



## Trichomonosis in Garden Birds

### Agent

*Trichomonas gallinae* is a single-celled protozoan parasite that can cause a disease known as trichomonosis in garden birds.

### Species affected

Trichomonosis is known to affect pigeons and doves in the UK, including woodpigeons (*Columba palumbus*), feral pigeons (*Columbia livia*) and collared doves (*Streptopelia decaocto*) that routinely visit garden feeders, and the endangered turtle dove (*Streptopelia turtur*), which sometimes feed on food spills from bird tables in rural areas. It can also affect birds of prey that feed on other birds that are infected with the parasite. The common name for the disease in pigeons and doves is “canker” and in birds of prey the disease is also known as “frounce”.

Trichomonosis was first seen in British finch species in summer 2005 with subsequent epidemic spread throughout Great Britain and across Europe. Whilst greenfinch (*Chloris chloris*) and chaffinch (*Fringilla coelebs*) are the species that have been most frequently affected by this emerging infectious disease, many other garden bird species which are gregarious and feed on seed, including the house sparrow (*Passer domesticus*), siskin (*Carduelis spinus*), goldfinch (*Carduelis carduelis*) and bullfinch (*Pyrrhula pyrrhula*), are susceptible to the condition. Other garden bird species that typically feed on invertebrates, such as blackbird (*Turdus merula*) and dunnock (*Prunella modularis*) are also susceptible: investigations indicate they are not commonly affected but that this tends to be observed in gardens where outbreaks of disease involving large numbers of finches occur.

### Pathology

*Trichomonas gallinae* typically causes disease at the back of the throat and in the gullet.

### Signs of disease

In addition to showing signs of general illness, for example lethargy and fluffed-up plumage, affected birds may drool saliva, regurgitate food, have difficulty in swallowing or show laboured breathing. Finches are frequently seen to have matted wet plumage around the face and beak. In some cases, swelling of the neck may be visible from a distance. The disease may progress over several days or even weeks, consequently affected birds are often very thin or emaciated.

### Disease transmission

The *Trichomonas gallinae* parasite is vulnerable to desiccation and cannot survive for long periods outside the host. Transmission of infection between birds is most likely to be by birds feeding one another with regurgitated food during the breeding season or through food or drinking water contaminated by an infected bird.

## Disease patterns

An epidemic of finch trichomonosis occurred throughout much of Great Britain in 2006 and 2007, and the disease has continued to cause large-scale mortality of finches in subsequent years. The number of outbreaks typically peaks in the late summer to autumn months, although they occur throughout the year.

The geographical distribution where most finch trichomonosis outbreaks occurred shifted from western to eastern areas of Britain in 2007-08, but the disease is now established throughout the British Isles.

Finch trichomonosis has now been found in continental Europe, where it was first seen in Fennoscandia in 2008. Migrating chaffinches carrying the parasite from Britain are thought to be the most likely way that the disease spread to the continent.

Consequent to the emergence of finch trichomonosis, the UK breeding greenfinch population declined from circa 4.3 million to circa 2.8 million birds which equates to an overall decline of 35% of the national population from 2006 to 2009. This represents the largest scale mortality of British birds due to infectious disease on record and demonstrates that infectious disease can cause dramatic declines of common wildlife species within a short time frame. The average number of greenfinches visiting gardens has declined by 50 per cent over the same time period. The annual population decline of greenfinches continues and the most recent Breeding Bird Survey data indicates a 60% reduction in the UK breeding population since the disease emerged (2006-2015).

It is most probable that the parasitic infection in finches originated from pigeons and doves in Great Britain. Subsequent to trichomonosis becoming established in finches, it is likely that the majority of transmission is from finch to finch; however, spread of the parasite between finches and pigeons or doves is also likely to occur. It is probable that birds of prey become infected through the consumption of diseased songbirds, as is known to occur following predation of infected pigeons and doves, but the extent to which this happens and the potential significance to British birds of prey requires further investigation.

## Risk to human and domestic animal health

*Trichomonas gallinae* is a parasite of birds and there is no known health threat to people or to mammals, such as dogs and cats. The parasite has the potential to affect captive poultry and pet birds.

Garden birds may carry other diseases that can affect people and pets (for example *Campylobacter*, *Chlamydia psittaci*, *Escherichia albertii* and *Salmonella* bacteria). We recommend following sensible hygiene precautions as a routine measure when feeding garden birds and handling bird feeders and tables. Following these rules will help avoid the risk of any infection transmitting to people and help safeguard the birds in your garden against disease.

- Clean and disinfect feeders/ feeding sites regularly. Suitable disinfectants that can be used include a weak solution of domestic bleach (5% sodium hypochlorite) and other specially-designed commercial products (See *Further information*). Always rinse thoroughly and air-dry feeders before re-use.
- Brushes and cleaning equipment for bird feeders, tables and baths should not be used for other purposes and should not be brought into the house, but be kept and used outside and away from food preparation areas.
- Wear rubber gloves when cleaning feeders and thoroughly wash hands and forearms afterwards with soap and water, especially before eating or drinking. Avoid handling sick or dead birds directly. For instance, use disposable gloves or pick the bird up through an inverted plastic bag.

## Diagnosis

Diagnosis of trichomonosis in wild birds relies on post-mortem examination and follow-up laboratory testing. The signs of the disease at post mortem are fairly characteristic, and a variety of tests can be used to confirm the presence of the parasite.

If you wish to report finding dead garden birds, or signs of disease in garden birds, please visit [www.gardenwildlifehealth.org](http://www.gardenwildlifehealth.org). Alternatively, if you have further queries or have no internet access, please call the **Garden Wildlife Health vets on 0207 449 6685**.

## Control

Whilst medicines are available for the treatment of trichomonosis in captive birds, effective and targeted dosing of free-living birds is not possible. Whilst finch trichomonosis occurs year round, generally speaking, June to September are the peak months for this condition, so it is particularly important to try to reduce the spread of this infectious disease during this critical time of year.

Birds infected with finch trichomonosis have difficulty swallowing and often regurgitate seed or water. This potentially infectious material can then quickly be consumed by healthy birds, exposing them to infection. As feeding stations encourage birds to congregate, sometimes in large densities, they can thereby increase the potential for disease spread between individuals when outbreaks occur. This means that general cleaning and good hygiene alone (see *Prevention* below) will not be enough to prevent birds infecting each other at feeders or bird baths during an outbreak, and further precautions are necessary.

As such, if you see birds of any species that you suspect may be affected in your garden, we recommend:

- Leaving bird baths empty until no further sightings of sick or dead wild birds occur.
- Temporarily stop feeding for a minimum of 2 to 4 weeks in order to encourage birds to disperse, thereby minimising the chances of new birds becoming infected at the feeding station.
- Only re-introduce feeding when you are no longer seeing birds with signs of ill health:
  - Gradually reintroduce food to your bird tables and/or hanging feeders, whilst closely monitoring for further signs of ill health.
  - It may also be advisable to avoid encouraging finches to congregate in large numbers and share food and water sources in the period following an outbreak when food is gradually being reintroduced, particularly if this falls during the peak season of finch trichomonosis (June-September). This may be achieved by offering a variety of food types, and limiting the volume of foods that attract large numbers of finches (e.g. limit the volume of mixed seed, sunflower seed hearts provided).
- If you see further birds with signs of ill health, once again stop feeding.

## Prevention

Following best practice for feeding garden birds is recommended to help control and prevent transmission of disease at feeding stations all year round (see *Further information*):

- Routine good hygiene on bird feeders.

- Provision of clean and fresh drinking water on a daily basis.
- Provision of fresh food from accredited sources.
- Rotate positions of feeders in the garden to avoid build-up of contamination in any one area
- Do not allow accumulations of seed to occur, for example on the ground below feeders, and particularly on surfaces that are damp and/or contaminated with faeces.

## Further information

[Best feeding practices](#) should be followed at all times to help ensure that the birds visiting your garden remain healthy. More information can be found on the Garden Wildlife Health website [www.gardenwildlifehealth.org](http://www.gardenwildlifehealth.org). The GBH booklet “Feeding Garden Birds – Best Practice Guidelines” is also available from the GWH team (by email: [gwh@zsl.org](mailto:gwh@zsl.org), telephone: 0207 449 6685).

## Scientific publications

Zu Ermgassen, E.K., Durrant, C., John, S., Gardiner, R., Alrefaei, A.F., Cunningham, A.A., Lawson, B., 2016. Detection of the European epidemic strain of *Trichomonas gallinae* in finches, but not other non-columbiformes, in the absence of macroscopic disease. *Parasitology* **143**(10), pp.1294-1300. [doi.org/10.1017/S0031182016000780](https://doi.org/10.1017/S0031182016000780).

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