

SUPPLEMENTARY MATERIAL

1. Correlation plot

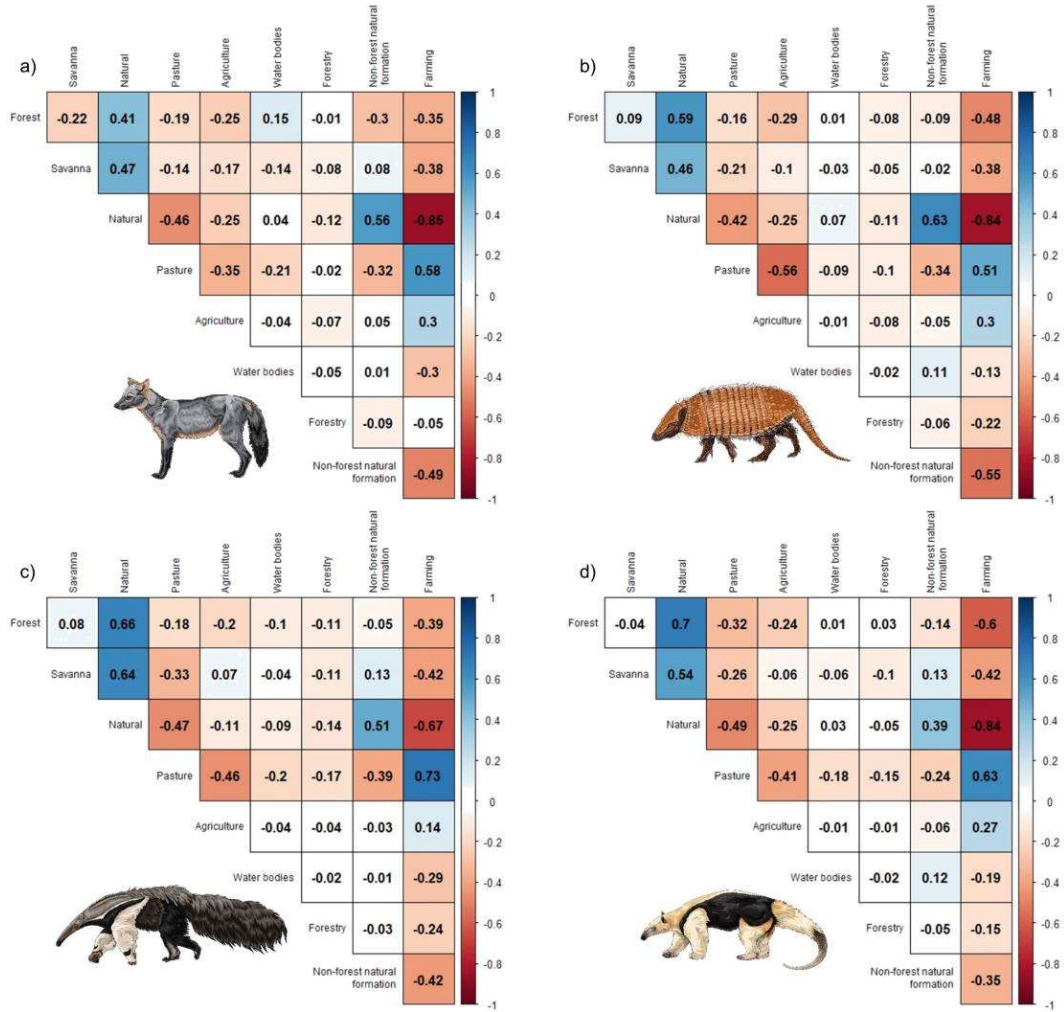


Figure S1. Plot of correlations between predictor variables for a) *Cerdocyon thous*, b) *Euphractus sexcinctus*, c) *Myrmecophaga tridactyla* and d) *Tamandua tetradactyla*. Darker shades of blue represent strong positive correlation while darker shades of red represent strong negative correlation.

2. R script for building and selecting best models

```
#Null Model
model_null = glm (n_roadkill~1, family =
binomial(link="probit"))

#Univariate models

model_forest = glm (n_roadkill~forest, family =
binomial(link="probit"))

model_savanna = glm (n_roadkill~savanna, family =
binomial(link="probit"))

model_open_vegetation = glm (n_roadkill~open_vegetation,
family = binomial(link="probit"))

model_natural = glm (n_roadkill~natural, family =
binomial(link="probit"))

model_pasture = glm (n_roadkill~pasture, family =
binomial(link="probit"))

model_agriculture = glm (n_roadkill~agriculture, family =
binomial(link="probit"))

model_farming = glm (n_roadkill~farming, family =
binomial(link="probit"))

model_forestry = glm (n_roadkill~forestry, family =
binomial(link="probit"))

#Multivariate models - with 2 landscape variables

model_pasture_agriculture = glm
(n_roadkill~pasture+agriculture, family =
binomial(link="probit"))

model_forest_savanna = glm (n_roadkill~forest+savanna, family
= binomial(link="probit"))

model_forest_pasture = glm (n_roadkill~forest+pasture, family
= binomial(link="probit"))

model_forest_agriculture = glm (n_roadkill~forest+agriculture,
family = binomial(link="probit"))

model_forest_farming = glm (n_roadkill~forest+farming, family
= binomial(link="probit"))

model_forest_forestry = glm (n_roadkill~forest+forestry,
family = binomial(link="probit"))

model_forest_open_vegetation = glm
(n_roadkill~forest+open_vegetation, family =
binomial(link="probit"))

model_savanna_pasture = glm (n_roadkill~savanna+pasture,
family = binomial(link="probit"))

model_savanna_agriculture = glm
(n_roadkill~savanna+agriculture, family =
binomial(link="probit"))
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model_savanna_farming = glm (n_roadkill~savanna+farming,
family = binomial(link="probit"))

model_savanna_forestry = glm (n_roadkill~savanna+forestry,
family = binomial(link="probit"))

model_savanna_open_vegetation = glm
(n_roadkill~savanna+open_vegetation, family =
binomial(link="probit"))

model_pasture_forestry = glm (n_roadkill~pasture+forestry,
family = binomial(link="probit"))

model_pasture_open_vegetation = glm
(n_roadkill~pasture+open_vegetation, family =
binomial(link="probit"))

model_agriculture_forestry = glm
(n_roadkill~agriculture+forestry, family =
binomial(link="probit"))

model_agriculture_open_vegetation = glm
(n_roadkill~agriculture+open_vegetation, family =
binomial(link="probit"))

model_farming_open_vegetation = glm
(n_roadkill~farming+open_vegetation, family =
binomial(link="probit"))

model_forestry_open_vegetation = glm
(n_roadkill~forestry+open_vegetation, family =
binomial(link="probit"))

model_farming_forestry = glm (n_roadkill~farming+forestry,
family = binomial(link="probit"))

#Models with two variables interacting between them

modelint_pasture_agriculture = glm
(n_roadkill~pasture*agriculture, family =
binomial(link="probit"))

modelint_forest_savanna = glm (n_roadkill~forest*savanna,
family = binomial(link="probit"))

modelint_forest_pasture = glm (n_roadkill~forest*pasture,
family = binomial(link="probit"))

modelint_forest_agriculture = glm
(n_roadkill~forest*agriculture, family =
binomial(link="probit"))

modelint_forest_farming = glm (n_roadkill~forest*farming,
family = binomial(link="probit"))

modelint_forest_forestry = glm (n_roadkill~forest*forestry,
family = binomial(link="probit"))

modelint_forest_open_vegetation = glm
(n_roadkill~forest*open_vegetation, family =
binomial(link="probit"))

modelint_savanna_pasture = glm (n_roadkill~savanna*pasture,
family = binomial(link="probit"))

```

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modelint_savanna_agriculture = glm
(n_roadkill~savanna*agriculture, family =
binomial(link="probit"))

modelint_savanna_farming = glm (n_roadkill~savanna*farming,
family = binomial(link="probit"))

modelint_savanna_forestry = glm (n_roadkill~savanna*forestry,
family = binomial(link="probit"))

modelint_savanna_open_vegetation = glm
(n_roadkill~savanna*open_vegetation, family =
binomial(link="probit"))

modelint_pasture_forestry = glm (n_roadkill~pasture*forestry,
family = binomial(link="probit"))

modelint_pasture_open_vegetation = glm
(n_roadkill~pasture*open_vegetation, family =
binomial(link="probit"))

modelint_agriculture_forestry = glm
(n_roadkill~agriculture*forestry, family =
binomial(link="probit"))

modelint_agriculture_open_vegetation = glm
(n_roadkill~agriculture*open_vegetation, family =
binomial(link="probit"))

modelint_farming_open_vegetation = glm
(n_roadkill~farming*open_vegetation, family =
binomial(link="probit"))

modelint_forestry_open_vegetation = glm
(n_roadkill~forestry*open_vegetation, family =
binomial(link="probit"))

modelint_farming_forestry = glm (n_roadkill~farming*forestry,
family = binomial(link="probit"))

#Model selecion by Akaike Criteria

AICctab(
model_null,
model_forest,
model_savanna,
model_open_vegetation,
model_natural,
model_pasture,
model_agriculture,
model_farming,
model_forestry ,
model_pasture_agriculture,
model_forest_savanna,
model_forest_pasture,
model_forest_agriculture,
model_forest_farming,
model_forest_forestry,
model_forest_open_vegetation,
model_savanna_pasture,
model_savanna_agriculture,
model_savanna_farming,
model_savanna_forestry,
model_savanna_open_vegetation,
model_pasture_forestry,
model_pasture_open_vegetation,
model_agriculture_forestry,
model_agriculture_open_vegetation,
model_farming_open_vegetation,

```

```
model_forestry_open_vegetation,  
model_farming_forestry,  
modelint_pasture_agriculture,  
modelint_forest_savanna,  
modelint_forest_pasture,  
modelint_forest_agriculture,  
modelint_forest_farming,  
modelint_forest_forestry,  
modelint_forest_open_vegetation,  
modelint_savanna_pasture,  
modelint_savanna_agriculture,  
modelint_savanna_farming,  
modelint_savanna_forestry,  
modelint_savanna_open_vegetation,  
modelint_pasture_forestry,  
modelint_pasture_open_vegetation,  
modelint_agriculture_forestry,  
modelint_agriculture_open_vegetation,  
modelint_farming_open_vegetation,  
modelint_forestry_open_vegetation,  
modelint_farming_forestry,  
weights = TRUE, delta = TRUE, base = TRUE)  
  
#vizulize the parameters of best models  
summary('best_model')  
  
#verifies if the best model has collinearity (if the values is  
bigger than 4 so is needed to simplify the model)  
vif('best_model')
```