

A barcode guide of the avian haemosporidians of the Kruger National Park and the surrounding areas

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Foundational science provides researchers and conservation managers alike with tools to study and preserve biodiversity. Barcoding initiatives, in particular, stand up as a costly-effective tool to characterize genetic biodiversity. Despite South Africa being one of the most biodiverse countries in the World, the contribution of South African samples to global barcoding initiatives is very low, even for charismatic groups such as birds. As of 2016, only 46 South African bird species have registers in the Encyclopedia of Life (data stemming from the Barcode of Life Data System - BOLD). We propose a twelve-month project to produce genetic barcodes of terrestrial birds to a sample of roughly 1,000 individual birds, appertaining to 100 species, sampled in the Kruger National Park. This objective is realistic, since we already possess most of the required blood samples (total of 782 samples representing 81 species), arising from previous projects of our research group collected from live birds under approved ethical clearances. Our final dataset will be of chief importance as a baseline assessment of the avian genetic diversity in one of the most relevant natural areas of the country, both in terms of biodiversity preservation and of contributing to the national GDP through nature-related tourist activities. The project will also contribute towards the training (in molecular work) of two previously disadvantaged PhD and MSc students.