

# Global Geotourism Perspectives



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## **Geosite Identification as an Element of Promoting Geotourism in a Wildlife Hotspot**

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# 9

## Geosite Identification as an Element of Promoting Geotourism in a Wildlife Hotspot: the Kruger National Park, South Africa

I C. Schutte and I. Booysen

### Introduction

The Kruger National Park (KNP), established in 1898, is the largest game reserve in South Africa. It covers approximately 19,000 sq km (1.9 million hectares) and extends 350 km in a north–south direction and 60 km from east to west. It is also part of the Great Limpopo Transfrontier Park, a peace park that links Kruger National Park with the Gonarezhou National Park in Zimbabwe, and to the east with the Limpopo National Park in Mozambique. There are also a myriad of private game parks and concession areas in and around the KNP. Besides the impressive numbers of mammals, reptiles, amphibians, birds and fish, the KNP has had human interaction with the Lowveld environment over many centuries as evidenced from bushman rock paintings to archaeological sites like Masorini and Thulamela. These cultural features represent persons and events that played a role in the history of the Kruger National Park and are conserved along with the park's natural assets (<http://www.sanparks.org>). At the same time, the geology on which the Kruger National Park is based, plays an important role in determining the distribution of vegetation and wildlife and is an additional tourism resource.

### Need for an inventory

Little geological information was available about the park before 1970. Ignatius Schutte mapped the park between 1971 and 1981. After verification in the field, the official 1:250,000 scale Geological Map Series was produced and printed. Schutte (1986) in Koedoe (<http://www.koedoe.co.za/>), included a black and white 1:500,000 geological map of the KNP. Following that, in 2000, two posters

were compiled and presented at a Geocongress in Stellenbosch (Schutte, 2000 a, b). Furthermore, it became apparent that there was a need to educate the general public, especially visitors to the park, about the geology of the park with a view to expanding the visitor attraction profile of the KNP (Schutte, 2003, 2004). Accordingly, in 2005, a team of four geo- and eco-scientists, under the auspices of the Kruger National Park, with financial aid received from the Geological Society of South Africa (GSSA) and the Rupert Foundation as well as assistance from the Universities of Pretoria (UP) and Witwatersrand (WITS) and the Council for Geoscience (CGS), started the identification and documentation of various prominent geosites across the KNP.

## Geosite recognition

In this case a geosite is a site with remarkable geological or scientific significance, and whose geological character meets several geosite selection criteria. These include scientific value, geotourism appeal, educational value, historical significance, cultural, spiritual and social value, economic value, international significance, link with biodiversity, refuge for rare and threatened species, aesthetic quality, representativeness, stratigraphic landmark, paleobiodiversity, rare or unique character, vulnerability, quality or state of preservation, size and accessibility (Verpaelst, 2004). These characteristics were taken into account when geosites in the KNP were identified.

During identification of geosites three global positioning (GPS) coordinates were measured, an average was calculated, and then documented and photographed. Thereafter a spreadsheet was compiled (see parameters in Table 9.1), initially in Microsoft Excel and eventually linked to a Geographical Information System (GIS).

**Table 9.1:** Example of geosite identification data sheet

Nr	South	East	Geology type	Description	Lithology	Location	Road
1	22.406070	31.09413	Sandstone	Fault bounded block of resistant Clarens Sandstone Formation	Clarens Sandstone Formation	Mataphela kopje east of Pafuri gate	H1-9

Using the GIS, the geosites were plotted and a 1:500 000 geological map (e.g. Figure 9.1) where the more than 120 geosites are shown as numbers. Various human and natural geospatial data were added (e.g. roads, rivers and dams) in the GIS to compile a well oriented map for tourists and scientists alike.

**Chapter extract**

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