rare sightings, unusual behaviors, significant nesting records, or summaries of such items.

First, second, or third sightings of species in either state must be submitted to the appropriate Bird Records Committee prior to publication in *The Chat*.

A Review of Winter Wren (*Troglodytes hiemalis*) Breeding Records from the Southern Appalachians

Ryan S. Mays

Blacksburg, Virginia; rymays@vt.edu

In the southern Appalachian Mountains, the Winter Wren (*Troglodytes hiemalis*) is an uncommon to locally common resident of high-elevation coniferous and deciduous forests, especially during the breeding season in the red spruce (*Picea rubens*)-Fraser fir (*Abies fraseri*) forest community above 1520 m (Pearson et al. 1942; Burleigh 1958; Potter et al. 1980; Robinson 1990; Simpson 1992; Stedman 1997; Rottenborn and Brinkley 2007; Holzman 2010). Although there have been numerous reports of fledged young, juveniles, and adults carrying food in the southern Appalachians since the late 1800s, only a few active nests of this species have been found or documented in the region. This article is a review of all Winter Wren breeding records from the southern Appalachians which have come to the attention of the author.

Historical nesting records from the Southern Appalachians

Southwest Virginia. In the mountains of southwest Virginia, Bert Williams discovered a nest with six fresh eggs at Mountain Lake (elevation ca. 1180 m) on Salt Pond Mountain in Giles County on 25 May 1915 (Clapp 1997). It was placed 1.3 m off the ground in a dead American chestnut (*Castanea dentata*) stub.

Joshua F. B. Camblos found a second nest with five fresh eggs on 22 June 1933 about 3 km southwest of Big Stone Gap (possibly ca. 800 m) in Lee County (National Museum of Natural History, Smithsonian Institution, Division of Birds, Collection No. 48124; Smithsonian Institution Archives, Accession No. 13-235, Camblos, Joshua F. B., Field Books, 1932-1939). This nest was placed among the roots of a large fallen oak (*Quercus* sp.) and according to Camblos was “quite a collection of small twigs, weed stems, grasses and rootlets, as well as generous amounts of moss. The small entrance led into an immediate cavity which was lined with fine grasses, hair and feathers. The five fresh, oval, white eggs were covered with fine dots of

reddish brown rather evenly and not nearly as dense as those of the House Wren.” Clapp (1997) incorrectly reported that this nest was found on 22 May 1933 in Wise County, Virginia. The collection data for the egg set, now at the Smithsonian Institution, clearly indicates that the date was 22 June 1933 and that the site was in Lee County.

North Carolina. In North Carolina, Thomas D. Burleigh (1941) located a nest with four fresh eggs on 16 May 1930 at 1920 m on Mount Mitchell in the Black Mountains of Yancey County. He described it as being well-hidden in the upturned roots of a wind-thrown Fraser fir.

Ryan S. Mays found a nest with six eggs on 19 June 2010 at Balsam Gap (1650 m) in Buncombe County. It was placed in the upturned roots of a fallen yellow birch (*Betula alleghaniensis*) and is the subject of another article in this journal issue (Mays and Neas 2015).

Brian O’Shea and others observed an active nest with five eggs on 5 June 2012 in the upturned roots of what was probably a red spruce along Big Butt Trail on Fence Brush Ridge (ca. 1710 m) on the Buncombe-Yancey County line (e-Bird report, Cornell Laboratory of Ornithology).

Tennessee. On 21 June 1933 at 1675 m on Mt. LeConte in the Great Smoky Mountains National Park (GSMNP) in Sevier County, Albert F. Ganier found a nest with five young placed between the roots of a tree on the bank of a ravine (Coffey 1942; Ganier and Mayfield 1946; Ganier 1962). The young had been on the verge of fledging because they flushed from the nest when Ganier enlarged the entrance to examine its contents. Ganier (1962) described the nest as being 13 cm in diameter and lined with soft materials and feathers, including small Ruffed Grouse (*Bonasa umbellus*) feathers.

Georgia. On 15 June 1922, Thomas D. Burleigh (1925) found what he took to be a recently vacated nest (having held young) on the northern slope of Brasstown Bald in Towns or Union County at an elevation of 1250 m. He described the nest as a ball of fine hemlock (*Tsuga* sp.) twigs and green moss, with an entrance on one side. It was situated in the upturned roots of a large fallen hemlock. Burleigh (1927) found another nest on a steep slope of Brasstown Bald at 1220 m on 22 May 1923. This nest contained five slightly incubated eggs and was 0.8 m from the ground in the upturned roots of a fallen yellow birch. It was a loose ball of green moss lined with Ruffed Grouse feathers.

Observations on fledged young and breeding behavior in the Southern Appalachians

North Carolina. In North Carolina, Alexander Sprunt and Joseph J. Murray

(1930) observed an adult feeding at least two recently fledged young at an elevation of ca. 1585 m on a slope of Grandfather Mountain in Avery County on 1 August 1930.

Stupka (1963) reported that Raymond J. Fleetwood found an adult and two young on 10 June 1935 near Heintooga Ridge (ca. 1220 m) and that F. R. Keating Jr. saw recently fledged young on 12 June 1937 around 1770 m on Andrews Bald. Both locales are within the GSMNP in Swain County.

In 2014, Marilyn Westphal and Marcus B. Simpson Jr. observed three fledglings with an adult along Bald Knob Ridge Trail (ca. 1525 m) off Blue Ridge Parkway mile marker 355 in Yancey County on 20 May, and two fledglings in the same area (probably a second brood) on 1 July (e-Bird report, Cornell Laboratory of Ornithology; M. B. Simpson Jr. unpublished data at Carolina Bird Club website Photo Gallery). A juvenile was later photographed along Bald Knob Trail by Kelly Hughes on 3 August, and Marilyn Westphal and Marcus B. Simpson Jr. saw three to four recently fledged young with adults on 10 September along the trail at the same location they had observed fledglings on 20 May and 1 July (e-Bird reports, Cornell Laboratory of Ornithology; photograph of fledging by M. B. Simpson Jr. posted to Carolina Bird Club website Photo Gallery). These records suggest that three broods may have been raised by the pair occupying this site in 2014.

Tennessee. In Tennessee, George B. Sennett (1887) observed Winter Wrens carrying nest material and food for young in the spruce-fir forest around the summit of Roan Mountain (ca. 1900 m in Carter County) in the summer of 1886.

Albert F. Ganier (1936) and others observed an adult carrying food on 25 June 1936, also on Roan Mountain. In June 1937, a collecting party from the United States National Museum (Smithsonian Institution) visited a number of locales in GSMNP of Tennessee and collected the following (Wetmore 1939):

- a juvenile from ca. 2010 m on Mt. Guyot in Sevier County on 24 June
- one recently fledged young on Inadu Knob in Cooke County at ca. 1700 m on 28 June
- a juvenile from ca. 1370 m on Snake Den Mountain in Cooke County on 28 June

Stedman (1997) cited an unpublished record by Robert B. Lyle of a brood of at least six fledglings observed somewhere in northeastern Tennessee, probably during the 1930s.

Richard L. Knight (2010) reported having seen three recently fledged young on Roan Mountain at Carver's Gap (ca. 1700 m on 14 July 1983) and two fledged young in the spruce-fir forest nearer the summit of Roan Mountain (1916 m) on 4 July 1997. Roan Mountain lies on the border between Tennessee and North Carolina.

Southwest Virginia. The remaining Winter Wren breeding records are all from southwest Virginia: In 1974, as reported by Scott (1975):

- M. Decker, YuLee Lerner, and others observed fledged young on 19 June in the red spruce forest around the summit (1682 m) of Whitetop Mountain, lying in Grayson, Smyth, and Washington counties.
- M. Decker and others also observed fledged young in the spruce-fir forest on Mount Rogers (ca. 1740 m) in Grayson or Smyth County on 21 June.
- Charles E. Stevens and Bruce Davenport found fledglings on nearby Pine Mountain (ca. 1220 m) on 23 June.

On 18 June 1986, Barry Kinzie and John Pancake found a fledgling on Beartown Mountain in Tazewell County. Ken Markley and Richard H. Peake also saw an adult carrying food at the summit of Beartown (1436 m) on the same date (Peake 1987).

Near Mountain Lake on Salt Pond Mountain in Giles County, Charles W. S. Ziegenfus observed two family groups during the spring or summer of 1991, one consisting of at least four fledglings (Johnston 2000; C. Ziegenfus pers. comm. to R. S. Mays).

On 10 and 24 June 2004, Ryan S. Mays observed two family groups of adults with five and at least four recently fledged young, respectively, in eastern hemlock (*T. canadensis*)-northern hardwood forest near Mountain Lake (R. S. Mays unpublished data).

On 30 May 2005, Mays watched a male (which had been singing) stuffing bits of green moss into a small natural cavity in an old fallen birch log in woods near Mountain Lake. When examined later on 23 July, the cavity was found to contain what appeared to be a non-breeding nest composed entirely of green moss and dead twigs with an unlined cup. Multiple non-breeding, or dummy, nests are commonly built by male Winter Wrens each breeding season (Hejl et al. 2002).

On 10 June 2009, Mays found another possible dummy nest placed in the upturned roots of a large fallen red spruce near the summit (1746 m) of Mount Rogers on the Smyth-Grayson County line, where several male Winter Wrens were singing and evidently holding territories. He felt inside the ball of green moss and twigs with one finger, but the interior was empty and did not seem to be lined.

On 25 June 2010, Mays flushed at least four recently fledged young from dense fern growth near the summit of Mount Rogers. He also observed an adult feeding at least two recently fledged young around 1460 m in predominantly northern hardwood forest on the western slope of Mount Rogers on 17 June 2011. Later the same day he found an adult with one recently fledged young in the spruce-fir forest just below the summit of Mount Rogers.

Summary and discussion

In summary, the breeding season of the Winter Wren in the southern Appalachians extends from approximately late April through late August, suggesting that the birds are double-brooded or readily replace lost clutches and nests. Winter Wrens are known to raise at least two broods elsewhere in North America (Hejl et al. 2002). Clutch size generally ranges from 4-7 eggs, the incubation period averages 16 days, and young fledge within about 16-19 days (Bent 1948, Hejl et al. 2002).

The earliest documented active nest in the southern Appalachians is the nest with four fresh eggs found by Burleigh (1941) on 16 May (1930) on Mount Mitchell in the Black Mountains of North Carolina, suggesting that territory establishment and nest-building started possibly as early as late April and that egg-laying began at least as early as 13 May even at this high-elevation site (ca. 1920 m). However, the 20 May 2014 observation of recently fledged young along the Bald Knob Ridge Trail, also in the Black Mountains but at a lower elevation (ca. 1525 m), by Marilyn Westphal and Marcus B. Simpson Jr. (e-Bird report, Cornell Laboratory of Ornithology), indicates that egg laying for this brood probably began in mid-April.

Camblos (Smithsonian Institution Archives, Accession No. 13-235 Camblos, Joshua F. B., Field Books, 1932-1939) found the latest active nest with five fresh eggs on 22 June 1933 in Lee County, Virginia, but fledged young observed on 10 September 2014 along Bald Knob Ridge Trail in the Black Mountains by Marilyn Westphal and Marcus B. Simpson Jr. shows that nesting may occasionally be attempted as late as August, with young fledging even as late as about 10 September (e-Bird report, Cornell University of Ornithology). This last record is also probable evidence that three broods may be attempted by some pairs in the region, since recently fledged young had been observed at the site in May and July 2014.

Further study of the Winter Wren during the breeding season in the southern Appalachians would be helpful in providing more comprehensive data on its breeding ecology, nesting habits, territoriality, and reproductive success. The species has a marked propensity for nesting in the upturned roots of fallen trees, especially in riparian areas in old-growth forests (e.g. Hejl et al. 2002), so special attention should be paid to these potential nest sites, as they appear to be an important factor in determining breeding site suitability and nest site selection for this species. Fallen trees are now especially numerous in spruce-fir forests, where Fraser firs killed by the invasive balsam woolly adelgid (*Adelges piceae*) have fallen or blown over in windstorms. Similar increases in the number of fallen trees will also occur in forests containing large hemlocks killed by the invasive hemlock woolly adelgid (*Adelges tsugae*).

Observers should report and carefully document for the literature all breeding season observations and nesting records of this interesting high-

elevation species in western North Carolina and other parts of the southern Appalachian region.

Acknowledgments

I thank Brian K. Schmidt, museum specialist in the Department of Vertebrate Zoology, Division of Birds, National Museum of Natural History, Smithsonian Institution, for sending me egg collection data. I also thank Aubrey O. Neas Jr., Christina Harvey, and several anonymous reviewers for their helpful comments and suggestions on an earlier draft of the manuscript.

Literature Cited

- Bent, A. C. 1948. Life histories of North American nuthatches, wrens, thrashers, and their allies. United States National Museum Bulletin 195.
- Burleigh, T. D. 1925. Notes on the breeding birds of northeastern Georgia. *Auk* 42: 70-74.
- Burleigh, T. D. 1927. Further notes on the breeding birds of northeastern Georgia. *Auk* 44: 229-234.
- Burleigh, T. D. 1941. Bird life on Mt. Mitchell. *Auk* 58: 334-345.
- Burleigh, T. D. 1958. *Georgia Birds*. The University of Oklahoma Press, Norman.
- Clapp, R. B. 1997. Egg Dates for Virginia Birds. Virginia Avifauna No. 6. Virginia Society of Ornithology, Lynchburg.
- Coffey, B. B. Jr., A. F. Ganier, G. R. Mayfield, H. C. Monk, J. M. Shaver, H. S. Vaughn, W. M. Walker, B. P. Tyler, A. Stupka, and A. R. Laskey. 1942. The wrens of Tennessee. *Migrant* 13: 1-13.
- Ganier, A. F. 1936. Summer birds of Roan Mountain. *Migrant* 7: 83-86.
- Ganier, A. F. 1962. Some nesting records from the Smokies. *Migrant* 33: 1-6.
- Ganier, A. F. and G. R. Mayfield. 1946. A June list from the Smoky Mountain summits. *Migrant* 17: 67.
- Hejl, S. J., J. A. Holmes, D. E. Kroodsmma. 2002. Winter Wren (*Troglodytes troglodytes*). In *The Birds of North America*, no. 623 (A. Poole and F. Gill, Eds.). Academy of Natural Sciences, Philadelphia, and the American Ornithologists' Union, Washington, DC.
- Holzman, S. 2010. Winter Wren, *Troglodytes troglodytes*. Pages 294-295 in *The Breeding Bird Atlas of Georgia* (T. M. Schneider, G. Beaton, T. S. Keyes, N. A. Klaus, Eds.). The University of Georgia Press, Athens.
- Johnston, D. W. 2000. Mountain Lake Region and Its Bird Life. Virginia Museum of Natural History, Martinsville.
- Knight, R. L. 2010. Summer birds of the Roan Mountain Highlands. *Migrant* 81: 1-28.

- Mays, R. S. and A. O. Neas Jr. 2015. Nesting of the Winter Wren (*Troglodytes hiemalis*) in the Black Mountains of North Carolina. *Chat* 79:116-118.
- Peake, R. H. 1987. The results of the 1986 Tazewell County foray. *Raven* 58: 1-17.
- Pearson, T. G., C. S. Brimley, and H. H. Brimley. 1942. *Birds of North Carolina*. Bynum Publishing Company, Raleigh.
- Potter, E. F., J. F. Parnell, and R. P. Teulings. 1980. *Birds of the Carolinas*. The University of North Carolina Press, Chapel Hill.
- Robinson, J. C. 1990. *An Annotated Checklist of the Birds of Tennessee*. The University of Tennessee Press, Knoxville.
- Rottenborn, S. C. and E. S. Brinkley. 2007. *Virginia's Birdlife: An Annotated Checklist*. Fourth Edition. *Virginia Avifauna* No. 7. Virginia Society of Ornithology.
- Scott, F. R. 1975. The Mount Rogers Foray of June 1974. *Raven* 46: 75-87.
- Sennett, G. B. 1887. Observations in western North Carolina Mountains in 1886. *Auk* 4: 240-245.
- Simpson, M. B. Jr. 1992. *Birds of the Blue Ridge Mountains*. The University of North Carolina Press, Chapel Hill.
- Sprunt, A. and J. J. Murray. 1930. A breeding record for the Winter Wren in the mountains of North Carolina. *Auk* 47: 570-571.
- Stedman, B. H. 1997. Winter Wren, *Troglodytes troglodytes*. Pages 236-238 in *Atlas of the Breeding Birds of Tennessee* (C. P. Nicholson, Ed.). The University of Tennessee Press, Knoxville.
- Stupka, A. 1963. *Notes on the Birds of Great Smoky Mountains National Park*. The University of Tennessee Press, Knoxville.
- Wetmore, A. 1939. Notes on the birds of Tennessee. *Proceedings of the United States National Museum* 86: 175-243.