

Gene linkage:

Genes that tend to be inherited together are said to be genetically linked.

Haplotypes:

Particular combinations of alleles carried on single chromosomes are called haplotypes. Freq. of various haplotypes within a population characterise the structure of populations & can allow reconstruction of the evolutionary history of a population.

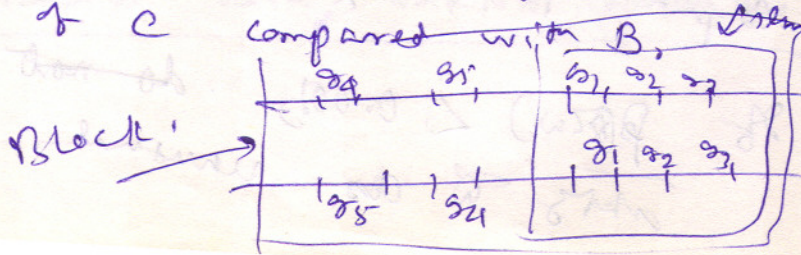
Consider two species B & C, both descendants ~~from~~ of ancestor A. Under this context the evolution on genetic linkage can be characterized by following attributes or description:

Conserved Synteny: Same (linked) sets of genes in a chromosome of B & C.

Conserved Segment: Conserved synteny with the physical ordering preserved.

Syntenic Segment: If "high density" "landmarks" appear in the same order on a single chromosome in each of the two species.

Syntenic block: A set of adjacent syntenic segments is called a syntenic block, which may contain inversion & permutation of the syntenic segments of C compared with B.



One of the significant computational problems is  
the computation of phylogenetic trees based upon  
sequences or gene orders.