

## SHORT NOTE

### Number of presacral vertebrae in *Dinornis*

Not until 1883, 43 years after bones of moas first came to the notice of Richard Owen, was a moa skeleton described that had a complete complement of presacral vertebrae. This specimen had 27 and was *Anomalopteryx didiformis* (= *Dinornis parvus*) (Owen 1883). Hutton (1892) stated that all moas have 27 presacral vertebrae, and this was endorsed by Archey (1941) and Oliver (1949, 1955). The first indication that *Dinornis* species may have more than 27 was noted by Falla (1941): "... most complete example of *Dinornis* recovered . . . the set of vertebrae lacks the axis but 20 cervical and seven free dorsals were collected". This specimen (XIIIA) of *D. giganteus* Owen therefore had a minimum of 28 presacral vertebrae. R. J. Scarlett (pers. comm.) observed 29 in another specimen of *D. giganteus* from Pyramid Valley, where the vertebrae were excavated in a position of articulation.

I have made the following observations:

A skeleton of *Dinornis novaezealandiae* Owen that I collected (WO51, Waitomo Caves Museum) has 6 thoracic and 22 cervical vertebrae preserved with only the axis and atlas missing, a total of 30.

Another *D. novaezealandiae* (National Museum - NMNZ S23654) had the vertebrae in a position of articulation when I collected it. It has 6 thoracic and 24 cervical vertebrae, a total of 30.

A third skeleton of *D. novaezealandiae* (NMNZ S211) has 6 thoracic and 23 cervical vertebrae preserved with only the atlas missing, a total of 30.

A skeleton of *Euryapteryx geranoides* (Owen) I excavated with a complete complement of vertebrae in articulation (NMNZ S25656) has 6 thoracic and 21 cervicals, i.e. 27.

A skeleton of *Euryapteryx curtus* (Owen) (NMNZ S441) is remarkably complete and has 6 thoracic and 21 cervical vertebrae.

A skeleton of *Anomalopteryx didiformis* (Owen) collected with vertebrae in a position of articulation by Peter De Lange (skeleton in Waitomo Caves Museum from Erebor Cave) has 6 thoracic and 21 cervical vertebrae.

These data support the contention that moa species of the family Emeidae (all species other than *Dinornis*) consistently have 27 presacral vertebrae but that, in the Dinornithidae, *D. giganteus* has at least 29 and *D. novaezealandiae* 30 presacral vertebrae.

#### LITERATURE CITED

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