Revisiting the Paleocene Dinosaurs of the San Juan Basin in View of Naysaying from the Vertebrate-Paleontologist Community

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In his News in Depth comment “Does fossil site record dino-killing impact” (5 April, 2019, p. 10) Colin Barras writes “Geologists have theorized that the impact, near what is now the town of Chicxulub on Mexico’s Yucatan Peninsula, played a role in the mass extinction at the end of the Cretaceous period, when all the dinosaurs (except birds) and much other life on Earth vanished.” This is just one example, both in the popular press and in scientific-journal articles, where overwhelming Paleocene-dinosaur-data presented in my Palaeontologia Electronica (PE) paper (Fassett, 2009) was ignored or disputed. My 146-page paper included a massive and detailed appendix on the palynology of the K-Pg boundary rocks in the San Juan Basin. These data showed conclusively that the dinosaur-bearing Ojo Alamo Sandstone was Paleocene in age throughout its extent in the San Juan Basin demonstrating that some dinosaurs in the San Juan Basin area survived the K-Pg asteroid-impact event. Most naysayers – chiefly vertebrate paleontologists – did not (and still do not) accept the findings of my PE paper primarily based on: 1) Incorrect claims that the dinosaur-bearing Ojo Alamo Sandstone consists of two members: a lower, dinosaur-bearing, Cretaceous member and an upper member of Paleocene age, and 2) Overwhelming palynologic data proving that the dinosaur-bearing Ojo Alamo Sandstone is Paleocene in its entirety throughout the San Juan Basin. As for number 1, not one of the naysayers has ever provided justification or any evidence, via geologic mapping or correlation of stratigraphic columns, to support their two-part Ojo Alamo thesis. As for claim number 2, there is not a single legitimate instance where any of the palynologic data presented in my PE paper has been falsified. All index palynomorphs identified from Ojo Alamo Sandstone samples listed in the PE paper from numerous collecting localities across the San Juan Basin are Paleocene in age. Not one single sample from the Ojo Alamo Sandstone has ever been found to be Cretaceous in age (other than a few, rare, reworked palynomorphs). In addition, false claims that there are Maastrichtian strata in the Cretaceous rocks underlying the Ojo Alamo was disproven in my PE paper. In that paper, palynologic data conclusively proved that the entire Maastrichtian and probably the uppermost part of the underlying Campanian are missing throughout the San Juan Basin. Those who have maintained otherwise have exercised poor scholarship in not referencing my PE paper. In short, no evidence has ever been provided by naysayers that has falsified any of the hard data in my PE paper.

References:


Keywords:

San Juan Basin, Paleocene dinosaurs, Ojo Alamo Sandstone, naysayers