as expressed in his "Geology and palæontology of the Judith River beds," 1905, p. 97.[1] This author in the writer's opinion also erred in his remarks[2], under the same heading in his report, on the material on which *S. marginatus* was established, as further work on the rich dinosaurian fauna of the Belly River beds of Alberta has so fully proved.

The members of the *Hadrosaurinæ* and *Saurolophinæ* resemble each other in having an elongated narial vacuity, opening through the skull, enclosed above by the nasals and premaxillaries. In both subfamilies there is a forward extension of the nasals, and a limitation of the premaxillaries to an anterior position in the skull. They differ from each other in the absence in the first and the presence in the other of a "foot" or distal expansion in the ischium.

The three subfamilies show distinctive characters in the relative size of the parieto-frontal region, and of the lachrymal.

The *Stephanosaurinæ* are characterized by an extremely high skull in marked contrast to the relatively low skull of the *Hadrosaurinæ* and *Saurolophinæ*, the extreme of skull depression being reached in the *Hadrosaurinæ*, viz., in the genus *Diclonius*. The primary characters of the *Stephanosaurinæ* separating it from the other two are—(1) the envelopment of the anterior nares in, and their separation by, the premaxillaries, (2) the extreme backward extension of the premaxillaries and their enclosure of the narial passages, (3) the enlargement of each narial passage posteriorly, within the supraorbital hood or dome, into an extensive air-chamber bounded by the premaxillaries and nasals.

In these subfamilies the appendicular skeleton and that of the trunk provide also characters which no doubt can be relied on as being distinctive in each.

The *Stephanosaurinæ* were more highly specialized than either the *Hadrosaurinæ* or the *Saurolophinæ*. The arrangement of the elements enclosing the anterior nares and narial passages implies different habits and may indicate a better adaptation to an aquatic life.

The earliest member of the *Hadrosaurinæ* is *Gryposaurus* from the Belly River formation of Alberta represented in Figure 36A by the skull of *G. notabilis* remarkable for its completeness and wonderful state of preservation.

The second genus of this subfamily, viz., *Kritosaurus*, from a not definitely determined geological horizon in New Mexico (the Ojo Alamo beds of San Juan county=?Edmonton formation of Alberta) is noteworthy for the great posterior height of the skull. The radical differences between *Gryposaurus* and *Kritosaurus*, particularly those conspicuously seen in the shape and size of the predentary and the proportionate length of the quadrate, make it probable that further fundamental dissimilarities will be revealed in the skull and other parts of the skeleton when the osteology of *Kritosaurus* is better known.

The type of *Kritosaurus* consists in general terms of the hinder half of the cranium, and a complete mandible, which latter reveals the length of the skull (Figure 36B). The orbital rim, including the postorbital bar, is, in the mounted skull, mostly restored in plaster, and all the facial

[1] "Geology and palæontology of the Judith River beds", by T. W. Stanton and J. B. Hatcher, with a chapter on the fossil plants by F. H. Knowlton; Bull. No. 257, U.S. Geol. Surv

[2] Cited by C. F. Bowen in "The stratigraphy of the Montana group, with special reference to the position and age of the Judith River formation in north-central Montana", Prof. Paper 90, U.S. Geol. Surv., 1914.