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Tectonic evolution of the Pan-African arc assemblage in Southern Sinai An example from the Sa'al-Zaghra belt

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The southern Sinai basement is part of the broader Neoproterozoic Arabian-Nubian Shield, which occupies parts of northeastern Africa and the Arabian Peninsula. The Sinai exposures of the shield are uniquely located as they form a bridge between the two halves of the shield that are elsewhere separated by the Red Sea rift. For shield terrain fragments are exposed in Sinai: the Feiran-Solaf, Kid, Taba-Elat and Sa'al-Zaghra metamorphic belts. Of these, the Sa'al Zaghra terrain has received the least attention. The four terrains are separated from each other by vast areas of syn- and post tectonic granitoids that complicate the correlation and have led to numerous controversies with respect to their interpretation. In this project structural, petrological and age dating will be carried out to clarify the evolution of the Sa'al Zaghra terrain in order to establish the relationship between it and the other terrains. Preliminary work already undertaken during this research suggests that the Sa'al-Zaghra and Kid terrains have much in common with respect to their lithological assemblages, as well as their structural and metamorphic histories. The same may be said of the Feiran-Solaf and Taba-Elat terrains. Juxtaposition of these paired terrains presents an enigma in that the Sa'al-Zaghra and Kid terrains appear to separate the Feiran-Solaf and Taba-Elat terrains from each other. There are possibilities of ancient transform systems that may explain this configuration.