

G. modestus on the Chatham Islands, New Zealand.

isolated throughout their existence. phylogenies can be used to define colonisation patterns

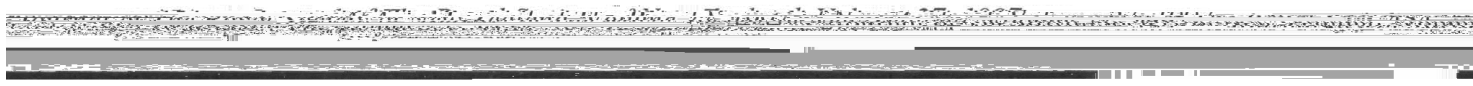
(Thorne & Mahotra 1996) and it is possible to make inferences about the circumstances that

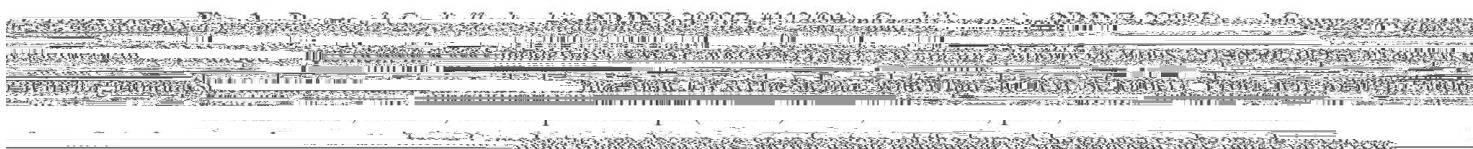
modestus has been considered to be the juvenile of *G dieffenbachu* (Buller 1873, Forbes 1892), and also the sole representative of a monotypic genus, *Cabalus* (Hutton 1874). *G*

dieffenbachu was also, at one stage, assigned to a monotypic genus (*Nesolimnas* Andrews 1896b) but has also been relegated to subspecific status as a variant of the volant species *G philippensis* (Ripley 1977). This latter situation presumably resulted from examination of the only skin specimen in existence (the holotype at BMNH, Tring), which shows that *G dieffenbachu* had very similar plumage to *G philippensis* (Diamond 1991) and does not

data does not support this conclusion, and indicates that *G dieffenbachu* and *G modestus* were about equally diverged from *G philippensis* (Trewick 1997).

Fossil bones from both species were found during the last century in limited quantities (Forbes 1902, Andrews 1906a, 1906b). This material, and that collected later, indicated that





premaxillae were drawn and fitted with linear regressions which were compared using ANOVA (Fig. 4). A three-way analysis of variance of premaxilla length against sex and island

kernel smoothing was produced (Fig. 5)

RESULTS

Fossil material of the two species endemic to the Chatham Islands is readily distinguished by eye (Fig. 1). Dimensions of bone elements assigned to the three species (*philippensis*,



Frequency

0.25

0.20

0.15



1873), *modestus* is superficially reminiscent of an extremely small kiwi. As such, it would appear that *modestus* had joined the guild of probing specialists, and presumably fed on

complex history for these birds. If their similarities were the result of common ancestry rather than convergence, then evolution of *modestus* on the Chatham Islands could have involved little change other than flightlessness. In fact, there were few similarities between

The image shows a table with multiple rows and columns. The content is almost entirely obscured by thick black redaction bars. The table structure is indicated by thin horizontal lines. There are approximately 15 rows and 2-3 columns visible. The redactions are most prominent in the first few rows and the middle section of the table.

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