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Mexican Ceratopsids: Considerations on their Diversity and Evolution

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Abstract: During the past decade, three new endemic taxa of ceratopsian ornithischians have been described from Mexico. Apparently, this group experienced a regional diversification in this area. To date Mexican Ceratopsia are represented by three species, one of which is a centrosaurine and two are chasmosaurines. Here we provide a critical review on Mexican ceratopsians and formally name a new centrosaurine ceratopsid species from the Aguja Formation as *Yehuecauhceratops mudei*. We also discuss possible causes for the rapid endemic diversification of Mexican ceratopsians.

Key words: Ceratopsia, centrosaurine, chasmosaurine, diversity, Mexico

INTRODUCTION

Ceratopsid Ornithischia are among the most diverse groups of Late Cretaceous dinosaurs. Their fossil remains have been described from North America and Asia, thus suggesting a predominantly Laurasian distribution. In western North America, remains of Ceratopsia are found in Cretaceous strata of the eastern side of the Rocky Mountains, reaching from Alberta (Canada) in the north to the Mexican states of Coahuila, Sonora and Chihuahua in the south. Recent discoveries in Coahuila suggest that a rich and diverse fauna of ceratopsians existed in Mexico during the Late Cretaceous. However, only a few Mexican ceratopsians have been formally reported or described (Loewen *et al.*, 2010; Porras-Múzquiz & Lehman, 2011; Rivera-Sylva *et al.*, 2016). Most Ceratopsia from Mexico are known from fragments with little or no significant taxonomic information. Therefore, the bulk of these finds remains undescribed and most represent only a record of occurrence with the exception of *Coahuilaceratops magnacuerna* (Loewen *et al.*, 2010), the only named Mexican ceratopsian to date.

The first ceratopsians in Mexico were collected in December 1958 in the Parras Basin, close to the town of Hipólito, Coahuila, by a team from the University of Texas led by Clarence Durham and Grover Murray. The specimens were later identified by John A. Wilson from the University of Texas at Austin, and Edwin H. Colbert from the American

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