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A NEW SPECIES OF TRIONYCHID TURTLE,
AMYDA NELSONI, FROM THE EOCENE
BEDS OF SOUTHWESTERN WYOMING

BY
E. C. CASE



UNIVERSITY OF MICHIGAN
ANN ARBOR

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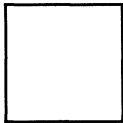
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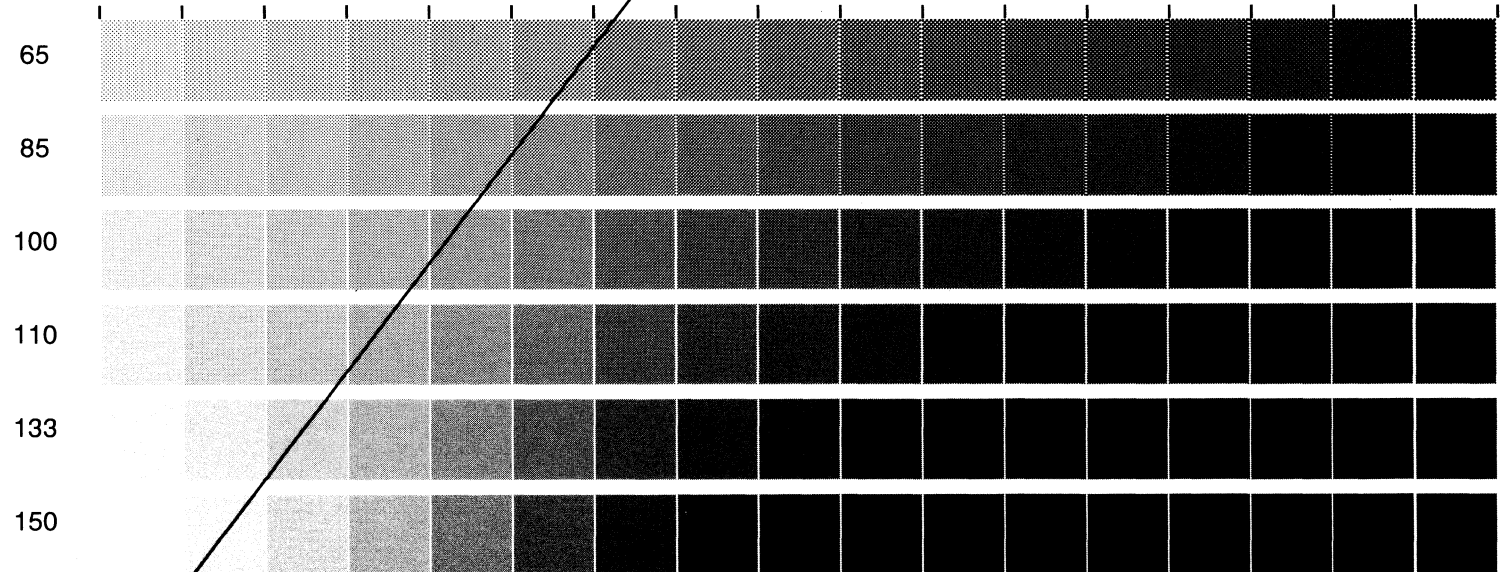
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UNIVERSITY OF MICHIGAN

Editor: EUGENE S. McCARTNEY

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(Continued on inside of back cover)

A NEW SPECIES OF TRIONYCHID TURTLE,
AMYDA NELSONI, FROM THE EOCENE
BEDS OF SOUTHWESTERN WYOMING

E. C. CASE

IN the summer of 1926 the author discovered the larger part of the skeleton of a large Trionychid turtle in the Eocene, Bridger, beds a few miles east of Granger, Wyoming. The parts recovered consist of the carapace with the exception of the distal ends of some of the ribs, the plastron with the exception of the left hypoplastron, and parts of the entoplastron, the pelvic arch with the exception of the distal ends of the ischia, the complete pectoral arch, the last dorsal and the two sacral vertebrae, and some of the foot bones and portions of the limb bones. This specimen, the holotype of the species, is No. 8393 of the collection in the Geological Museum of the University of Michigan.

The form of the carapace, plastron, and the arches is shown in the accompanying plate and text figures. This turtle approaches most closely to *Amyda salebrosa* Hay and *Amyda(?) exquiseta* Hay (pages 524 and 525, Publication 75 of the Carnegie Institution of Washington). From the first of these it differs in the more concave anterior border of its nuchal plate, the more rounded posterior border of the plastron, the lack of contraction of the distal portion of the first costal plate and the more regular pattern and larger size of the pits upon the surface of the carapace. The fourth neural resembles the third in outline and the fifth has both the anterior and posterior edges and the sides gently convex and not meeting in sharp angles. From *A. exquiseta* it differs in the more concave anterior border of its nuchal plate and in the general outline of this bone, in the slighter emargination of the posterior border of the carapace,

in the lack of contraction of the distal portions of the first costals, and in the greater extension of the ribs beyond the ends of the costals. The size and distribution pattern of the pits upon the surface of the carapace and the shape of the neural plates are very similar to *A. exquiseta*. The carapace of the specimen of *A. exquiseta* restored and figured by Hay was rather incomplete, and, except for the form of the first costal plate and the extension of the ribs beyond the costal plates, the

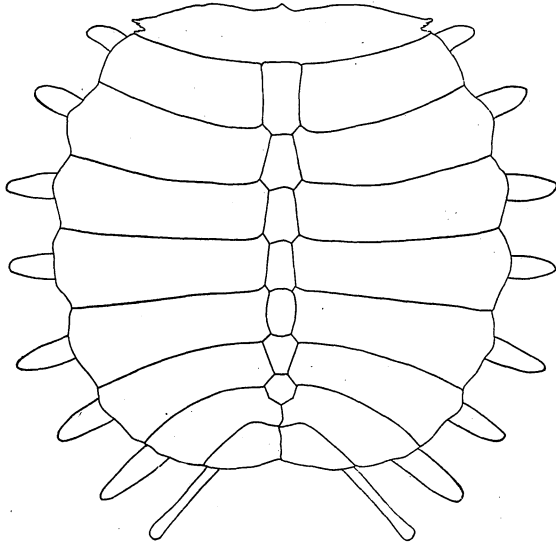


FIG. 1. Outline of the carapace of *Amyda nelsoni*. $\times 1/6$

difference might be considered as due to individual variation or the imperfection of Hay's specimen.

Because of the imperfection of his specimen Hay was uncertain whether it should be placed in the genus *Amyda* or in the genus *Aspiderites*, but there can now be no doubt that there was no pre-neural plate and that he was correct in his assignment to the genus *Amyda*.

As mounted, the specimen of *A. nelsoni* shows the carapace complete and perfect with the exception of the distal ends of

some of the ribs, which were weathered out and not recovered; the length of all is shown from one side or the other with the exception of the last pair, which are incomplete. The left hypoplastron is restored entirely as the bone was weathered out and only fragments were recovered. Only the posterior portions of the entoplastron were recovered and the anterior median portion is restored. The right epiplastron is restored in part. The pectoral arch is placed as nearly as possible in the correct position; the bones were compressed between the carapace and

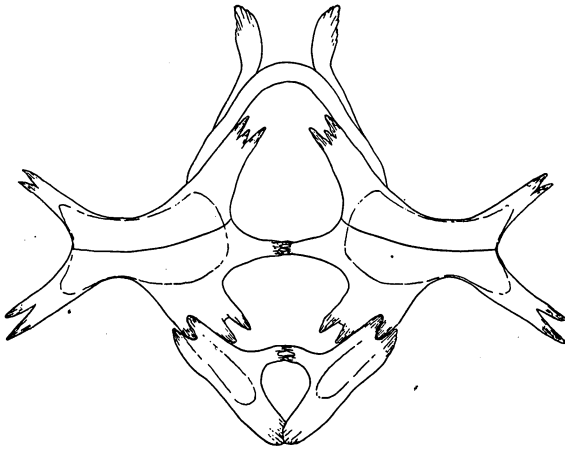


FIG. 2. Outline of the plastron of *Amyda nelsoni*. $\times 1/6$

plastron and were somewhat distorted, but the position of the distal ends of the procoracoid processes of the scapulae is marked by circular scars on the lower side of the nuchal plate near the median line and with these points as guides the position of the arches is fairly certain. Only the distal portions of the very thin coracoids were destroyed by decay and have been restored.

The bones of the pelvic arch were also compressed and disarticulated, but with the exception of the distal ends of the ischia they are preserved nearly complete and the articular faces are so little distorted that they could be replaced in their natural

position. The limb bones are very similar to those of the living *Amyda* and the preserved phalanges indicate long feet with powerful claws.

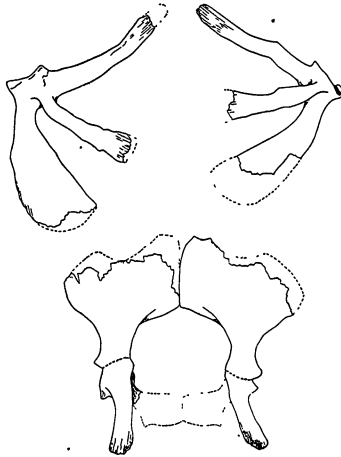


FIG. 3. Outline of the pectoral and pelvic girdles of *Amyda nelsoni*, figured as preserved and placed in proper position. $\times 1/6$

Measurements:

Total length of the plastron without the ribs.....	.368 Mm.
Total breadth of the plastron without the ribs.....	.364

Neural plates	Length	Width
1	.068	.033
2	.046	.036
3	.046	.030
4	.043	.025
5	.037	.022
6	.033	.030
7	.025	.027
Width of the bridge of the plastron....	.048	

The species is named in recognition of the interest and help of Miss Theodora Nelson, a former student with the author.

PLATE I

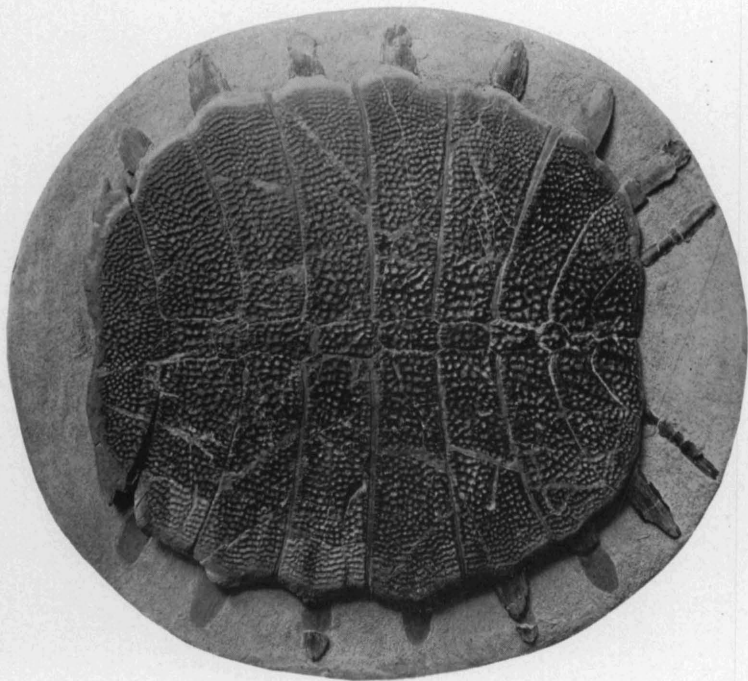


FIG. 1. Photograph of the carapace of *Amyda nelsoni*

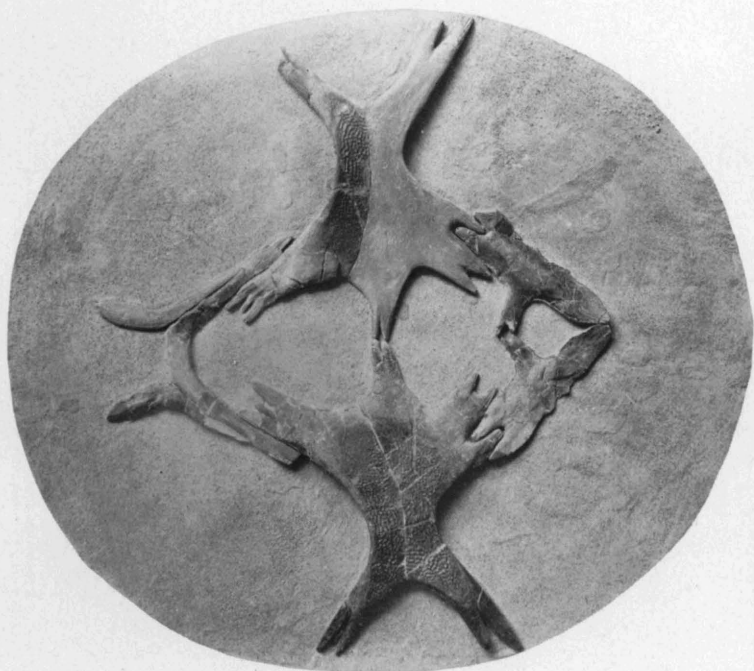


FIG. 2. Photograph of the plastron of *Amyda nelsoni*

(Continued from inside of front cover)

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