

Supplementary material

Appendix 1

Table A1. Variables included as environmental predictors for the breeding habitat of rails. BIO variables were constructed by Hijmans *et al.* (2006) and downloaded from < <http://www.worldclim.org/>>. Wetland presence and type were developed and validated by Lehner & Döll (2004) and converted to binary presence/absence rasters. North American land cover was interpolated from SPOT VEGETATION satellite data (Latifovic *et al.* 2002).

Model Name	Description
BIO1	Annual Mean Temperature
BIO2	Mean Diurnal Range (Mean of monthly (max temp – min temp))
BIO5	Max Temperature of Warmest Month
BIO8	Mean Temperature of Wettest Quarter
BIO9	Mean Temperature of Driest Quarter
BIO12	Annual Precipitation
BIO13	Precipitation of Wettest Month
BIO15	Precipitation Seasonality (Coefficient of Variation)
BIO19	Precipitation of Coldest Quarter
GLWD	Wetland Presence
GLC2000	Land Cover

Table A2. The number of individuals caught and sampled for isotopic feather analysis by species, year, and location. All birds in Saskatchewan were captured in June and July. All other birds were captured between August and November.

Species	Year	Arkansas	Illinois	Louisiana	Minnesota	Mississippi	Missouri	Ohio	Saskatchewan	South Carolina	Total
Sora	2015	2	6	38	6		53	10	45	2	162
Virginia Rail	2015						8		4	1	13
Yellow Rail	2013						4				4
	2014								17		17
	2015					2	5		13		13
All	Total	2	6	38	6	2	75	10	79	3	221

Figure A1 - Corrected $\delta^2\text{H}$ of Sora (*Porzana carolina*), Virginia Rail (*Rallus limicola*) and Yellow Rail (*Corturnicops novebrancis*) as a function of location. Individuals from Saskatchewan were captured on the breeding grounds. All others were captured during autumn migration.

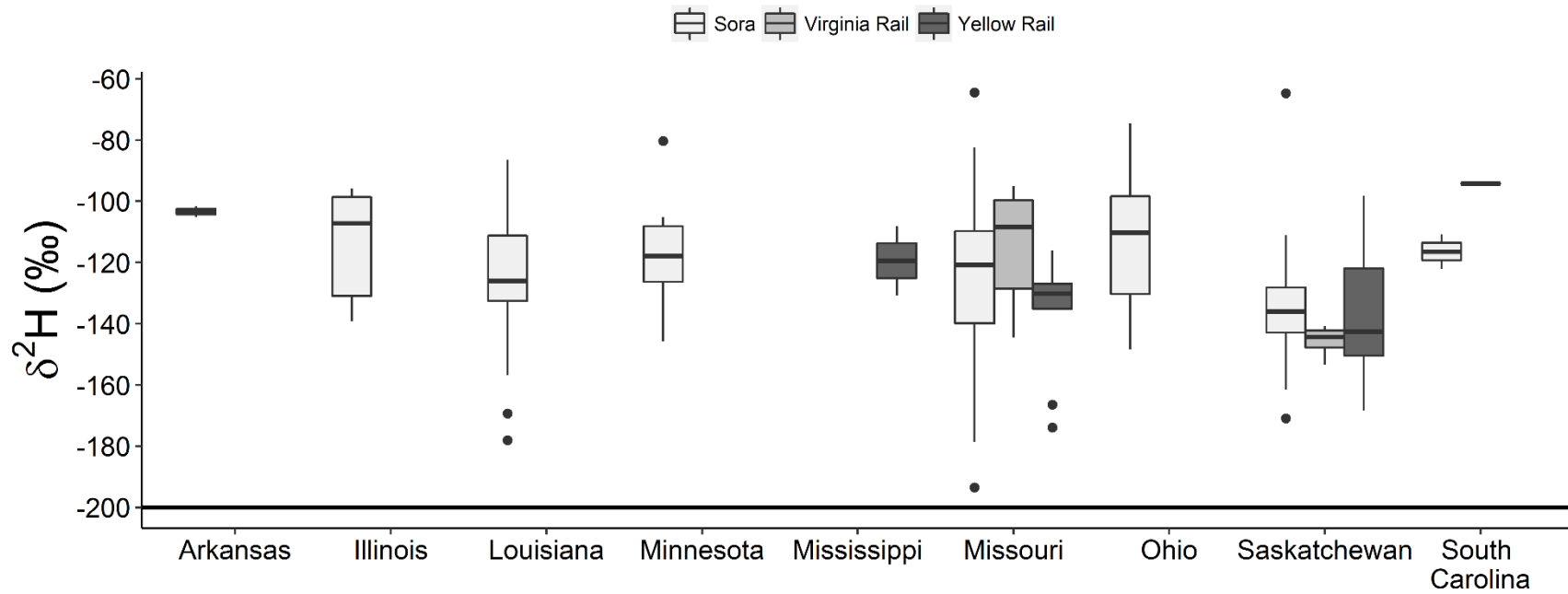


Figure A2 - Assignment of breeding areas of Virginia Rail (*Rallus limicola*). Each map depicts individuals captured within that particular state.

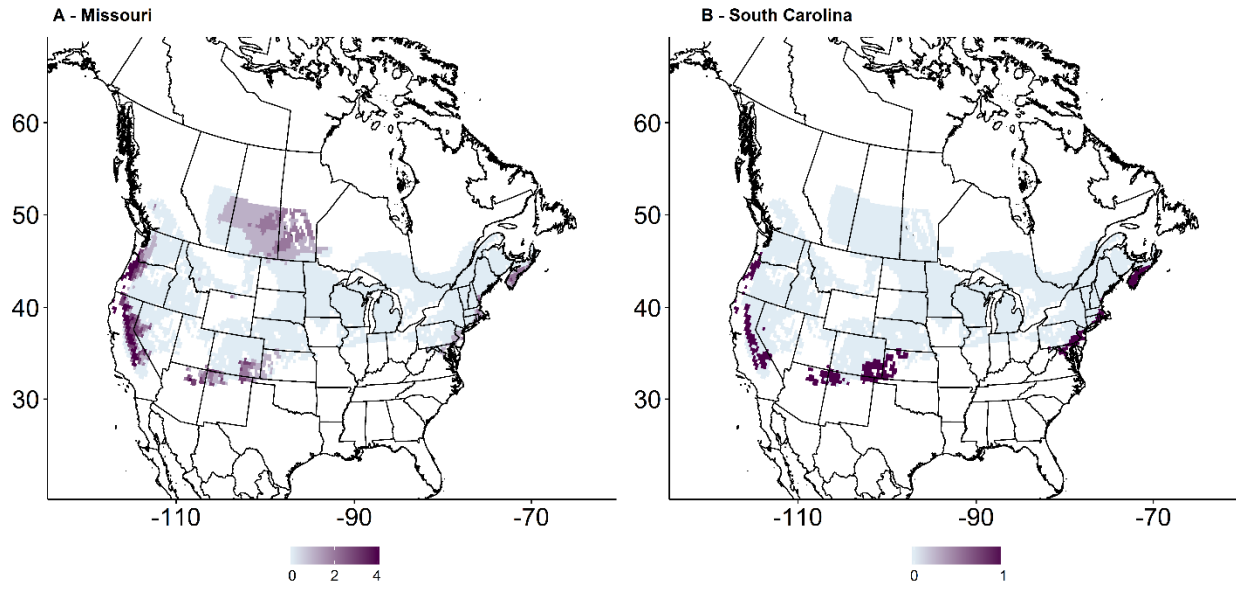


Figure A3 - Assignment of breeding areas of Yellow Rail (*Coturnicops noveboracensis*). Each map depicts individuals captured within that particular state.

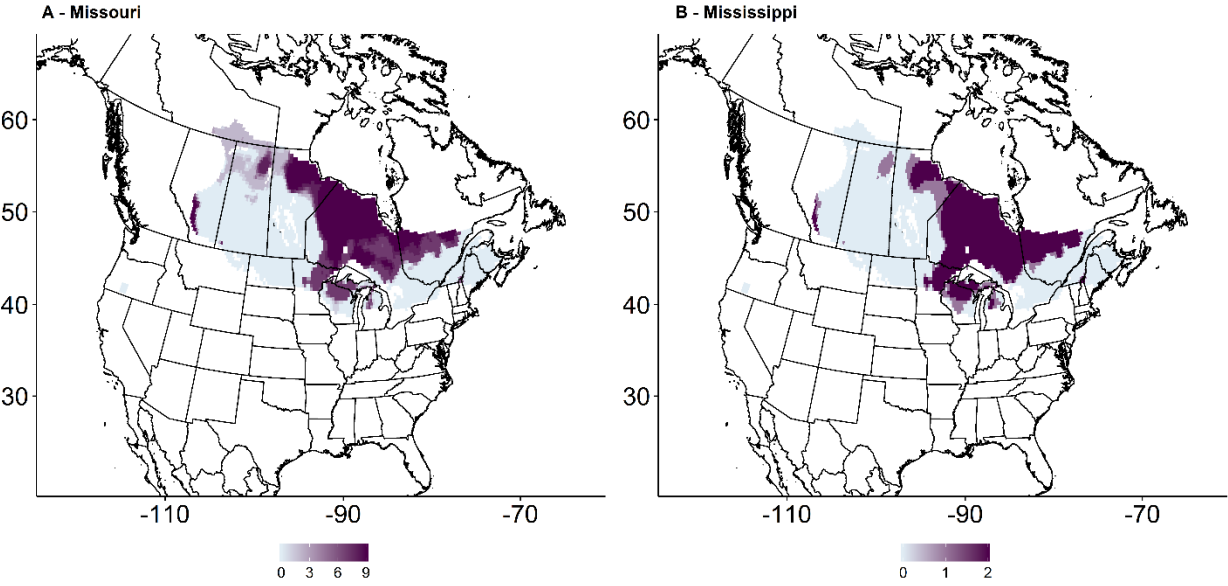
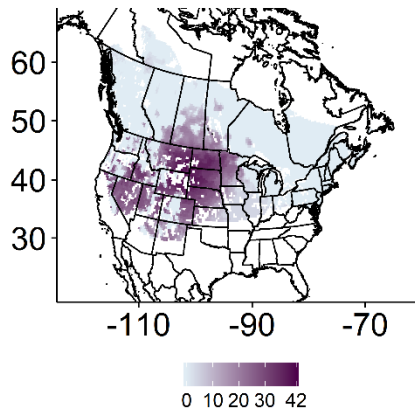
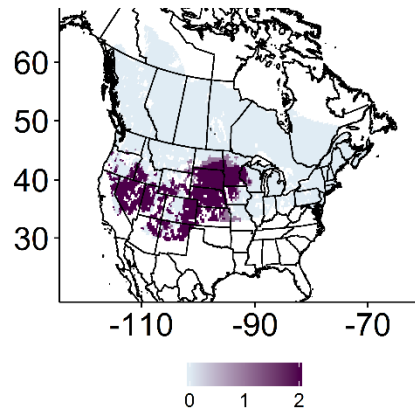


Figure A4 - Assignment of breeding areas of Sora (*Porzana carolina*). Each map depicts individuals captured within that particular state.

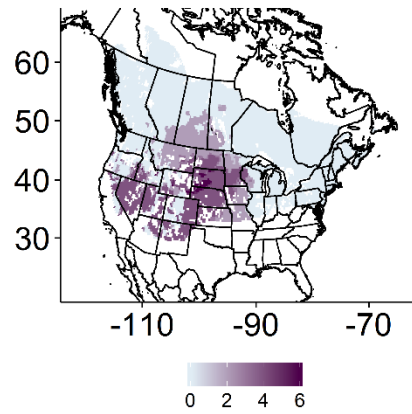
A - Missouri



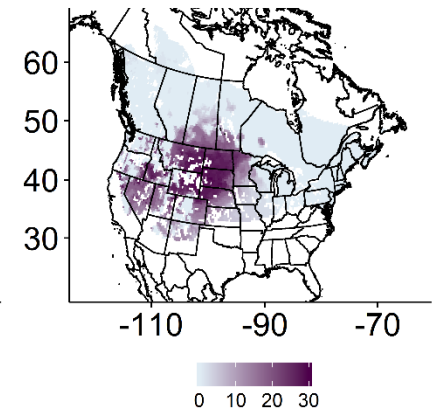
B - Arkansas



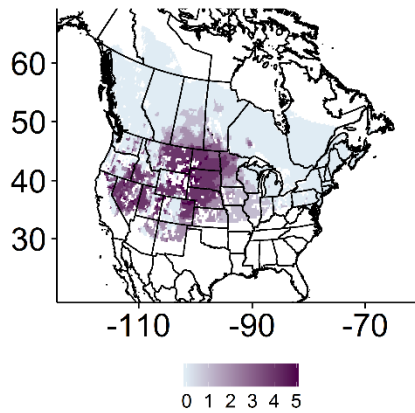
C - Illinois



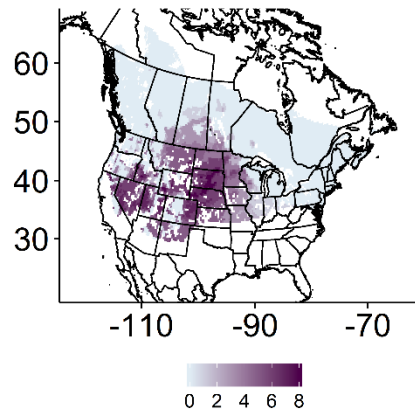
D - Louisiana



E - Minnesota



F - Ohio



G - South Carolina

