Breeding Fulvous Whistling-Ducks and other notes on the birds of Querétaro’s reservoirs

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Abstract
I present a noteworthy breeding record for the state of Querétaro in central Mexico. In addition, I demonstrate records of six species which have not previously been documented in the state. All were seen on a series of reservoirs in the lower half of the state. These further additions to the Querétaro avifauna confirm the importance of these water bodies to a wide range of species.

Keywords: distribution, range expansion, man-made water bodies.

Un registro de reproducción de Dendrocygna bicolor y otras observaciones de las aves de las presas de Querétaro

Resumen
Presento un registro notable de reproducción para el estado de Querétaro en el centro de México. Además, presento observaciones de seis especies que no habían sido previamente documentadas en Querétaro. Todas fueron vistas en una serie de presas en el sur del estado, lo que confirma la importancia de estos cuerpos de agua como hábitat para una amplia gama de especies.

Palabras clave: distribución, ampliación de distribución, presas.

Methods
I monitored four reservoirs in Querétaro (Figure 1) between August 2012 and June 2013 (El Centenario 20°29′46″N, 99°53′41″W; La Constitución de 1917 20°24′25″N, 100°04′50″W; La Llave 20°28′14″N, 100°00′48″W, and unnamed 20°33′34″N, 99°57′04″W). I made all observations with Leica binoculars and a Nikon spotting scope, and took photographs with a Canon 50D camera.

Introduction
In predominantly dry regions, inland bodies of water can be important to breeding, wintering and migratory bird species. Whilst the northernmost part of Querétaro is temperate, much of the state has an arid climate (e.g., León-Paniagua et al. 1990), which principally consists of semi-desert and agricultural habitats. A chain of reservoirs interspersing this dry habitat, however, hosts a variety of bird species (e.g., Hiley 2012). Almost 400 species have been documented in Querétaro (e.g., Navarro et al. 1993, Pineda-López 2010), of which 70 are wetland birds (Pineda-López et al. 2013).

Whilst the Sierra Gorda in the northern part of Querétaro has long been recognised for its biodiversity and has been designated as a ‘Biosphere Reserve’ since 2001 (UNESCO 2011), the rest of the state has traditionally received little ornithological attention. Querétaro does not receive many visiting foreign bird-watchers, who are more attracted to the coastal regions of Mexico, and unlike neighbouring Guanajuato (see www.audubonmex.org), does not have a strong local bird-watching chapter.

A recent increase in studies of Querétaro’s water bodies, however, has resulted in a number of additions to the documented avifauna of the state (Pineda-López and Arellano-Sanaphre 2010, Hiley 2012, Pineda-López et al. 2013). Whilst some of these records represent unusual or ‘out-of-range’ examples of opportunistic or lost individuals, the appearance of other ‘new’ species is more likely a result of the aforementioned historical under-recording in the state, and should be treated with care (Sánchez-González 2013).

Here, I present a series of sightings from a chain of reservoirs in southern Querétaro. One is a significant breeding record, whilst the others are species of varying degrees of rarity which have not been previously documented in the state. Potential explanations are discussed.
Results

*Dendrocygna bicolor* (Fulvous Whistling Duck)
On 14th October 2012, I observed six pairs of *D. bicolor* with recently fledged broods at La Llave (Figure 2). Brood sizes were between six and 12 inclusive, and each brood was estimated to be less than three weeks of age.

The following species, which had not previously been documented in Querétaro, were also noted during the study period (Figure 3).

*Botaurus lentiginosus* (American Bittern)
An adult was seen at La Llave on October 14th 2012.

*Platalea ajaja* (Roseate Spoonbill)
Individuals were seen at La Constitución de 1917 (11th September 2012), Unnamed (2nd December 2012), and El Centenario (23rd June 2013).

*Calidris melanotos* (Pectoral Sandpiper)
*C. melanotos* was noted regularly on passage at both La Llave (*e. g.*, six on 21st April 2013) and at La Constitución de 1917 (*e. g.*, three on 29th September 2012).

*Tachycineta bicolor* (Tree Swallow), *Riparia riparia* (Bank Swallow), *Petrochelidon pyrrhonota* (Cliff Swallow)
All three species were seen regularly during migration periods, but most noticeably in September at La Constitución de 1917 (*e. g.*, on 9th September 2012, I recorded 30 individuals of *P. pyrrhonota*, 17 of *R. riparia* and four of *T. bicolor*).
confirm a degree of historical under-recording in the southern part of the state of Querétaro.

*Dendrocygna bicolor*, although considered a coastal resident in Mexico (Howell and Webb 1995), has been recorded inland in Estado de México (Colón Quezada 2004) and Querétaro (Pineda-López and Arellano-Sanaphre 2010). The record presented here is the first demonstration of breeding in central Mexico, however, and is furthermore significant given the large number of pairs observed of this globally abundant but declining species (BirdLife International 2013).

Of the other species recorded, only the observations of *P. ajaja* would be considered out of range according to the maps in Howell and Webb (1995). In conjunction with other recent sightings of rare wetland birds in Querétaro (e.g., Hiley 2012, Pineda-López *et al* 2013), the presence of this species suggests that these artificial water bodies are potentially attractive to wandering wetland birds.

The remaining species, according to existing information regarding the birds of central Mexico (Howell and Webb 1995), are expected to be present in the state in either the non-breeding season (*B. lentiginosus, T. bicolor*) or in periods of migration (*C. melanotus, R. riparia, and P. pyrrhonata*). Whilst *B. lentiginosus* is skulking and difficult to see, the absence of


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