

FULL ACCOUNT FOR: Canis lupus





**System:** Terrestrial

| Kingdom  | Phylum   | Class    | Order     | Family  |
|----------|----------|----------|-----------|---------|
| Animalia | Chordata | Mammalia | Carnivora | Canidae |

Haushund (German), feral dog (English), domestic dog (English), kuri (Maori, Common name

New Zealand), guri (Maori), kurio (Tuamotuan), uli (Samoan), peto

(Marquesan), pero (Maori)

**Synonym** Canis dingo , Blumenbach, 1780

Canis familiaris, Linnaeus, 1758

Similar species

Canis lupus (the dog) is possibly the first animal to have been domesticated Summary

> by humans. It has been selectively bred into a wide range of different forms. They are found throughout the world in many different habitats, both closely associated with humans and away from habitation. They are active hunters and have significant negative impacts on a wide range of native fauna.



view this species on IUCN Red List

### **Species Description**

Domestic dogs are believed to have first diverged from wolves around 100,000 years ago. Around 15,000 years ago dogs started diverging into the multitude of different breeds known today. This divergence was possibly triggered by humans changing from a nomadic, hunting based-lifestyle to a more settled, agriculture-based way of life (Vilà et al. 1997). Domestic dogs have been selectively bred for various behaviours, sensory capabilities and physical attributes, including dogs bred for herding livestock (collies, shepherds, etc.), different kinds of hunting (pointers, hounds, etc.), catching rats (small terriers), guarding (mastiffs, chows), helping fishermen with nets (Newfoundlands, poodles), pulling loads (huskies, St. Bernards), guarding carriages and horsemen (Dalmatians), and as companion dogs. Domestic dogs are therefore extremely variable but the basic morphology is that of the grey wolf, the wild ancestor of all domestic dog breeds.

### **Notes**

Dogs were possibly the first animal to be domesticated by humans around 15,000 years ago. There are estimated to be 400,000,000 dogs present in the world.

Dogs taken to the Pacific islands by the early Polynesians may have been about the size of a small collie, but shorter in the leg (Anderson 1990). They have long since been replaced by, or crossed with, various breeds from Europe.

Reviewed by Mech (1974, Mammalian Species, 37) Canis familiaris has page priority over Canis lupus in Linnaeus (1758), but both were published simultaneously, and C. lupus has been universally used for this species [excerpted from Mammal Species of the World, 3d Edition, p. 281] (ITIS, 2004).

#### Uses

Domesticated dogs have been bred to assist humans in a wide range of activites including farming, hunting and companionship.



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### **Habitat Description**

Dogs are usually closely associated with humans so can potentially be found in all habitats. Feral and ranging domestic dogs may be found far from human habitation.

#### Reproduction

Placental, sexual. 4-12 puppies per litter. Both males and females become sexually mature at around 6-12 months.

#### **Nutrition**

Mainly carnivorous but may eat plant material and invertebrates

## **General Impacts**

In Israel, free-ranging feral dogs are a major threat to populations of endangered mountain gazelles (see *Gazella gazella* ssp. *gazella* in IUCN Red List of Threatened Species) (Manor and Salz, 2004). Canine Distemper Virus (CDV) is thought to have caused several fatal epidemics within the Serengeti-Mara ecosystem in East Africa. The source of the CDV was probably domestic dogs in the local villages surrounding the park. The canids affected included silver-backed jackals (*Canis mmesomelas*) and bat-eared foxes (*Otocyon megalotis*) in 1978 and endangered African wild dogs (see *Lycaon pictus* in IUCN Red List of Threatened Species) in 1991. The Serengeti lion population (see *Panthera leo* in IUCN Red List of Threatened Species) which remained unaffected during these two epidemics was hit by an epidemic in early 1994, caused by a morbillivirus which is closely related to CDV. Later that year the epidemic had spread north to lions, hyenas, bat-eared foxes and leopards in the Maasi Mara National reserve. This epidemic claimed at least 30% of the lion population (estimated at 3000 in Serengeti at that time). It is suggested that the possible route of transmission from domestic dogs was the spotted hyena that range through human habitation and travel long distances within the park (Roelke-Parker *et al.* 1996).

Uncontrolled domestic dogs can be equally as damaging as truly feral animals. In New Zealand, during study of kiwi (see <u>Apteryx australis</u>; <u>Apteryx haastii</u>; <u>Apteryx mantelli</u>; and <u>Apteryx owenii</u> in <u>IUCN Red List of Threatened Species</u>) in a Northland forest, the loss of 13 out of 23 kiwi fitted with transmitters was found to be the result of predation by one German shepherd dog. It was estimated that this single dog alone had killed 500 out of 900 birds, although this estimate was considered to be possibly conservative (Taborsky 1988). Seabirds and mammals are included among the prey taken by feral dogs (e.g. Dickman, 1996, Stevenson and Woelher, 2007).

### **Management Info**

The principal techniques to control wild dogs are exclusion fencing, shooting, trapping and poisoning. Poisoning using 1080 is the most cost-effective means of reducing populations of wild dogs over large areas of remote or inaccessible country. New techniques such as the use of livestock guarding dogs, poison ejecting devices and toxic collars have been suggested as alternatives to current methods.

The Australian Bureau of Rural Sciences (BRS) in cooperation with the Vertebrate Pests Committee of the Standing Committee on Agriculture and Resource Management (SCARM) has published guidelines for managing the impacts\r\nof dingoes (Canis lupus dingo) and other wild dogs (C.I. familiaris) as part of the Managing Vertebrate Pests series. Please follow this link to view and download Fleming, P., Corbett, L., Harden, R. and Thomson, P. (2001) Managing the Impacts of Dingoes and Other Wild Dogs. Bureau of Rural Sciences, Canberra.

## **Pathway**

### **Principal source:**

**Compiler:** IUCN SSC Invasive Species Specialist Group (ISSG) with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment



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Review:

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### **ALIEN RANGE**

[1] ANGUILLA [1] ANTIGUA AND BARBUDA [1] AUSTRALIA [1] BAHAMAS [3] CAYMAN ISLANDS [2] COOK ISLANDS [1] DOMINICAN REPUBLIC [2] ECUADOR

**[5]** FIJI [1] FRENCH GUIANA [11] FRENCH POLYNESIA [1] GERMANY

[1] GUAM [1] HAITI [9] KIRIBATI [1] IAMAICA [1] MADAGASCAR

[1] MARSHALL ISLANDS [1] MASAI MARA RESERVE [1] MEXICO

[3] MICRONESIA, FEDERATED STATES OF [1] NAURU [4] NEW CALEDONIA

[2] NEW ZEALAND

[3] NORTHERN MARIANA ISLANDS [1] NIUE

[1] PAPUA NEW GUINEA [2] SAINT HELENA [1] SAINT LUCIA [1] SAINT MARTIN (FRENCH PART)

[1] SERENGETI-MARA ECOSYSTEM [1] SOLOMON ISLANDS

[1] TOKELAU [2] TONGA [3] TURKS AND CAICOS ISLANDS [8] UNITED STATES

[1] UNITED STATES MINOR OUTLYING ISLANDS [2] VIRGIN ISLANDS, BRITISH

## Red List assessed species 191: EX = 8; CR = 28; EN = 52; VU = 53; NT = 31; DD = 4; LC = 15;

Aepypodius bruijnii EN Alauda razae CR Amblysomus corriae NT Anas chlorotis EN Anas wyvilliana EN Anolis longiceps VU Aplonis santovestris VU Apteryx australis VU Apteryx mantelli EN Apteryx haastii VU

Aramidopsis plateni VU Arctocephalus galapagoensis EN

**Ardeotis nigriceps CR** Arvicola sapidus VU Atelocynus microtis NT Atelopus quanujo CR Burhinus grallarius NT Brachypteracias squamiger VU Camarhynchus pauper CR Canis simensis EN Capreolus capreolus LC Casuarius bennetti NT Celestus warreni CR

Celestus anelpistus CR Charadrius melodus NT Charadrius obscurus EN Charadrius sanctaehelenae CR Chlamyphorus truncatus DD Chrysocyon brachyurus NT Conilurus penicillatus NT Cryptoprocta ferox VU Coturnix novaezelandiae EX Ctenosaura bakeri CR Ctenosaura palearis EN Cuon alpinus EN Cyclura carinata CR Cyclura collei CR Cyclura cornuta VU Cyclura lewisi CR Cyclura pinquis CR

Cyclura ricordii CR Dasypus hybridus NT Dasyurus hallucatus EN Dasyurus maculatus NT Dasyurus spartacus NT Diplothrix legata EN **Dipodomys margaritae CR** Dorcopsulus vanheurni NT Ducula pickeringii VU Eliurus myoxinus LC Eupleres goudotii NT Eudyptes pachyrhynchus **VU** 

Global Invasive Species Database (GISD) 2025. Species profile Canis lupus. Available from: https://www.iucngisd.org/gisd/species.php?sc=146 [Accessed 07 December 2025]



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Eurynorhynchus pygmeus CR

Fossa fossana NT Galidia elegans LC Galidictis grandidieri EN

Gallicolumba sanctaecrucis EN

Gallinula silvestris CR Gallirallus dieffenbachii EX Gallirallus okinawae EN Gallirallus sylvestris EN Gazella cuvieri EN

Grus antigone VU

Gymnocrex rosenbergii VU Habroptila wallacii VU Hippocamelus antisensis VU Hypogeomys antimena EN Iguana delicatissima EN Laterallus spilonotus VU Lepidochelys olivacea VU

Lycaon pictus EN

Macrotarsomys ingens EN Mallomys istapantap LC Mazama nana **DD** 

Megapodius bernsteinii VU Megapodius laperouse EN Megapodius pritchardii EN Mesitornis unicolor VU

Microperoryctes longicauda LC

Monias benschi VU Mysateles prehensilis NT Neotoma bryanti EN Numenius tahitiensis **VU** Papagomys armandvillei NT Pentalagus furnessi EN Petrogale persephone EN Phalacrocorax harrisi VU Phascolarctos cinereus LC

Philoria frosti CR Pitta anerythra VU Plagiodontia aedium EN Porphyrio kukwiedei EX Potorous longipes EN Procellaria parkinsoni VU Pseudalopex fulvipes CR Pseudomys fumeus EN Pterodroma axillaris EN Pterodroma brevipes VU

Pterodroma phaeopygia CR Pteropus pselaphon CR

Pterodroma hasitata EN

Pudu puda **VU** Puffinus heinrothi VU Puffinus opisthomelas NT Rallina leucospila NT Rattus richardsoni VU

Felis margarita NT Fulica alai VU

Galidictis fasciata NT Gallicolumba salamonis EX

Gallinula pacifica CR Gallirallus calayanensis **VU** 

Gallirallus lafresnayanus CR Gallirallus rovianae NT

Gallotia simonyi CR Geocapromys brownii VU

Grus paradisea VU

Gymnomyza aubryana CR Henicophaps foersteri VU Hippocamelus bisulcus EN Hypsiprymnodon moschatus LC

Larus fuliginosus VU Leipoa ocellata VU Litoria caerulea LC Macaca sylvanus EN Mallomys gunung EN Mazama gouazoubira LC Megacrex inepta NT

Megapodius geelvinkianus VU Megapodius nicobariensis VU

Mergus australis **EX** Microgoura meeki EX Moho bishopi EX

Mungotictis decemlineata VU Neodon sikimensis LC Nesoclopeus woodfordi NT Ozotoceros bezoarticus NT Pelecanoides garnotii EN Petrogale penicillata NT Phalacrocorax featherstoni EN Phalacrocorax onslowi CR Phascolosorex doriae LC

Phoebastria immutabilis NT

Pitta superba **VU** 

Puffinus newelli EN

Rallina canningi NT

Pluvianellus socialis NT Porzana sandwichensis EX Potorous tridactylus LC Procyon pygmaeus CR Pseudobulweria rostrata NT Psittirostra psittacea CR Pterodroma baraui EN Pterodroma externa VU Pterodroma longirostris VU Pterodroma sandwichensis VU Pudu mephistophiles VU Puffinus creatopus **VU** 

Rallus semiplumbeus EN Reithrodontomys spectabilis CR

Global Invasive Species Database (GISD) 2025. Species profile Canis lupus. Available from: https://www.iucngisd.org/gisd/species.php?sc=146 [Accessed 07 December 2025]



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Rhionaeschna galapagoensis EN

Rhynochetos jubatus EN

Scolopax mira VU

Solenodon cubanus EN

Spheniscus mendiculus EN

Sterna albostriata EN

Suta flagellum LC

Sylvilagus varynaensis DD

Tamias palmeri EN

Tarsius lariang **DD** 

Tarsius tarsier VU

Thinornis rubricollis NT

Tokudaia osimensis EN

Tupaia nicobarica EN

Vermivora crissalis NT

Zalophus wollebaeki EN

Rhynchomeles prattorum EN

Sarcophilus harrisii EN

Sminthopsis butleri VU

Solenodon paradoxus EN

Spilogale pygmaea VU

Sterna nereis VU

Sylvilagus bachmani LC

Syrmaticus soemmerringii NT

Tarsius dentatus VU

Tarsius pelengensis EN

Terrapene carolina **VU** 

Thomomys mazama LC

Tokudaia tokunoshimensis **EN** 

Uratelornis chimaera VU

Vestiaria coccinea VU

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**Summary:** This report reviews available information on the adverse effects of 14 alien vertebrates considered to be �significant invasive species on islands of the South Pacific and Hawaii, supplementing the authors� experience with that of other workers.

Bomford, M., 2003. Risk Assessment for the Import and Keeping of Exotic Vertebrates in Australia. Bureau of Rural Sciences, Canberra. **Summary:** Available from: http://www.feral.org.au/wp-content/uploads/2010/03/PC12803.pdf [Accessed August 19 2010]

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**Summary:** Available from: http://www.daff.gov.au/\_data/assets/pdf\_file/0013/1504111/dingoes-and-dogs.pdf [Accessed 26 June 2010] Gerber, G. 1997. Nesting Behavior of the Little Cayman rock iguana, *Cyclura nubila caymanensis*. Joint Annual Meeting, American Society of Ichthyologists and Herpetologists/Herpetologists League/Society for the Study of Amphibians and Reptiles. University of Washington, Seattle, U.S.A.

Gerber, G.P. 2000. Conservation of the Anegada Rock Iguana: Field Research Report. Unpublished Report to the British Virgin Islands National Parks Trust, Fauna & Flora

Glen, A.S., Gentle, M.N. and Dickman, C.R. 2007. Non-target impacts of poison baiting for predator control in Australia. Mammal Review Volume 37 Issue 3 Page 191-205, July 2007

IUCN 2010. IUCN Red List of Threatened Species. Version 2010.4.

**Summary:** The IUCN Red List of Threatened Species provides taxonomic, conservation status and distribution information on taxa that have been globally evaluated using the IUCN Red List Categories and Criteria. This system is designed to determine the relative risk of extinction, and the main purpose of the IUCN Red List is to catalogue and highlight those taxa that are facing a higher risk of global extinction (i.e. those listed as Critically Endangered, Endangered and Vulnerable). The IUCN Red List also includes information on taxa that are categorized as Extinct or Extinct in the Wild; on taxa that cannot be evaluated because of insufficient information (i.e. are Data Deficient); and on taxa that are either close to meeting the threatened thresholds or that would be threatened were it not for an ongoing taxon-specific conservation programme (i.e. are Near Threatened).

Available from: http://www.iucnredlist.org/ [Accessed 25 May 2011]

IUCN/SSC Invasive Species Specialist Group (ISSG)., 2010. A Compilation of Information Sources for Conservation Managers.

**Summary:** This compilation of information sources can be sorted on keywords for example: Baits & Lures, Non Target Species, Eradication, Monitoring, Risk Assessment, Weeds, Herbicides etc. This compilation is at present in Excel format, this will be web-enabled as a searchable database shortly. This version of the database has been developed by the IUCN SSC ISSG as part of an Overseas Territories Environmental Programme funded project XOT603 in partnership with the Cayman Islands Government - Department of Environment. The compilation is a work under progress, the ISSG will manage, maintain and enhance the database with current and newly published information, reports, journal articles etc.

K♦rtner, G. 2007. 1080 aerial baiting for the control of wild dogs and its impacts on spotted-tailed quoll (*Dasyurus maculatus*). Wildlife Research 34: 48-53

**Summary:** Spotted quolls were radio-trtacked to assess the effect an aerial poison operation to control wild dogs may have on quoll survival. The result suggested most quolls are able to survive baiting campaigns



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Lapidge, Bourne, Braysher, and Sarre., 2004- present feral.org.au [Online]. Web-based (http://www.feral.org.au)

Summary: The Bureau of Rural Sciences National Feral Animal Control Program under the Natural Heritage Trust has supported the Pest Animal Control CRC in cooperation with the University of Canberra to develop a comprehensive, interactive and freely available website, Feral.org.au on pest animals. The site aims to make information on past and current research readily accessible and to interpret and pull together relevant data to assist end-users in making management decisions.

The website is available from http://www.feral.org.au/content/general/about.cfm

This page is available from: http://www.feral.org.au/content/species/dog.cfm

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Varnham, K. 2006. Non-native species in UK Overseas Territories: a review. JNCC Report 372. Peterborough: United Kingdom.

Summary: This database compiles information on alien species from British Overseas Territories.

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Barnett, B. D. 1982. Feral dogs of southern Isabela. Noticias Galapagos 35: 15 \$\displantarrow\$16.

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Summary: Available from: http://www.iucnredlist.org/search/details.php/15951/all [Accessed 7 February 2008]

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Summary: Available from: http://www.iucnredlist.org/apps/redlist/details/141094/0 [Accessed 12 March 2010]

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CONABIO. 2008. Sistema de información sobre especies invasoras en Móxico. Especies invasoras - Mamóferos. Comisión Nacional para el Conocimiento y Uso de la Biodiversidad. Fecha de acceso.

#### Summary: English:

The species list sheet for the Mexican information system on invasive species currently provides information related to Scientific names, family, group and common names, as well as habitat, status of invasion in Mexico, pathways of introduction and links to other specialised websites. Some of the higher risk species already have a direct link to the alert page. It is important to notice that these lists are constantly being updated, please refer to the main page (http://www.conabio.gob.mx/invasoras/index.php/Portada), under the section Novedades for information on updates.

Invasive species - mammals is available from: http://www.conabio.gob.mx/invasoras/index.php/Especies\_invasoras\_-\_Mam%C3%ADferos [Accessed 30 July 2008]

### Spanish:

La lista de especies del Sistema de informaci�n sobre especies invasoras de m�xico cuenta actualmente con informaci�n aceca de nombre cientôfico, familia, grupo y nombre comôn, asô como hôbitat, estado de la invasiôn en Môxico, rutas de introducciôn y ligas a otros sitios especializados. Algunas de las especies de mayor riesgo ya tienen una liga directa a la pegina de alertas. Es importante resaltar que estas listas se encuentran en constante proceso de actualización, por favor consulte la portada

(http://www.conabio.gob.mx/invasoras/index.php/Portada), en la secci∳n novedades, para conocer los cambios.

Especies invasoras - Mam@feros is available from:

http://www.conabio.gob.mx/invasoras/index.php/Especies invasoras - Mam%C3%ADferos [Accessed 30 July 2008]

De Thoisy, pers. comm., 2007

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ITIS (Integrated Taxonomic Information System), 2004. Online Database Canis lupus

**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=180596 [Accessed 14 January 2008] Macdonald, D. W. and C. Sillero-Zubiri. 2004. Biology and conservation of wild canids. Oxford University Press, UK.



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Summary: Available online in PDF format at www.canids.org

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