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Interactive comment on "Extant shore-platform stromatolite (SPS) assemblage" *by* Alan Smith et al.

Anonymous Referee #1

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The manuscript "Extant shore-platform stromatolite (SPS) assemble" by Alan Smith et al. observed SPS lithological and geomorphological assemblage and described that SPS are produced by mineral precipitation. However, the data provided by the authors are not sufficient to support interpretations and conclusions, at least in the way they are described in the manuscript in the present form. The present data are definitively publishable but not to a well-known journal as Biogeosciences.

General commentsïijŽ 1. The microorganisms were prevalent in the Precambrian. Microbial fossils present the cellular structure, which is similar to cyanobacteria and other prokaryotes. But morphological analysis of these microbial fossils is often not enough to obtain the correct information. The acquisition of information would highly benefit from in-situ analytical techniques such as laser Raman spectroscopy, and stable

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Discussion paper

isotopes. The potential effect of microbes in the formation of stromatolites should be further discussed. 2. The scientific methods and assumptions are not valid and clearly outlined, such as when the authors try to discuss SPS preservation potential in the geological record, what is the preservation mechanism? 3. The formation of stromatolites requires certain environmental conditions, especially more information about the water chemistry measurements should be provided. Specific comments: 1. Typing errors p.8, l. 33 (“be necessary for SPS growth” miss symbol) and p18, l10 “and Precambrian Examples.?” 2. The manuscript has also a number of grammatical errors that need to be corrected.

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