

Unmasking the secrets of the extinct moa

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Giant Haast's eagle attacking New Zealand moa. Artwork: John Megahan. Copyright: PLoS Biology. Via Wikipedia.

Griffith researchers have undertaken a study to clarify the number of species which existed of the extinct New Zealand moa.

The findings have been published in 'Complex species status for extinct moa (Aves: Dinornithiformes) from the [genus](#) *Euryapteryx*', in the open access journal *PLOS ONE*.

Lead author Dr Huynen said the challenges of understanding extinct fauna can be formidable and particularly so when it comes to this ancient bird.

"Despite more than 100 years of research being devoted to the issue, determining species status is challenging, especially where there is an

absence of substantial morphological, physiological, and behavioural data," said Dr Huynen.

"Moa were comprised of a relatively large number of species that can be grouped into six genera. One of these genera, *Euryapteryx*, has been difficult to characterise into its constituent species, so this is the genus we have focused upon," Dr Huynen said.

"Using a DNA barcoding technique we were able to show that two species were likely to have existed in the genus *Euryapteryx*, with the possibility of some subspecies," Dr Huynen said.

Co-author Professor David Lambert said that while the study provided new insights it has not proven to be as elucidating as the team had hoped.

"Although DNA barcoding is very successful in determining most other species of birds, including the other [moa](#) species, for some reason the results were not as clear with *Euryapteryx* and therefore it is not possible to precisely discriminate possible species," Professor David Lambert said.

"Using this DNA barcoding technique we have been able to show that species status in *Euryapteryx* is very complex with there is no clear separation between various individuals and that this is possibly the result of repeated hybridisation events within the genus.

"Our results do provide a clearer picture of the species status of *Euryapteryx*, however, and support the suggestion that two species of *Euryapteryx* may have existed during the Holocene as well as a subspecies (possibly attributable to *E. curtus curtus*) that is found solely on New Zealand's North Island."

Provided by Griffith University

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