

NOTES ON TWO NEWLY MOUNTED FOSSIL VERTEBRATE SKELETONS IN THE UNITED STATES NATIONAL MUSEUM.

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INTRODUCTION.

AN unusually complete skeleton of *Uintatherium robustum* Leidy, and a composite skeleton of *Edaphosaurus boanerges* Romer and Price have recently been added to the exhibition series of fossil vertebrates in the United States National Museum. It is the purpose of this brief communication to call attention to these new acquisitions, and to present a few notes on some of their more salient features.

A Skeleton of *Uintatherium*.

Plate 1, Fig. 1.

The Smithsonian Paleontological Expedition of 1941 to the Bridger Basin in southwestern Wyoming, under the leadership of Associate Curator, C. L. Gazin, was fortunate in discovering an unusually complete skeleton of *Uintatherium robustum* Leidy, U. S. N. M. No. 16662. This specimen was found by Doctor Gazin weathering out of the formation along a cattle trail that crossed a low divide in the badlands between Henry's Fork and Sage Creek, Uinta County, Wyoming.

The bones of the skeleton formed a compact heap in the ground with many of the important parts still in articulation. In all the following bones of this individual were recovered: complete skull; articular portions of both lower jaws; 11 dorsal, 3 lumbar vertebrae; complete sacrum; 7 anterior caudal vertebrae; 33 ribs, 2 sternal bones; complete pelvis; left femur, tibia, fibula and pes; left scapula, humerus, radius, ulna and foot lacking the fifth toe; right humerus, radius and complete manus.

All of the vertebrae except the second dorsal were articulated with the sacrum and pelvis. The limbs and feet of the left side, somewhat flexed, extended downward into the clay beneath the other bones of the skeleton, and the feet were almost wholly articulated.

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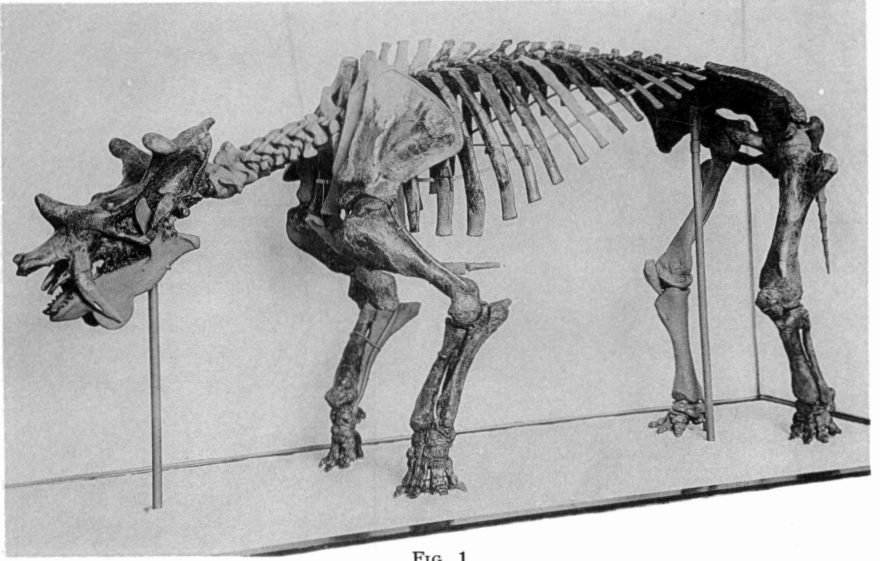


FIG. 1

Diagonal view of the mounted skeleton of *Uintatherium robustum* Leidy, U. S. N. M., No. 16662. About 1/28 natural size.

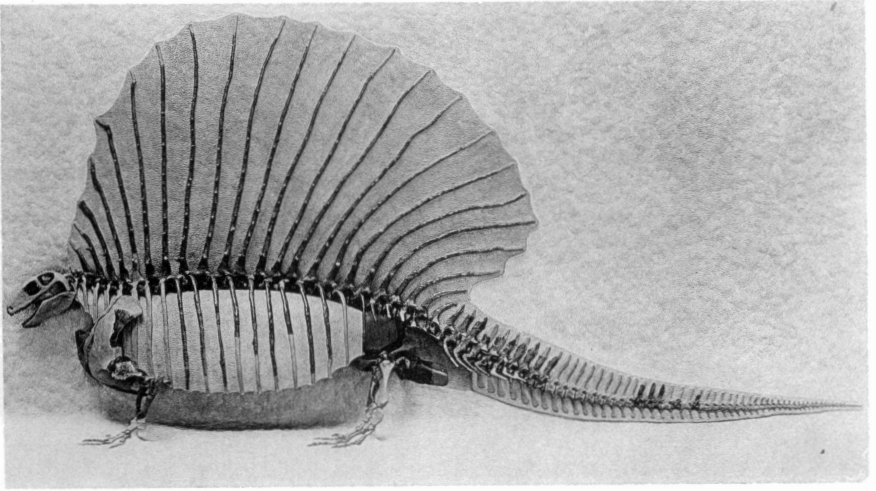


FIG. 2

Side view of skeleton of *Edaphosaurus boanerges* Romer and Price, U. S. No. 16647. About 1/20 natural size.

In reconstructing the skeleton the missing bones have been replaced either by casts of homologous elements of other individuals or by carefully modeled replicas. In the mounted skeletons these have all been given a distinctive color so that they may be readily distinguished from the original bones. The preservation is excellent and all the bones are practically free from postmortem distortion.

Although there is considerable *Uintatherium* skeletal material preserved in the museums of this country, nowhere, so far as inquiry could develop, is there a complete presacral column. Thus, in articulating the present skeleton a complete articulated backbone of *Coryphodon* belonging to the National Museum was used as a guide. This has resulted in the following formula: C7, D17, L3, S-4, Ca. 19±. This backbone differs from the first pictorial restoration of *Uintatherium* by Marsh in having two less dorsals and one less lumbar vertebra. The number of lumbar in *Uintatherium* may now be considered as positively determined as three, since this specimen was found with the dorsals, lumbar, and sacrum in articulated sequence.

The skeleton shown in Plate 1, Fig. 1, is posed in an upright standing position on a groundwork of artificial matrix, with the head slightly lowered. In general, one is impressed by the large head, the shortness of the ribs, the heavy limbs, and the great width of the pelvis. As mounted, the skeleton has an over-all length of 10 feet 6 inches, a greatest height at the center of the back of 5 feet 3 inches.

Most of the preparation, and all of the work of restoration and mounting, was done by preparator Thomas J. Horne, and he is to be highly complimented on the excellent results attained.

A Skeleton of *Edaphosaurus*.

Plate 1, Fig. 2.

Through exchange with the Museum of Comparative Zoology, Cambridge, Massachusetts, the United States National Museum has acquired a composite skeleton of *Edaphosaurus boanerges* Romer and Price. The skeleton was assembled from an assortment of materials collected by the Harvard Museum from a bone bed deposit of fossils discovered by Doctor A. S. Romer

in 1932, near the town of Geraldine, in northern Archer County, Texas. It was from this same assemblage of fossil bones that the mounted skeletons of *Edaphosaurus* now in the Harvard and Oklahoma University museums were selected.

Although the present specimen in itself has not contributed anything new to our knowledge of the unknown features of the *Edaphosaurus* skeleton, it does incorporate all of the latest information resulting from the monographic study of the Pelycosauria by Romer and Price.²

The vertebral formula of both the presacral and caudal series has not been certainly determined as yet, though the latest evidence appears to indicate that in *E. boanerges* 24 vertebrae constitute the complete presacral series, and that number has been adopted in the present mount. Still less is known about the complete number of caudals, but as restored this skeleton has 59 caudal vertebrae. The distal fourth of the tail is a cast of an articulated series belonging to a skeleton in the Museum of Southern Methodist University of Dallas, Texas, mounted by Mr. R. V. Witter, who kindly furnished us with a cast of this portion of the tail.

The National Museum specimen (see Plate 1, Fig. 2) is mounted in half relief against an artificial background on which the outlines of the dorsal fin and tail are also in relief. The relief effect is further accentuated by the use of contrasting colors. The fin, body and tail have been tinted a darkish red which makes these parts stand out prominently from the light reddish color of the background that simulates the color of the original matrix.

The work of restoration and mounting of this skeleton for exhibition was done by chief preparator Norman H. Boss, and he, too, is to be highly commended for the artistic appearance of the finished specimen.

As mounted, the specimen has a greatest length over all of 7 feet, greatest height from the base to the top of the tallest spine, 3 feet and 3 inches.

² Romer and Price, 1940. Geol. Soc. Amer. Special Paper, No. 28, pp. 390-393.