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### NOTE ON THE OCCURRENCE OF DINOSAURIAN FOSSIL EGGS FROM INFRATRAPPEAN LIMESTONE IN KHEDA DISTRICT, GUJARAT

D. M. MOHABEY

Geological Survey of India, Ashram Road,  
Ahmedabad 380 014, India.

In the course of mapping during the field season 1981-82 the author collected six spherical fossil eggs from the upper horizons of the Infratrappean Limestone (Lametas) in the area north of Balasinor in Kheda district, Gujarat (figure 1).



**Figure 1.** Dinosaurian fossil eggs showing outer calcitic shell

The diameter of these eggs is uniformly about 12 cm. These fossil eggs are represented by limestone with very little calcareous clay and are enveloped by thin calcitic shell cover about 1-2 mm thick. The thickness of the shell is very uniform in all the eggs. The shell is damaged and fragmented before fossilisation as evident from the nature of the shell fragments.

The shell is chocolate brown in colour without glaze. The damage inflicted on the shells due to subsequent recrystallisation and secondary silicification has obliterated most of the morphological characters. The external surface differs from the internal (mamillary) surface and is characterised by equally spaced fine isolated tubercles. These tubercles (nodes) project out as semi spherical nodes and at times the cast of these nodes are present. The internal surface shows granu-

lated texture and at times spongy spicules are also noticed.

Under the scanning electron microscope (SEM) the external surface differs from the internal (mamillary) semispherical nodes (tubercles). They are equally spaced, isolated and are rarely of coalescing type. These are surrounded by spongy mass at times with depressions. The broken nodes show horizontal growth layers of biocalcite. The pores mostly circular to semicircular in outline and rarely polygonal, are very much present in the so called horizontal growth layers.

The internal (mamillary) surface is characterised by fine mamillary knobs and at places resorption craters too are visible within these mamillary knobs. The knobs are surrounded by some curvilinear disconnected grains.

The vertical section displays basal mamillary zone and overlying zone with prismatic layering. Some spongy mass is also present in between. Very narrow vertical to sub-vertical, at times very irregular canaliculae, are also present.

The occurrence of Upper Cretaceous egg shells have been reported from China, Mongolia, Brazil, Peru, Montana, Utah and European Mediterranean. In India the dinosaurian egg shell fragments have been reported by Prof. Ashok Sahni from Lameta beds of Jabalpur. The discovery of complete egg shell fragments by the author in the present area has opened new vistas for studying the nesting habits of the extinct dinosaurs and palaeopathological condition of these eggs. The mode of occurrence of these fossil eggs and their state of preservation suggests their autochthonous nature of occurrence. The dinosaur must have dug shallow holes and laid the eggs, a typical behaviour found mostly in reptiles. The state of preservation of these fossil eggs suggests that they had not been hatched. Further detailed studies are necessary to understand the actual position. The discovery of dinosaurian fossil bones in the close proximity has made it more interesting. The detailed study (under progress) would throw light on the nesting habits, habitation and the probable causes for the extinction of once dominating dinosaurs.

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