A New Chasmosaurine Ceratopsid From the Hall Lake Member of the Mcrae Formation (maastrichtian), South-Central New Mexico

Sebastian G. Dalman and Spencer G. Lucas

1 New Mexico Museum of Natural History and Science / Fort Hays State University, Hays, Kansas, 1801 Mountain Road N.W., Albuquerque, NM, 87104, sebastiandalman@yahoo.com
2 New Mexico Museum of Natural History and Science, 1801 Mountain Road N.W., Albuquerque, NM, 87104

We document a new chasmosaurine ceratopsid from the Upper Cretaceous Hall Lake Member of the McRae Formation, New Mexico. The chasmosaurine fossils consists of much of the skull, several vertebrae, ribs, and incomplete forelimbs. The fossils were collected from a red mudstone bed ~24 m above the base of the Hall Lake Member, south of McRae Canyon, Sierra County. Based on the occurrence of a tyrannosaur equivalent in body size to *Tyrannosaurus rex* and the sauropod *Alamosaurus sanjuanensis*, the Hall Lake Member is dated as Lancian (late Maastrichtian). The new chasmosaurine taxon is distinguished by a short but robust supraorbital horncore that is anteroposteriorly wide and mediolaterally compressed, premaxilla with a short pronounced ridge on the lateral surface, pterygoid with flat posteromedial ridge, robust jugal with pronounced posterolateral ridge, robust epijugal, and a long fenestrated frill with a strongly convex median parietal bar, and transversely narrow squamosal with a pointed end and elongate episquamosals. Cladistic analysis recovers the McRae Formation chasmosaurine ceratopsian as a sister to *Pentaceratops* and places it within the *Coahuilaceratops*+*Utahceratops* clade based on the transversely narrow squamosal and the transversely expanded frill posteriorly. The discovery of the new taxon adds to the diversity of chasmosaurine ceratopsians during the final stage of the Late Cretaceous and to the poorly known dinosaur fauna of the McRae Formation.

2017 New Mexico Geological Society Annual Spring Meeting
April 7, 2017, Macey Center, New Mexico Tech campus, Socorro, NM
Online ISSN: 2834-5800