

AN HISTORIC RECORD OF THE RED-COCKADED WOODPECKER IN INDIANA

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ABSTRACT. A previously overlooked historic record of the Red-cockaded Woodpecker in Indiana is presented. It was collected in 1823 at the confluence of the Ohio and Anderson rivers in Perry County by the German naturalist Paul Wilhelm. It is concluded that although the specimen collected by Wilhelm is apparently no longer extant, the Red-cockaded Woodpecker should be considered a hypothetical species in future revisions of the checklist of Indiana vertebrates.

Keywords: Red-cockaded Woodpecker, *Picoides borealis*, birds, Indiana, Paul Wilhelm

The Red-cockaded Woodpecker (*Picoides borealis*) is a small woodpecker historically found throughout much of the southeastern United States, occurring along the Atlantic seaboard from southern Florida northwards to Virginia, west along the Gulf Coast to eastern Texas and Oklahoma, and north to southeastern Missouri and west-central Kentucky (Conner et al. 2001). Extra-limital records exist for north-central Texas, New Jersey, Maryland, Pennsylvania, Ohio, and Illinois (Cory 1919; Bent 1964; Mengel 1965; Jackson 1994; Conner et al. 2001), but the Red-cockaded Woodpecker has not been reported from Indiana (Simon et al. 2002). A previously overlooked historic record of the Red-cockaded Woodpecker in Indiana is here presented.

This record is based on a Red-cockaded Woodpecker collected at the confluence of the Ohio and Anderson rivers (37°59.94'N, 86°48.80'W) on 25 April 1823. The bird was taken by Paul Wilhelm (Duke of Württemberg), a German naturalist who collected plants and animals while traveling the Ohio, Mississippi, and Missouri rivers from 1822 to 1824 (Butscher 1942; Wilhelm 1973). According to Wilhelm (1973), the boat in which he was traveling up the Ohio River sustained “some unimportant damage” necessitating a stop “near a settlement [present-day Troy in Perry County] on Anderson Creek.” While awaiting completion of repairs, Wilhelm went ashore, climbed some nearby “bluffs,” and collected “a few rare birds [not listed], among them *Picus querulus*” [= *Picoides*

borealis]. Although it is unclear from the account whether the woodpecker was collected in Spencer or Perry County, a prominent ridge, probably the “bluffs” described by Wilhelm, is located on the west bank of the Anderson River in Spencer County. Wilhelm’s attention was drawn to the woodpecker after it vocalized. The ultimate fate of this specimen is unknown; Wilhelm’s collection, among the largest private natural history collections ever assembled, was dispersed and much of it lost following his death in 1860 (Lottinville 1973).

Wilhelm (1973) provides little in the way of habitat description, merely noting that “*Cercis canadensis* [redbud] and *Prunus virginianus* [= *P. virginiana*, common chokecherry] were in full bloom” and scattered *Hamamelis virginica* [= *H. virginiana*, witch hazel] were seen. The mention of these plants coupled with his statement that the collection occurred after climbing nearby “bluffs”, suggest the woodpecker was taken in upland hardwood forest. Although typically associated with stands of mature pine (*Pinus* spp., particularly *P. taeda* and *P. palustris*, but also *P. elliottii*, *P. echinata*, *P. rigida*, and *P. virginiana*; Conner et al. 2001), Red-cockaded Woodpeckers in central Kentucky inhabit mixed pine-oak forests (Mengel 1965; Kalisz & Boettcher 1991; Monroe & Zimmerman 1994). While Spencer and Perry counties are outside of the known natural distribution of any *Pinus*, *P. virginiana* is found west of the collection site in Clark, Floyd, and Scott counties (Fowells 1965), and may have

historically occurred in uplands along the Anderson River. However, most extra-limital records of Red-cockaded Woodpeckers are from habitats other than pine forest (Mengel 1965; Conner et al. 2001). The area of the collection site is now considered part of the Shawnee Hills Natural Region, and characterized as mixed mesophytic forest dominated by American beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), hickory (*Carya* spp.), tuliptree (*Liriodendron tulipifera*), and oaks (*Quercus* spp.) (Petty & Jackson 1966; Mumford & Whitaker 1982; Jackson 1997).

Red-cockaded Woodpeckers outside of the traditional breeding range are generally thought to be vagrant or dispersing birds (Conner et al. 2001). Breeding colonies of Red-cockaded Woodpeckers in south-central Kentucky (Mengel 1965; Monroe & Zimmerman 1994) are the nearest extant populations to Perry and Spencer counties in Indiana and represent a possible source of the bird taken by Wilhelm. These populations occur approximately 250 km southeast of the collection site, well within the known dispersal capabilities of Red-cockaded Woodpeckers; a bird observed in northern Illinois during August 2000 was over 650 km from the nearest breeding population (Conner et al. 2001). Red-cockaded Woodpeckers have also been sighted in Mammoth Cave National Park (Wilson 1961; Mengel 1965), only 110 km southeast of the collection site. Although suitable habitat is limited and reproduction remains undocumented in the park, it is possible that colonies might have historically occurred in this area (Mengel 1965).

Wilhelm's record was evaluated according to the criteria proposed by Forman & Russell (1983) for assessing the validity of historical data: first- or second-hand observations, context of the observation, possible bias in the data, and the author's knowledge of the subject. Wilhelm's record constitutes a first-hand report, and although it appears in an account not published until 1835 (11 years after the specimen was collected), the book is based on personal journals written during his travels. There is no obvious bias in the account, and Wilhelm was a knowledgeable and experienced naturalist well qualified to identify the specimens he collected. Wilhelm also carried natural history manuals and publications of American and European scientists with him to facilitate identification of specimens in the field (Lottin-

ville 1973). Furthermore, the plumage of the Red-cockaded Woodpecker is distinct (Ridgway 1914), and not easily confused with any of the more common species of small-bodied woodpeckers known to occur in the region (*Picoides villosus*, *P. pubescens*, and *Sphyrapicus varius*). Therefore, it is unlikely that a collector of Wilhelm's experience would confuse a Red-cockaded Woodpecker with one of the other woodpeckers common in the forests of southern Indiana.

In conclusion, the Red-cockaded Woodpecker collected by Wilhelm in Indiana should be regarded as a valid state record, albeit one that has escaped the notice of contemporary biologists. It is therefore recommended that the Red-cockaded Woodpecker be considered a hypothetical species (*sensu* Simon et al. 2002) in future revisions of the checklist of Indiana vertebrates. Although the record as discussed here seems valid, a hypothetical designation for the Red-cockaded Woodpecker is warranted because the specimen collected by Wilhelm cannot be located for verification. Given the lack of suitable breeding habitat in southern Indiana, it is unlikely that the Red-cockaded Woodpecker was ever a permanent member of the state's biota.

ACKNOWLEDGMENTS

Mike Robinson and the Interlibrary Loan staff at Sul Ross State University are thanked for locating several obscure references. An initial draft of this manuscript benefited from the reviews of Lewis Medlock and J. Dan Webster.

LITERATURE CITED

- Bent, A.C. 1964. Life Histories of North American Woodpeckers. Dover Publications, Inc. New York. 334 pp.
- Butscher, L.C. 1942. A brief biography of Prince Paul Wilhelm of Württemberg (1797–1860). *New Mexico Historical Review* 8:181–225.
- Conner, R.N., D.C. Rudolph & J.R. Walters. 2001. The Red-cockaded Woodpecker: Surviving in a Fire-maintained Ecosystem. University of Texas Press. Austin. 363 pp.
- Cory, C.B. 1919. Catalogue of Birds of the Americas and the Adjacent Islands in Field Museum of Natural History. Part 2. No. 2. Field Museum of Natural History. Chicago, Illinois. Publ. 203. 528 pp.
- Forman, R.T.T. & E.W.B. Russell. 1983. Evaluation of historical data in ecology. *Bulletin of the Ecological Society of America* 64:5–7.

- Fowells, H.A. 1965. *Silvics of Forest Trees of the United States*. U.S. Department of Agriculture, Forest Service, Agriculture Handbook No. 271. Washington, D.C. 762 pp.
- Jackson, J.A. 1994. Red-cockaded Woodpecker, *Picoides borealis*. *The Birds of North America*, No. 85. American Ornithologists Union, Washington, D.C. 20 pp.
- Jackson, M.T. 1997. *The Natural Heritage of Indiana*. Indiana University Press, Bloomington. 482 pp.
- Kalisz, P.J. & S.E. Boettcher. 1991. Active and abandoned Red-cockaded Woodpecker habitat in Kentucky. *Journal of Wildlife Management* 55:146–154.
- Lottinville, S. 1973. Editor's introduction. Pp. xiii–xxix. *In* *Travels in North America, 1822–1824* (Lottinville, S., ed.). University of Oklahoma Press, Norman. 456 pp.
- Mengel, R.M. 1965. *The Birds of Kentucky*. American Ornithologists Union, Ornithological Monograph No. 3. Allen Press, Lawrence, Kansas. 581 pp.
- Monroe, B.L. Jr. & W. Zimmerman. 1994. *The Birds of Kentucky*. Indiana University Press, Bloomington. 145 pp.
- Mumford, R.E. & J.O. Whitaker, Jr. 1982. *Mammals of Indiana*. Indiana University Press, Bloomington. 537 pp.
- Petty, R.O. & M.T. Jackson. 1966. Plant communities. Pp. 264–296. *In* *Natural Features of Indiana* (A.A. Lindsey, ed.). Indiana Academy of Science, Indianapolis. 597 pp.
- Ridgway, R. 1914. *The birds of Middle and North America*. Part VI. *Bulletin of the United States National Museum* 50:1–882.
- Simon, T.P., J.O. Whitaker, Jr., J.S. Castrale & S.A. Minton. 2002. Revised checklist of the vertebrates of Indiana. *Proceedings of the Indiana Academy of Science* 111:182–214.
- Wilhelm, P. 1973. *Travels in North America, 1822–1824*. (Lottinville, S., ed.). University of Oklahoma Press, Norman. 456 pp. [Originally published in 1835 as *Reise nach dem nördlichen Amerika in den Jahren 1822 bis 1824*].
- Wilson, G. 1961. Additions to the “Birds of Mammoth Cave National Park”. *Kentucky Warbler* 37:7–9.

Manuscript received 4 February 2009, revised 21 April 2009.