

Mammals (last update March 2014)

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This account lists all the species of mammals that have been reliably recorded in South Australia and provides maps showing their distribution based on confirmed records. The evidence for species occurrence comes from museum specimens (i.e. whole or part animals, pick-up skeletons and skulls and subfossils), observational records that have been verified by a mammalogist (e.g. photographs, descriptions, captures, sound recordings) and information from publications. Mammal species that have become extinct in South Australia since European settlement or have been introduced are annotated in the list.

Australia has been home to about 370 native mammal species. This number fluctuates as new species are described and others synonymised. Of the 190 species known to have occurred in South Australia (including 11 recorded only by subfossil remains), 173 are indigenous to Australia and 17 introduced by Europeans (Table 2.1). There is debate as to whether the Dingo should be considered an introduced species, since it was brought to Australia 4000–5000 years ago by peoples unknown.

South Australia has the highest number of mammal species extinctions of any State or Territory. Twenty seven species (16%) have disappeared since European settlement. Some groups have suffered more than others; for example, seven out of eight species (88%) of bandicoots and bilbies and three of 19 species (16%)

of native rodents, not including those known only from subfossils, have become extinct. To our knowledge, only one species (4%) of bat is extinct in South Australia. There are no known extinctions among the monotremes, marsupial moles, cetaceans and pinnipeds.

The introduction of native mammal species (i.e. those not previously recorded in an area) and reintroduction of species (i.e. those known to have existed in an area) have been attempted in many parts of South Australia since the 1920s, more intensively since the 1980s. To our knowledge, this has involved 15 species, including six that had become extinct in the State prior to their reintroduction. If records are available, annotations regarding these introductions and reintroductions are made in the taxonomic list.

The scientific names for species and their higher-level classification (i.e. Subclass, Order, Suborder, Family) used in this account follow the world list of mammals (Wilson and Reeder 2005) with some amendments detailed below. Subfamilies, genera and species are arranged alphabetically and are included only when it is necessary to divide South Australian representatives of a Family into meaningful subgroups. Recent synonyms for scientific names can be found in Watts and Aslin (1981), Walton (1988), and Rice (1998), Wilson and Reeder (2005), and Van Dyck and Strahan (2008). Common names follow Mead and Brownell (2005), Wozencraft (2005) and Van Dyck and Strahan (2008) except for recently described species.

Monotremes

Living monotremes are grouped into two Families that differ greatly and future studies may assign them to higher order classification than Family. Several subspecies of *Tachyglossus aculeatus* have been described (e.g. *T. a. aculeatus* on mainland South Australia and *T. a. multiaculeatus* on Kangaroo Island) but the current view is that genetically and morphologically these cannot be clearly separated.

Marsupials

In Australia, marsupials are divided into three major groups that are aligned by their diet and morphology: 1) insectivorous/carnivorous (Dasyuromorphia and *Notoryctes*), 2) insectivorous/omnivorous (Peramelomorphia) and 3) primarily herbivorous (Diprotodontia). There is mixed opinion as to which group evolved first, the bandicoots or the dasyuroids, and the evolutionary position of *Notoryctes* is not known. The taxonomic affinities of *Lagostrophus fasciatus* are uncertain, with one view placing it in the Subfamily Stenurinae, a group of fossil kangaroos. Syndactyly, the joining of two toes in the foot, is found in the bandicoots, macropods and potoroids and was for a

long time thought to be of evolutionary significance. It is now considered a convergent trait. Some of the Diprotodontia have an opposable hallux (big toe orientates at almost right angles to the foot) to aid in climbing. In this Census, the Subfamily Planigalinae is treated as a separate group but it is sometimes included with the Subfamily Sminthopsinae (Wilson and Reeder 2005). Since some marsupials (e.g. bandicoots) have a rudimentary placenta, the term 'placental mammal' is not appropriate for what are more correctly referred to as eutherians. It is retained here as an alternative to eutherian.

Bats

Traditional classification divides the Order Chiroptera into two suborders, the Megachiroptera (flying-foxes and their allies) and Microchiroptera (all echolocating families). Recent genetic studies directed towards resolving the evolutionary relationships among bats have radically challenged this traditional view. The overwhelming evidence now shows that some echolocating bat families are more closely related to flying-foxes than they are to other echolocating bat families (Yu *et al.* 2012). While there is now consensus that still only two new suborders are needed to account for the new groups of bat families, there are two competing proposals for naming these suborders and for which bat families comprise them (see summary in Hutcheon and Kirsch (2006)). At this point there is no world agreement on which names to use. In this Census we have dispensed with allocating bats to a suborder.

Genetic studies have led to the creation of a new family, Miniopteridae, for the genus *Miniopterus*. It was formerly included in the Family Vespertilionidae (Miller-Butterworth *et al.* 2007).

The genus *Austronomus* now replaces *Tadarida* (Churchill 2008, Ammerman *et al.* 2012).

Since the last Census (Robinson *et al.* 2000), several species-level taxonomic changes have been made that affect South Australian bats. *Nyctophilus timoriensis* has been divided into *N. corbeni* and *N. major* (Parnaby 2009), and a new Australian species of free-tailed bat, *Mormopterus eleryi*, has been described (Reardon *et al.* 2008). Other changes to the genus *Mormopterus* will be published in the near future.

The taxonomy and nomenclature of *Miniopterus schreibersii bassanii* remain problematic. There is agreement that the species *Miniopterus schreibersii* does not occur in Australia (Tian *et al.* 2004; Appleton *et al.* 2004) but to which species the subspecies *M. s. bassanii* belongs is not resolved. However, there is a strong likelihood that this subspecies will be recognised as a full species in the near future. In this Census we have chosen to adopt Churchill's (2008) conclusion that *bassanii* be treated as a subspecies of *Miniopterus orianae*.

At the time of the previous version of the census (Robinson *et al.* 2000), *Pteropus poliocephalus* was considered an occasional visitor to South Australia. A small colony (close to 1400 at the time of this Census) is now naturally established in Adelaide and in 2011 and 2012, young were born. The species is likely to become a permanent resident of the State. In 2013, a *P. alecto* was recorded in Adelaide, the first record for South Australia.

Pinnipeds

There are two main groups of pinnipeds that occur in South Australia, the eared seals (Family Otariidae) and the 'true' seals (Family Phocidae). Recent worldwide reviews of the otariids (Brunner 2004, Berta and Churchill 2012) have advocated changes that, if adopted, would affect the naming of Australian species. Berta and Churchill (2012) recommended that all *Arctocephalus*, except *A. pusillus*, be transferred to the genus *Arctophoca*. This Census has opted not to make this change until there is clear demonstration of its acceptance worldwide.

Three of the five otariids that have been recorded in South Australia also breed there but *A. tropicalis* and *A. gazella* do not and are therefore considered occasional visitors. There is clear evidence of hybridization between species of *Arctocephalus* at Macquarie Island and this may have implications for those that are recorded on the Australian mainland.

Phocid seals breed in the Antarctic and Subantarctic and are therefore sometimes referred to as Antarctic seals. Except for the Elephant Seal, these species do not breed in continental Australia and are occasional visitors to South Australia (Shaughnessy *et al.* 2012).

Cetaceans

Both major groups of cetaceans, the baleen and toothed whales, have been recorded in South Australia. There is recent evidence (Fordyce and Marx 2012) that Neobalaenidae (*Caperea marginata*) is the last survivor of a fossil family of baleen whales, the Cetotheriidae, but in this Census we have chosen not to adopt this family name until it is accepted by the scientific community.

The families Neobalaenidae and Physeteridae contain only one species. All other families found off South Australia either have multiple species occurring here or relatives elsewhere in the world. Some taxonomic treatments (e.g. Wilson and Reeder 2005) include Kogiidae with Physeteridae but this Census does not. Mead and Brownell (2005) listed *Physeter catodon* for the Sperm Whale but worldwide opinion favours the retention of *P. macrocephalus*.

Two species, *Balaenoptera borealis* and *Lagenorhynchus obscurus*, have been sighted alive at sea off South Australia but not confirmed by vouchered specimens. Alternatively, many cetacean species are

listed based solely on stranded animals and it is not known whether they truly inhabit the waters off South Australia. Some might venture from their prime habitat in the Subantarctic (e.g. *Phocoena dioptrica*, Evans *et al.* 2001) while others may use the south-flowing Leeuwin Current to access South Australian waters (e.g. *Balaenoptera edeni*, *Feresa attenuata*).

Assigning a conservation status to cetaceans is very difficult because for most species there is no information on population size and there is the added difficulty of recording and identifying animals at sea. For this reason, the State conservation listings are a 'best guess' for each species' status.

Rodents

Australian rodents are all members of the Muridae and there has been some debate as to the groupings below this family level. Breed and Aplin (2008) concluded that it would be unwise to decide on a formal subfamily or tribe taxonomy until murine rodents are resolved at a global scale. They advocate the following subdivisions (as they apply to South Australia native rodents): the 'Pseudomys Group' including the genera *Pseudomys*, *Conilurus*, *Leggadina*, *Leporillus*, *Mastacomys* and *Notomys*; the 'Hydromys Group' and the 'Native *Rattus* Group'.

The non-native *Rattus* and *Mus* belong to different lineages from Australian native rodents.

Although described as a full species by Thomas in 1910, *Pseudomys auritus* was included with *Pseudomys australis* until a formal differentiation was made by Medlin in 2008. A careful study of all specimens of *P. australis* from South Australia is needed in order to properly describe the distribution of *P. auritus*.

The former distribution of South Australia's arid-dwelling rodents is problematical because many early specimens were lodged with other Australian and overseas museums.

It has therefore not been possible to verify their species identifications for this Census. In addition, the data associated with early specimens at the South Australia Museum has often been lost or is inaccurate thus making the records impossible to map. This is particularly so for the genus *Notomys* because several of the species are difficult to discriminate on skulls alone. Perhaps ancient DNA technology can be developed to identify these species.

Subfossils

The subfossil collection of the South Australian Museum consists of the partial remains (bones, fur, nests, scats) of modern vertebrate species that have usually been collected from protected situations (e.g. caves, rock overhangs, buildings) where accumulations have built up over considerable time. They can be recently deposited (e.g. fresh owl pellets) or represent very old accumulations dating back hundreds, even many thousands, of years. In the past, there was the expectation that most were laid down before European settlement but recent dating of some sites challenges that theory (McDowell *et al.* 2012). However, it would be unwise to generalise that all subfossils represent mammal species that were present at the time of European settlement.

A large portion of an owl's diet is made up of rodents and seven species of rodent are known only from subfossil remains in South Australia. One species of rodent, *Notomys robustus*, was described (Mahoney *et al.* 2008) on the basis of only subfossil material because it has never been collected as a whole animal.

Table 2.1: Conservation status of South Australian mammals. Number of species in brackets is the number introduced by humans and is included in the number to the left.

Order	Common Name	Species	EX*	E**	V	Subfossils only
Monotremata	Platypus and echidnas	2		1		
Notoryctemorphia	Marsupial moles	1			1	
Dasyuromorphia	Carnivorous marsupials	33	6	4	3	3
Peramelemorphia	Bandicoots and bilbies	8	7		2	
Diprotodontia	Koalas, wombats, possums and macropods	32	10	4	3	1
Lagomorpha	Rabbits and hares	2 (2)				
Chiroptera	Bats	28	1	5	2	
Carnivora	Carnivorous eutherians	13 (3)		1	1	
Perissodactyla	Odd-toed ungulates	2 (2)				
Artiodactyla	Even-toed ungulates	7 (7)				
Cetacea	Whales and dolphins	33		1		
Rodentia	Rodents	29 (3)	3	1	4	7
Totals		190 (17)	27	17	16	11

* does not include species known only from subfossils

** excludes those counted as extinct in South Australia

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Class Mammalia - Mammals

Subclass Prototheria - Monotremes

Order Monotremata - Platypus and Echidna

Family Ornithorhynchidae - Platypus

1. *Ornithorhynchus anatinus* (Shaw, 1799) Platypus SA: E

Introduced to Kangaroo Island (1928–1946, extant) and reintroduced to sanctuaries in the Onkaparinga catchment (1990s).

Family Tachyglossidae - Echidna

2. *Tachyglossus aculeatus* (Shaw, 1792) Short-beaked Echidna

Subclass Marsupialia - Marsupials

Order Notoryctemorphia - Marsupial Moles

Family Notoryctidae - Marsupial Mole

3. *Notoryctes typhlops* (Stirling, 1889) Southern Marsupial Mole (Itjaritjara) AU: EN SA: V

Order Dasyuromorphia - Carnivorous marsupials

Family Thylacinidae - Thylacine

4. *Thylacinus cynocephalus* (Harris, 1808) Thylacine AU: EX

This species is known only from subfossils in SA.

Family Myrmecobiidae - Numbat

5. *Myrmecobius fasciatus* Waterhouse, 1836 Numbat AU: VU SA: E

Original populations extinct in SA. Western Australian animals re-introduced to Yookamurra Sanctuary from 1993 (extant) and Arid Recovery/Roxby in 2005 (failed).

Family Dasyuridae - Dasyurids

Subfamily Dasyurinae - Quolls, dibblers, parantechinuses, pseudantechinuses, Kowari, mulgaras, Tasmanian Devil

6. *Dasyercus blythi* (Krefft, 1867) Brush-tailed Mulgara (Mulgara) AU: VU SA: E

There has been recent taxonomic revision of this species (Woolley 2005). It was formerly known as *D. cristicauda*. This species is considered extinct in SA.

7. *Dasyercus cristicauda* (Thomas, 1905) Crest-tailed Mulgara (Ampurta) AU: EN

There has been recent taxonomic revision of this species (Woolley 2005). It was formerly known as *D. hillieri*.

8. *Dasyuroides byrnei* (Spencer, 1896) Kowari AU: VU SA: V

The Vertebrates of South Australia (Robinson et al. 2000) used the genus *Dasyercus* but this has not been universally accepted elsewhere in Australia.

9. *Dasyurus geoffroii* Gould, 1841 Western Quoll AU: VU SA: E

This species is considered extinct in SA.

10. *Dasyurus maculatus* (Kerr, 1792) Spotted-tailed Quoll (Tiger Quoll) AU: EN SA: E

This species is considered extinct in SA.

11. *Dasyurus viverrinus* (Shaw, 1800) Eastern Quoll SA: E

This species is considered extinct in SA.

12. *Parantechinus apicalis* (Gray, 1842) Dibbler AU: EN

This species is known only from subfossils in SA.

13. *Pseudantechinus macdonnellensis* (Spencer, 1895) Fat-tailed Pseudantechinus

Australian EX = Extinct; CR = Critically Endangered; EN = Endangered; VU = Vulnerable
South Australian E = Endangered (includes Extinct); V = Vulnerable; R = Rare

14. *Sarcophilus harrisi* Boitard, 1841 Tasmanian Devil AU: EN

This species is known only from subfossils in SA.

Subfamily Phascogalinae - Phascogales, antechinuses

15. *Antechinus agilis* Dickman, Parnaby, Crowther & King, 1998 Agile Antechinus SA: E
16. *Antechinus flavipes* (Waterhouse, 1838) Yellow-footed Antechinus SA: V
17. *Antechinus minimus* (Geoffroy, 1803) Swamp Antechinus SA: E
18. *Antechinus swainsonii* (Waterhouse, 1840) Dusky Antechinus
First collection made for South Australia at Lower Glenelg River Conservation Park in 2013.
19. *Phascogale calura* Gould, 1844 Red-tailed Phascogale AU: EN SA: E
This species is considered extinct in SA.
20. *Phascogale tapoatafa* (Meyer, 1793) Brush-tailed Phascogale SA: E

Subfamily Planigalinae - Planigales, ningauis

21. *Ningau ridei* Archer, 1975 Wongai Ningau
22. *Ningau yvonneae* Kitchener, Stoddart & Henry, 1983 Southern Ningau
23. *Planigale gilesi* Aitken, 1972 Giles' Planigale (Paucident Planigale)
24. *Planigale ingrami* (Thomas, 1906) Long-tailed Planigale
25. *Planigale tenuirostris* Troughton, 1928 Narrow-nosed Planigale

Subfamily Sminthopsinae - Dunnarts, Kultarr

26. *Antechinomys laniger* (Gould, 1856) Kultarr
27. *Sminthopsis aitkeni* Kitchener, Stoddart & Henry, 1984 Kangaroo Island Dunnart AU: EN SA: E
Preliminary studies of this and *S. griseoventer* show a close relationship between these species (Kemper *et al.* 2011). Further research may result in synonymy.
28. *Sminthopsis crassicaudata* (Gould, 1844) Fat-tailed Dunnart
29. *Sminthopsis dolichura* Kitchener, Stoddart & Henry, 1984 Little Long-tailed Dunnart
30. *Sminthopsis griseoventer* Kitchener, Stoddart & Henry, 1984 Grey-bellied Dunnart
31. *Sminthopsis hirtipes* Thomas, 1898 Hairy-footed Dunnart
32. *Sminthopsis macroura* (Gould, 1845) Stripe-faced Dunnart
33. *Sminthopsis murina* (Waterhouse, 1838) Common Dunnart
34. *Sminthopsis ooldea* Troughton, 1965 Ooldea Dunnart
35. *Sminthopsis psammophila* Spencer, 1895 Sandhill Dunnart AU: EN SA: V
36. *Sminthopsis youngsoni* McKenzie & Archer, 1982 Lesser Hairy-footed Dunnart SA: R

Order Peramelemorphia - Bandicoots and bilbies

Family Thylacomyidae - Bilbies

37. *Macrotis lagotis* (Reid, 1837) Greater Bilby (Bilby) AU: VU SA: V
Original populations extinct in SA. Introduced to Thistle Island (2000, extant), Arid Recovery/Roxby (2000, extant) Venus Bay Conservation Park (2000, failed) and Yookamurra Sanctuary (2007, extant).
38. *Macrotis leucura* (Thomas, 1887) Lesser Bilby AU: EX SA: E

Family Chaeropodidae - Pig-footed Bandicoot

39. *Chaeropus ecaudatus* (Ogilby, 1838) Pig-footed Bandicoot AU: EX SA: E

Australian EX = Extinct; CR = Critically Endangered; EN = Endangered; VU = Vulnerable
South Australian E = Endangered (includes Extinct); V = Vulnerable; R = Rare

Family Peramelidae - Bandicoots

Subfamily Peramelinae - Bandicoots

40. *Isoodon auratus* (Ramsay, 1887) Golden Bandicoot AU: VU SA: E

Although recent genetic studies by Zenger *et al.* (2005) place *I. auratus* in *I. o. fusciventer*, this Census retains the use of *I. auratus* until morphological studies confirm its status. This species is considered extinct in SA.

41. *Isoodon obesulus* (Shaw, 1797) Southern Brown Bandicoot AU: sspp SA: V

Two subspecies recognised in SA, *I. o. obesulus* (SA Mainland & Kangaroo Island subspecies) AU: EN SA: V and *I. o. nauticus* (Nuyts Archipelago subspecies) AU: VU SA: V. Recent taxonomic studies by Zenger *et al.* (2005) concluded that all SA *Isoodon* taxa, including *I. auratus*, should be included in one species, *I. obesulus*, and two subspecies. This Census retains the previous taxonomy until morphological studies confirm their status.

42. *Perameles bougainville* Quoy & Gaimard, 1824 Western Barred Bandicoot AU: sspp SA: sspp

Original populations extinct in SA (*P. b. fasciata* AU: EX). Reintroduced (Western Australian stock *P. b. bougainville* AU: EN) to Arid Recovery/Roxby in 2001 (extant).

43. *Perameles eremiana* Spencer, 1897 Desert Bandicoot AU: EX SA: E

44. *Perameles gunnii* Gray, 1838 Eastern Barred Bandicoot AU: EN SA: E

This species is considered extinct in SA.

Order Diprotodontia - Koala, wombats, possums and macropods

Family Phascolarctidae - Koala

45. *Phascolarctos cinereus* (Goldfuss, 1817) Koala

Original populations extinct in SA. Introduced to Kangaroo Island (1923–1958, extant), many locations along the River Murray (1959–1965, extant), Mount Lofty Ranges (1965), Sleaford (1969, extant) and reintroduced to many locations in the South East (1969–present, extant).

Family Vombatidae - Wombats

46. *Lasiorhinus latifrons* (Owen, 1845) Southern Hairy-nosed Wombat

Introduced to Kangaroo Island (1926, 1936, failed), Wedge Island (1971, extant), and Pooginook Conservation Park, Kia-Ora Station, Glenora Station and Whydown Station (all in 1971, extant), and Kellidie Bay Conservation Park (1971).

47. *Vombatus ursinus* (Shaw, 1800) Common Wombat SA: R

Family Burramyidae - Pygmy-Possums

48. *Cercartetus concinnus* (Gould, 1845) Western Pygmy-possum

49. *Cercartetus lepidus* (Thomas, 1888) Little Pygmy-possum

50. *Cercartetus nanus* (Desmarest, 1818) Eastern Pygmy-possum SA: V

Family Phalangeridae - Brushtail Possums

51. *Trichosurus vulpecula* (Kerr, 1792) Common Brushtail Possum SA: R

Reintroduced to many locations, including the Flinders Ranges, along the River Murray (extant) and on Thistle Island (extant).

Family Pseudocheiridae - Ringtail Possums

52. *Pseudocheirus peregrinus* (Boddaert, 1785) Common Ringtail Possum

Introduced to Flinders Chase, Kangaroo Island (1926, extant).

Family Petauridae - Wrist-Winged Gliders

53. *Petaurus australis* Shaw, 1791 Yellow-bellied Glider SA: E

54. *Petaurus breviceps* Waterhouse, 1839 Sugar Glider SA: R

Note: the single SA Museum specimen for the Mt Lofty Ranges (M17784) is probably a captive escapee.

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55. *Petaurus norfolcensis* (Kerr, 1792) Squirrel Glider SA: E

Family Acrobatidae - Feathertail Glider

56. *Acrobates pygmaeus* (Shaw, 1794) Feathertail Glider SA: E

Recent studies show that there is likely to be two species in SA, one along the River Murray and the other in the South East.

Family Potoroidae - Potoroos, bettongs and Desert Rat-Kangaroo

57. *Bettongia lesueur* (Quoy & Gaimard, 1824) Burrowing Bettong AU: EX SA: E

Original populations extinct in SA. Reintroduced (stock from Western Australia) to Yookamurra Sanctuary (from 2007, extant) and Arid Recovery/Roxby (from 2000, extant).

58. *Bettongia penicillata* Gray, 1837 Brush-tailed Bettong AU: sspp SA: sspp

Original populations (*B. p. penicillata* AU: EX SA: E) extinct in SA. Western Australian subspecies (*B. p. ogilbyi* AU: EN SA: R) introduced to Venus Bay Conservation Park (1980, 1994, Island A extant, Venus Bay Peninsula extinct), St Francis Island (1981–1987, failed), Baird Bay Island (1982), Wedge Island (1983, extant), St Peter Island (1983, extant), Yookamurra Sanctuary (1991, 1992, extant), Lincoln National Park (1999, failed), Flinders Ranges National Park (1999, failed) and Katarapko Island (1999, failed).

59. *Caloprymnus campestris* (Gould, 1843) Desert Rat-kangaroo AU: EX SA: E

60. *Potorous platyops* (Gould, 1844) Broad-faced Potoroo AU: EX

This species is known only from subfossils in SA.

61. *Potorous tridactylus* (Kerr, 1792) Long-nosed Potoroo AU: VU SA: E

Family Macropodidae - Wallabies and kangaroos

Subfamily Macropodinae - Hare-wallabies, rock-wallabies, pademelons, wallabies and kangaroos

62. *Lagorchestes hirsutus* Gould, 1844 Rufous Hare-wallaby (Mala) AU: EX SA: E

The subspecies *L. h. hirsutus* is the only taxon that occurred in SA. It is extinct.

63. *Lagorchestes leporides* (Gould, 1841) Eastern Hare-wallaby AU: EX SA: E

Gould reported that in the 1840s this species was abundant on the SA plains, particularly 'between the belts of the Murray and the mountain ranges' (Van Dyck and Strahan 2008).

64. *Macropus eugenii* (Desmarest, 1817) Tammar Wallaby AU: ssp SA: ssp

There is insufficient scientific knowledge to clearly define subspecies, however this Census takes the approach of distinguishing subspecies. The mainland subspecies, *M. e. eugenii* AU: EX SA: E, is extinct in SA but introduced to Kawau Island, NZ and from there reintroduced to Innes National Park (2004–2008, extant). Kangaroo Island subspecies *M. e. decres* still common and also introduced to Greenly Island (1907, extant), Boston Island (1971, possibly extinct) and Wardang Island (extant).

65. *Macropus fuliginosus* (Desmarest, 1817) Western Grey Kangaroo

Introduced to Wedge Island during 1980s (extinct).

66. *Macropus giganteus* Shaw, 1790 Eastern Grey Kangaroo SA: R

67. *Macropus greyi* Waterhouse, 1846 Toolache Wallaby AU: EX SA: E

68. *Macropus robustus* Gould, 1841 Euro

69. *Macropus rufogriseus* (Desmarest, 1817) Red-necked Wallaby SA: R

70. *Macropus rufus* (Desmarest, 1822) Red Kangaroo

71. *Onychogalea lunata* (Gould, 1841) Crescent Nailtail Wallaby AU: EX SA: E

72. *Petrogale lateralis* Gould, 1842 Black-footed Rock-wallaby AU: ssp SA: sspp

Two subspecies recognised. *P. l. lateralis* (McDonnell Ranges race AU: VU SA: E) in far NW of SA (reintroduced to Musgrave Ranges in 2010, extant). *P. l. pearsoni* (AU: delisted in 2010 SA: R) on Pearson Island and introduced to Wedge, Thistle (1975, extant on both islands) and West Islands (extinct).

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73. *Petrogale xanthopus* Gray, 1855 Yellow-footed Rock-wallaby AU: ssp SA: V
The subspecies *P. x. xanthopus* AU:VU is the only one found in SA. Reintroduced to Aroona Dam area (1996–present).
74. *Thylogale billardieri* (Desmarest, 1822) Tasmanian Pademelon SA: E
This species is considered extinct in SA.
75. *Wallabia bicolor* (Desmarest, 1804) Swamp Wallaby SA: V

Subfamily uncertain - Banded Hare-wallaby

76. *Lagostrophus fasciatus* (Péron & Lesueur, 1807) Banded Hare-wallaby AU: ssp
A subspecies, *L. f. baudinettei*, was discovered to be part of the South Australian fauna by Helgen and Flannery (2003) based on a specimen in the Museum für Naturkunde, Berlin. Only the subspecies *L. f. albipilus* AU: EX has been assigned a status. This species is considered extinct in SA.

Subclass Eutheria - Eutherians or placentals

Order Lagomorpha - Rabbits and hares

Family Leporidae - Rabbit and Hare

77. *Lepus europaeus* Pallas, 1778 European Brown Hare
78. *Oryctolagus cuniculus* (Linnaeus, 1758) Rabbit (European Rabbit)

Order Chiroptera - Bats

Family Pteropodidae - Flying-foxes

79. *Pteropus alecto* Temminck, 1837 Black Flying-fox
The first SA record of this species was an animal that died during a heatwave in Botanic Park, Adelaide in January 2013.
80. *Pteropus poliocephalus* Temminck, 1825 Grey-headed Flying-fox AU: VU SA: R
81. *Pteropus scapulatus* Peters, 1862 Little Red Flying-fox SA: R

Family Megadermatidae - False vampires

82. *Macroderma gigas* (Dobson, 1880) Ghost Bat SA: E
Subfossils confirm the evidence for this species in SA but these are undated. Finlayson (1961) recorded that Aboriginal people remembered it in the Mann, Musgrave and Tomkinson Ranges early in the 20th century.

Family Emballonuridae - Sheath-tailed bats

83. *Saccolaimus flaviventris* (Peters, 1867) Yellow-bellied Sheath-tailed Bat SA: R
84. *Taphozous hilli* Kitchener, 1980 Hill's Sheath-tailed Bat SA: R
The record from near Ooldea is based on a description by Wood Jones (1923-25) of a specimen that he assigned to *T. georgianus*. This specimen cannot be traced and is more likely to be *T. hilli*.

Family Molossidae - Free-tailed bats

85. *Austronomus australis* (Gray, 1838) White-striped Free-tailed Bat
86. *Mormopterus eleryi* Reardon & McKenzie, 2008 Bristle-faced Free-tailed Bat SA: V
87. *Mormopterus planiceps* (Peters, 1866) Southern Free-tailed Bat
88. *Mormopterus ridei* (Felten, 1964) Eastern Free-tailed Bat
89. *Mormopterus* species 3 (not formally described) Inland Free-tailed Bat

Family Vespertilionidae - Evening bats

Subfamily Myotinae - Mouse-eared bats

90. *Myotis macropus* Gould, 1855 Large-footed Myotis SA: E

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Subfamily Vespertilioninae - Evening bats

91. *Chalinolobus gouldii* (Gray, 1841) Gould's Wattled Bat
92. *Chalinolobus morio* (Gray, 1841) Chocolate Wattled Bat
93. *Chalinolobus picatus* (Gould, 1852) Little Pied Bat SA: E
94. *Falsistrellus tasmaniensis* (Gould, 1858) Eastern False Pipistrelle (Tasmanian Falsistrelle) SA: E
95. *Nyctophilus corbeni* Parnaby, 2009 Corben's Long-eared Bat AU: VU SA: V
96. *Nyctophilus geoffroyi* Leach, 1821 Lesser Long-eared Bat
97. *Nyctophilus gouldi* Tomes, 1858 Gould's Long-eared Bat SA: E
98. *Nyctophilus major* Gray, 1844 Central Long-eared Bat
99. *Scotorepens balstoni* (Thomas, 1906) Inland Broad-nosed Bat
100. *Scotorepens greyii* (Gray, 1843) Little Broad-nosed Bat
101. *Vespadelus baverstocki* (Kitchener, Jones & Caputi, 1987) Inland Forest Bat
102. *Vespadelus darlingtoni* (Allen, 1933) Large Forest Bat
103. *Vespadelus finlaysoni* (Kitchener, Jones & Caputi, 1987) Finlayson's Cave Bat
104. *Vespadelus regulus* (Thomas, 1906) Southern Forest Bat
105. *Vespadelus vulturnus* (Thomas, 1914) Little Forest Bat

Family Miniopteridae - Bent-winged bats

106. *Miniopterus orianae* Thomas, 1922 Large Bent-winged Bat AU: ssp SA: ssp

The subspecies *M. o. bassanii* (Southern Bent-winged Bat AU: CR SA: E) is the only taxon found in SA. See Introduction for an explanation of the taxonomic decision to change from *M. schreibersii*.

Order Carnivora - Carnivorous eutherian mammals

Family Felidae - Cat

107. **Felis catus* Linnaeus, 1758 Domestic Cat (Feral Cat)

Family Canidae - Dingo and Fox

108. **Canis lupus* Linnaeus, 1758 Feral Dog, Dingo

There are two subspecies recognised in Australia, *C. lupus dingo* (Dingo) and *C. lupus familiaris* (Feral Dog). The mapped records are almost entirely those of the Dingo.

109. **Vulpes vulpes* (Linnaeus, 1758) Fox (Red Fox)

Family Otariidae - Eared seals

The taxonomy of the fur seals is undergoing some revision. Berta and Churchill (2011) recommend that all fur seals except *Arctocephalus pusillus* be transferred to the genus *Arctophoca* but it is not known whether this will be generally accepted. For this reason, the Census has retained *Arctocephalus* for all SA fur seals.

110. *Arctocephalus forsteri* (Lesson, 1828) New Zealand Fur Seal (Australasian Fur Seal)
111. *Arctocephalus gazella* (Peters, 1875) Antarctic Fur Seal

Known from a sighting on Kangaroo Island (Shaughnessy 1994). Needs confirmation by photograph or specimen.

112. *Arctocephalus pusillus* (Schreber, 1775) Australian Fur Seal (Brown Fur Seal) SA: R
Only one subspecies, *A. p. doriferus* Wood Jones, 1925 found in Australian waters.
113. *Arctocephalus tropicalis* (Gray, 1872) Subantarctic Fur Seal AU: VU SA: E
114. *Neophoca cinerea* (Péron, 1816) Australian Sea Lion AU: VU SA: V

Family Phocidae - 'True' seals

115. *Hydrurga leptonyx* (de Blainville, 1820) Leopard Seal SA: R

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116. *Leptonychotes weddellii* (Lesson, 1826) Weddell Seal
 117. *Lobodon carcinophaga* (Hombron & Jacquinot, 1842) Crabeater Seal
 118. *Mirounga leonina* (Linnaeus, 1758) Southern Elephant Seal AU: VU SA: R
 119. *Ommatophoca rossii* Gray, 1844 Ross Seal

Order Perissodactyla - Odd-toed ungulates

Family Equidae - Horse and Donkey

120. **Equus asinus* Linnaeus, 1758 Donkey (Feral Donkey)
 121. **Equus caballus* Linnaeus, 1758 Horse (Brumby)

Order Artiodactyla - Even-toed ungulates

Family Suidae - Pig

122. **Sus scrofa* Linnaeus, 1758 Pig (Feral Pig)

Family Camelidae - Camel

123. **Camelus dromedarius* Linnaeus, 1758 One-humped Camel (Dromedary, Arabian Camel)

Family Cervidae - Deer

124. **Cervus dama* Linnaeus, 1758 Fallow Deer
 125. **Cervus elaphus* Linnaeus, 1758 Red Deer

Family Bovidae - Horned ruminants

126. **Bos taurus* Linnaeus, 1758 Cattle (European Cattle)
 127. **Capra hircus* Linnaeus, 1758 Goat (Feral Goat)
 128. **Ovis aries* Linnaeus, 1758 Sheep (Feral Sheep)

Order Cetacea - Whales, dolphins and porpoises

Suborder Mysticeti - Baleen whales

Family Balaenidae - Right whales

129. *Eubalaena australis* (Desmoulins, 1822) Southern Right Whale AU: EN SA: V

Family Balaenopteridae - Rorquals

130. *Balaenoptera acutorostrata* Lacépède, 1804 Dwarf Minke Whale SA: R

The Dwarf Minke Whale is an un-named subspecies of the Common Minke Whale.

131. *Balaenoptera bonaerensis* Burmeister, 1867 Antarctic Minke Whale

132. *Balaenoptera borealis* Lesson, 1828 Sei Whale AU: VU SA: V

133. *Balaenoptera edeni* Anderson, 1879 Bryde's Whale SA: R

134. *Balaenoptera musculus* (Linnaeus, 1758) Blue Whale AU: EN SA: E

Two subspecies are found in the Southern Hemispheres: *B. m. intermedia* the Southern Blue Whale and *B. m. breviceauda* Ichihara, 1966 the Pygmy Blue Whale. The species is in need of taxonomic revision worldwide.

135. *Balaenoptera omurai* Wada, Oishi & Yamada, 2003 Omura's Whale

This species has not been universally accepted because of the need for a complete revision of the Bryde's Whale group.

136. *Balaenoptera physalus* (Linnaeus, 1758) Fin Whale AU: VU SA: V

137. *Megaptera novaeangliae* (Borowski, 1781) Humpback Whale AU: VU SA: V

Family Neobalaenidae - Pygmy Right Whale

138. *Caperea marginata* (Gray, 1846) Pygmy Right Whale SA: R

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Suborder Odontoceti - Toothed whale, dolphins and porpoises

Family Delphinidae - Killer whales, pilot whales and dolphins

- 139. *Delphinus delphis* Linnaeus, 1758 Short-beaked Common Dolphin
- 140. *Feresa attenuata* Gray, 1874 Pygmy Killer Whale
- 141. *Globicephala macrorhynchus* Gray, 1846 Short-finned Pilot Whale SA: R
- 142. *Globicephala melas* (Traill, 1809) Long-finned Pilot Whale
- 143. *Grampus griseus* (Cuvier, 1812) Risso's Dolphin SA: R
- 144. *Lagenorhynchus obscurus* (Gray, 1828) Dusky Dolphin
- 145. *Lissodelphis peronii* (Lacépède, 1804) Southern Right-whale Dolphin
- 146. *Orcinus orca* (Linnaeus, 1758) Killer Whale (Orca)
- 147. *Pseudorca crassidens* (Owen, 1846) False Killer Whale SA: R
- 148. *Tursiops aduncus* (Ehrenberg, 1833) Indo-Pacific Bottlenose Dolphin
- 149. *Tursiops truncatus* (Montagu, 1821) Common Bottlenose Dolphin

Family Phocoenidae - Porpoises

- 150. *Phocoena dioptrica* Lahille, 1912 Spectacled Porpoise

Family Physeteridae - Sperm Whale

- 151. *Physeter macrocephalus* Linnaeus, 1758 Sperm Whale SA: R

Family Kogiidae - Pygmy and Dwarf Sperm Whales

- 152. *Kogia breviceps* (de Blainville, 1838) Pygmy Sperm Whale SA: R
- 153. *Kogia sima* (Owen, 1866) Dwarf Sperm Whale SA: R

Family Ziphiidae - Beaked whales

- 154. *Berardius arnuxii* Duvernoy, 1851 Arnoux's Beaked Whale SA: R
- 155. *Hyperoodon planifrons* Flower, 1882 Southern Bottlenose Whale SA: R
- 156. *Mesoplodon bowdoini* Andrews, 1908 Andrews' Beaked Whale SA: R
- 157. *Mesoplodon grayi* von Haast, 1876 Gray's Beaked Whale (Scamperdown Whale) SA: R
- 158. *Mesoplodon hectori* (Gray, 1871) Hector's Beaked Whale SA: R
- 159. *Mesoplodon layardii* (Gray, 1865) Strap-toothed Whale
- 160. *Tasmacetus shepherdi* Oliver, 1937 Shepherd's Beaked Whale (Tasman Beaked Whale) SA: R
- 161. *Ziphius cavirostris* Cuvier, 1823 Cuvier's Beaked Whale (Goose-beaked Whale) SA: R

Order Rodentia - Rodents

Family Muridae - Murids

- 162. *Conilurus albipes* (Lichtenstein, 1829) White-footed Tree-rat AU: EX SA: E

This species was recorded by John Gould (1845–1863) as occurring in SA but the only confirmed evidence is from subfossils.

- 163. *Hydromys chrysogaster* Geoffroy, 1804 Water Rat
- 164. *Leggadina forresti* (Thomas, 1906) Central Short-tailed Mouse (Forrest's Mouse)
- 165. *Leporillus apicalis* (Gould, 1853) Lesser Stick-nest Rat AU: EX SA: E
- 166. *Leporillus conditor* (Sturt, 1848) Greater Stick-nest Rat AU: VU SA: V

Extinct on mainland SA. Stock from remaining wild population on the Franklin Islands reintroduced to Reevesby Island (1991, 1992, extant), Yookamurra Sanctuary (1991, 1992, failed), St Peter Island (1993, 1994, extant), Venus Bay Conservation Park (1995, 1996, failed) and Arid Recovery/Roxby Downs (1998, 1999, extant).

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167. *Mastacomys fuscus* Thomas, 1882 Broad-toothed Rat
This species is known only from subfossils in SA.
168. **Mus musculus* Linnaeus, 1766 House Mouse
169. *Notomys alexis* Thomas, 1922 Spinifex Hopping-mouse
170. *Notomys amplus* Brazenor, 1936 Short-tailed Hopping-mouse AU: EX SA: E
This species is known only from subfossils in SA.
171. *Notomys cervinus* (Gould, 1853) Fawn Hopping-mouse SA: V
172. *Notomys fuscus* (Wood Jones, 1925) Dusky Hopping-mouse AU: VU SA: V
173. *Notomys longicaudatus* (Gould, 1844) Long-tailed Hopping-mouse AU: EX SA: E
This species is known only from subfossils in SA.
174. *Notomys mitchellii* (Ogilby, 1838) Mitchell's Hopping-mouse
175. *Notomys robustus* Mahoney, Smith & Medlin, 2008 Broad-cheeked Hopping-mouse
This species is known only from subfossils.
176. *Pseudomys apodemoides* Finlayson, 1932 Silky Mouse
177. *Pseudomys auritus* Thomas, 1910 Long-eared Mouse
This species was synonymised with *Pseudomys australis* until very recently (Medlin, 2008). This species is considered extinct in SA.
178. *Pseudomys australis* Gray, 1832 Plains Mouse AU: VU SA: V
Introduced to Yookamurra Sanctuary from pet stock (1991–1994, failed).
179. *Pseudomys bolami* Troughton, 1932 Bolam's Mouse
180. *Pseudomys desertor* Troughton, 1932 Desert Mouse
181. *Pseudomys gouldii* (Waterhouse, 1839) Gould's Mouse AU: EX SA: E
This species is known only from subfossils in SA.
182. *Pseudomys hermannsburgensis* (Waite, 1896) Sandy Inland Mouse
183. *Pseudomys occidentalis* Tate, 1951 Western Mouse
This species is known only from subfossils in SA.
184. *Pseudomys shortridgei* (Thomas, 1907) Heath Mouse AU: VU SA: E
185. *Rattus fuscipes* (Waterhouse, 1839) Bush Rat
186. *Rattus lutreolus* (Gray, 1841) Swamp Rat SA: R
187. **Rattus norvegicus* (Berkenhout, 1769) Brown Rat (Sewer Rat, Norway Rat)
188. **Rattus rattus* (Linnaeus, 1758) Black Rat (Ship Rat, Roof Rat)
Preliminary research on *R. rattus* in Australia has noted that two species are likely to be present.
189. *Rattus tunneyi* (Thomas, 1904) Pale Field-rat SA: E
Taylor and Horner (1973) provide evidence that this species occurred in SA based on specimens collected in about 1840. These have no specific locality data but those from J. B. Harvey are likely to have been from either Eyre Peninsula or Kangaroo Island. This species is considered extinct in SA.
190. *Rattus villosissimus* (Waite, 1898) Long-haired Rat (Plague Rat)