

## *Lycalopex griseus* 正體中文

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Carnivora	Canidae

**Common name** South American gray fox (English), Patagonian fox (English), renard gris (French), Argentinean grey fox (English), Patagonischen fuchs (German), Argentine grey fox (English), zorro gris Patagonico (Spanish), South American grey fox (English), zorro chico (Spanish), zorro chilla (Spanish), zorro de la pampa (Spanish, Chile), zorro gris (Spanish, Chile), zorro gris chico (Spanish, Argentina), chico grey fox (English), chico gray fox (English), gray zorro (English), n'uru (Araucano, Argentina/Chile), nuru (Araucano), atoj (Quechua, Argentina/Chile), yeshgai (Peulche, Argentina/Chile), nguru (Araucano), chilla (Spanish), grey zorro (English)

**Synonym** *Pseudalopex griseus* , (Gray, 1837)  
*Dusicyon griseus* ,  
*Lycalopex griseus* , (Gray, 1837)

**Similar species** *Lycalopex culpaeus*, *Lycalopex fulvipes*, *Lycalopex gymnocercus*

**Summary** In its native range the chilla, *Lycalopex griseus* is scarce and is rarely seen in the wild because of hunting. Native to mainland South America it was introduced into the Falkland where it has proved to have a negative impact on native birds.



[view this species on IUCN Red List](#)

## Species Description

A fox-like canid with a small grey body, measurements as follows: Head-body length: 446 to 670 millimeters; Tail: 202 to 427 millimeters; Weight: 2.5 to 5.45 kilograms. Head rufescent, flecked with white, large ears, chin with well marked black spot. Coat brindled grey, made up of agouti guard hairs with pale underfur. Thighs crossed by a black patch. Legs and feet pale tawny. Underparts pale grey. Tail long and bushy, with dorsal line and tip black. Tail's underside presents a mixed pale tawny and black pattern (Osgood 1943; Long 2003; Clutton-Brock et al. 1976, in del Solar & Rau 2004).

## Notes

*Lycalopex griseus* is listed on the [IUCN red list](#) with the lowest risk status 'least concern'. In 1990 and 1994 it was listed as vulnerable.

There has been a general disagreement as to generic classification of the South American canids, with most of the disagreement centered on the species *australis*, *culpaeus*, *griseus*, *gymnocercus*, *microtis*, *sechurae*, *thous* and *vetulus* (ITIS *Dusicyon* C. E. H. Smith, 1839). The accepted name of the chilla or Patagonian fox is *Lycalopex griseus*; it was previously *Pseudalopex griseus* and previous to that *Dusicyon griseus* (Otley et al. 2008).

Scientific names used in this species profile are faithful to the information given in the sources.

Subspecies of *P. griseus* (del Solar & Rau 2004): *P. g. domeykonus*: Chile to southern Peru; *P. g. gracilis*: Western Argentina; *P. g. maullinicus*: Southern temperate forests of Argentina and Chile; *P. g. griseus*: Patagonia.

## Lifecycle Stages

Longevity: probably only several years in the wild (but uncertain) and 13 years in captivity (Ginsberg & Macdonald 1990; Long 2003).

## Uses

The commercial use of the chilla in South America is considerable; most fox skins originate from Argentina or are shipped via Argentina. 382 000 skins were shipped between 1980 and 1983 (an average of about 130 000 skins annually). Most exports went to West Germany, Switzerland and Italy (IUCN 1988, in Ginsberg & Macdonald 1990).

## Habitat Description

The chilla is mainly crepuscular (active at dawn and dusk) and nocturnal but it is occasionally diurnal; it makes its den among rocks, tree bases, low shrubs or in the burrows of other animals. Habitats include: plains/low open grasslands/pampas, scrublands/shrublands, deserts, forest edges, low mountains/mountain foothills (Long 2003; Ginsberg & Macdonald 1990). In its native range the chilla dwells mainly on the slopes of Cordillera de los Andes (Jaksic *et al.* 1983).

In Argentina it occurs in the western and southern arid and semi-arid regions of the country. In Argentina and Chile the chilla occurs in steppes, pampas grasslands and scrublands (Olrog and Lucero 1981, in Jiménez *et al.* 2008). The chilla generally inhabits plains and low mountains but has been reported to occur as high as 3500 to 4000 meters (Marquet *et al.* 1993, Jayat *et al.* 1999, in Jiménez *et al.* 2008). Although the chilla occurs in a variety of habitats it is more common in open shrublands rather than in dense vegetation or ravines. It reportedly visits some ravines in search of fruit (Jaksic *et al.* 1980, Jiménez *et al.* 1996, in Jiménez *et al.* 2008). In Chilean Patagonia the typical habitats of the chilla are steppes and shrublands composed of coirón grass (*Festuca* spp. and *Stipa* spp.) or Antarctic beech *Nothofagus antarctica*. Habitat disturbance caused by the slashing and burning of native forests to clear land for sheep farming seems to have been advantageous for the chilla. In the north-eastern Mendoza desert (Argentina) the chilla seems to prefer low shrubby sand dunes rather than higher areas (Jiménez *et al.* 2008).

Chillas are tolerant of climatic regimes from remarkably hot and dry areas such as the Atacama coastal desert in northern Chile (less than 0 mm average annual rainfall, 22 degrees C mean annual temperature), to the humid regions of the temperate Valdivian forest (2000 mm average annual rainfall, 12 degrees C mean annual temperature) and the cold Tierra del Fuego (ca. 400 mm average annual rainfall, 7 degrees C mean annual temperature (Jiménez *et al.* 2008). This high tolerance for different temperature variables may have implications for the potential future range expansion of the chilla and its subsequent impact on prey species as climate changes occur (due to human activities which involve the burning of fossil fuels).

## Reproduction

Breeding: August to September; Gestation: 53 to 58 days; Litter Size: two to five but may be variable. Lactation: unknown; Age to Sexual Maturity: one year but uncertain (Cattanji Pers. Comm., in Ginsberg & Macdonald 1990)

## Nutrition

Chilla is an opportunistic omnivore, feeding on rodents, rabbits, berries, reptiles, birds, eggs, arthropods, sheep carrion and plant material (grass) (Long 2003; Zapata *et al.* 2005 and references therein, in Otley *et al.* 2008). For greater detail please see del Solar & Rau (2004).

On Weddell Island (Falklands) birds and mammals represent about 80% of the diet of the fox; all shot foxes during the early lambing season were found to have eaten lambs (Miller 1998, in Otley *et al.* 2008). Insects, mussels, plants and berries and rat were also found in examined fox faeces and digestive tracts (Otley *et al.* 2008). Berries are consumed particularly in autumn and include those of the peumo plant *Cryptocarya alba* and those of *Lithraea caustica*. In central and northern Chile rodents comprise the greatest proportion of the foxes' prey making up to 98% of the prey items in faeces examined; birds comprise only about 3%. In Tierra del Fuego small animals and the berries of the Magellan barberry *Berberis buxifolia* were the main dietary components of the chilla (Jaksic *et al.* 1983, Yanez & Jaksic 1978). The diet of *D. griseus* in Tierra del Fuego has been found to be more diversified than that of the native fox on the island *D. culpaeus* and birds accounted for an important fraction of its prey (Jaksic 1983). In a study on *Dusicyon* foxes on Tierra del Fuego were found to have consumed the following (Jaksic 1983): *Artiodactyla* carrion (*D. griseus* is apparently more of a scavenger than *D. culpaeus*); European cattle *Bos taurus*; domestic sheep *Ovis aries*; *Lagomorpha* (rabbits are a small fraction of the diet of *D. griseus* compared with *D. culpaeus*); European rabbit *Oryctolagus cuniculus*; Rodentia yellow-nosed grass mouse *Akodon xanthorhinus*; the 'Vulnerable (VU)' Magellanic tuco-tuco (see [Ctenomys magellanicus in IUCN Red List of Threatened Species](#)); coney rat *Reithrodon physodes*; birds [Anseriformes] upland goose *Chloephaga picta*; crested duck *Lophonetta specularioides*; [Charadriiformes] kelp gull *Larus dominicanus*; [Falconiformes] chimango caracara *Mivago chimango*; [Passeriformes] black-chinned siskin *Carduelis barbata*; dark-faced ground-tyrant *Muscisaxicola macloviana*; Falkland thrush *Turdus falklandii*; reptiles; Squamata: Magellan's tree iguana; Insects (mainly lepidopteran larvae and coleopteran adults; a few arachnids, tunicates, amphipods, and polychaetes) were also detected. *D. griseus* seems to prey on invertebrates more frequently than its congener *D. culpaeus*. Plant material detected included mainly Gramineae and the leaves, stems, and bark of dicots.

## General Impacts

The chilla is reported as a farmer's pest. It target lambs on farmland across its native distribution and in the Falkland Islands (Bellati and von Thungen 1990, Miller 1998, in Otley *et al.* 2008). The chilla is considered a voracious predator of livestock, poultry and game in some areas (eg: parts of Mendoza, Argentina, Chile) and goat breeders have claimed losses to the chilla. A survey carried out in Chile found that each family lost on average of 34.5% of their hens, although as this figure is based on reports by farmers it may be overestimated. As such most research participants (67.4%) had negative attitudes towards chilla (Silva-Rodriguez *et al.*, 2009b). It is uncertain whether the remains of domestic animals present in chilla faeces and stomachs are from live animals or just carrion. It is unlikely whether the chilla could tackle anything larger than a new-born lamb; of which there is no doubt that it takes (del Solar & Rau 2004). Scat analysis confirmed that they do take chickens (Silva-Rodriguez *et al.*, 2009b).

*Pseudalopex griseus* preys on the adults, fledglings and eggs of steamer ducks, crested ducks and kelp geese on Beaver Island, Falklands where fox control has resulted in an increase in the abundance of these species (Poncet 1998, in Otley *et al.* 2008).

## Management Info

There are few if any successful fox eradication programmes anywhere in the world, except on the Aleutian Islands, where over 40 islands have been cleared of Arctic foxes (Otley *et al.* 2008).

Beaver Island Farm gained funds from the Overseas Territories Environment Programme (OTEP), Falkland Islands Government, Falklands Conservation and Antarctic Research Trust to attempt the eradication of chilla from Tea Island (300 ha) during 2008 (in conjunction with the eradication of black rats). An eradication plan is currently being drafted by fox eradication specialists in Alaska, and it is likely the plan will have to be a combination of poisoning, chemical lures, trapping, tracking with dogs and shooting (Otley *et al.* 2008).  
In their native range in South America chillas are hunted on the belief that they prey on livestock and poultry. Shooting, poison, dogs, snares and foothold traps are all used on the fox. Hunting occurs despite legal protection. Chillas are also hunted for their pelts (del Solar & Rau 2004).

## Pathway

Sheep ranchers attempted to control rabbit populations on their farms by introducing foxes *Dusicyon griseus* from the mainland to Tierra del Fuego (Goodall 1979, in Jaksic 1983).

## Principal source:

**Compiler:** IUCN SSC Invasive Species Specialist Group (ISSG) with support from the EU-funded South Atlantic Invasive Species project, coordinated by the Royal Society for the Protection of Birds (RSPB)

## Review:

**Publication date:** 2010-08-10

## ALIEN RANGE

[1] ARGENTINA

[1] CHILE

[8] FALKLAND ISLANDS (MALVINAS)

**Red List assessed species 1: NT = 1;**

[Pygoscelis papua](#) NT

## BIBLIOGRAPHY

23 references found for *Lycalopex griseus*

### Management information

Hall, James R., Robin W. Woods, M. de L. Brooke and Geoff M. Hilton., 2002. Factors affecting the distribution of landbirds on the Falkland Islands. Bird Conservation International (2002) 12:151-167.

Jaksic, Fabian M., 1983. Rabbit and Fox Introductions in Tierra del Fuego: History and Assessment of the Attempts at Biological Control of the Rabbit Infestation. Biological Conservation 26 (1983) 367-374

[Otle, H., Munro G., Clausen A and Ingham B. 2008. Falkland Islands State of the Environment Report 2008. Falkland Islands Government and Falklands Conservation, Stanley.](#)

**Summary:** Available from:

[http://www.epd.gov.fk/wp-content/uploads/Falkland%20Islands%20State%20of%20the%20Environment%20Report%202008\\_final\\_sm.pdf](http://www.epd.gov.fk/wp-content/uploads/Falkland%20Islands%20State%20of%20the%20Environment%20Report%202008_final_sm.pdf) [Accessed 20 August 2008]

### General information

Armstrong, Patrick H., 1994. Human impact on the Falkland Islands environment. Volume 14, Number 3 / September, 1994, The Environmentalist

[BirdLife International 2008. Species factsheet: \*Chloephaga rubidiceps\*. Downloaded from <http://www.birdlife.org> on 6/11/2008](#)

**Summary:** Available from: <http://www.iucnredlist.org/details/141463> [Accessed 10 November 2008]

[Boere, G.C., Galbraith, C.A. & Stroud, D.A. \(eds\). 2006. Waterbirds around the world. The Stationery Office, Edinburgh, UK. 960 pp.](#)

**Summary:** Available from: [http://www.jncc.gov.uk/PDF/pub07\\_waterbirds\\_part3.3.2.11.pdf](http://www.jncc.gov.uk/PDF/pub07_waterbirds_part3.3.2.11.pdf) [Accessed 10 November 2008]

[Canid Specialist Group. 2008. Chilla \(\*Pseudalopex griseus\*\).](#)

**Summary:** Available from: [http://www.canids.org/species/Pseudalopex\\_griseus.htm](http://www.canids.org/species/Pseudalopex_griseus.htm) [Accessed 29 July, 2010]

Cocu, N., R. Harrington, M. D. A. Rounsevell, S. P. Worner, M. Hull., 2005. Of pests and parasites and guanacos Geographical location, climate and land use influences on the phenology and numbers of the aphid, *Myzus persicae*, in Europe. Journal of biogeography ISSN 0305-0270 CODEN JBIODN 2005, vol. 32, no4, pp. 615-632 [18 page(s) (article)] (2 p.1/2)

Franklin, William L. and Melissa M. Grigione. 2005. The enigma of guanacos in the Falkland Islands: the legacy of John Hamilton. Journal of Biogeography (J. Biogeogr.) (2005) 32, 661-675

Ginsberg, Joshua Ross & David Whyte Macdonald., 1990. Foxes, Wolves, Jackals, and Dogs: An Action Plan for the Conservation of Canids. IUCN/SSC Canid Specialist Group, International Union for Conservation of Nature and Natural Resources Species Survival Commission. Wolf Specialist Group Contributor David Whyte Macdonald, IUCN/SSC Canid Specialist Group Published by IUCN, 1990

[Gonzalez del Solar & J. Rau. 2004. 3.6 Chilla \*Pseudalopex griseus\* \(Gray, 1837\) Least Concern](#)

**Summary:** Available from: <http://www.canids.org/species/Chilla.pdf> [Accessed 10 November 2008]

[ITIS \(Integrated Taxonomic Information System\), 2008. Online Database \*Dusicyon C. E. H. Smith, 1839\*](#)

**Summary:** An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.

Available from: [http://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=183822](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=183822) [Accessed 10 November 2008]

[ITIS \(Integrated Taxonomic Information System\), 2008. Online Database \*Lycalopex griseus\* \(Gray, 1837\)](#)

**Summary:** An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.

Available from: [http://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=726272](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=726272) [Accessed 10 November 2008]

Jaksic, Fabian. (1998). Vertebrate invaders and their ecological impacts in Chile. *Biodiversity and Conservation*. 7. 1427-1445. 10.1023/A:1008825802448.

Jaksic, Fabian & Yáñez, José & Rau, Jaime & Jaksic, Fabian & Yanez, Jose. (1983). Trophic relations of the southernmost populations of *Dusicyon* in Chile. *Journal of Mammalogy*. 64. 693. 10.2307/1380529.

[Jiménez, J.E. and Novaro, A.J. 2004. \*Culpeo Pseudolopex culpaeus\* \(Molina, 1972\) Least Concern](#)

**Summary:** Available from: <http://www.canids.org/species/Culpeo.pdf> [Accessed 10 November 2008]

[Jiménez, J.E., Lucherini, M. & Novaro, 2008. \*Pseudalopex griseus\*. In: IUCN 2008. 2008 IUCN Red List of Threatened Species. . Downloaded on 05 November 2008.](#)

**Summary:** Available from: <http://www.iucnredlist.org/details/6927> [Accessed 10 November 2008]

Long, John L. 2003. *Introduced Mammals of the World: Their History, Distribution and Influence*. Published by CSIRO Publishing.

McDowall, R. M., 2005. Falkland Islands biogeography: converging trajectories in the South Atlantic Ocean. *Journal of Biogeography*, Volume 32, Number 1, January 2005 , pp. 49-62(14)

Silva-Rodriguez, E.A., Soto-Gamboa, M., Ortega-Solia, G.R. & Jimenez, J.E. 2009b. Foxes, people and hens: human dimensions of a conflict in a rural area of southern Chile. *Revista Chilena de Historia Natural*, 82: 375-386.

Silva-Rodriguez, E.A., Verdugo, C., Aleuy, O.A., Sanderson, J.G., Ortega-Solis, G.R. Osorio-Zuniga, F., Gonzalez-Acuna, D. 2009. Evaluating mortality sources for the Vulnerable pudu *Pudu puda* in Chile: implications for the conservation of a threatened deer. *Oryx*, 44(1): 97-103

[UNEP-WCMC Species Database \*Lycalopex griseus\* \(Gray, 1837\)](#)

**Summary:** Available from:

<http://www.unep-wcmc.org/isdb/species.cfm?genus=Lycalopex&species=griseus&source=Animals&tabname=distribution> [Accessed 10 November 2008]

[UniProt 2002-2008, Species \*Dusicyon griseus\* \(grey zorro\)](#)

**Summary:** Available from: <http://www.uniprot.org/taxonomy/298410> [Accessed 10 November 2008]