

# There has to be an easier way:

SA biological data collection goes from field datasheets to apps

Helen Owens & Amy Teitzel

SA Department for Environment and Water



Government of South Australia  
Department for Environment  
and Water









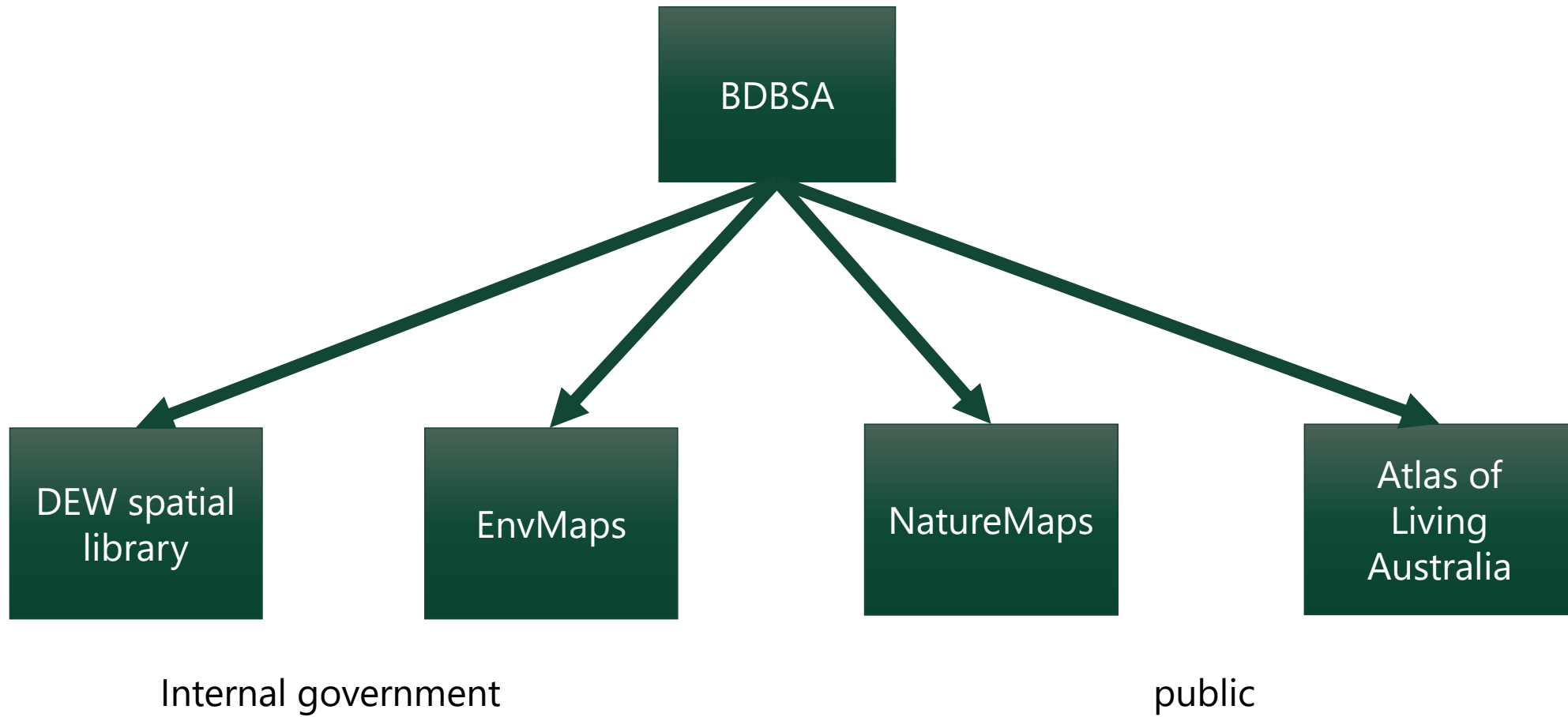




# BDBSA = Biological Databases of SA

What it is;

- data management system run by DEW
- primarily for flora and fauna species records
- 30 years +
- Currently on Oracle software
- Holds government and non-government datasets for SA



# BDBSA Audience

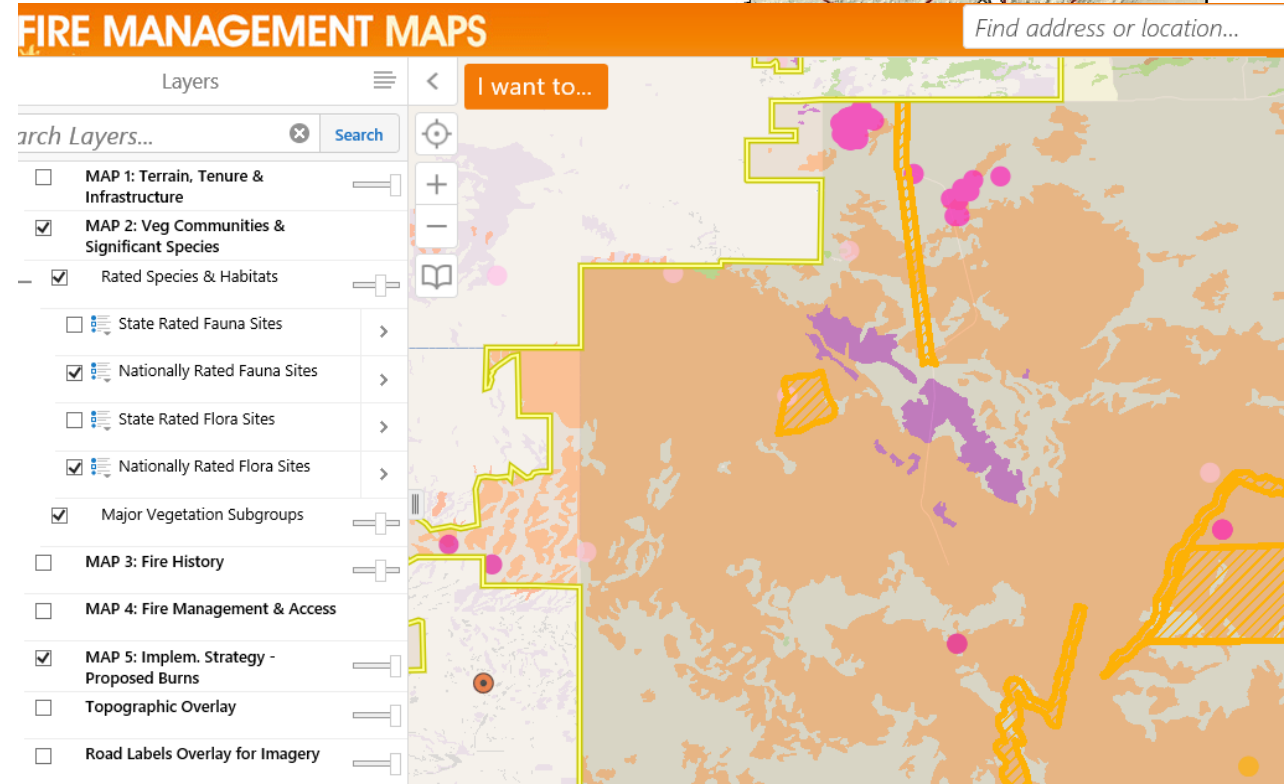
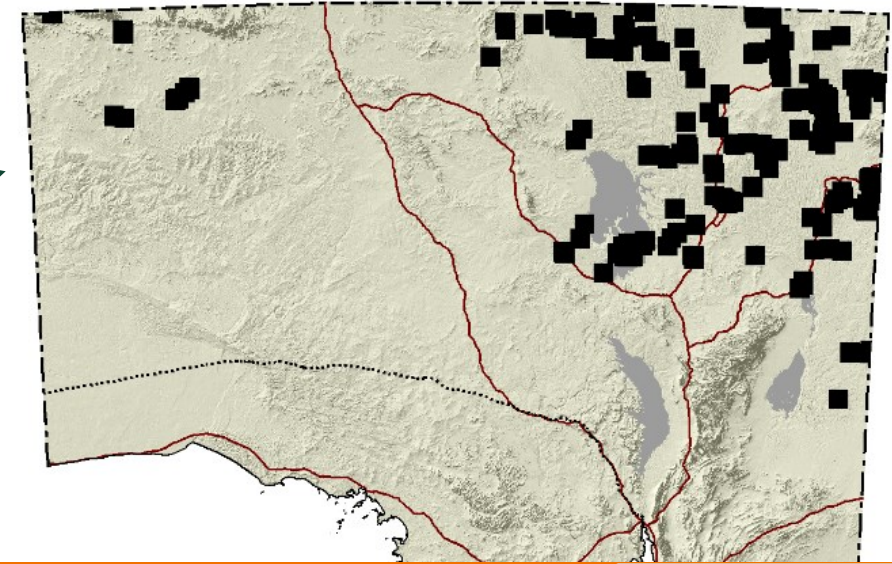
- Environmental managers
- Councils
- Environmental consultants
- Mining companies
- Land developers
- Researchers
- Field naturalists
- Public



# BDBSA Uses

- Threatened species management
- Species Distribution Maps
- Fire management planning
- Ecological studies
- Vegetation Clearance Applications
- Development Approvals
- Park management plans
- Revegetation work

*Eremiascincus fasciolatus*











# NatureMaps

Find address or location...

General Tools

Select Tools

Measure Tools

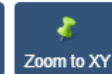
Draw Tools

Find Tools

Property Tools

Flora Tools

Fauna Tools



## Plot Coordinates

Coordinate System:

Web Mercator

1

X 15259418.19

Y -3852512.36

2

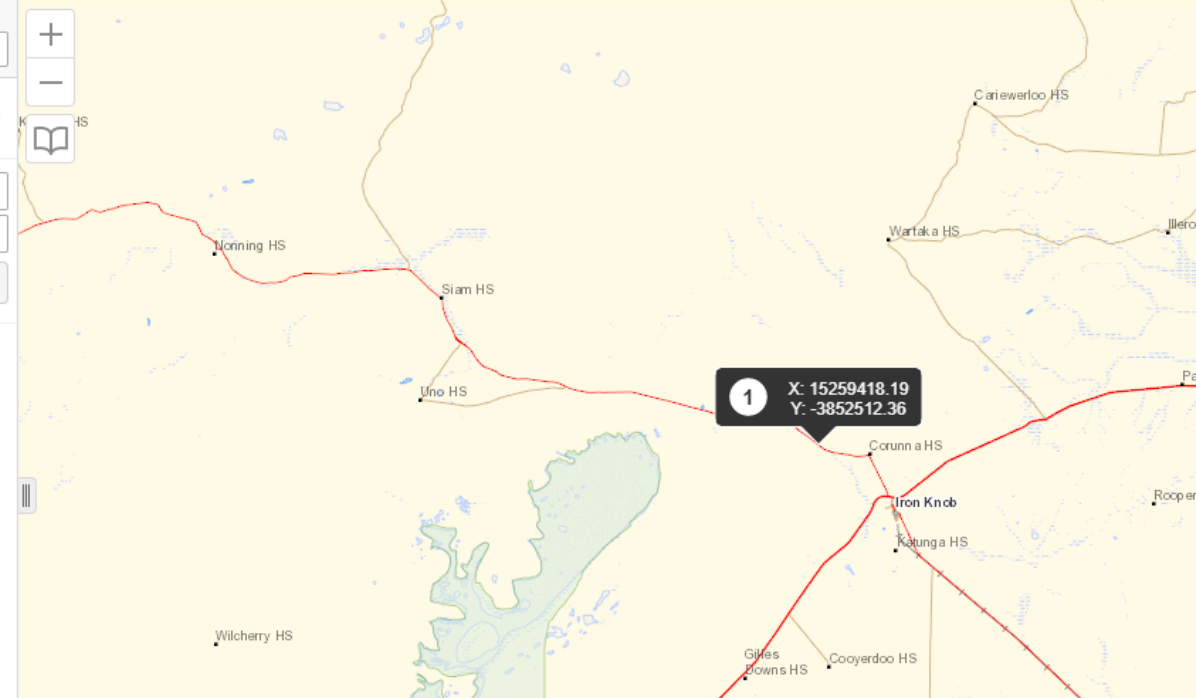
X 15214014.60

Y -3825835.84

Add

Cancel

Click or tap a location on the map to plot a coordinate.





[illegible]

<b>Opportunistic records</b>				Voucher number series type <input type="checkbox"/> Opportune <input type="checkbox"/> Collector <input checked="" type="checkbox"/> Survey	
Date <span style="margin-left: 20px;">20</span> <span style="margin-left: 20px;">OCT</span> <span style="margin-left: 20px;">2015</span> <small>(day) (month) (year)</small>					
Observer      NRN LMH		Survey      8 7 5			
TARD    5 4 3 2 0 1 3 9		HORNING    6 2 9 5 2 4 9			
<b>Reliability</b> ① < 50m 2 > 50m-100m 3 > 100m-250m 4 > 250m-500m 5 > 500m-1km 6 > 1km-10km D > 10km	<b>Locn Datum</b> ① WGS84 2 AGD84 3 AGD66 4 GDA94	<b>Locn Method</b> 1 Map ② 7 GPS 4 DGPS 5 Gazetteer	Circle number as appropriate		
		Mapsheet _____ (Optional)			
Location desc CNZ Approx 200m east of track in mallee					
Habitat E socialis, E gracilis Open Mallee					
Comments					

Species	Voucher	Sighting
Gray Shrike-thrush		
Colluricincla harmonica		
Red-capped Robin		
Petroica goodenovii		

Data continued over page Y / N

[illegible]

- date
- observer
- location
- species

File Home Insert Page Layout Formulas Data Review View Developer Tell me what you want to do...

Clipboard Font Alignment OnePlaceDocs for Excel

Document Properties Search SharePoint

General Number

Conditional Formatting Format as Table

Normal\_Sheet1 Normal Bad Good

Insert Delete Format

AutoSum Fill Clear Sort & Find Filter Select

**CHECK OUT REQUIRED** To modify this server workbook, you must check it out.

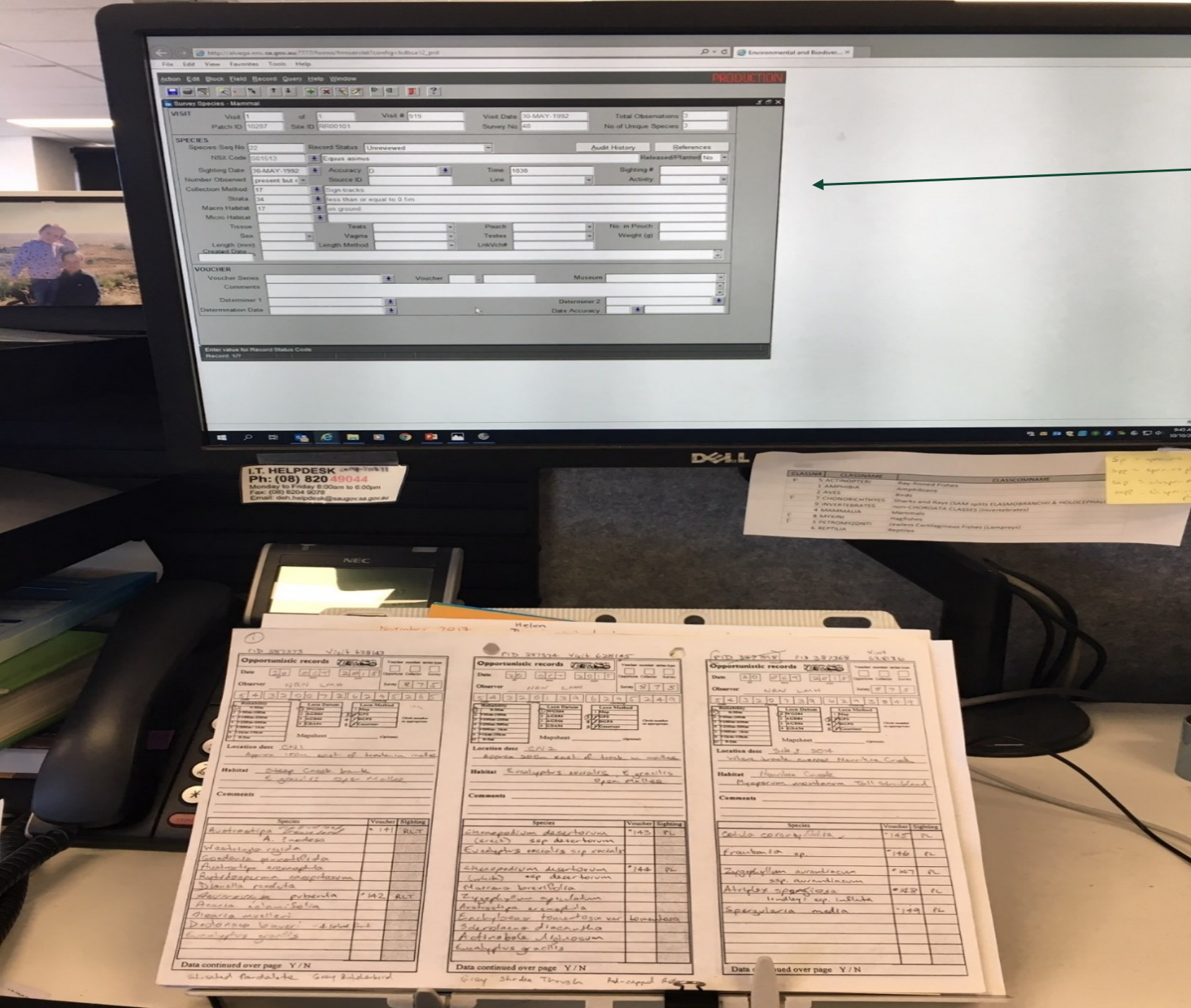
Check Out

A1 Release of Data

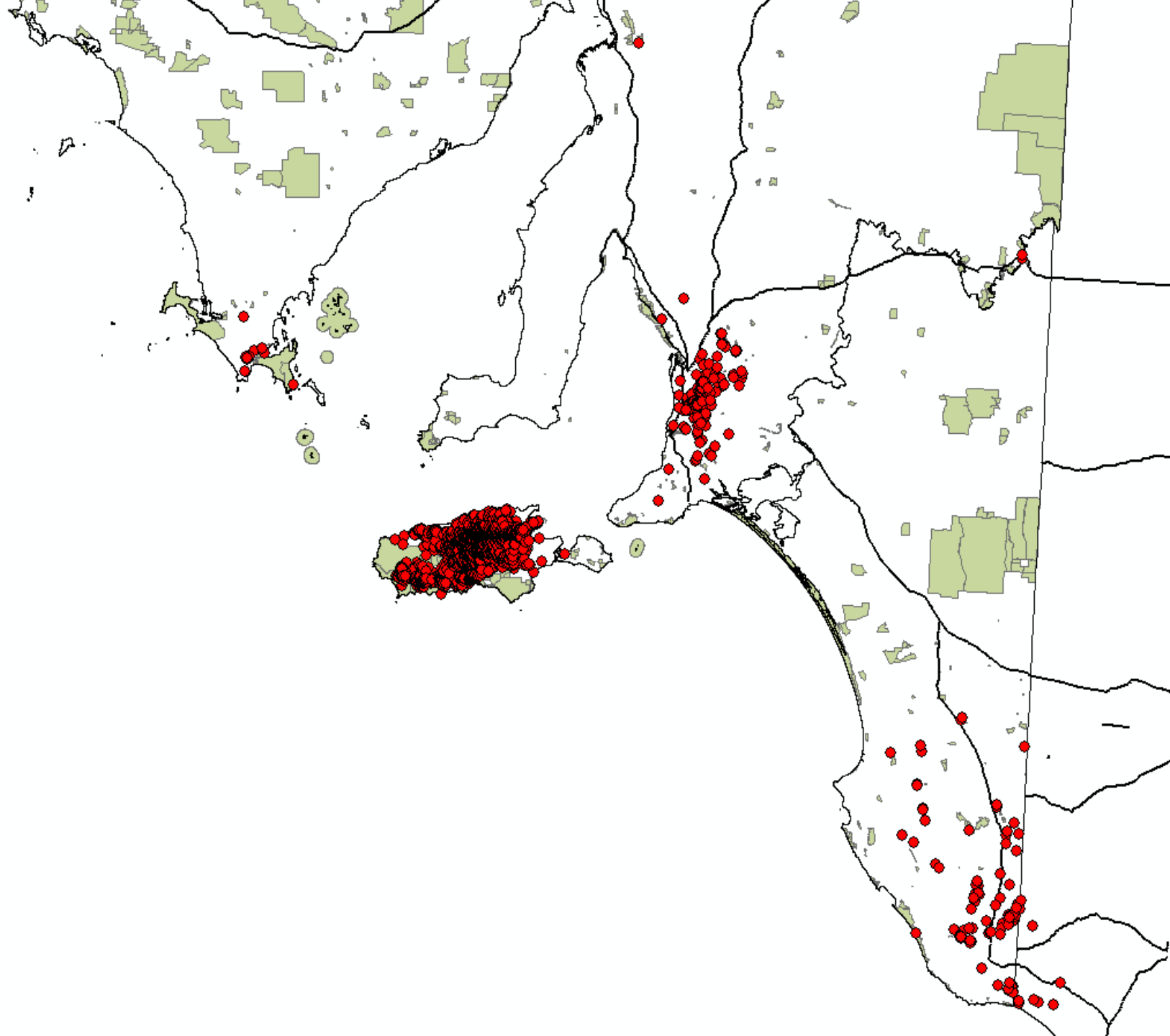
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
	Release of Data	Survey/Project Number	Zone	Easting	Northing	Latitude	Longitude	Coordinate source	Datum of coordinates	Location Accuracy	Date	Date Reliability	Observer Name	Species Type	Common Name	NSX Code (see the instructions page for a link to current taxonomic Codes)	(see the ins
1	Note: For DEW projects, select approved, or refer to INSTRUCTIONS.	BDBSA Survey Number (required field for all DEW staff and consultants).	Zone - either 52, 53 or 54 for SA	Easting - give as six figures with up to 3 decimals	Northing - give as seven figures with up to 3 decimals	Give in decimal degrees	Give in decimal degrees	Method that was used to calculate the coordinates. (see comment or Codes Spreadsheet for options). Codes are also acceptable.	Datum of GPS or Map used (see comment or Codes Spreadsheet for options). Codes are also acceptable.	Accuracy of coordinate (see comment or Codes Spreadsheet for options). Codes are also acceptable.	Date of sighting - DD/MM/YYYY	Reliability of the sighting date (see comment or Codes Spreadsheet for options)	Name of person/s who recorded the species (or preferably BDBSA observer Number if known - see OBSERVER sheet for current list). If multiple observers separate by "-".	Describes the Class of organism being observed.		Required field all for DEW staff and consultants	Genus
2																	
3	approved	279	54	466960.032	6218611.000	-35.52687	128.36987	GPS	WGS84	5-50m	1/09/2007	M	6757-334	P	River Red Gum	Q32144	Eucalyptus
4	approved	700				-34.44680	131.22357	GPS	WGS84	251-500m	25/12/2012	D	472	B	Spiny-cheeked Honeyeater	S04117	Acanthagenys
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	



# Data entry forms









# Requirements

- Capture tool for species records
- Available to internal and external users
- BDBSA compatible data
- Simple
- Mobile device friendly
- Works offline
- Automated upload into BDBSA
- Fast turn around time



# Pilot Study

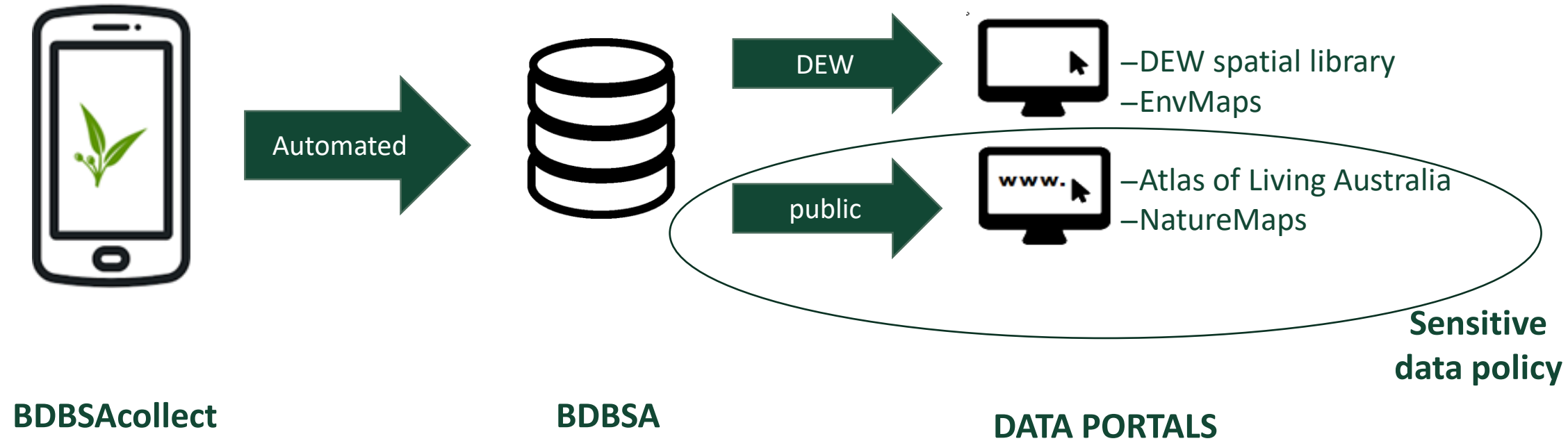


- Survey123 for ArcGIS by ESRI
- DEW staff only
- $\geq$  iOS 11,  $\geq$  Android 5
- works offline



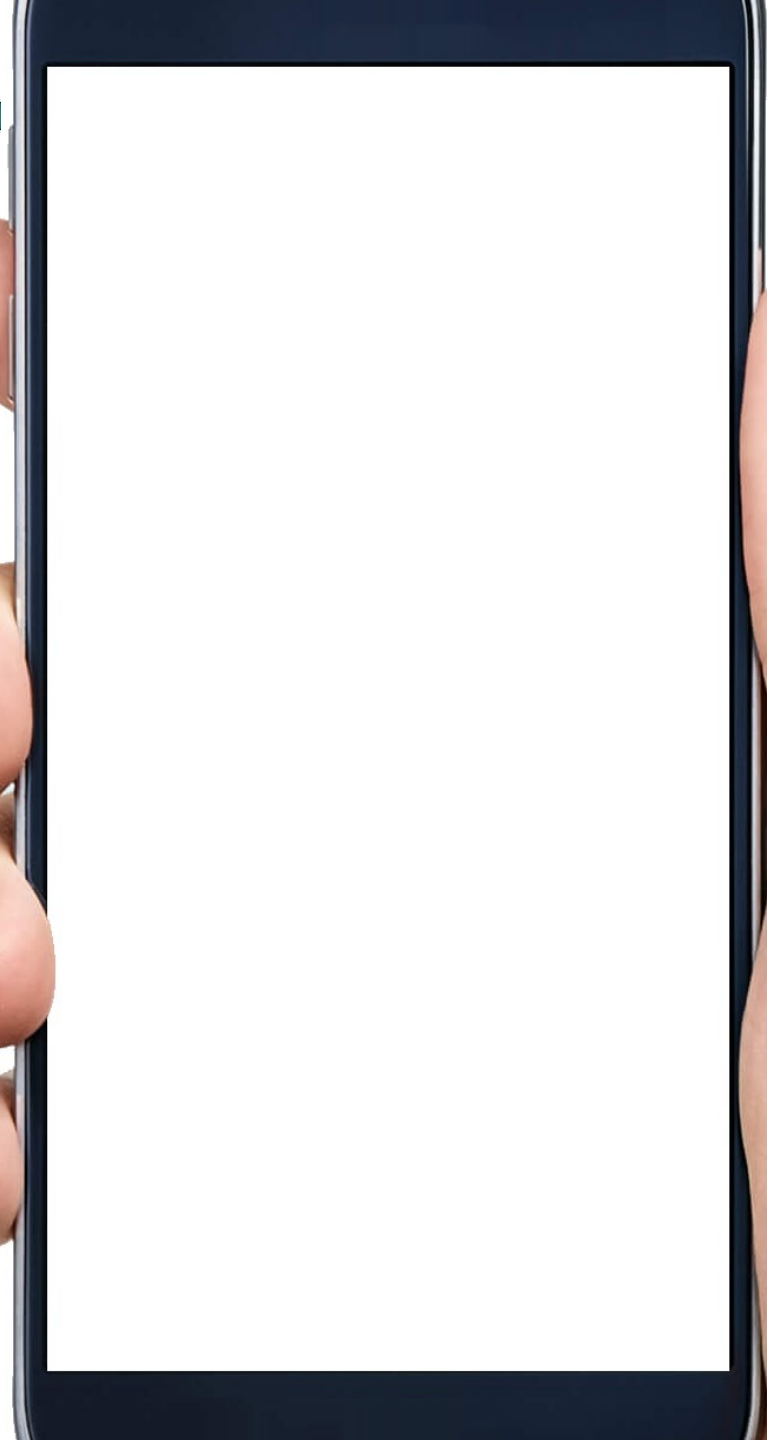
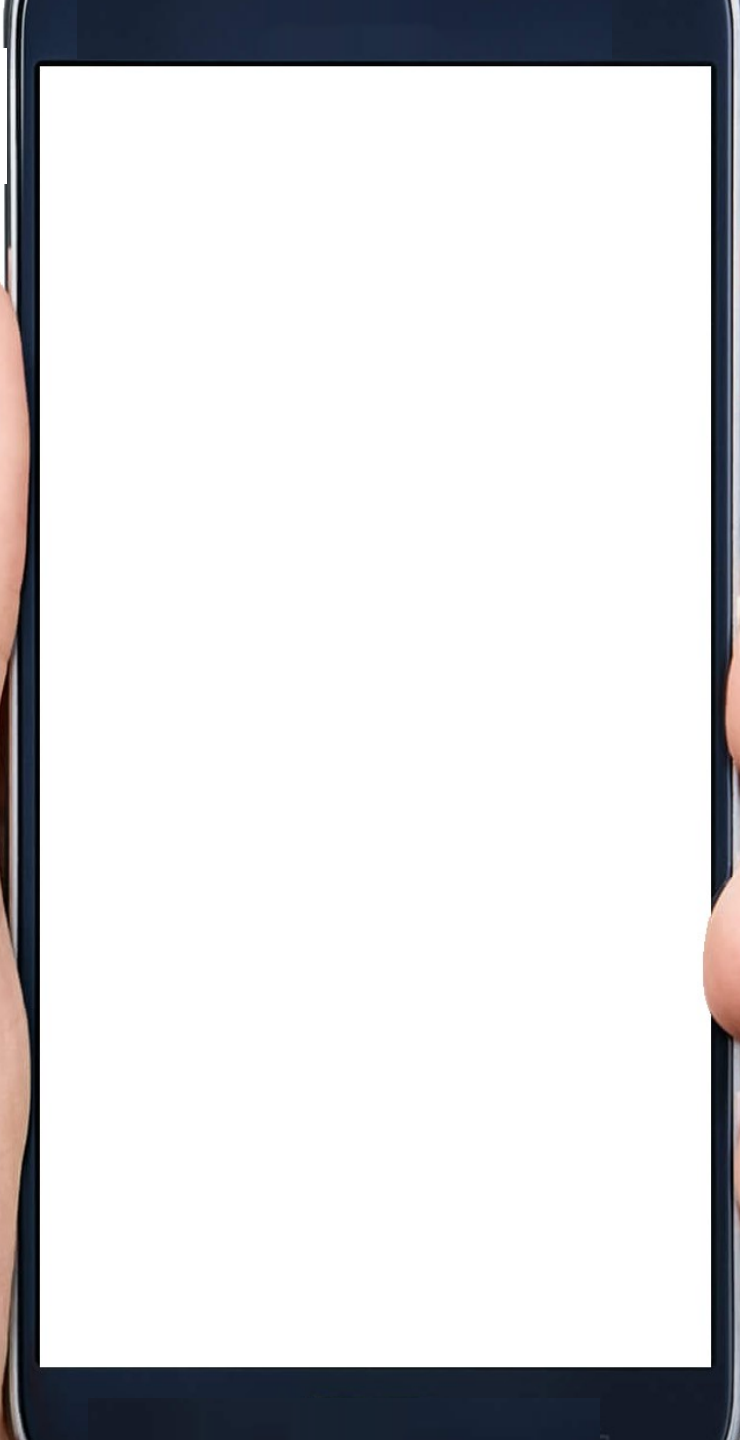
- BioCollect by Atlas of Living Australia
- Internal & external
- $\geq$  iOS 9,  $\geq$  Android 4.0.3
- PC batch uploads
- Multiple records per site

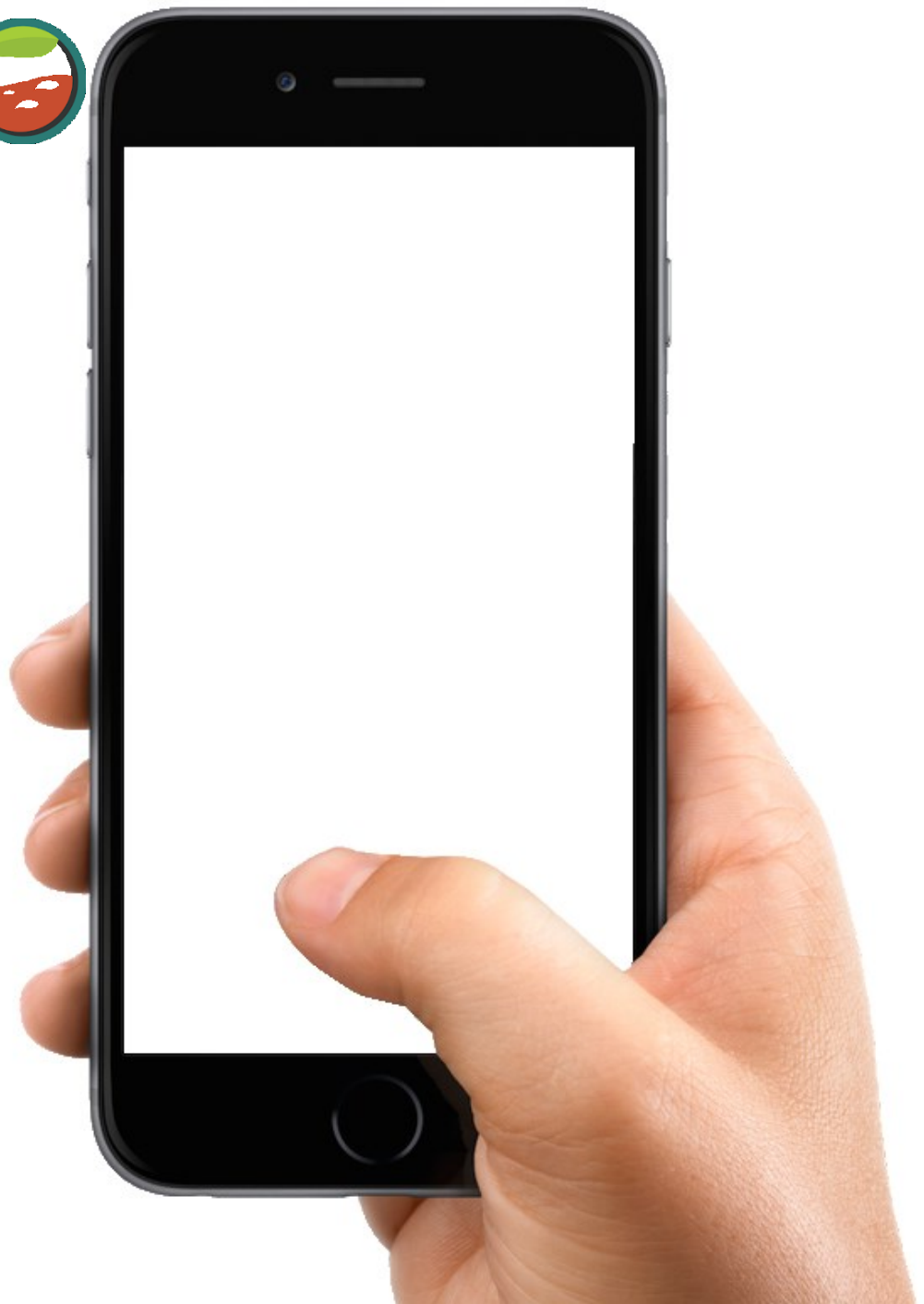
# BDBSAcollect Data Flows







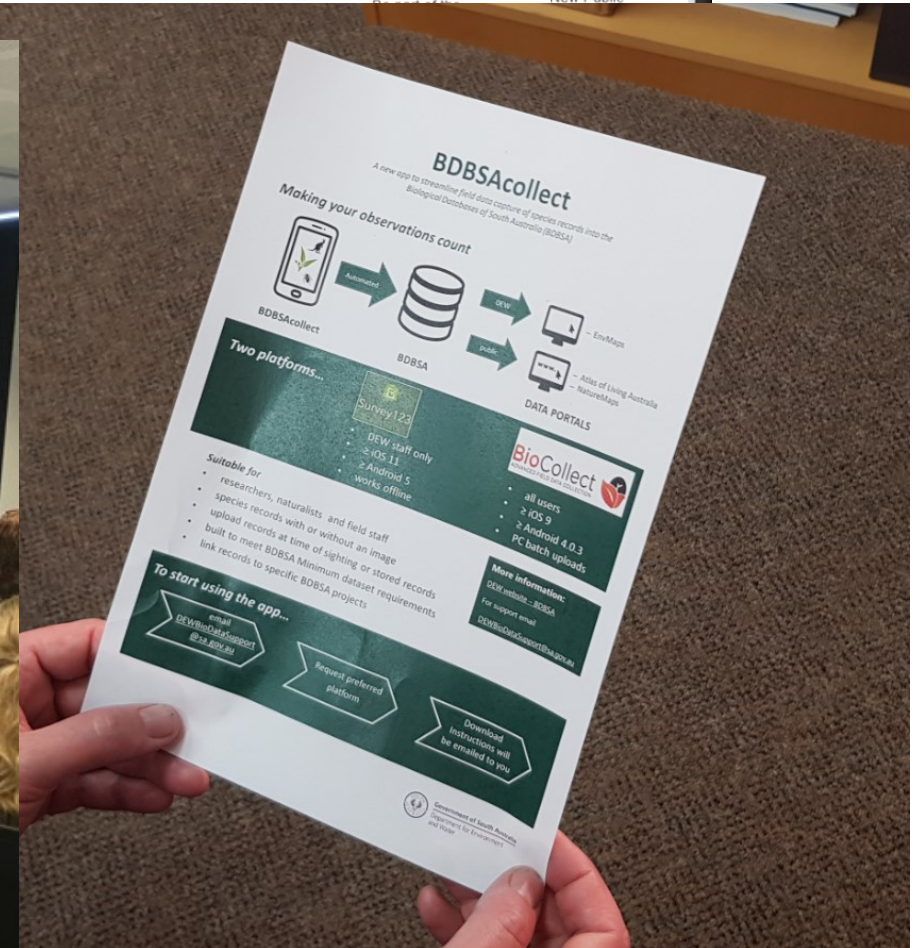
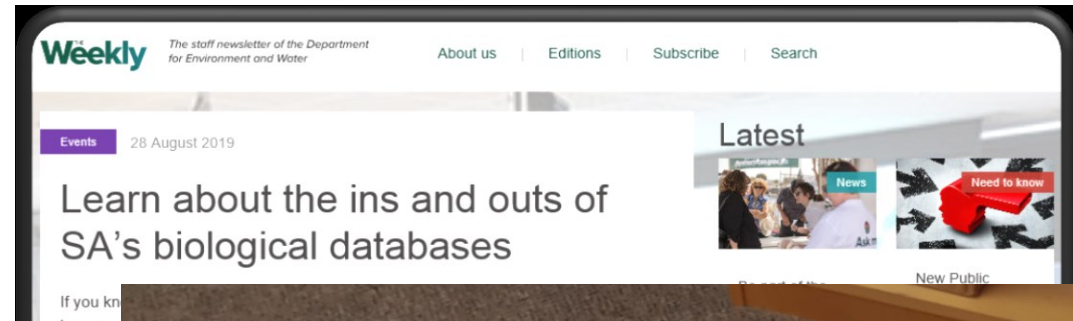








# Launched!



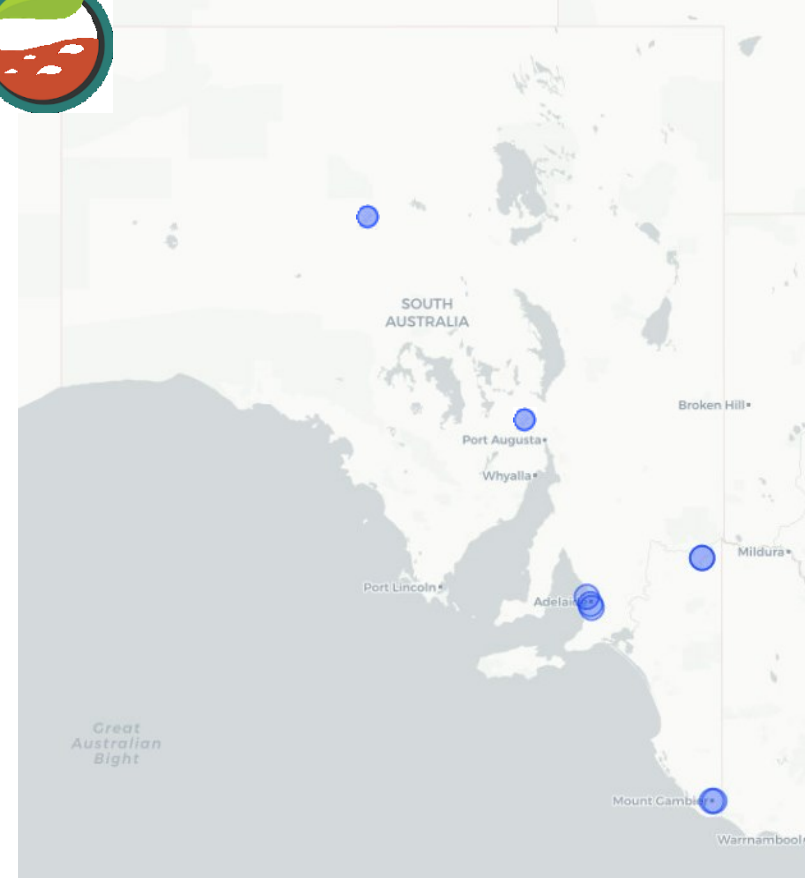
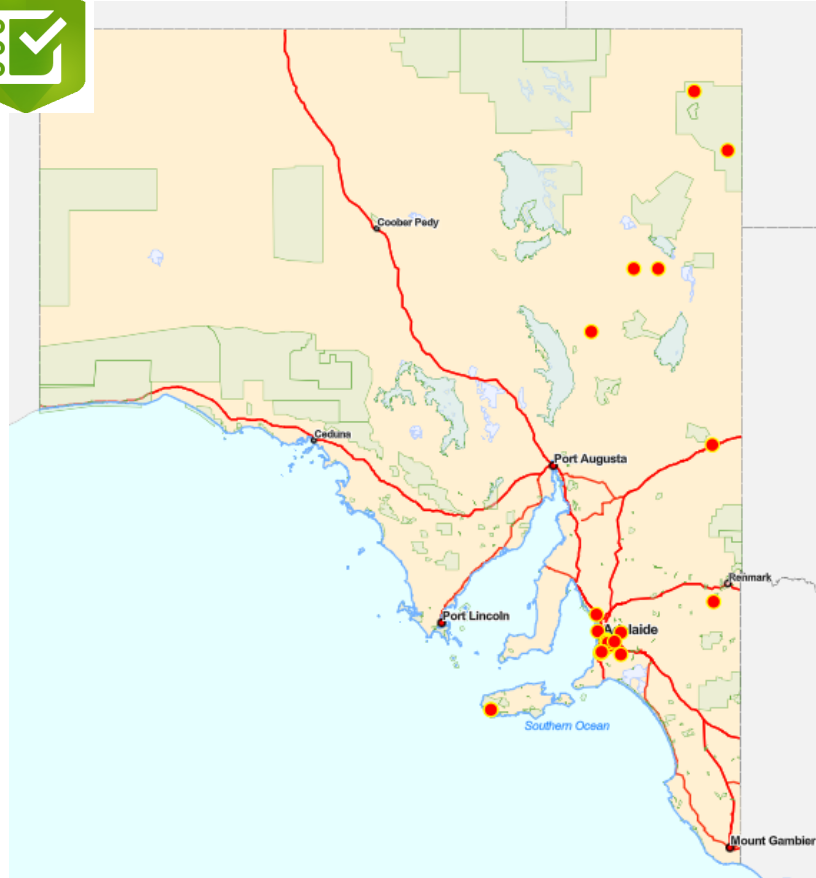
# Current use...

- Opportunistic sightings
- Projects with a simple attribute capture requirement

# ... and in the future...

- Used as a template for more complex projects with a biological data capture need with customised attributes

# Results so far...











# QUESTIONS

Photo credits:

- Duncan McKenzie
- Google



Government of South Australia  
Department for Environment  
and Water







Government  
of South Australia

---

Department for  
Environment and Water