Introduction to PCMs

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Hi everyone,

My name is Emma Dunne and I am a paleobiologist specialising in the macroevolutionary patterns of fossil vertebrates, especially ancient reptiles and amphibians. I am very much looking forward to our short class together on Thursday February 29th, where we will explore phylogenetic comparative methods together.

Before our class, please follow the instructions below to ensure that you are all set up and ready to go on the day! There are 4 short parts, **A**, **B**, **C**, and **D**:

A. Survey and downloads

1. Please fill out this short pre-class survey https://forms.gle/PhP3UJGPyum73AmE7 (it shouldn't take longer than 5 mins)

2. Ensure that you have RStudio and [R](R) downloaded on the computer you will use for this class. If not, follow the hyperlinks and download both before Thursday

3. From the Google Drive link, download the folder "R Exercise" to your computer. You can do this by right-clicking on the folder's name and choosing Download

4. Once downloaded, please open it and check that it contains two folders called "`code`" and "`data`", and a file called "`Intro_PCMs.Rproj`"

B. Downloading packages

In our class we will use 5 packages (listed below) that help us with the methods we will be using. Please install these in RStudio before the class.

To install packages in RStudio, you can simply use the main menu:
        Tools > Install Packages… > [type package name] > Click Install

R packages to install before class:
1. `tidyverse`
2. `ape`
3. `geiger`
4. `phytools`
5. `viridis`

If you have any trouble installing any of these packages or files, please let John Cunningham know!

C. Customising RStudio

If you haven't already done this, you might find it helpful to pick a theme in RStudio that helps you to read and interpret the code. (I recommend the theme called "Idle Fingers" because it is easy on tired eyes and makes the comments stand out)

To set your RStudio theme:
Tools > Global Options… > Appearance > Editor theme > Click Apply, then OK

D. File set-up

1. Just before the class, please open the file "`Intro_PCMs.Rproj`"
   a. It should open a new RStudio window
   b. In the Files tab on the right side of RStudio, you should be able to see the "`code`" and "`data`" folders listed
   c. You are very welcome to begin testing out the code before the class if you wish

2. Take a look at the slideshow we will use in the class. I have removed the slides that contain the answers, but don't worry, I will upload a full copy after our class so that you can keep a record of the answers and discussion points!

Looking forward to seeing you later this week!

Emma 😊