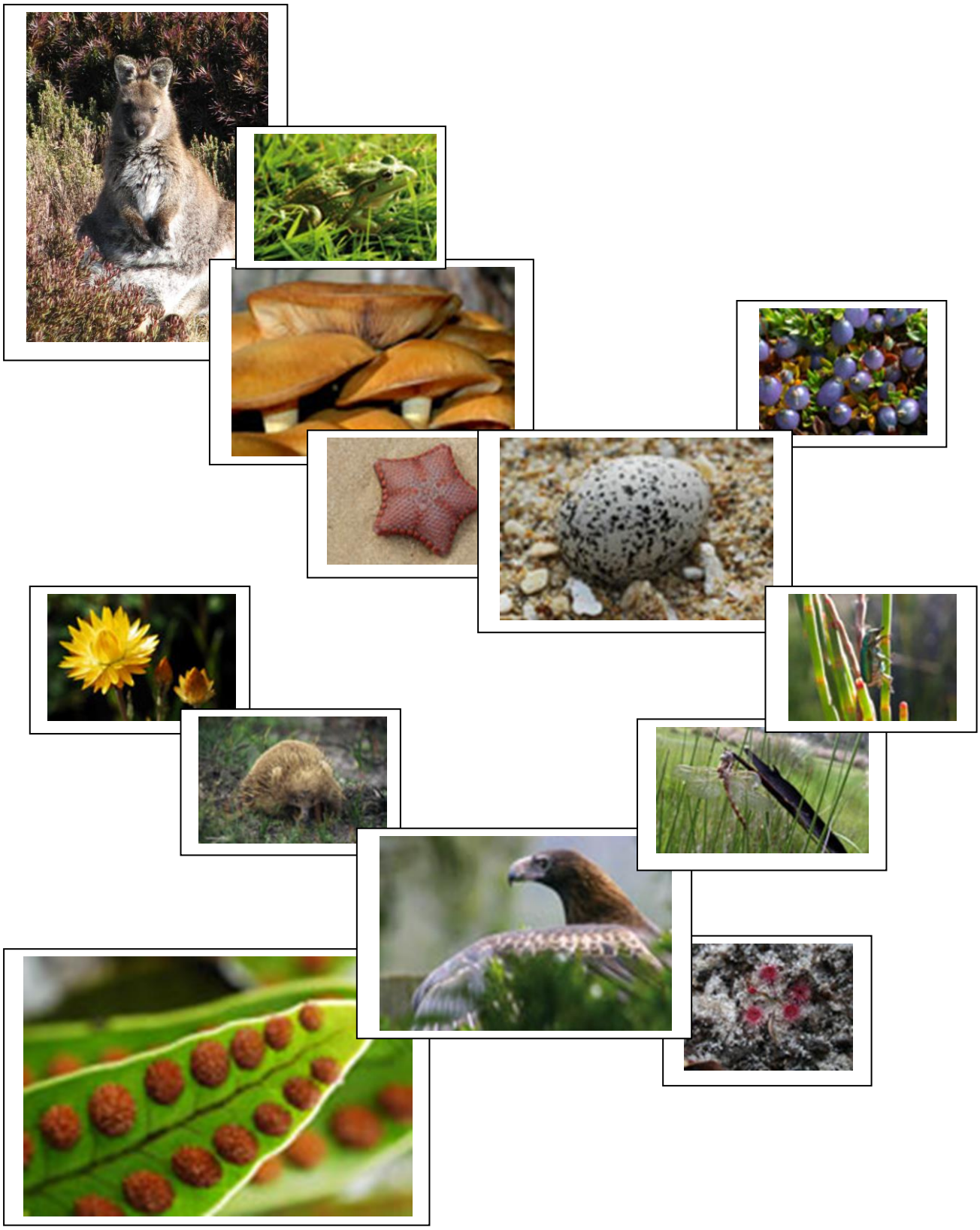
Natural Values Atlas Instructions

How to Search for Observations



Biodiversity Conservation Branch
Department of Primary Industry, Parks, Water and Environment

Tasmania
Explore the possibilities

Searching for Species Observations

In most cases when people want to search for observations in the NVA they want to search either by the name of a particular species, search a specific area, or perhaps search for observations by date or observer name. In some cases you may want to search using combinations of these.

Simple observation search

To do a simple observation search for records of a species:

1. Log on to the NVA

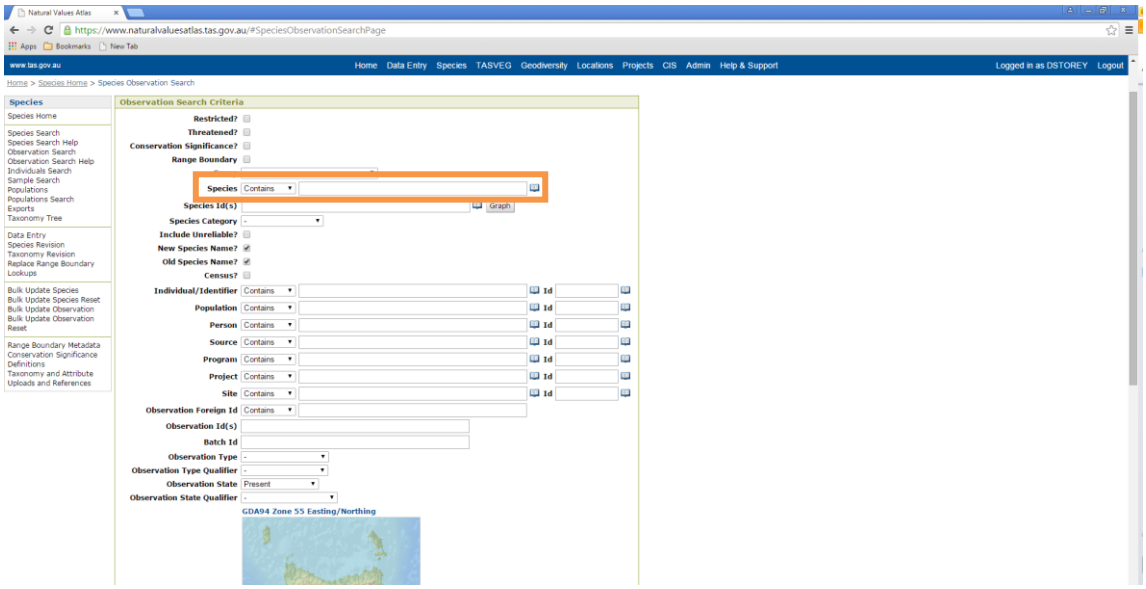
2. At the top left of the NVA home page there is a link entitled Observation Search. Click on this link to open the Observation Search page

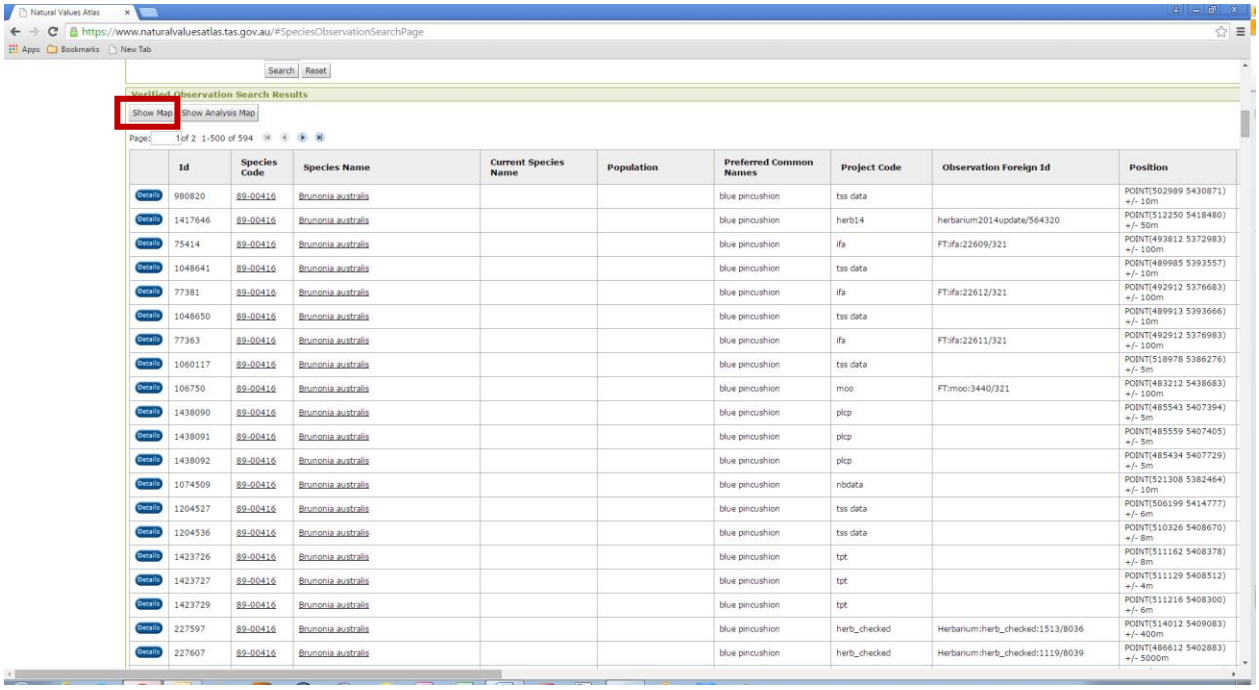
3. **Type the name, or part of the name, of a species** (scientific name or common name) into the 'Species' dialogue box ☐ below.

4. **Click on the 'book icon'** at the end of the Species dialogue box to bring up a pop-up list of matching species names. In the pop-up box **click on the name of the species you require**. The name you click on should be automatically entered into the Species dialogue box.

5. Once you have the name of the species you selected in the search box, **click the Search button at the bottom of the page and wait**. This may take a while if you are searching on a species that has a lot of observations. For example, there are over 7000 records for *Acacia melanoxylon* so searching for that species may take a while to return a result.

6. At the bottom of the observation search page a tabulated 'report' should have been returned listing all the observations in the NVA for the species you selected (see example below). Note: the results may be listed over several pages. Scroll though the pages using the arrow ▶ at the bottom of the page to see the other pages).

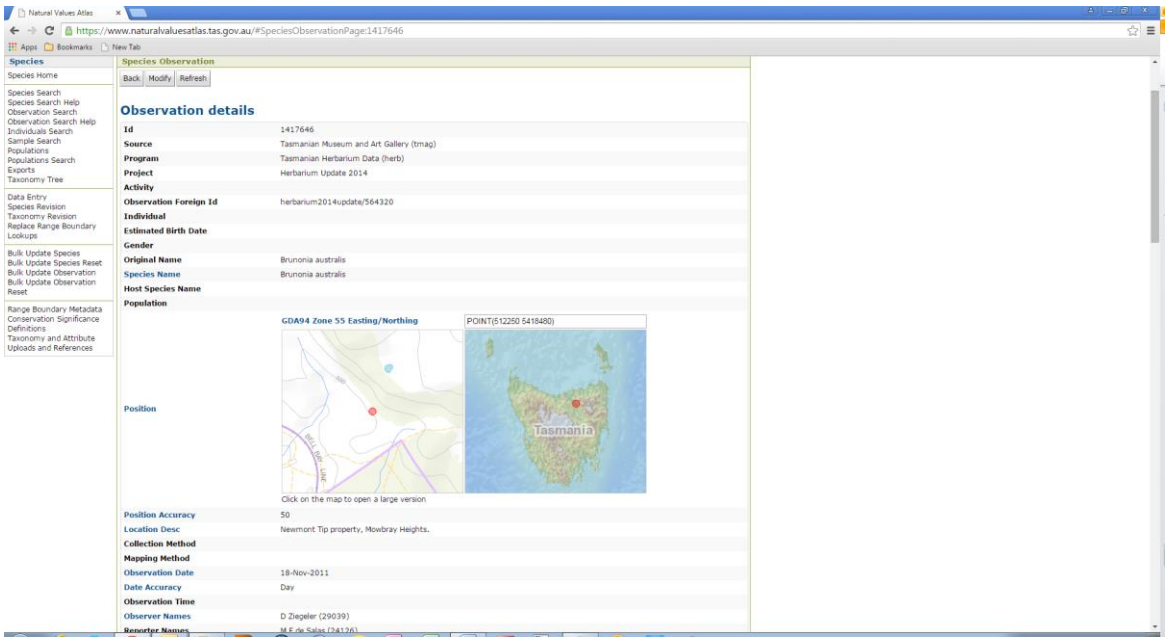




	Id	Species Code	Species Name	Current Species Name	Population	Preferred Common Names	Project Code	Observation Foreign Id	Position
Details	980820	89-00416	Brunonia australis			blue pincushion	tss data		POINT(502989 5430871) +/- 10m
Details	1417646	89-00416	Brunonia australis			blue pincushion	herb14	herbarium2014update/564320	POINT(512250 5418480) +/- 50m
Details	75414	89-00416	Brunonia australis			blue pincushion	ifa	FT:ifa:22609/321	POINT(493812 5372983) +/- 100m
Details	1048641	89-00416	Brunonia australis			blue pincushion	tss data		POINT(489985 5393557) +/- 10m
Details	77381	89-00416	Brunonia australis			blue pincushion	ifa	FT:ifa:22612/321	POINT(492912 5376683) +/- 100m
Details	1048650	89-00416	Brunonia australis			blue pincushion	tss data		POINT(489913 5393666) +/- 10m
Details	77363	89-00416	Brunonia australis			blue pincushion	ifa	FT:ifa:22611/321	POINT(492912 5376983) +/- 100m
Details	1060117	89-00416	Brunonia australis			blue pincushion	tss data		POINT(518978 5386276) +/- 5m
Details	106750	89-00416	Brunonia australis			blue pincushion	moo	FT:moo:3440/321	POINT(483212 5438683) +/- 100m
Details	1438090	89-00416	Brunonia australis			blue pincushion	plcp		POINT(485543 5407394) +/- 5m
Details	1438091	89-00416	Brunonia australis			blue pincushion	plcp		POINT(485559 5407405) +/- 5m
Details	1438092	89-00416	Brunonia australis			blue pincushion	plcp		POINT(485434 5407729) +/- 5m
Details	1074509	89-00416	Brunonia australis			blue pincushion	nbdata		POINT(521308 5382464) +/- 10m
Details	1204527	89-00416	Brunonia australis			blue pincushion	tss data		POINT(506199 5414777) +/- 6m
Details	1204536	89-00416	Brunonia australis			blue pincushion	tss data		POINT(510326 5408670) +/- 8m
Details	1423726	89-00416	Brunonia australis			blue pincushion	tpt		POINT(511162 5408378) +/- 8m
Details	1423727	89-00416	Brunonia australis			blue pincushion	tpt		POINT(511129 5408512) +/- 4m
Details	1423729	89-00416	Brunonia australis			blue pincushion	tpt		POINT(511216 5408300) +/- 6m
Details	227597	89-00416	Brunonia australis			blue pincushion	herb_checked	Herbarium:herb_checked:1513/8036	POINT(514012 5409083) +/- 400m
Details	227607	89-00416	Brunonia australis			blue pincushion	herb_checked	Herbarium:herb_checked:1119/8039	POINT(486612 5402883) +/- 5000m

7. **Look at the records on a map:** You can show a map of the observations you have searched for by clicking the 'Show Map' button just above the search result table (above). Note: The map can take 20-30 seconds to draw on the screen. If you try to map a large number of records (e.g. >5000) the map will take longer to draw.

8. **More Detail:** In the results returned from a simple search, the information about the species observations provided in the table is only a summary of the information available for a particular observation. To see more detailed information about a specific observation click on the blue details button Details next to the observation concerned. After clicking on this button a page with more details about the observation will appear (See example below).



The top section of the 'Species Observation' page, displays all the core data for the observation. Below that there is sometimes further information regarding the abundance of the species at this site and possibly information relating to the habitat in which the species occurred. For clarification of what the data means see Appendix 1.

In the centre of the Species Observation page there is are two map images showing, the location of the observation both zoomed in and zoomed out. You can click on the maps to open the map window and see more detail. For instructions on how to use the map viewer interface see the section entitled NVA Map Interface below (page 9)

Spatial (Area) Searches

You can also search for observations by selecting an area on a map and asking the NVA to return records for that fall within the selected area. The Search Area heading on the Observation Search page is associated with the NVA map interface. To define a search area you need to open the map interface and then identify and area in which you want to search.

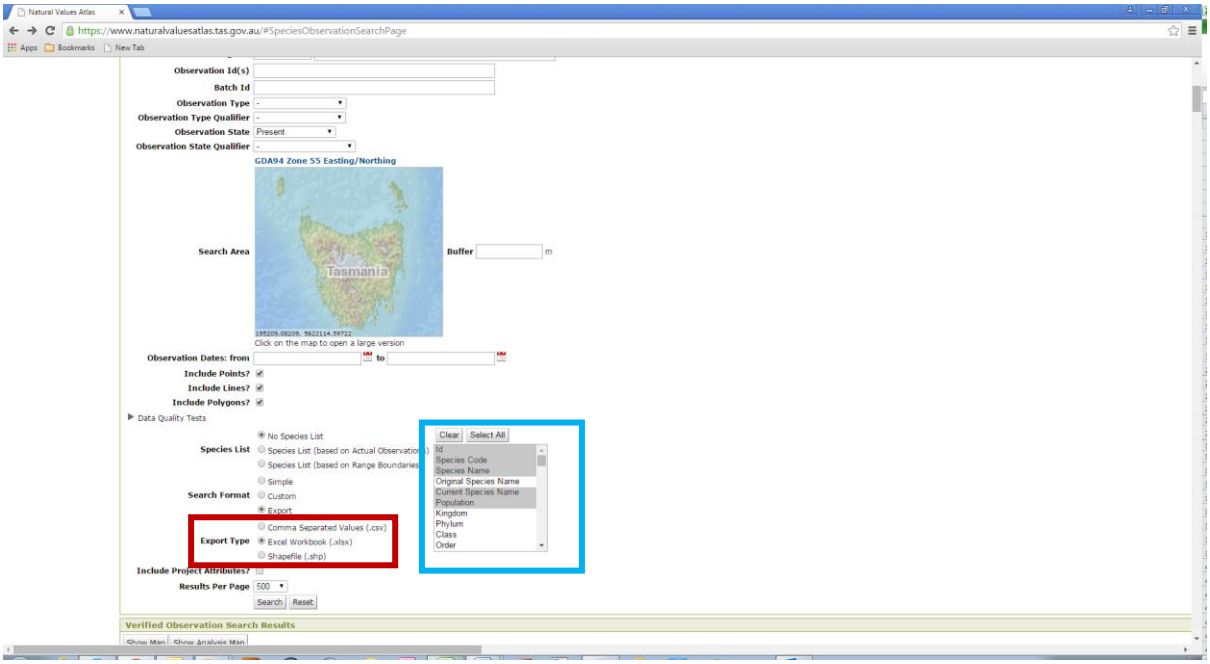
To open the map interface you click on either of the small maps embedded in the Observation Search page. You will see a new window open which looks like the one below. This window is referred to as the NVA map interface and the way it works is outlined below (page 9). This interface is used in a number of other places on the NVA and the functionality is always the same.

Using the map interface you can draw a search area on the map and return it to the Observation search page to conduct your search, or you can select a feature off a chosen map layer (e.g. select a property boundary off the cadastre / parcels layer) and use that feature as the basis for your search. To see how to do this refer to the instructions on How to Use the NVA Map Interface below (page 9)

More Advanced Search Options

The tabulated report outlined above is in the default 'Simple' report format. There are two other options available:

- **Custom** If you select this option an additional area at the bottom of the search parameters will become visible (in the image below). In this area you will see a list of all the available fields (more than for the simple search). By highlighting or un-highlighting the listed fields you can customise which fields are returned when you do a search. (Currently there is no option to save your preferences but this may be developed in the future.) Rather than detail the content of all these fields here, **if you need clarification regrading what these extra fields mean contact NVA support**.



- **Export** This option will allow you to export all observations and all fields you have selected in one of three formats (see ☐ above):

    - a CSV (comma separated values) file. This format can be opened, viewed and edited in any spreadsheet program

    - as a MS Excel file (.xlsx)

    - as an ESRI Shapefile which is readily imported into most GIS programs. Note: there is a limit on the number of records which can be directly exported to a shapefile (~ 50,000 records). If you need to export more records than this you should use the other options above and then import h XY data into you GIS.

If you select the Export option, a request to download the data you have specified is made to the database and your download will be placed in a queue waiting to be completed. A table outlining what is happening to your request will appear at the bottom of the screen. Click on the 'Refresh' button (just above the table) to refresh the information in this table (the table should refresh automatically every minute) Often the download will happen in only a few seconds but, if there is a lot of demand on the database or your internet connection is not very fast etc. you may have to wait a minute or two. If the download takes more than 10 minutes you should contact NVA support to check there isn't something going wrong at our end. These files download onto your hard-drive in a zip file so to open the files you need to open the zip file (just double click to open) and then open the file itself, choose 'Save As' and save the file to somewhere convenient for you. **Note: if you need to relocate a download that you have run previously (they are maintained for 3 days) you can find them again by clicking on the 'My NVA' tab at the top of any NVA window.**

More Options on the Observation Search page

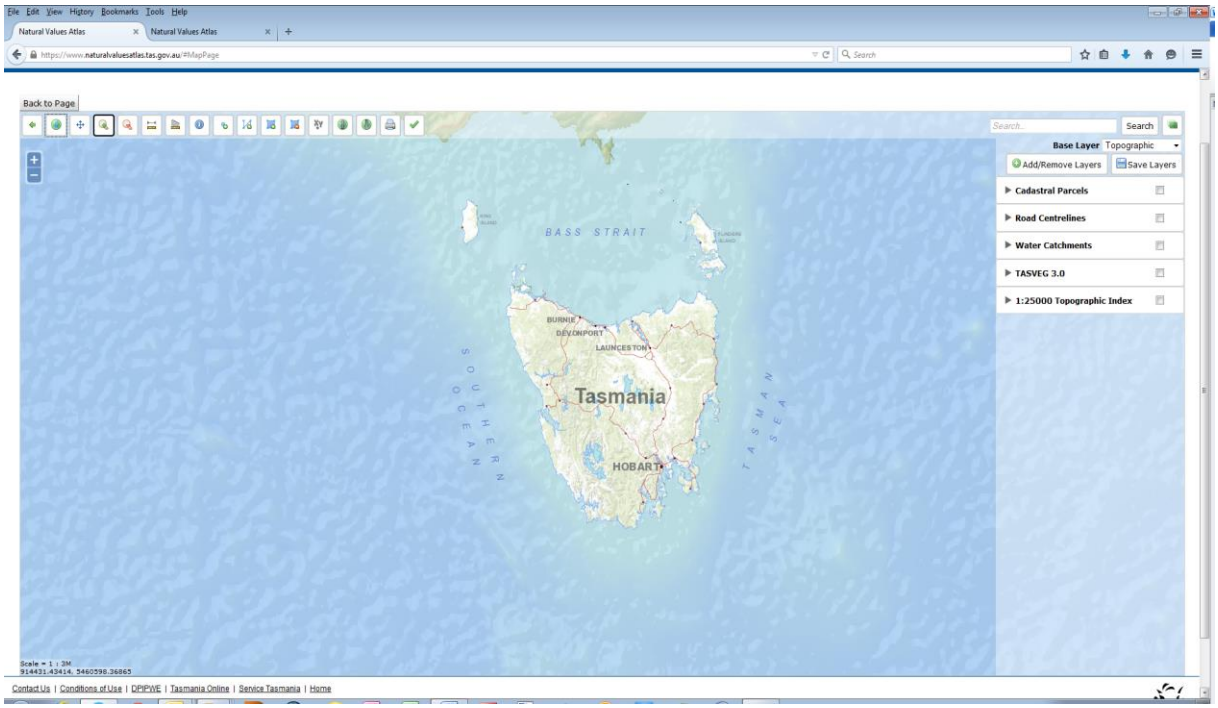
- **Restricted:** If you tick this option the results will only contain observations of 'restricted' species. Most users will not be able to see records of restricted species. There are only few species for which observations on the NVA are restricted and these are usually restricted to prevent excessive visitation of vulnerable populations or to prevent collection/trade in rare species (e.g. there is only one population of a species and it's vulnerable to disease brought in by human visitation and or collecting).
- **Threatened:** If you tick this box your search will only return observations of threatened species
- **Conservation Significance:** If you tick this box your search will only return observations of species which have been determined to have conservation significance. The conservation significance of a species can relate to a number of factors including the biogeographic origin of the species, the reservation status of the species (how well is it represented in the reserve system), Regional Forest Agreement priority, scientific significance of the species, if the species is a weed (negative conservation significance), the 'uncommon' status of the species, the cultural significance of a species, etc.
- **Habitat Mapping:** If you tick this box your search will only return observations of species for which habitat mapping has been loaded onto the NVA. Habitat mapping consist of areas which have been designated Core, Known or Potential habitat for a species. At this stage this has only been done for a few rare and threatened fauna species.
- **Group:** This consists of a drop-down list of predefined 'groups' of species which you can select to help narrow down your search
- **Species Id(s):** These are the id numbers/codes for NVA species. You can use the lookup table (click on the upward pointing arrow at the end of the dialogue box and type in a name) to select these. You can enter multiple Species Id's separated by a comma to search for multiple species at once.
- **Species Category:** Consists of a drop-down list of predefined 'species categories' which you can select to help narrow down your search.
- **Include Unreliable:** Sometimes observations are determined to be inaccurate or to be a duplicate of another record already in the NVA. These records are discontinued. They do, however remain in the database and you can look at these if you tick the Include Unreliable tick box.
- **New Species Name?** and **Old Species Name?**: Due to continual taxonomic revision the names of species often change. To make sure that you find all the observations for a species you may also need to see records for the species which were submitted under another name. If you tick the New Species Name and Old Species Name boxes all observations under names which relate to the name you are searching on will also be returned.

- **Individual/Identifier:** This is a tag or microchip number which identifies an individual animal/plant. If you know an animal's/plant's number you can enter it and search for records of the individual.
- **Population:** This dialogue box allows you to search for defined populations of a species. Populations have only been defined for a few threatened flora species. Most populations are name using an eight letter abbreviation (combining the first four letters of the genus with the first four letters of the species name) and then allocating a number (e.g. Conospermum hookeri population 21 is: Conohook 21). If you type in an 8 letter species abbreviation and then click on the book icon at the end of the dialogue box a list of matching populations will be displayed for you to choose from.
- **Person:** This refers to the person who collected the data in the field (the observer). You can enter a person's name and search for records submitted under their name
- **Source:** This is the organisation/entity from which the data was sourced (e.g. Birds Tasmania)
- **Program:** This is an overarching organisational structure under which data may have been collected (e.g. the Save the Tasmanian Devil Program). Within a program there are often a number of Projects (see below)
- **Project:** All data entered in the NVA is assigned to a project. This is primarily to assist with the retrieval of data. If you know of a project, or if you want to search for data under your own project, you can type the name of the project in and return observations lodged under that project.
- **Site:** Sometimes records are linked to a Site which is really just a named place/area to allow for the organisation and retrieval of particular datasets. If you know of a site you can search for observations linked to that that site
- **Observation Foreign Id:** This is the Id number/code which was assigned to the observation by the person who collected/entered the data. (NB. This is not the same as the Observation ID which is a number automatically assigned to each record by the NVA when the data is entered – see below). In many cases this field is left blank. It can be a number, or text, or a combination of both. Foreign Id's are not necessarily unique (many people just use sequential numbers for example so there may be numerous records in the NVA with the Doreign Id '1'. If you know a Foriegn ID you can use it to help you find a particular record.
- **Observation ID(s):** This is the ID given to an observation by the NVA. These are auto-generated by the NVA and **are all unique**. If you know the observation id of a particular observation you can enter it to help find the observation. You can enter multiple observation ID's separated by a comma to find multiple observations.
- **Batch ID:** This is the ID number given to a batch of data when it was entered into the NVA. If you know the batch number for a particular data set you can enter the batch number and retrieve the records which were entered as part of that batch. Note: Batches entered before January 30th 2012 are no longer retrievable by this

method because the system architecture changed on this date and the batch links for data entered earlier that this were lost.

- **Observation Type:** This is a drop down list allowing users to search for different types of observations e.g. 'sighting' observations or 'nest' observations
- **Observation State:** This is a drop down list allowing users to search for observations by State: e.g. 'Present' or 'Absent'. (there are very few absent record on the NVA, 99.99 % of records are 'Present'
- **Dates From and To:** This allows you to search for records observed between a given date range by entering a beginning and end date for the records you want to search for.
- **Species List Options**: These options allow users to include a species list for the area they are searching. The list can be based on actual observations in the database or on the habitat mapping for the species in the area. Note: habitat mapping only exists for some rare and threatened species.

How to Use the NVA Map Interface



Using the NVA's map interface you can navigate around the map, zoom in zoom out, and query map layers and identify or draw features which you can return to the NVA to use in your search. This is achieved using various tools which are incorporated into the map interface. The functionality of the different tools is outlined below. **You need to activate each tool by clicking on it prior to using it.**

Map tools:

Previous View Button - go back to the preceding view

Pan Tool – click on the map and drag to move map around in the window

Zoom In Tool – click the tool and draw a rectangle around the area of interest and the map viewer will zoom in to the area you selected

Zoom- Out Tool – click the tool and draw a rectangle to zoom out and the map viewer will redraw the current view to fit into the rectangle you drew

Full Extent button – returns to the default view showing the full map of Tasmania

 Zoom In on the centre of the map (predetermined amount of zooming)

 Zoom Out on the centre of the map (predetermined amount of zooming)

 Ruler Tool – Use this tool to measure a distance on the map. Click on the map at the start position and double click to finish. A pop-up window will display the length of the line you have drawn.

 Polygon Tool - To draw a polygon, activate this tool by clicking on it. Click at a start point and then continue clicking to draw around the area you are interested in. Double Click to finish. Try not to cross over the line you have already drawn (self-intersect) as this might cause your search to fail. To return this feature to the NVA and use it as a search criterion click the ✔ button at the top of the page.

 Line Tool - To draw a line, activate this tool by clicking on it, then click on the map at the start of your line. Draw the line by clicking as appropriate. Double click to finish drawing. To return this feature to the NVA and use it as a search criterion click the ✔ button at the top of the page. (**Note:** If you want to search using a line you should also enter an amount of buffer around the line in metres – once you have returned to the NVA search page –it is probable that a search simply using a line will return no results.)

 Point Tool – To draw a point, activate this tool by clicking on it, then click on the map where you would like your point to be. To return this feature to the NVA and use it as a search criterion click the ✔ button at the top of the page. (**Note:** If you want to search using a point you should also enter an amount of buffer around the point in metres – once you have returned to the NVA search page – it is probable that a search simply using a point will return no results.)

 Delete all Drawn Features Tool – As the name suggests clicking on this icon will delete any / all of the features you have drawn on the map using the tools above. It will also clear any features which you may have selected from a layer using the Information Tool in conjunction with the Layer Management window (see below)

 Show Vertices Tool – displays a table in which you can type the co-ordinates of the vertices (i.e. the corners / joins / points) that define the shape you wish to search. To enter a point, simply click on the button and then type in the coordinates of your point location. If you want to enter a rectangle or anther shape, first use the Polygon tool to draw a polygon and then click the Show Vertices button so that you can bring up the vertices and edit them to accurately define your search area. You can also use this tool to view the vertices (coordinates) of features you have selected / drawn using the information and select features tools (see below).

 Return Geometry to the NVA Button – returns the specified search area/point/line to the NVA search page (also closes the map window and returns to the NVA pages). Once back in the NVA you will then need to click on the Search button to start searching the NVA records using the point /line /polygon you have defined.

 Upload Shapefile (zipped) – uploads a zipped ESRI shapefile onto the NVA to use as a search area. ***Shapefiles need to fairly simple, single polygons which are not too large*** or the upload / search may fail. If you don't know what a shapefile is, it's probably best to ignore this button... ☺

 Save Map to PDF – this allows you to save the currently displayed map view to a PDF. You can then open the map with Adobe Reader and print it, or copy the image into an image management program to save in different formats and/or paste into MS Word etc.

Layer Manager Area

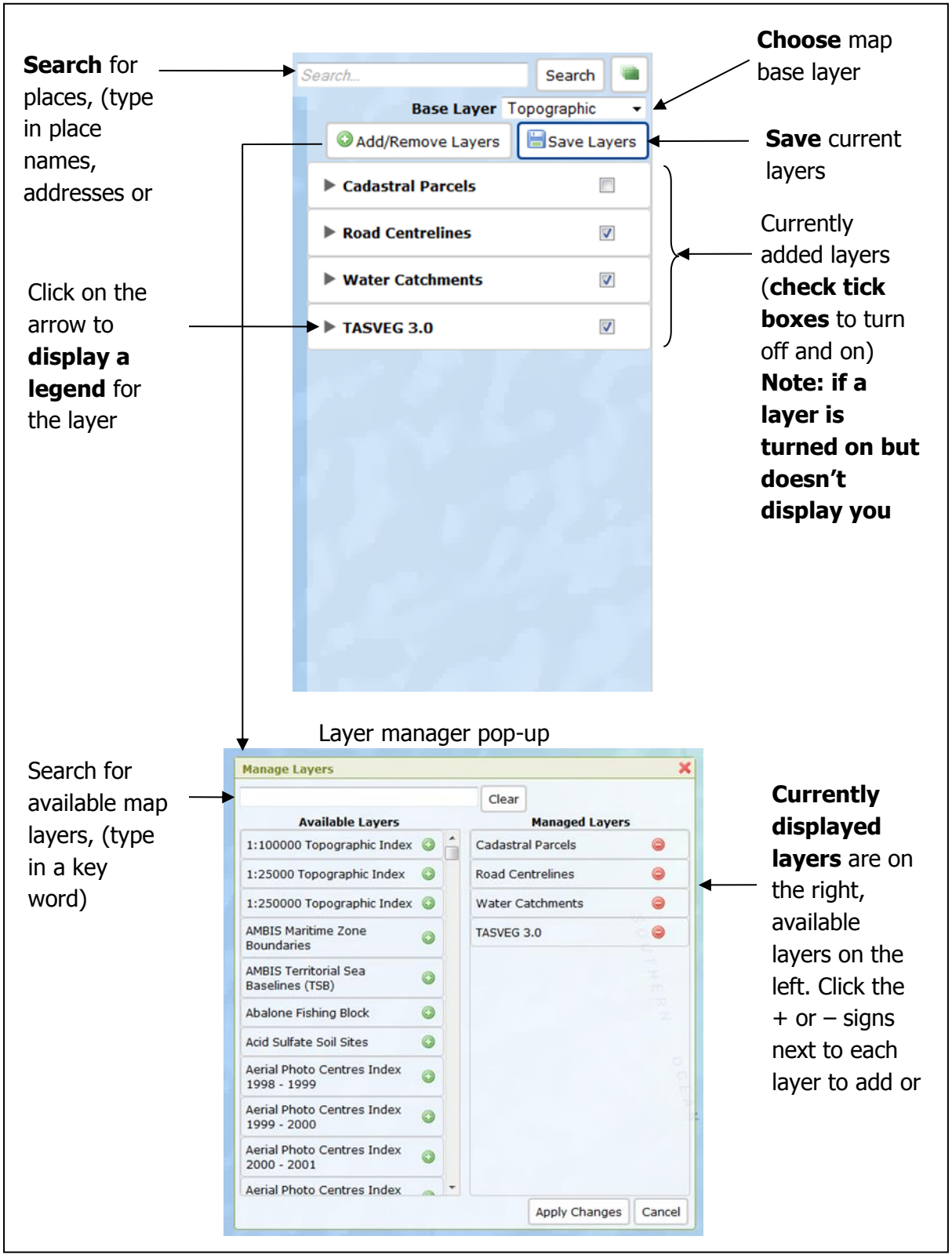
The Layer management area (see diagram next page) allows you to add layers of map data to your map view and to change the base layer for your Map

Click on the Manage Layers button  at the top right of the map viewer window to open the layer management area (on the right hand side of the map window see diagram below). If you click the same button again the layer manager area will be hidden.

To select a different base layer for the map click on the drop down arrow to the righ of the the 'Base Layer' heading on the Layer Management area. You can choose from, 'No Base Layer', 'Topographic' (the default), 'Scanned Maps' (scanned TASMAP maps), or the State Orthophoto (state-wide coverage of aerial photographs)

You can add layers of spatial information to your map view by opening the manage layers pop-up window, searching for the layers you require and clicking on the green **+** to the right of the layer name. Selected layers will move to the column on the right. If you click on the red **–** sign next to the layers on the right, they will be removed from the map and return the list of available layers on the left.

Once you are happy with the layers you have chosen click Apply Changes. The layers you have chosen should be plotted on the map. If a layer you have added doesn't appear to have plotted on the map check to see if there is a 'processing' symbol like this,  displaying on the screen. If you can see this symbol, the layers may still be waiting to draw and you need to wait a little for them to be plotted.

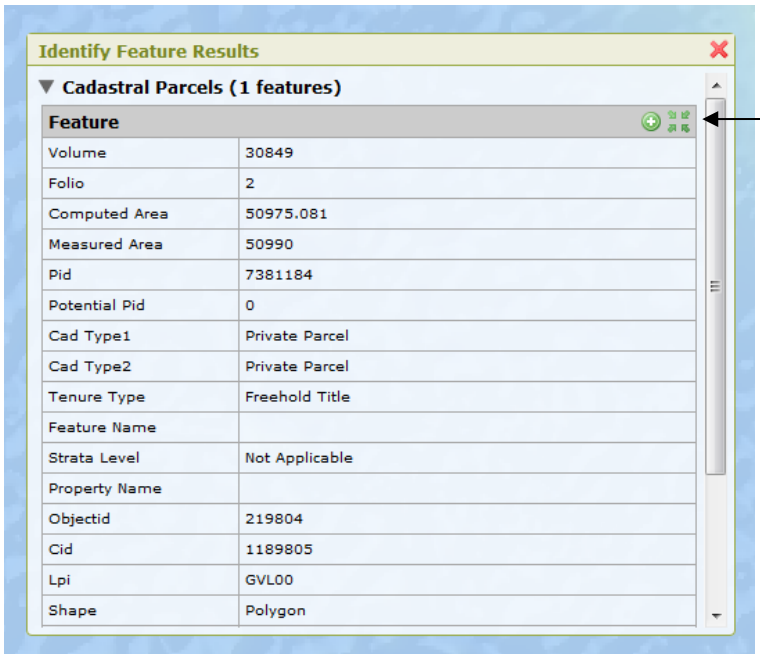


If you don't see the processing symbol, and the layers you have chosen still don't appear on the map it's likely you not have zoomed in close enough to display this layer (complex layers are not displayed when you are zoomed out as they would make the map unreadable.) Zoom in closer until the layer becomes visible.

Legends: If you want to see a legend for a layer/s you have loaded you can click on the right pointing arrow to the left of each layer name to open a legend window.

Information tool and select features tool – use this to return information about map features and ***to select map features***. The tool displays specific information from a chosen map feature. Using the mouse select a feature you are interested in from the layers you are displaying on your map, i.e. click anywhere on / inside the required map feature to retrieve information about the feature. The Identify Feature Results pop-up box should appear. This window will display specific information about the feature you have chosen.

You can now also ***use the chosen feature as a search parameter*** to search for records on the NVA. To do this, click on the green + button at the top right of the information Feature Results window (see diagram below). Your chosen feature should now be outlined in red on the map. If you then click on the green ✔ at the top of the NVA Map Viewer page, the geometry for the selected feature will be returned to the NVA search page so that you can conduct a search on the area outlined.



Use the green + to select the feature you are interested in. Then click on the ✔ button at the top of the page to return the selected feature to the NVA search screen and run a search on the area bounded by the feature.

Co-ordinate systems

The NVA map viewer allows the user to operate in two different map co-ordinate systems – GDA 94 (Eastings and Northings) and WGS 84 (Latitudes and Longitudes). This functionality was developed in particular for people dealing with marine records which are usually recorded as Latitude and Longitude.

By default the data is displayed in GDA94 (Eastings and Northings) However you can choose which co-ordinate system you want to view the data in by hovering your

mouse over the 'Logged in as' area at the top right of NVA web pages and choosing the projection you require This is a temporary change which will last until you exit the current session. If you want to make a permanent change hover your mouse over the 'Logged in as' area and select My NVA. On the My NVA page click the Modify button and then choose the co-ordinates system you would like to work in.

Appendix 1: Explanation of NVA Fields in the Observation Search results

The simple search returns the following fields:

Map: this is a link which allows you to identify the record in question on the map (if you have displayed the map using the Map All Records Button just above the results table)

Id: this is the observation id which is the NVA identification number for an observation. These are all unique. This can be very useful to track down a particular observation.

Species Code: this is the id number for the species.

Species name: the scientific name for the species.

Current species name: the current name for the species if it has changed.

Preferred Common Names: the most commonly used colloquial name for the species. There may be more than one provided.

Project Code: the code identifying the project the data is stored under

Record Status: this refers to the validity of the observation. In most cases all records will have the status accepted. If you elect to include discontinued records (by ticking the tick box at the top of the screen) you may see some 'Bad' records which have been deemed by experts to be unreliable.

Observer Names: this is the person who collected the data in the field. There may be multiple observer names for a single observation.

Observation Date: this is the date the observation was observed in the field by the person who collected the data (the observer).

Date Accuracy: this refers to the accuracy (confidence in) the date this record was collected

Position (GDA94): this the coordinates specifying the geographic location of the record (also referred to as the 'geometry'). The data in this field consists of the type of feature (point, line or polygon) and the Easting, Northing and +/- accuracy of the location information.

Observation Type: is referring to what was seen, e.g. a Sighting of the species, ab nest, a scat (animal poo), etc.

Observation State: is referring to attributes about the presence/absence of the species at the site of the observation. 99.999% of the observations in the NVA are currently 'present' but a few records may specify 'absent'. The number of absent records in the

database is expected to increase once we develop functionality to differentiate absences on the map interface (Mid 2012).

Observation Foreign ID: The identifier given to the record by whoever collected/ entered the data. This can be anything the person thought up. These id's are not necessarily unique (i.e. different records could possibly have the same foreign id).

Notes: This is where any relevant notes about the observation are entered.

Primary Identifier: This is the identification tag for an individual plant/animal (often blank).

There are a lot of other fields which you can choose to include in your search results using the custom search settings. If you need clarification regarding the data in these fields contact NVA support support@naturalvaluesatlas.tas.gov.au.