

Simulations with Drift and Sampling correction

```
##  
## Attaching package: 'boot'  
##  
## The following objects are masked from 'package:gtools':  
##  
##     inv.logit, logit
```

Simulations under drift

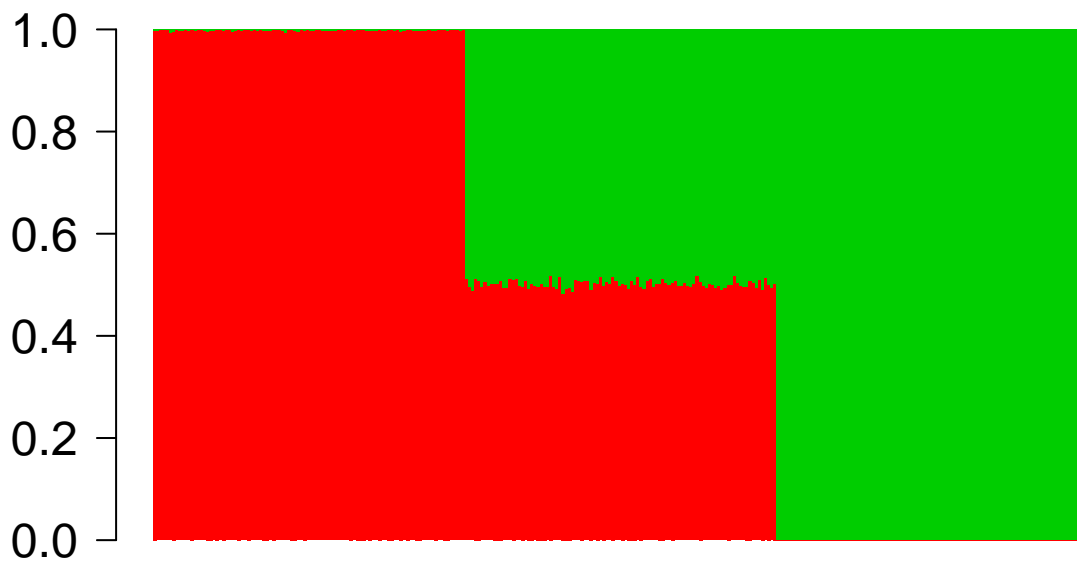
Global parametes: Population size = $1e4$ and number of samples from each currenty day population is 100 for a total of 300 populations. And the two ancestral frequencies are from Haak et al, 2015 (Yamanaya and WHG)

$K_known = 2$, $K_unknown = 0$

(a)

$t1 = 100$, $t2 = 100$, $\alpha = 0.5$

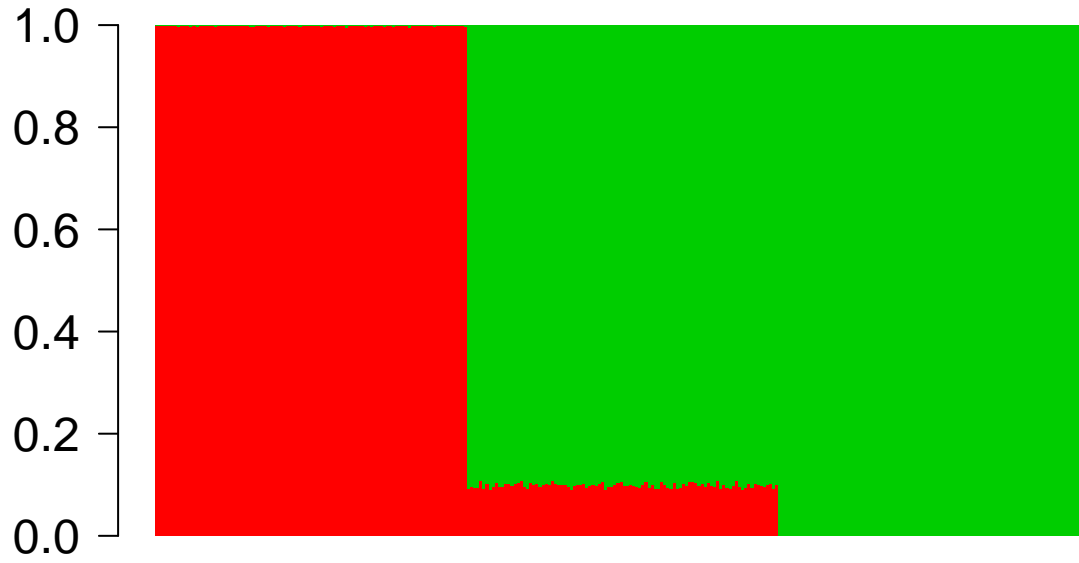
estd structure: No. of clusters= 2



(b)

$t1 = 100$, $t2 = 100$, $\alpha = 0.1$

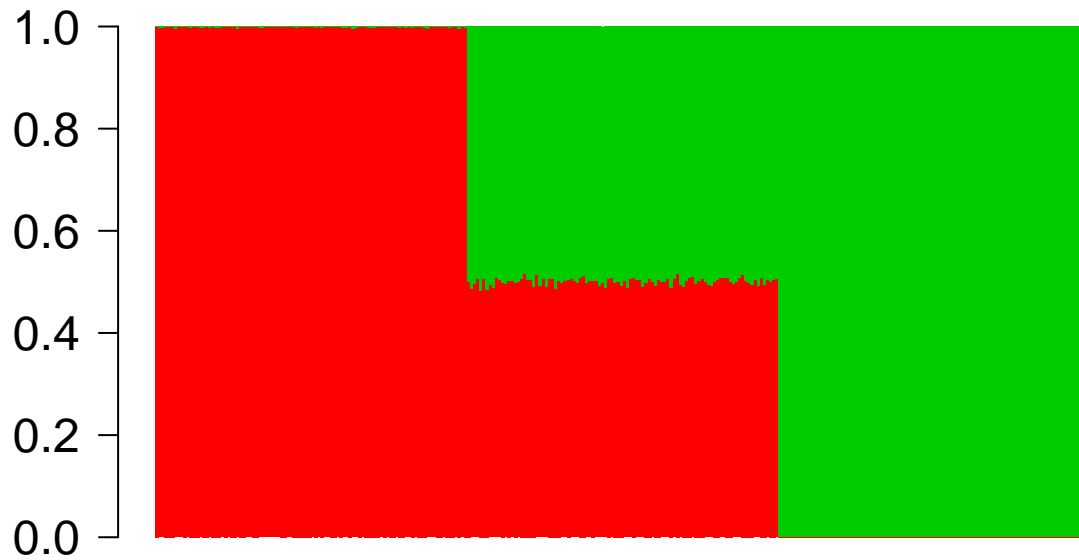
estd structure: No. of clusters= 2



(c)

$t1 = 250, t2 = 250, \alpha = 0.5$

estd structure: No. of clusters= 2



(d)

$t1 = 1, t2 = 300, \alpha = 0.5$

(e)

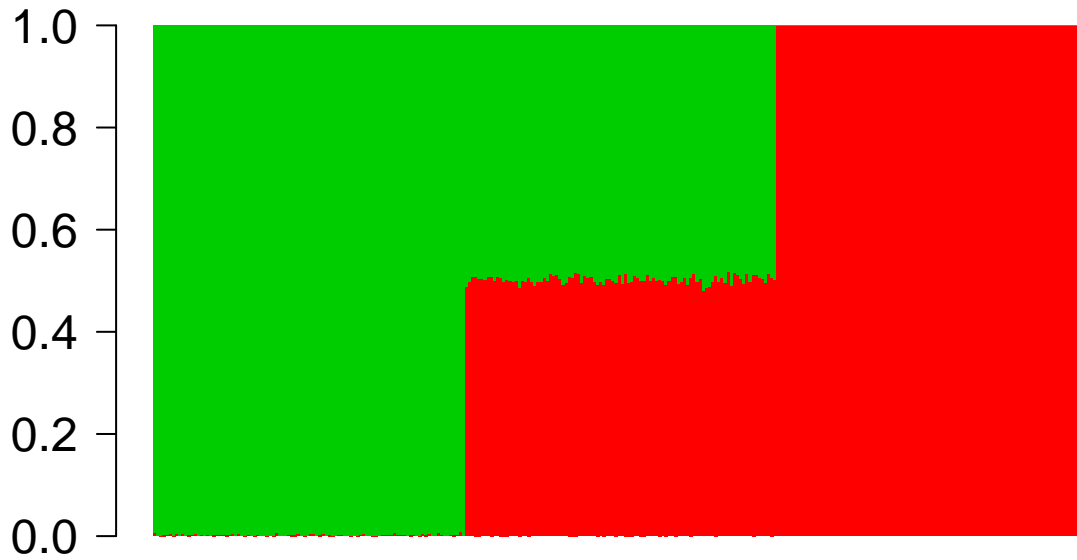
$t1 = 300, t2 = 1, \alpha = 0.5$

$K_known = 1$ and $K_unknown = 1$

(a-2)

$t1 = 100, t2 = 100, \alpha = 0.5$

estd structure: No. of clusters= 2



(b-2)

$t1 = 100, t2 = 100, \alpha = 0.1$

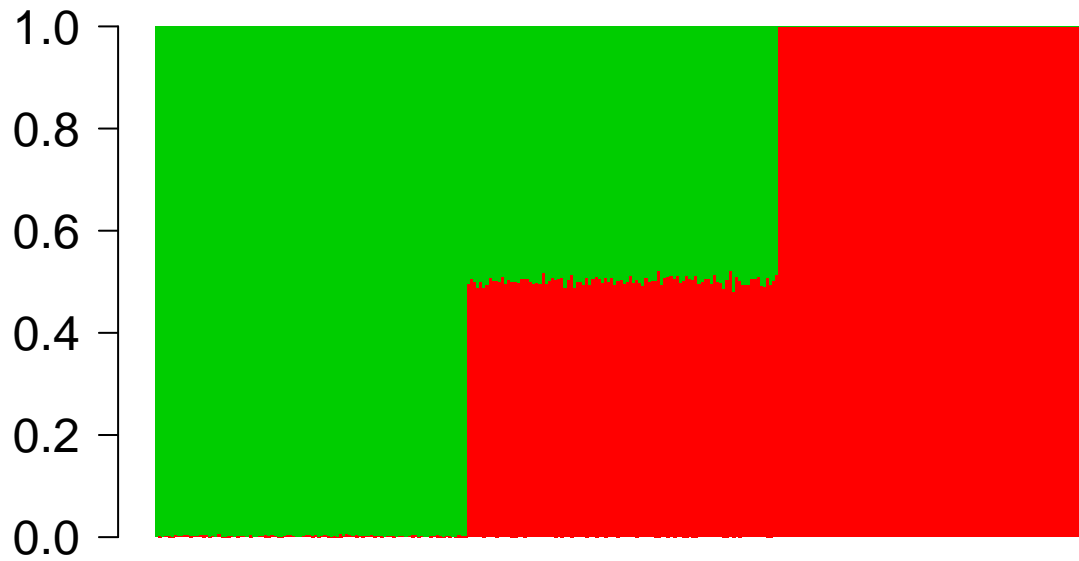
estd structure: No. of clusters= 2



(c-2)

$t_1 = 250, t_2 = 250, \alpha = 0.5$

estd structure: No. of clusters= 2



(d-2)

$t_1 = 1, t_2 = 300, \alpha = 0.5$

(e-2)

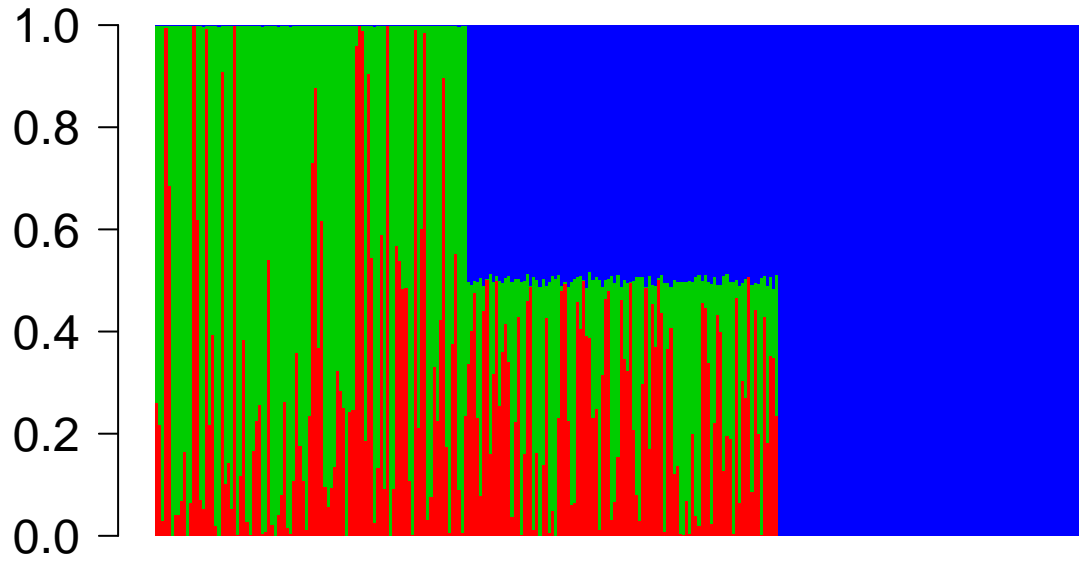
$t_1 = 300, t_2 = 1, \alpha = 0.5$

$K_{\text{known}} = 2$ and $K_{\text{unknown}} = 1$

(f)

$t_1 = 1, t_2 = 1, \alpha = 0.5$

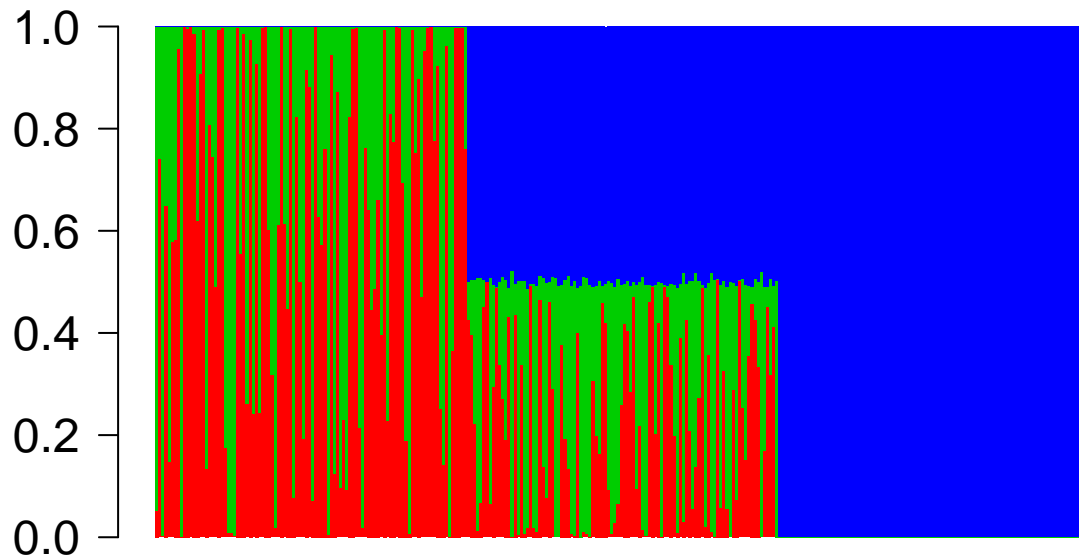
estd structure: No. of clusters= 3



(g)

$t1 = 250, t2 = 250, \alpha = 0.5,$

estd structure: No. of clusters= 3



(h)

$t1=10, t2 = 300, \alpha = 0.5$

Now with sampling error and drfit

(I)

$t_1 = 200, t_2 = 200, \alpha = 0.5, K_{\text{known}} = 2, K_{\text{unknown}} = 0$

estd structure: No. of clusters= 2



(J)

$t_1 = 200, t_2 = 200, \alpha = 0.5, K_{\text{known}} = 1, K_{\text{unknown}} = 1$

estd structure: No. of clusters= 2

