

Biodiversity in the Paleoproterozoic Francevillian Group, Gabon

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The Paleoproterozoic (~2.2 Ga) macrofossils are discovered one after another from the sedimentary sequence of the Francevillian Group in Gabon; pyritized macrofossils from Socoba section in Franceville Basin (Albani et al., 2010, *Nature*; 2014, *PLOS ONE*) and nodular fossils from Akou section in Okondja Basin (Moussavou et al., 2015, *J Geol Geosci*; Edou-Minko et al., 2017, *J Geol Geosci*). These fossils are interpreted as microbial colony or colonial eukaryotic organisms on the basis of their complex structures and macro sizes. They are reported from the black shales of the FB Unit; however, the fossil horizons are not correlated precisely because of the poor stratigraphic correlation between the basins. In order to clarify the interbasinal appearance of the fossils and the corresponding environmental changes, we conducted a geological fieldwork and investigated the litho-, bio- and chemo-stratigraphy in the Franceville, Lastoursville, and Okondja Basins. These intracratonic rift basins on the Archean basement rocks were filled up with the Paleoproterozoic Francevillian Group; i.e., FA (fluvial sandstones with uranium ore at the top, including the well-known Oklo nuclear reactors), FB (black shales and carbonates, containing manganese-rich carbonates and the fossil horizon at the upper part), FC (cherts), FD (black shales), and FE (sandstones). We will report the preliminary stratigraphic correlations between the Franceville, Lastoursville, and Okondja Basins, especially on the fossiliferous FB Unit.

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