Introduction to Using GBIF-mediated data

Exercise 1 - Darwin Core

# Instructions

Imagine you are about to assess a species, perhaps choose a species that you are familiar with. Discuss on your tables which of the following Darwin Core terms might be more relevant than others in assessing the extinction risk of a species and what might be some of the data quality issues associated with those terms. Remember that information for a red list assessment can be observed, estimated, inferred, projected and suspected.

For reference, these are the criteria used for assessing the conservation status of a species:

* **Population reduction** - assessment based on trends in population size over time
* **Restricted geographic range** - assessment based on the size of the species’ geographic range and information on population structure and declines in population and habitat.
* **Small population size and continuing decline** - assessment based on the present day number of individuals within the population and observed, estimated, projected or inferred declines in population size
* **Very small or restricted population** - assessment based on species with very small number of individuals

# Darwin Core terms

<https://dwc.tdwg.org/terms/>

| **individualCount**  The number of individuals represented present at the time of the Occurrence e.g. 0, 1, 25 | **occurrenceStatus**  A statement about the presence or absence of a Taxon at a Location e.g.present, absent**.** |
| --- | --- |
| **associatedMedia**  A list (concatenated and separated) of identifiers (publication, global unique identifier, URI) of media associated with the Occurrence e.g. <http://arctos.database.museum/SpecimenImages/UAMObs/Mamm/2/P7291179.JPG> | **associatedTaxa**  A list (concatenated and separated) of identifiers or names of taxa and their associations with the Occurrence. E.g. "parasitoid of":"Cyclocephala signaticollis" |
| **organismID**  An identifier for the Organism instance (as opposed to a particular digital record of the Organism). May be a globally unique identifier or an identifier specific to the data set e.g. <http://arctos.database.museum/guid/WNMU:Mamm:1249> | **materialSampleID**  An identifier for the MaterialSample (as opposed to a particular digital record of the material sample). In the absence of a persistent global unique identifier, construct one from a combination of identifiers in the record that will most closely make the materialSampleID globally unique. E.g.06809dc5-f143-459a-be1a-6f03e63fc083 |
| **eventDate**  The date-time or interval during which an Event occurred. For occurrences, this is the date-time when the event was recorded. Not suitable for a time in a geological context e.g**.** 1963-03-08T14:07-0600 | **habitat**  A category or description of the habitat in which the Event occurred e.g. oak savanna |
| **samplingProtocol**  The name of, reference to, or description of the method or protocol used during an Event e.g**.** mist net | **minimumElevationInMeters**  The lower limit of the range of elevation (altitude, usually above sea level), in meters e.g.802 |
| **decimalLatitude**  The geographic latitude (in decimal degrees, using the spatial reference system given in geodeticDatum) of the geographic center of a Location. Positive values are north of the Equator, negative values are south of it. Legal values lie between -90 and 90, inclusive e.g.  -41.0983423 | **typeStatusProperty**  A list (concatenated and separated) of nomenclatural types (type status, typified scientific name, publication) applied to the subject e.g.holotype of Pinus abies | holotype of Picea abies |
| **vernacularName**  A common or vernacular name e.g.Andean Condor | **recordedBy**  A person, group, or organization responsible for recording the original Occurrence eg Ukrainian Lepidopteran Society |

# Answers

| Fill in the following table using the Darwin Core terms provided. Add any additional ones you find. | | | |
| --- | --- | --- | --- |
| Term | Is it relevant  (Y/N) | Why? | What might be some of the data quality issues associated with this term? |
| individualCount |  |  |  |
| occurrenceStatus |  |  |  |
| associatedMedia |  |  |  |
| associatedTaxa |  |  |  |
| organismID |  |  |  |
| materialSampleID |  |  |  |
| eventDate |  |  |  |
| habitat |  |  |  |
| samplingProtocol |  |  |  |
| minimumElevationInMeters |  |  |  |
| decimalLatitude |  |  |  |
| typeStatusProperty |  |  |  |
| vernacularName |  |  |  |
| recordedBy |  |  |  |