

Loci

Individuals

0	2	2	1	1	0	1
0	2	1	0	1		
2	...					

X

$$E[x_{ij}|T] = 2p_i,$$

$$\text{Var}(x_{ij}|T) = 2p_i(1-p_i)(1+f_j),$$

$$\text{Cov}(x_{ij}, x_{ik}|T) = 4p_i(1-p_i)\varphi_{jk},$$

$$(1-F_{IT}) = (1-F_{IS})(1-F_{ST}),$$

$$(1-f_j) = (1-f_j^{L_j})(1-f_{L_j}),$$

$$F_{ST} = \sum_{j=1}^n w_j f_{L_j},$$

$$\hat{p}_i = \frac{1}{2} \sum_{j=1}^n w_j x_{ij},$$

$$\hat{\varphi}_{jk}^{\text{new}} \xrightarrow[m \rightarrow \infty]{\text{a.s.}} \varphi_{jk}.$$

E, Var, Cov,

round, sgn, logit,

$$\xrightarrow[m \rightarrow \infty]{\text{a.s.}}, \xrightarrow[n \rightarrow \infty]{\text{a.s.}}, \xrightarrow[n, m \rightarrow \infty]{\text{a.s.}},$$

 $x_{ij}, p_i, \hat{p}_i, F_{ST}, F_{IT}, F_{IS},$
 $f_B^A, f_j, f_j^{L_j}, f_{L_j}, \varphi_{jk}, \varphi_{jk}^{L_{jk}},$
 $f_{L_{jk}}, f_{L_j}^{L_{jk}}, R_{ST}, \phi_{ST}, G_{ST},$
 $G'_{ST}, \hat{F}_{ST,i}^{\text{sample}}, \hat{F}_{ST}^{\text{indep}}, \hat{F}_{ST}^{\text{WC}},$
 $\hat{F}_{ST}^{\text{Hudson}}, \hat{F}_{ST}^{\text{HudsonK}}, \hat{\varphi}_{jk}^{\text{std}},$
 $\hat{f}_j^{\text{std}}, \hat{f}_j^{\text{stdII}}, \hat{f}_j^{\text{stdIII}},$
 $\hat{F}_{ST}^{\text{std}}, \hat{F}_{ST}'^{\text{std}}, \hat{F}_{ST}''^{\text{std}}, \hat{\varphi}_{jk}^{\text{new}},$
 $\hat{\varphi}_{\min}^{\text{new}}, \hat{f}_j^{\text{new}}, \hat{F}_{ST}^{\text{new}},$
 $\hat{\varphi}_{jk}^{L_{jk}, \text{beagle}}, \hat{f}_j^{L_{jk}, \text{beagle}},$
 $p(1-p), A_{jk}, \hat{A}_{\min}.$