



Possibility of heliotropical response from inclination of columnar stromatolites, Socheong island, Korea

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Socheong island is a unique island containing Precambrian stromatolites in South Korea. Most of Socheong stromatolites are domes and columns, occurring as 10 cm to 1 meter thick stromatolite beds. Lower parts of stromatolite beds are predominantly composed of domal stromatolites, while columns increase toward the upper level of stromatolite beds. In many of stromatolite beds, inclined columns are easily identifiable, which is generally considered as a result of heliotropism. From general lithology, sedimentary structures, inclined angles and distributional pattern, and structural deformation of sedimentary rocks of Socheong island, the inclination of Socheong stromatolites could be better interpreted as a secondary structural deformation probably after formation of stromatolite columns, rather than as a result of heliotropism. However, at this moment, we do not clearly reject heliotropism interpretation for inclined columns of Socheong stromatolites. This is because the original position of stromatolite columns were also lost if structural deformation would have affected throughout the whole sedimentary rocks of Socheong island.

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