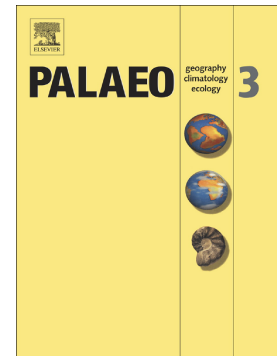


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New insights on the stepwise collapse of the Carboniferous Coal Forests: Evidence from cyclothems and coniferopsid tree-stumps near the Desmoinesian–Missourian boundary in Peoria County, Illinois, USA

Howard J. Falcon-Lang, W. John Nelson, Philip H. Heckel, William A. DiMichele, Scott D. Elrick



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**New insights on the stepwise collapse of the Carboniferous Coal Forests:
evidence from cyclothem and coniferopsid tree-stumps near the Desmoinesian–
Missourian boundary in Peoria County, Illinois, USA**

Howard J. Falcon-Lang^{1*}, W. John Nelson², Philip H. Heckel³, William A.
DiMichele⁴ and Scott D. Elrick²

¹*Department of Earth Sciences, Royal Holloway, University of London, Egham,
Surrey TW20 0EX, UK*

²*Illinois State Geological Survey, Coal Section, 615 E. Peabody Drive, Champaign,
Illinois 61820, USA*

³*Department of Earth and Environmental Sciences, University of Iowa, Iowa City,
Iowa 52242, USA*

⁴*Department of Paleobiology, NMNH Smithsonian Institution, Washington, DC 20560
USA*

*Corresponding author. E-mail address: hfalconlang@gmail.com

Abstract. The first phase in the stepwise collapse of the Carboniferous Coal Forests occurred near the Desmoinesian–Missourian boundary (early Kasimovian, ~ 307 Ma), and involved extirpation of *Lycospora*-producing lepidodendrids, and some other lycopsids, across most of tropical Euramerica. In this paper, we follow-up on historical reports of silicified tree-stumps in Peoria County, northwest-central Illinois, USA, which have significant implications for understanding Carboniferous Coal Forest collapse. Rooted near the paleoweathered top of the Lonsdale Limestone, and widespread across an area of ~ 250 km², the silicified tree-stumps belong to *Amyelon*-type coniferopsids. A key feature of the fossil wood is the occurrence of abundant

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