A COMPLETE PHYTOSAUR PELVIS FROM THE TRIASSIC BEDS OF WESTERN TEXAS

BY
E. C. CASE
AIIM SCANNER TEST CHART #2

Spectra

4 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
6 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
8 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
10 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789

Times Roman

4 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
6 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
8 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
10 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789

Century Schoolbook Bold

4 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
6 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
8 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
10 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789

News Gothic Bold Reversed

4 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
6 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
8 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
10 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789

Bodoni Italic

4 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
6 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
8 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
10 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789

Greek and Math Symbols

6 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
8 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789
10 PT
ABCDFGHJKLMNPQRSTUWXYZabcdefgfhiklmnopqrstuvwxyz;"../?0123456789

White

Black

Isolated Characters

<table>
<thead>
<tr>
<th></th>
<th>m</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>9</td>
<td>0</td>
<td>h</td>
<td>I</td>
<td>B</td>
</tr>
</tbody>
</table>
CONTRIBUTIONS FROM THE MUSEUM OF GEOLOGY

UNIVERSITY OF MICHIGAN

Editor: EUGENE S. McCARTNEY

The series of contributions from the Museum of Geology was inaugurated to provide a medium for the publication of papers based entirely or principally upon the collections in the Museum. When the number of pages issued is sufficient to make a volume, a title-page and a table of contents will be sent to libraries on the mailing list, and also to individuals upon request. Communications with reference to exchange or purchase of copies should be directed to the Librarian, General Library, University of Michigan.

VOLUME I

The Stratigraphy and Fauna of the Hackberry Stage of the Upper Devonian, by Carroll Lane Fenton and Mildred Adams Fenton. Pages xi + 260, 45 plates, 9 text figures and 1 map. Cloth. $2.76 net.

VOLUME II


(Continued on inside of back cover)
A COMPLETE PHYTOSAUR PELVIS FROM THE TRIASSIC BEDS OF WESTERN TEXAS

E. C. CASE

During the summer of 1925 the expedition from the Geological Museum of the University of Michigan recovered from the Dockum beds, upper Triassic, of Crosby County, Texas, a nearly complete pelvis of a large Phytosaur, probably of the genus *Phytosaurus*. The specimen was discovered by Mr. W. H. Buettner and has been prepared and mounted by him. In 1920 an expedition from the Geological Museum to the same locality recovered an imperfect ilium and the larger portion of a very fragmentary skull from the same spot where the pelvis was found in 1925. The imperfect right ilium was described and figured by the author in Publication 321 of the Carnegie Institution of Washington (Figure B, Plate 13, and Figure 27 C, page 71), and given the number 7244, U. of M. The pelvis recovered in 1925 lacked the right ilium, and in an effort to complete the otherwise perfect pelvis it was seen that the ilium found several years before fitted into the pelvis exactly. The skull had proved to be so incomplete that it could not be assembled, but a search was made among the fragments and the missing part of the right ilium was discovered. This is recorded to show the association of the skull and the pelvis, a fact supported by the exactly similar condition of fossilization and the identical locality of discovery.

The pelvis is so complete and so little distorted that it has been possible to assemble the bones in the position which they occupied in life and to show the exact form of the pelvis. The figures reveal the form and the relations of the bones better than could be done by a long description. The most striking
points are the long ischiadic symphasis, the large pubo-ischiadic opening and the sudden, apron-like, descent of the pubes. The pubic foramen was not completely closed; the bone becomes very thin at the inner portion and approaches very closely on the two sides of the opening, but the edges are complete. The small intervening space was undoubtedly filled with cartilage. The outline of the large pubo-ischiadic foramen is very nearly exact; although the bone is very thin the edges are complete in almost every part. The sudden descent of the pubes has been shown in some of the European forms and also in the extreme degree in the form described by Mehl as Accomposaurus wingatensis. The angulation of the two halves of the pelvis was checked by the bevel of the ischial symphasis and the meeting of the pubes. This compelled a spread somewhat greater than seemed correct and greater than was suggested by sacral vertebrae and ribs of other specimens in the collection of the Geological Museum, but it can not be more than three fourths of an inch too great, at the most.

Four vertebrae were found in close association with the pelvis, two without chevron facets and two with facets; it is assumed that they are the last two pygals and the first two caudals. The spines of all these vertebrae are noticeably high; it is possible that the vertebrae are placed a little too high in the mount.

As the pelvis was found in such close association with the fragmentary skull and as a fragment of the imperfect right ilium was found among the fragments of the skull, it seems very probable that the pelvis and skull are parts of one specimen. Such fragments of the skull as permitted measurements were compared with a large skull in the collection of the Geological Museum and found to show almost identical dimensions. If the assumption that the bones belong to one specimen is correct, the pelvis belonged to an animal with a skull 112 centimeters long. It was stated in the original description of the skull (No. 7532, U. of M.) with which the fragments were compared, that the exact length could not be determined, but it is now known that the continuity is complete from end to end and the measurement is exact.
Fig. 1. Right side of the pelvis. × 0.15

Fig. 2. Anterior view of pelvis. × 0.2
The following measurements give an idea of the size of the pelvis:

Length of crest of complete left ilium .................. 27.6 Cm.
Greatest antero-posterior length of pubis-ischium .... 41.6
Length pubo-ischiadic symphasis ....................... 38.4
Height from pubic symphasis to crest of ilium ....... 22.4
Outside width at crest of ilia ......................... 35.0
F. Foerste. Pages 189-208, with 5 plates. Price, $.36.
10. The Vertebral Column of Coelophysis Cope, by E. C. Case.
Pages 209-222, with 1 plate and 9 text-figures. Price, $.25.
11. A New Species of Trionychid Turtle, Amyda nelsoni, from the
Eocene Beds of Southwestern Wyoming, by E. C. Case.
Pages 223-226, with 1 plate and 3 text figures. Price, $.20.
12. A Complete Phytosaur Pelvis from the Triassic Beds of
Western Texas, by E. C. Case. Pages 227-229, with 1
plate. Price, $.20.
13. Discovery of a Hamilton Fauna in Southeastern Michigan,
by G. M. Ehlers and Mary E. Cooley. Pages 231-236.
Price, $.15.
14. Anisotrypa waynensis, a New Bryozoan from the Warsaw
Formation of Kentucky, by Charles F. Deiss, Jr. Pages