

Supercontinent Dynamics: India and Gondwana, 8th International Symposium on Gondwana to Asia – *Ian Fitzsimons (Curtin University, Australia; Email: I.Fitzsimons@curtin.edu.au) and Alan Collins (University of Adelaide, Australia; Email: alan.collins@adelaide.edu.au)*

The geological and geodynamic history of the Gondwana supercontinent has been the focus of a series of annual research symposia organised by the International Association for Gondwana Research since 2004. The eighth symposium in this series was held at the

National Geophysical Research Institute (Council of Scientific and Industrial Research) in Hyderabad, on 26-28 August 2011. This was the first time that the symposium had been held in India, an event made more auspicious by it forming part of the Golden Jubilee Year celebrations of the host organisation. NGRI scientists have now been documenting the role of India in the origin and evolution of Gondwana for fifty years, and this symposium allowed the Institute to showcase much of its recent work to an international audience.

The symposium attracted 113 registered delegates from six nations, and was sponsored by the Indian Ministry of Earth Sciences, the Department of Science and Technology, the Council of Scientific and Industrial Research and the NGRI. The

meeting opened on the evening of 26 August, with an icebreaker party at the NGRI Guesthouse, which is also where many of the delegates were accommodated for the duration of the meeting, only a short walk from the conference venue through the NGRI campus grounds. The two-day technical program commenced the following morning in the SB Hall, after an official inauguration ceremony in the presence of the Chief Guest Prof. Harsh Gupta. The symposium featured 7 keynote speakers and 37 oral presentations, in addition to 33 posters that were displayed each lunch-time in the recently completed Golden Jubilee Food Court, providing an excellent opportunity to combine informal discussions with some tasty Hyderabadi cuisine. Topics discussed in the technical sessions covered the full spectrum of Gondwana history and were divided into three overarching themes: the early history of cratons – structure, composition and dynamics; building and breaking of supercontinents with focus on Gondwana; and orogenic belts, sedimentary basins and resources. Although there was a particular

emphasis on Indian aspects of this evolution there were also papers presented on Antarctica, central Asia, China, Japan, Korea, and Sri Lanka.

A number of papers were concerned with the Archean crystalline rocks that provide evidence for Gondwana's ancient beginnings, most notably the Dharwar Craton, which remains India's most studied and best understood Archean terrane, as well forming the basement to the conference venue! Other papers were concerned with the Proterozoic basins that rest on top of the Archean cratons, again with a focus on local examples such as the Cuddapah Basin, and on Proterozoic orogenic domains like the Aravalli-Dehli belt, the Eastern Ghats belt and the Southern Granulite Terrain, which record multiple cycles of Proterozoic assembly and dispersal culminating in amalgamation of Gondwana proper at the dawn of the Palaeozoic.

There were also papers on Gondwana breakup including studies of India's onshore and offshore record of Late Palaeozoic to Mesozoic rifting and volcanism, and on the subsequent collision of Gondwana



fragments with Eurasia to form the great Himalayan mountain chain. These studies adopted a wide range of different approaches, from petrology, geochemistry and geochronology, to sedimentology and structural geology, heat flow, seismic studies and potential field geophysics. Recurrent conference themes included whether modern tectonic processes can be applied to Archaean cratons, the difficulty of identifying oceanic sutures in Proterozoic orogens, the lessons that Phanerozoic geology can have for the interpretation of Precambrian rocks, the value of geophysical datasets in adding a third dimension to geologic observations, and need for geologists and geophysicists to communicate and identify geological questions that might be addressed through targeted geophysical investigations.

The General Assembly of the International Association of Gondwana Research, hosted by Prof. M. Santosh, Secretary General of the IAGR, was held on the evening of 27 August and combined with the symposium banquet dinner. The IAGR is a non-profit organisation that

promotes, conducts, and co-ordinates global research on Supercontinents, with particular emphasis on Gondwana, and the highlight of the evening was the presentation of the award for best 2010 paper in Gondwana Research, the Association's international journal published by Elsevier. The award of a gold-plated medal and citation from IAGR was made to Prof. Yukio Isozaki and co-authors for their paper on "New insight into a subduction related orogen: a reappraisal of the geotectonic framework and evolution of the Japanese Islands". Prof. Isozaki also gave a keynote presentation on this topic during the technical sessions.

Immediately following the symposium, about 30 delegates joined a two-day field excursion to the Eastern Dharwar Craton. The trip comprised a 150 km transect across the craton from Hyderabad to Nagarjuna-sagar, visiting representative outcrops of the Archaean granite-greenstone basement and its Mesoproterozoic sedimentary cover sequence in the Cuddapah Basin. In addition to the geological stops this trip also provided an opportunity to visit Asia's largest masonry dam at Nagarjunasagar, and a

number of archeological sites that make this one of India's richest regions for ancient Buddhist culture.

Perhaps the most significant feature of this symposium is the way that it brought together geoscientists with a variety of different skills and interests. Such a multidisciplinary approach is rare in these times of increased specialisation, and the local organising committee, led by chief convener Y. J. Bhaskar Rao, Acting Director of the National Geophysical Research Institute, and his co-conveners Dr A.P. Singh and Dr E.V.S.S.K. Babu, is to be congratulated on assembling such an interesting and varied scientific program. The meeting concluded with the best student poster award to D.P. Mohanty, who is undertaking doctoral studies at the NGRI under the guidance of Dr T.R.K. Chetty. This award illustrates the role that the IAGR plays in supporting and encouraging the next generation of geoscientists, and the quality of local students presenting at this meeting suggests that next fifty years of the NGRI will be as productive as the first.