have to hand, whilst the attempt to predict the future state in each area is certainly likely to stimulate discussion.

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Antarctica and Supercontinent Evolution

Edited by S.L. Harley, I.C.W. Fitzsimons & Y. Zhou
Geological Society of London Special Publication 383, 2013.
ISBN 978-1-86239-367-7 (Hardcover), 237 pp. £229.

The volume comprises a 35-page synthetic chapter by the editors and a collection of analytical papers on India-Australia-Antarctica connections, the West Antarctic margin, and detrital zircons from the Transantarctic Mountains.

The Mesoproterozoic Rayner Province in the Lambert Glacier area, by E.V. Mikhalsky *et al*., shows that this province has common features with the Australian Albany-Fraser Orogen and evolved during closure of the intervening ocean to produce a metamorphic belt suturing Australia, Antarctica, and India at 1.0 Ga.

Pb isotopic domains from the Indian Ocean sector of Antarctica, by M.J. Flowerdew *et al*., finds the feldspar lead-isotope compositions of coastal complexes are identical to those of the Indian Dharwar Craton, and the Rayner Complex and Prydz Belt correlate with the Eastern Ghats Belt.

Boron- and phosphate-rich rocks in the Larsemann Hills, Prydz Bay, by E.S. Grew *et al*., considers granulite-facies paragneisses enriched in boron and phosphorus in the Larsemann Hills, and similar rocks in the Windmill Islands and at Broken Hill, Australia.

The c. *1000–900 Ma and* c. *550–500 Ma tectonothermal events in the Prince Charles Mountains–Prydz Bay region,* by Xiaochun Liu *et al*., considers the 1000–900 Ma Rayner orogeny that involved magmatic accretion and collision with India, and the 550–500 Ma Prydz orogeny on the south-east margin of the Indo-Antarctic block, suggesting that the major suture is located southeastwards of the Prydz Belt.

Contrasting metamorphic records and their implications for tectonic process in the central Sør Rondane Mountains, eastern Dronning Maud Land, by T. Adachi *et al.*, provides evidence that constrain models of the formation of Gondwanaland.

Possible armalcolite pseudomorph-bearing garnet–sillimanite gneiss from Skallevikshalsen, Lützow-Holm Complex, by T. Kawasaki *et al.*, finds a P–T path that matches that for similar rocks in Sri Lanka.

Anatarctic reworking and differentiation of continental crust along the active margin of Gondwana, by C. Yakymchuk *et al.*, deals with the Hf–O isotope composition of zircons to highlight prominent arc-parallel and arc-normal variations in the mechanisms and timing of crustal reworking versus crustal growth along the active margin of Gondwana.

Reconstruction of the early Mesozoic plate margin of Gondwana by U–Pb ages of detrital zircons from northern Victoria Land, by M. Elsner *et al.*, finds that age-clusters at 190–250 Ma reflect coeval magmatic activity along the Gondwana margin, and those at 500–700 Ma and 800–1200 Ma reflect crustal sources beneath the polar ice sheet.

The editors conclude that "geophysical data reveal prominent geological boundaries under the ice, but there are insufficient data to trace these features to exposed structures of known age. Until we can resolve the subglacial geometry and tectonic setting of the *c.* 0.5 and 1.0 Ga metamorphism, there will be no consensus on the configuration of Rodinia, or the size and shape of the continents that existed immediately before and after this supercontinent."

JOHN VEEVERS