

Greater South China: it was larger than previously believed

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Long-remaining unsolved issues include the Neoproterozoic to Paleozoic geotectonics of proto-Japan, in particular, precise timing of the onset of the Pacific subduction (or tectonic turnover from a passive to an active margin) and the homeland of Japan (North China or South China). To date, the nascent development of an arc-trench system of proto-Japan is reasonably constrained in timing to the early Cambrian or slightly older age. The other new view recently given by zircon chronology was the identification of older Precambrian detrital zircons and xenocrysts, in particular, the Neoproterozoic grains with similar ages to those of the South China basement. The North China block has been traditionally regarded as the homeland continent, along which Japan evolved. Detrital zircons of so-called Pan-African ages (ca. 1200-600 Ma) are identified, however, in various Paleozoic sandstones (Nakama et al., 2010; Isozaki et al., 2014); in addition, zircon xenocrysts of the similar ages were also recognized in the Paleozoic granitoids (Aoki et al., 2015). These ages are extremely rare in the North China block, whereas dominant in South China. The latest identification of the extensive Paleo- to Mesoproterozoic crusts in the Cathaysian part of South China cleared the difficulty in correlating Japan with South China. These data confirmed that Paleozoic Japan corresponded to an eastern extension of South China block prior to the Triassic collision with North China. This requires that the original South China block was much larger than the present conterminous mainland part, i.e., longer for more than 200 km to the northeast up to NE Japan, and the Greater South China (GSC) was proposed particularly for proper paleogeographic reconstruction of East Asia (Isozaki, 2014). The latest information on the detrital zircon age spectra from the Paleozoic sandstones of the Sergeevka belt in Primorye (Far East Russia) further suggests that this domain resembles Japan, and South China in terms of sedimentary settings and provenance. In short, the GSC becomes much larger, nearly twice larger, than previously imagined.

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