

inturn diminishing toward the front. Behind the posterior opening the bone is greatly thickened and a short, stout, inwardly directed process is developed whose anterior surface is in continuation with the posterior margin of the opening. At the anterior margin of the opening the bone is thin and continues so with little variation to the front.

Exteriorly the posterior thickening of the bone is excavated in front for the opening which occupies nearly the whole of the excavation. Superiorly it extends forward horizontally above the opening and for a short distance beyond it as a strong narrow ridge, adding to the breadth of the superior surface and greatly strengthening the bone at this part. Beneath the opening the thickening diminishes rapidly forward. The opening is thus seen to be sunken in the general level of the outer posterior surface. The remainder of the exterior surface has minor undulations in a general flattened convexity. The superior surface is broad posteriorly and flat with a slightly outward and downward slope. Passing forward it becomes rounded with a diminishing breadth. Viewed from within the surangular presents a general concave surface in advance of the inwardly directed process, deeply excavated beneath the superior border and slightly concave elsewhere.

In the lower front portion of this separate surangular a considerable part of the border is missing in advance of a smooth incurved edge, rather more than a semi-circle in extent, which may represent the even curve of a deep emargination, or possibly a nearly circular opening through the thin bone with the front margin broken away. In the left surangular of the type such an opening is not present nor does a deep emargination occur antero-inferiorly. Although the undulatory nature of the lower front border of the surangular in *Gorgosaurus* might allow of an unusually deep incurve of the edge as an individual variation yet the regularity of the curve and its extent in this particular specimen is suggestive of an opening within the bone. A large, oval, anterior opening is described and figured by Marsh as occurring in the surangular of *Ceratosaurus nasicornis* of the Jurassic.

The surangular's contribution to the transversely placed mandibular cotylus is behind the broad flat posterior portion of the superior border and separated from it exteriorly by a pointed elevation curving upward, forward, and slightly inward. This part of the cotylus is well excavated and is above and exterior to the greater portion of the large, roughened, nearly vertical surface for the articulation of the articular. It extends on to the inwardly directed process which at this point gives the surangular its maximum breadth. The suture between the surangular and the articular strikes obliquely back across the cotylus from within outward, the floor of the cotylus rising to the suture and indicating its bifossate nature as described and figured by the writer in his