O'Donnell 2020

iNaturalist Data Download Guide

1. Two ways to downloading CSV files of observations
    a. Through the project page - click the following:
        i. Observations
        ii. Export (right side)
        iii. Choose columns for data export on Data Export Page
    b. Through a filtered search - click the following:
        i. Explore
        ii. Filters
        iii. Choose what to filter (project, location, species, date range, RG status, etc.)
        iv. Download (in the filter window)
        v. Choose columns for data export on Data Export Page

2. Data Export Page
    a. Creating Queries - any info you entered in your filtered search (or the project name if you went through the project page) will automatically be filled in here
        i. Consider only using RG observations if you're interested in species confirmed by the iNaturalist community - highly recommended for any sort of species level analysis
    b. Preview - shows you how many observations are included (keep it under 200K)
    c. Choose Columns - hover over these to get definitions, what you include really depends on what it is you're looking for. Here's what I usually use:
        i. Basic:
            1. **ID** - unique identifier for the observation
            2. **observed_on** and **time_observed_at** - normalized times
            3. **user_login**
            4. **quality_grade** - casual/needs ID/research grade
            5. **url** - link to the specific observation
            6. **description** - any notes the user entered
            7. **captive_cultivated**
        ii. Geo:
            1. **latitude** and **longitude**
            2. **place_county_name** - there are also state and country options
        iii. Taxon:
            1. **scientific_name**
            2. **common_name**
            3. **iconic_taxon_name** - how iNaturalist groups these organisms
        iv. Taxon Extras:
            1. **taxon_kingdom_name**
            2. **taxon_phylum_name**
            3. **taxon_class_name**

4. **taxon_order_name**
5. **taxon_genus_name**
6. **taxon_species_name**

d. Create Export
   i. Time to process depends on the size of the dataset, so be aware of this if you wants students to download their own data during class
   ii. Examples from the middle of a weekday -
      1. 2020 Remote BioBlitz student project (2400 obs) took 1 min
      2. NYC City Nature Challenge data from 2017-2020 (50K obs) took 41 min

3. Other considerations
   a. States and counties are automatically places with downloadable observations
   b. There are many user-entered places as well, including:
      i. Most NYC parks
      ii. All 51 city council districts - To find these in the database, look up each one with the following naming convention “New York City Council District ##"
   c. The City Nature Challenge also offers good data to make comparisons, find a link to all the 2021 city projects on this page: https://citynaturechallenge.org/city-list-2021/