



Office of  
Environment  
& Heritage

# **BioNet Web Services**

**Species Sighting Web Service Data Standard**

**Version 3.0**

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# Introduction

This document provides a detailed overview of the data standard for the BioNet species sighting web service.

## Background to the development of the standard

The data standard for the species sighting web service has been developed based on the following objectives:

- promote standardisation through the adoption of a recognised standard
  - o which is used both domestically and internationally
  - o where practicable aligns with the Atlas of Living Australia data model
- make available all data which is currently shared by Office of Environment and Heritage via existing distribution channels.

Discussions were held with the Australian Museum and the Atlas of Living Australia to identify a candidate standard upon which the web service standard could be developed. The Biodiversity Information Standards (TDWG) Darwin Core standard was identified as the basis for development of the web service as it is both internationally recognised and was the key standard used by the Atlas of Living Australia in the development of their own data model.

Information on Darwin Core can be accessed via <http://www.tdwg.org/activities/darwincore/> and a quick reference guide on the Darwin Core terms can be accessed via <http://darwincore.googlecode.com/svn/trunk/terms/index.htm>.

It should be noted, however, that some data currently distributed by Office of Environment and Heritage does not fit within the Darwin Core standard. As this data is used by a number of organisations, it has been included as proprietary fields. These fields have been marked as such in the standard.

## Where does OData fit in?

Darwin Core provides a standardised glossary of terms (or fields) which facilitates the sharing of information by providing a common dictionary including definitions, examples and commentaries. It focuses on “what” we are exchanging. Its scope does not cover “how” we exchange the data.

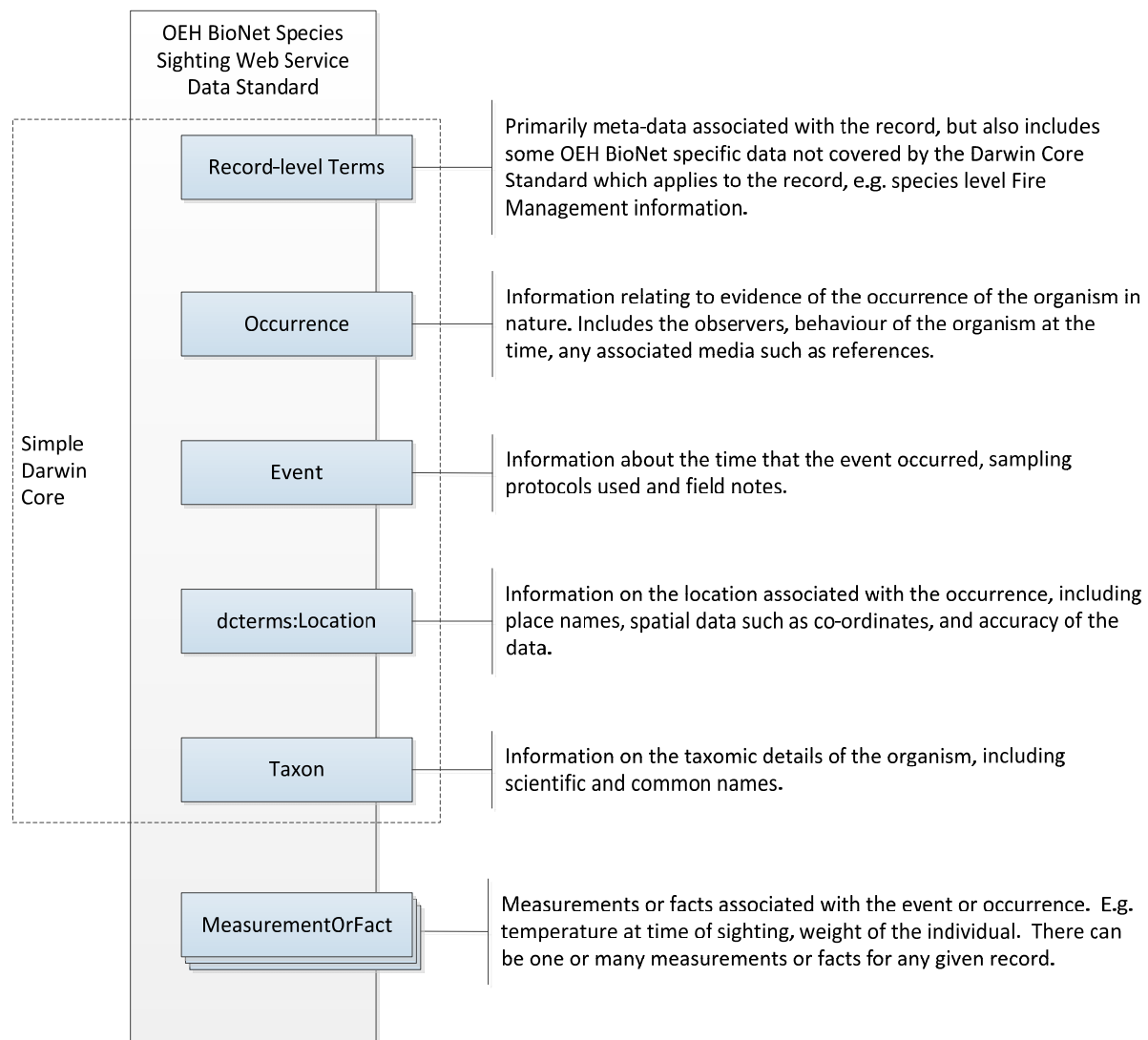
To this end, the project has selected the OASIS Open Data Protocol (OData) standard for data access and exchange which will be used across all of the web services within scope of this project (species sightings, systematic surveys, vegetation classification and threatened species profiles).

The following links are provided to give you more background on the protocol:

- <https://www.youtube.com/watch?v=wH5TUwzlaW!> – a short high level explanatory video
- <https://www.youtube.com/watch?v=dPIFNsLTPJU> – a short more technical explanation of the protocol
- [https://www.oasis-open.org/committees/tc\\_home.php?wg\\_abbrev=odata](https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=odata). – the OASIS standard specification details
- <http://www.odata.org/> - the OData community website

# Overview of the standard

The standard has been developed based on Darwin Core. Darwin Core comprises a glossary of terms (data fields), which have been separated into nine categories to logically group them. Based on the data we distribute only six of the categories apply as documented in Figure 1 below.



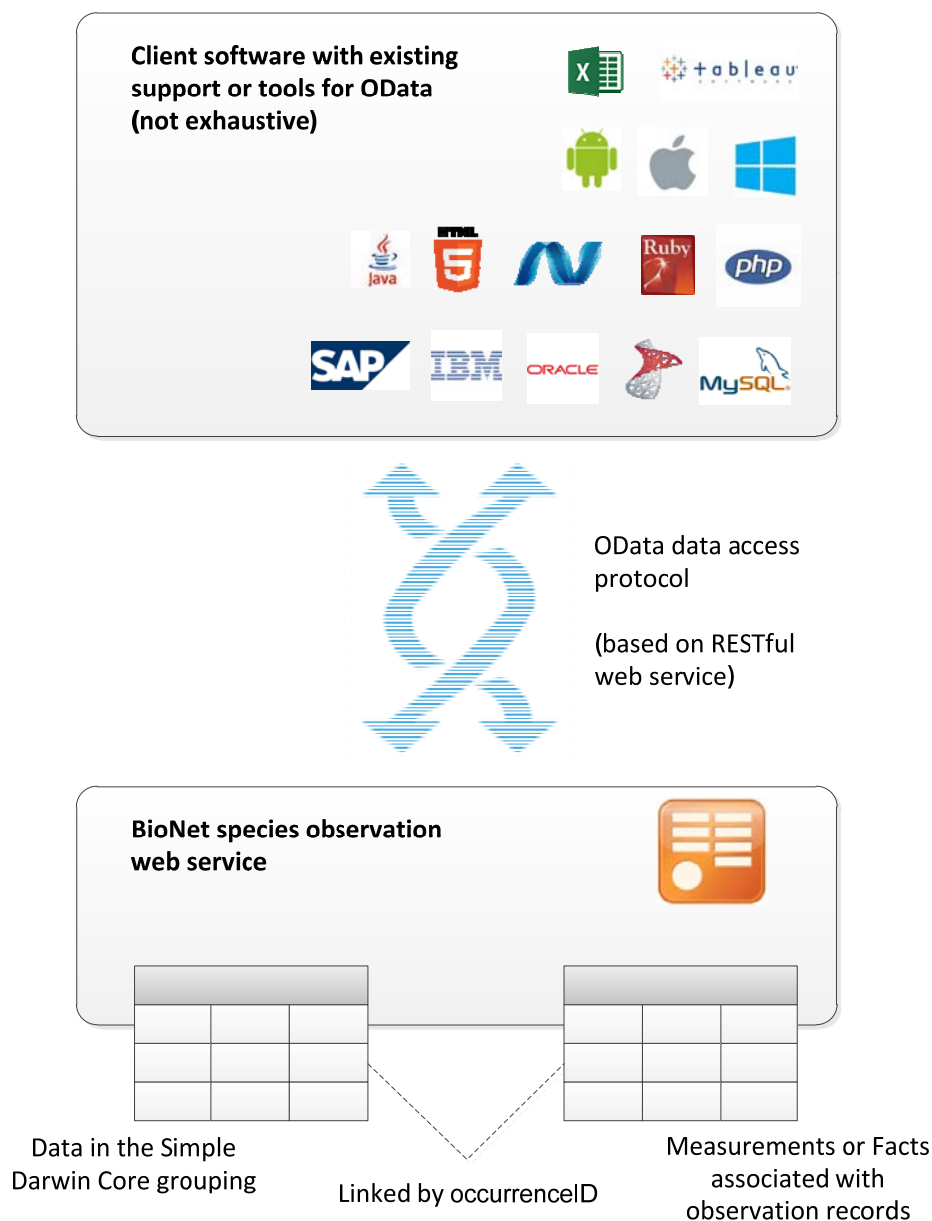
**Figure 1: Conceptual overview of the proposed data standard**

It was decided that proprietary data fields from Office of Environment and Heritage be included in the existing Darwin Core categories rather than separated out into a unique group. This is because most of the proprietary data fields logically fit into an existing group so keeping location data together, for instance, would make interpretation of the standard easier.

Five of the categories (Record-level Terms, Occurrence, Event, dcterms:Location and Taxon) fall within the Simple Darwin Core subset. This subset comprises terms which can be represented in a simple table of rows and columns, so specifically excludes data fields that may have multiple values for a single term.

More detailed information on Simple Darwin Core can be found at [Simple Darwin Core](#).

However, there are some data fields that we distribute which can have multiple values, or where the measurement is not covered by the standards terms within Darwin Core. To this end we are also proposing to use the MeasurementOrFact category to enable us to share this data. A conceptual overview of how this information will be logically presented via the OData protocol is given in Figure 2 below.



**Figure 2: Conceptual overview of data exposure via OData based web service**

In total 93 different data fields will be available via the web service. Of these 67 are covered by standard Darwin Core terms. The remaining 26 fields are non-standard and were handled as follows:

- Where the data is used as a primary filter to query the service and extract a subset of data, a proprietary term and field has been created. Where possible, if an existing Atlas of Living Australia term could be re-used for our proprietary data fields it was. This has been done to help promote standardisation at a national level for data fields that we assume might be in common use in Australia. In total there are 12 such fields, four in the dcTerms:Location category, seven in the Occurrence category, and one in the Taxon category.
- Where the data is not a primary filter, we have adopted the use of the DarwinCore standard approach which is to provide this data via a single field "dynamicProperties". This field was created in the Darwin Core standard to provide a mechanism for the distribution of structured content, generally via key-value pairs. To this end the single field (column) dynamicProperties will contain 14 terms. If needed, a query can be created using OData to filter on a specific term to narrow down returned results.



## Field level details

The following tables provide the exact specifications of the data fields available via the Species Sighting Web Service. Each table presents the group of terms which fall within the relevant category. Each field is also marked with a Standards reference to clearly indicate if the field is a DarwinCore term (marked DwC), an existing Atlas of Living Australia term which we have re-used (marked ALA), or an Office of Environment and Heritage proprietary term (marked OEH).

Where reference is made to Category 2 or 3 species in the 'Access restrictions column' this indicates that data is being withheld or obfuscated in accordance with the OEH Sensitive species data policy. More details on the sensitive species policy can be found at [Sensitive Species Data Policy](#) and it is recommended that this policy is read in conjunction with this standard.

## Record-level terms

| Field Name                 | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Example                                                                                                                                | Data Type     | Access restrictions | Standards reference |
|----------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------|---------------------|
| <b>basisOfRecord</b>       | Yes             | The specific nature of the data record.<br>Based on the Darwin Core Type controlled vocabulary ( <a href="http://rs.tdwg.org/dwc/terms/type-vocabulary/index.htm">http://rs.tdwg.org/dwc/terms/type-vocabulary/index.htm</a> ).                                                                                                                                                                                                                                                                                                                                                                                                                                                            | "PreservedSpecimen",<br>"FossilSpecimen",<br>"LivingSpecimen",<br>"HumanObservation",<br>"MachineObservation".                         | VARCHAR (30)  | None                | DwC                 |
| <b>collectionCode</b>      | Yes             | The name, acronym, coden, or initialism identifying the collection or data set from which the record was derived.<br>This will always be "BioNet Atlas of NSW Wildlife"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | "BioNet Atlas of NSW Wildlife"                                                                                                         | VARCHAR (50)  | None                | DwC                 |
| <b>dataGeneralizations</b> | No              | Actions taken to make the shared data less specific or complete than in its original form.<br>In this case, when the record is for a species that is listed in the Sensitive Species data policy information will be given on the actual denaturing applied to the location data. It will be either:<br>coordinates rounded to 0.01° for Category 3 species<br>coordinates rounded to 0.1° for Category 2 species<br>The policy in full including the sensitive species listings can be located at:<br><a href="http://www.environment.nsw.gov.au/policiesandguidelines/SensitiveSpeciesPolicy.htm">http://www.environment.nsw.gov.au/policiesandguidelines/SensitiveSpeciesPolicy.htm</a> | "coordinates rounded to 0.01DEG" or "coordinates rounded to 0.1DEG"<br>And<br>"The observer name has been changed to a unique User ID" | VARCHAR (300) | None                | DwC                 |

| Field Name                           | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                    | Example                                                                                                                                                                                                                                                                                                                                                                   | Data Type     | Access restrictions | Standards reference |
|--------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------|---------------------|
|                                      |                 | For Public and Licensed users the Observer Names will be provided as UserID, and there will be text ="The observer name has been changed to a unique User ID"                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                           |               |                     |                     |
| <b>datasetID</b>                     | Yes             | An identifier for the set of data. May be a global unique identifier or an identifier specific to a collection or institution.                                                                                                                                                                                                                                                                                                                | 12                                                                                                                                                                                                                                                                                                                                                                        | INT           | None                | DwC                 |
| <b>datasetName</b>                   | Yes             | The name identifying the data set from which the record was derived.                                                                                                                                                                                                                                                                                                                                                                          | "Atlas of Australian Birds 1", "OEH Default Sightings", "Grafton SF EIS Survey"                                                                                                                                                                                                                                                                                           | VARCHAR (100) | None                | DwC                 |
| <b>dcterms:bibliographicCitation</b> | Yes             | A bibliographic reference for the resource as a statement indicating how this record should be cited (attributed) when used.<br>This reference will be formatted as follows: "Atlas of NSW Wildlife <current date> <HH:MM> <AM/PM>"<br>Note: the date and time are AEST adjusted for daylight saving and reflect the data and time that the web service data was last refreshed from the source data (BioNet Atlas of NSW Wildlife database). | "Atlas of NSW Wildlife 22/08/2014 12:47 AM"                                                                                                                                                                                                                                                                                                                               | VARCHAR (50)  | None                | DwC                 |
| <b>dcterms:language</b>              | Yes             | The language of the resource based on RFC 4646 [RFC4646].                                                                                                                                                                                                                                                                                                                                                                                     | "en" for English                                                                                                                                                                                                                                                                                                                                                          | VARCHAR (3)   | None                | DwC                 |
| <b>dcterms:modified</b>              | Yes             | The most recent date-time on which the resource was changed based on ISO 8601:2004(E).                                                                                                                                                                                                                                                                                                                                                        | "1963-03-08T14:07-0600" is 8 Mar 1963 2:07pm in the time zone six hours earlier than UTC, "2009-02-20T08:40Z" is 20 Feb 2009 8:40am UTC, "1809-02-12" is 12 Feb 1809, "1906-06" is Jun 1906, "1971" is just that year, "2007-03-01T13:00:00Z/2008-05-11T15:30:00Z" is the interval between 1 Mar 2007 1pm UTC and 11 May 2008 3:30pm UTC, "2007-11-13/15" is the interval | VARCHAR (50)  | None                | DwC                 |

| Field Name                  | Always present? | Definition                                                                                                                                                                                                                                                                                                            | Example                                                                                                                                                                                                     | Data Type      | Access restrictions | Standards reference |
|-----------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|---------------------|
|                             |                 |                                                                                                                                                                                                                                                                                                                       | between 13 Nov 2007 and 15 Nov 2007.                                                                                                                                                                        |                |                     |                     |
| <b>dcterms:rights</b>       | Yes             | Information about rights held in and over the resource. Typically, rights information includes a statement about various property rights associated with the resource, including intellectual property rights.                                                                                                        | "Creative Commons By Attribution"                                                                                                                                                                           | VARCHAR (300)  | None                | DwC                 |
| <b>dcterms:rightsHolder</b> | Yes             | A person or organization owning or managing rights over the resource.                                                                                                                                                                                                                                                 | "Office of Environment and Heritage", "Birds Australia", "Australian Museum"                                                                                                                                | VARCHAR (150)  | None                | DwC                 |
| <b>dcterms:type</b>         | yes             | The nature or genre of the resource. For Darwin Core, recommended best practice is to use the name of the class that defines the root of the record.                                                                                                                                                                  | "StillImage", "MovingImage", "Sound", "PhysicalObject", "Event".                                                                                                                                            | VARCHAR (20)   | None                | DwC                 |
| <b>dynamicProperties</b>    | Yes             | A list (concatenated and separated) of additional measurements, facts, characteristics, or assertions about the record. Meant to provide a mechanism for structured content such as key-value pairs.<br><br>See the dynamicProperties table below for the full definitions of additional data supplied via this field | "BFMCS=8;<br>GeogExtent=HR;<br>MechanicalHRDescription=No slashing, trittering or tree removal;<br>PotentialImpact=Exclude Bush Fire; ProfileID=10546;<br>SpeciesFireDescription=No fire; Vulnerability=VH" | VARCHAR (1000) | None                | DwC                 |
| <b>informationWithheld</b>  | No              | Additional information that exists, but that has not been shared in the given record.                                                                                                                                                                                                                                 | "The following fields have been withheld and are only available to licensed or OEH staff: locality, locationRemarks, occurrenceRemarks, recordedBy"                                                         | VARCHAR (300)  | None                | DwC                 |
| <b>institutionCode</b>      | Yes             | The name (or acronym) in use by the institution having custody of the object(s) or information referred to in the record.                                                                                                                                                                                             | "NSW Office of Environment and Heritage"                                                                                                                                                                    | VARCHAR (200)  | None                | DwC                 |

| Field Name                  | Always present? | Definition                                                                                                                  | Example                                                                      | Data Type     | Access restrictions | Standards reference |
|-----------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------|---------------------|---------------------|
| <b>ownerInstitutionCode</b> | Yes             | The name (or acronym) in use by the institution having ownership of the object(s) or information referred to in the record. | "Office of Environment and Heritage", "Birds Australia", "Australian Museum" | VARCHAR (150) | None                | DwC                 |

## dynamicProperties

The following table provides the full definitions of the data which will be passed using the dynamicProperties field in the Record-level terms table above.

| dynamicProperty          | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Example                        |
|--------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| <b>BFMCS</b>             | No              | The number of bush fire management council areas that the species is found in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | "8"                            |
| <b>botanicalDivision</b> | Yes             | <p>The name of the Botanical Division within which the flora record occurs based on Harden (1990)<sup>1</sup>. Will be one of the following:</p> <ul style="list-style-type: none"> <li>• North Coast</li> <li>• Central Coast</li> <li>• South Coast</li> <li>• Northern Tablelands</li> <li>• Central Tablelands</li> <li>• Southern Tablelands</li> <li>• North Western Slopes</li> <li>• South Western Slopes</li> <li>• North Western Plains</li> <li>• South Western Plains</li> <li>• North Far Western Plains</li> <li>• South Far Western Plains</li> </ul> | "North Coast"                  |
| <b>CMA</b>               | Yes             | The name of the Catchment Management Authority within which the record occurs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | "Northern Rivers"              |
| <b>CMAsubregion</b>      | Yes             | The name of the Catchment Management Authority subregion within which the record occurs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | "Clarence Valley"              |
| <b>floraReserve</b>      | Yes             | If the record occurs within a flora reserve (as defined in the <i>Forestry Act 2012</i> ) this field gives the name of that flora reserve. If the field is marked "N/A" this indicates that the record does not occur within a flora reserve.                                                                                                                                                                                                                                                                                                                        | "Fenwicks Scrub Flora Reserve" |

<sup>1</sup> Harden, G.J. (ed) (1990) *Flora of New South Wales* – Volume 1, New South Wales University Press.

| dynamicProperty                | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Example                                                                                            |
|--------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|                                |                 | Note: This field does not give the name of reserves administered under the <i>National Parks Wildlife Act 1974</i> . See the 'reserve' field for information on reserves administered under that act.                                                                                                                                                                                                                                                                                         |                                                                                                    |
| <b>geogExtent</b>              | No              | The geographic extent of the species based on the following controlled vocabulary:<br>- W = Widespread; where the species is known from 5 or more BFMCs<br>- R = Restricted; where the species is known from 2 to 4 BFMCs<br>- HR = Highly Restricted; where the species is only known from 1 BFMC<br>Otherwise this field gives the value "N/A"                                                                                                                                              | "HR"                                                                                               |
| <b>IBRA</b>                    | Yes             | The name of the IBRA (Interim Biogeographic Regionalisation for Australia) Region within which the record occurs. This is based on IBRA version 6.1. Otherwise this field gives the value "N/A"<br>For more information on IBRA refer to: <a href="http://www.environment.gov.au/topics/land/national-reserve-system/science-maps-and-data/australias-bioregions-ibra">http://www.environment.gov.au/topics/land/national-reserve-system/science-maps-and-data/australias-bioregions-ibra</a> | "New England Tablelands"                                                                           |
| <b>mechanicalHRDescription</b> | Yes             | Information on any restrictions on the use of Mechanical Hazard Reduction Techniques within 100 metres of the Occurrence record. Otherwise this field gives the value "N/A"                                                                                                                                                                                                                                                                                                                   | "No slashing, trittering or tree removal", "Slashing in winter, but no trittering or tree removal" |
| <b>potentialImpact</b>         | Yes             | A categorisation of the information recorded in SpeciesFireDiscription into one of three broad categories related to the use of fire as a Hazard Reduction techniques using the following controlled vocabulary:<br>- Exclude Bush Fire<br>- Restrict Bush Fire<br>- No Conditions<br>Otherwise this field gives the value "N/A"                                                                                                                                                              | "Restrict Bush Fire"                                                                               |
| <b>profileID</b>               | Yes             | The unique identifier for the related threatened species profile as stored in the Threatened Species Profile Database maintained by the Office of Environment and Heritage. Otherwise this field gives the value "N/A"                                                                                                                                                                                                                                                                        | "10484"                                                                                            |
| <b>reserve</b>                 | Yes             | If the record occurs within a reserve (as defined in the <i>National Parks and Wildlife Act 1974</i> ) this field gives the name of that reserve. If the field is marked "N/A", this indicates that the record does not occur within a reserve. The following types of reserve are covered under this legalisation: <ul style="list-style-type: none"> <li>• national park</li> <li>• historic site</li> <li>• state conservation area</li> </ul>                                             | "Cocoparra National Park", "Bedooba State Conservation Area"                                       |

| dynamicProperty               | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                 | Example                                                                                                                                                   |
|-------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |                 | <ul style="list-style-type: none"> <li>• regional park</li> <li>• karst conservation reserve</li> <li>• nature reserve</li> <li>• Aboriginal area</li> </ul> <p>Note: This field does not give the name of reserves administered under the <i>Forestry Act 2012</i>. See the 'floraReserve' field for information on flora reserves.</p>                                                                                                   |                                                                                                                                                           |
| <b>speciesFireDescription</b> | Yes             | Information on any restrictions on the use of Controlled Burning as a Hazard Reduction Technique within 100m of the Occurrence record. Otherwise this field gives the value "N/A"                                                                                                                                                                                                                                                          | "No burning within 100 metres of streams", "No burning from 1 August to 31 March, and no more than once every 2 years. Retain logs on ground.", "No fire" |
| <b>stateForest</b>            | Yes             | If the record occurs within a state forest (as defined in the <i>Forestry Act 2012</i> ) this field gives the name of that state forest. If the field is marked "N/A" this indicates that the record does not occur within a state forest.                                                                                                                                                                                                 | "Bom Bom State Forest"                                                                                                                                    |
| <b>vulnerability</b>          | Yes             | <p>Vulnerability of the species to Hazard Reduction activities, based on a combination of Status on the Threatened Species Conservation Act and the species Geographic Extent as recorded in GeogExtent. Uses the following controlled vocabulary:</p> <ul style="list-style-type: none"> <li>- L = Low</li> <li>- M = Moderate</li> <li>- H = High</li> <li>- VH = Very High</li> </ul> <p>Otherwise this field gives the value "N/A"</p> | "VH"                                                                                                                                                      |

## Occurrence

| Field Name                  | Always Present?                                                                                                                                                                                                                                                                                                             | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Example                                                                                                                                                             | Data Type                                                          | Access restrictions | Standards reference                                                                                                                                                                                                                                                                         |                        |                                                                                                                                                                                                                                                                                                                             |         |               |      |     |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|------|-----|
| <b>associatedReferences</b> | No                                                                                                                                                                                                                                                                                                                          | A list (concatenated and separated) of identifiers (publication, bibliographic reference, global unique identifier, URI) of literature associated with the Occurrence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | "Christopher J. Conroy, Jennifer L. Neuwald. 2008. Phylogeographic study of the California vole, <i>Microtus californicus</i> Journal of Mammalogy, 89(3):755-767." | VARCHAR (500)                                                      | None                | DwC                                                                                                                                                                                                                                                                                         |                        |                                                                                                                                                                                                                                                                                                                             |         |               |      |     |
| <b>austConservation</b>     | No                                                                                                                                                                                                                                                                                                                          | <div><p>The Legal Status of the species under the <i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), and Migratory Bird agreements (JAMBA, CAMBA and ROKAMBA). It uses the following controlled vocabulary:</p><table><tr><th>Description</th><th>Definition under the EPBC Act 1999, and Migratory Birds agreement.</th></tr><tr><td>CAMBA</td><td>China-Australia Migratory Bird Agreement:<br/>Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the People's Republic of China for the protection of Migratory Birds and their Environment (Part 5, Commonwealth EPBC Act 1999).</td></tr><tr><td>Conservation Dependent</td><td>A native species is eligible to be included in the conservation dependent category at a particular time if, at that time: (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or (b) the following</td></tr></table></div> | Description                                                                                                                                                         | Definition under the EPBC Act 1999, and Migratory Birds agreement. | CAMBA               | China-Australia Migratory Bird Agreement:<br>Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the People's Republic of China for the protection of Migratory Birds and their Environment (Part 5, Commonwealth EPBC Act 1999). | Conservation Dependent | A native species is eligible to be included in the conservation dependent category at a particular time if, at that time: (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or (b) the following | "CAMBA" | VARCHAR (150) | None | ALA |
| Description                 | Definition under the EPBC Act 1999, and Migratory Birds agreement.                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                     |                                                                    |                     |                                                                                                                                                                                                                                                                                             |                        |                                                                                                                                                                                                                                                                                                                             |         |               |      |     |
| CAMBA                       | China-Australia Migratory Bird Agreement:<br>Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the People's Republic of China for the protection of Migratory Birds and their Environment (Part 5, Commonwealth EPBC Act 1999).                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                     |                                                                    |                     |                                                                                                                                                                                                                                                                                             |                        |                                                                                                                                                                                                                                                                                                                             |         |               |      |     |
| Conservation Dependent      | A native species is eligible to be included in the conservation dependent category at a particular time if, at that time: (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or (b) the following |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                     |                                                                    |                     |                                                                                                                                                                                                                                                                                             |                        |                                                                                                                                                                                                                                                                                                                             |         |               |      |     |



| Field Name | Always Present? | Definition            | Example                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Data Type | Access restrictions | Standards reference |
|------------|-----------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------|---------------------|
|            |                 |                       | subparagraphs are satisfied: (i) the species is a species of fish; (ii) the species is the focus of a plan of management that provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long term survival in nature are maximised; (iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory; (iv) cessation of the plan of management would adversely affect the conservation status of the species (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999). |           |                     |                     |
|            |                 | Critically Endangered | A native species is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).                                                                                                                                                                                                                                                |           |                     |                     |
|            |                 | Endangered            | A native species is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).                                                                                                                                                                                                                         |           |                     |                     |
|            |                 | JAMBA                 | Japan-Australia Migratory Bird Agreement:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                     |                     |

| Field Name | Always Present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Example | Data Type | Access restrictions | Standards reference |
|------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------|---------------------|---------------------|
|            |                 | <p>Refers to species listed in the Bilateral Agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment (Part 5, Commonwealth EPBC Act 1999).</p> <p>ROKAMBA Republic of Korea-Australia Migratory Bird Agreement:</p> <p>Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the Republic of Korea for the protection of Migratory Birds and their Environment (Part 5, Commonwealth EPBC Act 1999).</p> <p>Key Threatening Process Refers to a key process that threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).</p> <p>Vulnerable A native species is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered or endangered; and (b) it is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).</p> <p>Extinct A native species is eligible to be included in the extinct category at a particular time if, at that time, there is no reasonable doubt that the last member of the species</p> |         |           |                     |                     |

| Field Name                | Always Present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Example      | Data Type     | Access restrictions | Standards reference |
|---------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|---------------------|---------------------|
|                           |                 | <p>Extinct in the Wild</p> <p>has died (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).</p> <p>A native species is eligible to be included in the extinct in the wild category at a particular time if, at that time: (a) it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or (b) it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).</p> |              |               |                     |                     |
| <b>catalogNumber</b>      | Yes             | An identifier (preferably unique) for the record within the data set or collection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | "WD9884"     | VARCHAR (20)  | None                | DwC                 |
| <b>consequence</b>        | No              | <p>Final assessment as to the impact of Hazard Reduction activities on a species, based on the following controlled vocabulary:</p> <ul style="list-style-type: none"> <li>-- Mi: Minor</li> <li>- Mo: Moderate</li> <li>- Ma: Major</li> <li>- C: Critical</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                      | "Ma"         | VARCHAR (5)   | None                | OEH                 |
| <b>establishmentMeans</b> | Yes             | <p>The process by which the biological individual(s) represented in the Occurrence became established at the location. Based on the following controlled vocabulary:</p> <ul style="list-style-type: none"> <li>- Alive in NSW, Native</li> <li>- Extinct in NSW, Native</li> <li>- Introduced</li> </ul>                                                                                                                                                                                                                                                                                                                                                   | "Introduced" | VARCHAR (150) | None                | DwC                 |

| Field Name              | Always Present? | Definition                                                                                                                                                                                                                                                                                                                      | Example      | Data Type     | Access restrictions | Standards reference |
|-------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|---------------------|---------------------|
|                         |                 | <ul style="list-style-type: none"> <li>- Not Known from NSW</li> <li>- Hybrid</li> </ul>                                                                                                                                                                                                                                        |              |               |                     |                     |
| <b>estimateTypeCode</b> | No              | <p>Refers to the accuracy of the NumberIndividuals field using the following controlled vocabulary:</p> <ul style="list-style-type: none"> <li>- At least</li> <li>- Less than</li> <li>- Greater than</li> <li>- Estimate</li> <li>- Exactly</li> </ul>                                                                        | "At least"   | VARCHAR (20)  | None                | OEH                 |
| <b>individualCount</b>  | No              | The number of individuals represented present at the time of the Occurrence.                                                                                                                                                                                                                                                    | "25"         | NUMERIC (18)  | None                | DwC                 |
| <b>individualID</b>     | No              | An identifier for an individual or named group of individual organisms represented in the Occurrence. Meant to accommodate resampling of the same individual or group for monitoring purposes. May be a global unique identifier or an identifier specific to a data set.                                                       | "DJS019"     | VARCHAR (100) | None                | DwC                 |
| <b>observationType</b>  | Yes             | <p>Refers to the mode of observation. Uses a controlled vocabulary as follows:</p> <ul style="list-style-type: none"> <li>- Acoustic recording</li> <li>- Bone, teeth or shell</li> <li>- Burnt</li> <li>- Burrow</li> <li>- Camera</li> <li>- Cat kill</li> <li>- Crushed Cones</li> <li>- Dead</li> <li>- Dog kill</li> </ul> | "Nest/Roost" | VARCHAR (50)  | None                | OEH                 |

| Field Name          | Always Present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Example                                                                                      | Data Type     | Access restrictions | Standards reference |
|---------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------|---------------------|---------------------|
|                     |                 | <ul style="list-style-type: none"> <li>- Flora Record</li> <li>- Floristics Record from Systematic Flora Survey</li> <li>- Fox kill</li> <li>- Hair, feathers or skin</li> <li>- Heard call</li> <li>- In raptor/owl pellet</li> <li>- In scat</li> <li>- Miscellaneous</li> <li>- Nest/roost</li> <li>- Not located</li> <li>- Observed</li> <li>- Observed and Heard call</li> <li>- Road kill</li> <li>- Scat</li> <li>- Shot</li> <li>- Stranding/beached</li> <li>- Subfossil/Fossil Remains</li> <li>- Tracks, scratchings</li> <li>- Trapped or netted</li> <li>- Ultrasonic recording</li> </ul> |                                                                                              |               |                     |                     |
| <b>occurrenceID</b> | Yes             | <p>An identifier for the Occurrence (as opposed to a particular digital record of the occurrence).</p> <p>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 occurrenceID globally unique.</p>                                                                                                                                                                                                                                                                                                       | "urn:catalog: NSW Office of Environment and Heritage: BioNet Atlas of NSW Wildlife: WD9884". | VARCHAR (300) | None                | DwC                 |

| Field Name                 | Always Present? | Definition                                                                                                                                                                                                        | Example                                                                                                        | Data Type      | Access restrictions                                                                                                                                         | Standards reference |
|----------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|                            |                 | For this service it will be constructed according to the recommended Darwin Core formula as follows:<br><br>"urn:catalog:[institutionCode]:[collectionCode]:[catalogNumber]"                                      |                                                                                                                |                |                                                                                                                                                             |                     |
| <b>occurrenceRemarks</b>   | No              | Comments or notes about the Occurrence.                                                                                                                                                                           | "found dead on road".                                                                                          | VARCHAR (1000) | For Public and Registered users this field is withheld for Category 2 & 3 species.<br><br>For licensed users this field is withheld for Category 2 species. | DwC                 |
| <b>occurrenceStatus</b>    | Yes             | A statement about the presence or absence of a Taxon at a Location. Based on the following controlled vocabulary:<br><br>- Present<br>- Absent                                                                    | "Present"                                                                                                      | VARCHAR (20)   | None                                                                                                                                                        | DwC                 |
| <b>otherCatalogNumbers</b> | No              | A list (concatenated and separated) of previous or alternate fully qualified catalog numbers or other human-used identifiers for the same Occurrence, whether in the current or any other data set or collection. | "The Australian Museum, Sydney R10694", "Royal Botanic Gardens & National Herbarium of NSW, Sydney NSW227432". | VARCHAR (2000) | None                                                                                                                                                        | DwC                 |
| <b>PNFFilter</b>           | Yes             | Indicator as to whether the record is relevant to the Private Native Forestry Code of Practice based on the following controlled vocabulary:                                                                      | "Y", "N"                                                                                                       | VARCHAR (1)    | None                                                                                                                                                        | OEH                 |

| Field Name                   | Always Present? | Definition                                                                                                                                                                                                                                        | Example                                                                                               | Data Type     | Access restrictions                                                                                | Standards reference |
|------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------|---------------------|
|                              |                 | - Y (Yes)<br>- N (No)<br><br>See <a href="http://www.epa.nsw.gov.au/pnf/CodeofPractice.htm">http://www.epa.nsw.gov.au/pnf/CodeofPractice.htm</a> for more details and to download the code of practice.                                           |                                                                                                       |               |                                                                                                    |                     |
| <b>populationName</b>        | No              | Where the observation relates to the occurrence of a species within an endangered population as listed under the <i>Threatened Species conservation Act 1995</i> , the name of the threatened population will be given here                       | "Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area" | VARCHAR (255) |                                                                                                    |                     |
| <b>recordedBy</b>            | No              | A list (concatenated and separated) of names of people, groups, or organizations responsible for recording the original Occurrence.                                                                                                               | "Oliver P. Pearson; Anita K. Pearson"                                                                 | VARCHAR (500) | For Public, Registered and Licensed users the recorder name has been replaced with a unique UserID | DwC                 |
| <b>recordNumber</b>          | No              | An identifier given to the Occurrence at the time it was recorded. Often serves as a link between field notes and an Occurrence record, such as a specimen collector's number.                                                                    | "OPP 7101"                                                                                            | VARCHAR (30)  | None                                                                                               | DwC                 |
| <b>reproductiveCondition</b> | No              | The reproductive condition of the biological individual(s) represented in the Occurrence.<br><br>For Fauna, the following controlled vocabulary is applied:<br>- - Not breeding<br>- A Adult<br>- D Distraction display<br>- E Eggs<br>- G Gravid | "- Not breeding,A Adult,D Distraction display,E Eggs,I Immature (subadult),M Nestling,N Nesting"      | VARCHAR (900) | None                                                                                               | DwC                 |

| Field Name               | Always Present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Example                                                 | Data Type     | Access restrictions | Standards reference |
|--------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------|---------------------|---------------------|
|                          |                 | <ul style="list-style-type: none"> <li>- I Immature (subadult)</li> <li>- J Juveniles</li> <li>- L Lactating</li> <li>- M Nestling</li> <li>- N Nesting</li> <li>- P Pregnant</li> <li>- T Tadpoles</li> <li>- Y Yes, but no details</li> </ul> <p>For Flora, the following controlled vocabulary is applied:</p> <ul style="list-style-type: none"> <li>- BU Flower Buds</li> <li>- FL Flowering</li> <li>- FR Fresh Fruit</li> <li>- N No Breeding Evident</li> <li>- OF Old Fruit</li> <li>- SD Seeds</li> <li>- SE Seedlings Present</li> <li>- Y Breeding Present, but not specified</li> </ul> |                                                         |               |                     |                     |
| <b>sex</b>               | No              | <p>The sex of the biological individual(s) represented in the Occurrence based on the following controlled vocabulary:</p> <ul style="list-style-type: none"> <li>- Not Recorded</li> <li>- Female</li> <li>- Male</li> <li>- Unknown</li> <li>- Mixed sexes</li> </ul>                                                                                                                                                                                                                                                                                                                              | "Female", "Unknown"                                     | VARCHAR (20)  | None                | DwC                 |
| <b>stateConservation</b> | No              | The Legal Status of the species within NSW under the Threatened Species Conservation Act (TSC Act 1995),                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | "Protected", "Endangered, Category 2 Sensitive Species" | VARCHAR (150) | None                | ALA                 |



| Field Name            | Always Present?                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Example     | Data Type                                                                                 | Access restrictions | Standards reference                                                                                                 |            |                                                                                                                                                                                                             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                                                                                                                   |  |  |  |  |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>the <i>National Parks and Wildlife Act 1974</i> (NPW Act 1974), the <i>Fisheries Management Act 1994</i> No. 38 (FM Act 1994) and the Sensitive Species Data Policy (SSDP).</p> <p>Any given record can contain one or more of the following status’:</p> <table><tr><td>Description</td><td>Definition under the NPW Act 1974, the TSC Act 1995, the FM Act 1994 No. 38, or the SSDP.</td></tr><tr><td>Protected</td><td>Refers to fauna not listed in Schedule 11 of the NPW Act 1974 or to flora listed in Schedule 13 of the NPW Act 1974</td></tr><tr><td>Vulnerable</td><td>Refers to fauna and flora species that are likely to become endangered unless the circumstances &amp; factors threatening its survival or evolutionary development cease to operate (Schedule 2, TSC Act 1995).</td></tr><tr><td>Endangered</td><td>Refers to fauna and flora species that are likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival or evolutionary developments cease to operate; or, its numbers have been reduced to such a critical level, or its habitats have been so drastically reduced, that it is in immediate danger of extinction; or, it might already be extinct, but it is not presumed extinct (Schedule 1, part 1, TSC Act 1995).</td></tr><tr><td>Endangered Population</td><td>Refers to a population where, in the opinion of the Scientific Committee, its numbers have been reduced to such a</td></tr></table> | Description | Definition under the NPW Act 1974, the TSC Act 1995, the FM Act 1994 No. 38, or the SSDP. | Protected           | Refers to fauna not listed in Schedule 11 of the NPW Act 1974 or to flora listed in Schedule 13 of the NPW Act 1974 | Vulnerable | Refers to fauna and flora species that are likely to become endangered unless the circumstances & factors threatening its survival or evolutionary development cease to operate (Schedule 2, TSC Act 1995). | Endangered | Refers to fauna and flora species that are likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival or evolutionary developments cease to operate; or, its numbers have been reduced to such a critical level, or its habitats have been so drastically reduced, that it is in immediate danger of extinction; or, it might already be extinct, but it is not presumed extinct (Schedule 1, part 1, TSC Act 1995). | Endangered Population | Refers to a population where, in the opinion of the Scientific Committee, its numbers have been reduced to such a |  |  |  |  |
| Description           | Definition under the NPW Act 1974, the TSC Act 1995, the FM Act 1994 No. 38, or the SSDP.                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                                                                           |                     |                                                                                                                     |            |                                                                                                                                                                                                             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                                                                                                                   |  |  |  |  |
| Protected             | Refers to fauna not listed in Schedule 11 of the NPW Act 1974 or to flora listed in Schedule 13 of the NPW Act 1974                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                                                                           |                     |                                                                                                                     |            |                                                                                                                                                                                                             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                                                                                                                   |  |  |  |  |
| Vulnerable            | Refers to fauna and flora species that are likely to become endangered unless the circumstances & factors threatening its survival or evolutionary development cease to operate (Schedule 2, TSC Act 1995).                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                                                                           |                     |                                                                                                                     |            |                                                                                                                                                                                                             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                                                                                                                   |  |  |  |  |
| Endangered            | Refers to fauna and flora species that are likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival or evolutionary developments cease to operate; or, its numbers have been reduced to such a critical level, or its habitats have been so drastically reduced, that it is in immediate danger of extinction; or, it might already be extinct, but it is not presumed extinct (Schedule 1, part 1, TSC Act 1995). |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                                                                           |                     |                                                                                                                     |            |                                                                                                                                                                                                             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                                                                                                                   |  |  |  |  |
| Endangered Population | Refers to a population where, in the opinion of the Scientific Committee, its numbers have been reduced to such a                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                                                                           |                     |                                                                                                                     |            |                                                                                                                                                                                                             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                                                                                                                   |  |  |  |  |

| Field Name | Always Present? | Definition                   | Example                                                                                                                                                                                                                                                                                                                                                                                                          | Data Type | Access restrictions | Standards reference |
|------------|-----------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------|---------------------|
|            |                 |                              | critical level, or its habitat has been so drastically reduced, that it is in immediate danger of extinction and it is not a population of a species already listed in Schedule 1, and: (a) it is disjunct and at or near the limit of its geographic range, or (b) it is or is likely to be genetically distinct, or (c) it is otherwise of significant conservation value. (Schedule 1, part 2, TSC Act 1995). |           |                     |                     |
|            |                 | Presumed Extinct             | Refers to fauna and flora species that have not been located in nature during the preceding 50 years despite searching of known and likely habitats of that period (Schedule 1, part 4, TSC Act 1995).                                                                                                                                                                                                           |           |                     |                     |
|            |                 | Critically Endangered        | Refers to a species that is eligible to be listed as a critically endangered species if, in the opinion of the Scientific Committee, it is facing an extremely high risk of extinction in New South Wales in the immediate future, as determined in accordance with criteria prescribed by the regulations. (Schedule 1a, part 1, TSC Act 1995).                                                                 |           |                     |                     |
|            |                 | Category 2 sensitive species | Refers to species for which Atlas sightings' coordinates will be supplied denatured to public web applications, and denatured to licensed clients. Such species are classed as highly sensitive, and provision of precise locations would subject the species to high risk from threats such as disturbance and collection.                                                                                      |           |                     |                     |

| Field Name    | Always Present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Example                                      | Data Type     | Access restrictions                                                                            | Standards reference |
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|               |                 | <p>Category 3 sensitive species</p> <p>Refers to species for which sightings' coordinates will be supplied denatured to public web applications, but supplied 'as-held' to licensed clients. Current denaturing specifications are set out in Appendix 2. Such species are classed as of medium sensitivity, and provision of precise locations would subject the species to medium risk from threats such as collection/deliberate damage.</p> <p>Data are supplied under the conditions of a written data agreement, usually a Data Licence Agreement.</p> |                                              |               |                                                                                                |                     |
| <b>status</b> | Yes             | <p>The status of the record with respect to its validity as per the following controlled vocabulary:</p> <ul style="list-style-type: none"> <li>- Accepted as valid from quarantine</li> <li>- Invalid, in quarantine</li> <li>- Rejected as certainly incorrect</li> <li>- Suspect</li> <li>- Vagrant or Escaped Animal or Planted Specimen</li> <li>- Valid and accepted without modification</li> <li>- Valid record from population that is no longer extant</li> </ul>                                                                                  | "Suspect", "Rejected as certainly incorrect" | VARCHAR (200) | Public and Registered users can only access records where status is valid or accepted as valid | OEH                 |

## Event

| Field Name          | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                  | Example                                                      |                | Access Restrictions                                                                        | Standards reference |
|---------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------|---------------------|
| <b>eventDate</b>    | Yes             | The date-time or interval during which an Event occurred. For occurrences, this is the date-time when the event was recorded.<br><br>As per recommended best practice encoded using ISO 8601:2004(E).                                                                                                                                                                                       | "1978-06-01/1978-06-28"                                      | VARCHAR (25)   | None                                                                                       | DwC                 |
| <b>eventID</b>      | No              | The unique key assigned to a Census. A Census is a time distinct assessment conducted within a survey at a designated site.                                                                                                                                                                                                                                                                 | "CPXEI0000001"                                               | VARCHAR (20)   | For Category 2 & 3 Sensitive species this data is withheld from Public and Licensed users. | DwC                 |
| <b>eventRemarks</b> | No              | Comments or notes about the Event.                                                                                                                                                                                                                                                                                                                                                          | "after the recent rains the river is nearly at flood stage". | VARCHAR (1000) | None                                                                                       | DwC                 |
| <b>eventTime</b>    | No              | The time or interval during which an Event occurred.<br><br>As per recommended best practice encoded using ISO 8601:2004(E).                                                                                                                                                                                                                                                                | "10:00:00/10:05:00"                                          | VARCHAR (20)   | None                                                                                       | DwC                 |
| <b>habitat</b>      | No              | A category or description of the habitat in which the Event occurred as per the following controlled vocabulary:<br><br><ul style="list-style-type: none"> <li>- Closed chenopod shrubland</li> <li>- Isolated chenopod shrub</li> <li>- Isolated clump of chenopod shrubs</li> <li>- Chenopod shrubland</li> <li>- Open chenopod shrubland</li> <li>- Sparse chenopod shrubland</li> </ul> | "Sod grassland", "Open tussock grassland"                    | VARCHAR (150)  | For Category 2 & 3 Sensitive species this data is withheld from Public and Licensed users  | DwC                 |

| Field Name | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Example | Access Restrictions | Standards reference |
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|            |                 | <ul style="list-style-type: none"> <li>- Closed sod grassland</li> <li>- Isolated sod grasses</li> <li>- Isolated clump of sod grasses</li> <li>- Sod grassland</li> <li>- Open sod grassland</li> <li>- Sparse sod grassland</li> <li>- Closed fernland</li> <li>- Isolated ferns</li> <li>- Isolated clumps of ferns</li> <li>- Fernland</li> <li>- Open fernland</li> <li>- Sparse fernland</li> <li>- Closed forbland</li> <li>- Isolated forbs</li> <li>- Isolated clumps of forbs</li> <li>- Forbland</li> <li>- Open forbland</li> <li>- Sparse forbland</li> <li>- Closed tussock grassland</li> <li>- Isolated tussock grasses</li> <li>- Isolated clump of tussock grasses</li> <li>- Tussock grassland</li> <li>- Open tussock grassland</li> <li>- Sparse tussock grassland</li> <li>- Closed hummock grassland</li> <li>- Isolated hummock grass</li> <li>- Isolated clump of hummock grasses</li> <li>- Hummock grassland</li> <li>- Open hummock grassland</li> </ul> |         |                     |                     |

| Field Name | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Example | Access Restrictions | Standards reference |
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|            |                 | <ul style="list-style-type: none"> <li>- Sparse grassland</li> <li>- Closed vineland</li> <li>- Isolated vines</li> <li>- Isolated clump of vines</li> <li>- Vineland</li> <li>- Open vineland</li> <li>- Sparse vineland</li> <li>- Closed mallee forest</li> <li>- Isolated mallee trees</li> <li>- Isolated clump of mallee trees</li> <li>- Open mallee forest</li> <li>- Mallee woodland</li> <li>- Open mallee woodland</li> <li>- Closed lichenland</li> <li>- Isolated lichens</li> <li>- Isolated clup of lichens</li> <li>- Lichenland</li> <li>- Open lichenland</li> <li>- Sparse lichenland</li> <li>- Beach</li> <li>- Billabong or Swamp</li> <li>- Coastal Waters</li> <li>- Estuary</li> <li>- Freshwater Lake</li> <li>- Grazing Land</li> <li>- Saltwater Lake</li> <li>- Mudflat</li> <li>- Open Ocean</li> <li>- Crop Land</li> </ul> |         |                     |                     |

| Field Name | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Example | Access Restrictions | Standards reference |
|------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------|---------------------|
|            |                 | <ul style="list-style-type: none"> <li>- Rock Outcrop</li> <li>- Stream or River</li> <li>- Urban</li> <li>- Cave</li> <li>- Closed rushland</li> <li>- Isolated rushes</li> <li>- Isolated clump of rushes</li> <li>- Rushland</li> <li>- Open rushland</li> <li>- Sparse rushland</li> <li>- Closed shrubland</li> <li>- Isolated shrubs</li> <li>- Isolated clump of shrubs</li> <li>- Shrubland</li> <li>- Open shrubland</li> <li>- Sparse shrubland</li> <li>- Closed forest</li> <li>- Isolated trees</li> <li>- Isolated clump of trees</li> <li>- Open forest</li> <li>- Woodland</li> <li>- Open woodland</li> <li>- Closed sedgeland</li> <li>- Isolated sedges</li> <li>- Isolated clump of sedges</li> <li>- Sedgeland</li> <li>- Open sedgeland</li> <li>- Sparse sedgeland</li> <li>- Closed liverwortland</li> </ul> |         |                     |                     |

| Field Name            | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Example             |               | Access Restrictions                                                                       | Standards reference |
|-----------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------|-------------------------------------------------------------------------------------------|---------------------|
|                       |                 | <ul style="list-style-type: none"> <li>- Isolated liverworts</li> <li>- Isolated clump of liverworts</li> <li>- Liverwortland</li> <li>- Open liverwortland</li> <li>- Sparse liverwortland</li> <li>- Closed mossland</li> <li>- Isolated mosses</li> <li>- Isolated clump of mosses</li> <li>- Mossland</li> <li>- Open mossland</li> <li>- Sparse mossland</li> <li>- Closed mallee shrubland</li> <li>- Isolated mallee shrubs</li> <li>- Isolated clump of mallee shrubs</li> <li>- Mallee shrubland</li> <li>- Open mallee shrubland</li> <li>- Sparse mallee shrubland</li> <li>- Closed heathland</li> <li>- Isolated heath shrub</li> <li>- Isolated clump of heath shrubs</li> <li>- Heathland</li> <li>- Open heath</li> <li>- Sparse heath</li> </ul> |                     |               |                                                                                           |                     |
| <b>samplingEffort</b> | No              | The amount of effort expended during an Event.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | "60.00 Trap Nights" | VARCHAR (200) | For Category 2 & 3 Sensitive species this data is withheld from Public and Licensed users | DwC                 |



| Field Name              | Always present? | Definition                                                                                | Example                                                                  |               | Access Restrictions                                                                       | Standards reference |
|-------------------------|-----------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------|---------------------|
| <b>samplingProtocol</b> | No              | The name of, reference to, or description of the method or protocol used during an Event. | "20 by 20 Vegetation Plot (old type)", "Bat Ultrasound", "Cage Trapping" | VARCHAR (255) | For Category 2 & 3 Sensitive species this data is withheld from Public and Licensed users | DwC                 |

## Dcterms:Location

| Field Name                           | Always present? | Definition                                                                                                                                                                                                                                                                                                                            | Example                                | Data Type      | Access Restrictions                                        | Standards reference |
|--------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------|------------------------------------------------------------|---------------------|
| <b>coordinatePrecision</b>           | Yes             | A decimal representation of the precision of the coordinates given in the decimalLatitude and decimalLongitude. For example, 2 for coordinates accurate to two decimal places.<br><br>Note: be careful with coordinates converted from D:M:S they can have a lot of decimal places that are not warranted by the original coordinates | "1", "2", "9"                          | VARCHAR (5)    | None                                                       | DwC                 |
| <b>coordinateUncertaintyInMeters</b> | Yes             | The horizontal distance (in meters) from the given decimalLatitude and decimalLongitude describing the smallest circle within which the Location is likely to occur.<br><br>For example a value of 100 would mean that the location is accurate to the nearest 100 metres.                                                            | "30.0000"                              | NUMERIC (10,4) | None                                                       | DwC                 |
| <b>country</b>                       | Yes             | The name of the country or major administrative unit in which the Location occurs. Recommended best practice is to use a controlled vocabulary such as the Getty Thesaurus of Geographic Names.                                                                                                                                       | "Australia"                            | VARCHAR (9)    | None                                                       | DwC                 |
| <b>countryCode</b>                   | Yes             | The standard code for the country in which the Location occurs. Recommended best practice is to use ISO 3166-1-alpha-2 country codes.                                                                                                                                                                                                 | "AU" for Australia                     | VARCHAR (2)    | None                                                       | DwC                 |
| <b>county</b>                        | Yes             | The full, unabbreviated name of the next smaller administrative region than stateProvince (county, shire, department, etc.) in which the Location occurs. In the context of NSW, the Local Government Area. Where the record does not occur in a NSW LGA this field give the value "N/A"                                              | "Clarence Valley",<br>"Dubbo", "Tumut" | VARCHAR (120)  | None                                                       | DwC                 |
| <b>decimalLatitude</b>               | Yes             | The geographic latitude (in decimal degrees, using the spatial reference system given in geodeticDatum) of the geographic center of a                                                                                                                                                                                                 | "-41.0983423".                         | NUMERIC (12,9) | For Public and Registered users, this data is denatured to | DwC                 |

| Field Name              | Always present? | Definition                                                                                                                                                                                                                                                                             | Example         | Data Type      | Access Restrictions                                                                                                                                                                                     | Standards reference |
|-------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|                         |                 | Location. Positive values are north of the Equator, negative values are south of it. Legal values lie between -90 and 90, inclusive.                                                                                                                                                   |                 |                | 0.01 for Category 3 species, and 0.1 for Category 2 species<br><br>For Licensed users, this data is denatured to 0.01 for Category 2 species                                                            |                     |
| <b>decimalLongitude</b> | Yes             | The geographic longitude (in decimal degrees, using the spatial reference system given in geodeticDatum) of the geographic center of a Location. Positive values are east of the Greenwich Meridian, negative values are west of it. Legal values lie between -180 and 180, inclusive. | "-121.1761111". | NUMERIC (12,9) | For Public and Registered users, this data is denatured to 0.01 for Category 3 species, and 0.1 for Category 2 species<br><br>For Licensed users, this data is denatured to 0.01 for Category 2 species | DwC                 |
| <b>easting</b>          | Yes             | The reference in metres, measured east of an arbitrary origin (also referred to as the x-coordinate). The Easting provided in Atlas reports has been calculated from the Latitude and Longitude values. Data provided in MGA.                                                          | "691573"        | NUMERIC (6)    | For Public and Registered users, this data is denatured to 0.01 for Category 3 species, and 0.1 for Category 2 species<br><br>For Licensed users, this data is denatured to 0.01 for Category 2 species | ALA                 |
| <b>geodeticDatum</b>    | Yes             | The ellipsoid, geodetic datum, or spatial reference system (SRS) upon which the geographic coordinates given in decimalLatitude and decimalLongitude are based. Recommended best                                                                                                       | "GDA94"         | VARCHAR (5)    | None                                                                                                                                                                                                    | DwC                 |

| Field Name                  | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                        | Example                                                          | Data Type      | Access Restrictions                                                                        | Standards reference |
|-----------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------|---------------------|
|                             |                 | practice is to use the European Petroleum Survey Group (EPSG) code as a controlled vocabulary to provide an SRS, if known. Otherwise use a controlled vocabulary for the name or code of the geodetic datum, if known. Otherwise use a controlled vocabulary for the name or code of the ellipsoid, if known. If none of these is known, use the value "unknown". |                                                                  |                |                                                                                            |                     |
| <b>georeferenceProtocol</b> | No              | A description or reference to the methods used to determine the spatial footprint, coordinates, and uncertainties.<br><br>In the context of this data set, it will indicate if GPS was used to determine the location.                                                                                                                                            | "GPS"                                                            | VARCHAR (5)    | None                                                                                       | DwC                 |
| <b>locality</b>             | No              | The specific description of the place. Less specific geographic information can be provided in other geographic terms (higherGeography, continent, country, stateProvince, county, municipality, waterBody, island, islandGroup). This term may contain information modified from the original to correct perceived errors or standardize the description.        | "Hawkshead Road, 1km W of Hereford Park. Specified Map No: 8824" | VARCHAR (500)  | This data is withheld from Public and Registered users.                                    | DwC                 |
| <b>locationID</b>           | No              | An identifier for the set of location information (data associated with dcterms:Location). May be a global unique identifier or an identifier specific to the data set.                                                                                                                                                                                           | "7457-HO", "5224-035"                                            |                | For Category 2 & 3 Sensitive species this data is withheld from Public and Licensed users. | DwC                 |
| <b>locationRemarks</b>      | No              | Comments or notes about the Location.                                                                                                                                                                                                                                                                                                                             | "Partially cleared and regenerated."                             | VARCHAR (1000) | This data is withheld from Public and Registered users.                                    | DwC                 |
| <b>mapSheetNumber</b>       | Yes             | The Australian Topographic Map Sheet number for the map which covers the location of the record. Where the record does not overlap a valid NSW mapsheet this field gives the value "N/A"                                                                                                                                                                          | "8824 – BEGA"                                                    | VARCHAR (200)  | None                                                                                       | OEH                 |

| Field Name                      | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                        | Example   | Data Type    | Access Restrictions                                                                                                                                                                                          | Standards reference |
|---------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>maximumElevationInMeters</b> | No              | The upper limit of the range of elevation (altitude, usually above sea level), in meters.                                                                                                                                                                                                                                                                                         | "200".    | NUMERIC (4)  | For Category 2 & 3 Sensitive species this data is withheld from Public and Licensed users.                                                                                                                   | DwC                 |
| <b>minimumElevationInMeters</b> | No              | The lower limit of the range of elevation (altitude, usually above sea level), in meters.                                                                                                                                                                                                                                                                                         | "100".    | NUMERIC (4)  | For Category 2 & 3 Sensitive species this data is withheld from Public and Licensed users.                                                                                                                   | DwC                 |
| <b>northing</b>                 | Yes             | The reference in metres, measured north of an arbitrary origin (also referred to as the y-coordinate). The Northing provided in Atlas reports has been calculated from the Latitude and Longitude values. Data provided in Map Grid of Australia (MGA).                                                                                                                           | "6121614" | NUMERIC (7)  | For Public and Registered users, this data is denatured to 0.01° for Category 3 species, and 0.1° for Category 2 species.<br><br>For Licensed users, this data is denatured to 0.01° for Category 2 species. | ALA                 |
| <b>stateProvince</b>            | Yes             | The name of the next smaller administrative region than country (state, province, canton, department, region, etc.) in which the Location occurs. Where the record does not overlap a valid Australian state, this field gives the value "N/A"                                                                                                                                    | "NSW"     | VARCHAR (15) | None                                                                                                                                                                                                         | DwC                 |
| <b>zone</b>                     | Yes             | A 6° band of longitude, divided according to the Universal Transverse Mercator (UTM) coordinate system. NSW is divided into 4 Zones; Zone 56 is 150°–156° longitude, which encompasses much of eastern NSW. Zone 55 is 144°–150° longitude. Zone 54 is 138°–144° longitude, encompassing most of Western NSW. Zone 57 covers Lord Howe Island. The Zone in Atlas reports has been | "55"      | NUMERIC (2)  | None                                                                                                                                                                                                         | ALA                 |

| Field Name | Always present? | Definition                                                                  | Example | Data Type | Access Restrictions | Standards reference |
|------------|-----------------|-----------------------------------------------------------------------------|---------|-----------|---------------------|---------------------|
|            |                 | calculated from the Latitude and Longitude values.<br>Data provided in MGA. |         |           |                     |                     |

## Taxon

| Field Name                      | Always present? | Definition                                                                                                                                                                                      | Example                                           | Data Type     | Access Restrictions | Standards reference |
|---------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|---------------|---------------------|---------------------|
| <b>class</b>                    | Yes             | The full scientific name of the class in which the taxon is classified.                                                                                                                         | "Aves", "Equisetopsida"                           | VARCHAR (150) | None                | DwC                 |
| <b>family</b>                   | Yes             | The full scientific name of the family in which the taxon is classified.                                                                                                                        | "Cacatuidae", "Fabaceae"                          | VARCHAR (50)  | None                | DwC                 |
| <b>genus</b>                    | Yes             | The full scientific name of the genus in which the taxon is classified.                                                                                                                         | "Callocephalon", "Acacia"                         | VARCHAR (50)  | None                | DwC                 |
| <b>infraspecificEpithet</b>     | No              | The name of the lowest or terminal infraspecific epithet of the scientificName, excluding any rank designation.                                                                                 | "latifolia", "parviflora"                         | VARCHAR (50)  | None                | DwC                 |
| <b>kingdom</b>                  | Yes             | One of the following three values:<br>- Fauna<br>- Flora<br>- Fauna                                                                                                                             | "Flora", "Fauna".                                 | VARCHAR (150) | None                | DwC                 |
| <b>nomenclaturalCode</b>        | Yes             | The nomenclatural code (or codes in the case of an ambiregnal name) under which the scientificName is constructed. Recommended best practice is to use a controlled vocabulary.                 | "ICBN", "ICZN"                                    | VARCHAR (5)   | None                | DwC                 |
| <b>order</b>                    | Yes             | The full scientific name of the order in which the taxon is classified.                                                                                                                         | "Psittaciformes"                                  | VARCHAR (150) | None                | DwC                 |
| <b>scientificName</b>           | Yes             | The full scientific name, with authorship and date information if known. When forming part of an identification, this should be the name in lowest level taxonomic rank that can be determined. | "Callocephalon fimbriatum",<br>"Acacia pycnantha" | VARCHAR (80)  | None                | DwC                 |
| <b>scientificNameAuthorship</b> | No              | The authorship information for the scientificName formatted according to the conventions of the applicable nomenclaturalCode.                                                                   | "(Grant, 1803)"                                   | VARCHAR (100) | None                | DwC                 |
| <b>scientificNameID</b>         | Yes             | An identifier for the nomenclatural (not taxonomic) details of a scientific name.                                                                                                               | "0268"                                            | VARCHAR (10)  | None                | DwC                 |

| Field Name             | Always present? | Definition                                                          | Example                               | Data Type     | Access Restrictions | Standards reference |
|------------------------|-----------------|---------------------------------------------------------------------|---------------------------------------|---------------|---------------------|---------------------|
| <b>sortOrder</b>       | Yes             | An integer used to sort species in a sensible taxonomic order       | "97"                                  | INT           | None                | OEH                 |
| <b>specificEpithet</b> | No              | The name of the first or species epithet of the scientificName.     | "fimbriatum", "pycnantha"             | VARCHAR (50)  | None                | DwC                 |
| <b>taxonRank</b>       | Yes             | The taxonomic rank of the most specific name in the scientificName. | "Subspecies", "Species", "Genus".     | VARCHAR (150) | None                | DwC                 |
| <b>vernacularName</b>  | No              | A common or vernacular name.                                        | "Gang-gang Cockatoo", "Golden Wattle" | VARCHAR (80)  | None                | DwC                 |



## MeasurementOrFact

As discussed in the overview, additional measurements associated with a given sighting record will be supplied via a linked table using Darwin Core MeasurementOrFact. Each measurement will be linked back to the sighting record using the occurrenceID with the table below documenting the Darwin Core fields that will be made available via the species sighting web service.

| Field Name              | Always present? | Definition                                                                                                                                                                                                                                                  | Example                             | Data Type     | Access Restrictions | Standards reference |
|-------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------|---------------------|---------------------|
| <b>measurementType</b>  | No              | The nature of the measurement, fact, characteristic, or assertion. Recommended best practice is to use a controlled vocabulary.<br><br>See the measurementType table below for the full list of measurements supplied via the Species Sightings Web Service | "Aspect"                            | VARCHAR (20)  | none                | DwC                 |
| <b>measurementValue</b> | No              | The value of the measurement, fact, characteristic, or assertion.                                                                                                                                                                                           | "30"                                | VARCHAR (20)  | none                | DwC                 |
| <b>measurementUnit</b>  | No              | The units associated with the measurementValue. Recommended best practice is to use the International System of Units (SI).                                                                                                                                 | "degrees clockwise from true North" | VARCHAR (150) | none                | DwC                 |

### measurementType

The following table provides the full list of measurementTypes that (where available) will be given for each sighting record.

| measurementType     | Always present? | Definition                                                                                                                                                                                                                                    | Example     |
|---------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Aspect</b>       | No              | The aspect of the location where the observations was made measured in degrees clockwise from true North.                                                                                                                                     | "30"        |
| <b>Microhabitat</b> | No              | The small-scale habitat (e.g. on ground, or in tree) as per the following controlled vocabulary: <ul style="list-style-type: none"><li>- Flying above canopy</li><li>- In/on bridge</li><li>- In building</li><li>- Crevice in rock</li></ul> | "In burrow" |

| measurementType | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Example |
|-----------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|                 |                 | <ul style="list-style-type: none"> <li>- Crevice in log</li> <li>- Farm/fire dam</li> <li>- In dead tree (stag)</li> <li>- Edge of water</li> <li>- In/on post or stump</li> <li>- Flying within canopy</li> <li>- On ground</li> <li>- High shrub</li> <li>- In burrow</li> <li>- In cave</li> <li>- In grass</li> <li>- In tree hollow</li> <li>- In litter</li> <li>- In reeds</li> <li>- In soil</li> <li>- In Tree</li> <li>- In water</li> <li>- Lower canopy</li> <li>- Low shrub</li> <li>- Mid canopy</li> <li>- On (beach) sand</li> <li>- On fence</li> <li>- On log</li> <li>- On rock</li> <li>- Over water</li> <li>- Power line</li> <li>- On road</li> <li>- On trunk</li> <li>- Under bark</li> <li>- Upper canopy</li> </ul> |         |

| measurementType       | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Example  |
|-----------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|                       |                 | <ul style="list-style-type: none"> <li>- Undergrowth</li> <li>- Under log</li> <li>- Under rock</li> <li>- Under iron</li> <li>- Waterhole</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                 |          |
| <b>Slope</b>          | No              | The slope of the location where the observation was made measured in degrees from horizontal                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | "15"     |
| <b>SurfaceGeology</b> | No              | <p>The surface geology of the location where the observation was made as per the following controlled vocabulary:</p> <ul style="list-style-type: none"> <li>- Adamellite</li> <li>- Agglomerate</li> <li>- Altered Substrate Materials</li> <li>- Amphibolite</li> <li>- Andesite</li> <li>- Aplite</li> <li>- Arkose</li> <li>- Ash</li> <li>- Basalt</li> <li>- Breccia</li> <li>- Clay</li> <li>- Chert</li> <li>- Coal</li> <li>- Conglomerate</li> <li>- Coffee Rock</li> <li>- Diorite</li> <li>- Dolomite</li> <li>- Dolerite</li> <li>- Eolianite</li> </ul> | "Basalt" |

| measurementType | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Example |
|-----------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|                 |                 | <ul style="list-style-type: none"> <li>- Ferricrete</li> <li>- Gabbro</li> <li>- Granodiorite</li> <li>- Greenstone</li> <li>- Granite</li> <li>- Gneiss</li> <li>- Gravel</li> <li>- Graywacke</li> <li>- Hornfels</li> <li>- Unidentified igneous rock</li> <li>- Jasper</li> <li>- Calcrete</li> <li>- Calcareous sand</li> <li>- Laterite</li> <li>- Limestone</li> <li>- Marble</li> <li>- Unidentified metamorphic rock</li> <li>- Marl</li> <li>- Monzonite</li> <li>- Mudstone</li> <li>- No Observation Possible</li> <li>- Not Recorded</li> <li>- Obsidian</li> <li>- Other</li> <li>- Phyllite</li> <li>- Quartz porphyry</li> <li>- Quartzite</li> <li>- Rhyolite</li> <li>- Sand</li> <li>- Sandstone</li> </ul> |         |

| measurementType | Always present? | Definition                                                                                                                                                                                                                                                                                                                                                                                                                          | Example |
|-----------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|                 |                 | <ul style="list-style-type: none"> <li>- Silcrete</li> <li>- Sand/Clay/Alluvium</li> <li>- Unidentified sedimentary rock</li> <li>- Shale</li> <li>- Shale/Sandstone</li> <li>- Siltstone</li> <li>- Scoria</li> <li>- Slate</li> <li>- Serpentine</li> <li>- Schist</li> <li>- Syenite</li> <li>- Trachyte</li> <li>- Tuff</li> <li>- Unidentified Unconsolidated Substrate Material</li> <li>- Unknown</li> <li>- Silt</li> </ul> |         |

# Mapping to existing BioNet Atlas of NSW Wildlife field names

The illustration below shows how to manually search for and download records using the [BioNet Atlas of NSW Wildlife website](#).



Environment  
& Heritage



the website for the Atlas of NSW Wildlife

HOMEATLAS SEARCHVIS FLORA SURVEY

You are here: [Home](#) > Atlas search results[Search results](#)

Which species or group?

☐ All entities☐ Animals☐ Plants☐ Fungi☐ Communities☐ Threats☐ Endangered populations☒ Search for a species or group of species (e.g. birds)

Search for term

Enter at least 3 letters and click Go

Go

Term selected: Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area Endangered Populations

[Download records](#) [Save species list](#) [View map](#) Search criteria: Public Report of all Valid Records of Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area (Endangered Populations) returned a total of 1,517 records of 1 species.  
Report generated on 9/04/2015 4:28 PM.

Displaying 1-1 of 1 species below

To map records for individual species, select up to 5 species then click "view map".  
To map all records, click on "view map" (without selecting any species first).

The following table provides a mapping between the field names in the BioNet Atlas of NSW Wildlife record download and the new standardised field names in the web service.

#### Field name mapping

| BioNet website download field name | Web Service Field Name        |
|------------------------------------|-------------------------------|
| Accuracy                           | coordinateUncertaintyInMeters |
| CensusKey                          | eventID                       |
| ClassName                          | class                         |
| CommonName                         | vernacularName                |
| CommStatus                         | austConservation              |
| DatasetName                        | datasetName                   |
| DateFirst                          | eventDate                     |
| DateLast                           | eventDate                     |
| Description                        | locality                      |
| Easting                            | easting                       |
| Effort                             | samplingEffort                |
| EstimateTypeCode                   | EstimateTypeCode              |
| Exotic                             | establishmentMeans            |
| FamilyName                         | family                        |
| KingdomName                        | kingdom                       |
| Latitude_GDA94                     | decimalLatitude               |
| LocationNotes                      | locationRemarks               |
| Longitude_GDA94                    | decimalLongitude              |
| MicrohabitatType                   | MicrohabitatType              |
| Northing                           | northing                      |
| NSWStatus                          | stateConservation             |
| NumberIndividuals                  | individualCount               |
| ObservationType                    | ObservationType               |
| Observers                          | recordedBy                    |
| ProfileID                          | ProfileID                     |
| ScientificName                     | scientificName                |
| SensitivityClass                   | stateConservation             |
| SightingKey                        | catalogNumber                 |
| SightingNotes                      | occurrenceRemarks             |
| SortOrder                          | SortOrder                     |
| SourceCode                         | basisOfRecord                 |
| SpeciesCode                        | scientificNameID              |
| Status                             | Status                        |
| TechniqueType                      | samplingProtocol              |

| BioNet website download field name | Web Service Field Name |
|------------------------------------|------------------------|
| Zone                               | zone                   |