

New Galliformes for the Mexican state of Querétaro

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Durante relevamientos realizados en el estado de Querétaro, México, en busca de áreas con presencia de codornices, se descubrieron cuatro especies de galliformes sin registros previos para dicho estado^{2,9}: la Codorniz-coluda veracruzana (también llamada chivizcoyo) *Dendrortyx barbatus*, la Codorniz silbadora *Dactylortyx thoracicus pettingilli*, el Hoco faisán *Crax rubra* y la Pava cojolita *Penelope p. purpurascens*. La siguiente nota detalla la distribución de estas especies siguiendo ejemplos similares⁸ que amplían la información presentada por Howell y Webb⁹. Todas las observaciones fueron hechas en la recientemente establecida Reserva de la Biosfera Sierra Gorda, que comprende un área de 383.567 ha de terreno montañoso en el noreste de Querétaro.

Introduction

During field studies to identify locations for quails in Querétaro, Mexico, four species of Galliformes—Bearded Wood-partridge *Dendrortyx barbatus*, Singing Quail *Dactylortyx thoracicus pettingilli*, Great Curassow *Crax rubra* and Crested Guan *Penelope p. purpurascens*—previously unreported for the state^{2,9} were discovered. This note further clarifies the distribution of these species following other such examples⁸ which have amplified the information presented in Howell & Webb⁹. All observations were made in the recently established Sierra Gorda Biosphere Reserve, a 383,567 ha mountainous area in north-east Querétaro.

Bearded Wood-partridge *Dendrortyx barbatus*

- Joya de Hielo, Municipio Landa de Matamoros (21°14'N 99°10'W). Three birds were observed at a distance of 3 m on 19 July 1997, at 15h00,

scratching in the litter in an area dominated by *Quercus affinis*, *Q. sarorii*, *Magnolia dealbata*, *M. schiedeana*, *Cupressus lindeleyi* and *Liquidambar styraciflua*. On 11 July 1998, two were observed at a distance of 10 m, at 17h30.

- Cañon de las Avispas, Municipio de Jalpan de Serra (21°27'N 99°09'19"W). Five individuals were observed in October 1996, at 1,900 m, in a cloud forest fragment composed of *Abies guatemalensis*, *Cupressus lindeleyi*, *Taxus globosa* and *Pinus greggii* surrounded by a pine-oak forest. On 13 July 1998, five birds were observed along a path that connects Cañada de las Avispas to the city of Xilitla, San Luis Potosí (SLP), at 19h00.
- La Joya, 2 km east of San Juan de los Durán (21°28'N 99°09'W). Five groups were heard during 11 observational periods from 17 July–

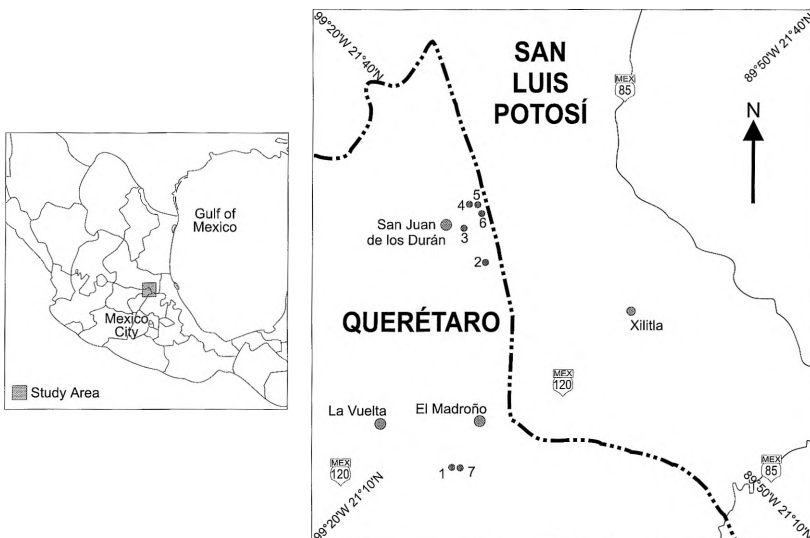


Figure 1. Locations in north-east Querétaro mentioned in the text. 1. Joya del Hielo. 2. Cañon de las Avispas. 3. La Joya. 4. Joya del Buey. 5. Joya del Durazno. 6. Los Chilares. 7. Joya de los Cedros.

27 July 1998. Birds sang during 06h30–10h45 (from dawn) and at 20h30 (dusk). In total, 39 singing bouts were recorded from the five groups, an average of 3.5 groups per singing period. This area is within the 4,663 ha Cañada de las Avispas nuclear zone. Vegetation varies from secondary growth to mature forest dominated by *Quercus affinis*, *Q. laurina*, *Pinus greggii* and *Liquidambar stryaciflua*.

- Joya del Buey, 3 km north-east of San Juan de los Durán (21°29'N 99°09'W). On 26 July 1998, at 12h30, a dog accompanying the investigators flushed three birds.

Singing Quail *Dactylortyx thoracicus pettingilli*

- Joya del Hielo. Two adults with four chicks were observed on 11 July 1998, at 17h30.
- Cañon de las Avispas. A small group was heard singing on 13 July 1998.
- Joya de los Cedros (near La Florida) (21°14'N 99°09'W). Five birds were observed on 11 August 1998, at 14h00. On 12 August 1998, seven birds were seen at 19h00.
- La Joya. Six adults were observed scratching in the litter on 17 August 1998 at 12h00.
- Joya del Durazno (21°29'N 99°09'W) and Los Chilares (21°28'N 99°08'W). Seven and six adults were observed foraging in oak forest during the morning hours shortly after sunrise on 17–18 August 1998.

Great Curassow *Crax rubra*

- Cañon de las Avispas. On 13 July 1998, an adult male was observed and photographed feeding on acorns in the crown of an oak tree, at 19h15.

Crested Guan *Penelope purpurascens purpurascens*

- Joya de los Cedros. Three birds were observed feeding on acorns at 08h30 on 12 August 1998.
- La Joya. Several birds vocalised at dawn and dusk of 17 August 1998.

Discussion

Howell & Webb⁹ list all four of these Galliformes as occurring on the Gulf slope of Mexico principally from southern Tamaulipas south. Range maps of Singing Quail, Great Curassow and Crested Guan suggest their presence in extreme north-east Querétaro. However, we found no published accounts to substantiate the inclusion of Querétaro within these species' ranges. Our observations document their presence on the western slope of the Sierra Madre Oriental in tropical semideciduous and evergreen forests.

Observations of Bearded Wood-partridges in Querétaro are the first published records^{1,4,6} for the state and verify the suggestion of Collar *et al.*³ that

the species should occur in Querétaro. Because of its remoteness, populations of the Bearded Wood-partridge in the Sierra Gorda Biosphere Reserve in Querétaro may have the greatest long-term potential for survival despite the lack of mention of this region by Wege & Long¹³ as a key area in the conservation of this species. While the greatest population densities for the species were found historically in Veracruz, habitat loss in this state, through land conversion into monocultural crops (e.g. sun coffee, pine plantations, citrus groves), human settlement, and livestock grazing, is significant.

According to Warner & Harrell¹² Singing Quail observed in Querétaro are members of the race *D. t. pettingilli*. This subspecies was described from specimens collected at Rancho del Cielo, 2.5 km north-west of Gomez Farias, Tamaulipas. Warner & Harrell¹² described the range of this race as 'forests of the Sierra Madre Oriental of southwestern Tamaulipas and southeastern San Luis Potosí'. It is apparently not common in south-east SLP as Davis⁵ reported observing only five birds during 288.5 hours fieldwork near Xilitla, SLP. The species is listed in the preliminary bird list of Sierra Gorda Biosphere Reserve, compiled by Roberto & Mario Pedraza (Grupo Ecologico Sierra Gorda IAF).

Leopold¹⁰ listed the range of the two cracids as along the eastern escarpment from Tamaulipas south, but did not include Querétaro within the known range of either species¹¹. Davis⁵ reported that during winter bird censuses at Xilitla, SLP, the only cracid observed was Plain Chachalaca *Ortalis vetula*. Great Curassow and Crested Guan have also been reported further north in the El Cielo Biosphere Reserve in south-west Tamaulipas⁷ (*JCE* unpubl. obs.). Leopold¹⁰ stated that, in Tamaulipas, during winters of good acorn crops, Great Curassow is found in the oak-sweetgum forest, well above their normal breeding range. In Querétaro, the curassow apparently moves into this floral community during midsummer and perhaps breeds there.

As the Galliformes we observed are included on the preliminary list of birds in the Sierra Gorda their presence had been noted by birdwatchers prior to our studies. The reports included here serve to verify previous anecdotal observations and encourage the use of this recently proclaimed biosphere reserve for ecotourism purposes. Despite significant changes in the landscape, an impressive, virgin oak-sweetgum *Quercus-Liquidambar* forest still exists in south-west San Luis Potosí, Hidalgo and north-east Querétaro. Although outside the published ranges of many bird species these forests support a significant and diverse avifauna previously thought only to occur along the Gulf slope. Many of these bird species are becoming





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Figures 1–5. Views of valley at La Joya, Querétaro, Mexico. Five groups of Bearded Wood-partridge *Dendrortyx barbatus* were recorded in this valley (Victor González / Center for the Study of Tropical Birds)

difficult to observe as popular, more coastal, locations become modified for agriculture, tourism or human habitation.

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