

Quick reference guide for NBN Atlas web services

This quick reference guide highlights useful NBN Atlas web services and provides tips on using them. Please see the [NBN Atlas Web API documentation](#) for the parameters used for each web service and to see all available web services (e.g., Web Map Services).

Species information E.g., accepted scientific names, common names, synonyms, Taxon Version Keys.

Most useful Web service/s to use:

Species search - <https://species-ws.nbnatlas.org/search?q={q}&fq={fq}>

- **EXAMPLE** – search for common name “Atlantic puffin”: <https://species-ws.nbnatlas.org/search?q=&fq=commonName:”Atlantic Puffin”>
 - See the Species-ws searchable fields table [\[xlsx\]](#) for the fields available to use for filtering your search.
 - When flattening the JSON the species information is stored in ‘searchResults’ > ‘results’.
 - If the ‘taxonomicStatus’ field contains “accepted”, the ‘guid’ field contains the accepted name TVK. If the ‘taxonomicStatus’ field contains “synonym”, the ‘acceptedConceptID’ field contains the accepted name TVK.

Species lookup with GUID - <https://species-ws.nbnatlas.org/species/{guid}>

- **EXAMPLE** - Retrieve species information for Puffin: <https://species-ws.nbnatlas.org/species/NBNSYS0000000013>
 - More fields are returned when using this web service. You can obtain the accepted species name’s TVK using the **Species search** web service.

Species Occurrence records information E.g., facet counts (e.g., number of records per year), retrieve or download species occurrence records.

Most useful Web service/s to use:

Occurrence Search - <https://records-ws.nbnatlas.org/occurrences/search?q={q}&fq={fq}>

EXAMPLE – Return the first 20 occurrence records for Warwickshire vice county from 2013 to the current year: [https://records-ws.nbnatlas.org/occurrences/search?q=cl254:”Warwickshire”&fq=year:\[2013 TO *\]&pagesize=20](https://records-ws.nbnatlas.org/occurrences/search?q=cl254:”Warwickshire”&fq=year:[2013 TO *]&pagesize=20)

- This can be used to retrieve species occurrence records (the default number of records returned is 10, you can change this by specifying a different page size e.g., ‘pageSize = 100’. **Please DO NOT set a page size larger than 1,000! This can bring the NBN Atlas down.**
 - When flattening the JSON, the occurrences are stored in ‘occurrences’.
 - As shown in this example, you can filter occurrence records by location using indexed record-ws fields (all layer field IDs are in the following format ‘cl{id no.}’, see records-ws indexed fields spreadsheet [\[CSV\]](#) for available fields).

- You can use an * when filtering by a range, e.g., date, to filter from the stated value, e.g., 2013, to the highest available value, i.e., for a data range this will mean the current year.
- This web service can also be used **to return facet counts** - <https://records-ws.nbnatlas.org/occurrences/search?q={q}&fq={fq}&facets={facet}>
 - **EXAMPLE** - Number of records for each species recorded in Warwickshire: https://records-ws.nbnatlas.org/occurrences/search?q=cl254:%22Warwickshire%22&fq=-occurrence_status:absent&facets=species&flimit=-1&pageSize=0
 - When flattening the JSON, the facet results are stored in 'facetResults' > 'fieldResult'. Also to only return the facet results set the page size to 0. The default number of facet results returned is 30, to return all facet results, set the flimit to -1 (i.e., flimit=-1).
 - You can return facet counts for any of the record-ws indexed fields.

Occurrence download - <https://records-ws.nbnatlas.org/occurrences/index/download?q={q}&fq={fq}>

** Maximum of 500,000 occurrence records returned per occurrence download.*

- **EXAMPLE** - Download species occurrence records for Puffins on Skomer Island: [https://records-ws.nbnatlas.org/occurrences/index/download?q=Isid:NBNSYS0000000013&fq=-occurrence_status:absent&lat=51.7362&lon=-5.2884&radius=2&fields=taxon_name,common_name,grid_ref,occurrence_date,year,verification_status&dwchHeaders=true&qa=none&file="skomer_island_puffin_records"&email=\[Insert email\]&reasonTypeId=\[Insert reasonType ID\]](https://records-ws.nbnatlas.org/occurrences/index/download?q=Isid:NBNSYS0000000013&fq=-occurrence_status:absent&lat=51.7362&lon=-5.2884&radius=2&fields=taxon_name,common_name,grid_ref,occurrence_date,year,verification_status&dwchHeaders=true&qa=none&file=)
 - When using the occurrence download web service you must provide an email address for the 'email' parameter, e.g., 'email=webapi@nbnatlas.org.uk'.
 - You must provide a reason type ID for the 'reasonTypeId' parameter, e.g., 'reasonTypeId:10'. Reason type IDs can be found in the Reason Types table [[CSV](#)] [[PDF](#)].
 - You can supply a string of fields to be included in your download (as in the example). A default set of fields will be included if none are supplied. For fields which can be supplied for a download, or the default download fields see the Records-ws_indexed_fields spreadsheet [[CSV](#)].
 - Set the 'dwchHeaders' parameter to 'true' for the Darwin Core names to be used in the download.
 - You can name the file of your download using the 'file' parameter, if no name is supplied the file will be named 'data' by default. You do not need to include the file extension in the file name, e.g., 'filename' and not 'filename.csv'.
 - By default, record assertions (i.e., a CSV file of any record issues) are included in the download. Set the 'qa' parameter to 'none', for these not to be included in the download.

Geospatial information (on the NBN Atlas), e.g., layer information (e.g., return information for Watsonian Vice Counties layer – includes VC names).

Most useful Web service/s to use:

Fetch an array of objects belonging to a specific field - <https://layers.nbnatlas.org/ws/objects/{layer ID}>

- **EXAMPLE** - Return objects belonging to the Watsonian Vice Counties (GB) layer (layer ID = 'cl254'): <https://layers.nbnatlas.org/ws/objects/cl254>
 - You can find the layer IDs in the record-ws indexed fields spreadsheet [\[CSV\]](#).

Data resource and Data provider information, e.g., Data resource/data provider names, data resource/data provider IDs, data resource/data provider contact information, etc.

Most useful Web service/s to use:

List data resources - <https://registry.nbnatlas.org/ws/dataResource>

- Return a list of all data resources on the NBN Atlas, including species lists. For all data resources (i.e. datasets) 'resourceType' = 'records'. For all species lists 'resourceType' = 'species-list'.
- For each data resource the data resource name ('name'), unique ID ('uid'), along with other fields are returned.

Data resource metadata - <https://registry.nbnatlas.org/ws/dataResource/{uid}.json>

- **EXAMPLE** - Return metadata for ARC's 'Records of amphibians and reptiles via iRecord' dataset: <https://registry.nbnatlas.org/ws/dataResource/dr2769.json>
 - You can also obtain data provider information for the data resource; all data provider information is stored under 'provider'. For example, the data provider's name will be stored in 'provider' > 'name'.
 - You can get the data resource UID from the URL of a data resource page on the NBN Atlas, e.g., <https://registry.nbnatlas.org/public/show/dr236>.

List data providers - <https://registry.nbnatlas.org/ws/dataProvider>

- Returns a list of all NBN Atlas data partners, including data partner names, UIDs, group classification (e.g., Local Environmental Record Centre) etc.

Data provider metadata – <https://registry.nbnatlas.org/ws/dataProvider/{uid}.json>

- **EXAMPLE** – Get the data provider metadata for Buglife: <https://registry.nbnatlas.org/ws/dataProvider/dp1.json>
 - You can get the data provider UID from the URL of a data partner page on the NBN Atlas, e.g., <https://registry.nbnatlas.org/public/show/dp58>.

Species lists information (on the NBN Atlas), e.g., return list of scientific names and TVKs for a species list (e.g., Natural England sensitive species list).

Most useful Web service/s to use:

Retrieve metadata for all lists - <https://lists.nbnatlas.org/ws/speciesList?max=-1>

- Retrieves a list of all species list on the NBN Atlas. By default, a maximum of 25 species lists are returned. Set the 'max' parameter to -1 to return all species lists.

Species List Items - <https://lists.nbnatlas.org/ws/speciesListItems/{dataResourceUid}>

- **EXAMPLE** – Return the species listed on the Red List GB post 2001 species list on the NBN Atlas:
<https://lists.nbnatlas.org/ws/speciesListItems/dr2111>.
 - Returns the species listed on the species list. You will need to search for the species list using the species list's UID. The UID can be found in the URL of the species list on the NBN Atlas, e.g., <https://lists.nbnatlas.org/speciesListItem/list/dr2111>.

Get List Metadata - <https://lists.nbnatlas.org/ws/speciesList/{druid}>

- **EXAMPLE** – Retrieve the metadata for the Red List GB post 2001 species list on the NBN Atlas:
<https://lists.nbnatlas.org/ws/speciesList/dr2111>

Species Lists for Species - <https://lists.nbnatlas.org/ws/species/{guid}>

- **EXAMPLE** – Return all species lists for Puffin:
<https://lists.nbnatlas.org/ws/species/NBNSYS0000000013>
 - 'guid' = species' Taxon Version Key (TVK). The TVK can be retrieved from the URL of a species page on the NBN Atlas, e.g.,
<https://species.nbnatlas.org/species/NBNSYS0000000013>.