Recent confirmed records and distribution of the White-nosed Coati *Nasua narica* in Colombia

José F. GONZÁLEZ-MAYA¹, Abelardo RODRÍGUEZ-BOLAÑOS², Diana PINTO² and Alex Mauricio JIMENEZ-ORTEGA³

Abstract

White-nosed Coati *Nasua narica* (Procyonidae) occurs from USA to South America west of the Andes. It has been extensively studied in some of its distribution range, but lacks information on basic ecology and distribution for most of its range. For Colombia, information is particularly scarce. Three new records of the species for the Chocó region are presented, increasing the number of credible localities from six to eight. A number of other claims, including some museum specimens, that suggest a distribution in the country wider than the Pacific region, require verification.

_Keywords_: Chocó, geographic range, occurrence, Procyonidae, South America

Registros recientes confirmados y su distribución del Cusumbo *Nasua narica* en Colombia

Resumen

El Cusumbo *Nasua narica* es un miembro de la familia Procyonidae que se distribuye desde Estados Unidos hasta Suramérica al Oeste de los Andes. La especie ha sido extensivamente estudiada en ciertas áreas de su distribución pero la mayoría de ésta permanece sin estudiar, con ausencia de referencias sobre su ecología básica y distribución. Para Colombia la información es particularmente escasa. Se presentan tres nuevos registros confirmados para la región del Chocó, aumentando el número de localidades que respaldan su distribución de seis a ocho para Colombia. Otros registros sugieren una distribución más amplia en el país, más allá de la región Pacífico, pero requieren verificación.

_Palabras clave_: Ámbito geográfico, Chocó, presencia, Procyonidae, Suramérica.

Introduction

White-nosed Coati *Nasua narica* is a member of the Procyonidae, considered Least Concern by the _IUCN Red List of Threatened Species_ (Samudio et al. 2008). It is distinguished from its only congener in South America, the South American Coati *N. nasua*, by the muzzle pelage and by the normal position of the hairs on the nape of the neck (externally) and by the midline-depressed palate, the parallel (not converging to the posterior) nasal bones and the absence of the postorbital process of the jugal bone (on skulls; Gommper 1996). The species is apparently rare in the United States of America, perhaps because its home-range size increases and population density decreases with latitude (Valenzuela & Ceballos 2000), but it varies from common to scarce in Central America (Samudio et al. 2008), and has been considered the most abundant small carnivore in some areas of Costa Rica (González-Maya et al. 2009) and Mexico (Ceballos & Miranda 1986). Its status is uncertain in the southern part of its distribution, south to Peru’s Pacific lowland rainforests (Pacheco et al. 2009). The species seems much reduced across its range (Janson 1981, Samudio et al. 2008), through habitat conversion to farmland and general forest loss, hunting, population isolation, non-target effects of predator-control campaigns and canine distemper and rabies (Samudio et al. 2008). Nonetheless, it seems at least locally to be highly adaptable, including to habitat modification and fragmentation (Samudio et al. 2008). Indeed, where not heavily hunted, it probably benefits from habitat disturbance (although not outright conversion) and human presence (Elmhagen & Rushton 2007, González-Maya et al. 2009).

The species is extensively studied in the USA and Mexico (Valenzuela 1998, Hass 2002) and in some areas of Costa Rica and Panama (Sáenz 1994, Gommper 1996, González-Maya et al. 2009), but overmuch of its distribution even the most basic information, such as occurrence and qualitative abundance, remains unclear. The Pacific slopes of South America, within which lies its southern limit of distribution, are one of the least known areas for several taxa, including mammals such as brokets *Mazama* and tapirs *Tapirus*, and reptiles such as American Crocodile *Crocodylus acutus* and Spectacled Caiman *Caiman crocodilus*. Glatston (1994) reported White-nosed Coati to occur south, west of the Andes, to Peru. Emmons (1990) also reported it as present towards the west coasts of Colombia, Ecuador and northern Peru, and it is reported in recent mammal lists for Ecuador (Tirira 2011) and Peru (Pacheco et al. 2009), always on the western slopes of the Andes.

Previous records from Colombia

For Colombia, limited information exists regarding White-nosed Coati’s range, based on few specimens, some of questionable credibility (Table 1). The specimen that Alberico et al. (2000) reported in the Instituto de Ciencias Naturales of the Universidad Nacional de Colombia (ICN) as from Magdalena department is given as from Cundinamarca department in the collection database (ICN 2011). Additionally, its validity is dubious: the specimen is apparently no longer held in the collection (pers. obs.), so requires tracking of its history and when (if) found, a review of its identification. At least five of the specimens
Table 1. Confirmed and claimed specimen records of White-nosed Coati *Nasua narica* in Colombia.

<table>
<thead>
<tr>
<th>Collection</th>
<th>Catalogue No</th>
<th>Locality</th>
<th>County</th>
<th>Department</th>
<th>Collector name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAvH</td>
<td>4755-1214</td>
<td>Ciudad Bolívar</td>
<td>Antioquia</td>
<td>Unknown</td>
<td>GBIF 2011</td>
<td></td>
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<td>IAvH</td>
<td>4755-1213</td>
<td>Betania</td>
<td>Antioquia</td>
<td>Unknown</td>
<td>GBIF 2011</td>
<td></td>
</tr>
<tr>
<td>IAvH</td>
<td>4755-1211</td>
<td>Citará</td>
<td>Antioquia</td>
<td>Unknown</td>
<td>GBIF 2011</td>
<td></td>
</tr>
<tr>
<td>IAvH</td>
<td>8-72</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>IAvH</td>
<td>4755-1215</td>
<td>Salgar</td>
<td>Antioquia</td>
<td>Unknown</td>
<td>GBIF 2011</td>
<td></td>
</tr>
<tr>
<td>IAvH</td>
<td>4755-1212</td>
<td>Andes</td>
<td>Antioquia</td>
<td>Unknown</td>
<td>GBIF 2011</td>
<td></td>
</tr>
<tr>
<td>IAvH</td>
<td>8-81*</td>
<td>Montebello</td>
<td>Norcasia</td>
<td>Caldas</td>
<td>C. Solano &amp; M. Contreras</td>
<td>GBIF 2011</td>
</tr>
<tr>
<td>IAvH</td>
<td>8-80*</td>
<td>Montebello</td>
<td>Norcasia</td>
<td>Caldas</td>
<td>C. Solano &amp; M. Contreras</td>
<td>GBIF 2011</td>
</tr>
<tr>
<td>IAvH</td>
<td>8-79*</td>
<td>Montebello</td>
<td>Norcasia</td>
<td>Caldas</td>
<td>C. Solano &amp; M. Contreras</td>
<td>GBIF 2011</td>
</tr>
<tr>
<td>IAvH</td>
<td>7070*</td>
<td>Cabaña del Parque</td>
<td>-</td>
<td>Norte de Santander</td>
<td>J. C. Contreras</td>
<td>GBIF 2011</td>
</tr>
<tr>
<td>ICN</td>
<td>ACG-2852*</td>
<td>-</td>
<td>Yacopí</td>
<td>Cundinamarca (see text)</td>
<td>A. Cadena</td>
<td>Alberico <em>et al.</em> 2000</td>
</tr>
<tr>
<td>UV</td>
<td>-</td>
<td>-</td>
<td>Chocó</td>
<td>-</td>
<td>-</td>
<td>Alberico <em>et al.</em> 2000</td>
</tr>
<tr>
<td>PSO-CZ</td>
<td>-</td>
<td>Imprecise; Pacific slopes in the biogeographic Chocó</td>
<td>-</td>
<td>Nariño</td>
<td>Unknown</td>
<td>Ramírez-Chaves &amp; Noguera-Urbano 2010</td>
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<tr>
<td>MUA</td>
<td>-</td>
<td>Imprecise: Urabá</td>
<td>-</td>
<td>Antioquia</td>
<td>Unknown</td>
<td>Cuartas-Calle &amp; Muñoz-Arango 2003</td>
</tr>
<tr>
<td>ICN &amp; IAvH</td>
<td>‡</td>
<td>Imprecise: Chocó</td>
<td>-</td>
<td>Chocó</td>
<td>(4 specimens)</td>
<td>Guzmán-Lenis 2004</td>
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<td>USNM</td>
<td>309084</td>
<td>Imprecise; Pacific slopes in the biogeographic Chocó</td>
<td>Ricourte?</td>
<td>Nariño</td>
<td>M. Carriker, Jr.</td>
<td>Ramírez-Chaves &amp; Noguera-Urbano 2010</td>
</tr>
<tr>
<td>FMNH</td>
<td>69599</td>
<td>Unguía, Gulf of Urabá</td>
<td>-</td>
<td>Antioquia</td>
<td>P. Hershkovitz</td>
<td>Decker 1991</td>
</tr>
<tr>
<td>FMNH</td>
<td>69600</td>
<td>Unguía, Gulf of Urabá</td>
<td>-</td>
<td>Antioquia</td>
<td>P. Hershkovitz</td>
<td>Decker 1991</td>
</tr>
<tr>
<td>FMNH</td>
<td>69601</td>
<td>Unguía, Gulf of Urabá</td>
<td>-</td>
<td>Antioquia</td>
<td>P. Hershkovitz</td>
<td>Decker 1991</td>
</tr>
</tbody>
</table>

FMNH: Field Museum, Chicago – United States;  
IAvH: Instituto de Recursos Biológicos Alexander von Humboldt – Colombia;  
ICN: Instituto de Ciencias Naturales, Universidad Nacional – Colombia;  
PSO-CZ: Colección Zoológica Universidad de Nariño – Colombia;  
UV: Universidad del Valle – Colombia.  
Specimen numbers asterisked (*) indicate records that need review (see text).  
‡ Although Guzmán-Lenis (2004) gave no details of the specimens evidently examined, the four mapped localities show that they are different from those tabulated here.

held at the Instituto de Investigación de Recursos Biológicos Alexander von Humboldt of Colombia (IAvH) require confirmation of the species identification, because confirmed records of White-nosed Coati in Colombia, i.e. those in Decker (1991), Cuartas-Calle & Muñoz-Arango (2003), Guzmán-Lenis (2004) and Ramírez-Chaves & Noguera-Urbano (2010), come only from the Pacific (west) slope lowlands, neither from central Colombia in the uplands of the Eastern Andes (Cundinamarca), nor to the east of this mountain range (Norte de Santander and Caldas). By contrast, South American Coati is likely to occur in the latter two departments and probably also in Cundinamarca (USNM 544419 – GBIF 2011; ICN 2961, ICN 15496 – ICN 2011; Vélez 2004), which lie close to the species’s generally accepted distribution (Emmons & Helgen 2008, Ferrer Pérez *et al.* 2009) and indeed to specific previous confirmed records (i.e. Caldas; Castaño *et al.* 2003, Sánchez *et al.* 2004). Furthermore, the Norte de Santander records are located near the Colombia–Venezuela border and the *Nasua* species occurring in Venezuela is *N. nasua* and not *N. narica* (Ferrer Pérez *et al.* 2009). Even given the clear morphological differences between the two *Nasua* species in Colombia, hasty assessments could lead to coati specimen misidentification.
The Antioquia records (all in the western lowlands, i.e. biogeographic Chocó) from IAvH are more plausible and the species was confirmed previously for the department (Decker 1991, Cuartas-Calle & Muñoz-Arango 2003).

Guzmán-Lenis (2004) also traced and validated some specimens of the species in Colombia for a preliminary review of the family in the country. No information for specimens reviewed (catalogue numbers) was given. Guzmán-Lenis’s (2004) methodology refers to specimens deposited at ICN and IAvH, but the final map shows only four confirmed White-nosed Coatis, all of them in the Colombia–Panama border (i.e. not all specimens currently listed by these collections as White-nosed Coati).

According to all sources traced, there are only 19 White-nosed Coati specimens claimed from the country (Table 1), including those that we consider (above) to require review of their identification and provenance. Unfortunately, the influential map in Samudio et al. (2008) included Magdalena department in White-nosed Coati’s range, apparently based on Alberico et al. (2000), which requires confirmation (see above). Various sources (e.g. García-Salinas et al. 2002, Montero 2004) state that White-nosed Coati occurs in parts of Colombia for which we have traced no specimen-based claims; these statements are not reviewed here, but further confuse the perceptions of this coati’s status in Colombia.

New records in Colombia

Three new confirmed White-nosed Coati records in western Colombia, in the Chocó department, were obtained through local visits in the capital city of the department (Quibdó) and exploratory camera-trapping in the region.

During control surveys by the environmental authority of the Chocó department (Corporación Autónoma Regional para el Desarrollo Sostenible de Chocó; CODECHO) for community possession of wildlife in Quibdó in 2008, a White-nosed Coati was found in a city house. The animal was held as a pet by indigenous people of the Embera culture (Fig. 1). Credible information regarding the origin, let alone exact capture site, was impossible to obtain.

During exploratory camera-trapping from October 2010 through January 2011 in two localities of the Valle settlement, Bahía Solano municipality, department of Chocó, 80 registrations, as pictures or videos, of White-nosed Coati were obtained. Using 10 camera-traps (Bushnell Trophy Cam) during 91 days, accounting for a sampling effort of 1,820 camera-trap-nights at both localities combined, a total of 365 events (pictures and videos) of 15 mammal species were obtained. These included 80 registrations of White-nosed Coati, 35 obtained near Nimiquía River (6°6’52”N, 77°25’16”W) and 45 near Valle River (6°6’30”N, 77°24’34”W) and all from below 10 m asl (Fig. 2). A preliminary examination of timing and fur patterns indicates that all the pictures probably involve only five individuals, three near Valle River and two near Nimiquía River.

Fig. 1. Captive White-nosed Coati *Nasua narica* in an Embera indigenous house found by the environmental authorities (CODECHO) in Quibdó city, department of Chocó, Colombia, during wildlife possession surveys in 2008.

Fig. 2. Camera-trapped White-nosed Coatis *Nasua narica*, department of Chocó, Colombia; (top) near Nimiquía (31 November 2010 at 16h40) and (bottom) Valle rivers (5 January 2010 at 17h22).
Conclusions

González-Maya et al. (2011) indicated that a thorough review of the Colombian specimens catalogued as White-nosed Coati and a general clarification of the distribution of the species in the country, as one of the main research priorities for small carnivores in Colombia. This needs to recognise the potential for identification and labelling problems in various collections.

These two new locality records increase the confirmed localities in Colombia from six to eight, all in the Pacific region in the biogeographic Chocó, western Andes lowlands (Table 1; Fig. 3). The captive in Quibdó city with no locality was also in this general area. The records from Caldas and Norte de Santander, all east of the Andes and in highlands and the perhaps-lost specimen from Cundinamarca or Magdalena, remain to be reviewed.

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