

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

Zoonoses



Australian Government

Department of the Environment and Heritage

Copyright

© Commonwealth of Australia 2006

Information contained in this publication may be copied or reproduced for study, research, information or educational purposes, subject to inclusion of an acknowledgment of the source.

The views and opinions expressed in this publication are those of the authors and do not necessarily reflect those of the Australian Government or the Minister for the Environment and Heritage.

While reasonable efforts have been made to ensure that the contents of this publication are factually correct, the Commonwealth does not accept responsibility for the accuracy or completeness of the contents, and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of this publication.

This publication is available online at:

<http://www.deh.gov.au/about/publications/index.html>

For additional hard copies, please contact the Department of the Environment and Heritage, Community Information Unit at ciu@deh.gov.au or 1800 803 772.

Disclaimer

Note

This document describes Zoonoses and has been developed with the involvement and cooperation of a broad range of stakeholders, but the making of this document does not necessarily indicate the commitment of individual stakeholders to undertaking any specific actions. The attainment of objectives and the provision of funds may be subject to budgetary and other constraints affecting the parties involved. Proposed actions may be subject to modification over the life of the document due to changes in knowledge.

Zoonoses: Avian Disease Pathogens Transmissible to Humans

Some avian pathogens can be transmitted to humans. Some have been described in detail, such as *Chlamydophila psittaci*, avian influenza virus, Newcastle disease virus and avian mycobacteria. Avian zoonotic diseases are covered in detail by Carpenter and Gentz (1997) and McCluggage (1996).

When working with birds, as long as the necropsy protocols as outlined in the Full Necropsy Protocol are followed, then the likelihood of contracting a pathogen from a bird is greatly minimised. In any case, accurate records of all bird contacts should be maintained for at least one year so that sources of infected birds and potentially exposed persons can be identified. Records should include the species of bird(s), individual bird identification, source of the bird(s), and any illnesses or deaths among the birds, particularly signs of ocular or nasal discharge, diarrhoea, or low body weight.

If you suspect a notifiable disease (chlamydophilosis, Newcastle disease, Avian influenza, avian tuberculosis or *Salmonella enteritidis*), State Stock Diseases Acts place an obligation on you to immediately notify an inspector.

Other pathogens that may be communicated to humans include:

Salmonella and *Arizona* infections
Listeria monocytogenes
Giardia sp. (Giardiasis)
Encephalitozoon sp in African lovebirds
Cryptococcus neoformans (Cryptococcosis)*

*Cryptococcosis

This disease is of some interest to field workers and is described more fully here. Cryptococcosis is a significant zoonosis, caused by *Cryptococcus neoformans*, and has been reported in several species of birds. *C. neoformans* can cause a severe meningitis in humans. There are two subtypes:

C. neoformans var. *neoformans* (serotypes A & D) - found in bird droppings; and
C. neoformans var. *gattii* (serotypes B & C) - found in *Eucalyptus* spp (Ellis and Pfeiffer, 1990):

- *Eucalyptus camaldulensis* (River Red Gum)
- *E. tereticornis* (Forest Red Gum)
- Also *E. blakelyi*, *E. gomphocephala* and *E. rudis*

The yeast is spread by basidiospores released from specific host plants, or desiccated blastoconidia (yeast cell form) disseminated from accumulations of dried pigeon dung.

Affected birds may have swollen sinuses, beak or skin tumours around the face, but can also have a mucoid oculonasal or choanal discharge.

In psittacine birds cryptococcosis often presents as a proliferative tumour of the nasal passages or beak or adjacent skin which, grossly, could easily be confused with a primary neoplasm. Instead the mass

consists of inflammatory tissue and significant numbers of organisms (Raidal and Butler, 2001).

Signs in pigeons include swellings around the head and conjunctivitis. The beak is not involved. Signs in psittacine birds include conjunctivitis and beak lesions.

References

1. Carpenter JW and Gentz EJ 1997 zoonotic diseases of avian origin. In Avian Medicine and Surgery, Eds Altman RB, Clubb SL, Dorrestein, GM and Quesenberry K. WB Saunders Company. pp 350-363
2. Ellis DH and Pfeiffer TJ. (1990). Natural habitat of *Cryptococcus neoformans* var *gattii*. J Clin Microbiol, 228, 1642-1644.
3. McCluggage DM. 1996 Zoonotic disorders, in Diseases of Cage and Aviary Birds, Third Edition, eds Roskopf WJ and Woerpel RW. Williams and Wilkins Baltimore USA. Pp 535-547
4. Raidal SR and Butler R5 (2001) Chronic Rhinosinusitis and Rhamphothecal Destruction in a Major Mitchell's Cockatoo (*Cacatua Leadbeateri*) due to *Cryptococcus Neoformans* var *gattii* J. Avian Med. Surg.]. Vol. 15, no. 2, pp. 121-125.