**Appendix A.**

Table A.1. Area-under-the-curve (AUC; Fielding and Bell, 1997) scores for three different modeling techniques evaluated for use in creating species distribution models. Models were evaluated using the migratory dataset, with 113 American woodcock (*Scolopax minor*) GPS locations to delineate use and 10,000 locations randomly distributed throughout Pennsylvania, USA to delineate pseudoabsence. Predictive variables included all metrics listed for the migratory model in Table 2 of the manuscript. The modeling technique with the greatest AUC during this testing process (random forest) was used for all further modeling of the migratory and breeding datasets.

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| **Modeling Technique** | **AUC** |
| MaxEnt (Phillips et al., 2006) | 0.68 |
| Random forest (Breiman, 2001) | 0.70 |
| Boosted regression trees (Elith et al., 2008) | 0.63 |

**References**

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