

# all the models

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## Contents

smaller models to build:

Genus	species	cities	climate predictors	heteroskedasticity	b0	data
none	single	single	none	no	$b_0 \sim 1$	$y \sim 100*b_0 * (1 - \text{ex})$
none	single	single	none	yes	$b_0 \sim 1$	$y \sim 100*b_0 * (1 - \text{ex})$
none	many	single	none	no	$b_0 \sim (1 \mid \text{Species})$	$y \sim 100*b_0 * (1 - \text{ex})$
many	many	single	none	no	$b_0 \sim$	$y \sim 100*b_0 * (1 - \text{ex})$
many	many	single	none	yes		$y \sim 100*b_0 * (1 - \text{ex})$
none	single	many	none	no		$y \sim 100*b_0 * (1 - \text{ex})$
none	single	many	on $\beta_0$	no		$y \sim 100*b_0 * (1 - \text{ex})$
none	single	many	none	yes		$y \sim 100*b_0 * (1 - \text{ex})$
none	single	many	on $\beta_0$	yes		$y \sim 100*b_0 * (1 - \text{ex})$
many	many	many	on $\beta_0$	no		$y \sim 100*b_0 * (1 - \text{ex})$
many	many	many	on $\beta_0$	yes		$y \sim 100*b_0 * (1 - \text{ex})$

build up to the full model, then test relaxing some of the effects on the different betas

Genus	species	cities	climate predictors	heteroskedasticity	data	b0	b1	b2	sigma	formula
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