

**S3 Table. Estimated probability  $Pr(\text{deviation})$  in small families.**

	AUTOTYP		GLOTTOLOG	
	Binom./MCMC	ML	Binom./MCMC	ML
Africa	0.00	0.00	0.00	0.00
Eurasia	0.03	0.03	0.03	0.03
Pacific	0.03	0.00	0.07	0.06
South America	0.00	0.00	0.00	0.00
Rest of the Americas	0.00	0.00	0.00	0.00

$Pr(\text{deviation})$  is the probability that the sole survivor(s) of a larger unknown family that is sampled with  $Pr(\text{bias})$  as exhibiting a bias is in fact not representative of the direction of that bias, i.e. exhibits a structure that deviates from the bias that characterized the larger family.