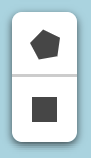
Species Observations Explorer

This interactive application maps where and for which taxonomic group there are enough species observations for ecological analyses in applied or theoretical contexts. It uses the half-ignorance algorithm [[1]](https://greensway.shinyapps.io/ignapp-v08/_w_f7cc4ef3/#footnote-1) to map the ignorance (i.e. bias and lack of sampling effort) inherent to the observations stored in the Global Biodiversity Information Facility [(GBIF)](http://www.gbif.org/). You can read more about Ignorance Scores [here](https://devpost.com/software/mapping-ignorance-in-space-and-time-evtf4a)

This dynamic application allows you to explore any reference taxonomic group (RTG, a group of species assumed to share the same information bias).   
On the first tab "**Map**" you can explore the spatial bias of the selected reference taxonomic group, in the selected time frame.   
Do like this:

1. Draw a polygon using any of the shape-buttons  on the top-left
2. On the tab to the left named "**Grid Options**", choose the width of the grid cells on the control panel on the right. If you want your grid to cover the full extent of your selected study area check the "Buffer" check-box. If you want squared grid cells, uncheck the "Hexagonal grid" check-box
3. Choose your Reference Taxonomic Group from the list
4. Under "Assumptions" you can specify the parameters for the half-ignorance algorithm. The O0.5 parameter defines the number of observations required per grid cell to decrease the ignorance score (IS) to 0.5 (see the reference above).  
   You can calculate IS over raw observations (using the O0.5RTG), over *Observation Indices* (i.e. the number of observations for the RTG divided by the observed number of species observed, per grid cell; using the O0.5 per species), or you can choose the combined Ignorance Scrore, that uses both parameters.
5. More search options are available if you look into the "**Search Options**" tab. Specifying a taxonomic ID will override the selected RTG. Beaware that the yelow map in the background shows you ALL the data that is available for the selected RTG, but YOUR search also depends on the Basis of Record. Select more classes using the Shift and Ctrl/Cmd keys as usual.
6. Click the "Grid" button  (on the "**Grid Options**" tab)
7. Do you like the grid? Click the "Search" button . Don't you like it? Change the options and click "Grid" again, or start over by clicking on "Clear" .
8. Finally, after the search is performed, you can download the grid (.SHP file) and the data table (as .CSV file) by clicking "Download" button  on the "**Download**" tab. So long, there are only a few Coordinate Reference Systems to choose from, but more are coming on demand. Files will be compressed in a .TAR file (for compatibility across platforms) in your default Download folder. You can open the file with [7zip](http://www.7-zip.org/).

The search will take a while, depending on the number of cells, but it is rather quick.

On the second tab "**Data**" the data obtained for each grid cell is ploted and displayed as a table.

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[1] Ruete A. 2015. Displaying bias in sampling effort of data accessed from biodiversity databases using ignorance maps. Biodiversity Data Journal 3:e5361 [(article)](https://bdj.pensoft.net/articles.php?journal_name=bdj&id=5361).

*Keywords*: citizen-science data, open-access biodiversity database, presence-only data, primary biodiversity data, sampling effort, spatial bias, species distribution model, taxonomic bias, temporal bias