# Argentina egg site supports BEDS model

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Auca Mahuevo in Neuquén Province in west-central Argentina is a well-known site for dinosaur eggs.[1] Uniformitarian scientists have published a significant body of information on the local sedimentology and stratigraphy. Their analysis of the remarkable embryonic remains, eggshell microstructure, and 'nests'[2–4] concluded: "The discoveries our crew made raised dozens of scientific mysteries."[5]

The Auca Mahuevo site is slightly larger than 1 km$^2$. The 86 m of strata that are exposed are considered Upper Cretaceous fluvial deposits and consist of sandstone, siltstone, and mudstone with weak 'paleosol' development. The site contains thousands of eggs, some with fossilized embryos,[6] embryonic bone and skin, and many dinosaur tracks. The eggs are found scattered, sometimes forming carpets of eggs, and some are found in clutches or 'nests'. Some clutches are as close together as 1–3 m.

There are four levels of eggs within the finer-grained siltstone and mudstone layers within a 40 m vertical interval (figure 1). The scientists claim to have identified six nest structures.[7] The eggs were laid by a titanosaur, a large sauropod.[8] A few of its remains are also found in the formation.

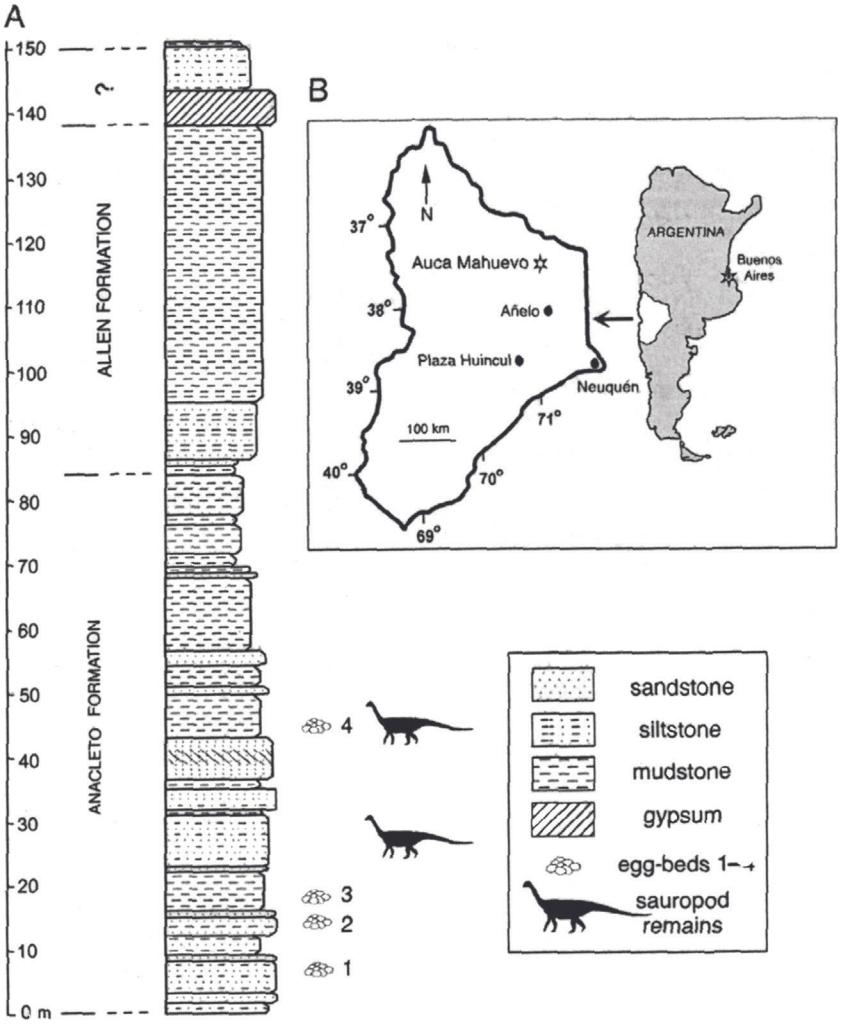


**Figure 1.** A composite stratigraphic section of the Auca Mahuevo locality (from Jackson *et al.*[1])

## Rapid fossilization of egg contents

One of the mysteries for uniformitarian science includes explaining how the eggs and embryos were fossilized quickly enough to be preserved, especially if the site is part of a 'floodplain environment'. In their own words:

> "Also, exactly how did the eggs and embryos become fossilized? We are sure that floods buried the eggs and nests in mud, but what processes of mineralization operated quickly enough that the poorly formed embryonic bones and skin became fossilized before they could decay?"[9]

It is obvious that flooding had to have buried the eggs and embryos rapidly. Mineralization of the soft embryo tissues indicates that burial had to have been virtually instantaneous.[10]

## The 'nest structures' are possibly dinosaur tracks

Scientists admit that structured nests, typified by a depression with a raised rim, are absent in the fine-grained sediments:

> "With the exception of six nesting traces preserved in sandstone (channel and crevasse splay deposits) in egg bed 4, thousands of eggs at Auca Mahuevo occur in mudstone and show no discernible evidence of nest structure."[11]

The lack of nests in the finer-grained sedimentary rocks is blamed on movement from swelling clay.[11]

Uniformitarian scientists concluded that many of the eggs must have been moved:

> "Movement of either individual eggs or subsets of eggs along slickensided surfaces (1) modified the number

> and relative position of eggs within individual clutches, (2) combined eggs of one or more clutches produced by different females, and (3) combined eggs from one or more nesting horizons, producing a time-averaged fossil assemblage."[12]

At face value there seems to have been an excessive amount of movement, but the movement is attributed to the faulting and heaving of swelling clay during the claimed paleosol development. The Auca Mahuevo paleosols contain expansive clays and can be classified as vertisols, but clays are not necessarily proof of ancient soils. The movement of the strata produced ridges and troughs a little more than a metre long and up to half a metre high. The troughs contained a few eggs but they are not considered nests.[11] There were also eggs on the ridges, which would support the author's interpretation of expanding of swelling clay.

Around the world millions of dinosaur eggs have been found on continents.[13] It is very rare to find nest structures associated with dinosaur eggs. There are so few nests that they can almost be counted on one set of hands.[7,14] This mystery of the many eggs but few nests is easily solved if the dinosaurs did not have time to make nests. Under normal circumstances, the porosity of the eggs (see below) would make nest building imperative.

The porous structure of the eggs requires the parent to cover them with vegetation or the embryo would dry out and die but, strangely, the eggs were found mainly in the open.[15] It is possible that at one time they were overlaid with vegetation, but evidence for vegetation and pollen is rare.[16] Scientists find essentially the same situation all over the earth.[14] The data can be interpreted to indicate that the dinosaurs did not have time to dig a hole or find vegetation to cover their eggs before some kind of disaster arrived. All of the sites indicate the dinosaurs faced a very abnormal situation.

Interestingly, a new development suggests the six 'nests' in the sandstone are probably dinosaur tracks:

> "One of the authors (GGT) examined the rimmed nests made in the Auco Mahuevo paleoriver silty sediments (Garrido, 2010b) and recognized them as dinosaur manus [hand] and pes [foot] prints with associated lateral sediment displacements …"[17]

Eliminating these six structures would shrink the number of nest structures found around the world by more than half.

## The BEDS hypothesis can explain the data

The discoveries at the Argentine fossil egg site supports the Briefly Exposed Diluvial Sediments (BEDS) hypothesis proposed by Oard.[14] 'Episodic large flood events' can produce BEDS in which the level of the floodwater oscillated up and down with different amplitudes and lengths of time of exposure. Global floodwaters would have oscillated up and down due to tides, tsunamis, nearby as well as distant tectonics, and other mechanisms. There would be different lengths of time that the sediments would be exposed. During a temporary drop in the level of the floodwater, dinosaurs from higher nearby ground or floating in the floodwater could climb onto the BEDS. The next rise would cover the eggs, tracks, and dead dinosaurs. Floodwater oscillations would regularly send a layer of sediment over previous BEDS. The stratigraphic section at Auca Mahuevo shows alternating thin sandstones, usually less than 1 m thick, with thicker layers of mud (figure 1). The lack of nest structures provides evidence that the eggs were laid in a hurry.

Movement of eggs could be due to the movement of swelling clay, brief transport in light currents, or sedimentation during egg laying.[18] The rapid deposition of sediment and oscillation of water levels during the Flood can explain the rapid fossilization after burial. Today, major floods are known to deposit no more than a few metres of sediment, whereas the fine-grained sediments found at the site are about 5–10 m thick and homogeneous. A floodplain environment today typically does not produce any of these effects. In a real floodplain, the paleontologists should find local changes in the type of sediment as well as cut and fill structures.

The fact that there are four levels of eggs with the remains of titanosaurs on two levels (figure 1) adds support to the oscillatory Flood model. The same type of dinosaur laid the eggs on all four BEDS. In the uniformitarian model, the sequence should be an accumulation of sediment over hundreds of thousands of years. How probable is it for the same type of dinosaur to frequent the same spot hundreds of thousands of years later?

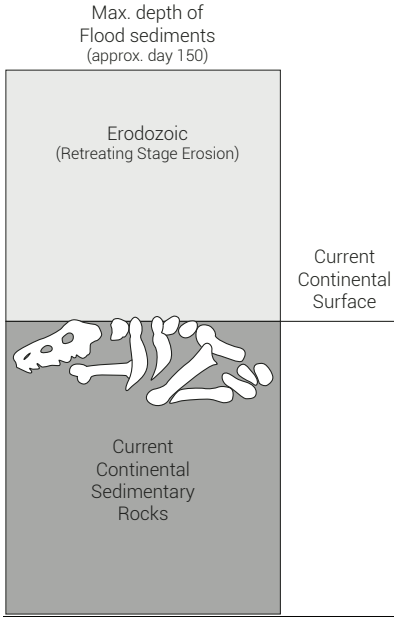


**Figure 2.** A block diagram showing the current continental surface and the volume of sedimentary rocks eroded after Day 150. Much sediment and sedimentary rock has been eroded to expose the level where dinosaur fossils and traces are found today. (Drawn by Melanie Richard).

In the Creation model the dinosaur eggs and tracks were most likely made between Day 40 and about Day 120 of the Flood. If they were laid during the first 40 days of heavy rain, the rain would have washed away the tracks and eggs. Conversely they had to have been laid before the peak of the Flood, which occurred on or near Day 150 (figure 2),[19] when the Bible tells us that all air-breathing flesh had perished. Between Day 40 and 120 the level of the Flood water would have oscillated during an overall rise, the time of the biblical 'prevailing'. The oscillations could explain the alternating sandstone/mudstone sedimentation.

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