

EXOTIC

Duck viral enteritis (herpesvirus)

Fact sheet

July 2019

Introductory statement

Duck viral enteritis is **not found** in Australia. Duck viral enteritis (DVE) (also known as duck plague) is a contagious and often deadly infection of wild and domestic ducks, geese, swans and other waterfowl (*Anatidae* family). It is caused by a herpesvirus (Anatid herpesvirus-1) of the genus *Mardivirus*, family *Herpesviridae*, and subfamily *Alphaherpesvirinae*. Duck viral enteritis occurs in most parts of the world and in areas where it occurs, it is a disease of economic concern in the poultry industry as well as causing mass mortalities in wild birds.

If you suspect a case of duck viral enteritis in Australian birds, you should immediately call the **Emergency Animal Disease Hotline (1800 675 888)**.

Epidemiology

The disease is highly contagious and the virus is transmitted via faecal-oral contact. Environmental contamination (including water sources) with bird faeces containing the virus may spread the disease. Flock density is an important factor in disease outbreaks. Duck viral enteritis can cause mass mortalities in susceptible *Anatidae* species. The severity of the disease and the mortality rate varies between epidemics and also with the host species affected.

Vertical transmission can occur through eggs, but the epidemiological significance of this is not clear. Birds of all ages (from as young as 7 days) are susceptible to infection.

The disease course is usually acute but may be chronic. Latent infection can establish in the trigeminal ganglia with reactivation inducing shedding and disease outbreaks. Birds that survive infection may become carriers for up to 4 years and continue to shed the virus in the faeces. The disease can spread between domestic birds and wild birds sharing the same environment.

Mallards may be reservoirs of the virus as they are less susceptible to the disease. Migratory waterfowl play an important epidemiological role in transmission of DVE within and between continents. Disease outbreaks have only been seen in *Anatidae* however migratory non-anatid waterbird species are known to carry the virus ^[1].

There is no regular migration of ducks or geese to or from Australia, however some natural movement of birds does occur ^[2] and nomadic waterfowl species in Australia can move large distances within the country ^[3, 4].

Duck viral enteritis is not a zoonotic disease.

Clinical signs, pathology, diagnosis and control

Many birds infected with DVE die acutely. Clinical signs include partially closed eyelids, photophobia, extreme thirst, inappetence, ataxia, nasal discharge, drooping plumage, watery diarrhoea, soiled vents and tremors of head, neck and body.

Pathological changes include vascular damage, internal haemorrhage, lesions in lymphoid organs, digestive mucosal eruptions and degenerative lesions in parenchymatous organs.

Diagnosis is based on characteristic gross and histopathologic changes, with herpetic inclusion bodies in the epithelium of the digestive tract and liver, and by viral isolation.

Vaccination is used in farmed birds. There is no effective treatment once birds are infected.

Wildlife Health Australia administers Australia's general wildlife health surveillance system, in partnership with government and non-government agencies. Wildlife health data is collected into a national database, the electronic Wildlife Health Information System (eWHIS). Information is reported by a variety of sources including government agencies, zoo based wildlife hospitals, sentinel veterinary clinics, universities, wildlife rehabilitators, and a range of other organisations and individuals. Targeted surveillance data is also collected by WHA. See the WHA website for more information <https://wildlifehealthaustralia.com.au/Our-Work/Surveillance> and <https://wildlifehealthaustralia.com.au/Our-Work/Surveillance/eWHIS-Wildlife-Health-Information-System>. There are no reports of DVE in National Wildlife Health Information System. We are interested in hearing from anyone with information on this condition in Australia, including laboratory reports, historical datasets or survey results that could be added to the National Wildlife Health Information System. If you can help, please contact us at admin@wildlifehealthaustralia.com.au.

Duck viral enteritis is a nationally notifiable animal disease. More information on DVE can be found on the WOAHA website www.woah.org/en/home. If you suspect a case of duck viral enteritis in Australian birds, you should immediately call the **Emergency Animal Disease Hotline (1800 675 888)**.

Acknowledgements

We are grateful to the people who have input into this fact sheet.

Wildlife Health Australia recognises the Traditional Custodians of Country throughout Australia. We respectfully acknowledge Aboriginal and Torres Strait Islander peoples' continuing connection to land, sea, wildlife and community. We pay our respects to them and their cultures, and to their Elders past and present.

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References

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3. Roshier DA, Robertson AI et al. (2002) Responses of waterbirds to flooding in an arid region of Australia and implications for conservation. *Biological Conservation* **106**: 399-411
4. Tracey JP, Woods R et al. (2004) The role of wild birds in the transmission of avian influenza for Australia: an ecological perspective. *Emu*, **104**(2): 109

To provide feedback on Fact Sheets

Wildlife Health Australia welcomes your feedback on Fact Sheets. Please email admin@wildlifehealthaustralia.com.au. We would also like to hear from you if you have a particular area of expertise and are interested in creating or updating a WHA Fact Sheet. A small amount of funding is available to facilitate this.

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