



## Historical winter records of the Thick-billed Parrot (*Rhynchopsitta pachyrhyncha*) in Chihuahua

### Registros históricos de invierno de la Cotorra Serrana Occidental (*Rhynchopsitta pachyrhyncha*) en Chihuahua

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#### Abstract

The migration patterns of the Thick-billed Parrot (*Rhynchopsitta pachyrhyncha*) remain poorly known. The species usually migrates to the southern Sierra Madre Occidental for the winter, and only rarely occurs in Chihuahua during that season. A careful reading of Carl Lumholtz's 'Unknown Mexico' revealed two records of the Thick-billed Parrot in Chihuahua during the winter, one at Colonia Pacheco in January 1892, and the other at Cerro Mohinora in January 1893. These historical records suggest recent changes to the species' migration patterns because of habitat destruction or other factors.

**Keywords:** Carl Lumholtz, historical records, migration, montane, Psittacidae.

#### Resumen

Los patrones de migración de la Cotorra Serrana Occidental (*Rhynchopsitta pachyrhyncha*) siguen siendo poco conocidos. Por lo general, la especie migra a la Sierra Madre Occidental para el invierno y rara vez se encuentra en Chihuahua durante esa temporada. Una lectura cuidadosa de 'Unknown Mexico' de Carl Lumholtz reveló dos registros de la Cotorra Serrana Occidental en Chihuahua durante el invierno, uno en Colonia Pacheco en enero de 1892 y el otro en Cerro Mohinora en enero de 1893. Estos registros históricos sugieren cambios recientes en los patrones de migración de la especie debido a la destrucción del hábitat o a otros factores.

**Palabras clave:** Carl Lumholtz, migración, montano, Psittacidae, registros históricos.

#### Introduction

The Thick-billed Parrot (*Rhynchopsitta pachyrhyncha*) migrates between breeding grounds in the northern Sierra Madre Occidental mountains to its wintering range in the southern part of those mountains (Snyder et al. 2020). Most recent observations suggest that the species is absent from Chihuahua and Sonora during the winter (Sheppard et al. 2023) with occasional exceptions. Many parrots migrated north into Arizona from July 1917 to March 1918 (Wetmore 1935), probably because of drought in their normal range (Snyder et al. 2020). Observers also noted the species in Chihuahua

#### INFORMACIÓN SOBRE EL ARTÍCULO

##### Recibido:

4 febrero 2025

##### Aceptado:

20 septiembre 2025

##### Editor Asociado:

Horacio Jesús de la Cueva Salcedo

##### Contribución de cada uno de los autores:

El autor realizó completamente el documento.

##### Cómo citar este documento:

Leese BE. 2025. Historical winter records of the Thick-billed Parrot (*Rhynchopsitta pachyrhyncha*) in Chihuahua. Huitzil Revista Mexicana de Ornitología 26(2):e690. <https://doi.org/10.28947/hrmo.2025.26.2.835>



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and Sonora during the winter of 1997-1998 (Snyder et al. 2020). Despite recent tracking studies of the species, its migration patterns remain understudied (Sheppard et al. 2023).

Historical records provide a window into earlier migration patterns of the species and how they may have changed. In this study, I document two historical records of the Thick-billed Parrot from winter in Chihuahua, drawn from the work of Carl Lumholtz.

## Methods

I consulted Carl Lumholtz (1902) ‘Unknown Mexico’ (available on the Internet Archive via Google) while conducting research on the Imperial Woodpecker (*Campephilus imperialis*; Leese et al. 2022). I noted accounts of the Thick-billed Parrot as the two species shared a similar habitat in the Pine-Oak plateaus of the Sierra Madre Occidental. The records of the Thick-billed Parrot proved particularly intriguing because they occurred in the winter.

Carl Lumholtz (1851-1922) traveled through Mexico on multiple visits between 1890 and 1910. During his travels, he recorded ethnographic observations of the Indigenous peoples of Mexico and collected natural history and ethnographic specimens (regrettably including human bones; see Pereira 2005). He published his account of his travels from 1890-1898 as ‘Unknown Mexico’, which remains one of the best windows into Mexico from that era. In the area of ornithology, Lumholtz provided some of the only observations of Imperial Woodpecker in the wild, as well as several specimens



**Figure 1.** Locations of Carl Lumholtz’s winter sightings of Thick-billed Parrots (*Rhynchopsitta pachyrhyncha*) in January 1892 and 1893.

of that species now in New York, Oslo, and Tring (Leese et al. 2022).

The Lumholtz expedition collected three specimens of the Thick-billed Parrot at Colonia Pacheco (30.087, -108.349) on 20 June 1891 (Allen 1893). One specimen is held at the Carnegie Museum of Natural History, Pittsburgh (CM Birds P102663; Rogers 2022), and the other two at the American Museum of Natural History (Skins 56846 and 56847; Trombone 2013). Therefore, although he did not identify the parrot in ‘Unknown Mexico’ as the Thick-billed Parrot, there is no doubt that he was familiar with the species. Lumholtz did not mention the collection of those specimens in ‘Unknown Mexico’, but he recorded two winter sightings of parrots during his travels (Figure 1).

## Results

### Lumholtz’s Observations

In January of 1892, Lumholtz returned to Mexico after a fundraising and lecture tour of the United States. At his camp near Colonia Pacheco (30.087, -108.349, ~1950 masl), Lumholtz (1902) observed:

“There were repeated falls of snow and the sierra assumed a thoroughly northern aspect. Only the multitude of green parrots with pretty red and yellow heads chattering in the tree-tops and feasting on pine cones, reminded us that we were in southern latitudes.” (Lumholtz 1902 1:99-100).

Lumholtz’s note about yellow on the head may seem out of place, as the species has yellow feathers on the wing not the head. However, the yellow eye ring could easily account for this observation. The location, habitat, and weather where he made these observations exclude the possibility that he was reporting Maroon-fronted Parrots (*Rhynchopsitta terrisi*) or another parrot species. Henry Lunt, a member of the Latter-Day Saints, who helped to found Colonia Pacheco as a colony for the church recalled Imperial Woodpeckers and parrots there (Jones 1996: 432). Figure 2 shows the campsite, as seen in late 1891, in a photograph by Lumholtz.

In the very south of Chihuahua, Lumholtz (1902) visited Cerro Mohinora (25.963, -107.049) on 12 January 1893, where he made camp at about 3000 masl and recorded:

“We made a camp about 1,000 feet below the top, among the pines, with snow lying all around us, and in the night a flock of parrots flew



**Figure 2.** Reproduction of photograph by Carl Lumholtz of his camp site near Colonia Pacheco where he observed Thick-billed Parrots in January 1892. (Asset ID: CL0057, American Museum of Natural History, New York).

screeching past the tents. I was surprised to find the temperature so mild; there was no ice on the water, not even at night. [...] I noticed more birds between our camping-place and the top than I had ever seen before in pine forests. Blackbirds, the brown creepers (*certhia*), and red cross bills were seen on the very top.” (Lumholtz 1902 1:422)

Lumholtz’s lack of a physical description of the parrots adds some uncertainty to the identity of the species he observed. Lilac-crowned Amazons (*Amazona finschi*) are known to occur within 50 km of Cerro Mohinora (e.g. Moore Laboratory of Zoology, MLZ Bird:16130; McCormack 2025). Although the Lilac-crowned Parrot does move altitudinally, it has never been seen more than 2000 masl (Renton 2020). In addition to the high altitude of Lumholtz’s records, his description of the habitat as “pine forests” makes the Lilac-crowned Amazon less likely given the latter’s preference for semi-

deciduous lowland forests (Renton 2020).

Lumholtz only mentioned parrots in the rest of ‘Unknown Mexico’ (including volume 2) in the context of sharing the creation stories of the various cultures that he encountered in his travels

## Discussion

Lumholtz’s observations suggest two possible interpretations. First, the parrots that Lumholtz observed may have been the wintering population of the hypothesized, but now extirpated, Arizona population (Snyder et al 1994, Snyder et al. 2020). If there was an Arizona breeding population in the 19th century, it may not have migrated as far south as the birds that bred in Chihuahua and Sonora. The site of Lumholtz’s 1892 encounter is approximately 135 km south of the US-Mexico border.

Secondly, Lumholtz may have encountered the

species before forest fragmentation made wintering further north ecologically impossible. Prior to the era of widespread logging in the Sierra Madre Occidental, the more intact forests may have allowed different migratory behaviors, a possibility that may be of importance for current land managers.

Lumholtz's observations, along with the 1917-1918 Arizona irruption and the 1989 double migration of the released Arizona population (Snyder et al. 1994), suggest that the species adapts its migratory behaviors when necessary. This adaptability may be essential to the species' survival in the face of deforestation and climate change (Monterrubio-Rico et al. 2015). Reference to other historical early documents may bring additional records of the species to light, which may help elucidate its ecology.

## Acknowledgements

I thank Meghan Short, Lars Erik Johannessen, and the anonymous reviewers for their help in preparing and improving this manuscript

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