

A New *Rhinoceros* of the Genus *Teleoceras* from Colorado

By HAROLD J. COOK

Among the many interesting fossils collected in the Pliocene beds of eastern Colorado, near Wray, Yuma County, by the Colorado Museum of Natural History expeditions, under Mr. Philip Reinheimer, in 1918 and 1919,* is some well-preserved and interesting *Rhinoceros* material. It will be necessary to complete rather extensive comparative studies on this material before all its relationships can be cleared up. But in the meantime, it seems well to note and describe one clear-cut new type, now on exhibit and mounted in the museum. It is named after and in honor of Mr. S. N. Hicks, whose generous contributions made the gathering of this valuable collection possible.

TELEOCERAS HICKSI, sp. nov.

Type No. 304, Colorado Museum of Natural History, a nearly complete skull. With this is an uncertainly associated pair of lower jaws, which are a good fit, and a complete mounted skeleton, an unknown amount of which probably belongs to the type. A second skull, No. 309, complete save for the front of the mouth, a little smaller than the type skull; and another skull, No. 715, somewhat larger, confirm the species. The second skull, No. 309, is taken as a paratype, because the type skull is so mounted in the skeleton that it is difficult to remove for study and both of these skulls are equally well preserved, uncrushed and not distorted. The paratype gives the characters not readily examined in the type. The lower jaws may or may not belong to this specimen, but agree well with the type and with other comparative skull and jaw material available from the same beds and locality.

As compared to *Teleoceras fossiger*, its nearest described relative,—*T. hicksi* is very much more brachycephalic, more nearly to the degree found in a parallel phylum, (*Peraceras*); the nasals are much shorter and sharply elevated, and the whole skull relatively shorter and wider. In the type *T. fossiger* skull, the length of the face, from the front of the orbit to the tip of the nasals, in relation to the length of the skull from the same point on the orbit to the back of the condyles, is about the ratio of 1:2. In *T. hicksi* it is approximately 1:4. The nasals are united in a thin nasal horn base and, being so very short and upturned, give the skull a decidedly snub-nosed appearance. The zygomatic arches are exceptionally wide and heavy and square-shouldered from a palatine view, at the rear. The whole interior surface of the arches is exceptionally rugose and also the area back of and below the eye along the outside of the brain case, for the attachment of the heavy muscles which controlled the lower jaws. The occiput is relatively more elevated in relation to the base-line

*Two New Bunomastodonts from Colo., by Harold J. Cook, (Proc. Colo. Mus. Nat. Hist., Vol. 4, No. 1).

A Pliocene Fauna from Yuma County, Colo., by Harold J. Cook, (Proc. Colo. Mus. Nat. Hist., Vol. 4, No. 2).

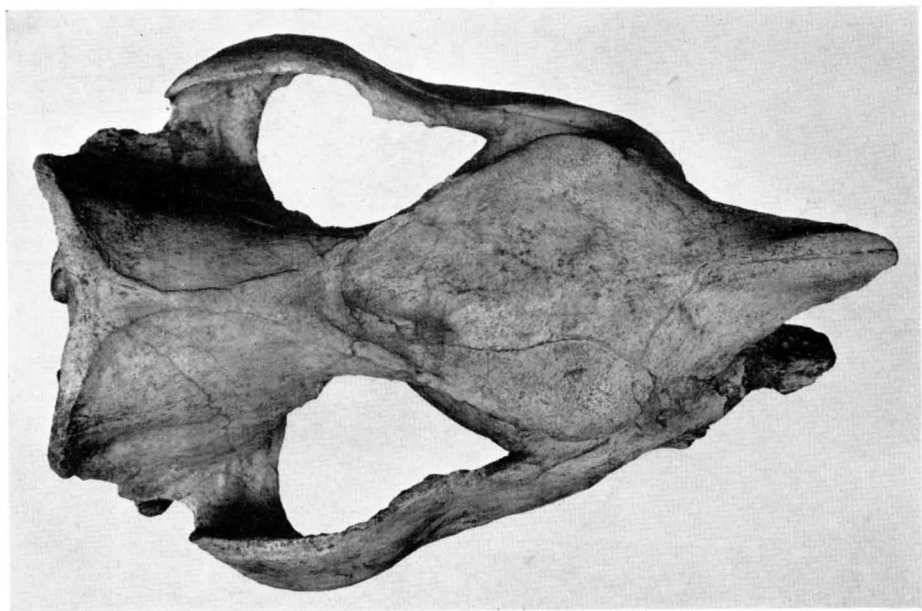
of the alveolar border of the teeth than in *T. fossiger*, and somewhat broader, to conform to the wider, shorter skull. In general, it is quite similar in type otherwise. The post-nareal aperture is relatively shorter and wider in *T. hicksi*. The broad, relatively flat palate goes with tooth rows which remain comparatively parallel, as in *fossiger*, not converging rapidly anteriorly as occurs in certain contemporary forms of about the same size. The pterygoids are very heavy and rugose.

There are six functional grinders above and five below, but the premolars are relatively reduced in size and all teeth more crowded and pinched antero-posteriorly, correlated with the greatly shortened face, as compared with *T. fossiger*. The metaloph of P_4 is relatively more strongly developed and a number of differences in dental pattern are observable but of uncertain diagnostic importance until the various phyla of Miocene-Pliocene rhinoceroses are better known. While the mounted skeleton is undoubtedly essentially correct, we have reason to believe that the tibia and fibula used in it are about one-fourth too long; and that the hind legs, consequently, were slightly shorter than this restoration would indicate. Its general proportions were very similar to those of *T. fossiger*. The lower jaws are curved with a rounding, sloping angle, far less pronounced than in such a type as *Aphelops megalodum*, and with large, strong incisors.

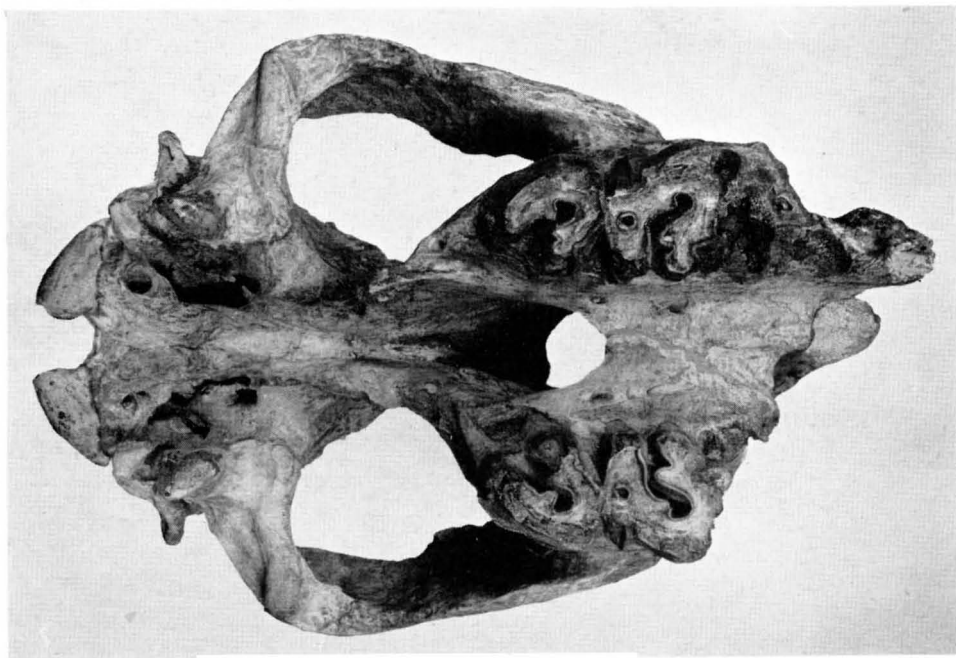
This appears to be in certain directions a more specialized species than *T. fossiger*, quite closely related, and from apparently the same ancestry, but going off at a tangent. It is possible that *T. hicksi* is derived from the latter, in which case the Yuma beds would be a somewhat later phase of deposition than that of the "Loup Fork" beds of Long Island, Kansas, where the type was found. But on the other hand, the first functional premolar (P_2) in *T. fossiger* is more reduced than in *T. hicksi*, and the teeth of the former are more hypsodont, both characters showing distinct advancement over the latter species. Therefore, on the evidence at hand, they appear to be divergent species, rather than stages in a unit phylum.

COMPARATIVE MEASUREMENTS

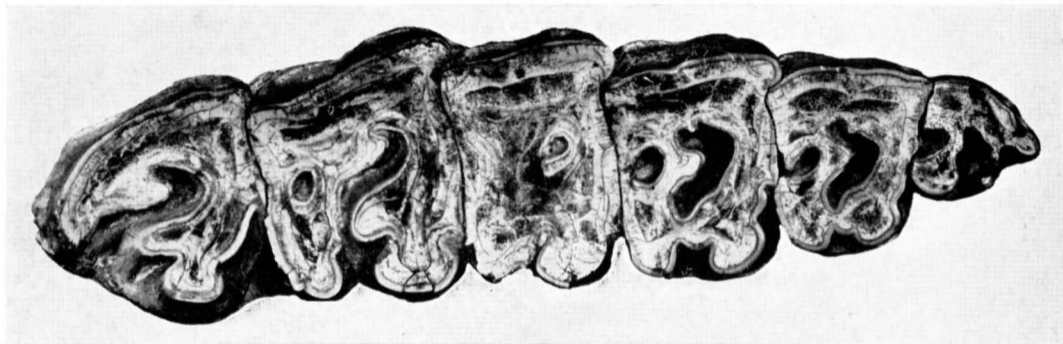
	No. 304 mm.	No. 309 mm.	No. 715 mm.	No. 251 mm.
Total length, skull, condyles to premaxillar, incl.	645			
Total length, skull, condyles to nasals, inclusive	538	486		
Total length, skull, condyles to front of orbit...	402	373		
Total length, skull, back of occiput to tip of nasals	463	444		
Front of orbit to tip of nasals, straight.....	134	118		
Front of orbit to tip of nasals, angular.....	180	183		
Greatest width, skull, across zygomatic arches...	334	342	370	
Height of occiput above base of condyles.....	214	225	193	
Height of skull above alveolar border of M^2	170	170	173	
Width of palate at M^3	76	77		
Width of palate at P^2 (approx.).....	88			
Total length upper dental series.....	288			267
Total length upper molar series.....	180	150		155
Total length lower dental series.....	258			
Total length lower molar series.....	173			
Total length lower jaw, over all.....	532			
Total length lower diastema in front of P_1	56			
Height of condyles above base of jaw.....	276			
Depth of jaw, below M_2	98			
Depth of jaw, below P_3	78			



TELEOCERAS HICKSI. Paratype No. 309.
Top view of skull. Approx. $X\frac{1}{4}$.

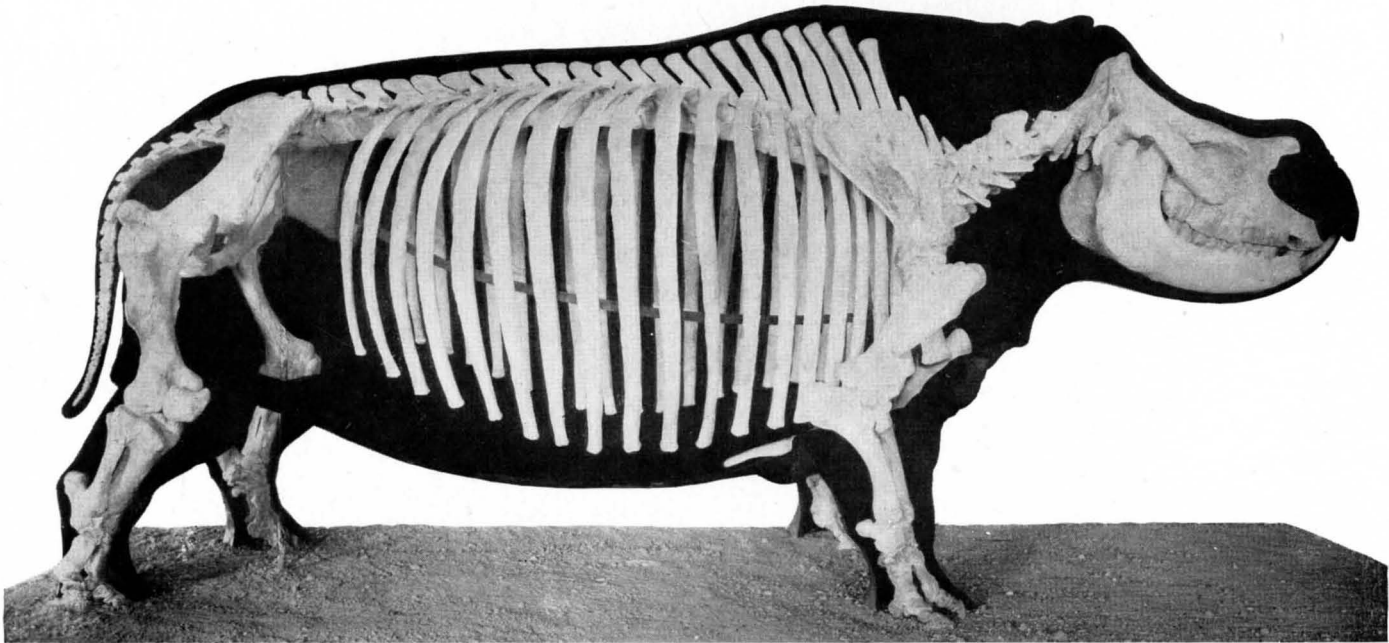


TELEOCERAS HICKSI. Paratype No. 309.
Palatine view of skull. Approx. $X\frac{1}{4}$.



TELEOCERAS HICKSI.

Upper right molar—premolar teeth. Referred specimen No. 251, Colo. Mus. Nat. Hist. Approx. $X\frac{1}{2}$.



Mounted skeleton of type of *Teleoceras hicksi*, with restoration modeled over one side, in Colorado Museum of Natural History.
In a former publication referred to as "*Teleoceras fossiger*".