

Detailed Final Report

Some Activities That Were Done:

Camera trapping:

Figure 1a locates the study areas in Neuquén Province (Argentina), the northern study site is Ñorquinco area and the southern in Queñi area. In figure 1b indicates all the sites where the camera traps were set in Queñi area in Lanín National Park. I am also showing some pictures of the Moultrie M40 Digital Trail Camera Scout Cam and the Solar Power panels (figures 2) and myself setting and checking cameras (figures 3).

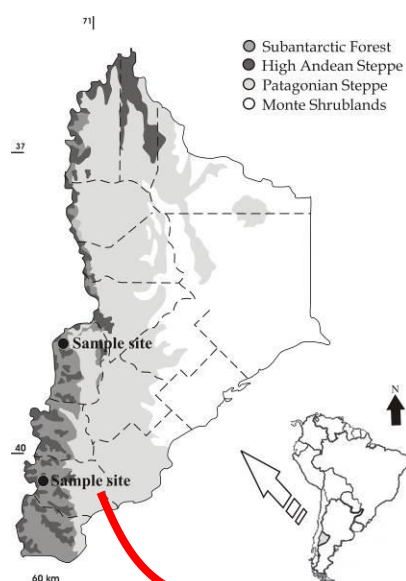


Figure 1a.

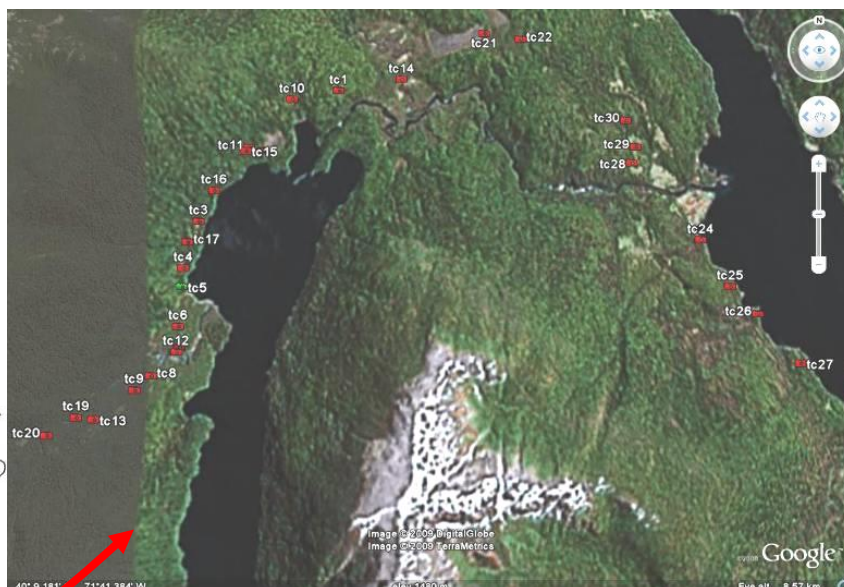


Figure 1b.



Figures 2. Setting and checking cameras traps.



Figures 3. Setting and checking cameras traps.

We obtained a lot of photos which would be impossible to show, so here are some of the wildlife pictures obtained during the camera trapping...



Culpeo fox (*Lycalopex culpaeus*)



Left: Valdivian opossum (*Dromiciops australis*). Right: Wild boar (*Sus scrofa*).



Left: Crested Caracara (*Polyborus plancus*). Right: Black vulture (*Coragyps atratus*).



Left: Rat (*Rattus rattus*). Middle: Long haired mouse (*Abrothix longipilis*). Right: Long tailed mouse (*Oligoryzomys longicaudatus*).

One of the most remarkable features of the camera trapping during the whole study was that Culpeo foxes appeared in almost every camera. Relative abundance of this carnivore (compared with other small carnivores as huiña) was very high. We hypothesized that this medium sized mammal could be generating some negative effects over huiñas (interspecific competition by spatial segregation, competition by exploitation or interference) among other small sized

carnivores. Culpeo foxes are known to be very successful competitors. **This possible intra-guild interaction should be taken into account when deciding conservation strategies for huiñas.** Huiñas are very small (almost 2 kg) and probably in low densities, and these characteristics (among others) make them very susceptible to these kind of interactions.

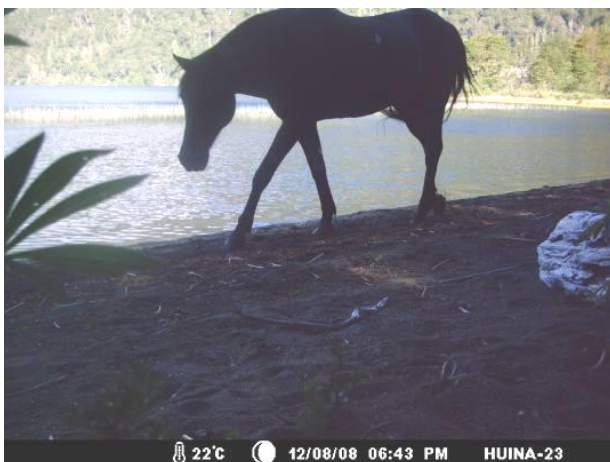
Some camera non-wildlife captures...



Left: Domestic cat. Right: Domestic dog.



Left: Tourist. Right: Cow.



Horse

The fact that we capture images of domestic cats and dogs within huiñas habitat in our study site has serious conservation implications. These domestic cats may compete with huiñas for prey and can spread diseases (panleukopenia, distemper, etc). Moreover, some wild cats can inter-breed with domestic ones, so huiña and domestic cats sympatry is another threat for the wild one because of the potential effect of a genetic dilution. These wild-domestic interactions are one of the most important issues to take into account here in Lanín National Park. Moreover, domestic dogs can prey on these small wild cats adding a new threat to the species. But these cats and dogs are there because of human actions, so this is the reason we have to continue working in education and conservation awareness.

Scent stations (SS).

The SS technique is mostly used to monitor long term trends of carnivore populations. But it can also be used to detect presence or absence of a target species and this was our objective.

We wanted to know if there was any relation between what we were capturing with the cameras and this technique.

Basically, a SS is a 1m radius circle of raked sandy soil and consisted of a fatty acid scent tablet placed in the centre of the circle to attract carnivores and then to record footprints of visiting animals. We set 7 lines of scent stations (over 13 kms, see figure 4 as an example). These SS were kept active during one night.

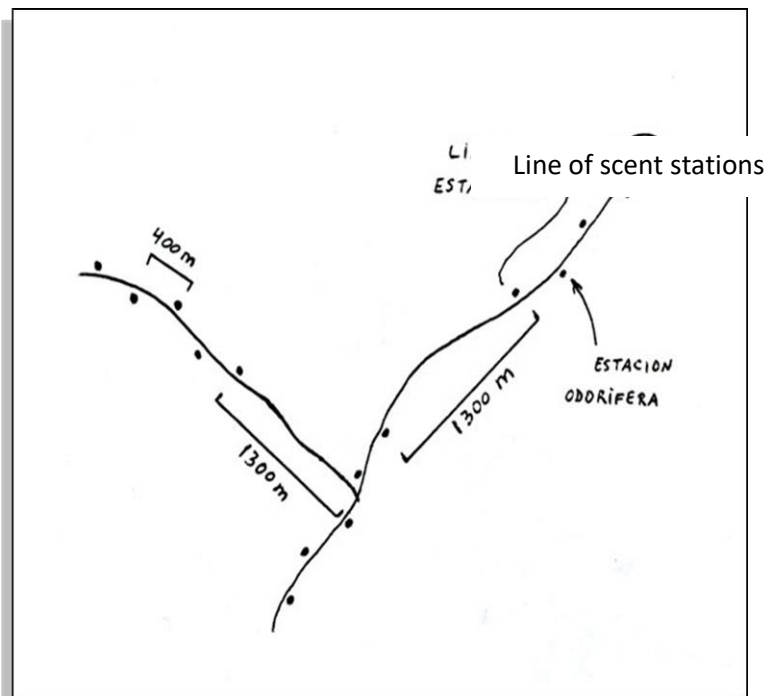


Figure 4. Scent station

Figures 5 show how we prepared the tablets and the circle. Figure 6 illustrate how we checked the SS and a photo of some culpeo fox tracks. At the end, we couldn't detect anything more than culpeo foxes. Although we know this technique was developed to monitor canids population trends, SS detected huiñas presence in some researches in Chile.



Figure 5: scent stations



Figure 6

Live-trapping.

We live trapped for 4 weeks during summer 2008/2009 with the collaboration of two veterinarians and a volunteer student. We used Tomahawk live traps (figure 7) for medium sized mammals. No huiñas were captured but culpeo foxes showed a "trap-happy" behaviour.

We tried two types of bait: dead bait (chicken, meat, etc) and live bait (doves). The traps were checked twice a day and in some traps we also set cameras to evaluate activity of the potential captured animals (figure 8).



Figure 7. Traps.



Figure 8

Necropsies.

We made two huiñas necropsies with the collaboration of Med. Vet. Carolina Marull (Field Veterinary Program - Wildlife Conservation Society) (figure 9). A melanic one that was killed in 2002 near our study area because it was found eating poultry. The other one was a huiña from Los Alerces national Park (Chubut province). This animal was found dead by a parkranger. These necropsies verified the presence of some intestinal parasites (*Ascaris*). The important issue of this result is that the only way that huiñas can get these parasites is being in contact with domestic animals (such as cats). Here again, we have a conservation problem.



Figure 9

Scat analysis.

Because one of our objective was to evaluate food habits of carnivore species, we collected every wild carnivore scat we found in the field. Unfortunately we didn't find any felid scat; all of them resulted to be of Culpeo fox (figure 10a). The main prey item found in the scats was sigmodontine rodents, mainly *Loxodontomys micropus* and *Chelemys macronyx*. Figures 10b shows some volunteers analysing the scats at the Wildlife Department Lab of the Centre of Applied Ecology of Neuquén.



Figure 10a & Figure 10b

Another interesting fact during the study...

Dead male huiña in September 2008.

Until September 2008 we were working in two areas of the Park (Ñorquinco and Queñi), but when this huiña appeared we decided to focused our attention only in Queñi area.



Some pictures during the Workshop with the Chilean colleagues



Some more photos....



Working and interacting with park rangers



Setting and checking camera traps.



Left: Some volunteers of the project. Right: Working with another park ranger.



Left: Our necropsy team. Right: More volunteers.