



Strategies to optimize the analysis of gene flow in speciation at the example of giraffes, bears, whales and seals –Axel Janke

SUMMARY

In this project, we will sequence the genomes from a number of mammals to study how species differ at the sequence level. In particular methods implemented in D-stat, Phylonet, D-foil, CoalHMM will show how past and current gene flow or the lack thereof affects speciation. Initially, we will focus on current projects in giraffe, bears and seals. For these taxonomic groups geneflow has been documented or is suspected. The new findings will also aid to use and interpret alternative evolutionary presentations like networks. So far, comparative genomic studies have only been made involving few individuals, but the expected inflation of the number of genomes for numerous species will make it necessary to develop efficient procedures to involve even hundreds of species/individuals in such studies. During the course of TBG we will also involve other taxonomic groups from which genomes will become available for comparative genomic studies.

TBG GENOMIC STATS:

De novo genomes	0
Re- sequenced genomes	0
Total genomes:	0
Total data:	0 Tera bases

SPECIES INVOLVED:

	Date (due)	NCBI	Coverage	Quality (planned)
Giraffes:				
Northern giraffe (<i>Giraffa camelopardalis</i>) Nubian	01.01.18	Yes	15x	re-sequence
Northern giraffe (<i>G. camelopardalis</i>) Rothschild's	01.01.19	No	(15x)	re-sequence
Northern giraffe (<i>G. camelopardalis</i>) West African	01.01.19	No	(15x)	re-sequence
Reticulated giraffe (<i>G. reticulata</i>)	01.01.19	No	(15x)	re-sequence
Masai giraffe (<i>Gi. tippelskirchi</i>) Masai	01.01.19	No	(15x)	re-sequence
Masai giraffe (<i>G. tippelskirchi</i>) Luanga Valle NP	01.01.19	No	(15x)	re-sequence
Southern giraffe (<i>G. giraffa</i>) Angolan	01.01.19	No	(100x)	De novo (gold)
Southern giraffe (<i>G.a giraffa</i>) South African	01.01.19	No	(15x)	re-sequence
Bears:				
Syrian brown bear (<i>Ursus arctos syriacus</i>) male	01.07.18	No	(20x)	re-sequence
Syrian brown bear (<i>Ursus arctos syriacus</i>) female	01.07.18	No	(20x]	re-sequence
Kamchatka brown bear (<i>Ursus arctos beringianus</i>)	01.07.18	No	(20x]	re-sequence