

ART. XXXIII.—ON A CARNIVOROUS DINOSAURIAN FROM THE  
DAKOTA BEDS OF COLORADO.

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The vertebrate fauna of the Dakota epoch of the regions west of the Mississippi having been heretofore unknown, it is satisfactory to be able to state that I have recently received, from a new locality, evidence of the existence of some colossal species of *Dinosauria* during this period. This is derived from a skeleton discovered near to the town of Canyon City, on the Arkansas River, near the point where the latter issues from the cañon through the Greenhorn Range of the Rocky Mountains.

At present, I only describe a portion of the right dentary bone, which supports eight teeth, and contains a cavity at the anterior extremity, from which one tooth was probably shed. The dentition is of the carnivorous type, and does not differ from that of the species of the genus *Laelaps*, to which have been referred numerous species from Cretaceous Nos. 5 and 6. The crowns exhibit the gradual modification of form in the succession from rear to front which I have already described in the *Laelaps incrassatus*.\* There are subordinate characters exhibited by the present animal which show that it is quite distinct from any of the species heretofore known.

Five successional and two functional teeth exhibit crowns complete, or nearly so. The posterior exhibit a nearly straight posterior edge and an anterior one curved backward to a subacute erect apex. Both are denticulated, but the denticles of the anterior edge do not descend so near to the base of the crown as those of the posterior. The anterior series turns inward toward the base. The section of the crown is here (at the ninth tooth from before) not quite symmetrical, the internal face being the more convex near the apex. Soon the greater convexity of the outer side of the crown near the base becomes apparent, and as the inward curvature of the anterior denticulate edge increases, the convexity becomes more pronounced. On the second tooth, which is the first one preserved, the posterior edge is median; the anterior edge is on the inner side of a gently convex anterior face, which passes into the external face by an abrupt convexity. The long axis of the section of the crown does not connect the cutting edges, but passes from the posterior edge to the extero-anterior convexity mentioned, and parallel to the symphysis mandibuli. The enamel is smooth and with a fine silky luster. Two stages of succession are evident in these teeth. Successional crowns

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\* See Proceedings Academy Phila., January, 1877.

are seen, as in *L. aquilunguis* and *L. incrassatus*, in the dentary bone on inner side of the roots of the functional teeth. As these develop, they appear to take position immediately below the crown of the old tooth, and grow vertically in its axis, finally displacing the latter in the manner characteristic of the *Crocodylia*.

The dentary bone is not deep, but is robust in the transverse direction. The external side is little convex in the vertical direction, and displays a smooth surface. A series of rather large foramina, rather close placed, extends near the superior alveolar margin. The inner face of the dentary is divided into two subequal planes by a wide, open, longitudinal groove, which terminates at the posterior border of the symphysis. The surface is smooth. The symphysis is a short plane, oblique to the long axis of the dentary bone, and having the usual antero-superior oblique direction. It is short, and is characterized by its absolute smoothness. Near its anterior inner border, there is a large foramen.

This reptile differs from the *L. incrassatus* from the Judith River bed of Montana in many respects:—(1) There is no tooth having the form of the canine of that species, *i. e.*, having the transverse greater than the longitudinal diameter, and the cutting edges opposite; (2) the anterior edge is not carried to the middle of the inner side of the crown in the anterior tooth preserved; as to the ramus, (3) the groove of the inner side is much inferior in position in the Colorado animal; (4) there are no symphyseal rugosities, as in *L. incrassatus*; (5) the ramus is shallower and thicker.

The species may then be named *Laelaps trihedron*, from the form of the second tooth.

*Measurements.*

|  | M.    |
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| Depth of ramus at posterior extremity of symphysis .....   | 0.090 |
| Width of ramus at the same point .....                     | 0.050 |
| Depth of ramus at sixth tooth .....                        | 0.095 |
| Width of ramus at sixth tooth .....                        | 0.045 |
| Depth of ramus at sixth tooth to the internal groove ..... | 0.050 |
| Length of portion of ramus supporting nine teeth .....     | 0.260 |
| Diameter of base of crown of fourth tooth                  |       |
| } transverse .....   | 0.015 |
| } antero-posterior .....                                   | 0.022 |
| Total length of third tooth .....                          | 0.145 |
| Diameter of base of crown of third tooth                   |       |
| } transverse .....   | 0.021 |
| } antero-posterior .....                                   | 0.022 |
| Width of anterior (convex) face .....                      | 0.017 |
| Length of crown of second tooth .....                      | 0.045 |
| Width of inner face .....                                  | 0.019 |
| Width of exterior face .....                               | 0.020 |
| Width of anterior face .....                               | 0.012 |

In this connection, I may mention that Prof. O. C. Marsh, of New Haven, has recently created another synonym by renaming the genus *Laelaps*. This is done on the supposition that the latter name is pre-occupied in entomology. The name has been used in that science, it is true, but simply as a synonym, and was therefore not employed or occupied when I applied it to this genus of extinct reptiles.