Vol. 25. Núm. 1: e-667 enero-junio 2024

Huitzil Revista Mexicana de Ornitología

Sociedad para el Estudio y Conservación de las Aves en México A.C.

CIPAMEX

Pine Warbler (*Setophaga pinus Wilson*): new record for the state of Durango, Mexico

Chipe pinero (*Setophaga pinus Wilson*): nuevo registro en el estado de Durango, México

Andrés Ortega-Chufani[1], **Laura Magdalena Scott-Morales**[1, *]

[1] Universidad Autónoma de Nuevo León, Facultad de Ciencias Forestales. México. Linares, N.L.

***Corresponding author: morasgurrola@gmail.com**

Abstract

The Pine Warbler (*Setophaga pinus*) inhabits eastern North America, where it breeds in the northern USA and Canada, and winters in southeastern USA. In Mexico, the species is considered an irregular winter migrant in the states of Nuevo Leon and Tamaulipas. We report the first record of the Pine Warbler for the state of Durango, in the protected area of the Cañon de Fernandez State Park, municipality of Lerdo. On 8 January 2023 at 11:42 h, a Pine Warbler was observed perched on a cypress tree (*Taxodium huegelii*), located on the banks of the Nazas River. The bird was on a branch approximately two meters above the ground. This record expands the species' winter distribution in Mexico. Observations like this are essential for confirming movements of species in time and space during migration, and for documenting changes in the distribution of migratory species.

Keywords: citizen science, Cañón de Fernandez, migration, Parulidae, RAMSAR site, winter distribution.

Resumen

El chipe pinero (*Setophaga pinus*) habita en la parte oriental de Norteamérica, y se reproduce en el norte de EUA y Canadá, pasando el invierno en el sureste de EUA. En México es considerado migratorio invernal irregular en los estados de Nuevo León y Tamaulipas. Reportamos el primer registro de *S. pinus* en el estado de Durango, dentro del área natural protegida Parque Estatal Cañón de Fernández en el municipio de Lerdo. El día 8 de enero de 2023 a las 11:42 h., se observó un ejemplar de *S. pinus* posado en un árbol de Ahuehuete (*Taxodium huegelii*), ubicado a la orilla del río Nazas. El ave estaba sobre una rama aproximadamente a dos metros de altura de piso. Este registro amplía la distribución invernal de la especie en México. Reportes como el presente son esenciales para confirmar los movimientos de las especies en tiempo y espacio durante la migración, y documentar posibles cambios que ocurren en la distribución de especies migratorias.

Palabras clave: ciencia ciudadana, Cañón de Fernández, migración, Parulidae, sitio RAMSAR, distribución invernal

INFORMACIÓN SOBRE EL ARTÍCULO

Recibido:
7 de noviembre de 2023
Aceptado:
18 de mayo de 2024
Editor Asociado:
Adolfo Gerardo Navarro Sigüenza

Contribución de cada uno de los autores:

A.O.C: realizó la observación, tomó la foto, verificó la identificación y participó en el manuscrito. L.M.S.M.: verificó la observación, escribió y coordinó la revisión del manuscrito y es autor de correspondencia

Cómo citar este documento:

Ortega-Chufani, A., Scott-Morales, LM. 2024. Pine Warbler (*Setophaga pinus* Wilson): new record for the state of Durango, Mexico. Huitzil 25(1):e-667. DOI: https://doi.org/10.28947/hrmo.2024.25.1.767

Esta obra está bajo una licencia de Creative Commons Reconocimiento No Comercial-Sin Obra Derivada 4.0 Internacional.

Introduction

The Pine Warbler (*Setophaga pinus* Wilson) belongs to the family Parulidae and occurs in eastern North America (Howell and Webb 1995, Rodewald et al. 2020). The species primarily inhabits open pine and deciduous forests, Oak-scrub-Sand Pine barrens, Banks Pine (*Pinus banksiana* Lamb) moorland, and similar longleaf pine forests (National Audubon Society 2023). The Pine Warbler breeds in the United States, from eastern Texas and northeastern Arizona to New York and Michigan, and in Canada in Alberta, Manitoba, southern Quebec, and New Brunswick (eBird 2023, DeCandido and Allen 2005, Sibley 2014, Taylor 2018, Rodewald et al. 2020, Hudon et al. 2021, Naturalista 2023).

The Pine Warbler migrates to the southeastern United States in winter and returns north in early spring (The Cornell Lab 2023). Long migrations are not common, but sightings from Texas to California reveal the Pine Warbler to be a rare visitor to those states in winter (Dunn and Alderfer 2017, eBird 2023). The species has occasionally been recorded in the states of Nuevo León, Tamaulipas, and northeastern Coahuila in Mexico (Howell and Webb 1995, Garza Tobón 2020). The southernmost records of the Pine Warbler are from Costa Rica in Central America, the Dominican Republic and Haiti in the Caribbean, and Colombia in South America (Strewe and Navarro 2004, eBird 2023, Latta and Sondreal 2023).

Methods

The present record was obtained in the Cañon de Fernández State Park (25º20'40"N, 103º43'37"W), an area of dry mountain ranges bisected by the Nazas River, in the municipality of Lerdo, in the northeast of the state of Durango. In 2008, Cañon de Fernández Park was declared a RAMSAR site with an area of 17,001 ha, 0.9% of which is the riparian corridor associated with the Nazas River (SRNMA 2017). The altitude varies between 1165 and 1890 m asl with an average annual precipitation of 230 mm (SRNMA 2017). The climate is arid with mean annual temperature of 20°C and a mean annual minimum and maximum of 15°C and 30°C, respectively. The landscape is dominated by desert scrub on the slopes and plains (Rzedowski 2006), with riverine gallery forest and associated aquatic environment (RAMSAR 2008).

The observation was made by AOC during one of the frequent walks in the park between 07:00h. and 12:00h. to observe and photograph the avifauna present in the area. For this purpose, Bushnell Falcon 10x50-mm binoculars and a Nikon COOLPIX P950 digital camera with an 83x optical zoom and a 4.3–357-mm lens focal length are used. The observer walked parallel to the course of the river, pausing to photograph birds.

Results

On 8 January 2023 at 11:42 h (CST), AOC observed a Pine Warbler on a branch of a Montezuma Cypress (*Taxodium huegelii* C. Lawson) on the bank of the Nazas River in the park (Fig. 1). The temperature at the site was about 12°C, with a clear, sunny sky. The bird was approximately two meters above the ground, between the river and desert scrub. The sighting was brief, at an observation distance of 4–5 m, and two photographs were taken (Fig. 1). In the same tree, a Yellow-rumped Warbler (*Setophaga coronata* Linneaus) and an American Robin (*Turdus migratorius* Linneaus) were also observed.

We identified the Pine Warbler by its conspicuous white bars on the wings and its contrasting dark auricular and the yellow eye ring (Fig. 1B). Subsequently, the identification was ratified in laboratory by contrasting the photographs with the field guide where other characteristics such as yellow underparts, the indistinct olive streaks on sides of the breast, the white belly and undertail coverts, its relatively large bill, and the tail extending beyond the undertail coverts were confirmed (Dunn and Alderfer 2017). The notorious yellow color in the underparts and head, distinguish it from other *Setophaga* spp. present in the region (winter plumage)

Discussion

Our sighting reported here is the first for the state of Durango and the north-central region of Mexico, considerably expanding the Pine Warbler's winter distribution in Mexico. The nearest observation to the present record, according to eBird (2023), was on 2 February 2020, in the municipality of Monclova, Coahuila de Zaragoza (Garza Tobón 2020), approximately 293 km east of our sighting. Garza Tobón (2020) mentions seeing a bird perched on flowers of 'Huizache', a Sweet Acacia (*Vachellia farnesiana* Wight and Arn), but the accompanying photographs show the bird perched in a Moctezuma Cypress, similar to the sighting reported here.

Taken together, these two sightings confirm a wider winter range for the species. Whether this is

Figure 1. A Pine Warbler (*Sethopaga pinus* Wilson) perching on a branch of a Montezuma Cypress (*Taxodium huegelii* C. Lawson) in Cañon de Fernandez State Park, Lerdo, Durango, Mexico. Photographs: Andrés Ortega Chufani, 8 January 2023.

due to a marked change in mature pine forest extent or condition over the last 150 years (Pidgeon et al. 2005) is uncertain, but habitat loss and the effects of climate change on migrant birds is well documented in other species (Finch et al. 2017, Xu et al. 2019). Furthermore, since migratory behavior is a rapidly evolving trait, species are likely to be adapting to global warming (Schaefer et al. 2008). Alternate environmental stressors or climatic factors may also affect bird migration dynamics, as is the case of forest fires (Kittelberger et al. 2022).

Records such as the one reported here are important as they confirm the regional movements of species in time, as well as the temporal changes in their distributions. In addition, they can identify areas of importance for the conservation of these species. Uncertainty about the occurrence and distribution of most bird species may be due to several factors, including a lack of sightings, limited participation in birdwatching, and a lack of attention to studies of species distributions (González Carrasco 2017). It is thought that if more birdwatchers reported their sightings on citizen science platforms, twice as many species currently considered accidental or winter visitors would be recorded (Howell and Webb 1995, Rivera-López et al. 2016). Furthermore, the ease of digital platforms for recording bird sightings on a global scale increases our knowledge about species distributions owing to citizen science. Our sighting expands the winter distribution of the Pine Warbler and demonstrates the species' ability to visit and explore novel habitats in winter, potentially reflecting adaptation to climatic variability and subcontinental changes in landscape structure.

Acknowledgments

Our special thanks to C. Garza, R. Chávez, N. Reid, T. Orozco for the improvement of this manuscript. We also thank all anonymous reviewers for their improvements to this manuscript.

Literature cited

DeCandido R, Allen D. 2005. First confirmed nesting of the Pine Warbler (*Dendroica pinus*) in New York city. The Kingbird 55(4):328-334.

Dunn J, Alderfer J. 2017. National Geographic field guide to birds of North America. Washington, D.C., USA.

eBird. 2023. Pine Warbler (*Setophaga pinus*). https://ebird.org/species/pinwar. (accessed on 20 February 2023).

Finch T, Butler S, Franco A, Cresswell W. 2017. Low migratory connectivity is common in long-distance migrant birds. Journal of Animal Ecology 86:662-673.

Garza Tobón D. 2020. Pine Warbler (*Setophaga pinus*). Macaulay Library. The Cornell Lab of Ornithology: https://macaulaylibrary.org/asset/207401211

González Carrasco LG. 2017. Primer registro de chipe garganta amarilla (*Setophaga dominica*) en el estado de Chihuahua, México. Huitzil 18:53-56.

Howell S, Webb S. 1995. A guide to the birds of Mexico and Northern Central America. Oxford

University Press. Oxford, England, United Kingdom.

Hudon J, Klauke R, Lein MR, Riddell J, Ritchie B, Romanchuk G, Wershler. 2021. Thirteenth report of the Alberta Bird Record Committee. Alberta Bird Record Committee. https://hdl.handle.net/10133/5861

Kittelberger KD, Miller MK, Şekercioğlu ÇH. 2022. Fall bird migration in western North America during a period of heightened wildfire activity. Avian Conservation & Ecology 17(2):43. https://doi.org/10.5751/ACE-2339-170243

Latta SC, Sondreal ML. 2023 Observations on the abundance, site persistence, home range, foraging, and nesting of the Pine Warbler on Hispaniola, and first record of ground nesting for this species. Ornitología Neotropical 10:45-54.

National Audubon Society. 2023. Chipe Pinero (*Setophaga pinus*). https://www.audubon.org/es/guia-de-aves/ave/chipe-pinero (Consulted on 20 February 2023).

Naturalista. 2023. Chipe Pinero (*Setophaga pinus*). Comisión Nacional para el Conocimiento y Uso de la Biodiversidad: https://www.naturalista.mx/taxa/145244-Setophaga-pinus (accessed on 20 February 2023).

Pidgeon A, Schulte L, Mladenoff D. 2005. Pre-Euroamerican Distribution of Pine Warblers (*Dendroica pinus*) in Wisconsin: A tool for setting regional conservation priorities. USDA Forest Service General Technical Report PSW-GTW-191.

RAMSAR 2008. Parque Estatal Cañón de Fernández. Ficha Informativa de los Humedales Ramsar. Ramsar Sites Information Service: https://rsis.ramsar.org/ris/1747 (accessed on 3 March 2023).

Rivera-López EA, Cabrera-Cruz SA, Ramírez-Utera AL, Ramírez-Almanza EM, Villegas-Patraca R. 2016. Primer registro del mergo cresta blanca (*Lophodytes cucullatus*) en el estado de Zacatecas, México. Huitzil 17:115-119. https://doi.org/10.28947/hrmo.2016.17.1.222

Rodewald PG, Withgott JH, Smith KG. 2020. Pine Warbler (*Setophaga pinus*), version 1.0. Poole, A.F (eds). The Birds of the World. Ithaca, NY. Cornell Lab of Ornithology. https://birdsoftheworld.org/bow/species/pinwar/1.0/introduction (accessed on 20 February 2023).

Rzedowski J. 2006. Vegetación de México. Comisión Nacional para el Conocimiento y Uso de la Biodiversidad Mexicana. https://www.biodiversidad.gob.mx/publicaciones/librosDig/pdf/VegetacionMx_Cont.pdf (accessed on 20 February 2023).

Schaefer HC, Jetz W, Böhning-Gaese K. 2008. Impact of climate change on migratory birds: community reassembly versus adaptation. Global Ecology and Biogeography 17:18-49.

SRNMA (Secretaría de Recursos Naturales y Medio Ambiente). 2017. Programa de manejo del área natural protegida Parque Estatal Cañón de Ferández. Cd. Lerdo, Durango, México. https://vaxelcanon.com/wp-content/uploads/2021/06/PROGRAMA-DE-MANEJO-DEL-CAÑÓN_DE-FERNÁNDEZ-comprimido-comprimido.pdf.

Sibley D. 2014. The Sibley guide to birds. Second edition. Knopf Publishing Group. New York, USA.

Strewe R, Navarro C. 2004. New and noteworthy records of birds from the Sierra Nevada de Santa Marta region, north-eastern Colombia. Bulletin of the British Ornithologists' Club 124:38-51.

The Cornell Lab. 2023. Pine Warbler. All About Birds: https://www.allaboutbirds.org/guide/Pine_Warbler/overview (Consulted on 20 February 2023).

Taylor P. 2018. Pine Warbler. *Setophaga pinus*. En Artuso C, Couturier AR, De Smet KD, Koes RF, Lepage D, McCracken J, Mooi RD, Taylor P (eds.). The atlas of the breeding birds of Manitoba, 2010-2014. Bird Studies Canada. Winnipeg, Manitoba. http://www.birdatlas.mb.ca/accounts/speciesaccount.jsp?sp=PIWA&lang=en

Xu Y, Si Y, Wang Y, Zhang Y, Prins,H, Cao L, De Boer W. 2019. Loss of functional connectivity in migration networks induces population decline in migratory birds. Ecological Applications 29:e01960. https://doi.org/10.1002/eap.1960