Pennsylvania Woodcock Habitat Modeling Meeting Minutes, November 5th 2020

The meeting began with a PowerPoint presentation on progress so far (attached)

Discussion:

* LIDAR data for Pennsylvania has not been published yet, and including it in the habitat model might not be the best fit for the model’s intended use
  + Group agreed that going forward without the LIDAR data appears to be the best option for now.
* Methods for compensating for spatial autocorrelation in an individual’s successive stopover locations
  + One potential solution might be using a minimum convex polygon to incorporate a set of stopover points into a single polygon for use in calculating landscape metrics.
    - Downside: this makes stopovers with multiple points difficult to compare to stopovers with a single point.
  + Resource selection at the first point at each stopover may differ from selection at later points.
  + At the broader spatial scale we’re interested in (e.g. forest configuration within 1 km) these points may have similar enough attributes that we can randomly select one without losing stopover information.
* Classification and Regression Trees are another tool that we could incorporate into the habitat model.
  + Might be helpful for handling non-linear predictor variables
  + Scott has experience with this and offered his advice.
* Mark Anderson at TNC has been doing some work using circuit theory that may be applicable to this.
  + There are also new collaborators with the woodcock project that are considering circuit theory approaches to connectivity.
  + Because of the spatial scale associated with this type of approach (multi-state), this type of connectivity approach may not be addressable in a Pennsylvania-only context.
* Other projects have shared their results with stakeholders using interactive Shiny apps. This would be a nice way to ensure that the final model products are accessible to the public.
  + The woodcock project is already using Shiny apps to share migration data; it shouldn’t be difficult to design a similar one to share the Pennsylvania predictive layers.
* Should we consider separating fall migratory locations from spring migratory locations?
  + Resource selection may be different due to the different pace of migration and different motivations (searching for breeding vs. nonbreeding habitat) between seasons.
  + However, if we cut the dataset into too many pieces we’ll lose predictive ability. We won’t do this yet, but we may reconsider separating locations by season down the road.
  + This might be a good approach to take when modeling stopover habitat throughout the Atlantic flyway, where sample sizes are a bit larger.

Other project notes:

* Massachusetts is coming on next year as a new collaborator.
* Fieldwork for Pennsylvania woodcock capture is funded by Pittman-Robertson funds, but the contract with UMaine for modeling work is not and can be used for non-federal match funds.
* Written reports on quarterly progress for Pennsylvania modeling won’t be necessary, but we will prepare written summaries of each quarterly update meeting.
* Lisa will check to see if any spatial data comparable to the state game land layers are available for the Fall 2020 release location.
* Invoices for the project can be billed quarterly or annually.
* The $1000 that was allotted for travel for the project may be better spent elsewhere due to COVID-19; Ken will verify that this funding allocation is flexible and that those funds can be used for other purposes.
* Next coordination meeting will likely be in mid-late January 2021; will send out a scheduling email in late December.