

Observations of Sumichrast's Wren *Hylorchilus sumichrasti* in the Cerro de Oro, Oaxaca, Mexico

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Se estudió la historia natural del Cuevero de Sumichrast *Hylorchilus sumichrasti*, una especie endémica a México que se considera amenazada o casi amenazada. Se describe brevemente el canto de los machos en Cerro de Oro, Oaxaca. A diferencia de la mayoría de los troglodítidos, el Cuevero de Sumichrast presenta dimorfismo sexual en el canto. Mientras que la mayoría de los troglodítidos se alimentan exclusivamente de artrópodos, esta especie frecuentemente consume caracoles. El Cuevero de Sumichrast es localmente común. Sin embargo, no se encuentra en ningún área natural protegida.

Sumichrast's Wren *Hylorchilus sumichrasti* is a little-known species that is considered Near Threatened² or Endangered¹⁰. Here, we present data on some aspects of its life history based largely on observations made in 1994 and 1995 at Cerro de Oro, Oaxaca (18°02'N 96°15'W), and on four specimens collected by ADSM in Cerro de Oro and nearby Río Manso (17°42'N 95°55'W).

Methods

Opportunistic life-history observations were made of a territorial pair in March–July 1994 (120 hours) and while conducting censuses along an 850-m transect (straight-line distance 738 m). Sumichrast's Wren abundance was estimated by spot-mapping. We recorded all birds seen or heard in 15–30 minutes at points every 50 m along the transect. Spot-mapping was performed from 07h00 to 12h00 on 2–3 days in August, September, December, and February–April in 1994–1995. All counts were made by MPV. Individuals were identified based on clusters of registrations, with emphasis on locating the edges of adjacent territories based on simultaneous records. The number of females was probably underestimated due to our emphasis on birds detected simultaneously, because females sing less frequently than males¹¹ and female song does not carry as far as that of males (indeed, the female song, being less conspicuous, was only discovered in the mid-1990s whereas male song has been known since the early 1980s). Dietary information was gathered while observing the focal pair, and by analysing the stomach contents of two females collected in Cerro de Oro (3 June and 28 October 1995) and of an adult male (completely ossified cranium) and a female collected in Río Manso (26 April 1994 and 29 June 1995).

Breeding season

Based on the our observations and data in the literature, the breeding season of Sumichrast's Wren is March–August: we observed nest-building by the

focal pair in March and copulation in April; active nests have been found in May^{1,3}; the females collected on 3 and 29 June 1995 had brood patches and active ovaries with many small follicles (ADSM pers. obs.); and we observed fledglings being fed by adults in July–August. One pair along the transect had two fledglings, which sometimes foraged separately, each with one adult; at other times both foraged with one adult or with both parents.

Song

Song was usually delivered from boulders, and occasionally from nearby low vegetation. Males in Cerro de Oro had small song repertoires of 3–4 song-types. Males sang each type many times before falling silent or switching to a different one. Between songs, males often crouched and bobbed up and down in a similar manner to many other wrens, including House *Troglodytes aedon*, Rock *Salpinctes obsoletus* and Canyon Wrens *Catherpes mexicanus*. Neighbouring males sometimes counter-sang using identical song-types. Songs had 4–9 notes. Song-types made by an individual varied in intonation and/or number of notes, sometimes involving the addition of an extra note in the middle or at the end of the song. In most parts of the species' range, both 'short songs' and 'long songs' are made. These differ in structure, number of notes and duration⁵. 'Long songs' were never heard at Cerro de Oro.

In contrast to most other wrens, female Sumichrast's Wrens have a song-like vocalization very different from the male song¹¹. Female song was sometimes made from the same perches as male song, or while foraging or transporting nesting material. Sometimes female song is made in duet with male song. Both sexes sang throughout the year, but much less frequently in winter, like Canyon Wren⁸. Howell & Webb⁷ described the singing posture of Sumichrast's Wren as 'usually (?) fairly horizontal, tail cocked' whereas in Nava's Wren *Hylorchilus navai* it is 'usually (?) fairly vertical, tail held straight down'. In Cerro de Oro, Sumichrast's Wren of both sexes sang with the body

held upright and the tail held straight down or slightly cocked.

Diet and foraging

As in other wrens, diet consisted almost exclusively of small invertebrates. However, in contrast to other wrens, snails were a frequent prey item, although Zapata Wren *Ferminia cerverai* regularly takes the eggs of *Pomacea* snails⁹. The stomach contents of the four specimens contained shell remains of different snail species (Table 1). Snail shells 1.5–5 mm long and a fruit measuring 6.6 x 3.5 x 1.1 mm were found in the stomachs, but larger prey (c.4 cm long) were observed being caught. As in other wrens strongly associated with rocky outcrops, Sumichrast's Wren mainly probed for prey in rock crevices or gleaned from rocky surfaces, clinging to sloping or occasionally vertical rocks. Other foraging behaviours included tossing aside fallen leaves with the beak, and occasional short sallies after flying insects (including once after a moth). Sumichrast's Wren hopped on rocks while foraging, and rarely flew short distances (<10 m). Foraging individuals frequently flicked their tails downward and slowly raised them to their cocked position (roughly once per second).

Table 1. Prey of Sumichrast's Wren *Hylorchilus sumichrasti* principally based on stomach contents of four specimens. Items labelled with an asterisk were detected only through field observations. 1: female (3 June) Cerro de Oro; 2: female (28 October) Cerro de Oro; 3: male (26 April) Rio Manso; and 4: female (29 June) Rio Manso.

Prey item		2	3	4
Unidentified annelid *				
Arthropods:				
Unidentified spider *				
Oribatidae (Acarina)				
Diplopoda				
Cnididae (Hemiptera)				
Coleoptera				
Unidentified Coleoptera				
Unidentified Scarabaeidae*				
<i>Canthon</i> sp. (Scarabaeidae)				
Carabidae				
Unidentified Chrysomelidae				
<i>Coptocyla</i> sp. (Chrysomelidae)				
Unidentified Tenebrionidae				
<i>Heleodes</i> sp. (Tenebrionidae)			2	
Heteroceridae				
Hydrophilidae				
Curculionidae		3		
Lepidoptera (adults and larvae)*				
Orthoptera*				
Tupilidae (Diptera)*				
<i>Odontomachus</i> (Formicidae)*				
Molluscs:				
Annulariidae	4	3	8	2
<i>Chandrapama</i> (Annulariidae)		2	6	2
<i>Salasiella</i> sp. (Spiraxidae)				
Unidentified (opercula)			22	
Plant:				
Unidentified fruit (sycone?)				

Abundance

Sumichrast's Wren in Cerro de Oro was more abundant than is usual in Canyon Wren. Conservative interpretation of the spot maps yielded a total of at least 13 males and nine females along the 738 m-long and 200 m-wide transect, whereas the only comparable data for Canyon Wren was 11 territories along a 3.2 km-long canyon⁸.

Discussion

Juveniles and females of most passerines complement their diets with a source of calcium, such as snails, during periods of egg-laying and skeleton growth⁶. Because all four stomachs examined had snails, including that of the male and the 28 October female, which clearly was not breeding or growing, it appears that snails may be a regular component of the diet of Sumichrast's Wren.

Sumichrast's Wren combines high abundance with small geographical range and narrow ecological tolerance. The species is unusual in the presence of a song-like vocalization in females and in the high frequency of snails in the diet. Due to its small range and strict ecological requirements, the species is deemed threatened. The karst habitat of Sumichrast's Wren has not (yet) been as severely affected as that of Nava's Wren, but it is being increasingly encroached by cultivation and cattle ranches⁴. Rock outcrops tend to be left as forested patches embedded in rangeland. Furthermore (and unlike Nava's Wren), there are no protected areas within the range of Sumichrast's Wren. Its territories, in some cases, reached the forest edge with no apparent edge effect. However, increased human disturbance (including logging and rock extraction) affected Sumichrast's Wren abundance along one 300-m transect in Cerro de Oro, where there were no Sumichrast's Wren territories (a male was heard only once in five visits). The species requires greater attention in terms of conservation and research.

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References

- Bangs, O. & Peters, J. L. (1927) Birds from the rain forest region of Veracruz. *Bull. Mus. Comp. Zool.* 67: 471–487.
- BirdLife International (2000) *Threatened birds of the world*. Cambridge, UK: BirdLife International & Barcelona: Lynx Edicions.

3. Collar, N. J., Gonzaga, L. P., Krabbe, N., Madroño Nieto, A., Naranjo, L. G., Parker, T. A. & Wege, D. C. (1992) *Threatened birds of the Americas: the ICBP/IUCN Red Data Book*. Cambridge, UK: International Council for Bird Preservation.
4. Gómez de Silva, H. (1997) Distribution and conservation status of *Hylorchilus* wrens (Troglodytidae) in Mexico. *Bird Conserv. Intern.* 7: 409–418.
5. Gómez de Silva, H. (1997) Comparative analysis of the vocalizations of *Hylorchilus* wrens (Troglodytidae). *Condor* 99: 981–984.
6. Graveland, J. & van Gijzen, T. (1994) Arthropods and seeds are not sufficient as calcium sources for shell formation and skeleton growth in passerines. *Ardea* 82: 299–319.
7. Howell, S. N. G. & Webb, S. (1995) *A guide to the birds of Mexico and northern Central America*. Oxford: Oxford University Press.
8. Jones, S. L. & Dieni, J. S. (1995) Canyon Wren *Catherpes mexicanus*. In: Poole, A. & Gill, F. (eds.) *The birds of North America*, 197. Philadelphia: Acad. Nat. Sci., Philadelphia & Washington DC: American Ornithologists' Union.
9. Martínez García, O. & Martínez García, A. (1991) Primer registro de nidificación y observaciones ecoetológicas de *Ferminia cerverai* (Aves: Troglodytidae). *Rev. Biol.* 5: 91–93.
10. México (2002) Norma Oficial Mexicana NOM-059-ECOL-2001, Protección ambiental: especies nativas de México de flora y fauna silvestres—Categorías de riesgo y especificaciones para su inclusión, exclusión o cambio—Lista de especies en riesgo. Mexico City.
11. Pérez-Villafaña, M., Gómez de Silva, H. & De Sucre-Medrano, A. (1999) Sexual dimorphism in the song of Sumichrast's Wren (*Hylorchilus sumichrasti*). *Wilson Bull.* 111: 128–129.

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