April 13, 2023 Education Working Group Call

Attendees: Cazimir Kowalski, Gerbrand Koren, Abby Lewis, Mary Lofton, Alyssa Willson, Jody Peters

Agenda/Notes:
1. Congratulations to Alyssa! Her manuscript on assessing ecological forecasting education paper was accepted to Ecology and Evolution
    a. Willson, A.M., Gallo, H., Peters, J.A., Abeyta, A., Bueno Watts, N., Carey, C.C., Moore, T.N., Smies, G., Thomas, R.Q., Woelmer, W.M. and McLachlan, J.S. 2023. Assessing opportunities and inequities in undergraduate ecological forecasting education. Accepted at Ecology and Evolution. (This came out of efforts from the Education working group, the RCN Pedagogy workshops, EFISA, and the Alfred P. Sloan Foundation connections)

2. SimBio Foundation Grant - $10, 000 for projects related to research in biology education at the undergraduate level to develop a concrete project (which doesn't need to be finished by the end of the grant). Deadline is April 15 - so just something for the group to be aware of for future years (unless you have 3 pages ready to go)

3. Updates or Requests for Input on different projects
    a. Ethics in Forecasting Project Manuscript Updates
        i. Authorship guidelines
        ii. Updates on writing
            ● Figure Set 1
            ● Figure Set 2
            ● Figure Set 3
            ● Figures Set 4
        iii. Copyright for figures/tables - what did Abby find out?
            ● Abby reached out to the editor this week to check in to see if this will be a good fit and then to get advice about copyright permissions. Abby will keep the group updated
        iv. References - in each Figure Set? Or one main Reference section?
        v. Next Steps
            ● Abby added a Rubric - would like feedback on (currently on pg 10)
                ○ Once the group feels good about the Rubric, then can use this as a model for the other Figure sets
                ○ Figure set 2 - have Part A, Part B - Have subheadings but take out the Part A and Part B
            ● Be clear about what to have students outside/inside class - Figure Set 2 and Figure Set 3
                ○ Figure set 2 short case study text, but it will take time for students to go through the tables so make sure that fits

within the 1 hour time or suggest students look at it before hand
- ○ Check the links to the tables in Hobday
- ● Cazimir - will work on simplifying the text. Also worried about how much time it will take for students to read. See how long it takes for readings by reading it out loud slowly
- ● Question about connecting to Record et al blog post on types of ethical issues around forecasting
  - ○ Is there another forecasting ethics paper to frame the paper around?
    - ■ Hobday et al 2019 paper?
      - ● So focused on marine fisheries so it may be disorienting before flying foxes
  - ○ Do we need an overarching framework that all 4 come from
  - ○ Record et al only gets referenced at beginning of Fig Set 1
  - ○ Started these conversations - as practitioners of forecasting we see these ethical issues as concerns that we haven't seen good resources for
  - ○ Helpful reference: Improving Case-Based Ethics Training with Codes of Conduct and Forecasting Content https://doi.org/10.1080/10508422.2012.661311
- ● Other framing question - how forecasting specific do we want this to be?
  - ○ What to sell as the overarching theme for the modules?
  - ○ Caz will update Figure Set 3 to have more of a forecasting spin
- ● Background section - written for instructors or students?
  - ○ If we want instructors to share the background section,
  - ○ Can be for either instructors/students, but isn't necessary for the students
  - ○ Should there be a teacher version and a student version?
  - ○ Notes to Instructor - should not go to students
  - ○ Student assessment and rubric should go to students
  - ○ Looking through previous examples from the journal - they follow this similar format.
  - ○ Would like to provide 4 handouts for students specifically - Abby will check with the journal about this
    - ■ This will also allow us to make specific references available for each Figure Set
  - ○ TO DO: Make student section stand alone and background section as optional for students
  - ○ TO DO: Move learning objectives into student instructions

- Abby will spend time on the overview/intro to make it match the framing which is moving away from Record blog post and focus on different steps in the forecasting time step
- Everyone check the headings in your individual section to make sure they are appropriate
- Figure Set 4 - the goal was to expand to a more global perspective compared to Fig Set 3 which is more Indigenous US. Was that clear?
- Helpful to have more description in the Introduction - here are the types of case studies and the types of classes we think this will be targeted to.
  - Uncertainty - upper level undergrads or stats classes where students are already thinking about this
  - Fig 3 - early undergrads
  - Fig 4 - may be some upper level
  - Intro level class often already have curriculum developed so it can be hard to break into
  - Give the reader idea if there is an order to the modules. Or what modules may be better suited to different classes
- Caz "thinks" they share Fig Set 2 or 4 with the students they are working with - depending on how ready they are
- Gerbrand has used the Fig 4 case study in his classes and it has worked well for a range of levels
- Fig Set 4- talk about unintended consequences of international community coming in. Abby added a bullet point to flesh out

vi. References
- Everyone to add their own references sectin

b. Olivia is presenting EFI DEI/EDU activities at ESA
   i. What is the April abstract deadline? Is there any more input Olivia needs before that deadline?
   ii. From the DEI call, Olivia is all set. We will follow up on the June and July calls to make sure Olivia has the information she needs for her presentation which will include a recap of the EFI DEI and Education working group activities

c. Macrosystems EDDIE Updates - come back to this as the first discussion point on the May call
   i. If we have time: request for quick feedback on a figure that I'm hoping to use in Version 2 of Module 7: Using Data to Improve Ecological Forecasts

1-day-ahead forecasts generated every day
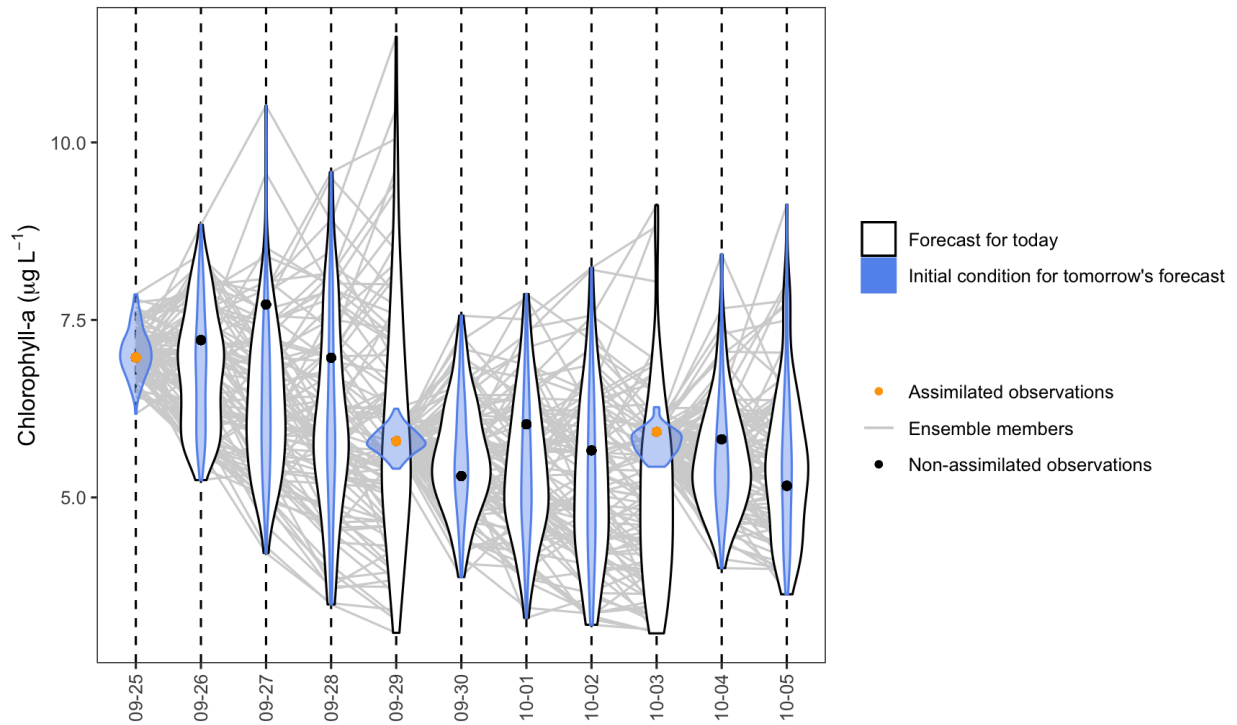
d. Other potential updates - leaving as a placeholder for future calls
   i. Anna - Forecasting, Prediction, Projection Vocabulary Manuscript
   ii. Antoinette's learning goals and concepts