



DRYANDRA STATE FOREST

THE LIBRARY
DEPARTMENT OF CONSERVATION
& LAND MANAGEMENT
WESTERN AUSTRALIA

The area under discussion comprises the forest blocks of Dryandra, Mooterdine and Contine and all related blocks but excludes that area already dealt with in the Northern Jarrah Forest Faunal list.

It straddles the eastern edge of the Darling Scarp and is a laterite plateau deeply eroded by steep-sided gullies often down to granite bedrock. Vegetation is Jarrah-Marri complex on the laterite with sub-floras of Dryandra and Banksia.

On the gullies are dense stands of Brown Mallet and on the clay and sand flats Wandoo and Marri interspersed with Jam and some Casurine stands.

It is assumed that the Forests Department Officers of the area will be aware of the floral complexities of the environment as these are the foundation for the habitats of the fauna of the different areas. It should also be borne in mind that this is simply a field list of known vertebrate species in the area and is subject to addition as the use programme gets under way.

The Fauna

Prior to listing the fauna it is perhaps worth reiterating some elementary facts about the subject in order to clarify the relationship of the various groups under listing. The accompanying key will quickly explain relationship of the major animal groups. Since the area under review excludes the sea we can simplify the invertebrate group considerably.

591.

9

(9412)

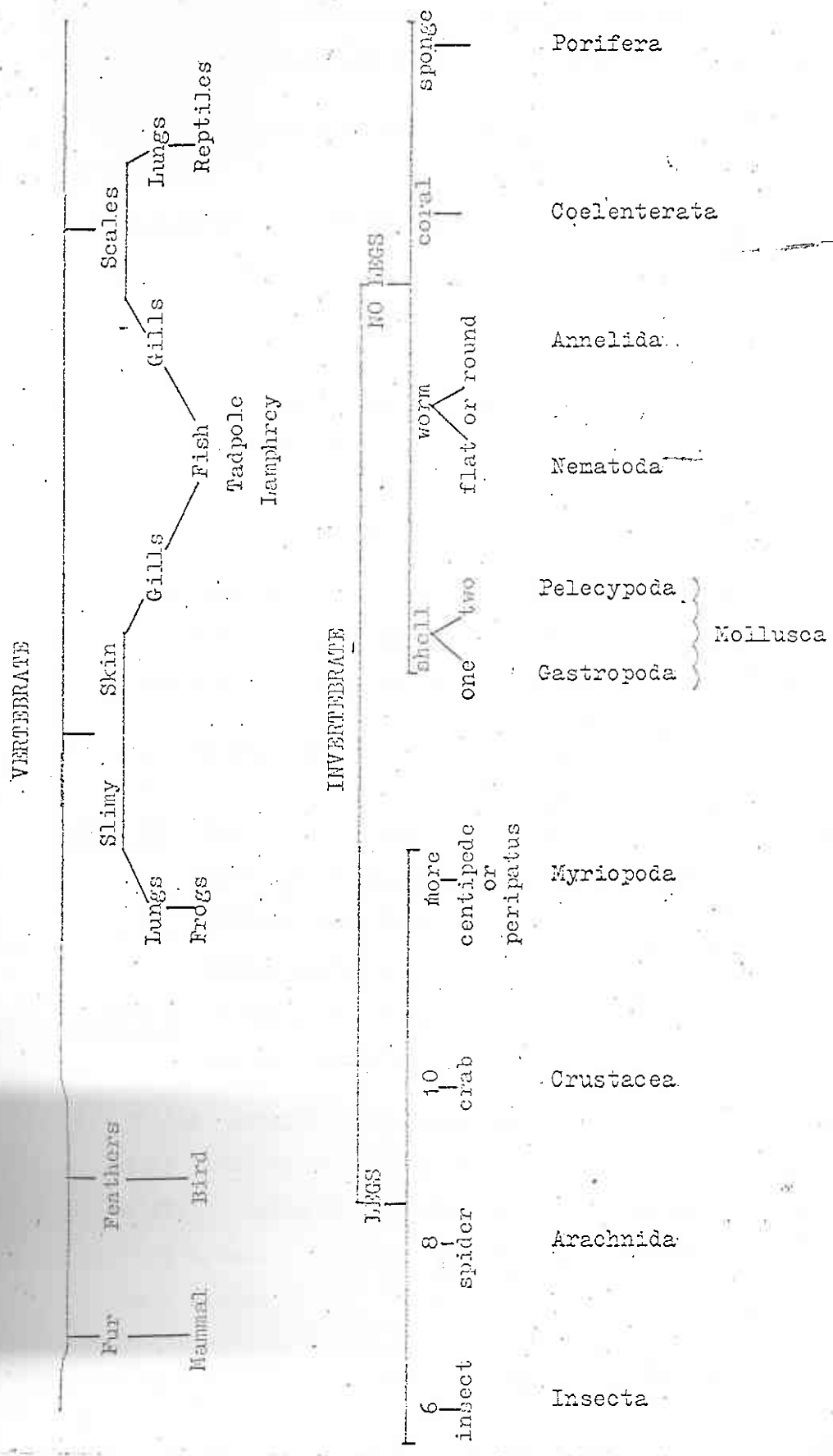
FAU

Most invertebrates are marine but some occur in land and fresh water areas. To exclude these marine forms and look only at those on land areas would mean that the non-arthropods would comprise molluscs, sponges and round and flat worms.

An animal is a living thing (at some stage) that can move itself about.

The only other living thing (at some stage) is a PLANT.

Animals may have a backbone (vertebrate) or not (invertebrate).



3.

PRESERVATION

In this Faunal list will be noted constant reference to preserving specimens to forward to :

W.A. Museum, Beaufort Street, Perth.

Forests Department, Research Branch, Como.

Fisheries and Fauna, 108 Adelaide Terrace, Perth

Following is a simple guide to preservation of vertebrates:

Small fresh In 75% methylated spirit or 10% Formalin.

Always split open body cavity to allow fluid to enter,

or

open body cavity and pack whole animal in salt,

or

place in water in plastic bag and freeze.

For mammals the skull is always of value and because a specimen is rotten the skull may still be of great importance. Pack in salt or sun-dry.

Dealing with each group in order.

MAMMALIA Fur bearing, air breathing, warm blooded vertebrates which suckle their young. Divided into Monotremes, marsupials and modern mammals.

Monotremes or egg-laying mammals. Only one found in W.A. and it occurs in this area.

1. Echidna Tachyglossus aculatus Sometimes called Spiny Anteater or Bush Porcupine. Termite and ant eater. Seen at dusk and dawn especially in rocky areas. Diggings frequent. Not found in beach areas.

Marsupials which commonly have a pouch (but not always) and the young are born at a very unformed stage of development which is completed externally. They are divided into four main groups :

Native Cats (Dasyurids)

Bandicoots (Peramelids)

Possoms (Phalangers)

Kangaroos (Macropods)

Native Cats Carnivorous marsupials mostly small, up to cat size. All have pointed faces and large eyes.

2. Mardo Antechinus flavipes large mouse size; grizzle grey browner towards rump: "foxy" face, big eyes with pale ring around them. Slightly hairy tail. Rare in jarrah: ground and tree living: extends to south coast flats and granites. 4" body.
3. Wambenger Phascogale tapoatafa like a blue grey squirrel, black bottlebrush tail. Tree living. 10" body.
4. Red Tailed Wambenger P. calure² Like a half-sized brown version of the above. Tree living especially in Casurina sp. Buff red patch on top of tail in front of black brush. 5" body.
5. Mouse Dunnart Sminthopsis murina Mouselike: "foxy" face, big eyes, widespread in whole area. Ground living, often in dead blackboys. Smooth furred tail.
6. Fat Tailed Dunnart S. crassicaudata as above, short fat brown tail, dark patches on ears. Ground living, preferring more open country than above.
7. Granule Footed Dunnart S. granulipes As above, but more grey and a fat white tail. Pads of toes are granulated. Mostly in sandy country.

Of the above, (2, 4, 5, 6, 7) are mouse size but lack the chisel teeth of the rodent. Often found in dead blackboy stumps and hollow logs.

8. Chuditch or Native Cat Dasyurus geoffroyii cat sized animal; red brown fur with white spots, "foxy" face.
9. Numbat Myrmecobius fasciatus Kitten sized animal reddish brown fur with striking black and white cross bands. Black bottle brush tail. Comes out in daytime.

Bandicoots

10. Quenda Isodon obesulus Large rat like animal, short smooth tail. Coarse fur. Common bandicoot. Ground living.

Possums

11. Common Possum Trichosurus vulpecula cat size, black occasionally, mostly grey, usually white tip tail. Tree living. Brush tail.
12. Mundarda or Pygmy Possum Cercartetus concinnus mouse size brown grey above, white belly, curls tail tightly. Often in dead blackboys.
13. Noolbenger or Honey Possum Tarsipes spencerae mouse size, long thin nose, 3 dark stripes on back generally brown. Curls tail tightly.

Kangaroo

14. Grey Kangaroo Macropus fuliginosus Common Kangaroo of area. Fine fur, large animal, hops with body low.
15. Brush Wallaby M. irma Grizzle grey, long black tail black gloves and feet, black ears with white patches. White face stripe.
16. Tammar M. eugenii brush size, grey fur, reddish shoulder or mantle, no face marking, no brush on tail. Prefers thicket casurina.

17. Woolly Bettongia penicillata cat size reddish-brown-grey fur. Long tail with black hair crest at rear. Lives in dry thickets.

It is possible that other small mammals occur in some thickets but no positive recent record has been made in this area.

Modern or Eutherean mammals These carry their young to an advanced stage of development before birth. They may be divided into Bats (Chiroptera), Rodents (Murids) and the Dingo (Canis) for native mammals but recognition is complicated by the addition of a considerable number of Feral or introduced mammals.

Bats Are hard to field identify and need expert checking at W.A. Museum.

18. Red Flying Fox Pteropus scapulatus Very large $5\frac{1}{4}$ " forearm, 2ft wingspan, reddish brown fur, pale fur under "armpit" foxlike head, no tail, rare visitor.
19. White Bellied Sheathtail Taphazous flaviventris large bat, forearm 2", 14" wingspan, dog like face. Tail in flexible sheath; black with white belly sometimes yellow. Throat pouch.
20. Tasmanian Pipistrelle Pipistrellus tasmaniensis medium large bat, forearm 2", 12" wingspan. Dark brown all over. Tail contained in permanent web.
21. Little Bat Eptesicus pumilis Very small brown bat, no special characteristics. Most common dusk flying species. Often in houses. Webbed tail. Forearm $1\frac{1}{4}$ " Wingspan 7".
22. Goulds Wattled Bat Chalinolobus gouldii Larger than preceding. Forearm $1\frac{3}{4}$ ", 9" wingspan. Black head and mantle; brown body; ears continue into lips. Tree living. Webbed tail.

23. Chocolate Bat C. morio Size as above but brown all over. Caves and hollow tree living; forearm $1\frac{3}{4}$ "
Smaller ears and lip lobes; webbed tail.
- 24.) Longeared Bats Nyctophilus sp. There are two species
25.) here but the overlap makes field identity too difficult. Long ears and webbed tail; grey-brown. Forearm $1\frac{1}{2}$ ".
26. Whitestriped Bat Tadarida australis Large fast-flying bat. Tail not sheathed. White stripe along body "armpit." Big ears; wrinkled doglike lips. Black or dark brown fur. Throat pouch. Forearm 2".
27. Little Flat Bat T. planiceps small brown form of the above. No throat pouch. No white stripe. Forearm $1\frac{1}{2}$ ".

Rodents or Murids The mice and rat family are recognized by their chisel front teeth; most will be difficult to identify correctly and should be forwarded to W.A. Museum for positive naming.

28. House mouse Mus musculus (Feral) The common mouse, well known, brown-grey widespread in area. Smooth fur. Mousy cheesy smell, upper incisors usually notched.
29. Common Rat Rattus rattus (Feral) Lives widely in area. Smooth look; tail longer than head and body.
30. Southern Bush Rat R. fuscipes shorter and heavier than above, prefers swamp habitat; Shorter tail; rough looking fur. Rare.
31. Shortridges Mouse Pseudomys shortridgei
32. Ashy grey Mouse P. albocinereus
33. Western Mouse P. occidentalis
34. Gould's Mouse P. gouldii

All mouselike animals, tend to be hairier than

Mus musculus

Any mice collected should be forwarded to W.A. Museum or Forestry Research Headquarters for record and identification.

35. Water Rat Hydromys chrysogaster Twice size of common rat; small head, black body, white tail tip. Swamp and other water including rivers.
36. Rabbit Oryctolagus cuniculus (Feral) Widespread through area.
37. Dog Canis familiaris (Feral) The true dingo may occur in this area but wild dogs are more frequently seen of many types.
38. Fox Vulpes vulpes (Feral) Widespread and common in the area. During late autumn they appear to suffer from a mange which alters their appearance by removing fur. This causes many reports of strange animals in the forest.
39. Cat Felis catus (Feral) Widespread and common in the area. Grave danger to native fauna.
40. Cow Bos taurus (Feral) Occasional individuals appear in area.
41. Horse Equus caballus (Feral) Small bands and individuals occur in western blocks.
42. Man Homo sapiens Aboriginal paintings, stone arrangements and tools should be preserved and noted. All locations containing these should be noted and W.A. Museum advised. There is an excellent stone arrangement in the Contine Block; one of the very few in Southern W.A.

All Feral fauna in forest areas should be destroyed if possible. Apart from direct damage the range of ecological interference is ample warrant for these removals. Reference Book, Native Mammals of Australia, Ride, 1970.

AVES or Birds

These constitute the biggest group of observable fauna in the area. Many are difficult to identify under field conditions and the use of field guides is considered essential.

Western Australia contains approximately 480 species of birds excluding feral and visiting species. Of these 380 odd occur south of the Kimberley Division and may enter the area under discussion. The following list is designed to indicate resident (R) and non resident (NR) birds but excludes sea birds unless they are recorded within the Forest area waters.

The order and names given is that of the Handbook of the Birds of Western Australia (4th Edition) an excellent reference book. Also Field Guide to Australian Birds (Slater 1971).

Emus Large flightless birds.

1. Emu Dromaius novaehollandiae (R) Frequent in area, especially open heath.

Grebes The common "Dabchick" seen on dams and lakes. Smaller than a duck with a habit of diving under water. Have lobed feet instead of webbed.

2. Crested Grebe Podiceps cristatus (R) Infrequent but common on open water. "Dagwood like" crest on head.
3. Little Grebe P. novaehollandiae (R) Common on all waters. Black head, pale spot at base of bill.
4. Hoary Headed Grebe P. poliocephalus (R) Not as common as above. Streaky head. No spot at base of bill.

Pelicans

5. Australian Pelican Pelecanus conspicillatus (R) :
Occasional on river pools. Very large black and white bird with huge pouched bill. Pouch is not usually distended.

Shags Common swimming birds, black or pied, larger than duck. Darter can be readily recognised by very thin head and neck unlike others.

6. Little Black Cormorant Phalacrocorax sulcirostris
(R) Frequent in swamps and dams. All black, small.
7. Little Pied Cormorant P. melanoleucos (R) Frequent in swamps and dams. Pied. Small. Short bill.
8. Darter Anhinga rufa (R) Occasional on major waters. Needle like head. Very long thin neck. All black or black and white.

Hérons Long legged, long billed, long necked water birds.

9. White Faced Heron Ardea novaehollandiae (R)
The common blue "crane." Blue grey bird with white face.
10. White Necked Heron A. pacifica (R) Slightly larger than above, white head and neck; dark grey body.
11. Nankeen Night Heron Nycticorax caledonicus (R)
A "crane" like bird with shorter neck than most. Adults light brown with black head. Young streaked grey and pale brown. Night feeding but may be flushed during day: about half size of Whitefaced Heron.
12. Black Bittern Dupetor flavicollis (R) Mostly black.

13. Brown Bittern Botaurus poiciloptilus (R) Mostly mottled brown. This and above species are a little smaller than Whitefaced Heron. Very shy, secretive birds.
14. Little Bittern Ixobrychus minutus (R) Half size of above - similar colouring.

Ibises may be distinguished by the shape of the bill which is down curved like a pick head, whereas that of the herons and bitterns is straight. They tend to shorter necks and legs with plumper bodies.

15. Strawnecked Ibis Threskiornis spinicollis (R) black and white. Slightly larger than Whitefaced Heron.
16. White Ibis T. molluca (NR) Occasionally seen with above. All white except black wing tips. Same size as above.
17. Yellowbilled Spoonbill Platalea flavipes (NR) All white, yellow legs and bill. Spoon shaped bill. Large bird almost size of a swan. If black legs and bill it could be Royal Spoonbill.

Ducks Ducklike birds (includes swans and geese).

18. Black Swan Cygnus atratus (R) The beer bird.
19. Freckled Duck Stictonetta naevosa (R) Dark brown body barred lighter; low in water. In flight like Black Duck but no white under wing.
20. Mountain Duck Tadorna tadornoides (R) Black body and head, chestnut neck and breast.
21. Black Duck Anas superciliosa (R) Dark brown edged paler; strongly marked whitish eyebrow.
22. Chestnut Teal A. castanea (R) Infrequent; Female like Grey Teal but darker rufous colour; Male as below but with blackish head and neck.

23. Grey Teal Anas gibberifrons (R) Most common duck, grey speckled: white throat; smallish bird.
24. Blue Winged Shoveller: A. rhynchotis (R) Similar to Black Duck. Very long bill. Blue patch on wing. No eyebrow. Only duck with reddish legs.
25. Pink eared Duck Malacorhynchus membranaceus (R) Zebra Patterned back. Long flapped bill. Black eye patch.
26. White Eyed Duck Aythya australis (R) Brown duck: white wing mark, often with white eye. Dives.
27. Maned Goose Chenonetta jubata (R) An erect duck, speckled grey body, brown head, slight crest.
28. Bluebilled Duck Oxyura australis (R) Swims low; small bird, blue bill, mottled dark grey-brown colour. Dives.
29. Musk Duck Biziura lobata (R) Swims low, black body, short tail, pouch beneath bill. Dives.

Most people are aware of the Black Duck and Black Swan. The others are not difficult to identify once the idea of comparison is established by correct observation.

Eagles, Hawks and similar birds of prey.

30. Black Shouldered Kite Elanus notatus (R) Pale almost white: hovering flight habit. Black shoulder patch and small black eye patch. Small Hawk.
31. Black Kite Milvus migrans (NR) Medium large hawk. All black appearance. Forked tail. A very strong gliding bird. Sporadic visitor.
32. Square Tailed Kite Lophoictinia isura (R) Slight crest, white face, generally brown mottled bird, square tail; usually open country; large hawk, very long wings.

33. Black Breasted Buzzard Hamirostra malanosternon (R) Generally dark plumage with a large white spot on each wing easily seen in flight. Large Hawk.
34. Whistling Eagle Haliastur sphenurus (R) Similar to Squaretailed Kite with pale head and neck, rounded tail, has square dark patch under wing in flight. Whistling call is distinctive. Large Hawk.
35. Little Eagle Hieraoetus morphnoides (R) Very similar to above; has feathered legs unlike above; slight black crest, short square tail; triangular dark patch under wing in flight. Large Hawk.
36. Australian Goshawk Accipiter fasciatus (R) Grey green above, barred brown below, round tail; cere (nostril skin) greenish. Medium Hawk.
37. Collared Sparrow Hawk A. cirrocephalus (R) Very similar to above. Smaller bird, square tail. Middle toe is more lengthy and slender. Cere bright yellow. Medium Hawk.
38. Wedgetail Aquila audax (R) Biggest eagle. Black: legs feathered. Tail wedge shaped. Generally dark.
39. Spotted Harrier Circus assimilis (R) Grey-barred slender hawk with rufous face patches. White spots on chestnut underneath. Flies just above ground slowly gliding. Medium Hawk. Rare in area.
40. Peregrine Falcon Falco peregrinus (R) Upper blue grey with fine black bars. Head, cheeks and neck, black; chestnut under with dark spots on belly; rare except in rugged country. Medium Hawk.
41. Little Falcon Falco longipennis (R) Blue grey upper, black head and cheeks; white under to rufous belly. "Chicken Hawk" small hawk, similar to above.
42. Brown Hawk F. berigora (R) Brown upper, pale or dark belly streaked. Dark "tear drop" from eye. Medium Hawk.

43. Kestrel F. cenchroides (R) Chestnut brown above; very pale below. Like Black-shouldered Kite this bird hovers. Small Hawk.

Hawks are difficult to tell apart in the field and only practice will make identity sure.

(Condon - "Field Guide to Australian Hawks" is a useful book).

Mallee Fowls Hen-like birds which build huge stick and dirt mounds.

44. Mallee Fowl Leipoa ocellata (R) A hen sized bird brown with black and white cross bars, black stripe down chest. Favours Wandoo country, and Box poison thickets. Usually nests on firelines.

Quails Small ground birds; fast flying; rise, curve away, and drop back again.

45. Stubble Quail Coturnix pectoralis (R) Streaky black-brown above: marked black streaks below, eyebrow white: hind toe. Male may have a chestnut throat.
46. Brown Quail Synoicus ypsilophorus (R) Streaky black brown above, barred black below, pale eyebrow; hind toe.
47. Painted Quail Turnix varia (R) Mottled back, including head and neck, pale under; upper breast grey with buff spots. No hind toe. No white eyebrow but whitish patch around eye.
48. Little Quail Turnix velox (R) Mottled back excluding neck, pale under with faint white bars on rufous upper breast. No hind toe. No eyebrow.

Positive identity of Quail will rely on specimens in the hand.

Rails and Waterhens Long legged, shy, thickset and swamp birds resembling bantams or small hens.

49. Banded Landrail R. philippensis (R) Greenish brown above with white flecks barred black and white below, brown chest; grey throat. Strong white eyebrow.
50. Spotted Crake Porzana fluminea (R) Brown with scattered white spots above, grey-black chest to barred black and white flanks. White under tail.
51. Spotless Crake P. tabuensis (R) Dark brown above, lead grey below. No markings except faint spots and bars under tail. Red legs and eye.
52. Native Hen Tribonyx ventralis (NR) Like a dark bantam in colour, size and shape : white spots on flanks, red legs.
53. Dusky Moorhen Gallinula tenebrosa (R) Hen size black bird, white on tail, green legs and red bill, flicks tail while walking. Marsh bird.
54. Swamphen Porphyrio porphyrio (R) Hen size dark blue bird, black wings and tail, white under tail, massive red bill, red legs.
55. Coot Fulica atra (R) Like small Moorhen but beak and face white. Grey legs, flat toes not webbed, red eye.

Wild Turkey

56. Bustard Eupodotis australis (NR) Occasional wild turkey on open heath and plain especially after fires.

Waders These are the most difficult group to identify in the field, but most are found on estuary and seashore. Forest area waders are scarce. Include snipe, sandpipers, dotterels and plovers.

57. Banded Plover Zonifer tricolor (R) Little smaller than magpie. Brown back, white throat, black head and chest except white eye stripe. Red face skin and legs: yellow bill and eye.
58. Redcapped Dotterel Charadrius alexandrinus (R) Small fast running, bobbing bird on lake edges. White under, grey above, with reddish cap and white forehead.
59. Black Fronted Dotterel C. melanops (R) Small most common lake dotterel chestnut brown back, white under with broad black chest band. Brown cap, white eyebrow.
60. Red Kneed Dotterel C. cinctus Small. Brown above, black head, black banded chest. More black under than previous species.
61. Wood Sandpiper Tringa glareola (NR) Small. Heavily speckled above, white grey below, white rump.
62. Sharp Tailed Sandpiper Erolia acuminata (NR) Streaky grey bird, paler under tail; black centre and white sides to tail.

Stilts Long legged, long necked, long billed slender wading birds. Size of magpie lark.

63. White Headed Stilt Himantopus himantopus (NR) White bird, black back and behind neck. Pink legs.
64. Avocet Recurvirostra novaehollandiae (NR) Black and white body, red head and neck, upturned bill.
65. Southern Stone Curlew Burhinus magnirostris (R) Large streaked grey buff and white bird. Big head and eye. Night call is eerie wail.

Pigeons and Doves Rather erect birds, well known from racing pigeon.

66. Pigeon Columba livia (R) (Feral) The common domestic pigeon gone wild.

67. Senegal Turtledove Streptopelia senegalensis (R)
(Feral) Light brown above, lilac chest with black speckles, bluish wings, smaller than above.
68. Common Bronzewing Phaps chalcoptera (R) Brown-buff speckled; pigeon size, white forehead, white chin. Metallic wing bar.
69. Brush Bronzewing P. elegans (R) Shorter and plumper than above. No white forehead or chin. More chestnut colouring especially chestnut throat patch and brownish cap.
70. Crested Pigeon Ocyphaps lophotes (R) Blue grey pigeon, obvious colour patch on wing; long dark crest carried erect on crown. Red eye and leg. Not common in forest preferring clearings.

Parrots and Cockatoos Like Ringneck and Galah.

71. Purple Crowned Lorikeet Glossopsitta porphyrocephala (R) Very small, short tailed, fast flying parrots following flowering eucalypt patches. Generally green above, pale blue below, purple and red on head.
72. White Tailed Black Cockatoo Calyptorhynchus baudini (R) Large, brownish-black with white band on tail and white cheek patch.
73. Red Tailed Black Cockatoo C. banksi Very similar to above but red or yellow tail bands and cheek spotting (if any).
74. Long-billed Corella Cacatua tenuirostris (NR) White, yellowish under tail and wings, long bill, blue-grey eye patch. Rare visitor.
75. Galah C. roseicapilla (R) Pink and grey, common cage bird.
76. Cockatiel Leptolobus hollandicus (NR) Grey parrot with whitish-yellow head and throat, orange cheek patch. A distinct yellow and grey crest: broad white wing bar, long tail.

77. Smoker Polytelis anthopeplus (NR) Yellowish-green parrot, red bill and wing patch, long tail, slender bird.
78. Western Rosella Platycercus icterotis (R) Smallish red bird with greenish scalloped black back and wings.
79. Red Capped Parrot Purpureicephalus spurius (R) Green above, purple below, red cap, yellow-green cheek and rump. Sometimes called King Parrot.
80. 28 Parrot Barnardius zonarius (R) Green above, green below, paler on belly. Black head to blue cheeks, yellow collar. Common "ringneck."
81. Elegant Grassparrot Neophema elegans (R) Small greenish-yellow parrot with blue on wing tail and forehead; yellow face. Prefers open grassland.
82. Budgerygah Melopsittacus undulatus (NR) Common cage bird, small green parrot, yellowish head: neck and back finely barred with black and yellow.

Cuckoos Parasiting birds on others. Usually grey or slightly metallic birds, smaller than magpie, larger than wagtail.

83. Pallid Cuckoo Cuculus pallidus (NR) Upper brown-grey under light grey or brownish; tail white toothed on brown-brown. Size of elongated Dove. Scale-like whistle. "Rainbird." White spot on wing shoulder. Largest cuckoo in area.
84. Fantailed Cuckoo Cacomantis pyrrhophanus (R) Grey back, rufous breast. Tail toothed and tipped white. White spot on wing shoulder. Smaller than above.
85. Narrowbilled Bronze Cuckoo Chrysotoceyx basalis (NR) Smaller than above, bronze brown above, white below with incomplete crossbars. Tail feathers red/brown; Brown ear patch visible.

86. Golden Bronze Cuckoo C. lucidus (NR) As above except bars under throat to belly are distinct and complete. No ear patch. No red on tail.

Owls Nocturnal birds with large eyes and soft feathers. Strong hooked bills.

87. Boobook Owl Ninox novaeseelandiae (R) All brown with paler spots. Common forest owl, mopoke call at night.
88. Barking Owl N. connivens (R) Similar to above but larger, white much more marked. Huge yellow eyes whereas Boobook eyes are less markedly yellow.
89. Barn Owl Tyto alba (R) A white owl, actually pale grey-brown above with darker spots.
90. Masked Owl T. novaehollandiae (R) Similar to above; larger, darker brown, and face ring more distinct and dark.

Frogmouths Owl-like birds, nocturnal, insect eaters. Short broad bills.

91. Frogmouth Podargus strigoides (R) A marbled brown and grey streaked bird, usually camouflaged like dead wood; about crow size. Feather tuft pointing forward between eye and beak.
92. Owlet Nightjar Aegotheles cristatus (R) Similar to above, fine grey barrings. Half size of Frogmouth; marked eyebrow.
93. Spotted Nightjar Eurostopodus guttatus (R) Reddish brown bird, size between Owlet Nightjar and Frogmouths. White throat, distinct "cap" large white spots on each wing readily seen in flight.

Swallows Swallow like birds. Small gliding birds, catching insects on wing.

94. Forktailed Swift Apus pacificus (NR) Swallowlike, long slender wings, flies high, white rump and deep forked tail, white throat. Occurs at cyclone times usually.
95. Welcome Swallow Hirundo meozena (R) The common town swallow. Reddish forehead, throat and chest. Upperparts metallic black; deeply forked black tail.
96. Tree Martin Petrochelidon nigricans (R) Upper-parts black with white rump; underparts grey to white. Smaller than above. Slight reddish forehead, rest of cap black. Most common bush swallow. Tail not forked. Nests in hollow trees.
97. Fairy Martin P. ariel (R) Occasional visitor. Similar to above but red head and streaky back. Very white rump, builds bottle-shaped mud nests in caves, overhangs, culverts and bridges.

Kingfishers Big beaked, erect sitting birds, brightly coloured; e.g. like Kookaburra.

98. Kookaburra Dacelo gigas (R) (Feral) Well known; dark brown body, white neck, white eyebrow, brown rump and brown barred tail. Has laughing call.
99. Secred Kingfisher Halcyon sancta (NR) Summer visitor. Like small kookaburra; green-blue back and wings, pale buff below. Call is "Ki-ki-ki."

Rainbow Birds Small brilliantly coloured, gliding summer visitors. Called "golddigger" from habit of nesting in sandy areas in a burrow.

100. Rainbow Bird Merops ornatus (NR) Brilliant orange, green and sky blue: slight down-curved slender bill. Black tail with two centre spines protruding. Gliding flight; size of a large swallow. Sometimes called "Bee eater."

Pipits Small, plain, ground birds; erect stance.
Size of a wagtail.

101. Pipit Anthus novaeseelandiae (R) Small streaky brown bird with pale breast and throat. Tail outer feathers white: runs on ground in clearings; occasionally perches in low vegetation.

Cuckoo Shrikes Largish grey and white birds:
undulating flight: resemble cuckoos.

102. Ground Cuckoo Shrike Pteropodocys maxima (NR) —
Upper back grey, lower back and upper tail barred white. Wings and tail black underparts grey to white. "Queel" call.

103. Blackfaced Cuckoo Shrike Coracina novaeollandiae (R) (Blue Pigeon or Jay). General colour blue-grey: black head, wing tips and end of tail. The undulating flight and habit of refolding wings several times when landed help identify.

104. White Winged Triller Lalage sueurii (NR) Two colour forms for sexes. Male black and white, like small magpie. Female brown above, paler below. Half size of cuckoo shrike.

Babblers Active, dull-coloured birds: honey eater like bill; usually noisy in small parties.

105. Whitebrowed Babbler Pomatostomus superciliosus (R)
Brown above, white below; white eyebrow, size of yellow Robin, but with longer tail.

106. Chestnut Quail Thrush Cinclosoma castanotum (R)
Chestnut to brown head, back and rump; throat and chest black; black line beneath eye with white line below that. Wings and shoulders mottled brown and black spotted with white.

Warblers Small, shy, brown birds in swamps and rush thickets.

107. Little Grass Bird Megalurus gramineus (R) Brown streaked back; white eyebrow; underparts white, spotted and streaked finely with black. Small. Very shy, but calls constantly in rush beds, "pee-pee."

108. Reed Warbler Acrocephalus stentoreus (R) Bright brown above, buff below; white throat and belly; buff eyebrow. A little larger than above. ~~Shy~~ but noisy in reed beds. "quarty-quarty-quarty" or "twitchee-twitchee-twitchee" being common and vigorous calls.

109. Song Lark Cincloramphus sp. (R) Brown, streaked
110. paler back, underparts dark brown or paler. Rather like a large Pipit. Two species possible; always in cleared country. Soars high singing then flutters back to earth.

Fairy Wrens Small birds with erect tail. Found in thickets. Females difficult to identify without males which are brilliantly coloured: often in family parties of 6-8 birds.

111. Banded Blue Wren Malurus splendens (R) All blue male, no white or red, female brown above and whitish below. Sometimes called Splended Wren.

112. Blue-breasted Wren M. pulcherrimus (R) Male blue and black with chestnut shoulder patches and white abdomen. There is a patch of black across the upper back, and another across the rump. Between these is blue. Female as above.

113. Emu Wren Stipiturus malachurus (R) A small grey and black streaky bodied bird with bright blue throat and chest, buff belly. Tail is like emu feathers, very thin and almost colourless grey. Very shy.

Scrub-wrens and Thornbills Small plain birds of scrub and thickets. About the size of a Silvereye.

114. Western Warbler Gerygone fusca (R) Upper grey-brown, under white: dark brown tail with white end band. No head markings. Slow lazy call which goes on and on.
115. Broadtailed Thornbill Acanthiza apicalis (R) Upper olive brown with reddish rump, forehead and ears freckled. Throat and breast streaked strongly: Tail may be held erect like a wren.
116. Western Thornbill A. inornata (R) Very similar to western warbler but has black band on tail and slight freckling on forehead and eye area. No white eyebrow.
117. Yellow Tailed Thornbill A. chrysorrhoa (R) Upper olive-brown, yellow rump; white eyebrow, spotted crown, underparts whitish.
118. Spotted Scrub Wren Sericornis maculatus (R) Upper including rump, brownish grey; under white with strong streaky black spots on throat and chest, white eyebrow and under eye line. Black and white wing spot.
119. Weebill Smicrornis brevirostris (R) The smallest bird in Australia, very short bill, back yellowish brown, under yellow with greyish breast. Rare in karri.

Chats Small finch like birds; noisy; usually in flock. About size of silvereye.

120. White Fronted Chat Ephthianura albifrons (R) Small black and white bird, open country. Call like Zebra finch.
121. Crimson Chat E. tricolor (NR) As above, but chest, head and rump scarlet. Occasionally with flocks of above.

Robins Rather plain birds, small, dumpy; with a white wing patch; male and female usually different colour.

122. Brown Flycatcher Microeca leucophaea (NR)
Grey-brown above, off white under, outer tail feathers white. Rare in forest, has tail flicking habit.
123. Scarlet Robin Petroica multicolor (R) Male scarlet breast, upper parts black, white forehead, white wing patch, white outer tail feathers. Female has grey where male is black and scarlet is more pale. "Robin Redbreast."
124. Redcapped Robin P. goodenovii (NR) Occasional visitor in Wandoo or Jam country. As above, but with red patch on head in male. Female lacks any red on breast and only a brownish patch on head.
125. Hooded Robin P. oucellata (R) Generally black above including head throat and upper chest. Under parts white. Female dark grey brown above and dull white below with grey clouded breast.
126. Western Yellow Robin Eopsaltria griseogularis (R)
Larger than above, yellow lower breast and belly, white throat, grey upper chest, upper parts grey, rump yellow.

Fantails Small birds with large tails, usually very mobile and unafraid. Like Willy Wagtail.

127. Grey Fantail Rhipidura fuliginosa (R) Grey above, buff below, white chin, grey throat, white eyebrow, two white wing bars, outer tail feather white. Very common in forest.
128. Willy Wagtail R. leucophrys (R) Well known black and white bird, upper parts black, breast and abdomen white, white eyebrow. Common in clearings and settlements.
129. Restless Flycatcher Seisura inquieta (R) Like above but upper parts blue-black and entire under parts white.

25.

Whistlers and Shrike Thrushes Medium size birds with slightly hooked strong bills. Often sex colour differences. Females hard to distinguish.

130. Golden Whistler Pachycephala pectoralis (R)

Bright yellow belly and lower breast, white throat with narrow black bib which runs up and over head, back olive green, wings and tail grey to black. Female grey above, buff on lower breast. No. yellow. Throat and upper breast grey.

131. Rufous Whistler P. rufiventris (R) As above for male with chestnut instead of yellow. Female is streaked below.

132. Western Shrike Thrush Colluricincla rufiventris (R)

Dark grey above, under light grey. Rufous under tail and lower belly. Breast streaked. Larger than the previous two. Very noisy and melodius.

133. Western Shrike-Tit Falcunculus frontatus (R) Upper bright olive-green; head and throat black with erect crest; white eyebrow and cheek stripe: yellow breast and under tail: belly white.

134. Crested Bellbird Oreoica gutturalis (R) Upper brown; head black with black crest; white chin and lores; black chest white abdomen. Call like a cattle bell is usually very clear.

Tree Creepers Small birds which run up or down trees feeding in crevices.

135. Black Capped Sittella, Neositta pileata (R)

Flock bird. Black head with white forehead, yellow bill, orange wing patch in flight. White rump and short, white-tipped black tail. Underparts white. These appear to move down tree trunks, towards base.

136. Rufous Tree Creeper Climacteris rufa (R)

- 136. Rufous Tree Creeper Climacteris rufa (R) All brown, rich colour, paler below. Marked reddish wing stripe in flight. Runs up trees. Constant calling is diagnostic.

Diamond Birds Small bright birds, usually in tree canopy.

- 137. Mistletoe Bird Dicaeum hirundinaceum (R) Very small bird. Male glistening blue-black upper, throat, chest and rump bright red. White-belly. Female dark brown upper; black tail; under greyish; undertail pinkish.
- 138. Spotted Pardalote Pardalotus punctatus (R) Crown, wings and tail black with white or yellow spots, back generally spotted black on buff, rump brown. Underside buff or yellow.
- 139. Red Tipped Pardalote P. substriatus (R) Like above, but with plain grey back not spotted. White wing band with red spot at "elbow." Call "be quick" or "chip-chip" very common.

Silvereye The common "greenie" of the South.

- 140. Silvereye Zosterops gouldi (R) All green, under yellowish, silver or white ring around eye. Very common in flocks.

Honeyeaters Birds with slight downcurved bills, difficult to identify in field. Nomadic, and often follow honey flows. Size varies, being small (Silvereye size), medium, or large (Wattle bird size).

- 141. Brown Honeyeater Lichmera indistincta (R) Small, grey-brown above, grey below, tiny yellow and white eye patch, olive-green on wing.

142. Singing Honeyeater Meliphaga virescens (R)
Medium. Grey brown above, streaked grey-buff below. A black eye line; yellow ear patch with white tip.
143. Yellowplumed Honeyeater Meliphaga ornata (R)
Medium small; back brown with olive on wings, tail and head. Under whitish, strongly streaked brown; small yellow face patch with some brown markings.
144. White-naped Honeyeater Melithreptus lunatus (R)
Medium. Bright olive-green above, white below, white ring behind black head cap. White ring around eye.
145. Brown Headed Honeyeater Melithreptus breuirostris (R) Small. Olive-green above, buff-grey below; buff ring behind brown head cap; orange ring around eye. Mainly forest edge of clearings.
146. Spinebill Acanthorhynchus superciliosus (R)
Medium small. Long slender bill, reddish throat and chest with black and white bands below; under belly buff; outer tail feathers white. Female lacks breast pattern.
147. Tawny Crowned Honeyeater Gliciphila melanops (R)
Medium small. Back brown, under dull white, chestnut crown, black eye patch outlined with white, salmon pink to buff under wing. May have yellow patch on throat. Open country bird which follows honey flows especially in Dryandra.
148. New Holland Honeyeater Phylidonyris novaehollandiae (R) Medium. A black and white bird with yellow wing patch on outer wing: tail yellow and white over black, white eye.
149. White cheeked Honeyeater Phylidonyris niger (R)
Medium. As above: Large white cheek patch and no white on tail; coastal heaths but penetrates cleared country.

150. Miner Menorhina flavigula (R) Large; grey above with olive green wing edges and forehead. Beak, legs and face skin yellow; face lines black; grey throat and chest barred white to white belly.
151. Red Wattle Bird Anthochaera carunculata (R) Large. Mottled brownish grey, paler chest, yellow belly, small red dangling wattle behind eye.
152. Little Wattle Bird A. chrysoptera (R) Large, but smaller than above, generally like above, no wattle, no yellow; spotted rather than streaked. Red patch on wing in flight.

Finches Small thick-billed birds, feeding on seed.

153. Red-eared Firetail Zonaeginthus oculatus (R) Upper brownish, black barred. Breast buff with black bars to spotted black and white belly. Crimson rump, behind eye, and bill. Swamp liver.
154. Zebra Finch Taeniopygia castanotis (R) Back and crown grey, rump white, changing to barred black and white tail. Chestnut patch behind eye; throat and chest barred black and white; belly white; flank chestnut spotted white.

Magpie Larks The common Peewit or Mudlark.

155. Magpie Lark Grallina cyanoleuca (R) A magpie like bird, smaller than magpie with similar black and white colouring. More erect stance and less robust bill. Builds mud nest.

Woodswallows Swallowlike birds with longer bills and more dumpy bodies.

156. Masked Wood Swallow Artemus personatus (NR) Blue grey bird, face and throat black, whitish belly. Occasional visitor in wandoo in dense flocks.

157. Blackfaced Wood Swallow Artemus cinereus (R) }
 158. Dusky Wood Swallow A. cyanopterus (R) }

Similar slaty-grey birds, latter has white edge to wing, while former has distinct black patch around eye and face. Former prefers open areas whereas latter is more often found in forest.

Magpies Well known black and white birds. South Australian emblem.

159. Squeaker Streptera versicolor (R) Large grey-bird with white wing patch in flight, under tail white.
160. Grey Butcher Bird Cracticus torquatus (R) Black and white above: below and mid back grey.
161. Pied Butcher Bird C. nigrogularis (NR) All black and white; head, neck and chest black.
162. Western Magpie Gymnorhina dorsalis (R) The common black and white Magpie.
163. Raven Corvus coronoides (R) All black bird, base of feathers grey; long deep call, long hackles at throat.
164. Little Crow C. bennetti (NR) All black bird, base of feathers white, short warbling call, short throat hackles, usually visits in flocks in summer.

REPTILES are cold blooded, scaly, air breathing vertebrates which may live in water as well as on land. In the south-west they are grouped into Tortoises, Lizards and Snakes. Only ones recorded here will be those known to exist in area.

Tortoises Hard shelled aquatic reptiles.

- 1. Long-necked Tortoise Chelodina oblonga Long snake like neck. Common tortoise in most swamps and rivers.

LIZARDS Can be divided into 5 major groups. Legless lizards, geckoes, dragon lizards, goannas and skink lizards. Reference: Handbook of Lizards of W.A. - Glauert. The names in this book are obsolete, but nothing better is available in a handbook.

Legless Lizards Snake-like lizards with hind legs reduced to flaps. 'No front legs; tail breaks off. Body pattern runs length of body - unlike snakes whose patterns runs across body: body scale is divided and tongue is not forked.

- 2. Scalefoot Lizard Pygopus lepidopodus Blunt head, stout, rows of longitudinal spots: tends to rear up with tongue flickering. Length to 16 inches.
- 3. Frazers Snake Lizard Delma fraseri Slender, fairly uniform olive-grey above and whitish below, which extends as "ribs" to above in throat. Length to 18 inches.
- 4. Slender Snake Lizard Plethorax gracilis Very slende Pointed head, olive brown above; yellow throat to whitish belly. Distinct brown side line of scales with black spot on each scale. Length to 12 inches.

5. Worm Lizards Aprasia sp. At least 2 species which look like scaled worms about 6 inches long.
6. Common Snake Lizard Lialis burtoni Very pointed head; plain grey ranging to brightly spotted with grey, rufous and black. Length to 18 inches. The most common species.

Geckoes Small velvety lizards with no overlapping scales, usually dull coloured, with large eyes.

7. Barking Lizard Gymnodactylus milii Head, body and tail 3 distinct areas. Long spindly legs, bright black and white patterns. Length to six inches. Stands erect and "barks."
8. Marbled Gecko Phyllodactylus marmoratus Normal gecko lizard with dark marbled pattern. 5 inches.
9. Dtella Peropus variegatus Similar to above except spotted rather than marbled. Length to 5 inches.
10. Spiny Tailed Gecko Diplodactylus spinigerus Soft grey body with double row of soft black spines on tail. These can exude a black sticky substance. Striking golden eye. Length to 5½ inches.
11. Festooned Gecko D. vittatus Dark brown body with pale dorsal stripe connecting pale head and tail, short blunt head, cream eye ring. Usually found in rocky areas. Belly always white. Length to about 3½ inches.
12. Beautiful Gecko D. pulcher Generally brown body with white belly all overlaid with irregular light spots. Length about 3½ inches.
13. Mountain Devil Moloch horridus Short, fat, spikey lizard with 2 curved horns over eyes. Large lump on back of neck. Blotched yellowish and brown body.

Dragon Lizards Small spikey dragon-like lizards, tail lost and not replaceable. Short broad head, yellow tongue.

14. Bearded Dragon Amphibolurus barbatus Grey to yellow with erectile "beard" which protrudes when alarmed. Yellow mouth. May have irregular darker pattern on back. Length to 12 inches.
15. Rock Dragon A. ornatus Black and white or black and brown-yellow body; generally dark with lighter crossbars, tail always banded, not necessarily regularly. Always on rock faces where it runs into flat crevices or sits and bobs head just outside. Length to 10½ inches.
16. Netted Dragon A. reticulatus Thickbodies, blunt headed mottled with a net pattern of light on dark or dark on light. Length to 10". Lives in burrow.

Goannas Elongated lizards with long strong legs and claws, forked tongues and non-renewable tails.

17. Bungarra Varanus gouldii Spotted brown over yellowish body. Banded tail ending in yellow. Black line through eye with yellow above and below. Length to 6 feet.
18. Black Goanna V. tristis Very dark all over, back lightening towards tail area where spots appear, banded belly. Length to 2 feet 6 inches.

Skinks Smooth shiny lizards (with some exceptions) usually blue tongues. Tail replaceable. Smaller specimens are difficult to identify. W.A. Museum should receive any unidentified material. These are the most frequent lizards in forest areas.

19. Blue Tongue Tiliqua occipitalis Large, smooth, pale brown lizard with dark brown cross bands. Large triangular head, slender pointed tail and blue tongue. Length to 16 inches.

20. Blue Tongue Tiliqua occipitalis Large, smooth, pale brown lizard with dark brown cross bands, Large triangular head, slender pointed tail and blue tongue. Length to 16 inches.
21. Bobtail T. rugosa Large, shingled, pale brown lizard with black cross bands irregularly spaced. Thick rounded tail. Length to 12 inches.
22. Gunthers Skink T. melanops Small, stout, short legged lizard with short blunt head. Olive brown with black dots on scales, face darker. Length to 6 inches.
23. Smiths Skink Egernia carinata Small, stout, mottled brown-grey lizard with reddish throat and belly. Likes dead wood and blackboys. Length to 9 inches. Four white scales over ear.
24. Kings Skink E. kingi Large, smooth black or dark brown, may be speckled with white. Length to 22 inches. Sometimes called Land Mullet. No white scales over ear.
25. Frys Skink E. whitei (pulchra) Slightly keeled scales. Brown lizard with darker markings: always white or yellow eyelids and ear covers. Length to 12 inches.
26. Lesueurs Skink Lygosoma lesueurii Medium, slender lizard with slender limbs. Three or more black dorsal stripes with white edges on a brown back. A series of white spots on side. Belly white with cream tone. Length to 10 inches.
27. Keeled Skink L. monotropis Small, medium lizard, orange with brown cross bands. Length to 9 inches.
28. Red Legged Skink L. labillardieri Bronzy-brown back with dark side stripe which has a fire white line on either side. Belly cream-yellow hind legs always red with darker spots.

29. New Holland Skink L. trilineatum Small lizard olive-brown or bronzy, with black spots - maybe forming a dorsal stripe above - blue grey below, side dark with white spots. Length to 7 inches.
30. Burrowing Skink L. initiale (L. quadridigitatum) Small, slender, short: degenerate legs: brown back orange-red belly, burrowing snout, odd dark spots scattered or in lines. Length to 4½ inches.
31. Slippery Skink L. bipes (L. microtis) Small, pale cream with black side band. No front legs, slender hind legs with 2 toes each. Length to 4 inches.
32. Wood Skink Ablepharus boutoni Small, grey lizard, common on fences and dead wood. Length to 4 inches.
33. Sandhill Skink A. lineo-ocellatus Small, spotted grey with reddish head, orange throat, white side band, shiny white under. Length to 4 inches.
34. Grays Skink A. elegans (A. greyi) (A. lineatus) Very small, bronzy above, head darker, dorsal spots forming lines. Usually in leaf litter. Length to 3 inches.

Undoubtedly there are other small skinks to be found in the area but until further survey is done no positive identification can be made.

SNAKES are long, slender, legless reptiles. They have a forked tongue and an entire belly scale. In this area they may be divided into Worm Snakes, Pythons and Poisonous Snakes. Reference - Glauert, Snakes of Western Australia.

Worm Snakes

- 35 34.
36 35. Worm Snakes or Blind Snakes are small blunt ended snakes with no distinct head or tail, like a large scaled worm: difficult to identify in the field. Length to 12 inches. At least 2 species occur in this forest area. Typhlops sp. Non venomous.

Pythons Large snakes with distinct necks. Non venomous.

- 37. Carpet Snake Morelia variegata Patterned body with dark edging to each blotch. Length to 7ft.
- 38. Children's Python Liasis childreni similar to above but no dark edging to pattern. Length to 7ft.

Poisonous Snakes These include some deadly Australian land snakes and so identification is essential.

- 39. Dugite Demansia nuchalis affinis Common poisonous snake up to 6 ft; usually brown but may be spotted or banded. Young have black head with cross patterned body and large eye. Under tail scales (subcaudals) are divided. Strike position is S shaped.
- 40. Mulga Snake Pseudachis australis Poisonous snake up to 7ft. Uniform dark brown colour; Big head but not distinct neck. Under tail scales are undivided except last one third which are divided. Strike position is flattened neck and body angled sideways. Chews during strike. Prefers stony country.
- 41. Tiger Snake Notechis scutatus occidentalis Poisonous snake up to 6ft. Stout snake broad head, usually black body with yellow throat fading to blue belly. Can be banded. Under tail scales undivided. Strike position erect, neck and forebody flattened like cobra; forward strike.
- 42. Death Adder Acanthophis antarcticus Poisonous snake up to 2 ft. short blunt dumpy like a bobtail without legs; large triangular head and distinct neck, green brown colour with darker crossbands, fine spine on end of tail.

The four species above are the only known lethal snakes in the area.

43. Bandy Bandy Rhynchoelaps bertholdi bertholdi small black and yellowish-orange banded snake, burrowing nose. Black bands right around body. Length to 14 inches.
44. Half-ringed Snake Brachymophis semifasciatus Similar to above but duller colours and bands do not go right around body. Length to 15 inches.
45. Narrow Banded Snake Rhynchoelaps fasciolatus Similar to above but many fine bands that do not go right around body. Length to 15 inches.
46. Little Whip Snake Denisonia gouldi A red snake with black head and white spots in front of each eye. Under surface is pinkish with opalescent sheen. Length to 20 inches. Common in blackboys.
47. Black-naped Snake Vermicella bimaculata Similar above but has more pointed head and a black cross bar or nape separated from the black cap by reddish body colour. Length to 20 inches.
48. Crowned Snake Denisonia coronata A greenish-brown snake with a black head and white lips. The fore part of the head tends to be lighter in colour; reddish tail. Length to 20 inches.
51. Bardick Denisonia curta Stout, big headed snake, rather like small greenish grey death adder. Belly colour reddish to cream. Length to 20 inches

FROGS May be divided into Tree Frogs, Turtle Frogs, Banjo Frogs, Moaning Frogs, Toadlets and Froglets. Reference book which contains a key to tadpoles and eggs as well as frogs, is "Frogs of Southern W.A. - Main."

Tree Frogs Suckered disks on end of toes and fingers. Slender green frogs.

- 1. Slender Tree Frog. Hyla adelaidensis Small green or brown frog, dark side stripe, orange spots behind thigh.
- 2. Green and Golden Tree Frog. H. moorei Large stout frog. Green and gold, sometimes mottled. Common Bullfrog.

Turtle Frog

- 3. Turtle Frog Myobatrachus gouldii Stout, tiny headed frog, usually underground. Lead grey brown.

Banjo Frog

- 4. Banjo Frog Limnodynastes dorsalis Large frog, dorsal stripe, red groin, swollen gland on thigh. Called "pobble-bonk" from its distinctive call.

Moaning Frogs

- 5. Humming Frogs Neobatrachus pelobatoides Medium stout frog mottled grey-green or yellow back. Trilling call.
- 6. Moaning Frog Helioporus eyrei Medium frog, leaden grey back mottled with offwhite yellowish nose stripe, white belly. Called "woop-woop" from the moaning call.
- 7. H. inornatus Medium stout frog. Larger than above; no nose stripe, dark brown above, white spots on flanks and throat area, usually near black peat swamps. Moaning call as above.

- 8. Helioporus psammophilus Small medium stout frog similar to H. eyrei, lacks yellow, trilling call like an outboard motor.

Toadlets

- 9. Toadlets Pseudophryne guentheri. Small flat frog, mottled grey brown back, black and white belly. Sometimes called 'walking frog' as it doesn't necessarily hop.

Froglets

- 10. Froglets Crinia georgiana Small frog, varied colouring, usually light or dark brown; always with red in groin, pale hands and white belly.
 - 11. C. glauerti }
 - 12. C. insignifera }
 - 13. C. pseudinsignifera }
- Tiny frogs 1/2 inch long. No red in groin, black and white belly. Difficult to determine apart.
- 14. C. leai Small frog; brown above with darker dorsal stripe; belly green brown or grey brown; no black.

FISH There are some fish which occur in permanent waters in the area.

References:

- Freshwater Fishes of Australia - Whitley. and
West Australian Naturalist,
Volume 1, No. 3. P. 49-53.
1. Minnow Galaxias occidentalis Long slender fish of up to 6 inches. Clear green with darker vertical stripes.
 - 2.
 - 3.
 4. Night Fish Bostockia porosa Deep bodied, blackish fish up to 6 inches, has deep pits on head and face.
 5. Pygmy Perch Edelia vittata Tiny bream like fish, 1 inch in length, red belly, brown spangled above.
 6. Goby Glossogobius suppositus Flat cobbler-like fish without stings, marbled colours. Length to 2 inches.
 7. Freshwater Cobbler Tandanus bostocki Typical cobbler, small black eel-like fish with big head "whiskers" out around mouth. Three poisonous spines behind head, one on top and one in each pectoral fin.

Trout

9. Rainbow Trout and Brown Trout.
10. Two species the Brown and Rainbow Trout occur throughout the area.
- 11.
12. Carp and Redfin Perch May s... occur in the area and are occasionally caught by anglers.
13. King River Perchlet Mamatherina balstoni Very similar to Pygmy Perch but has a very large mouth whereas former has very small mouth. Near Collie.
14. Hardihead Craterocephalus edelensis Small silvery fish with a broad silver blue band down length of body $1\frac{1}{2}$ inches (Smelt).

15. Mosquito Fish Gambusia affinis (Feral) Small podgy fish, Purple spot on silver abdomen. Length to 1'

Invertebrates

The notable ones for mention are the freshwater crustaceans Jilgie and Coonack (Cherax sp.). These are like a miniature lobster and abound in the swamps and creeks.

The Mussel, Westralunio sp. A 2 inch black bivalve.

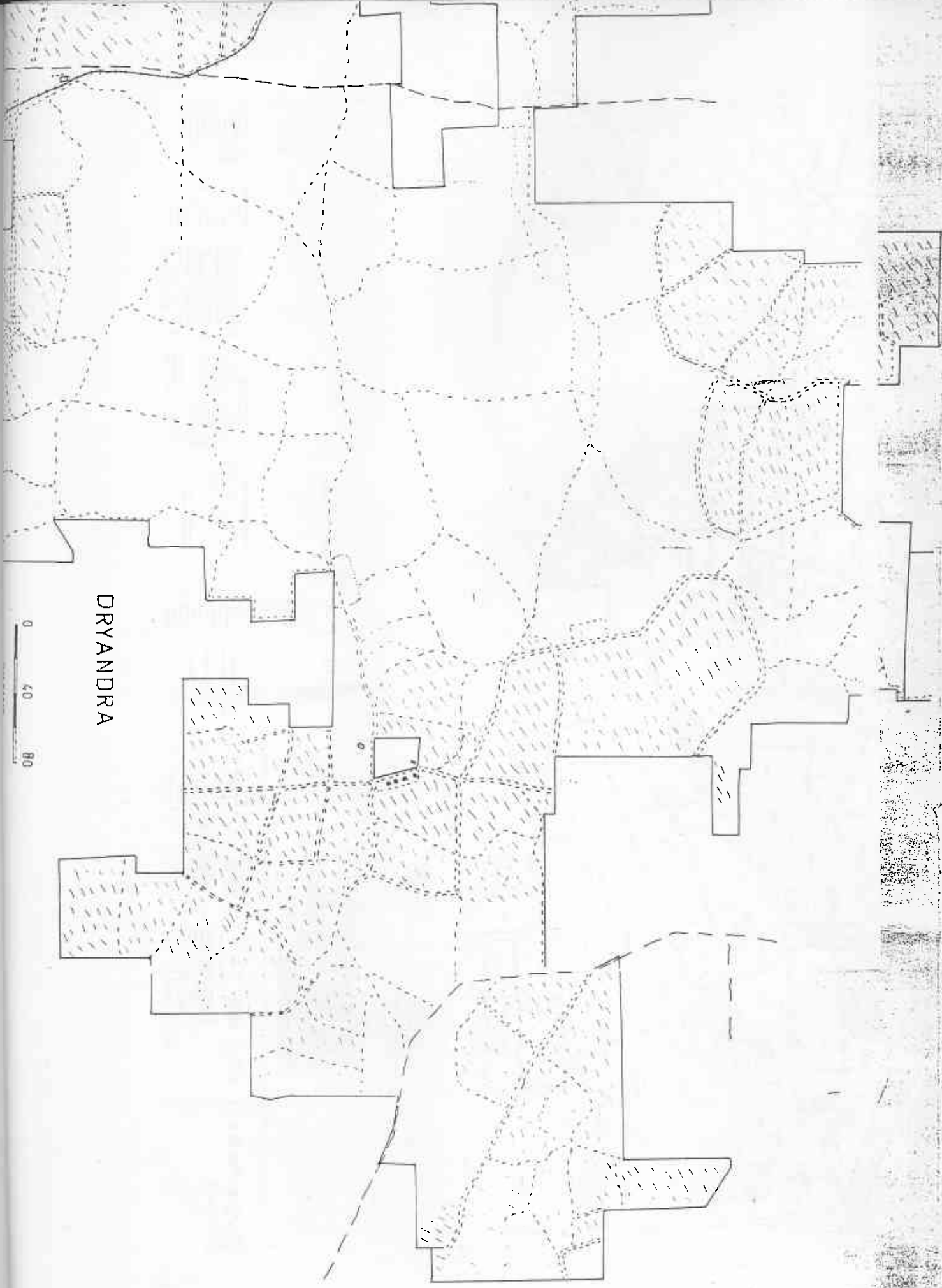
A fresh water sponge. Ephydatia multiformis

Certain small crustaceans of the Phreatoicoidea like sandhoppers.

The invertebrates as a whole are of little scientific value in terms of sight survey and one can readily suppose that if certain vertebrates are present the invertebrates are also present as part of the ecosystem necessary to support the vertebrates.

DRYANDRA

0 0.7 80



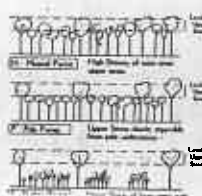


SOUTHERN

OCEAN

- SPECIES**
- J. JARRAH
 - M. MANN
 - A. KARRI
 - W. WANDOO
 - Bl. BLACKBUTT
 - Bl. BULLOCK
 - E. BANJUA
 - D. NON FOREST
 - D. DERACK

- HEIGHT CLASSES**
J.M. 20'
- A+ 100+
 - A 80-100
 - B 60-80
 - C 40-60
 - KARRI
 - A 100+
 - B 80-100
 - C 60-80



UPPER STRATA
Percentage Crown Cover

JARRAH		KARRI	
0	1-5	1-4	3-9
6-19	20-29	10-14	15-19
30-39	40+	20-24	25-29
		30-34	35-39
			40+

Upper strata plus 20
Total density plus 80
M types - total density only

- ROAD CLASSIFICATION**
- 1st Class
 - 2nd Class
 - 3rd Class
 - Tracks not numbered
- F.D. Light Fire Damage
S.F.D. Severe Fire Damage

- F. Tree
- Rb. Ringbarked
- Och. Orchard
- Pt. D. Part Cleared
- Cu. Cultivated
- P. Pasture
- B. Building
- S.T. Shade Trees
- V.O. Very Open
- Dec. Decadent
- V. Virgin Forest

- PHOTO INFORMATION**
WAINUP
RUNS 1-3 JULY 1963
- Photo Property Status
Tobacco Reserve 20
- REFERENCE TREES**
- Shade trees plus 01
 - Translocated from other areas
 - Photo principal areas 02
 - Photo principal areas 03
 - Photo principal areas 04
- Photo principal areas 01
Photo principal areas 02
Photo principal areas 03
Photo principal areas 04

RELIABILITY

Mapping A
Interpretation A

FORESTS DEPARTMENT

Date Plan	Interpretation	Checked	Revised
J.A.R. 1963	J.A.R. 1963	J.A.R. 1963	J.A.R. 1963
J.A.R. 1963	J.A.R. 1963	J.A.R. 1963	J.A.R. 1963
J.A.R. 1963	J.A.R. 1963	J.A.R. 1963	J.A.R. 1963

REVISED 1963 12-1-68
Revised 1968 Aug 10

F.D. A.P.I. MAP No. 43/40.
(454C/40NE)