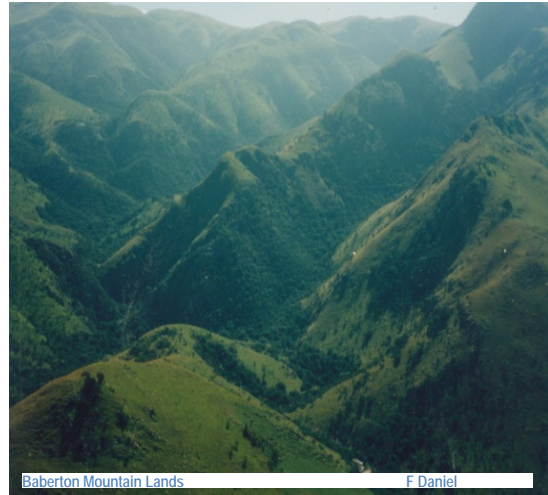


## Cradle to Cradle Corridor Post SIL conference tour – 21 – 27 August 2010

**Tour leaders: Dr. Johan Engelbrecht and Laria Vermaak**

This Post SIL conference tour will be partly based on the Cradle to Cradle Corridor. The core theme of the Cradle to Cradle Corridor is to celebrate 4 billion years of life on Earth: from the origin of life on Earth to the origin of humans on Earth. This corridor allows the traveler to experience the co-evolution of earth and life over immense periods of time, and at the same time develop an acute understanding of the dramatic forces (some catastrophic, others more gentle) that shaped our collective natural history.

The tour will start with the “Cradle of Mankind” and then travel back into time to the Ancient Barberton Greenstone Belt exposed through relatively recent erosion ( $\pm 100$  million years ago) during the formation of the escarpment. This natural sculpturing process exposed fossilized oceanic crust of more



Barberton Mountain Lands F Daniel



Exposed pillow lava M de Wiitt

than 3400 million years in the Komati River Basin and the Nkomazi Wilderness area, representing the oldest oceanic crust on Earth. This complex is billions of years older than the “Cradle of Mankind” with a record that extends life’s roots to the most remote reaches of the geological past, containing the remains of the earliest known life forms to appear on earth. The Komati River cuts through the Barberton Mountain Lands and exposes a treasure trove of ancient geological formations, ranging between 3500 to 3000 million years, and now provides habitat to many endemic plants and animals in the area.

Nkomazi Wilderness Area conserves a significant part of the Barberton Greenstone Belt, world famous for its

Archean geology, which represents 3.5 billion years of earth’s natural history and evolution. This area has come to be recognized in the world of earth science as one of the most truly remarkable localities. It is a unique modern laboratory that provides an early window to the earth’s dim past for assisting researchers to understand and describe the history and evolution of our planet from its very beginning, marking this end of the journey back in time for geologists. The Barberton Mountain Land is the most extensive piece of ancient crust on Earth, and as a result is home to the most well preserved and least altered oldest volcanic and sedimentary rocks on Earth. Here, written in the pages of the rocks and strata, scientists are able to tease out the 3.5 billion year earth story.

Here scientists have found evidence of the formation of the first continent on Earth, the Kaapvaal Craton. From fossilized ripples and tidal-litho deposit evidence it is shown that water was abundant on the early Earth and are testimony to the fact that the Moon-Earth system was already in place billions of years ago, ruling over the tides as it still does today. Part of the geology consists approximately of a 7 km sequence, starting from the deep oceans and moving up towards shallow seas, beach, estuaries, rivers and sand dune environment, thus allowing scientists to study the early ocean and beach environments. The presence of meteorite impact fallout is also evidence of the oldest and largest meteorites to hit the Earth. This is the home to the famous Komatiites rocks (named after the Komati River) discovered by Morris and



Komatiite F Daniel

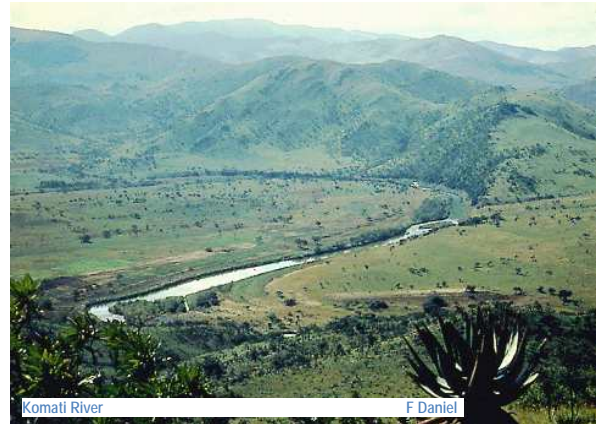
Richard Viljoen in 1969, which formed from the hottest-known volcanic lavas (about 1400°C) ever to erupt onto the Earth's surface. The banded iron formations that were deposited during this period show no rusting which together with evidence of the first anaerobic life forms shows that there was still no free oxygen, and life started here as bacteria (*Archaeosphaeroides barbertonsis*) 3.45 billion years ago.



lchnofossil of bacteria M de Witt

Today the modern meaning of the world Nkomazi is “the place of water”. *Figuratively*, “Nkomazi” refers to the river as the source of all life and fruitfulness in the same sense that a cow’s milk nourishes the new-born calf. In the context of the river it refers to the life-

giving waters, which feed and nourish the land and all the life upon it. The Komati River is the life force of this wilderness area.



Komati River F Daniel

Nkomazi Wilderness is South Africa’s youngest proclaimed nature reserve, forming part of the proposed Greater Ancient Barberton Mountain lands Conservancy. This is an exciting initiative aimed at linking an existing 170,000 hectares of conservation land together to form a new Transfrontier Conservation Area. This park will stretch from Badplaas in the South to the World famous Kruger National Park in the North East



Potholes in Komati River F Daniel

This ancient geological base underlies one of the richest biodiversities on Earth, with 2500-recorded plant species (second in South Africa only to the Cape Fynbos and Succulents), 410 bird species, 80 animal species, several endemic butterflies, spiders and insects roam the mountain Land. Nkomazi has a multitude of ecosystems and is a kaleidoscope of Africa’s many habitats where highveld (for springbuck, eland, blesbuck and Oribi), lowveld and middleveld habitats come together supporting the most diverse game count possible. It encompasses a variety of topographical features from pristine Drakensberg crags and crests to wide expanses of open grasslands, valleys, wetlands, potholes, granite koppies, indigenous forests, riverine bush, cliffs, afromontane forests, montane grasslands and a mist belt. This is a high rainfall

area and the terrain forms part of 15 kilometres of the sensitive Komati River catchment area and tributaries such as the Sterkspruit and Mawela Wela clear water streams. Waterfalls are plentiful, filling cool rock pools. The cold water of the escarpments is an ideal habitat for temperate species, while other species thrive in the warmer waters in the valleys. It is probably one of the only properties in South Africa where one can find both highveld (oribi, eland, etc) and lowveld (Big 5) game in a single natural area.

From here the tour will take you to the world famous Kruger National Park which is one of the largest game reserves in Africa and needs no introduction. It covers 18,989 square kilometers and extends 350 kilometers from north to south and 60 kilometers from east to west.



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## ITINERARY

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- Day 1** Fly from Cape Town to Johannesburg
- 21 August** Travel to “Cradle of Human Kind” near JHB Maropeng visitor Centre  
Do the “Cradle of Human Kind” tour  
Presentation on the Lake Chrissie area and Komati River  
Sleep over at “Cradle of Human Kind” Maropeng Hotel
- Day 2** Travel to “Cradle of Life” (COL) near Badplaas via Lake Chrissie, Verloren Vallei RAMSAR site other areas of importance
- 22 August** Presentations on the unique geological features and World Heritage Site  
Presentation on the archeology of the area  
Sleep over at Badplaas COL
- Day 3** Visit Komati River geology Kromdraai & Tjakastad. Discussions about the aquatic and terrestrial species of the area
- 23 August** Presentation on the Rivers and aquatic species in Mpumalanga  
Sleep over at Badplaas COL
- Day 4** Tour into big five reserve, next to the Komati River and see some of the accessible geological features. Discussions about the aquatic and terrestrial species of the area
- 24 August** Sleep over at Badplaas COL
- Day 5** Travel to KNP
- 25 August** En route discussions about the geology/ vegetation and the aquatic systems of the rivers in the KNP  
Sleep over in Lower Sabie
- Day 6** Travel to Letaba
- 26 August** Visit Elephant Museum  
Sleep over in Letaba Rest Camp
- Day 7** Travel to Phalaborwa/ Nelspruit Airport to fly back to Johannesburg
- 27 August** or Drive back to Johannesburg via Phalaborwa
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The approximate cost is ZAR2 000 per day, inclusive of accommodation, transport, airfares (Cape Town - Johannesburg) and meals.

### Contact:

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