

High-precision age for the Jurassic Haifanggou Formation and its implications for the coevolution of plants and atmospheric CO₂

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Abstract:

Abundant Jurassic terrestrial plant fossils were discovered from the Haifanggou Formation (and its correlative strata) in NE China. The recent discovery of *Schmeissneria sinensis* from this formation provided evidence that the origin of angiosperms could be much earlier than previously believed and impacted several hypotheses regarding the coevolution of plants and atmospheric CO₂. A high-precision framework for the Haifanggou Formation is critical to establishing its role in plant evolution, particularly of angiosperms, and will improve our knowledge of the influential process between atmospheric CO₂ levels and the plant evolution. As a participant of EARTHTIME, one of my central goals is to increase precision and accuracy of radioisotopic dating techniques. Highly precise and accurate chronologies are essential for a full understanding of biological evolution, extinctions, catastrophes, climate changes, and generally understanding Earth History.