

### Metadata for Appendix N: R/P Ratios for CSV Files

Files found within SDRP.Ratios.Flower.csv and NARP.Ratios.Flower.csv.

#### **Description**

CSV files containing R/P ratios. The realized/potential range size ratio (R/P) was used as a measure of how well species fill their potential ranges based on rasterized geographic distribution data. P was defined as the total number of pixels predicted to be suitable habitat using a species distribution model. R was defined as the number of pixels containing at least one occurrence point. Both R and P were calculated for North America as well as clipped to the Sonoran Desert. R was then calculated as the number of cells with at least one observation, while P was calculated as the number of cells predicted as suitable (above a threshold value) by a species distribution model. For the Sonoran Desert analysis, both R and P were calculated using a 10km x 10km pixel grain size. The North America R and P were estimated at a much coarser resolution of 50 km x 50 km to account for this being a continental scale analysis. The R/P ratios were calculated by Carolyn Flower in May 2018 for the Sonoran Desert and June 2018 for North America. Contains the following information:

speciesname	Each species R/P was calculated for.
r	Realized range was defined as the total number of pixels containing at least one occurrence point.
p	Potential range was defined as the total number of pixels predicted to be of suitable habitat using a species distribution model.
roverp	The range filling ratio or "R/P" is a percentage of the realized range over the potential range.
type	How the species was categorized. Each food plant was compared to both used and unused congeners. Sister species were used for comparison if available in the phylogenetic literature. I labeled the sister species and congeners as one, two, three, etc., to organize the spreadsheet for analysis but this is arbitrary.
original_food_species	The food plant each sister species and/or congener is being compared to.