**Tracing human population history through ancient DNA: Pretoria bone collection**

**Sampling of human remains curated at the Pretoria Bone Collection (Department of Anatomy, University of Pretoria).**

**PermitID 2804**

**Team members**

Carina Schlebusch (Uppsala University and University of Johannesburg), Mattias Jakobsson (Uppsala University and University of Johannesburg), Marlize Lombard (University of Johannesburg), Maryna Steyn (University of the Witwatersrand)

Assistance: A Meyer (University of the Witwatersrand)

**Report (Nov 2020)**

For this project, we aimed to sample several skeletons housed in the Pretoria Bone Collection, in order to (a) do radiocarbon dating where not available, and (b) conduct aDNA assessment. It should, however, be kept in mind that the dates and aDNA in themselves can never represent the site and the people who inhabited it, and therefore it needs to be accompanied by full skeletal analysis of the sampled individual as well as others from the site. As I (M Steyn) worked at UP before, I am familiar with most of the skeletons and have conducted skeletal analyses on most of them during the past 30 years. Most of the skeletons date from the Early or Late Iron Age.

In this regard, all specimens have been sampled during the past two years, as applied for. The full list of sampled skeletons is shown below – the dates shown here are those which were known before this project commenced. The remains were transferred from University of Pretoria (with permission) to the University of the Witwatersrand in order to do the sampling under sterile conditions to avoid contamination. All skeletons were subsequently returned to the University of Pretoria by M Steyn by hand, where they continue to be curated.

|  |  |  |  |
| --- | --- | --- | --- |
| **Skeleton** | **aDNA ID no** | **Bones sampled** | **Provenance** |
| UP001 | UPS001 | Petrous bone | Happy Rest, Limpopo, 1310 ± 50 BP direct date |
| UP002 | UPS002 | Phalange | Happy Rest, Limpopo, not dated, similar context as above |
| UP013 | UPS013 | Tooth, phalange | Hole-in-the-wall, Eastern Cape |
| UP17a | UPS017a | Molar, petrous bone | Eggo Cave, Limpopo |
| UP17b | UPS017b | Molar, petrous bone | Eggo Cave, Limpopo |
| UP29 | UPS029 | Petrous bone | Skukuza Rock Shelter, Mpumalanga |
| UP32 | UPS032 | Incisor, long bone | Schuinsdraai, Mpumalanga, ±AD 1500 |
| UP47 | UPS047 | Phalange | Schuinsdraai, Mpumalanga, ±AD 1500 |
| UP77 | UPS077 | Molar | Kon Stayt, Limpopo, Pta 4363: AD 1227(1264)1283 |
| UP130 | UPS130 | Molar, petrous bone | Nwanetsi, Mpumalanga, AD 1410 direct date |
| UP132 | UPS132 | Molar, petrous bone | Ben Alberts, Limpopo, AD 1485-1628 |
| UP139 | UPS139 | Molar | Pilanesberg, Northwest Province, AD 1433 (1451) 1487 |

All the radiocarbon dates have been finalized and are available (also including isotope analysis), and we are awaiting the results of the aDNA analysis which may take several years. We will report fully on each, in published format, once the data becomes available.

We are grateful towards the University of Pretoria for allowing us access to the remains.

Prof. M Steyn