

Vertex finely punctured, with a deep oblong vulviform impression. Thorax transverse, very slightly dilated at the sides, not distinctly gibbous in front, densely covered with irregular punctures of two different sizes, which are especially numerous towards the posterior angles. Elytra more finely punctulate, the punctules forming indistinct striæ. Beneath pale testaceous, the sternal plates and legs darker, inclining to castaneous.—*Hab.* California.

The coloration of this species, so different from its congeners, might induce the suspicion of its being immature. If so, it is still distinct from any other species that I have met with.

Notice of a nearly Complete Skeleton of a *Dinornis*, presented by Dr. GIBSON to the Museum of the Yorkshire Philosophical Society. By THOMAS ALLIS, Esq., F.L.S., Hon. Sec. Yorksh. Phil. Soc.

[Read June 16, 1864.]

(Abstract.)

IN the course of last summer, Mr. Allis had an opportunity, on the occasion of Dr. Gibson and his brother, who is a resident in New Zealand, visiting the Museum of the Yorkshire Philosophical Society, to suggest to those gentlemen how desirable it would be if the Museum could obtain some bones of the *Moa*, of which it possessed only a single small fragment. Mr. Allis was, at the same time, anxious to procure a specimen of the *Apteryx*, with a view of his tracing out the rudimentary wing-bones in that bird.

A few weeks since, Mr. Allis was informed by Dr. Gibson that his brother had succeeded in obtaining a perfect skeleton of the *Moa*, as well as an *Apteryx* and some of its eggs, all of which had been forwarded to England. This collection reached the York Museum at the end of May, and, when examined, was found to contain a very nearly complete skeleton of a gigantic species of *Dinornis*, together with numerous bones belonging to four distinct young birds of the same species. The best-marked of these bones were an ischium, an os pubis, a few ribs, and a small cruciform bone (the immature sternum). Before the skeleton was mounted, some photographic views of the bones were taken, copies of which were exhibited to the Society. One of the photographs shows the inner aspect of the sacrum; the three anchylosed vertebræ adjoining the sacrum, with their ribs still attached by cartilage to them;

the next dorsal rib, attached in like manner; the bones of the inner toe of the left foot, kept in position by cartilage; the phalanges exposed on their upper surface, with the periosteum entire, but retaining on their under surface the whole of their cartilage and also the outer integument of the sole. The head, with the exception of the loss of the left zygomatic bone, is as perfect as it would have come from the hands of the most expert anatomist, and without a trace of foreign matter on its surface. The tympanic bones retain the normal action they have in the living bird. A portion of the outer skin adheres to one of the fibulæ. Three of the dorsal ribs have articulating surfaces and cartilage at their lower end,—evidence of there being three sternal ribs on each side, although but two are represented in the only published figure Mr. Allis has had access to. The sternum is also shown with three of its ribs *in situ*; the sides of that bone are unsymmetrical, probably arising from injury in early youth. The second photograph shows the femur, with the still flexible *ligamentum teres* and the articular cartilage on its head, and having a portion of skin attached to it; a view of the under surface of the head, with its detached mandible; a view of the sternum, showing its anterior border, with the fossæ, in which are the articulating surfaces for the attachment of the anterior limbs; the tarsus; and an outer view of the pelvis; together with a considerable portion of the skin, studded with the quill-parts of the feathers, which are bifid as in the Emu; some of the feathers preserve a portion of the web.

A bystander attempted, by a sudden jerk of the hand, to pull out one of the feathers, but did not succeed in doing so; the feather would neither move nor break, but, slipping through the fingers, retained its position, texture, and elasticity alike uninjured.

Besides these parts, the same photograph exhibits a view of the eight caudal vertebræ, retained in their proper relative position by the cartilage on their under surface; and the os coccygis, which differs in form from that of any other bird, having two finely-pointed processes pointing upwards, beautifully preserved.

The other bones received consist of nine true cervical vertebræ; how many are wanting is unknown, but at least two or three, as well as the atlas; two dorsal vertebræ with short ribs (the upper pair is wanting); next in order a single vertebra, with the left rib attached; then three others normally ankylosed, and all with the left rib attached to them. The first sacral vertebra has one

of its ribs attached by cartilage, the other detached; the next two have ribs ankylosed to them. Of the nine left dorsal ribs, seven retain their cartilaginous attachment to the vertebræ just as they were when the bird was alive, and one of the nine is missing. The posterior limbs are perfect, except in the loss of the middle toe of the left foot. When all the bones had been placed in proper order on the table, one was left for which no place could be found, the unusual shape of which rendered it difficult to form an opinion as to what it was; it was evident, however, that it belonged to an adult bird; and Mr. Allis soon convinced himself that it was the rudimentary wing-bone for which he had before sought in vain; it was less than an ounce in weight.

The most striking peculiarity of this skeleton is its great strength, especially in the neck. The cervical vertebræ want those acicular processes which are found on the under side of those bones in the Ostrich, and bear in this respect a closer resemblance to those of the Emu.

The bones wanting to complete the skeleton are the left zygomatic, the atlas, two or more of the upper cervical vertebræ, the first pair of dorsal ribs, the first pair of sternal ribs and the third left sternal rib, one of the rudimentary anterior limbs, and the left middle toe.

With respect to the species of *Dinornis* to which these bones belong, Mr. Allis is uncertain. Looking at the general character of the skeleton, no more appropriate name could be found than "*robusta*;" but whether it be *D. robusta* of Prof. Owen is doubtful. Dr. Gibson has carefully measured the leg-bones, and does not find them agree in all respects with any described by Prof. Owen, though the difference, Mr. Allis suggests, may possibly be only sexual.

It appears that the skeleton was discovered by some persons who were on a "prospecting" expedition in search of gold, almost completely buried in a heap of sand, and having beneath it the bones of the four young ones. Judging from the condition of the cervical vertebræ, Mr. Allis is of opinion that the bird was buried with its body and head bent down, whilst the neck, arching upwards, was more exposed,—all the bones of the trunk and limbs, and of the head itself, being perfectly preserved, and apparently in a quite fresh condition, with their articular cartilages entire, and ligaments flexible and strong; whilst the middle cervical vertebræ were much weather-worn, and evidently had suffered from exposure above the surface of the ground.



Allis, Thomas. 1864. "Notice of a nearly Complete Skeleton of a Dinornis, presented by Dr. Gibson to the Museum of the Yorkshire Philosophical Society." *The Journal of the Linnean Society of London. Zoology* 8(29), 50–52.
<https://doi.org/10.1111/j.1096-3642.1864.tb02005.x>.

View This Item Online: <https://www.biodiversitylibrary.org/item/98595>

DOI: <https://doi.org/10.1111/j.1096-3642.1864.tb02005.x>

Permalink: <https://www.biodiversitylibrary.org/partpdf/376903>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.