

inclined but slightly from the horizontal. There is no neural spine. The neural arch ends in an angulation above from which two ridges diverge backward, one to each postzygapophysis. With this centrum both ribs are preserved to which reference will be made later.

Measurements of Cervical Vertebra (distorted) of Paratype of Edmontosaurus.

	Mm.
Maximum length, about.	175
Maximum height, about.	157
Length of centrum.	123
Anterior height of same, about.	74
Posterior height and breadth of same, about.	85
Depth of concavity of posterior end of centrum.	38
Diameter of neural canal.	37

Anterior Dorsal Vertebra. The dorsal vertebra here described (Figure 31) is from the paratype of *Edmontosaurus* and is the anterior one of two having much the same size and proportions. It appears to be about the fourth or fifth from the front in the dorsal series. Two ribs, one of which is well preserved in its entirety (Figure 33), evidently belong, judging from their proportions, to this particular vertebra.

The centrum of this vertebra is opisthocœlous, but with the concavity and convexity less than in the cervical vertebra above described. It is longer than high, narrows downward, is pinched on the sides, and has a longitudinal keel below between the articulating ends. The neural arch is high and robust. The neural spine is short and does not rise much above the top of the transverse processes. It is broad in the fore-and-aft direction, inclined backward at an angle of about 45 degrees to the horizontal, is thin, and comes to a sharp edge along its anterior slope the base of which is vertically above the midlength of the centrum. It extends far beyond the posterior end of the centrum. It narrows slightly above its midheight, but regains its lower breadth by expanding above at the curved superior border which is thickened and rugose. The transverse processes are long and heavy, and rise upward at an angle of about 35 degrees to the vertical, inclining backward nearly as much as the neural spine. Anteriorly they come to a thin, sharp edge which is a continuation upward, with a change of direction outward of the narrow upper border of the prezygapophyses. Interno-posteriorly a thin flange is developed connecting them with the postzygapophyses. Externo-posteriorly a much stouter flange extends down to the posterior shoulder of the neural arch. Between these flanges a deep excavation leads downward and is separated from the corresponding excavation of the other side by a median lamella of bone extending up from the neural canal and supporting the pair of postzygapophyses from below.

The development of flanges in the transverse processes results in their being subtriangular in outline in cross-section. There is an inner face, broad and flat, an antero-external one becoming transversely concave in its upper part, and a third directed almost backward also concave with the concavity rapidly increasing below. The second and third faces are about equal in extent and both are narrower than the inner face.