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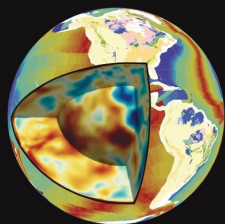
# Supercontinent Cycles Through Earth History

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Edited by Z.X. Li, D.A.D. Evans and J.B. Murphy



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The supercontinent-cycle hypothesis attributes planetary-scale episodic tectonic events to an intrinsic self-organizing mode of mantle convection, governed by the buoyancy of continental lithosphere that resists subduction during the closure of old ocean basins, and the consequent reorganization of mantle convection cells leading to the opening of new ocean basins. Characteristic timescales of the cycle are typically 500 to 700 million years. Proposed spatial patterns of cyclicity range from hemispheric (introversion) to antipodal (extroversion), to precisely between those end members (orthoversion). Advances in our understanding can arise from theoretical or numerical modelling, primary data acquisition relevant to continental reconstructions, and spatiotemporal correlations between plate kinematics, geodynamic events and palaeoenvironmental history. The palaeogeographic record of supercontinental tectonics on Earth is still under development. The contributions in this Special Publication provide snapshots in time of these investigations and indicate that Earth's palaeogeographic record incorporates elements of all three end-member spatial patterns.

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**KILIAN, T. M., BLEEKER, W., CHAMBERLAIN, K., EVANS, D. A. D. & COUSENS, B. P.** Palaeomagnetism, geochronology and geochemistry of the Palaeoproterozoic Rabbit Creek and Powder River dyke swarms: implications for Wyoming in supercraton Superia

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**KEPPIE, F.** How subduction broke up Pangaia with implications for the supercontinent cycle

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