RE-UNITE PROTEROZOIC GONDWANALAND AT SRI LANKA AND ANTARgCTICA

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Tectonothermal history of Highland Series rocks of Sri Lanka appears to be similar with those of Lutzow-Holm Bay, Antarctica. They both include earlier recumbent-isoclinal foldings and later upright folding, the dominant granulite facies metamprphism being associated with the former, and the later, less dominant amphibolite facies metamorphism, with the latter foldings. Further later events including local recrystallization of biotite with younger schistosity structures on some rocks are also detected from both area. Decomsposition products after staurolite such as biotite-sillimanite (rarely kyanite), sillimanite-spinel, and even the staurolite itself occur very rarely as inclusions in garnet porphyroblast in some aluminous paragneisses from both areas, indicating decompressional and temperature-increasing P-T-t path at the main granulite facies metamojphism. From both the Highland Series rocks and the granulite facies rocks of Lutzow-Holm Bay, radiometric ages of ca 2.0 Ga, ca 1.1 Ga, ca 0.7 Ga and Ca 0.5 Ga are known. These ages are considered to reflect geologic events common for both rocks.

The above correlation made it possible to suggest correlations of the amphibolite facies rocks of eastern Lutzow-Holm Bay coast with those of the Western Vijayan Complex, and rocks of the Yamato-Belgica Complex of Antarctica with those of the Eastern Vijayan Complex. Both the former two rocks grade to the granulite facies rocks without a distinct tectonic gap and both the latter two rocks are considered to be tectonically separated from the granulite facies rocks. Paleomagnetic analysis and Rb/Sr dating of Highland Series rocks are carrying on; their results may be used for additional discussions.