

# Guatemalan Pygmy Owl *Glaucidium cobanense* is a good species

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New World pygmy owls have ridden a long, tumultuous and undoubtedly far from finished taxonomic journey, with numerous splits and new species making their way into the literature in the last 20 years. One enigmatic montane taxon is *Glaucidium [gnoma] cobanense*, which occurs in highland forests from northern Chiapas state, Mexico, through Guatemala to central Honduras. Its voice remained unknown into the 1990s, and its taxonomic status thus remained unresolved.

In Middle America, the traditional view of highland pygmy owls has been that birds from Mexico south to Honduras were part of the 'Northern Pygmy Owl' *Glaucidium gnoma* complex, whilst those in Costa Rica and Panama were part of the Andean Pygmy Owl *G. jardinii* complex<sup>1</sup>. Mexican populations, however, probably comprise at least three species<sup>3</sup>, and recently the southern Central American populations have been treated as a distinct species, Costa Rican Pygmy Owl *G. costaricanum*, which has phylogenetic affinities with the mountain-inhabiting pygmy owls of northern Middle America and not with Andean Pygmy Owl of South America<sup>6</sup>. On the basis of its plumage and biogeography, *G. [gnoma] cobanense* from the northern Central American highlands (Figs. 1–3), described by Sharpe<sup>7</sup> in 1875, seemed likely to prove specifically distinct from pygmy owls in the mountains north-west of the Isthmus of Tehuantepec, and the name Guatemalan Pygmy Owl was provisionally suggested<sup>3</sup>. This owl was treated as a full species, Guatemalan Pygmy Owl *G. cobanense*, in the *Handbook of the birds of the world*<sup>4</sup>. Now, a recent paper<sup>2</sup> has compared the voice of *cobanense* from Guatemala and Mexico with nominate *gnoma* from Mexico, providing additional support for species status.

## Vocalisations of Middle American highland pygmy owls

We here describe the voice of *cobanense* (Figs. 4–6) and compare it briefly to its closest montane relatives, Mountain Pygmy Owl *G. gnoma* to the north-west (here considered a species distinct from the vocally very different Northern Pygmy

Owl *G. californicum* of the USA) and Costa Rican Pygmy Owl to the south-east. See Eisermann & Howell<sup>2</sup> for details of recordings, some of which can be heard online at the Macauley Library, Cornell Lab of Ornithology ([www.macauleylibrary.org](http://www.macauleylibrary.org)) and at xeno-canto (XC; [www.xeno-canto.org](http://www.xeno-canto.org)). Sonograms here were produced using RavenLite software, with a 'spectrogram sharpness' value of 404.

The hooting of *cobanense* is notably faster paced than that of *gnoma* (typically 30–35 notes / 10 seconds vs. 16–19 notes / 10 seconds in *gnoma*) and can be given in repeated bursts of 3–4 hoots (Fig. 4) and in prolonged series, often with a paired rhythm (Fig. 6b). As in other pygmy owls, bursts of hooting can be preceded by quavering whistles. Another vocalisation that may draw attention is the very rapid-paced *whiwhiwhi ...* given by females when establishing a nest site (Fig. 5); the pattern of this call may suggest a high-pitched Northern Flicker *Colaptes auratus* or a small falcon.

A comparison of the song of *cobanense* with that of Costa Rican Pygmy Owl (Fig. 6b–c) reveals that both are decidedly fast-paced relative to *gnoma* (Fig. 6a), but in these examples *cobanense* is even faster paced than *costaricanum* (30–35 notes / 10 seconds vs. 26–28 notes / 10 seconds) and has distinctly paired hoots; consequently, it sounds quite different. Fig. 3b of Robbins & Stiles<sup>6</sup> shows that *costaricanum* can produce around 32 notes / 10 seconds in paired series, although with a subtly but distinctly different rhythm to *cobanense* (*costaricanum* has notes within pairs more widely separated, but with shorter pauses between pairs than *cobanense*). Moreover, *costaricanum* averages

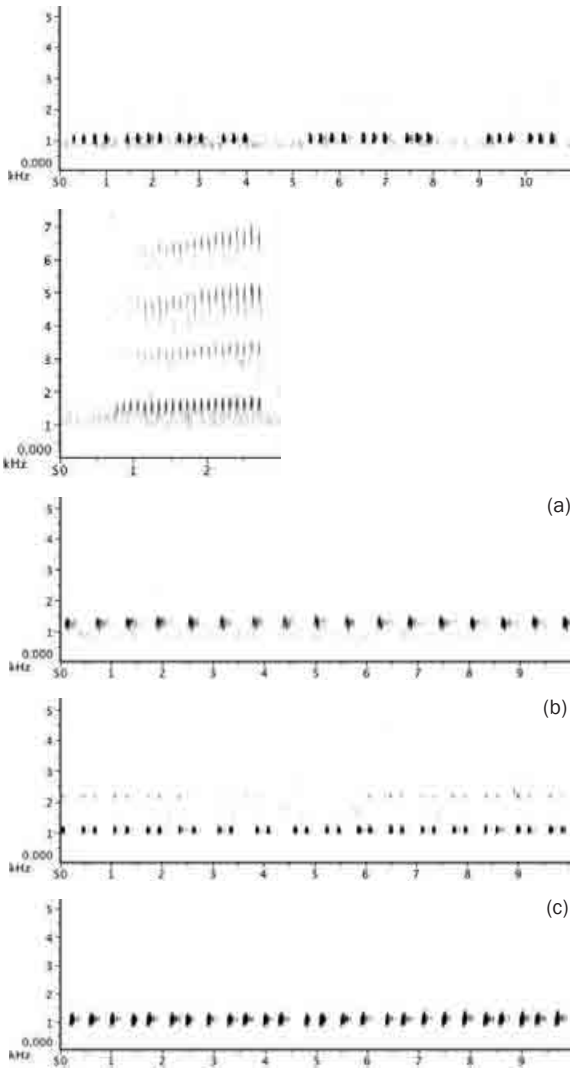


Figure 1. Brown-morph Guatemalan Pygmy Owl *Glaucidium cobanense* in typical bromeliad habitat, Chanal Road, Chiapas, Mexico, 3 March 2007 (the bird in recording Fig. 6). (Steve N. G. Howell)

Figure 2. Rufous-morph Guatemalan Pygmy Owl *Glaucidium cobanense*, Chelemhá Reserve, Alta Verapaz, Guatemala, 27 May 2008 (Knut Eisermann)

Figure 3. Brown-morph male Guatemalan Pygmy Owl *Glaucidium cobanense* at nest entrance, Chelemhá Reserve, Alta Verapaz, Guatemala, 13 March 2010 (Claudia Avendaño)





Left, top to bottom:

Figure 4. Spontaneous hoots in repeated short bursts (note the rapid pacing within bursts) by Guatemalan Pygmy Owl *Glaucidium cobanense*, Chanal Road, Chiapas, Mexico, 13 March 2010 (Steve N. G. Howell)

Figure 5. Nest site vocalisation of female Guatemalan Pygmy Owl *Glaucidium cobanense*, Chelemhá Reserve, Alta Verapaz, Guatemala, 12 March 2010 (Knut Eisermann)

Figure 6. Comparison of typical prolonged song of: (a) Mountain Pygmy Owl *Glaucidium gnoma*, Oaxaca state, Mexico, 19 March 2010 (S. N. G. Howell); (b) Guatemalan Pygmy Owl *G. cobanense*, Chiapas state, Mexico, 3 March 2007 (S. N. G. Howell); and (c) Costa Rican Pygmy Owl *G. costaricanum*, Cartago province, Costa Rica, 9 February 2001 (A. Spencer; XC72943). Note the relatively slow pace of Mountain and quick pace of Guatemalan. All three taxa often give notes in a paired rhythm, but *gnoma* and *costaricanum* (at least) can also give notes with fairly steady pacing.

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longer winged but shorter tailed than *cobanense*<sup>6</sup>, which does not differ appreciably in size from *gnoma*<sup>5</sup>. Such differences in voice and morphology are comparable to those between other species of pygmy owls, and the most realistic approach is to consider *cobanense* a distinct species, Guatemalan Pygmy Owl.

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