New Records of the endangered Andean Cat *Leopardus Jacobita*

Palacios R.(*), Novaro A.J., Walker R.S., DiMartino S., Monteverde M., Cañadell S., Cossios D.

(*) rociopalacios@gmail.com, Alianza Gato Andino, Jenner 152, Villa Carlos Paz, Cordoba, Argentina. # 5152.

INTRODUCTION

Recent research on the Andean cat *Leopardus jacobita* brings to light how little is still known of this species, one of the world´s most endangered small cats. Previously believed to be endemic to the High Andean and Puna biogeographic provinces of the South American Andes, at altitudes above 3000 m.a.s.l.. an opportunistic photograph taken in 2004 in the Caverna de las Brujas Provincial Reserve in Mendoza, Argentina, produced the startling finding of two Andean cats at only 1800 m.a.s.l., 500 km further south than previously reported, where the High Andean and Patagonian biogeographic provinces interface (Sorli et al., 2006). Here we report new records of the Andean cat, all except one below 3000 m.a.s.l., in a new mosaic of habitats, predominantly the Monte biogeographic province, consisting of low scrub, with the mixed grass-shrub steppes of the Patagonian biogeographic province on mountaintops and high plateaus. These records extend the range of the Andean cat yet another 300 km south, and demonstrate that the species is not an endemic of high Andean habitats.

METHODS

The study took place in the Andean foothills and northern Patagonia region of Mendoza and Neuquén provinces in Argentina (Figure 1). To the east of the Andes, the area contains plateaus and peaks of old volcanoes, the highest of which is 3500 - 4700 m.a.s.l.. Human population density is very low, approximately 0.02/km^2, and the main human activity is small-scale husbandry of goats and cattle.

After the discovery of the Andean cat at Caverna de las Brujas, we sought to determine the extent and pattern of the distribution of the species in the region. We interviewed 15 people in other parts of the Andean foothills and in the extra-Andean mountainous areas of northern Patagonia where there were populations of mountain vizcachas *Lagidium viscacia*, the principal prey species of the Andean mountain cat (Napolitano et al., 2008; Walker et al., 2007), and carried field surveys, searching rock outcrops for tracks and feces of small cats, and collecting fresh feces of small cats for genetic identification (Cossíos and Angers, 2006). In the interviews we asked informants to identify and describe the small cat species which occurred where they lived, with the aid of a series of photographs of small cats. If the informant had skins or skulls in their possession, we took samples for verification of species identification with genetic analysis.

N°	Location	Y_	X_	Elevation	Confirmed records	Unconfirmed records
1	Villavicencio	-32,49844	-69,05458	2665	1	
2	Caverna de las Brujas	-35,80207	-69,82408	1800	2	1
3	Agua de Perez	-36,79004	-69,43932	1740	3	2
4	Chihuidos	-38,25213	-69,71287	650	2	2
5	Las Carceles	-38,28361	-69,37056	962	1	
A	Laguna del Diamante	-34,23381	-69,37761	3400		2
B	Cerro Morro	-35,42464	-69,82792	2530		1
C	Puesto de Vazquez	-35,43417	-69,81472	2057		1
D	Puesto de Aburto	-35,65917	-69,73139	2420		1
E	Cerro Negro	-35,68721	-69,83293	2749		1
F	Cañada de Leiva	-35,81160	-69,80316	1687		1
G	Sierra de Palauco	-35,95796	-69,44637	2625		2
H	Payún Matrú	-36,32585	-69,19999	2100		1
I	Sierra Negra	-37,15778	-69,27361	720		1
J	Auca Mahuida	-37,74004	-68,94406	1500		1
K	Los Nogales	-37,79937	-69,39619	543		1
	TOTAL				9	18

Table 1: Confirmed and unconfirmed (interviews) records of Andean cats in northern Patagonia, sites are presented with geographic coordinates and elevation.

RESULTS

Overall we obtained nine confirmed and 18 unconfirmed records (Table 1, Fig. 1). As confirmed records we include genetic identification of scats for three records, two at Caverna de las Brujas Provincial Reserve (Mendoza), and the other at Las Carceles in Neuquén. Scats collected at Caverna de las Brujas were in different caves and different years. We also collected a tail and 3 skulls at Agua de Perez (Mendoza) and two skins and another skull in Chihuidos (Neuquén), all belonging to Andean cats. Finally, an Andean cat was sighted by S. Cañadell at Villavicencio Private Reserve (Mendoza).

Andean mountain cats were reported by informants at seven other locations, but we were unable to confirm these reports with skins, skulls, or feces. Nevertheless, all were within the range defined by confirmed records (Fig. 1). Two of these sites, Cerro Morro and Cerro Negro, were in the Andean foothills, three were in the extra-Andean mountainous areas (Palauco, Payún Matrú, and Auca Mahuida), and two were near hills or plateaus with mountain vizcachas (Los Nogales, Sierra Negra).

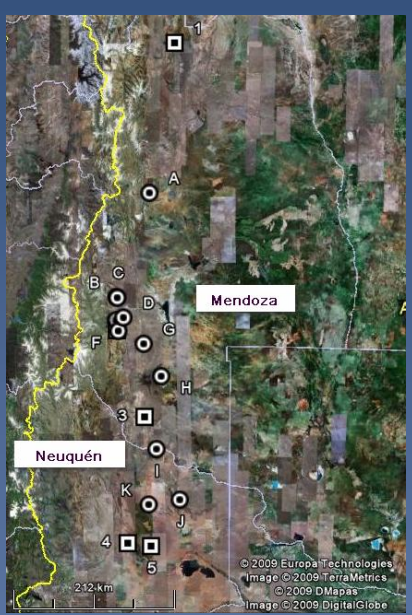

Figure 1: Map with Andean cat confirmed and unconfirmed records. Squares are confirmed records and circles are unconfirmed. See Table 1 for specific site information

DISCUSSION

Our findings, combined with a recent report from Cerro Nevado, northwest of the Payunia reserve (Martinez et al., 2008), suggest that although Andean cats are rare, their distribution is much larger and habitat plasticity greater than previously assumed. The newly confirmed sites are located in mosaics of scrub and steppe vegetation, but all contain rocky cliffs inhabited by mountain vizcachas. Rather than being adapted to and restricted to high altitude habitats, their distribution may be more dependent on the availability of their principal prey species. Because the distribution of the mountain vizcacha extends further into Patagonia, the Andean cat may have an even larger distribution than is currently known.

The Patagonian Andean cats are genetically distinct from those of the Andes (Cossíos et al., in prep.), and the threats they face are somewhat different. Hunting in the Andes is mainly for religious purposes and conflict over livestock is low (Lucherini & Merino, 2008; Inskip & Zimmerman, 2009). In Patagonia, Andean cats prey on goats, generating high conflict with goatherders. Another immediate threat is related to intense activity by oil companies, opening thousands of kilometers of exploration trails. The major impact of these oil trails on wildlife is providing access for poachers. Finally, for northwestern Patagonia, climate change models predict temperatures will increase and precipitation decrease over coming decades, creating more arid conditions and reducing plant productivity. Decreased productivity in an area already intensively grazed by goats and other livestock could cause populations of mountain vizcachas to decline, reducing carrying capacity for Andean cats.

REFERENCES

Inskip, C., Zimmerman, A., 2009. Human-felid conflict: a review of patterns and priorities worldwide. Oryx 43, 18- 21.

Lucherini, M., Merino, M.J., 2008. Perceptions on human–carnivore conflicts in the high Andes of Argentina. Mountain Research and Development 28, 81-85

Martinez, F., Chebez, J.C., Berlanga, P., Yacante, R., Nigro, N.A., 2008. Nueva localidad para el gato andino *Oreailurus jacobita* en la provincia de Mendoza, Argentina. Nótulas Faunísticas 26, 1-5.

Sorli, L.E., Martinez, F.D., Lardelli, U., Brandi, S., 2006. Andean cat in Mendoza, Argentina – Furthest south and at lowest elevation ever recorded. Cat News 44, 24.

ACKNOWLEDGMENTS

We thank M. Moyano, B. Correa, O. Aguilera, J. Sanchez, R. Rojas, F. Mendoza, M. Sagal, V. Forquera, L. Gajardo, C. Marull, L. Moyano, G. Sanchez, M. Palma, U. Lardelli, C. Rojas, E. Chamorro, S. Ocampo, J. Baronetto, M. Figueroa, S. Goitia, M. Guevara, J. Oberholzer, I. Crespin, N. Radovani, L. RivasA. Gonzalez, L. Heidel, M. Bolgeri, and A. Salvo for information and/or assistance in the field. The Departments of Renewable Natural Resources of Mendoza and Protected Areas of Neuquén provided permission to conduct fieldwork. The Wildlife Conservation Society, Whitley Fund for Nature, Wildlife Conservation Network, and Rufford Small Grants provided funding.

CITA/CITE:

Palacios R., Novaro A.J., Walker R.S., DiMartino S., Monteverde M., Cañadell S., Cossios D. 2009. New Records of the endangered Andean cat Leopardus jacobita. Poster Session, 10th International Mammalogical Congress. Mendoza, Argentina 9-14, August 2009.