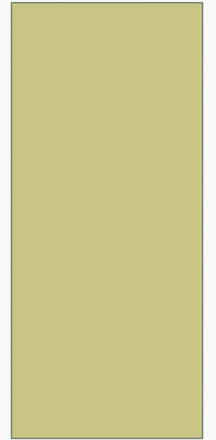


THE A.E. PHAUP AWARD FOR 2015

FORBES MUGUMBATE & TIM BRODERICK
26 FEBRUARY 2016



THE A.E. PHAUP AWARD



A.E. PHAUP (1978)

This, our premier annual award, is made to the author or authors of a refereed paper in a recognized journal, or a Geological Survey publication or a book, that is considered to have made the most considerable impact on our evolving knowledge of Zimbabwean geology.

For this year's Albert Edward Phaup Award, a total of six titles were considered by the review committee.

PHAUP AWARD WINNERS, 2015

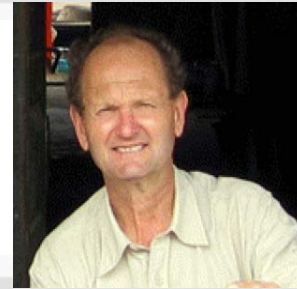
Are: R.M. Key, F.P.D. Cotterill and A.E. Moore.

For their paper entitled:

**The Zambezi River: An Archive of Tectonic Events
Linked to the Amalgamation and Disruption of
Gondwana and Subsequent Evolution of the African
Plate.**

Published in the *South African Journal of Geology*,
2015, Vol. 118 (4), pp. 425-438.

ROGER KEY



Dr Roger Key is a well known name to us, mainly due to his long-term association with the Geological Survey of Botswana from 1972 and his contributions to geological mapping in that country. Awarded the DSM by Botswana in 1998 and the MBE in 1999, he has worked on BGS projects in several African countries including Zambia and Mozambique. His contributions to the regional geological understanding of southern Africa are profound and prolific. Since 2012 he has operated his consultancy, Kalahari Key, out of Scotland into Africa.

FENTON (WOODY) COTTERILL



Woody Cotterill is the son of onetime consulting geologist to the Shurugwi Chrome Mines. He retains a wide-ranging fascination for African ecology, evolution and geomorphology, much of which is focused on Zimbabwe and the surrounding region. He, with Andy Moore is a previous winner of the Phaup Award. His continued observance of the evolution of the Zambezi eco system has led him to pursue his concept of *Geoecodynamics*, though the auspices of AEON (Africa Earth Observation Network) based at Stellenbosch and previously UCT.

ANDY MOORE

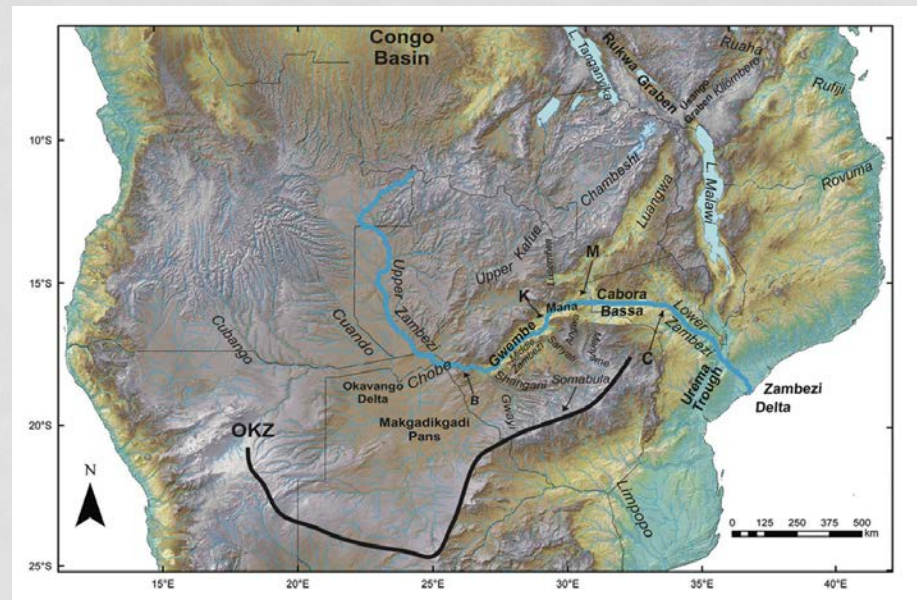
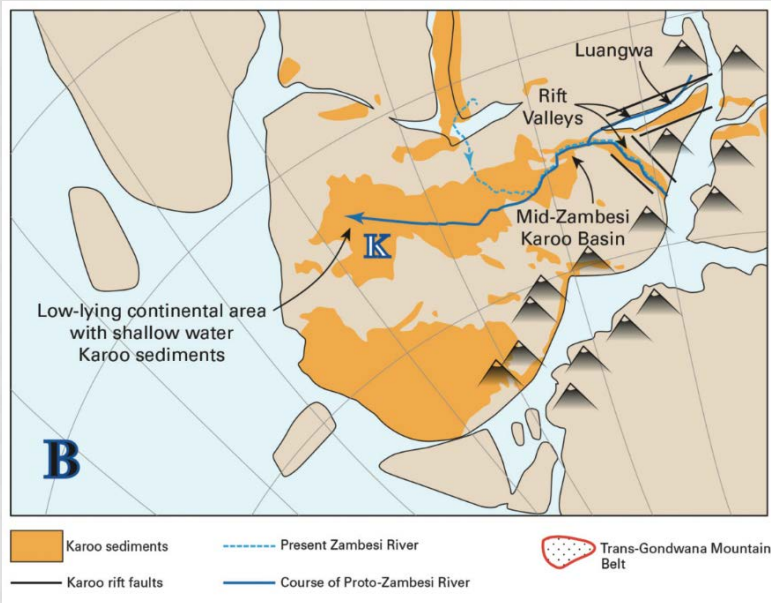


Andy Moore, PhD, MBA at UCT, is also well known to us through his continued involvement with our Society. From 1980 he led a concerted effort in diamond exploration across Zimbabwe, and has continued his quest in Botswana and elsewhere, including Madagascar. His passion for research in pursuance of his interests in kimberlites, alkaline volcanism, landscape development, the Kalahari Basin and drainage evolution especially in the Zambesian realm, through associations with Rhodes and James Cook universities, has driven him.

THE PROTO-ZAMBEZI RIVER SYSTEM

And it's extant drainage system across south-central Africa

The concept envisages an End-Neoproterozoic Trans-Gondwana mountain range providing the source material for west-directed Dwyka, Ecca & Upper Karoo, Permo-Triassic, rift controlled sedimentation. Reverse river flow via the same evolving rift system began to the east in the Mid-Jurassic in response to the Gondwana split providing an eastern seaboard. The river System has survived, albeit with changed flow direction and continuously evolving catchments through river capture, tectonic uplift and down throw.



SUMMARY OF MAJOR EVENTS MODIFYING THE SOUTH-CENTRAL AFRICAN PLATE

Studies, particularly in the Cabora Bassa basins of Mozambique and Zimbabwe have allowed ideas on the evolution of Karoo sedimentation, rift systems and river flow to evolve.

Age (Ma)	Event
93	Opening of Mascarene Basin establishes the eastern Africa shoreline as a passive margin.
130 to 90	Isostatic uplift and erosion of eastern and central Africa.
135	Complete separation of East Africa from Madagascar.
145 to 100	High energy proximal sedimentation along Africa's developing eastern coastline.
165	South facing gulf started to develop between East Africa and Madagascar (start of West Gondwana break-up). Lower Zambezi River flowing eastwards ; Reeves (2013) reconstruction.
201 to 165	Siliciclastic sedimentation in half grabens adjacent to (and along) the line of separation of East Africa from Madagascar, and at an angle to the earlier Karoo rift-basins.
184 to 173	Karoo magmatism – sub-continental flood basalts, bimodal volcanic centres in rift-basins and regional dyke swarm.
258 to 210	Erosion related to uplift with drier climate (uppermost Karoo sedimentation).
280 to 237	Ecce-Beaufort Groups sedimentation: fluvio-lacustrine 'coal measures' overlain by west-directed high-energy, fluvial sedimentation in the Proto-Zambezi River through the Mid-Zambezi Basin and Cabora Bassa Rift-basin.
≥302 to 280	Dwyka glaciation of Gondwana with west-directed ice movement across West Gondwana off the Trans-Gondwana Mountain Belt.
420 to 302	Unknown amount of sedimentation in central-southern Africa; most removed by the Dwyka glacial event.
480 to 420	End of magmatism within the Pan African orogenic belt system with relatively slow crustal cooling until 420 Ma.

CONGRATULATIONS!

We applaud the authors, appreciate their research efforts and encourage their continued involvement in the greater understanding of Zimbabwe Geology, and its regional context.

CONGRATULATIONS to ROGER, WOODY and ANDY on the occasion of their recognition.

