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

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 They have long since been replaced by, or crossed with, various breeds from Europe.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 activities including farming, hunting and companionship.

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 mesomelas*) 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 *Apteryx australis; Apteryx haastii; Apteryx mantelli; and Apteryx owenii* in IUCN Red List of Threatened Species) 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 of dingoes (*Canis lupus dingo*) and other wild dogs (*C.l. 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
Review:

Publication date: 2010-09-15

ALIEN RANGE

[1] ANGUILLA
[1] AUSTRALIA
[3] CAYMAN ISLANDS
[1] DOMINICAN REPUBLIC
[5] FIJI
[1] GUAM
[1] JAMAICA
[1] MADAGASCAR
[1] MASAI MARA RESERVE
[3] MICRONESIA, FEDERATED STATES OF
[4] NEW CALEDONIA
[1] NIUE
[1] PAPUA NEW GUINEA
[1] SAINT LUCIA
[1] SERENGETI-MARA ECOSYSTEM
[1] TOKELAU
[3] TURKS AND CAICOS ISLANDS
[1] UNITED STATES MINOR OUTLYING ISLANDS
[1] ANTIGUA AND BARBUDA
[1] BAHAMAS
[2] COOK ISLANDS
[2] ECUADOR
[1] FRENCH GUIANA
[1] GERMANY
[1] HAITI
[9] KIRIBATI
[1] MARSHALL ISLANDS
[1] MEXICO
[1] NAURU
[2] NEW ZEALAND
[3] NORTHERN MARIANA ISLANDS
[2] SAINT HELENA
[1] SAINT MARTIN (FRENCH PART)
[1] SOLOMON ISLANDS
[2] TONGA
[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
- Amblysomus corriae NT
- Anas wyvilliana EN
- Aplonis santovestris VU
- Apteryx haastii VU
- Aramidopsis plateni VU
- Ardeotis nigriceps CR
- Atelocynus microtis NT
- Brachypteracias squamiger VU
- Camarhynchus pauper CR
- Capreolus capreolus LC
- Celestus anelpistus CR
- Charadius melodus NT
- Charadius sanctaeelenae CR
- Chrysocyon brachyurus NT
- Coturnix novaezelandiae EX
- Ctenosaura bakeri CR
- Cuon alpinus EN
- Alauda razae CR
- Anas chlorotis EN
- Anolis longiceps VU
- Apteryx australis VU
- Apteryx mantelli EN
- Arctocephalus galapagoensis EN
- Arvicola sapidus VU
- Atelopus guanajo CR
- Burhinus grallarius NT
- Canis simensis EN
- Casuarius bennetti NT
- Celestus warreni CR
- Charadius obscurus EN
- Chlamyphorus truncatus DD
- Conilurus penicillatus NT
- Cryptoprocta ferox VU
- Ctenosaura palaearis EN
- Cyclura carinata CR
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FULL ACCOUNT FOR: Canis lupus

Porphyrio kukwiedei EX
Potorous longipes EN
Procariella parkinsoni VU
Pseudalopex fulvipes CR
Pseudomys fumeus EN
Pterodroma axillaris EN
Pterodroma brevipes VU
Pterodroma hasitata EN
Pterodroma phaeopygia CR
Pteropus pselaphon CR
Pudu puda VU
Puffinus heinrothi VU
Puffinus opisthomelas NT
Rallina leucopodia NT
Rattus richardsoni VU
Rhionaeschna galapagoensis EN
Rhynochetos jubatus EN
Scolopax mire VU
Solenodon cubanus EN
Spheniscus mendiculus EN
Sterna albostriata EN
Suta flagellum LC
Sylvilagus varrynaensis DD
Tamias palmeri EN
Tarsius lariang DD
Tarsius tarsier VU
Thinornis rubricollis NT
Tokudaia osimensis EN
Tupaia nicobarica EN
Vermivora crissalis NT
Zalophus wolfebaeki EN
Porzana sandwichensis EX
Potorous tridactylus LC
Procyon pygmaeus CR
Pseudobulweria rostrata NT
Psittirostra psittacea CR
Pterodroma barrau EN
Pterodroma extera VU
Pterodroma longirostris VU
Pterodroma sandwichensis VU
Pudu mephistophiles VU
Puffinus creatopus VU
Puffinus newelli EN
Rallina canningi NT
Rallus semiplumbeus EN
Reithrodontomys spectabilis CR
Rhynchometes pratorum 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

BIBLIOGRAPHY

38 references found for Canis lupus

Management information
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.


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).
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-tracked 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
Summary: The Bureau of Rural Sciences National Feral Animal 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
Pacific Invasives Initiative (PII), 2006a. Viwa Island Restoration Project
Summary: This database compiles information on alien species from British Overseas Territories.
Available from: http://www.jncc.gov.uk/page-3660 [Accessed 10 November 2009]

General information

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 informac?n sobre especies invasoras de M?xico cuenta actualmente con informaci?n acerca de nombre cient?fico, familia, grupo y nombre com?n, as? como de estado de la invasi?n en M?xico, rutas de introducci?n y ligas a otros sitios especializados. Algunas de las especies de mayor riesgo ya tienen una liga directa a la p?gina de alertas. Es importante resaltar que estas listas se encuentran en constante proceso de actualizaci?n, por favor consulte la portada (http://www.conabio.gob.mx/invasoras/index.php/Portada), en la secci?n de 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

Summary: Personal communication with Benoit de Thoisy from the association Kwata, an expert of the vertebrate fauna of French Guiana.


Summary: Abstract only online, available from: http://www.iucngisd.org/gisd/species.php?sc=146


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.


Summary: Dogs were found to impact endangered gazelle populations

Meyer, J.-Y. pers. comm., 2007


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