

**Table S12. Main set of parameter estimates in *G-PhoCS* analysis.**

Parameter	Raw estimate $\times 10^4$	Calibrated <sup>a</sup>	Parameter	Raw estimate $\times 10^4$	Calibrated <sup>a</sup>
$N_{\text{BSJ}}$	1.1 (0.9–1.2)	2,639 (2,322–2,942)	$T_{\text{ancDOG1}}$	0.40 (0.36–0.44)	12,102 (10,932–13,074)
$N_{\text{DNG}}$	0.8 (0.7–0.8)	1,914 (1,760–2,080)	$T_{\text{ancDOG}}$	0.43 (0.39–0.46)	12,795 (11,736–13,701)
$N_{\text{ISW}}$	10.4 (8.6–12.3)	26,092 (21,611–30,732)	$T_{\text{ancWLF1}}$	0.45 (0.39–0.50)	13,389 (11,688–14,982)
$N_{\text{CRW}}$	4.6 (3.9–5.2)	11,427 (9,835–12,968)	$T_{\text{ancWLF}}$	0.45 (0.39–0.50)	13,455 (11,766–15,060)
$N_{\text{CHW}}$	2.2 (1.9–2.4)	5,426 (4,733–6,087)	$T_{\text{ancDW}}$	0.50 (0.46–0.53)	14,874 (13,875–15,900)
$N_{\text{GLJ}}$	7.8 (7.5–8.1)	19,446 (18,746–20,139)	$T_{\text{root}}$	13.3 (12.7–13.8)	398,262 (381,927–415,086)
$N_{\text{ancDOG1}}$	0.3 (0.0–0.8)	793 (66–1,990)	$m_{\text{ISW} \rightarrow \text{BSJ}}$	0.18 (0.12–0.24)	
$N_{\text{ancDOG}}$	0.8 (0.3–1.3)	1,999 (701–3,200)	$m_{\text{BSJ} \rightarrow \text{ISW}}$	0.07 (0.06–0.09)	
$N_{\text{ancWLF1}}$	0.6 (0.0–1.3)	1,393 (44–3,327)	$m_{\text{CHW} \rightarrow \text{DNG}}$	0.03 (0.00–0.06)	
$N_{\text{ancWLF}}$	5.1 (0.4–10.0)	12,627 (981–24,991)	$m_{\text{DNG} \rightarrow \text{CHW}}$	0.04 (0.02–0.06)	
$N_{\text{ancDW}}$	18 (17.7–18.3)	44,993 (44,205–45,812)	$m_{\text{GLJ} \rightarrow \text{ISW}}$	0.00 (0.00–0.00)	
$N_{\text{root}}$	7.3 (6.5–8.0)	18,169 (16,311–19,990)	$m_{\text{ISW} \rightarrow \text{GLJ}}$	0.05 (0.04–0.06)	
			$m_{\text{GLJ} \rightarrow \text{ancDW}}$	0.02 (0.01–0.03)	
			$m_{\text{ancDW} \rightarrow \text{GLJ}}$	0.99 (0.89–1.10)	

<sup>a</sup> Absolute parameter values are obtained by assuming an average mutation rate of  $m=1.0 \times 10^{-8}$  mutations per site per generation and an average generation time of three years (see Text S9).