

Cat Project of the Month – June 2007

The IUCN/SSC Cat Specialist Group's website (www.catsg.org) presents each month a different cat conservation project. Members of the Cat Specialist Group are encouraged to submit a short description of interesting projects

Ecology and Conservation of Four Sympatric Cat Species in the Argentinean Monte



Camera trap photo of a Pampas cat, Los Alamos Farm, Argentina (Photo GECM, UNS)

This project is aiming to contribute to the conservation of a unique and very little understood cat guild that occurs in a threatened landscape of Argentina, through the understanding of species-specific ecological requirements and interspecific interactions as well as awareness raising activities.

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Claudia Manfredi is a PhD Biologist at UNS; she has worked with Geoffroy's cats since 1999. Claudia is a member of the Cat SG since 2005.

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C. Manfredi and M. Lucherini with a live-captured Geoffroy's cat (Photo GECM, UNS)

The **Pampas cat**, *Oncifelis colocolo*, ranges from southern Ecuador and Peru to central, western, and southern Brazil, parts of Bolivia, central Chile, Paraguay Uruguay and southern Argentina (Sunquist and Sunquist, 2002). It has been recently up-graded to the Near Threatened IUCN category (Nowell, 2002).

The **Geoffroy's cat**, *Oncifelis geoffroyi*, is distributed from southern Bolivia and Brazil to the southern part of Patagonia in Chile and Argentina (Sunquist and Sunquist 2002). The Geoffroy's cat has been recently up-graded to the Near Threatened IUCN category (Nowell, 2002).

The **Jaguarondi's**, *Herpailirus jaguarundi*, range extends from southern Texas through the coastal lowlands of Mexico, throughout Central America, and into South America east of the Andes to central Argentina (Sunquist and Sunquist, 2002). In central American and North America, the jaguarundi is listed in appendix I of CITES (Sunquist and Sunquist, 2002), while in Argentina is categorized as potentially vulnerable (Diaz and Ojeda, 2000).

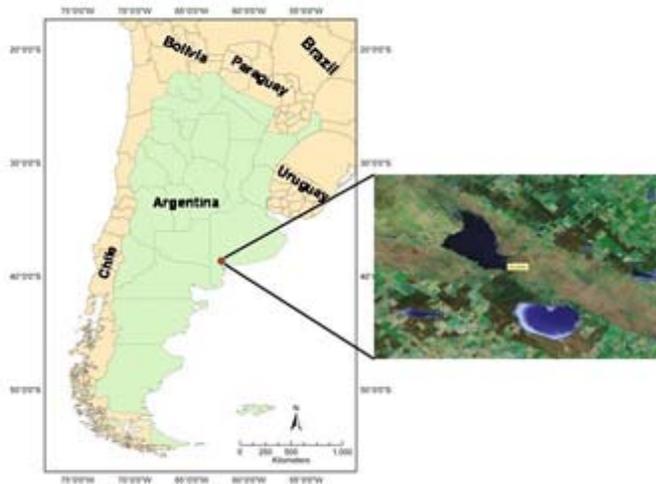
The **Puma**, *Puma concolor*, is one of the carnivores with the largest distribution range in the world, since it occurs from Canada to the south of Patagonia, and one of the most known. It is listed as Near Threatened by IUCN (Nowell 2000), and on CITES appendix II except for three subspecies, which are on appendix I, while in Argentina is considered Near Threatened (Diaz and Ojeda, 2000).



Camera trap photo of a Pampas cat (Photo GECM, UNS)

The Pampas cat is one of the least known cats in South America and very little data are available on Jaguarundi and Puma populations in Argentina. This unique cat guild occurs at the border between the Pampas Grassland and Argentine Monte. These ecoregions are among the most strongly affected habitats by human intervention in Argentina, due to farming and cattle activities, widespread hunting and little protection of natural areas (Bertonatti and Corcuera, 2000). For these reasons it is urgent to collect baseline data on these felids that can help us to understand how these different human activities are affecting wildcat populations and intra-guild interactions, and what are the perception and attitudes of local communities of carnivores, in order to find solutions favouring conflict reduction and the coexistence of humans and carnivores.

The goal of our project is to provide novel information on the natural history and ecological niche of the top predators of central Argentina that will contribute to understand their conservation requirements. We are investigating the present-day distribution, population status, ecological niche, and genetic identity of four species of felids, as well as how their natural behaviour is affected by habitat alterations in a human-dominated landscape.



Our specific objectives are:

- To investigate the local distribution, population status and abundances of these four cat species.
- To analyze the trophic niche of each species and interspecific overlap.
- To study their home ranges, activity patterns, and movements.
- To understand how cat natural behavior is affected by habitat alterations caused by men.
- To analyze perception and attitudes of local communities toward carnivores and carry out environmental education activities to increase awareness on their role in natural ecosystems and conservation needs.
- To produce a habitat suitability model for the distribution of cats in the Argentine Monte and Grassland.

Map of the study area. We started field data collection at Los Alamos farm and 2 other, private-owned farms (covering almost 7,000 ha) located in the proximity of Chasicó Lake Provincial Park, Buenos Aires province of Argentina. The main habitats are scrubland, where the most common trees are *Prosopis alba*, *P. nigra*, and *Geoffrea decorticans*, and sand dunes, where vegetation is dominated by *Aextoxicon punctatum*. Cattle activities create open pastures with scattered trees.

Methods

We work with photo trapping to study distribution and habitat use, activity patterns and relative population abundance for each cat species. Cameras are baited with Bobcat Urine or Bobcat Gland Lure.

The cats are also being captured with different live trap models. Captured animals are sedated with a combination of tiletamine-zolazepam and morphological measures and biological samples are taken. Adult animals are fitted with radiocollars.

Through the use of radio telemetry we are obtaining information about the spatial and social organization, movement and activity, habitat use and selection.

To study the trophic niche of each cat species we are collecting fecal samples, which will be identified by DNA analysis.



Radiotelemetry sampling (Photo GEEM, UNS)

We are interviewing local people, to spread awareness on our work and understand which are the conflicts between them and carnivores. With education work on schoolchildren and adults, we aim to improve attitudes of local communities toward carnivores.



M. Benzaquin setting a camera trap (Photo GECCM, UNS)

Preliminary results

In our study area, until the moment, we have confirmed the presence of 3 of the 4 species of wild cats, where the Geoffroy's cat is more abundant than the Pampas cat and puma.

With a sampling effort of 590 camera-trap days, we took 47 carnivore photos. Geoffroy's cats were the most abundant wildcats, but we also obtained Pampas cat pictures (Fig.1)

Small cats mainly defecate in latrines, particularly on trees (57.7% of all defecation sites, with an average of 3.2 faeces) and on the ground (42.3%; average number of faeces: 1.6; Fig. 2).

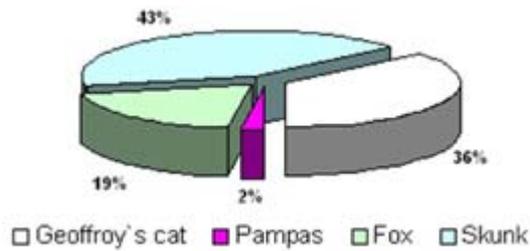


Fig. 1. Proportions of carnivore camera trap photos at Los Alamos farm and surrounding areas.

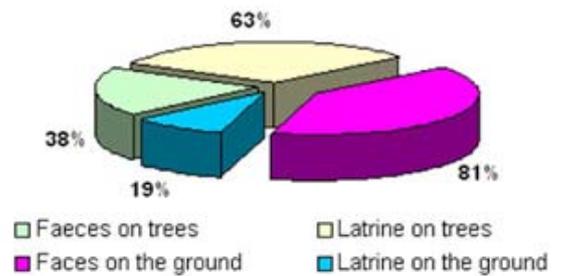


Fig. 2. Proportions of small cat defecation site types at Los Alamos farm and surrounding areas.

Until now, we have completed over 655 trap days and captured 11 Geoffroy's cat individuals, one Pampas fox, *Pseudalopex gymnocercus*, and one skunk, *Conepatus chinga* (Table 1). Five of these cats have been radiotagged.

We obtained an average (\pm SD) of 90 ± 65 locations per cat in only 8 months of radiotracking (range: 26–188).

The preliminary mean home range size ranged from 1.3 ± 1.9 km², when excursions are excluded (90% Minimum Convex Polygon), to 1.7 ± 1.8 km² (100% Minimum Convex Polygon). Home ranges were larger for males (with the exception of one male) than females. The two females had similar home range sizes.

Currently, we keep tracking 3 individuals and live trapping to radiocollar new individuals. We are also expanding our camera trapping to detect the areas used by jaguarondis and pumas.

Table 1. Carnivores captured at Chasicó.

Species	Sex	Age	Weight (kg)	ID
Skunk	Male	Young Adult	1	S1
Geoffroy's Cat	Female	Adult	2.8	F1
Fox	Male	Adult	5	Fox1
Geoffroy's Cat	Male	Adult	5	M1
Geoffroy's Cat	Male	Young Adult	4.2	M2
Geoffroy's Cat	Male	Young Adult	3.850	M3
Geoffroy's Cat	Female	Adult	3.4	F2
Geoffroy's Cat	Female	Young	1.400	F3
Geoffroy's Cat	Male	Adult	3.900	M4
Geoffroy's Cat	Male	Young Adult	3.200	M5
Geoffroy's Cat	Male	Young Adult	3.750	M6
Geoffroy's Cat	Male	Adult	4	M7
Geoffroy's Cat	Male	Young Adult	-	M8



E. Luengos Vidal recording data from a live-captured Geoffroy's cat (Photo GECM, UNS)

The use of different techniques has confirmed the presence of 3 of the 4 species of wildcats and that, currently, the Geoffroy's cat is probably the most abundant species of wildcat in the Argentine Monte. This could be related to its greater adaptability with respect to the other small cats, and to differential hunting pressure, in the case of the puma.

Nevertheless, we are aware that more data are needed to understand the intraguild interactions between these cats and how they have been affected by human activities.

Our project is also providing opportunities for university students from Argentina (and other countries) to volunteer and thus get training on a variety of field techniques in carnivore conservation biology. Miriam Benzaquin is developing the final work to obtain her Bachelor title in Biology.

References

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Díaz G. and Ojeda R. 2000. "Libro Rojo de Mamíferos Amenazadas de la Argentina". SAREM. Page .106

Bertonatti C. and Corcuera J. 2000. Situación ambiental de la Argentina 2000. Buenos Aires, Fundación Vida Silvestre Argentina. 440 pp.

Project Information

Duration: July 2006 - December 2008

Location (see map): Central Argentina, "Los Alamos" farm of Alberto Salvá and Chasicó Provincial Park, Médanos, Buenos Aires Province

Sponsor(s): Earthwatch Institute
Panthera/Wildlife Conservation Society Kaplan Awards Program
Huellas NGO

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