Dr. Claire M. Curry

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Dr. Erika Newton, Managing Editor

Journal of Applied Ecology  
British Ecological Society  
Charles Darwin House  
12 Roger Street London WC1N 2JU UK

Dear Dr. Newton:

Please find attached a manuscript entitled “Spatially explicit ensemble models do not always improve species distribution model accuracy” for consideration in *Journal of Applied Ecology*. We use original and citizen science data to examine whether use of novel species distribution modeling methods, specifically spatially explicit ensembles, improves species distribution prediction at smaller scales than previous usages (at continental scales). Our work shows that accuracy of conventional and spatially explicit ensembles varies with species and data resolution, and therefore managers seeking best choices for computational efficiency must currently chose models based on computational power available. We expect that this will be of interest to the *Journal of Applied Ecology* readership because it allows managers to make appropriate decisions when evaluating potential techniques to implement with their available datasets.

This manuscript is original research. All co-authors approve of this submission, and we do not have the manuscript in press, submitted, or published elsewhere. We agree to archive the data and code used in the paper should it be accepted. As the corresponding author, I can be reached by email at [curryclairem@gmail.com](mailto:curryclairem@gmail.com) or by phone at +1 (405) 325-4034.

Sincerely

Claire M. Curry

We show that increasing computational power and model complexity for prediction of species distribution does not always result in a concomitant increase in accuracy, and can even decrease accuracy. Therefore modelers need to carefully choose methods appropriate to their study species, scale, and resolution, and where feasible compare multiple predictions.