Victorian Biodiversity Data Standards

Recording where plant and animal populations are and where activities to protect and improve our environment are delivered is increasingly important to understand how our activities are impacting Victorian biodiversity. To gather consistent information where the Department has invested in species assessment or monitoring work the following standards have been developed to align with the state species occurrence dataset, the Victorian Biodiversity Atlas (VBA).

The VBA is the information system that collates all of Victoria's animal and plant species observations. To ensure the species information in the VBA can be collated and used for multiple analyses, information supplied must meet minimum standards before it can be included into the dataset.

The VBA standards are being further defined to meet the international standard Darwin Core so data shared via the VBA can be collated into analysis of the national and international level greatly increasing the influence of each individual record.

Spatial data

Central to the development of these Standards is the requirement to provide spatial data. This enables the information to be aggregated into a single spatial database. The initial collection, collation and reporting of output data is the responsibility of delivery agencies.

Individual areas were species assessments of monitoring is undertaken can be captured as either a polygon, line or point feature. In the Standards, each output includes a description of the appropriate spatial data feature.

Spatial data metadata

Spatial data submitted with the output data each year must be accompanied by a metadata statement consistent with the concepts and guidelines developed by the Australia New Zealand Land Information Council (ANZLIC). In accordance with the National Metadata Directory System, a set of mandatory core metadata elements are required. Any additional information that is deemed relevant to interpret the data supplied should also be provided in an accompanying document.

Data accuracy

Spatial data should be as accurate as possible. For purposes of mapping, the underlying data is usually mapped at 1:25,000. Positional accuracy should provide a reasonable guide to the location of reported activities and clearly distinguish the location of one activity from another.

Data verification
All data submitted is verified by species specialists across the state. Only species information that meets the standards and are approved by reviewers are accepted as records in the VBA and published via the application. Any records that require further information or checking will be forwarded to the data supplier to check and resubmit.

For some institutions that curate and verify their own datasets such as the National Herbarium of Victoria, Museums Victorian and BirdLife Australia these are imported as approved records to make the VBA the most comprehensive dataset for the state.

Reporting DELWP species observation data

Outputs should be provided to the timeline specified by the relevant agencies or investment programs. Agencies are to provide data directly through the VBA application, either manually entering the information or via the excel batch upload templates. Contact the VBA administration team to receive a copy of the latest version of the templates and further guidance on how to prepare your data.

Table 2: Description of common attribute data required (mandatory) for each species observation

Attribute	Description	Source	DarwinCore Link
Project ID	Unique identifier for each assessment or monitoring project The Project ID is generated by the VBA application once the delivery partner creates a new project within the application.	Application generated	http://rs.tdwg.org/dwc/terms/datasetID
Project Name	A name to identify a project. Projects are structured data, typically survey based with one or more surveys grouped together. To create a project, use the next protocol: • Name the target taxon or taxon type. • Name either the point of interest (as a town or park), region or State depending on the scale of your project. • Brief scope, this could also include the organisation(s) and year. Example: "La Trobe University Malleefowl surveys of the Murray Sunset NP 2010."	Delivery partner	http://rs.tdwg.org/dwc/terms/datasetName
Project Description	A description of the Project Name. Example: "Flora data recorded from 1x1 m and 10x10m quadrats at Baw Baw Frog breeding sites from 1996-1999"	Delivery partner	http://rs.tdwg.org/dwc/terms/catalogNumber
VBA Observer/Login Name	A unique sequence of characters used to identify a user and allow access to the application. Required for each observer that has identified species occurrence records within that project.	Delivery partner	http://rs.tdwg.org/dwc/terms/recordedBy
Site Name	The name for the set of location information. To define a site name it is important to give clear information. • If you have been undertaking an extensive survey using a series of sites then use that in the Site Name field, for instance, Site 1a – MM4h, BUT ensure the locality information gives a clear indication of the site location • Alternatively use the Site Name to pinpoint where on a track or a park, river etc. you made your observation, for instance, Junction of Snobs Creek Rd & No. 6 Track. The Site Location can then be the nearest town or park as Lake Eildon NP	Delivery partner	http://rs.tdwg.org/dwc/terms/verbatimLocality

Site Location	Can be built from spatial location - Note public land boundary the site falls in or distance to nearest Point of Interest Describe the locality using an accepted place name. Preferably give a distance and direction from a named point.	Delivery partner	http://rs.tdwg.org /dwc/terms/verba timLocality
Coordinate system	From a defined list, indicate the type of coordinates used to record the site coordinates. Only complete one of the following type of coordinates: • *latlong*, to identify latitude/longitude DMS (degrees minutes seconds). • *decdegrees*, to identify latitude/longitude DD (decimal degrees). • *eastnorthl*, to identify easting/northing (long – must include zone).	Delivery partner	http://rs.tdwg.org /dwc/terms/verba timCoordinateSys tem
Coordinate datum	From a defined list, a value to indicate a standard position or level that measurements are taken from at the site against a reference system or approximation of the earth's surface. GDA94, WGS84, AGD66	Delivery partner	http://rs.tdwg.org /dwc/terms/verba timCoordinates
X coordinate	A numeric representation of the precision of the coordinates given in the Easting or Longitude related with the type of coordinates used. Examples: • When the type of coordinates is *latlong* a value would be: "1492136" • When the type of coordinates is *decdegrees* a value would be: "149.3600" • When the type of coordinates is *eastnorthl* a value would be: "708400"	Delivery partner	http://rs.tdwg.org /dwc/terms/verba timCoordinates
Y coordinate	A numeric representation of the precision of the coordinates given in the Northing or Latitude related with the type of coordinates used. Examples: • When the type of coordinates is *latlong* a value would be: "373440" • When the type of coordinates is *decdegrees* a value would be: "37.5779" • When the type of coordinates is *eastnorthl* a value would be: "5838400"	Delivery partner	http://rs.tdwg.org /dwc/terms/verba timCoordinates
Spatial accuracy	A numeric value in the meters of the potential error associated with the X-Y coordinates. Example "15"	Delivery partner	http://rs.tdwg.org /dwc/terms/coor dinateUncertainty InMeters
Survey Name	An identifier for the set of information associated with a survey. Can be built from sampling protocol and date. Example "Herp census of alpine plains summer 2017"	Delivery partner or auto-generated	http://rs.tdwg.org /dwc/terms/event ID

Start Date	The single date or the start date of an interval during which a survey occurred. For species observations, this is the date when the survey was started. Use the following encoding scheme dd/mm/yyyy. Example: "01/01/2018" is 01 January 2018	Delivery partner	http://rs.tdwg.org/dwc/terms/verbatimEventDate
Survey Method	Select from a defined list with name of, reference to, or description of the sampling methods and techniques used during a survey. There can be multiple values associated with each sampling technique. These are defined in separate look-up tables within the batch upload templates. Example: "Dusk watch" or "2ha Bird Search" must be listed in the defined SAMPLING_METHOD lookup list.	VBA Defined list	http://rs.tdwg.org/dwc/terms/samplingProtocol
Sampling Effort	Select from a defined list with name of, reference to, or description of the effort to detect species during a survey. Can be multiple per method Example: "Number of Observers =2" or "Area sampled = 2ha" selectable from the defined SAMPLING_METHOD_DETAIL_LUT lookup list and linked to the method selected.	VBA defined list	http://rs.tdwg.org/dwc/terms/samplingEffort
Species Observed (Taxon ID)	This is made up of the Scientific Name, Common Name and associated VBA Taxon ID from the defined list (download available via VBA application species checklist) Example "Example: "Pelecanus conspicillatus" "Australian Pelican" "11652"	VBA defined list	http://rs.tdwg.org/dwc/terms/taxonID http://rs.tdwg.org/dwc/terms/scientificName http://rs.tdwg.org/dwc/terms/vernacularName
Type of Record	Select from a defined list with name of, reference to, or description of the detail of type of observation used. Example: "Captured", "Heard". The Default is "seen"	Delivery partner	http://rs.tdwg.org/dwc/terms/HumanObservation
Non-Mandatory meta-data fields to be provided if collected.			
Count	The number of each species present and identified at the time of the observation. Note the field can be left blank to denote presence only. If undertaking camera trap surveys to is recommended to not include the count. This field can also be zero in the case of a targeted species survey to denote with the effort to find that species it was not discovered	Delivery partner	http://rs.tdwg.org/dwc/terms/individualCount
Extra Information (Breeding)	A description to represent important extra information during the identification of the taxon Examples: "Breeding", "Introduced", "Salvaged"	Delivery partner	http://rs.tdwg.org/dwc/terms/behavior