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Vertebrate paleoecology of the late Campanian (Cretaceous) Fruitland Formation, San Juan Basin, New Mexico (USA)

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Sediments of the Fruitland Formation in northwestern New Mexico represent a delta plain that prograded northeastward over the retrating strandline of the North American epeiric seaway during the late Campanian. Fruitland fossil vertebrates are fishes, amphibians, lizards, a snake, turtles, crocodilians, dinosaurs (mostly hadrosaurs and ceratopsians) and mammals. Autochthonous fossils in the Fruitland Formation represent organisms of the trophically-complex *Parasaurolophus* community. Differences in diversity, physical stress and life-history strategies within the *Parasaurolophus* community fit well the stability-time hypothesis. Thus, dinosaurs experienced relatively low physical stress whereas fishes, amphibians, small reptiles and mammals experienced greater physical stress. Because of this, dinosaurs were less likely to recover from an environmental catastrophe than were smaller contemporaneous vertebrates. The terminal Cretaceous extinctions selectively eliminated animals that lived in less physlcally-stressed situations, indicating that the extinctions resulted from an environmental catastrophe.

Key words: Fruitland Formation, New Mexico, delta plain, stability-time hypothesis, Cretaceous extinctions.