

## The eggshell of the Eocene bird *Lithornis*

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Although the fossil bird *Lithornis* has been known for more than a century, only in the 1980s were its affinities within the palaeognathous birds (Aves, Palaeognathae) realized and demonstrated by use of osteological characters. Other lines of evidence could, however, be used to test hypotheses of its affinities. To add data to this ongoing investigation, we present the first detailed description of the microscopic morphology of the eggshell of this fossil bird. Our description of eggshells of two species of *Lithornis* is consistent with the placement of this fossil bird within Palaeognathae. Characters that corroborate this position include the presence of three aprismatic structural layers visible by use of scanning electron microscopy (SEM) in the eggshell microstructure. The placement of *Lithornis* phylogenetically close to the extant flighted South American group Tinamidae is supported on the basis of characters present in the structural composition of the eggshell layers of both these taxa.

**Key words:** Aves, Palaeognathae, *Lithornis*, eggshell ultrastructure, Eocene, London Clay.

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