

Themes 13: Tectonic Evolution of Gondwana (Oral)

**Late Pan-African brittle-ductile E-W compressional interactions between the Tanzanian and Congo-Bangweulu cratons in Central Africa: Fault-kinematic and paleostress reconstruction**

Damien Delvaux (1), A.S. Macheyeke (2), M.L. Kipata (3), G. I. Mawe (4), E.N. Safari (4), Y.M. Mukokya (4, 5), M.E. Birhenjira (4), K.C. Buzera, G. B. Ganza (4).

(1) Royal Museum for Central Africa, B-3080 Tervuren, Belgium. damien.delvaux@africamuseum.be

(2) Geological Survey of Tanzania, Dodoma, Tanzania, asmacheyeke@yahoo.com

(3) Université de Lubumbashi, R.D. Congo

(4) Université Officielle de Bukavu, R.D. Congo

(5) Banro Congo mining S.A

The Paleoproterozoic Ubende and Mesoproterozoic Karagwe-Ankolean belts which separate the Tanzanian and Congo-Bangweulu cratons in Central Africa and which hosts the western branch of the East African rift system has long been recognized as a weak zone which has been reactivated time and again. It has been believed to have been affected by Pan-African tectonism on the basis of suspected isotopic rehomogenisation and related geochronological age rejuvenation in the Karagwe-Ankole belt in Rwanda, Burundi and Kivu regions as well as by shearing and metamorphic phases in the Ubende belt in Tanzania and Malawi. Similarly, several isolated thrust structures are known along these belts. But this interaction has never been demonstrated from a structural point of view.

Here, we report a synthesis of systematic investigation of brittle minor faults along these two belts over about 1200 km long performed over a period of 20 years of field work in Tanzania, Zambia and DR Congo.

We interpret these results as evidence for Late Pan-African brittle-ductile E-W compressional interactions between the Tanzanian and Congo-Bangweulu cratons in response of the convergence and collision between East and West Gondwana during the East African Orogen.