

**A REVISION OF THE UPPER TRIASSIC ORNITHISCHIAN DINOSAUR
REVUELTOSAURUS, WITH A DESCRIPTION OF A NEW SPECIES, *R. HUNTI***

INTRODUCTION

As part of the comparative studies made for the new ornithischian taxa described here, I re-examined the type and referred material of *Revueltosaurus* identified by Hunt (1989). I also examined specimens identified by Padian (1990), Sereno (1991b), Hunt and Lucas (1994), Long and Murry (1995) and Heckert and Lucas (1997c), as well as undescribed fossils at UCMF and teeth found at “Dinosaur hill” in PEFO that are now repositied there. In the course of this study I identified a second species of *Revueltosaurus*, which I describe here. Because of the taxonomic confusion surrounding *Revueltosaurus* and its validity, establishing the new species requires a revision of the genus.

To date, teeth of *Revueltosaurus* have been identified from several sites in both New Mexico and Arizona (Fig. 12.1). The type locality of *Revueltosaurus callenderi* is in the Bull Canyon Formation (NMMNH locality 1), and other localities in the area yield fossils of *R. callenderi* (Hunt, 1988, 1989, 2001). Padian (1990) first identified *R. callenderi* teeth from strata of the Painted Desert Member of the Petrified Forest Formation in PEFO. Long and Murry (1995) also identified teeth of “*R. callenderi*” from the Blue Hills near St. Johns, Arizona. Hunt and Lucas (1995b) pointed out that this identification was incorrect, and indicated the presence of similar teeth in the Los Esteros Member of the Santa Rosa Formation in central New Mexico. Heckert and Lucas (1997c) pointed out additional differences between the teeth identified as *R. callenderi* by Long and Murry and *R. callenderi*. Heckert et al. (2001b) briefly considered the Los Esteros specimens. Here I consider the Los Esteros teeth a distinct species of *Revueltosaurus*, and refer the Blue Hills specimens to that species. Teeth “possibly referable” to *Revueltosaurus callenderi* by Kaye and Padian (1994, p. 188-189) are not assignable to *Revueltosaurus*, and instead include teeth of *Tecovasaurus* (Kaye and Padian, 1994, fig. 9.108; Hunt and Lucas, 1994), *Crosbysaurus* (Kaye and Padian, 1994, fig. 9.104-105), indeterminate ornithischians, and non-dinosaurian archosaurs (see previous chapter for more detailed discussion).

All fossils of *Revueltosaurus* are isolated teeth, with the exception of an undescribed skull fragment collected by Hunt (pers. comm.). These isolated teeth, however, are typically the only ornithischian teeth from the localities in question, and almost certainly represent one taxon, and possibly one individual, at each locality. Hunt (1989) tentatively identified recurved teeth of *Revueltosaurus* as premaxillary and conical teeth as maxillary