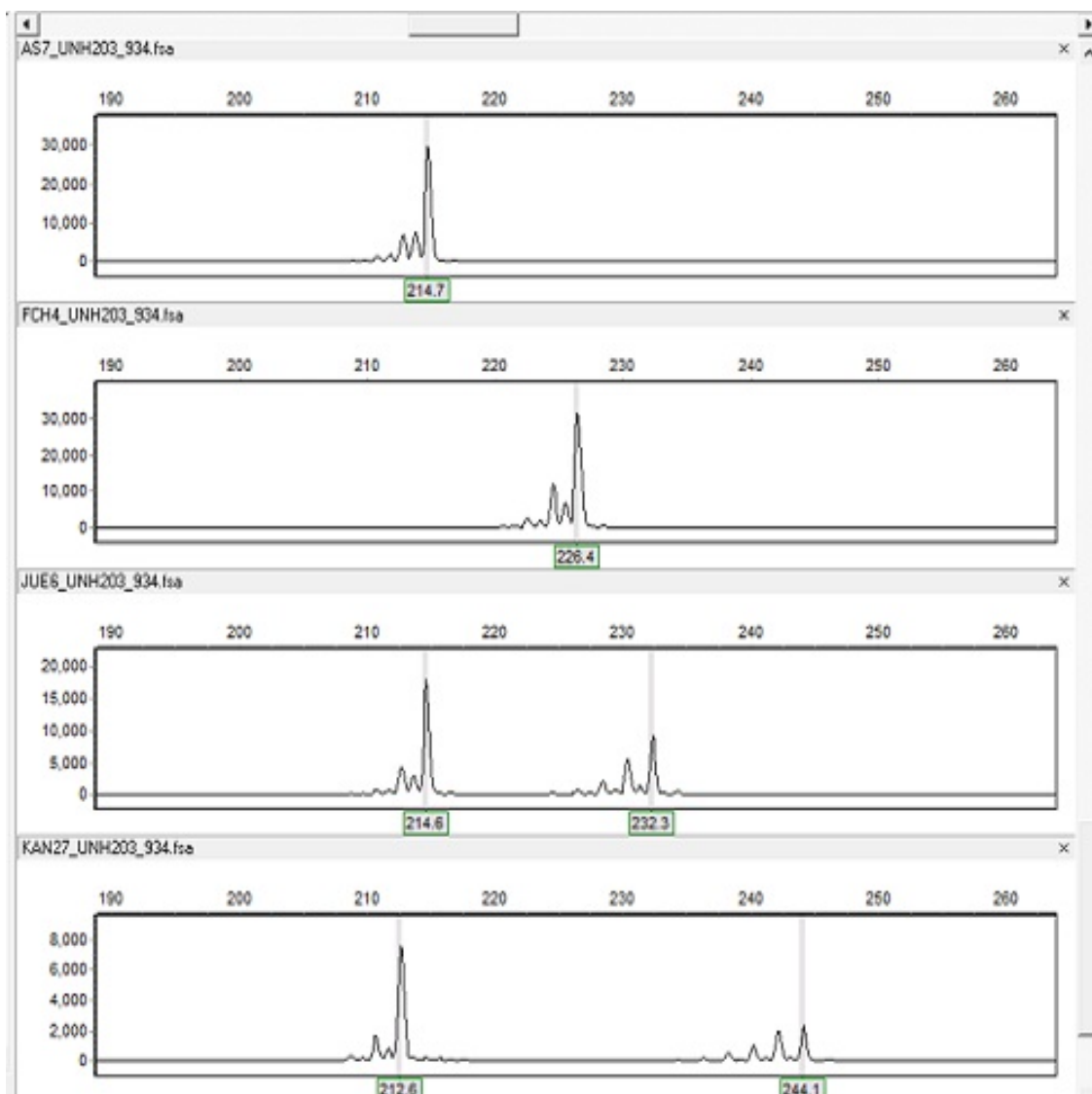


Project Update: April 2018

I have completed the laboratory work for this project, which has spanned nearly 9 months. I sequenced over 170 tilapia samples at the D-loop region of the mitochondrial DNA (mtDNA), with selected samples sequenced at the ND1 gene. I also screened 365 samples (excluding 2015 samples) at 10 nuclear microsatellite loci. I have been analysing data concurrently since December 2017. Preliminary results showed significant variations among samples and have revealed information critical for addressing my research objectives. In particular, the phylogenetic analysis using mtDNA sequences revealed that at least one farm in Ghana was growing the unapproved genetically improved farmed tilapia (GIFT) strain of Nile tilapia *Oreochromis niloticus*. We have also detected signals of the GIFT strain in wild samples from the Volta River. Ongoing analysis should provide further information on the genetic differentiation and the extent of mixing between wild samples and the GIFT strain.



Output screen from GeneMarker® for nuclear microsatellite fragment analysis. The panel shows allelic variation in four individuals from four different populations at the UNH934 locus. Individuals with single peaks are considered homozygous for the locus, and those with two peaks are considered heterozygous