

13.1 Guidelines - For Managing Risk Of Pigeon Paramyxovirus In Zoo Birds

Pigeon paramyxovirus (PPMV), previously an exotic disease, entered Australia in August 2011, causing high mortality in racing and fancy pigeons in Victoria. It is now widespread in feral pigeons in the greater Melbourne area. In May 2012 it was identified in a loft of pigeons in Western Sydney. It is highly likely that PPMV will become endemic and spread slowly through the eastern states of Australia, and possibly beyond.

The disease causes neurological and gastro-intestinal signs, with high mortality in pigeons and doves and has also been a cause of death in a family of collared sparrowhawks (*Accipiter cirrocephalus*) (presumably through eating dead infected pigeons). Incubation period is typically 2-6 days. In North America a strain of the virus has caused die-offs in double crested cormorants. Closely related viruses can affect poultry and waterfowl; however the strain currently active in Australia does not appear to cause disease in these species. Very little is known about the risk of this disease to our native pigeons and doves, zoo collection birds, or other native species in Australia.

Signs of disease in pigeons include increased thirst, diarrhoea, regurgitation, loss of appetite, respiratory signs and reluctance to move and fly. Nervous signs include trembling of the wings and head, tumbling on landing, partial paralysis of the wings and legs and twisting of the neck.

The disease spreads through contact with infected birds (including wild native and feral pigeons), contaminated equipment, contaminated drinking water and food and through contact with the virus on the hands, boots or clothes of people.

The following risk assessment and management procedures are recommended for Association member zoos in Australia:

1. Maintain excellent levels of institutional biosecurity including appropriate management of feed, wastes and animal transactions (see the National Zoo Biosecurity Manual www.zooaquarium.org.au/index.php/press-releases/reference-materials and also the Association's "Guidelines for managing risk of pigeon paramyxovirus when transacting zoo birds 13.2", available on the ZAA Portal: Resources – Guidelines).
2. Ensure all staff maintain appropriate personal hygiene and biosecurity practices, including hand washing or disinfection before and after preparing food, handling animals and their wastes, and at the beginning and end of the work day.
3. Ensure staff with access to birds outside the zoo (including pigeons and domestic poultry) practice excellent personal hygiene and biosecurity practices, including

change of work clothing and boots prior to contact with other birds or animals outside the zoo.

4. Ensure all relevant staff are regularly updated on the current situation with PPMV, including its geographical proximity to your property. Access information via your state/ territory Department of Primary Industry website or National Pests and Diseases website www.outbreak.gov.au.
5. Stop feeding culled feral pigeons to collection birds. Alternatively, perform a specific risk analysis to determine the risks and management options relevant to your current circumstances.
6. Be alert to any significant increases in numbers of feral or other pigeons on or around the property, in particular in or around bird enclosures.
7. Be alert to any sick or dead wild birds on or around the property. Collect any carcasses and arrange for them to be submitted for post mortem examination¹. If appropriate, collect and euthanase sick feral birds for investigation. It is advisable to handle carcasses and sick birds with gloves and **ALWAYS** wash hands afterwards.
8. If your zoo has a wildlife rescue and rehabilitation clinic, you may need to consider and manage the risks if wild (and potentially diseased) pigeons or doves are presented for care.
9. Consider vaccination of high risk/ high value collection birds (pigeons and doves). Commercial Newcastle Disease (ND) chicken vaccines are believed to protect pigeons from clinical PPMV. Owners of flock and fancy pigeons in Victoria have been advised to consult their veterinarian who can arrange to vaccinate their healthy flocks with two doses of killed ND vaccine a few weeks apart by subcutaneous injection. An annual booster is recommended for on-going protection (<http://www.dpi.vic.gov.au/agriculture/pests-diseases-and-weeds/animal-diseases/pigeon-paramyxovirus/vaccination-of-pigeons-for-avian-paramyxovirus-ppmv1>). The safety and efficacy of ND vaccine in zoo birds is currently not known². See also www.auspigeonco.com.au for more information on pigeon vaccination in Australia.
10. Consider and manage risks prior to transferring zoo birds within the property, or transporting collection birds to other institutions (see the Association's "Guidelines for managing risk of pigeon paramyxovirus when transacting zoo birds" available on the ZAA Portal: Resources – Guidelines). Consult your state or territory DPI for current information on possible movement restrictions on birds.
11. Consult the National Zoo Biosecurity Manual for general and specific recommendations for biosecurity management in zoos www.zooaquarium.org.au/index.php/press-releases/reference-materials

¹ Contact your state/ territory Dept of Primary Industry Veterinary Laboratory to discuss carcass submission and post mortem examination options.

² Work is underway to assess the efficacy of ND vaccine in protecting pigeons and other non-domestic birds.

All suspicious deaths of wild or zoo birds should be reported to your state Australian Wildlife Health Network Wildlife Coordinator, your local Department of Primary Industry or Agriculture, or via the Emergency Animal Disease Watch Hotline: 1800 675 888

Any concerns or questions can also be referred to the Regional Veterinary Officer, Zoo and Aquarium Association executive office.

Approval

These guidelines were approved by the Board of the Association on 14 June 2012.

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