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The Paleoproterozoic fossil record: Implications for the evolution of the biosphere during Earth's middle-age

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**The Paleoproterozoic fossil record: implications for the evolution of the biosphere
during Earth's middle-age.**

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Abstract

The Paleoproterozoic (2.5-1.6 Ga) Era is a decisive time in Earth and life history. The paleobiological record (microfossils, stromatolites, biomarkers and isotopes) illustrates the biosphere evolution during a time of transitional oceanic and atmosphere chemistries. Benthic microfossil assemblages are recorded in a variety of oxygenated, sulfidic, and ferruginous environments representative of the spatial heterogeneities and temporal variations characteristic of this Era. The microfossil assemblages include iron-metabolizing and/or iron-tolerant prokaryotes, sulfur-metabolizing prokaryotes, cyanobacteria, other undetermined prokaryotes, and eukaryotes. The undetermined microfossils represent a majority of the

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