

Appendix XXI
Conference Presentations

I Reunión Binacional sobre la Conservación del Huillín, 30-31 octubre 2005, Valdivia, Chile. Without Book of Abstracts

1. Fasola L., Di Franco L, Chéhebar C, Cassini MH. Hipótesis sobre los mecanismos de dispersión del huillín en el Parque Nacional Nahuel Huapi. I Reunión Binacional sobre la Conservación del Huillín, Valdivia, Chile, 30-31 octubre 2005.
2. Cassini MH. El proyecto de la Iniciativa Darwin: 'Nutria amenazada y Visón invasor'. I Reunión Binacional sobre la Conservación del Huillín, Valdivia, Chile, 30-31 octubre 2005.
3. Fasola L, Chéhebar C, Porro G, MacDonald D, Cassini MH. Distribución del huillín en la Argentina. I Reunión Binacional sobre la Conservación del Huillín, Valdivia, Chile, 30-31 octubre 2005.
4. Centrón D, Cassini MH. Métodos moleculares para el estudio de la estructura genética de las poblaciones de huillines. I Reunión Binacional sobre la Conservación del Huillín, Valdivia, Chile, 30-31 octubre 2005

XXII Reunión Argentina de Ecología 2006, 22 – 25 August 2006, Córdoba, Argentina

5. Composición de la dieta del Huillín (*Lontra provocax*) en Bahía Lapataia, Tierra del Fuego Gozzi, A. C. (1) ; Fasola, L. (2); Malmierca L (3); Cassini M. H. (1) (2)

El huillín, *Lontra provocax*, es un mustélido endémico del sur de Argentina y Chile que habita ambientes acuáticos tanto continentales como marinos. Se encuentra catalogada “en peligro” de extinción. En Argentina las poblaciones marinas se ubican en la costa del Canal de Beagle e Isla de los Estados. La dieta y las relaciones tróficas de las especies amenazadas aportan información valiosa para diagnósticos de estados de conservación y diseños de planes de acción orientados a mejorar su situación. En este trabajo se determinó la composición de la dieta del huillín en un ambiente marino a través del análisis de fecas (n=70) recolectadas entre 1999 y 2006 en Bahía Lapataia (Canal de Beagle). Las frecuencias relativas para las distintas presas para todos los años y estaciones resultó: crustáceos (30,41%); peces (42,51%); aves (0,68%); moluscos (7,43%); otros (18,92%). Los géneros de peces marinos *Notothenia*, *Eleginops* y *Austrolycus* fueron los más representados. Usando tablas de contingencia se encontró que el consumo relativo de las diferentes presas se mantiene constante entre estaciones ($\chi^2=7,8$ $p=0,8$) y entre años. Éste es el primer estudio de dieta de una población marina de huillines en Argentina, donde se encontró que estos consumen preferentemente peces

British Ecological Society Annual Meeting, 5 - 7 September 2006 , University of Oxford, UK

6. Routes and speed of dispersal of an endangered otter (*Lontra provocax*) in Patagonia. Laura Fasola, Leonardo Di Franco, David MacDonald and Marcelo H. Cassini.

In 1980s, signs of regular activity of Southern river otters were found only in the Nahuel Huapi lake area. In the following decades, signs were found in consecutive lakes to the North. We estimated the routes and speed of dispersal and discussed the constraints for re-colonization.

British Ecological Society Annual Meeting, 10 - 12 September 2007, University of Glasgow, UK

7. FASOLA, L.¹, CHEHEBAR C.², MACDONALD, D.W.³, CASSINI, M.H.⁴ (1 Organización PROFAUNA, Argentina, 2 Administración Parques Nacionales, Argentina, 3 University of Oxford, UK, 4 Universidad de Luján, Argentina)

Invasion of North American mink in Argentinean Patagonia: degree of expansion and impact on native prey.

In forty years mink have spread over an area of 26 000 km², covering most Andean Patagonia and a small proportion of marine environments. Small mammals are the most common prey. Waterbirds are the most threatened native wildlife, depending on the availability of alternative prey types.

10th International Otter Colloquium, 10 – 16 October 2007, Hwacheon, South Korea

8. Genetic diversity in South American river otter (*Lontra provocax*) in Argentina. *Centrón D, Ramirez B, Fasola L, MacDonald D, Schiavini A, Cassini MH.*

Lontra provocax is an endemic species from Patagonia that has been categorized as “endangered” by the IUCN. In this study, non-invasive molecular methods were used to investigate the genetic diversity and haplotype distribution of *L. provocax* in Argentinean Patagonia. We analysed 150 scats collected from 1995 to 2006 and we obtained 13 sequences of control region with only one haplotype, and 34 sequences of cytochrome b with four haplotypes. The population of the south of Patagonia (Tierra del Fuego and Isla de los Estados islands) showed a relatively high haplotype diversity ($h=0.71$) and was statistically different to the population of the north (AMOVA, $F_{ST}=0.15$, $p=0.018$). We concluded that there are two different genetic stocks of *L. provocax* that deserve conservation attention, and that the southern population appears not to have suffered a human-induced population bottleneck of the sort typically experienced by various otter species around the world.

9. The distribution of macro-crustaceans in Argentinean Patagonia: multiple scale analysis of the role of resource availability in wildlife distribution. *Cassini MH, Fasola L, Aued B, Chéhebar C, MacDonald D*

In this paper we use a multi-scale approach to evaluate resource distribution for the identification of environmental determinants of the distribution of a species with conservation requirements. The objectives are: (1) describe the distribution, in the Andean Patagonian region of Argentina, of macro-crustaceans of the genera *Aegla* and *Sammastacus* (main prey of the Southern river otter *Lontra provocax*), (2) analyse environmental factors associated with crustacean distribution, and otter distribution, at different spatial scales, and (3) discuss the importance for wildlife ecology of the resource distribution patterns at different scales. We used five different sources of information to establish the distribution of crustaceans: (1) crustaceans surveys in northern and southern Patagonia (2) other indicators (mink diet analysis, location of rests of crustaceans external skeletons and interviews to local people). Macro-crustaceans showed strong heterogeneities in their distribution at four ecological scales: They occur in lakes in northern, but not southern, Patagonia. In northern Patagonia, they were found in four of six basins. Within a basin, there was a longitudinal and altitudinal gradient, with low crustacean density in lakes at high altitudes. Within lakes, they were significantly more abundant on rocky bottoms than on coasts with stones, gravel or rush vegetation. The latitudinal and altitudinal gradients, the basin differences, and the local heterogeneities can be explained by thermal gradients, water body productivity, geological history and crustacean's behaviour, respectively. Southern river otter distribution matches macro-crustaceans distribution at the proper ecological scales, strongly suggesting that one of the main factors that regulates the distribution and abundance of *L. provocax* is the availability of this type of prey.

10. Coexistence of North American mink and South American river otter in Patagonia.. *Fasola L, Chéhebar C, MacDonald D, Porro G, Cassini MH*

In Europe and South America, American mink, *Mustela vison*, have escaped or been introduced to areas occupied by native otters. This raises questions about the impact of invasive mink on otters, of which several are of at least regional conservation concern (although mink and the American river otter, *Lutra canadensis*, are sympatric in substantial parts of their natural distributions). We (1) describe the use of habitat of North American mink and South American river otters *Lontra provocax* in Argentinean Patagonia, and (2) test predictions of niche partitioning theory on the coexistence of these two species. Based on surveys of 600m transects for otter and mink scats and footprints along the watersides of lakes and rivers in the Andean Patagonic region, we compared diet composition (from scat analysis) and micro-habitat preferences (from field signs) of the two species. Southern river otters preferred lakes to rivers and lagoons, and their abundance was associated with that of macro-crustaceans. Within lakes, otter distribution was positively associated with the availability of food and refuges, and was negatively associated with human activity. Habitat use by both species was similar in the Limay basin, but mink behaved different in other river basins where otters were absent. Otters were more specialist than mink in habitat use and diet. Otters are dominant to mink, and their distribution was independent of the presence of mink. Contrary to the prediction of niche partitioning theory, and of results elsewhere, resource use by mink was more similar to that of otters where the species occurred sympatrically than where they were allopatric.

11. Diet of the Southern river otter in Argentinean Patagonia *Fasola L, Gozzi AC, Malmierca L, Chéhebar C, MacDonald D, Cassini MH*

Southern river otter, *Lontra provocax*, is endemic from Argentinean and Chilean Patagonia. In Argentina, there are two populations, one in northern Patagonia occupying the Limay river basin, and the other one in southern Patagonia, in the Beagle channel. Recent studies indicated that for most species of otters, population abundance and distribution is constrained by food availability. Thus, studies on foraging ecology can provide key information for otter conservation. The objectives of this paper were to describe present diet of the species along its Argentinean geographic range; to analyse differences in the diet between seasons and years; to compare with Chilean populations and with other species of otters; and to evaluate the relationship between diet requirements, diet composition and habitat use in Patagonia. We analysed 254 spraints of otters collected between 1983 and 2006. Macro-crustaceans dominated the freshwater diet while fish did so with sea diet. In northern Patagonia, there were no significant differences in diet composition between 1983 and 2005, and between water bodies; in winter, otter ate more fish and fewer crustaceans than in summer. In southern Patagonia, there were no differences between years or seasons. As most species of otters, *L. provocax* showed high level of specialization in slow prey, mainly benthonic fish and macro-crustacean. Agreement between the historical distributions of otters and that of crustaceans suggests that the specialisation in crustacean consumption in freshwater is an old adaptation of the species, and that they are a critical resource for otter survival.