

THE “KIBARAN BELT” OF CENTRAL AFRICA: WHAT’S IN A NAME ?

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Keywords: Kibaran belt, Mesoproterozoic, Karagwe-Ankole belt, Rodinia

The name “Complexe des Kibara” and “Système des Kibara” was introduced by Robert (1931) and referred to a (meta)sedimentary sequence (a “Supergroup” in present-day terminology), studied in the Kibara Mountains (type locality) in N Katanga region (DRC; Fig. 1). As the deformed and intruded rocks displayed a physiographic NE-SW trend, the term “Kibaran belt” was used to refer to mountain-building processes (following a geosyncline episode) responsible for the “Kibara Mountains”. Following prevailing ideas, the concepts of unconformity, orogenic cycle and orogeny became then linked to the “Kibaran”. With progress in radiometric dating (1960-ies), “syn-orogenic” (Kibaran) granites were distinguished from “post-orogenic” tin granites. Culmination of the Kibaran orogeny was dated at 1370-1310 Ma (Cahen et al., 1984). Some geologists considered a protracted “Kibaran orogeny”, with several phases between 1370 up to the 970 Ma tin granites (spanning 400 Ma !). With introduction of plate tectonics (late ‘60-ies), the concepts of Kibaran orogenic cycle and orogeny were expanded to include the Wilson cycle terminology, implicitly linking orogeny to subduction-collision processes at plate edges. More recently the concepts of supercontinent cycles were developed, with for this part of the world, the “collisional orogeny” related to “Rodinia” amalgamation at 1 Ga, closing the Mesoproterozoic Era. Eventually, the term “Kibaran” was often mistakenly used as synonym for “Mesoproterozoic” (1.6–1.0 Ga) to denote Mesoproterozoic orogenic events in Africa. Other geologists restricted its use to the 1.0 Ga “global” collisional orogenic event at the edge of the Congo Craton, leading to Rodinia amalgamation, even if the (way of) participation of the African cratonic blocks in this process is still a matter of debate. Anyhow, “Kibaran” became synonymous to “Grenville” (= “Grenville-aged”) confusing African *versus* American geologists.

We propose that in future the use of the ambiguous term “Kibaran” – systematically in association with the term “event” - should be restricted to refer only to the c. 1375 Ma prominent tectono-magmatic event, which is unrelated to an orogenic event but includes intracratonic (i.e. intraplate) emplacement of abundant coeval bimodal magmatism under extensional regime (Tack et al., 2010). Simultaneously, the “Karagwe-Ankole belt” or “KAB” and the “Kibara belt” or “KIB” – written as proper name and not as adjective and used in a purely descriptive and geographic sense - have been redefined (Tack et al., 2010; Fig. 1). The KAB is located to the NE of the NW-SE trending Palaeoproterozoic Ubende belt – Rusizian basement extension. This name, adopted on the basis of nomenclature precedence, was used historically to designate the Mesoproterozoic belt in respectively the Karagwe (NW Tanzania) and Ankole (SW Uganda) regions. The KAB corresponds to the “Notheastern Kibaran Belt” (NKB; Tack et al., 1994). The Kivu-Maniema (DRC) region, north of the Ubende belt – Rusizian basement extension and west of the Western Rift (Fig. 1), is left undefined for now although “some continuity” of the KAB in Kivu-Maniema is obvious from satellite imagery and derived products but hampered by the stratigraphic and structural complexity and the scarcity of recent field data. Similarly, we restrict the name “Kibara belt” (“KIB”) only to a belt occurring SW of the Ubende belt – Rusizian basement extension including the type locality. The KAB is structurally distinct from the KIB as both belts are separated by a clear break in continuity.

In any case, the term “Kibaran” should be rejected for the ca. 1.0 Ga collisional processes at plate edges (including the related collisional granitic magmatism), at the origin of Rodinia amalgamation. Whether the term “Grenville-aged” is appropriate for (central) Africa by opposition to already previously used African terms like (Southern) Irumide, Natal, Namaqua, ... is open for debate in an ideal forum like CAG 23 !

