

GEOLOGICAL SURVEY OF SOUTHERN TO EASTERN  
PENINSULAR INDIA 1992  
IN VIEW OF COMPARING GEOLOGY  
WITH ANTARCTICA (ABSTRACT)

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A geological field survey of Precambrian rocks in southern-eastern Peninsular India was conducted during October–November, 1992 (M. YOSHIDA *et al.*, *J. Geosci.*, Osaka City Univ., **37**, 31, 1994). The survey is a major activity of the Japanese working group of IGCP288 in 1992 and is a part of the 4 years' program (1991–1994) of the India-Japan Joint Research "Comparative Study of Precambrian Geology between India and Antarctica". The study was funded by the Grant in Aid for International Scientific Research, The Ministry of Education, Science and Culture, Japan (Monbusho) for the 1992 and 1993 fiscal years.

Survey areas include, from southwest to northeast, areas surrounding Trivandrum, west of Bangalore, southern Karnataka State, south of Madras, surrounding Hyderabad, surrounding Godavari Valley, surrounding Visakhapatnam, surrounding Bhubaneswar, and the Shinghbhum Craton area. Fourteen scientists (co-authors of this report) participated in the present field survey and additional 20 Indian scientists joined or assisted us in places. The total survey took 338 man-days with 105 observation points, and some 1000 rock samples totalizing about 800 kg in weight were collected. Field data and rock samples collected are under laboratory analyses including structural, microstructural, petrological, geochemical, fluid inclusion, and isotope analyses.

Throughout the field study, we could recognize the distinct difference between the cratonic areas and the mobile belts that have been witnessed by many geologists in India since 1930's. The cratonic areas are characterized by low grade metamorphics and various igneous activities. The mobile belts are characterized by high grade metamorphics, abundant metasediments and charnockites. It is recognized that the latter terrains appear monotonously similar except for variations in the proportional amount of charnockites throughout southern to eastern Peninsular India, as pointed out by NARAYANASWAMI (Geol. Surv. India Misc. Publ., **23**, 1, 1975). Also, it is found that they resemble the Proterozoic granulite terrains of Sri Lanka as well as the Lützow-Holm Bay area, East Antarctica as has also been pointed out by several geologists (e.g., O. KATZ, Nature **239**, 271, 1972).

In view of comparing geology between India and Antarctica, we felt that a search for Archaean cratonic components in subglacial areas to the south, away from the coast of Lützow-Holm Bay, is necessary. Analysis of morainic boulders along the coast is considered effective in addition to geophysical researches to verify the existence and examine the characteristics of the supposed subglacial Archaean cratonic blocks.

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