Noteworthy field observations of the Andean Condor in Bolivia

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A case of a healed wing bone fracture

On 11 August 2012, while monitoring Andean Condors *Vultur gryphus* in Chuquisaca (20° 17' S 64° 52' W), central Bolivia, I photographed an adult male Andean Condor whose right wing had a strange shape. This wing had a lump in the middle part, looked shorter than the left wing and seemed to be missing feathers (Figure 1). The individual didn't show any loss in flight ability and its behaviour was indistinguishable from other condors observed in the area.

The untidy appearance of the secondary feathers – which are inserted in the proximal section of the forearm – suggests that the photographed condor had recovered from a wing bone fracture (ulna or radius). (Naisbitt & Holz 2004, G. Wiemayer *pers. comm.*).

Figure 1. Front and rear view of the condor recovered from a wing bone fracture.

During extensive field observations of Andean Condors in Peru and Colombia, leg and foot injuries (some of them caused by shooting) were the most commonly observed, but no wing injury was reported (McGahan 2011). Houston (1993) reported three cases of healed ulna fractures in griffon vultures (*Gyps africanus* and *G. rueppellii*) in Africa, and indicated that the probable causes for the injuries were mid-air collisions and fighting at carcasses. Andean Condors frequently conduct flying pursuits where it is common to see them collide, while fights at carcasses are also common (McGahan 2011, *pers. obs.*). One of these causes could have originated the observed injury, but a gunshot could be the reason as well, since human persecution (shooting owing to alleged attacks on livestock) is a major threat to the Andean Condor in Bolivia (Balderrama *et al.* 2009).

Houston (1993) estimated that griffon vultures can survive almost three weeks without feeding, and suggested that this period of time is long enough for an ulna fracture to heal. Likewise, Andean Condors can go several days between feedings (Wallace & Temple 1987) and this observation shows their ability to survive disabling injuries in the wild, and being able to recover until they reach a level of fitness comparable to that prior to their injury.

It would be interesting to assess the causes and incidence of these types of injuries, as well as monitor the birds that have survived them.

A leucistic Andean Condor

Leucism is defined as a partial or total lack of melanin in a few or all feathers and it is caused by an inherited disorder of the deposition of this pigment in the feathers (van Grouw 2006). It is a commonly reported colour aberration in birds and, unlike albinism where the individual is unable to produce melanin at all, in some forms of leucism the eyes, skin, bill and talons may remain normally coloured (van Grouw 2006).

In vultures, cases of leucism have been reported in Old and New World species (Camiña 2005), in the latter observed mainly in Turkey Vultures *Cathartes aura* and Black Vultures *Coragyps atratus* (Hosner & Lebbin 2006, Figueroa *et al.* 2011). Pavez (2008) observed an abnormal plumage in an Andean Condor in Chile – an adult male with well pigmented eyes and skin,

but with abnormal white or partial white feathers in the back and wings dorsum – and defined it as "close to a case of leucism".

On 27 July 2012 I photographed an adult female Andean Condor in Chuquisaca (19° 06' S 64° 48' W) which had normal coloured eyes, skin and plumage, except for a tail feather – the 3rd left rectrix – which was completely white (Figure 2).

Figure 2: Dorsal and ventral views of the leucistic condor.

Although it is very difficult to accurately identify mutations of plumage pigmentation in the field (van Grouw 2011), the observed plumage is clearly consistent with the definition of leucism, and this observation would be the first documented case of a leucistic Andean Condor.

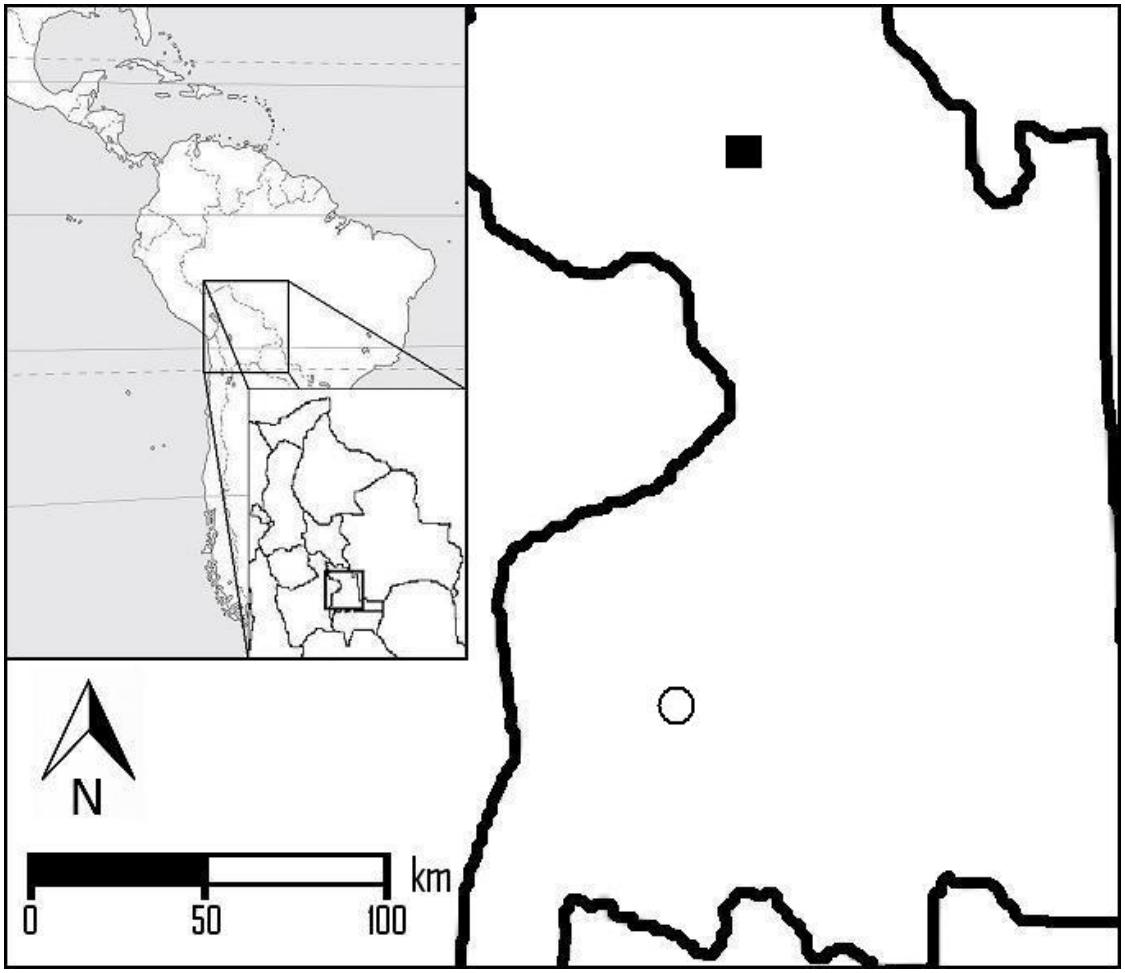

Figure 3. Location of the observations. The site where the leucistic condor was observed is denoted by the black square. The circle denotes the site of the other observation.

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Key-Words: Bolivia, fracture, leucism, *Vultur gryphus*

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