

Biogeography of the herpetofauna of the Archipelago of the Recherche, Western Australia

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Abstract

Published and unpublished herpetological data collected up until 1995 are collated for 47 islands in the Archipelago of the Recherche, off the south coast of Western Australia. The 20 species of reptile and one species of frog found on the Archipelago's islands represent only 42% of the herpetofaunal diversity of the Esperance Plain on the adjacent mainland. The six most common and widely distributed species are the geckos *Phyllodactylus marmoratus marmoratus* and *Underwoodisaurus milii*, and the skinks *Ctenotus labillardieri*, *Egernia kingii*, *E. napoleonis* and *Hemiergis peronii*. The herpetofauna of individual islands ranges from just one of these common species on the smallest islands, to 16 species (including all of the core suite of common species listed above) on the largest island. The snake, *Pseudonaja affinis tanneri* is the only reptile endemic to the Archipelago. A similarity index based on average linkages (UPGMA) indicates that the Archipelago's herpetofauna is most similar to that of the eastern end of the Esperance Plain.

Introduction

The islands of the Archipelago of the Recherche off the southern Western Australian coast (Fig 1) lie between longitudes 120°30'S and 124°10'E and up to 60km offshore in the west (Termination Island in 35°28'S, 121°59'E) and 30km offshore to the east (Daw Island in 33°51'S, 124°06'E). There are about 200 islands in the Archipelago, ranging in size from over 1000 ha (Middle Island, having most vegetation types and most plant species) to many small islands less than 10ha that have little vegetation or are no more than exposed rocks. The Archipelago, with the exception of High, Station and Woody islands, was vested in the Western Australian Wildlife Authority as an A class reserve on 19 April, 1980.

European knowledge of the natural history of these islands began nearly 200 years ago with the investigations of Labillardière and Riche on the "Recherche" and "Esperance" under the command of d'Entrecasteaux. Matthew Flinders charted the islands in 1802 and Captain Phillip Parker King of the Royal Navy made a short visit in 1818. The remainder of the nineteenth century saw the Archipelago exploited by sealers and pastoralists, the latter with minimal success. The little biological data collected during this time was anecdotal and imprecise (Bechervaise 1954).

The beginning of the twentieth century saw the first attempt to systematically investigate the natural history of the islands. JT Tunney, the Western Australian Museum's professional collector at the turn of the century, made mammal and bird collections from some of the largest islands in 1904 and 1906 (Whittell 1954). This was followed by an expedition in 1921 which included Messrs Hull, Wright and Grant (Hull 1922). DL Serventy made visits in 1944 (Serventy 1947) and again in 1947 and 1948 (Serventy 1952). In 1950, an expedition organised by the Australian Geographical Society sys-

tematically worked its way through the Archipelago, visiting 20 islands (Fairbridge & Serventy 1954; Glauert 1954 & Willis 1953). More recently, naturalists such as Abbott & Black (1978), Goodsell *et al.* (1976), Lane (1982a,b,c), Lane & Daw (1985), Maryan & Robinson (1987) and Tingay & Tingay (1982a,b) have published on collections and observations on the reptiles of the Archipelago. Other contributors, including AA Burbidge, I Cook, J Dell, A Hopkins, D Knowles, NL McKenzie, D Pearson & A Williams, VN Serventy, AN Start and A Weston, have lodged specimens and unpublished observations with the Western Australian Museum. Since 1979, we have had the opportunity of visiting many more islands to collect birds and reptiles. Despite all efforts, Storr (1987) lists bird data from only about 50 islands, while Western Australian Museum records together with published observations give herpetological data for only 47 islands.

The aim of this paper is to collate and review the scattered published and unpublished herpetological data available for the Archipelago of the Recherche, and to compare it with the herpetofauna of the opposite mainland.

Results

The particular species that have been recorded on the various islands of the Recherche Archipelago are listed in Appendix 1 and summarised in Table 1. Recent collecting has thrown doubt on some earlier observations; these earlier and doubtful observations, and certain unidentifiable published descriptions of reptiles from particular islands, are excluded from this list.

Substantial efforts by a number of collectors have not confirmed the sight record of *E. kingii* from Daw Island (Glauert 1954). Specimens of *Egernia napoleonis* from the south coast of Western Australia, east of Bremer Bay (including the Archipelago of the Recherche), are larger than specimens from Western populations (Storr 1978). Specimens of *E. napoleonis* from Daw Island are excep-

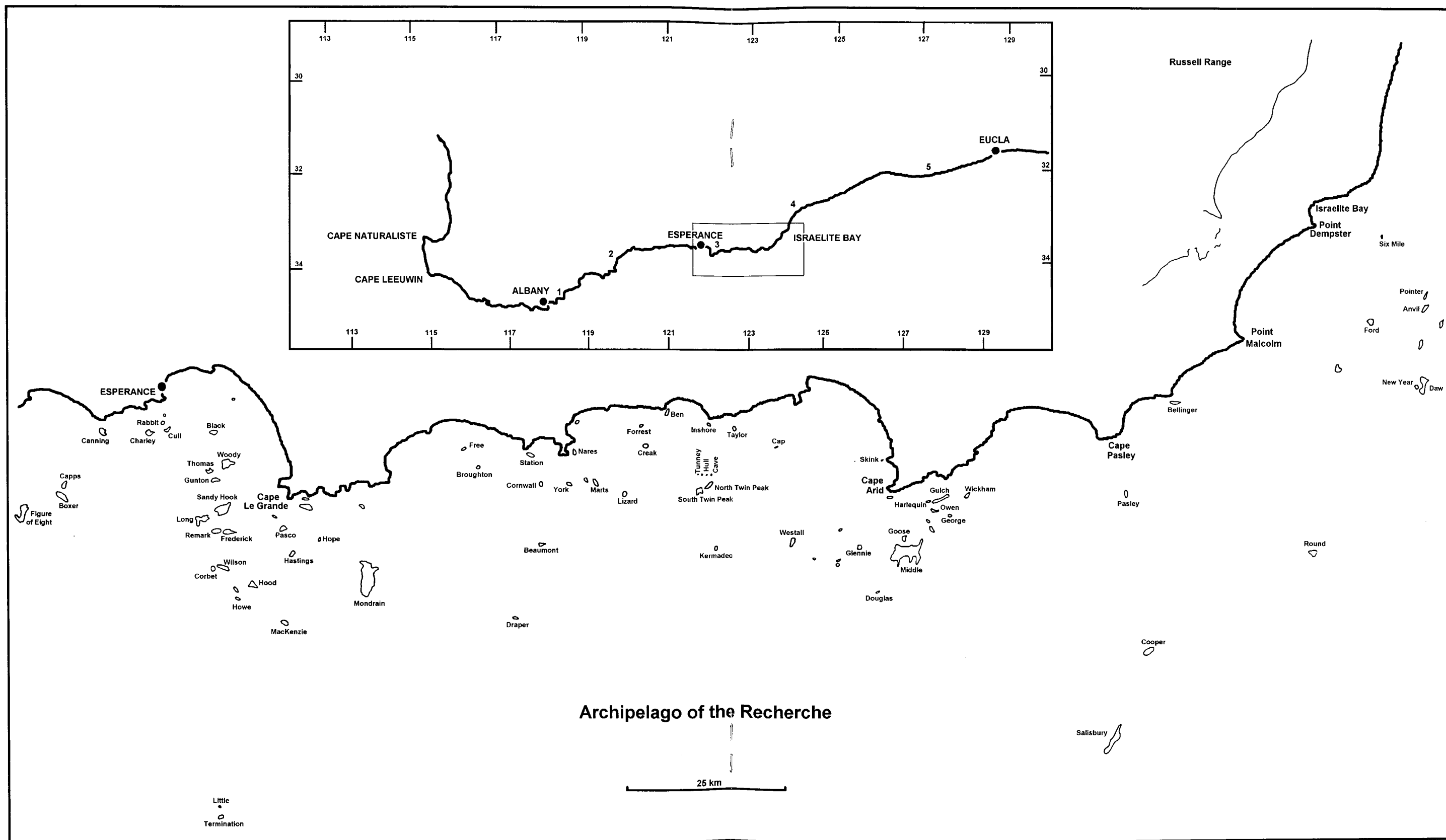


Figure 1. The Archipelago of the Recherche, showing major islands mentioned in the text and; inset, the location of 5 mainland areas with which the herpetofauna of the Archipelago of the Recherche is compared; Two Peoples Bay (1), Fitzgerald River National Park (2), Cape Le Grand National Park (3), plain below Wylie Escarpment (4), Roe Plain (5).

Table 1

The number of islands which have one species, two species, and so on, up to 16 species supported by the largest island. The area of the largest island, within a suite of islands supporting the same number of species, is also given.

Number of species	Number of islands	Area of largest island (ha)
1	7	100
2	8	140
3	6	130
4	7	100
5	9	280
6	3	285
7	2	190
8	1	125
9	1	315
10	0	-
11	1	300
12	0	-
13	0	-
14	0	-
15	1	780
16	1	1080

tionally large (up to 145 mm SVL and 94 grams) so it is possible that Glauert's observation is based on these large *E. napoleonis*.

Despite extensive work on Mondrain Island by Abbott & Black (1976), Johnstone (unpublished observations) and Pearson & Williams (*pers. comm.*), there has not been a specimen of *Hemiergis peronii* to substantiate a sight record (Glauert 1954). It is possible that Glauert's sight record is based on *Lerista dorsalis*, because *H. peronii* and *L. dorsalis* have the same digital formula (4+4) and many *H. peronii* from the Archipelago develop dorsal stripes similar to those of *L. dorsalis*.

Names of some lizards have changed since the publication of earlier lists. The skink *Lerista dorsalis* is the *Lerista frosti* of Abbott & Black (1978) and the *Ablepharus elegans* of Glauert (1954). *Gemmatophora norrisi* is the *Amphibolurus muricatus* of Abbott & Black (1978).

The names of some islands have also changed. In the past, MacKenzie Island (34°12'S, 122°06'E) has been called Round Island; Westall Island (34°05'S, 122°58'E) has been called Combe Island; Cull Island (33°55'S, 121°54'E) has been called Gull Island; Kermadec Island (34°05'S, 122°05'E) has been called Wedge Island; Wickham Island (34°01'S, 123°17'E) has been called Stanley Island; and Daw Island (33°51'S, 124°06'E) has been called Christmas Island. Anvil Island (33°44'S, 124°05'E), Skink Island (33°59'S, 123°09'E), Harlequin Island (34°01'S, 123°14'E),

Table 2

Habitat of 19 reptile and amphibian taxa in the Archipelago of the Recherche. Numbers in columns indicate the number of individuals found in each habitat.

Species	Habitat	Under shrubs on sand	On or under granite	On or under limestone	On or under leaf litter	On <i>Carpobrotus</i>	Under bark	On beach sand	In burrow in soil	In loose soil
<i>Litoria cyclorhynchus</i>			2							
<i>Phyllodactylus m. marmoratus</i>			75	1	2		1			
<i>Underwoodisaurus milii</i>			29	2						
<i>Ctenophorus ornatus</i>			29							
<i>Gemmatophora norrisi</i>				4						
<i>Cryptoblepharus virgatus clarus</i>			1							
<i>Ctenotus labillardieri</i>			65							
<i>Egernia kingii</i>			18	1					1	
<i>Egernia multiscutata bos</i>			2						8	1
<i>Egernia napoleonis</i>		2	80	1					1	
<i>Hemiergis peronii</i>			9					1		6
<i>Bassiana trilineata</i>			3	5						
<i>Morethia obscura</i>			1							
<i>Lerista microtis intermedia</i>								1		
<i>Tiliqua rugosa rugosa</i>			2							
<i>Varanus rosenbergi</i>					1					
<i>Morelia spilota imbricata</i>			1			1				
<i>Acanthophis antarcticus</i>		2								
<i>Notechis coronatus</i>			10		2	1				

Hull Island (33°58'S, 122°50'E), Six Mile Island (33°38'S, 123°57'E) and Tunney Island (33°58'S, 122°49'E) have only recently been named.

Discussion

Species distribution within the Recherche Archipelago

Less than half of the islands in the Recherche Archipelago have reptiles or frogs collected from them, and the collecting effort varies from many days in the case of the larger islands to only an hour or so for the smaller islands. Such incomplete data only allows the most general of conclusions regarding the distribution of species within the Archipelago and species diversity-island area relationships to be drawn.

Table 1, which summarises the data in Appendix 1, shows the number of islands which have one species, two species and so on up to 16 species, and the area of the largest island within a suite of islands supporting the same number of species. The most widely distributed species in the Archipelago, the gecko *Phyllodactylus marmoratus marmoratus*, occurs on 32 islands. It is followed by various skinks; *Egernia kingii* (31), *Egernia napoleonis* (30), *Ctenotus labillardieri* (21), and the gecko *Underwoodisaurus milii* (19) and the skink *Hemiergis peronii* (19). We consider these six species to comprise the "core" herpetofauna of the Archipelago. The most common and widely distributed snake (*Notechis coronatus*) is found on nine islands. *Morelia spilota imbricata* and *Pseudonaja affinis tanneri* are the least common snakes, with the python only occurring on the two largest islands (Middle and Mondrain), and the endemic *P. affinis tanneri* only on Boxer and Figure of Eight Islands, at the western end of the Archipelago. The skink *Lerista microtis intermedia* is restricted to the predominantly sandy Wickham Island, while the monitor *Varanus rosenbergi* is only found on Middle Island.

The four largest islands, of Middle (1080 ha), Mondrain (780 ha), Salisbury (315 ha) and North Twin Peak (300 ha), support 16, 15, 9 and 11 species respec-

tively, and all of them except Salisbury has a complete suite of the six core species. Fewer species utilise the habitats created by limestone than by granites (Table 2), which may explain why Salisbury Island, which is largely Quaternary eolianite (Bechervaise 1954), supports the fewest species of the four largest islands. The remaining 43 smaller islands are less than 300 ha and support only up to eight species.

Comparison with mainland herpetofauna

Lack of data may preclude a thorough analysis of the intra-island herpetofauna for the Archipelago of the Recherche but it does not hinder a biogeographic comparison with the opposite mainland because the herpetofauna assemblages of both areas should now be nearly completely known. Although many small islands in the Archipelago remain unvisited, they probably only support a few of the common species (most likely some, but not all, of the six core suite of species). It is unlikely that few, if any, amphibian or reptile species remain to be added to the 21 species so far recorded from the Archipelago.

Details of the lower west and south coast mainland herpetofauna have been obtained from studies of the coastal strip between Busselton and Two Peoples Bay (How *et al.* 1987), Cape Le Grand National Park (Kitchener *et al.* 1975) and the Great Australian Bight (Storr *et al.* 1981; Congreve 1985; McKenzie & Robinson 1987; Greer *et al.* 1991). These data, which are summarised in Table 3 and augmented with data from Western Australian Museum records pertaining to the plain below Wylie Escarpment (see Figure 1), indicate that the coastal strip from Augusta to Eucla supports a moderately rich herpetofauna.

The herpetology of the long coastal strip between Two Peoples Bay and Roe Plains, to which we have compared the herpetofauna of the Archipelago of the Recherche (Table 4), transects several ecophysical zones. Two Peoples Bay, the westernmost site, is by far the wettest (*ca.* 850 mm rainfall *p.a.*) and represents the southeastern extremity of the jarrah-marri woodlands that is generally

Table 3

The number of species and subspecies recorded from the Archipelago of the Recherche and 5 regions of the adjacent south coast mainland. Numbers in brackets refer to site numbers (Appendix 2).

FAMILY	Two Peoples Bay (1)	Fitzgerald River National Park (2)	Cape Le Grand National Park (3)	Recherche Archipelago	Below Wylie Escarpment (4)	Roe Plain (5)
Leptodactylidae	7	9	4	0	2	0
Hylidae	2	2	2	1	1	0
Cheluidae	1	1	0	0	0	0
Gekkonidae	2	5	3	2	5	5
Pygopodidae	3	5	3	0	2	1
Agamidae	0	2	3	2	3	7
Scincidae	14	14	14	11	17	12
Varanidae	1	0	1	1	1	0
Typhlopidae	0	1	1	0	0	0
Boidae	1	0	1	1	0	1
Elapidae	6	5	4	3	4	3
TOTAL	37	44	36	21	35	29

associated with leached sands over ironstone gravels (Beard 1990). Two Peoples Bay is the eastern limit of southwestern Australian reptile endemics, such as *Egernia luctuosa*, *E. pulchra* and *Glaphyromorphus australis*.

The mainland sites of Fitzgerald River National Park, Cape Le Grand National Park and the plain below Wylie Escarpment are situated on the Esperance Plain which generally becomes more arid with increasing longitude. Ravensthorpe has a mean average rainfall of 420 mm, Esperance 740 mm and Israelite Bay 388 mm (*pers. comm.*, Western Australian Bureau of Meteorology). This undulating plain with scrub heaths and occasional thickets of eucalypts is relieved by numerous granitic and gneissic hills and domes. Most prominent of these is the Barren Range (Fitzgerald River National Park), Mt Le Grand and Frenchman Peak (Cape Le Grand National Park) and Russell Range (plateau above Wyle Escarpment). Israelite Bay is the eastern limit of granitic outcrops. Offshore, where the Esperance Plain is submerged, granite domes continue to protrude above sea level and form the islands of the Archipelago of the Recherche. Dortch & Morse (1984) estimate that Middle Island was formed by rising sea levels at least 9,000 and perhaps as much as 11,000 years ago.

Increasing aridity and the lack of granite, one of the more important microhabitats in the southwest of Western Australia, induces major changes to the herpetofauna of the south coast particularly in the eastern portion of the Esperance Plain. The Western Swamp Turtle (*Chelodina oblonga*) has its eastern limit in the Fitzgerald River drainage, while the lack of lithic complexes terminates the distribution of a number of amphibians and reptiles. Cape Le Grand is the eastern limit of *Ctenophorus ornatus* while the lack of soaks and pools generated by granite outcrops limits the number of amphibians found east of Israelite Bay (Table 3). Israelite Bay is also the eastern limit for the Tiger Snake (*Notechis scutatus occidentalis*) and the pygopod *Delma fraseri fraseri*. The python *Morelia spilota imbricata* and the skink *Tiliqua occipitalis* have recently been recorded from the vicinity of Eyre (Griffin & Hunt 1993).

The loss of these south-western herpetofaunal elements is compensated by the western intrusion of semi-arid and arid zone reptiles, in particular agamids and *Lerista*, although the species diversity of the latter in no way approaches the diversity exhibited by this genus on the mid-west coast of Western Australia. Three species of agamid and four species of *Lerista* (*Ctenophorus maculatus*, *C. griseus*, *C. pictus*, *Gemmatophora norrisi*, *Lerista dorsalis*, *L. baynesi* and *L. picturata*) are found on the plain below Wylie Escarpment but not further west on the mainland.

Still further northeast along the coast the Roe Plains (Nullarbor Region, Eremian Province, Beard 1990) is even more arid (Eyre 296 mm rainfall *p.a.*) and is isolated by the Baxter Cliffs in the west, the Hampton Plateau in the north and the cliffs at the head of the Great Australian Bight in the east. It is vegetated with areas of chenopod steppe, scattered Myall and copses of mallee on heavier soils and melaleuca and dense mallee on lighter soils. There are also extensive areas of dune with little or no vegetation. The reptiles are represented by two skinks endemic to the Roe Plains (*Ctenotus brooksi euclae* and *Lerista arenicola*) as well as elements of the Nullarbor

herpetofauna not found further southwest (*Morethia adelaidensis* and *Pogona nullarbor*).

A Simpson's similarity index (Biodiversity 1993) based on the taxa listed in Appendix 2 for the mainland sites of Two Peoples Bay, Cape Le Grande and Fitzgerald National Parks, Esperance Plain below Wylie Escarpment and Roe Plains, and the geckos, pygopods, agamids, skinks and elapids in Appendix 1 using average linkages (UPGMA), indicates that the Archipelago's herpetofauna is least like the western and easternmost mainland sites (Two Peoples Bay and Roe Plain respectively) and most similar to the herpetofauna of Cape Le Grand National Park, Fitzgerald River National Park and Wylie Escarpment of the Esperance Plain (Fig 2). What is, perhaps, a little surprising is the close affinity of the Archipelago's herpetofauna with that of the Wylie Escarpment. The analysis could have been influenced by the fact that three of the four largest islands (Middle, Salisbury, North and South Twin Peak), which collectively support about 90% of the Archipelago's herpetofaunal diversity are situated towards the more arid, eastern end of the Archipelago, and as a consequence are likely to be ecophysically and zoologically most similar to the eastern end of the Esperance Plain.

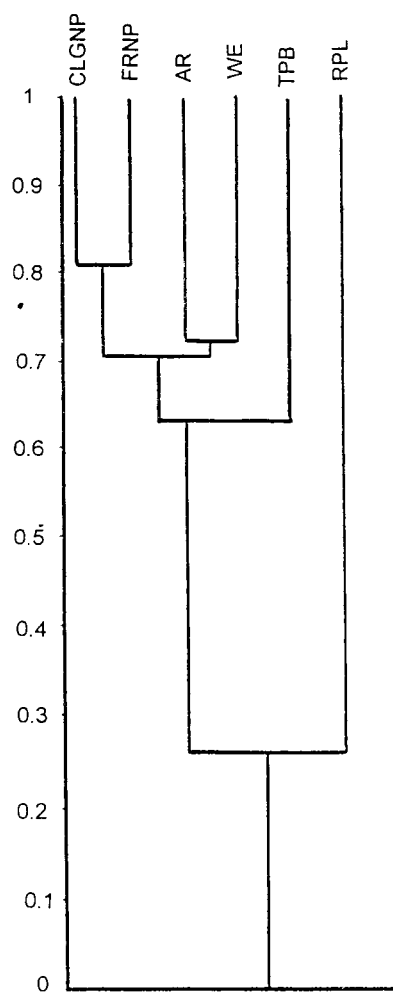


Figure 2. Simpson's similarity index for Archipelago of the Recherche (AR) and the mainland sites, Two Peoples Bay (TPB), Fitzgerald River National Park (FRNP), Cape Le Grand National Park (CLGNP), Wylie Escarpment (WE) and Roe Plain (RP).

With the exception of the endemic race of the dugite (*Pseudonaja affinis tannerii*), the species of amphibians and reptiles on the Archipelago of the Recherche are moderately common to common on the adjacent mainland. In our view, none of these species, including the dugite, require more protection than that currently provided by the 'A' Class Reserve status of the majority of the islands in the Archipelago.

Current South Australian Museum records (A Edwardes, South Australian Museum, *pers. comm.*) indicate that there are now about twice as many species of reptile recorded from the Nuyts Archipelago than indicated by the most recent published paper on the area (Robinson & Smyth 1976). Furthermore, apart from a list of the amphibians and reptiles of Eyre Peninsula (Schwaner *et al.* 1985) there are no published faunal lists for discrete sites on the west coast of South Australia. This lack of recent published data precluded the extension of this study to include island and adjacent mainland amphibian and reptile faunas, east to Eyre Peninsula, South Australia. Nuyts Archipelago is of particular interest because it offers a glimpse of a fauna in an otherwise inundated terrain at the eastern end of the Great Australian Bight. This group of islands mirrors the Archipelago of the Recherche at the western end of the Great Australian Bight.

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Appendix 1. The herpetofauna of the islands of the Archipelago of the Recherche on which species have been found. * indicates specimens in Western Australian Museum; letters indicate observations as follows: a, Australian Geographical Society Expedition (Glauert 1954); b, Lane & Daw (1985); c, Lane (1982a); d, Lane (1982b); e, Lane (1982c); f, Tingay & Tingay (1982a); g, Tingay & Tingay (1982b); h, Maryan & Robinson (1987); i, Goodsell *et al.* (1976); j, Smith & Johnstone (unpublished notes); k, Pearson & Williams (*pers. comm.*).

ISLAND	Approximate area (ha)	<i>Litoria cyclorhynchus</i>	<i>Phyllodactylus m. marmoratus</i>	<i>Underwoodisaurus miltii</i>	<i>Ctenophorus ornatus</i>	<i>Gemmatophora norrisi</i>	<i>Cryptoblepharus virgatus clarus</i>	<i>Ctenotus labillardieri</i>	<i>Egernia kingii</i>	<i>Egernia multiscutata bos</i>	<i>Egernia napoleonis</i>	<i>Hemiergis peronii</i>	<i>Bassiana trilineata</i>	<i>Morethia obscura</i>	<i>Lerista dorsalis</i>	<i>Lerista microtis intermedia</i>	<i>Tiliqua rugosa rugosa</i>	<i>Varanus rosenbergi</i>	<i>Morelia spilota imbricata</i>	<i>Acanthophis antarcticus</i>	<i>Notechis coronatus</i>	<i>Pseudonaja affinis tanneri</i>	Total number of species
ANVIL	25			j				*	*	*	*												5
BELLINGER	40	*						*	*	*	*												5
BEN	55	*						*	*	*	*												4
BOXER	200							*	a	*	*									*	*		6
CAVE	3	a	*					*	a	*	a												4
CHARLEY	100		*					*	a														3
CORBET	100	*		b				*		*													4
CULL	70		*					*	*	*													3
DAW	180	*	*	*					a	*										*	*		7
DOUGLAS	30				*				a														2
FIG. OF EIGHT	200	*						*	a											a		*	5
FORREST	20	*						*	*	*													4
FREDERICK	80								d														1
GOOSE	85	*						*	*	*	*										*		5
GULCH	100	*						*	*	*	*										*		5
GUNTON	95	*							a														2
HARLEQUIN	10	*						*		*	*												3
HIGH	10							*	*	*	*										*		5
HOOD	130							f	f	f													3
HOPE	25									*	*												1
HULL	20	*	*							*	*	*											4
INSHORE	35	*						*	*	*	*												5
KERMADEC	30	a							a														2
LONG	140	a							a														2
MACKENZIE	50								c			c											2
MIDDLE	1080	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	16
MONDRAIN	780	*	*	*	*	*	*	*	*	*	*	a	*	*	*	*	*	*	*	k	*	*	15
NEW YEAR	20									*	*												1
NARES	5	*					*			*	*												3
N TWIN PEAK	300	*	*	*	*	*	*	*	a	*	*	*	*	*	*	*	*	*	*	*	*	*	11
S TWIN PEAK	115	*	*	*	*	*	*	*	a	*	*	*	*	*	*	*	*	*	*	*	*	*	3
OWEN	25	*								*	*	*											2
PASCO	85	a	a	a					a			a											5
RABBIT	<10	*																					1
REMARK	100	*	a	*					a&e														4
SALISBURY	315	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9
SANDY HOOK	285	*	*	*	*	*	*	*	*	*	*	g	*	*	*	*	*	*	*	a&g	*	*	6
SIX MILE	10									*	*	*											1
SKINK	10							*	*	*	*	*											3
TAYLOR	15	*							a	*	*	*	*	*	*	*	*	*	*	*	*	*	6
TERMINATION	85	*	*	*	*	*	*	*	a	*	*	*	*	*	a	*	*	*	*	*	*	*	5
THOMAS	100	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2
TUNNEY	25	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	4
WESTALL	100									*	*	*	*	*	*	*	*	*	*	*	*	*	1
WICKHAM	40									*	*	*	*	*	*	*	*	*	*	*	*	*	2
WILSON	125	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	8
WOODY	190		h&i	h&i			h	h&i	*	*	*	h&i	*	h									7

Appendix 2. Species and subspecies of geckos, pygopods, agamids, skinks and elapid snakes recorded from 5 sites on the south coast mainland adjacent to the Archipelago of the Recherche. Numbers in brackets refer to site numbers (Fig 1).

	Two Peoples Bay (1)	Fitzgerald River National Park (2)	Cape Le Grand National Park (3)	Wylie Escarpment (4)	Roe Plain (5)
Gekkonidae					
<i>Crenadactylus ocellatus ocellatus</i>		*			
<i>Gehyra variegata</i>				*	*
<i>Phyllodactylus marmoratus marmoratus</i>	*	*	*	*	
<i>Phyllodactylus marmoratus alexanderi</i>				*	*
<i>Diplodactylus granariensis</i>	*	*			*
<i>Diplodactylus spinigerus inornatus</i>		*	*	*	*
<i>Underwoodisaurus milii</i>		*	*	*	*
Pygopodidae					
<i>Aprasia inaurita</i>					*
<i>Aprasia repens</i>		*			
<i>Aprasia striolata</i>	*	*	*		
<i>Delma australis</i>	*	*	*		
<i>Delma fraseri fraseri</i>		*		*	
<i>Pygopus lepidopodus lepidopodus</i>	*	*	*	*	
Agamidae					
<i>Ctenophorus maculatus griseus</i>		*		*	*
<i>Ctenophorus ornatus</i>			*		
<i>Ctenophorus pictus</i>					*
<i>Gemmatophora norrisi</i>				*	*
<i>Pogona minor minor</i>			*		*
<i>Pogona nullarbor</i>					*
<i>Tympanocryptis adelaidensis chapmani</i>		*	*	*	*
Scincidae					
<i>Cryptoblephurus virgatus clarus</i>		*			*
<i>Bassiana trilineata</i>	*	*	*	*	
<i>Ctenotus catenifer</i>	*	*	*	*	
<i>Ctenotus gemmula</i>		*	*	*	
<i>Ctenotus labillardieri</i>	*	*	*	*	
<i>Ctenotus impar</i>				*	
<i>Ctenotus brooksi euclae</i>					*
<i>Egernia bos</i>	*	*	*	*	
<i>Egernia kingii</i>	*		*		
<i>Egernia luctuosa</i>	*				
<i>Egernia napoleonis</i>	*	*	*	*	
<i>Egernia pulchra</i>	*				
<i>Glaphyromorphus australis</i>	*				
<i>Hemiergis initialis brookeri</i>		*		*	*
<i>Hemiergis peronii</i>	*	*	*	*	
<i>Lerista baynesi</i>				*	*
<i>Lerista distinguenda</i>		*	*	*	
<i>Lerista microtis microtis</i>	*				
<i>Lerista microtis intermedia</i>		*	*	*	
<i>Lerista dorsalis</i>				*	*
<i>Lerista picturata</i>				*	
<i>Lerista arenicola</i>					*
<i>Menetia greyii</i>		*	*		*
<i>Pseudomoia baudini</i>					*
<i>Tiliqua occipitalis</i>	*		*	*	*
<i>Tiliqua rugosa rugosa</i>	*	*	*	*	*
<i>Morethia adelaidensis</i>					*
<i>Morethia obscura</i>	*	*	*	*	*
Elapidae					
<i>Notechis coronatus</i>	*	*	*	*	
<i>Notechis curtus</i>	*	*	*		
<i>Notechis mastersii</i>				*	*
<i>Notechis minor</i>	*				
<i>Notechis scutatus occidentalis</i>	*	*	*	*	
<i>Pseudonaja affinis affinis</i>	*		*	*	*
<i>Rhinoplocephalus bicolor</i>	*				
<i>Rhinoplocephalus nigriceps</i>		*			
<i>Rhinoplocephalus spectabilis</i>					*