Lake Eyre Basin Rivers Monitoring Project

Identifying data sources available to support multiple cultural values associated with water assets

DEWNR Technical report 2015/44

Government of South Australia
Department of Environment, Water and Natural Resources

Funding for these projects has been provided by the Australian Government through the Bioregional Assessment Programme.

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April, 2015

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Foreword

The Department of Environment, Water and Natural Resources (DEWNR) is responsible for the management of the State's natural resources, ranging from policy leadership to on-ground delivery in consultation with government, industry and communities.

High-quality science and effective monitoring provides the foundation for the successful management of our environment and natural resources. This is achieved through undertaking appropriate research, investigations, assessments, monitoring and evaluation.

DEWNR's strong partnerships with educational and research institutions, industries, government agencies, Natural Resources Management Boards and the community ensures that there is continual capacity building across the sector, and that the best skills and expertise are used to inform decision making.

Sandy Pitcher
CHIEF EXECUTIVE
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Summary

This report identifies some key available data sources and their possible application when assessing impact of coal seam gas (CSG) and large coal mining (LCM) on cultural values. Although the Arckaringa and Pedirka coal-bearing are the focus of this report, the information provided is relevant to water assets within the entire Kati Thanda-Lake Eyre region and Central Australia.

Information regarding the cultural importance of water was gathered on Aboriginal, pastoral and social heritage values using data sourced from book publications, State Library of South Australia Collections, project work undertaken by the South Australian Arid Lands (SAAL) Natural Resources Management (NRM) Board (existing within DEWNR), and web-based Heritage Databases publically accessible on the internet. It was beyond the scope of this project to undertake an extensive literature review and public consultation with pastoralists and Traditional Owners.

Aboriginal values of water and associated ecosystems within the Kati Thanda-Lake Eyre region are multi-faceted and include many perspectives, language groups and stakeholders. Plant and animal species associated with aquatic habitats, and their use by Aboriginal people (e.g. as food, medicine or other) was identified through published literature – the information on the Aboriginal name, language group and use are presented for each species, as is the scientific name, a habitat description and mapped distribution. This report has used published information on the Aboriginal use of plant and animal species to identify an approach to capture a component of cultural values. Application of this method will require consultation with Traditional Owners in the area of concern, to determine its use and applicability in how Aboriginal values are represented, which is planned as a subsequent phase of this project.

The pastoral values identified in the Arckaringa and Pedirka region include areas that provide opportunities for wet season grazing, fishing, swimming, and/or picnicking. Additional, important water assets included waterholes and springs, and bore-fed wetlands. Although data presented were compiled from a small number of pastoral properties (13), they highlight cultural values from a pastoral perspective. These values should also be considered when undertaking assessments on the potential impact of CSG and LCM.

Water sites within the Kati Thanda-Lake Eyre region are often included in both heritage and environmental databases. A total of 118 heritage sites, associated with aquatic ecosystems, were identified in this project. In many cases the values associated with these listings are both social and ecological for example, Kati Thanda-Lake Eyre is valued as a heritage, conservation, wetland and bird site. These cross-disciplinary linkages suggest that the values associated with water assets within the region occur across multiple scales, from local to landscape. They also highlight the extent to which water assets are valued within the region. Therefore acknowledging and taking into account the multiple values attributed to water in the regional landscape will be paramount to assessing potential impacts from CSG and LCM development.

This report highlights the intrinsic link that social values have with environmental assets, including sites and species. It also showcases that these values can be reported on in a way that is sensitive to the confidentiality around Aboriginal and pastoralist cultural knowledge.

1 Introduction

1.1 Background

The Bioregional Assessment (BA) Programme is a transparent and accessible programme of baseline assessments that increase the available science for decision making associated on potential water-related impacts of coal seam gas (CSG) and large coal mining developments. A bioregional assessment is a scientific analysis of the ecology, hydrology, geology and hydrogeology of a bioregion with explicit assessment of the potential direct, indirect and cumulative impacts of coal seam gas and large coal mining development on water resources. This Programme draws on the best available scientific information and knowledge from many sources, including government, industry and regional communities, to produce bioregional assessments that are independent, scientifically robust, and relevant and meaningful at a regional scale. For more information on bioregional assessments, visit <http://www.bioregionalassessments.gov.au

The Bioregional Assessment methodology (Barrett et al. 2013) is sectioned into contextual information, model-data analysis, and impact analysis and risk assessment. Within the risk analysis, the:

"bioregional assessment must provide sufficient scientific advice as to the level of risk associated with impacts on water-dependent assets (eg. matters of National Environmental Significance and other important ecological and cultural water features)," pp. 28.

The aim of this report is to capture 'other important cultural information' when considering applications on CSG and large coal mining (LCM) developments in South Australia. This project focuses on the Arckaringa Basin and the Pedirka Basin in the Kati Thanda-Lake Eyre region. These basins have been targeted because they contain significant coal resources and are where there is potential for large-scale coal mining or coal seam gas development in South Australia.

The Bioregional Assessment (Barrett et al. 2013) identifies that water assets may be directly or indirectly and materially affected by exposure to changes in water quality or quantity from CSG or coal mining. One way to measure a direct or indirect exposure is to measure the response of plants and animals within the ecosystem being exposed to CSG or coal mining development. Plants and animals are not only indicators of changes to ecosystem function but are socially valued as indicators of ecosystem 'health'. Aboriginal people value plants and animals as food, medicine, and other resources and capturing information on the use of flora and fauna resources by Aboriginal Australians is a means of recognising a component of cultural values within the landscape:

"Many of these species, or assemblages they form, also have cultural associations for both Indigenous and non-Indigenous Australians, for example waterbirds, turtles, crocodiles, platypus and fish. Recognition of these associations is paramount to Indigenous people, but also to many non-Indigenous people, for whom the health of their environment is measured through the presence of fish in rivers and birds on lakes". pp. 56, Barrett et al. (2013).

The above quotation forms the backbone to the outputs of this report for the Australian Governments Department of the Environment. This report identifies data sources available to support multiple cultural values of water assets in the Kati Thanda-Lake Eyre region specifically in regards to:

1 Aboriginal use of flora and fauna

2 Pastoral interaction with aquatic ecosystems

3 Social heritage sites of importance

1.2 The Lake Eyre Basin Rivers Monitoring Project

The Lake Eyre Basin (LEB) presents unique challenges to assessing and managing the risks that may arise from coal seam gas (CSG) and coal mining developments. It is characterised by a high degree of hydro-climatic variability and unpredictability, with patterns of water availability occurring over annual and decadal scales. There are considerable knowledge gaps regarding the hydrology and ecology of surface water assets and their vulnerabilities during different phases of the hydro-climatic cycle.

The Lake Eyre Basin River Monitoring (LEBRM) project aims to address these knowledge gaps for areas potentially impacted by CSG or coal mining activities. The LEBRM project will form a key input into the Bioregional Assessment work for the LEB, and will, in turn, provide information and tools to assist the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC). The IESC is a statutory body under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) which provides scientific advice to Australian governments on the water-related impacts of coal seam gas and large coal mining development proposals.

Under the EPBC Act, the IESC has several legislative functions to:

- Provide scientific advice to the Commonwealth Environment Minister and relevant state ministers on the water-related impacts of proposed coal seam gas or large coal mining developments.
- Provide scientific advice to the Commonwealth Environment Minister on:
  - bioregional assessments being undertaken by the Australian Government, and
  - research priorities and projects commissioned by the Commonwealth Environment Minister.
- Publish and disseminate scientific information about the impacts of coal seam gas and large coal mining activities on water resources.

This report is part of a series of studies forming the Lake Eyre Basin Rivers Monitoring (LEBRM) project. The LEBRM project is one of three water knowledge projects undertaken by the South Australian Department of Water, Environment and Natural Resources (DEWNR) to inform the BA in the Lake Eyre Basin region. The three projects are:

- Lake Eyre Basin Rivers Monitoring
- Arckaringa and Pedirka Groundwater Assessment
- Lake Eyre Basin Springs Assessment

1.3 Water resources in the Kati Thanda-Lake Eyre region

To maintain consistent terminology throughout the Bioregional Assessment Programme, coal-bearing basins are referred to as subregions within a larger bioregion. The Lake Eyre Basin (LEB) bioregion covers an area of approximately 1.31 million km^2 of central and north-eastern Australia, including parts of Queensland, New South Wales, South Australia and the Northern Territory (Figure 1-1). The LEB bioregion incorporates the whole of the Lake Eyre surface drainage basin as well as portions of several adjacent surface drainage catchments. The main areas of interest for the Bioregional Assessments within the LEB bioregion are those underlain by four separate coal-bearing geological basins – the Pedirka and Arckaringa basins in the west, and the Galilee and Cooper basins in the east.

1.4 Study area

A study area has been defined for this project to capture the potential extent of influence from water-related impacts due to potential large coal mining or coal seam gas activities in the Arckaringa and Pedirka Basins. This comprises consideration of water dependent assets[1] and their receptors[2] that may be affected by changes in "baseline variables, flow regimes, hydraulic conditions, surface water – groundwater connections, inundation patterns and effects of salt or salinity" (Barrett, *et al.*, 2013). The following spatial information and assumptions were used to derive the study area boundary (as illustrated by Figure 1-2), based on best information available at this time:

[1] A water-dependent asset is "an entity, such as a Ramsar or state significant wetland, within a bioregion with characteristics having value and which can be linked directly or indirectly to a dependency on water quantity or quality" (Barrett *et al.*, 2013)

[2] "Receptors are discrete, identifiable attributes, such as a particular rare or threatened species, contained within assets that are measurably impacted by a change in water quantity or quality resulting from CSG or coal mining development. It is through receptors that the impacts of CSG and coal mining development are defined within a BA" (Barrett *et. al*, 2013).

- Extent of potential groundwater drawdown derived from DEWNR groundwater Stage 1 preliminary conceptual modelling for the Pedirka Basin, which identifies 210 km radius from known coal bearing bodies. The inferred 210 km groundwater drawdown extent assumes potential for up to a 50 year Life of Mine and large scale mining operations.
- Extent of the Great Artesian Basin (GAB) along the western and southern boundaries to identify potential groundwater connectivity
- 20 km buffer boundary has been included as a contingency around known surface waters and groundwater drawdown extents
- Additional 10 km buffer included where intersection with fractured rock aquifer extent occurs
- Inclusion of springs in close proximity to 210 km radius from coal beds in an easterly direction based upon DEWNR knowledge of these groundwater systems
- Entire Kati Thanda-Lake Eyre (north and south) boundary incorporated.
- Phreatic surface information was utilised to identify connectivity to shallow groundwater potentially utilised by vegetation. Vegetation groundwater dependency was assumed up to a 10 m depth, based upon information presented within a study into ecological water requirements of groundwater systems (Tomlinson, 2011) and taking a consistent approach for defining study areas for the Bioregional Assessment for other regions.
- GAB springs of the Lake Eyre supergroup included with a 5 km buffer to accommodate the extensive wetland and terrestrial ecosystems these springs support. It is noted that the impacts of drawdown on pressures would reduce further from the coal resource but recognising that there may be ecological dependencies between the springs.
- Dry areas of the GAB were excluded as these areas do not have surface water connections with coal bodies in the Pedirka and Arkaringa Basins.

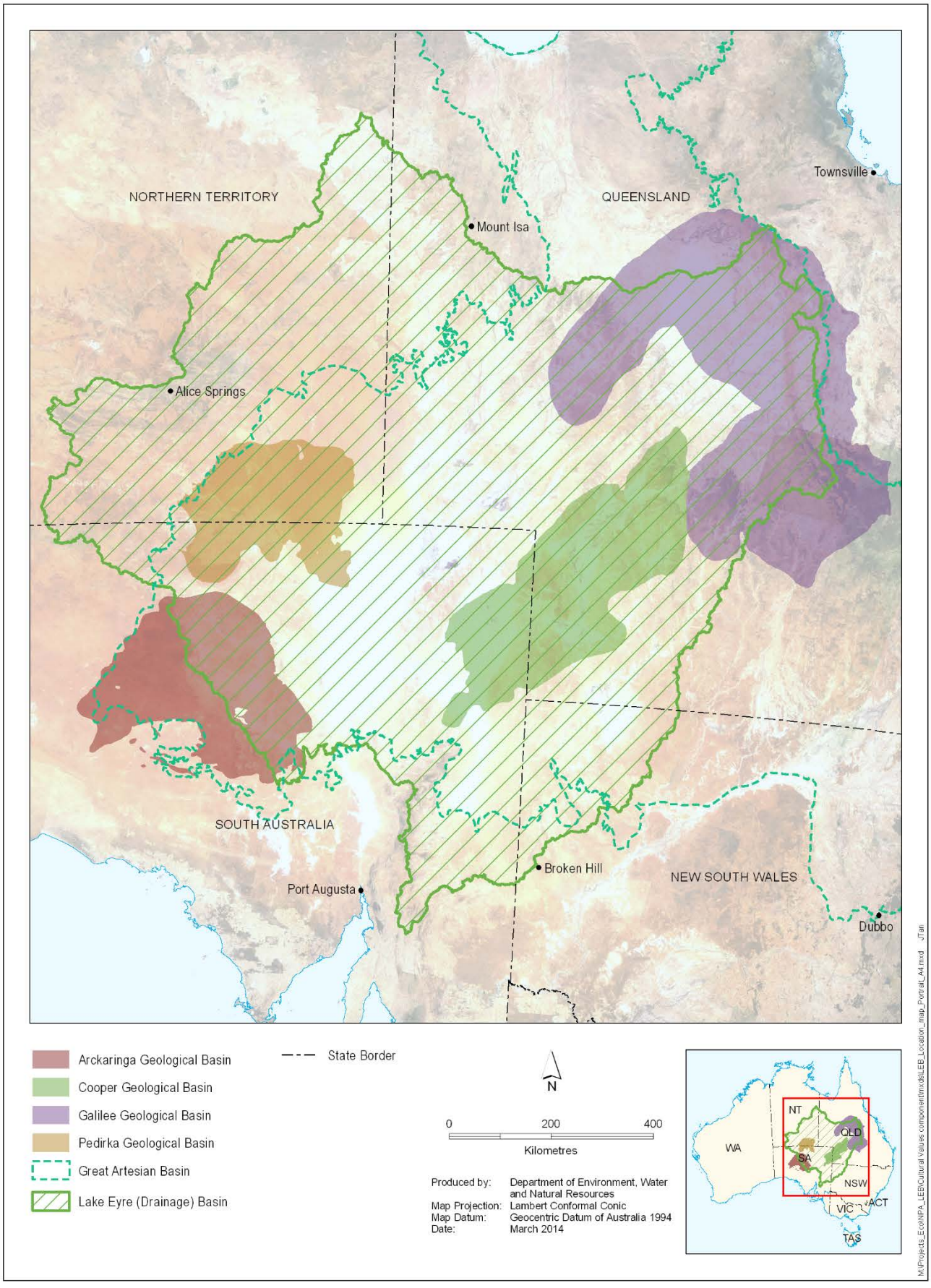


Figure 1-1 Lake Eyre Basin bioregion and coal-bearing subregions

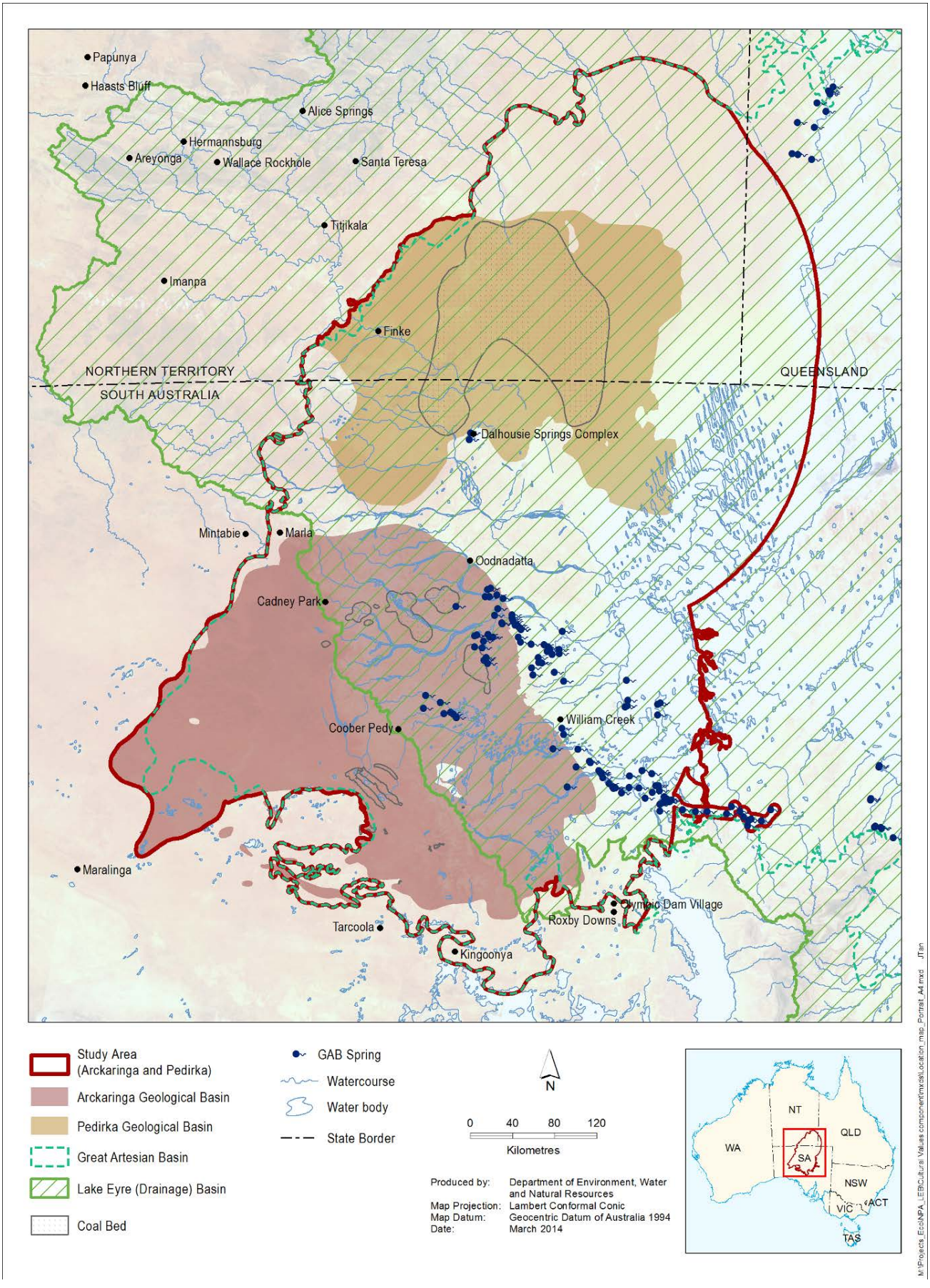


Figure 1-2 The combined Arckaringa and Pedirka study area used for reporting cultural values

In this report water resources within the Lake Eyre bioregion include all ecosystems that rely on surface water or groundwater to function within the landscape. Water assets within the LEB were previously identified for the SAAL NRM Region, and are available through the Water Asset Database (Denny and Berens, 2013). The following type of water assets were identified for the SAAL NRM Region by Denny and Berens, 2013:

- wetlands and waterholes, springs, watercourses, dams and tanks, gilgais, regional groundwater, wells, flow gauges and prescribed water resources areas.

Conceptual models were also developed to illustrate key aquatic ecosystems types in the LEB and their potential vulnerability to CSG and large coal mining related activities (Imgraben and McNeil, 2013). The key aquatic ecosystems identified included:

- connected ecosystems
  - watercourses, waterholes, flood outs, floodplains, lakes, swamps, pans
- isolated ecosystems:
  - lakes, swamps, pans, tributaries and channels.

The above aquatic ecosystems plus floodplains, bore wetlands, GAB spring and gilgai's were classified and mapped (Miles and Miles, 2015) however some aquatic habitats that haven't been classified or mapped within the Bioregional Assessment Programme due to limited data are ecosystems such as rock-holes, soaks and inter-dunal wetlands.

The overall objective of this project was to identify data sources associated with cultural values of water resources, especially those that overlay the coal-bearing basins of the Arckaringa and Pedirka subregions within South Australia.

1.5 Water and Aboriginal peoples

Aboriginal values encompass Country and all that is connected to Country. Aboriginal Country takes in everything within the landscape - landforms, waters, air, trees, rocks, plants, animals, foods, medicines, minerals, stories and special places. Connections to Country include cultural practices, knowledge, songs, stories and art, as well as all people: past, present and future.

With water being an intrinsic link to Country, trying to capture Aboriginal values associated with water is complicated and differs between Country, e.g. language group areas. The following considerations should be taken into account when assessing the cultural value of water:

- different water types and their interconnectivity, such as:
  - surface water, groundwater sources
  - waterbodies (e.g. temporary, permanent)
  - ecosystems (e.g. rivers, floodplains, wetlands, claypans, rockholes etc.)
  - regimes (e.g. flooding, drying)
  - quality (e.g. saline, fresh) etc.
- cultural values may not always align with ecological values, although at times they may overlap or be complementary.
- different methods used to assess values, such as: interviews, surveys, data analysis and spatial mapping with the flexibility to meet individual or community needs.
- the importance of respecting, protecting and maintaining intellectual property rights.

1.1.1 Aboriginal values presented within this report

This project acknowledges the cultural sensitivities in recording and mapping Aboriginal information. Therefore, it was considered not appropriate to pursue identifying cultural knowledge of specific sites without appropriate consultation with Traditional Owners and Native Title holders or claimants. At the time of writing this report, the South Australian Government's policy on protection of Aboriginal culture and heritage in regards to mining is:

> *'The holders of an exploration licence or mineral claim must obtain an agreement authorising exploration or mining on native title land. DMITRE cannot grant a mining lease until an agreement has been negotiated with the native title holders or claimants. Any agreement reached between the parties must be lodged with a mining registrar for assessment.'* (Minerals DIMTRE, 2014).

Negotiations between mining companies and Aboriginal people often involves undertaking 'site clearances' with the appropriate Aboriginal representatives. In addition, Aboriginal people or their representatives must have access to the Aboriginal Site Heritage Register, managed by Aboriginal Affairs and Reconciliation (AAR), Department of State Development (the former Department of Premier and Cabinet (DPC) Aboriginal Affairs and Reconciliation Division (AARD)). It is the responsibility of the AAR to protect and preserve Aboriginal heritage and culture in South Australia.

This report will not identify specific sites of cultural importance, given that mining companies need to reach an agreement with Aboriginal people to undertake mining activities in the first instance. Furthermore, there exists an Aboriginal Heritage Register record of culturally important sites (though this is not a conclusive database), and there is an acknowledgement of the connection of Aboriginal culture to all water assets within the Water Asset Database as described by the following statement (Denny and Berens, 2013):

> *'South Australia is rich with Aboriginal cultural heritage. Aboriginal people are strongly connected to their land and water. Water is a vital component of this connection, providing food, plants, drinking water as well as many water sites of significance to Aboriginal archaeology, anthropology, tradition or history. The rivers, lakes, rock-holes, ground-waters and springs play an important role in Aboriginal traditional culture. Many are associated with myths and song and are important elements of rich cultural landscapes. The rights and interests of Aboriginal people to look after and be involved in planning and managing land and waters of cultural significance has been recognised through both state and commonwealth legislation. It is important that the cultural significance of these water sites are recognised and addressed in Water Planning. This can only be done by following the established cultural protocols and legislative procedures which include contacting the DPC - AARD State Aboriginal Heritage Branch, South Australian Native Title Services, and any registered Native Title interests'*

A key objective of this report was to identify as many plant and animal species used by Aboriginal people associated with aquatic ecosystems in the Arckaringa and Pedirka subregions. A similar methodology, developed by the Confederated Tribes of the Umatilla Reservation (CTUIR) in Oregon, USA, a "First Foods" framework is used to understand, map and manage natural resources of cultural significance. CTUIR use their cultural connection to First Foods -- water, salmon, deer, cous and huckleberry -- to bring attention to species and linkages (ecological processes) that are understood by Tribal members but are not well understood by outside entities. One of the goals of the framework is to provide culturally appropriate and transparent 'public information' regarding the First Foods and natural resource management that can be recognised and used both inside and outside the Tribal community (Quaempts, 2007).

The advantages of identifying plants and animals of cultural value is that these species can then be incorporated into the Bioregional Assessments outputs; contextual information, model-data analysis, impact analysis, risk analysis and outcome summary. It also allows for the development of hydro-ecological response models to better understand potential impacts and associated risks of CSG and large coal mining to species of cultural importance.

Information presented in this report has not undergone any review or consultation with Australian Aboriginal people in the Arckaringa and Pedirka subregion or the larger region of the LEB and Central Desert. The information contained in this report was compiled using published information, including publications by Aboriginal people, especially on the topic of ethnobotany. It is recognised that the use of cultural knowledge within historic publications may not have had consent from Traditional Owners therefore the application of this method using published material requires consultation.

1.6 Water in the pastoral landscape

Within South Australia, the Arckaringa and Pedirka subregions mostly fall within the SAAL NRM Region where pastoralism is the dominant land use. Water use in this area has varied over time but the sources have included; Great Artesian Basin springs, desert rivers and waterholes, bores and bore-fed wetlands.

Recently a cultural landscape assessment was undertaken in the Neales Catchment (located within the Arckaringa subregion) by Lee (2011). This landscape assessment used physical features and human influences within the Neales Catchment to identify the environmental, economic, cultural and social values associated with landscape features (e.g. waterholes). Lee (2011) makes the following observations of key cultural values in the Neales Catchment:

- Waterholes and other water bodies are the focus of ongoing human existence in the outback. The appeal of arid zone landscapes is increased by the visual presence of water and/or the indication that water sources exist to sustain vegetation.
- Landscapes that exhibit permanent and natural waterholes and springs are refuges for animals and humans in dry times, and are places for sustenance and recreation
- Preferred landscapes exhibit high biodiversity with viewpoints overlooking visibly pristine landscapes
- Constructed dams, bores and tanks are indicators of pastoral and other activity and contribute to the cultural landscape, but there is a preference for 'natural' and preferably pristine waterholes
- The presence of fish and other wildlife at healthy waterholes contributes to the desert experience and promotes an important opportunity for recreation and social meetings for locals

The information captured by Lee (2011) includes pastoral values at a very broad landscape scale and is set amongst other cultural values (e.g. Aboriginal, local community and tourism).

In contrast, the Ecosystem Management Understanding (EMU) process, as reported by Pringle (2009), is undertaken at a much finer scale of individual pastoral stations. EMU operates in a confidential manner directly with pastoral station managers. A common point of entry into the EMU program is through concern over loss of pastoral productivity, although the underlying foundation to EMU is that non-commercial value (i.e. ecosystem function) on pastoral property is integral to successful land management. Pringle (2009) has found that a common and major discussion point is often the plight of arid zone wetlands. Pastoralists working through the EMU process have been observed to change their management strategies around wetlands. This is a significant outcome, given that many water assets on pastoral properties are not managed for conservation outcomes and often these sites require repair and on-going management. An important component of the EMU process is that management strategies are arrived at collaboratively and, importantly, voluntarily.

Due to confidentially, there is no publicly available information on pastoral values captured in relation to aquatic ecosystems through the EMU Program. However, another SAAL NRM Board-funded project (Young, 2007, *in draft*) captured pastoral station values in the Stony Desert Plains Interim Biogeographic Regionalisation for Australia (IBRA) area of the Neales and Macumba River catchments (located within the Arckaringa and Pedirka subregions).

In 2005, the Arid Rivers program was developed by the SAAL NRM Board, in co-operation with Desert Channels Queensland, as a response to LEB community concerns over the sustainable management of waterholes and wetlands and the identification and conservation of community values associated with them. The program consisted of three sub-projects; natural waterholes, biological survey, and integrating community priorities. The Stony Plains was selected as a trial location for the Arid Rivers program, which tested a methodology for linking scientific and community priorities.

This study, entitled '*The results of the Landscape Values Mapping in the Neale's and Macumba River Catchments*' (Young, 2007 *in draft*), is an important piece of work because it formally documents pastoral values across the landscape. Values captured relate to grazing, occurrences of plants and animals, and areas of recreation, heritage, aesthetic or other special significance.

The SAAL NRM Board has made the spatial data captured in the draft report by Young (2007), available to this project. A description of the values, and how the information associated with these values is used within this report, is presented in Section 2.3.

Bore-fed wetlands are also considered of 'value' to pastoralists in the SAAL NRM Region (Phipps, 2008) and have been incorporated into this report. Historically GAB water was supplied to pastoralists through free-flowing bores, but 65 to 90% of

this water was lost through evaporation and seepage occurring in the drainage lines. South Australia has undertaken initiatives to prevent loss of pressure in the GAB since 1977 and the Australian and State Governments have, in partnership with landholders, controlled or capped many of free-flowing bores.

In some cases bore-fed wetlands within the GAB have significant social, economic and environmental value for the local community, regional visitors and tourists, and these wetlands remain free flowing (Phipps, 2008). Phipps (2008) interviewed pastoralists in relation to 17 bore-fed wetlands in the SAAL NRM Region to determine the values the wetlands represented to the community, to provide baseline descriptions of the wetlands, and to identify management issues for individual wetlands. The results of the study found that, in regards to bore-fed wetlands:

- The main values described were social and environmental in nature. In many cases landholders believed that wetlands contribute to the conservation of wildlife and wetland vegetation. For example, 59% of respondents returned the maximum score when describing the importance of the wetland as a drought refuge for wildlife.
- 18% of landholders returned the maximum survey score to indicate they strongly believed that bore-fed wetlands contributed to problems with feral animals or the spread of weeds.
- Wetlands were common sites for recreation and relaxation although the nature of this interaction varied depending on factors such as the size of the wetland, its proximity to homesteads and whether or not the general public could access the site.
- Social values included adding to the feeling of belonging, reducing tension, providing a site for entertaining family and visitors and also educational opportunities.
- From an environmental perspective, commonly expressed values included: the conservation of birds, other wildlife and wetland vegetation; providing a drought refuge for wildlife; and conservation of fish and aquatic wildlife. There was a clear dominance of the value of the wetlands for the conservation and observation of bird species. For example, many landholders maintained their own list of the bird species that they had observed at station wetlands.
- It was noted during consultations that virtually all pastoralists interviewed considered wetlands as viable watering points for stock. In most cases this was seen only as an emergency back-up supply, but a few pastoralists still rely on the wetlands as watering points during normal operations.

The use of uncontrolled free flowing wells reduces aquifer pressure and can negatively impact on natural GAB springs and other artesian wells. In response to these concerns, all jurisdictions within the GAB have agreed that the use of bore drains as a method to deliver water to stock can no longer be justified. Most free-flowing bores are being rehabilitated (i.e. fitted with control valves, replacement of open earthen bore drains with piped water reticulation systems) as part of the of the GAB Strategic Management Plan (GABCC, 2000). The SAAL NRM Region's Water Allocation Plan (WAP) for the Far North Prescribed Wells Area (FNPWA) identified that bore-fed wetlands (including bore-fed waterholes) has been estimated as some 12 ML/d of artesian water (SAAL NRM Board, 2009). The FNPWA WAP proposed that by 2010 the amount of artesian water saved though wetland management plans would be reduced to 7 ML/d, but acknowledges that there is still a knowledge gap in regards to other free-flowing bores and potential bore-fed wetlands within the region. These sites are yet to be identified and managed, though a strategic direction within the SAAL NRM Plan is to *'review status of currently flowing artesian bores and develop and implement management/rehabilitation programs as deemed necessary'* (pp 123, SAAL NRM Plan, 2009). Further information and investigation on bore-fed wetlands/free-flowing bores in the Arckaringa subregion was published in the Bioregional Assessment Programmes' mapping and classification project (Miles and Miles, 2015) and hydroecology project (Hooper and Miles, 2015).

1.7 Social heritage

What constitutes heritage in a national framework has been explicitly defined by the Australian Government (Commonwealth of Australia, 2014):

> *'…all the things that make up Australia's identity - our spirit and ingenuity, our historic buildings, and our unique, living landscapes. Our heritage is a legacy from our past, a living, integral part of life today, and the stories and places we pass on to future generations.'*

The Water Asset Database for the SAAL NRM Region (Denny and Berens, 2013) has a field that identifies social/cultural values. Aboriginal values were captured within the blanket statement as stated above in Section 1.1.1, while other attributes of non-

Aboriginal value were captured as heritage, amenity, therapeutic, spiritual, existence and unknown. For each of the water assets within the Water Asset Database (Denny and Berens, 2013), the following social values were attributed:

- wetlands and waterholes:
  - intersected a Park or Reserve = amenity, existence
  - listed in the Directory of Important Wetlands under Criteria 6 (DIWA, 2008) = heritage
- springs:
  - intersected a Park or Reserve = amenity, existence
  - 170 GAB springs were given a value based on expert knowledge
  - other springs = unknown
- watercourses = unknown
- dams:
  - intersected a Park or Reserve = amenity, existence
  - other dams = unknown
- gilgais = unknown
- regional groundwater = unknown
- wells = unassigned
- flow gauges = not applicable and attributed as unknown
- prescribed water resource areas = unassigned.

In an attempt to add further information on social values beyond those reported by Denny and Berens (2013), and to try to capture broader Australian community values, this report has further investigated public data available for download through various heritage websites, and includes heritage sites that are related to water within the Arckaringa and Pedirka subregions.

2 Methodology

2.1 Aboriginal use of flora and fauna

2.1.1 Language and sourced literature

Due to the scarcity of published literature of the flora and fauna utilised by Aboriginal people (especially fauna) in the Arckaringa and Pedirka coal basins, information has been captured across the larger Kati-Thanda Lake Eyre and Central Desert regions. Information for the following language groups was captured; Alyawarre, Adnyamathanha, Anmatyerr, Arabana, Arrernte, Banggarla, Barkindji, Birria, Budjari, Dieri, Karanya, Karangura, Karuwali, Kuyani, Kuungkari, Malyangapa, Ngadjuri, Ngamini, Nukunu, Pintupi, Pirlatapa, Pitjantjarjara, Pitta-Pitta, Tereila, Wandjiwalgu, Wangkangurru/Yarluyandi, Wangkumara, Warlpiri, Wiljali, Yandruwandha, Yankunytjatjara, Yawarawarrka. The location and naming of these language groups is based on Horton (1994).

In the results section, flora and fauna species used by Aboriginal people have been mapped to show species distribution in relation to the study area and broadly at the Australia-wide landscape, but the maps do not distinguish the species distribution in relation the language group that utilised a certain species. This is an important point to consider, as there would be differences in use of plants and animals in different Country, which again highlights to need for consultation of this methodology to determine its applicability.

The following literature provided information on the Aboriginal use of flora and fauna in the Kati Thanda-Lake Eyre region:

- *Arelhe-kenhe Merrethene: Arrernte traditional healing*. V. Dobson (2007). IAD Press, Northern Territory, Alice Springs
- *Adnyamathanha and beyond - useful plants of an ancient land*. N. Bonney (2006) Australian Plants Society Inc., S.A.
- *Anmatyerr Ayey Arnang-akert: Anmatyerr plant stories by the women from Laramba (Napperby) community*. J. Green (2003) IAD Press, Northern Territory, Alice Springs
- *Field Guide to the plants of outback South Australia*. F. Kutsche and B. Lay (2003) Department of Water, Land and Biodiversity Conservation, South Australia
- *Seed of the Coolibah: A history of the Yandruwandha and Yawarawarrka people*. H. Tolcher (2003) Openbook Australia, South Australia, Adelaide
- *Punu: Yankunytjatjara plant use*. C. Goddard and A. Kalotas (2002) IAD Press, Northern Territory, Alice Springs
- *Field guide to the common plants of the Cooper Basin (South Australia and Queensland)*. D. Wiltshire and M. Schmidt (1997) Santos, Adelaide
- *Bushfires and bushtucker: Aboriginal plant use in central Australia*. P. Latz (1996) IAD Press, Northern Territory, Alice Springs
- *Kowari 4: Uluru Fauna: The distribution and abundance of vertebrate fauna of Uluru (Ayers Rock-Mount Olga) National Park*, N.T. J. Reid, J. Kerle and S. Morton (1993) Australian National Parks and Wildlife Service, Canberra
- *Bush Tucker: A guide to, and resources on traditional Aboriginal foods of north-west SA and central Australia*. C. Winfield (1982) Wattle Park Teachers College, TAFE (SA)
- *Aboriginal names and utilisation of the fauna in the Eyrean region*. T. Harvey Johnston (1943) From: Transactions of the Royal Society of South Australia, vol 67 (2)
- *The ecology of the Aborigines of central Australia: Botanical notes*. JB. Cleland and T. Harvey Johnson (1933) From: Transactions of the Royal Society of South Australia, vol lvii
- *The manners and customs of the Dieyerie tribe of Australian Aborigines*. S. Gason (1897) pp. 253-307; in Woods (ed) The native tribes of South Australia. E.S. Wigg & Son, Rundle St, Adelaide

2.1.2 Flora

The following information on each plant species associated with water dependent assets was collected and collated for this study (Appendix A):

- scientific name
- common name
- plant family, community structure and habitat description
- Aboriginal name and language group
- Aboriginal use (food, medicine, other)
- recorded distribution of the species within Australia (presented graphically)
- references/sources.

Species distributions were obtained from the Atlas of Living Australia website (ALA, 2014). Food and medicinal plants were identified from literature. Plant species that occur within the Arckaringa and Pedirka coal basins were also mapped in relation to their occurrence in river and creek drainage lines.

2.1.3 Fauna

The following information on each fauna species associated with water dependent assets was captured (Appendix B):

- scientific name
- common name
- class* and habitat description
- Aboriginal name and language group
- Aboriginal use (food, other)
- recorded distribution of the species within Australia (presented graphically)
- references/sources.

*each species was placed in one of the following classes: mammal, reptile, crustacean, bivalve, fish, frog, waterbird, bird (i.e. terrestrial bird associated with water habitats).

The recorded distribution of the species occurrence was downloaded from the Atlas of Living Australia website (ALA, 2014).

2.2 Native Title

Public data provided by the Native Title Tribunal (2013) was downloaded for this report, including coverage of the following within the study area:

- Schedule of Native Title Determination Applications
- Registered Native Title Determination Applications
- Determinations of Native Title
- Registered /Notified Aboriginal Land Use Agreements.

2.3 Pastoral interaction with aquatic ecosystems

To map pastoral values in the Kati Thanda-Lake Eyre region data has been used from the 2008 AridRivers projects (i.e. the unpublished work by Young (2007)). This report provides results of the Landscape Values Mapping project in the Neales and Macumba River Catchments, which has been used to capture pastoral information for this study including:

- wet season grazing areas
- areas where fish occur
- recreational areas (e.g. swimming, picnicking)
- important water assets (i.e. waterholes and springs)
- waterbodies.

Also included are artificial bore-fed wetlands identified by Phipps (2008), as a pastoral value, noting that only a subset of the total number identified fall within the Arckaringa/Pedirka study area.

A side LEBRM investigation (R Hooper 2014, pers. comm., 7 Jan.) researched bore-fed wetlands within the Neales Catchment (Arckaringa subregion) as potential aquatic refuges. The following classifications were used to discuss bore-fed wetlands identified through bore flow data and time-series aerial imagery:

- Class 0 - Some historical evidence of a wetland. Bore presently controlled and not flowing.
- Class 1 - Some evidence of a current wetland. Bore presently controlled and flowing.
- Class 2 - Good evidence of an established wetland. Bore controlled or uncontrolled.

In this report, only bores categorised as Class 1 and 2 (not Class 0) have been considered. Class 1 and Class 2 bore-fed wetlands are further illustrated by Figure 2-1 and Figure 2-2 below.

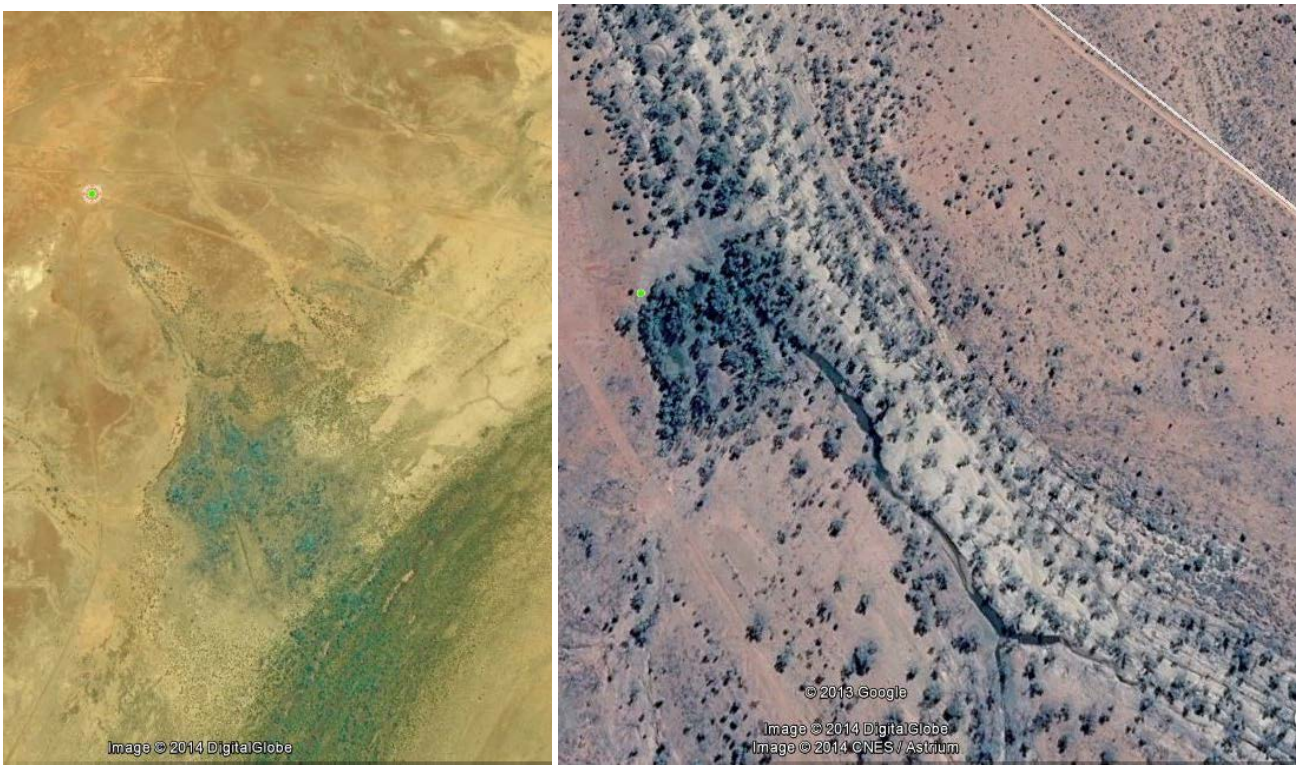


Figure 2-1 Evidence of a bore-fed wetland using imagery of a Class 1 at Wood-duck Creek Bore (left) and Class 2 at Junction Bore (right)

Figure 2-2 Photographic evidence of Junction Bore (Class 2) bore-fed wetland

2.4 Social heritage sites of importance

This assessment has attempted to further the inventory on social values by utilising data from various web-based databases, by building on data captured in Denny and Berens (2013). Social heritage data were obtained from the following public databases:

- Australian Government Department of the Environment, Environmental Resources Information Network (ERIN), Discover Information Geographically (DIG), including:
  - Register of the National Estate (2008)
  - Commonwealth Heritage List (2013)
  - National Heritage List (2013)
  - World Heritage List (2013)
  - Collaborative Australian Protected Areas Database (CAPAD) 2012 - external
  - Directory of Important Wetlands in Australia (DIWA) (2008)
  - Ramsar Wetlands of Australia (2011) – subset only
- State Heritage databases:
  - SA: Department of Planning, Transport and Infrastructure's; South Australian Heritage Places Database (2014)
  - NT: Department of Lands, Planning and the Environment; NT Heritage Register (Note: can download place names but not locations, therefore this data has not been included)
  - QLD: Department of Environment and Heritage Protection; Queensland Heritage Register (can only access places listed on the website and not locations, therefore this data has not been used)
- Other:
  - Important Bird Areas (Birds Australia, 2009)

Information obtained from these websites included places associated with 'water' with a related social value(s).

3 Results

3.1 Native Title

The relationship of Native Title to the study area, including Native Title Determinations and Registered/Notified Aboriginal Land Use Agreements is depicted in Figure 3-1.

The majority of the study area is under the governance of registered/notified land use agreement(s). A portion of the study area is under a determination of Native Title, meaning that a Native Title claim(s) is now formally recognised for relevant areas of land or waters. Another area is the subject of a schedule of Native Title Determination Application, meaning that the area is currently being assessed for a Native Title claim(s). Figure 3-1 shows that the majority of the coal basins are subject to or may be subject to Native Title claims, meaning that negotiations with Aboriginal claimants will form a pivotal part of any application to develop and extract these deposits.

As stated in the Introduction Section 1.5, it is not appropriate without proper consultation (Traditional Owners, Native Title holders or claimants) to explicitly record or map cultural sensitivities.

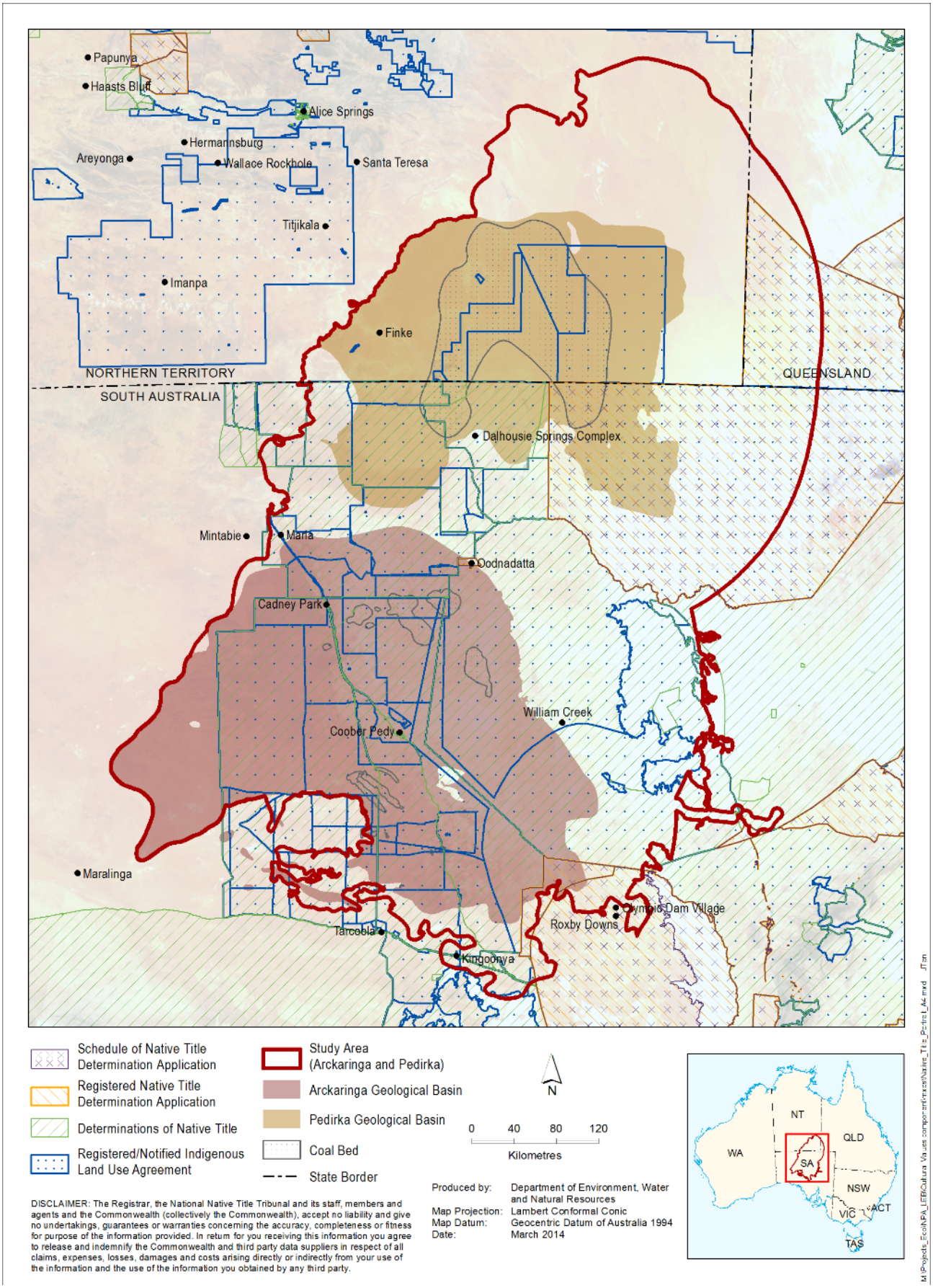


Figure 3-1 Different schedules of Native Title within the Arckaringa and Pedirka study area

3.2 Aboriginal use of flora

Within the study area, 112 plant species growing in association with aquatic ecosystem habitats (e.g. watercourses, floodplains, salt lakes, springs, etc.) were identified that are used by Aboriginal people. Of the 112 plant species, 86 species were identified as food plants and 31 species were identified as medicinal (Table 3-1).

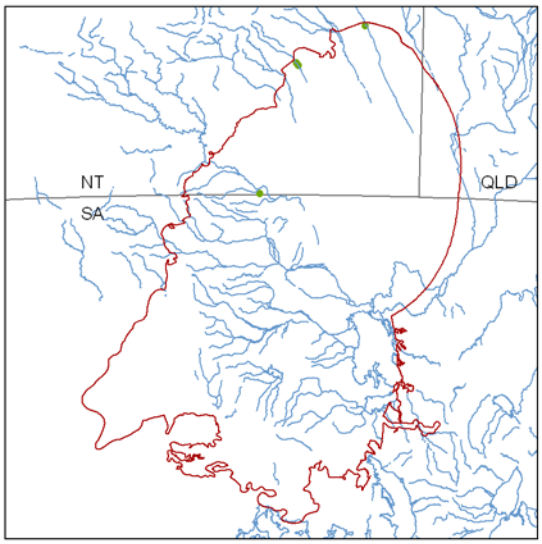
Information associated with all 112 plant species can be found in Appendix A. The recorded distribution of 18 food plants and 12 medicine plants have been mapped for the Arckaringa and Pedirka study area to demonstrate the interaction of a subset of food and medicinal plants with the riverine environment. The 30 plants mapped for this study were chosen due to their popularity across language groups and multiple uses as a resource (refer to Appendix A for specific information on each species).

Table 3-1 Aboriginal food and medicine plants identified from literature

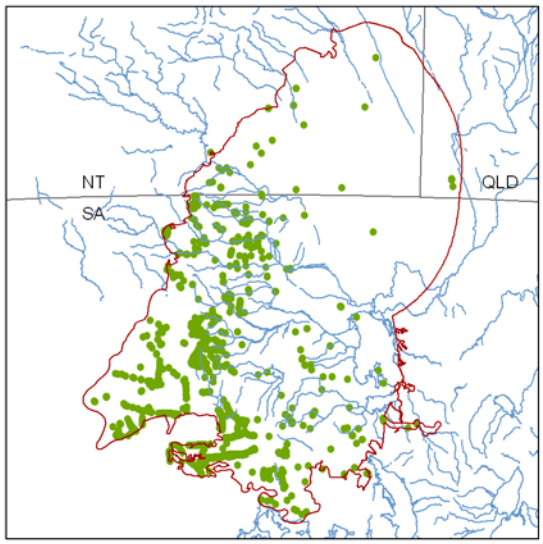
	Tree	Shrub	Grass	Forb / climber	Sedge / aquatic
Food	*Capparis mitchellii**	*Cynanchum floribundum**	*Astrebla pectinata*	*Tetragonia eremaea*	*Cyperus bulbosus**
	Bauhinia gilva	*Capparis spinosa* var. *nummularia*	*Chloris pectinata*	*Salsola australis*	*Cyperus vaginatus*
	Erythrina vespertilio	*Atriplex nummularia* ssp. *nummularia*	*Chloris truncata*	*Tecticornia tenuis*	*Schoenoplectus dissachanthus*
	Codonocarpus pyramidalis	*Enchylaena tomentosa**	*Eragrostis australasica*	*Tecticornia verruscosa*	*Juncus aridicola*
	*Acacia aneura**	*Acacia cuthbertsonii*	*Eragrostis eriopoda**	*Ipomoea polymorpha*	*Juncus bufonius*
	Acacia estrophiolata	*Acacia jennerae*	*Eragrostis setifolia*	*Lepidium phlebopetalum*	*Juncus caespiticius*
	Acacia murrayana	*Acacia ligulata*	*Eriachne ovata*	*Lepidium rotundum*	*Juncus holoschoenus*
	Acacia papyrocarpa	*Acacia oswaldii*	*Panicum decompositum**	*Drosera indica*	*Juncus kraussii*
	Acacia salicina	*Acacia ramulosa*	*Paspalidium basicladum*	*Vigna lanceolata* var. *latifolia**	*Juncus subsecundus*
	Acacia stenophylla	*Acacia tetragonophylla*	*Phragmites australis**	*Erodium cygnorum*	*Typha domingensis**
	Owenia acidula	*Acacia victoriae**	*Urochloa subquadripara**	*Lechenaultia divaricata*	*Triglochin hexagona*
	Eremophila longifolia	*Senna artemisioides*		*Cullen australasicum*	*Triglochin striata*
	Corymbia aparrerinja	*Eremophila glabra*		*Trigonella suavissima*	*Marsilea drummondii**
	Eucalyptus camaldulensis	*Eremophila latrobei*		*Sida goniocarpa*	*Marsilea hirsuta*
	Eucalyptus camaldulensis ssp. *obtusa*	*Eremophila maculata*		*Calandrinia polyandra*	
	Eucalyptus coolabah	*Eremophila sturtii*		*Portulaca oleracea**	
	Eucalyptus socialis	*Myoporum acuminatum*		*Marsdenia australis**	
	*Santalum acuminatum**	*Nitraria billardierei*		*Cucumis melo* ssp. *agrestis**	
	*Santalum lanceolatum**	*Zygophyllum aurantiacum* ssp. *aurantiacum*		*Glycine canescens*	
	Alectryon oleifolius			*Boerhavia dominii*	
	Atalaya hemiglauca				
	Brachychiton gregorii				
Medicine	*Acacia estrophiolata*	*Prostanthera stratiflora*	*Chrysopogon fallax**	*Trichodesma zeylanicum*	*Cyperus vaginatus**
	Acacia salicina	*Acacia ligulata**	*Cymbopogon ambiguus**	*Crotalaria eremaea* ssp. *strehlowii*	
	Owenia acidula	*Acacia rivalis*	*Eulalia aurea**	*Marsdenia australis*	
	Eremophila longifolia	*Acacia tetragonophylla**		*Crinum flaccidum**	
	Corymbia aparrerinja	*Eremophila bignoniflora**			
	Eucalyptus camaldulensis	*Eremophila latrobei*			
	Eucalyptus camaldulensis ssp. *obtusa**	*Eremophila maculata**			
	*Eucalyptus coolabah**	*Eremophila neglecta*			
	*Melaleuca glomerata**	*Eremophila sturtii*			
	Pittosporum angustifolium	*Myoporum acuminatum*			
	Santalum acuminatum	*Pimelea microcephala*			
	Santalum lanceolatum				

*selected plants mapped below within the Arckaringa and Pedirka study area

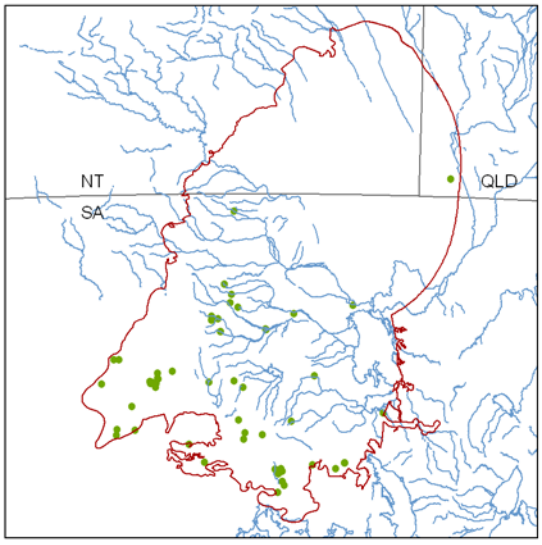
native orange (*Capparis mitchellii*)



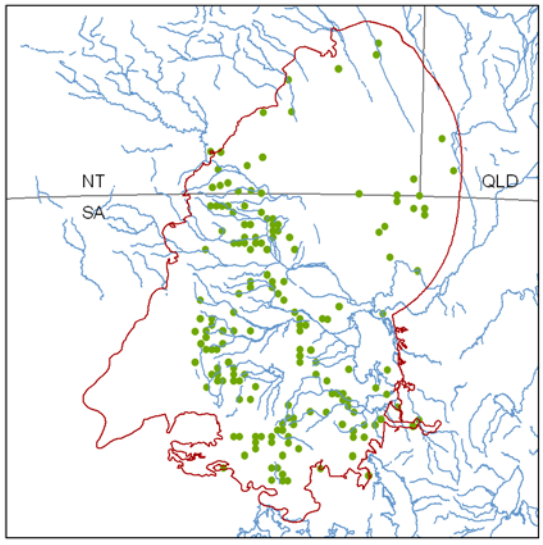
horse mulga (*Acacia aneura*)



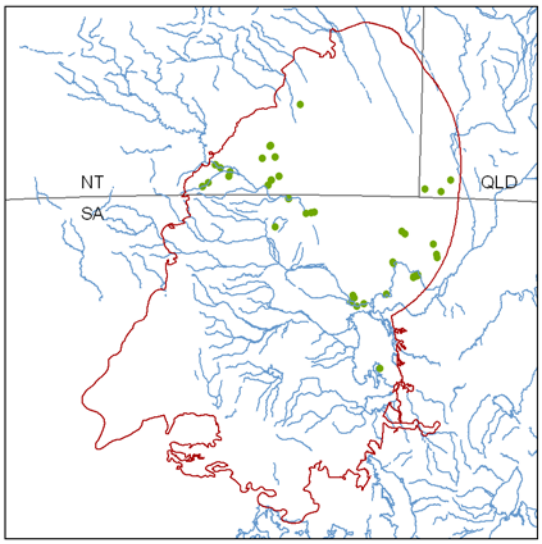
quandong (*Santalum acuminatum*)



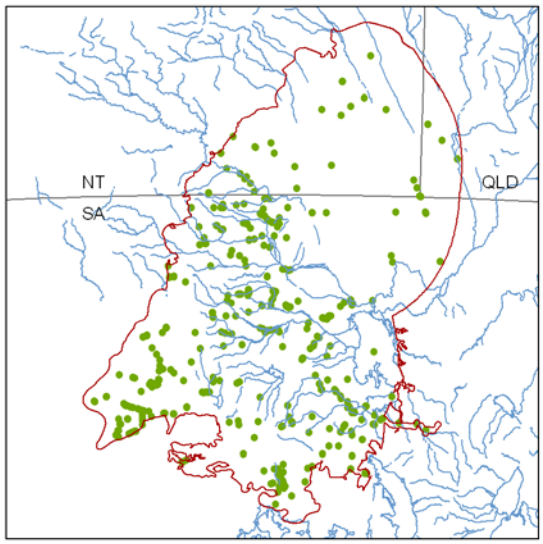
plum bush (*Santalum lanceolatum*)



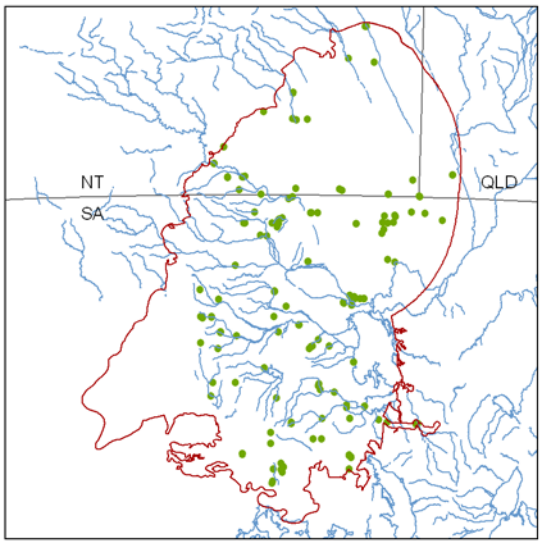
native pear (*Cynanchum floribundum*)



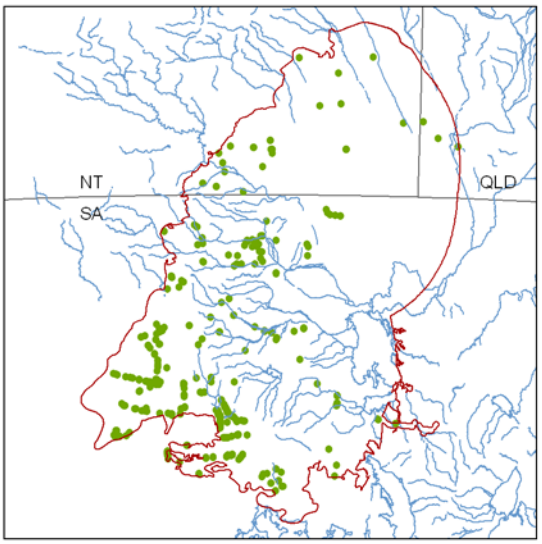
ruby saltbush (*Enchylaena tomentosa*)



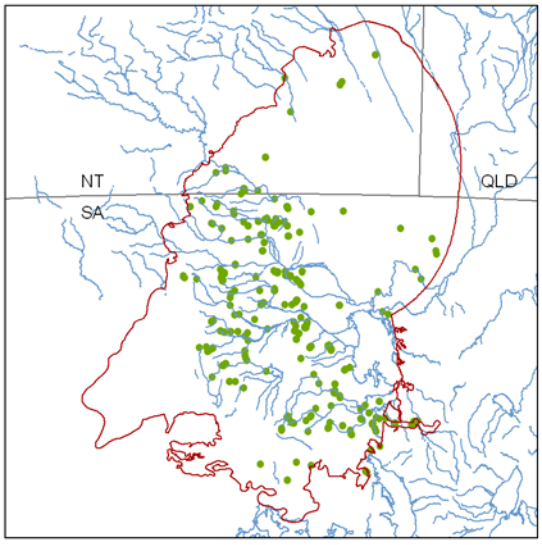
elegant acacia (*Acacia victoriae*)



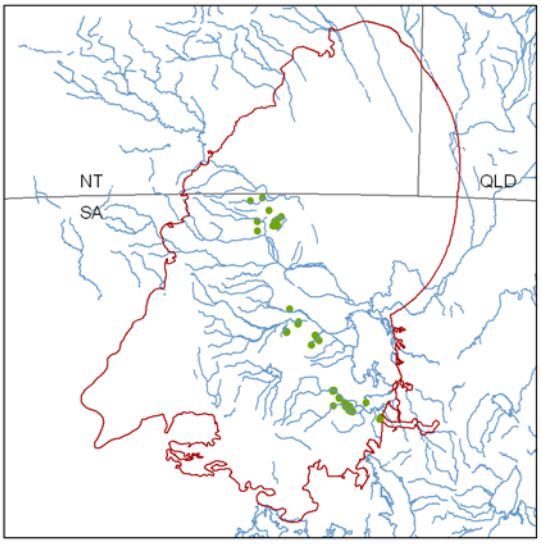
naked woollybutt (*Eragrostis eriopoda*)



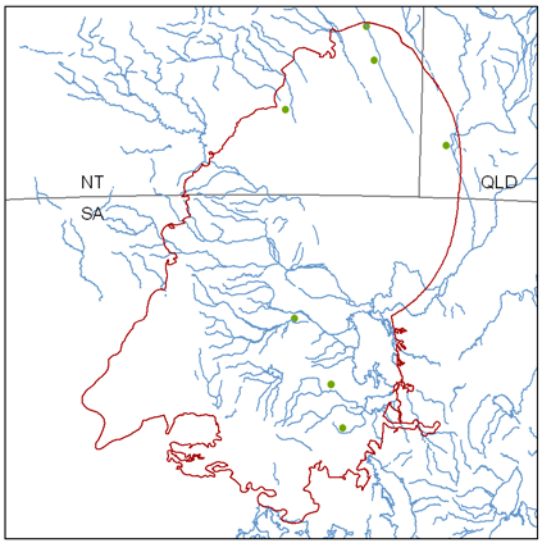
native millet (*Panicum decompositum*)



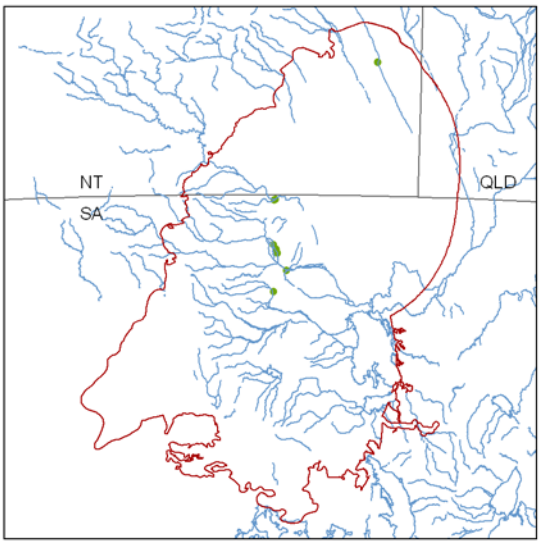
common reed (*Phragmites australis*)



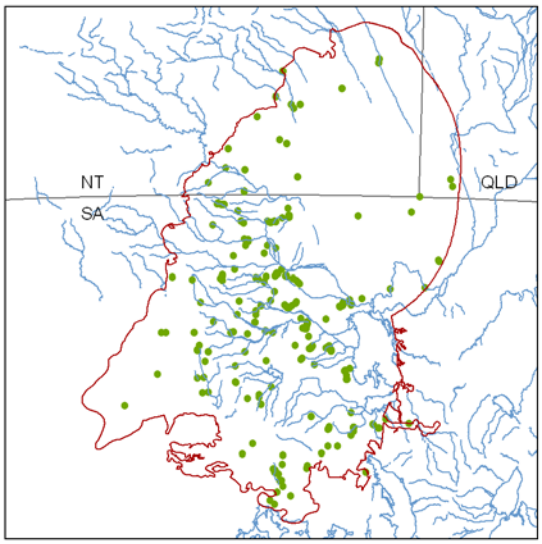
armgrass millet (*Urochloa subquadripara*)



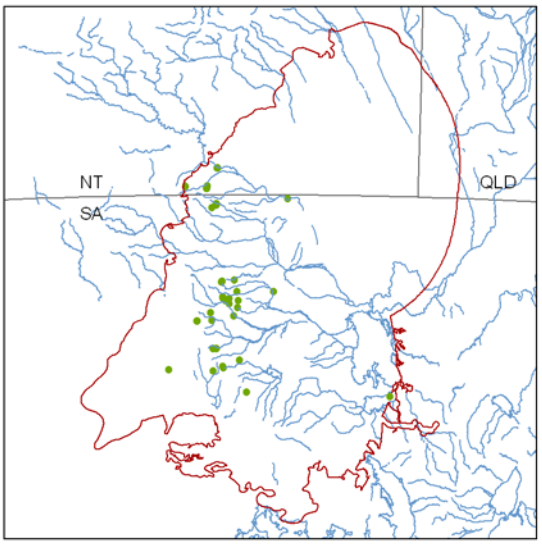
pencil yam (*Vigna lanceolata* var. *latifolia*)



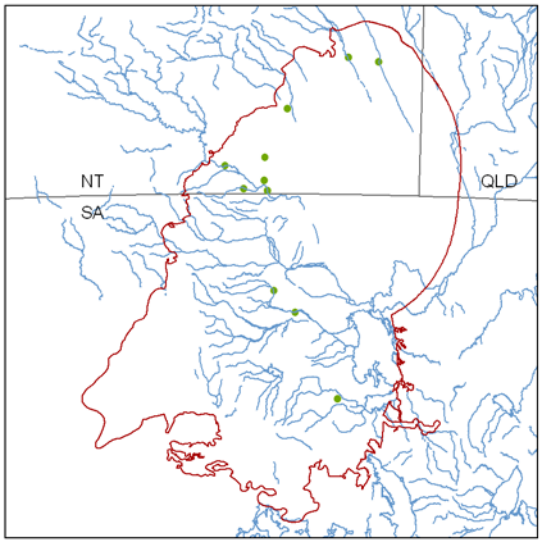
purslane (*Portulaca oleracea*)



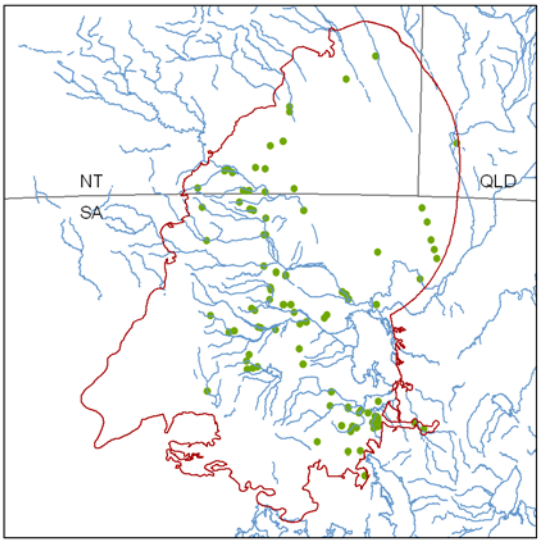
bush banana (*Marsdenia australis*)



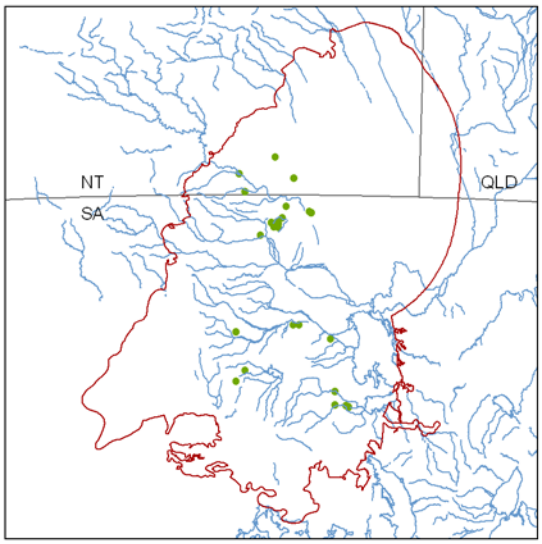
native gooseberry (*Cucumis melo* ssp. *agrestis*)



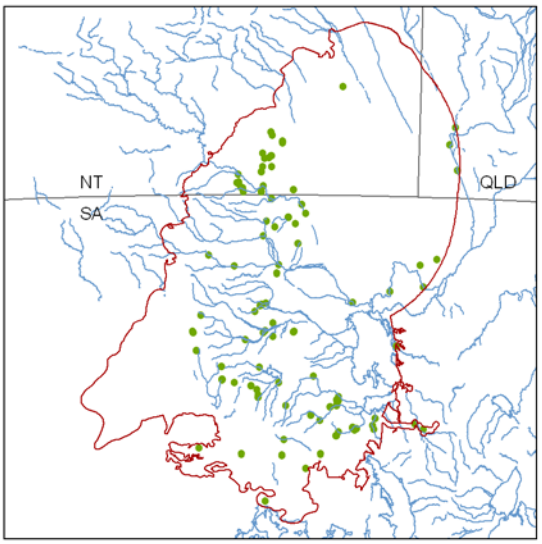
onion grass (*Cyperus bulbosus*)



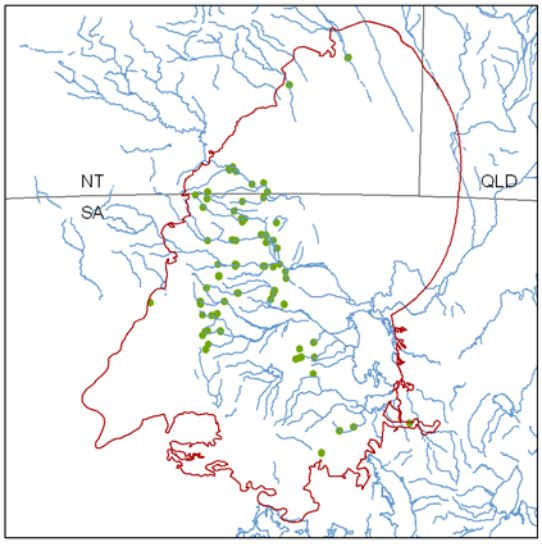
bull-rush (*Typha domingensis*)



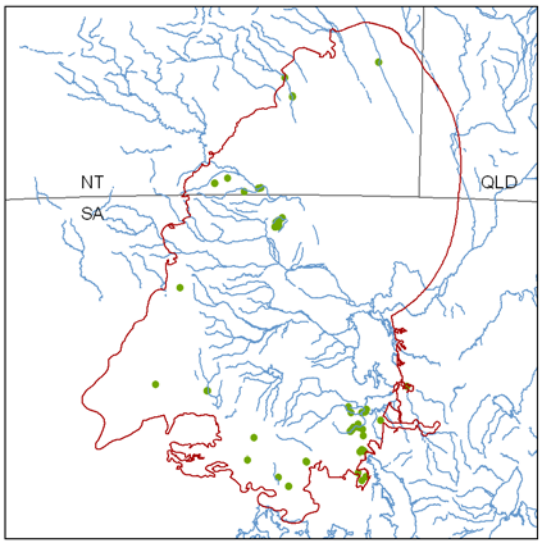
nardoo (*Marsilea drummondii*)



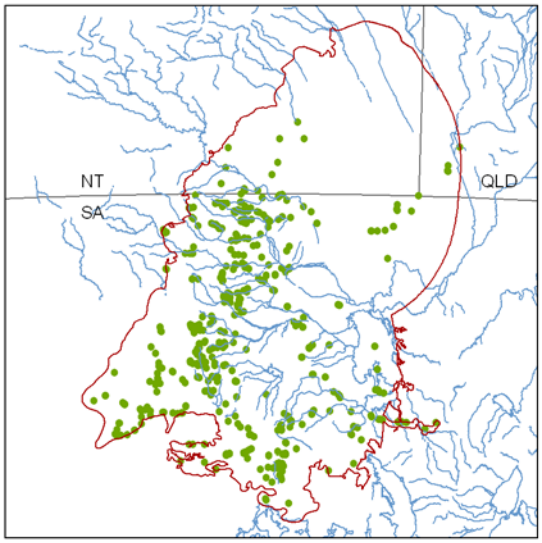
Northern river red gum (*Eucalyptus camaldulensis* ssp. *obtusa*)



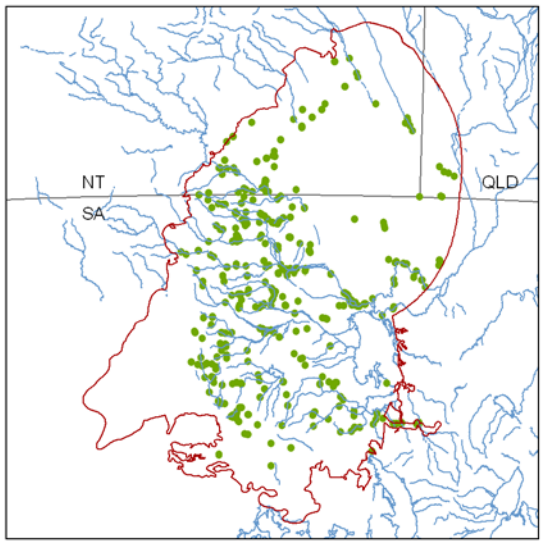
white tea-tree (*Melaleuca glomerata*)



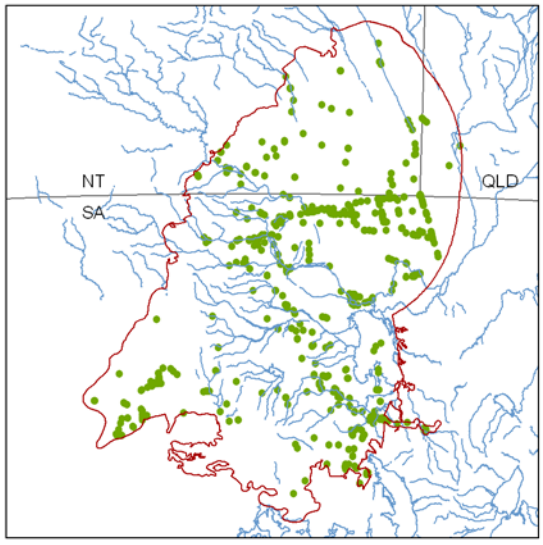
dead finish (*Acacia tetragonophylla*)



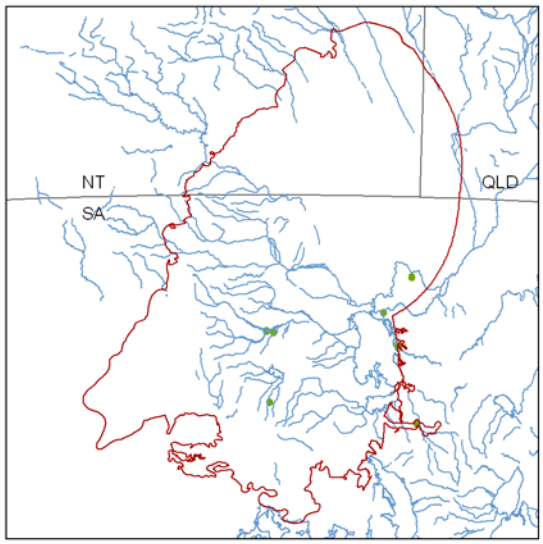
coolibah (*Eucalyptus coolabah*)



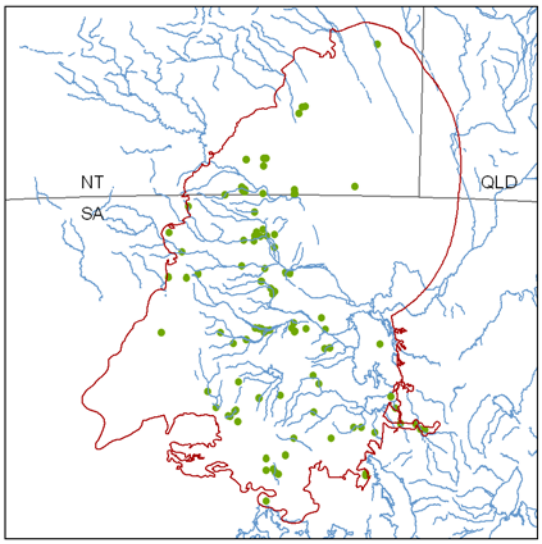
umbrella bush (*Acacia ligulata*)



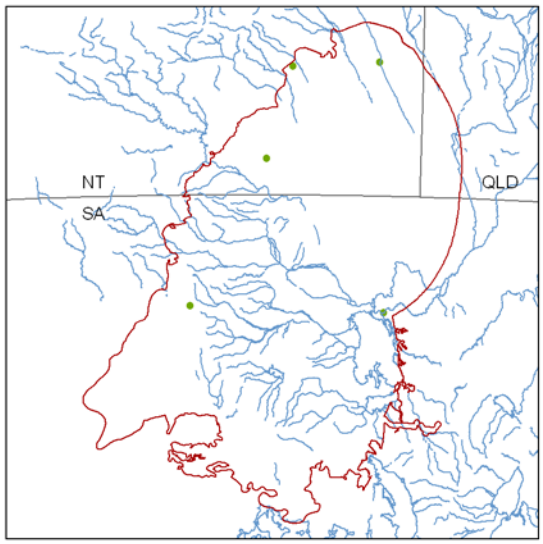
eurah (*Eremophila bignoniflora*)



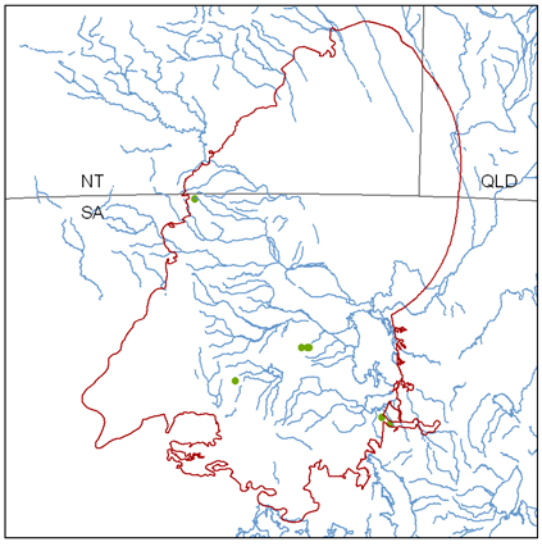
spotted emu bush (*Eremophila maculata*)



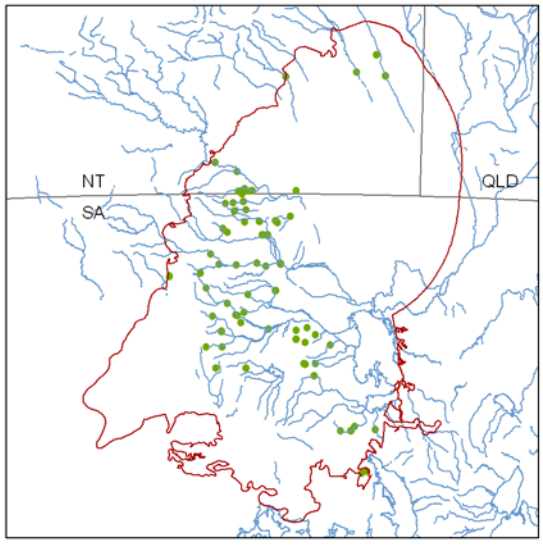
spear grass (*Chrysopogon fallax*)



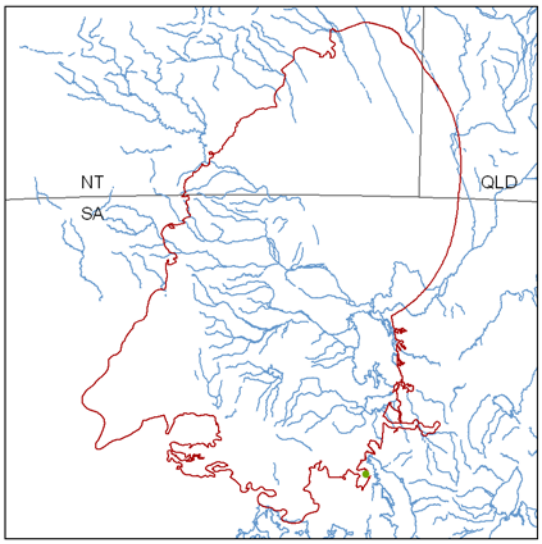
lemon-scented grass (*Cymbopogon ambiguus*)



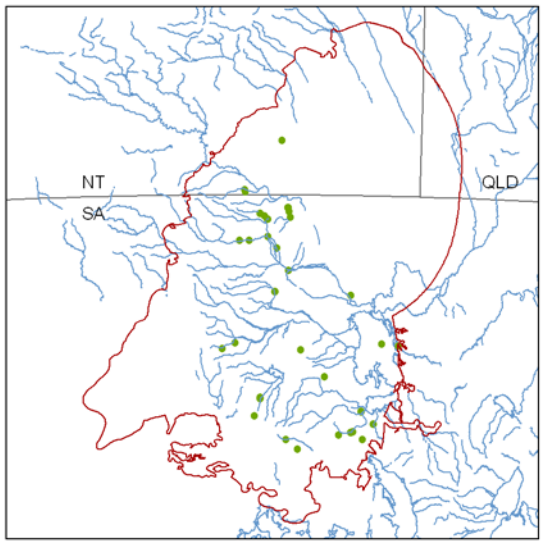
silky browntop (*Eulalia aurea*)



stiff-leaved sedge (*Cyperus vaginatus*)



sandover lily (*Crinum flaccidum*)



3.3 Aboriginal use of fauna

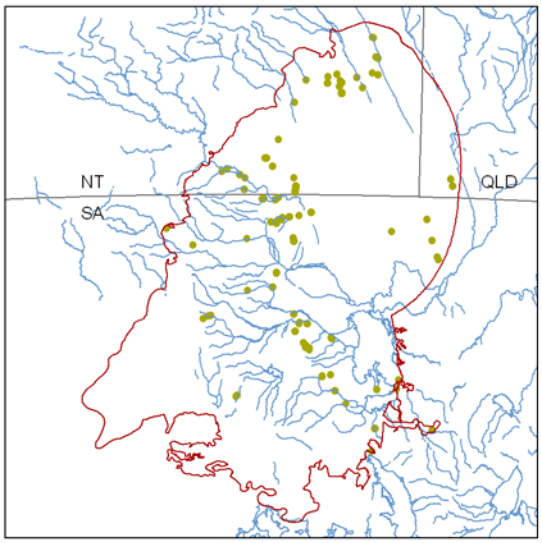
The literature identified 56 fauna species associated with water in the study area that are also used by Aboriginal people (Appendix B). The following sections summarise results for each animal class; mammals, reptiles, crustaceans, bivalves, fishes, frogs and birds. A subset of the animals identified have been mapped to show their association with river-courses of the study area.

3.3.1.1 Mammals

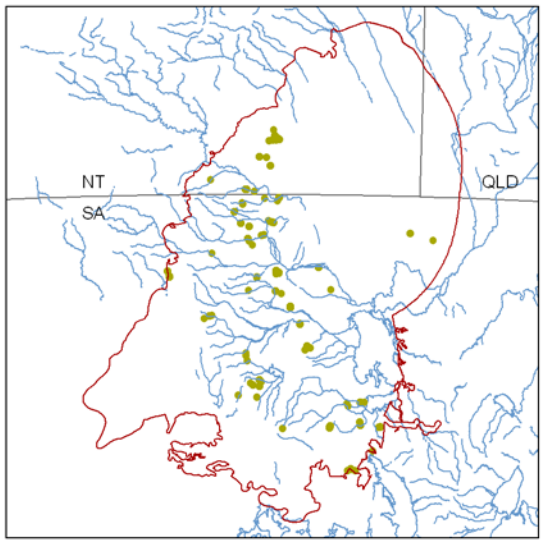
The following eight mammals, all associated with aquatic environments, were recorded as being used for food (Tolcher, 2003; Reid *et al.*, 1993; Winfield, 1982; Harvey Johnson, 1943). Animal by-products, such as fur, skin, hair, tails, and sinew, were also utilised by Aborigines. It is assumed that these animals were harvested by multiple language groups across the Kati Thanda-Lake Eyre region.

- common brushtail possum (*Trichosurus vulpecula*)
- crescent nail tailed wallaby (*Onychogalea lunata*)
- western quoll (*Dasyurus geoffroii*)
- long-haired rat (*Rattus villosissimus*)
- water rat (*Hydromys chrysogaster*)
- plains rat (*Pseudomys australis*)
- fawn hopping mouse (*Notomys cervinus*)
- burrowing bettong (*Bettongia lesueur*)

long-haired rat (*Rattus villosissimus*)



plains rat (*Pseudomys australis*)



3.3.1.2 Reptiles

Only a few reptiles associated with water were found within the literature as being a food resource. Turtles were mentioned as being opportunistically harvested when caught in fish nets by the Yandruwandha and Yawarrawarrka people on Cooper Creek (Tolcher, 2003). There is only one species of turtle within the Innamincka area of Cooper Creek (language area of the Yandruwandha and Yawarrawarrka) being *Emydura macquarii emmotti* (Cooper Creek turtle).

Snakes and lizards also occur within the riverine and wetland environment of Central Australia and Lake Eyre region, but it was difficult to locate many references that related all three elements clearly (i.e. species, habitat and their utilisation as a food resource). Reid *et al.* (1993) mentioned the following lizards of significance to Anangu of Uluru that inhabit watercourse environments, though none of these species were utilised as a food resource (Table 3-2). Veronica Dobson's Dialogue (2009) mentions that the Arrernte people ate the following reptiles found at the springs near Santa Teresa (in the LEB): arlewatyerre, sand goannas (most likely *Varanus gouldii*); aremaye, short-tailed goannas (most likely *Varanus brevicauda*), perenties (*Varanus giganteus*); arntetetherrke atyunpe, carpet snakes; arleye (most likely Womma Python (*Aspidites ramsayi*), Stimpson's Python (*Antaresia stimsoni*) and Carpet Python (*Morelia spilota*)).

Table 3-2 Reptiles associated with water habitats but not utilised as a food resource (Reid *et al.*, 1993)

Aboriginal Name	Scientific Name	Common Name	Habitat	Value
Mutingka/ Pulu pulu	Small skinks including: *Ctenotus dux, C. leonhardii, C. quattoredecimlineatus, C. piankai, C. leae, C. septenarius, C. helenae, C. schomburgkii, C. colletti, C. brooksi, Menetia greyii*		Range of habitats which include creek lines	Tjukurpa*
Pinakunytinytji	*Varanus gilleni*	pygmy mulga monitor	Other habitats; and dry creek beds	Not eaten
Tjuntalpi/Tuntanpililli	*Lophognathus longirostris, Diporiphora winneckei*	dragon lizard, canegrass two-lined dragon	Range of habitats which include rocks and debris along watercourses	Not recorded

* Tjukurpa (the Law) as defined in Reid *et al.* (1993)

3.3.1.3 Crustaceans

The two crustaceans, known to exist within the Lake Eyre Basin, that were eaten by Aboriginal people are yabbies (*Cherax destructor*) and crabs (*Austrothelphusa transversa*) (Appendix B). Other crustaceans of the macro invertebrate kind, (e.g. shrimp (*Macrobrachium australiense*) and shield-shrimp (*Triops australiensis*)) were not mentioned in the literature as being a food resource.

Both Tolcher (2003) and Harvey Johnson (1943) reported that yabbies were a food resource for Aboriginal people in the Lake Eyre Basin. Harvey Johnson (1943) also recorded that Aboriginal people ate inland crabs and used the water store within their burrows as a water source.

3.3.1.4 Bivalves

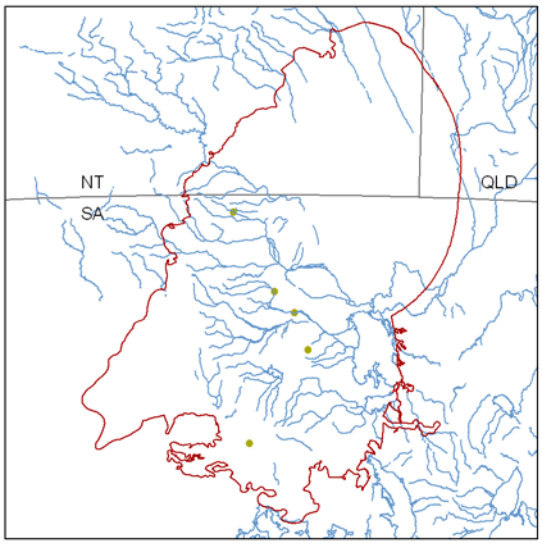
Four cryptic species belonging to the freshwater mussel genus, *Velesunio,* have been genetically distinguished in central Australia (Hughes *et al.* 2004), all of which are morphologically similar to *Velesunio ambiguous* (Baker *et al.* 2003). Tolcher (2003) and Harvey Johnson (1943) have reported that *Velesunio ambiguus* and *Velesunio wilsonii* were eaten by Aboriginal people (Appendix B). Until taxonomic classification of the four cryptic species is completed, it is assumed that all four freshwater mussel species within the Lake Eyre Basin were eaten and their shells used as implements. However, for the purpose of this only the two species mentioned in Tolcher (2003) and Harvey Johnson (1943) have been mapped. The distribution of *V. wilsonii* has been mapped in the Arckaringa and Pedirka study area to show its association with water-courses.

3.3.1.5 Fishes

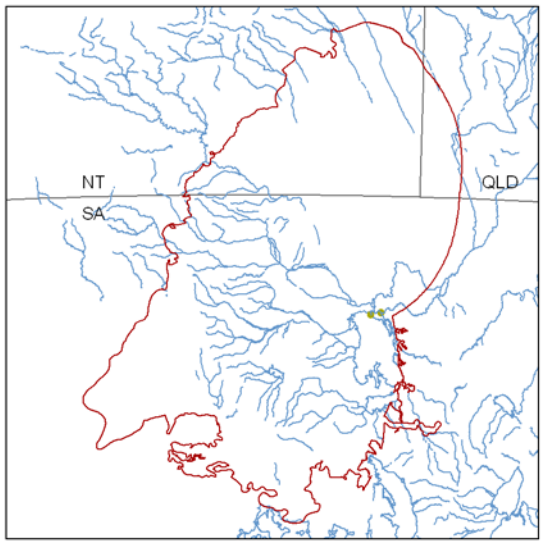
Of the 18 species of fish recorded in the Lake Eyre Basin from 2000-2003 (Costelloe *et al.* 2004), the following 6 species have been recorded in literature as being harvested as a food resource by Aboriginal people (Tolcher, 2003; Harvey Johnson, 1943). Tolcher (2003) describes the use of fish nets and spears for harvesting fish from waterholes; it is mentioned that any fish caught in the nets were eaten but there were preferences for certain species and nets were made to target these larger species. Three fish species have been mapped below in the study area.

- bony bream (*Nematalosa erebi*)
- Hyrtl's catfish (*Neosilurus hyrtlii*)
- yellow belly (*Macquaria ambigua*)
- spangled perch (*Leiopotherapon unicolour*)
- banded grunter (*Amniataba percoides*)
- Welch's grunter (*Bidyanus welchi*)

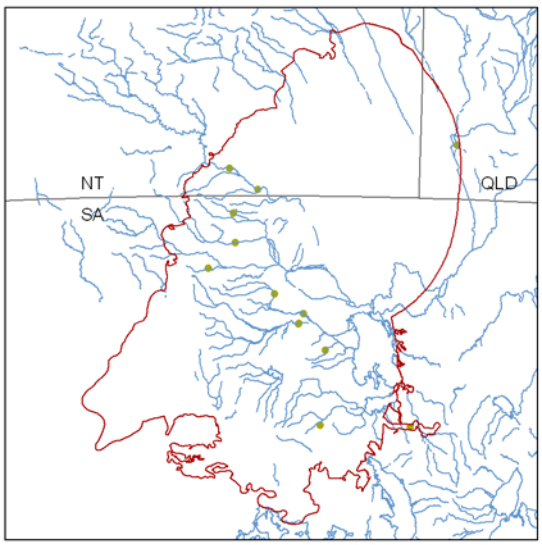
freshwater mussel (*Velesunio wilsonii*)



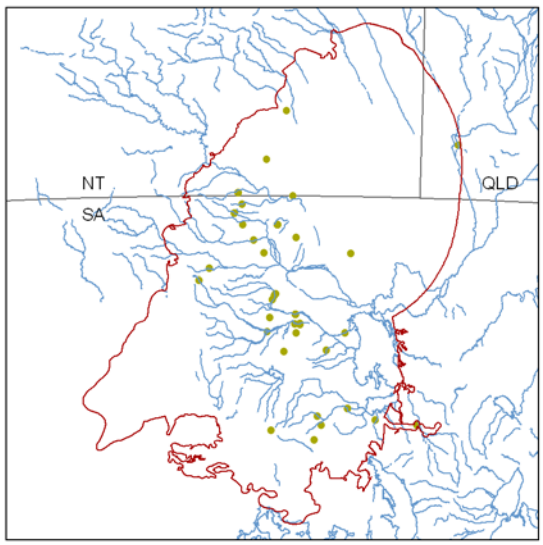
yellow belly (*Macquaria ambigua*)



bony bream (*Nematalosa erebi*)



spangled perch (*Leiopotherapon unicolour*)



3.3.1.6 Frogs

The only publication found with reference to Aboriginal people using frogs as a food resource in the Lake Eyre Basin is within Harvey Johnson (1943). There is some confusion within this piece of literature over which species were eaten, as the two records referred to within Harvey Johnson (1943) state:

> *'Duncan-Kemp (1933, pp. 45) referred to the presence in the Diamantina region of two kinds of edible frogs, a large grey-green lethargic species found aestivating deep in the mud of dry creeks, and a very small red-capped frog. The former were stated to possess storage tanks in their abdomens and may be either L. ornatus or (more probably) C. platycephalus. Tadpoles were caught by hand by children and eaten alive (pp. 288).*
>
> *Roth (1897, pp. 50) mentioned that koo-yer-ko was the name of a frog amongst the Karanya tribe; this is obviously the same as Howitt's kuyarku or kutyarku (onomat.) of the Yaurorka and Yantruwunta. He reported (pp. 38, 94) that there were three edible frogs in the Diamantina region inhabited by the Pittapitta: taralko, a large ''bullfrog" 4 ½ to 5 inches long; koonpa, 3 ½ inches; and nemaka 2 ½ inches; a general term for any small frog was neng-o. In addition there were large greenish frogs, ka-ti-loa (p, 94), which were apparently not eaten, but were dug up from their burrows in hard ground with yam sticks or from sandy soil. Katiloa was probably either Cyclorana or Limnodynastes, or both. Nemaka may have been Hyla rubella and taralko may have been L. ornatus.'*

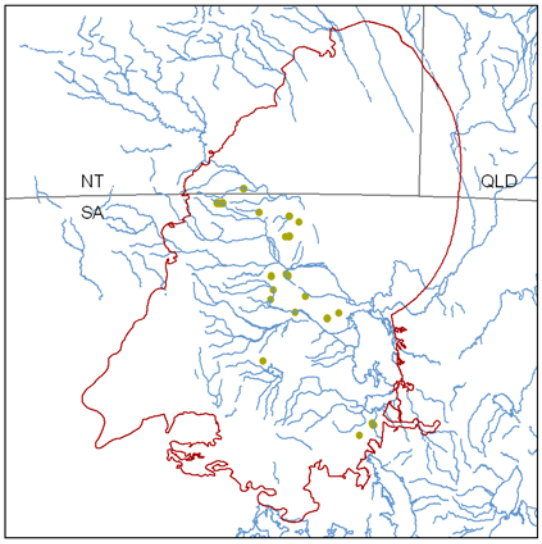
Based on the the above information, the following two species have been listed as a food resource (Appendix B):

- *Cyclorana platycephala* (water-holding frog)
- *Litoria rubella* (desert-tree frog).

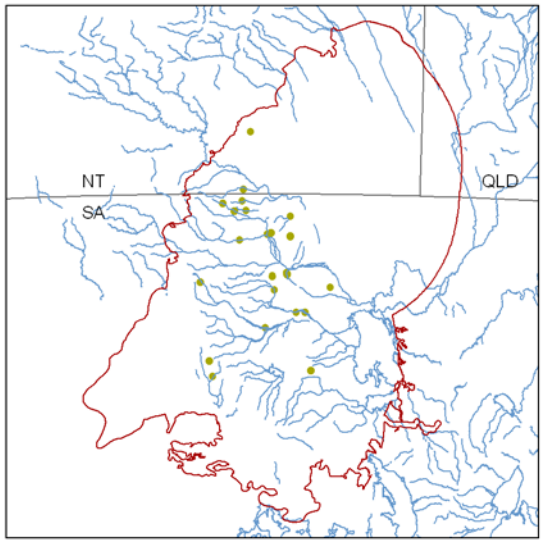
Potentially *Limnodynastes ornatus* may have been utilised also, but the conflicting information above provided sufficient basis to exclude it from this study.

Both frog species have also been mapped below in the study area to show their interaction with the riverine environment, with additional details provided in Appendix B.

water-holding frog (*Cyclorana platycephala*)



desert-tree frog (*Litoria rubella*)



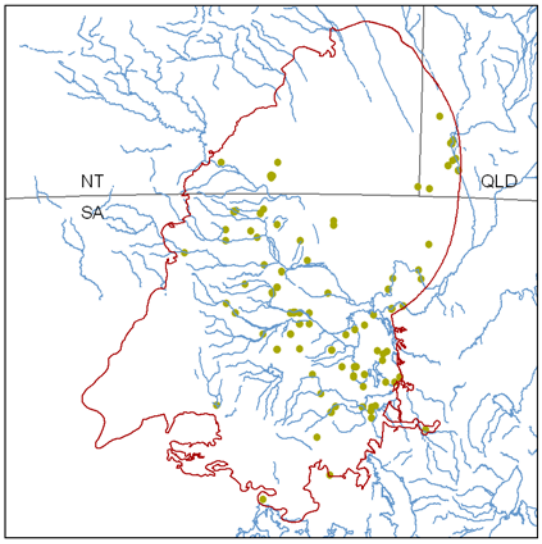
3.3.1.7 Birds

References to the use of birds as food were often found to be quite general. For example, Gason (1897) stated under the heading 'birds' that 'all were eaten'. Tolcher (2003) provides further detail about Aboriginal people harvesting ducks with nets and other tools. Given these references, it is assumed that all the waterbirds recorded by Gason (1897), Harvey Johnson (1943) and Tolcher (2003) were either directly or opportunistically harvested as a food resource. Tolcher (2003) also noted the direct harvesting of Australian pelican (*Pelecanus conspicillatus*) eggs during breeding season, while Harvey Johnson (1943) noted the general harvest of eggs and utilisation of feathers. Based on these reports, it is assumed all species found within the LEB may have had their eggs and/or feathers used. The following conclusions were made:

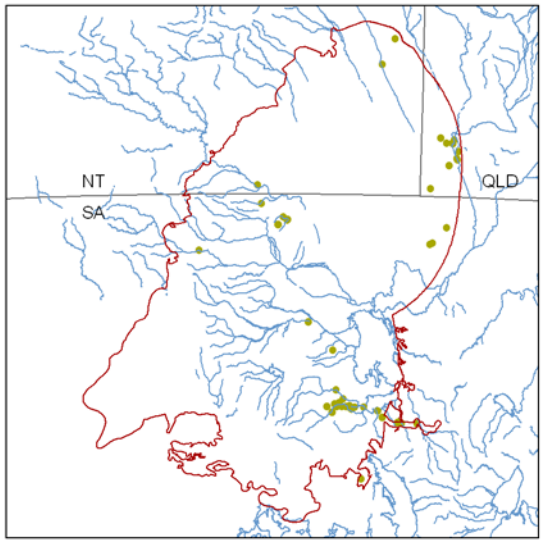
- A total of 27 waterbirds were potentially harvested (Gason, 1897; Harvey Johnson, 1943; Tolcher, 2003); dusky moorhen (*Gallinula tenebrosa*), black-tailed native-hen (*Tribonyx ventralis*), Eurasian coot (*Fulica atra*), purple swamphen (*Porphyrio porphyrio*), Australian spotted crake (*Porzana fluminea*), hoary-headed grebe (*Poliocephalus poliocephalus*), Australasian grebe (*Tachybaptus novaehollandiae*), Australian pelican, great cormorant (*Phalacrocorax carbo*), little pied cormorant (*Microcarbo melanoleucos*), silver gull (*Chroicocephalus novaehollandiae*), gull-billed tern (*Gelochelidon nilotica*), common greenshank (*Tringa nebularia*), black-winged stilt (*Himantopus himantopus*), brolga (*Grus rubicunda*), nankeen night-heron (*Nycticorax caledonicus*), eastern great egret (*Ardea modesta*), white-faced heron (*Egretta novaehollandiae*), white-necked heron (*Ardea pacifica*), Pacific black duck (*Anas superciliosa*), Australian wood duck (*Chenonetta jubata*), plumed whistling-duck (*Dendrocygna eytoni*), Australian shelduck (*Tadorna tadornoides*), grey teal (*Anas gracilis*), pink-eared duck (*Malacorhynchus membranaceus*), hardhead (*Aythya australis*), black swan (*Cygnus atratus*) and musk duck (*Biziura lobata*).
- Four terrestrial species that inhabit water courses were directly mentioned by Reid *et al.* (1993) and Winfield (1982) as being a food resource (galah (*Eolophus roseicapilla*), Major Mitchell's cockatoo (*Lophochroa leadbeateri*), Port Lincoln parrot (*Barnardius zonarius* ssp. *barnardi*) and budgerigar (*Melopsittacus undulatus*)).
- Two other terrestrial species may have been opportunistically or directly harvested (Gason, 1897; Harvey Johnson, 1943), including the inland dotterel (*Peltohyas australis*) and masked lapwing (*Vanellus miles*).

The details of all 33 bird species can be found in Appendix B. Below eight popular species, based on multiple Aboriginal names from numerous language groups, have been mapped in the study area to show their recorded distribution and association with the riverine environments.

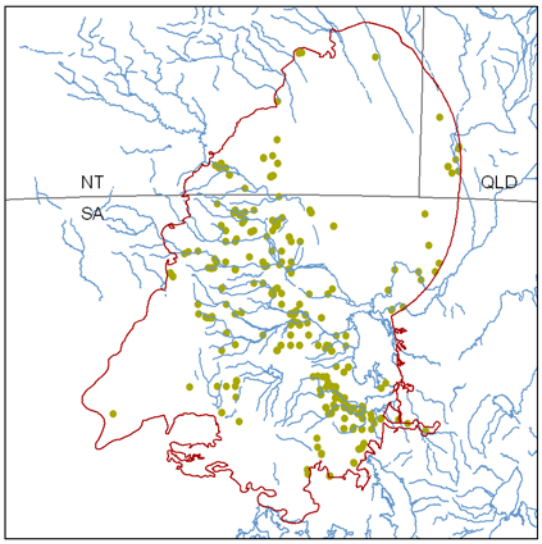
Australian pelican (*Pelecanus conspicillatus*)



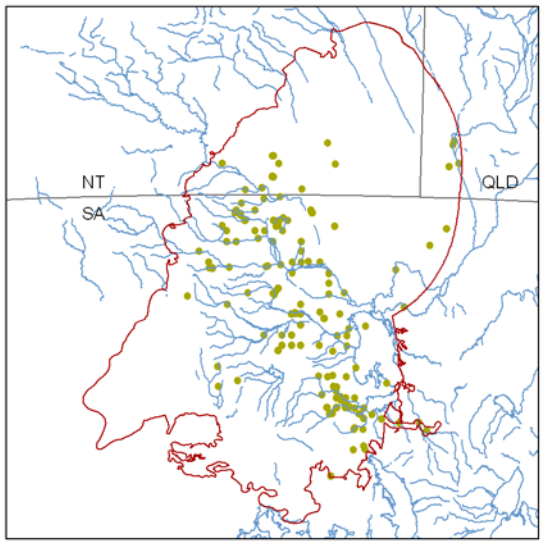
brolga (*Grus rubicunda*)



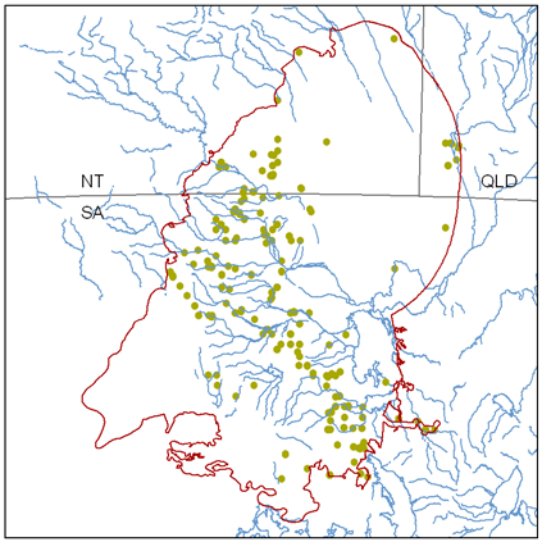
white-faced heron (*Egretta novaehollandiae*)



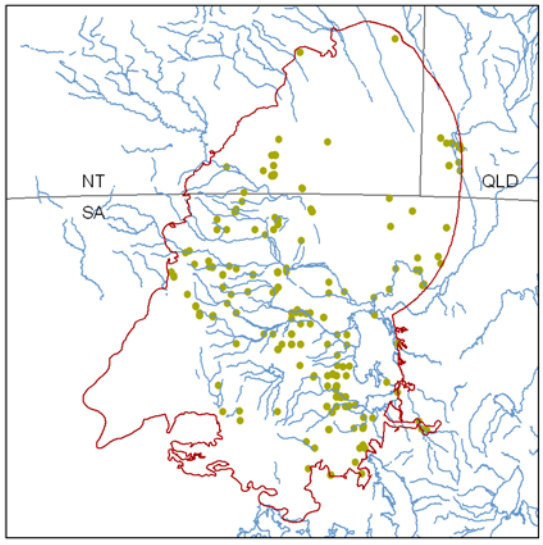
Pacific black duck (*Anas superciliosa*)



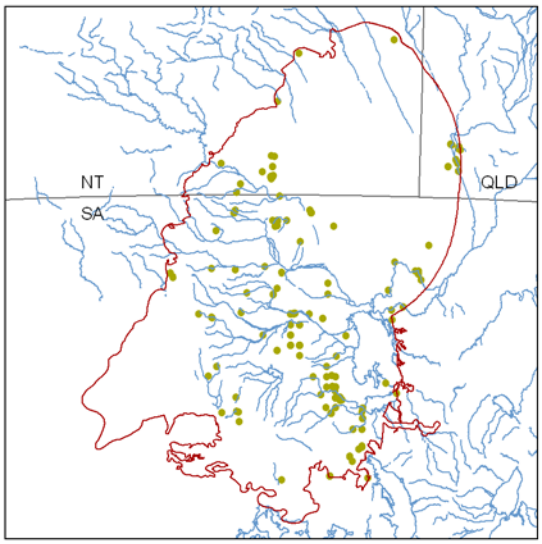
Australian wood duck (*Chenonetta jubata*)



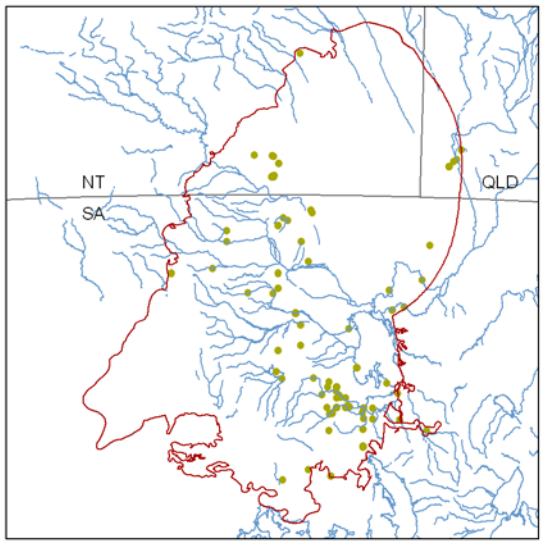
pink-eared duck (*Malacorhynchus membranaceus*)



hardhead (*Aythya australis*)



black swan (*Cygnus atratus*)



3.4 Pastoral values identified in relation to aquatic ecosystems

The work undertaken by Phipps (2008) identified the value of bore-fed wetlands to pastoralists in the LEB with these artificial wetlands included as a pastoral value in this study. Only one of the 17 wetlands described by Phipps (2008) is located within the Arckaringa/Pedirka study area; Coward Springs (Figure 3-2). A preliminary investigation of other bore-fed wetlands in the Arckaringa and Pedirka study area has been undertaken by Hooper (R Hooper 2014, pers. comm., 7 Jan.), which found evidence of a further 42 bores supporting wetland associations in the Macumba and Neales-Peake River systems. Of the 42 bore-fed wetlands identified, 32 are considered to have some or good evidence of feeding a wetland (i.e. Class 1 and 2), while 10 have evidence linking historic wetlands (i.e. :

- 12 bore-fed wetlands (Class 1) - Some evidence of a current wetland, bore presently controlled and flowing (labelled as 'potential wetland with controlled flowing bore,' Figure 3-2)
- 20 bore-fed wetlands (Class 2) - Good evidence of an established wetland, bore controlled or uncontrolled (labelled as 'wetland with controlled or free-flowing bore,' Figure 3-2).
- 10 historic bore-fed wetlands (Class 0) – some evidence of historic bore-fed wetlands, with bore now controlled and wetland non-existent (not shown on Figure 3-2)

Young (2007, *in draft*) provided an assessment of the types of values pastoralists identified for bore-fed wetlands on stations in the Stony Desert region. Wet season grazing and recreational values (i.e. swim/picnic) were most commonly identified for wetlands, while some were also recognised as being important water sources (for ecology) and fish refuge habitats in the arid landscape.

Table 3-3 Pastoral stations in the Stony Desert IBRA region where cultural values were identified by Young (2007, *in draft)*

Pastoral Station	Values identified	Pastoral Station	Values identified
Allandale	Wet season grazing Important water Swim / picnic	Mount Sarah	Wet season grazing Fish Important water Swim / picnic
Anna Creek	Wet season grazing Swim / picnic	Nilpinna	Waterbodies
Evelyn Downs	Wet season grazing Fish Important water Swim / picnic	The Peake	Wet season grazing Fish Important water Swim / picnic Waterbodies
Hamilton	Wet season grazing Fish Swim / picnic	Tieyon	Wet season grazing Swim / picnic Waterbodies
Lambina		Todmorden	Wet season grazing Fish
Macumba	Wet season grazing Fish Important water Swim / picnic	Welbourn Hill	Fish Swim / picnic
Mount Barry	Wet season grazing Swim / picnic	Wintinna	Wet season grazing

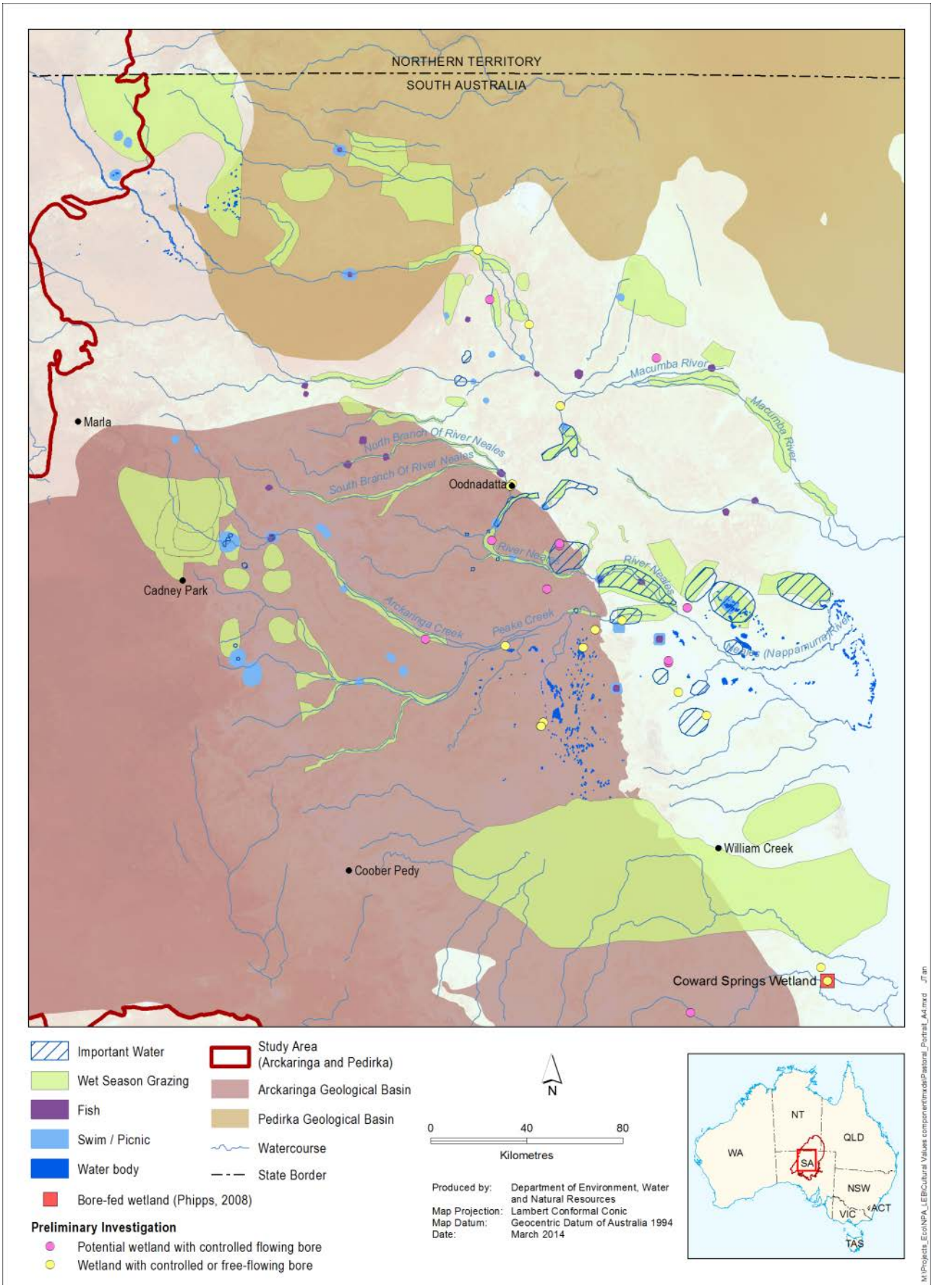


Figure 3-2. Pastoral values mapped in the Arckaringa and Pedirka study area

3.5 Social heritage values identified for aquatic ecosystems

Public heritage data were sourced from nine online databases (Table 3-4). The searches found 118 heritage sites in the Arckaringa and Pedirka study area associated with water/aquatic ecosystems (Table 3-5, Figure 3-3).

Data from the Register of the National Estate included historic, natural and Aboriginal sites. Natural sites were defined as sites associated with conservation areas (e.g., national parks), which are assumed to contain aquatic ecosystems. Historic sites were filtered to include only those sites associated with water, while all the natural and Aboriginal sites were included in the final table and maps (Table 3 5, Figure 3 3). Aboriginal sites were listed by name only, and because sites associated with water could not be distinguished from those that were not, all sites were included in Figure 3-3.

For the same reason as stated above, all the conservation areas listed in the Collaborative Australian Protected Areas Database (CAPAD) were included; these sites were often found in multiple databases (Table 3-5, Figure 3-3). Five additional sites contained in the Directory of Important Wetlands (Criteria 6 – social and cultural value), but that occur just beyond the study area were included due to either their relative close proximity (e.g. salt lakes) or their direct connection to the study area through an associated aquatic feature (e.g., Mulligan River and Toko Range in north-eastern Queensland). 'Important Bird Areas' (2009) were also included due to the likelihood of association with aquatic ecosystems.

Table 3-4 Heritage databases available for the Arckaringa/Pedirka study area

Database	Downloaded attributes (i.e. number of sites at national & state scale)	Number of sites within study area	Number of sites within study area associated with water/aquatic ecosystems
Register of the National Estate	21,261	95	Potentially 70 (kept all Aboriginal sites and conservation areas): Historic= 6 Indigenous = 45 Natural = 19
Commonwealth Heritage List	518	0	0
National Heritage List	200	4	3
World Heritage List (note; none listed in area of interest)	45	0	0
Collaborative Australian Protected Areas Database (CAPAD) 2012 - external	7,305	21	21; All, as it is likely that the park/ reserve/conservation area has an 'aquatic ecosystem' type in its boundary
Directory of Important Wetlands (DIWA), Criteria 6	286	3 (8 in the wider region)	8 considered for the wider region (refer above -all mapped)
RAMSAR	161	0 (1 in wider region)	0
SA: Department of Planning, Transport and Infrastructure's; South Australian Heritage Places Database	23,299	26	10
Important bird areas (Birds Australia, 2009)	350	6	6
TOTAL	**53,425 attributes**	**155 sites**	**118 sites associated with water/aquatic ecosystems**

Table 3-5 Heritage sites associated with water/aquatic ecosystems in the study area

Site	Type	Listed Database
The Peake Group (ruins)	Historic	Register of the National Estate SA Heritage Places
Charlotte Waters Telegraph Station Site - OTL Site	Historic	Register of the National Estate
Curdimurka railway siding complex /Stuart Creek Rail Bridge	Historic	Register of the National Estate SA Heritage Places
Strangways Springs Site (telegraph station)	Historic	Register of the National Estate SA Heritage Places
Algebuckina Bridge (bridge over the Neale's)	Historic	Register of the National Estate SA Heritage Places
Coward Springs Railway Site	Historic	SA Heritage Places
Edward Creek Railway Siding Complex	Historic	SA Heritage Places
Stony Creek Rail Bridge	Historic	Register of the National Estate
Former Mount Hamilton Station Site (Ruins), Wabma Kadarbu Mound Springs Conservation Park	European Heritage	SA Heritage Places
Tertiary Silcrete Flora, Stuarts Creek	Fossilised flora	SA Heritage Places
Simpson Desert Simpson Desert Conservation Park Simpson Desert National Park (1978 boundary)	Natural	CAPAD, 2012 Register of the National Estate Important Bird Area (2009)
Munga-Thirri National Park	Natural	CAPAD, 2012
Yellabinna Region	Natural	Register of the National Estate
Mulligan / Eyre National Park Proposal	Natural	Register of the National Estate
Kati Thanda-Lake Eyre National Park & Elliot Price Conservation Park	Natural	Register of the National Estate National Heritage List CAPAD, 2012 DIWA Important Bird Area (2009)
Lake Gairdner National Park	Natural	Register of the National Estate CAPAD, 2012
Lake Torrens National Park	Natural	CAPAD, 2012 Important Bird Area (2009)
Mac Clark Conservation Reserve	Natural	CAPAD, 2012
Tallaringa Conservation park	Natural	CAPAD, 2012
Witjira National Park / Dalhousie Springs Area & ruins	Natural	Register of the National Estate National Heritage List CAPAD, 2012 DIWA SA Heritage Places
Wabma Kadarbu Mound Springs Conservation Park	Natural	CAPAD, 2012
Billa Kalina Springs	Natural	Register of the National Estate
Blanche Cup Springs Area	Natural	Register of the National Estate
Welcome Springs and Davenport Springs	Natural	Register of the National Estate
Big Cadna-owie Spring	Natural	Register of the National Estate
Freeling Springs	Natural	Register of the National Estate National Heritage List
Finniss Springs, Old Women Spring, West Finniss Springs	Natural	Register of the National Estate
Emerald Springs and Priscilla Springs	Natural	Register of the National Estate
Lake Eyre Mound Springs	Natural	DIWA
Coongie lakes	Natural	DIWA, RAMSAR
Inland Saline Lakes	Natural	DIWA
Finke River Headwater Gorges System	Natural	DIWA
Karinga Creek Palaeodrainage System	Natural	DIWA
Bulgunnia	Natural	Important Bird Area (2009)

Site	Type	Listed Database
Lakes Muncoonie, Mumbleberry & Torquinie	Natural	Important Bird Area (2009)
Granite Downs	Natural	Important Bird Area (2009)
Moon Plains	Natural	Register of the National Estate
Arckaringa Hills	Natural	Register of the National Estate
Bon Bon National Reserve System (gazettal in progress)	Natural	CAPAD, 2012
Witchelina Station National Reserve System (gazettal in progress)	Natural	CAPAD, 2012
Kalamurina	Biodiversity hotspot	CAPAD, 2012
Ethabuka	Nature Refuge	CAPAD, 2012
Mulligan River	Nature Refuge	CAPAD, 2012
Toko Range Toko Gorge & Waterhole	Nature Refuge	CAPAD, 2012 DIWA
Cravens Peak	Nature Refuge	CAPAD, 2012
2 x unnamed	Heritage Agreement	CAPAD, 2012
Mount Willoughby	Aboriginal Protected Area	CAPAD, 2012
45 x Aboriginal Sites	Aboriginal	Register of the National Estate

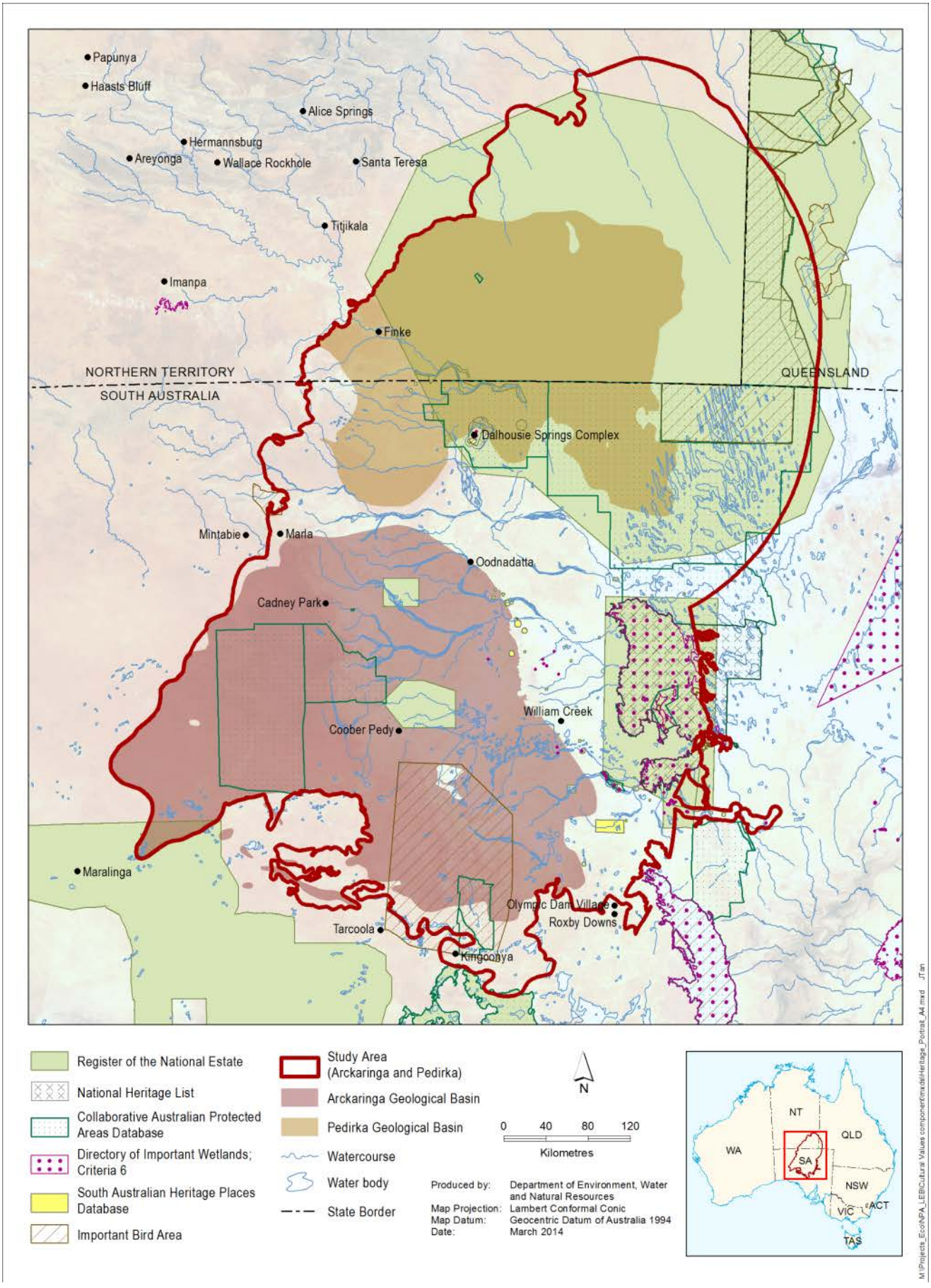


Figure 3-3. Social heritage values associated with water identified from public databases

4 Discussion and conclusions

4.1 Aboriginal values

The exercise of reducing complex and often multi-dimensional Aboriginal cultural values into a series of simple maps does impose necessary limitations that may at times be unrealistic or culturally inappropriate. While this project had a wider objective of considering Aboriginal cultural interpretations of the landscape in terms of law, dreaming, song-lines, and significant sites, this assessment concentrated on a method of relating the most readily available information on cultural use to spatial distributions of plants and animals that occur with water in the LEB. This necessarily leaves out many facets of the complex relationship between culture and land, but potentially creates a useful basis in which biological and ecological information can be linked with cultural information as a form of cultural use recognition. This project largely concentrated on literature related to food resources, being the most widely published information available. In consultation with Traditional Owners, the approach used for this project could be extended to illustrate further connections to Country. An example of extending this work could include the additional capture of cultural values or indicators of health, and the use of these together with scientific assessments to measure the health of water assets in the study area. An example of a similar approach has been achieved with Maori indicators used to provide a cultural health index for streams and waterways in New Zealand (Tipa and Teirney 2003).

A project of this nature should be done in consultation with traditional owners and other Aboriginal authorities. As this project was intended to be a proof of concept of how cultural information can be merged and displayed with existing ecological and biological databases, consultation was not within the scope. The concept has been shown to be a viable way to relate culture, ecology and water, and it is hoped that future work will include cultural engagement and consultation to build a more complete picture of the complex cultural and ecological landscape of the Aboriginal people in this region. Future mapping exercises should also solicit Aboriginal comment on ways to improve the representation and linkage of cultural values cartographically and in existing databases, and how best to manage this information to ensure cultural sensitivities are observed.

It should be stressed that consultation requiring Aboriginal knowledge needs better recognition and an appropriate, clear engagement process on how proprietary knowledge will be utilised and reported before consultation begins. The most successful projects are those where information is collected and reported in a way for community use; a good example is work undertaken by Glenn Wightman, an ethno-biologist with the Northern Territory Government's Department of Land Resource Managements' Botanical Bulletin series (Northern Territory Government, 2014). Biocultural knowledge published in this bulletin series give good examples of how projects can be better developed for outputs that are valued by the relevant communities, reflecting cultural values such as bush tucker, bush medicine, biological-based visual art, seasonal indicators, hunting signs, artefact knowledge, Dreamtime stories and other relevant knowledge. This published information has multiple uses such as tools for land management, schools, rangers, scientists, tourism and elders. Cultural database systems developed specifically for Native Title groups are another example, and can provide a starting point to identify values and improve participation in Traditional Ecological Knowledge (TEK), land, water and cultural site management. This example is a way forward of working together in capturing and preserving cultural values for multiple uses.

4.2 Pastoral values

The mapping component of this report did not adequately capture pastoral values of the region, as data were not extensive and only being available for 13 pastoral stations from the Arid Rivers project (Young, 2007, *in draft*). Although data are not available for the whole of the Arckaringa and Pedirka study area, pastoral values in the arid region of the Kati Thanda-Lake Eyre region provide a representative indication for this study. Pastoralists most commonly identified the importance of wetlands for stock grazing, recreational activities (picnic / swimming) and fish, highlighting the importance of reliable water sources in arid environments with low and increasingly unpredictable rainfall, not just for practical reasons (i.e. grazing) but also respite (e.g. a place to swim, enjoy, escape the heat). The results clearly indicate that there is a need to consider associated pastoral social values when attempting to understand the potential impacts of coals seam gas and large coal mining in this region.

4.3 Social values

By considering social values through the use of heritage and environmental databases, a site will often be valued across multiple listings. For example, Kati Thanda-Lake Eyre is valued as a heritage, conservation, tourism, wetland and bird site. By recording information that links ecological values with social values, a more holistic assessment of social values at a landscape scale is possible. That being said, if a site is only valued by a single user (e.g. a historic site such as Algebuckina Bridge), this does not mean that the site is of any lesser value.

An important validation of this project's methodology is evident in the 118 heritage sites identified as being associated with aquatic ecosystems in an arid environment. There is however, inherent difficulties is in the assimilation of this data that was spread across nine separate public databases and for multiple different social typologies (historic, European heritage, heritage agreement, Aboriginal Protected Area, Aboriginal heritage, fossilised flora, natural, biodiversity hotspot and native refuge).

The methodology employed in this study does illustrate the value water has in the social landscape of the region, and brings attention to the social values that may be impacted by coal seam gas and large coal mining through their influence on regional water assets.

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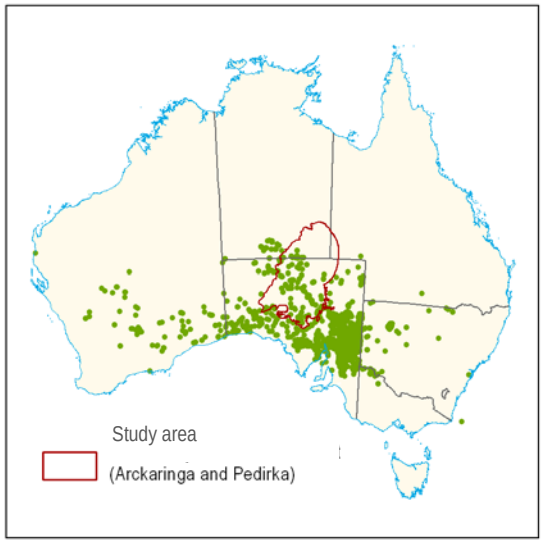
Appendices

Information presented in this appendices has not undergone any review or consultation with Australian Aboriginal people in the Arckaringa and Pedirka subregion or the larger region of the LEB and Central Desert. The information contained in this appendices was compiled using published information. It is recognised that the use of cultural knowledge within historic publications may not have had consent from Traditional Owners therefore the application of this method of using published material requires consultation – its presentation here is intended only as a 'proof of concept' to relate culture, ecology and water and provides a starting point for discussing ecosystem values in the Lake Eyre Basin.

A. Flora utilised by Aboriginal people

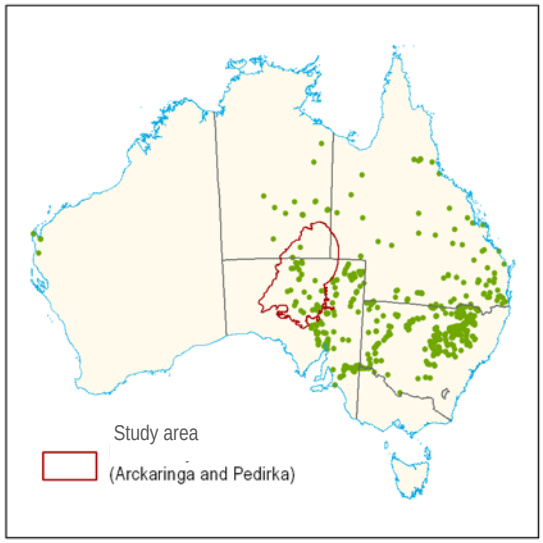
AIZOACEAE

Species	*Tetragonia eremaea*
Common Name	desert spinach
Life Form	forb
Aboriginal Name (acronym)*	paldroo (Ad)
Portion used as food	greens
Medicine plant	
Other uses	
Habitat type	other; gilgais; swamps
Reference	Bonney (2006); Kutsche and Lay (2003)



AMARYLLIDACEAE

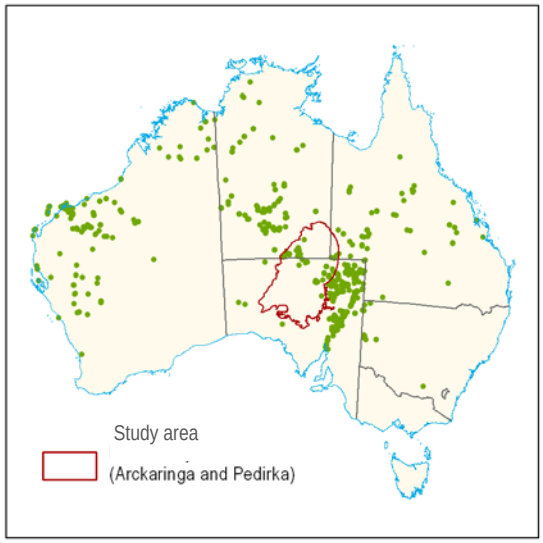
Species	*Crinum flaccidum*
Common Name	sandover lily
Life Form	lily
Aboriginal Name (acronym)*	ilyelkernng (Al); ilyelkernng, alyelk-alyelk, arlerlk-arlerlk, lelkenng, lyelkenng (An); marnampi, ngarlirl-karlirlki, yarlirl-karlirlki (Wa)
Portion used as food	
Medicine plant	Yes
Other uses	
Habitat type	watercourse; swamp
Reference	Green (2003); Latz (1996)



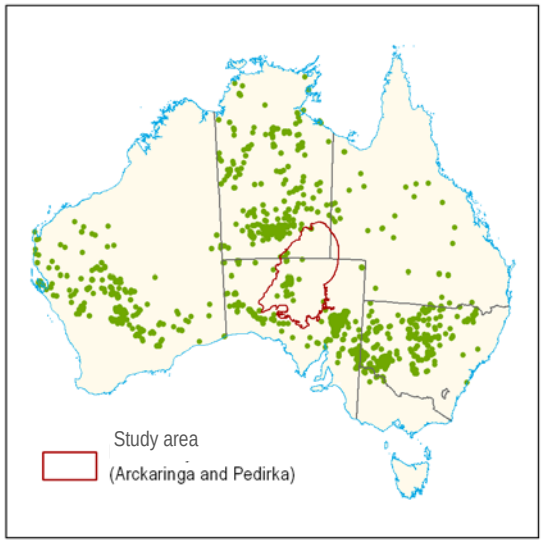
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

ASCLEPIADACEAE

Species	*Cynanchum floribundum*
Common Name	native pear
Life Form	shrub
Aboriginal Name (acronym)*	angelth, antya (Al); ngelth, angelth (An); angelthe (east Ar); ngelthe (west Ar); jukurlu, nyarrpurta, yulawari (Wa); angelth (An); mootcha, wila, weela (Ad)
Portion used as food	fruit, greens, seeds
Medicine plant	
Other uses	bark fibre
Habitat type	watercourse; other
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003); Latz (1996)

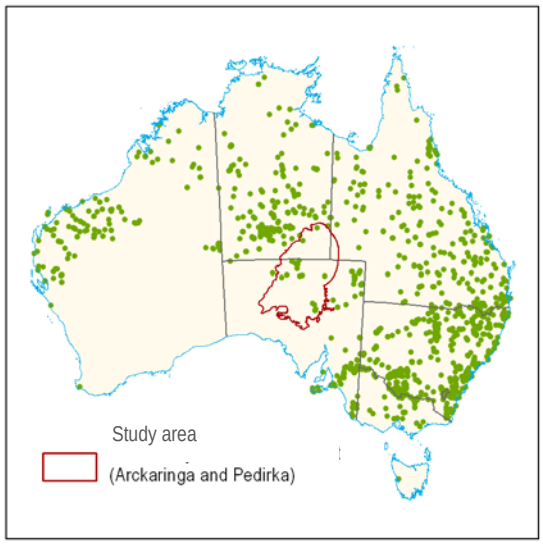


Species	*Marsdenia australis*
Common Name	bush banana
Life Form	climber
Aboriginal Name (acronym)*	alkwarrer (Al); parl, altyeye, alangkw, pwarl, alkwarrer (An); altyeye (east Ar); altyeye (west Ar); ipala, ipalu, kulurrpa, langa, yipala, muulpu, unturrngu, utiralya (Pj); yuparli (Wa); atnetye (Ar); utiralya (Pj Yk); nandi, nundi, willa, ungga (Ad)
Portion used as food	fruit, greens, roots; flowers; seed pods; stems
Medicine plant	Yes
Other uses	decoration, mythology
Habitat type	other; swales; near watercourses
Reference	Dobson (2007); Bonney (2006); Green (2003); Kutsche and Lay (2003); Latz (1996); Winfield (1982)



ASTERACEAE

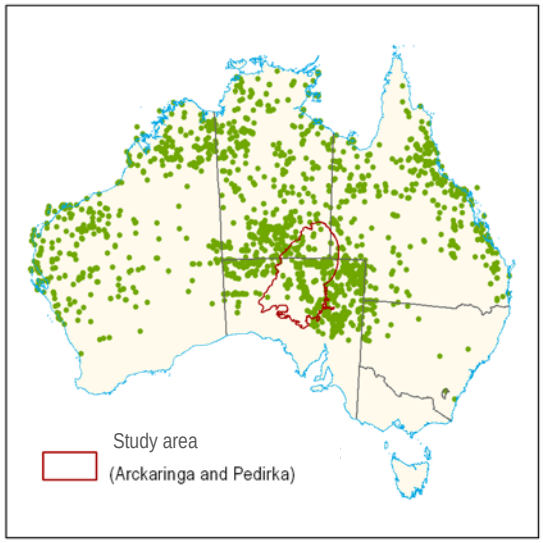
Species	*Centipeda minima*
Common Name	sneeze weed
Life Form	forb
Aboriginal Name (acronym)*	inteng-inteng (Al); kata-palkalpa (Pj); munyu-parnti-parnti (Wa)
Portion used as food	
Medicine plant	yes
Other uses	narcotic
Habitat type	watercourse; swamp
Reference	Latz (1996)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

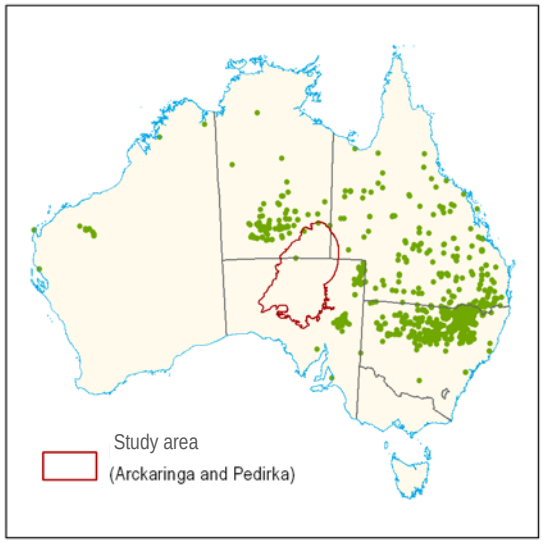
BORAGINACEAE

Species	*Trichodesma zeylanicum*
Common Name	cattle bush
Life Form	forb
Aboriginal Name (acronym)*	unavailable
Portion used as food	
Medicine plant	yes
Other uses	
Habitat type	other; intermittent flooding; runoff
Reference	Wiltshire and Schmidt (1997)

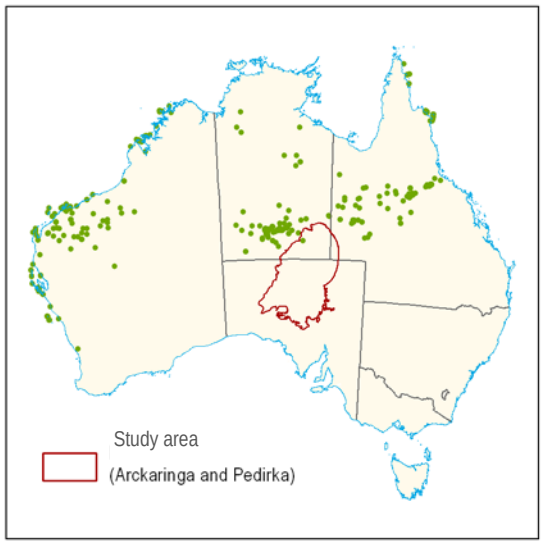


CAPPARACEAE

Species	*Capparis mitchellii*
Common Name	native orange
Life Form	tree
Aboriginal Name (acronym)*	iga, higga, eka (Ad); umpultjati (Pj Yk); atwakey, atakwey (An); mbultj-ada (Ar)
Portion used as food	fruit; pulp; seed, flower buds
Medicine plant	
Other uses	mythology
Habitat type	other; creek banks; floodplains
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003); Wiltshire and Schmidt (1997); Cleland and Harvey Johnson (1933)



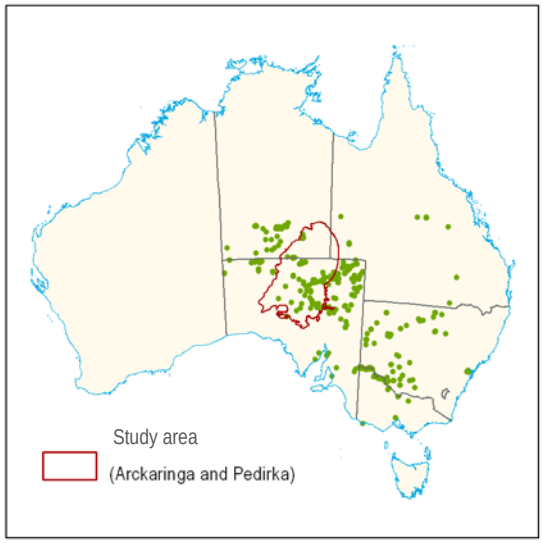
Species	*Capparis spinosa* var. *nummularia*
Common Name	wild passionfruit
Life Form	shrub
Aboriginal Name (acronym)*	arrwereng (Al); arratning, arrweneng, arrutneng (An); arrutnenge (east Ar); rratninge (west Ar); mingkilyananga (Wa)
Portion used as food	fruit
Medicine plant	
Other uses	
Habitat type	other; river flats
Reference	Green (2003); Latz (1996)



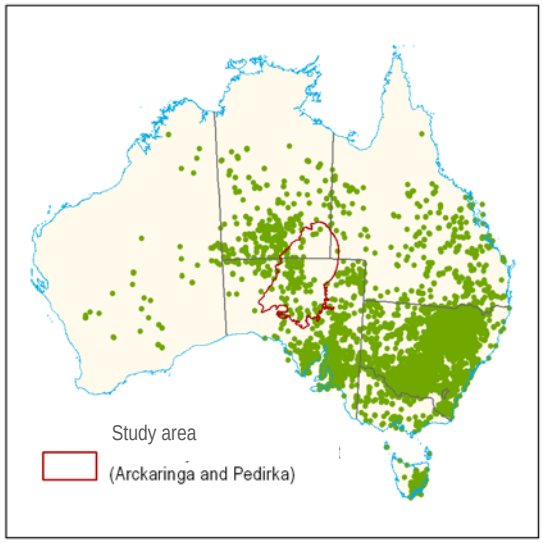
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

CHENOPODIACEAE

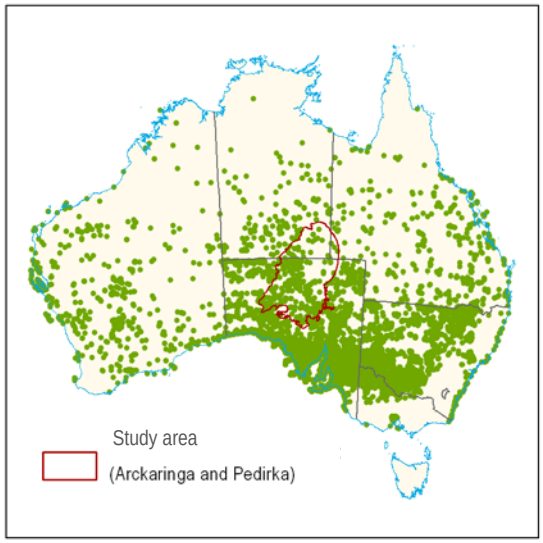
Species	*Atriplex nummularia* ssp. *nummularia*
Common Name	old-man saltbush
Life Form	shrub
Aboriginal Name (acronym)*	iriya (Pj Yk); nilpina, nilpena (Ad)
Portion used as food	greens
Medicine plant	
Other uses	
Habitat type	watercourses; floodplains; other
Reference	Bonney (2006); Kutsche and Lay (2003)



Species	*Einadia nutans*
Common Name	climbing saltbush
Life Form	climber
Aboriginal Name (acronym)*	iylkeylk, ntyemeny (Al); ntyemeny (An); pwelempwele (west Ar); nyiyurr-nyiyurrpa, punyuru, tjunan-tjunanpa, iwatiwata, malkakutjalpa, mukul-mukulpa, ngantja-kuru-kuru (Pj); yinjiminyi (Wa)
Portion used as food	
Medicine plant	
Other uses	decoration
Habitat type	other; floodplain, watercourse, gully
Reference	Kutsche and Lay (2003); Latz (1996)



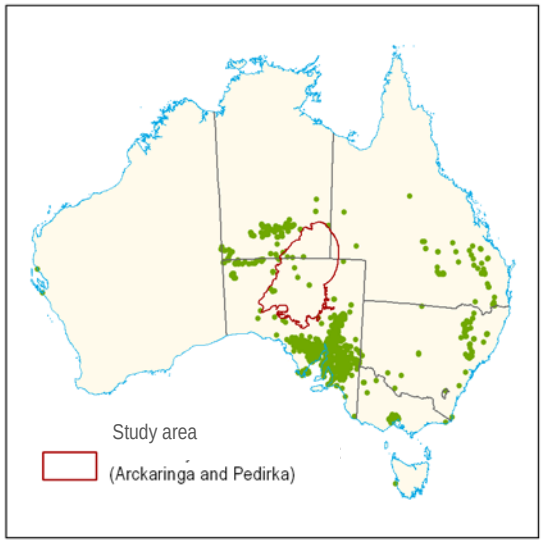
Species	*Enchylaena tomentosa*
Common Name	ruby saltbush
Life Form	shrub
Aboriginal Name (acronym)*	ntyemeny (Al); ntyemeny, intyemeny (An); ntyemenye (east Ar); inteyinteye (west Ar); kampul-kampulpa (Pt); iwatiwata, malkakutjalpa, wilpan-wilpanpa (Pj); mulkul-mukulpa (Wa); vulami-wata, wool-ami (Ad)
Portion used as food	fruit
Medicine plant	
Other uses	decoration
Habitat type	other; mound springs, salk lakes
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003); Latz (1996)



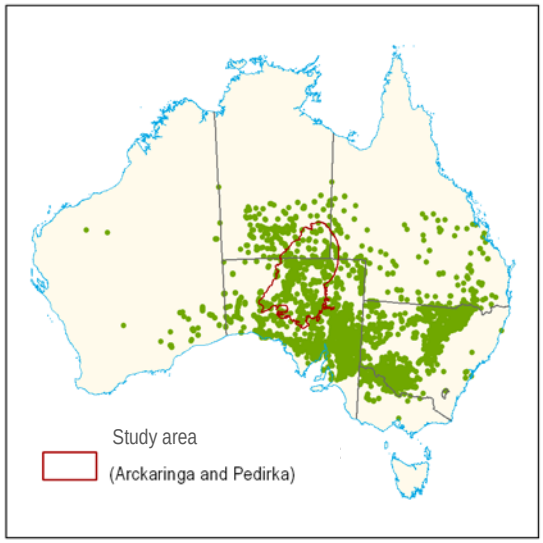
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

CHENOPODIACEAE

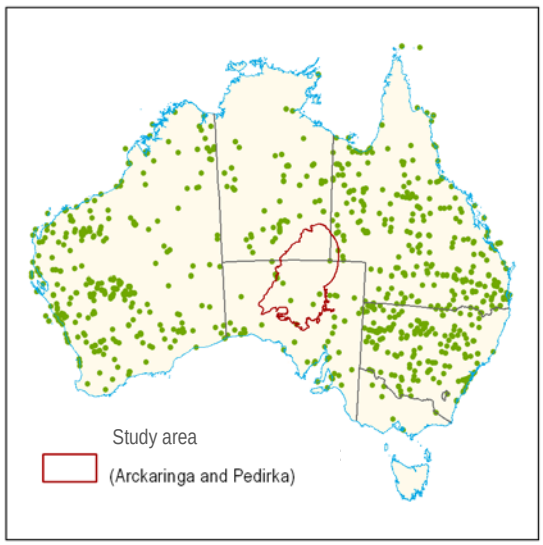
Species	*Rhagodia parabolica*
Common Name	mealy saltbush
Life Form	shrub
Aboriginal Name (acronym)*	nilpena (Ad)
Portion used as food	
Medicine plant	
Other uses	fruit used for red dye
Habitat type	other; creek banks
Reference	Bonney (2006); Kutsche and Lay (2003)



Species	*Rhagodia spinescens*
Common Name	thorny saltbush
Life Form	shrub
Aboriginal Name (acronym)*	ila, itha, yillaroo (Ad)
Portion used as food	
Medicine plant	
Other uses	fruit used for red dye
Habitat type	other; watercourses; floodplains
Reference	Bonney (2006); Kutsche and Lay (2003)



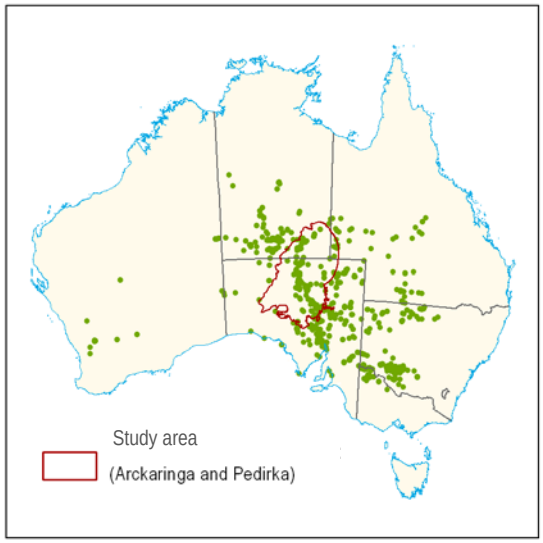
Species	*Salsola australis*
Common Name	buckbush
Life Form	forb
Aboriginal Name (acronym)*	ilka, yilka, vilakurru (Ad)
Portion used as food	grubs
Medicine plant	
Other uses	spines used for body piercing and decoration
Habitat type	other; claypans
Reference	Bonney (2006); Kutsche and Lay (2003)



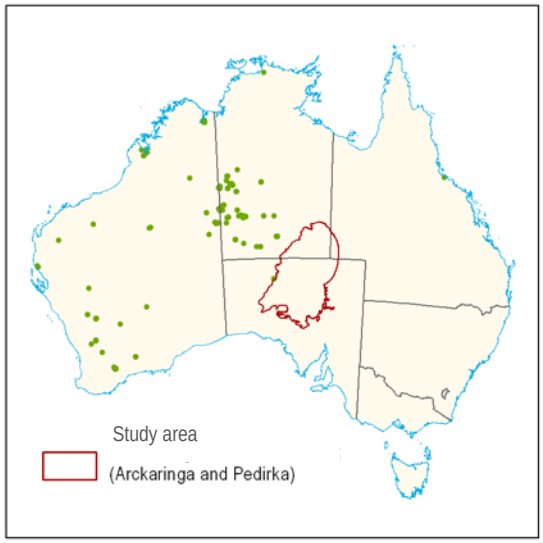
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

CHENOPODIACEAE

Species	*Tecticornia tenuis*
Common Name	slender glasswort
Life Form	forb
Aboriginal Name (acronym)*	karnkw, akarnkw, akarnk (An)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	other; salt lake
Reference	Green (2003)

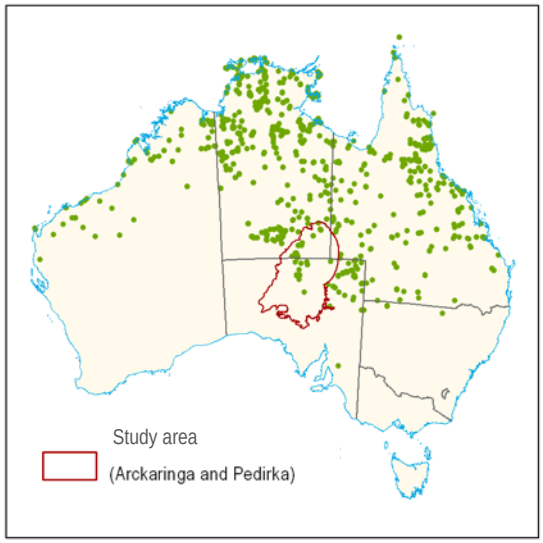


Species	*Tecticornia verruscosa*
Common Name	claypan samphire
Life Form	forb
Aboriginal Name (acronym)*	karnkw, akarnkw, akarnk (An)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	other; claypans; lakes
Reference	Green (2003)



CONVOLVULACEAE

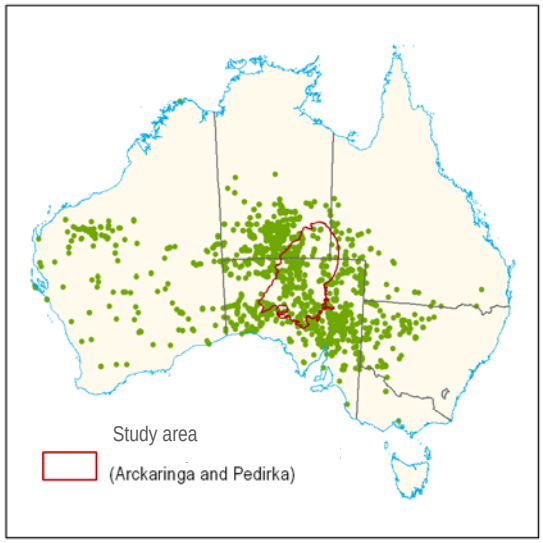
Species	*Ipomoea polymorpha*
Common Name	silky cow-vine
Life Form	forb
Aboriginal Name (acronym)*	woonooroo, mootcherie (Ad)
Portion used as food	root, bulb
Medicine plant	
Other uses	
Habitat type	other; watercourse
Reference	Bonney (2006)



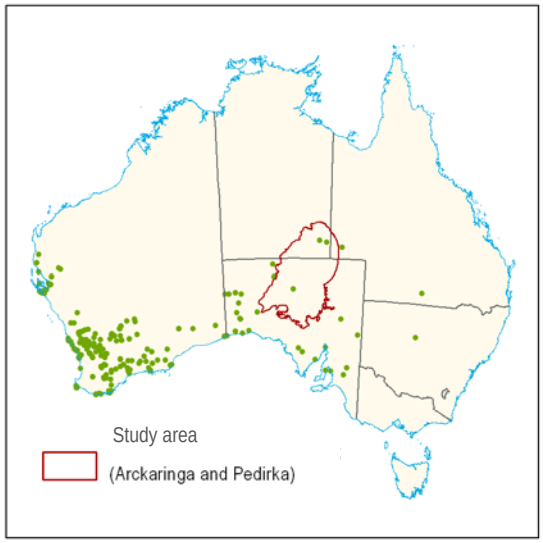
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

CRUCIFERAE

Species	*Lepidium phlebopetalum*
Common Name	veined peppercress
Life Form	forb
Aboriginal Name (acronym)*	unmuta (Pj Yk)
Portion used as food	greens
Medicine plant	
Other uses	
Habitat type	gilgais; floodplains; swales; claypans; other
Reference	Kutsche and Lay (2003)

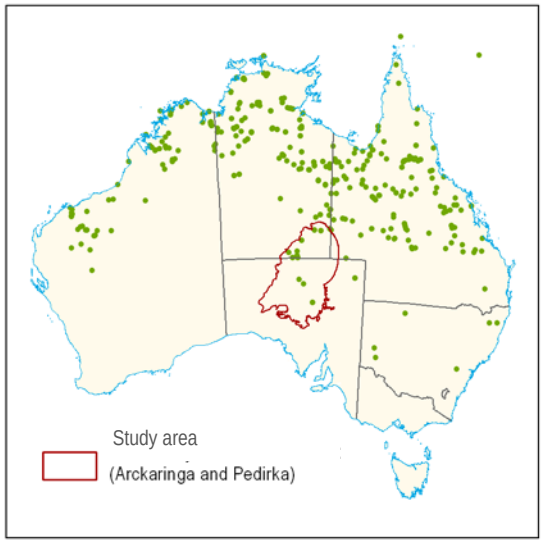


Species	*Lepidium rotundum*
Common Name	veined peppercress
Life Form	forb
Aboriginal Name (acronym)*	werkandu (Ad)
Portion used as food	greens
Medicine plant	
Other uses	
Habitat type	other; salt lakes
Reference	Bonney (2006)



CUCURBITACEAE

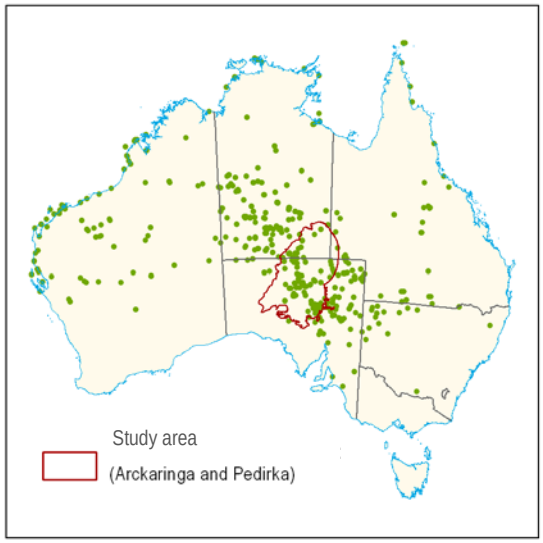
Species	*Cucumis melo* ssp. *agrestis*
Common Name	native gooseberry
Life Form	climber
Aboriginal Name (acronym)*	lkwart (Al); lkwart, ilkwart, urlkart, ulkart (An); ilkartwe (Ar); ngalparanpa (Wa); poodukani (Yd, Yw); yulpa, moku (Ad)
Portion used as food	fruit; seeds
Medicine plant	
Other uses	
Habitat type	clay; watercourse; swamp
Reference	Bonney (2006); Green (2003); Tolcher (2003); Latz (1996)



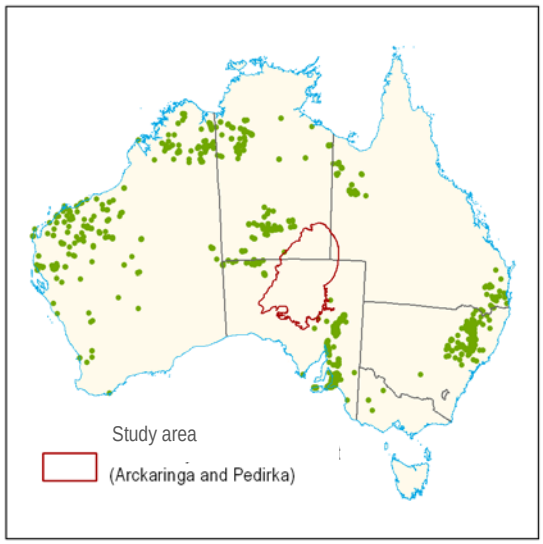
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

CYPERACEAE

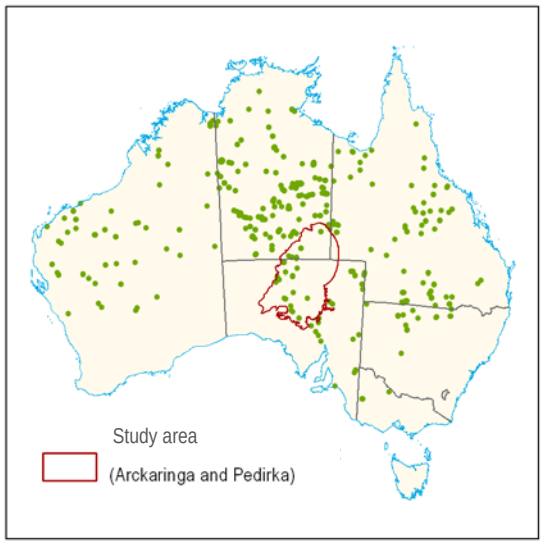
Species	*Cyperus bulbosus*
Common Name	onion grass
Life Form	sedge
Aboriginal Name (acronym)*	irreyakwerr (Al); yerrakwerr, irreyakwerr (An); irreyakwerre, yalke (east Ar); yalke (west Ar); alka, kinyuwurru, pinti-parnta, pirlapanu, yakanku, yirrakurru (Wa); karlakala (Yd Yw); winkara (Ad)
Portion used as food	bulb
Medicine plant	
Other uses	mythology
Habitat type	watercourse; salt lake; claypans; other
Reference	Bonney (2006) ; Green (2003); Tolcher (2003); Latz (1996)



Species	*Cyperus vaginatus*
Common Name	stiff-leaved sedge
Life Form	sedge
Aboriginal Name (acronym)*	purta-purta, puta-puta (Pj Yk); widna (Ad)
Portion used as food	root shoots
Medicine plant	yes
Other uses	
Habitat type	watercourses; creek banks; salt lake margins; mound springs; swamps
Reference	Bonney (2006); Kutsche and Lay (2003)



Species	*Schoenoplectus dissachanthus*
Common Name	
Life Form	sedge
Aboriginal Name (acronym)*	irrpwen (Al)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	watercourse; swamp
Reference	Latz (1996)



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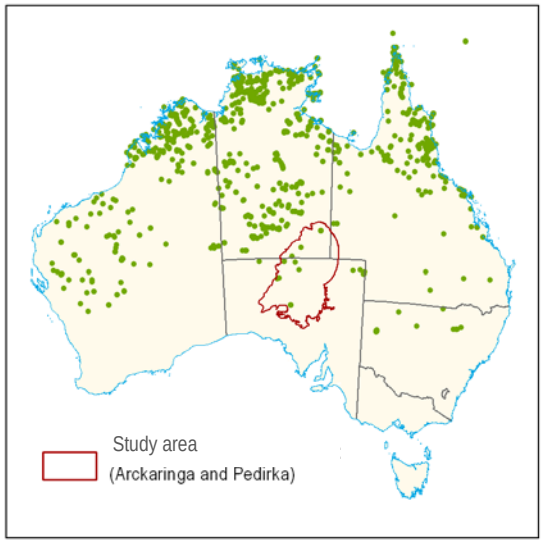
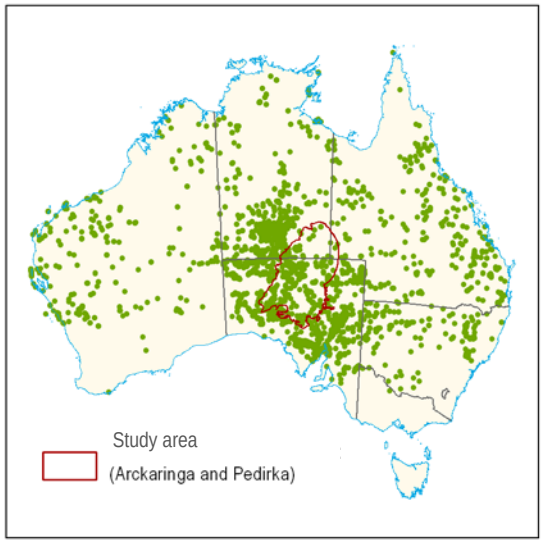
DROSERACEAE

Species	*Drosera indica*
Common Name	sundew
Life Form	forb
Aboriginal Name (acronym)*	yurltukunpa, yimangi-kirlangu (Wa)
Portion used as food	honey
Medicine plant	
Other uses	
Habitat type	watercourse; swamp; other
Reference	Latz (1996)



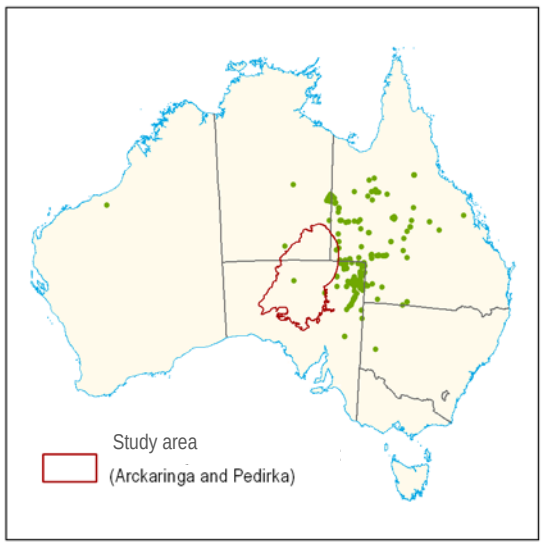
EUPHORBIACEAE

Species	*Euphorbia tannensis* ssp. *eremophila*
Common Name	desert spurge
Life Form	forb
Aboriginal Name (acronym)*	ipi-ipi (Pj Yk); anemarraty, atnemarraty, marlek-alyey-alyey (An)
Portion used as food	
Medicine plant	
Other uses	decoration
Habitat type	floodplains
Reference	Green (2003); Kutsche and Lay (2003)



FABACEAE

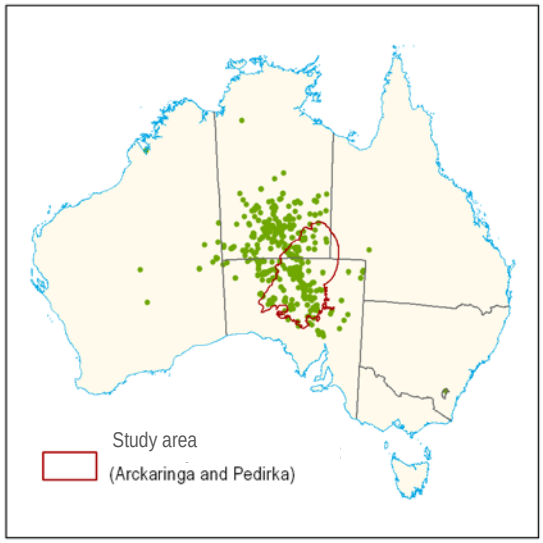
Species	*Bauhinia gilva*
Common Name	Queensland bean tree
Life Form	tree
Aboriginal Name (acronym)*	moodlu (Yd, Yw)
Portion used as food	honey, seeds
Medicine plant	
Other uses	
Habitat type	watercourse; floodplains
Reference	Tolcher (2003); Wiltshire and Schmidt (1997)



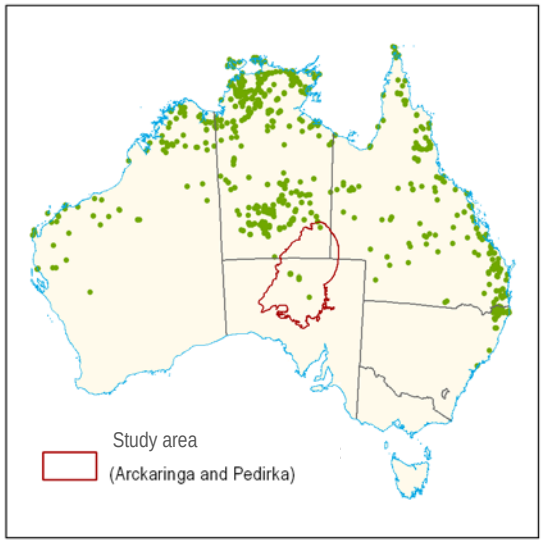
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

FABACEAE

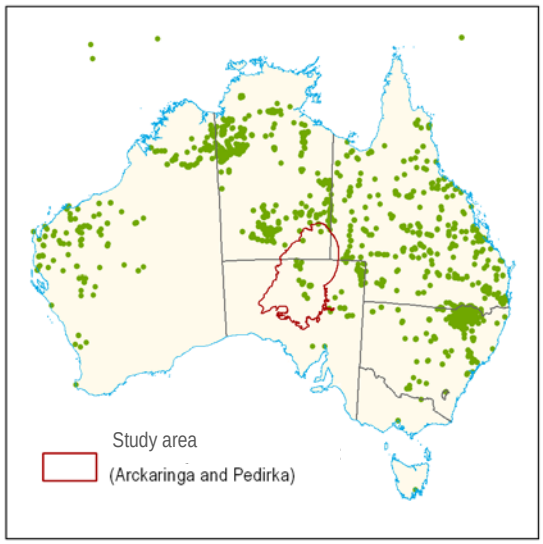
Species	*Crotalaria eremaea* ssp. *strehlowii*
Common Name	
Life Form	forb
Aboriginal Name (acronym)*	kalpipila (Yk); rltar-rltar, rlywayep-rlywayep (An)
Portion used as food	
Medicine plant	yes
Other uses	
Habitat type	other; watercourse
Reference	Green (2003); Goddard and Kalotas (2002)



Species	*Erythrina vespertilio*
Common Name	bean tree
Life Form	tree
Aboriginal Name (acronym)*	atywerety (Al); inernt, atywerety (An); aparrtye, atyweretye, inernte (east Ar); ininti, yininti (Pt); ininti (Pj); yinirnti (Wa)
Portion used as food	root
Medicine plant	
Other uses	artefact, ornament, mythology, implement
Habitat type	watercourse; other
Reference	Green (2003); Latz (1996)



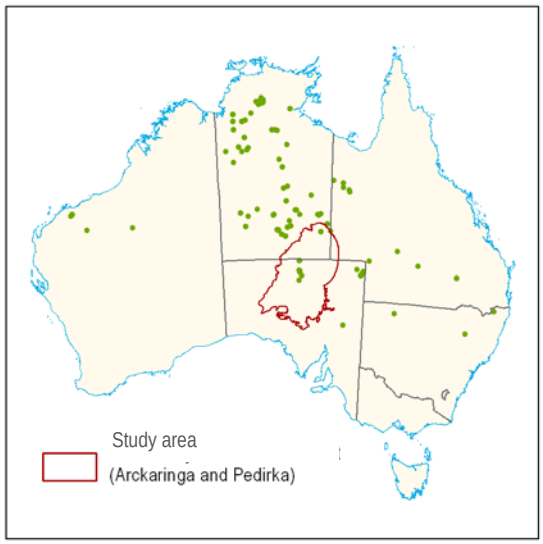
Species	*Acacia farnesiana*
Common Name	mimosa bush
Life Form	shrub
Aboriginal Name (acronym)*	alekw, alwek (Al); alekw (An); arlakwe (East Ar); irlakwe (West Ar); yintiringi-rningi, putunarri (Wa)
Portion used as food	
Medicine plant	
Other uses	artefacts, misc
Habitat type	clay communities; watercourses
Reference	Latz (1996)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

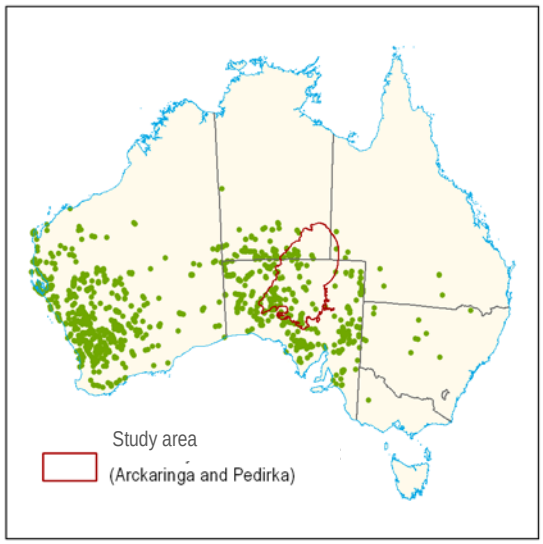
FABACEAE

Species	*Vigna lanceolata* var. *latifolia*
Common Name	pencil yam
Life Form	forb
Aboriginal Name (acronym)*	arlatyey (Al); arlatyety, rnamp, atnwelarr, anwelarr, katywetarr, mwerenenty (An); arlatyeye, irranenye (east Ar); yame (north Ar); irtennge (south Ar); irlatyeye (west Ar); atanngi, katjutarri, kutjuntu, wapiti, yatanngi (Pt); katjutari (Pj); japirda, wapirti, ngarlajiyi, kajutari, wajaraki, yumurnunju (Wa); wadroo (Ad)
Portion used as food	root
Medicine plant	
Other uses	mythology
Habitat type	other; watercourse; swamp
Reference	Bonney (2006); Green (2003); Latz (1996)



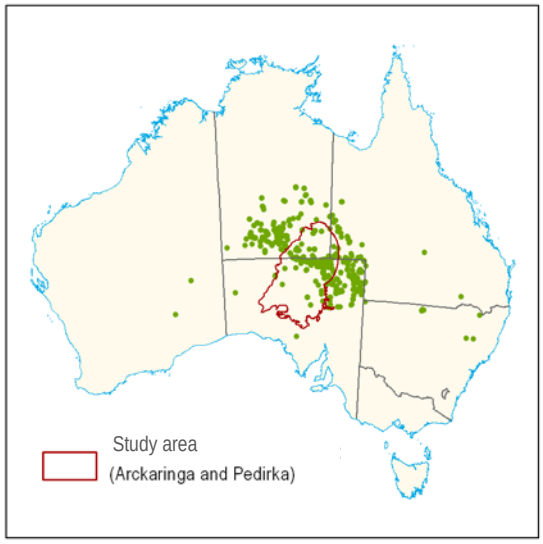
GERANIACEAE

Species	*Erodium cygnorum*
Common Name	blue geranium
Life Form	forb
Aboriginal Name (acronym)*	pital-pitalpa (Pt); malu-munpunpa, malu-pumpunya (Pj); adnyalpu, adnalpu, ajinarupo, yarp (Ad)
Portion used as food	seeds, roots
Medicine plant	
Other uses	
Habitat type	other; watercourses; floodplains; sand dune swales
Reference	Bonney (2006); Kutsche and Lay (2003)



GOODENIACEAE

Species	*Lechenaultia divaricata*
Common Name	
Life Form	forb
Aboriginal Name (acronym)*	anpay, apweneng (Al); unpaye (east Ar); unpaye (west Ar); unpay (An)
Portion used as food	root
Medicine plant	
Other uses	adhesive
Habitat type	watercourse; swamp
Reference	Green (2003); Latz (1996)



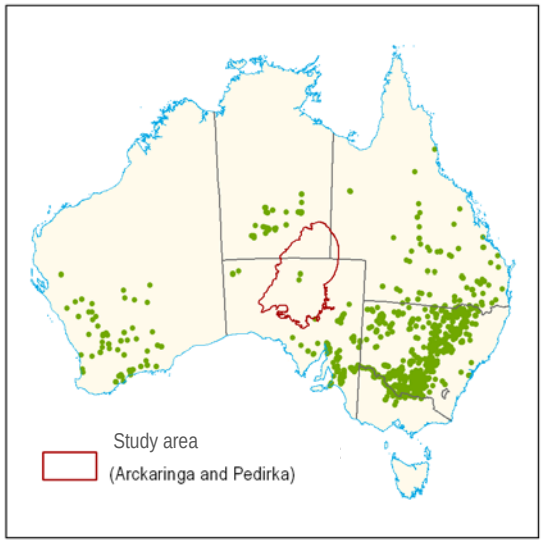
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

GYROSTEMONACEAE

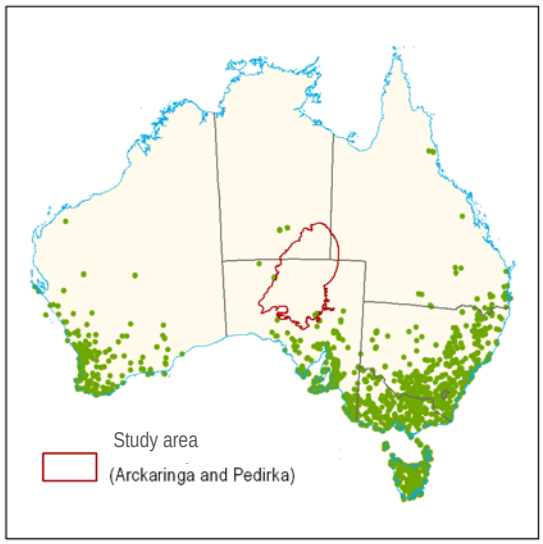
Species	*Codonocarpus pyramidalis*
Common Name	slender bell fruit
Life Form	tree
Aboriginal Name (acronym)*	alunga, alyunga (Ad)
Portion used as food	grubs
Medicine plant	
Other uses	
Habitat type	other; creeks
Reference	Bonney (2006)

JUNCACEAE

Species	*Juncus aridicola*
Common Name	tussock rush
Life Form	sedge
Aboriginal Name (acronym)*	vunduta (Ad)
Portion used as food	rhizome, shoots
Medicine plant	
Other uses	
Habitat type	watercourse; other
Reference	Bonney (2006)



Species	*Juncus bufonius*
Common Name	toad rush
Life Form	sedge
Aboriginal Name (acronym)*	vunduta (Ad)
Portion used as food	rhizome, shoots
Medicine plant	
Other uses	
Habitat type	watercourse; other
Reference	Bonney (2006)

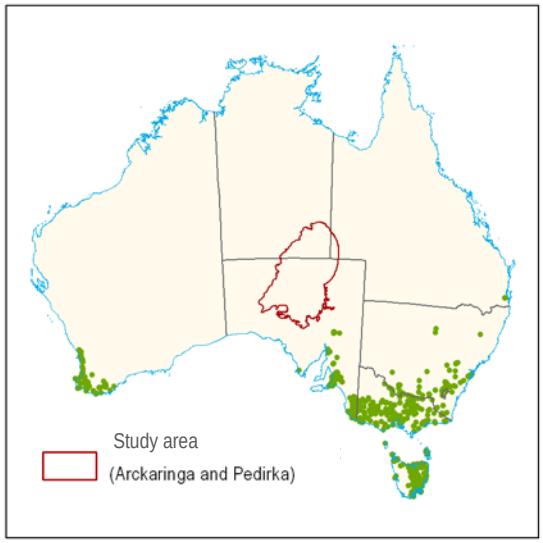


* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

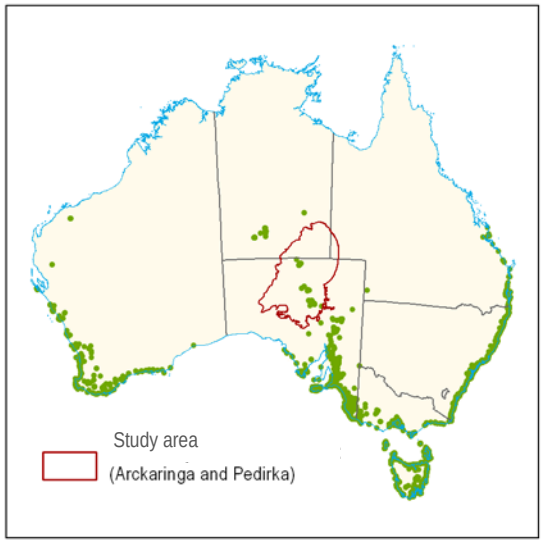
JUNCACEAE

Species	*Juncus caespiticius*
Common Name	grassy rush
Life Form	sedge
Aboriginal Name (acronym)*	vunduta (Ad)
Portion used as food	rhizome, shoots
Medicine plant	
Other uses	
Habitat type	watercourse; other
Reference	Bonney (2006)

Species	*Juncus holoschoenus*
Common Name	joint-leaved rush
Life Form	sedge
Aboriginal Name (acronym)*	vunduta (Ad)
Portion used as food	rhizome, shoots
Medicine plant	
Other uses	
Habitat type	watercourse; other
Reference	Bonney (2006)



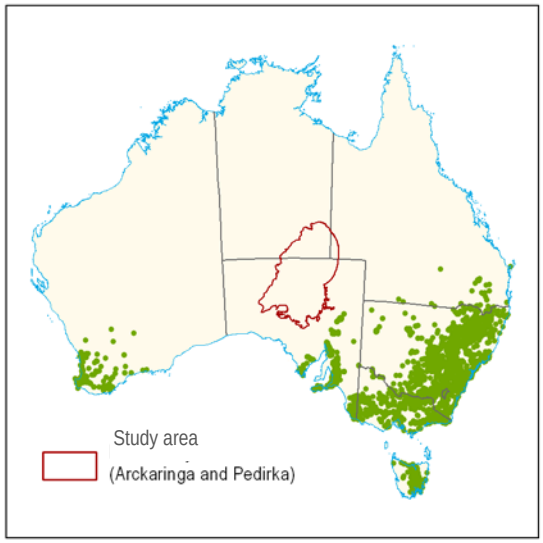
Species	*Juncus kraussii*
Common Name	sea rush
Life Form	sedge
Aboriginal Name (acronym)*	vunduta (Ad)
Portion used as food	rhizome, shoots
Medicine plant	
Other uses	
Habitat type	watercourse; other
Reference	Bonney (2006)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

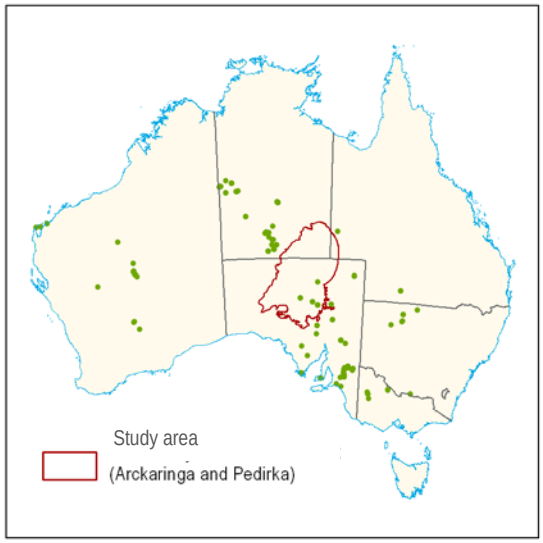
JUNCACEAE

Species	*Juncus subsecundus*
Common Name	finger rush
Life Form	sedge
Aboriginal Name (acronym)*	vunduta (Ad)
Portion used as food	rhizome, shoots
Medicine plant	
Other uses	
Habitat type	watercourse; other
Reference	Bonney (2006)



JUNCAGINACEAE

Species	*Triglochin hexagona*
Common Name	six-point arrowgrass
Life Form	aquatic forb
Aboriginal Name (acronym)*	not available
Portion used as food	root tubers
Medicine plant	
Other uses	
Habitat type	watercourse; other
Reference	Bonney (2006)

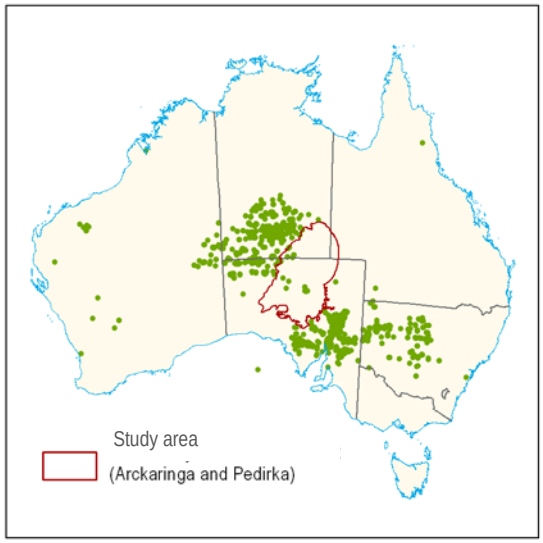


Species	*Triglochin striata*
Common Name	streaked arrowgrass
Life Form	aquatic forb
Aboriginal Name (acronym)*	not available
Portion used as food	root tubers
Medicine plant	
Other uses	
Habitat type	watercourse; other
Reference	Bonney (2006)

* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

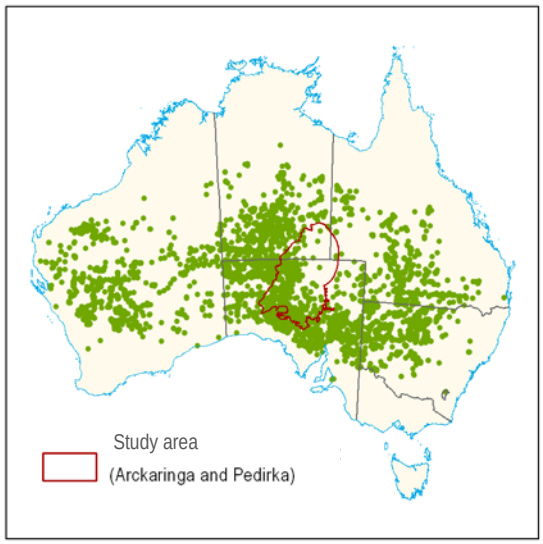
LABIATAE

Species	*Prostanthera stratiflora*
Common Name	striated mintbush
Life Form	shrub
Aboriginal Name (acronym)*	atnurlke, arrwatnurlke (east Ar); arretnurlke (west Ar); mintjingka, karingana (Pj); warlkalpa (Wa); karingana (Yk); ngkwern, rnter-rnter, amwer, apmwer (An)
Portion used as food	
Medicine plant	yes
Other uses	
Habitat type	other; watercourses; gullies
Reference	Dobson (2007); Green (2003); Kutsche and Lay (2003); Goddard and Kalotas (2002); Latz (1996)

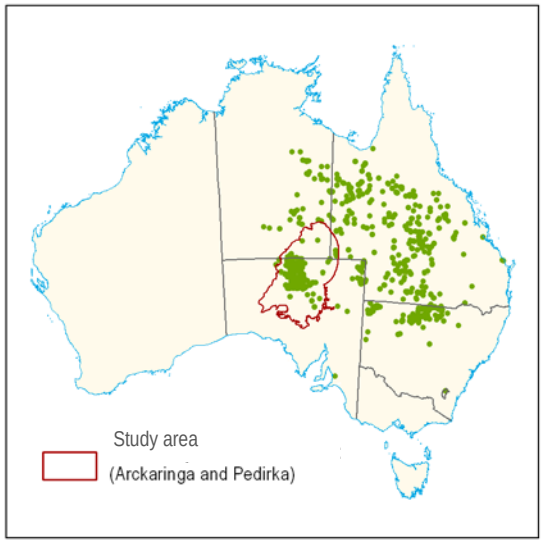


LEGUMINOSAE

Species	*Acacia aneura*
Common Name	horse mulga
Life Form	tree
Aboriginal Name (acronym)*	artety (Al); artety (An); artetye (east Ar); irtetye (west Ar); kurrku, mantja, manytja, wanari (Pt); kalpilya, kurku, minyura, puyukara, tjamalya, wanari (Pj); manja, wanajirti, wardiji (Wa); kurku (Yk); malka, mulka, mulbura (Ad)
Portion used as food	seeds, galls, lerp
Medicine plant	
Other uses	implements; artefacts
Habitat type	other; watercourses
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003); Goddard and Kalotas (2002); Latz (1996)



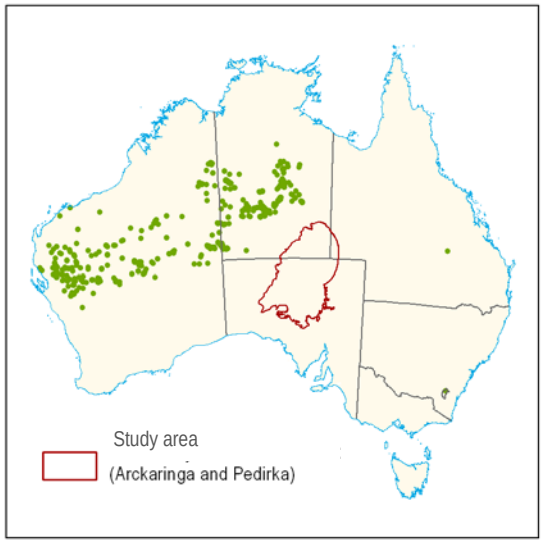
Species	*Acacia cambagei*
Common Name	gidgea
Life Form	tree
Aboriginal Name (acronym)*	unavailable
Portion used as food	
Medicine plant	
Other uses	implements; ash
Habitat type	clay soils; watercourses; floodplains; claypans
Reference	Kutsche and Lay (2003); Wiltshire and Schmidt (1997)



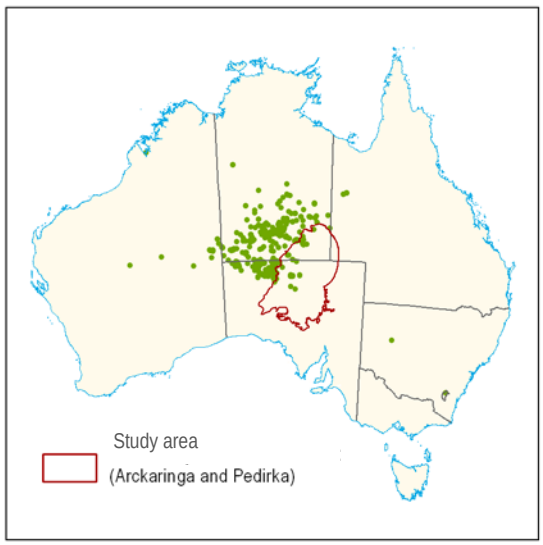
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

LEGUMINOSAE

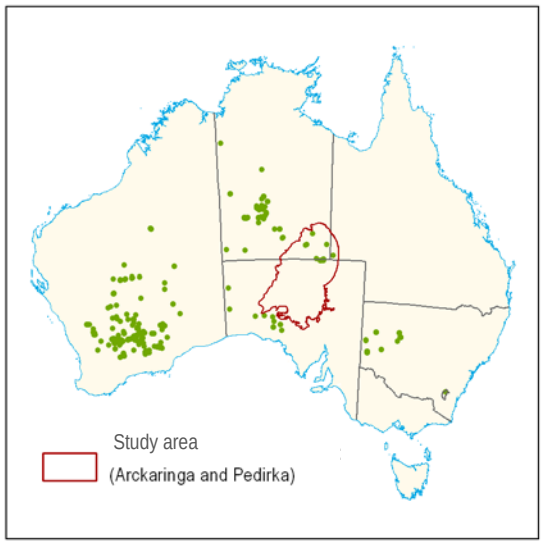
Species	*Acacia cuthbertsonii*
Common Name	silver witchetty
Life Form	shrub
Aboriginal Name (acronym)*	alhanker, irley, pirley (Al); lywey, perley, peyley, pirley (An); piliyi, yalpirri (Pt); alpiri, apulya, kalirma (Pj); pirliyi (Wa)
Portion used as food	seeds
Medicine plant	
Other uses	fibre
Habitat type	other; fringing small water courses
Reference	Green (2003); Latz (1996)



Species	*Acacia estrophiolata*
Common Name	ironwood
Life Form	tree
Aboriginal Name (acronym)*	tjau, utjanypa (Pj, Ad); athenge, atyarnpe (Ar); atheng, athimp, atyarnp (An)
Portion used as food	gum
Medicine plant	Yes
Other uses	misc.
Habitat type	other; floodplains
Reference	Dobson (2007); Green (2003); Kutsche and Lay (2003)



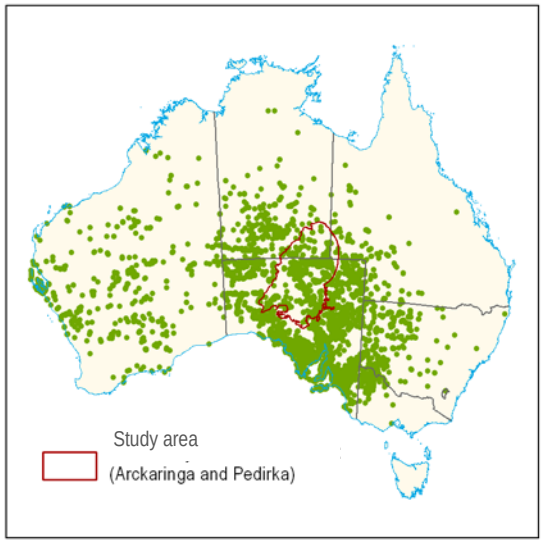
Species	*Acacia jennerae*
Common Name	
Life Form	shrub
Aboriginal Name (acronym)*	lalkerrek, alalherrk (An); walalyirrki (Wa)
Portion used as food	seeds, gum
Medicine plant	
Other uses	
Habitat type	salt lake; watercourse
Reference	Green (2003); Latz (1996)



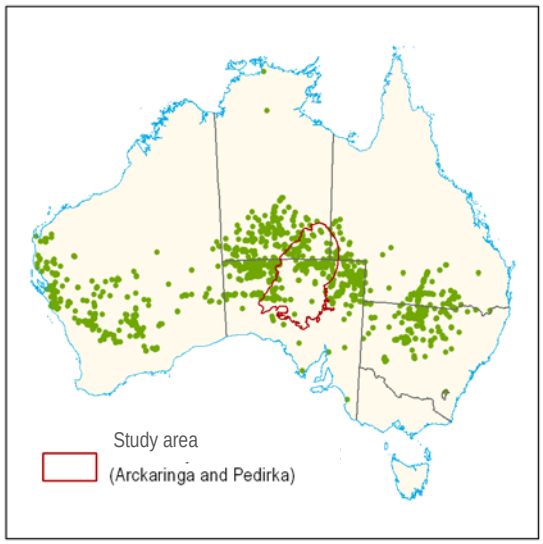
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

LEGUMINOSAE

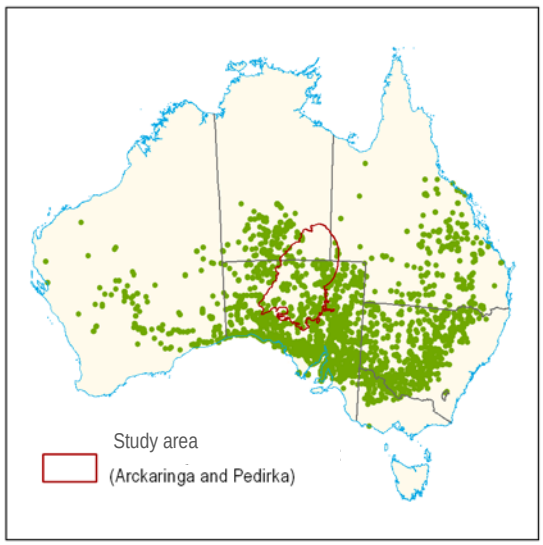
Species	*Acacia ligulata*
Common Name	umbrella bush
Life Form	shrub
Aboriginal Name (acronym)*	arterrk (Al); rterrk, arterrk (An); arterrke (east Ar); irterrke (west Ar); watarrka (Pt); watarka (Pj); wardarrka (Wa); watarka (Yk); aru, muntera, katura (Ad)
Portion used as food	seeds, grubs, gum
Medicine plant	yes
Other uses	ash, mythology
Habitat type	other; salt lake; watercourses
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003); Goddard and Kalotas (2002); Latz (1996)



Species	*Acacia murrayana*
Common Name	colony wattle
Life Form	tree
Aboriginal Name (acronym)*	tjuntala (Yk); arrely, arrelh (An)
Portion used as food	seeds, grubs
Medicine plant	
Other uses	
Habitat type	other; watercourses; floodplains
Reference	Green (2003); Goddard and Kalotas (2002)



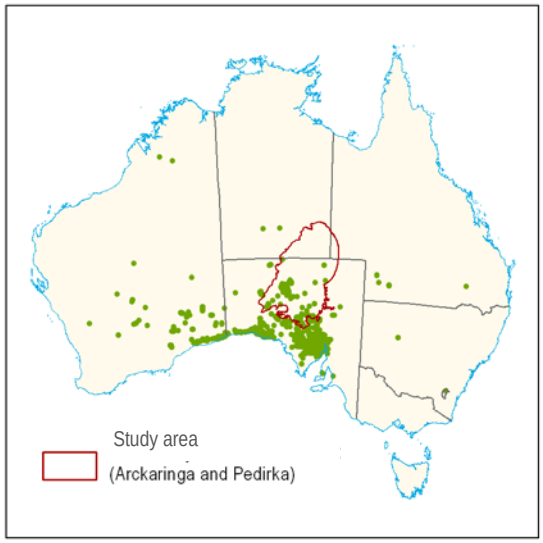
Species	*Acacia oswaldii*
Common Name	
Life Form	shrub
Aboriginal Name (acronym)*	lpeye (west Ar); waltari, wilpiya (Pj); ulka, oolka, wi-aka (Ad)
Portion used as food	seeds, gum
Medicine plant	
Other uses	artefacts
Habitat type	other; salt lake
Reference	Bonney (2006); Latz (1996)



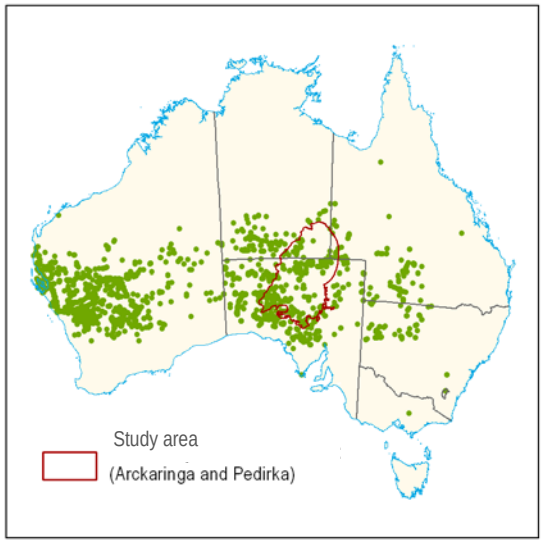
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

LEGUMINOSAE

Species	*Acacia papyrocarpa*
Common Name	western myall
Life Form	tree
Aboriginal Name (acronym)*	weitga (Ad)
Portion used as food	seeds
Medicine plant	
Other uses	implements, firewood
Habitat type	other; watercourses
Reference	Bonney (2006); Kutsche and Lay (2003)



Species	*Acacia ramulosa*
Common Name	
Life Form	shrub
Aboriginal Name (acronym)*	pakuta, palpa (Pj)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	other; salt lake
Reference	Latz (1996)

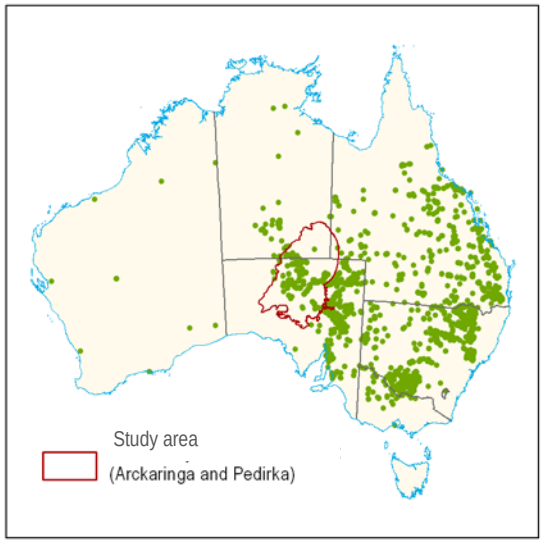


Species	*Acacia rivalis*
Common Name	silver wattle
Life Form	shrub
Aboriginal Name (acronym)*	nuri, nguir (Ad)
Portion used as food	
Medicine plant	yes
Other uses	
Habitat type	other; watercourses
Reference	Bonney (2006)

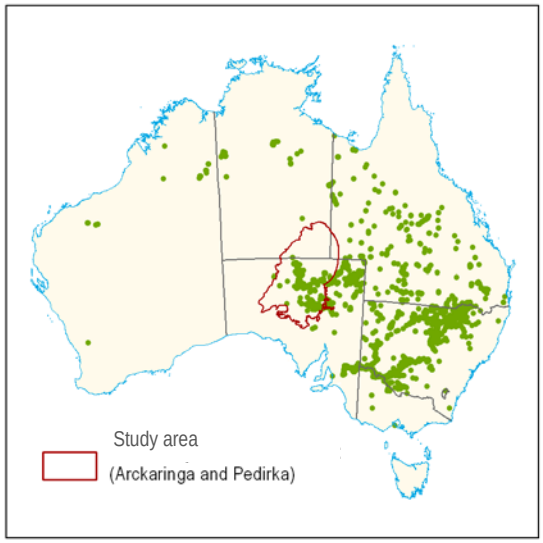
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

LEGUMINOSAE

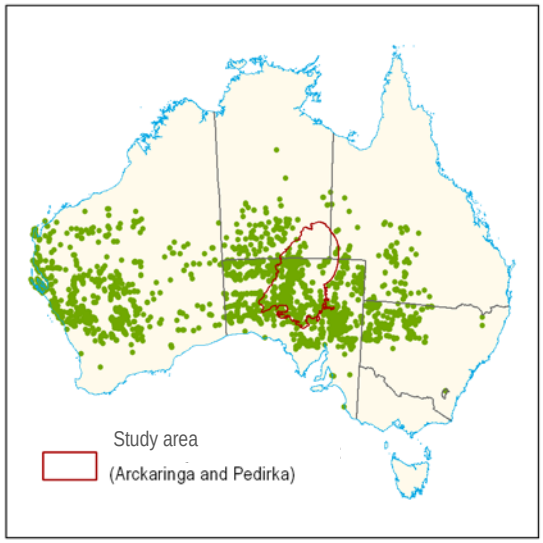
Species	*Acacia salicina*
Common Name	broughton willow
Life Form	tree
Aboriginal Name (acronym)*	valkura, w(v)alkura, ilkura, relkura, kunya, tjirri (Ad)
Portion used as food	seeds
Medicine plant	yes
Other uses	ash; fish poison; implements; firewood
Habitat type	other; clay-soils; watercourses; floodplains; drainage lines
Reference	Bonney (2006); Kutsche and Lay (2003); Wiltshire and Schmidt (1997)



Species	*Acacia stenophylla*
Common Name	river cooba
Life Form	tree
Aboriginal Name (acronym)*	unavailable
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	watercourses; swamp margins
Reference	Wiltshire and Schmidt (1997)



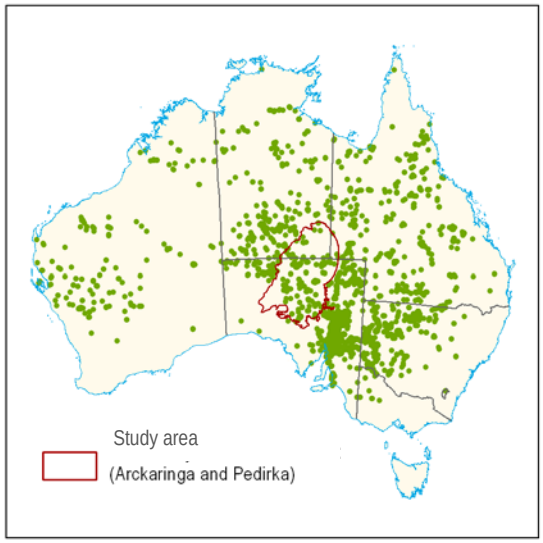
Species	*Acacia tetragonophylla*
Common Name	dead finish
Life Form	shrub
Aboriginal Name (acronym)*	arlketyerr (Al); arlketyerr, tyer (An); arlketyerre (east Ar); irlketyerre (west Ar); wakalpuka (Pt); kurungantiri, wakalpuka (Pj); kurarra (Wa); vara-vada, vada, vaira, vera, bararrecka (Ad)
Portion used as food	seeds, grubs
Medicine plant	Yes
Other uses	artefacts
Habitat type	other; watercourses; drainage lines
Reference	Dobson (2007); Bonney (2006); Green (2003); Kutsche and Lay (2003); Latz (1996)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

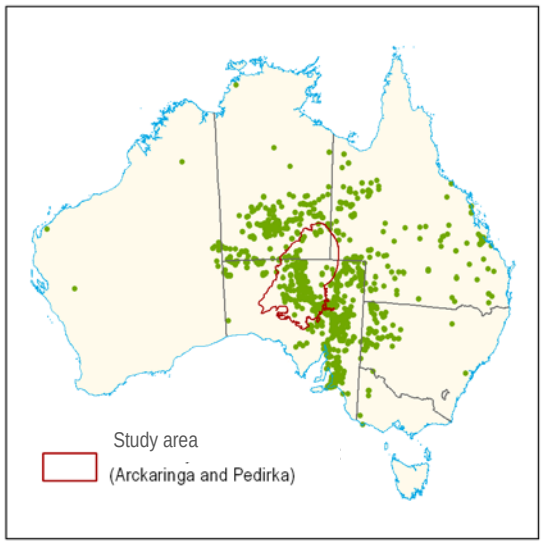
LEGUMINOSAE

Species	*Acacia victoriae*
Common Name	elegant acacia
Life Form	shrub
Aboriginal Name (acronym)*	arlep (Al); arlep, arlep (An); arlepe (east Ar); tuperle (south Ar); urlepe (west Ar); pulkuru (Pt); ngatunpa, aliti (Pj); kanaparlku, yalupu, yarlirti (Wa); ming(ga), min-ga, kalyoo, kalyu (Ad)
Portion used as food	seeds, grubs, gum
Medicine plant	
Other uses	artefacts, firewood
Habitat type	other; river flats; waterholes; alluvial plains; creeklines
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003); Wiltshire and Schmidt (1997); Latz (1996)

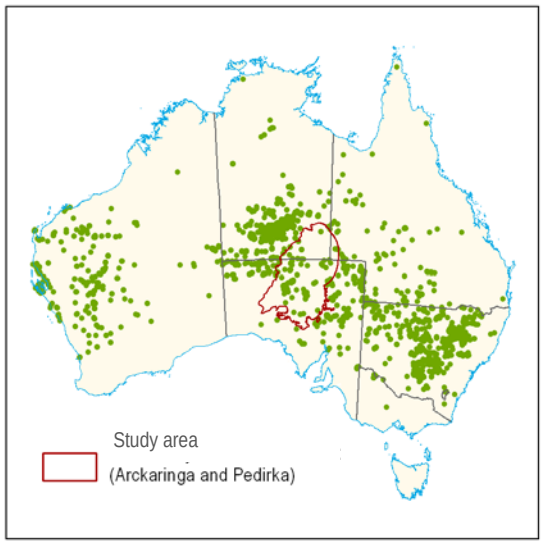


FABACEAE

Species	*Cullen australasicum*
Common Name	native verbine
Life Form	forb
Aboriginal Name (acronym)*	windurra (Ad)
Portion used as food	stem
Medicine plant	
Other uses	fibre
Habitat type	swamps; watercourses, gilgais
Reference	Bonney (2006); Kutsche and Lay (2003)



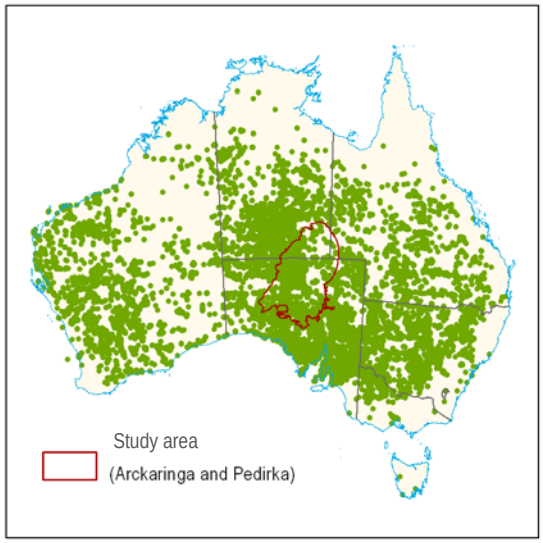
Species	*Glycine canescens*
Common Name	silky glycine
Life Form	climber
Aboriginal Name (acronym)*	kalpil-kalpilpa (Pj Yk)
Portion used as food	root
Medicine plant	
Other uses	
Habitat type	other; watercourses
Reference	Bonney (2006); Kutsche and Lay (2003)



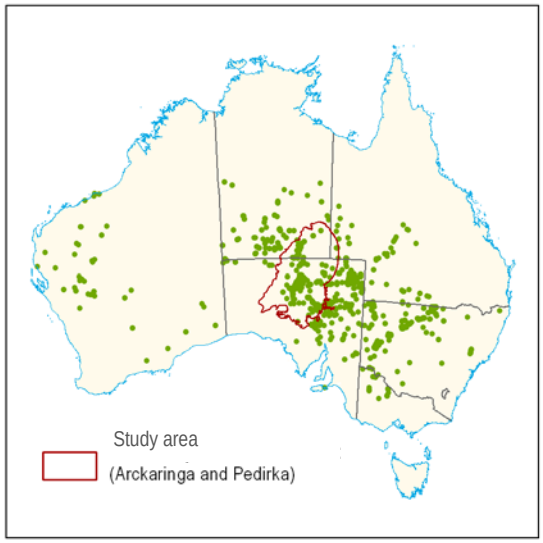
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

FABACEAE

Species	*Senna artemisioides*
Common Name	silver senna
Life Form	shrub
Aboriginal Name (acronym)*	vunila, mulka (Ad); karpil-karpilpa (Pj Yk)
Portion used as food	seed
Medicine plant	
Other uses	flowers for decoration
Habitat type	other; watercourses
Reference	Bonney (2006); Kutsche and Lay (2003)

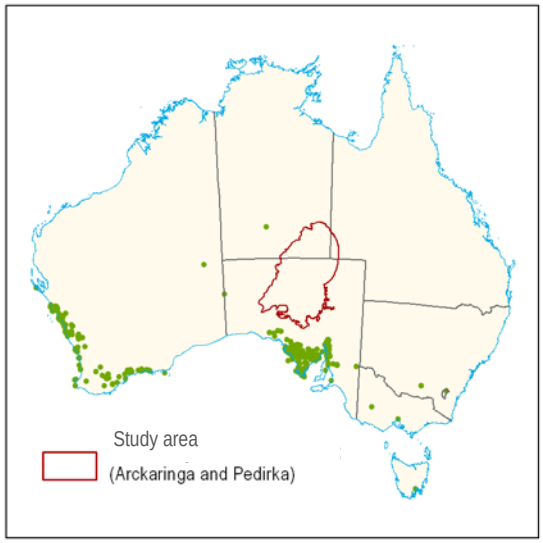


Species	*Trigonella suavissima*
Common Name	cooper clover
Life Form	forb
Aboriginal Name (acronym)*	kuloomba, walpulaa, kalumba (Ad)
Portion used as food	foliage, greens
Medicine plant	
Other uses	
Habitat type	swamps; watercourses, gilgais; floodplains
Reference	Bonney (2006); Kutsche and Lay (2003)



MALVACEAE

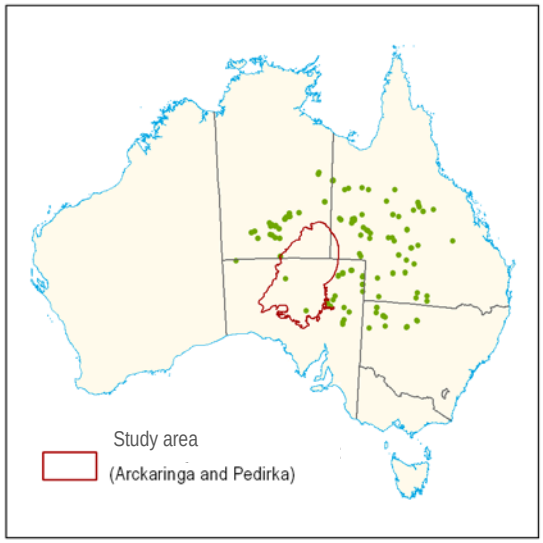
Species	*Alyogyne huegelii*
Common Name	native hibiscus
Life Form	shrub
Aboriginal Name (acronym)*	apara (Ad)
Portion used as food	
Medicine plant	
Other uses	flowers, fibre
Habitat type	creek beds; other
Reference	Bonney (2006); Kutsche and Lay (2003)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

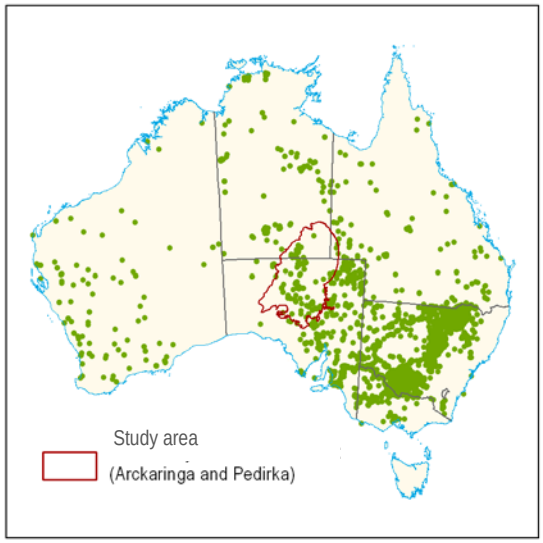
MALVACEAE

Species	*Sida goniocarpa*
Common Name	
Life Form	forb
Aboriginal Name (acronym)*	munta-munta (Wa)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	cracking clay
Reference	Latz (1996)

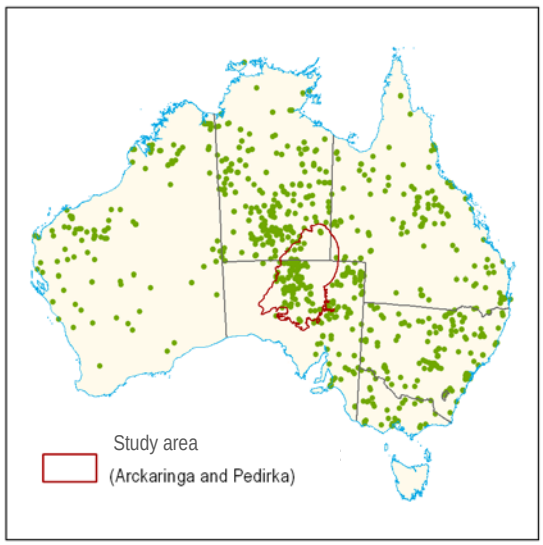


MARSILEACEAE

Species	*Marsilea drummondii*
Common Name	nardoo
Life Form	fern
Aboriginal Name (acronym)*	ngadu (Yd Yw); ara, ngardu (Ad)
Portion used as food	spores, root nodules
Medicine plant	
Other uses	
Habitat type	watercourse; floodplains; claypans; waterholes; swamps
Reference	Bonney (2006); Kutsche and Lay (2003); Tolcher (2003); Wiltshire and Schmidt (1997)



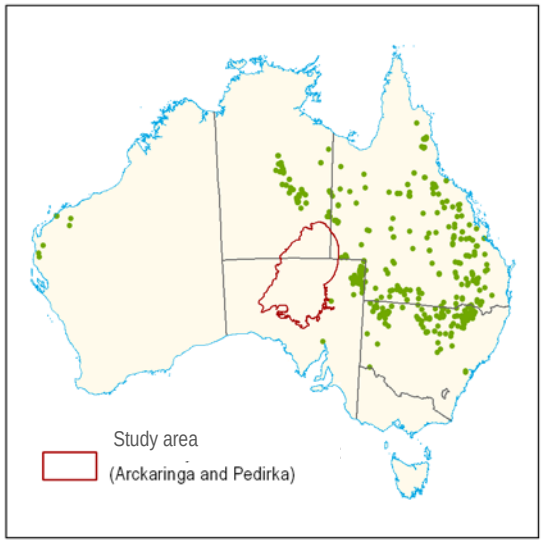
Species	*Marsilea hirsuta*
Common Name	short-fruit nardoo
Life Form	fern
Aboriginal Name (acronym)*	ara, ngardu (Ad)
Portion used as food	spores, root nodules
Medicine plant	
Other uses	
Habitat type	creeks; riverbeds; swamps; salt flats; claypans
Reference	Bonney (2006)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

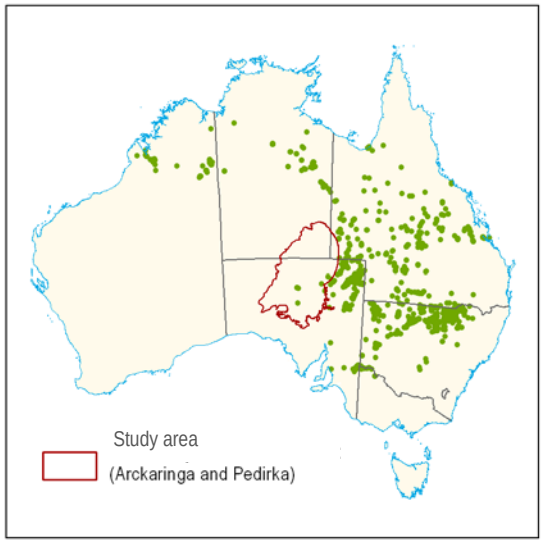
MELIACEAE

Species	*Owenia acidula*
Common Name	emu apple
Life Form	tree
Aboriginal Name (acronym)*	arrek (Al); kunyan-kunyanpa (Wa)
Portion used as food	fruit
Medicine plant	yes
Other uses	shelter construction
Habitat type	other; watercourse
Reference	Kutsche and Lay (2003); Latz (1996)

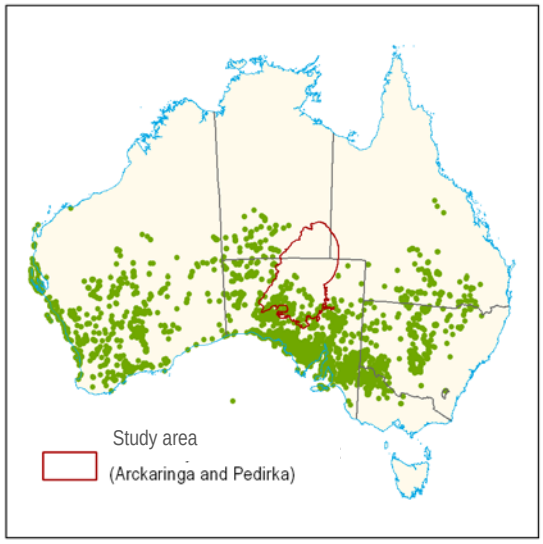


MYPORORACEAE

Species	*Eremophila bignoniflora*
Common Name	eurah
Life Form	shrub
Aboriginal Name (acronym)*	unavailable
Portion used as food	
Medicine plant	yes
Other uses	
Habitat type	floodplains; drainage lines; lakes
Reference	Wiltshire and Schmidt (1997)



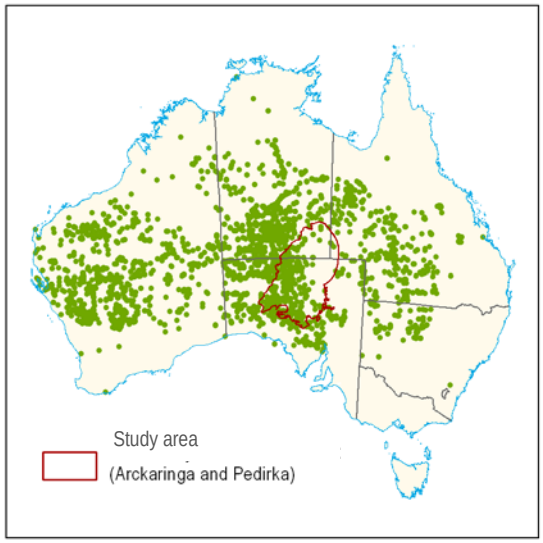
Species	*Eremophila glabra*
Common Name	fuchsia bush
Life Form	shrub
Aboriginal Name (acronym)*	ilvi-vati, ooli-werdi, uli-vati (Ad)
Portion used as food	honey
Medicine plant	
Other uses	
Habitat type	other; watercourse
Reference	Bonney (2006); Kutsche and Lay (2003)



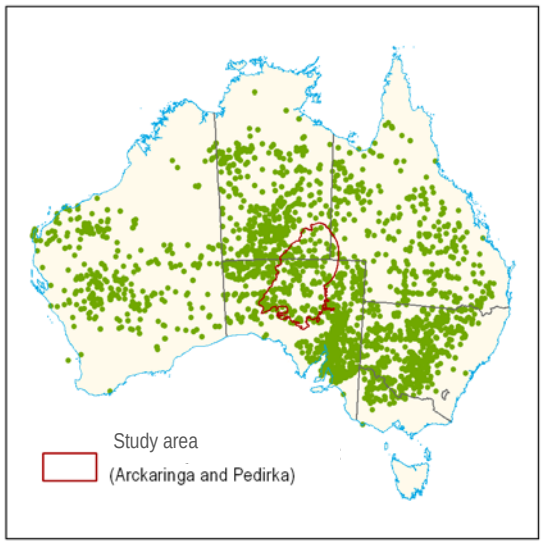
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

MYPORORACEAE

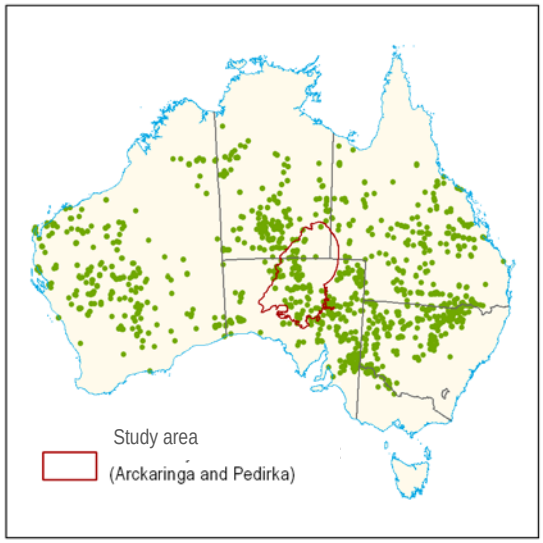
Species	*Eremophila latrobei*
Common Name	crimson emu bush
Life Form	shrub
Aboriginal Name (acronym)*	akwenthey, therrpeyt (Al); nyerleng, annyerleng, anyerleng, atnyerleng (An); atnyerlenge (east Ar); tnyerlenge (west Ar); ngarrawara, ngarrankura (Pt); mintjingka, ngarankura (Pj); miyinpa, yanyirlingi (Wa); uli-varti, uli-vati (Ad)
Portion used as food	honey
Medicine plant	yes
Other uses	
Habitat type	other; gullies; creek beds
Reference	Dobson (2007); Bonney (2006); Green (2003); Kutsche and Lay (2003); Latz (1996)



Species	*Eremophila longifolia*
Common Name	weeping emu bush
Life Form	tree
Aboriginal Name (acronym)*	verti-walka, vativaka, verti-werka, vada-waka, kuyamara (Ad)
Portion used as food	nectar
Medicine plant	yes
Other uses	burial ceremonies
Habitat type	other; watercourse
Reference	Bonney (2006); Kutsche and Lay (2003)



Species	*Eremophila maculata*
Common Name	spotted emu bush
Life Form	shrub
Aboriginal Name (acronym)*	ilvi, ilyvi, taia-munni (Ad)
Portion used as food	honey
Medicine plant	yes
Other uses	
Habitat type	floodplains
Reference	Bonney (2006); Wiltshire and Schmidt (1997)

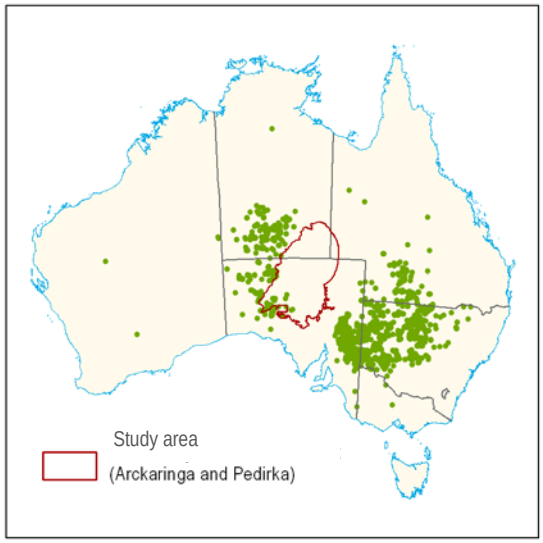


* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

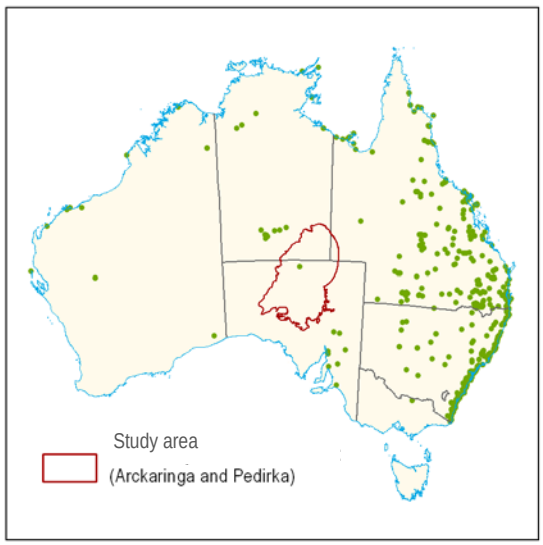
MYPORORACEAE

Species	*Eremophila neglecta*
Common Name	
Life Form	shrub
Aboriginal Name (acronym)*	aratja (Pj)
Portion used as food	
Medicine plant	yes
Other uses	
Habitat type	claypans; other
Reference	Latz (1996)

Species	*Eremophila sturtii*
Common Name	turpentine bush
Life Form	shrub
Aboriginal Name (acronym)*	atyer, kwenthey, iyter, tyer (An); ilpurt-ilpurte (east Ar); ilpurt-ilpurte (west Ar); munyunpa, watara (Pj); yari, yara (Ad)
Portion used as food	honey
Medicine plant	yes
Other uses	insect repellant
Habitat type	claypans; other
Reference	Bonney (2006); Green (2003); Latz (1996)



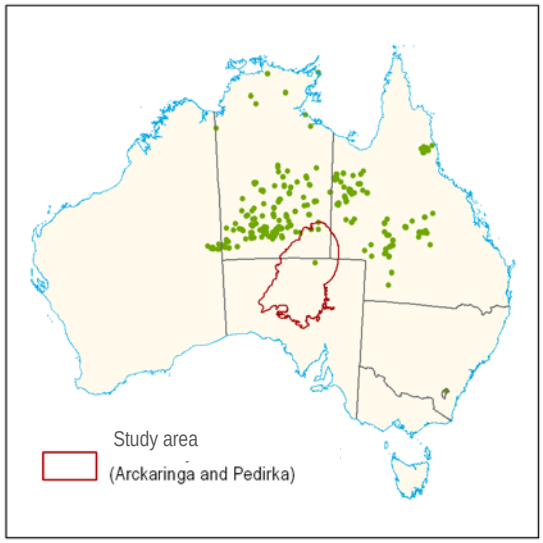
Species	*Myoporum acuminatum*
Common Name	native myrtle
Life Form	shrub
Aboriginal Name (acronym)*	tywerrketywerrke (west Ar); pulkaru (Pj); warlkalpa (Wa)
Portion used as food	fruit
Medicine plant	yes
Other uses	adhesive, toy
Habitat type	salt lake; watercourse; swamp
Reference	Latz (1996)



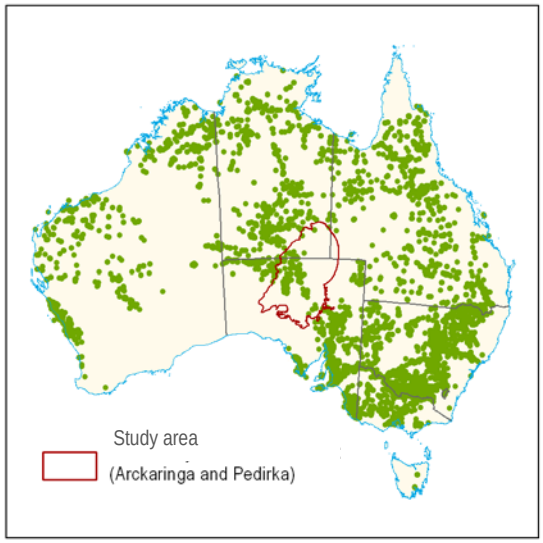
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

MYRTACEAE

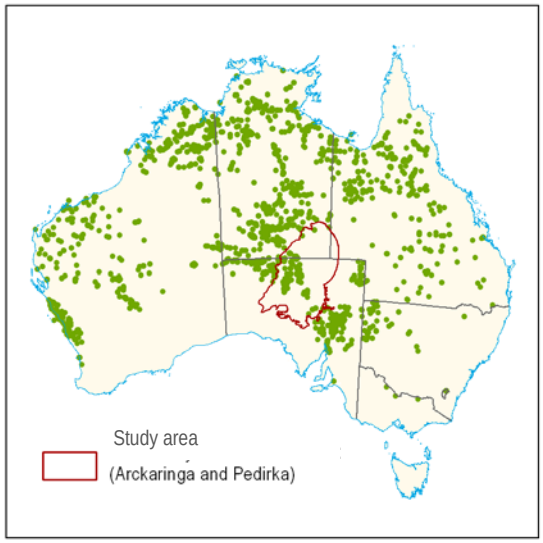
Species	*Corymbia aparrerinja*
Common Name	ghost gum
Life Form	tree
Aboriginal Name (acronym)*	ilwemp, lwemp (Al); ilwemp, lwemp, pwernengk, ulemp (An); ilwempe (east Ar); ilwempe (west Ar); kilkilpa (Pt); para, pilpira (Pj); wapurnumgku (Wa)
Portion used as food	honey, grubs, gum
Medicine plant	yes
Other uses	artefact, cement, misc., mythology
Habitat type	other; near watercourses
Reference	Green (2003); Latz (1996)



Species	*Eucalyptus camaldulensis*
Common Name	river red gum
Life Form	tree
Aboriginal Name (acronym)*	aper (Al); aper, per (An); apere (east Ar); pere (west Ar); itara, ngapiri, pipalya, yitara (Pt), apara, itara, piipalya (Pj); kunjumarra, ngapiri (Wa)
Portion used as food	lerp, honey, grubs
Medicine plant	yes
Other uses	artefact, ash, firewood, misc., mythology, ornament, toys
Habitat type	watercourse
Reference	Latz (1996)



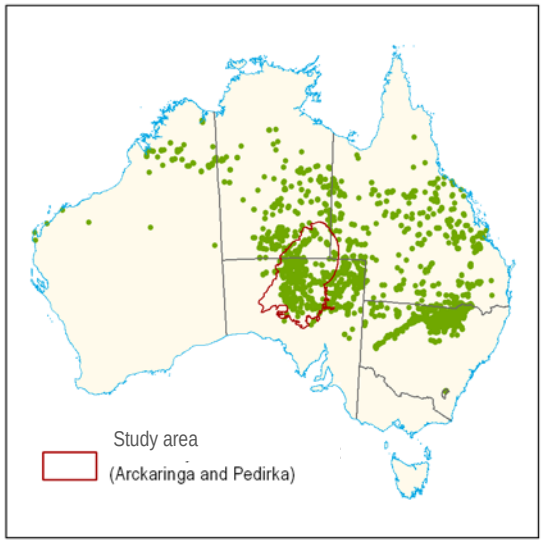
Species	*Eucalyptus camaldulensis* ssp. *obtusa*
Common Name	northern river red gum
Life Form	tree
Aboriginal Name (acronym)*	apara, itara, piipalya (Pj Yk); apere (Ar); apara (Yk); aper (An); wera, wira, wida (Ad)
Portion used as food	grubs, lerp, nectar
Medicine plant	Yes
Other uses	artefact, ash, firewood, misc., mythology, ornament, toys
Habitat type	watercourse; floodplain
Reference	Dobson (2007); Bonney (2006); Green (2003); Kutsche and Lay (2003); Goddard and Kalotas (2002); Wiltshire and Schmidt (1997)



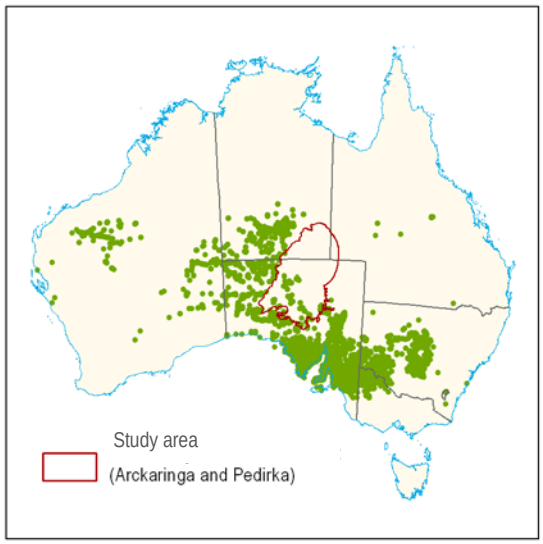
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

MYRTACEAE

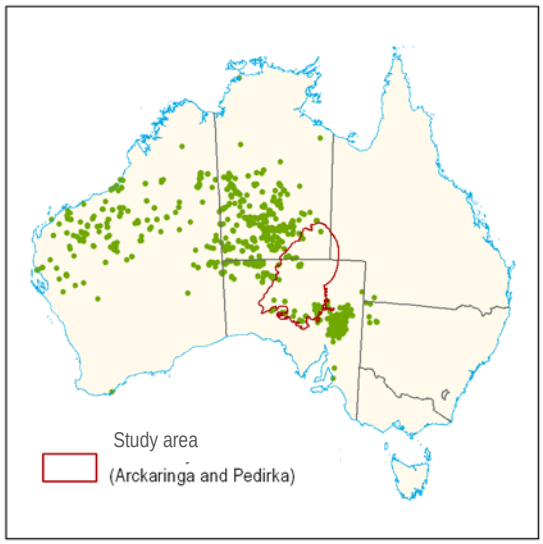
Species	*Eucalyptus coolabah*
Common Name	coolibah
Life Form	tree
Aboriginal Name (acronym)*	ankerr, ankerrmern (Al); ankerrmern, ankerrpmern (An); ankerre (east Ar); ankerre (west Ar); ankara (Pj); karrawari (Wa); waliya, coolebah (Ad)
Portion used as food	seeds, grubs, lerp, water, nectar
Medicine plant	Yes
Other uses	artefact, ash, ornament, fish poison
Habitat type	watercourse; swamp; floodplain
Reference	Bonney (2006); Green (2003); Tolcher (2003); Wiltshire and Schmidt (1997); Latz (1996)



Species	*Eucalyptus socialis*
Common Name	red mallee
Life Form	tree
Aboriginal Name (acronym)*	ngapari, pulura (Pj Yk); madla, wadlha (Ad)
Portion used as food	honey, water
Medicine plant	
Other uses	ceremony, implements
Habitat type	other; salt lake dunes
Reference	Bonney (2006); Kutsche and Lay (2003)



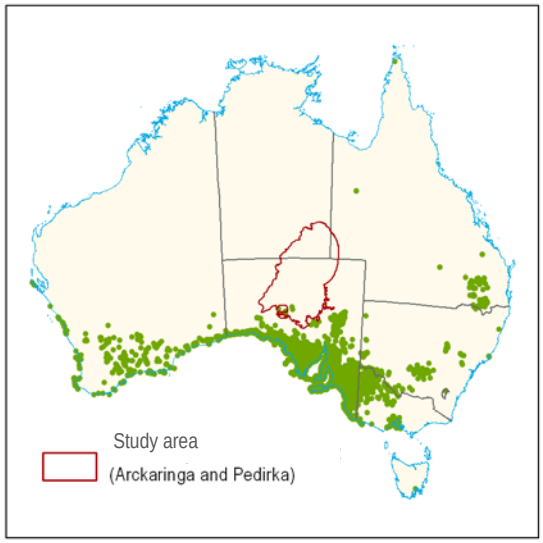
Species	*Melaleuca glomerata*
Common Name	white tea-tree
Life Form	tree
Aboriginal Name (acronym)*	athengkw (Al); irlperl (An); irlperle, watentye (An); ilypili, palyku, tjantutu, yilypili (Pt); ilpili, piyalpa (Pj); kintilarri, kupangardi, pakarli (Wa); al-aru, alarru, ooda, arladu, wooda (Ad)
Portion used as food	
Medicine plant	Yes
Other uses	implements, misc., mythology, shelter construction, toys, bark for cooking
Habitat type	watercourse; salt lake; claypans; mound springs; rocky creek beds
Reference	Bonney (2006); Kutsche and Lay (2003); Latz (1996)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

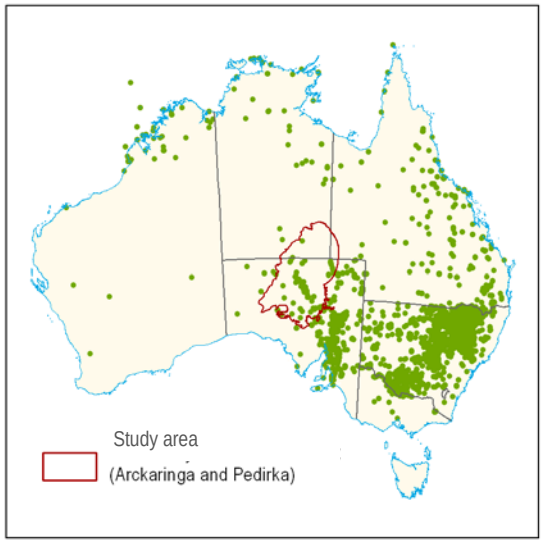
MYRTACEAE

Species	*Melaleuca lanceolata*
Common Name	dryland honey myrtle
Life Form	shrub
Aboriginal Name (acronym)*	utura, uta, wuta, woota, koota (Ad)
Portion used as food	
Medicine plant	
Other uses	implements
Habitat type	watercourses; salt lakes; other
Reference	Bonney (2006)



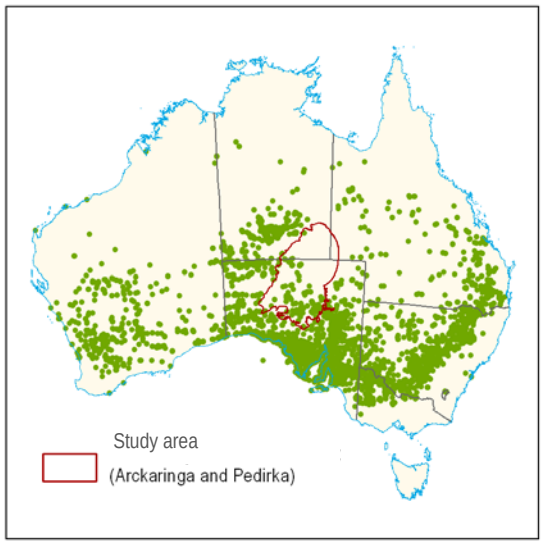
NYCTAGINACEAE

Species	*Boerhavia dominii*
Common Name	tar vine
Life Form	climber
Aboriginal Name (acronym)*	winkara, aldya, tawo (Ad)
Portion used as food	roots, grubs
Medicine plant	
Other uses	
Habitat type	other; watercourses
Reference	Bonney (2006); Kutsche and Lay (2003)



PITTOSPORACEAE

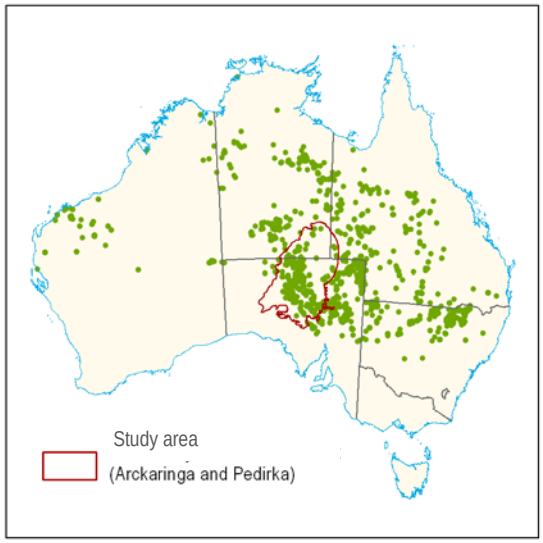
Species	*Pittosporum angustifolium*
Common Name	native apricot
Life Form	tree
Aboriginal Name (acronym)*	alita, kumpalypa (Pj Yk); anawert, atnawert, welterr (An)
Portion used as food	
Medicine plant	yes
Other uses	
Habitat type	other; watercourse
Reference	Green (2003); Kutsche and Lay (2003)



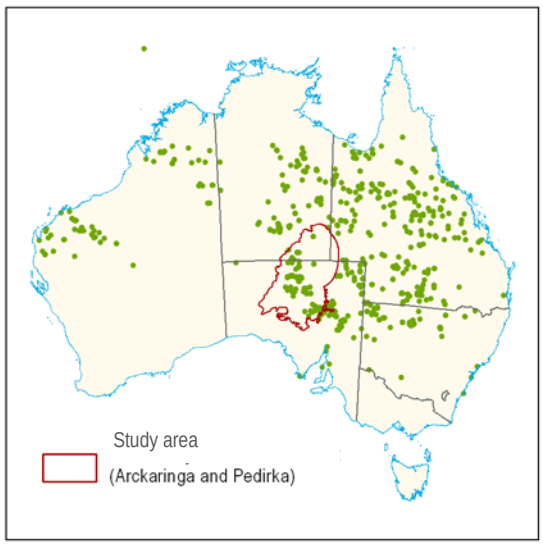
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

POACEAE

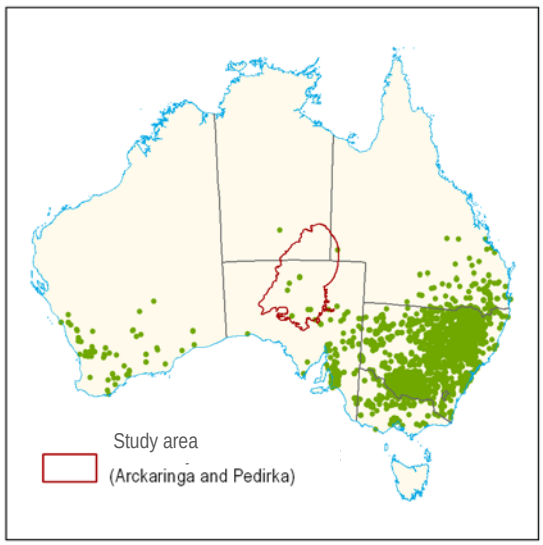
Species	*Astrebla pectinata*
Common Name	barley mitchell grass
Life Form	grass
Aboriginal Name (acronym)*	vawa, pindi (Ad)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	floodplain; other
Reference	Bonney (2006); Wiltshire and Schmidt (1997)



Species	*Chloris pectinata*
Common Name	windmill grass
Life Form	grass
Aboriginal Name (acronym)*	ali, alhi (Ad)
Portion used as food	seed
Medicine plant	
Other uses	
Habitat type	gilgais; watercourses; floodplains; other
Reference	Bonney (2006); Kutsche and Lay (2003)



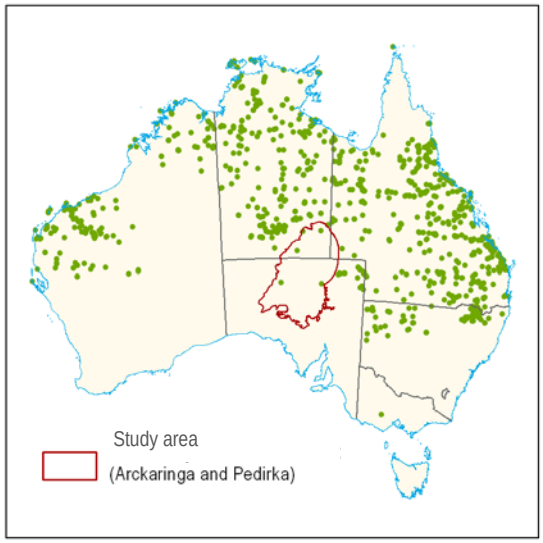
Species	*Chloris truncata*
Common Name	umbrella grass
Life Form	grass
Aboriginal Name (acronym)*	ali (Ad)
Portion used as food	seed
Medicine plant	
Other uses	
Habitat type	gilgais; watercourses; floodplains; other
Reference	Bonney (2006); Kutsche and Lay (2003)



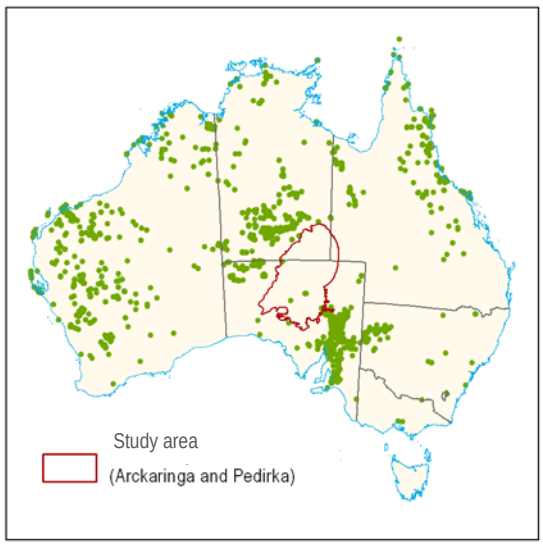
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

POACEAE

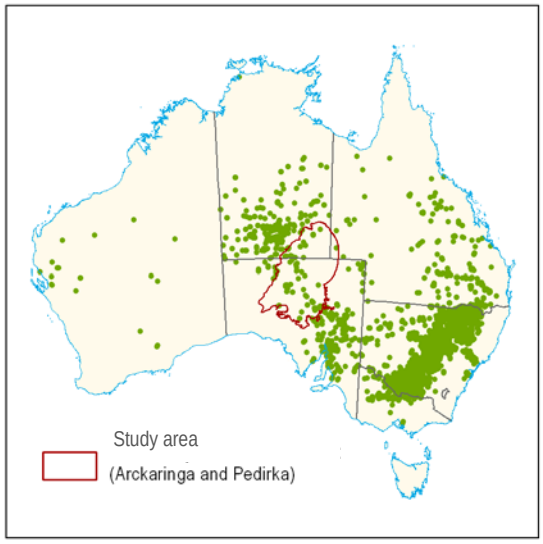
Species	*Chrysopogon fallax*
Common Name	spear grass
Life Form	grass
Aboriginal Name (acronym)*	iylayemp-iylay, iylenty, lyayepelyay (Al); lyayepelyay, iylayempeylay, layempeylay, layepeylay (An)
Portion used as food	
Medicine plant	yes
Other uses	toys; misc.
Habitat type	watercourse; swamp
Reference	Green (2003); Latz (1996)



Species	*Cymbopogon ambiguus*
Common Name	lemon-scented grass
Life Form	grass
Aboriginal Name (acronym)*	aherr-aherr, apmwer, rrwengerrweng (Al); herre-herre (west Ar); yawula (Pt); ilintji (Pj); kalpalpi, karrinyarra, minjipa, pajarnpajarnpa, palpalpi, yayirri-yayirri (Wa); aherre-aherre (Ar); aherr-aherr, ahirr-ahirr (An)
Portion used as food	
Medicine plant	yes
Other uses	
Habitat type	other; watercourses; floodplains; gullies
Reference	Dobson (2007); Kutsche and Lay (2003); Green (2003); Latz (1996)



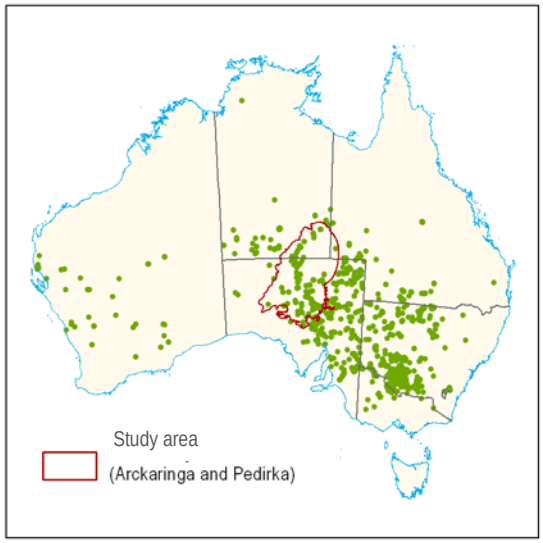
Species	*Enteropogon acicularis*
Common Name	curly windmill grass
Life Form	Grass
Aboriginal Name (acronym)*	tunper (Al); tunpere (east Ar); ilintji, mukul-mukulpa (Pj); tingari (Wa)
Portion used as food	
Medicine plant	
Other uses	implement
Habitat type	watercourse
Reference	Latz (1996)



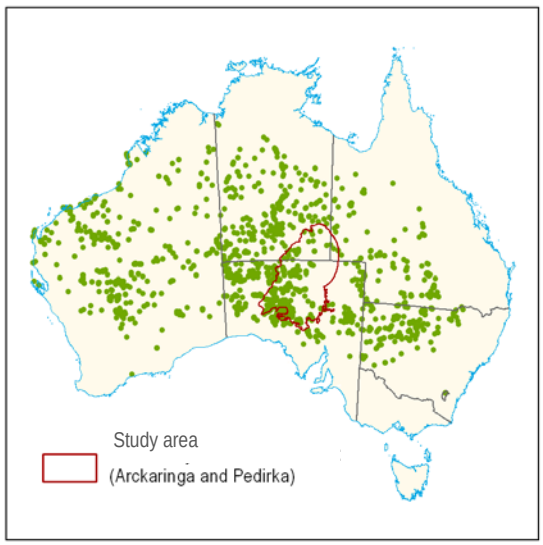
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

POACEAE

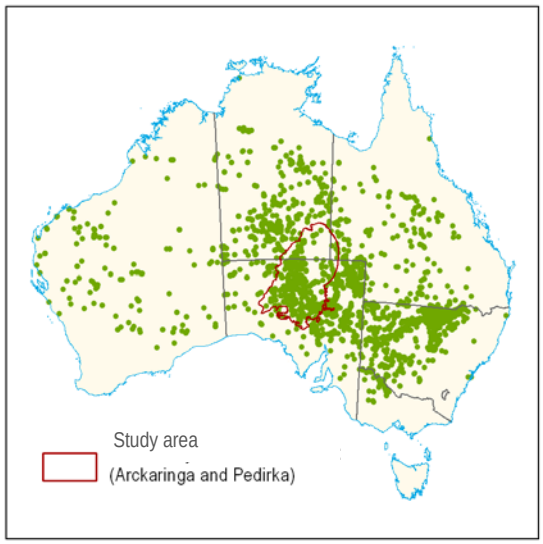
Species	*Eragrostis australasica*
Common Name	swamp canegrass
Life Form	Grass
Aboriginal Name (acronym)*	yutara (Ad)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	swamps; gilgais; claypans, watercourses; other
Reference	Bonney (2006); Kutsche and Lay (2003)



Species	*Eragrostis eriopoda*
Common Name	naked woollybutt
Life Form	Grass
Aboriginal Name (acronym)*	wangunu (Yk); antyey, alyatywereng (An); yutara (Ad)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	other; floodplains; levees
Reference	Bonney (2006); Green (2003); Goddard and Kalotas (2002)



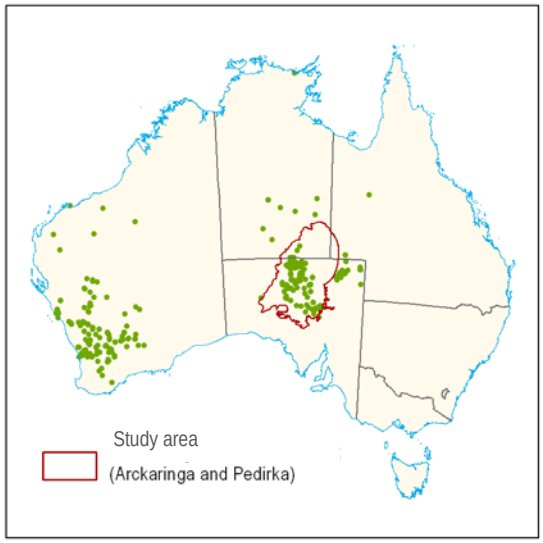
Species	*Eragrostis setifolia*
Common Name	neverfail
Life Form	Grass
Aboriginal Name (acronym)*	yutara (Ad)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	gilgais; floodplains; watercourses; other
Reference	Bonney (2006); Kutsche and Lay (2003)



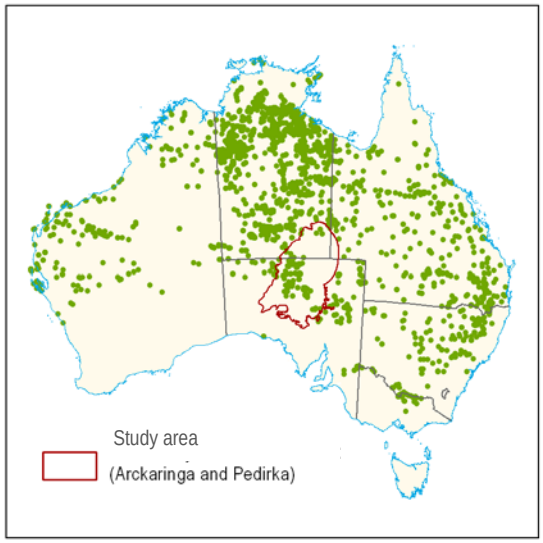
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

POACEAE

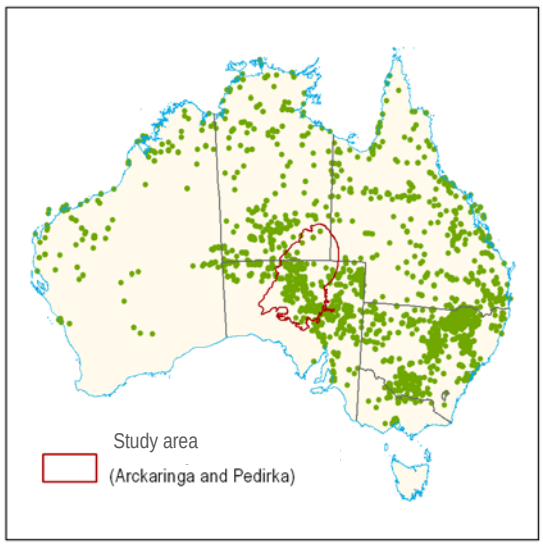
Species	*Eriachne ovata*
Common Name	swamp wanderrie
Life Form	Grass
Aboriginal Name (acronym)*	taa-taa (Pj Yk)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	watercourses; swamps; other
Reference	Kutsche and Lay (2003)



Species	*Eulalia aurea*
Common Name	silky browntop
Life Form	Grass
Aboriginal Name (acronym)*	ilintji (Pj Yk); arlperlp (An)
Portion used as food	
Medicine plant	yes
Other uses	sleeping mat, misc.
Habitat type	watercourse
Reference	Green (2003); Kutsche and Lay (2003)



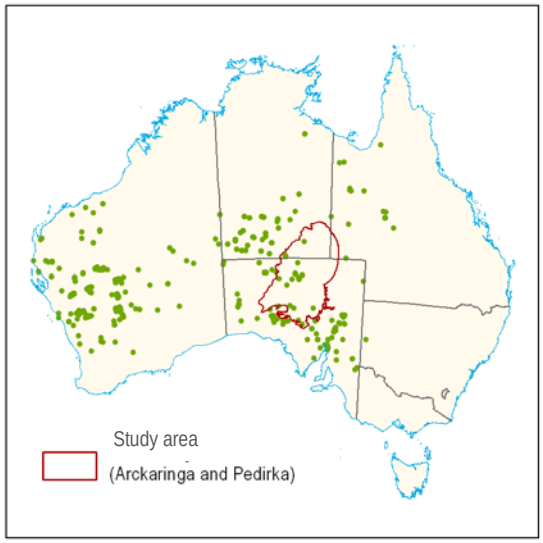
Species	*Panicum decompositum*
Common Name	native millet
Life Form	Grass
Aboriginal Name (acronym)*	altywart (Al); altywart, altyart (An); altyartwe (east Ar); altywert (west Ar); iljuta, tjalkara, yalkara (Pt); kaltu-kaltu, tarkaultu (Pj); yika, yurlumpuru (Wa); kaltu-kaltu (Yk); yutara (Ad)
Portion used as food	seeds
Medicine plant	
Other uses	mythology
Habitat type	other; clayey; better-water soils; floodplains; gilgais; creek banks
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003); Goddard and Kalotas (2002); Latz (1996)



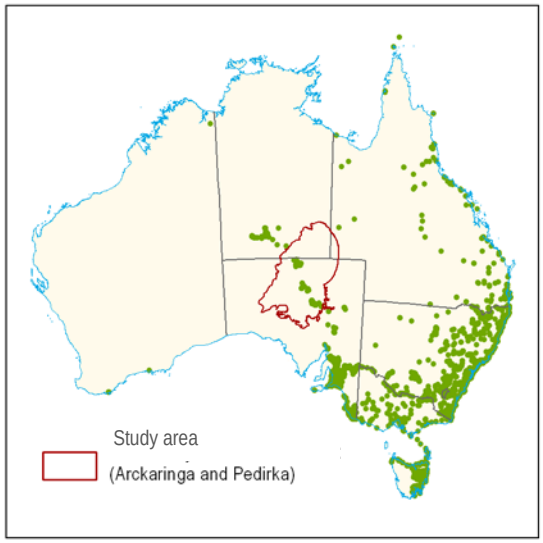
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

POACEAE

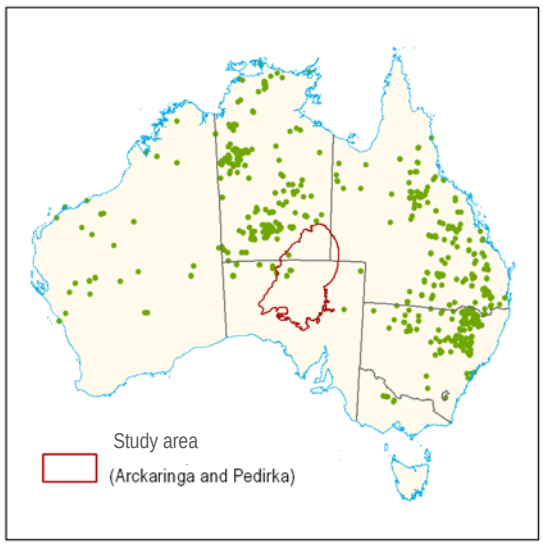
Species	*Paspalidium basicladum*
Common Name	
Life Form	grass
Aboriginal Name (acronym)*	kapari, wiyulpa (Pj)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	other; salt lake
Reference	Latz (1996)



Species	*Phragmites australis*
Common Name	common reed
Life Form	grass
Aboriginal Name (acronym)*	pmweltatye (east Ar); apmwelteye, pmweltatye (west Ar)
Portion used as food	root
Medicine plant	
Other uses	ceremony, shelter construction, toys
Habitat type	watercourse; waterholes; creek banks; mound springs; bore-drain swamps
Reference	Kutsche and Lay (2003); Latz (1996)



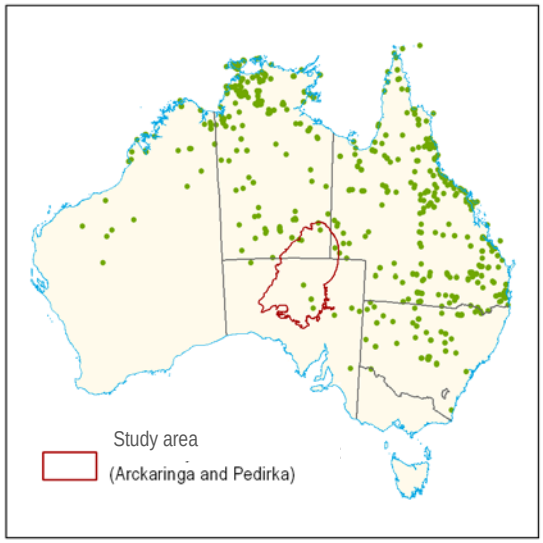
Species	*Themeda avenacea*
Common Name	swamp grass
Life Form	grass
Aboriginal Name (acronym)*	irlenty, iylenty (Al); irlenty, lyenty (An); kaltura (Pt); ilintji (Pj); kurntulja, kurnturtja, yinjiri (Wa)
Portion used as food	
Medicine plant	
Other uses	decoration, mythology, toys
Habitat type	swamp
Reference	Green (2003); Latz (1996)



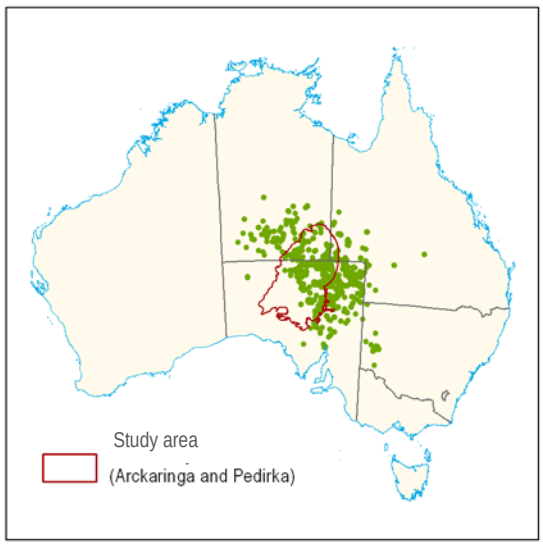
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

POACEAE

Species	*Urochloa subquadripara*
Common Name	armgrass millet
Life Form	grass
Aboriginal Name (acronym)*	atnyent, atwet (Al); anekwerr, mamperrk (An); itwerte (west Ar); mana (Pt); ilirara, kunakanti, kunawitu (Pj); yika (Wa)
Portion used as food	seeds
Medicine plant	
Other uses	
Habitat type	watercourse; swamp
Reference	Latz (1996)

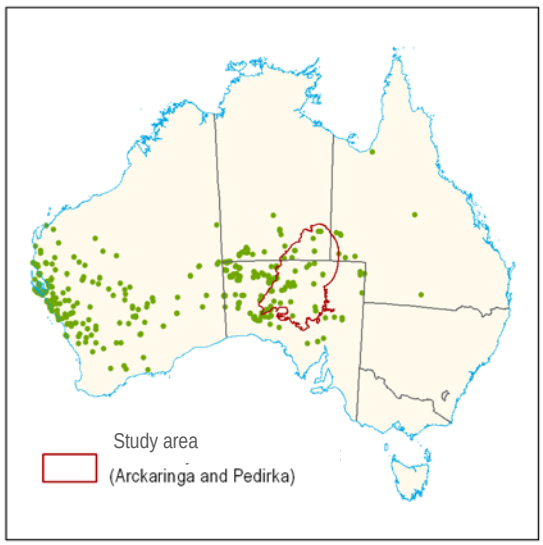


Species	*Zygochloa paradoxa*
Common Name	sandhill canegrass
Life Form	grass
Aboriginal Name (acronym)*	bree-ta (Ad)
Portion used as food	
Medicine plant	
Other uses	burial ceremonies
Habitat type	other; sandy creek banks
Reference	Bonney (2006); Kutsche and Lay (2003)



PORTULACACEAE

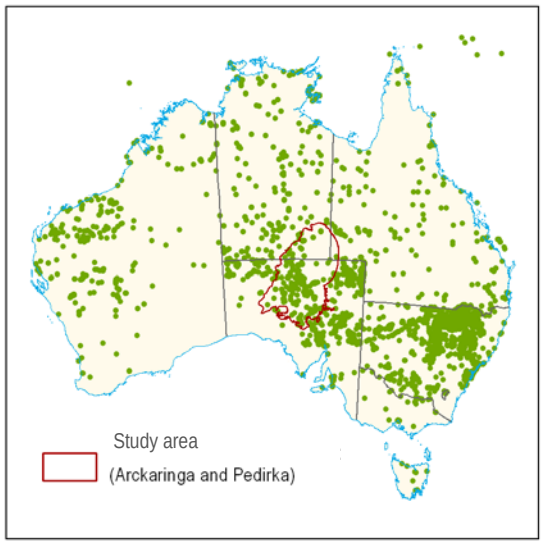
Species	*Calandrinia polyandra*
Common Name	parakeelya
Life Form	forb
Aboriginal Name (acronym)*	parakeelya, manyura (Ad)
Portion used as food	roots, leaves, seeds
Medicine plant	
Other uses	
Habitat type	other; floodplains
Reference	Bonney (2006); Kutsche and Lay (2003)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

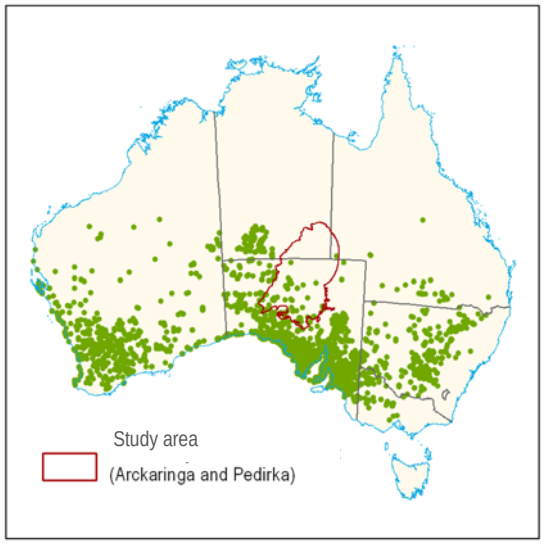
PORTULACACEAE

Species	*Portulaca oleracea*
Common Name	pigweed, purslane
Life Form	forb
Aboriginal Name (acronym)*	lyaw (Al); akart, ilyaw, akat, kat (An); alyawe, lyawe, ngkwetyeke (east Ar); lyawe, ngkweteke (west Ar); wakati, wayali (Pt); maru-maru, tuntunparara, wakati (Pj); wakati (Yk); ngadli (Yd Yw); munyeroo, w(v)idla, verka, vidla-vaka, wirlda, manyura (Ad)
Portion used as food	seeds, greens, root, stem
Medicine plant	
Other uses	mythology
Habitat type	other; river banks; floodplains
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003);Tolcher (2003); Goddard and Kalotas (2002); Latz (1996)

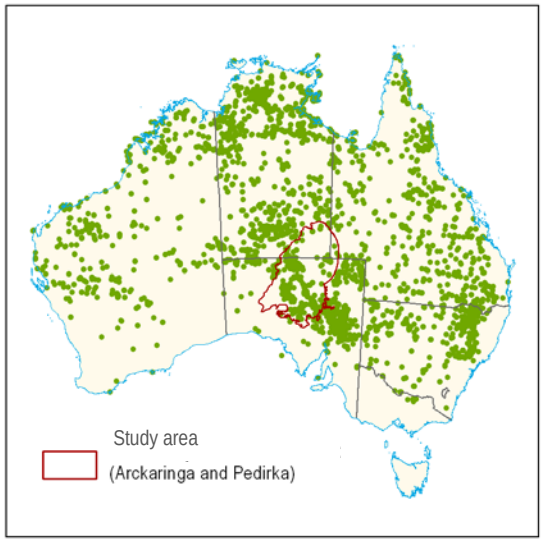


SANTALACEAE

Species	*Santalum acuminatum*
Common Name	quandong
Life Form	tree
Aboriginal Name (acronym)*	pmerlpe, pmwerlpe (east Ar); pmwerlpe (west Ar); mangata, walku, wayanu, witirrpa (Pj Yk); mangarda, mangarta (Wa); wayanu (Ya); mangart, mwerlp, amwerlp (An); uti, urti, wurti, wulti, nakala (Ad)
Portion used as food	fruit
Medicine plant	yes
Other uses	artefact, mythology, water
Habitat type	other; near watercourses; near salt lakes
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003); Goddard and Kalotas (2002); Latz (1996)



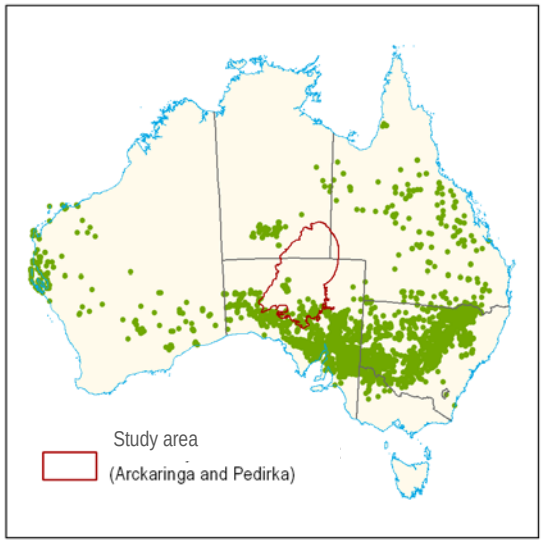
Species	*Santalum lanceolatum*
Common Name	plum bush
Life Form	tree
Aboriginal Name (acronym)*	alkwa (Al); alkwa, ankwerlay, ankwerely (An); alkwe, ankweleye, arrankweye (east Ar); rrankweye (west Ar); arrnguli, kupata (Pj); marrkirdi, mukaki, yankurlayi (Wa); Vatiwaka (Ad); kupata (Yk); mandawarra (Yd Yw); arnguli (Pj); kupata (Yk); manswarra, mandaworra, vatiwaka (Ad)
Portion used as food	fruit
Medicine plant	yes
Other uses	decoration, mythology
Habitat type	other; watercourse, creek
Reference	Bonney (2006); Green (2003); Kutsche and Lay (2003); Tolcher (2003); Goddard and Kalotas (2002); Latz (1996); Winfield (1982)



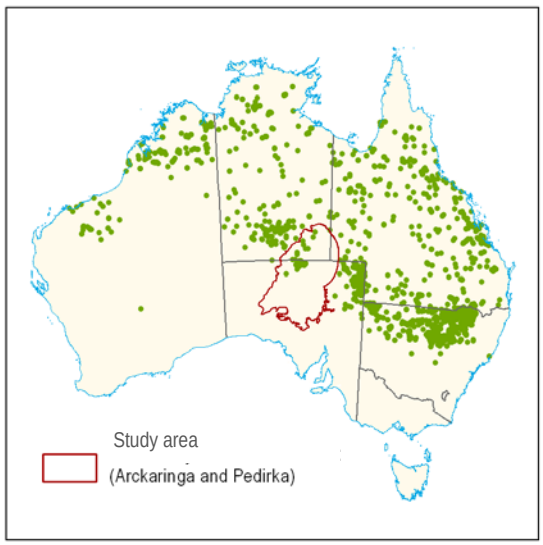
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

SAPINDACEAE

Species	*Alectryon oleifolius*
Common Name	bullock bush
Life Form	tree
Aboriginal Name (acronym)*	pmwerlpe-pmwerlpe (west Ar); winyikutu (Pt); tjalura (Pj); minyara, minara, minera, mindra, palkurunu (Ad)
Portion used as food	gum, buds, seed
Medicine plant	
Other uses	clubs, ash
Habitat type	clay; watercourse; swamp
Reference	Bonney (2006); Latz (1996)

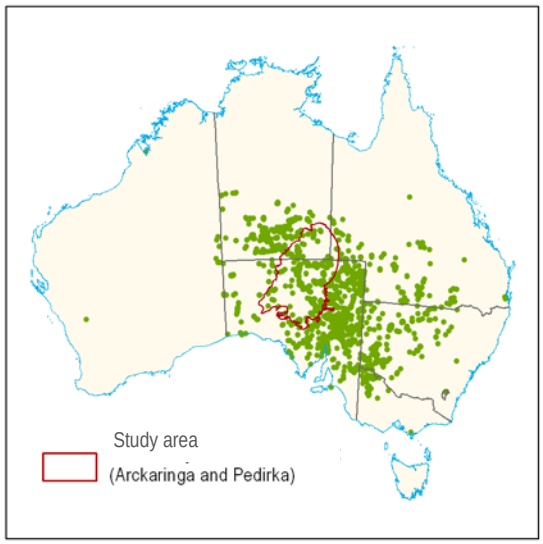


Species	*Atalaya hemiglauca*
Common Name	whitewood
Life Form	tree
Aboriginal Name (acronym)*	arlperr (An)
Portion used as food	gum, grub
Medicine plant	
Other uses	implements; artefacts
Habitat type	sand dune swales; alluvial floodplain soils
Reference	Green (2003); Kutsche and Lay (2003); Wiltshire and Schmidt (1997)



SOLANACEAE

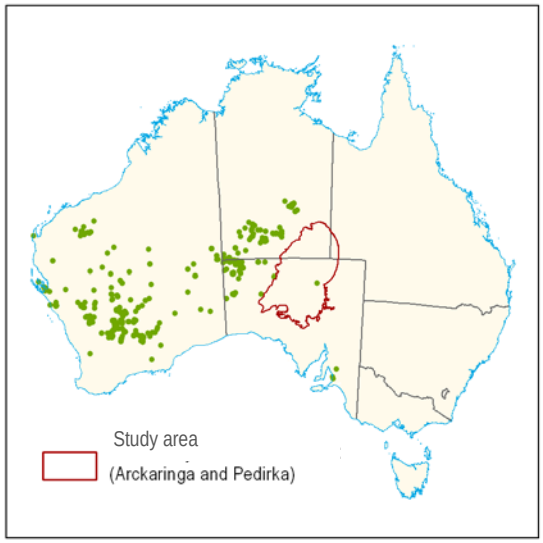
Species	*Nicotiana velutina*
Common Name	Native Tobacco
Life Form	forb
Aboriginal Name (acronym)*	kngwarrey-kngwarrey (Al); ingkwelpe-ingkwelpe, ingkwerlp-ingkwerlpe (east Ar); ingkwerlp-ingkwerlpe (west Ar); pina-pina, pinar-pinarpa (Pj); jungarrayi-jungarrayi (Wa); ngwarray-ngwarray (An); yuru-vundulundula, urp-rindju-lu, vakatiri (Ad)
Portion used as food	
Medicine plant	
Other uses	narcotic
Habitat type	other; river banks; salt lakes
Reference	Bonney (2006); Green (2003); Latz (1996)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

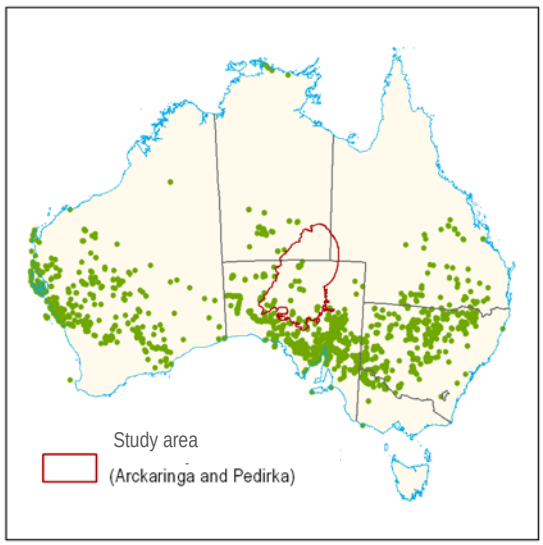
STERCULIACEAE

Species	*Brachychiton gregorii*
Common Name	desert kurrajong
Life Form	tree
Aboriginal Name (acronym)*	apeng (Al); apenge (east Ar); ngalte (west Ar); ngalta (Pt); ngalta, anpiri (tap root) (Pj); ngalta (Wa); apeng (An)
Portion used as food	seeds, roots, grubs
Medicine plant	
Other uses	artefacts, water
Habitat type	other; near watercourses
Reference	Green (2003); Latz (1996)



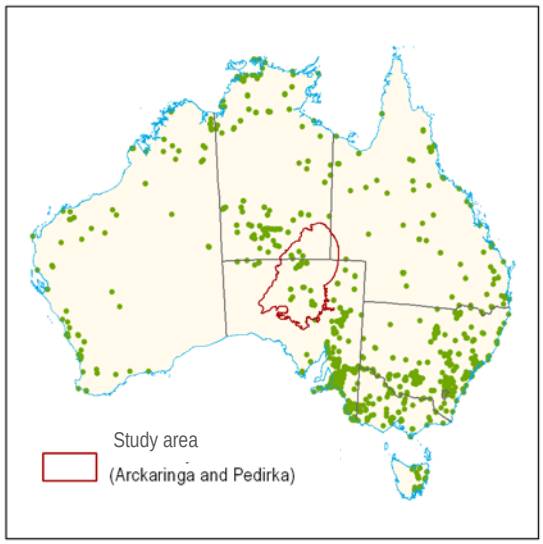
THYMELAEACEAE

Species	*Pimelea microcephala*
Common Name	shrubby rice-flower
Life Form	shrub
Aboriginal Name (acronym)*	tjiltarupi (Pj Yk); wir-pari, wirri-pirri, wilpiri, walpari, willparee (Ad)
Portion used as food	
Medicine plant	yes
Other uses	fibre
Habitat type	other; watercourses
Reference	Bonney (2006); Kutsche and Lay (2003); Latz (1996)



TYPHACEAE

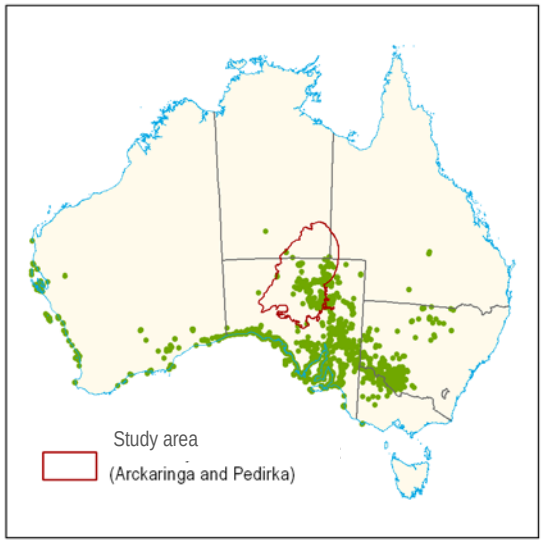
Species	*Typha domingensis*
Common Name	bull-rush
Life Form	sedge
Aboriginal Name (acronym)*	ingkwe (west Ar); tjintjira, tjuna-tjuna (Pj); vanduta, unamburru (Ad)
Portion used as food	greens, rhizomes, root shoots
Medicine plant	
Other uses	
Habitat type	watercourse; swamp
Reference	Bonney (2006); Latz (1996)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

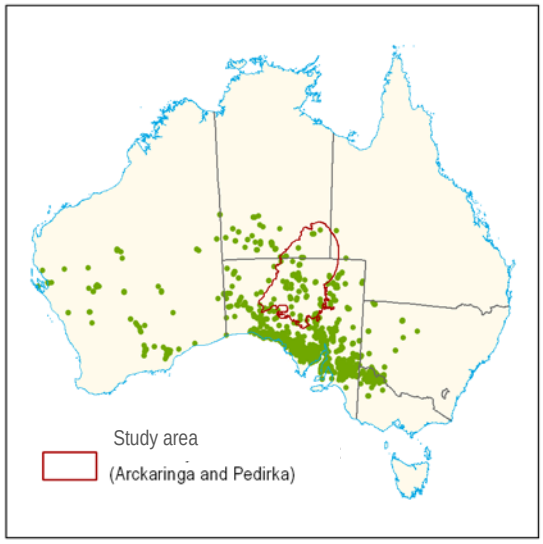
ZYGOPHYLLACEAE

Species	*Nitraria billardierei*
Common Name	nitre bush
Life Form	shrub
Aboriginal Name (acronym)*	wadniri, wadnhiri (Ad)
Portion used as food	fruit
Medicine plant	
Other uses	
Habitat type	other; salt lake; watercourses; floodplains
Reference	Bonney (2006); Kutsche and Lay (2003)



THYMELAEACEAE

Species	*Zygophyllum aurantiacum* ssp. *aurantiacum*
Common Name	shrubby twinleaf
Life Form	shrub
Aboriginal Name (acronym)*	malantu, piyarpiti (Pj Yk); midi, midti, mid-di, midhi (Ad)
Portion used as food	grubs
Medicine plant	
Other uses	cooking
Habitat type	other; claypans
Reference	Bonney (2006); Kutsche and Lay (2003)

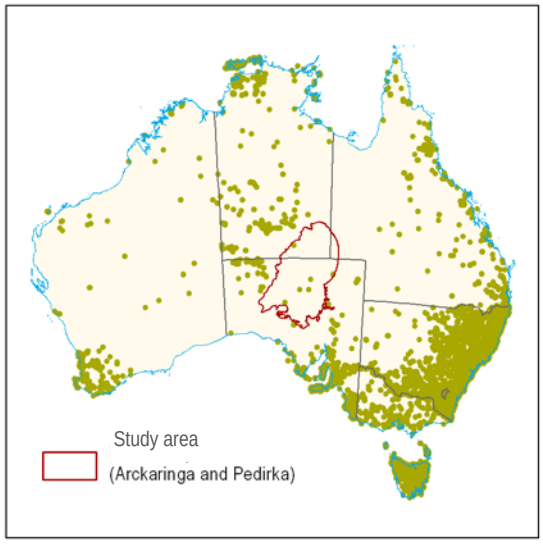


* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru/Yarluyandi (Wg/Yr); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

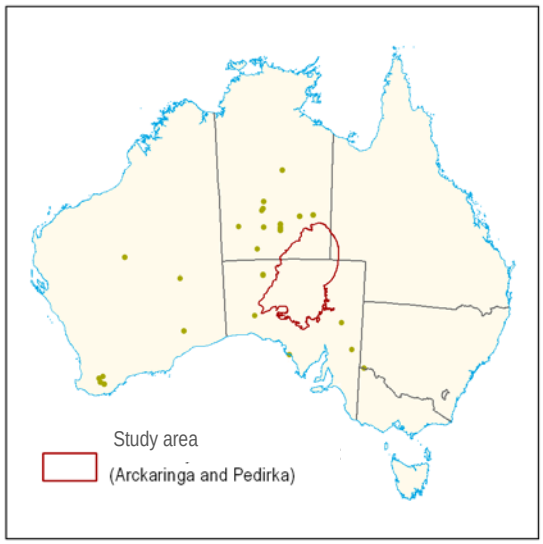
B. Detailed information on the fauna utilised by Aboriginal people

MAMMALS

Species	*Trichosurus vulpecula*
Common Name	common brushtail possum
Aboriginal Name (acronym)*	pildra (Yd Yw); wayuta, munga wayuru (Pj Yk); pildra (D); pilta (Wi, M, Ww); pilla, peedla, pillpa (Bg); pilda (Ab); bilda (Ky, Ad, Nu); bilta (Ad); wombla, womboola (Ab); wampala, marloo (Ng); murloo, mullo (Yw); murlu (Ww); burloo (Ka); warnunga (Kk); koorakunnia (Bj), yoranga (M), murrathurra (T), gurrigen (Wk)
Food resource	meat
Other uses	fur, skin, sinew, hair
Habitat type	other; riparian watercourse, creek
Reference	Tolcher (2003); Reid (1993); Winfield (1982); Harvey Johnston (1943)



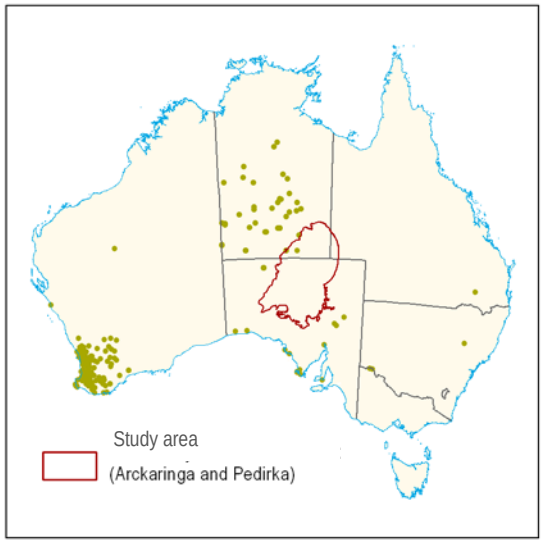
Species	*Onychogalea lunata*
Common Name	crescent nail tailed wallaby
Aboriginal Name (acronym)*	tawal(pa) (Pj Yk)
Food resource	meat
Other uses	
Habitat type	other; creeks
Reference	Winfield (1982)



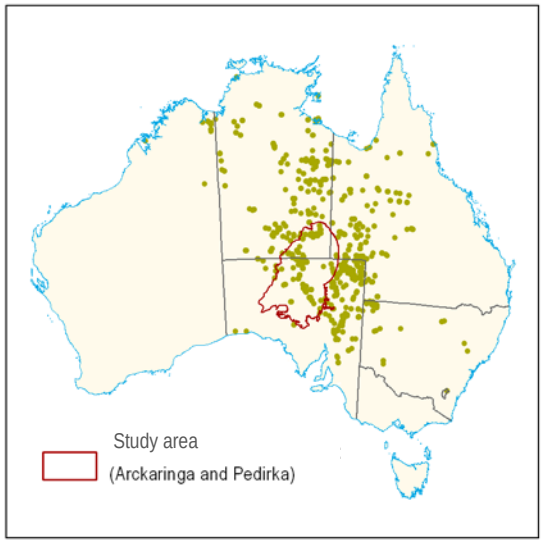
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

MAMMALS

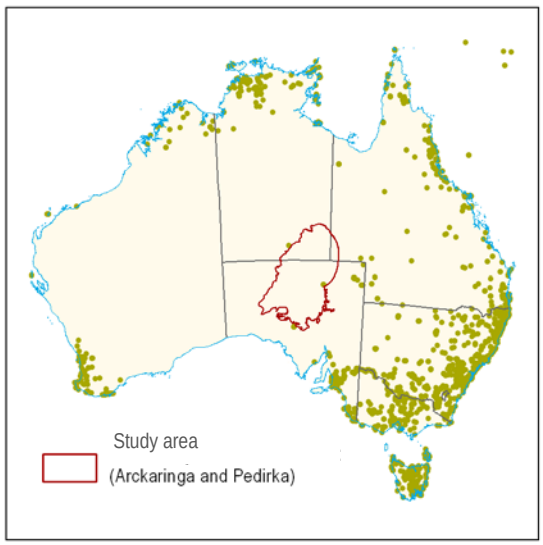
Species	*Dasyurus geoffroii*
Common Name	western quoll
Aboriginal Name (acronym)*	partjata, kinika (Pj Yk); tjikawa-ra (D); aku-indji, jikaura (Nj, D); ik-oo-urra (Pi)
Food resource	meat
Other uses	
Habitat type	creeks; other
Reference	Winfield (1982)



Species	*Rattus villosissimus*
Common Name	long-haired rat
Aboriginal Name (acronym)*	mi-i-kudrru (Yd Yw); mai-aru (Nj, Wg/Yr)
Food resource	meat
Other uses	fur, tails, hair, adornment
Habitat type	watercourse; floodplain; other
Reference	Tolcher (2003); Harvey Johnston (1943)



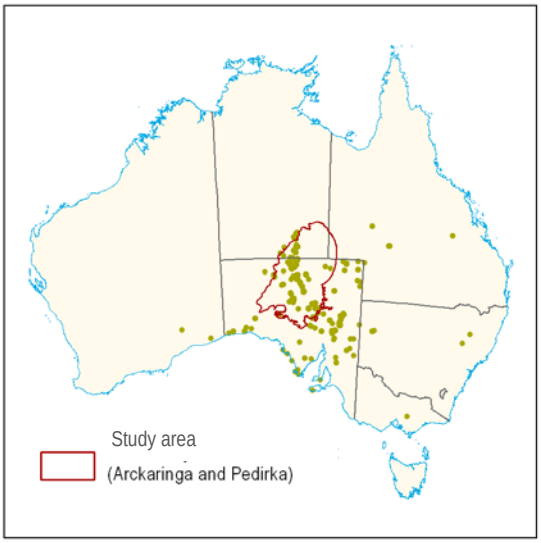
Species	*Hydromys chrysogaster*
Common Name	water rat
Aboriginal Name (acronym)*	thuka thayini (Yd Yw)
Food resource	meat
Other uses	fur, tails, hair, adornment
Habitat type	watercourse; other
Reference	Tolcher (2003)



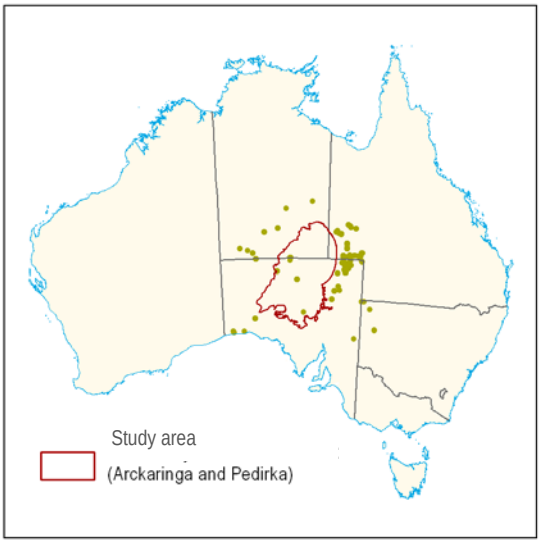
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

MAMMALS

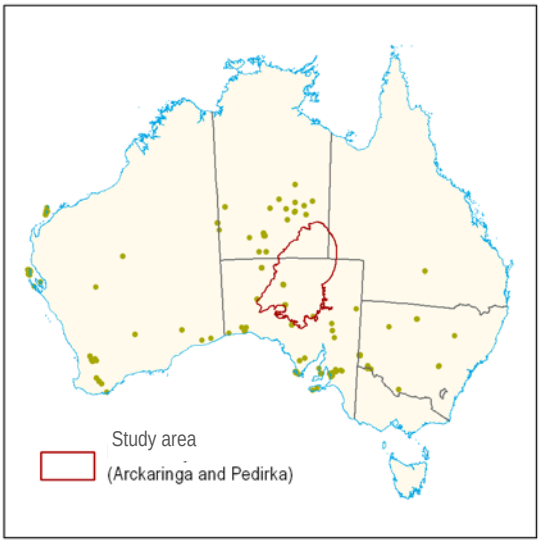
Species	*Pseudomys australis*
Common Name	plains rat
Aboriginal Name (acronym)*	pallyoora (Wg/Yr, Ng)
Food resource	meat
Other uses	fur, tails, hair, adornment
Habitat type	recorded as abundant at Goyders Lagoon
Reference	Harvey Johnston (1943)



Species	*Notomys cervinus*
Common Name	fawn hopping mouse
Aboriginal Name (acronym)*	oorarrie (Wonga-nguru=Wg/Yr?)
Food resource	meat
Other uses	
Habitat type	Clay-pans
Reference	Harvey Johnston (1943)



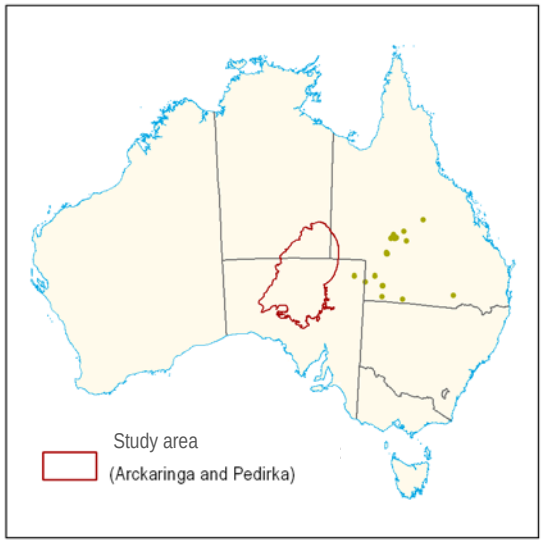
Species	*Bettongia lesueur*
Common Name	burrowing bettong
Aboriginal Name (acronym)*	mitika, tjunku (Pj)
Food resource	meat
Other uses	
Habitat type	other; creek banks, salt lakes
Reference	Reid (1993)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (Di); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

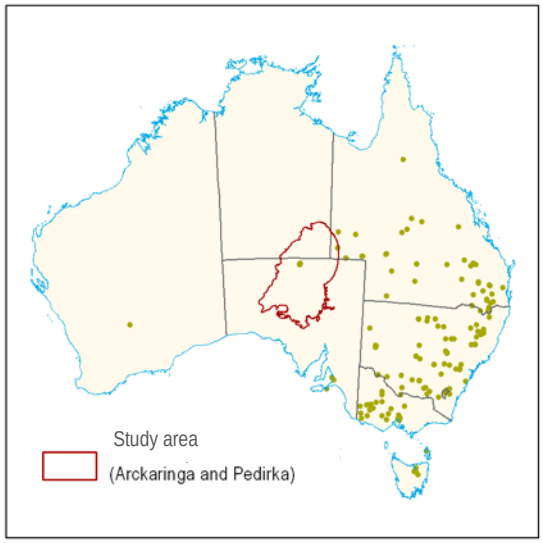
REPTILE

Species	*Emydura macquarii emmotti*
Common Name	Cooper Creek turtle
Aboriginal Name (acronym)*	nharramindji (Yd Yw)
Food resource	meat
Other uses	
Habitat type	watercourse; other
Reference	Tolcher (2003)

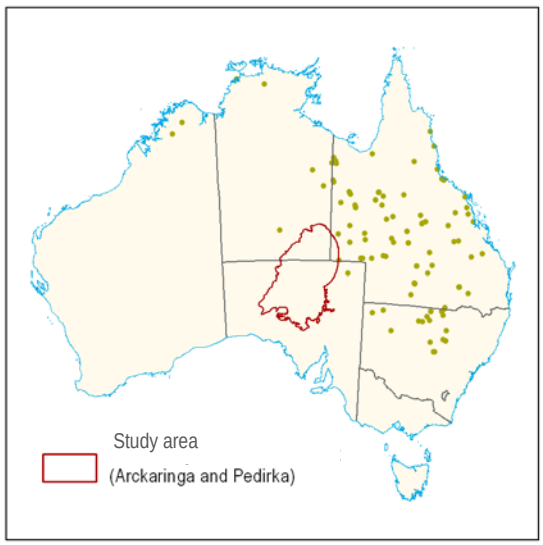


CRUSTACEAN

Species	*Cherax destructor*
Common Name	yabbie
Aboriginal Name (acronym)*	koonkideri, kunkudirri (Ab); koonkoodirri, koonkooderie (Ng); kurnkuderri, kuniekundri (D); kidneykooderi (Yw); buggila (Wk); boogali (Bj); boagalli, muracuru, umpurra (Ww); unde (Ka); thandoola (T); wolkoo (Nu); narraminyah (Yw); thinta (T); kutera (M); trunagi (Kr); illya-anma (Ar)
Food resource	meat
Other uses	
Habitat type	watercourse; other
Reference	Tolcher (2003); Harvey Johnston (1943)



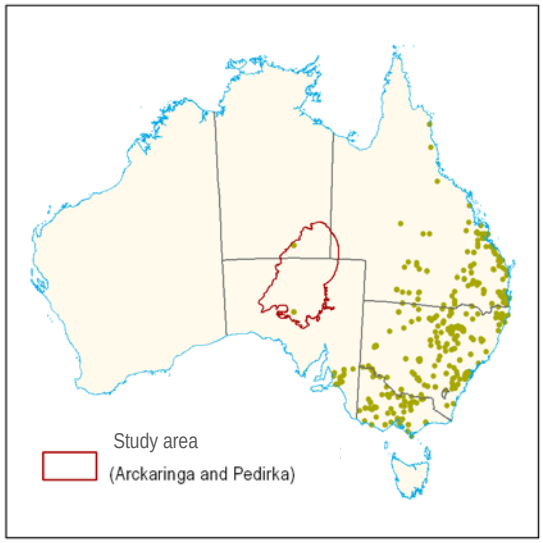
Species	*Austrothelphusa transversa*
Common Name	freshwater crab
Aboriginal Name (acronym)*	koranti (Ng, Wg/Yr); jilaki (Nj); kung-kutiri? (D)
Food resource	meat; water
Other uses	
Habitat type	watercourse; other
Reference	Harvey Johnston (1943)



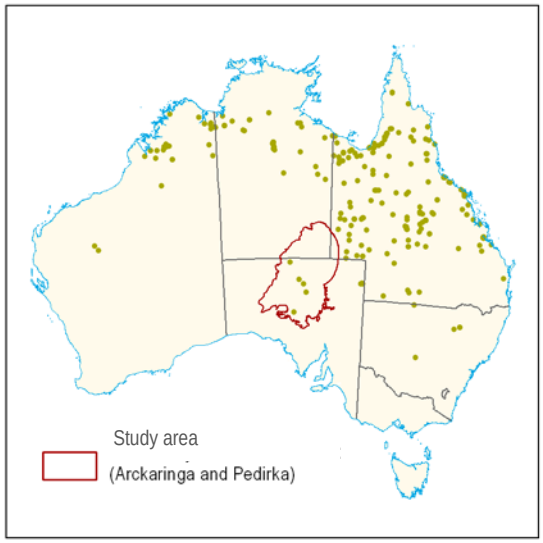
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

BIVALVE

Species	*Velesunio ambiguus*
Common Name	freshwater mussel
Aboriginal Name (acronym)*	thuka (Yd Yw)
Food resource	meat
Other uses	
Habitat type	watercourse; other
Reference	Tolcher (2003)



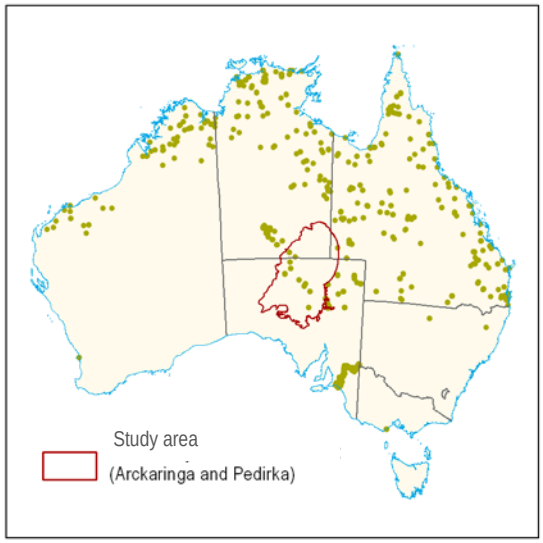
Species	*Velesunio wilsonii*
Common Name	freshwater mussel
Aboriginal Name (acronym)*	koorie, kuri (D); koori (Kg)
Food resource	meat
Other uses	shell
Habitat type	watercourse; other
Reference	Harvey Johnston (1943)



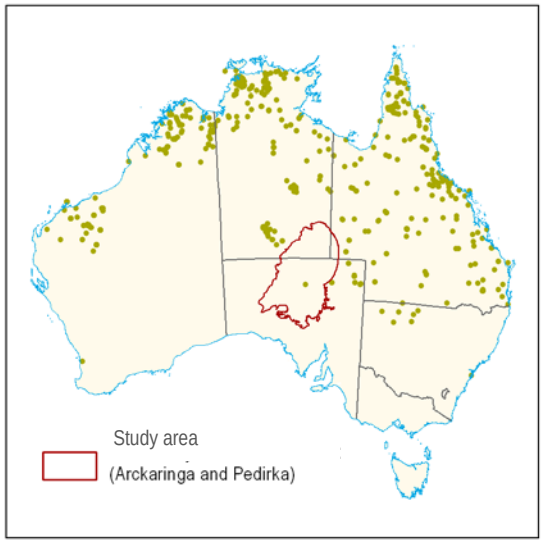
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

FISH

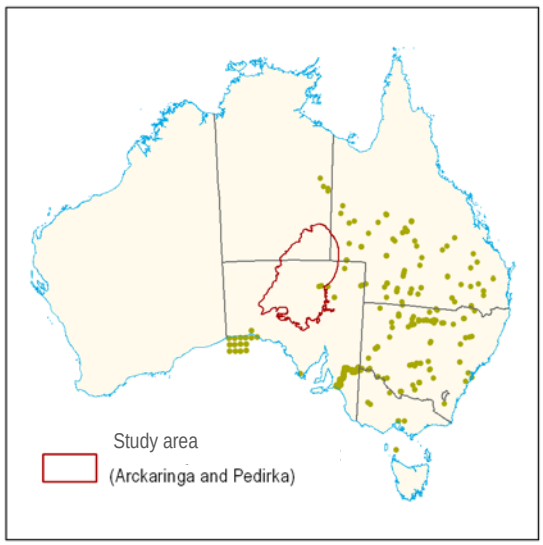
Species	*Nematalosa erebi*
Common Name	bony bream
Aboriginal Name (acronym)*	kirapara (D); ngampuru (Yw); namba (Wi, Bk); interpitna (Ar); paru (D); pitjanka (Yd Yw)
Food resource	meat
Other uses	
Habitat type	watercourse; other
Reference	Tolcher (2003); Harvey Johnston (1943)



Species	*Neosilurus hyrtlii*
Common Name	catfish
Aboriginal Name (acronym)*	ko-pe is general term for fish (Pi); kapi (Yd Yw)
Food resource	meat
Other uses	
Habitat type	watercourse; other
Reference	Tolcher (2003); Harvey Johnston (1943)



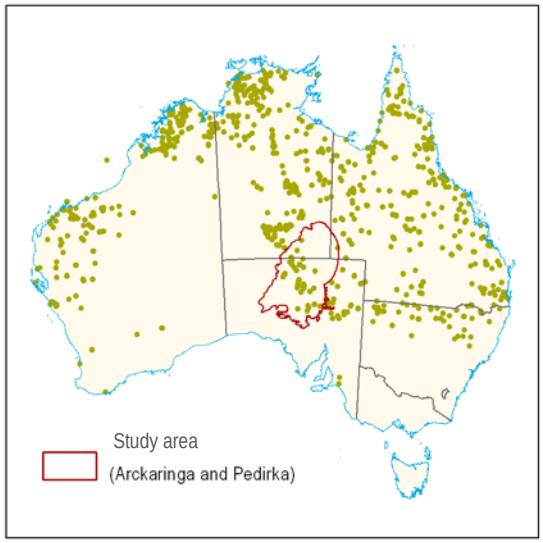
Species	*Macquaria ambigua*
Common Name	yellow belly
Aboriginal Name (acronym)*	makara (Ng, Wg/Yr); ngampurru (Yd Yw)
Food resource	meat
Other uses	
Habitat type	watercourse; other
Reference	Tolcher (2003); Harvey Johnston (1943)



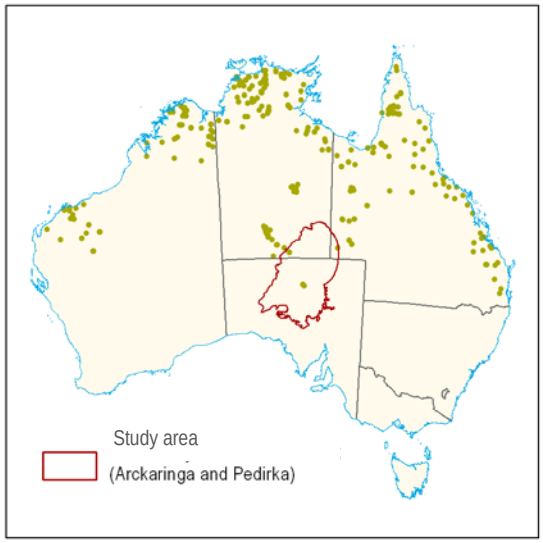
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

FISH

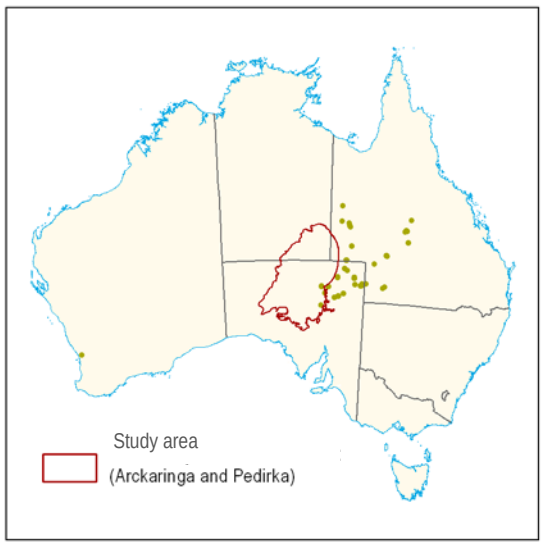
Species	*Leiopotherapon unicolour*
Common Name	spangled perch
Aboriginal Name (acronym)*	warri (Ng, Wg/Yr); multa-multa (D); peru, umperu (Yd Yw)
Food resource	meat
Other uses	
Habitat type	watercourse; other
Reference	Tolcher (2003); Harvey Johnston (1943)



Species	*Amniataba percoides*
Common Name	banded grunter
Aboriginal Name (acronym)*	warri (Ng, Wg/Yr); multa-multa (D)
Food resource	meat
Other uses	
Habitat type	watercourse; other
Reference	Harvey Johnston (1943)



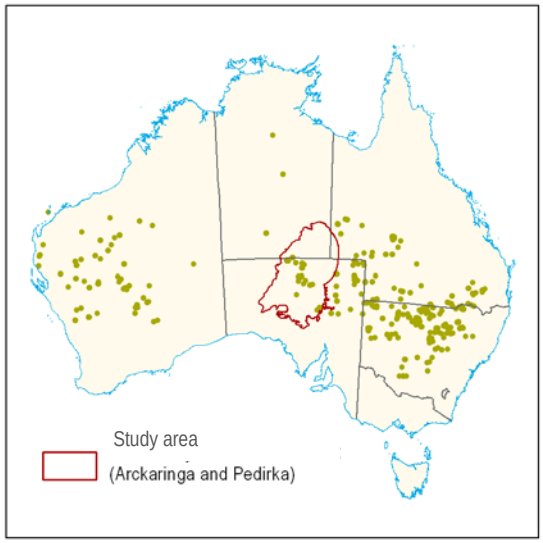
Species	*Bidyanus welchi*
Common Name	Welch's grunter
Aboriginal Name (acronym)*	tharuwitji (Yd Yw)
Food resource	meat
Other uses	
Habitat type	watercourse; other
Reference	Tolcher (2003)



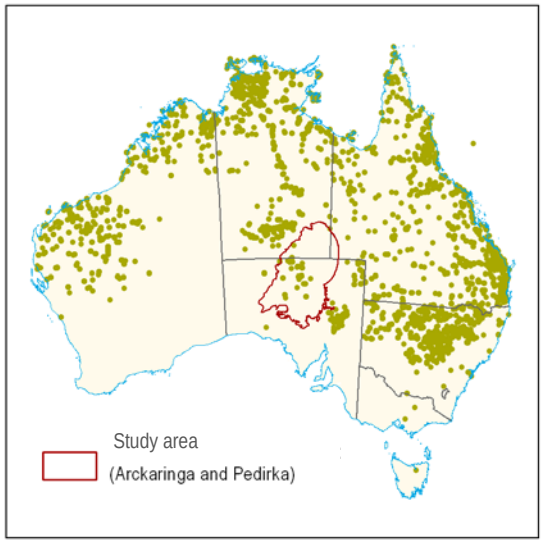
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

FROGS

Species	*Cyclorana platycephala*
Common Name	water-holding frog
Aboriginal Name (acronym)*	kulathirrie, kaladiri (D); kutyarku (Yd); kuyarku (Yw)
Food resource	not sure which species were eaten?
Other uses	
Habitat type	watercourse; other
Reference	Harvey Johnston (1943)



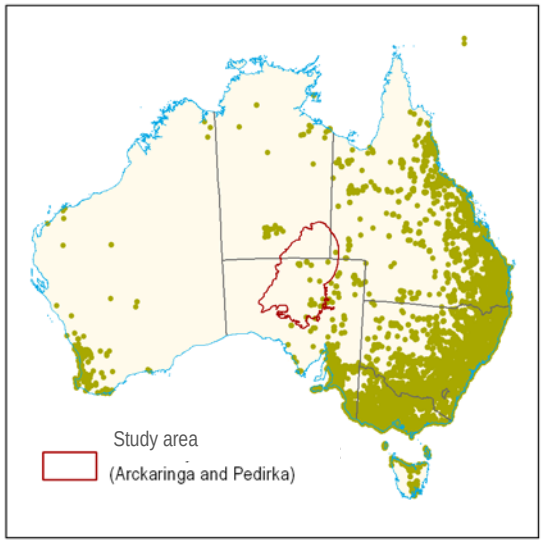
Species	*Litoria rubella*
Common Name	desert-tree frog
Aboriginal Name (acronym)*	tidnamara (D, Wg/Yr, Ab, Ng); ngarna (Ad)
Food resource	not sure which species were eaten?
Other uses	
Habitat type	watercourse; other
Reference	Harvey Johnston (1943)



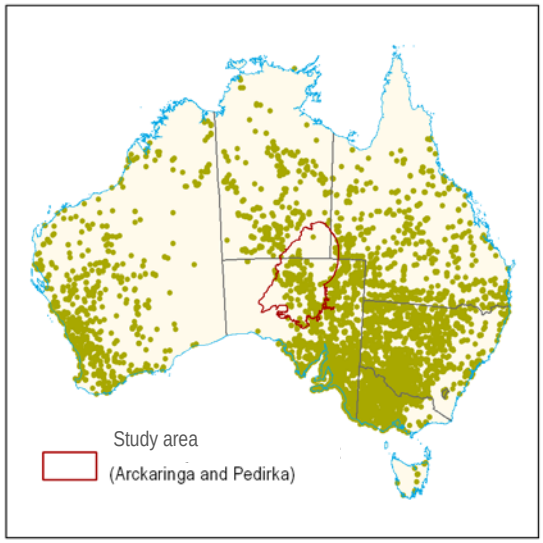
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

WATERBIRDS

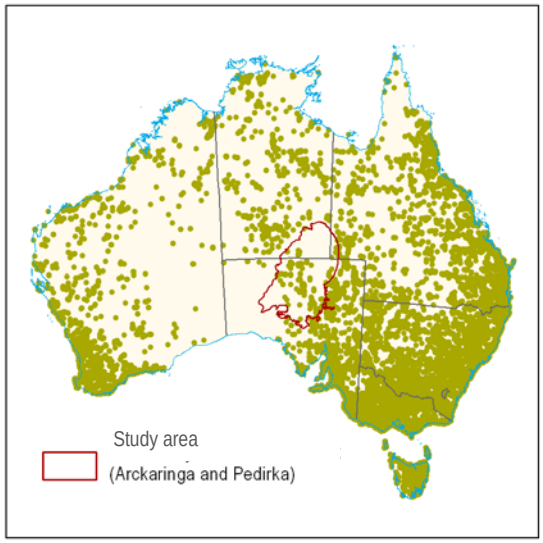
Species	*Gallinula tenebrosa*
Common Name	dusky moorhen
Aboriginal Name (acronym)*	wattawirrie (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	usually freshwater, some brackish; wetlands, open waters, swamps, lakes
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



Species	*Tribonyx ventralis*
Common Name	black-tailed native-hen
Aboriginal Name (acronym)*	kilkie (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	fresh or saline; permenant or temporary wetlands, claypans, lakes
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



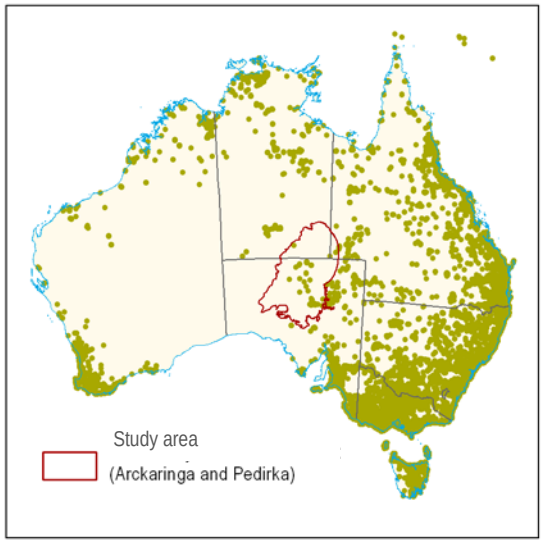
Species	*Fulica atra*
Common Name	Eurasian coot
Aboriginal Name (acronym)*	muroomuroo (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	rivers, lakes, swamps
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



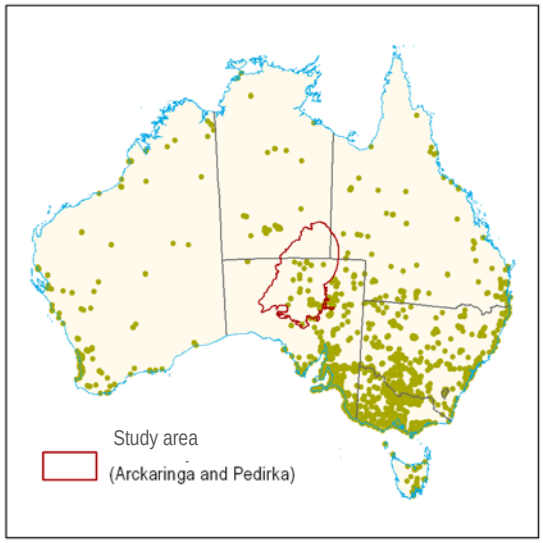
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

WATERBIRDS

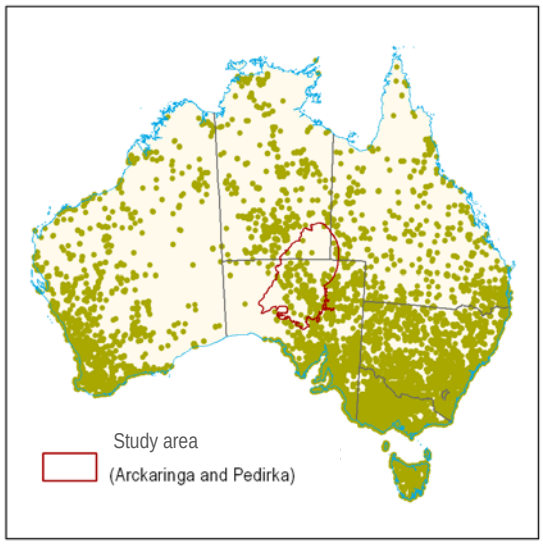
Species	*Porphyrio porphyrio*
Common Name	purple swamphen
Aboriginal Name (acronym)*	moko-irta (Bg)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	swamps, lakes, river margins
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



Species	*Porzana fluminea*
Common Name	Australian spotted crake
Aboriginal Name (acronym)*	tampatampana, thanpathanpa (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	fresh or saline; wetlands, lakes, swamps, saltmarsh
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



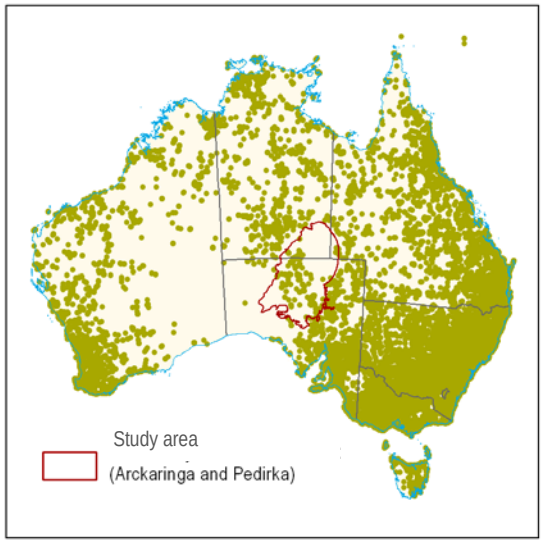
Species	*Poliocephalus poliocephalus*
Common Name	hoary-headed grebe
Aboriginal Name (acronym)*	thookabie, tooka-tookabi (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	freshwater; waterholes, river pools, dams, floodwaters
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



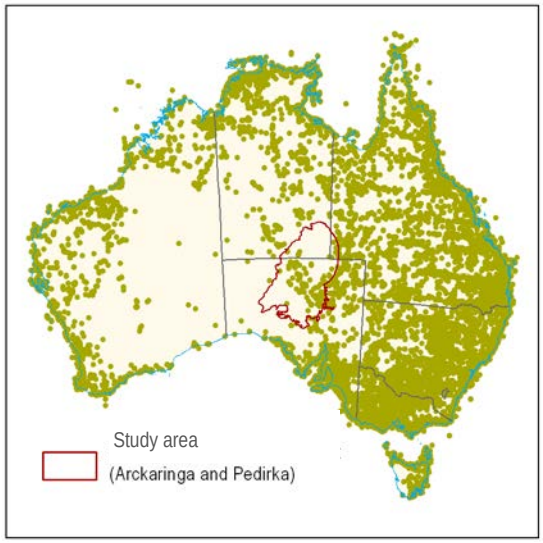
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

WATERBIRDS

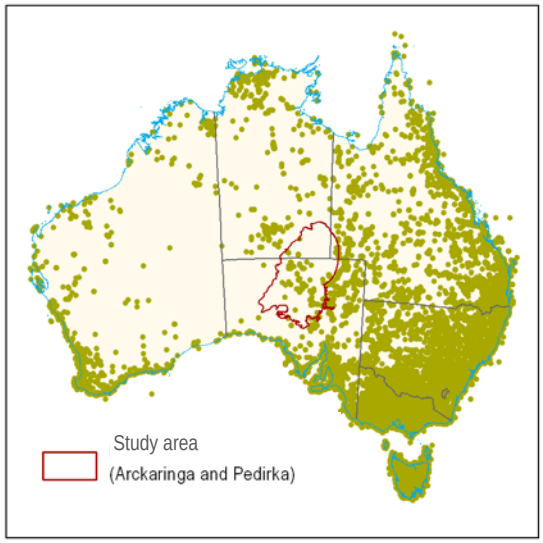
Species	*Tachybaptus novaehollandiae*
Common Name	Australasian grebe
Aboriginal Name (acronym)*	doolpadoolparoo (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	usually freshwater; wetlands, lakes, swamps, dams
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



Species	*Pelecanus conspicillatus*
Common Name	Australian pelican
Aboriginal Name (acronym)*	tampanpara (Ab); tumpunara, toompingaroo (Ng); thampara (Ky); tampangra (Yd); thaumpara (D); tampangara (D); thampano (M); kaubungarra (Wk); worandoo, warrunto (Ab); turta (Ka); thirta (Kk); tarta (Bi); weedley (Bg); mamunou (Nu); dukkamirri, dookamerri (Yw); karbonera (M); malimurro (Pi); murlimarroo (Kr); kowbernuggera (Bj); dakamirri (Yd Yw)
Food resource	meat ; eggs
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	diverse; large or small areas of waters from coastal bays to temporary desert pools
Reference	Aboriginal utilisation: Harvey Johnston (1943); Tolcher (2003). Habitat preference for birds: Morcombe (2002)



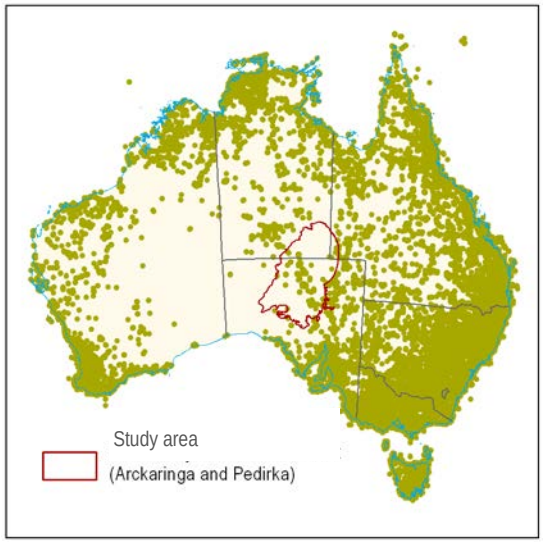
Species	*Phalacrocorax carbo*
Common Name	great cormorant
Aboriginal Name (acronym)*	malura (D); muloora (D); yaldu (Bg)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	fresh or saline; deep rivers, lakes, swamps, floodwaters
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



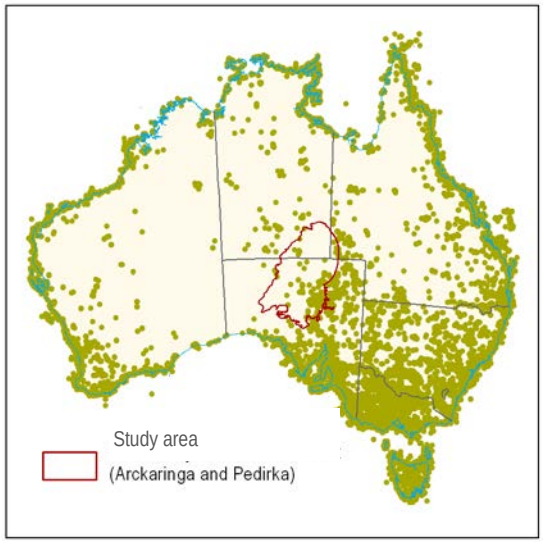
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

WATERBIRDS

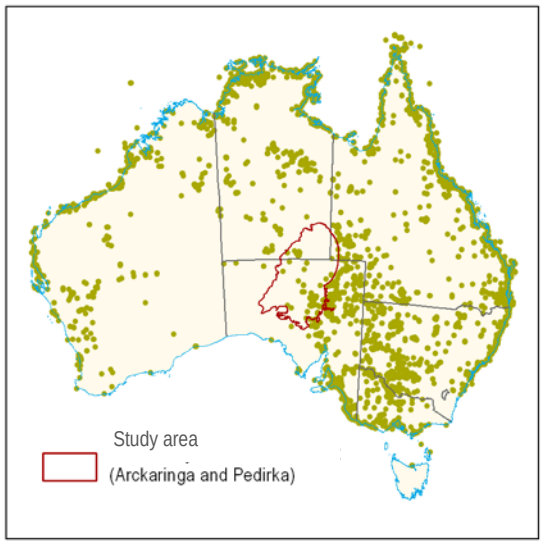
Species	*Microcarbo melanoleucos*
Common Name	little pied cormorant
Aboriginal Name (acronym)*	wutju-bakanni (D); woochoo-bukanni (Kg)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	small lakes, dams, billbongs, swamps, floodwaters
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



Species	*Chroicocephalus novaehollandiae*
Common Name	silver gull
Aboriginal Name (acronym)*	kalliworra, yao (Bg); kirrpiyirrka (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	rivers, lakes, temporary floodwaters
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



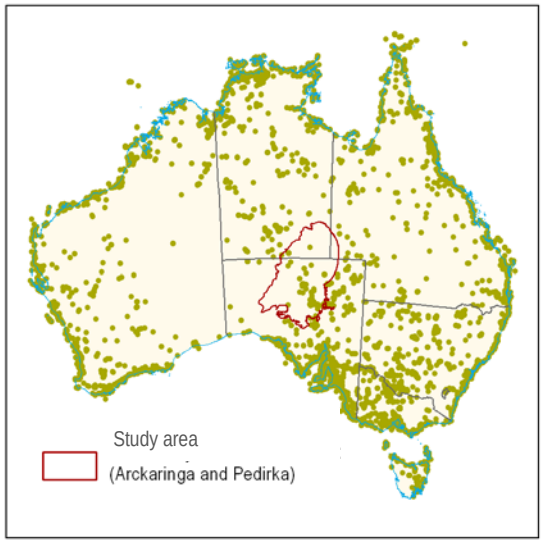
Species	*Gelochelidon nilotica*
Common Name	gull-billed tern
Aboriginal Name (acronym)*	muti-muti (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	fresh or saline; temporary waters; claypans, saltpans, salt marsh, open floodplains
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



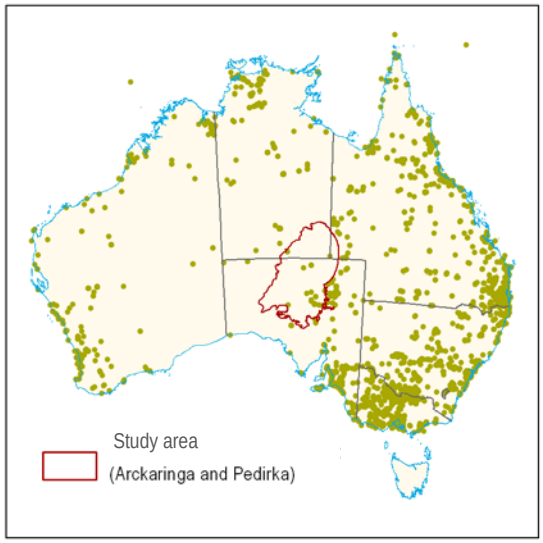
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

WATERBIRDS

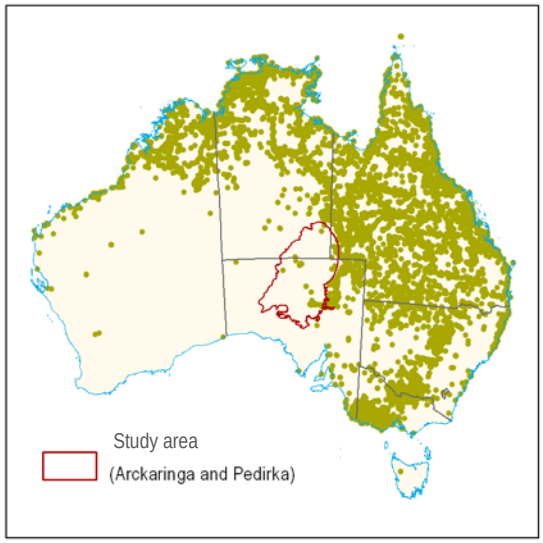
Species	*Tringa nebularia*
Common Name	common greenshank
Aboriginal Name (acronym)*	chooiechooie (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	permanent and temporary wetlands; billabongs, lakes, swamps, floodplains; prefers mud rather than sand
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



Species	*Himantopus himantopus leucocephalus*
Common Name	black-winged stilt
Aboriginal Name (acronym)*	muta-muta, mootoomootoo (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	shallow freshwater wetlands; interior claypans; salt lakes
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



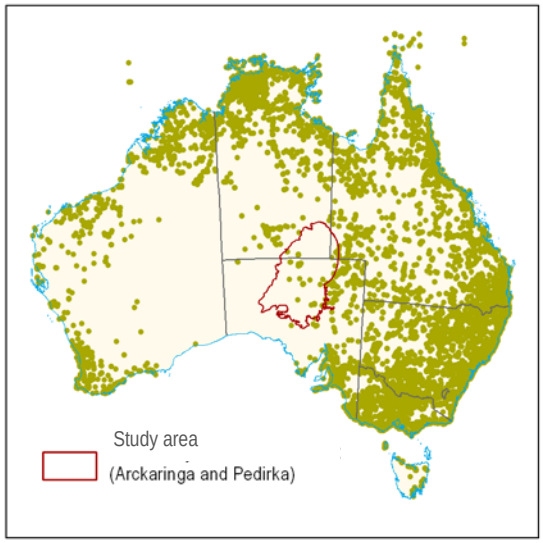
Species	*Grus rubicunda*
Common Name	brolga
Aboriginal Name (acronym)*	puralka (Ab); puralku (D); pooralkoo (Ng); pooralko (M); pooralco (Ng); booralko (D); puralko (Ww); bouralko (Yd); wooroo (Ab); koodri (Yw); mulumpari (Ww); mulvani (Bi); koorltho (M); koonthurra (Bj); goonthurra (T); goontheri (Kk); golathurra (Pi); kuntharata (Ka); brolgar (Kr)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	freshwater swamps, flooded grasslands, billabong margins, lagoons, floodplains
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



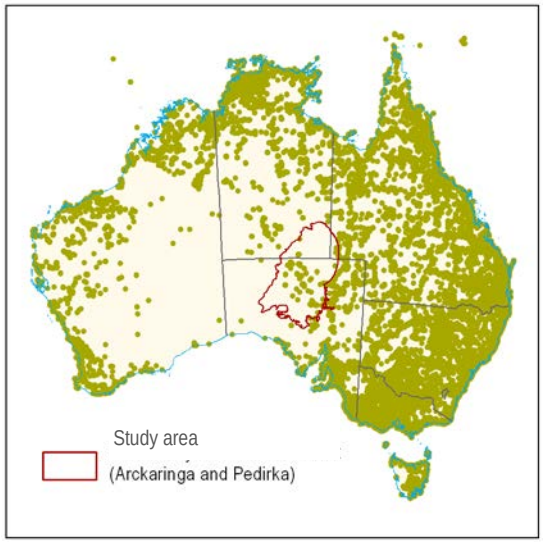
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

WATERBIRDS

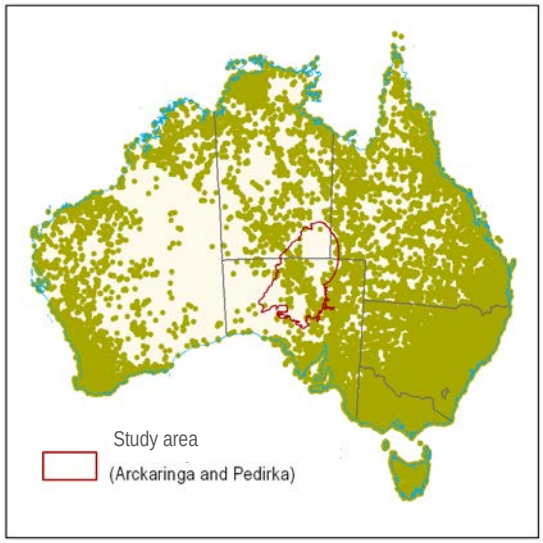
Species	*Nycticorax caledonicus*
Common Name	nankeen night-heron
Aboriginal Name (acronym)*	ooroo, wuru (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	wetlands, billabongs, flooded grasslands
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



Species	*Ardea modesta*
Common Name	eastern great egret
Aboriginal Name (acronym)*	moolpa, mulpu (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	wetlands
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



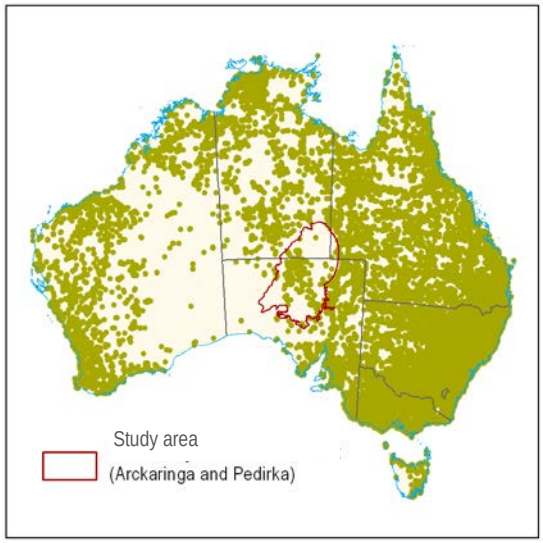
Species	*Egretta novaehollandiae*
Common Name	white-faced heron
Aboriginal Name (acronym)*	kogunya (Kg): wurru (Ab); wadna (Bg)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	usually shallow wetlands, swamp margins, lakes
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



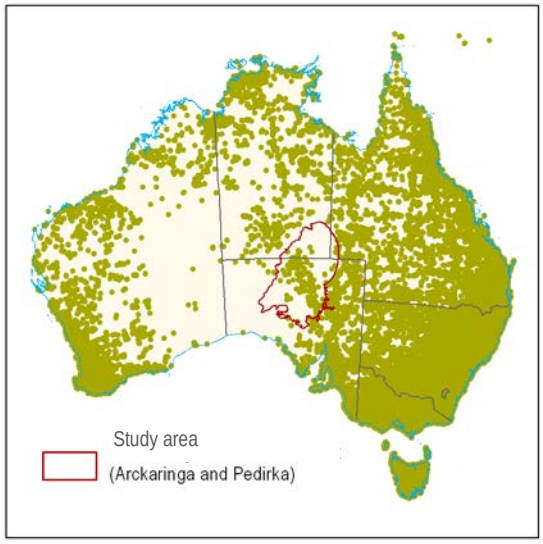
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

WATERBIRDS

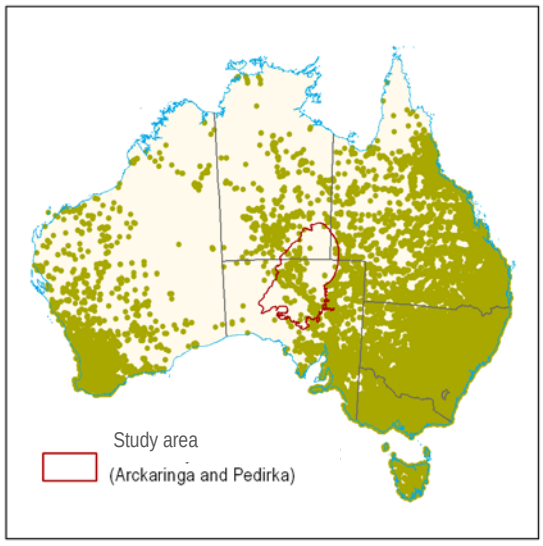
Species	*Ardea pacifica*
Common Name	white-necked heron
Aboriginal Name (acronym)*	culiemulyandurie (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	shallow wetlands, swamps, floodwaters, lakes
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



Species	*Anas superciliosa*
Common Name	Pacific black duck
Aboriginal Name (acronym)*	pia (Ng); peya (Bi); murrara (Ad); murrarra (Bg); maru-maru (D); marara (Ad); maurra (Bg); nurry (Nj); nowirra, willunga (T); mungowrie (M); mingenarra (Ka); mingalla (Ky); yella-moora (Kk); durnmi, oodla-oodla, mulchawarroo (Ab); dickeri (Yw); tarralko (Yd); chippala (D); urle (Wk); barndoo (Ad); manou (Nu); ngalta (M); kultappi (Ww); tanthunnie (Bg); pepulu (Pi); kurligoolpar (Kr); pundrewunga (Ww)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	almost every wetland habitat; preference for shallow well vegetated swamps
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



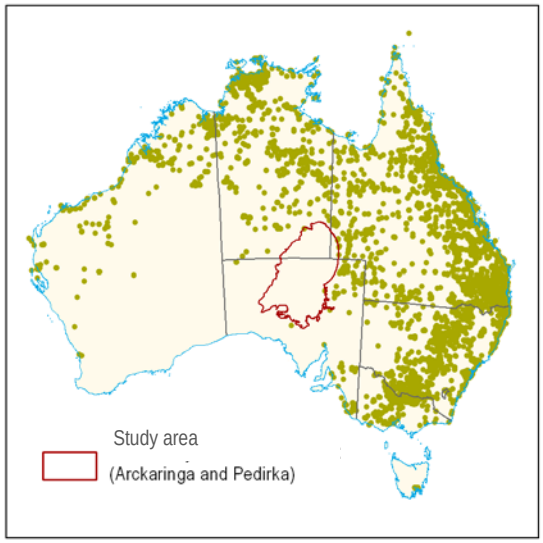
Species	*Chenonetta jubata*
Common Name	Australian wood duck
Aboriginal Name (acronym)*	barndo (Ad); goonary (Kk); koonallee (Wi); kunarli, koormaly (M); Koonare (Bj); goornabrinna (Yw); koodnapina (D); kooraburra, ngowera (T); bitta-bitta (Wk); neirey (Nu); kowwar (Kr); moondon-ngarie (Bg); chiberli (Ka); yarkalto (Ab); yangacaroota-ngarie (Ky); bompeparoo (Pi)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	other; within vicinity of water
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



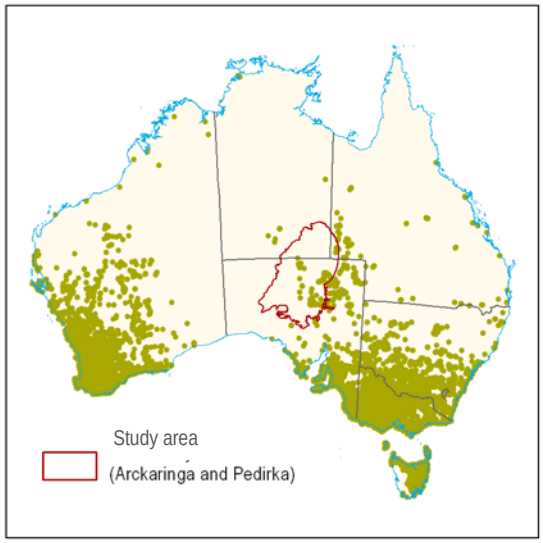
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (D); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

WATERBIRDS

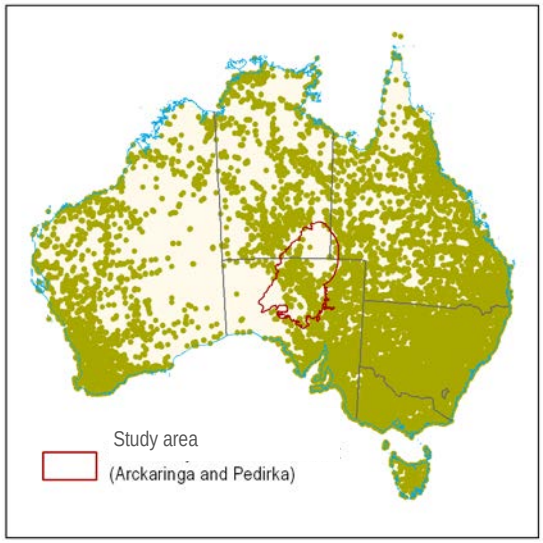
Species	*Dendrocygna eytoni*
Common Name	plumed whistling-duck
Aboriginal Name (acronym)*	tjipala, chipala (D); kibulyo (Pi)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	swamps, lakes, floodwaters
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



Species	*Tadorna tadornoides*
Common Name	Australian shelduck
Aboriginal Name (acronym)*	kockadooroo (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	fresh, brackish or saline large expanses of waters eg lakes. nesting on lakes, swamps, streams
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



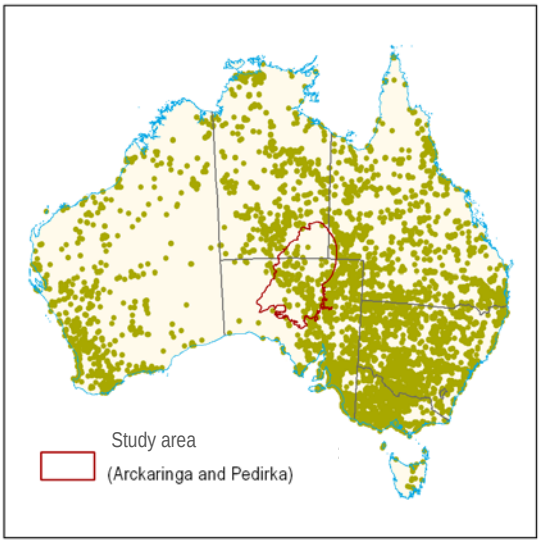
Species	*Anas gracilis*
Common Name	grey teal
Aboriginal Name (acronym)*	tharalkoo, taralku (D); marrar (Bg)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	varied; almost any wetlands, uses temporary floodwaters
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



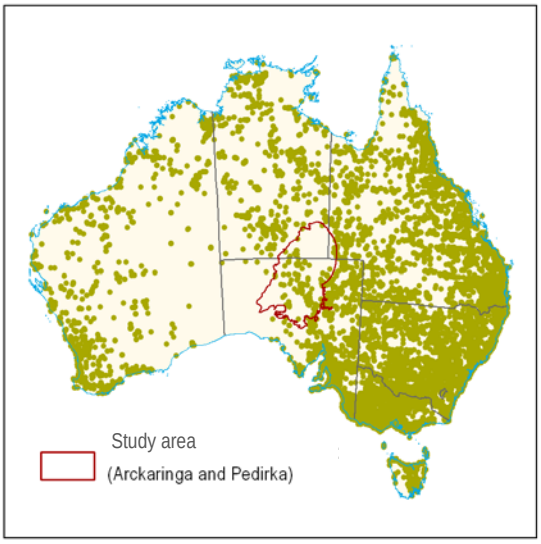
* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (Dy); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

WATERBIRDS

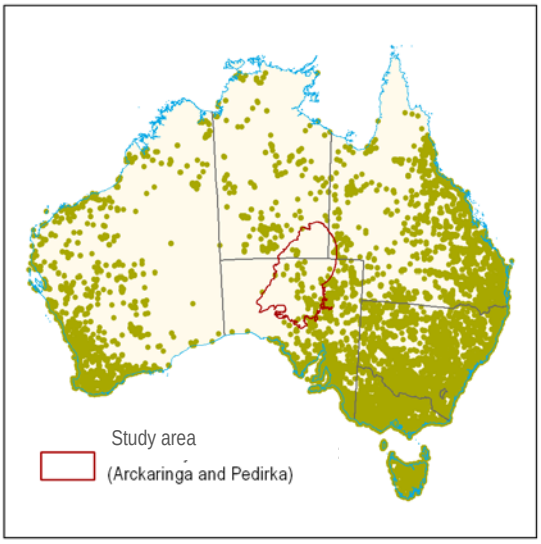
Species	*Malacorhynchus membranaceus*
Common Name	pink-eared duck
Aboriginal Name (acronym)*	tau-urla, manataulawuluni (D); taralku (Yd Yw)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	shallow, open, muddy wetlands and temporary floodwaters
Reference	Aboriginal utilisation: Harvey Johnston (1943); Tolcher (2003). Habitat preference for birds: Morcombe (2002)



Species	*Aythya australis*
Common Name	hardhead
Aboriginal Name (acronym)*	koodnapina (D); midji pudlu pudlu (Yd Yw)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	arge deep, lakes, swamps, but also smaller creeks, shallow floodplain pools; rarely salt lakes
Reference	Aboriginal utilisation: Harvey Johnston (1943); Tolcher (2003). Habitat preference for birds: Morcombe (2002)



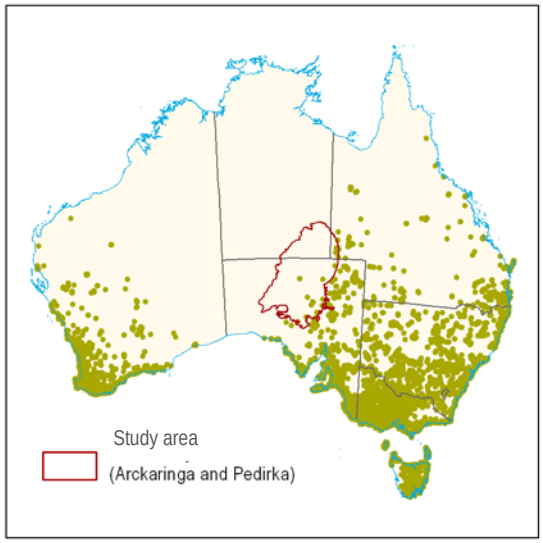
Species	*Cygnus atratus*
Common Name	black swan
Aboriginal Name (acronym)*	kooti (Ab, Bg); kute (Ab); kootee, koodie (Ng); kootie (D); kurti (D, Ab); koodri (Yw); cootie (Ky); oortee (Ad); cotee (Yd); kurti (Kr); kuteru (M); kootooroo (T, Bj); gootheroo (Kk)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	large areas of shallow water with aquatic veg; lakes
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (Dy); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

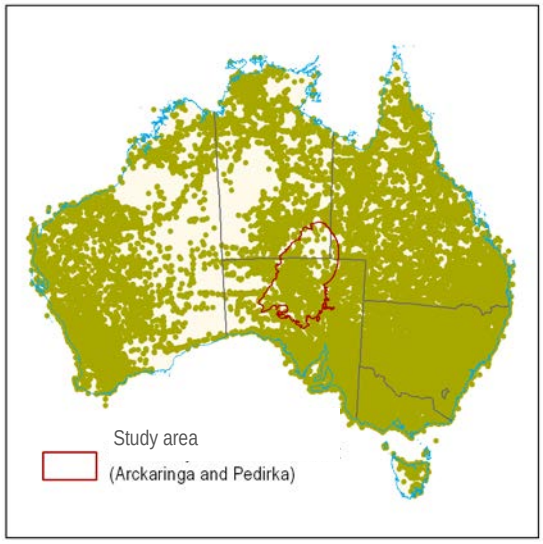
WATERBIRDS

Species	*Biziura lobata*
Common Name	musk duck
Aboriginal Name (acronym)*	ngannallii (Bg)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	deep permanent lakes, swamps with dense reedbeds and open waters
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)

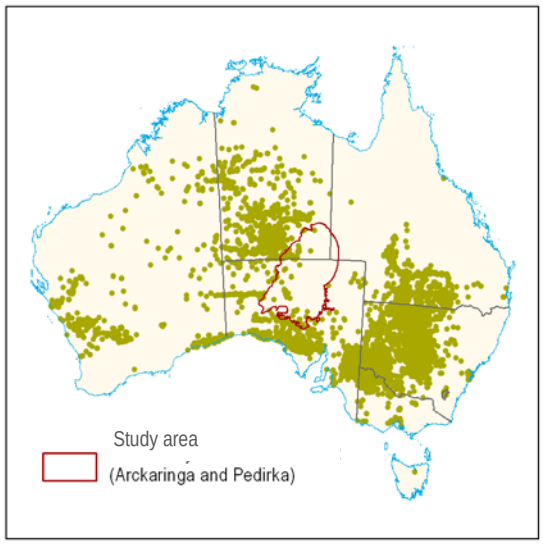


TERRESTRIAL BIRDS AFFILATED WITH AQUATIC HABITATS

Species	*Eolophus roseicapilla*
Common Name	galah
Aboriginal Name (acronym)*	piyarpiyar(pa), kaki (Pj Yk), kinturka (Pj)
Food resource	meat
Other uses	
Habitat type	creeks; other
Reference	Reid *et al.* (1993); ; Winfield (1982)

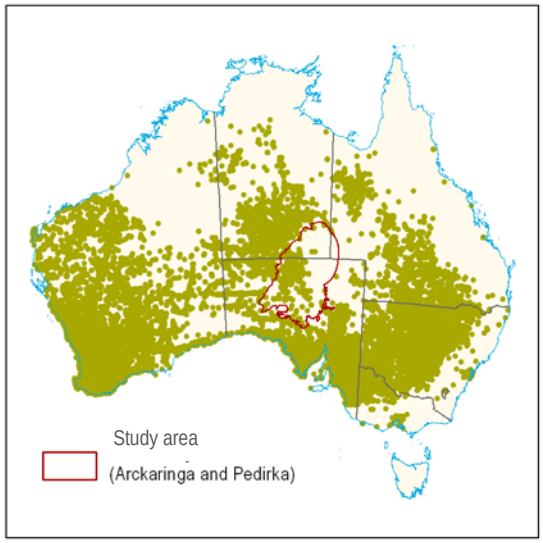


Species	*Lophochroa leadbeateri*
Common Name	Major Mitchell's cockatoo
Aboriginal Name (acronym)*	kakalyalya (Pj Yk)
Food resource	meat
Other uses	
Habitat type	creeks; other
Reference	Winfield (1982)

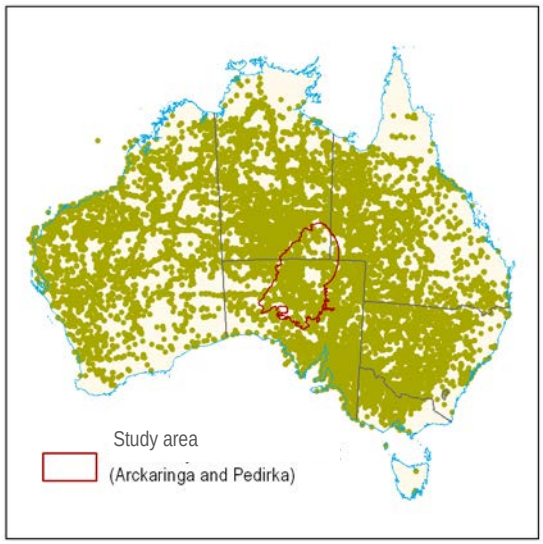


* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (Dy); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

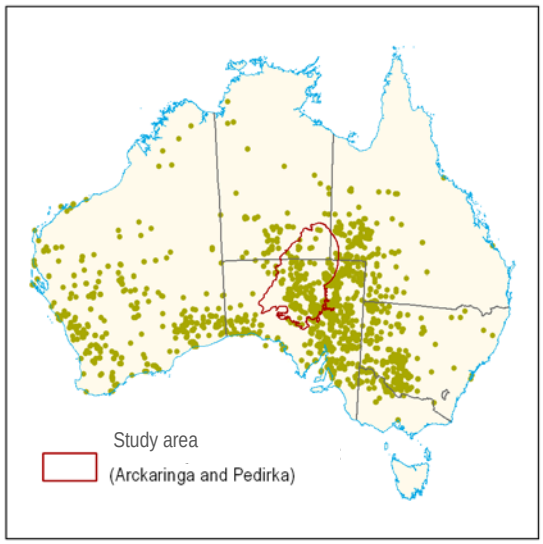
Species	*Barnardius zonarius* ssp. *barnardi*
Common Name	Port Lincoln parrot
Aboriginal Name (acronym)*	patilpatil(pa), pulalypulaly(pa) (Pj Yk)
Food resource	meat
Other uses	
Habitat type	creeks; other
Reference	Winfield (1982)



Species	*Melopsittacus undulatus*
Common Name	budgerigar
Aboriginal Name (acronym)*	kiilykiilykari, natitjiri (Pt)
Food resource	meat
Other uses	
Habitat type	other; creeks
Reference	Reid *et al.* (1993)

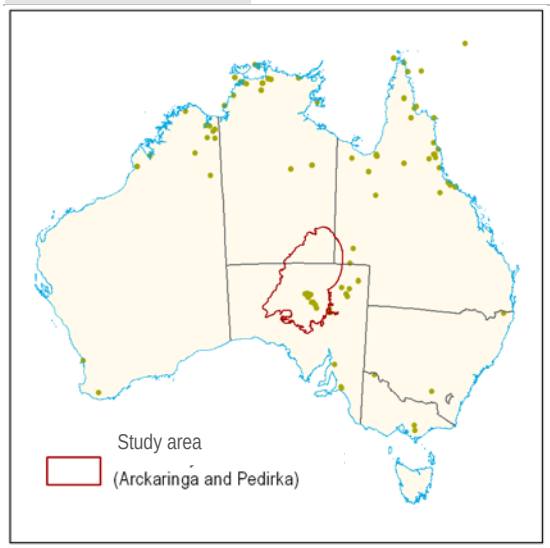


Species	*Peltohyas australis*
Common Name	inland dotterel
Aboriginal Name (acronym)*	palpara (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	other; at times near ephemeral creeks, claypans
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (Dj); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

Species	*Vanellus miles*
Common Name	spurwing plover, masked lapwing
Aboriginal Name (acronym)*	darudaru (D)
Food resource	meat (generically mentioned that 'all are eaten' (Gason, 1879))
Other uses	the use of eggs and feathers is generically mentioned (Harvey Johnson, 1943)
Habitat type	other; open short-grasses sites often beside water of swamps, lagoons, salt marsh
Reference	Aboriginal utilisation: Harvey Johnston (1943). Habitat preference for birds: Morcombe (2002)



* Alyawarre (Al); Adnymathanha (Ad); Anmatyerr (An); Arabana (Ab); Arrernte (Ar); Banggarla (Bg); Barkindji (Bk); Birria (Bi); Budjari (Bj); Dieri (Dr); Karanya (Kr); Karangura (Kg); Karuwali (Ka); Kuyani (Ky); Kuungkari (Kk); Malyangapa (M); Ngadjuri (Nj); Ngamini (Ng);Nukunu (Nu); Pintupi (Pt); Pirlatapa (Pp); Pitjantjarjara (Pj); Pitta-Pitta (Pi); Tereila (T); Wandjiwalgu (Ww); Wangkangurru (Wg); Wangkumara (Wk);Warlpiri (Wa); Wiljali (Wi); Yandruwandha (Yd); Yankunytjatjara (Yk); Yawarawarrka (Yw)

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