

**MODELLING THE GROWTH OF NORTH ISLAND BROWN KIWI (*APTERYX MANTELLI*) WITH CONSTRAINED HIERARCHICAL B-SPLINES**

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The North Island Brown Kiwi (*Apteryx mantelli*) is endemic to New Zealand and, as a threatened species and a national icon, is the subject of considerable research and conservation management effort. In Operation Nest Egg, birds are hatched and raised in captivity before being released to the wild, possibly via a predator-free creche environment. We investigate the effect of different rearing patterns on the growth of kiwis, extending the regression spline mixed modelling approach of Mackenzie et al. (2005, *JABES* 10, 394-410) to force an upper asymptote and to accommodate a time-varying covariate.