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**THE PERUP**  
*a living forest*

A.C.N.



## INTRODUCTION

The Perup forest contains more species of mammals than any similar sized area in the south-west of Western Australia. Viable populations of at least five rare and endangered mammals exist within the area. For this reason the Perup is a proposed nature reserve.

Studies of forest ecology and the experimental application of management techniques are carried out in the 40,000ha Perup Forest.

## HISTORICAL

The Perup area was set aside in 1971 as a Forests Department Management Priority Area for flora and fauna. Since that time much research on the fauna of the area has been carried out by the Forests Department and later Department of Conservation and Land Management. Most research has centered around the effects of fire on flora and fauna. Though the prime reason for most of this research has been to study the effects of prescribed burning practices, the major thrust has been on the fire ecology of species rather than the immediate effects of cool spring fires, the current practise by CALM.

These studies provide understanding of the role that fire plays in the ecology of the communities which occur in the Perup. As well as being able to predict the effects of prescribed fire on plants and animals, this information may enable forest scientists to formulate fire management plans more suitable to the species of the area.

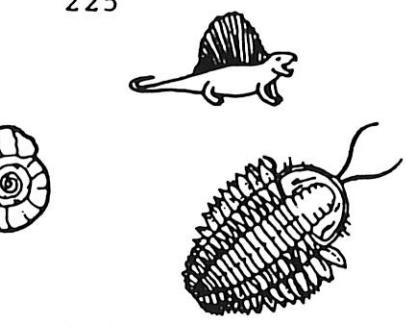
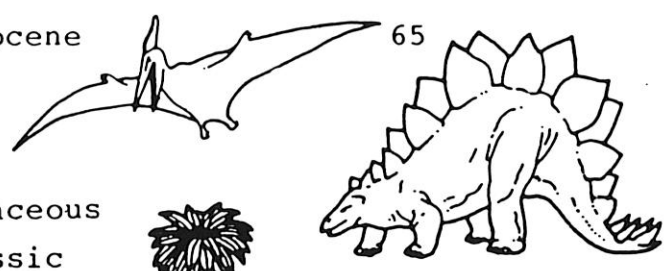
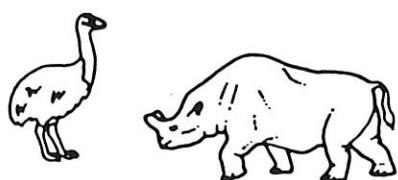
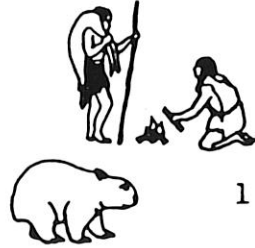
Much of the work has been written up and is published in journals, scientific papers and various pamphlets listed under references, some of which have been included in this booklet.

## GEOGRAPHY

The Perup area lies between the head waters of the Perup and Tone Rivers, tributaries of the Warren River. It is undulating country, typical of the upper reaches of rivers in the south-west and is characterized by broad, flat valleys and low ridges. The rainfall is low, less than 800mm p.a. and streams and swamps in the area are seasonal.

MAJOR DIVISIONS OF GEOLOGICAL TIME  
(oldest at bottom)

ERA	PERIOD	Millions of Years from the Present.	
KAINOZOIC	Quaternary	1	
	Recent		
	Pleistocene		
	Tertiary	65	
	Pliocene		
	Miocene		
	Oligocene		
	Eocene		
	Paleocene	225	
	MESOZOIC		Cretaceous
Jurassic			
Triassic			
PALAEOZOIC			Permian
		Carboniferous	
	Devonian		
	Silurian		
PROTEROZOIC	Ordovician	570	
	Cambrian		
ARCHAEOZOIC	Pre Cambrian	2,300	
		3,200	



## GEOLOGY

The Perup is extremely ancient in geological terms. The area is underlain with rock dating back to the Archean era which is the period prior to any fossil evidence (Pre-cambrian times). These rocks are mostly granites and gneiss' and are considered to be the core of the Australian continent. In places there has been more recent intrusions occurring in the quaternary period. The table illustrates the relative geological times.

Sands occur around the margins of swamps. Yellow podsollic (leached) soils occur along the drainage lines while the ridges are sandy gravels with occasional boulders and sheets of laterite. Laterite is a relatively recent occurrence resulting from weathering when the climate of Australia was wet and tropical (probably in the Pliocene period). With an abundance of vegetation supplying organic acids to the rain water, there was active decomposition of rock forming minerals. The dissolved portions would be carried down into the subsoil where it would be deposited as an impervious hardpan or crust. As the climate became increasingly more arid, the soils above the crust (now mostly sandy material) were stripped off by winds leaving the pavement of laterite.

## VEGETATION

The predominant vegetation of the area is an open forest of jarrah (*Eucalyptus marginata*) and marri (*E. calophylla*). Jarrah tends to be dominant on the ridges and the lateritic soils, whereas marri is more common in the valleys and on the sandier soils. Wandoo (*E. wandoo*) woodlands occur in many of the valleys, especially on clay soils in the northern parts of the area.

The understorey over most of the Perup is of low clumped scrub species. Species which are able to continually regenerate from a root stock, such as *Hakea lissocarpa*, *Leucopogon capitellatus* and *Bossiaea ornata* are common on the ridges. In lower lying areas, particularly on sandy soils, *Hypocalymma angustifolia* is dominant. In the treeless drainage lines on shallow soils *Hakea prostrata*, *H. varia* and *Acacia saligna* form tall open thickets. In some areas, particularly along the upper parts of the Perup river, *Melaleuca viminea* forms dense thickets. The wandoo woodlands have a sparse understorey with much bare ground between occasional shrubs.

A few restricted habitats occur with more specialized vegetation. These include granite outcrops with *Casuarina heugliana*, *C. humilis*, *Hakea cuclocarpa* and *Dryanda ornata*, and several peaty swamps with reedbeds of *Cladium reticulatum*.

tum surrounded by woodland of *Banksia attenuata*, flooded gum (*E. rudis*) and *Melaleuca preissii*.

Several leguminous species form dense thickets following summer fires - *Gastrolobium bilobum* (heartleaf poison), *G. spinosum* (prickly poison) and *Acacia pulchella*. Many thickets of heartleaf originating from the 1951 wildfires exist in the more fertile valleys, particularly in the south of the area. Prickly poison thickets occur on shallow soil over granite outcrops and *A. pulchella* form low thickets in many places following summer or autumn fires. These thickets of 'fire weed' species are important for several species of mammals in the area.

A list of plant species collected from the area is presented in Appendix 1.

## ANIMALS

The area is outstanding primarily because of its diverse mammal fauna and the high number of rare and endangered species it contains.

A total of 21 native and five introduced species of mammals, 85 species of birds, 4 species of frogs have been recorded in the area (Appendix 2). This list is not considered to be complete and more species of birds and reptiles are likely to be recorded in future. You may even find yourself collecting the first recorded specimen for the area.

The largest existing population of the woylie (*Bettongia penicillata*), estimated to number less than 5,000 individuals lives in the area. The woylie occurs throughout most of the area. Particularly on the more fertile sandy gravels where the ground cover is comparatively dense.

The numbat (*Myrmecobius fasciatus*) is also widely distributed but far less common. The total population of this species within the area is estimated to number less than one thousand animals.

The chudich, western native-cat (*Dasyurus geoffroii*) is also widely distributed. Although uncommon, it appears the population is stable.

The tammar wallaby (*Macropus eugenii*) is restricted to the tickets of heartleaf and *Melaleuca viminea* mentioned previously and is comparatively common in the northern and southern parts of the area, where these thickets exist.

The western ringtail possum (*Pseudoncheirus peregrinus*) exists in low numbers over much of the area, in particular in the south and north.

All these species are now on the rare and endangered species list and are the primary reason for the special status of the area .

In 1973/74 many species of fauna in the area suffered a drastic decline in population and it is believed that the introduction of the fox was responsible. Forest Focus Number 23 provides interesting reading on this subject and it is included in the appendices.

## RESEARCH

Since the early 1970's biological research has been particularly concerned with the rare and endangered species. Some of the details of this research can be found in the various papers and journals listed under further reading and included with this booklet.

Kangaroo and brush wallaby (*Macropus irma*) populations are monitored twice yearly along a transect through the area. The possum populations are also monitored twice yearly along transects, using spotlights. Other mammals e.g. chudich are trapped on a regular basis as a part of a capture, mark and release programme.

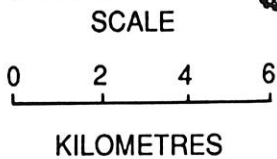
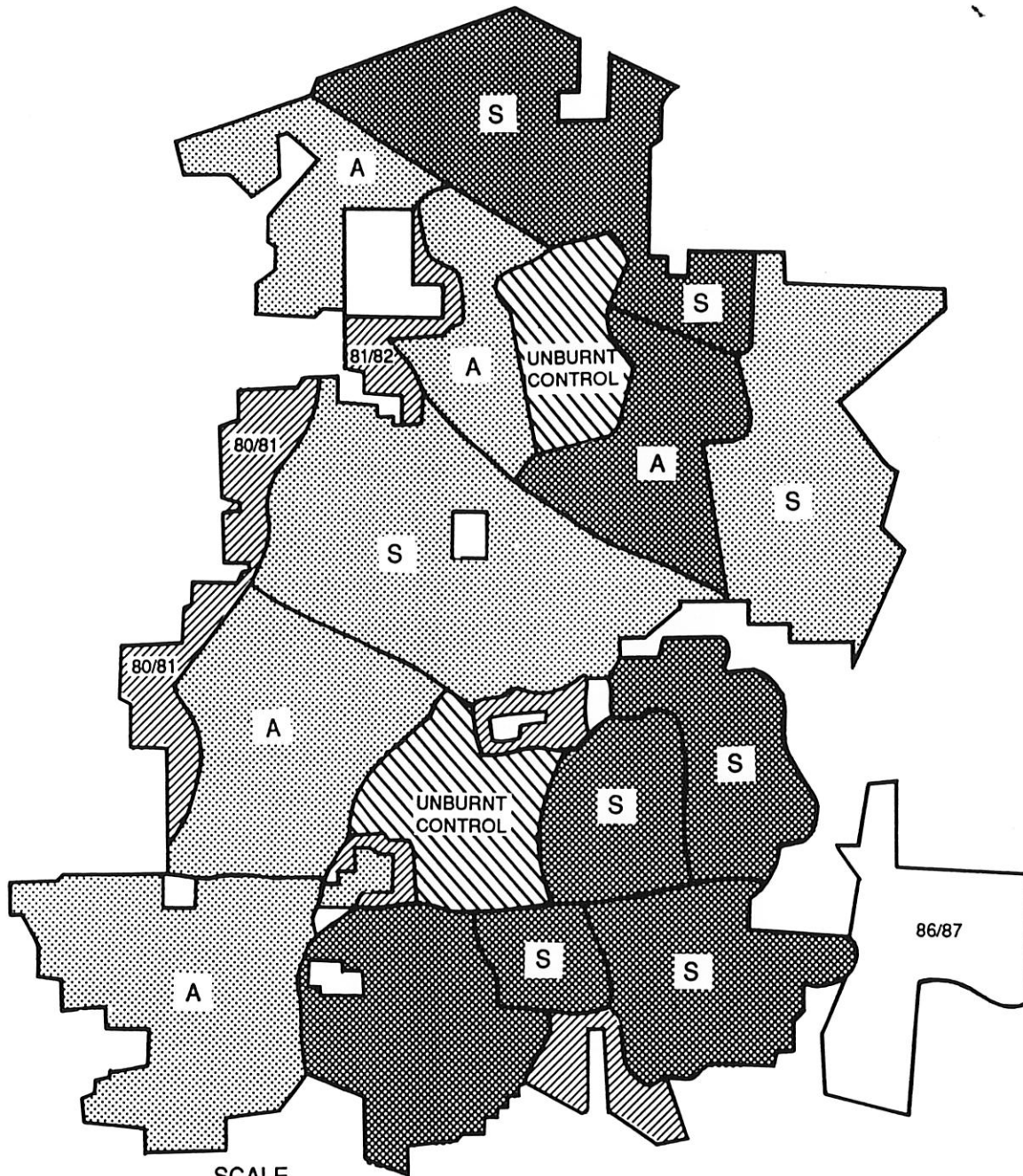
In addition to these monitoring programmes, more detailed studies on species biology, particularly in relation to fire, have been carried out on the woylie and tammar wallaby. These studies are still in progress and detailed investigations are being carried out into the relationship between 'tammar thickets' and fire. Artificial establishments of these thickets, by planting and sowing, is also being investigated.





Further work on the woylie, the establishment of new colonies in other areas of State Forest and the role of the fox as a predator are also receiving attention.

In addition to these studies, work has been done on the biology of the numbat and some work has been done on the fire ecology of possums, the native chudich and bird communities in the area.

## MANAGEMENT OF THE AREA

All research carried out within the area is of value as basic ecological data. However, the main reason for most of the research relates to the fire ecology of the Perup and the populations of animals which exist there. Fire control is considered basic to the management and protection of the area and the surrounding farmland.



- CORE AREA
-  Unburnt control block
  -  8 - 12 year burn cycle
- PROTECTION BURNS
-  6 - 7 year burn cycle
  -  Handburn

A = Autumn  
S = Spring

*Burning plan for the Perup. The two special "core" (high fauna value) areas, one in the north, the other in the south, form the basis of the plan. Protection is provided by buffer zones which are burnt in a shorter rotation. In addition the blocks are burnt on rotation in different seasons which is designed to provide added protection and increases the habitat diversity.*

No information on the fire history of the area is available prior to 1938. From that time however, records indicate that the Perup suffered frequent wildfires during summer and autumn months. It was common practice for the farmers in the area to burn on the forest perimeter, and uncontrolled fires often continued to burn in the adjacent bush for long periods.

In 1951 an exceptionally severe wildfire burnt the entire area, leaving the trees scorched and leafless. The extensive thickets of heartleaf, the main home of the tammar, originated as a result of this fire.

Fuel reduction burning was introduced in the late 1950s and by the mid 1960s the area was under a regular 5-7 year cycle of prescribed spring burning, formulated to account of the fauna values of the area. It included two large unburnt (control) areas and one area which allows for alternate spring and autumn burns on a longer cycle and includes special protective burning buffer zones.

This present burning plan is a compromise between protection of the forest area (as well as the surrounding farming areas) and protection of the fauna as indicated by the results of research findings. Some of the details of this burning plan, the philosophy and research findings upon which it is based are outlined in an article in Forest Focus No. 25.

The broad aim in the Perup is to integrate other uses of the forest with the management of the area for flora and fauna. Fire protection plays a major role but other aspects such as wood production and the use of the area for scientific study are also considered important. It is not a 'natural museum'. It is a place where active and positive management of the area's biological resource is taking place in a rational and practical manner. It is a living forest.





## FURTHER READING

CHRISTENSEN, P (1973)

A new concept in Forestry - Fauna Priority Areas. Forest Focus No. 10.

CHRISTENSEN, P. (1974)

The concept of Fauna Priority Areas. Proc. of Fire Ecol. Symp. Monash Uni.

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Fire in South-west forest ecosystems. Forest Focus No. 13.

CHRISTENSEN, P. (1975)

The breeding burrow of the banded ant-eater (*Myrmecobius fasciatus*). W.A. Nat. Vol. 13, p.32.

CHRISTENSEN, P.E. & KIMBER, P.C. (1975)

Effects of prescribed burning on the flora and fauna of South-west Australian Forests. Proc. Ecol. Soc. of Aust. Vol. 9, 85-106.

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A sad day for native fauna. Forest Focus No. 23.

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Interrelationships between forest fauna, nitrogen fixing plant species and forest health. In "Managing Nitrogen Economies of Natural and Man-made Ecosystems". Ed. Rummery, R.A. and Hingston, F.J. C.S.I.R.O. Div. of Land Res. Mgmt.

CHRISTENSEN, P.E.S. (1980)

The Biology of *Bettongia penicillata* Gray, 1837, and *Macropus eugenii* (Desmarest, 1817) in relation to fire. For. Dept. of W.A. Bull. 91.

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Observations on the nest building habits of the brush-tailed rat-kangaroo or woylie (*Bettongia penicillata*). Proc. Roy. Soc. W.A. 63 : 2p. 33-38.

CHRISTENSEN, P., RECHER, H. & HOARE, J. (1981)

IV Community responses to fire regimes, dry sclerophyll forest. In 'Fire and the Australian Biota'. Ed. Gillen, M., Groves, R.H. and Noble, R. Aust. Acad. of Sc.

CHRISTENSEN, P. (1982)

Using prescribed fire to manage forest fauna. Forest Focus No. 25.

INIONS, G. & BRADBURY, H. (1982)

Playing Possum. Forest-Focus No. 26.

MAISEY, K. & BRADBURY, H. (1982)

New light on the Numbat. Forest Focus No. 27.

RECHER, H.F. & CHRISTENSEN, P.E. (1980)

Fire and the Australian Biota. In 'Ecological Biography in Australia'. W. Junk.

UNDERWOOD, R.J. & CHRISTENSEN, P.E. (1981)

Fire Management in Western Australia. Special Focus No. 1.



# APPENDIX 1: Flora of the Perup

## POLYPODIACEAE

*Cheilanthes tenuifolia* Swartz.

*Lindsaya linearis* Swartz.

*Pteridium esculentum* Nakai.

## CYCADACEAE

*Macrozamia reidleyi* C.G. Gardn.

## PODOCARPACEAE

*Podocarpus drouyniana*

## GRAMINAE

*Danthonia pilosa* R.Br.

*Poa caespitosa*

*Vulpia bromoides*

## CYPERACEAE

*Cyathochaete avenacea*

*Gahnia trifida* Labill.

*Lepidosperma angustatum* R.Br.

*Lepidosperma brunoniquum* Nees

*Lepidosperma longitudinale*

*Mesomelaena uncinata*

*Mesomelaena tetragona* R.Br. F.Muell.

## RESTIONACEAE

*Anarthria prolifera* R.Br.

*Loxocarya fasciculata* (R.Br.) Beth.

*Loxocarya flexuosa* (R.Br.) Benth.

## PHILYDRACEAE

*Pritzelia pygmaea* (R.Br.) F.Muell.

## JUNCACEAE

*Juncus pallidus* R.Br.

## LILIACEAE

- Agrostocrinum scabrum* (R.Br.) Bail.  
*Borya nitida* Labill.  
*Burchardia* sp.  
*Johnsonia lupulina* R.Br.  
*Stypandra imbricata* R.Br.  
*Sowerbaea laxiflora* Lindl.  
*Dianella revolutos* R.Br.  
*Chamaescilla corymbosa* (R.Br.) F.Muell.

## XANTHORRHOEACEAE

- Dasypogon bromeliaefolius* R.Br.  
*Lomandra endlicheri* F. Muell.  
*Lomandra* sp.  
*Xanthorrhoea gracilis* Endl.  
*Xanthorrhoea preissii* Endl.

## HAEMODORACEAE

- Anigozanthos bicolor* Endl.  
*Anigozanthos flavida* Red & D.C.  
*Anigozanthos manglesii* D. Don.  
*Conostylis setigera* R.Br.  
*Hypoxis occidentalis* Benth.  
*Tribonanthes australis* Endl.

## IRIDACEAE

- Patersonia occidentalis* R.Br.  
*Patersonia juncea* Engl.

## ORCHIDACEAE

- Acianthus reniformis* (R.Br.) Schlechter  
*Acianthus reniformis* var. *huegelii* (Endl.) A.S. George  
*Caladenia barbarossae* Reichb.  
*Caladenia deformis* R.Br.  
*Caladenia flava* R.Br.  
*Caladenia gemmata* Lindl.  
*Caladenia heugelii* Klotsch  
*Caladenia latifolia* R.Br.  
*Caladenia macrostylis* R. Fitzg.  
*Caladenia menziesii* R. Br.  
*Caladenia patersonii* R. Br.

*Caleana migrita* Lindl.  
*Diuris laxiflora* Lindl.  
*Diuris emarginata* R. Br.  
*Drakea glyptodon* Fitz.  
*Corybas dilatatus* Rhipp et Nicholls.  
*Elythranthera brunnonis* (Endl.) A.S. George  
*Elythranthera emarginata* (Lindl) A.S. George  
*Eriochilus dilatatus* Lindl.  
*Lyperanthus serratus* (Lindl.)  
*Lyperanthus nigricans* R.Br.  
*Microtis alba* R.Br.  
*Prasophyllum fimbria* Reichb.  
*Prasophyllum parviflorum* Lindl.  
*Pterostylis barbata* Lindl.  
*Pterostylis nana* R. Br.  
*Pterostylis recurva* Benth.  
*Thelymitra crinita* Lindl.  
*Thelymitra fuscolutea* R. Br.  
*Thelymitra pauciflora* R.Br.  
*Thelymitra villosa* Lindl.

#### **CASUARINACEAE**

*Casuarina humilis* Ptto. et Dietr.  
*Casuarina huegeliana*

#### **PROTEACEAE**

*Ademanthos obovata* Labill.  
*Banksia grandis* Willd.  
*Banksia littoralis* R.Br.  
*Banksia sphaerocarpa* R. Br.  
*Conospermum caeruleum* R. Br.  
*Conospermum flexuosum* R. Br.  
*Dryandra armata* R. Br.  
*Dryandra bipinnatafida* R.Br.  
*Dryandra nivea* R. Br.  
*Dryandra sessilis* (R. Br.) Druce.  
*Grevillea pilulifera* (Lindl.) C. A. Gardn.  
*Grevillea pulchella* Meissn.  
*Grevillea quercifolia* R. Br.  
*Hakea amplexicaulis* R. Br.  
*Hakea incrassata* R. Br.

*Hakea lissocarpa* R. Br.  
*Hakea oleifolia* (Sm.) R. Br.  
*Hakea prostrata* R. Br.  
*Hakea ruscifolia* Labill.  
*Hakea trifurcata* (Sm.) R. Br.  
*Hakea undulata* R.Br.  
*Hakea varia* R.Br.  
*Persoonia Longifolia* R. Br.  
*Petrophile longifolia* R. Br.  
*Petrophile serruriae* R. Br.  
*Synaphea favosa* R. Br.  
*Synaphea petiolaris* R. Br.  
*Synaphea preissii* Meissn.  
*Synaphea reticulata* (Sm.) G.A. Gardn.  
*Stirlingia simplex* Lindl.

#### **SANTALACEAE**

*Leptomeria cunninghamii* Miq.

#### **OLEACEAE**

*Olax benthamii* Miq.

#### **POLYGONACEAE**

*Muehlenbeckia adpressa* (Labill.) Meissn.

#### **AMARANTACEAE**

*Trichinum manglesii* Lindl.

#### **AIZOACEAE**

*Carpobrotus aequilateralis* (How.) N.E.Br.

#### **RANUNCULACEAE**

*Clematis pubescens* Hueg.  
*Ranunculus colonorum* Sm.

#### **DROSERACEAE**

*Drosera bulbosa* Hook.  
*Drosera gigantea* Lindl.  
*Drosera stolonifera* Endl.  
*Drosera Sulphurea* Lehm.

## ROSACEAE

*Acaena ovina* A. Cunn.

## PITTOSPORACEAE

*Billardiera floribunda* (Putterl.) Muell.

*Billardiera parviflora* D.C.

*Billardiera varifolia* Trucz.

*Sollya fusiformis* (Labill.) Briq.

## MIMOSACEAE

*Acacia browniana*

*Acacia dipteria*

*Acacia drummondii* Lindl.

*Acacia extensa* Lindl.

*Acacia incurva* Benth.

*Acacia insoliata* E.Pritzl

*Acacia latipes* Benth.

*Acacia microbotrya* Benth.

*Acacia myrtifolia* Wild.

*Acacia nervosa* D.C.

*Acacia pentadenia* Lindl.

*Acacia pulchella* R.Br.

*Acacia saligna* Wendl.

*Acacia stenoptera* Benth.

*Acacia urophylla* Benth.

*Acacia wildenowniana*

## CAESALPINIACEAE

*Labichea punctata* Benth.

## PAPILIONACEAE

*Bossiaea eriocarpa* Benth.

*Bossiaea linophylla* R.Br.

*Bossiaea ornata* (Lindl.) Benth.

*Brachysema praemorsum* Meissn.

*Brachysema sericeum* (Sm.) Domin.

*Chorizema aciculare* (D.C.) C.A.Gardn.

*Chorizema ilicifolium* Labill.

*Chorizema rhombeum* R.Br.

*Daviesia cordata* S.Moore

*Daviesia incrassata* Sm.

*Daviesia preissii* Meissn.  
*Daviesia rhombifolia* Meissn.  
*Gastrolobium bilobum* R.Br.  
*Gastrolobium spinosum* Benth.  
*Gastrolobium villosum* Benth.  
*Gompholobium burtonioides* Meissn.  
*Gompholobium knightianum* Lindl.  
*Gompholobium ovatum* Meissn.  
*Goodia latifolia* Salisb.  
*Hardenbergia comptoniana* Benth.  
*Hovea chorizemifolia* (Sweet) D.C.  
*Hovea Elliptica* (Smith) D.C.  
*Hovea trisperma* Benth.  
*Isotropis cuneifolia* (Sm.) Domin.  
*Jacksonia furcellata* (Bonpl.) D.C.  
*Kennedyia coccinea* Vent.  
*Kennedyia prostrata* R.Br.  
*Mirbelia scabra* R.Br.  
*Oxylobium linearifolium* (Don.) Domin.  
*Pultenaea ericifolia* Benth.  
*Pultenaea ochreatea* Meissn.  
*Sphaerolobium medium* R.Br.  
*Sphaerolobium* sp.  
*Viminaria juncea* Sm.

## **OXALIDACEAE**

*Oxalis corniculata*

## **RUTACEAE**

*Boronia crenulata* Sm.  
*Boronia spathulata* Lindl.  
*Eriostemon modiflorus* Lindl.

## **TREMANDRACEAE**

*Platytheca verticillata* (Hueg.) Baill.  
*Tetratheca affinis* Endl.  
*Tetratheca setigera* Endl.

## **POLYGALACEAE**

*Comesperma confertum* Labill.  
*Comesperma volubile* Labill.



## EUPHORBIACEAE

- Beyeria* sp.  
*Phyllanthus calycinus* Labill.  
*Poranthera huegelii* Klotzsch.  
*Ricinocarpus glaucus* Endl.

## LINACEAE

- Linum marginale* A.Cunn. ex Planch.

## RHAMNACEAE

- Cryptandra pungens* Steud.  
*Trymalium ledifolium* Fenzl.  
*Trymalium spathulatum* (Labill.) Ostf.

## STACKHOUSIACEAE

- Stackhousia brunonis* Benth.  
*Stackhousia huegelii* Endl.

## STERCULIACEAE

- Thomasia grandiflora* Lindl.  
*Thomasia pauciflora* Lindl.  
*Thomasia purpurea* (Ait.) J.Gay.

## DILLENACEAE

- Hibbertia amplexicaulis* Steud.  
*Hibbertia cuneiformis* Labill.  
*Hibbertia pulchra* Ostf.  
*Hibbertia quadricolor* Domin.  
*Hibbertia rhadinopoda* F. Muell.  
*Hibbertia stellaris* Endl.

## VIOLACEAE

- Hybanthus floribundus* (Walp.) F.Muell.

## THYMELAEACEAE

- Pimelea nervosa* (Walp.) Meissn.  
*Pimelea rosea* R.Br.  
*Pimelea suaveolens* (Endl.) Meissn.  
*Pimelea sylvestris* R.Br.

## MYRTACEAE

- Actinodium cunninghamii* Schau.  
*Agonis linearifolia* (D.C.) Schau.  
*Agonis parviceps* Schau.  
*Astartea fascicularis* (Labill.) D.C.  
*Calothamus lateralis* Lindl.  
*Calothamus sanguineus* Labill.  
*Calythrix brachyphylla* Turcz.  
*Calythrix flavescens* A.Cunn.  
*Eucalyptus calophylla* R.Br.  
*Eucalyptus cornuta* Labill.  
*Eucalyptus decipiens* Endl.  
*Eucalyptus marginata* Sm.  
*Eucalyptus patens* Benth.  
*Eucalyptus rudis* Endl.  
*Eucalyptus wandoo* Blakely.  
*Hypocalymma angustifolium* Endl.  
*Kunzea micrantha* Schau.  
*Kunzea recurva* Schau.  
*Leptospermum ellipticum* Endl.  
*Leptospermum erubescens* Schau.  
*Melaleuca acerosa* Schau.  
*Melaleuca hamulosa* Turcz.  
*Melaleuca incana* R.Br.  
*Melaleuca lateritia* Otto.  
*Melaleuca parviflora* Lindl.  
*Melaleuca polygaloides* Schau.  
*Melaleuca raphiophylla* Schau.  
*Melaleuca scabra* R.Br.  
*Melaleuca thymoides* Labill.  
*Melaleuca viminea* Lindl.  
*Verticordia habrantha* Schau.  
*Verticordia pennigera* Endl.

## HALORRHAGACEAE

- Glischrocaryon aureum* (Lindl.) Orch.  
*Glischrocaryon* sp.

## APIACEAE

- Daucus glochidiatus* Sieb.  
*Pentapeltis silvatica* (Dick.) Domin.

*Platysace compressa* (Labill.) Norman.  
*Platysace tenuissima* (Benth.) Norman.  
*Trachymene pilosa* Sm.  
*Xanthosia atkinsoniana* F.Muell.  
*Xanthosia candida* (Benth.) Steud. ex Bung.

#### **EPACRIDACEAE**

*Andersonia caerulea* R.Br.  
*Astroloma ciliatum* (Lindl.) Druce.  
*Astroloma pallidum* R.Br.  
*Brachyloma preissii* Sond.  
*Leucopogon australis* R.Br.  
*Leucopogon capitellatus* D.C.  
*Leucopogon concinnus* Benth.  
*Leucopogon distans* R.Br.  
*Leucopogon glabellus* R.Br.  
*Leucopogon ovalifolius* Sond.  
*Leucopogon propinquus* R.Br.  
*Leucopogon pulchellus* Sond.  
*Leucopogon verticillatus* R.Br.  
*Lysinema ciliatum* R.Br.  
*Sphenotoma capitatum* (R.Br.) Lindl.  
*Styphelia tenuiflora* Lindl.

#### **LOGANIACEAE**

*Logania serpyllifolia* R.Br.

#### **GENTIANACEAE**

*Centaurium australe* (R.Br.) Ostf.

#### **LABIATAE**

*Hemiandra pugens* R.Br.  
*Hemigenia incana* (Lindl.) Benth.  
*Hemigenia* sp.

#### **SCROPHULARIACEAE**

*Veronica plebeia* R.Br.

#### **LOBELIACEAE**

*Lobelia rhombifolia* De Vriese.  
*Lobelia tenuior* R.Br.

## GOODENIACEAE

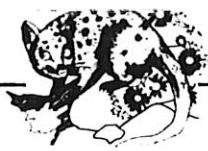
- Leschenaultia biloba* Lindl.
- Leschenaultia formosa* R.Br.
- Scaevola longifolia* De Vriese.
- Scaevola striata* R.Br.
- Vellia trinervis* Labill.

## STYLIDIACEAE

- Levenhookia pusilla* R.Br.
- Stylidium adnatum* R.Br.
- Stylidium brunonianum* Benth.
- Stylidium calcaratum* R.Br.
- Stylidium caespitosum* R.Br.
- Stylidium caricifolium* Lindl.
- Stylidium ciliatum* Lindl.
- Stylidium emarginatum* Sond.
- Stylidium rehens*
- Stylidium schoenoides* D.C.
- Stylidium* sp.

## ASTERACEAE

- Athrixia* sp.
- Brachycome iberidifolia* Benth.
- Craspedia glauca* (Labill.) Spreng.
- Craspedia uniflora*
- Gnaphalium luteo-album* Linn.
- Helichrysum ramosum* D.C.
- Helichrysum bracteatum* (Vent.) Andr.
- Helipterum cotula* (Benth.) D.C.
- Lagenophora huegelii* Benth.
- Olearia cassineae* F.Muell.
- Podolepis lessonii* (Cass.) Benth.
- Senecio lautus* Soland.
- Senecio minimus* Poir.
- Waitzia citrina* (Benth.) Steetz.



## APPENDIX 2: Vertebrate Species of the Perup

### MAMMALS

- Grey Kangaroo (*Macropus fuliginosus*)
- Brush Wallaby (*Macropus irma*)
- \* Tammar (*Macropus eugenii*)
- \* Woylie (*Bettongia penicillata*)
- Brush Possum (*Trichosurus vulpecula*)
- \* Common Ringtail (*Pseudocheirus peregrinus*)
- Pygmy Possum (*Cercartetus concinnus*)
- Bandicoot (*Isodon obesulus*)
- \* Native Cat (*Dasyurus geoffroyi*)
- Brush-tail Phascogale (*Phascogale tapoatafa*)
- Mardo (*Antechinus flavipes*)
- Common Dunnart (*Sminthopsis murina*)
- \* Numbat (*Myrmecobius fasciatus*)
- Southern Bush Rat (*Rattus fuscipes*)
- Water Rat (*Hydromys chrysogaster*)
- Lesser Long-eared Bat (*Nyctophilus geoffroyi*)
- Nyctophilus major*
- Gould's Long-eared Bat (*Nyctophilus gouldii*)
- Gould's Wattled Bat (*Chalinolobus gouldii*)
- Chocolate Bat (*Chalinolobus morio*)
- Little Bat (*Eptesicus pumulis*)
- Tasmanian Pipistrelle (*Pipistrellus tasmaniensis*)
- White-striped Bat (*Tadarida australis*)
- Little Flat Bat (*Tadarida planiceps*)
- Echidna (*Tachyglossus aculeatus*)
- Cat (*Felis catus*)
- Dingo (*Canis familiaris*)
- Mouse (*Mus musculus*)
- Rabbit (*Oryctolagus cuniculus*)
- Fox (*Vulpes vulpes*)

\* Species which is rare, or otherwise in need of special protection.

## FROGS

- Slender Tree Frog (*Litoria adelaidensis*)
- Green & Gold Tree Frog (*Litoria moorei*)
- Heleioporus inornatus*
- Moaning Frog (*Heleioporus eyeri*)
- Crinia georgiana*
- Ranidella glauerti*
- Ranidella insignifera*
- Humming Frog (*Neobatrachus pleobatoides*)

## SNAKES

- Blind snake (*Typhlina australis*)
- Dugite (*Demansia nuchalis affinis*)
- Tiger snake (*Notechis scutatus occidentalis*)
- Little Whip snake (*Denisonia gouldii*)

## LIZARDS

- Marbled Gecko (*Phyllodactylus marmoratus*)
- Scale Footed Lizard (*Pygopus lepidopodus*)
- Bobtail (*Tiliqua rugosa*)
- Smith's skink (*Egernia napoleonis*)
- Red-legged skink (*Ctenotus labillardieri*)
- Slippery skink (*Lerista microtis microtis*)
- Burrowing skink (*Hemiergus peronii peronii*)
- New Holland skink (*Leiopisma trilineatum*)
- Bungarra (*Varanus gouldii*)

## BIRDS

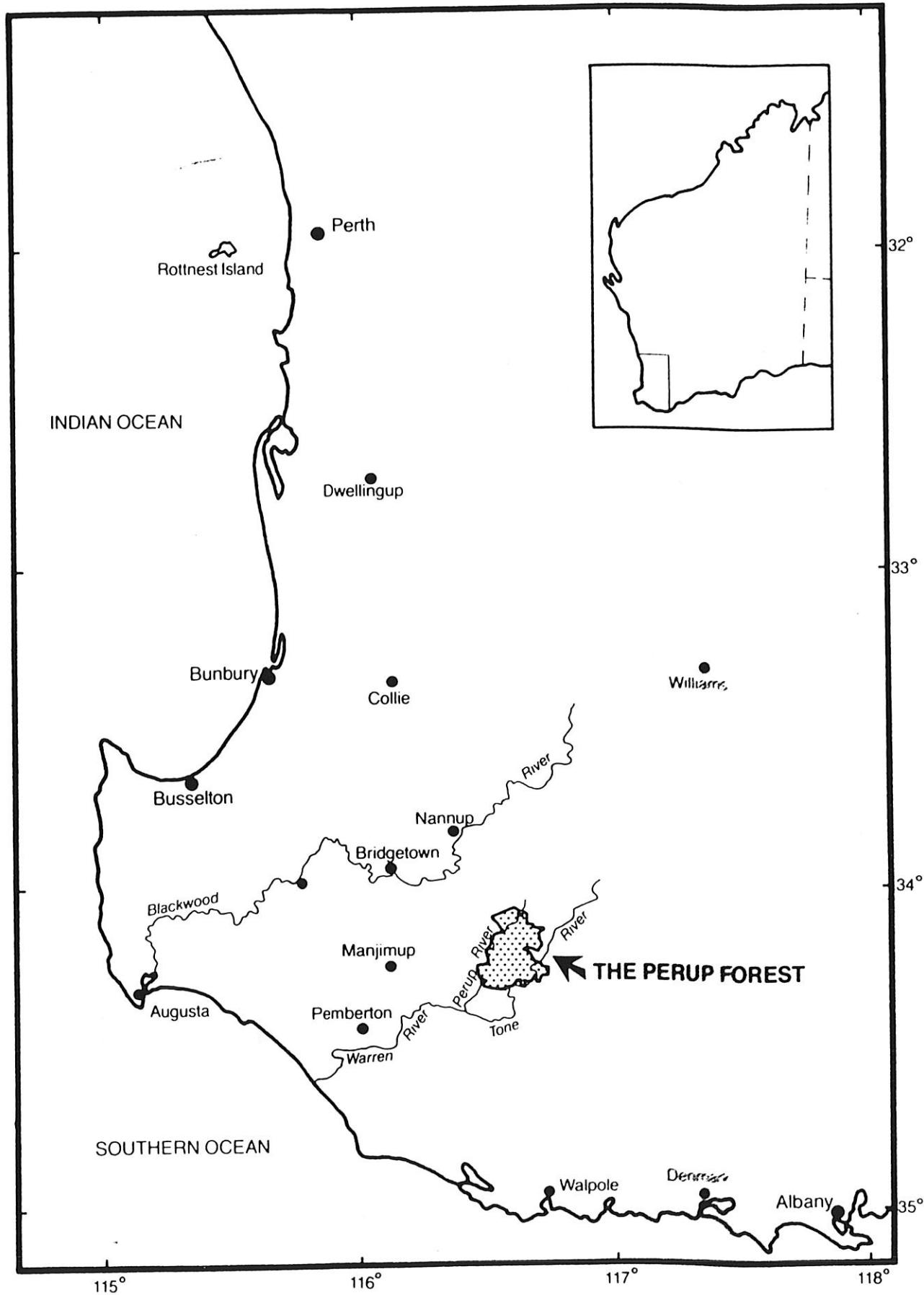
- Emu (*Dromaius novaehollandiae*)
- Australian Grebe (*Tachybaptus novaehollandiae*)
- Darter (*Anhinga melanogaster*)
- Little Black Cormorant (*Phalacrocorax sulcirostris*)
- Little Pied Cormorant (*Phalacrocorax melanoleucos*)
- Pacific Heron (*Ardea pacifica*)
- White-faced Heron (*Ardea novaehollandiae*)
- Rufous Night Heron (*Nycticorax caladonicus*)
- Black Bittern (*Dupetor flavicollis*)
- Straw-necked Ibis (*Threskiornis spinicollis*)
- Black Swan (*Cygnus atratus*)
- Australian Shelduck (*Tadorna tadornoides*)
- Pacific Black Duck (*Anas superciliosa*)

Grey Teal (*Anas gibberifrons*)  
 Maned Duck (*Chenonetta jubata*)  
 Musk Duck (*Biziura lobata*)  
 Whistling Kite (*Haliastur sphenurus*)  
 Brown Goshawk (*Accipiter cirrhocephalus*)  
 Wedge-tailed Eagle (*Aquila audax*)  
 Little Eagle (*Hieraaetus morphnoides*)  
 Australian Hobby (*Falco longipennis*)  
 Brown Falcon (*Falco berigora*)  
 Australian Kestrel (*Falco cenchroides*)  
 Painted Button-Quail (*Turnix varia*)  
 Eurasian Coot (*Fulica atra*)  
 Banded Lapwing (*Vanellus tricolor*)  
 Black-fronted Plover (*Charadrius melanops*)  
 Common Bronzewing (*Phaps chalcoptera*)  
 Brush Bronzewing (*Phaps elegans*)  
 Red-tailed Black-cockatoo (*Calyptorhynchus magnificus*)  
 White-tailed Black-cockatoo (*Calyptorhynchus baudinii*)  
 Purple-crowned Lorikeet (*Glossopsitta porphyrocephala*)  
 Red-capped Parrot (*Purpureicephalus spurius*)  
 Western Rosella (*Platycercus isterotis*)  
 Port Lincoln Ringneck (*Barnardius zonarius*)  
 Elegant Parrot (*Neophema elegans*)  
 Pallid Cuckoo (*Cuculus pallidus*)  
 Fan-tailed Cuckoo (*Cuculus pyrrhophanus*)  
 Shining Bronze-cuckoo (*Chrysococcyx lucidus*)  
 Southern Boobook (*Ninox novaehollandiae*)  
 Barn Owl (*Tyto alba*)  
 Tawny Frogmouth (*Podargus strigoides*)  
 Australian Owlet-nightjar (*Aegotheles cristatus*)  
 Laughing Kookaburra (*Dacelo novaeguineae*)  
 Sacred Kingfisher (*Halcyon sancta*)  
 Welcome Swallow (*Hirundo neoxena*)  
 Tree Martin (*Cecropis nigricans*)  
 Richard's Pipit (*Anthus novaeseelandiae*)  
 Black-faced Cuckoo-shrike (*Coracina novaehollandiae*)  
 Scarlet Robin (*Petroica multicolor*)  
 White-breasted Robin (*Eopsaltria georgiana*)  
 Western Yellow Robin (*Eopsaltria griseogularis*)  
 \* Crested Shrike-tit (*Falcunculus frontatus*)  
 Golden Whistler (*Pachycephala pectoralis*)

Rufous Whistler (*Pachycephala rufiventris*)  
Grey Shrike-thrush (*Colluricincla harmonica*)  
Restless Flycatcher (*Myiagra inquieta*)  
Grey Fantail (*Rhipidura fuliginosa*)  
Willie Wagtail (*Rhipidura leucophrys*)  
Splendid Fairy-wren (*Malurus splendens*)  
Red-winged Fairy-wren (*Malurus elegans*)  
White-browed Scrub-wren (*Sericornis frontalis*)  
Weebill (*Smicronis brevirostris*)  
Western Gerygone (*Western fusca*)  
Inland Thornbill (*Acanthiza apicalis*)  
Western Thornbill (*Acanthiza inornata*)  
Yellow-rumped Thornbill (*Acanthiza chrysorrhoa*)  
Varied Sittella (*Daphoenositta chrysoptera*)  
Rufous Treecreeper (*Climacteris rufa*)  
Red Wattlebird (*Anthochaera carunculata*)  
White-naped Honeyeater (*Melithreptus lunatus*)  
Brown Honeyeater (*Lichmera indistincta*)  
New Holland Honeyeater (*Phylidonyris novaehollandiae*)  
Western Spinebill (*Acanthorhynchus superciliosus*)  
Spotted Pardalote (*Pardalotus punctatus*)  
Striated Pardalote (*Pardalotus striatus*)  
Silvereye (*Zosterops lateralis*)  
Australian Magpie-lark (*Grallina cyanoleuca*)  
Dusky Woodswallow (*Artamus cyanopterus*)  
Australian Magpie (*Gymnorhina tibicen*)  
Grey Currawong (*Strepera versicolor*)  
Australian Raven (*Corvus coronoides*)  
Tawny-crowned Honeyeater (*Phylidonyris melanops*)  
Singing Honeyeater (*Lichenostomus virescens*)



PERUP FOREST LOCATION MAP





A.C.