



Beak and Feather Disease Virus (BFDV) (aka Psittacine Circoviral Disease, PCD, 'Runners')

Affected species

BFDV is common in parrots, cockatoos and lorikeets, but strains of the virus have also been confirmed in other bird species such as a Black-faced Cuckoo-shrike and in raptors. It particularly affects juveniles and young adults. Older adults may develop immunity but can still be carriers.

Cause

The psittacine circovirus occurs naturally in the wild and can persist for many years in tree hollows and other nest sites. The virus multiplies in the liver and can be transmitted orally or in faeces or feathers. It is highly contagious. The virus attacks feather and beak cells, causing abnormalities. It also attacks the immune system. Most birds eventually die from the disease or from secondary infections.

Diagnosis

Clinical signs are highly variable depending on the age and species of bird. The progression of the disease is also highly variable. Signs of acute infection include diarrhoea, weight loss, anorexia, depression and death. Chronic infections may result in abnormal feathers, loss of powder down, beak changes and immunosuppression.

Feathers:

- can be curled, clubbed, twisted, easily broken or present with deformities in the shaft and calamus (the part of the feather that is attached to the bird)
- the calamus (part of the feather shaft that is closest to and penetrates the skin) is often dark in colour (Note that we do not pull feathers to examine the calamus as this is painful for the bird. A bird may have BFDV and still have some feathers with a normal calamus.)
- may grow slowly, or fail to re-grow
- may be of a different colour, for example, yellow where they should be green
- lack of powder down (test by rubbing your fingers in the body feathers under the wing – they should be coated in a white powder in a healthy bird)
- can have a dark, oily appearance
- may be shed easily in your rescue container
- Juveniles of some parrot species may retain patches of fluffy grey down after their adult feathers have grown.



Note that the three top feathers have dark calamus and deformed shaft, compared with the two bottom feathers



This juvenile Eastern Rosella retained patches of fluffy grey down when its adult feathers should have grown



- Lorikeets that are infected with BFDV will often present with the last two to four primary flight feathers of both wings and the main tail feathers missing. These lorikeets are called “runners” since they are unable to fly, yet able to forage and run on the ground.
- Lorikeets with BFDV may be reported as ‘baby birds’ because they have no tail feathers.



Note that these Rainbow Lorikeets are missing outer primary flight feathers and some tail feathers



This Sulphur-crested Cockatoo has a shiny black bill because it lacks the powder down that would normally give the bill a matte grey appearance

Beaks:

- can have a glossy black or bone coloured appearance
- may be severely deformed, cracked, curled
- may appear normal.

Legs and feet:

- look darker in colour because of lack of powder down



This Galah has shiny legs and feet, and feather look darker, because of a lack of powder down



Laboratory testing:

Laboratory testing is now available at an affordable price but requires a venous blood collection (i.e. from a vein) - check with your vet.

Treatment

As BFDV is endemic in bird populations, it cannot be eradicated, even if an effective vaccine for pet birds is developed. Wild birds that have BFDV are euthanased when they come into care. If they have been in contact with healthy birds those birds also need to be euthanased as they are likely to have contracted the virus, even if they are not currently showing symptoms.



This Little Corella has 'dirty' feathers and missing flight and tail feathers

Hygiene

Take these precautions:

- quarantine all parrots on arrival (for at least one week)
- don't house parrots in timber aviaries as timber is porous and cannot be disinfected
- use cardboard boxes to rescue small parrots as they can be disposed of after use
- for larger parrots that can chew through cardboard, use plastic and metal cat carriers which can be disinfected after use
- warn avian vets in advance if you are bringing in a suspected BFDV case so they can take precaution.
- shower and change your clothes before handling other birds
- dispose of towels rather than disinfecting them
- disinfect equipment with Virkon S (F10 has been found to be less effective, requiring several applications over a prolonged period to kill the virus).
- remove and dispose of (preferably burn) timber perches and leaf litter.

Other

BFDV is not zoonotic and is not a notifiable wildlife disease.

References

[Beak and Feather Disease](#)

[Hygiene Protocols for the Prevention and Control of Diseases \(Particularly Beak and Feather Disease\) in Australian Birds](#)