Model	Parameter	Achromatic, 1 JND	Achromatic, 2 JND	Achromatic, 3 JND	Chromatic, 1 JND	Chromatic, 2 JND	Chromatic, 3 JND
Breeding Timing							
	Instrucept Berecking Senson Length Partial Migration vx. No Migration Pall Migration vx. No Migration Beneding Senson Length x Partial Migration Beneding Senson Length x Partial Migration Beneding Senson Length x Fall Migration Phylogonatic Sagmad, Medicina (1998; Cordibbe Interval)	black-1.16 (-3.87, 1.67), pd = 0.76 black-0.06 (-0.62, 0.56), pd = 0.57 black-0.04 (-1.16, 1.01), pd = 0.53 black-0.04 (-1.16, 1.01), pd = 0.53 black-0.29 (-0.73, 1.37), pd = 0.98 black-0.29 (-0.73, 1.37), pd = 0.9 black-0.29 (0.16, 0.43)	red-8.36 (-16.28, -0.62), pd = 0.98 red-2.36 (-4.72, 0.03), pd = 0.97 black1.41 (-12, 4.12), pd = 0.83 blue4.2 (1.16, 7.5), pd = 0.99 blue5.03 (-0.14, 6.38), pd = 0.96 blue4.19 (-0.53, 9.34), pd = 0.93 blue6.17 (0.56, 0.86)	ref-7.81 (-14.83, -1.86), pd = 0.99 ref-1.39 (-3.56, 0.4), pd = 0.91 black1.20 (-0.82, 3.57), pd = 0.85 blue3.11 (0.46, 5.73), pd = 0.98 blue3.11 (0.27, 4.62), pd = 0.94 black2.8 (-1.3, 6.72), pd = 0.89 black0.61 (0.42, 0.8)	black-0.88 (-2.98, 1.05), $pd = 0.78$ black-0.12 (-0.79, 0.34), $pd = 0.08$ black.0.72 (-0.06, 1.59), $pd = 0.94$ black.0.83 (-0.37, 1.99), $pd = 0.88$ black.0.33 (-0.43, 1.14), $pd = 0.76$ black.0.32 (-1.16, 2.12), $pd = 0.7$ black.0.72 (0.08, 0.28)	red-7.21 (-15.29, 0.55), pd = 0.95 red-1.99 (-4.64, 0.35), pd = 0.94 black1.9 (-0.87, 4.9), pd = 0.88 blue4.39 (1.03, 8.14), pd = 0.99 blue2.2 (-0.82, 5.53), pd = 0.9 blue5.08 (-0.18, 11.12), pd = 0.95 blue5.08 (-0.18, 11.12), pd = 0.95	bluck-2.5 (-8.12, 2.21), pd = 0.83 bluck-2.6 (-1.13, 10.99), pd = 0.92 bluck-4.6 (-0.68, 12.61), pd = 0.95 bluck3.54 (-2.58, 11.13), pd = 0.85
Breeding Spacing	Intercept Island vs. Mainhaud Becceling Range Size Phylogenetic Signal , Median (199% Credible Interval)	$\begin{array}{l} black-1.94 \; (-6.01,\; 2.01),\; pd = 0.8 \\ black0.08 \; (-1.38,\; 1.57),\; pd = 0.54 \\ black0.08 \; (-0.13,\; 0.28),\; pd = 0.75 \\ black0.27 \; (0.15,\; 0.41) \end{array}$	$\begin{array}{l} {\rm red}\text{-}9.77 \; (\text{-}20.11,\; 0.89),\; pd = 0.95 \\ {\rm black}\text{-}0.64 \; (\text{-}4.43,\; 2.88),\; pd = 0.61} \\ {\rm black}\text{-}2.12 \; (\text{-}0.27,\; 0.7),\; pd = 0.77} \\ {\rm black}\text{-}0.71 \; (0.56,\; 0.85) \end{array}$	$\begin{array}{l} {\rm red\text{-}10.31\ (\text{-}19.2,\text{-}1.98),pd} = 0.98 \\ {\rm black\cdot0.09\ (\text{-}3.02,2.96),pd} = 0.52 \\ {\rm black0.26\ (\text{-}0.14,0.66),pd} = 0.87 \\ {\rm black0.6\ (0.42,0.77)} \end{array}$	$\begin{array}{l} black-0.67 \; (-3.63, 2.27),  pd = 0.65 \\ red-1.3 \; (-2.45, -0.12),  pd = 0.97 \\ blacks.02 \; (-0.14, 0.18),  pd = 0.58 \\ blacks.0.5 \; (0.07, 0.25) \end{array}$	$\begin{array}{l} \rm red8.32\ (18.86,\ 2.03),\ pd\ =\ 0.92\\ \rm black3.39\ (8.67,\ 1.38),\ pd\ =\ 0.89\\ \rm black3.21\ (0.29,\ 0.72),\ pd\ =\ 0.77\\ \rm black0.72\ (0.55,\ 0.86) \end{array}$	$\begin{array}{l} {\rm red}\text{-}12.87 \ (\text{-}39.57,\ 4.41),\ pd = 0.91 \\ {\rm black}\text{-}3.26 \ (\text{-}12.57,\ 4.21),\ pd = 0.77 \\ {\rm black}0.23 \ (\text{-}0.62,\ 1.1),\ pd = 0.69 \\ {\rm black}0.85 \ (0.71,\ 0.95) \end{array}$
Breeding Sympatry	Intercept Number of Sympatric Species ( 30% Breeding Range Overlap) Phylogenetic Signal , Median (90% Credible Interval)	$\begin{array}{l} {\rm red}\text{-}0.9 \; (\text{-}3.45,  1.76),  pd \equiv 0.72 \\ {\rm black}0.03 \; (\text{-}0.18,  0.24),  pd = 0.61 \\ {\rm black}0.26 \; (0.14,  0.39) \end{array}$	$\begin{array}{l} {\rm red}\text{-}6.89 \; (\text{-}14.7, \text{-}0.02), \; pd \; \equiv \; 0.95 \\ {\rm black}0.14 \; (\text{-}0.31, 0.56), \; pd \; \equiv \; 0.71 \\ {\rm black}0.7 \; (0.54, 0.83) \end{array}$	red-6.74 (-13.39, -1.09), $pd = 0.98black0.12 (-0.27, 0.49), pd = 0.71black0.59 (0.41, 0.77)$	$\begin{array}{l} {\rm red}\text{-}1.38 \ (\text{-}3.25,\ 0.3),\ pd \ \equiv \ 0.91 \\ {\rm blue}0.34 \ (0.17,\ 0.51),\ pd \ \equiv \ 0.99 \\ {\rm black}0.13 \ (0.06,\ 0.23) \end{array}$	$\begin{array}{l} {\rm red}\text{-}6.34 \; (\text{-}13.61, \; 0.11), \; pd \; \equiv \; 0.95 \\ {\rm blue}0.46 \; (0.01, \; 0.92), \; pd \; \equiv \; 0.96 \\ {\rm blue}0.09 \; (0.52, \; 0.83) \end{array}$	$\begin{array}{l} {\rm red}\text{-}11.29 \ (\text{-}22.79,  \text{-}1.24),  pd  \equiv  0.98 \\ {\rm blue}0.75 \ (0.03,  1.5),  pd  \equiv  0.97 \\ {\rm black}0.82 \ (0.67,  0.94) \end{array}$