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Summary

My research is focused on the earliest mammals from the Late Triassic and Early Jurassic; a time when critical changes were occurring to the jaw joint and dentition.

My main focus involves the basal mammals *Kuehneotherium* and *Morganucodon* from the fissure deposits of South Wales, and I am particularly interested in how the selective pressures of feeding influenced mandibular evolution in these mammals and what biomechanics can tell us about why the jaw may have evolved in a particular manner.

My other interest concerns the faunal diversity within the fissures and whether this is related to the palaeoecology or to taphonomic processes.

Keywords

- mammals
- mandibular evolution
- biomechanics
- faunal diversity
- fissures
- palaeoecology
- taphonomic

Memberships

Organisations

[School of Earth Sciences](#)

Earth Sciences staff

- [Honorary staff and academic visitors](#)

Recent publications

- Lautenschlager, S, Gill, PG, Luo, ZX, Fagan, MJ & Rayfield, EJ, 2018, '[The role of miniaturization in the evolution of the mammalian jaw and middle ear](#)'. *Nature*, vol 561., pp. 533-537
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