

CARCHARODONTOSAURID TOOTH FROM THE LATE CRETACEOUS OF MINAS GERAIS, BRAZIL EXHIBITING A SPLIT CARINA

CANDEIRO, C.R.A.¹; TANKE D.H.²

¹Laboratório de Macrofósseis, Departamento de Geologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 21949-900, Brazil, candeiro@yahoo.com.br

²Dinosaur Research Program, Royal Tyrrell Museum of Palaeontology, Box 7500, Drumheller, Alberta, T0J 0Y0, Canada, darren.tanke@gov.ab.ca

Split carina affecting theropod teeth have been reported in allosaurid, tyrannosaurid and troodontid dinosaurs of North America. Recent studies of theropod teeth from the Late Maastrichtian Marília Formation, Bauru Group, Minas Gerais State, Brazil have identified a split carina on a carcharodontosaurid tooth (CPP 156). It is the first record of split carina in a theropod tooth recovered from Gondwanan landmasses. CPP 156 is a complete tooth, slightly recurved and with an oval cross-section. This morphology indicates that it derived from the anterior region of the jaws, perhaps the premaxilla. Both carinae bear large and expanded denticles, with the mesial carina showing only the apical part of the denticles. The enamel is smooth with wrinkled bands that are not present at the bases of the denticles. The Fore-Aft Basal Length of tooth is 14.28mm and the Tooth Crown Height of 25.59mm. The most prominent feature of this tooth is a well-developed split anterior carinae row arising from near the tip of the tooth crown. The normal anterior carina row is present from the base of the crown to the tip over a distance of 25.64 mm. The split (extra) carina row ("y") is shorter (24.73 mm), and the serrations ~33% smaller, but of the same morphology as those on anterior and the posterior carina rows. The split carina row arises from the 5th denticle (counting away from the tip) and splits and gently curves off from the main carina row forming an angle of roughly 45 degrees. The split carina of CPP 156 most closely resembles that seen in *Tyrannosaurus* and *Albertosaurus*. However, North American taxa have V-shaped split carina proximally-located, and on the Brazilian tooth it is Y-shaped and distally-located. The presence of the split carina in CPP 156 demonstrates that this pathological feature was present at the teeth of both Gondwanan and Laurasian theropods.