

AOC 2005 – Blenheim, New Zealand.

Hatching asynchrony and chick growth in the red-crowned kakariki (*Cyanoramphus novaezelandiae*).

Luis ORTIZ-CATEDRAL

Dianne H. BRUNTON

Ecology and Conservation Group, Institute of Natural Resources, Massey University, Albany Campus, Auckland, New Zealand.

Presentation type: Oral

Asynchronous hatching has been widely studied in passeriformes, pelecaniiformes and falconiformes; however the order Psittaciformes has received little attention, mainly because of the challenges associated with this group of birds. There is uncertainty on whether or not parrots conform to predictions derived from these avian orders. In general, it is predicted that an age and size hierarchy arise as a result of asynchronous hatching. In addition, later hatched chicks are expected to show slower growth rates and attain asymptotic mass at later dates than first hatched chicks. We explored the consequences of hatching asynchrony on chick growth for red-crowned kakariki (*Cyanoramphus novaezelandiae*) breeding on Tiritiri Matangi Island, New Zealand. We established hatching hierarchies by daily checks of clutches due to hatch. Overall, we monitored 25 clutches, of which only 10 produced at least one fledgling. This represents a total of 22 chicks fledged. Overall, survival was higher for first and second chicks than later hatched chicks. Similarly, mean asymptotic values for mass and wing were higher for first than second hatched chicks. Asymptotic culmen length was not associated with hatching rank, however this can be the result of sexual dimorphism. Even though these results agree with predictions derived from other avian systems we failed to rule out the prediction that age and size hierarchies among nestlings are the result of hatching asynchrony *per se*.