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NEW BREEDING RECORD AND LOCATION FOR WILSON'S PHALAROPE (*PHALAROPUS TRICOLOR*) IN THE NEBRASKA GREAT PLAINS, USA-

Wilson's phalarope (*Phalaropus tricolor*; *Scolopacidae*) is a migratory shorebird that relies on interior wetlands for foraging and breeding (Colwell and Jehl 1994, van Gils et al. 2018). Its global population status is unclear (Colwell and Jehl 1994, Lesterhuis and Clay 2010), and is variously listed as declining (Morrison et al. 2006, van Gils et al. 2018), increasing (Andres 2009, BirdLife International 2018), and exhibiting a long-term decline but recent stability (Sauer et al. 2011, Andres et al. 2012). Its global population estimate of 1.5 million birds has not been updated for 30 years, since 1988 (Colwell and Jehl 1994, Lesterhuis and Clay 2010, Andres 2012). In Nebraska, analysis of Breeding Bird Survey data indicate a population decline in Wilson's phalarope by ~1.5% between 1966 and 2014 (Sauer et al. 2017).

Published maps of the breeding range Wilson's phalarope vary but typically include north-central and northwestern Nebraska as its easternmost extent (Sauer et al. 2017, Silcock and Jorgensen 2018, van Gils et al. 2018, but see also Colwell and Jehl 1994). Their historic breeding range has contracted due to the conversion of native grasslands and wetlands to agriculture (Lesterhuis and Clay 2010), but in recent decades their breeding range has also expanded, particularly eastward (van Gils et al. 2018), presumably as birds search for suitable new habitat. In contrast to most other shorebirds, Wilson's phalaropes forage mainly while swimming and thus require close proximity to wetlands at all stages of their life cycle (Lesterhuis and Clay 2010). They are considered highly vulnerable to drought and other climate variables (Lesterhuis and Clay 2010, Galbraith et al. 2014), and recent climate modeling predicts a 100% loss of their current breeding range by 2080 due to global warming (National Audubon Society 2015).

In Nebraska, Wilson's phalaropes are documented as breeding regularly in the Sandhills and northern Panhandle (Jorgensen 2012, Silcock and Jorgensen 2018). The Rainwater Basin, situated south of the Platte River in south-central Nebraska, is not included in published maps of their breeding range, and most natural wetlands in this area were drained for agriculture over the past ~150 years (Jorgensen 2012). However, Wilson's phalaropes have occasionally been reported in this area during their breeding season (Sharpe et al. 2001, Jorgensen 2012, Silcock and Jorgensen 2018). Most such reports have not included evidence of breeding, but exceptions include reports of fledglings in 1985, 1996, and 2007, and nests in 1987, 1988, 1991, 2005, and 2007 (Sharpe et al. 2001, Jorgensen 2012, Silcock and Jorgensen 2018). A 2017 nest with eggs in Fillmore County (Silcock and Jorgensen 2018), together with the new record we detail below, comprise the first evidence of Wilson's phalarope breeding in the Rainwater Basin in 10 years.

Here, we report a first known case of successful breeding of Wilson's phalaropes on Mormon Island in June–July 2017, at a site approximately 350 km southeast of its main breeding range in Nebraska and 260–320 km north of documented breeding areas in Kansas. We observed territorial adult and subsequently juvenile Wilson's phalaropes on this river island, formed by two channels of the Platte River, which is typically characterized by ephemeral sloughs in spring that dry by early to mid-June. We detected a pair of adults on 5 June 2017 and again on 8 June 2017, who exhibited territorial behavior by repeatedly circling the same location and vocalizing in a manner that suggested that they were protecting a nest. Breeding was confirmed when two juvenile birds, accompanied by two adults, were detected on 28 June 2017. Two juveniles were subsequently detected and photographed on 30 June and again on 15 July (Fig. 1). Some other nests reported in this region were found in wetland areas with recent intensive grazing by cattle (Silcock and Jorgensen 2018), and the breeding location documented here likewise featured grazing by cattle that were present at the site.



Figure 1. Two juvenile Wilson's Phalaropes on Mormon Island, Nebraska, 15 July 2017.

In the scientific literature, Wilson's phalarope is consistently described as selecting nest sites within 100 m of wetlands (e.g., Colwell and Jehl 1994, Lesterhuis and Clay 2010, van Gils et al. 2018). This breeding location on Mormon Island featured no permanent natural wetland, but both adult and juvenile phalaropes were regularly observed in close proximity to an above-ground water tank constructed from a farm machinery tire. Situated approximately ~1 km from each of two branches of the Platte River, this tank was equipped with a hose that provided a continuous stream of

water that overflowed to flood the surrounding vegetation. This and other recent records of Wilson's phalarope breeding in new locations underline the need for more data and a better understanding of its population dynamics and prospects in light of ongoing habitat and climate change (Lesterhuis and Clay 2010, Andres et al. 2012, Galbraith et al. 2014). In June 2018, Wilson's phalaropes were sighted again on Mormon Island, which we will continue to monitor for birds.

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LITERATURE CITED

- Andres, B. A. 2009. Analysis of shorebird population trend datasets for the North American Bird Conservation Initiative: State of the Birds 2009. <<http://www.stateofthebirds.org/2009/home-page-documents/Analysis%20of%20Shorebird%20Population%20Trend%20Datasets.pdf>>. Accessed 4 July 2018.
- Andres, B. A., P. A. Smith, R. G. Morrison, C. L. Gratto-Trevor, S. C. Brown, and C. A. Friis. 2012. Population estimates of North American shorebirds, 2012. *Wader Study Group Bulletin* 119:178–194.
- BirdLife International. 2018. Species factsheet: *Steganopus tricolor*. <<http://www.birdlife.org>> Accessed 7 May 2018.
- Colwell, M. A., and J. R. Jehl Jr. 1994. Wilson's Phalarope (*Phalaropus tricolor*), version 2.0. In A. F. Poole and F. B. Gill, editors. *The Birds of North America*. Cornell Lab of Ornithology, Ithaca, NY, USA. <<https://birdsna.org/Species-Account/bna/species/wilpha>>. Accessed 4 July 2018.
- Galbraith, H., D. W. DesRochers, S. Brown, and J. M. Reed. 2014. Predicting vulnerabilities of North American shorebirds to climate change. *PLoS ONE* 9(9):e108899. <<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0108899>>. Accessed 4 July 2018.
- Jorgensen, J. G. 2012. *Birds of the Rainwater Basin, Nebraska*. Nebraska Game and Parks Commission, Lincoln, Nebraska, USA. <<http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1054&context=nebgamestaff>>. Accessed 4 July 2018.
- Lesterhuis, A. J., and R. P. Clay. 2010. Conservation plan for Wilson's Phalarope (*Phalaropus tricolor*) Version 1.1. Manomet Center for Conservation Sciences, Manomet, Massachusetts. <<http://www.avibirds.com/saps/NA/USA/EN/Wilsons%20Phalarope2010.pdf>>. Accessed 4 July 2018.
- Morrison, R. G., B. J. McCaffery, R. E. Gill, S. K. Skagen, S. L. Jones, G. W. Page, C. L. Gratto-Trevor, and B. A. Andres. 2006. Population estimates of North American shorebirds, 2006. *Wader Study Group Bulletin* 111:67–85.
- National Audubon Society. 2015. Audubon's birds and climate change report: a primer for practitioners: Wilson's Phalarope. National Audubon Society, New York, USA. <<http://climate.audubon.org/birds/wilpha/wilsons-phalarope>>. Accessed 4 July 2018.
- Sauer, J. R., D. K. Niven, J. E. Hines, D. J. Ziolkowski, Jr, K. L. Pardieck, J. E. Fallon, and W. A. Link. 2011. The North American Breeding Bird Survey, results and analysis 1966–2010. U.S. Geological Survey, Patuxent Wildlife Research Center, Laurel, MD, USA. <<http://fwspubs.org/doi/full/10.3996/nafa.79.0001>>. Accessed 4 July 2018.
- Sauer, J. R., D. K. Niven, J. E. Hines, D. J. Ziolkowski, Jr, K. L. Pardieck, J. E. Fallon, and W. A. Link. 2017. The North American breeding bird survey, results and analysis 1966–2015. Version 2.07. USGS Patuxent Wildlife Research Center, Laurel, MD, USA. <<https://www.mbr-pwrc.usgs.gov/bbs/>>. Accessed 4 July 2018.
- Sharpe, R. S., W. R. Silcock, and J. G. Jorgensen. 2001. *Birds of Nebraska: their distribution and temporal occurrence*. University of Nebraska Press.
- Silcock, W. R., J. G. Jorgensen. 2018. Wilson's Phalarope (*Phalaropus tricolor*), Version 1.0. In *Birds of Nebraska*. <<http://www.BirdsofNebraska.org>>. Accessed 4 July 2018.
- Van Gils, J., P. Wiersma, G. M. Kirwan. 2018. Wilson's Phalarope (*Steganopus tricolor*). *Handbook of the Birds of the World Alive*. <<https://www.hbw.com/node/53944>>. Accessed 4 July 2018.

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