**Independent Project on Joint Species Distribution Models with Hmsc in R**

* Work through Part IV of the R practical which examines how habitat and spring temperature impact the distribution of *C. monedula*.
  + Discuss the following in your presentation:
    - How is the distribution of *C. monedula* affected by temperature?
    - What can you determine about *C. monedula*’s habitat preferences?
    - Based on your k-fold cross-partitioning, how reliable are your predictions?
    - In the two graphs you create showing abundance as a function of habitat, why do you think the predictions vary somewhat between the two graphs?
* Choose another species from the data set on Finnish birds. Select a species that you hypothesize will have a different distribution that *C. monedula*. Conduct the Part IV analysis again for your chosen species. If you think your species might respond to a climate variable that is different from April/May temperature, you can use one of the other temperature predictors in the data (simply switch “AprMay” in the code to the name of your selected climate variable).
  + Discuss the following in your presentation:
    - How did you hypothesize that the distribution of your selected species would differ from that of C. monedula?
    - How is the distribution of your species’ affected by temperature?
    - What can you determine about your species’ habitat preferences?
    - Based on your k-fold cross-partitioning, how reliable are your predictions?
    - How does the result for this species differ from what you saw for *C. monedula*? Was your hypothesis supported?
* If you have additional time: Choose another one or two species. Research the species to see which climate predictors they might be most sensitive to and run the Part IV analysis for the species.

**Office Hours with Kim:**

Thursday, January 13, 2022

16:00 – 17:00 on zoom

<https://uwmadison.zoom.us/j/98176390454>

If you have any problems accessing the zoom (or any other problems that can’t wait until the office hour), feel free to reach our via email: [Kimberly.thompson@idiv.de](mailto:Kimberly.thompson@idiv.de) and I will get back to you as soon as possible.