GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Cervus elaphus***

Cervus elaphus 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Artiodactyla	Cervidae

Common name Rotwild, Rothirsch (German), cerf elaphe (French), Ciervo colorado (Spanish), Rothirsch (German), deer (English), Edelhirsch (German), wapiti (Shawnee), elk (English), red deer (English), European red deer (English)

Synonym

Similar species

Summary Red deer (Cervus elaphus) were introduced to several countries, including North and South America, New Zealand and Australia. In Argentina they have invaded several National parks, influencing native flora and fauna and possibly disrupting ecological processes. Of particular concern is possible competition with an endangered deer endemic to the southern parts of Chile and Argentina. They also compete with livestock.

view this species on IUCN Red List

Species Description
Adult red deer (*Cervus elaphus*) are medium-sized and round-antlered, with a uniform, plain brown body, lighter below. Mature males have antlers with 10 or more tines, the uppermost pointing upwards in a cluster. The muzzle is blackish and hairless, and the hooves are grey to black. Both sexes are similar in colour. Adults typically have no spots, newborn fawns are brown or reddish-brown with a dark dorsal stripe and a creamy to light brown rump patch. White spots are scattered on the back and flanks (Nugent and Fraser 2005). Female live weights are 100-150kg, male live weights 200-300kg.

Notes
In southern Latin America the invasion of red deer (*Cervus elaphus*) has occurred in temperate rain forests, ecotonal areas and tree-less steppe areas. The invasion is encouraged through plantations of exotic conifers in ecotonal and steppe areas. The only important predator is the native puma (*Puma concolor*).

Lifecycle Stages
In Patagonia, sexual maturity of red deer (*Cervus elaphus*) females is at 1 or 2 years of age; gestation lasts approximatly 240 days; males reach their maximum development at 12-14 years of age; life span in the wild in both sexes is 18-20 years.

Uses
Red deer (*Cervus elaphus*) have been used to stock game parks for recreational and trophy hunting. Red deer have been farmed for venison, velvet and skins/hides, as well as\r\nfor Asian medicines using antlers, velvet, tails and testicles, and teeth for jewellery (Auckland Regional Council- PestFacts).

Habitat Description
The habitat types occupied by red deer (*Cervus elaphus*) in southern Chile and Argentina include native forest types and grasslands and modified vegetation types. Currently red deer are established in most forested habitat types encountered between about 34E and 55E S. Inhabited native vegetation types include: alerce forests, *Fitzroya cupressoides*; Araucaria forest, *Araucaria araucaria*; Cordilleran Cypres forest, *Austrocedrus chilensis*; Roble-Rauli-Coihue forest, *Nothofagus obliqua*, *N. nervosa*, *N. dombeyi*; Rauli-Tepa-Coihue forest, *Nothofagus nervosa*, *N. dombeyi*, *Laureliopsis philipiana*; Valdivian Rainforest complex; Lenga forest, *Nothofagus pumilio*; Nire forest, *Nothofagus antarctic*; Magallan Coihue forest, *Nothofagus betuloides*; alto-Andean vegetation; Patagonian steppe; wet meadows and riparian wetlands; brush and grassland of anthropogenic origin - e.g. forests cleared for livestock; agricultural areas and forest plantations. The present distribution of red deer has the following environmental characteristics: it covers the latitudes between 37E 42' S and 54E 55' S (non-contiguous); the longitudes between 73E 36' W and 69E 50' W (non-contiguous); and altitudes between 300m and 2,450m.

Reproduction
Normally one offspring per female. In some parts of Argentina, 10-30% of yearling females breed.

Nutrition
The dietary breadth of red deer (*Cervus elaphus*) is evidenced by the habitat types invaded so far, which range from temperate rain forests to cold-dry steppe habitat. Females feed on the more lush habitats whilst the males prefer the poorer feeding areas.

General Impacts
In South America there is now evidence of extensive dietary overlap of red deer (*Cervus elaphus*) with an endangered native heumel (see *Hippocamelus bisulcus* in IUCN Red List of Threatened Species) and likely with guanaco, another native ungulate. Red deer have reached high densities locally with measureable effects on the flora (Flueck, W., pers. Comm., 2003).
Deer prevent regeneration of favoured plant species, which causes significant changes to the structure and composition of native ecosystems. At critical sites, non-replacement of canopy species can lead to canopy collapse. There is no evidence in New Zealand, Chile or Argentina, that equilibrium has been reached between deer and the native ecosystems they inhabit. Deer continue to inhibit forest regeneration even at low density (Department of Conservation Policy Statement on Deer Control, 2002).

Management Info
Preventative measures: Risk Assessment models for assessing the risk that exotic vertebrates could establish in Australia have been further explored by the Western Australia Department of Agriculture & Food (DAFWA) to confirm that they reasonably predict public safety, establishment and pest risks across a full range of exotic species and risk levels.
The Risk assessment for the Red deer (*Cervus elaphus*), has been assigned a VPC Threat Category of **EXTREME**. Mammals and birds were assessed for the pest risk they pose if introduced to Australia, by calculating Vertebrate Pests Committee (VPC) Threat Categories. These categories incorporate risk of establishing populations in the wild, risk of causing public harm, and risk of becoming a pest (eg causing agricultural damage, competing with native fauna, etc). The 7-factor Australian Bird and Mammal Model was used for these assessments.
Physical: In Argentina, wild red deer (*Cervus elaphus*) are generally treated as a resource, mainly for trophy hunting, and currnently there is no comprehensive strategy to monitor and control populations. Although considered an unwanted invasive species in National parks, current manipulations are restricted to trophy hunting. Only where densities have reached high levels on some private lands, red deer are specifically culled to decrease the density. Several provinces and National parks with wild red deer have established their hunting regulations, though not being based on population characteristics or conservation goals (Werner, F., pers. comm., 2004).
\r\nIntegrated management: The Department of Conservation in New Zealand has released a policy statement on deer control, (Department of Conservation Policy Statement on Deer Control, 2001), which adopts an integrated approach to control of deer, working with all interest groups.
Please follow this link for a case study on the management of red deer in New Zealand compiled by the IUCN SSC Invasive Species Specialist Group (ISSG).

Pathway
Introduced by acclimatisation societies.

Principal source: Dr. Werner T. Flueck, Consejo Nacional de Investigaciones Cientificas y Tecnologica and Centro de Ecologia Aplicada del Neuquen, Argentina

Compiler: IUCN/SSC Invasive Species Specialist Group (ISSG)

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ALIEN RANGE

[2] ARGENTINA
[5] NEW ZEALAND
[1] PERU
[1] VIRGIN ISLANDS, U.S.
[1] CHILE
[1] PATAGONIA
[1] SOUTH AMERICA

Red List assessed species 7: CR = 1; EN = 3; VU = 1; LC = 2;

Callaeas cinereus **EN**
Cyanoramphus malherbi **CR**
Lama guanicoe **LC**
Porphyrio hochstetteri **EN**
Cervus elaphus **LC**
Hippocamelus bisulcus **EN**
Nestor notabilis **VU**

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