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Rediscovery of Southern Horned Curassow *Pauxi unicornis koepckeae* in Cerros del Sira, Peru

Melvin Gastañaga, A. Bennett Hennessey and Ross MacLeod

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En los últimos años por estudios recientes, se ha descubierto que el crácido amenazado de extinción *Pauxi unicornis* habita en un rango mucho más restringido, con dos subespecies separadas por aproximadamente 1.300 km. Gracias a estos estudios actualmente ha cambiado su estatus de conservación de Vulnerable a En Peligro de Extinción (BirdLife). En Bolivia la subespecie *P. u. unicornis* vive en los Parques Amboro y Carrasco entre 400 y 1.200 msnm y en Perú la población *P. u. koepckeae* habita en la Reserva Comunal El Sira (616.413,41 ha.). En Perú después de la colecta de dos especímenes en 1969 no se han tenido registros de la especie hasta las últimas investigaciones a cargo de Asociación Armonía en el área. La primera realizando entrevistas locales en comunidades étnicas alrededor de los Cerros del Sira en el 2003, en la cual se encontraron 14 personas que describían perfectamente la especie. La segunda iniciando la búsqueda de la especie en los lugares señalados en el primer estudio. Y las dos últimas en el 2005 que permitieron encontrar a la especie a mayor altura de la señalada por la literatura y también realizar la grabación en video de un ejemplar en su estado natural. Esto se convertía en el primer registro con evidencia física de la especie viva en el campo después de 36 años, pero todavía no está libre de amenazas en la zona como cacería y pérdida de hábitat.

Southern Horned Curassow *Pauxi unicornis*, formerly considered Vulnerable to extinction¹, was upgraded to Endangered, in 2005, based on new information on hunting threats, habitat destruction and a more restricted range than previously thought². Recent studies have revealed that the former assumption^{3,4} that the species would be found throughout the foothills of the Andes from central Peru to central Bolivia was incorrect. Recent research^{5–8} demonstrates that *P. u. koepckeae* is isolated in Peru and *P. u. unicornis* occurs only in Bolivia, with a gap of over 1,000 km between them.

In autumn 2003, Armonía (BirdLife in Bolivia) commenced a project to investigate the status of Peruvian *P. u. koepckeae* by conducting local information surveys⁶. Prior to this, this form was known solely from two specimens collected in 1969, in the isolated Cerros del Sira, dpto. Huánuco, central Peru¹³, and a possible sighting at Távara, in southern Peru near the border with Bolivia³. The first phase of the project located 30 indigenous people around the isolated Cerros del Sira with some knowledge of the species, including 14 able to describe it perfectly without prior information⁶, providing the first evidence of the species' persistence in Peru for 34 years. Indeed, some local people reported hunting the species recently. This phase also confirmed that the observer in Távara³ considered his observation to be unconfirmed¹¹ and, after failing to find any local people familiar with the species in the area, concluded the species was unlikely to exist in this region of Peru.

At the onset of the second phase, which is reported here, no physical evidence of *P. u. koepckeae* had been uncovered for 35 years and it had never been observed alive in the wild other than by local hunters or guides^{10,13}. In order to conserve the species, it is important to assess the population size and confirm the species' distribution. The aim of the field work was thus, to make the first scientific observations *P. u. koepckeae* in the wild and obtain evidence of its continued existence in Peru.

Study area and Methods

The Cerros del Sira range is located in central Peru, in dpto. Huánuco. These mountains, isolated from the Andes, are known for their endemic biodiversity and form part of Endemic Bird Area 053, the Peruvian East Andean Foothills¹², a region of high global conservation importance. Most of the Sira range lies within the El Sira Communal Reserve⁹, but no infrastructure for its protection apparently exists.

Over the course of 14 months, three visits were made to the Cerros del Sira to search areas of habitat thought to be probably suitable for *P. u. koepckeae*, which is known to inhabit altitudes of 400–1,200 m in Bolivia. Field work during the first visit was conducted on 1 October–15 November 2004 and included three sites: A (09°18'S 74°50'W), B (09°23'S 74°50'W) and C (09°20'S 74°49'W). Two ornithologists and two botanists, accompanied by a local guide, were responsible for the field work. The second search occurred on 2–7 March 2005, during which period two observers and a local guide

returned to site B, where hunters reported having recently shot a *P. u. koepckeae*. The third search was undertaken on 13–23 October 2005, with two observers and a local guide again at site B.

In all cases the town of Puerto Inca was utilised as a base and local trails were used to access surrounding indigenous communities 1–2 days walk away, from where team members walked a further day to areas where local people had reported hunting or observing *P. u. koepckeae* within the last decade. We left camp each day at 06h00 to make observations in the forests of the surrounding area. Each day was spent walking existing trails or transects newly opened by the guides. We usually returned to camp around 15h00–16h00. The steep terrain and difficulty in cutting new trails meant that the maximum area explored at each site was estimated at c.6 km in diameter.

Observations were made using binoculars, with a Sony 990x Hi8 video camera or Kodak CX7330 digital stills camera to record any observations. A minidisk recorder (Sharp MT280E) with Sennheiser ME66 microphone was also used on the final visit. Given the species' threatened status and the lack of population data for *P. u. koepckeae*, collection of a specimen was deemed inappropriate and would have conflicted with the ongoing education work aimed at implementing a voluntary hunting ban by local communities.

Results

During the visit in 2004 we did not find the species, but did meet additional local people with knowledge of the species. On the second visit, to site B, on 4 March 2005 whilst following the usual routine, MG and an assistant observed a *P. u. koepckeae* at 09°23'S 74°47'W, at 1,200 m, perched slightly above head height, in a tree 5 m distant. During the c.5-minute observation, it made a loud barking call, of a type unknown in Bolivia (RM pers. obs.), which it continued throughout the observation, before flying downslope. A short low-quality video was obtained using a digital stills camera, but the resolution was insufficient to record all of the subspecific characters. On 5 March, both observers and the local guide returned to the same area and, based on the guide's identification, heard four individuals singing. The song identified by the guide as belonging to *P. u. koepckeae* had notes similar to those of *P. u. unicornis* from Bolivia and to the song of *Mitu tuberosum*, but appeared to differ from both other taxa in the pattern of notes, always lacking the final emphasis described by Cox *et al.*³

On the third visit, MG and an assistant surveyed higher at site B, up to altitudes of 1,700

m. On 17 October MG, an assistant and the local guide observed a pair of *P. u. koepckeae* at 09°23'S 74°46'W, three-hours walk from the first observation, at 1,430 m, and made a 14-minute video of one of the birds, providing the first documentation (Fig. 1) for the continued existence of *P. u. koepckeae* since collection of the type series in 1969¹³ as well as the first behavioural record of this subspecies. Three individuals, giving the same song as heard during the previous visit, were audible, albeit further away and only briefly.

Another noteworthy record made during this visit was an encounter with a hunter carrying a Black Tinamou *Tinamus osgoodi*, on 14 October (Fig. 2), another poorly known species considered Vulnerable by IUCN / BirdLife International¹². Indigenous people commented that hunters visit the mountains principally to search for *T. osgoodi* and Brown Woolly Monkey *Lagothrix lagotricha*, and that *P. u. koepckeae* is taken only opportunistically, rather than constituting a main target.

Discussion and recommendations

The three *P. u. koepckeae* observed were very similar to one another in plumage and differed from the Bolivian subspecies, based on photographs taken in Carrasco National Park, Bolivia, by RM, and observations in captivity in Santa Cruz zoo, by MG. The main differences are the colour and shape of the casque; greyish blue, rather than blue in *P. u. unicornis*, and more flattened towards the head than the upright horn of Bolivian *P. u. unicornis*. *P. u. koepckeae* also has a bluish rather than greenish sheen to the plumage. We believe these differences, combined with those in vocalisations, suggest that the two populations may represent different species.

From our observations, it appears that the main threats to *P. u. koepckeae* are hunting by local communities and habitat loss due to logging and extraction of gold. The species seems particularly susceptible to hunting pressure because it exhibits little fear of humans. However, local communities only specifically hunt other species (see above) and given that this curassow does not represent an important part of their diet, it appears practical to work with local people to eliminate hunting of *P. u. koepckeae* with the assistance of other resources.

Given the threatened status of *P. u. koepckeae*, the subspecies' distinctiveness and its small range, the need for immediate conservation action is obvious. It is imperative to develop a long-term conservation project in the Sira area, focusing not only on *P. u. koepckeae* but also at conserving the habitat and other wildlife of the area, which includes six restricted-range bird species¹². In the short term, the most urgent requirements are: to



Figure 1 (above and left). First photographs of *Pauxi unicornis koepckeae*, Cerros del Sira, Peru (taken from video recording) (Melvin Gastañaga)



Figure 2. Black Tinamou *Tinamus osgoodi* hunted in Cerros del Sira, Peru (Melvin Gastañaga)

determine the distribution of *P. u. koepckeae* in Sira, to estimate the population size, and the extent to which it is threatened. We consider that long-term conservation of the region's threatened species is best promoted by finding alternatives to hunting for the local people, and through ongoing environmental education in combination with launching courses as to opportunities for sustainable use of natural resources—giving alternatives to their over-exploitation. It is also important to improve the infrastructure of the existing El Sira Communal Reserve, by contracting park guards from the local communities to control hunting and logging. We also consider that it would be advantageous to create a private reserve in the area where we found *P. u. koepckeae* and which currently lies only within the buffer zone of the communal reserve, making this area threatened by agricultural expansion. Such a reserve should provide employment for the local communities as well as protect the curassow.

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