

Schistosoma Ancestor

The ancestor of the *S. japonicum* complex diversity rapidly and colonise Central, Eastern and South East Asia. Mt genome gene order is the same as all other trematodes and cestodes

First invasion of Africa by schistosomes giving rise to the *S. hippopotomi* clade. This is basal to the rest of the non African/ non *S. japonicum* group species and assumed to have the same mt gene genome order as the Asian schistosomes

Second invasion of Africa by ancestors that where similar to *Orientobilharzia turkestanicum* and *S. incognitum*

Population bottle neck occurred marked by a change in mtgenome gene order and in sex chromosome size and gave rise to the proto – *S. mansoni* clade

S. mansoni type sex chromosome karyotype seen throughout both groups of African *Schistosoma* species and thus considered to be the ancestral form

S. haematobium is the only species in Africa with this karyotype but shares homology with the other African species in mt gene order

Both species, *S. bovis* and *S. mattheei* primarily found in cattle and appear to have the same karyotype even though the mtDNA shows them to be phylogenetically distinct

Schistosoma indicum group? Retained the African mt genome gene order no karyotype information available

Reinvasion of Asia from the Africa giving rise to the *S. indicum* group

S. japonicum

S. sinensium

S. mekongi

S. malayensis

