SYSTEMATIC SURVEY OCCURRENCES TEMPLATE INSTRUCTIONS

OVERVIEW

Use this template to record systematic survey occurences data; that is the presence or absence of an organism at a particular site locality at a point in time.

This Systematic Survey Occurrences template **must be used in combination** with the Systematic Survey Metadata template and, in some cases, the Systematic Survey Sites template.

Templates have been provided to facilitate integration of your data into the Biodiversity Data Repository(BDR) database. Not all types of data have been catered for in the available templates at this stage; therefore, if you are unable to find a suitable template, please contact bdr-support@gaiaresources.com.au to make us aware of your data needs.

NEED TO KNOW:

For data validation, you will need your data file to:
- be the correct **file format**,
- have **matching template fields** to the template downloaded (do not remove, or change the order of fields),
- additional fields may be added **after the templated fields** (noting that the data type is not assumed and values will be encoded as strings),
- have populated the relevant fields using the correct **data type** (for example dates for date fields),
- have values in **mandatory fields** (see Table 1),
- comply with data **value constraints** for example the geographic coordinates are consistent with a geodeticDatum type of the five available options, and
- align with existing controlled vocabularies wherever possible (this is mandatory for geodeticDatum), but new terms may be submitted for consideration and will not cause a validation error.

FILE FORMAT

- The systematic survey occurrence template is a UTF-8 encoded csv (not Microsoft Excel Spreadsheets). Be sure to save this file with your data as a .csv (UTF-8) as follows, otherwise it will not pass the in-browser csv validation step upon upload.
  [MS Excel: Save As > More options > Tools > Web options > Save this document as > Unicode (UTF-8)]
- **Do not include empty rows**.

FILE SIZE

MS Excel imposes a limit of 1,048,576 rows on a spreadsheet, limiting a CSV file to the header row followed by 1,048,575 occurrences. Furthermore, MS Excel has a 32,767 character limit on individual cells in a spreadsheet. These limits may be overcome by using or editing CSV files with other software.

Larger datasets may be more readily ingested using the API interface. Please contact bdr-support@gaiaresources.com.au to make us aware of your data needs.

TEMPLATE FIELDS

The template file contains the field names in the top row. Table 1 will assist you in transferring your data to the template with the following information:

- **Field name** in the template (and an external link to the Darwin Core standard for that field where relevant);
- **Description** of the field;
- **Required** whether the field is **mandatory or optional**;
- **Format** (datatype) required for the data values for example text (string), number (integer, float), or date;
- **Example** of an entry for that field; and
- **Vocabulary links** within this document (for example pick list values) where relevant. The fields that have suggested values options for the fields in Table 1 are listed in Table 2 in alphabetical order of field name.

ADDITIONAL FIELDS

Data that do not match the existing template fields may be added as additional columns in the CSV files after the templated fields.
E.g., eventRemarks, associatedTaxa, pathway.

Table 1: Systematic Survey Occurrence data template fields with descriptions, conditions, datatype format, and examples.

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
providerRecordID	The unique (within provider) identifier allocated to this record by the data provider e.g. when data is provided by an aggregator. It connects the record to the collection and storage of the specimens when these parts of the workflow may have been done by different parties.	Mandatory	String	89T22FSJMJ079c5cf
providerRecordIDSource	Person or Organisation that generated the providerRecordID. For providers registered with the BDR, this field should contain your BDR registrationID. Populate only if the details are different from the dataset submission details.	Optional	String	Western Australian Biodiversity Information Office
locality	The specific description of the place.	Optional	String	Cowaramup Bay Road, Margaret River
decimalLatitude	The geographic latitude (in decimal degrees, using the spatial reference system given in geodeticDatum) of the geographic centre of a Location. Positive values are north of the Equator, negative values are south of it. Valid coordinate ranges for the BDR system are within and inclusive of -90 to 0.	Mandatory	Float	-33.812314

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
decimalLongitude	The geographic longitude (in decimal degrees, using the spatial reference system given in geodeticDatum) of the geographic centre of a Location. Positive values are east of the Greenwich Meridian, negative values are west of it. Valid coordinate ranges for the BDR system are within and inclusive of 0 to 180.	Mandatory	Float	115.231512
geodeticDatum	The acronym for the ellipsoid, geodetic datum, or spatial reference system (SRS) upon which the geographic (non-projected) coordinates given in decimalLatitude and decimalLongitude as based.	Mandatory	String	WGS84 (Vocabulary link)
coordinateUncertaintyIn Meters	The horizontal distance (in metres) from the given decimalLatitude and decimalLongitude describing the smallest circle containing the whole of the Location. Leave the value empty if the uncertainty is unknown, cannot be estimated, or is not applicable (because there are no coordinates). Zero is not a valid value for this term.	Optional	Float	50.0
dataGeneralizations	Actions taken to make the shared data less specific or complete than in its original form, due to restrictions around identifying locations of particular species. Suggests that alternative data of higher quality may be available on request.	Optional	String	Coordinates rounded to the nearest 10 km for conservation concern

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
eventDate	The date (with precision of year (YYYY), month year (YYYY-MM) or date in the following formats DD/MM/YYYY or YYYY-MM-DD are accepted) or date-time without timezone (in ISO 8601 format for example 2021-07-11T06:23:00) or date-time with timezone(in ISO 8601 format for example 2022-05-20T06:23:00+08:00) during which a species occurrence was observed. For occurrences, this is the date-time when the event was recorded. Not suitable for a time in a geological context.	Mandatory	Timestamp	2019-09-24
samplingProtocol	The sampling protocol is the method used to sample the locality to determine the presence (or absence) of the taxon referred to in this record at the indicated time. This may be a collecting method or a method to observe an organism without collection. Recommended best practice is to describe a species occurrence with no more than one sampling protocol. In the case of a summary, in which a specific protocol can not be attributed to specific species occurrences, the recommended best practice is to repeat the property for each IRI that denotes a different sampling protocol that applies to the occurrence.	Optional	String	Human observation
basisOfRecord	The specific nature of the data record.	Optional	String	Preserved Specimen (Vocabulary link)
recordedBy	A person, group, or organisation responsible for recording the original Occurrence.	Optional	String	J. Doe

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
recordNumber	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.	Optional	String	OPP 7101
occurrenceStatus	A statement about the presence or absence of a Taxon at a Location.	Optional	String	Present (Vocabulary link)
habitat	A category or description of the habitat in which the event occurred.	Optional	String	Closed forest of *Melaleuca lanceolata*. White,grey or brown sand, sandy loam.
establishmentMeans	Statement about whether an organism or organisms have been introduced to a given place and time through the direct or indirect activity of modern humans.	Optional	String	Native (Vocabulary link)
organismRemarks	Comments or notes about the Organism instance.	Optional	String	good condition
individualCount	The number of individuals present at the time of the Occurrence. 0 = none, no value = the specific number was not recorded.	Optional	Integer	1
organismQuantity	A number or enumeration value for the quantity of organisms.	Optional	Integer	12.5
organismQuantityType	The type of quantification system used for the quantity of organisms.	Optional	String	% biomass
lifeStage	The age class or life stage of the Organism(s) at the time the Occurrence was recorded.	Optional	String	Mature (Vocabulary link)

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
sex	The sex of the biological individual(s) represented in the Occurrence.	Optional	String	Unspecified (Vocabulary link)
reproductiveCondition	The reproductive condition of the biological individual(s) represented in the Occurrence.	Optional	String	No breeding evident
ownerRecordID	Identifier given to the occurrence by the owner of the data. Populate this field if the data owner is different to the data provider. Unique (within data owner) identifier for the record.	Optional	String	12345NT521mc5h
ownerRecordIDSource	Person or Organisation that generated the ownerRecordID. For organisations registered with the BDR, this field should contain the BDR registrationID. For all others, please provide the name of the Person or Organisation who owns the data.	Optional	String	BHP
collectionCode	The name, acronym, code, or initialism identifying the collection or data set from which the record was derived. It is associated with the catalogNumber.	Optional	String	HERB
catalogNumber	An identifier (preferably unique) for the record within the data set or collection.	Optional	String	`145732`, `145732a`, `2008.1334`, `R-4313`

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
catalogNumberSource	Organisation that generated the catalogNumber. In the BDR context, this is likely to be a collecting institution where a specimen or material sample is located. For organisations registered with the BDR, this field should contain the BDR registrationID. For all others, please provide the name of Person or Organisation.	Optional	String	Western Australian Museum
otherCatalogNumbers	A list (concatenated and separated with a space vertical bar space (|)) 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.	Optional	String	`NPS YELLO6778 | MBG 33424`
otherCatalogNumbersSource	Organisation that generated the otherCatalogNumbers. For organisations registered with the BDR, this field should contain the BDR registrationID. For all others, please provide the name of Person or Organisation.	Optional	String	University of Western Australia
preparations	A list (concatenated and separated with a space vertical bar space (|)) of preparations and preservation methods for a specimen.	Optional	String	Wet (in ethanol or some other preservative) (Vocabulary link)
preparedDate	The date (with precision of year (YYYY), month year (YYYY-MM) or date in the following formats DD/MM/YYYY or YYYY-MM-DD are accepted) or date-time without timezone (in ISO 8601 format for example 2021-07-11T11:23:00) or date-time with timezone(in ISO 8601 format for example 2022-05-20T06:23:00+08:00) representing the date or date-time the specimen was prepared.	Optional	Timestamp	2019-09-24

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
associatedSequences	A list (concatenated and separated with a space vertical bar space (|)) of identifiers (publication, global unique identifier, URI) of genetic sequence information associated with the Occurrence.	Optional	String	https://www.ncbi.nlm.nih.gov/nuccore/MT766606.1
sequencingMethod	The method used to obtain sequence data for example DNA, RNA, or protein from the sample.	Optional	String	Sanger-dideoxy-sequencing
verbatimIdentification	A string representing the taxonomic identification as it appeared in the original record. This term is meant to allow the capture of an unaltered original identification/determination, including identification qualifiers, hybrid formulas, uncertainties, etc. This term is meant to be used in addition to scientificName (and identificationQualifier etc.), not instead of it.	Optional	String	*Caladenia ?excelsa*
dateIdentified	The date (with precision of year (YYYY), month year (YYYY-MM) or date in the following formats DD/MM/YYYY or YYYY-MM-DD are accepted) or date-time without timezone (in ISO 8601 format for example 2021-07-11T11:23:00) or date-time with timezone(in ISO 8601 format for example 2022-05-20T06:23:00+08:00) on which the subject was determined as representing the Taxon.	Optional	Timestamp	2019-09-24
identifiedBy	A list (concatenated and separated with a space vertical bar space (|)) of names of people, groups, or organisations who assigned the Taxon to the subject.	Optional	String	J. Doe | S. Smith | Stream Environment and Water Pty Ltd
identificationMethod	Method used to associate the organism with the scientificName label.	Optional	String	Visually identified in the field (sighting)

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
scientificName	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. This term should not contain identification qualifications, which should instead be supplied in the identificationQualifier column. NOTE: Phrase names such as Rhagodia sp. Hamersley (M.Trudgen 17794) are permitted in the scientificName field where those are in use.	Mandatory	String	*Caladenia excelsa*
identificationQualifier	A brief phrase or a standard term ("cf.", "aff.") to express the determiner's doubts about the Identification.	Optional	String	Species incerta (Vocabulary link)
identificationRemarks	Comments or notes about the Identification.	Optional	String	One unopened flower when recorded and one leaf only. ID not confirmed
acceptedNameUsage	The full name, with authorship and date information if known, of the currently valid (zoological) or accepted (botanical) taxon.	Optional	String	*Occiperipatoides gilesii (Spencer, 1909)*
kingdom	The full scientific name of the kingdom in which the taxon is classified.	Mandatory	String	Plantae (Vocabulary link)
taxonRank	The taxonomic rank of the most specific name in the scientificName.	Optional	String	Species (Vocabulary link)

APPENDICES

APPENDIX-I: VOCABULARY LIST

Apart from geodeticDatum, the data validation does not require adherence to the below vocabularies for each of the fields indicated as having vocabularies. These vocabularies are provided as a means of assistance in developing consistent language within the database. New terms can be added to more appropriately describe your data that goes beyond the current list. Table 2 provides some suggested values from existing sources such as: Biodiversity Information Standard (TDWG), EPSG.io Coordinate systems worldwide, the Global Biodiversity Information Facility, and Open Nomenclature in the biodiversity era.

Table 2: Suggested values for controlled vocabulary fields in the template. Each term has a preferred label with a definition to aid understanding of its meaning. For some terms, alternative labels are provided that mean the same sort of thing. Note: **geodeticDatum value must come from one of the options in this table**.

Template field name	Preferred label	Definition	Alternate label
basisOfRecord	FossilSpecimen	A preserved specimen that is a fossil.	Fossil Specimen
	HumanObservation	An output of a human observation process.	Human Observation
	LivingSpecimen	A specimen that is alive.	Living Specimen
	MachineObservation	An output of a machine observation process.	Machine Observation
	MaterialSample	A physical result of a sampling (or subsampling) event. In biological collections, the material sample is typically collected, and either preserved or destructively processed.	Material Sample
	Occurrence	An existence of an Organism (sensu http://rs.tdwg.org/dwc/terms/Organism) at a particular place at a particular time.	
	PreservedSpecimen	A specimen that has been preserved.	Preserved Specimen

Template field name	Preferred label	Definition	Alternate label
establishmentMeans	introduced	Establishment of a taxon by human agency into an area that is not part of its natural range.	alien, exotic, non-native, nonindigenous
	introducedAssistedColonisation	Establishment of a taxon specifically with the intention of creating a self-sustaining wild population in an area that is not part of the taxon's natural range.	assisted colonisation
	native	A taxon occurring within its natural range.	native (indigenous)
	nativeReintroduced	A taxon re-established by direct introduction by humans into an area that was once part of its natural range, but from where it had become extinct.	native: reintroduced
	uncertain	The origin of the occurrence of the taxon in an area is obscure.	unknown, cryptogenic
	vagrant	The temporary occurrence of a taxon far outside its natural or migratory range.	casual
geodeticDatum	AGD84	Australian Geodetic Datum 1984	EPSG:4203
	AGD66	Australian Geodetic Datum 1966	EPSG:4202
	GDA2020	Geocentric Datum of Australia 2020	EPSG:7844
	GDA94	Geocentric Datum of Australia 1994	EPSG:4283
	WGS84	World Geodetic System 1984, used in GPS	EPSG:4326
identificationQualifier	animalia cetera	It groups all the unidentified specimens that are not listed as separate taxa. The term cetera (abbreviated c. or cet.) may be applied to a given high-rank taxon, meaning that identification at a lower taxonomic level has not been attempted (see also stetit) but explicitly not including subordinate taxa that may have been identified.	a.c., A.C.

Template field name	Preferred label	Definition	Alternate label
	confer	"Compare with". Specimens should be compared to reference material, since most of the diagnostic characters correspond to a given species but some are unclear. Also used in the sense of affinis and species incerta (these usages are discouraged).	cf., cfr., conf., sp. cf.
	ex grege	"Of the group including". The specimen has some affinity to a known species or it belongs to a species group or species complex; see also affinis and species proxima.	ex gr., gr.
	familia genus species	The specimen has not been attributed to any known species nor family; see also species.	fam. gen. sp.
	genus et species nova	The specimen is considered to belong to a new species and a new genus; for more details, see species nova.	gen. et sp. nov., gen. nov., sp.nov., nov. gen. et sp.
	genus novum	The specimen is considered to belong to a new species and a new genus; for more details, see species nova	gen. nov., g. nov., gen. n., g. n., nov. gen.
	genus species	The specimen has not been related to any known species nor genus; see also species.	gen. sp., g. sp.
	species	The specimen has not been identified, nor it has been related to any known species; the uncertainty is potentially provisional: it could be due to the lack of suitable dichotomous keys, or to the occurrence of a species not previously described. Also used in the sense of species indeterminabilis and stetit (these usages are discouraged.	sp.
	species (pl.),	More than one species belonging to the same genus (or higher-rank taxon) are included.	spp., sp. pl.

Template field name	Preferred label	Definition	Alternate label
	species affinis	"Has affinity with". The specimen has some affinity to a known species but it is not identical to it; it generally implies distinction more than a possible identity, in contrast with the qualifier confer; see also species Proxima and ex grege. It is often used in combination with the ON qualifier species nova. Also used in the sense of confer (this usage is discouraged).	aff., sp. aff.
	species incerta	The identification is uncertain; it usually indicates a higher reliability with respect to confer. The sign "sp. inc." is also used in the sense of species, species indeterminabilis and species inquirenda (these usages are discouraged).	?, sp. Inc
	species indeterminabilis	The specimen is indeterminable beyond a certain taxonomic level due to the deterioration or lack of diagnostic characters. Also used in the sense of species and stetit (these usages are discouraged.	indet., ind., sp. indet., sp. ind.
	species nova	The specimen is considered to belong to a new, previously undescribed species. (1) When describing a new species, the use of the qualifier is required by the ICZN (1999) to explicitly indicate the taxa name as intentionally new. (2) Used as ON qualifier to refer to a new, still unnamed species before the formal publication of the description.	sp. nov., spec. nov., sp. n., nov. sp., nov. spec., n. sp.
	species proxima	The specimen is near to a known species but it is not identical to it; see also affinis and ex grege.	prox., sp. prox., nr., sp. nr.
	stetit	Identification at a lower taxonomic level has not been attempted, even if allowed by the sample conditions. It may also be used when more records with different ON qualifiers need to be merged at a safe taxonomic level.	stet., the intentional absence of qualifiers
	subspecies	The only infraspecific rank regulated by the ICZN (1999). As ON qualifier, it indicates that the specimen probably belongs to a subspecies but it has not been related to any known one; see also species.	ssp., subsp.
kingdom	Animalia	Kingdom Animalia	

Template field name	Preferred label	Definition	Alternate label
	Fungi	Kingdom (taxonRank: Regnum) Fungi	
	Plantae	Kingdom (taxonRank: Regnum) Plantae	Plantae Haeckel
lifeStage	adult	An adult is a plant, animal, or person who has reached full growth or alternatively is capable of reproduction.	imago
	embryo	An embryo is a multicellular diploid eukaryote in its earliest stage of development, from the time of first cell division until birth, hatching, or germination.	egg, seed
	gamete	A gamete is a cell that fuses with another gamete during fertilisation in organisms that reproduce sexually. In species that produce two morphologically distinct types of gametes, and in which each individual produces only one type, a female is any individual that produces the larger type of gamete — called an ovum (or egg) — and a male produces the smaller tadpole-like type — called a sperm. This is an example of anisogamy or heterogamy, the condition wherein females and males produce gametes of different sizes. In contrast, isogamy is the state of gametes from both sexes being the same size and shape, and given arbitrary designators for mating type. Gametes carry half the genetic information of an individual, one chromosome of each type.	ovum, sperm, pollen

Template field name	Preferred label	Definition	Alternate label
	gametophyte	In plants and algae that undergo alternation of generations, a gametophyte is the multicellular structure, or phase, that is haploid, containing a single set of chromosomes. The gametophyte produces male or female gametes (or both), by a process of cell division called mitosis. In mosses, liverworts and hornworts (bryophytes), the gametophyte is the commonly known phase of the plant. An early developmental stage in the gametophyte of mosses (immediately following germination of the meiospore) is called the protonema. In most other land plants the gametophyte is very small (as in ferns and their relatives) or even reduced as in flowering plants (angiosperms), where the female gametophyte (ovule) is known as a megagametophyte and the male gametophyte (pollen) is called a microgametophyte.	gamont, protonema, pollen, ovule
	juvenile	A juvenile is an individual organism that has not yet reached its adult form, sexual maturity or size. Juveniles sometimes look very different from the adult form, particularly in terms of their colour. In many organisms the juvenile has a different name from the adult.	seedling, eft, calf, hatchling, infant, foal, kitten, kit, chick, nymph, fawn, whelp, pup, elver, fry

Template field name	Preferred label	Definition	Alternate label
	larva	A larva (Latin; plural larvae) is a young (juvenile) form of animal with indirect development, going through or undergoing metamorphosis (for example, insects, amphibians, or cnidarians). The larva can look completely different from the adult form, for example, a caterpillar differs from a butterfly. Larvae often have special (larval) organs which do not occur in the adult form. The larvae of some species can become pubescent and not further develop into the adult form (for example, in some newts). This is a type of neoteny. It is a misunderstanding that the larval form always reflects the group's evolutionary history. It could be the case, but often the larval stage has evolved secondarily, as in insects. In these cases the larval form might differ more from the group's common origin than the adult form. The early life stages of most fish species are considerably different from juveniles and adults of their species and are called larvae.	larvae, tadpole, polliwog, pollywog, polliwig, polewig, polwig, planula, nauplius, zoea, nymph, caterpillar, grub, maggot, wriggler, trochophore, veliger, glochidium, ammocoete, leptocephalus, bipinnaria, caterpillar, grub, maggot
	pupa	A pupa is the life stage of some insects undergoing transformation between immature and mature stages. The pupal stage is found only in holometabolous insects, those that undergo a complete metamorphosis, with four life stages: egg (-> embryo), larva, pupa, and imago (-> adult).	puppe

Template field name	Preferred label	Definition	Alternate label
	spore	A spore is a reproductive structure that is adapted for dispersal and surviving for extended periods of time in unfavorable conditions. Spores form part of the life cycles of many bacteria, plants, algae, fungi and some protozoans. A chief difference between spores and seeds as dispersal units is that spores have very little stored food resources compared with seeds. Spores are usually haploid and unicellular and are produced by meiosis in the sporangium by the sporophyte. Once conditions are favorable, the spore can develop into a new organism using mitotic division, producing a multicellular gametophyte, which eventually goes on to produce gametes. Many ferns, especially those adapted to dry conditions, produce diploid spores. In this case spores are the units of asexual reproduction, because a single spore develops into a new organism. By contrast, gametes are the units of sexual reproduction, as two gametes need to fuse to create a new organism.	-
	sporophyte	All land plants, and some algae, have life cycles in which a haploid gametophyte generation alternates with a diploid sporophyte, the generation of a plant or alga that has a double set of chromosomes. A multicellular sporophyte generation or phase is present in the life cycle of all land plants and in some green algae. For common flowering plants (Angiosperms), the sporophyte generation comprises almost their whole life cycle (that is whole green plant, roots etc), except phases of small reproductive structures (pollen and ovule).	agamont

Template field name	Preferred label	Definition	Alternate label
	zygote	A zygote (or zygocyte) describes the first stage of a new unique organism when it consists of just a single cell. The term is also used more loosely to refer to the group of cells formed by the first few cell divisions, although this is properly referred to as a blastomere. A zygote is usually produced by a fertilisation event between two haploid cells - an ovum from a female and a sperm cell from a male - which combine to form the single diploid cell. Thus the zygote contains DNA originating from both mother and father and this provides all the genetic information necessary to form a new individual	blastomere
occurrenceStatus	absent	The occurrence was not present at the location and time of the observation.	-
	present	The occurrence was present at the location and time of the observation.	-
preparations	alcohol	Alcohol	-
	deepFrozen	Deep frozen	Deep frozen
	dried	Dried	-
	driedAndPressed	Dried and pressed	Dried and pressed
	formalin	Formalin	-
	freezeDried	Freeze-dried	Freeze-dried
	glycerin	Glycerin	-
	gumArabic	Gum arabic	Gum arabic
	microscopicPreparation	Microscopic preparation	Microscopic preparation
	mounted	Mounted	-
	noTreatment	No treatment	No treatment
	other	Other	unspecified

Template field name	Preferred label	Definition	Alternate label
	pinned	Pinned	-
	refrigerated	Refrigerated	-
sex	female	Female (♀) is the sex of an organism, or a part of an organism, which produces mobile ova (egg cells).	F, ♀
	hermaphrodite	One organism having both male and female sexual characteristics and organs; at birth an unambiguous assignment of male or female cannot be made	Zwitter
	male	Male (♂) refers to the sex of an organism, or part of an organism, which produces small mobile gametes, called spermatozoa.	M, ♂
	undetermined	If the sex of an organism can't be determined for some reason.	Undet., unknown
taxonRank	class	class	-
	cultivar	The epithet is usually output in single quotes and may contain multiple words, see ICBN §28. Examples: Taxus baccata 'Variegata', Juniperus ×pfitzeriana 'Wilhelm Pfitzer'; Magnolia 'Elizabeth' (= a hybrid, no species epithet).	-
	cultivarGroup	cultivar group	grex
	family	family	-
	form	form	forma
	genus	genus	-
	informal	informal	-
	infragenericname	Used for any other unspecific rank below genera and above species.	-
	infraorder	infraorder	-
	infraspecificname	Used for any other unspecific rank below genera and above species.	-
	infrasubspecificname	Used for any other unspecific rank below subspecies.	-

Template field name	Preferred label	Definition	Alternate label
	kingdom	kingdom	regnum
	order	order	alliance
	phylum	phylum	division
	section	Section within a genus. In Zoology a section sometimes refers to a group above family level, this is NOT meant	
	series	Series within a genus	
	species	species	
	speciesAggregate	A loosely defined group of species. Zoology: 'Aggregate - a group of species, other than a subgenus, within a genus. An aggregate may be denoted by a group name interpolated in parentheses.' -- The Berlin/MoreTax model notes:'[these] aren't taxonomic ranks but circumscriptions because on the one hand they are necessary for the concatenation of the fullname and on the other hand they are necessary for distinguishing the aggregate or species group from the microspecies.' Compare subspecific aggregate for a group of subspecies within a species!	aggregate, species group, species complex
	subfamily	subfamily	
	subform	subform	subforma
	subgenus	subgenus	
	suborder	suborder	
	subsection	Subsection within a genus	
	subseries	Subseries within a genus	
	subspecies	subspecies	

Template field name	Preferred label	Definition	Alternate label
	subspecificAggregate	A loosely defined group of subspecies. Zoology:'Aggregate - a group of subspecies within a species. An aggregate may be denoted by a group name interpolated in parentheses.'	
	subtribe	subtribe	
	subvariety	subvariety	subvarietas
	superfamily	superfamily	
	supragenericname	Used for any other unspecific rank above genera.	
	tribe	tribe	
	unranked	unranked	
	variety	variety	varietas

Table 2b: Suggested values for conditionally mandatory values for the threatStatus and conservationJurisdiction in the template. State and Territory conservationJurisdictions spelt out in words are also valid. For some threatStatus terms, alternative labels are provided that are also valid for that conservationJurisdiction.

conservation Jurisdiction	threatStatus	threatStatus alternative labels
ACT	extinct	
	extinct in the Wild	
	critically endangered	
	endangered	
	vulnerable	
	regionally conservation dependent	
EPBC	EX	extinct
	XW	extinct in the wild, EW
	CE	critically endangered, CR
	E	Endangered, EN
	V	Vulnerable, VU
	CD	conservation dependent
	JAMBA	
	CAMBA	
	KAMBA	
	CITES	
NSW	EX	Extinct
	CE	Critically Endangered
	En	Endangered
	V	Vulnerable
NT	Ex	Extinct
	Ew	Critically endangered (possibly extinct)
	CE	Critically endangered
	EN (extinct in NT)	Endangered (extinct in NT)
	EN (extinct in wild in NT)	Endangered (extinct in wild in NT)
	EN	Endangered
	Vu (extinct in NT)	Vulnerable (extinct in NT)

		Vu	Vulnerable
		NT	Near Threatened
		LC (extinct in NT)	Least concern (extinct in NT)
		LC	Least concern
		DD	Data Deficient
		NE	Not Evaluated
QLD		EX	Extinct wildlife
		PE	Extinct in the wild wildlife
		CR	Critically endangered wildlife
		E	Endangered wildlife
		V	Vulnerable wildlife
		NT	Near threatened wildlife
		SL	Special least concern wildlife
		C	Least concern wildlife
		I	International wildlife
SA		E	Endangered
		V	Vulnerable
		R	Rare
		ssp.	indicates that at least one subspecies for this species has been given a conservation rating
		sp.	indicates that a rating has been applied to the species level. The status has not been assessed at the subspecies level
TAS		x	Extinct
		e	Endangered
		v	Vulnerable
		r	Rare
VIC		Extinct	
		Extinct in the Wild	
		Critically Endangered	
		Endangered (Extinct in Victoria)	
		Endangered	
		Vulnerable	
		Conservation Dependent	

	Restricted	
WA	T	
	CR	critically endangered species
	EN	endangered species
	VU	vulnerable species
	EX	extinct species
	EW	extinct in the wild
	Specially protected species	
	MI	migratory species
	CD	species of special conservation interest (conservation dependent fauna)
	OS	other specifically protected fauna
	P1	priority 1: poorly-known species
	P2	priority 2: poorly-known species
	P3	priority 3: poorly-known species
	P4	priority 4: rare, near threatened and other species in need of monitoring

APPENDIX-II: Timestamp

Following date and date-time formats are acceptable within the timestamp:

xsd:dateTimeStamp with timezone	yyyy-mm-ddThh:mm:ss.sTZD (eg 1997-07-16T19:20:30.45+01:00) OR yyyy-mm-ddThh:mm:ssTZD (eg 1997-07-16T19:20:30+01:00) OR yyyy-mm-ddThh:mmTZD (eg 1997-07-16T19:20+01:00)
xsd:dateTime	yyyy-mm-ddThh:mm:ss.s (eg 1997-07-16T19:20:30.45) OR yyyy-mm-ddThh:mm:ss (eg 1997-07-16T19:20:30) OR yyyy-mm-ddThh:mm (eg 1997-07-16T19:20)
xsd:Date	dd/mm/yyyy OR d/m/yyyy OR yyyy-mm-dd OR yyyy-m-d
xsd:gYearMonth	mm/yyyy OR m/yyyy OR yyyy-mm
xsd:gYear	yyyy

Where:

yyyy = four-digit year

mm   = two-digit month (01=January, etc.)

dd   = two-digit day of month (01 through 31)

hh   = two digits of hour (00 through 23) (am/pm NOT allowed)

mm   = two digits of minute (00 through 59)

ss   = two digits of second (00 through 59)

s   = one or more digits representing a decimal fraction of a second

TZD = time zone designator (Z or +hh:mm or -hh:mm

APPENDIX-III: UTF-8

UTF-8 encoding is considered a best practice for handling character encoding, especially in the context of web development, data exchange, and modern software systems. UTF-8 (Unicode Transformation Format, 8-bit) is a variable-width character encoding capable of encoding all possible characters (code points) in Unicode.

Here are some reasons why UTF-8 is recommended:**Universal Character Support:** UTF-8 can represent almost all characters from all writing systems in use today. This includes characters from various languages, mathematical symbols, and other special characters.

- **Backward Compatibility:** UTF-8 is backward compatible with ASCII (American Standard Code for Information Interchange). The first 128 characters in UTF-8 are identical to ASCII, making it easy to work with systems that use ASCII.
- **Efficiency:** UTF-8 is space-efficient for Latin-script characters (common in English and many other languages). It uses one byte for ASCII characters and up to four bytes for other characters. This variable-length encoding minimises storage and bandwidth requirements.
- **Web Standards:** UTF-8 is the dominant character encoding for web content. It is widely supported by browsers, servers, and web-related technologies.
- **Globalisation:** As software applications become more globalised, supporting a wide range of languages and scripts becomes crucial. UTF-8 is well-suited for internationalisation and multilingual support.
- **Compatibility with Modern Systems:** UTF-8 is the default encoding for many programming languages, databases, and operating systems. Choosing UTF-8 helps ensure compatibility across different platforms and technologies.

When working with text data, it's generally a good idea to use UTF-8 encoding to avoid issues related to character representation and ensure that your software can handle a diverse set of characters and languages.

For assistance, please contact: bdr-support@gaiaresources.com.au