\( Y_{mi} \) decides strand assignment of alleles

\( s_i \) decides strand transmitted to offspring

\( \sigma_i \) mapping strands to parental origin

Sureness

\( \hat{a}_{mi} \) allows the allele assignment to be partial

\( \hat{a}_{mi} = 0.5 \), uninformative
\( \hat{a}_{mi} = 0.9 \), strong bias
\( \hat{a}_{mi} = 1.0 \), no uncertainty

Recorded allele value \( a_{mi} \)

"1" in all three examples