

### Andean cat in northern Patagonia: Linking conservation to research

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The Andean cat (*Leopardus jacobita*) is a small feline that was believed to inhabit only the high Andes of Argentina, Bolivia, Chile and Peru. One of the lesser known cats worldwide (Nowell & Jackson 1996), it is considered the most threatened felid in the Americas and among the five most endangered in the world (IUCN 2007). When in 2008 our multidisciplinary team discovered the Andean mountain cat living at 650 m.a.s.l. in the steppe and scrub of northern Argentinean Patagonia, we changed forever the standard conception of this endangered species (Novaro et al. 2011).

Common characteristics of the steppe and scrub landscapes that the Andean cat inhabits are aridity and extreme temperatures, with sparse vegetation and heterogeneous geomorphology, consisting of patchy rocky habitats that rise in a predominantly flat landscape. Those rocky patches, found mainly in areas near watercourses, are biodiversity hotspots in an otherwise low biodiversity landscape. Although there is still scarce information on the Andean cat and its requirements, it is believed to have a naturally fragmented, highly fragile habitat (Villalba et al. 2004). The existence of watercourses is probably an important factor for the presence of the Andean cat. Another relevant factor is expected to be the presence of mountain vizcachas (*Lagidium viscacia*, *L. peruanum*), a permanent resident of rocky outcrops (Napolitano et al. 2008; Walker et al. 2007b). This large rodent is the main prey of Andean cats and is a rock specialist.

Argentina is a paradise to wild cat lovers, harboring 10 species of the 11 living in the Americas. The discovery of the threatened Andean cat in Patagonia was followed by the recognition of

two main conservation threats for this area: poaching and lack of information. Unfortunately, we may have discovered this genetically unique population only to document its decline, as most of the records we obtained were of cats recently killed by goat herders. My initial project, as an independent researcher belonging to the Andean Cat Alliance and working in collaboration with Wildlife Conservation Society and local governmental agencies, was to build capacity of park rangers in identification and monitoring of Andean cat and sympatric carnivores. This successful project resulted in three main relevant outputs for conservation. First, over 200 rangers were trained in Andean cat conservation and monitoring. Second three monitoring units were established in different protected areas, and finally ecological awareness about this species and native carnivores was increased inside governmental agencies. During that same project, I collected field samples and records of Andean cat presence in northern Patagonia. Combining that information with the database obtained by WCS we now have a database of independent records of Andean cats, with over 80% of those being hunted individuals. Therefore it is urgent to implement effective conservation measures while doing ecological and biological research about this species to insure its long term persistence in this landscape.

The WCS Patagonian Steppe program is currently addressing the immediate threat posed by poaching by working with local goat herders. For long-lasting conservation actions it is necessary to understand where the cat is in this landscape, what areas it chooses, how it interacts with other carnivores, and how it responds to human presence, including extensive activity by oil companies.

First, for my PhD project I am mapping the potential distribution of the Andean cat in the region based on different variables that will allow me to build a robust model highlighting sites with high potential for Andean cat presence. I am using a GIS approach to take advantage of the intensive surveys that were carried out by me and also by the WCS team over several years over a huge 40,000 km<sup>2</sup> area. I expect to build a Resource Selection Function based on the most important local variables, which will allow me to build a suitability map. The resulting map can be used to guide land-use decisions by government and extractive industries, even in areas where the presence of the Andean cat can still not be confirmed. The Wild Felid Legacy Scholarship helped me to complete my field work during these past months, obtaining new records of both Andean cats and mountain vizcachas, and carrying out field surveys to obtain some ground truths to be used for developing SIG layers.

Second, in collaboration with the WCS Patagonian Steppe program and local governmental



Andean Cat - Copyright Jim Sanderson

agencies we are developing site-specific strategies to eliminate killing of Andean cats by goat herders. We are promoting and assisting in the use of local, mixed-breed livestock guarding dogs to reduce conflict between humans and native carnivores. We are also working with herders at other sites to increase their tolerance of occasional losses to Andean cats by helping them reduce livestock losses due to reasons other than predation, such as illness, overstocking, or poor genetic quality of stock, and increase their overall income from goats. WCS's veterinarians and agronomists are working with herders at Andean cat sites in Mendoza and Neuquén, to improve the health of goat herds and to develop alternative income sources, such as the sale of old, non-reproductive goats to the French market, and the harvesting of valuable cashmere by combing and shearing goats. We already obtained "Wildlife Friendly" certification for cashmere from goats belonging to herders who agree to reduce their herd size and not kill Andean cats.

Finally, we continue with the courses to build capacity of park rangers as requested by governmental agencies. We also have located several camera traps within the Monitoring Units that are being supervised by park rangers. With those cameras we confirmed Andean cat presence in an area where no records ever existed. These parks harbour the only two confirmed protected populations in the region, and monitoring by the park rangers will help evaluate whether they are providing effective protection to this endangered feline.

We believe that this combined approach of research and action is more than a necessity; it is the only real way to make conservation effective in this globalized and accelerated world. We need research; we need to know what the species need to be able to conserve them better. We also urgently need conservation actions to be real and effective, and that means it is not possible to wait until research provides the most effective solutions. The perfect combination is to use one to help the other: doing conservation also doing research and visa versa. This is the only way we can preserve our wild cats, while discovering their long kept secrets.

*Literature cited p. 27*

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Patagonia is not completely flat, it is cut by huge cliffs that are steep and long. These cliffs serve as wildlife hotspots in the desert, and are perfect habitat for mountain viscachas and Andean cats.



Capacity building course for park rangers. This activity concluded with the implementation of three Andean Cat Monitoring Units in three different protected areas.

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WFA Student Representatives are highly-motivated volunteer members of the WFA that are presently enrolled at a university (undergraduate or graduate studies) and agree to biannually report on activities within their assigned state or geographic area concerning activities that relate to wild felid research, conservation, and education. This will require the student rep to contact appropriate departments and professors in area universities and colleges, identify professors and students that are involved in felid research/conservation/education and then maintain a line of communication with those contacts. The contacts will report on any pertinent activities to the student rep to be presented in upcoming issues of the Wild Felid Monitor or on the WFA website ([www.wildfelid.org](http://www.wildfelid.org)). Information can be presented as updates (summarized by the student rep) or as articles (submitted by the contact). Student representatives report to the Student Representative Coordinator, Cheyenne Burnett. If you are interested in becoming a Student Representative for WFA, please contact Cheyenne at [cheyburnett@gmail.com](mailto:cheyburnett@gmail.com)