GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Sciurus carolinensis***

Sciurus carolinensis 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Rodentia	Sciuridae

Common name scoiattolo grigio (Italian), Grauhoernchen (German), grey squirrel (English), gray squirrel (English)

Synonym

Similar species

Summary The grey squirrel (*Sciurus carolinensis*) is native to deciduous forests in the USA and has been introduced to the UK, Ireland, Italy and South Africa. In the introduced range grey squirrels damage trees by eating the bark and in Europe they cause the local extinction of red squirrel (Sciurus vulgaris) populations through competition and disease.

view this species on IUCN Red List

Species Description
The grey squirrel (*Sciurus carolinensis*) is a medium-sized tree squirrel with no sexual dimorphism in size or colouration. Ranges of external measurements (in mm) are: total length, 380-525; length of tail, 150-250; length of hind foot, 54-76; length of ear, 25-33. Adult body mass ranges from 300 to 710g. The back is grizzled dark to pale grey and may be washed with cinnamon on hips, feet, and head. Ears are buff to grey to white in the north; tail is white to pale grey. Underparts are white to grey to buff to cinnamon. In the native range of the species in North America melanism is common in the north and albinism is rare (Koprowski, 1994).

Notes
Grey squirrels (*Sciurus carolinensis*) cache food in small pits to see them through the winter. They have excellent spatial memory allowing these caches to be relocated.

Uses
Grey squirrels (*Sciurus carolinensis*) are harvested for food in Mississippi (USA). Squirrels are popular animals to watch throughout their native and introduced ranges.

Habitat Description
Grey squirrels (*Sciurus carolinensis*) survive best in mature deciduous woodland where there is a mixture of nut producing species that produce food that can be stored overwinter. In the UK they are common visitors to urban gardens where they frequently eat food left out for birds.

Reproduction
Placental, sexual. 2-3 young per litter, 1-2 litters per year.

Nutrition
Grey squirrels (*Sciurus carolinensis*) eat nuts, buds, flowers, seeds, fruits, fungi, some insects and occasionally bird eggs. During low food periods, they strip bark to get to inner bast and cambian layers. They also feed on maize if grown close to woodlands.

General Impacts
In overlap areas, the grey squirrel (*Sciurus carolinensis*) causes the extinction of the red squirrel (see *Sciurus vulgaris* in IUCN Red List of Threatened Species) through competitive exclusion. It can also cause damages to woodland through bark stripping activity, sycamore (*Acer pseudoplantanus*) and beech (*Fagus sylvatica*) are particularly badly affected (Bertolino and Genovesi, 2003). Grey squirrels also act as a reservoir for a poxvirus that red squirrels are affected by. This has been postulated as another reason why red squirrels go extinct in the presence of grey squirrels; a phenomonon known as pathogen-mediated competition (Gurnell *et al.* 2006). Squirrels can be a garden pest by digging up bulbs and eating the bark of ornamental plants.

Management Info
The Forestry Commission, in the United Kingdom, have a research programme that includes investigating the impact of grey squirrels on woodland biodiversity & identifying efficient control strategies, developing cost effective methods of managing impacts on timber production, developing a decision-support system for woodland managers on targeting grey squirrel control to support sustainable forest management, and promoting and supporting best practice management for the control of grey squirrels and their impacts. Please follow this link for an annual summary of their research
Physical: Physical management of grey squirrels includes bounty payments, free cartridges (for shooting), tail bonuses, and trapping.
Chemical: Warfarin (anti-coagulant) is the only cost-effective method of control currently available.

Pathway

Principal source:

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

Review:

Pubblication date: 2005-10-17

ALIEN RANGE

[3] CANADA
[1] ITALY
[1] SOUTH AFRICA
[1] IRELAND
[1] PITCAIRN
[1] UNITED KINGDOM

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

Muscardinus avellanarius **LC**
Sciurus vulgaris **LC**
Tamiasciurus mearnsi **EN**

BIBLIOGRAPHY
11 references found for **Sciurus carolinensis**

Managment information
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]
Forestry Commission, Great Britian., 2008. Management of grey sqirrels.
Summary: Available from: http://www.forestresearch.gov.uk/forestry/kirn-5m5emv [Accessed 20 february 2008]
Genovesi, P. and Bertolino, S., 2001. Human dimension aspects in invasive alien species issues: the case of the failure of the grey squirrel eradication project in Italy. In: McNeely, J.A. (Ed.), The Great Reshuffling: Human Dimensions of Invasive Alien Species. IUCN, Gland Switzerland and Cambridge, UK, pp. 113–119.
Genovesi, Piero (in press). Threats posed by the Grey squirrel in Europe and a strategy for the future: the Italian perspective. From a presentation at the 6th Meeting of the Group of Experts on Invasive Alien Species (Palma de Majorca, 9-11 June 2005) to be published by the Council of Europe.
Koprowski, J.L. 1994. *Sciurus carolinensis*. Mammalian Species 480: 1-9.
Summary: In depth information about the species covereing anatomy, breeding, ecology etc

Mayle, Brenda and Smith, Linda (in press). Non-Native Invasive Species - the Grey Squirrel *Sciurus carolinensis*. A particular example of the threat posed to European Biodiversity. From a presentation at the 6th Meeting of the Group of Experts on Invasive Alien Species (Palma de Majorca, 9-11 June 2005) to be published by the Council of Europe.

Murray, C. and C. Pinkham. 2002. Towards a Decision Support Tool to Address Invasive Species in Garry Oak & Associated Ecosystems in BC. Prepared by ESSA Technologies Ltd., Victoria, B.C. for the GOERT Invasive Species Steering Committee, Victoria, 96 pp.

Summary: Available from: http://www.goert.ca/documents/GOEDSTreport.pdf [Accessed 13 February 2008]

The Garry Oak Ecosystems Recovery Team (GOERT)., 2003. Annotated Bibliographies on the Ecology and Management of *Sciurus carolinensis*

The Garry Oak Ecosystems Recovery Team (GOERT)., 2003. Field manual of *Sciurus carolinensis*

Summary: Available from: http://www.goert.ca/documents/InvFS_sciucaro.pdf [Accessed 13 February 2008]

General information

CONABIO. 2008. Sistema de informaci&#65533;n sobre especies invasoras en M&#65533;xico. Especies invasoras - Mam&#65533;feros. Comisi&#65533;n 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&#65533;n sobre especies invasoras de m&#65533;xico cuenta actualmente con informaci&#65533;n aceca de nombre cient&#65533;fico, familia, grupo y nombre com&#65533;n, as&#65533; como h&#65533;bitat, estado de la invasi&#65533;n en M&#65533;xico, rutas de introducci&#65533;n y ligas a otros sitios especializados. Algunas de las especies de mayor riesgo ya tienen una liga directa a la p&#65533;gina de alertas. Es importante resaltar que estas listas se encuentran en constante proceso de actualizaci&#65533;n, por favor consulte la portada (http://www.conabio.gob.mx/invasoras/index.php/Portada), en la secci&#65533;n novedades, para conocer los cambios.

Especies invasoras - Mam&#65533;feros is available from: http://www.conabio.gob.mx/invasoras/index.php/Especies_invasoras_-_Mam%C3%ADferos [Accessed 30 July 2008]

ITIS (Integrated Taxonomic Information System), 2005. Online Database *Sciurus carolinensis*

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.cbif.gc.ca/pls/itisca/taxastep?king=every&p_action=containing&taxa=Sciurus+carolinensis&p_format=&p_ifx=plglt&p_lang= [Accessed March 2005]