Polar dinosaurs: evolutionary conundrums and biblical solutions

Michael J. Oard

Polar dinosaurs refer to dinosaur fossils found within the polar latitudes. Considering plate tectonics, paleolatitudes of the Northern Hemisphere were farther northward when Cretaceous System strata were deposited than they are today. In the Southern Hemisphere, polar latitudes would also include southeast Australia, New Zealand, and the Chatham Islands where dinosaur fossils have been found.[1]

The evolutionary conundrum of cold winters but warm paleofauna

The existence of polar dinosaurs has raised at least four conundrums for the evolutionary paradigm. For instance, climate models indicate the polar latitudes would have been very cold during the Cretaceous winter, while the paleoflora and paleofauna indicate temperatures had to have been above freezing all year around:

> "Paleobotanical evidence clearly indicates that during much of the Cretaceous northern polar temperatures on lands surrounding the Arctic Ocean were above freezing during the polar night. … Evidence for very warm Arctic Ocean waters (15 to 20°C) has been presented by Jenkyns *et al.* (2004). Proxy data indicating ocean temperatures of 30°C at 60°S latitude (Bice *et al.*, 2003) supports the idea of warm poles during much of the Cretaceous."[2]

Hay believes that lower topography, higher ocean levels, and greenhouse gases, including carbon dioxide and methane, would have maintained above-freezing winter temperatures.[3] He also erroneously thinks that, considering the average lapse rate[4] of the atmosphere of 6°C/km, the lower topography would have resulted in warm polar night temperatures. Even if this lapse rate could be applied, it would not have warmed the Arctic much because the air was so cold to begin with. As far as lower topography is concerned, the continental areas of North America and Eurasia are relatively low anyway. Besides, the polar night causes a temperature inversion to which the average atmospheric lapse rate would not apply. Despite all the possible variables that could be applied to cause polar warmth, the cold winter temperatures depend especially on one variable: the angle of the sun, and the evolutionary model cannot do anything about that for the Cretaceous.

Other evolutionary conundrums

Cold winter temperatures are one of several other conundrums. For instance, why would dinosaurs have even lived there, considering that most scientists believe dinosaurs to have been warm-climate animals? Polar dinosaurs have unleashed much speculation on Arctic coping mechanisms. With long periods of darkness and photosynthesis cut off—and the resulting loss of vegetation—what would they have eaten? If dinosaurs were adapted to the cold, as the existence of polar dinosaurs suggests, how and why would they disappear from the whole earth at the end of the Cretaceous due to one meteorite impact? Partly for this reason, some scientists are moving away from the impact mechanism for dinosaur extinction and suggesting that dinosaurs were in wide decline well before the supposed very late Cretaceous impact.[5,6] These are very difficult problems for evolutionary geologists to explain.[7,8]

Alaskan polar dinosaurs

Many dinosaur fossils and tracks have been found in Alaska since 1980, and they are similar to those of dinosaurs found in the middle latitudes.[9–11] They are especially abundant in the Prince Creek Formation, along the Colville River of the North Slope of Alaska, USA, at a paleolatitude claimed to be 85°N (69–70°N today). Countless dinosaur and bird tracks and a few pterosaur tracks are now known to exist in Denali National Park and

Figure 1. Eroded 'clast' of a hadrosaur track, Denali National Park, Alaska, USA

surroundings.[12,13] They are found on multiple stratigraphic levels with evidence of erosion in some layers. There are even tracks that were more firmly lithified than their surrounding sediments and were subsequently eroded from their original positions to land elsewhere as 'clasts' in talus, which is extremely rare (figure 1).

Polar dinosaurs did not migrate

Many scientists have suggested dinosaur migration from the mid to the high latitudes each year as a solution to the conundrums. However, many evolutionary scientists think that this is unlikely.[8,9] Still, no very small or baby dinosaurs had been found to support the idea that dinosaurs lived in the polar latitudes all year around.

But the idea of migration has finally been put to rest with the discovery of perinatal and very young dinosaurs from the Prince Creek Formation, Alaska.[14] Evidence for eggshells and baby dinosaurs had not been found in the Southern Hemisphere paleopolar latitudes until recently.[15] Two incomplete ornithopod perinatal, or possibly embryonic, femora have been found in New South Wales, Australia, complimenting 'yearling' specimens from Victoria, Australia. These three discoveries support high-latitude breeding and eliminate migration for polar dinosaurs.

Thus, "Dinosaurs were remarkably climate-tolerant, thriving from equatorial to polar latitudes."[16] Furthermore, a Chicxulub impact on the Yucatan Peninsula is an unlikely cause of dinosaur extinction, as many scientists have believed.[17]

Polar dinosaurs explained by the Flood

Because of the earth's tilt, the Northern Hemisphere has never had enough light, warmth, or food to support dinosaurs, yet we find their fossils and fossil footprints in places like Denali, Alaska. The Creation/Flood model has the most plausible explanation for why we find 'polar' dinosaurs. The most likely explanation is the dinosaurs and the paleoflora were transported northward on Flood currents during the Inundatory Stage of the Flood.[18,19] Dinosaurs capable of swimming could have floated from low to high latitudes on strong currents that are laminar in the upper portion of the floodwater. They may have also hitched rides on log mats. Even in today's relatively more steady conditions, a strong water current is capable of transporting a floating object from low to mid latitudes in as little as two days. An interesting point in support of this is that most of the dinosaur tracks and bones are from hadrosaurs and three-toed theropods, the dinosaurs most likely able to float and swim well since they had large lower bodies and no heavy horns to sink them.

Strong floodwater currents would also explain the abundant warm-climate vegetation and other animal fossils found in Alaska.[20,21] In support of this idea a subtropical to tropical cycad leaf was recently found in southwest Alaska.[10] Evidence for these northward currents is further shown by the long-distance trail of hard rocks that spread north from the Alaska Range.[22] In addition, very thick sediments, well over 10 km thick, are found on the Arctic margin, indicating immense northward erosion and transport of sediment from Alaska,[23] pointing to northward currents at times during the Flood.

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