

Darwin Initiative

Half Year Report (due 31 October each year)

PLEASE NOTE: Due to the increased number of reports expected in 2005, we will not be able to confirm receipt of reports but will contact you individually should any questions arise

Project Ref. No.	13/018
Project Title	Building Genetic Forensic Capacity to Reduce South Africa's Illegal Trade
Country(ies)	South Africa
UK Organisation	University of Sheffield
Collaborator(s)	University of KwaZulu-Natal (Prof Mike Perrin)
Report date	30 September 2005
Report No. (HYR 1/2/3/4)	2
Project website	http://www.shef.ac.uk/misc/groups/molecol/parrotandcrane.html

1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).

April - Sept Two South African MSc students based at Sheffield University to undertake research and training in development of a genetic marker set.

May 2005 Dr Taylor travelled to the UK to visit Terry Burke and Deborah Dawson and view the molecular laboratories and facilities at the University of Sheffield.

May 2005 Dr Taylor visited UK experts working at a number of government, NGO and private organisations working in the field of wildlife DNA fingerprinting and illegal trade.

2. Give details of any notable problems or unexpected developments that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

Microsatellites developed for other species were first examined for utility in the Blue rCrane and Cape Parrot.

A valuable resource of 48 published and unpublished Grus crane species microsatellites (unpublished microsatellites kindly provided by Travis Glenn) was identified. For 6 unpublished loci primers were designed. All 48 loci were tested in Blue crane. Thirty-three loci amplified well without any further work. In 10 unrelated individuals, eight loci had 2 alleles and thirteen loci had more than 3 alleles. Of these 9 loci did not display null alleles and suitable for paternity assignment in the Blue crane. These loci will now be tested in more individuals (and some from other populations where possible) to determine if we have now identified a sufficient number of microsatellite loci for confident paternity assignment in this species. This work will be performed in South Africa (Sept 2005-Jan 2006). On return to Sheffield genotyping data will be reanalysed and paternity assignment software and techniques by demonstrated. In Sheffield during Sept 2005-Jan 2006, further microsatellite development work will continue in Sheffield to develop more loci (although we suspect few additional loci will be required). For six loci PCR amplified blue crane products will be sequenced and/or primers (re)designing and tested. Bird loci known to amplify well in other species have also been tested and amplified well. These will be tested for polymorphism.

Despite testing 60 loci from other parrot (including loci from the same genus) and 44 loci amplifying to date only one polymorphic microsatellite loci has been found for the Cape Parrot. The disappointing low

