ICARE 2017 Abstract Submission

A study of the health of wild Carnaby's cockatoo (*Calyptorhynchus latirostris*) nestlings at key breeding sites in Western Australia.

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ABSTRACT

Carnaby's cockatoo is an endangered black cockatoo species, endemic to Western Australia. The role of disease as a threatening agent in relation to population decline for this species, remains unknown. This five-year research project investigated the prevalence of beak and feather disease virus (BFDV), avian polyomavirus (APV), adenovirus and *C. psittaci* infection in Carnaby's cockatoo nestlings at key breeding sites across this species' distribution range.

A total of 278 nestlings were sampled between 2010-2014. Blood, feather and swabs (conjuctival, choanal and cloacal) were collected to enable establishment of baseline health parameters and test the birds for BFDV, APV, adenovirus and *C. psittaci.* PCR was used to screen for these diseases, and haemagglutination and haemagglutination inhibition testing was also used to screen for BFDV.

BFDV was detected in five (2%) nestlings based on PCR of blood samples. Eleven (4%) nestlings tested positive to APV, and three chicks were concurrently infected with both BFDV and APV. Five nestlings (2%) tested positive for adenovirus and 38 (14%) nestlings tested positive for *C. psittaci*.

The detection of these infections in the nestlings is of potential concern. The clinical significance of these infections in Carnaby's cockatoo populations remains unknown. It is hoped that long-term monitoring of leg-banded nestlings from survey sites and opportunistic sample collection from injured wild adult birds will provide insight into the epidemiology and clinical significance of these infections in this endangered cockatoo species.