

**Microscopic Hair Characteristics of South African Blue
Wildebeest (*Connochaetes taurinus*), Black wildebeest
(*Connochaetes gnou*) and Red Rock Hare
(*Pronolagus crassicaudatus*)**

Phillip Taru^{1*}, Geoffrey Mukwada² and Wiseman Chingombe³

*University of the Free State, Geography Department, QwaQwa Campus, P. Bag X13,
Phuthaditjhaba 9866, South Africa*

Email: ¹<philiptaru@yahoo.ie>, ²gmukwada@gmail.com, ³wchingombe@gmail.com>

KEYWORDS Hair Cross Section. Hair Identification. Scale Pattern. Scanning Electron Microscopy

ABSTRACT Hair identification provides a wealth of information in many fields of research including wildlife management. This research describes the scale pattern and cross sectional morphology of hairs of South African Blue wildebeest (*Connochaetes taurinus*), Black wildebeest (*Connochaetes gnou*) and Red rock hare (*Pronolagus crassicaudatus*). Samples were taken from the back of pelts curated at the Ditsong National Museum of Natural History in South Africa. The hairs were examined using FEI Quanta 400 E scanning electron microscopy. Analysis of the hair samples revealed fine details of species-specific scale and cross sectional morphology. However, in one case, the cross section shape of red rock hare was found to have more cavities than observed in other pieces of hair from the same animal. Researchers involved in the study of hair should examine when possible, in addition to guard hairs, examples from different sites on the body and consider geographical differences in sampling.