Cat Project of the Month – June 2006

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

*For application use this **standardised form** (an editable word document)*

Conservation and ecology of the huiña cat (*Oncifelis guigna*) in northwestern Patagonia (Argentina)

Huiña found in Queñi, Lanin NP, Argentina (Photo National Parks Administration)

The huiña is the smallest cat of the Valdivian forest (Chile and Argentina) and the only carnivore endemic to the southern Andean forests. It has one of the most restricted distributions of any carnivore and is considered one of the two most threatened wild cats in South America. But very little information is available about its ecology, habitat requirements and threats.

Martín J. Monteverde

Martin is a PhD student of the University of Buenos Aires working on haibtat selection theory and and risk of hantavirus. He is also the chief of the Wildlife Department at the Center of Applied Ecology of Neuquén and has been working as a an assistant with the Southern Cone Program of WCS since 2000. Martin has been a member of the Cat Specialist Group since 2005.

mjm@jdeandes.com.ar

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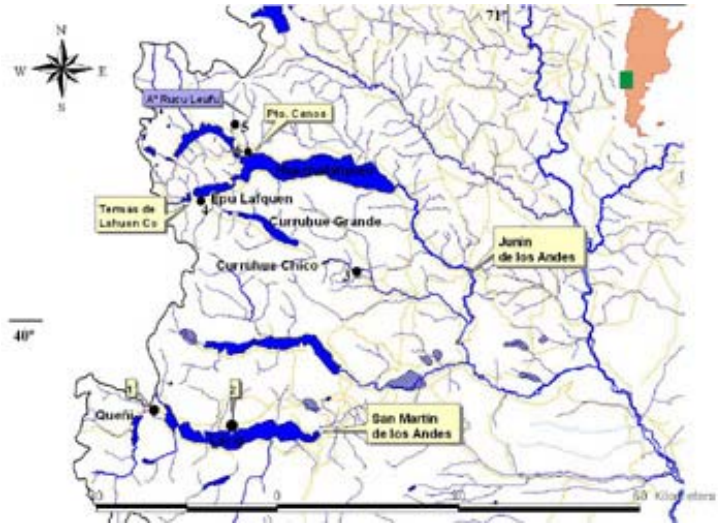
Martín Monteverde
(Photo L. Piudo)

There is an emerging consensus among scientific and conservation institutions that the biodiversity of the Valdivian ecoregion is of outstanding global value and significantly at risk. The Valdivian temperate forest is one of South America's most threatened ecoregions. Five hundreds years ago, this ecoregion was covered by temperate forests interspersed with wetlands, lakes, etc. and now over 40% of the original forest cover has been lost. In Argentina, over-grazing, human-caused wild fires and invasion of exotic species (red deer, wild boar, European hare, European rabbit) constitute major threats but conversion to exotic plantation and other pressures on the native forest are more recent and limited, like tourism and urbanization.
Forest carnivores have frequently been the target of conservation concern because of their association in some regions with older forests and sensitivity to landscape-level habitat alteration. Conservation of forest carnivores depends on accurately assessing environmental factors that determine their distribution and abundance. The principal native species that compose the carnivore assemblage of the Valdivian temperate forest are the huiña cat (*Oncifelis guigna*), the Geoffrey's cat, the culpeo fox, the Patagonian grison, the lesser grison and hog-nosed skunks. The huiña is the smallest cat of the Valdivian forest (Chile and Argentina) and the only carnivore endemic to the southern Andean forests. It has one of the most restricted distributions of any carnivore and is considered one of the two most threatened wild cats in South America. It is categorized as Vulnerable by the IUCN (2002 Red List) and by the Argentinean Society for the Study of Mammals (SAREM), and it is in CITES Appendix II. It is also fully protected in Argentina and Chile by National Legislations. But very little information is available about its ecology, habitat requirements and threats in Argentina where its status and distribution are not well known and have to be updated. Some of the carnivore species of the Valdivian temperate forest have been studied in the Patagonian steppe, but there is very little information available on these species in the forest. In Lanín National Park, our preliminary data indicates that the huiña has been declining these last decades.

Objectives

Our study attempts to investigate the spatial ecology, habitat use and the relationship of the huiña with the rest of the carnivore assemblage of the Valdivian forest, as well as the consequences of human activities inside the Lanín National Park. Simultaneously with the research we are carring out educational activities to minimize the main threats detected so far (presence of domestic cats and dogs and hunting of wild cats), by working with the people that live inside the park (park rangers and settlers) with these carnivores.

Huiña habitat - Subantarctic forest (Lanín NP; Photo M. Monteverde)



This map represents the area of Lanín NP where we work. Numbers 1-6 are the study sites. You can also see some tourist places and cities for reference.

Study area

We work in specific areas of the park using year-round camera trapping, scent stations and eventually radio-tracking. To compare resource use among the different carnivore species, we determine food habits through the analysis of faeces collected in the field. Samples of scats are sent to Wildlife Genetics International in Canada to identify the carnivore species that produced the scat using a molecular genetic technique. This technique has been used successfully in our preliminary research in the area, and is able to distinguish between even the closely related Geoffrey's cat and the huiña. Educational activities include training for park rangers and environmental education for up to 2500 inhabitants of the park to reduce the impact of domestic animals on wild cats and to improve the conservation awareness for protection of all carnivores in the park using the huiña cat as a *flagship* species.

Methods

To achieve information on presence/absence of carnivores we will use camera-trap stations, following the protocol of the U. S. Forest Service for small forest carnivores. In each area we randomly select five sampling units of 10 km2 each. An automatic 35-mm camera (with protective housing) with a single-sensor system compound of an infrared transmitter and receiver will be placed at four different baited stations within each sample unit. We operate each station until either all the target species are detected or a minimum of 28 days has elapsed. Care is taken to ensure that comparable effort is made in each area during each season.
We evaluate annual trends in carnivore relative abundance with track counts in scent-stations operated twice per year in each area. Stations will be constructed as circle of soft soil of 1-meter diameter with a small plaster pastille in the middle saturated with Fat Acid Scent as attractant. Tracks will be identified to species levels. This technique has been widely used for monitoring of culpeo fox abundance in the nearby steppe ecosystem, and has been used successfully in the Valdivian forest of Chile to detect both culpeo foxes and huiñas.

Setting camera traps in Lanín NP (Photo L. Piudo)

To assess the feasibility of using radiotelemetry to study the effects of human disturbance and Geoffroy's cats on spatial use and social organization of the huiña, we will attempt live captures of the two cat species. We will use skunk and raccoon-sized Tomahawk traps baited with trout, chicken, or canned fish and dry cat food. We won't use live bait because of the logistical difficulties involved in coordinating the checking of traps among park rangers and personnel based in Junín de los Andes. Huiñas have been easily and successfully trapped in Chile using canned fish and dry cat food as baits. Scats found in the study areas will be analyzed by cleaning, examining hairs and bones, and comparing to published keys of hairs and teeth and skulls of animals in the region, and to the reference collections at WD-CEAN

People working with us in the project (Photo L. Piudo)

Expected Outcome

This study will provide new information about the structure of the carnivore community in the threatened Valdivian forest and will help Lanín National Park establish management goals and strategies to improve the protection they provide to native carnivore species, especially the huiña. The huiña is found in several Argentine national parks along the southern Andes. The northernmost of these, and one of the largest, is Lanín National Park. This park is also one of the Andean national parks with the most human impact. It has more human settlements than any of the other parks in Argentina, and was predicted to receive over 100,000 tourists in 2003. The effect of human settlements and tourism on the wildlife of the park is not known. If one of the goals of the parks is to protect the native wildlife of the southern Andean forests, it is crucial to determine how these species are affected by different human activities in the park in order to make management decisions that promote their survival and persistence.

At the same time we will begin to address the urgent threats to the huiña that we have already identified. The development and implementation of these strategies will be facilitated by the fact that personnel from the National Park Agency and the Provincial Department of Wildlife Ecology are members of the team. The data collected will allow us to find out which species are most affected by the food resource alteration, and whether the prey base variation is intervening with the intraguild relations. Likewise, we will also evaluate potential conservation needs of the other carnivore species, assess which of these may be in need of consideration by conservation managers and develop local conservation strategies.

Killed huiña in Lanín National Park (Queñi Area) - 1999 (Photo National Parks Administration)

National Parks Agency has expressed its deep interest in the project since it possesses as priority the study and knowledge of the carnivore assemblage of the Valdivian forest in order to design conservation strategies. It is for this reason that we have their institutional support, logistical help and the permission for act inside the park. The Wildlife Conservation Society is also interested in the project since it is compatible with some of the *Southern Cone Program* objectives, so they are also giving us logistical support.

Project Information

Duration:	2002 - ongoing
Location (see map):	Lanín National Park
Sponsor(s):	Wildlife Conservation Society - Wildlife Department (Center of Applied Ecology of Neuquen) - National Park Administration
Project address:	Epulafquen 106, B° Jardines del Chimehuin, Junín de los Andes (8371) - Pcia. del Neuquén, Argentina
Project leader:	Lic. Martín J. Monteverde, Chief of the Wildlife Department at the Center of Applied Ecology of Neuquén, mjm@jdeandes.com.ar
Project website:	--