

## Errata I

### Yang 2014 Molecular Evolution: A Statistical Approach

Page	Incorrect	Correct	Notes
p.3 table 1.1 F84 row A column C	$\beta\pi_T$	$\beta\pi_C$	
p.67 eq. 2.38	$V_0$	$U_0^{-1}$	
p.105 figure 4.2 last number for node 6	0.004344	0.000444	
p.106 line –23	0.004344 = 0.003070	0.000444 = 0.002976	
p.123 line 15	Yang, Lauder, and Lin (1995b);	Yang, Lauder, and Lin (1995c);	
p.138 line –12	$\pi_1 = x_1/s, \pi_2 = x_2/s, \pi_3 = x_3/s$	$\pi_1 = e^{x_1}/s, \pi_2 = e^{x_2}/s, \pi_3 = e^{x_3}/s$	
p.182 l.–7	simple and composite	null and alternative	
p.188 below eq. 2.15	for all $n$ .	for all $x$ .	
p.196 in Eq. 6.33	$\exp\{-$	$\exp\{$	delete the minus sign
p.196 line –12	$(L_1 + L_1)$	$(L_0 + L_1)$	
p.197 line 16	Bayesians	Bayesian	
p.198 line 2	have the same K-L divergence from the true model	are all correct and encompass the true model	
p.204 below eq. 6.66	$V = -H^{-1}$	$V = -(nH)^{-1}$	
p.207 line –3	(13.24)	(A.24)	
p.209 fig. 6.8b			The four lines with points should be moved to the right to align with the x axis.
p.228 l.6	$(\alpha + 1)$	$(\alpha - 1)$	
p.230 l.18	with $x > 7$	with $\theta > 7$	
p.232 above eq. 7.37	$EA^n E^{-T}$	$EA^n E^{-1}$	change –T into –1
p.233, 3 lines above eq. 7.40.	gives the efficiency	gives the variance	
p.234 line –6,	$k$	$K$	twice
p.238 line –7	$EA^n E^{-T}$	$EA^n E^{-1}$	change –T into –1
p.244 lines –14 & –13	$\rho_k + \rho_{k+1}$	$\rho_{2k} + \rho_{2k+1}$	
p.282 paragraph 1	If the branch lengths (and other parameters) are from the posterior for the		This statement is true only in the case where $\alpha$ in equation (8.21) is < 1 for all possible $t$

	current tree, the branch lengths in the new tree (when the algorithm moves to the new tree through a cross-tree move) will automatically be from the stationary (posterior) distribution for the new tree.		and $t'$ but is in general incorrect. In the latter case, use of within-chain moves will benefit the mixing efficiency for estimating posterior model (tree) probabilities.
p.294, figure 8.11a			Label the mother node of node $a$ as $u$ and the daughter node as $v$ . See attached figure.
p.294, lines 2-3	the proposal ratio will be one. Otherwise the proposal ratio will be the ratio of the uniform and exponential densities for the age of node $a$ :	the proposal ratio will be the ratio of the uniform densities for the age of node $a$ at the source and target. Otherwise it will be the ratio of the uniform and exponential densities.	
p.294, first line within eq. 8.29	1	$\frac{1/(t_u - \max\{t_x, t_v\})}{1/(t_b - \max\{t_x, t_y\})}$	
p.310 fig. 9.1b	MRCA →	MRCA →	arrow should point to the node in the gene tree
p.329 line -7	$\tau s$	$\tau s$	remove space
p.337 below eq. 9.47	species'	species	
p.335 line -3	Liu et al. (2010b)	Liu et al. (2010a)	
p.336 paragraph 1 in Sec 9.4.3.2	Liu et al. (2010a)	Liu et al. (2010b)	twice
p.338 paragraph above Sec 9.4.3.3	Liu et al. (2010a)	Liu et al. (2010b)	
p.338 paragraph 1 in Sec 9.4.3.3	Liu et al. (2010b)	Liu et al. (2010a)	
p.356 l.2	(Zang et al. 2011)	(Zhang et al. 2011)	
p.422 l.-3	if $j \leq i$ , set $j = j + 1$	if $j \geq i$ , set $j = j + 1$	
p.480	Steel, M.	Steel, M.A.	twice, and reorder references
p.196 in Eq. 6.33	$\exp\{-$	$\exp\{$	delete the minus sign
p.196 line -12	$(L_1 + L_1)$	$(L_0 + L_1)$	

p.198 line 2	have the same K-L divergence from the true model	are all correct and encompass the true model
p.233 line 3 below Eq. 7.40	$E = 1/(2\pi_2 - 1)$	$E = 1/(1 - 2\pi_2)$
p.257 table 7.6 first column	$B_{01}$	$B_{10} = 1/B_{01}$
p.361 line -3	habits	habitats
p.422 line -3	if $j \leq i$ ,	if $j \geq i$ ,

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We decided to set symbols for vectors in bold italic ( $\mathbf{x}$ ,  $\mathbf{y}$ ,  $\mathbf{t}$ ) rather than bold ( $\mathbf{x}$ ,  $\mathbf{y}$ ,  $\mathbf{t}$ ). However this rule is not consistently applied. The following lists the page numbers (and number of occurrences) where the symbols should be corrected.

p.102 (1 time), p.103 (6 times), p.104 (2), p.105 (1), p.106 (2), p.107 (1), p.111 (15), p.112 (8), p.114 (4), p.115 (5), p.117 (2), p.120 (3), p.123 (1), p.127 (6), p.128 (17), p.130 (13), p.131 (2), p.139 (1), p.172 (1), p.178 (3), p.226 (10), p.267 (2), p.268 (12), p.269 (1), p.281 (2), p.329 (1), p.382 (2), p.408 (4), p.447 (1).