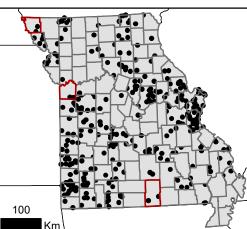
(A) Probability of occurrence of *A. gerardi* in the State of Missouri

Atohison

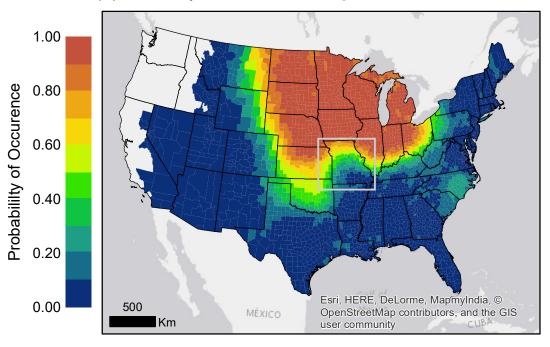
Jackson

Howell

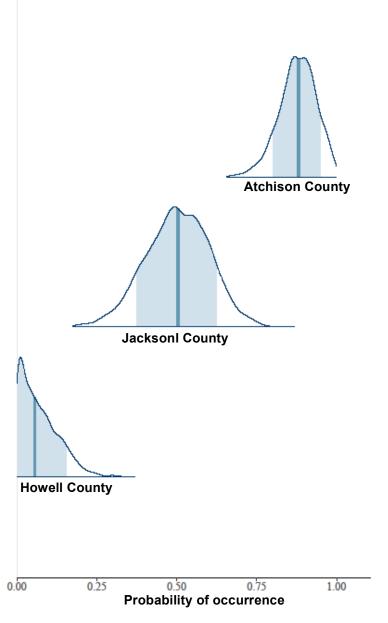
(B) Number of records of *A. gerardi* in the State of Missouri



(D) Probability of occurrence of A. gerardi across the US



(C) Posterior distribution of the probability of occurrence of *A. gerardi* in the three highlighted counties



**Figure X.** Modeled occurrence of *Andropogon gerardi* using bayesLopod based on presence-only data across US counties (D). Panel (A) is a close up of the modeled distribution in the State of Misssouri and each point in a county of panel (B) represents one presence record (but not an exact locality). Importantly, in Missouri *A. gerardi* is common in the north, but very rare in the south. This pattern is captured by the bayesLopod model (A), but it is not evident by just examining the presence records it is based on (B). To illustrate that, the three highlighted counties have the same number of records (two), but different probability of occurrence. Panel (C) shows the median probability of occurrence in each of these counties( and the uncertanty around it) as estimated by bayesLopod accounting by sampling patterns in each county and its surrounding areas.