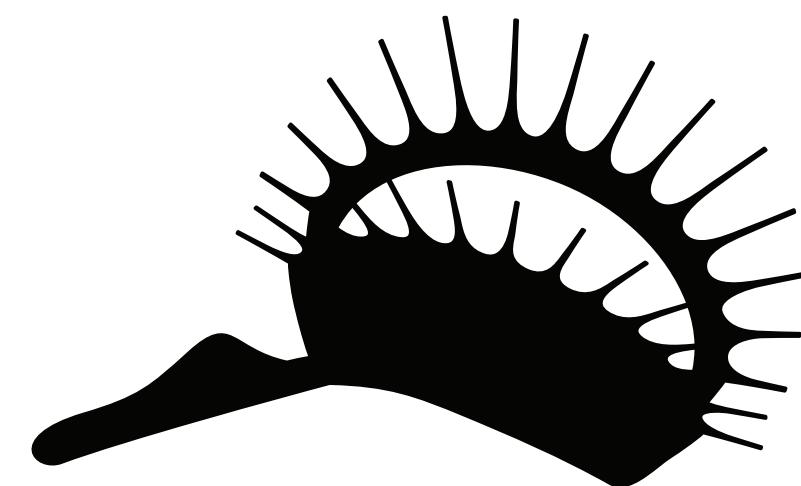


Exploring Carnivorous Plant Habitats based on Images from Social Media



Rafael Blanco

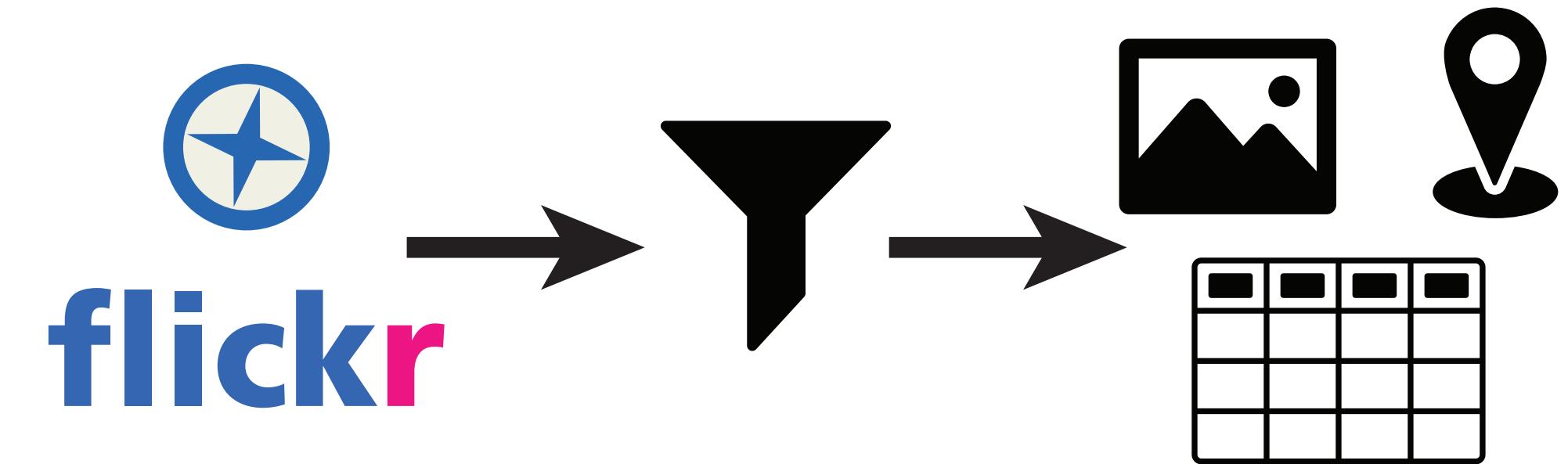
Zujany Salazar

Tobias Isenberg

We visualize species habitat distribution information based on geo-located images posted on social media platforms Panoramio and Flickr. For the example of carnivorous plants, we use published image data to produce interactive maps of the spatial distribution of different species/genuses, histograms of the elevations at which they grow, and plots of the temporal distribution of the photographs.

As we show above, the data is biased based on where people live or travel to, and contains intentionally or unintentionally incorrect positions. While we can only show the former, we address the latter by comparing data from different people.

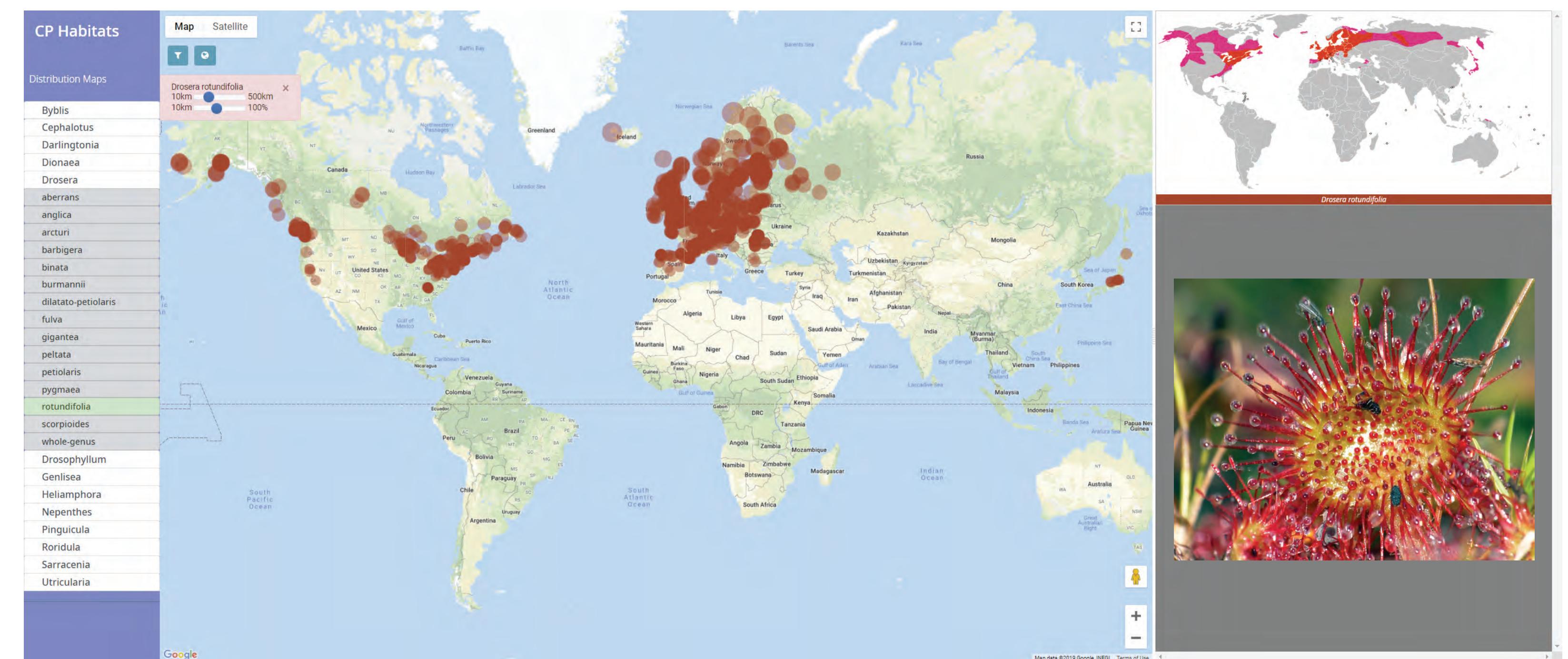
Our work thus showcases an interesting use of social media data for longer-term “events” such as plant grows in a specific habitat/region.



Geographic data exploration

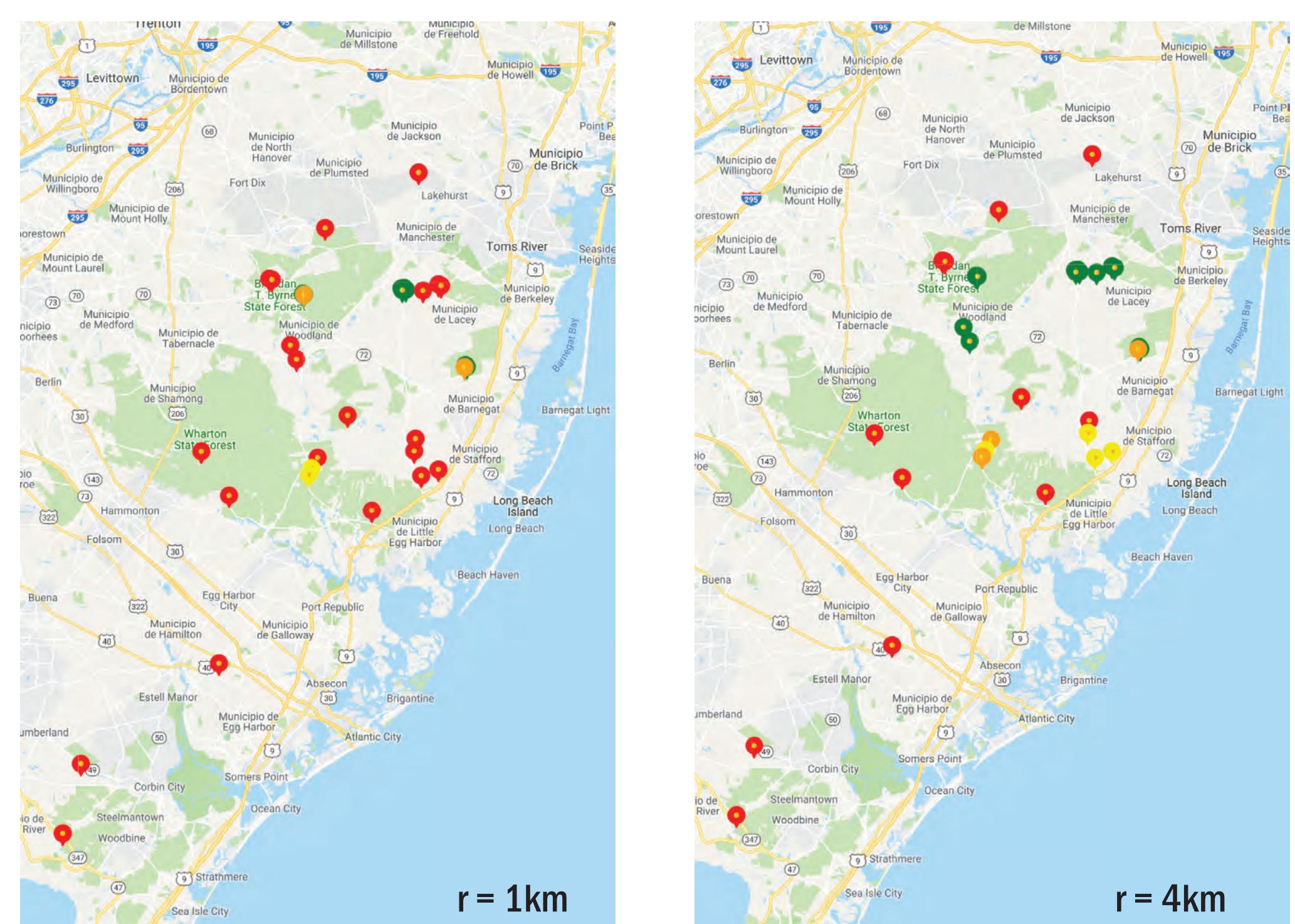


general exploration interface with markers indicating the plant genus, and image bar at the bottom

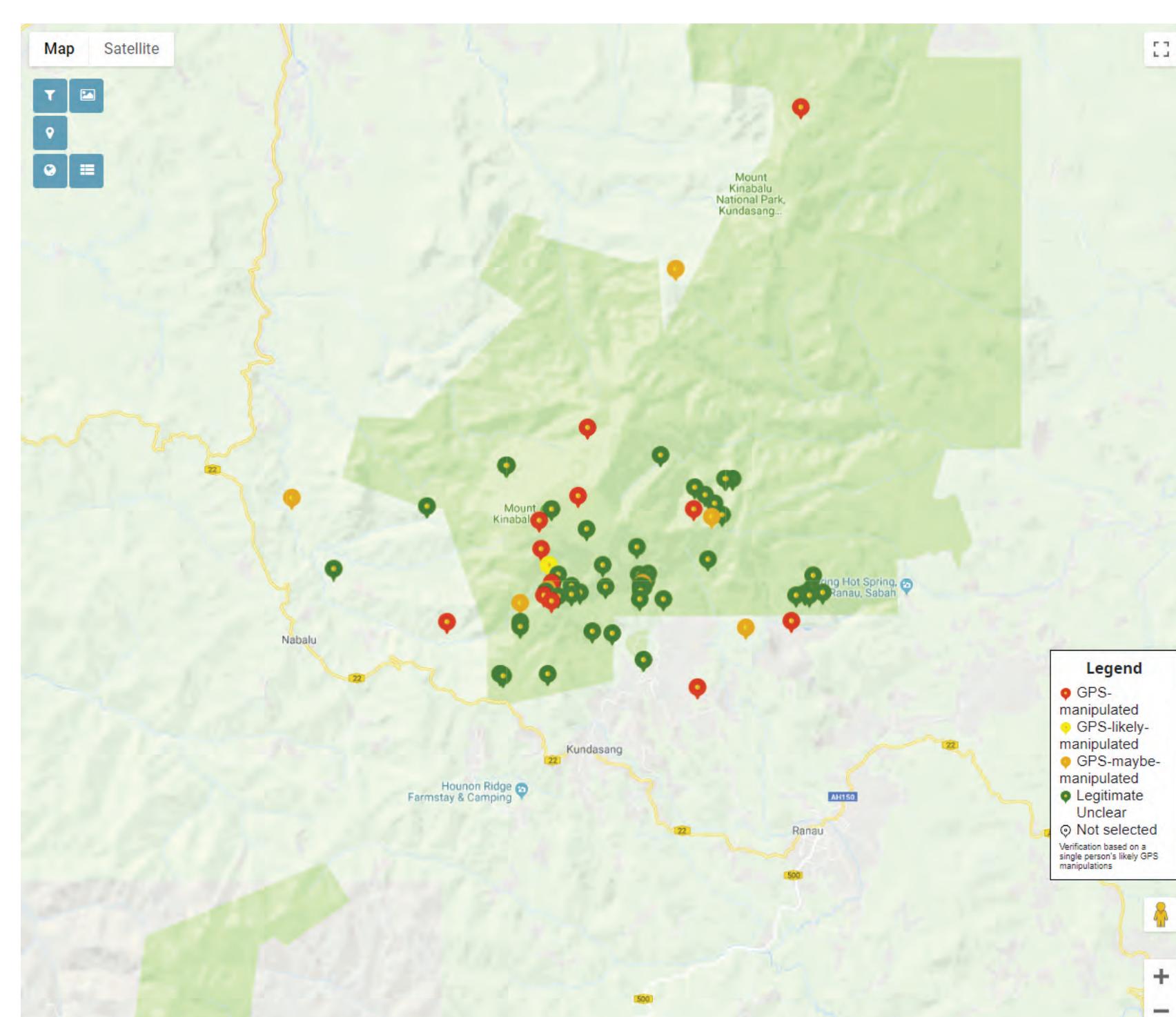


distribution mode: plant locations shown as semi-transparent circles, traditional distribution map from Wikipedia on top-right

Data verification

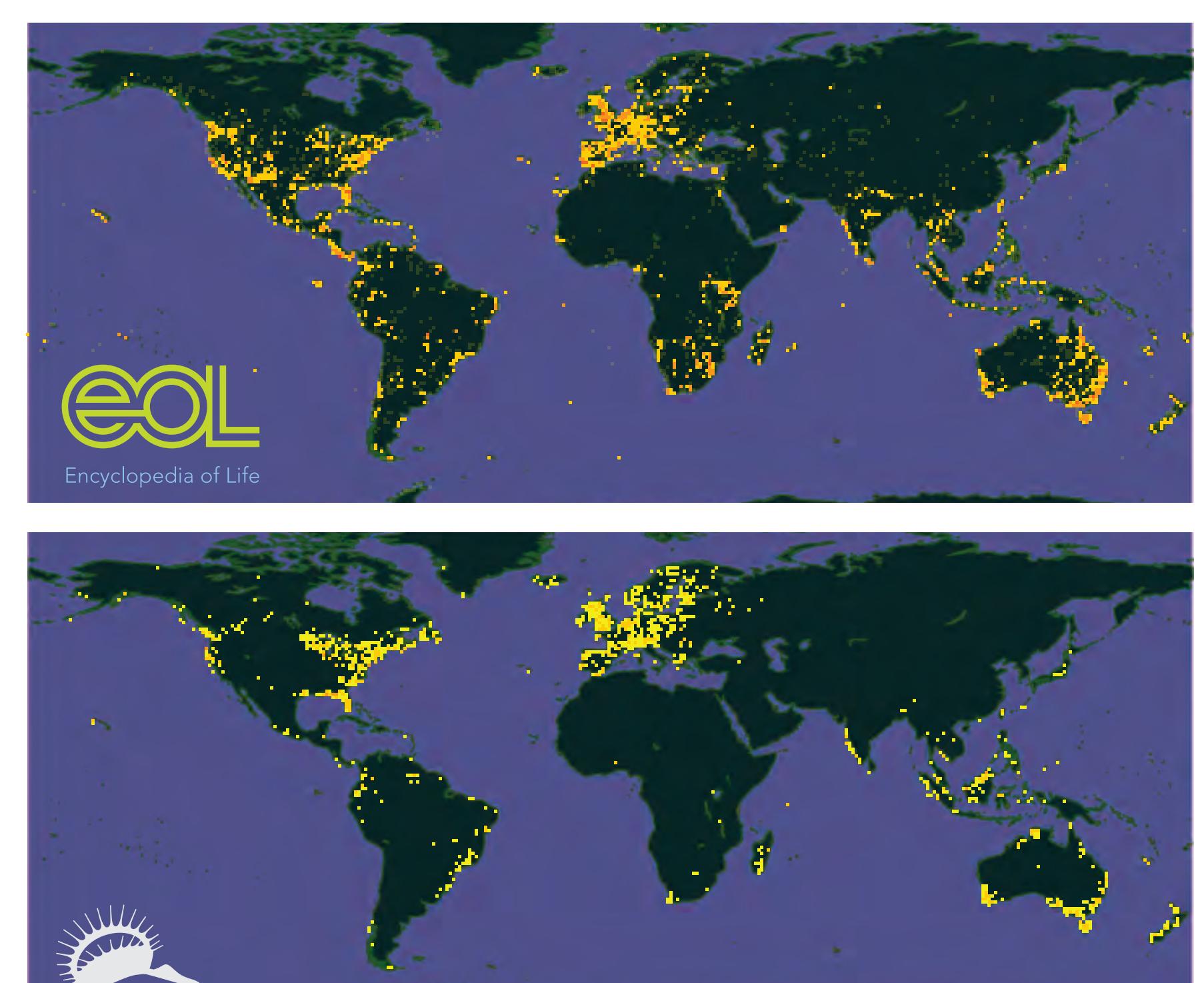


colors based on others' posts of same species, genus, or other plant in a given vicinity



colors based on other posts of the same person with identical coordinates

Data bias



pictures not evenly distributed, comparison of our data to EOL posts

Plots for the exploration of meta data by species, genus, and for the whole dataset

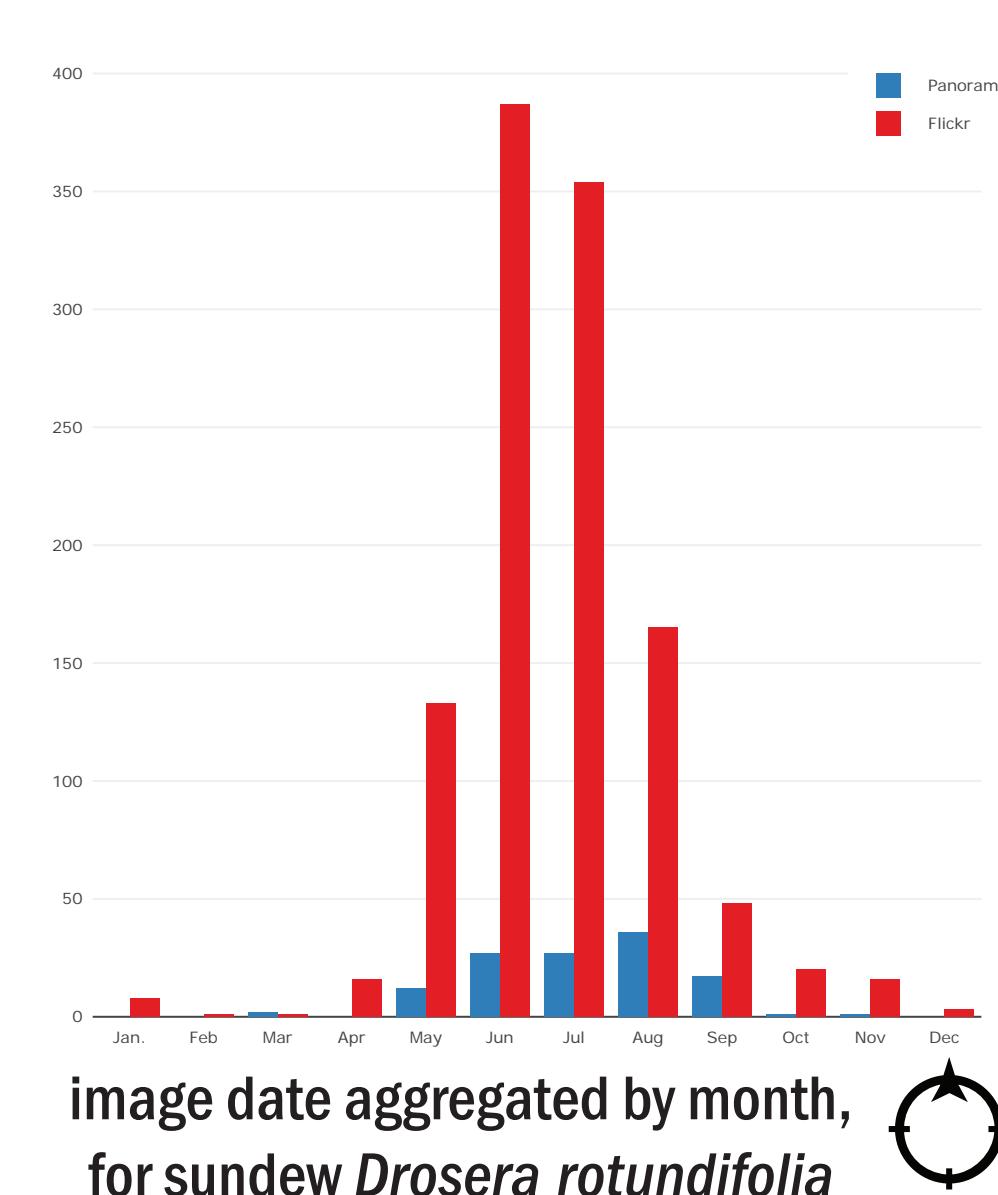


image date aggregated by month, for sundew *Drosaria rotundifolia*

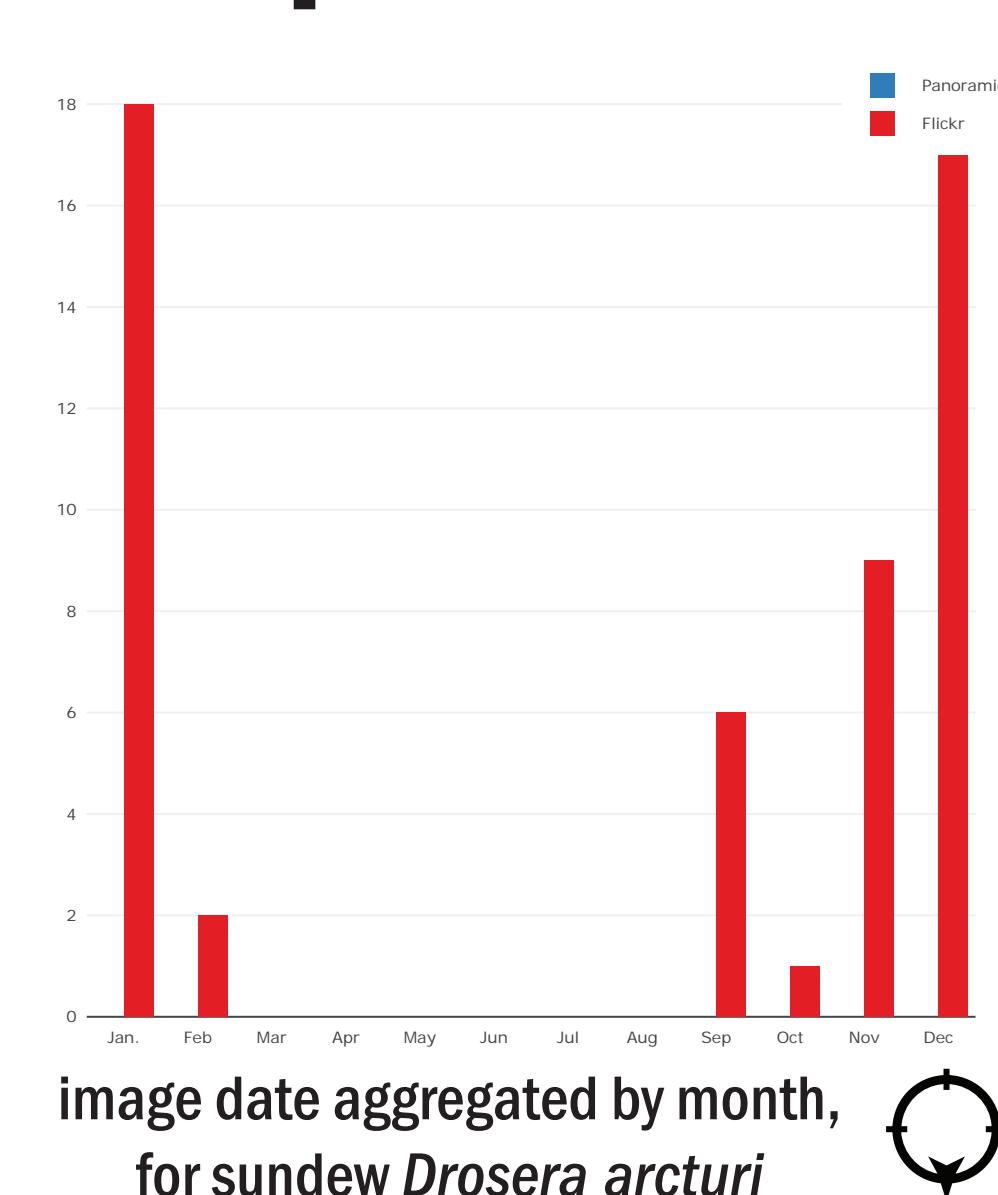
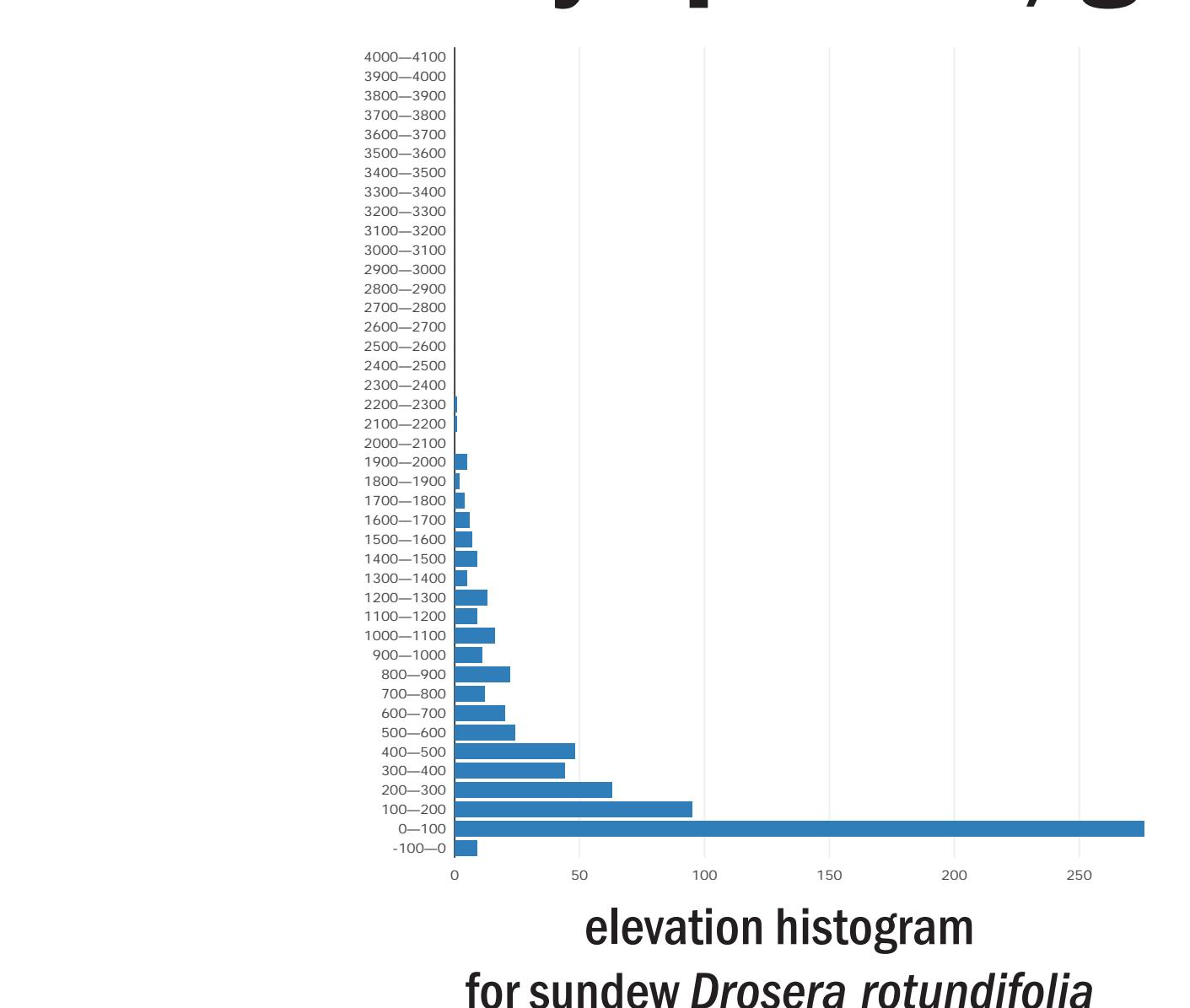
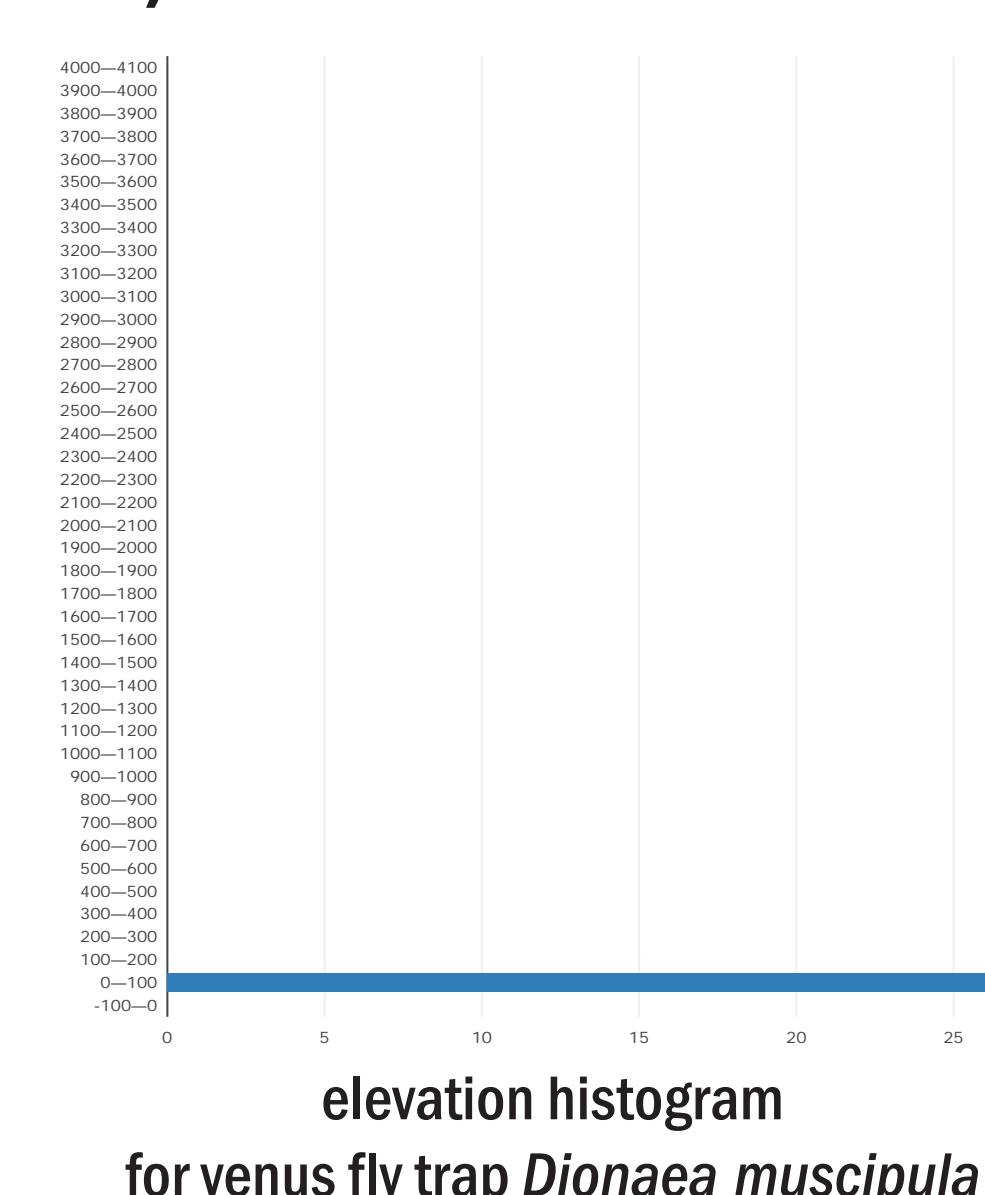


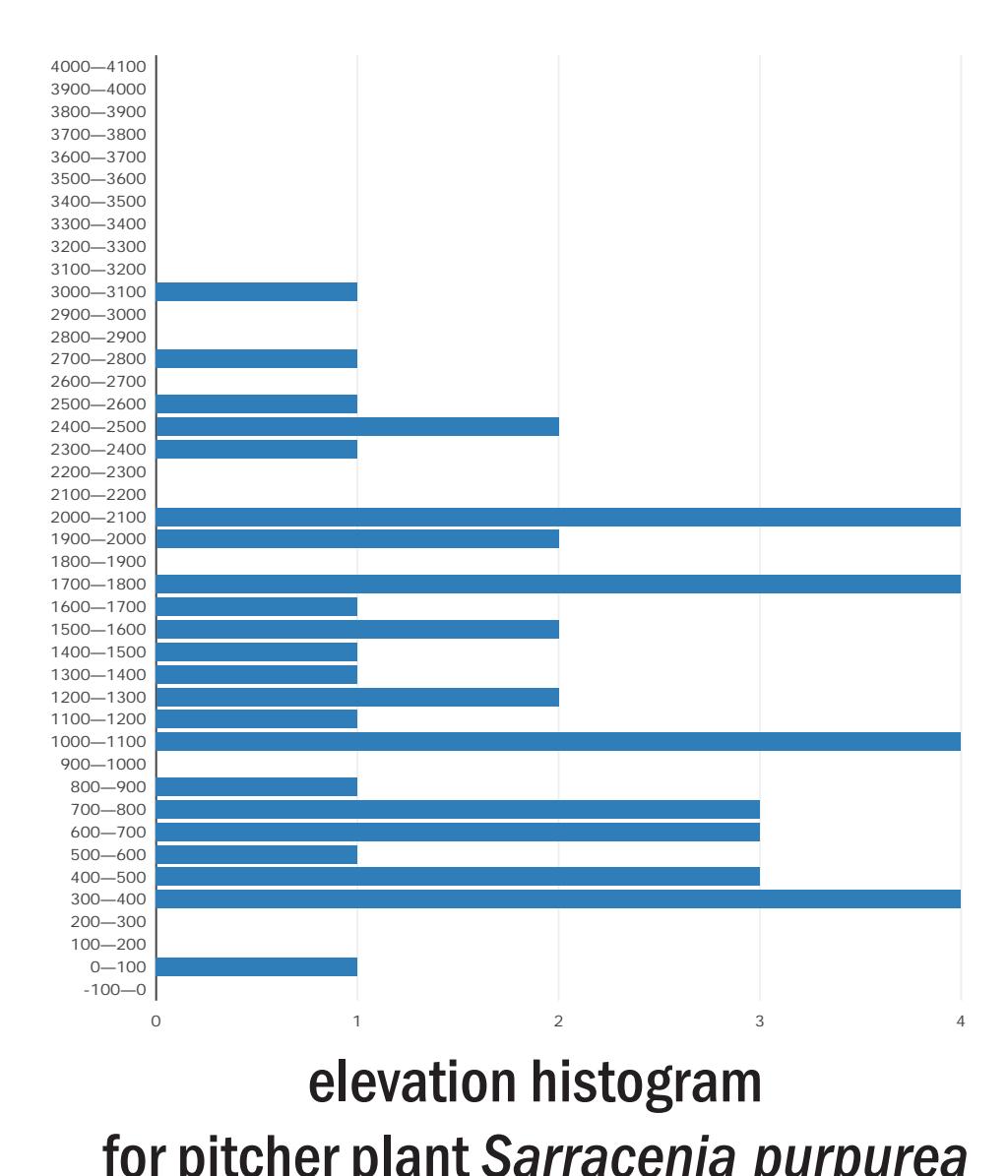
image date aggregated by month, for sundew *Drosaria arcturi*



elevation histogram for sundew *Drosaria rotundifolia*



elevation histogram for Venus fly trap *Dionaea muscipula*



elevation histogram for pitcher plant *Sarracenia purpurea*

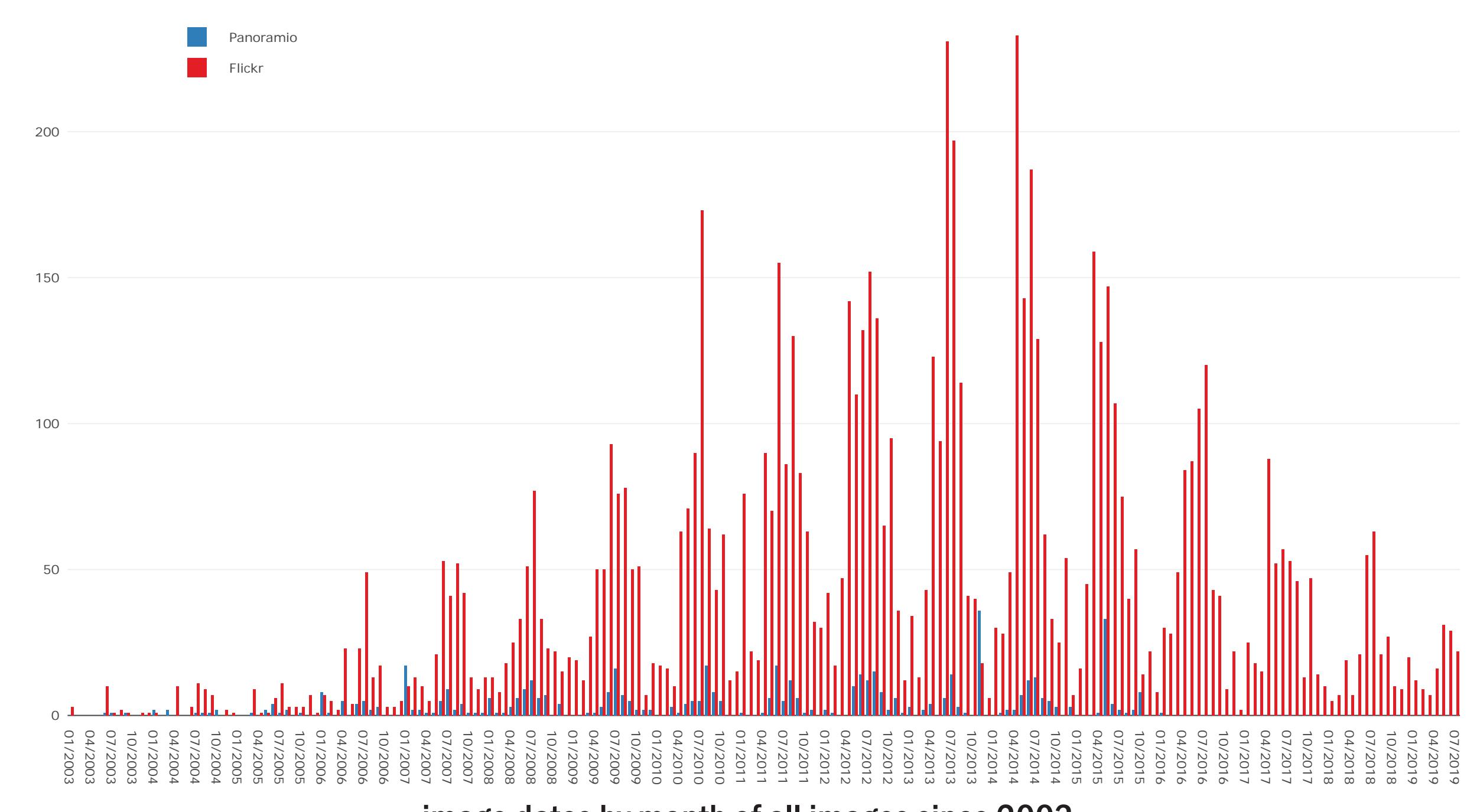


image dates by month of all images since 2003

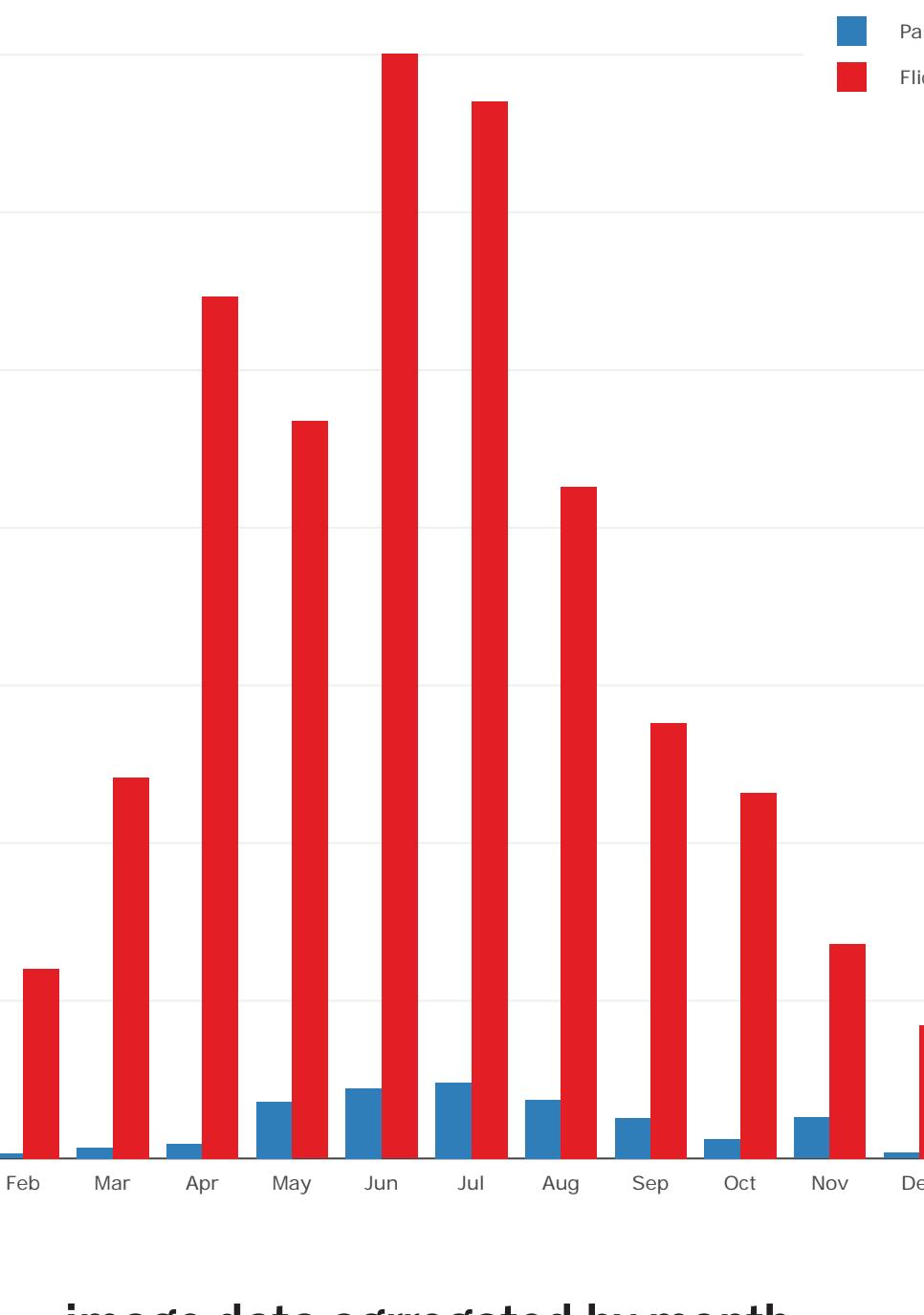
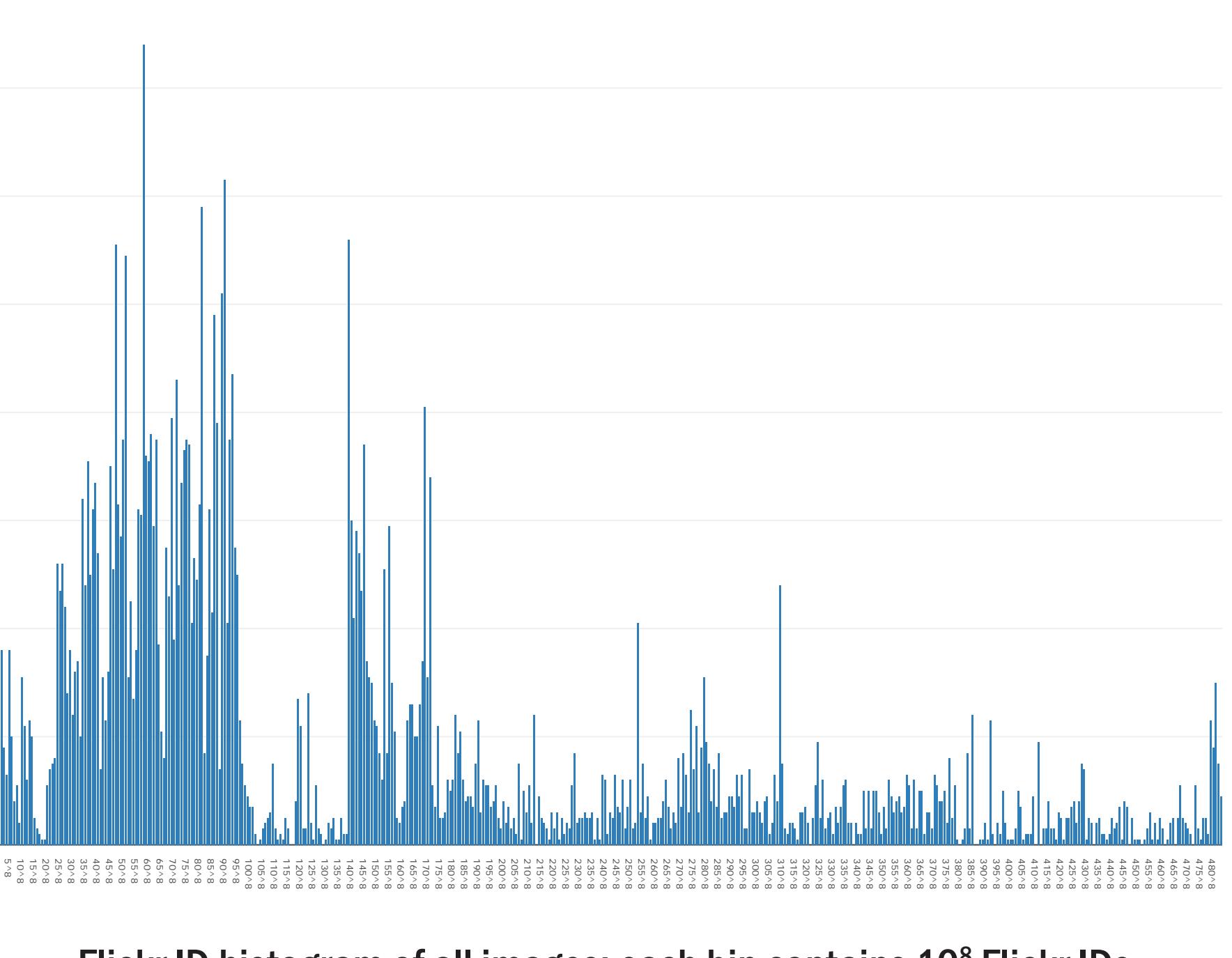


image data aggregated by month



Flickr ID histogram of all images; each bin contains 10^8 Flickr IDs