



# Animal Pest Alert

## Canada Goose

**NOT INDIGENOUS**

The Canada Goose (*Branta canadensis*) is not indigenous to Australia but it is kept here as an exotic waterfowl species and has recently been found in the wild in two states. It is an invasive species which has established populations in many countries including New Zealand. It poses an extreme threat to Australia with significant potential to establish wild populations here and become a pest, so it is important to immediately report any in the wild.



PHOTO: DEPT. JAW4TRAVEL / DREAMSTIME.COM

Magpie Goose



**INDIGENOUS**

PHOTO: GRAEME CHAPMAN

Cape Barren Goose



**INDIGENOUS**

PHOTO: SUSAN FLASHMAN / BIGSTOCKPHOTO.COM

Australian Shelduck



**INDIGENOUS**

PHOTO: DEREK MOORE

Domestic Goose



**NOT INDIGENOUS**

PHOTO: IVAN KMIT / DREAMSTIME.COM

Please report all sightings of Canada Geese in the wild – Freecall 1800 084 881

# Canada Goose

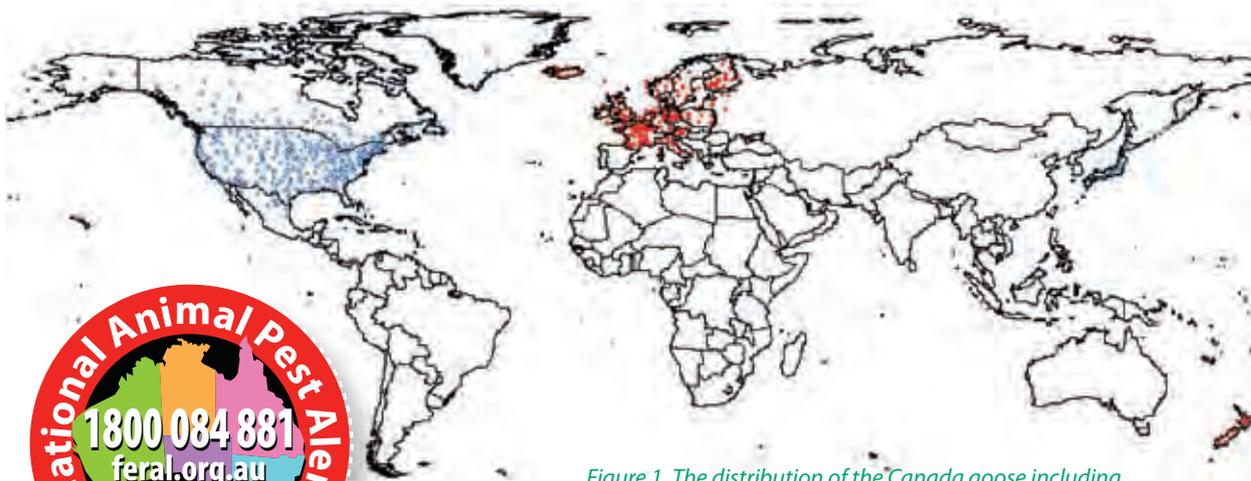


Figure 1. The distribution of the Canada goose including natural (blue) and introduced (red) populations.



## Description

The form of Canada goose found in Australia and New Zealand is a moderate to large bird 55 to 100 cm in length (body and tail), with a wingspan of 122 to 183 cm, and weighing 3 to 6 kg. It is brown and white with a conspicuous white patch on the cheeks and chin and a long black neck and head. The bill, tail, legs and feet are also black. Male, female and immature birds are similar although immature plumage is more greyish and the white face-patches are often tinted brown.



Figure 2. The four Canada geese removed in NSW in flight, with black necks, white face-patches, pale bellies and dark wings (photo: Rohan Clarke / wildlifeimages.com.au).

The Canada goose swims with its neck held upright. It flies (in groups in striking V-formation) with neck outstretched and often with loud honking. It is easily identified from below by its black neck, white face-patch, pale belly and dark underwings. It also has a white V-shaped mark on the rump, visible from above and when the bird is taking off.

## Mistaken identity

In Australia, the Canada goose may be mistaken for large indigenous or other introduced waterfowl. However, the combination of its long black neck and head, distinctive white face-patch and honk will set it apart from:

- Magpie Goose (northern Australia)
- Cape Barren Goose (southern coastal Australia including Tasmania)

- Australian Shelduck (Western Australia and south-eastern Australia)
- Domestic Goose (all states and territories).

## Distribution

The natural range of the Canada goose is North America (Canada and the United States of America, including Alaska, the Aleutian Islands and Hawaii), the Bahamas and Greenland. In winter, some populations migrate south to warmer areas (some as far as Mexico), and to other countries including Bermuda, Japan and Russia (Kamchatka Peninsula). Non-migratory populations also occur in the United States, as a result of the introduction and establishment of the goose in what were previously non-breeding areas (Figure 1).

Introduced populations (resulting from the deliberate and accidental release of the goose) occur in Iceland and in Europe including Austria, Belgium, Denmark, Estonia, Finland, Germany, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, western Russia, Sweden and the United Kingdom. In addition to natural populations occasionally migrating from North America, some introduced goose populations in Europe also migrate and captives continue to escape or be released. These factors result in the goose's occasional presence in other countries including Bulgaria, Czech Republic, France, Liechtenstein, Luxembourg, Portugal, Slovakia, Slovenia, Spain and the Ukraine (where no specific locations are known, the country is not included on the distribution map). An introduced population also occurs in Beijing, China.



Figure 3. Canada geese damaging a cereal crop in Ohio (photo: Tim Daniel, Ohio Department of Natural Resources).

Please report all sightings of Canada Geese

The Canada goose was successfully introduced to New Zealand (early 1900s; last in 1950) and is now a widespread pest there but has not yet established wild populations in Australia.

The goose was unsuccessfully introduced to Western Australia (first in 1913; last report 1929) and Victoria (in 1920s; observed up to 1935). Two geese reported in Tasmania in 1927 were believed to have originated from the Victorian birds. In the 1970s, one bird was recorded on Lord Howe Island, and since 2002 four small incursions have been recorded on the east coast of mainland Australia.

## Habitat

The Canada goose can occupy a wide range of habitats including tundra, semi-desert, wooded, open or coastal areas and agricultural land. It can also live in urban areas, including parks, airports and golf courses and other areas with extensive lawns. It is usually found near water including marshes, mudflats, estuaries and other wetlands, including ornamental lakes.

## Reproduction, food and behaviour

The Canada goose mates for life and begins nesting at two to three years of age. The nest is a large mass of vegetation lined with down, usually built on the ground near water, although the goose is reported to also use nests located off the ground. Four to seven white eggs are laid. The goose can be aggressive towards people and pets if disturbed when breeding.

The Canada goose eats a wide variety of plant roots, grasses, stems, leaves, fruits, aquatic plants and sedges. It also eats agricultural crops and pasture. Though it mostly grazes, it sometimes feeds by dabbling (dipping its head under water). In urban environments in the United Kingdom it readily takes food handouts and this could occur elsewhere.

Within its natural range, the majority of Canada goose populations migrate to warmer areas before the onset of winter. Some introduced populations also migrate, such as those in the United Kingdom and Scandinavia. In late summer adults become flightless for about a month during the post-breeding moult.

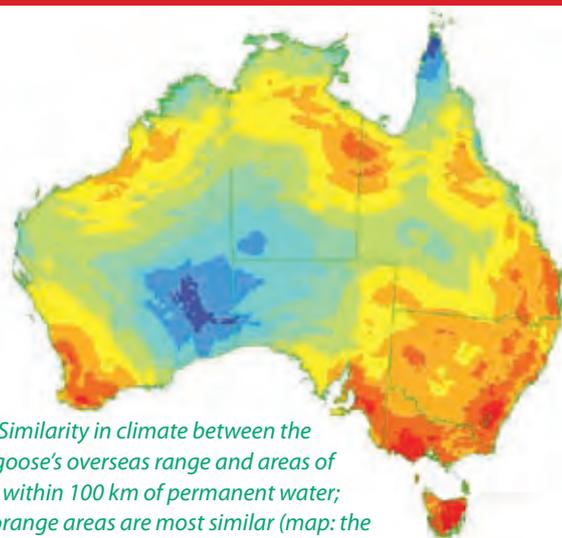
In the wild, a Canada goose can live for up to 30 years. However, the mortality rate is high and many only live to three years. In captivity they are known to have lived to 42 years.

## Damage by the Canada goose

The Canada goose is listed on the Global Invasive Species Database, alongside the Common Starling, Red Fox and Cane Toad.

The Canada goose is considered a moderate pest of agriculture, damaging crops such as broccoli, cabbage, cereals, corn, lucerne, pea, rye, soybean and turnip (Figure 3). It competes with livestock by feeding on pasture and fouling it with droppings, and may also transmit diseases to livestock.

Outside its natural range, the Canada goose is a moderate environmental pest because it competes with indigenous species for food and nesting sites, and it spreads parasites



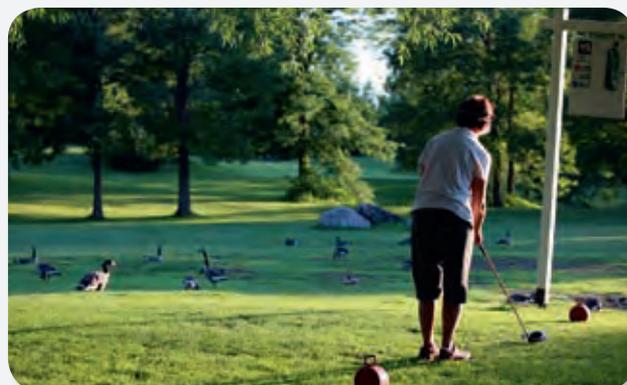
*Figure 4. Similarity in climate between the Canada goose's overseas range and areas of Australia within 100 km of permanent water; red and orange areas are most similar (map: the Australian Government Bureau of Rural Sciences).*

and diseases. In large flocks, the Canada goose fouls ponds and lakes with its droppings. The resulting increased algal growth reduces oxygen levels which harms some aquatic animals.

The Canada goose damages gardens, landscaping, pathways, golf courses, lawns and other grassed areas (Figure 5). The damage is caused by the goose grazing, fouling areas with droppings and by erosion from trampling. The droppings are also a source of harmful bacteria that can pose a significant health threat to humans. Accumulation of droppings can cause pathways and grassed areas to become slippery, making them unpleasant for people to use and increasing the risk of falls.

In flocks, the Canada goose prefers to graze in open grassy areas such as airports, posing a serious bird-strike risk to aircraft. DNA evidence indicates that a flock of migrating Canada geese caused the Hudson River plane crash in New York in January 2009 when the plane ditched but all 155 people on board survived (Figure 6). However, other goose bird-strikes have resulted in fatalities.

Control programs at airports, urban parklands and on farms have included habitat modification, scaring with sound, lights or movement, chemical repellents, hunting and reproductive control. Compensation payments have also been made to farmers in the United States and the Netherlands for damage of crops by the Canada goose.



*Figure 5. Flock of Canada geese fouling a golf course in the US with their droppings (photo: Sebastien Cote / iStockphoto.com).*

# Canada Goose



## Potential to be a pest in Australia

The Canada goose is rated as highly likely to establish populations in the wild in Australia and become a pest of agriculture, the environment and public amenity.

A scientific risk assessment conducted by the Department of Agriculture and Food, Western Australia and endorsed by the national Vertebrate Pests Committee indicates that the Canada goose poses an extreme threat (the highest of four categories) to Australia. Part of the assessment showed that the climates of the goose's overseas range and areas of Australia are very similar (Figure 4).

It is therefore important that the Canada goose does not establish in the wild in Australia and that any found are removed quickly.

The habitats of many Australian waterbirds are similar to those preferred by the Canada goose, increasing potential risks of competition for food, nesting sites and suitable habitat.

Agricultural crops that could be at risk include cereals, corn, lucerne, soybeans, wheat and various emerging crops. The species could also compete with livestock for pasture, and potentially transmit salmonella to cattle.

The Canada goose would add to the nuisance caused in urban areas by other birds, by grazing and polluting lawn areas, playgrounds, lakes and ponds with its droppings. It could also worsen bird-strike problems at Australian airports.

## Birds in captivity and the wild

The Canada goose is prohibited in the Northern Territory, Tasmania and Western Australia, but can be kept in the Australian Capital Territory, New South Wales, South Australia and Victoria.

Where Canada geese are permitted in captivity there are few requirements in place to ensure they remain securely in their enclosures. The geese found in the wild in Australia either originated from captive collections or flew from New Zealand.

In New South Wales a Canada goose was observed at Shoalhaven Heads in 2002. The fate of this goose is unknown, but Birds Australia (Australia's biggest non-government bird conservation organisation) was satisfied that this was a wild individual from New Zealand.

Also in New South Wales, four Canada geese were first sighted on the south coast in late December 2007. After a month they were not seen again until early March 2008, in seaside wetlands 120 km south of Sydney (Figure 2). After the first

### Important Disclaimer

The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.



Figure 6. A Canada goose bird-strike caused the Hudson River plane crash in New York in January 2009 (photo: Associated Press).

sighting appropriate responses were debated by various groups including government authorities, birdwatching groups, waterfowl societies and the general public. (Birds Australia reported that these were most likely wild geese from New Zealand). In mid-March, using a rapid response plan agreed to by various New South Wales government authorities and the RSPCA, the Game Council of NSW allowed conservation hunting volunteers to remove the geese to prevent establishment of the species in Australia.

In Victoria, a Canada goose observed in a Melbourne park in 2004 disappeared before authorities could recapture it. Another goose lived for two years on the Kingston Public Golf Course next to a Melbourne airport before it was trapped in 2008 and relocated. These birds were thought to have come from waterfowl collections.

## Risk management

To help prevent the Canada goose from establishing in the wild and becoming a pest in Australia, it is essential that it is maintained in secure (preferably double-doored) enclosures. An unwanted Canada goose should be surrendered to the authorities or a responsible organisation, not released into the wild.

Any seen in the wild should be immediately reported to the nearest relevant government department or wildlife authority on Freecall 1800 084 881, so that appropriate action can be taken.

## Acknowledgments

Produced with support from the Australian Government through the Australian Pest Animal Management Program administered by the Bureau of Rural Sciences within the Australian Government Department of Agriculture, Fisheries and Forestry. Endorsed nationally by the Vertebrate Pests Committee and relevant state and territory authorities. Technical information and distribution map provided and published by the Department of Agriculture and Food, Western Australia. Australian climate map provided by Jeanine Baker, Bureau of Rural Sciences.



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