Master project in human population genetics

Title
Demographic history of South African Coloured groups

Background
The Bantu expansion out of West Africa brought agriculture and ironworking to southern Africa and started the marginalization of the Khoe-San groups. This was further exacerbated during the colonial period and subsequent segregation.

Before the arrival of agricultural practices in southern Africa, this region was inhabited by hunter-gatherer groups. The remnants of these groups are today known collectively as the Khoe-San. They utilize click consonants in their languages, though the linguistic distance between certain groups is so large that they are linguistically unrelated.

Before the Bantu expansion, another migration from East Africa arrived in southern Africa. These people were already admixed with Eurasian groups and brought with them the practice of livestock raising and a pastoralist way of life. The subsequent admixture of genes and lifeways gave rise to the Khoe Khoe groups, the first half of the term “Khoe-San”.

In a recent project, we studied one of the ancestral groups called the Hesequa by sampling individuals from the self-identified “Coloured” population of South Africa. This project would be a continuation of that study where we investigate other remnant Khoe-San ancestry within the Coloured population today.

Work plan
The sampling and genotyping have already been done so this project would focus on analyzing data.

The analysis would consist of investigating the demographic history of these groups, which will require the use of common population genetic methods and software such as PCA, ADMIXTURE, F- and D-statistics.

The majority of the work will be performed in a UNIX environment, so previous experience working in UNIX terminals is required. Previous experience with population genetics is a plus but not a requirement.

Contact
The day to day supervision would be with PhD Student Rickard Hammarén in Carina Schlebusch’s research group at Human Evolution at the Institution for Organismal Biology at EBC Uppsala.

The start time and scope (number of credits) of the project is quite flexible. Depending on what we decide the project could start as soon as possible or beginning of January 2022.

If you are interested in starting this project then contact rickard.hammaren@ebc.uu.se