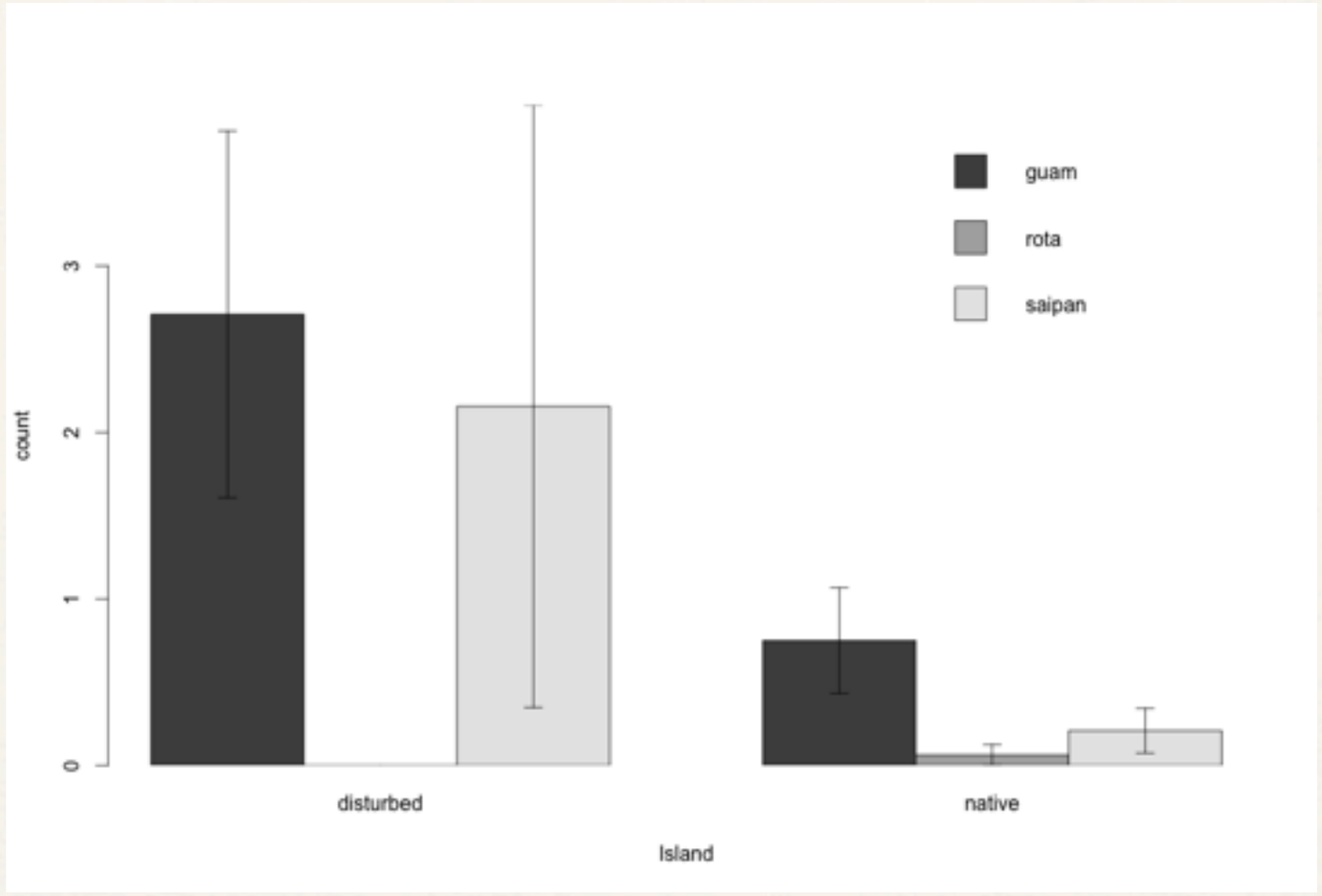
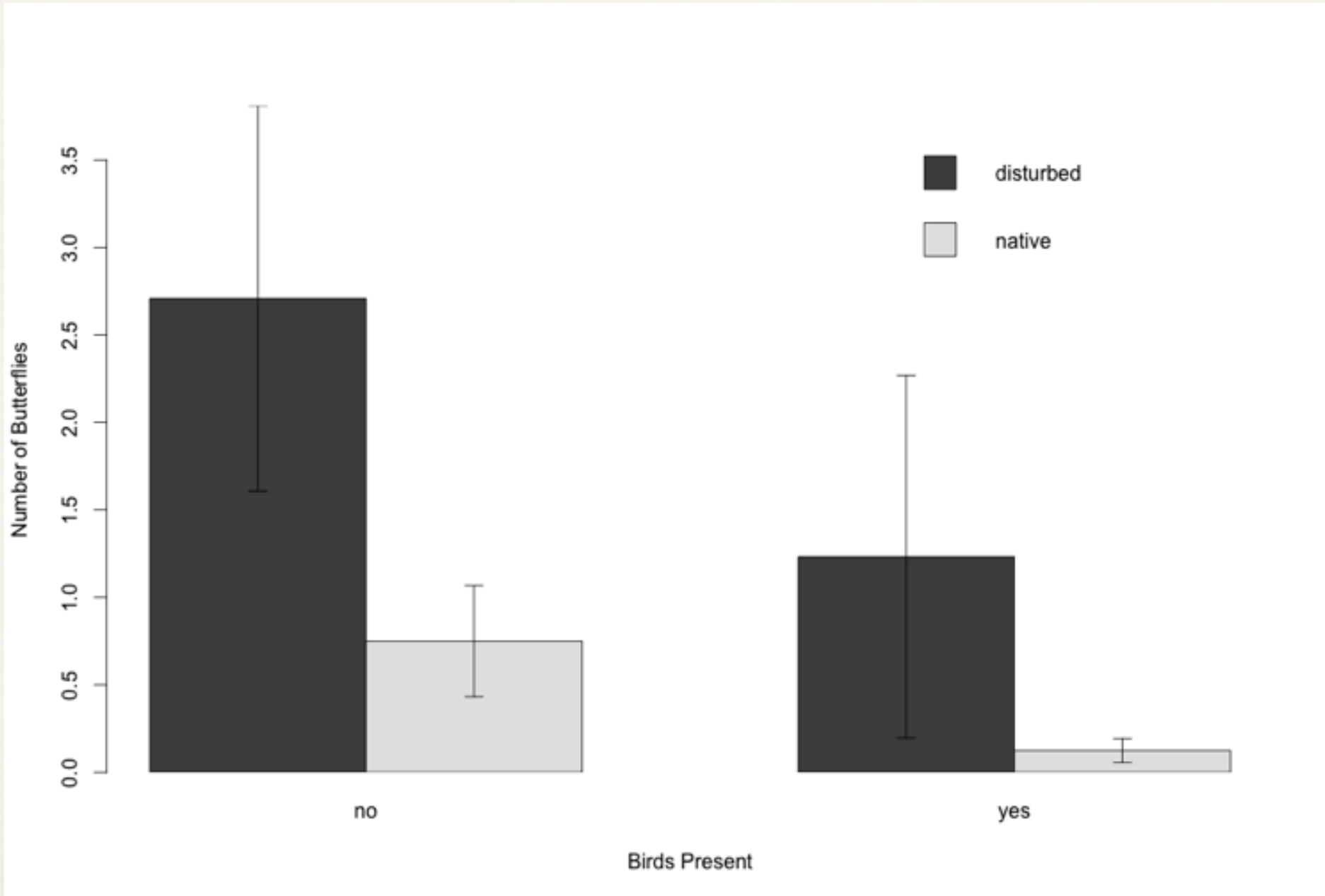
Data as of Nov 5, 2013

Butterfly Count by Island



Butterfly Count by Forest Type



Summary of Mixed Model

Call:

glm(formula = total ~ bird * type + length, family = "poisson",
data = sumbutterfly)

This is the model used to explain our data. We are testing if butterfly count is influenced by type of forest or presence of birds. Due to the fact that length varied between surveys, it is included as a random effect.

Deviance Residuals:

Min	1Q	Median	3Q	Max
-4.9198	-2.7106	-1.4746	-0.0848	10.2992

Coefficients:

	Estimate	Std. Error	z value	Pr(>|z|)	
(Intercept)	-1.870885	1.544583	-1.211	0.22580	
birdyes	-0.582394	0.177176	-3.287	0.00101	**
typenative	-1.132750	0.241085	-4.699	**2.62e-06**	***
length	0.016489	0.005132	3.213	0.00131	**
birdyes:typenative	-1.277013	0.466191	-2.739	0.00616	**

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

This value is highly significant. The amount of butterflies is highly influenced by the type of forest. A native forest is significantly less likely to have butterflies compared to a disturbed forest. A forest that has bird presence also is less likely to have butterflies.

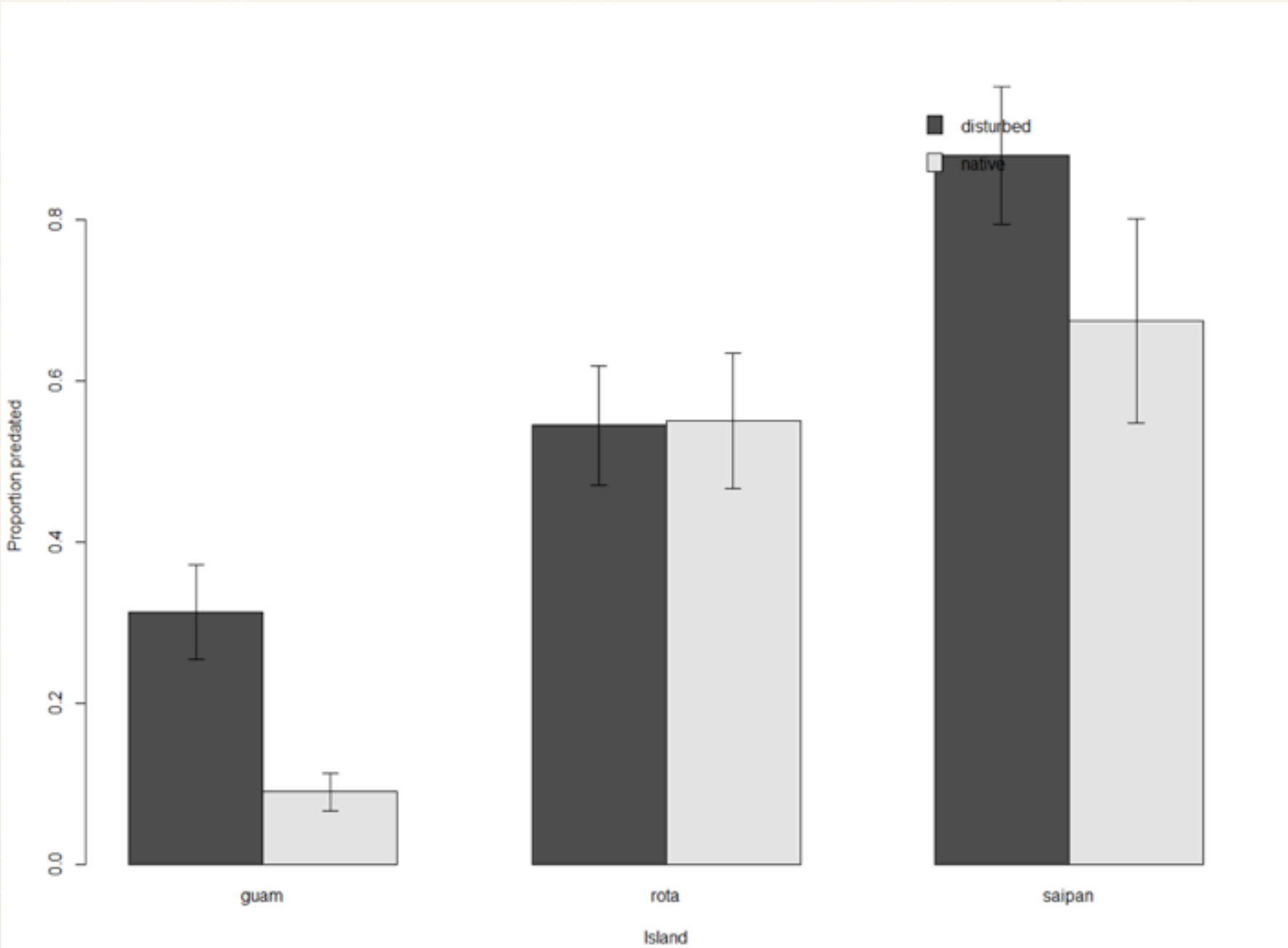
(Dispersion parameter for poisson family taken to be 1)

Null deviance: 387.68 on 20 degrees of freedom
Residual deviance: 252.66 on 16 degrees of freedom
AIC: 310.3

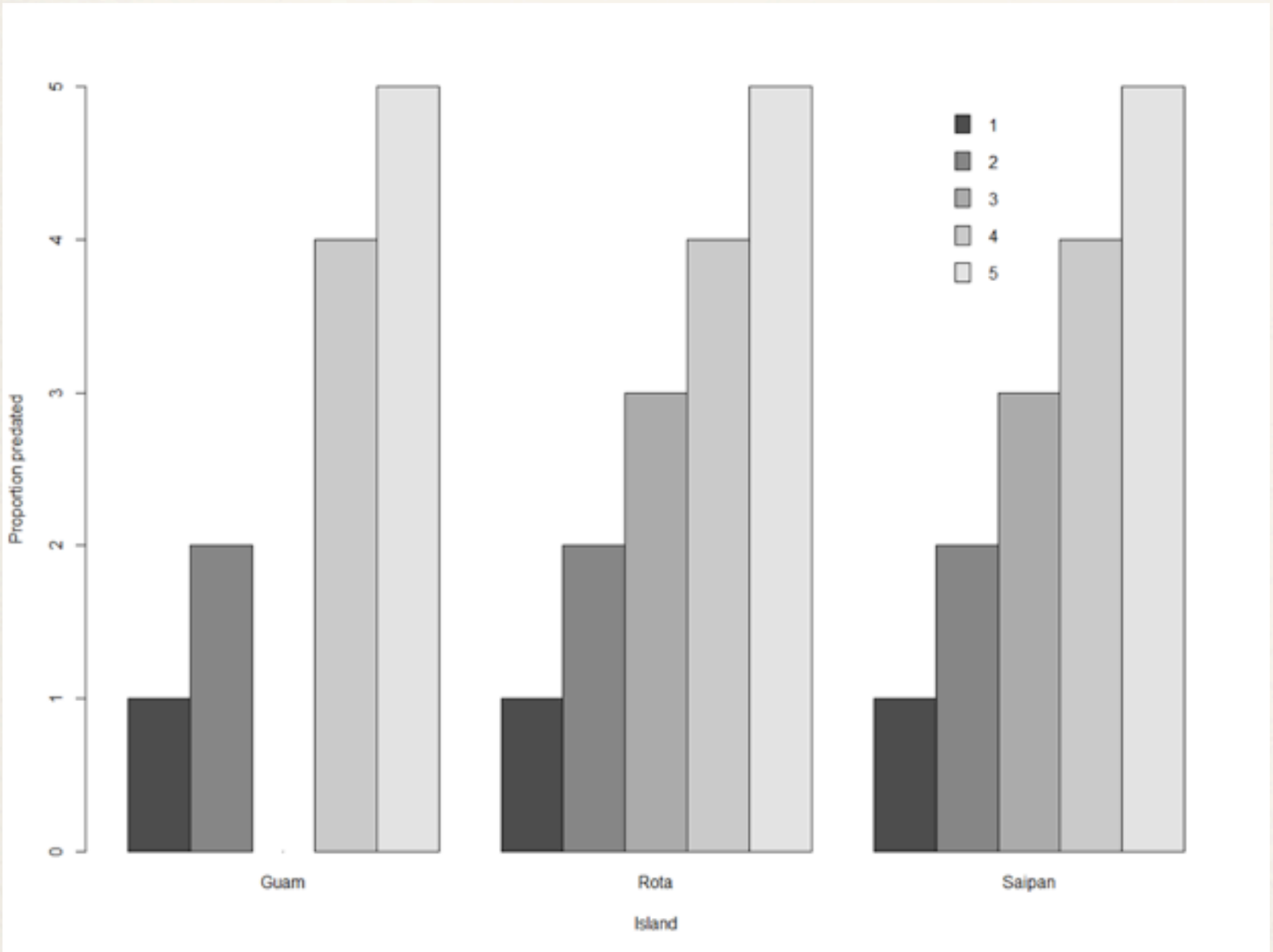
The lower the AIC value, the more accurate the model is. Compared to models that ignore forest type or bird presence, this model has the lowest AIC value.

Number of Fisher Scoring iterations: 9

Caterpillar Predation by Island/ Type



Caterpillar Predation by Type



Type 1 = Arthropod
Type 2 = Lizard
Type 3 = Bird
Type 4 = Small Mammal
Type 5 = Unknown