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AVIFAUNA OF THE AUSTRALIAN CAPITAL TERRITORY

Final report of the ACT Avifauna Database Project

Canberra Ornithologists Group

July 1990

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PURPOSE AND SCOPE OF THIS REPORT

This report is the final report of the ACT Avifauna Database Project conducted by Canberra Ornithologists Group for the National Capital Development Commission and subsequently the National Capital Planning Authority. The study was undertaken between September 1986 and November 1989.

Section 1 contains a brief summary of major findings of the study. The background, methods, coverage and a discussion of cell richness are covered in Section 2. Section 3 contains discussion of the species list given in Appendix 1. Bird habitat types are described in Section 4, and habitats and sites of special significance are listed in Section 5. The final section outlines some opportunities for creative recreation with birds as the focus.

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1. SUMMARY

Between September 1986 and November 1989 presence-absence data were collected on 7487 visits to 165 grid cells covering the whole of the Australian Capital Territory.

A total of 228 species was recorded (167 landbirds and 61 waterbirds).

Two vagrant species were added to the ACT list: Superb Fruit-Dove and Scaly-breasted Lorikeet.

First breeding records were obtained for the following nine species: Sacred Ibis, Brown Quail, Lewin's Rail, Crested Pigeon, Australian King-Parrot, Skylark, Spotted Quail-thrush, Regent Honeyeater and Satin Bowerbird.

The cell with the highest number of species was Cell 39 (Jerrabomberra Wetlands, 152 species). This cell also had the greatest number of waterbird species (48). Cell 25 (National Botanic Gardens and Australian National University) had the highest number of landbirds (119).

The woodland and savannah grassland in the Murrumbidgee River Valley, and to the north and west of the city are the richest habitats overall.

Conservation priority should be given to protection of the wet closed forests of the lower Cotter catchment and to the protection of low altitude woodland and open forest remnants.

2. INTRODUCTION

2.1 Methods

A 2.5-minute grid along lines of latitude and longitude was superimposed over the whole of the Australian Capital Territory, yielding a total of 165 cells measuring approximately 3.5 by 4.5 kilometres. This system was adopted to ensure that the data would be compatible with the Royal Australasian Ornithologists Union's Atlas of Australian Birds and the New South Wales bird atlas project which is currently in progress. These data will also be compatible with any future national bird atlas projects.

The entire area of the ACT fell within the grid system with the exception of three small areas in extremely remote or inaccessible locations where the ACT border passes a short distance beyond the grid boundary. The total area of these sections is no more than several hundred hectares and therefore had little effect on the final results.

Volunteer field workers were recruited from among the Canberra Ornithologists Group membership, the general public, the National Parks Association, the Wildlife Foundation Inc and the ACT Parks and Conservation Service. Each field worker received a set of instructions, blank data sheets and maps (see Appendix 1 of first interim report).

The basic aim of the data collection was to record as many species as possible in a given cell. This approach has been widely adopted in similar atlas projects in Australia and abroad (eg. Blakers et al. 1984, Sharrock 1976). Field workers were asked to cover as much of the cell as possible, but the majority of records came from intensive searches of a small part of the cell.

There were no time restrictions on the duration of a survey, but a new data sheet was to be used for each month. For surveys outside the urban area, most surveys lasted for 1-4 hours. Workers were requested to record the presence of any species seen or heard within the cell. Breeding behaviour, defined as presence of nest with eggs or young, bird incubating eggs of brooding young, adult carrying food for young or presence of recently fledged or flightless young, was noted. In the second year of the project, nest building activity was included as evidence of breeding.

All rarities were vetted by the Canberra Ornithologists Group Rarities Panel to ensure that only accurate records were included. The occurrence of less rare birds in unusual locations or at unusual times of the year were checked with the observer where possible.

Four sub-reports were prepared in connection with this project. These reports described the avifauna of Gungahlin, the Molonglo River Corridor, the Paddys River Catchment and raptors in Open Space in the ACT. Details of these reports are provided in the references section at the end of this report.

The data are held on a computerised database operating in an IBM-compatible PC. The software used for database management is RBase System V. The for each visit one data sheet is held. The database contains the following information: a unique sheet number, observer, grid cell number, location, date commenced and completed. Individual species are coded to indicate presence and six classes of breeding activity: nest building, nest with eggs,

nest with young, carrying food, dependent young, and unspecified breeding.

2.2 Coverage

Between 1 September 1986 and 31 August 1989, 7308 datasheets were collected. Between the official end of the project and 9 November 1989, a further 179 sheets were collected, bringing the total number to 7487. A total of 1126 sheets had fewer than six species recorded on them. These are usually chance sightings of unusual species and are termed 'incidental sheets'. The calculation of quartile ranges in the species list in Section 3 discounts these sheets.

The total number of sheets and the number of sheets discounting incidentals for each cell are shown in Figure 1 and Figure 2. As would be expected, the cells with the highest number of sheets are in the suburban area. Only a single cell has fewer than 10 sheets and even many remote and inaccessible cells have 15-20 sheets, excluding incidentals. For all but a handful of cells, the number of sheets is greatly in excess of the original target of 12.

The total number of species recorded in a cell is closely related to the number of sheets for the cell (Figure 3). The more often a cell is visited, the more species will be recorded there. Even after more than 200 sheets were collected in Cell 25, incorporating the National Botanic Gardens and the ANU, new species were still being added to the list.

If we only consider those species that are recorded on more than 10% of sheets (core species) and discount those species only recorded on 10% of sheets or less (vagrant species), the results

						25	19	30	34								
					20	37	41	42	44	27							
				102	61	119	162	140	130	49	19						
		37	38	73	37	54	129	321	233	103	31	21	21				
	35	44	33	81	43	78	78	140	180	59	51	49	19	14	34		
	34	38	29	41	78	157	162	57	63	23	39	40	21	14			
	53	39	35	26	31	103	153	82	58	35							
31	51	17	39	49	27	24	115	65	46								
34	11	18	72	51	30	57	50	43	26								
37	30	51	57	34	18	19	71	27	14								
24	16	26	20	16	45	35	34	23	20								
15	17	16	42	50	27	46	59	38	19								
17	29	18	17	58	50	34	45	21									
	24	21	20	23	36	24	18	12									
	14	16	20	22	31	26	13	11									
			17	23	54	24	11	8									
			14	24	30	24	26	10									
			21	19	36	61	23										
				17	31	26	18										

Figure 1. Total number of sheets per cell

							21	18	30	29							
						20	35	30	38	42	27						
					95	54	113	144	119	109	45	18					
			30	29	63	28	50	96	247	185	94	31	21	17			
		31	26	24	61	33	66	63	115	146	39	44	43	19	13	32	
		20	26	26	30	64	145	131	37	52	19	31	36	19	14		
		41	34	33	25	29	94	135	74	49	34						
23	49	15	35	46	24	22	101	45	42								
21	11	16	61	44	27	44	37	25	22								
26	26	44	49	30	14	18	56	26	14								
21	14	25	19	16	44	29	23	20	16								
15	16	12	34	42	24	19	44	34	18								
12	23	18	15	52	41	21	42	20									
	22	16	17	22	33	22	17	12									
	14	14	19	20	28	24	13	11									
			17	22	50	20	11	8									
			14	24	29	22	25	10									
			18	18	31	57	21										
				16	27	26	18										

Figure 2. Number of non-incidental sheets per cell

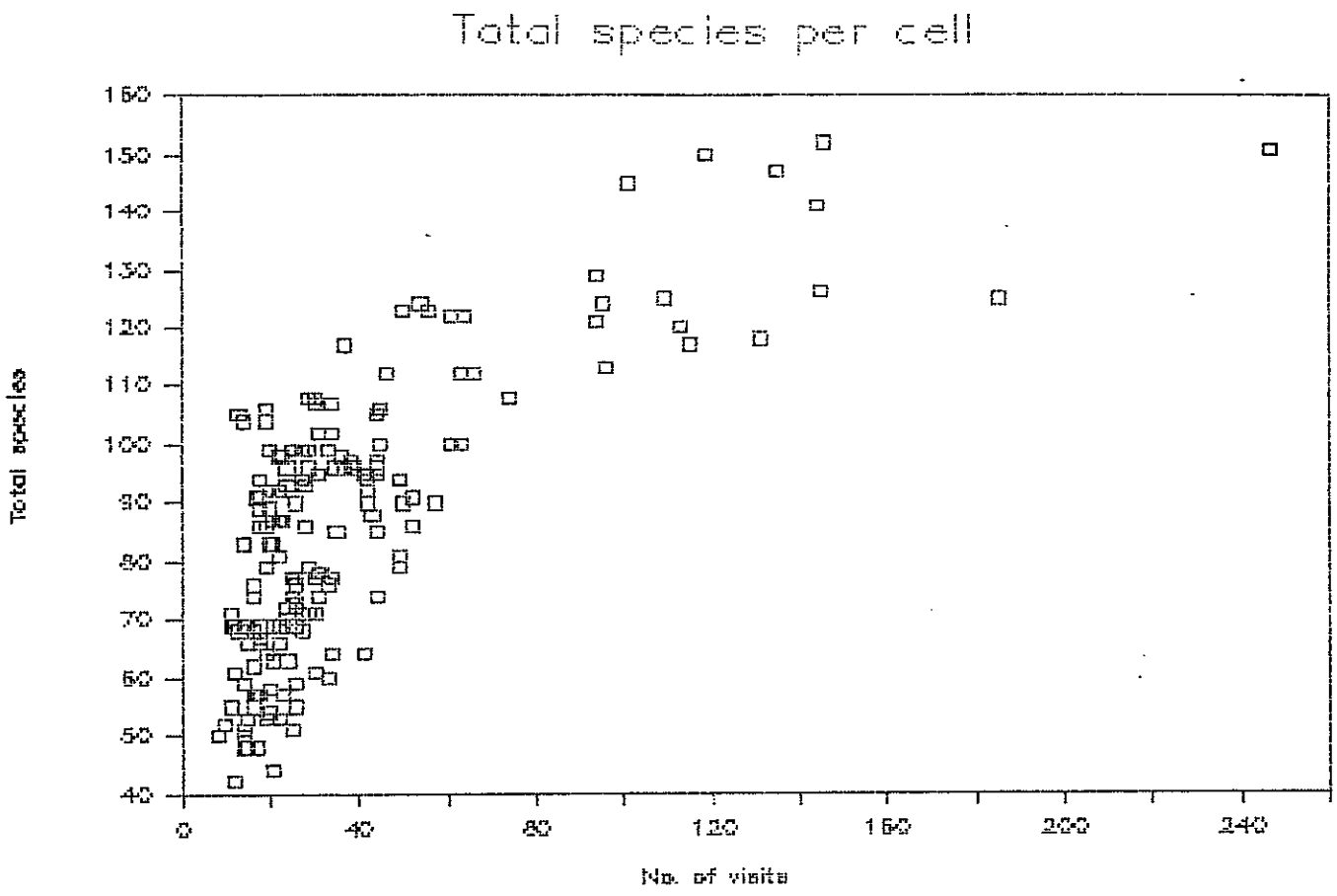


Figure 3. Total species versus total sheets per cell

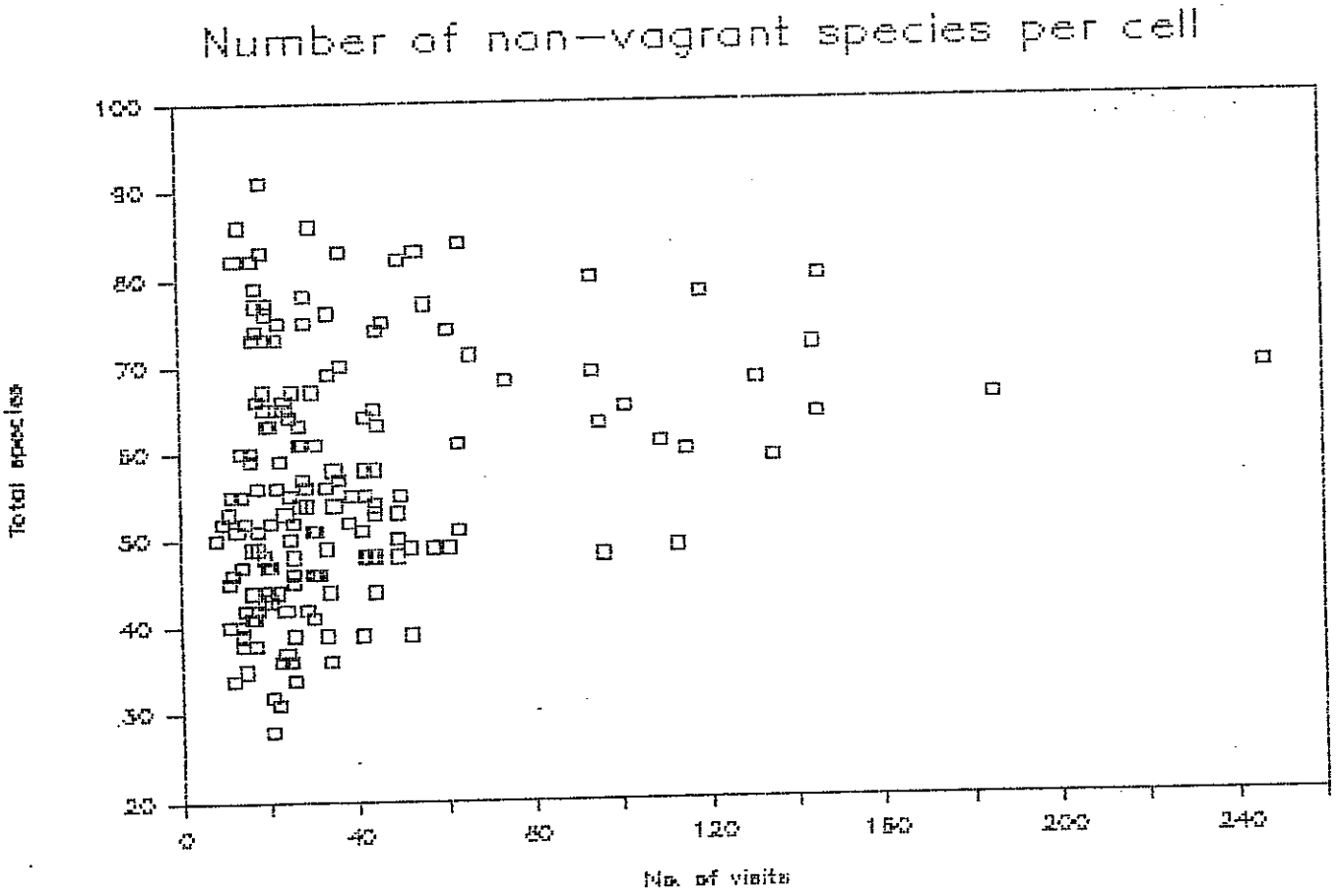


Figure 4. Core species versus total sheets per cell

are quite different. The number of core species per cell is plotted against the total number of visits to the cell in Figure 4. There is no clear correlation between the number of core species for a cell and the number of sheets for the cell. The size of the core is constant after about 12-15 sheets. Put another way, we can be reasonably confident about the core species of cells with more than 12-15 sheets.

2.3 Seasonal coverage

The original aim of the project was to visit each cell at least once per season over the three years course of the study to provide data for the analysis of migration patterns. After one year, this target was shown to be too conservative so the a new target of one visit per cell per month was set.

The target of complete monthly coverage for each cell was largely met. Spring and summer coverage is relatively complete, but a small number of cells were missed during autumn and winter. In June 1989, flooding on the Lower Naas River washed out the Naas Fire Trail. This made access to the northern end of the valley impossible, with the result that a number of cells were not surveyed.

In a broad perspective, the missing cells have an insignificant effect and a complete month-by-month picture of the distribution can be assembled.

2.4 Cell richness

2.4.1 Overall richness

The richness of a cell is defined as the number of species recorded in that cell. The greater the number of species, the richer the cell.

The total number of species recorded in each cell is shown in Figure 5. The maximum is 152 (Cell 39 - Jerrabomberra Wetlands) to a minimum of 42 (Cell 120 - Leura Gap). A number of trends are clear from Figure 5:

* The richest cells are clustered around the urban areas. Between 100 and 150 species have been recorded in most of these cells. The good vegetative cover, presence of bird-attracting native and exotic plants, proximity to reserves and a greater level of observer effort all contribute to this.

* Cells through which the Murrumbidgee River Corridor and the Molonglo River Corridor both show up as being rich areas. Between 100 and 145 species have been recorded in most cells in the river corridors.

* Woodland and grassland in the north and east of the ACT form a belt of intermediate richness around the city. In these areas, 80 to 90 species per cell is the norm.

* The forests of the west and south of the ACT have the lowest species richness with a range of about 50 to 70 being usual.

Richness is only a very crude measure of the value of a cell as it is strongly influenced by the total number of sheets because the more often a cell is visited, the more vagrants are likely to be

83 94 107 96

99 96 108 97 94 94

124 124 120 141 150 125 106 91

71 108 100 93 123 113 151 125 121 95 87 91

74 69 96 100 99 112 112 117 152 96 97 88 86 105 78

58 76 72 77 122 126 118 96 86 104 102 98 106 104

64 64 60 74 99 129 147 108 94 102

57 81 66 85 112 93 98 145 100 92

63 55 57 122 96 99 95 117 99 92

55 59 85 79 61 83 89 123 90 69

44 50 51 64 62 74 79 98 89 74

48 68 61 77 90 70 79 105 107 86

42 87 66 53 91 95 83 95 92

66 55 48 69 76 87 91 69

51 48 53 83 86 63 68 69

57 81 90 54 71 50

59 72 71 53 77 52

69 67 78 90 69

76 68 73 57

Figure 5. Total number of species per cell

47 79 86 56

76 54 67 52 48 63

63 83 49 72 78 61 74 77

46 75 51 61 82 48 69 66 80 61 63 73

46 45 65 49 56 71 61 60 80 55 53 48 67 82 46

47 48 46 51 84 64 68 70 39 83 61 57 91 86

39 36 39 55 78 69 59 68 53 69

36 50 52 58 75 66 73 65 63 55

32 40 44 74 54 61 58 83 64 65

34 39 48 48 41 60 66 77 67 55

28 39 36 48 49 44 54 75 73 60

35 49 46 44 58 42 65 65 76 74

34 59 51 42 49 51 52 64 77

44 41 38 44 49 65 82 55

40 38 43 63 57 37 51 45

41 56 55 44 53 50

47 53 42 31 50 52

56 49 51 49 43

59 54 52 42

Figure 6. Number of core species per cell

recorded there. The number of non-vagrant (core) species per cell is shown in Figure 6. Non-vagrant or core species are defined as those species which are recorded on more than 10 per cent of visits.

There is much less variation in the size of the core of cells across the study area. In the forested parts of the ACT in the western and southern quarters, the core is usually 35-50 species. In the lower, more open parts, the core varies between about 50 and 80.

Two factors influence the size of the core: the presence of habitat suitable for waterbirds may increase the core by as many as 10, and cells surveyed a small number of times by more skilled observers may have larger cores than cells covered by less skilled observers. While there is no accessible solution to the question of observer's skill, the bias introduced by the availability of waterbird habitat is removed in the discussion below.

2.4.2 Waterbirds

Waterbirds are defined as all swimming, diving, wading, shoreline and reedbed species. The number of waterbird species recorded in each cell is shown in Figure 7. The richest cell is 39 (Jerrabomberra Wetlands) where 48 species have been recorded. Cells of greatest waterbird richness are clustered around the urban lakes, wetlands, river corridors and grazing land where large farm dams provide habitat.

The northern and eastern parts of the ACT are much richer in waterbirds than the western and southern parts which are largely forested. Even in the most heavily forested areas, waterbirds such

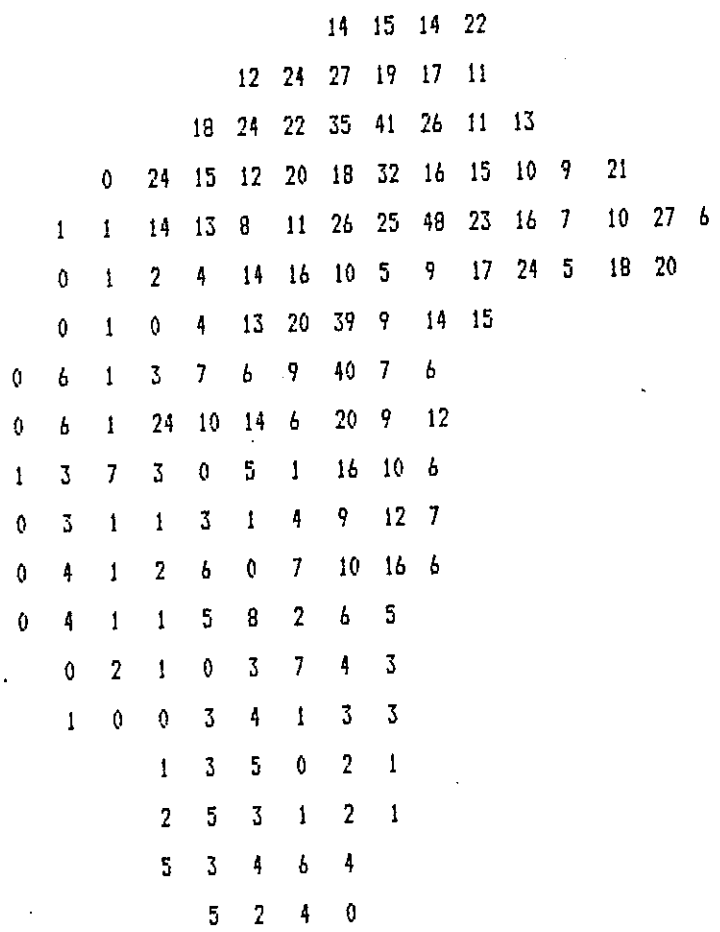


Figure 7. Total waterbird species per cell

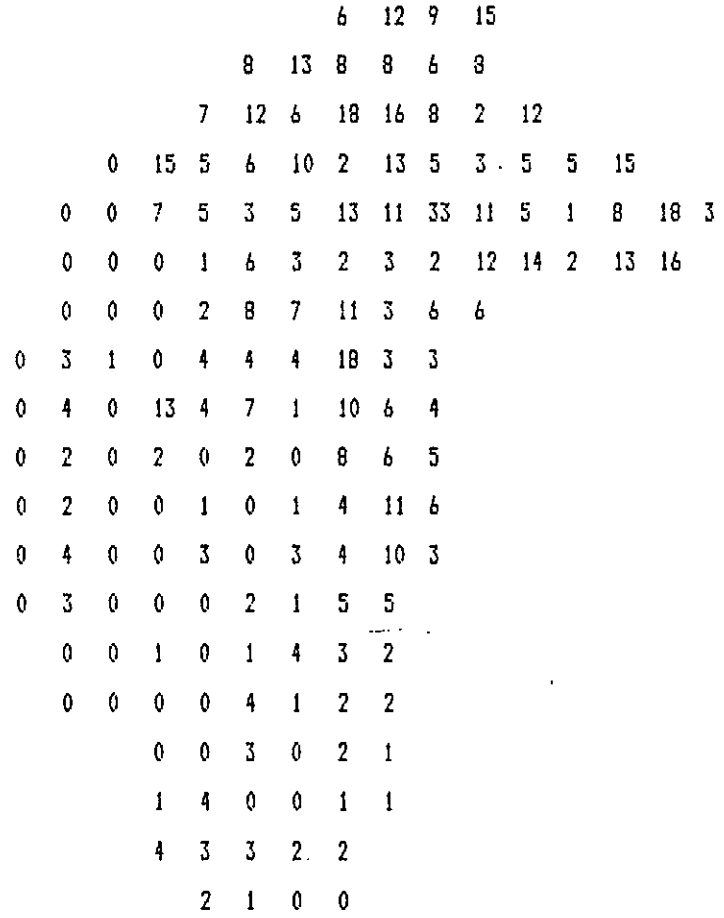


Figure 8. Number of core waterbird species per cell

as Maned or Pacific Black Duck may be found on creeks or rivers and vagrant waterbirds may be recorded overhead.

The number of core waterbird species in each cell is shown in Figure 8. This is a more reliable indication of each cell's richness as the size of the core is independent of the total number of visits to the cell.

The richest cell is 39 (Jerrabomberra Wetlands) where the core consists of 33 species. Lagging not far behind are Cells 77 (Tuggeranong Lakes) and 44 (farm dam near Kowen Forest). The latter was thoroughly surveyed on a small number of occasions by two skilled observers, with the result that the core is high.

Other rich waterbird habitats are Lake Ginninderra, Gungahlin Wetlands, parts of the Upper Molonglo River Corridor, the Murrumbidgee River Corridor, and large farm dams in the northern and eastern quadrants of the ACT.

Factors contributing to waterbird richness include presence of deep open water, shallow in-shore water, exposed mud flats, areas of thick fringing vegetation, reedbeds, safe breeding and 'loafing' areas such as islands and spits, and low levels of human interference.

It should be noted that for most waterbirds with the exception of the Maned and Pacific Black Duck, Moorhen and Swamphen, breeding habitat in the ACT is generally poor when taken in the national context.

2.4.3 Landbirds

Landbirds are defined as all other species. The total number of landbird species per cell is shown in Figure 9. The richest cell is Cell 25 (National Botanic Gardens and Australian National University) where 119 species were recorded. A number of cells in the suburban area and in the Murrumbidgee River Corridor contained over 100 species. Cells in high alpine forest areas such as Leura Gap, Mt Gingera and Blackfellows Gap (120, 100 and 110) were among the cells with the lowest total numbers of landbirds.

Again, it is instructive to remove the bias caused by high numbers of visits to a cell. The number of core species in each cell is shown in Figure 10. The great majority of the richest cells (those with a core of sixty or more species) are located in the Murrumbidgee River Corridor, the adjacent suburbs in southern Canberra, Paddys River Catchment and the Lower Naas-Gudgenby Valley. Other areas with significantly high numbers of core species are located in the Upper Molonglo Corridor, the Ainslie-Majura area and Mulligans Flat.

All these areas with large landbird cores tend to be open woodland mixed with some grassland. Open and closed forest have intermediate core sizes. High altitude alpine woodland has the smallest numbers of core species.

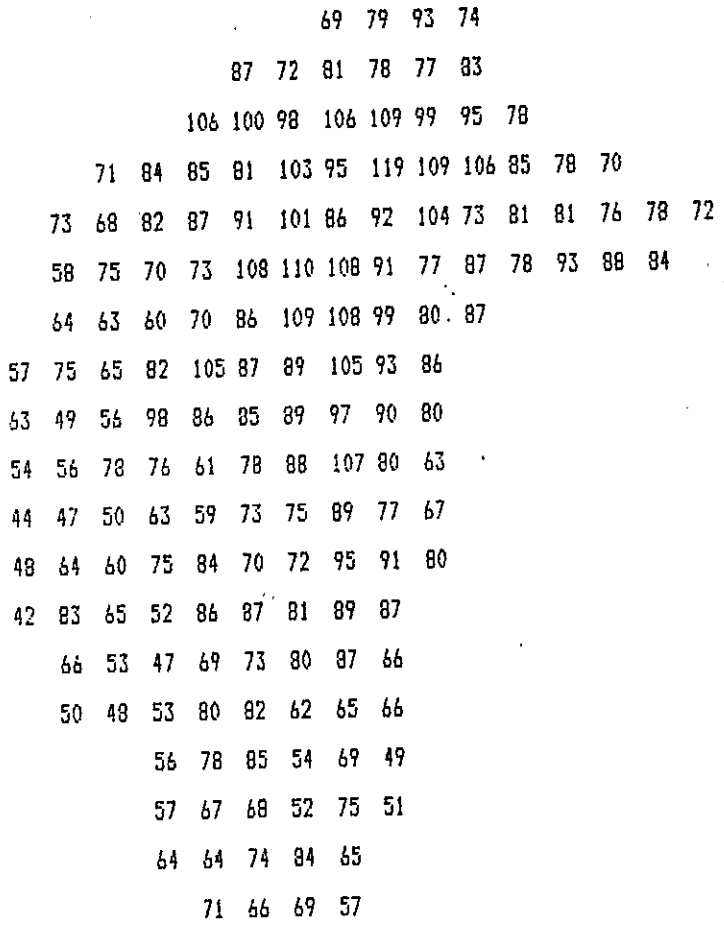


Figure 9. Total number of landbird species per cell

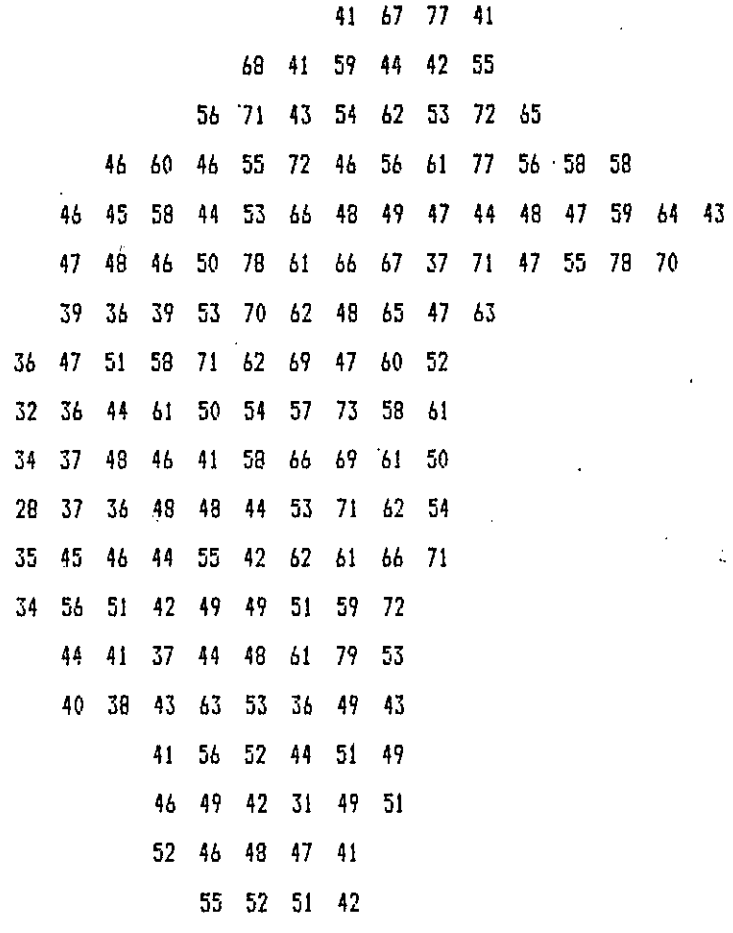


Figure 10. Number of core landbird species per cell

3. SPECIES LIST

3.1 Explanatory notes

All species recorded during this study are listed in Appendix 1. Distribution maps are given in Appendix 2. The orthography and taxonomic order follow RAOU (1978). The following information is provided for each species:

Summary of status: a brief statement that summarises the species' status ACT-wide. The status was based on how frequently a species was recorded throughout its entire range. Only those months during which a given species was present were considered for migratory species.

Throughout this report the words 'very common' indicate that the species was very commonly recorded in a given range, 'common' means commonly recorded, etc. As the data were collected on a presence/absence basis, no numbers of individuals or densisties were collected.

The following conventions were adopted:

Frequency (percentage of all sheets)	**Status**
>= 60%	very common
20-59%	common
1-19%	uncommon
~1%	rare
<<1%	very rare

Thus, a species is said to be very common if the probability of recording it is 60% or more throughout most of its range.

Details of distribution: a more detailed description of the locations and habitats where it is found, with relative abundance in each.

Breeding and seasonal variation: a summary of breeding and monthly variations, including arrival and departure for migrants, and changes in distribution for altitudinal migrants.

A total of 228 species was recorded (167 landbirds and 61 waterbirds) during this study. A small number of aviary species such as the Spotted Turtledove and Rose-ringed Parrakeet were also recorded, but these have been ignored for the purposes of this report.

In compiling the species list, some additional data have been drawn from Canberra Ornithologists Group's *Annual Reports* and *Canberra Bird Notes*.

COG (1985b) lists 260 species for Canberra and district, but this includes some species that are locally extinct and a number which are only found on Lake Bathurst or Lake George.

Three vagrant species, the Wedge-tailed Shearwater, Superb Fruit-Dove and Scaly-breasted Lorikeet, had never been recorded in the ACT before.

First breeding records were obtained for the following nine species: Sacred Ibis, Brown Quail, Lewin's Rail, Crested Pigeon, Australian King-Parrot, Skylark, Spotted Quail-thrush, Regent Honeyeater and Satin Bowerbird.

3.2 Sensitive species

A species is said to be sensitive if it is rare, endangered or declining. This may be on a local (ACT) or a national level. Reasons for the inclusion of each are given in the species list. The following species have been identified as sensitive:

Darter *Anhinga melanogaster*

Little Bittern *Ixobrychus minutus*

Musk Duck *Biziura lobata*

Peregrine Falcon *Falco peregrinus*

Buff-banded Rail *Rallus philippensis*

Baillons Crake *Porzana pusilla*

Australasian Crake *Porzana fluminea*

Spotless Crake *Porzana tabuensis*

Latham's Snipe *Gallinago hardwickii*

Yellow-tailed Black-Cockatoo *Calyptorhynchus funereus*

Superb Parrot *Polytelis swainsonii*

Powerful Owl *Ninox strenua*

White-throated Needletail *Hirundapus caudacutus*

Cicadabird *Coracina tenuirostris*

White's Thrush *Zoothera dauma*

Pink Robin *Petroica phoenicea*

Red-capped Robin *Petroica goodenovii*

Hooded Robin *Melanodryas cucullata*

Jacky Winter *Microeca leucophaea*

Crested Shrike-tit *Falcunculus frontatus*

Restless Flycatcher *Myiagra inquieta*

Eastern Whipbird *Psophodes olivaceus*

Pilotbird *Pycnoptilus floccosus*

Regent Honeyeater *Xanthomyza phrygia*

Yellow-tufted Honeyeater *Lichenostomus melanops*

Diamond Firetail *Emblema guttata*

Double-barred Finch *Peophila bichenovii*

4. HABITAT TYPES AND SITES

The main habitat types in the ACT are described in this section. The birds typical of each are listed and locations containing good examples of each habitat are given. A full list of species in each habitat is given in Appendix 4. An asterisk indicated that a species is regularly found in a particular habitat. Occasional or accidental occurrences have been ignored. Habitat definitions follows NCDC 1984.

4.1 Grassland

Description: treeless, or occasional remnant trees.

Dominant plant species: grasses.

Typical species: Black-shouldered Kite, Australian Kestrel, Stubble Quail, Brown Quail, Galah, Skylark, Richard's Pipit, European Goldfinch.

Remarks: generally poor avifauna, but poorly studied. Truely undisturbed native grassland is rare in the ACT. Threatened by continued expansion of suburbs.

Example: Gungahlin, Majura Valley, Tarpaulin Creek, etc.

4.2 Savannah Woodland

Description: less than 5% canopy shade.

Dominant plant species: Yellow box, red gum.

Typical species: Brown Falcon, Eastern Rosella, Red-rumped Parrot, Rufous Songlark, Yellow-rumped Thornbill, Southern White-face, Diamond Firetail, Australian Magpie-lark, Australian Magpie.

Remarks: moderately rich avifauna. Usually woodland thinned for grazing. Poorly represented in National Parks. Threatened by continued expansion of suburbs.

Example: Gungahlin, Huntly Hs.

4.3 Woodland

Description: 5% to 30% canopy shade.

Dominant plant species: Yellow box, red gum, Argyle apple

Typical species: Pallid Cuckoo, Horsfield's Bronze-Cuckoo, Dollarbird, Tree Martin, White-winged Triller, Scarlet Robin, Rufous Whistler, Willie Wagtail, Restless Flycatcher, White-throated Gerygone, Brown Treecreeper, Noisy Friarbird, White-plumed Honeyeater, Olive-backed Oriole, White-winged Chough, Dusky Woodswallow.

Remarks: rich avifauna. Poorly represented in reserves. Considerably pressure from urban development.

Examples: Campbell Park on the eastern side of Mt Ainslie, Castle Hill, Tuggeranong Hill.

4.4 Alpine woodland

Description: 5% - 30% canopy shade, above 1300m, interpersed with frost hollows.

Dominant plant species: snow gum, mountain gum, black sallee.

Typical species: Flame Robin, Olive Whistler, Striated Pardalote, Little Raven.

Remarks: rich in summer, but most species are summer migrants and leave during the winter. Well represented in Namadgi National Park.

Examples: Upper Cotter Flats, Snowy Flats, Ginini Flats, etc.

4.5 Open Forest

Description: 30% to 70% canopy shade.

Dominant plant species: red stringybark, brittle gum, scribbly gum, peppermints, apple box.

Typical species: Sacred Kingfisher, Leaden Flycatcher, Speckled Warbler, Weebill, Buff-rumped Thornbill, Varied Sittella, Red Wattlebird, Mistletoebird, Silvereye.

Remarks: rich avifauna. Well represented in National Parks.

Examples: Rocky Crossing, Lower Naas River, Glendale Crossing, Greenwood Hills, Gungahlin Hill, Mulligans Flat. High altitude open forest is well represented in Namadgi National Park, but low altitude forests, with the exception of Black Mountain, are not well represented in reserves.

4.6 Closed Forest

Description: More than 70% canopy shade.

Dominant plant species: alpine ash, brown barrell, mountain gum.

Typical species: Wonga Pigeon, Yellow-tailed Black-Cockatoo, Gang-gang Cockatoo, Fan-tailed Cuckoo, Shining Bronze-Cuckoo, Superb Lyrebird, Eastern Yellow Robin, Golden Whistler, Satin Flycatcher, White-browed Scrubwren, Brown Thornbill, White-throated

Treecreeper, White-eared Honeyeater, Eastern Spinebill, Pied Currawong.

Remarks: Rich avifauna. Many of the less common species are unique to this habitat, e.g. Rose Robin, Eastern Whipbird, etc. Moderately well protected in Namadgi National Park, but best examples are in the Lower Cotter Catchment. These are currently unprotected.

Examples: Lees Creek, Cotter River below Bendora, Lyrebird Creek at Tidbinbilla Nature Reserve.

4.7 Aquatic habitats

Description: lakes, margins, wetlands, marshes, dams and rivers.

Dominant plant species: reeds, grasses, sedges.

Typical species: Hoary-headed Grebe, Australian Grebe, Great Cormorant, Little Pied Cormorant, White-faced Heron, Pacific Black Duck, Maned Duck, Dusky Moorhen, Purple Swamphen, Eurasian Coot, Masked Lapwing, Welcome Swallow, Clamorous Reed-Warbler.

Examples: Jerrabomberra Wetlands, urban lakes, etc.

4.8 Riverine and fringing habitats

Description: vegetation fringing lakes and rivers, often artificial or highly modified.

Dominant plant species: willows, casuarinas, tee-tree thickets.

Typical species: Brown Thornbill, White-browed Scrubwren, Superb Fairy-wren, Blackbird, Red-browed Firetail, Yellow Thornbill (casuarinas), Rainbow Bee-eaters (sandy banks).

Examples: Lake Burley Griffin margins, Murrumbidgee and Molonglo Rivers.

4.9 Urban habitats

Description: all built-up areas within the city, generally well watered, many exotic plants, habitat highly modified (landscaped parks and gardens).

Typical species: in addition to some woodland species, many exotic species, including Feral Pigeon, House Sparrow, Greenfinch, Common Myna, Blackbird, Starling. All but the last two are generally confined to the city.

Example: suburban Canberra.

Remarks: Urban areas generally have high total numbers of species. This is the result of the amount of time observers spent in the city and the increased likelihood that rare and unusual species and passage migrants will be recorded. The number of core species in urban areas is much lower than the total number and is comparable with open forest areas. Many urban survey cells also contain a portion of lake or wetland. The presence of aquatic habitat in a cell can contribute as many as 20 species to the total species list and 10 to the core.

5. HABITATS AND SITES OF ORNITHOLOGICAL SIGNIFICANCE

This section describes habitats and sites of particular ornithological significance in the ACT. Many of the locations listed here have already been described in detail in various sub-reports associated with this project. See location entries for details of specific reports.

In general, ornithologically valuable medium to high altitude open forest communities are well represented in Namadgi National Park, but low altitude yellow box - red gum woodland and open forest is very poorly represented in reserves. In the remainder of the ACT this woodland has been cleared for grazing and more recently suburbs. Some is on private property and some is in unreserved Open Space Areas. These remaining pockets are fragmentary, and in many cases are subject to the stresses of fire, grazing and insect pests. A number of the more important woodland remnants are listed below, but it is likely that there are a number more that have not been located. Conservation of woodland should be accorded high priority.

The avifaunal richness of various habitats are compared in the discussion below.

Closed forest, Lower Cotter catchment

The closed forest communities in the Lower Cotter Catchment between Bendora and the Cotter dam, excluding the pine plantation contain the highest concentrations of many bird species. These include many of the less common birds such as the Brush Bronzewing, Wonga Pigeon, Australian King-Parrot, Cicadabird, White's Thrush, Rose Robin, Pink Robin, Rufous Fantail, Eastern

Whipbird, and Pilotbird. The following common species also appear in maximum concentrations in this area: Superb Lyrebird, Eastern Yellow Robin, Golden Whistler, White-browed Scrubwren and Brown Thornbill. Two long-term bird banding sites, Lees Ck and New Chums Rd, are located in this area. This area has no conservation status at present. The value of this area should be recognised, and its inclusion in Namadgi National Park should be sought.

Yellow box - red gum woodland

Once widespread, but widely cleared for grazing and then for housing. Exists only as scattered fragments. Many areas of Yellow Box Woodland are still heavily grazed which destroys the understorey layer and greatly reduces the woodland's value as bird habitat. The premier examples of yellow box - red gum woodland are found at Campbell Park on the eastern slopes of Mt Ainslie, and at Castle Hill. Other notable areas are the western slopes of Mt Ainslie and Mt Majura, Gungahlin Hill (lower slopes) and Mugga Lane. These areas all warrant high protection status. Monash Drive on Mt Ainslie is to be positively deplored, as it would require the destruction of a large area of excellent woodland.

Jerrabomberra Wetlands

Very rich wetland habitat, high species diversity, conservation status to be upgraded. Described in detail in COG (1987a)

Mt Ainslie-Mt Majura and Black Mountain

Very rich areas of open forest and woodland. High species diversity, important core areas for adjacent suburbs. Conservation status should be upgraded. Described in detail in COG 1986a.

Mulligans Flat

Very rich open forest and woodland habitat. Isolated remnant in otherwise poor habitat. Contains notable populations of Hooded Robin, Crested Shrike-tit, Western Gerygone, etc. Records of very rare species, including Regent Honeyeater, Little Friarbird and Pied Butcherbird. Described in detail in COG (1987b)

Gungahlin Hill

Rich open forest and woodland remnant in otherwise poor habitat. Described in detail in COG (1987b).

Hall woodland and open forest

Hall cemetery, pound and a small pocket of open forest on the western side of the Barton Highway are important remnants. All support rich bird communities. All warrant closer study.

Greenwood Hill

Very large area of dry, low altitude open forest. Appears to be only slightly disturbed. Difficult to survey as it is located within the Duntroon Firing Range. Unprotected. Warrants closer study.

Campbell Park

Large area of very rich yellow box - red gum woodland. Notable for populations of Jacky Winter, Crested Shrike-tit, Brown Treecreeper, Diamond Firetail, Southern Whiteface. Unusually rich habitat close to the city. Unprotected. Protection should be upgraded. Important for educational use.

Mugga Lane

Woodland remnant south and east of the Mugga Lane Zoo with excellent regrowth. Supports good populations of a wide range of woodland species. No protection.

O'Malley woodland

A very rich woodland remnant between O'Malley and Mt Mugga. Little disturbance. High species diversity. Important breeding core area and refuge for birds visiting adjacent suburbs. Currently unprotected. Threatened by long-term urban expansion.

Other natural areas

Natural areas near the city containing woodland and open forest remnants are often important core areas for birds visiting adjacent suburbs. Areas noted as being of particular value during this study are Aranda Bushland, Bruce Ridge, Lake Ginninderra Foreshores, Mt Painter, the Pinnacle, Red Hill, Isaacs Ridge, Mt Wanniassa, Mt Taylor, Cooleman Ridge, Mt Tuggeranong, Urambi Hills and Rob Roy Range. Mt Stromlo eucalypt forest with notable stands of E. nortonii is also of high ornithological value. While some of these are protected as Open Space Areas, others lack proper protection and are threatened by long-term urban development. Protection of all these woodland and forest remnants should be upgraded.

Lake Burley Griffin

Lake Burley Griffin supports a number of areas of ornithological significance especially for waterbirds and birds of lake margins

and reedbeds. These are described in detail in COG 1985b and 1987a.

Murrumbidgee Corridor

Rich, varied riverine habitats with good populations of waterbirds and landbirds. Particularly rich areas are located where the river is broad and slow-flowing and the natural vegetation remains in tact. Described in detail in COG 1986b.

Molonglo River Corridor

Rich, varied riverine habitats with good populations of waterbirds and landbirds, particularly the section between Scrivener Dam and the Murrumbidgee. Described in detail in COG 1987a.

Tidbinbilla Nature Reserve

Excellent wet forest gullies on the eastern slopes of the Tidbinbilla Range. Rich artificial wetlands. Well protected. Described in detail in COG 1988a.

Castle Hill

Rich yellow box - red gum - apple box woodland remnant on the eastern slopes of Castle Hill. Unprotected, private lease, lightly grazed. Widely used for educational purposes. Heavy grazing would largely destroy the value of this area. Should be protected. Described in detail in COG 1988a.

Mt Tennent - Blue Gum Creek

An extensive area of great botanical and ornithological complexity, particularly noteworthy as an outlier of closed forest

communities. Current conservation status inadequate. Described in COG 1988a.

Point Hut Crossing - honeyeater migration

The outward migration of the Yellow-faced and White-naped Honeyeaters in the autumn is a wide-spread phenomenon in the ACT. Point Hut Crossing is a convenient and well-known location for viewing the migration. It has been widely used by Canberra Ornithologists Group for group and public interpretation work. See COG 1986b.

Raptor breeding sites

Many birds of prey are sensitive to the presence of people nearing their nests. There are a number of important breeding sites described in the confidential report,COG 1988b, which warrant further protection.

6. EDUCATIONAL OPPORTUNITIES

Birds are the most prominent group of animals in the natural landscape, and their attractive appearance and varied behaviour makes them an ideal subject for educational activities. The only bird-oriented educational facility in the ACT is the excellent artificial wetland with public viewing hide at Tidbinbilla Nature Reserve.

Jerrabomberra Wetlands have potential for development as an educational centre. This has been discussed in detail in COG 1987a. The major constraint on development in this area is the fact that it is a fragile system and human intrusion into the area may destroy the refuge values. A good example of well-intentioned but poorly informed development is Kelly's Swamp: the swamp is now linked to Jerrabomberra Creek by a permanent channel. The idea was to provide year-round habitat for birds, but the wetland needs to dry out from time to time to retain its vigour. The quality of the swamp has fallen considerably since it was 'improved'. All future developments should be viewed in this light.

There is still potential for expansion in the area of developing eductional facilities. Creative conservation opportunities have been identified for the following locations: Lake Burley Griffin (COG 1985b); Uriarra Crossing, Casuarina Sands, Cotter Junction, Red Rocks Gorge, Point Hut Crossing and Smiths Road (COG 1986b); Queanbeyan Sewerage Ponds, Sullivans Creek and Black Mountain Peninsula (COG 1987a); Mulligans Flat, Gungahlin Hill and CSIRO Plant Industry Farm (COG 1987b); and the disused Belconnen sewerage treatment ponds west of the suburb of Macgregor (COG correspondence with NCDC, 1987).

None of these 14 separate proposals has yet been brought to fruition.

7. REFERENCES

Canberra Ornithologists Group. 1985a. A field list of the birds of Canberra and district. Canberra: COG.

Canberra Ornithologists Group. 1985b. The birdlife of the Museum of Australia site. Report to the National Capital Development Commission.

Canberra Ornithologists Group. 1986a. The significance of Mt Ainslie-Majura and Black Mountain as habitat for birds. Report to the National Capital Development Commission.

Canberra Ornithologists Group 1986b. Murrumbidgee River Corridor bird survey: final report, November 1986. Report to the National Capital Development Commission.

Canberra Ornithologists Group. 1987a. The Avifauna of the Molonglo River Corridor. Report to the National Capital Development Commission.

Canberra Ornithologists Group 1987b. The Avifauna of Gungahlin. Report to the National Capital Development Commission.

Canberra Ornithologists Group 1988a. The avifauna of the Paddys River catchment. Report to the National Capital Development Commission.

Canberra Ornithologists Group 1988b. Raptors in ACT Open Space: a special study within Stage 3 of the ACT Avifauna Database Project. Report to the National Capital Development Commission.

National Capital Development Commission 1984. The ecological resources of the ACT. NCDC: Canberra.

APPENDIX 1. SPECIES LIST

Emu ***Dromaius novaehollandiae***

Common breeding resident in Tidbinbilla Nature Reserve where birds were released in the mid-1960s. Some have subsequently colonised the neighbouring property of Birrigai, where they now breed. Occasional individuals have strayed out of the reserve into Namadgi National Park.

Great Crested Grebe ***Podiceps cristatus***

Rare breeding summer migrant. Found on urban lakes and large farm dams. Absent during winter. Breeds at Museum of Australia site near Acacia Inlet on Lake Burley Griffin. Numbers have declined over past decade.

Hoary-headed Grebe ***Poliocephalus poliocephalus***

Common breeding resident. Common on Jerrabomberra Wetlands and large farm dams, uncommon to rare on urban lakes, Molonglo and Murrumbidgee rivers, and reservoirs.

Australasian Grebe ***Tachybaptus novaehollandiae***

Very common breeding resident. Very common on Jerrabomberra Wetlands, urban lakes, river corridors and farm dams particularly those in the north and west of the ACT. More common in autumn and winter.

Wedge-tailed Shearwater ***Puffinus pacificus***

Very rare vagrant. Single bird blown off course to Canberra during easterly gales.

Australian Pelican ***Pelecanus conspicillatus***

Common visitor. Common on Jerrabomberra Wetlands, Lake Burley Griffin and Lake Ginninderra. Uncommon to rare on Tuggeranong lakes, large farm dams and river corridors. More common in spring and summer.

Darter ***Anhinga melanogaster***

Rare breeding resident. Regular in small numbers on Jerrabomberra Wetlands. Occasional records from a number of other locations, but mostly within the Molonglo River Corridor. Bred regularly on the Molonglo River opposite Duntroon (maximum of six nests) until 1982. Only one breeding record available to COG since that time. May be declining. Sensitive as it may be declining.

Great Cormorant ***Phalacrocorax carbo***

Very common visitor. Very common on Jerrabomberra Wetlands, urban lakes. Common on river corridors and reservoirs. Uncommon on farm

dams. Numbers peak in spring. Has bred on Jerrabomberra Wetlands, but not during the period of this study.

Pied Cormorant ***Phalacrocorax varius***

Rare visitor. Rare on Jerrabomberra Wetlands, Lake Burley Griffin and Upper Molonglo River corridor.

Little Black Cormorant ***Phalacrocorax melanoleucos***

Common visitor. Very common on Jerrabomberra Wetlands, Lake Burley Griffin and Lake Ginninderra. Uncommon on Tuggeranong lakes, reservoirs and farm dams. One breeding record from Molonglo Reach, 1989. Breeding areas sensitive.

Little Pied Cormorant ***Phalacrocorax sulcirostris***

Common visitor. Common on large farm dams in northern part of ACT, Jerrabomberra Wetlands, Lake Burley Griffin, Lake Ginninderra. Common to uncommon on Murrumbidgee River Corridor, reservoirs and smaller rivers and creeks. Numbers decline over spring and summer. May leave area to breed elsewhere. Has bred on Jerrabomberra Wetlands, but not during the period of this study.

Pacific Heron ***Ardea pacifica***

Uncommon irruptive visitor. Uncommon to rare on wetlands, urban lakes and farm dams. Most frequently recorded in summer. May suddenly appear in many parts of the ACT, remain for some weeks, then disappear again.

White-faced Heron ***Ardea novaehollandiae***

Common breeding resident. Common on all major wetlands, lakes, river corridors and large farm dams. Common to uncommon throughout the northern and eastern parts of ACT in all areas except places where there is continuous forest cover.

Cattle Egret ***Ardeola ibis***

Uncommon non-breeding resident/visitor. Common only on Jerrabomberra Wetlands and Gungahlin Wetlands, rare on other urban lakes and farm dams. Irruptive. Appears to leave area in summer, presumably to breed elsewhere.

Great Egret ***Egretta alba***

Uncommon visitor. Uncommon on Jerrabomberra Wetlands, uncommon to rare on other urban lakes, wetlands and farm dams.

Little Egret ***Egretta garzetta***

Rare visitor. Rare on Jerrabomberra Wetlands and Gungahlin Wetlands.

Intermediate Egret ***Egretta intermedia***

Rare visitor. Rare on Jerrabomberra Wetlands, Gungahlin Wetlands and Lake Ginninderra.

Rufous Night Heron ***Nycticorax caledonicus***

Uncommon summer visitor. Uncommon to rare on Jerrabomberra Wetlands, Gungahlin Wetlands, Lake Burley Griffin, Murrumbidgee and Molonglo corridors, reservoirs and some farm dams. Only recorded spring and summer. Most records are of immatures, suggesting that appearance in the ACT might be part of post-breeding dispersal.

Little Bittern ***Ixobrychus minutus***

Rare breeding summer migrant. Rare on Lake Burley Griffin. A very small breeding population, possibly only 1-2 pairs, exists in the reedbeds around Acacia Inlet, Yarramundi Bay and Warrina Inlet at the western end of Lake Burley Griffin. Blakers et al (1984) state that the Little Bittern is a summer migrant in Australia, and all local records are from the months November-February. The species is highly cryptic and is easily overlooked. Suitable habitat also exists on the Jerrabomberra and Gungahlin Wetlands, but the species has not been recorded there yet. The development of the Museum of Australia at Yarramundi Reach on Lake Burley Griffin will probably have an adverse effect on the Little Bittern. Sensitive.

Glossy Ibis ***Plegadis falcinellus***

Very rare vagrant. Single record from grazing land near Booroomba Hs, west of Tharwa.

Sacred Ibis ***Threskiornis aethiopica***

Common resident. Common around potential food especially the Queanbeyan abattoir and the Belconnen Tip, also Gungahlin wetlands, Jerrabomberra Wetlands, large farm dams especially in the Gungahlin and Kowen areas. Uncommon in Murrumbidgee and Molonglo Corridor. Single breeding record on artificial wetlands at Tidbinbilla could herald substantial numbers of breeding records in future. Fewer present in winter, numbers peak in summer.

Straw-necked Ibis ***Threskiornis spinicollis***

Common resident. Common on Jerrabomberra Wetlands, uncommon to rare on Gungahlin wetlands, urban lakes, large farm dams and grazing land.

Royal Spoonbill ***Platalea regia***

Uncommon visitor. Uncommon on Jerrabomberra Wetlands, rare on Gungahlin wetlands, other urban lakes, Tidbinbilla Wetlands and large farm dams. Absent in winter. May be declining. Sensitive.

Yellow-billed Spoonbill ***Platalea flavipes***

Uncommon visitor. Uncommon on Gungahlin wetlands, rare on Jerrabomberra Wetlands, other urban lakes and large farm dams. Note reversal of abundance on Jerrabomberra Wetlands and Gungahlin wetlands compared with previous species. Very few records in winter or spring. May be declining. Sensitive.

Plumed Whistling Duck *Dendrocygna eytoni*

Very rare vagrant. Two record of a single bird on Tidbinbilla Wetlands.

Black Swan *Cygnus atratus*

Common breeding resident. Common on Jerrabomberra Wetlands, some large farm dams, such as Uriarra Hs dam, and Tidbinbilla Wetlands. Uncommon to rare on other urban lakes, wetlands, farm dams and rivers.

Australian Shelduck *Tadorna tadornoides*

Rare visitor. Uncommon on Jerrabomberra Wetlands. Uncommon to rare on large farm dams in Gungahlin and Kowen, and Tidbinbilla Nature Reserve.

Pacific Black Duck *Anas superciliosa*

Very common breeding resident. Very common to common on all wetlands, urban lakes, major rivers, large farm dams. Common to uncommon on reservoirs and smaller rivers, creeks and small farm dams.

Mallard *Anas platyrhynchos* (introduced)

Uncommon breeding resident. Originally domestic ducks released into the wild. Common at Canberra Crematorium, Mitchell. Uncommon on Jerrabomberra Wetlands and urban lakes. Rare on farm dams. Competes for resources and interbreeds with Black Duck. May become a pest.

Grey Teal *Anas gibberifrons*

Common breeding resident. Common on large farm dams, particularly in Gungahlin and Kowen, Gungahlin wetlands, Jerrabomberra Wetlands, Tuggeranong lakes and Tidbinbilla Nature Reserve. Common to uncommon on smaller farm dams and river corridors.

Chestnut Teal *Anas castanea*

Uncommon visitor. Common on Gungahlin wetlands and Tidbinbilla Nature Reserve where it may be attracted by pinioned birds, uncommon to rare on Jerrabomberra Wetlands, large farm dams and Tuggeranong lakes. Only a small proportion of the population breeds in the study area.

Australasian Shoveler *Anas rhynchotis*

Uncommon breeding visitor. Common on Jerrabomberra Wetlands, and a small number of large farm dams in Gungahlin and Kowen. Uncommon to rare on urban lakes and other small farm dams. Single breeding records from Kowen and Tuggeranong lakes. Records peak in autumn.

Pink-eared Duck *Malacorhynchus membranaceus*

Uncommon resident/visitor. Uncommon on Jerrabomberra Wetlands. Rare on some farm dams.

Hardhead *Aythya australia*

Uncommon resident. Common on Jerrabomberra Wetlands and Uriarra Hs dam. Uncommon to rare on other large farm dams, Tidbinbilla Nature Reserve, Gungahlin wetlands, Queanbeyan Sewerage Ponds, Tuggeranong lakes and Upper Molonglo. Has bred at Tidbinbilla Nature Reserve.

Maned Duck *Chenonetta jubata*

Very common breeding resident. Occurs throughout the ACT wherever there is standing water. Only absent from areas of continuous forest. Very common on all wetlands, urban lakes, river corridors, farm dams of all sizes. Common on reservoirs and minor rivers. Follows suitable watercourses, eg the lower Naas River, into surprisingly unsuitable habitat. Records peak in spring and reach a low in autumn.

Blue-billed Duck *Oxyura australis*

Rare visitor. Rare on farm dams and Jerrabomberra Wetlands

Musk Duck *Biziura lobata*

Uncommon breeding resident. Common on Lake Ginninderra where it breeds, uncommon on Jerrabomberra Wetlands, rare on farm dams and urban lakes. May be declining. Records on Lake Burley Griffin and Jerrabomberra Wetlands have declined in the past decade. Has bred on Jerrabomberra Wetlands and Lake Burley Griffin, but no breeding record from these areas during this study. Sensitive.

Black-shouldered Kite *Elanus notatus*

Common breeding resident. Common in paddocks and open areas with long grass surrounding built-up areas in Weston Creek and Tuggeranong where house mice are plentiful and easily seen. Also common around Lake Ginninderra and Campbell Park. Uncommon in all other open areas abutting suburbs. Rare near Angle Crossing.

Black Kite *Milvus migrans*

Very rare visitor. Two records from Wanniassa and Pine Island.

Whistling Kite *Haliastur sphenurus*

Uncommon breeding resident. Common around Uriarra Crossing where a pair breeds regularly. Uncommon to rare along Murrumbidgee and Molonglo Rivers and over wetlands and lakes.

Brown Goshawk *Accipiter fasciatus*

Uncommon breeding summer migrant. Uncommon in all habitats at all altitudes. Thinly but widely distributed. More common in spring and summer, but some remain all year round.

Collared Sparrowhawk *Accipiter cirrhocephalus*

Uncommon breeding summer migrant. Uncommon to rare in suburban areas. Uncommon locally, for example Tidbinbilla Nature Reserve.

Rare elsewhere. Vagrants may occur in any habitat, but prefers open areas with some trees.

Grey Goshawk ***Accipiter novaehollandiae***

Rare visitor. Scattered records of single birds from suburbs, grazing land and Jerrabomberra Wetlands.

White-bellied Sea-Eagle ***Haliaeetus leucogaster***

Rare visitor. Rare along Murrumbidgee River, on Jerrabomberra Wetlands, Lake Burley Griffin and in transit over unsuitable habitat such as suburbs and pine plantation.

Wedge-tailed Eagle ***Aquila audax***

Common breeding resident. Common in the far south of Namadgi National Park south of Naas Ck, between Tharwa and Caloola Farm, and in the Paddy's River catchment. Uncommon in all other areas, except built-up areas where it is rare.

Little Eagle ***Hieraaetus morphnoides***

Uncommon breeding resident. Common locally where breeding pairs hold territories, generally uncommon in all woodland in the northeastern half of the ACT. Many territories are in or near river corridors.

Spotted Harrier **Circus** ***assimilis***

Very rare visitor. Four records from open grassland.

Marsh Harrier ***Circus aeruginosus***

Rare visitor. Rare on Jerrabomberra Wetlands, Molonglo River, Murrumbidgee River and Gudgenby River. Seldom far from watercourses or wetlands, rarely in transit over unsuitable habitat.

Black Falcon ***Falco subniger***

Very rare visitor. Five records from suburbs.

Peregrine Falcon ***Falco peregrinus***

Uncommon breeding resident. Common around known breeding sites in Gungahlin, the Molonglo Corridor and the Murrumbidgee Corridor and the lower Gudgenby River. Uncommon further away from these sites. Rare elsewhere. Some move away in winter: birds which breed at highest altitudes seem to migrate, others may be more sedentary. Breeds only on exposed rocky cliff faces. Sensitive.

Australian Hobby ***Falco longipennis***

Uncommon breeding summer migrant. Uncommon in woodland, grassland and suburbs, rare in forest. Most common summer-autumn.

Brown Falcon ***Falco berigora***

Common breeding resident. Common on open grassland and woodland, particularly in the Murrumbidgee Valley south of Point Hut Crossing and the Lower Gudgenby-Naas area.

Australian Kestrel ***Falco cenchroides***

Common breeding resident/summer migrant. Common in open grassland in the northern half of the ACT and around Angle Crossing. Uncommon in grassland west and south of the Murrumbidgee. Rare or absent in forested and heavily built-up areas. More common in all areas in summer than in winter. Complete migration out of high altitude areas in winter, some remain year-round at lower altitudes.

Stubble Quail ***Coturnix novaezeelandiae***

Uncommon breeding resident. Uncommon in grassland, tends to be localised. Becomes more conspicuous in summer when breeding birds are calling.Some altitudinal movement is suggested as there are no winter records above 800m.

Brown Quail ***Coturnix australis***

Rare breeding (?) resident. Uncommon at a small number of locations including Lake Ginninderra, Tuggeranong lakes, McQuoids Ck and Mt Clear. Rare elsewhere. Seems to prefer grassland near permanent water, It is assumed that the species breeds here because it is present in spring and summer.

Painted Button-quail ***Turnix varia***

Rare breeding resident. Rare in open forest. Multiple records from Mt Ainslie, Mt Majura, Black Mountain and Stromlo Forest, but single records from all other locations.

Buff-banded Rail ***Rallus philippensis***

Rare irruptive summer visitor. Rare on Gungahlin wetlands, Jerrabomberra Wetlands, Tuggeranong lakes and farm dams. All records are between September and February. May appear simultaneously in a number of locations and remain for several weeks. Probably occurs in very low numbers in most wetlands where there are suitable reedbeds and adjacent mudflats, but is highly cryptic and is under-recorded. May be sensitive on account of restricted habitat.

Lewin's Rail ***Rallus pectoralis***

Very rare irruptive summer visitor. One regularly on Gungahlin wetlands over a period of four months from October 1987 to January 1988. One other from Tidbinbilla Nature Reserve in January 1988. Probably occurs in very low numbers in most wetlands where there are suitable reedbeds and adjacent mudflats, but is highly cryptic and is under-recorded. May be sensitive on account of restricted habitat.

Baillons Crake ***Porzana pusilla***

Rare irruptive summer visitor. Very rare on Gungahlin wetlands, Tuggeranong lakes and some farm dams. Most ACTAD records result from a single irruption in November-December 1988. May appear simultaneously in a number of locations and remain for several weeks. Probably occurs in very low numbers in most wetlands where there are suitable reedbeds and adjacent mudflats, but is highly cryptic and is under-recorded. May be sensitive on account of restricted habitat.

Australasian Crake ***Porzana fluminea***

Rare irruptive summer visitor. Very rare on Gungahlin wetlands and Tuggeranong lakes. All records made between September and December. Irruption in 1986 and 1988. May appear simultaneously in a number of locations and remain for several weeks. Probably occurs in very low numbers in most wetlands where there are suitable reedbeds and adjacent mudflats, but is highly cryptic and is under-recorded. May be sensitive on account of restricted habitat.

Spotless Crake ***Porzana tabuensis***

Very rare resident? Status uncertain. Single record from Tidbinbilla Nature Reserve in June 1988. Probably occurs in very low numbers in most wetlands where there are suitable reedbeds and adjacent mudflats, but is highly cryptic and is under-recorded. May be sensitive on account of restricted habitat.

Dusky Moorhen ***Gallinula tenebrosa***

Common breeding resident. Very common on Jerrabomberra Wetlands, Lake Ginninderra, Gungahlin wetlands and Tidbinbilla Nature Reserve. Common on some farm dams, particularly Uriarra Hs dam and some dams in Kowen, and Tuggeranong lakes. Uncommon on Murrumbidgee Corridor and Queanbeyan Sewerage ponds. Rare on minor rivers such as Naas River near Mt Clear.

Eastern Swamphen ***Porphyrio porphyrio***

Common breeding resident. Very common on Jerrabomberra Wetlands, Lake Burley Griffin, Lake Ginninderra. Common on Tuggeranong lakes. Uncommon to rare on Gungahlin wetlands, Tidbinbilla Nature Reserve and some farm dams.

Eurasian Coot ***Fulica atra***

Very common breeding resident. Very common on Jerrabomberra Wetlands, Lake Burley Griffin, Lake Ginninderra, Tuggeranong lakes, Gungahlin wetlands, Tidbinbilla Nature Reserve, Queanbeyan Sewerage ponds and some large farm dams, notably in Gungahlin, Kowen, Uriarra and Booroomba. Uncommon to rare on other farm dams and river corridors.

Masked Lapwing ***Vanellus miles***

Very common breeding resident. Very common in well-watered open pasture north and west of Canberra, and in the frost-hollow

valleys in the extreme southwest of the ACT. Common in all other grassland areas at low altitudes. Even found on high altitude frost hollows like Creamy Flats (1350m). Uncommon in heavily built-up areas, absent from woodland and forest.

Banded Lapwing ***Vanellus tricolor***

Uncommon visitor. Occasional records from grassland areas. Rarely recorded in the same location more than once, suggesting a highly mobile population. Rare breeding records from pre-Atlas period.

Red-kneed Dotterel ***Erythrogonys cinctus***

Rare summer migrant. Rare on Jerrabomberra Wetlands, very rare on farm dams and Tuggeranong lakes. May be declining. Recorded only from September to March, suggesting some regional movement.

Double-banded Plover ***Charadrius bicinctus***

Very rare visitor. A single record from Point Hut Silt Trap.

Red-capped Plover ***Charadrius ruficapillus***

Very rare visitor. A single record from Point Hut Silt Trap.

Black-fronted Plover ***Charadrius melanops***

Common breeding resident. Common on Tuggeranong lakes, the Murrumbidgee River south of Tharwa, and the lower Naas River below Caloola Farm. Also common on farm dams, particularly in the northwest part of the ACT between Uriarra Crossing and Hall, and the eastern part in Kowen, and Jerrabomberra Wetlands.

Black-winged Stilt ***Himantopus himantopus***

Rare visitor. Rare on Jerrabomberra Wetlands, Lake Ginninderra, Lake Burley Griffin, Tuggeranong lakes and three records from one farm dam in Kowen.

Red-necked Avocet ***Recurvirostra novaehollandia***

Very rare visitor. One individual recorded at two locations near of Uriarra Hs.

Common Sandpiper ***Tringa hypoleucos***

Very rare summer migrant. Two records from Lake Burley Griffin and one from Casuarina Sands near the Cotter Reserve on the Murrumbidgee River.

Greenshank ***Tringa nebularia***

Very rare summer migrant. One record from the Tuggeranong lakes.

Latham's Snipe ***Gallinago hardwickii***

Uncommon summer migrant. Uncommon on Jerrabomberra Wetlands. Uncommon to rare throughout the ACT in all areas where medium length wet grass is found near water, and in generally marshy

areas, including high altitude alpine bogs such as Ginini Flats. First arrivals are in August, last departures in April. Protected under the Australia-Japan Migratory Birds Treaty. May be sensitive on account of restricted habitat.

Sharp-tailed Sandpiper *Calidris acuminata*

Rare summer migrant. Rare to very rare on Jerrabomberra Wetlands, Lake Ginninderra and Tuggeranong lakes. May be declining.

Silver Gull *Larus novaehollandiae*

Very common non-breeding resident. Very common on Jerrabomberra Wetlands, Lake Burley Griffin, Lake Ginninderra and the area surrounding the Belconnen Tip at Holt, and other areas such as Civic where it can scavenge human food scraps. Uncommon in other urban areas, mainly birds overhead. Uncommon on Tuggeranong lakes but may increase as development progresses. Note records of passage birds from Corin Dam and Glendale Crossing.

Whiskered Tern *Chlidonias hybrida*

Rare visitor. Three records from Lake Ginninderra, one from Jerrabomberra Wetlands and three from Lake Tuggeranong.

Caspian Tern *Hydroprogne caspia*

Very rare visitor. Three records from Lake Burley Griffin and Jerrabomberra Wetlands in three consecutive months, possibly all of the same individual.

Superb Fruit-Dove *Ptilinopus superbus*

Very rare visitor. One record (first for the ACT) from Page on 3 May 1987 of an immature bird, possibly strayed off course during migration.

Feral Pigeon *Geopelia livia* (introduced)

Common breeding resident. Very common in Inner North Canberra, Civic, Fyshwick and Inner South Canberra, Weston Creek. Common to uncommon in Belconnen and Tuggeranong. Rare outside urban areas.

Peaceful Dove *Columba placida*

Rare visitor. Uncommon but regularly recorded in one location only: Bibaringa stud on the Cotter Road west of Weston Creek. Very rare in a number of other locations including Uriarra Crossing, CSIRO Wildlife (Gungahlin), Lake Burley Griffin, Russell Hill and Booroomba Hs 10 km NW or Tharwa. There is a small number of urban records, but these are almost certainly aviary escapees. Very few winter record. Majority of records from spring and summer where the species is calling and is therefore more conspicuous.

Diamond Dove *Geopelia cuneata*

Very rare visitor. One record from Uriarra Crossing and another from the Cotter River near Bendora Dam. Two other urban records are probably aviary escapees.

Common Bronzewing *Phaps chalcoptera*

Uncommon breeding resident. Patchily distributed throughout the ACT, locally common, eg. Mulligan's Flat and Campbell Park. Absent from treeless areas and snow gum forest.

Brush Bronzewing *Phaps elegans*

Rare breeding resident. Rare in thick understorey along the Cotter River between Corin and Cotter Dams. Some additional records from southern Namadgi National Park. As it is present during spring and summer, breeding is assumed, although no breeding records are available.

Crested Pigeon *Ocyphaps lophotes*

Uncommon breeding resident. Common to uncommon on the northern and western fringes of Belconnen. Uncommon in other areas on the outskirts of suburban Canberra. Rare in built-up areas. Often in open paddocks in association with horses as it may take stock feed such as oats. First confirmed local breeding records made during this study.

Wonga Pigeon *Leucosarcia melanoleuca*

Common breeding resident. Very common in the wettest forests east of Piccadilly Circus. Common to uncommon in all other forests, including pine plantations, west of the Murrumbidgee, with the exception of the highest alpine snow gum forests where it is absent. Breeding is assumed. The species becomes more conspicuous during spring and summer when it calls more frequently.

Yellow-tailed Black-Cockatoo *Calyptorhynchus funereus*

Common breeding resident. Common on the eastern slopes of the Tidbinbilla Ra south as far as the Corin Dam Road. Common around Blundells Flat east of Mt Coree and common in the Gudgenby pine forest. Uncommon in most other forested areas and along river corridors west of the Murrumbidgee. Surprising absence from area between the Upper Cotter and the Orroral Valley. Several records from Kowen pine forest. Fewer records in spring may coincide with change in behaviour during breeding, or may reflect some seasonal movement away from the ACT. Breeding is assumed, but no active nests were located. Sensitive to habitat destruction.

Gang-gang Cockatoo *Callocephalon fimbriatum*

Very common breeding resident. Common in all forested areas west of the Murrumbidgee, and central and southern Canberra, uncommon to rare in woodland at low altitude, absent from treeless areas. Marked seasonal movement. There is a general movement out of the ACT and into urban areas during the winter. On their return in spring and summer, the species becomes common, particularly above 1200m. Very few breeding records are available as the species becomes secretive near the nest.

Galah ***Cacatua roseicapilla***

Very common breeding resident. Very common in all grassland, woodland and urban habitats between the Murrumbidgee and the Kowen escarpment. Absent from all areas of continuous forest, although individuals may be recorded flying over unsuitable habitat.

Little Corella ***Cacatua sanguinea***

Very rare visitor/aviary escapee. Records are ambiguous as Canberra lies on the edge of the natural range of this species, which is also a popular aviary species. As the only two records are from suburban areas, they are more likely to be escapees.

Sulphur-crested Cockatoo ***Cacatua galerita***

Very common breeding resident. Very common to common in all habitats north and east of the Cotter and Orroral Rivers. Uncommon west and south of these. Absent only from snow gum forest at high altitude. Marked seasonal movement into middle altitudes (1200-1500) and out of the city during spring and summer, presumably to breed.

Rainbow Lorikeet ***Trichoglossus haematodus***

Rare visitor/uncommon escapee. Canberra lies at the western edge of the natural range of this species. The small number of records from non-suburban areas of the ACT are almost certainly birds that have strayed up over the coastal escarpment. Urban records - the great majority of sighting - are most likely aviary escapes or their descendants. Free-flying birds have bred in suburban gardens.

Scaly-breasted Lorikeet ***Trichoglossus chlorolepidotus***

Very rare visitor. One record of a small flock at Point Hut Crossing in April 1987, the first for the ACT. Normal range extends north from the Illawarra along the eastern seaboard.

Little Lorikeet ***Glossopsitta pusilla***

Rare irruptive visitor. Six records from highly disparate locations. All records from two separate irruptions during 1987. Arrival coincided with periodic flowering of eucalypt. Note that two records were from an altitude of about 1300m in June when Mountain gums were in flower. Usually found east of the coastal escarpment.

Australian King-Parrot ***Alisterus scapularis***

Common breeding altitudinal migrant. Common in urban areas, especially Inner South and Weston Creek, particularly in winter. Moves to adjacent ranges to breed in the spring. Uncommon on the Tidbinbilla Range and in the Lower Cotter Catchment. Generally rare in low to medium altitude forest. Absent from high altitude alpine forest. Absent from treeless areas at all altitudes. First local breeding records were made during the current study.

Superb Parrot *Polytelis swainsonii*

Rare summer visitor. Rare in northern part of the ACT. These birds are stragglers at the southernmost extent of the species' range in the local region. Not far north, in places like Gundaroo and Murrumbateman, the species seems to be quite common in the summer.

Cockatiel *Nymphicus hollandicus*

Rare visitor/aviary escapee. Rare records of small flock of birds that are obviously wild, but the majority of records are of single birds in built-up areas. These are almost certainly aviary escapes. The ACT lies on the at the extreme eastern edge of the natural range of this inland species.

Budgerigar *Melopsittacus undulatus*

Very rare visitor/aviary escapee. No confirmed records of wild birds during this survey, but occasional records of single birds in built-up areas. See above.

Swift Parrot *Lathamus discolor*

Very rare visitor. One record from suburban Griffith. A winter migrant from Tasmania to the east coast of the mainland. Individuals occasionally stray up over the escarpment.

Crimson Rosella *Platycercus elegans*

Very common breeding resident. Very common in all habitats except grassland areas totally devoid of trees.

Eastern Rosella *Platycercus eximius*

Very common breeding resident.

Port Lincoln Ringneck *Barnardius zonarius*

Aviary escapee. One record from Mt Majura where a small breeding colony was to known exist some years ago. One record from Lake Burley Griffin.

Red-rumped Parrot *Psephotus haematonotus*

Common breeding resident. Common in all woodland and savannah woodland east of the Murrumbidgee River and north of Tharwa.

Pallid Cuckoo *Cuculus pallidus*

Common breeding summer migrant. Common in woodland between August and January.

Brush Cuckoo *Cuculus variolosus*

Uncommon breeding summer migrant. Uncommon to rare in closed forest west of the Murrumbidgee between October and February. Rare in most other habitats, for example, built-up areas, during spring and autumn passage migration.

Fan-tailed Cuckoo *Cuculus pyrrhophanus*

Common breeding summer migrant. Common in forest and woodland between August and April. Uncommon in other habitats during spring and autumn passage migration. Occasionally overwinters at low altitudes.

Black-eared Cuckoo *Chrysococcyx osculans*

Very rare summer migrant. Three records from the northern part of the ACT and suburban Canberra. Found Australia-wide except the southeastern corner.

Horsfield's Bronze-Cuckoo *Chrysococcyx basalis*

Common breeding summer migrant. Common in woodland and open forest between August and March. Rare individuals overwinter at low altitudes.

Shining Bronze-Cuckoo *Chrysococcyx lucidus*

Common breeding summer migrant. Common in woodland, open forest and closed forest (where Horsfield's Bronze-Cuckoo is generally absent) between August and March. Rare individuals overwinter at low altitudes.

Common Koel *Eudynamis scolopacea*

Bare breeding (?) summer migrant. One or two individuals have been recorded in suburban Canberra every summer between November and January for the past few years. One record from closed forest on the Corin Dam Road. These birds are highly conspicuous and noisy, and the same individual may be recorded by many observers. Breeding is yet to be confirmed, but their behaviour and the time of year are indicative.

Powerful Owl *Ninox strenua*

Rare breeding resident. Probably fewer than 10 pairs inhabit closed forest west of the Murrumbidgee River. Each pair requires a very large home range and large, secure hollow for breeding. Intolerant of human disturbance. May be vulnerable nationally. Sensitive to logging of breeding habitat.

Southern Boobook *Ninox noveaseelandiae*

Common breeding resident. Probably common in woodland and forest, but as it is only active at night it is under-recorded during normal daylight surveys. Requires hollows for nesting. Sensitive to habitat destruction in suburban areas. Strong peak in records in spring coincide with peak in calling activity during the breeding season as the great majority of records are aural.

Barking Owl *Ninox connivens*

Very rare visitor. Two records from savannah woodland on the outskirts of Kambah, one from open forest on the Boboyan Rd south of Gudgenby Hs.

Barn Owl *Tyto alba*

Rare irruptive visitor. Ten records, mainly from built-up areas. No seasonal pattern is obvious. May appear in large numbers following mouse plagues.

Tawny Frogmouth *Podargus strigoides*

Uncommon breeding resident. Uncommon in all forests and woodland, but being noctural and highly cryptic during daylight, it is underrecorded. Becomes more conspicuous and calls more often during the breeding season, hence a peak in records during the spring and summer.

Australian Owlet-nightjar *Aegotheles cristatus*

Uncommon breeding resident. Probably uncommon in all forests and woodland. Roosts in hollows during the day and hunts at night. Its call is seldom heard and is often overlooked. Seriously underrecorded.

White-throated Nightjar *Caprimulgus mystacalis*

Very rare visitor. One record from suburban Kambah and another some kilometres west on the Murrumbidgee River.

White-throated Needletail *Hirundapus caudacutus*

Uncommon non-breeding summer migrant. Uncommon in all habitats between December and March. Often preceding westerly storm fronts. Completely aerial. Migrates from Japan.

Fork-tailed Swift *Apus pacificus*

Rare summer non-breeding migrant. All records are from urban areas, but is probably found in all habitats. Frequently in association with White-throated Needletail. Completely aerial. Migrates from North Asia.

Azure Kingfisher *Ceyx azurea*

Very rare visitor. Two records from Sullivan's Ck, Acton about two years apart.

Laughing Kookaburra *Dacelo novaeguineae*

Very common breeding resident. Very common in all forest and woodland habitats. Dependent on trees for nest sites and hunting perches so shuns grassland.

Red-backed Kingfisher *Halcyon pyrrhopygia*

Very rare visitor. One record from Acacia Inlet, Lake Burley Griffin. One found dead some weeks later in suburban O'Connor.

Sacred Kingfisher *Halcyon sancta*

Uncommon breeding summer migrant. Uncommon but patchily distributed through all forests and woodlands from October until March. Hollow-nester.

Rainbow Bee-eater *Merops ornatus*

Common breeding summer migrant. Common in the Murrumbidgee River Corridor and lower Naas and Gudgenby Rivers from October until March. Breeds in tunnels in sandy banks and hawks for insects over still water. Rare in unsuitable habitat, e.g. suburbs, during passage migration in spring and summer. Recreational pressure on river banks may influence breeding.

Dollarbird *Eurystomus orientalis*

Uncommon breeding summer migrant. Uncommon in woodland between October and March. Hollow-nester.

Superb Lyrebird *Menura novaehollandiae*

Common breeding resident. Very common in closed forest, particularly in the Lower Cotter Catchment, common in open forest west of the Murrumbidgee. Note separate populations on the Molonglo River south of Queanbeyan and in the Kowen forest. More conspicuous May-August when birds are most vocal.

Singing Bushlark *Mirafra javanica*

Rare breeding summer migrant. Rare in grassland around Tuggeranong lakes from October to March. Very rare elsewhere. Easily overlooked, may be underrecorded.

Skylark *Alauda arvensis*

Uncommon breeding resident (introduced). Locally common in grazed grassland, e.g. around Tuggeranong lakes, Majura Valley-Jerrabomberra Wetlands and Parkwood Hs area. Tends to prefer improved pasture, less adaptable than Richard's Pipit (see below). Very few records in February and March, possibly on account of post-breeding moult.

Welcome Swallow *Hirundo neoxena*

Common breeding resident/migrant. Very common on all major river corridors and lakes. Found in most habitats where there are medium to large areas of standing water. Absent from continuous tracts of forest. Clear summer migration into areas above 1000m. There is certainly some summer migration into places below 1000m, but there is also passage movement in both spring and autumn.

Tree Martin *Cecropis nigricans*

Common breeding summer migrant. Common in Murrumbidgee River Corridor and Upper Molonglo. Uncommon in other woodland or savannah woodland areas. Most return in August and depart by April, some overwinter, particularly at low altitudes. Breeds in standing dead timber.

Fairy Martin ***Cecropis ariel***

Uncommon breeding summer migrant. Generally uncommon in grassland and savannah near permanent water, locally common around breeding colonies. Often breeds under bridges, in culverts, etc. Most return in September and have departed by April. Less cold tolerant than preceding species. Very rarely overwinters.

Richard's Pipit ***Anthus novaeseelandiae***

Common breeding resident. Common in all grassland areas. Migratory at higher altitudes.

Black-faced Cuckoo-shrike ***Coracina novaehollandiae***

Very common breeding summer migrant. Very common in urban area and savannah woodland and woodland. Common in low open and closed forest, uncommon in alpine forest. Many overwinter, particularly at low altitudes.

White-bellied Cuckoo-shrike ***Coracina papuensis***

Very rare visitor. Three records from urban area.

Cicadabird ***Coracina tenuirostris***

Rare breeding summer migrant. Rare in closed forest. Most records from the Lower Cotter catchment. Rare in other habitat, for example, Mt Ainslie, during spring and autumn passage migration. Sensitive to habitat destruction.

White-winged Triller ***Lalage sueurii***

Common breeding summer migrant. Common in woodland below 1000m between October and February. Records vary considerably from one year to the next.

White's Thrush ***Zoothera dauma***

Uncommon breeding resident. Uncommon in closed forests of the Lower Cotter Catchment, rare in other forests. Very rare in Murrumbidgee River Corridor and Botanical Gardens. Note separate population in Kowen Forest-Molonglo Gorge area. Cryptic, may be underrecorded.

Blackbird ***Turdus merula***

Very common breeding resident (introduced). Very common in suburban gardens, parks and open spaces. Common on river corridors, uncommon forest areas, particularly those with dense growth along gullies. Thought to be spreading. First recorded in the ACT in 1948.

Flame Robin ***Petroica rosea***

Very common breeding altitudinal migrant. Very common in forest and woodland above 1000m between September and March, at other times, common in grassland and woodland below 1000m.

Rose Robin ***Petroica rodinogaster***

Uncommon breeding summer migrant. Uncommon in closed forest, particularly in the Lower Cotter Catchment between September and February. Rare in other unsuitable habitats, for example, suburban gardens, during spring and autumn passage migration. Very rarely overwinters at low altitudes.

Pink Robin ***Petroica phoenicea***

Very rare winter migrant. Two records of migrants, assumed to be from Tasmania. Very secretive, underrecorded. May be sensitive to habitat destruction.

Scarlet Robin ***Petroica multicolor***

Common breeding resident. Common in woodland and open forest, rare in closed forest. Moves to more open habitats in winter. Becomes inconspicuous and ceases calling in summer.

Red-capped Robin ***Petroica goodenovii***

Rare irruptive breeding (?) visitor. Rare in dry savannah woodland. Prone to irruption.

Hooded Robin ***Melanodryas cucullata***

Uncommon breeding resident. Common around Angle Crossing and the Lower Naas-Gudgenby Valley, Mulligan's Flat and places in the Kowen Forest. uncommon to rare in other woodland area. Intolerant of heavy grazing and human settlement. Sensitive.

Eastern Yellow Robin ***Eopsaltria australis***

Very common breeding resident. Very common in open and closed forest west of the Murrumbidgee River, common on river corridors. Uncommon in high alpine forest. Tolerates pine plantations.

Jacky Winter ***Microeca leucophaea***

Uncommon breeding resident. Uncommon to rare in woodland remnants. Uncommon at Castle Hill and Campbell Park. Very scattered. Has declined drastically in recent decades. Intolerant of intensive human land-uses. Sensitive.

Crested Shrike-tit ***Falcunculus frontatus***

Uncommon breeding resident. Uncommon in open forest and closed forest, rare in woodland and river corridors. Inconspicuous, underrecorded. Sensitive to destruction of woodland habitat.

Olive Whistler ***Pachycephala olivacea***

Uncommon breeding resident. Uncommon in alpine woodland above 1400m. Rare in closed forest at lower altitudes, rare on river corridors.

Golden Whistler ***Pachycephala pectoralis***

Very common breeding altitudinal migrant. Very common in closed forest, particularly in the lower Cotter Catchment, common in open forest west of Murrumbidgee River and east of Kowen escarpment between September and March. Many move to woodland at lower altitudes at other times of the year, but a substantial number remain in their forest territories year round.

Rufous Whistler ***Pachycephala rufiventris***

Very common in woodland and open forest, uncommon in closed forest, rare in alpine woodland from September to April. Uncommonly overwinters at low altitudes.

Grey Shrike-thrush ***Colluricincla harmonica***

Very common breeding resident. Very common in all forests west of Murrumbidgee River and east of Kowen escarpment. Uncommon in woodland.

Black-faced Monarch ***Monarcha melanopsis***

Very rare visitor. Most records are of immatures in autumn, possibly straying off usually northward migration route.

Leaden Flycatcher ***Myiagra rubecula***

Uncommon breeding summer migrant. Uncommon in woodland and open forest between October and March.

Satin Flycatcher ***Myiagra cyanoleuca***

Uncommon breeding summer migrant. Uncommon in closed forest and open forest, generally west of the Murrumbidgee River between October and March. Prefers more closed, higher habitats than preceding species.

Restless Flycatcher ***Myiagra inquieta***

Uncommon breeding resident. Common in woodland and uncommon around Angle Crossing and the Lower Naas-Gudgenby Valley, Castle Hill. Common generally on Murrumbidgee River corridor and Upper Molonglo Corridor. Uncommon in other woodland areas. Note absence from suburbs. Sensitive to destruction of woodland habitat.

Rufous Fantail ***Rhipidura rufifrons***

Uncommon breeding summer migrant. Uncommon in closed forest in the Cotter Catchment and on the eastern slopes of the Tidbinbilla Range between October and March. Uncommon to rare passage migrant through suburbs and suburban open space during spring and autumn.

Grey Fantail ***Rhipidura fuliginosa***

Very common breeding summer migrant. Very common in closed forest, open forest and woodland, common elsewhere from September-March. Many overwinter below 1000m.

Willie Wagtail ***Rhipidura leucophrys***

Very common breeding resident. Very common in woodland and urban areas. Seasonal movement away from areas above 1000m in winter. Rare records of individuals in unsuitable habitat, eg closed forest, during migration or post-breeding dispersal.

Eastern Whipbird ***Psophodes olivaceus***

Uncommon breeding resident. Uncommon in the lower Cotter Catchment and on the Tidbinbilla Range. Rare to very rare elsewhere.

Spotted Quail-thrush ***Cinclosoma punctatum***

Uncommon breeding resident. Uncommon in open forest and closed forest west of Murrumbidgee River. Most isolated population on Monaro Hwy and in Greenwood Hills/Kowen Forest.

Clamorous Reed-Warbler ***Acrocephalus stentoreus***

Common breeding summer migrant. Very common on Jerrabomberra Wetlands, Lake Ginninderra, common wherever there are substantial reedbeds between Aug and March.

Little Grassbird ***Megalurus gramineus***

Uncommon breeding resident. Common on Jerrabomberra Wetlands and Lake Ginninderra, uncommon on other urban lakes and wetlands. Rare on farm dams and creeks in rural areas. Prefers extensive reedbeds.

Golden-headed Cisticola ***Cisticola exilis***

Uncommon breeding resident. Common on Jerrabomberra Wetlands and around Tuggeranong lakes and Point Hut, uncommon to rare elsewhere where there is rank grass near permanent water.

Rufous Songlark ***Cinclorhamphus mathewsi***

Common breeding summer migrant. Common in woodland, particularly ungrazed woodland at low altitude, between September and March. Rare individuals overwinter. Numbers of records vary markedly from year to year.

Brown Songlark ***Cinclorhamphus cruralis***

Rare summer visitor. Rare in grassland. Prone to minor irruption.

Superb Fairy-wren ***Malurus cyaneus***

Very common breeding resident. Very common in open habitats where there is a good shrub storey, including grassland, urban areas, woodland and open forest. Uncommon in closed forest and alpine woodland.

Pilotbird ***Pycnoptilus floccosus***

Uncommon breeding resident. Very common in dense shrub layer along the Cotter River downstream from Corin Dam to Bendora Dam. Uncommon elsewhere in Cotter Catchment. Rare elsewhere

White-browed Scrubwren ***Sericornis frontalis***

Very common breeding resident. Very common in closed forest and alpine woodland. Common in open forest and woodland, rare in grassland, but will be found in most places where there is continuous shrubby vegetation along creeklines and rivers.

Speckled Warbler ***Sericornis sagittatus***

Uncommon breeding resident. Common at Mulligan's Flat and the Majura Valley but uncommon and patchy elsewhere in woodland and open forest at low altitude.

Weebill ***Smicrornis brevirostris***

Common breeding resident. Common in all open forest and woodland, locally very common, generally at low altitude, but occasionally above 1000m

Western Gerygone ***Gerygone fusca***

Uncommon breeding summer migrant. Common at Mulligan's Flat, Majura Valley and Angle Crossing. Uncommon in open forest and woodland at low altitude elsewhere. Present September to April. Rarely over winters.

White-throated Gerygone ***Gerygone olivacea***

Common breeding summer migrant. Common in woodland and open forest, particularly the Murrumbidgee River Corridor, and the eastern part of the ACT, rare above 1000m. Present September to April. Rarely overwinters.

Brown Thornbill ***Acanthiza pusilla***

Very common breeding resident. Very common in closed forest, common in open forest, uncommon in woodland but occurs wherever there is a dense shrub layer along watercourses.

Buff-rumped Thornbill ***Acanthiza reguloides***

Common breeding resident. Very common in dry woodland, particularly in north-eastern part of the ACT. Common in woodland, uncommon in open forest rare in closed forest and alpine woodland.

Yellow-rumped Thornbill ***Acanthiza chrysorrhoa***

Very common breeding resident. Very common in urban areas and woodland with an open floor and some scattered shrubs, uncommon in open forest, absent from closed forest.

Yellow Thornbill ***Acanthiza nana***

Uncommon breeding resident. Uncommon in woodland and open forest, particularly in Murrumbidgee River Corridor, but tends to be localised. Closely associated with some species of acacia.

Striated Thornbill ***Acanthiza lineata***

Common breeding resident. Common in closed forest, open forest and woodland, uncommon in more open habitats, but may occur wherever there are some trees.

Southern Whiteface ***Aphelocephala leucopsis***

Uncommon breeding resident. Common in the Angle Crossing - Lower Naas-Gudgenby Valley. Uncommon to rare elsewhere. Occurs in woodland and grassland where dead standing trees are available for nest sites, often near rocky outcrops.

Varied Sittella ***Daphoenositta chrysoptera***

Uncommon breeding resident. Common in the Majura Valley and Mulligan's Flat, uncommon to rare in other open forest, woodland areas. Rare in lower closed forest.

White-throated Treecreeper ***Climacteris leucophaea***

Very common breeding resident. Very common in closed forest, open forest, woodland. Common in urban areas, uncommon in areas where few or no native trees remain.

Red-browed Treecreeper ***Climacteris erythrops***

Uncommon breeding resident. Uncommon in closed forest, rare in open forest west of the Murrumbidgee River, absent from alpine woodland.

Brown Treecreeper ***Climacteris picumnus***

Common breeding resident. Very common around Angle Crossing and Lower Naas-Gudgenby Valley and Gudgenby Valley proper. Common in woodland south of Tuggeranong and at Mulligan's Flat and Majura Valley. Rare in open forest. Sensitive around suburbs. Requires dead stumps and fallen logs for nest sites.

Red Wattlebird ***Anthochaera carunculata***

Very common breding summer migrant. Very common in all forest and woodland habitats between September and April. Uncommon in open habitats but occurs wherever some native trees are found. Many overwinter at low altitudes.

Spiny-cheeked Honeyeater ***Acanthagenys rufogularis***

Very rare visitor. Two records of this inland species - suburban Kambah and Angle Crossing.

Noisy Friarbird ***Philemon corniculatus***

Common breeding summer migrant. Common in suburbs, woodland, savannah woodland, uncommon in open forest and closed forest. Birds in these habitats are mostly on passage. Present September to April, a small number overwinter.

Little Friarbird ***Philemon citreogularis***

Rare summer migrant. Rare in woodland and open forest. Series of records from Mulligan's Flat over several consecutive summers, single records elsewhere.

Regent Honeyeater ***Xanthomyza phrygia***

Rare breeding summer migrant. Rare in woodland and open forest in the northern part of the ACT. Has bred at Lake Ginninderra. Breeding attempted at Mt Ainslie and Commonwealth Park. Nationally endangered. Sensitive.

Noisy Miner ***Manorina melanocephala***

Common breeding resident. Common in savannah woodland and woodland, but patchy and localised.

Yellow-faced Honeyeater ***Lichenostomus chrysops***

Very common breeding summer migrant. Very common in closed forest, open forest and woodland between September and March. Common all habitats during spring and autumn passage migration. Many over winter in open forest and woodland below 800 m.

White-eared Honeyeater ***Lichenostomus leucotis***

Very common breeding altitudinal migrant. Very common in closed forest and open forest above 1000 m between October and February, moves to open forest and woodland at lower altitudes for the winter.

Yellow-tufted Honeyeater ***Lichenostomus melanops***

Rare winter visitor. Rare in woodland and open forest. Majority of records from lower Gudgenby and Naas Valleys in Apple Box. Small number of summer records. Status not certain. May be declining. Sensitive.

Fuscous Honeyeater ***Lichenostomus fuscus***

Uncommon breeding altitudinal migrant. Common in core habitat of Apple Box and along the Lower Naas River between November and March. Uncommon in woodland at other times of the year.

White-plumed Honeyeater ***Lichenostomus penicillatus***

Common breeding resident. Common in savannah woodland and woodland, locally very common, usually near permanent water, rare in open forest.

Brown-headed Honeyeater ***Melithreptus brevirostris***

Uncommon breeding resident. Uncommon in all forests and woodland, but may be locally common, eg. Majura Valley and Mulligan's Flat. Patchy.

White-naped Honeyeater ***Melithreptus lunatus***

Very common breeding summer migrant. Very common in closed forest and open forest above 1000m between September and May, Very common in nearly all habitats with trees during passage migration in spring and autumn, commonly over winters below 800 m.

Crescent Honeyeater ***Phylidonyris pyrrhoptera***

Uncommon winter migrant. Locally common around winter flowering banksias and grevilleas in closed forest and along the Murrumbidgee River respectively. Permanent population in National Botanic Gardens.

New Holland Honeyeater ***Phylidonyris novaehollandiae***

Uncommon breeding resident. Locally common around banksias and grevilleas in closed forest and along Murrumbidgee River respectively. Permanent population in National Botanic Gardens. Less mobile than Crescent Honeyeater.

Eastern Spinebill ***Acanthorhynchus tenuirostris***

Common breeding altitudinal migrant. Common in closed forest above 900 m from Septembertember to April, moves to suburban areas and low altitude forest for the winter.

Scarlet Honeyeater ***Myzomela sanguinolenta***

Very rare visitor. One record from suburban area.

White-fronted Chat ***Ephthianura albifrons***

Uncommon visitor. Uncommon on Lake Ginninderra and Tuggeranong lakes, rare on farm dams. Has bred in ACT, but does not normally breed here. Shores of lakes, dams and rivers.

Mistletoebird ***Dicaeum hirundinaceum***

Common breeding summer migrant. Common in savannah woodland and woodland between October and March. Uncommon at other times. Closely associated with mistletoe.

Spotted Pardalote ***Pardalotus punctatus***

Very common altitudinal migrant. Very common in closed forest above 900 m between August and March, moves to lower altitudes in winter, but may be found throughout the ACT at all times of year.

Striated Pardalote ***Pardalotus striatus***

Very common altitudinal migrant. Very common in forest and woodland between August and April. Absent from forest above 900 m between May and July. Clear migration out of high areas in winter.

Silvereye ***Zosterops lateralis***

Very common summer migrant. Very common in open forest, common in closed forest, and woodland from September to April. Uncommon in forest at other times but many remain in suburbs over the winter. Substantial passage migrations in spring and autumn.

European Goldfinch ***Carduelis carduelis***

Very common breeding resident (introduced). Very common in grassland and savannah woodland, less common at higher altitudes.

European Greenfinch ***Carduelis chloris***

Rare breeding resident (introduced). Uncommon at Jerrabomberra Wetlands and some other location around Lake Burley Griffin. Highly localised. Only conspicuous in spring and summer.

House Sparrow ***Passer domesticus***

Very common breeding resident. Very common in urban area, uncommon to rare in grassland. Closely associated with human habitation. Common around country homesteads.

Red-browed Firetail ***Emblema temporalis***

Common breeding resident. Common in dense vegetation along rivers and creeks below 1000 m. Common to very common in Murrumbidgee River Corridor and Upper Molonglo Corridor. Tolerates pine forest.

Diamond Firetail ***Emblema guttata***

Uncommon breeding resident. Common at Mulligan's Flat, Majura Valley and Angle Crossing - Lower Naas Valley. Prefers relatively undisturbed woodland. Intolerant of human interference. Probably declining. Sensitive.

Zebra Finch ***Poephila guttata***

Rare visitor/aviary escapee. Some urban records ambiguous. Possibility of wild birds on Molonglo River upstream from Jerrabomberra Wetlands.

Double-barred Finch ***Poephila bichenovii***

Uncommon breeding resident. Common at Lake Ginninderra, Gungahlin, Mt Taylor, uncommon in some other urban open space areas and other rural woodland. Patchy and localised. Sensitive to habitat destruction in the long-term.

Common Starling ***Sturnus vulgaris***

Very common breeding resident (introduced). Very common in grassland, savannah woodland and built-up areas.

Common Myna ***Acridotheres tristis***

Common breeding resident (introduced). Very common in inner south Canberra, Weston Creek, Kambah and Woden Valley. Uncommon (to rare) in other suburban areas. Spreading into rural habitats. Competes with Rosellas, Galahs and parrots for nest holes.

Olive-backed Oriole ***Oriolus sagittatus***

Uncommon breeding summer migrant. Common in woodland and open forest in northern parts of the ACT and Lower Naas Valley. Uncommon in woodland and open forest elsewhere, rare in closed forest. Most arrive September but number fall in late summer. Rare birds over winter.

Satin Bowerbird ***Ptilonorhynchus violaceus***

Uncommon breeding resident. Common in closed forest in Lower Cotter Catchment and in Tidbinbilla Valley. Uncommon in other closed forest, rare in other open forest. Note small population in suburban Weston Creek. Some small-scale local altitudinal migration. First confirmed local breeding record was made during this study.

White-winged Chough ***Corcorax melanorhamphos***

Common breeding resident. Common in dry open forest and woodland, especially in Pierce's Creek area in northeast corner of ACT. Uncommon in savannah woodland and closed forest. Tolerant of human activity.

Australian Magpie-lark ***Grallina cyanoleuca***

Very common breeding resident. Very common in savannah woodland and woodland, particularly at low altitudes.

Masked Woodswallow ***Artamus personatus***

Very rare visitor. Very rare in woodland.

White-browed Woodswallow ***Artamus superciliosus***

Rare irruptive breeding summer migrant. Present on a long-term average of about one year in five when it becomes common but localised in woodland between October and January.

Dusky Woodswallow ***Artamus cyanopterus***

Common breeding summer migrant. Common in woodland, uncommon in open forest, between Aug and April.

Grey Butcherbird ***Cracticus torquatus***

Common breeding resident. Common in open forest, uncommon in woodland and closed forest, but patchy.

Pied Butcherbird ***Cracticus nigrogularis***

Very rare visitor. Several records from Mulligans Flat area.

Australian Magpie ***Gymnorhina tibicen***

Very common breeding resident. Very common in grassland and woodland. Occurs in small pockets of open habitat in otherwise unsuitable locations, for example, closed forest.

Pied Currawong ***Strepera graculina***

Very common altitudinal migrant. Very common in all forest and woodland, uncommon in open habitats. Build-up above 900 m between September and March, coinciding with drop in records at lower altitudes.

Grey Currawong ***Strepera versicolor***

Uncommon breeding resident. Locally common, but generally uncommon in open and closed forest. Uncommon in woodland and rare in grassland, but will occur anywhere where there is some tree cover.

Australian Raven ***Corvus coronoides***

Very common breeding resident. Very common in all habitats except closed forest and alpine woodland, but even in these two is still common. Some migration to highest altitudes in summer.

Little Raven ***Corvus mellori***

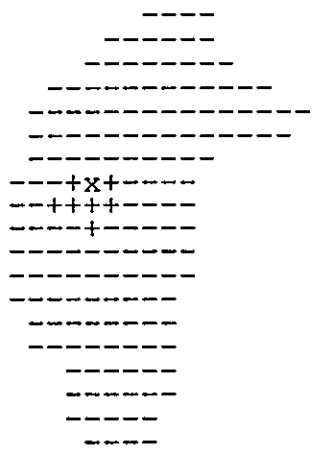
Uncommon breeding resident. Uncommon in all habitats, but rare in built-up areas. Marked summer migration into alpine woodland and grassland above 1300m, coinciding with arrival of the migratory Bogong Moth, a common food source.

APPENDIX 2. DISTRIBUTION MAPS

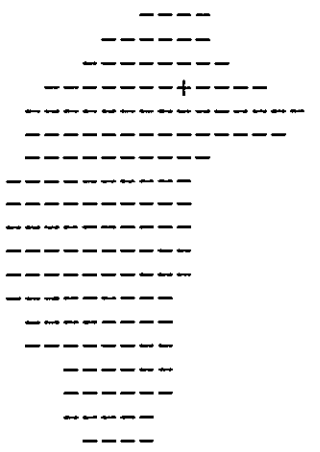
The following symbols have been used to indicate the percentage of datasheets for each cell on which a given species was recorded:

-	0 %
+	1-25%
x	26-50%
O	51-75%
@	76-100%

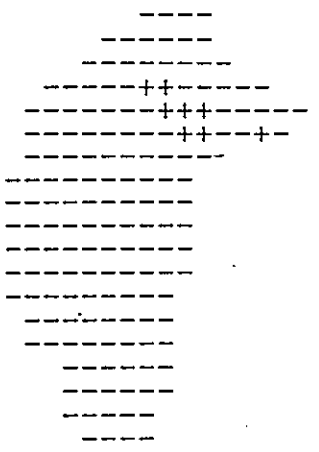
Emu



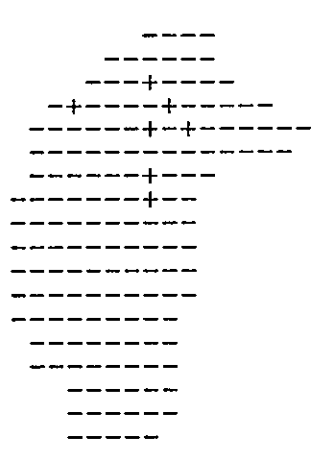
Wedge-tailed Shearwater



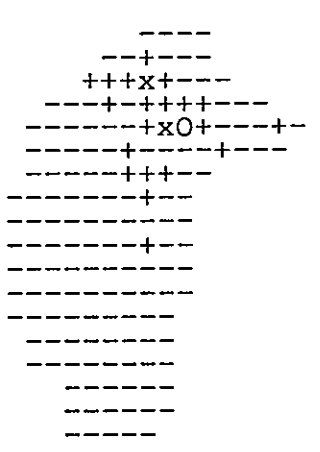
Pied Cormorant



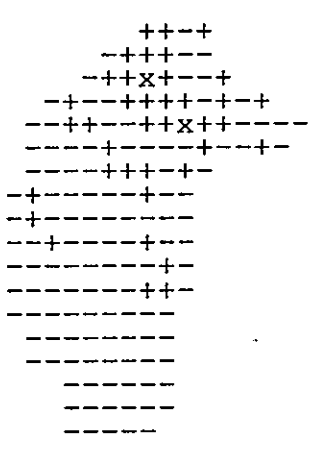
Great Crested Grebe



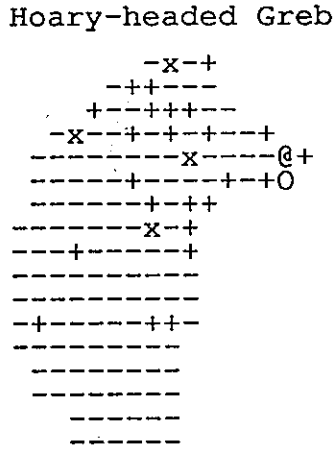
Australian Pelican



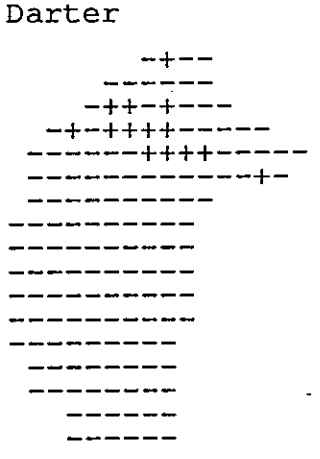
Little Black Cormorant



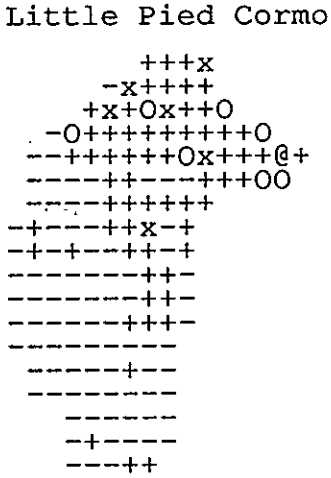
Hoary-headed Grebe



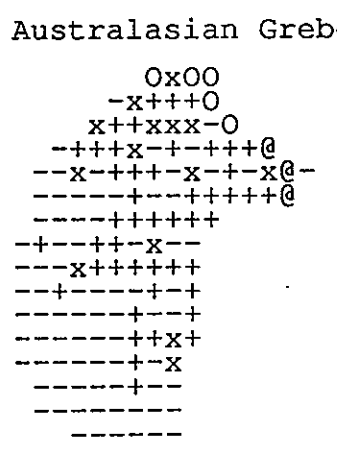
Darter



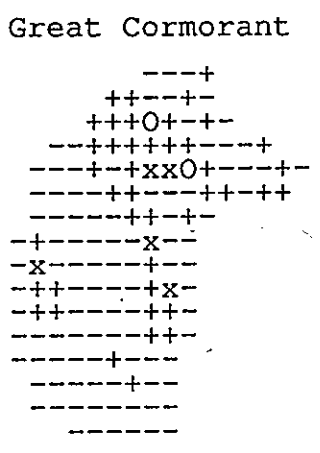
Little Pied Cormorant



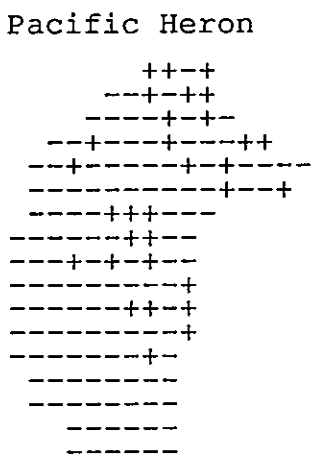
Australasian Grebe



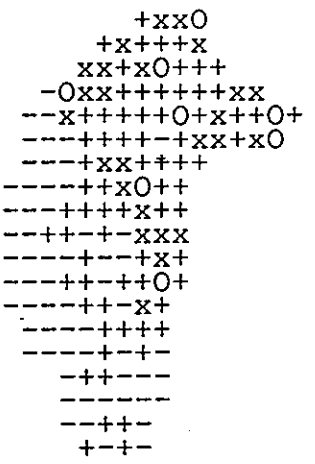
Great Cormorant



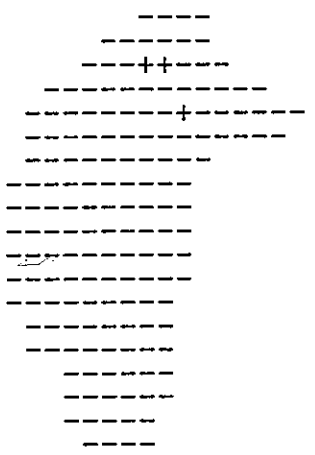
Pacific Heron



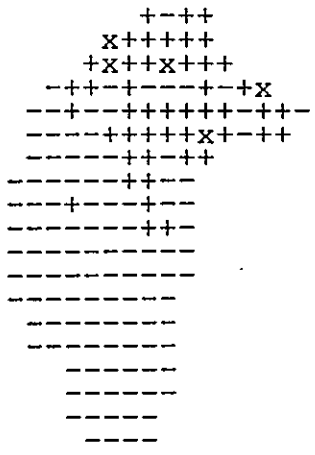
White-faced Heron



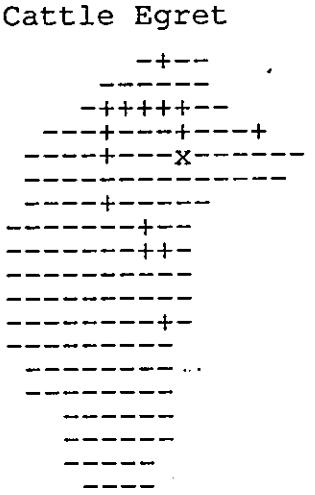
Intermediate Egret



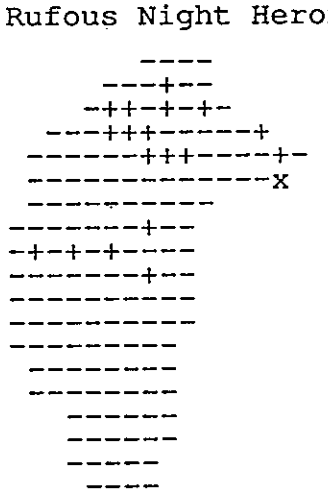
Sacred Ibis



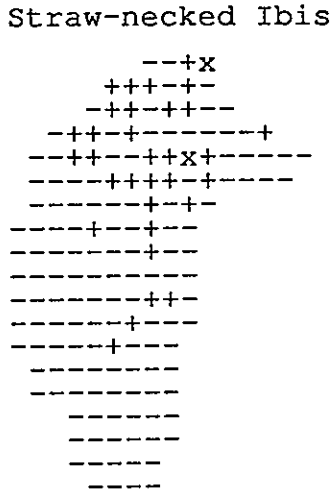
Cattle Egret



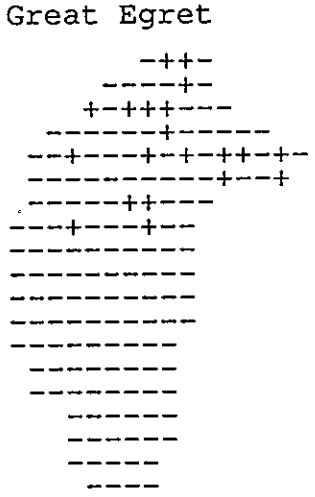
Rufous Night Heron



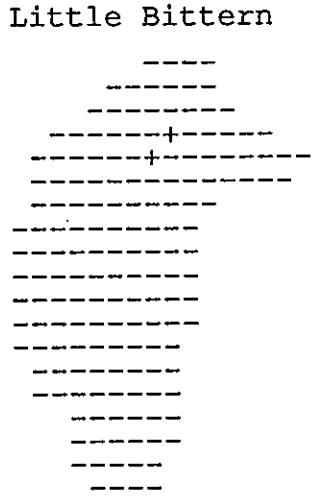
Straw-necked Ibis



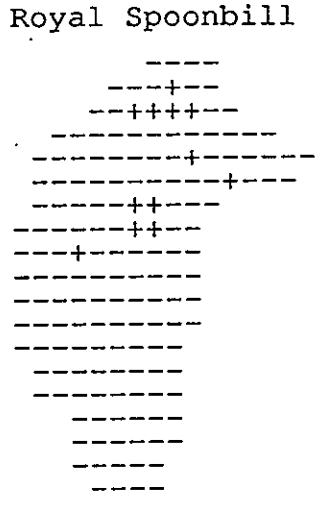
Great Egret



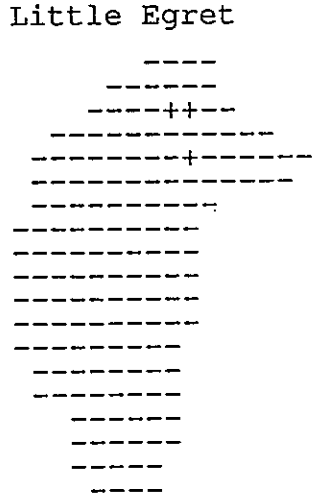
Little Bittern



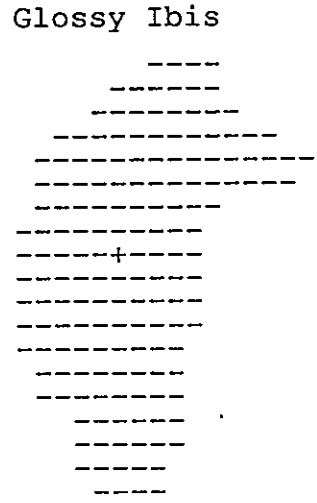
Royal Spoonbill



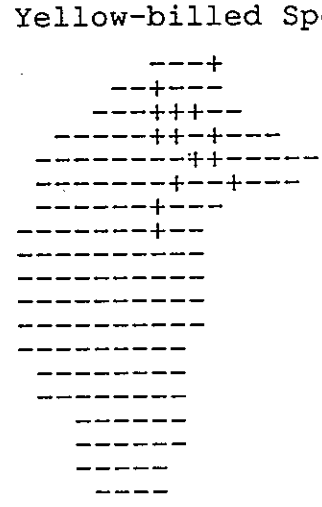
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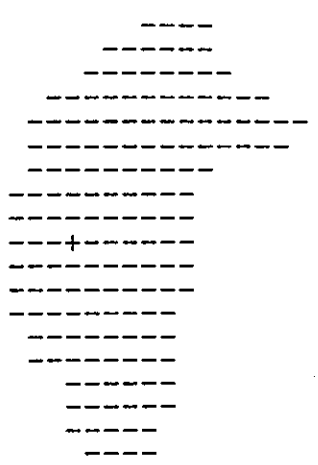
Glossy Ibis



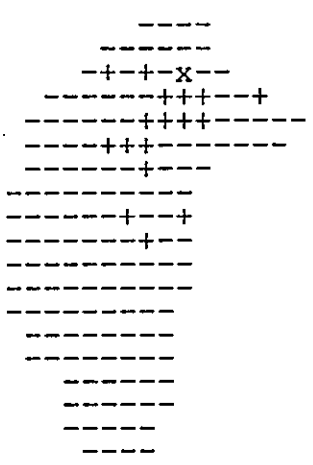
Yellow-billed Spoonbill



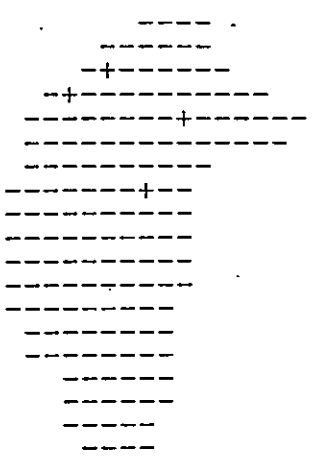
Plumed Whistling-Duck



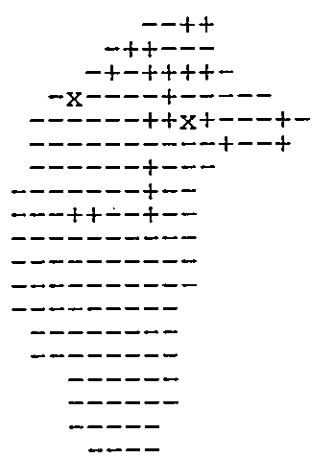
Mallard



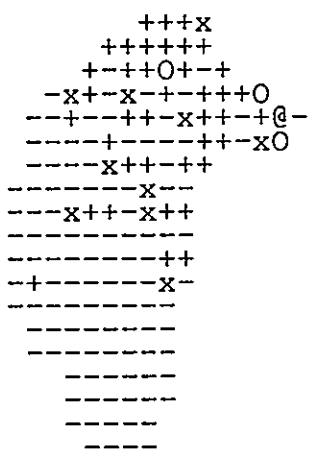
Pink-eared Duck



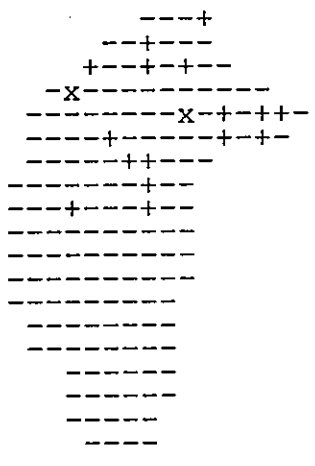
Black Swan



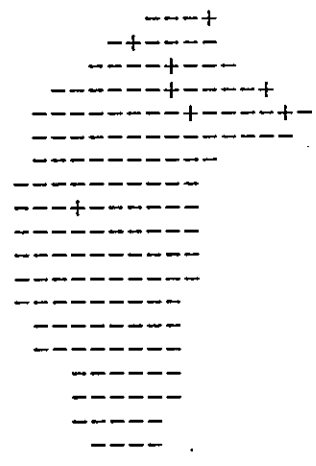
Grey Teal



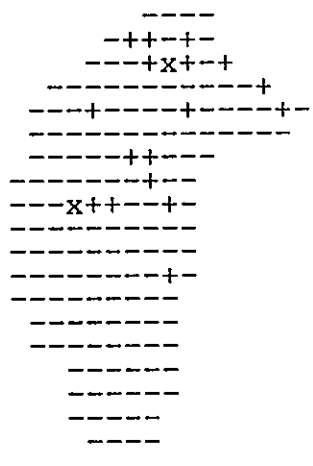
Hardhead



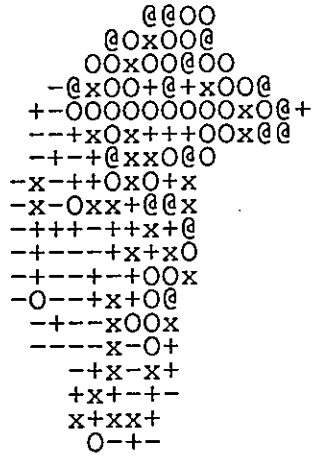
Australian Shelduck



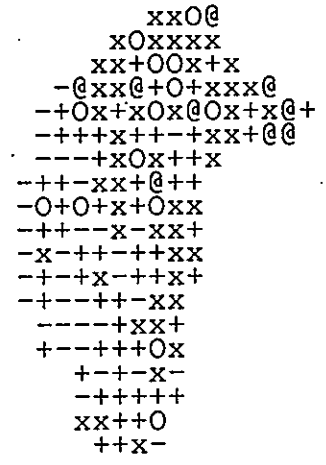
Chestnut Teal



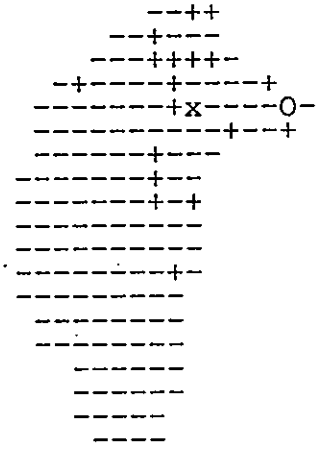
Maned Duck



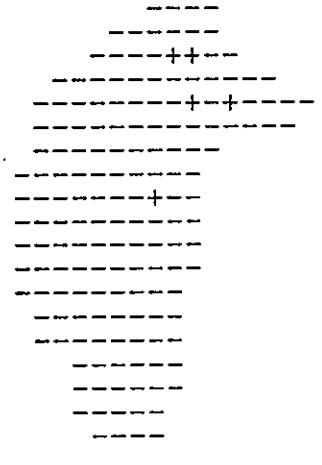
Pacific Black Duck



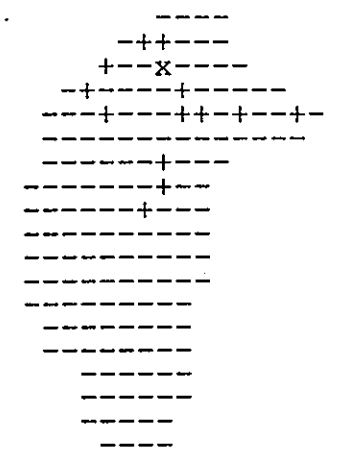
Australasian Shoveler



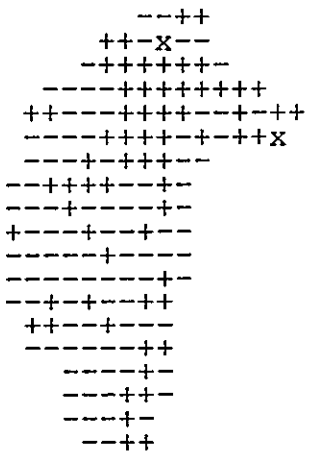
Blue-billed Duck



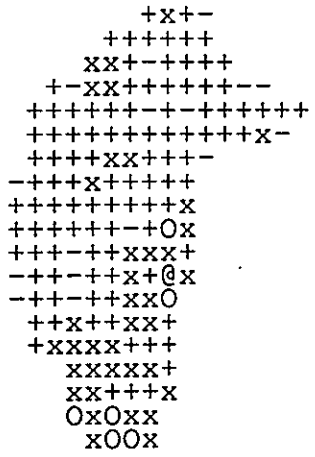
Musk Duck



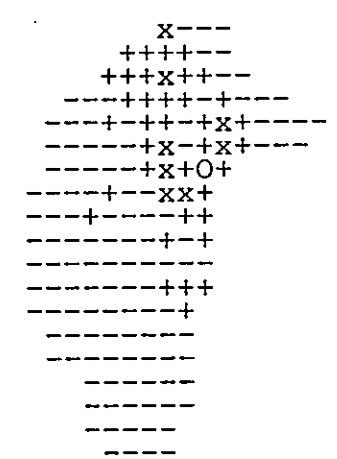
Collared Sparrowhawk



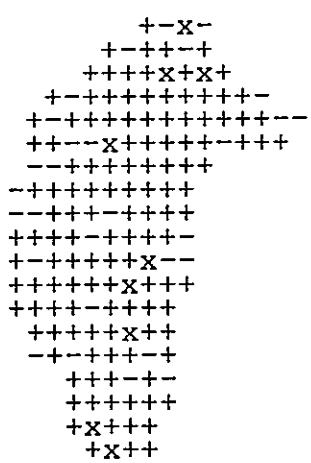
Wedge-tailed Eagle



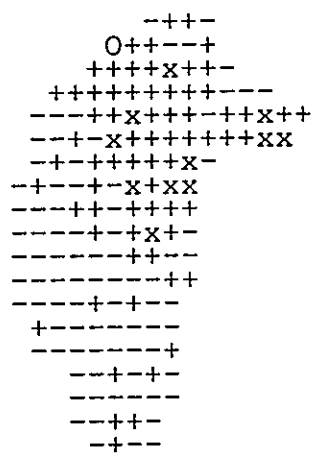
Black-shouldered Kite



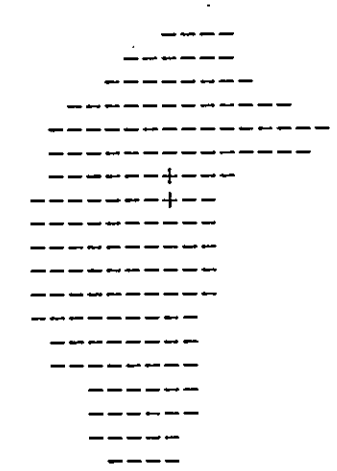
Brown Goshawk



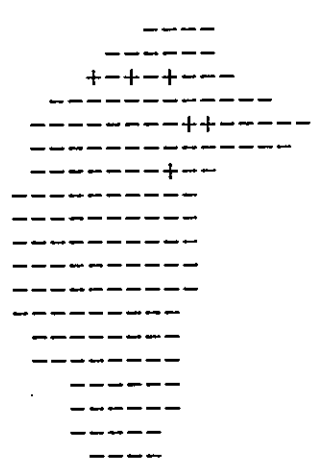
Little Eagle



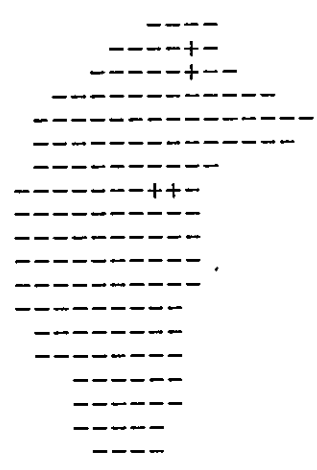
Black Kite



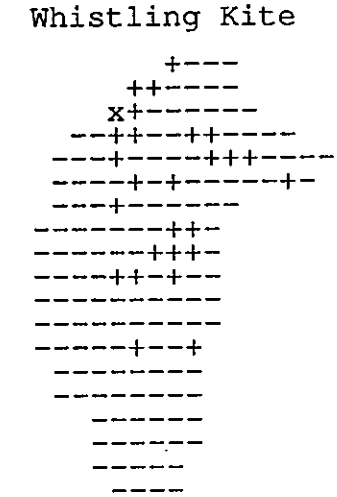
Grey Goshawk



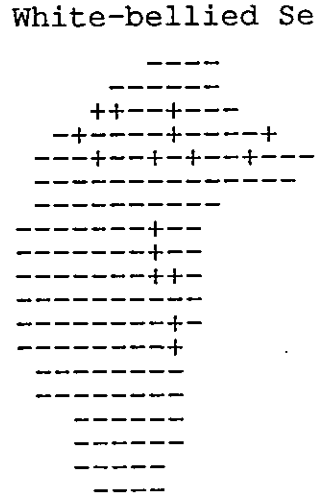
Spotted Harrier



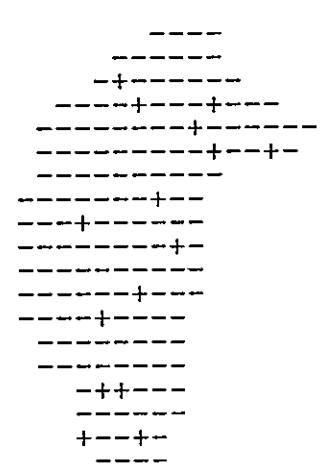
Whistling Kite



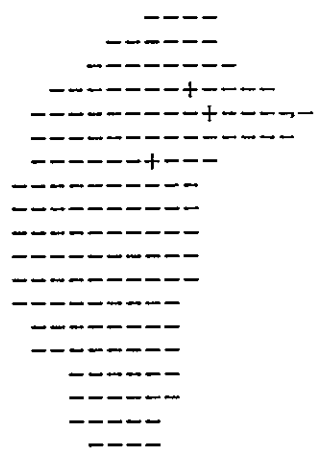
White-bellied Sea-Eagle



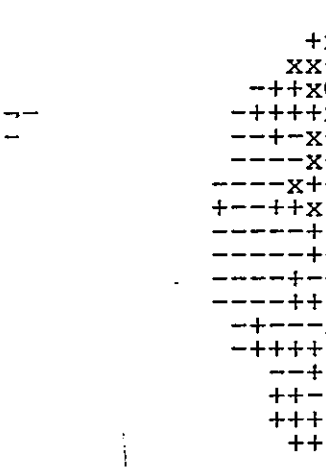
Marsh Harrier



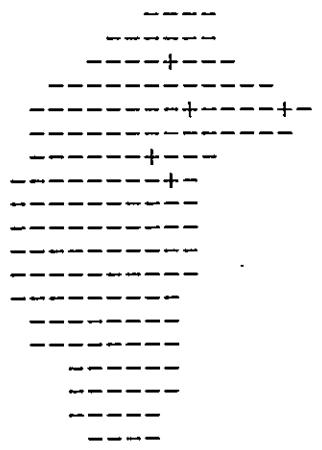
Black Falcon



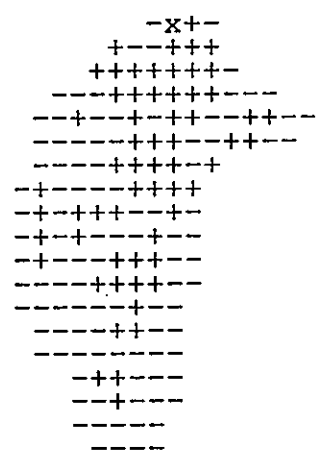
Australian Kestrel



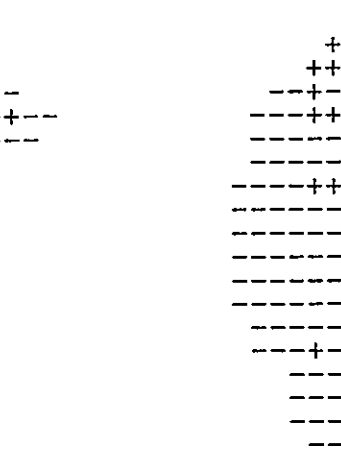
Buff-banded Rail



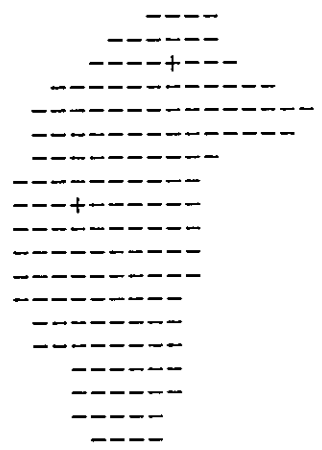
Peregrine Falcon



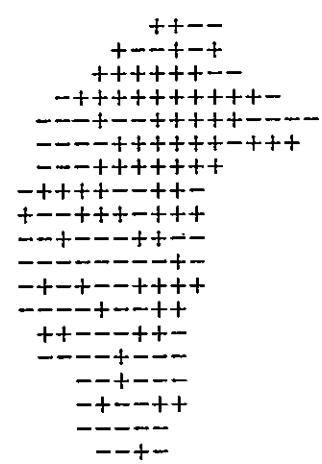
Stubble Quail



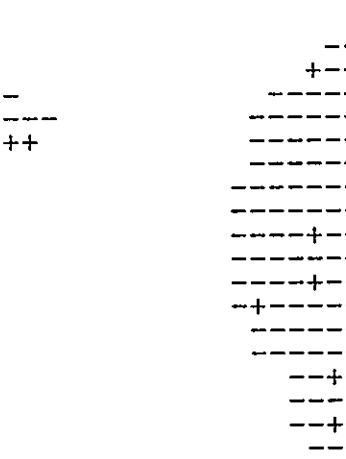
Lewin's Rail



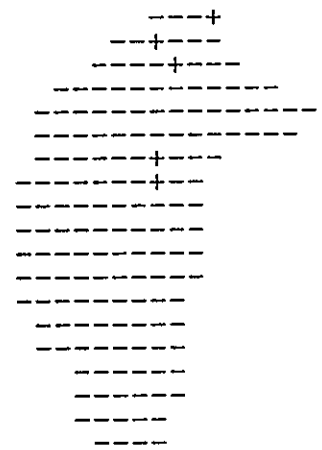
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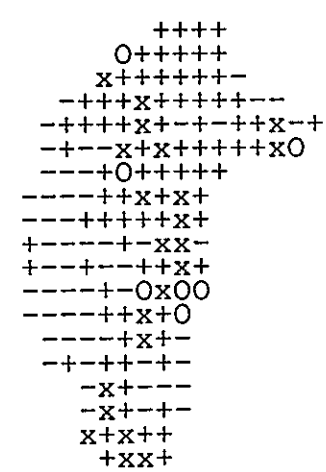
Brown Quail



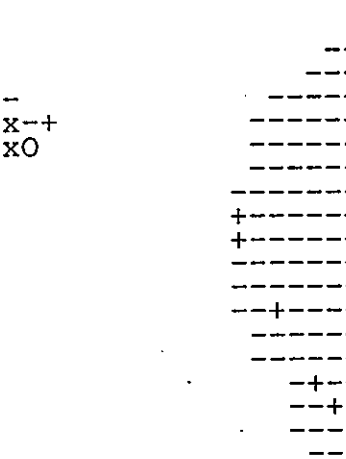
Baillon's Crake



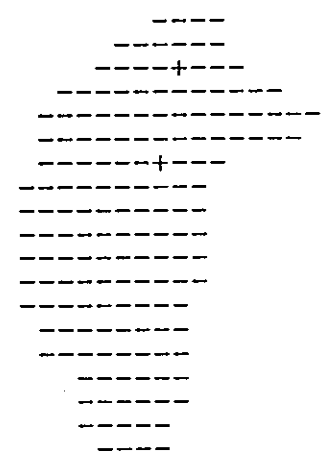
Brown Falcon



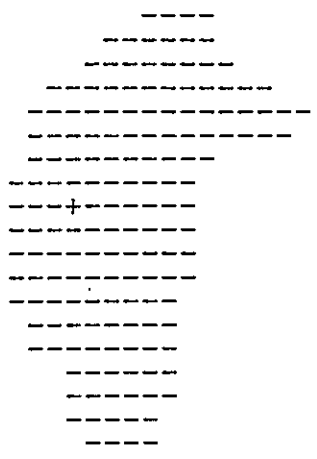
Painted Button-quail



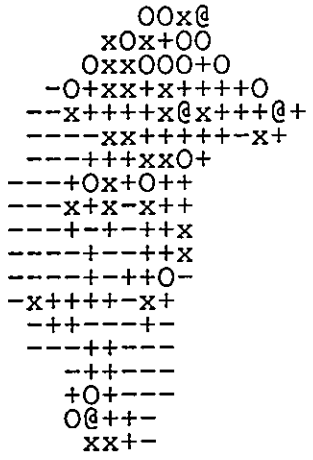
Australasian Crake



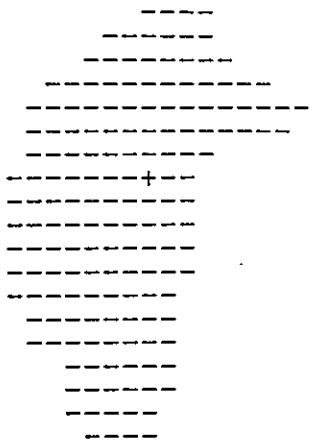
Spotless Crake



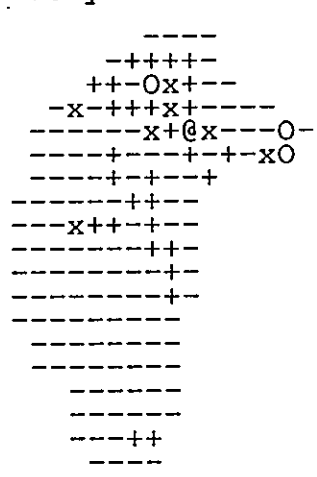
Masked Lapwing



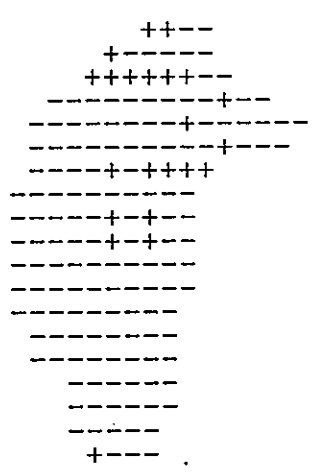
Red-capped Plover



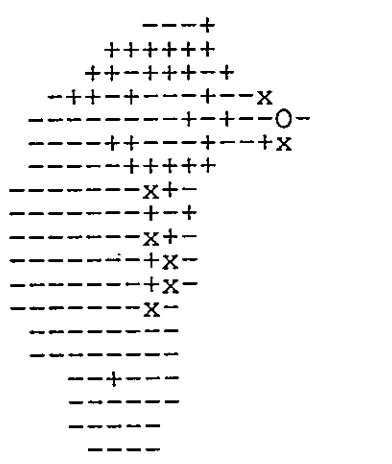
Dusky Moorhen



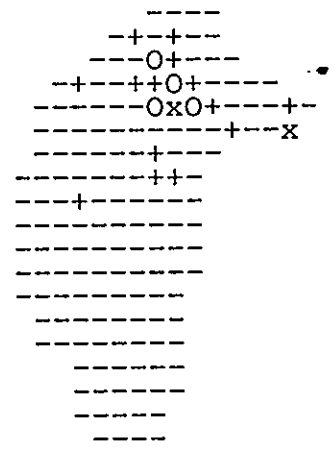
Banded Lapwing



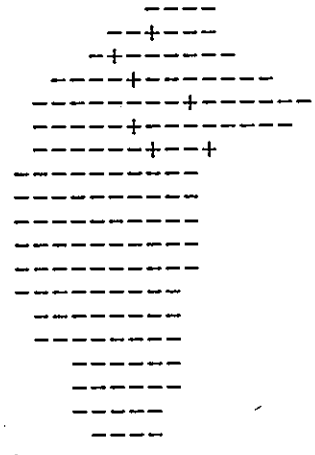
Black-fronted Plover



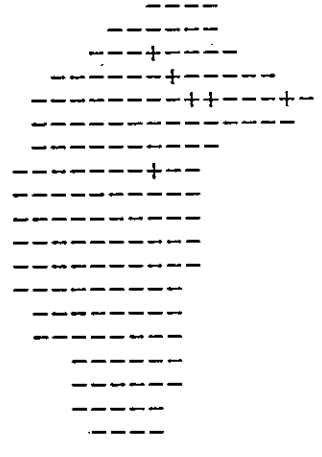
Eastern Swamphen



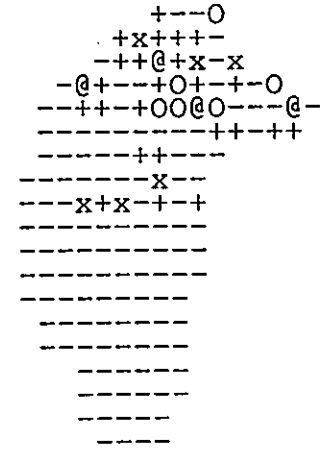
Red-kneed Dotterel



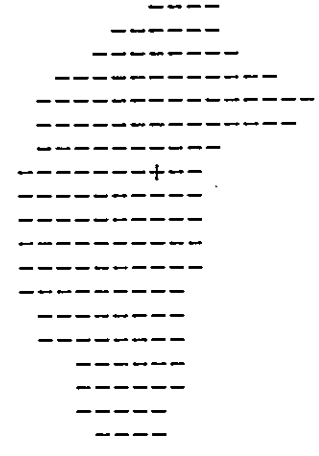
Black-winged Stilt



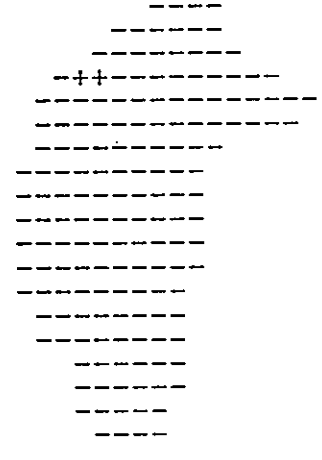
Eurasian Coot



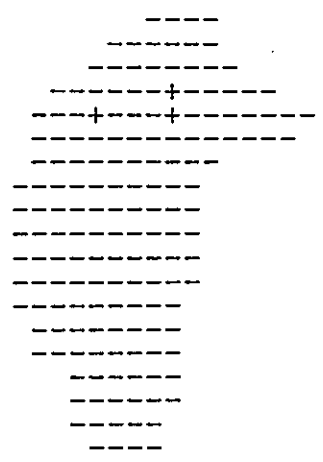
Double-banded Plover



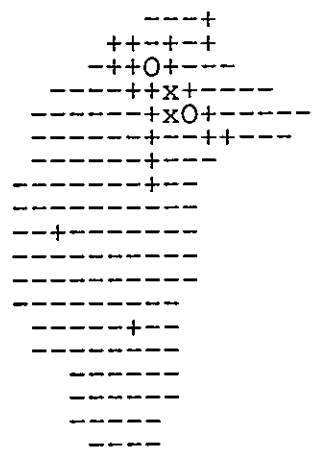
Red-necked Avocet



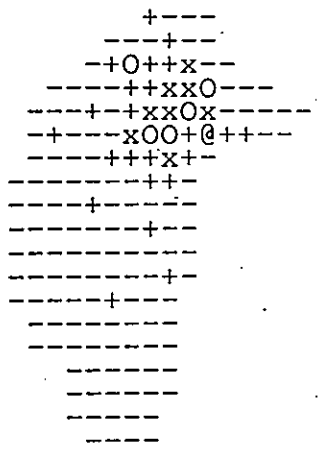
Common Sandpiper



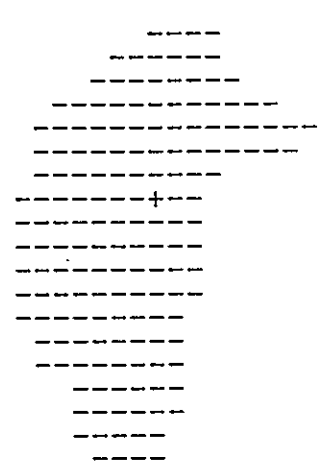
Silver Gull



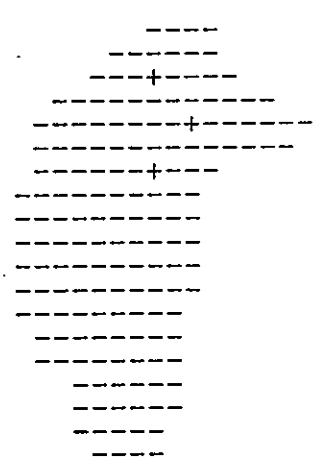
Feral Pigeon



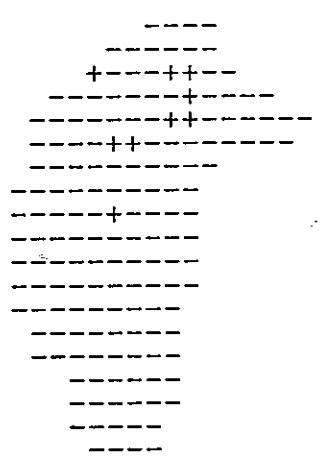
Greenshank



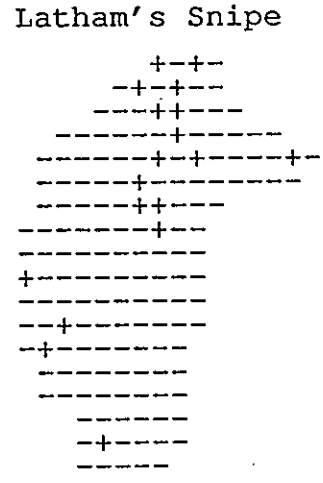
Whiskered Tern



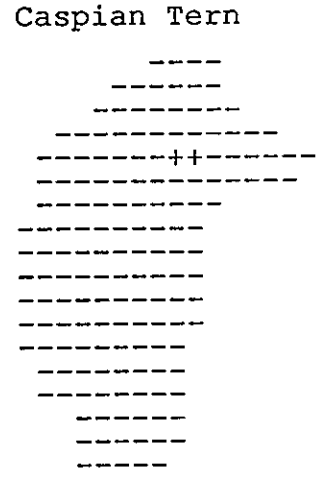
Peaceful Dove



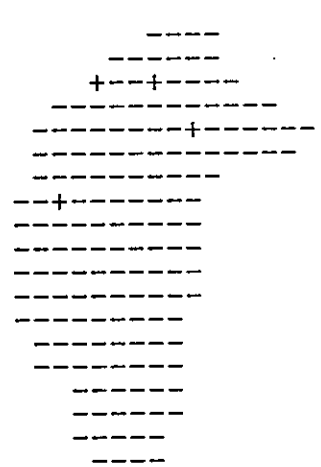
Latham's Snipe



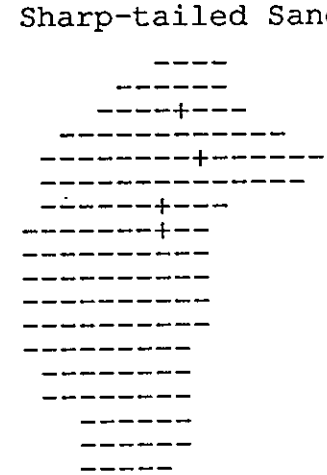
Caspian Tern



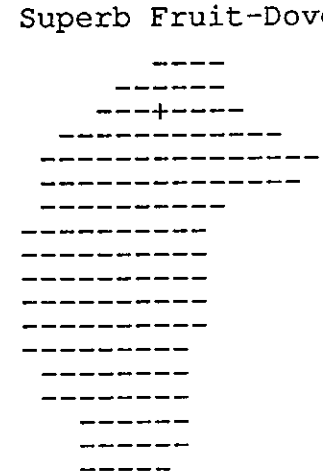
Diamond Dove



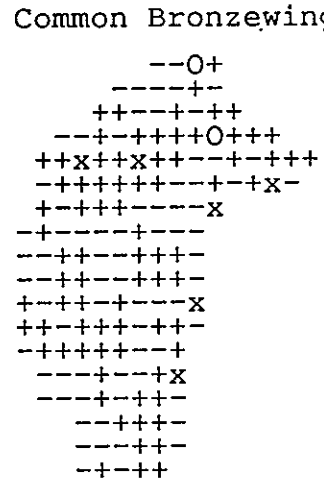
Sharp-tailed Sandpiper



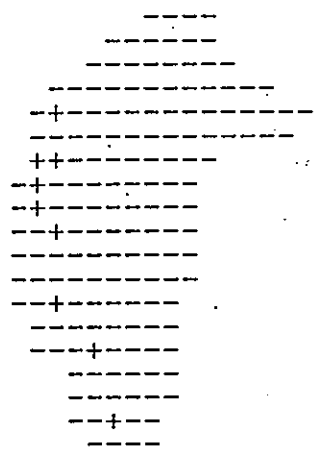
Superb Fruit-Dove



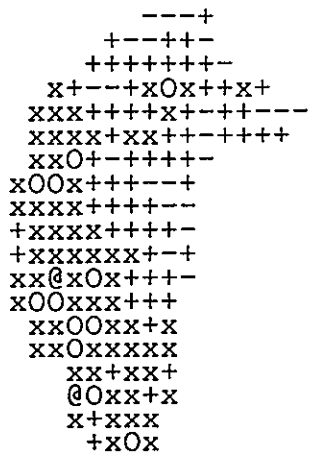
Common Bronzewing



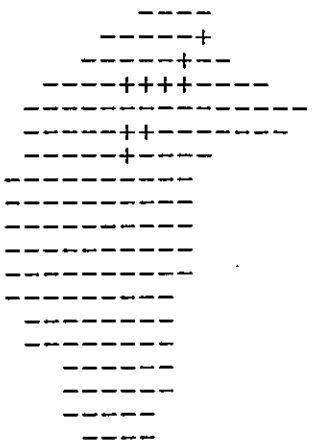
Brush Bronzewing



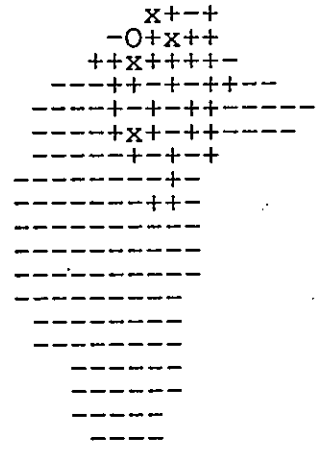
Gang-gang Cockatoo



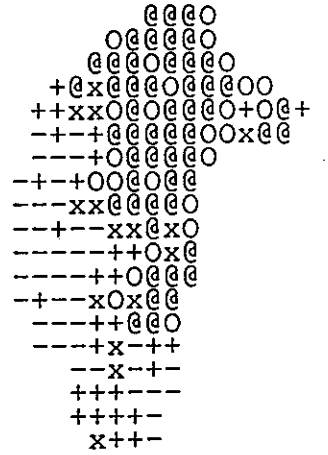
Rainbow Lorikeet



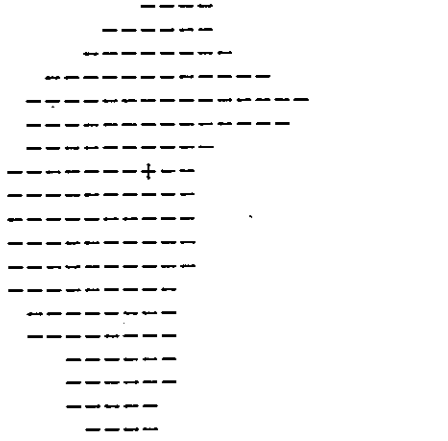
Crested Pigeon



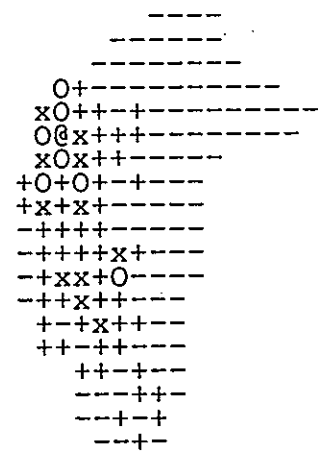
Galah



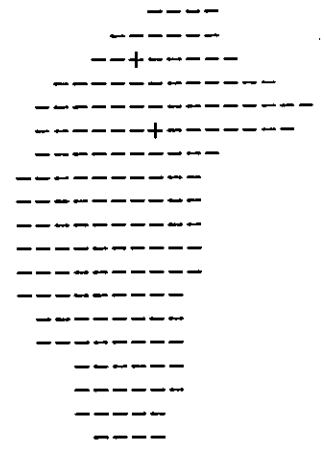
Scaly-breasted Lorikeet



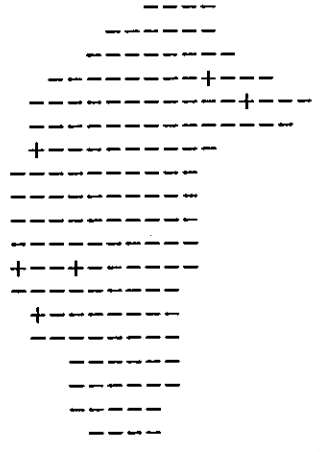
Wonga Pigeon



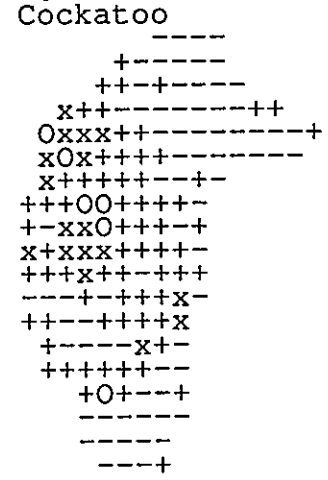
Little Corella



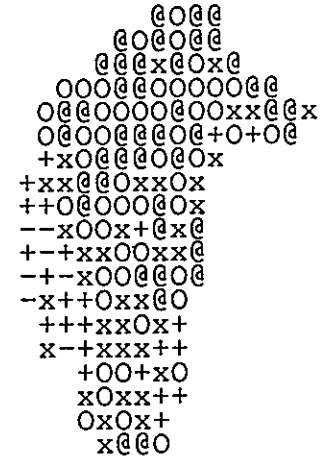
Little Lorikeet



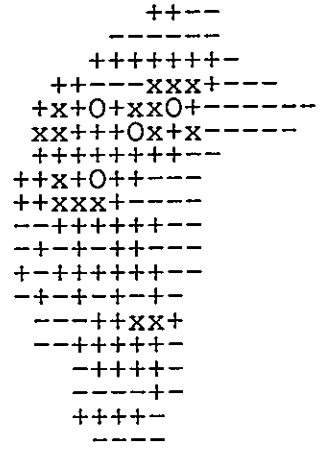
Yellow-tailed Black-Cockatoo



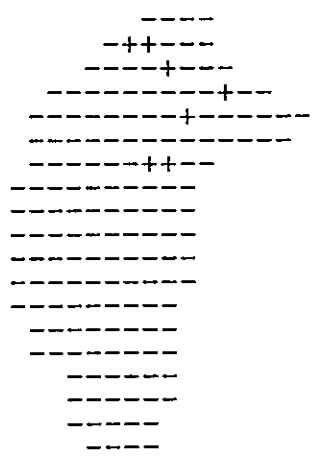
Sulphur-crested Cockatoo



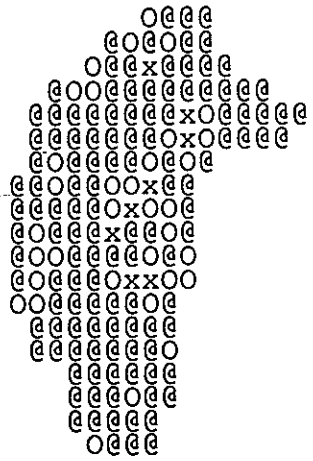
Australian King-Parrot



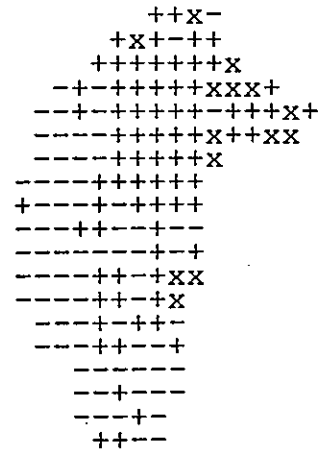
Superb Parrot



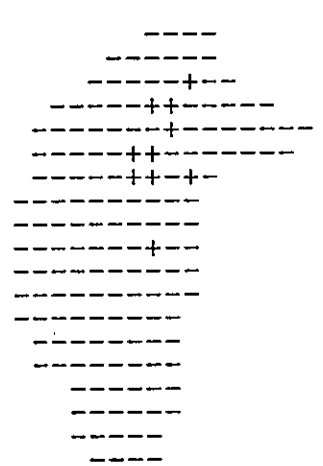
Crimson Rosella



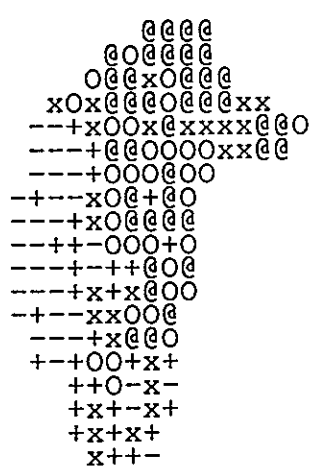
Pallid Cuckoo



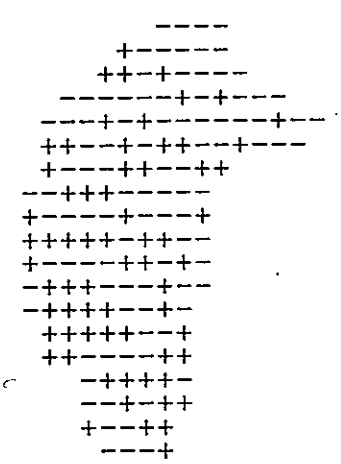
Cockatiel



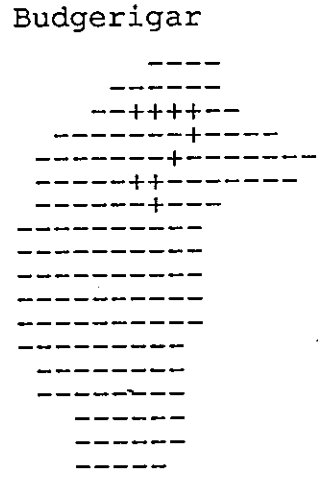
Eastern Rosella



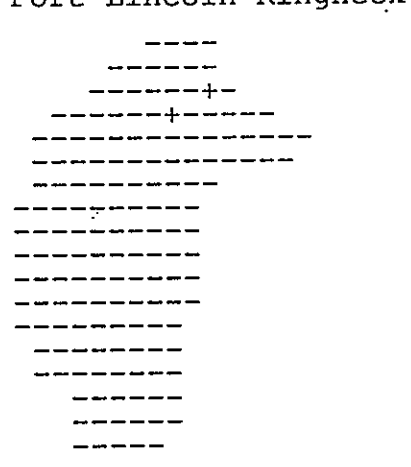
Brush Cuckoo



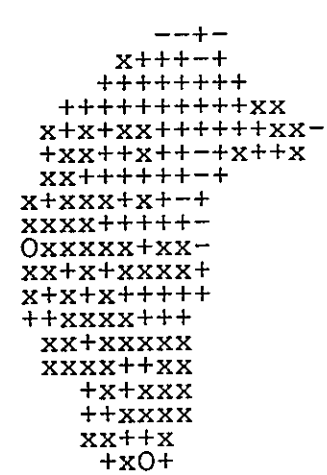
Budgerigar



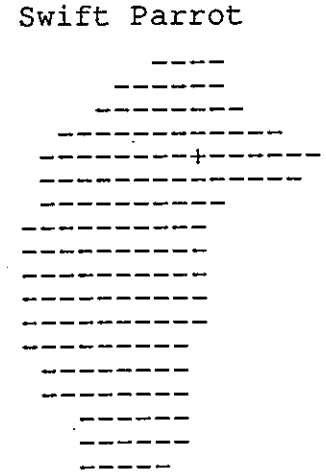
Port Lincoln Ringneck



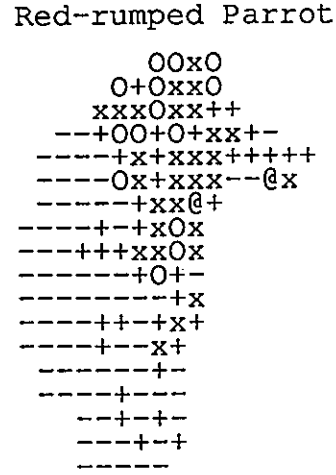
Fan-tailed Cuckoo



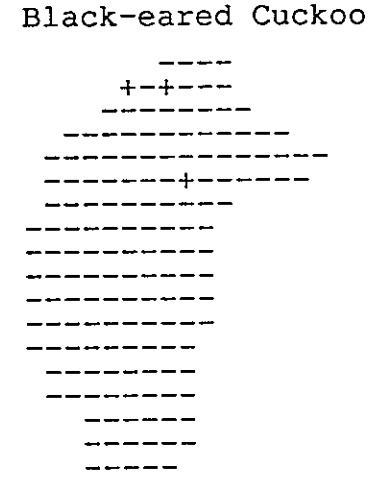
Swift Parrot



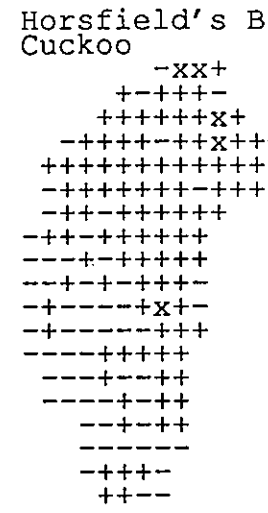
Red-rumped Parrot



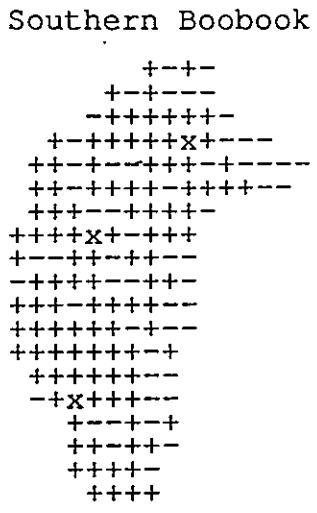
Black-eared Cuckoo



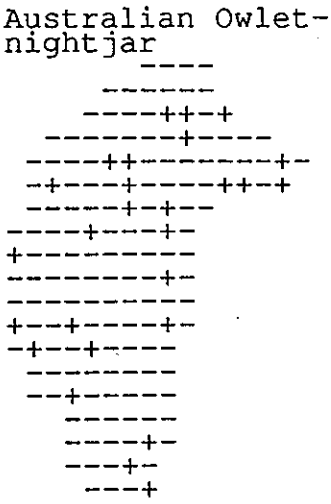
Horsfield's Bronze-Cuckoo



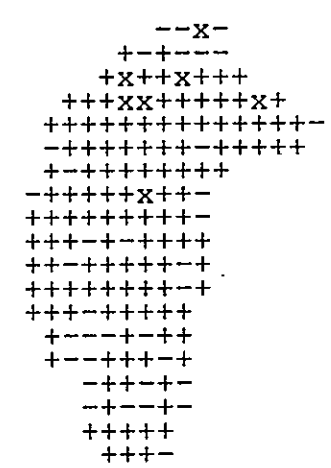
Southern Boobook



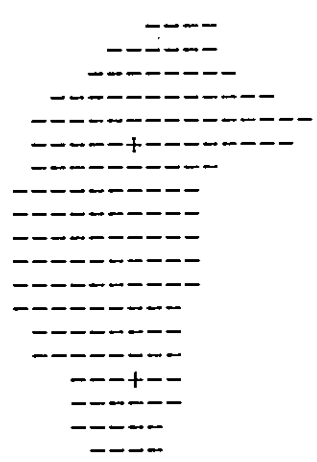
Australian Owlet-nightjar



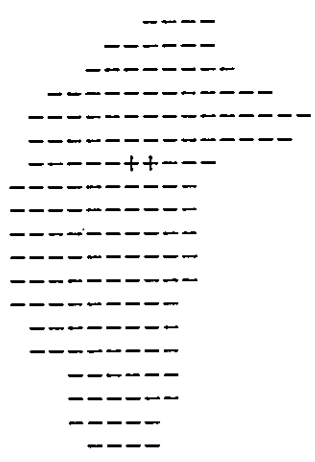
Shining Bronze-Cuckoo



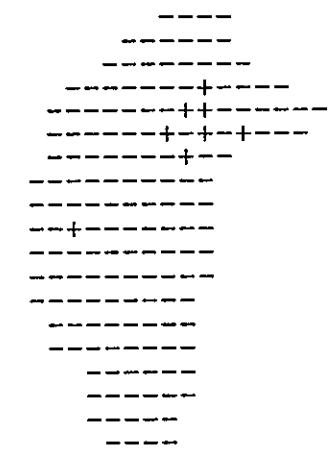
Barking Owl



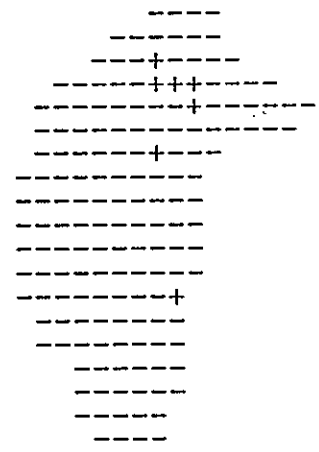
White-throated Nightjar



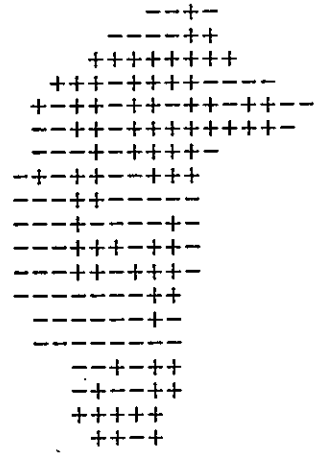
Common Koel



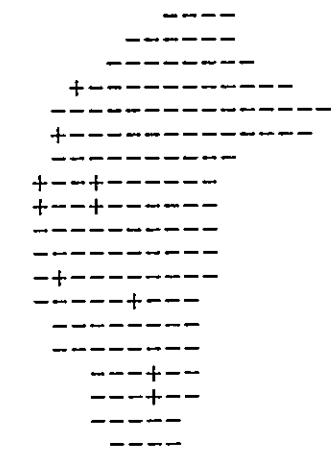
Barn Owl



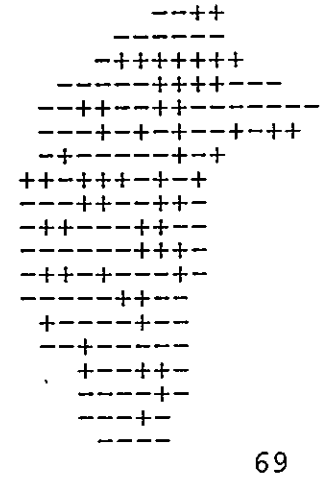
White-throated Needletail



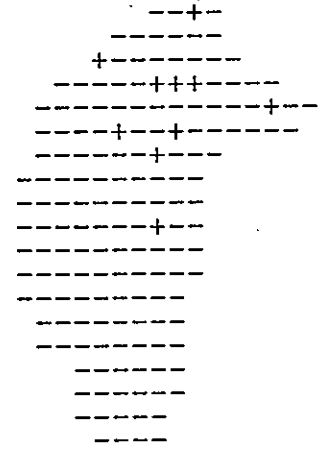
Powerful Owl



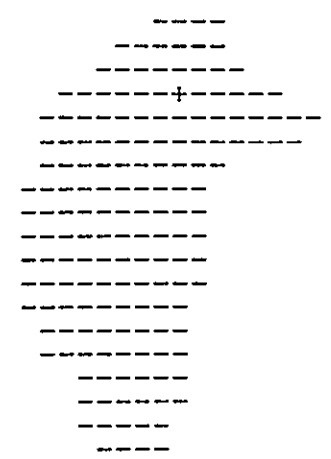
Tawny Frogmouth



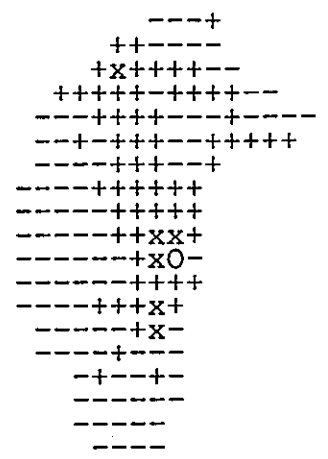
Fork-tailed Swift



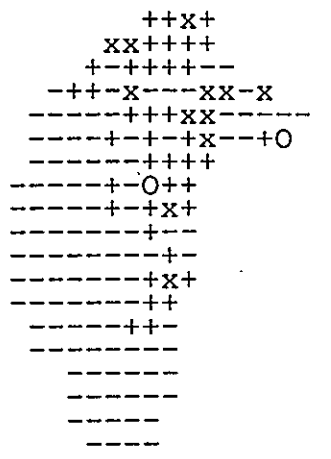
Azure Kingfisher



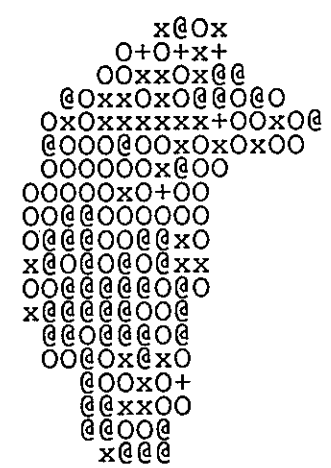
Rainbow Bee-eater



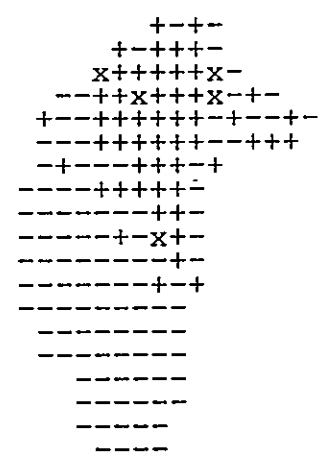
Skylark



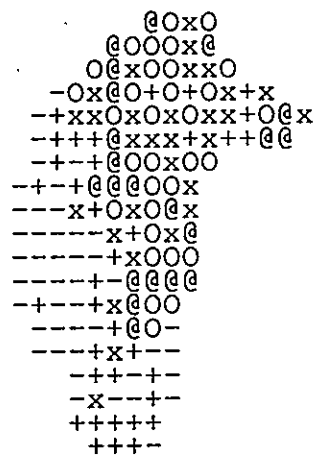
Laughing Kookaburra



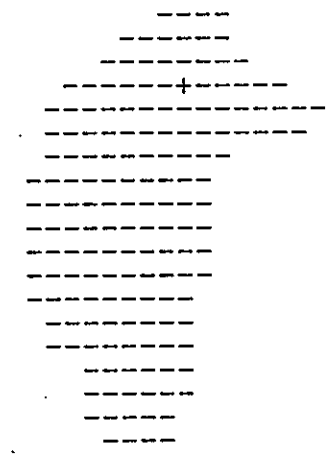
Dollarbird



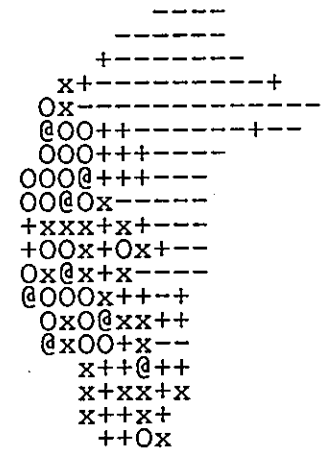
Welcome Swallow



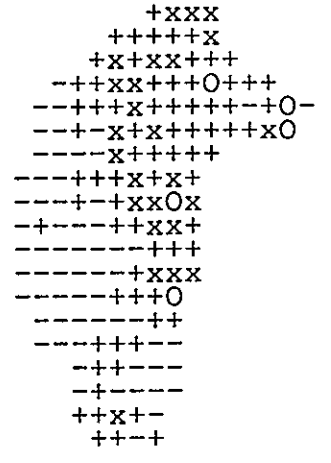
Red-backed Kingfisher



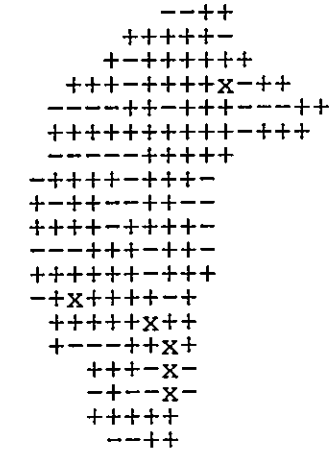
Superb Lyrebird



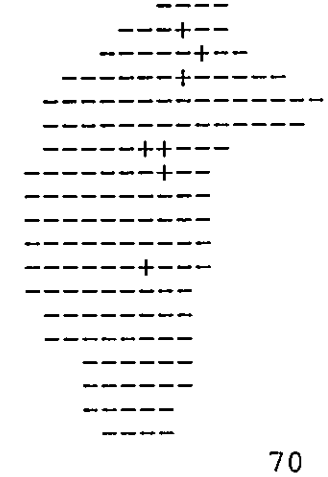
Tree Martin



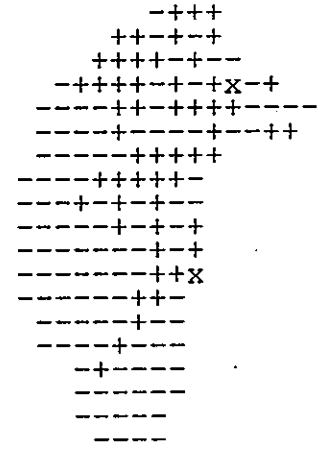
Sacred Kingfisher



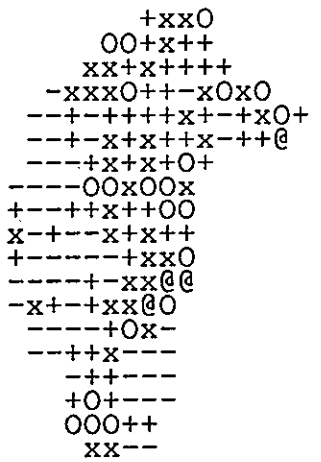
Singing Bushlark



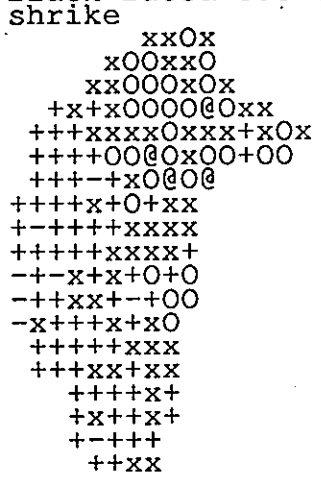
Fairy Martin



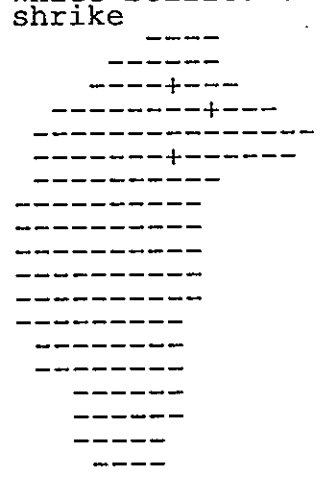
Richard's Pipit



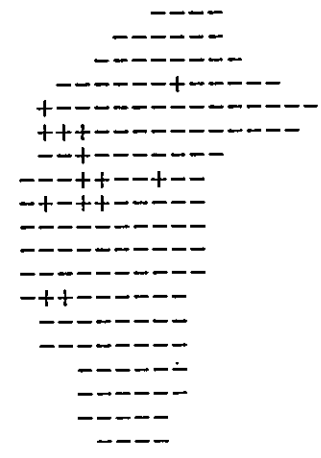
Black-faced Cuckoo-shrike



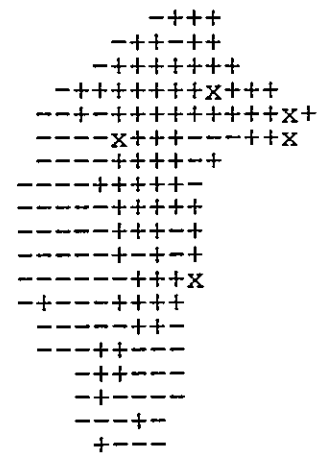
White-bellied Cuckoo-shrike



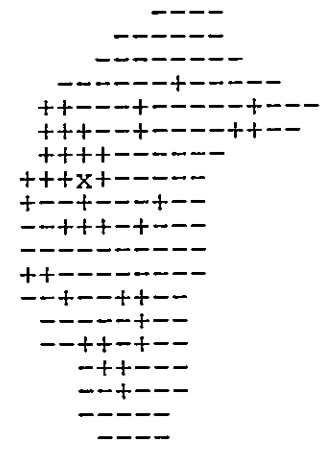
Cicadabird



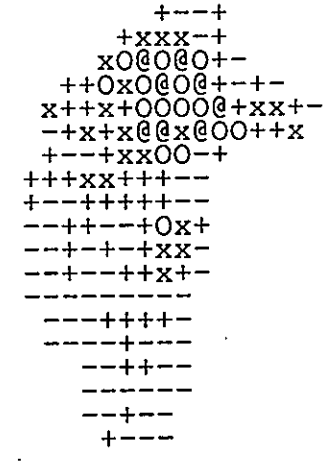
White-winged Triller



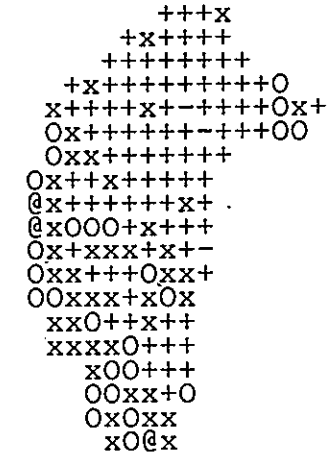
White's Thrush



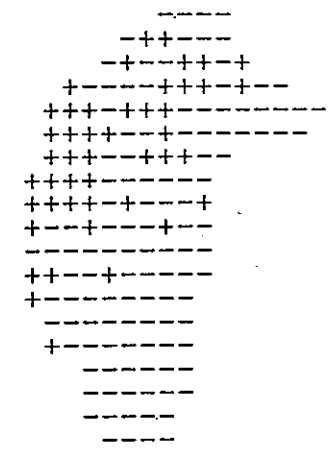
Blackbird



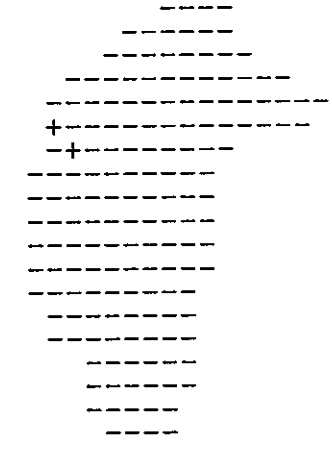
Flame Robin



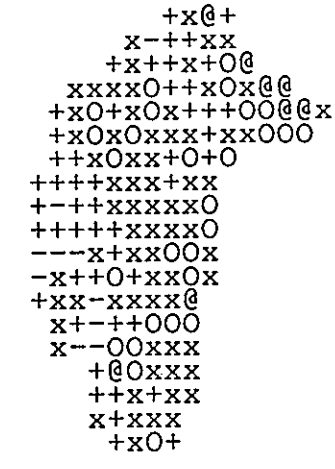
Rose Robin



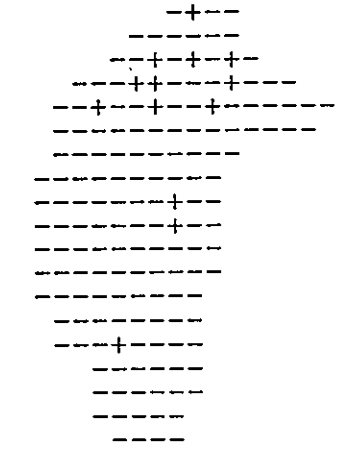
Pink Robin



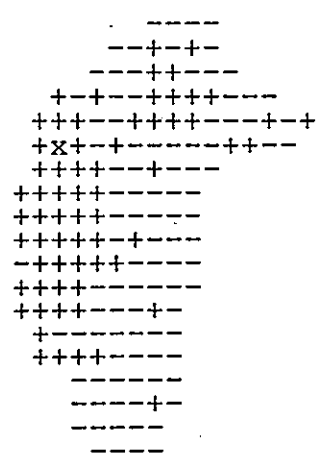
Scarlet Robin



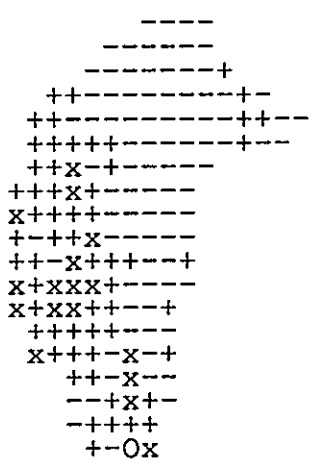
Red-capped Robin



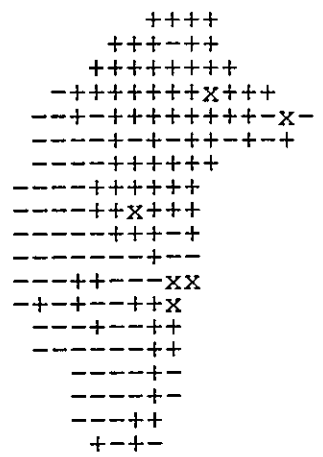
Rufous Fantail



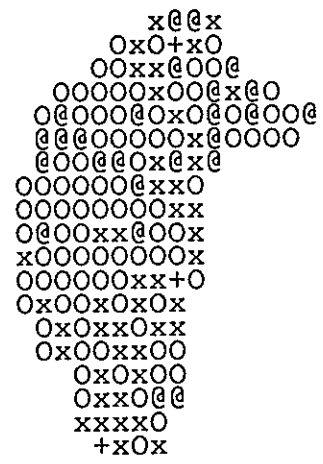
Spotted Quail-thrush



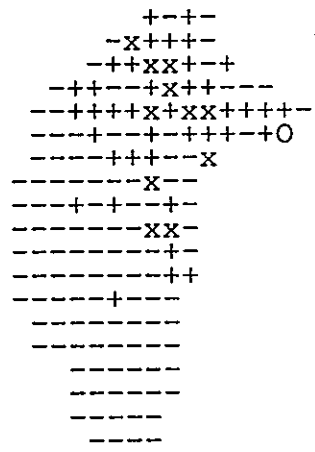
Rufous Songlark



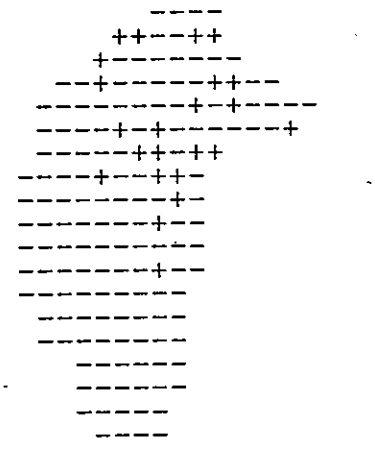
Grey Fantail



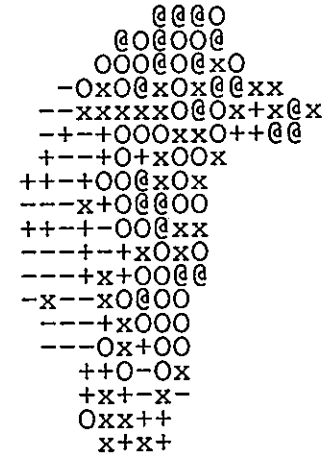
Clamorous Reed-Warbler



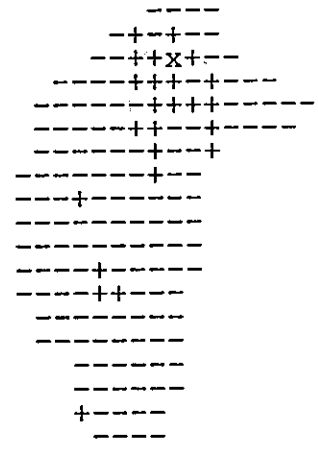
Brown Songlark



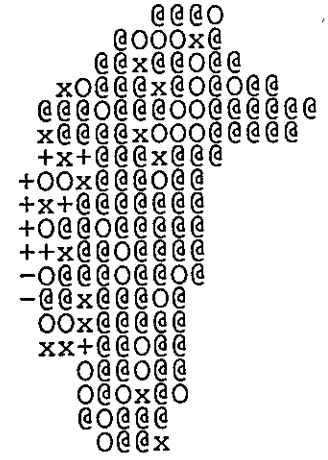
Willie Wagtail



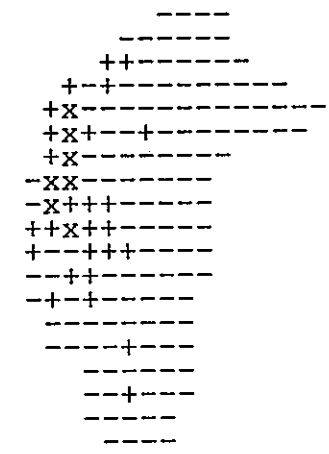
Little Grassbird



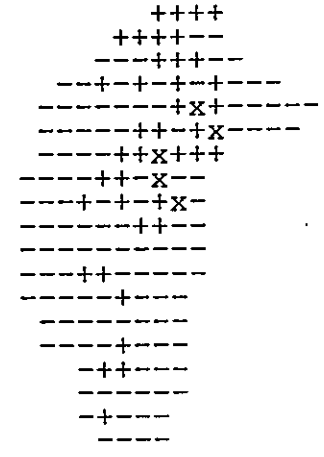
Superb Fairy-wren



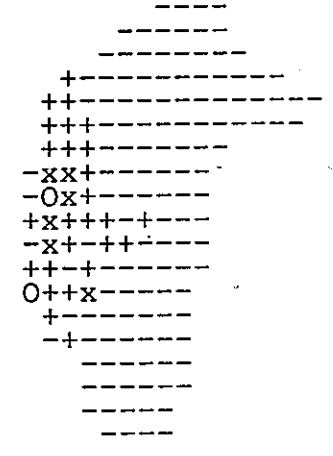
Eastern Whipbird



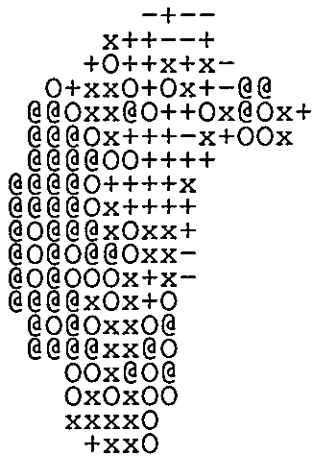
Golden-headed Cisticola



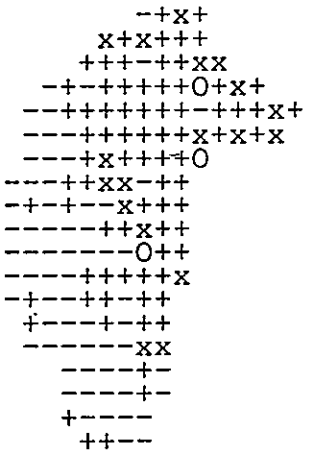
Pilotbird



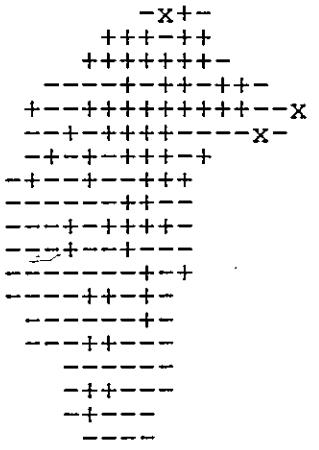
White-browed Scrubwren



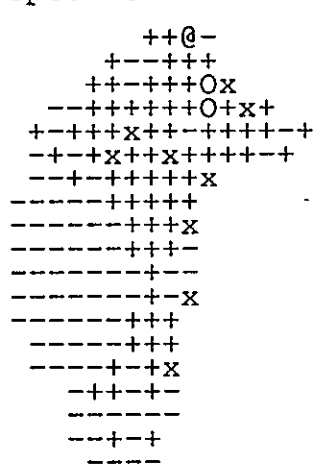
White-throated Gerygone



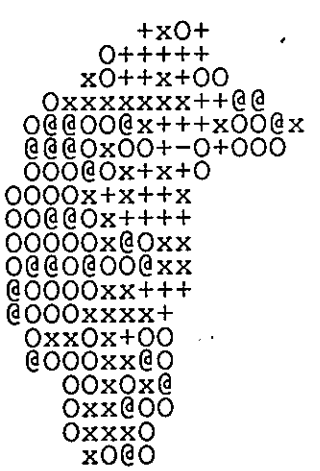
Yellow Thornbill



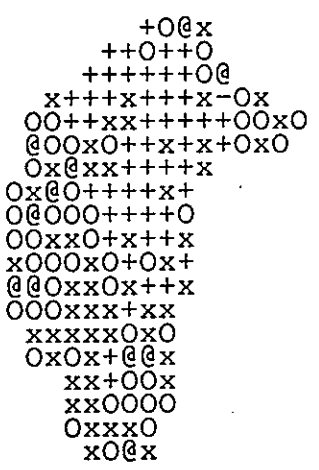
Speckled Warbler



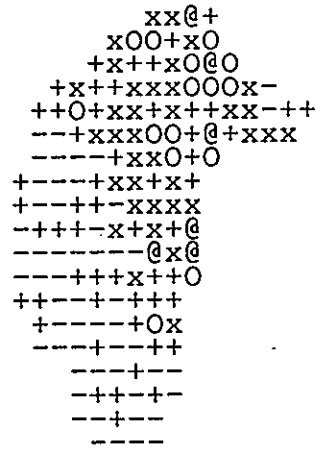
Brown Thornbill



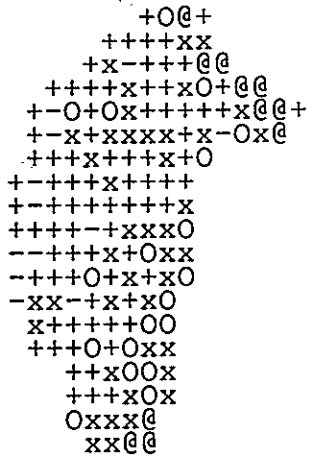
Striated Thornbill



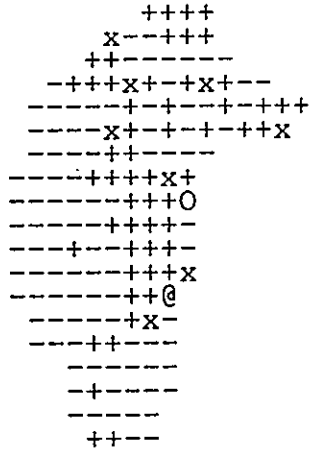
Weebill



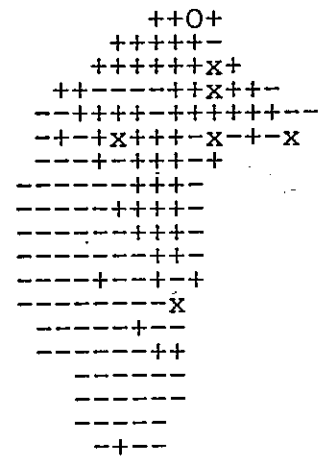
Buff-rumped Thornbill



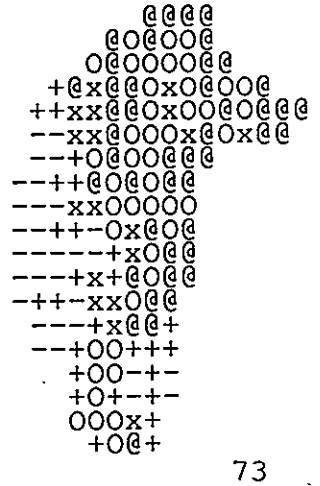
Southern Whiteface



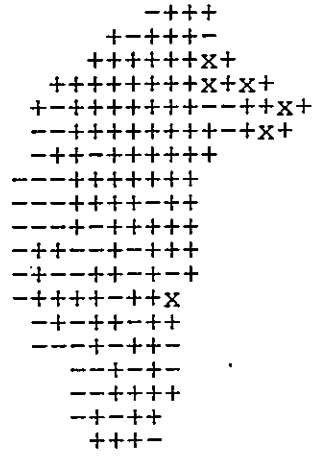
Western Gerygone



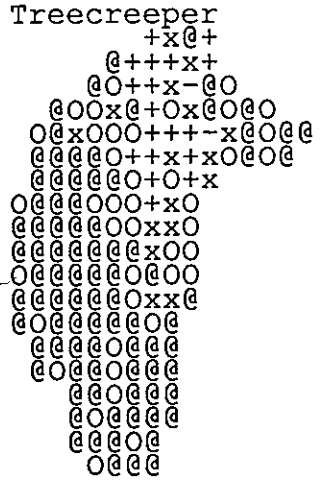
Yellow-rumped Thornbill



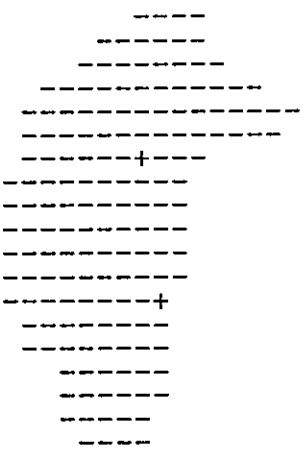
Varied Sittella



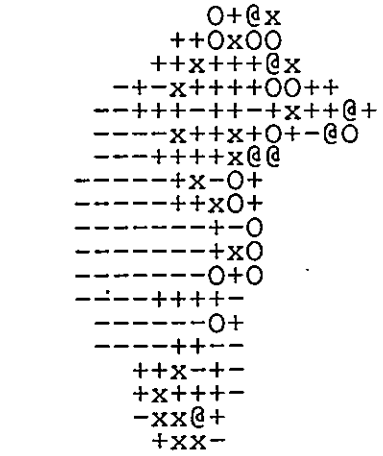
White-throated Treecreeper



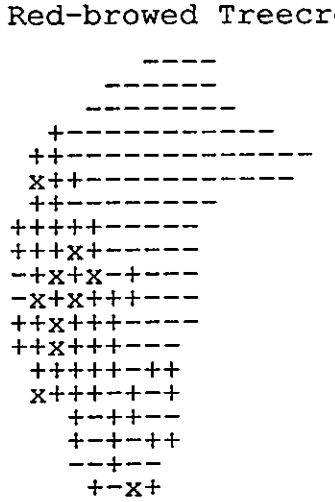
Spiny-cheeked Honeyeater



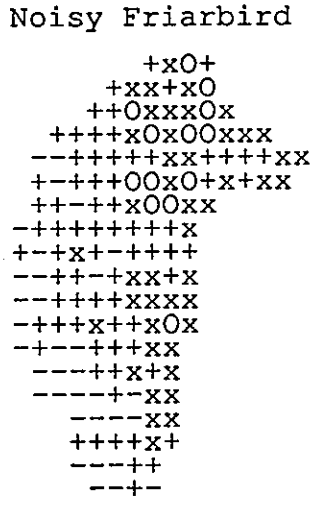
Noisy Miner



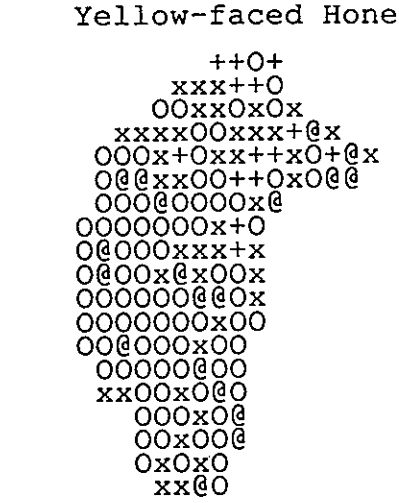
Red-browed Treecreeper



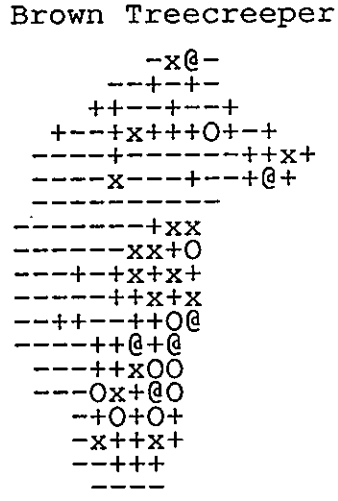
Noisy Friarbird



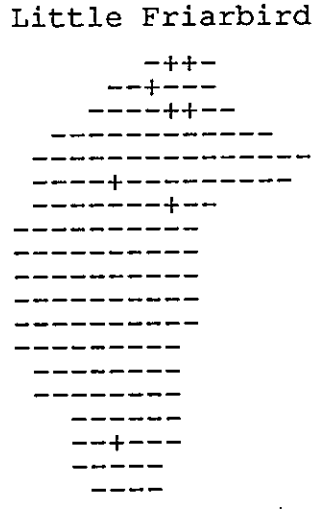
Yellow-faced Honeyeater



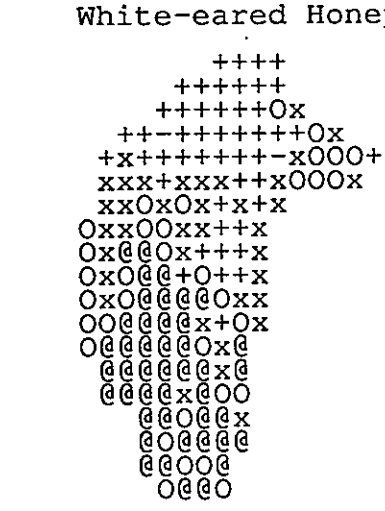
Brown Treecreeper



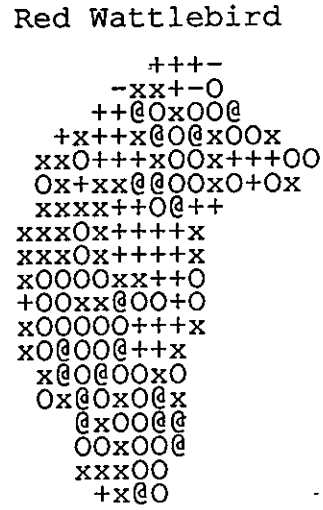
Little Friarbird



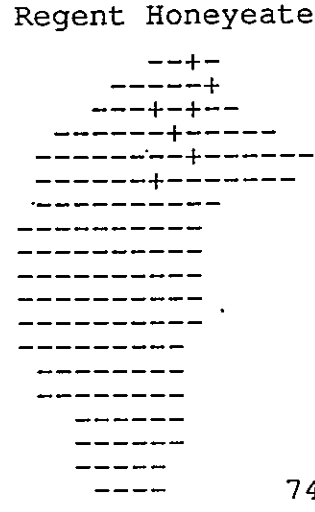
White-eared Honeyeater



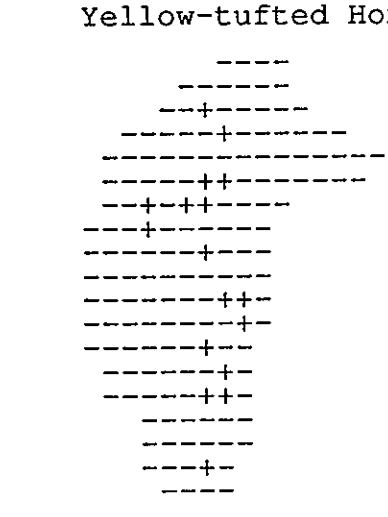
Red Wattlebird



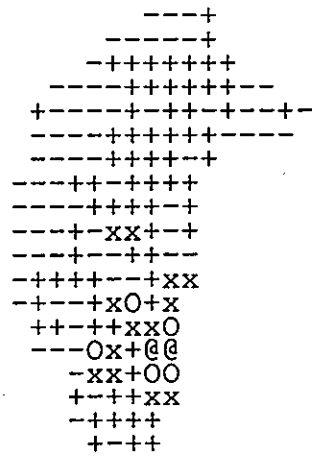
Regent Honeyeater



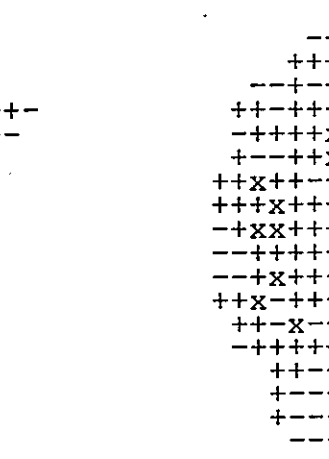
Yellow-tufted Honeyeater



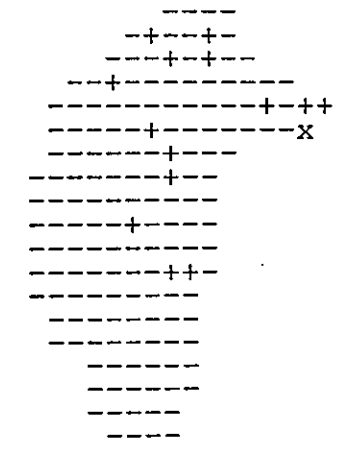
Fuscous Honeyeater



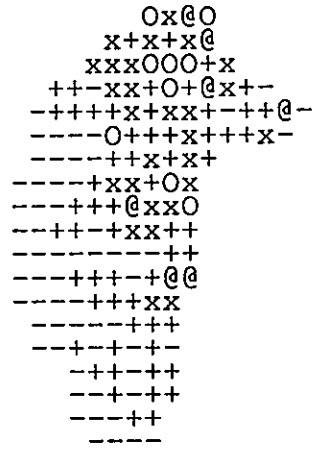
Crescent Honeyeater



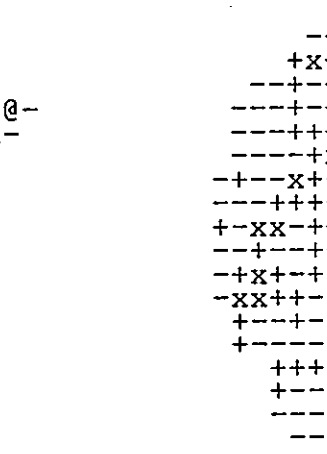
White-fronted Chat



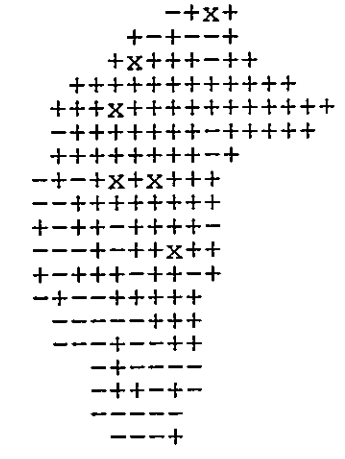
White-plumed Honeyeater



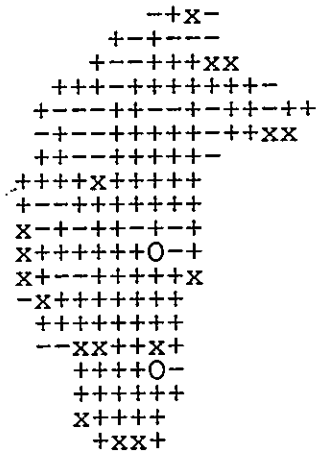
New Holland Honeyeater



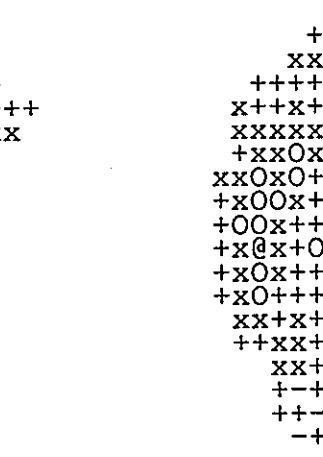
Mistletoebird



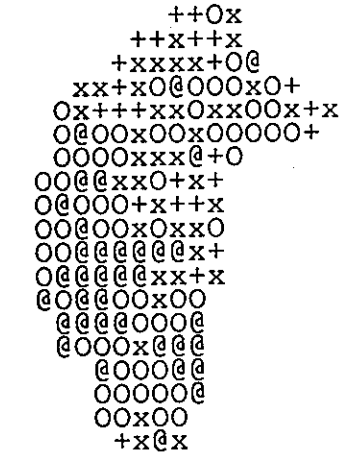
Brown-headed Honeyeater



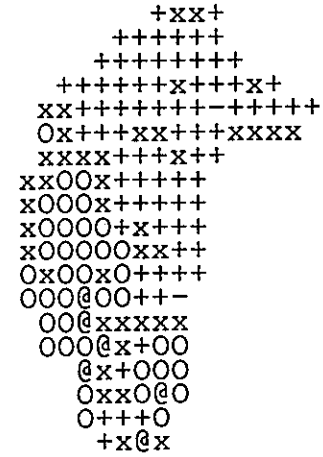
Eastern Spinebill



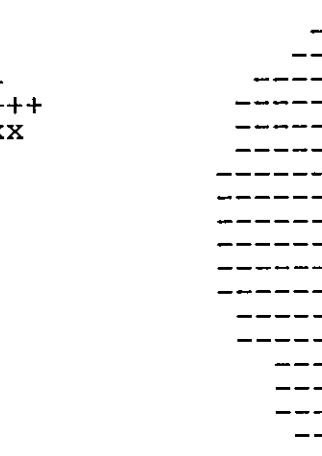
Spotted Pardalote



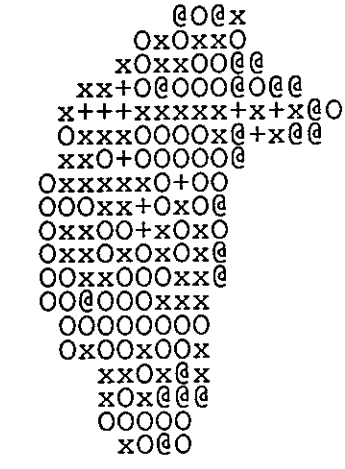
White-naped Honeyeater



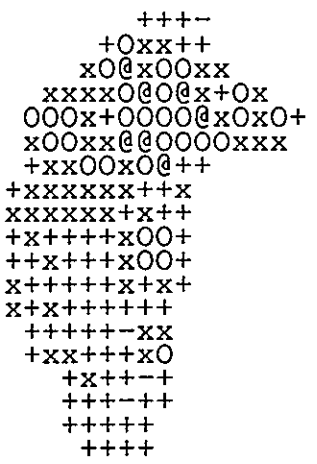
Scarlet Honeyeater



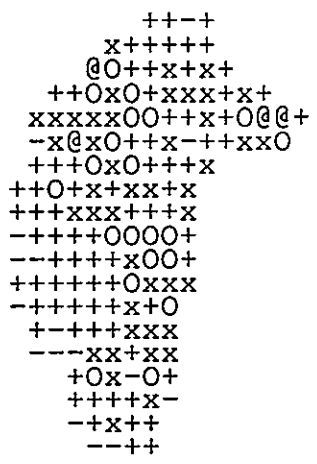
Striated Pardalote



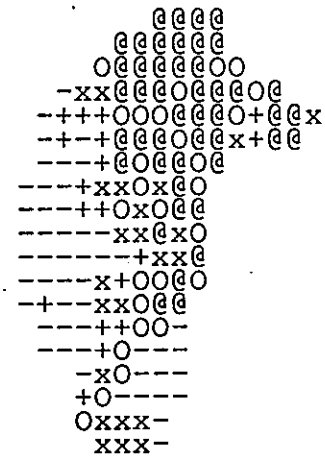
Silvereye



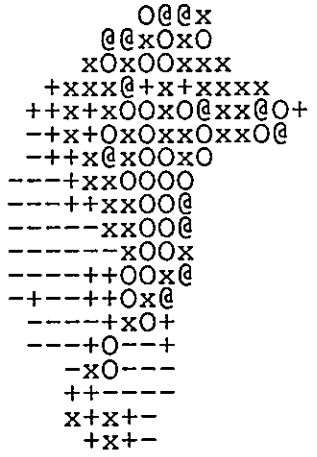
Red-browed Firetail



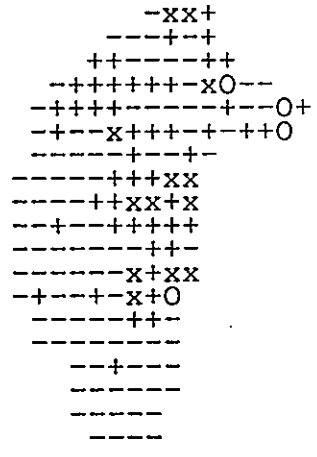
Common Starling



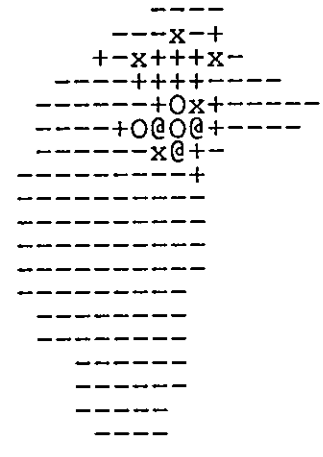
European Goldfinch



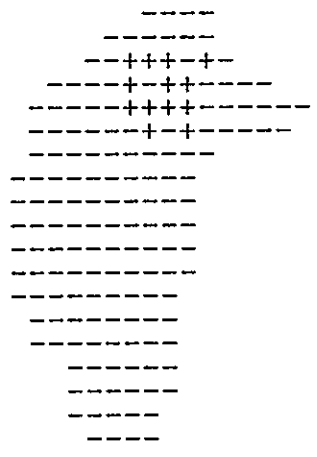
Diamond Firetail



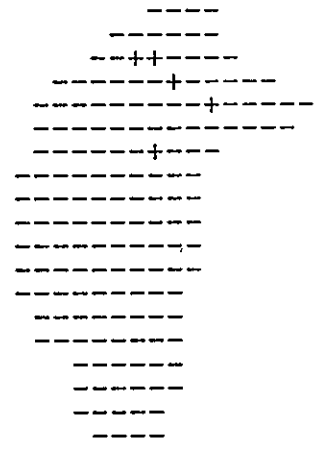
Common Myna



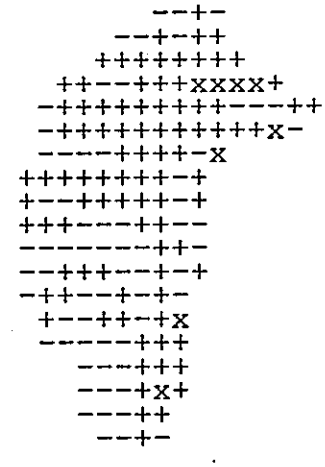
European Greenfinch



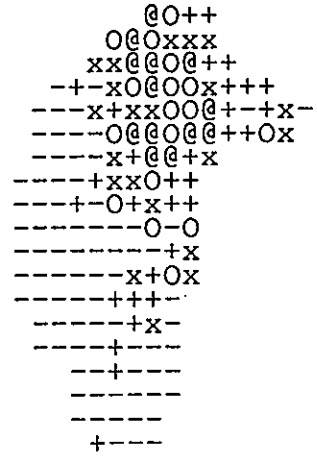
Zebra Finch



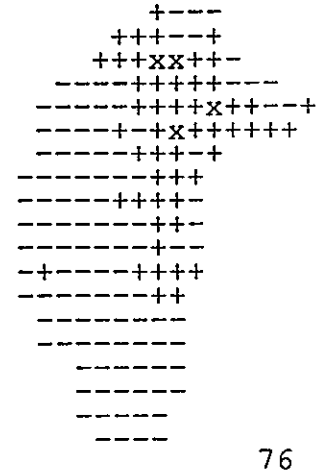
Olive-backed Oriole



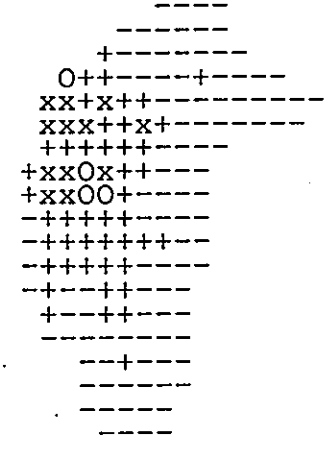
House Sparrow



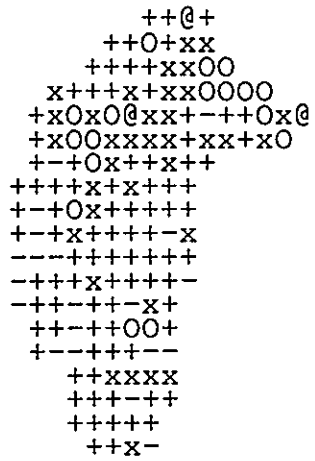
Double-barred Finch



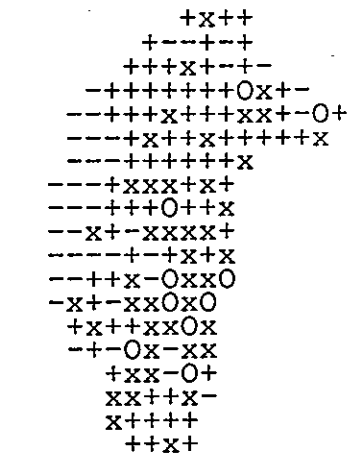
Satin Bowerbird



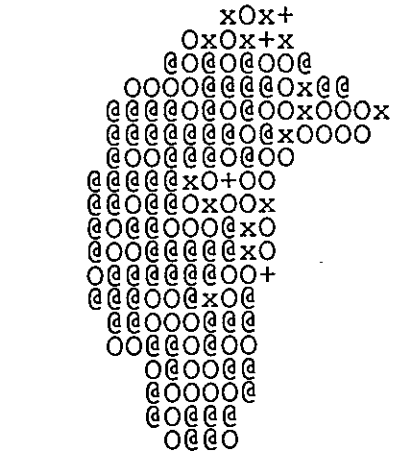
White-winged Chough



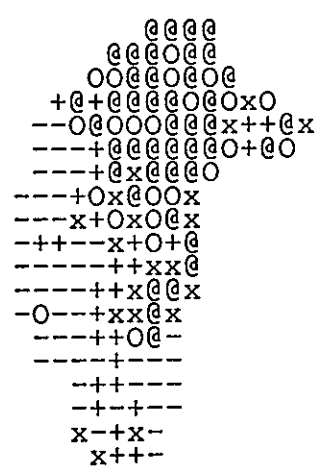
Dusky Woodswallow



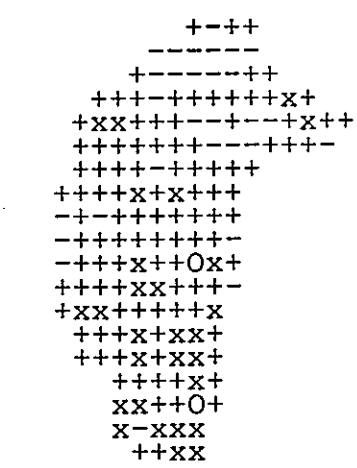
Pied Currawong



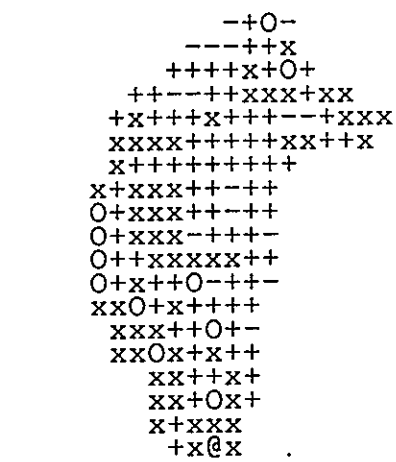
Australian Magpie-lark



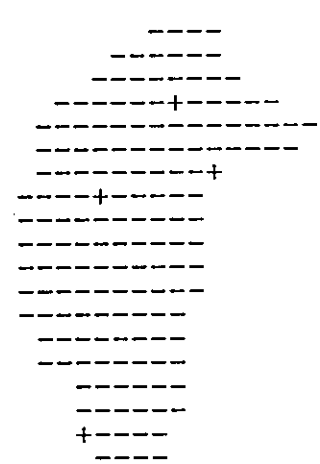
Grey Butcherbird



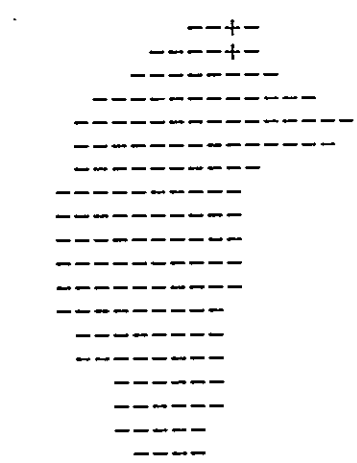
Grey Currawong



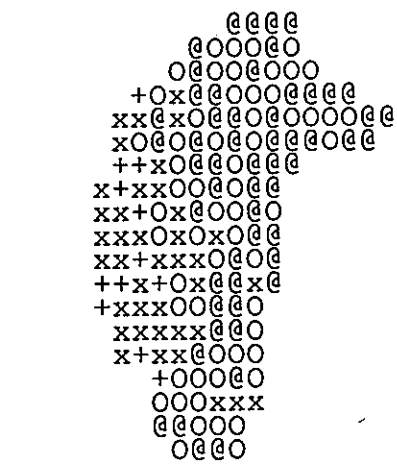
Masked Woodswallow



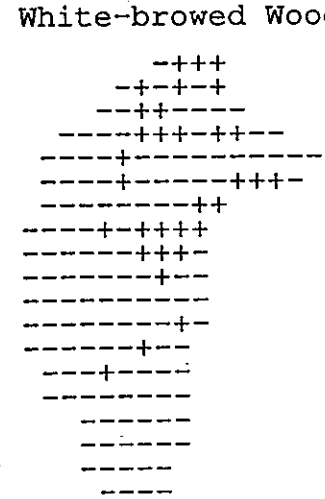
Pied Butcherbird



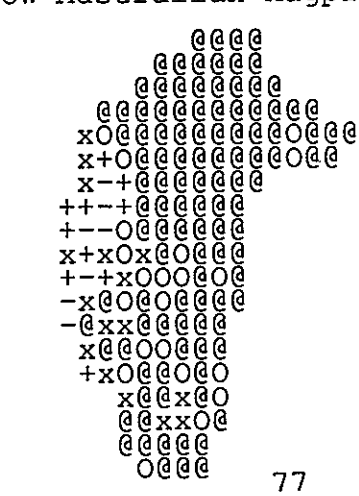
Australian Raven



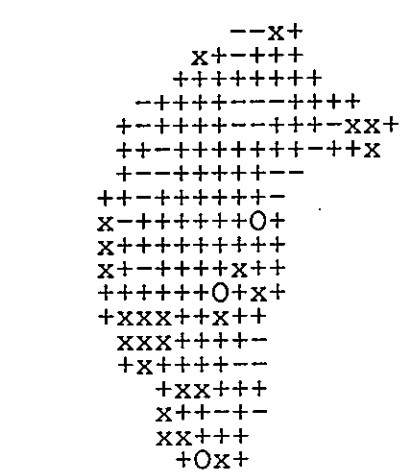
White-browed Woodswallow



Australian Magpie



Little Raven

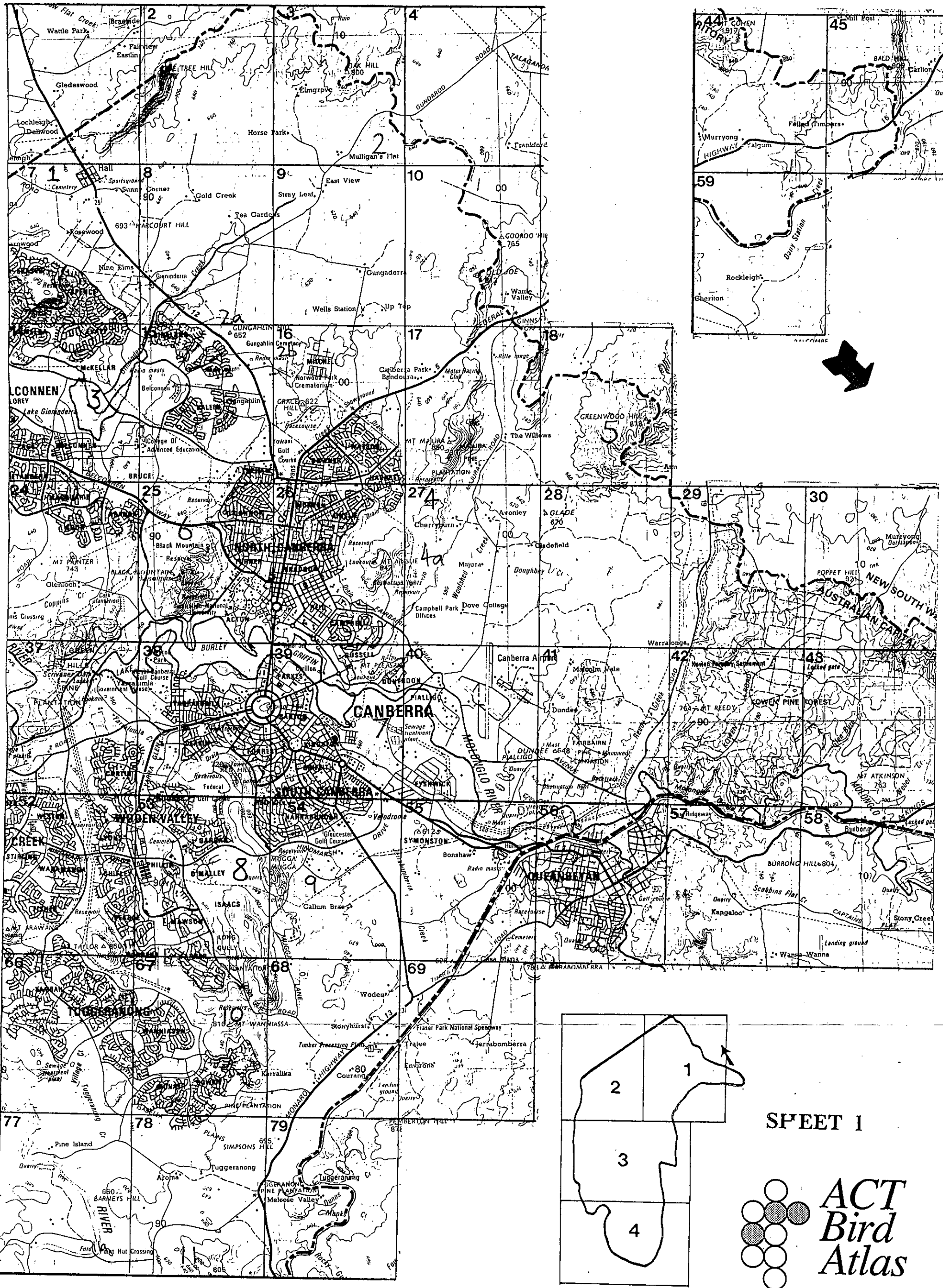


APPENDIX 3. BASE MAPS

The following sits of ornithological significance are indicated on the base maps:

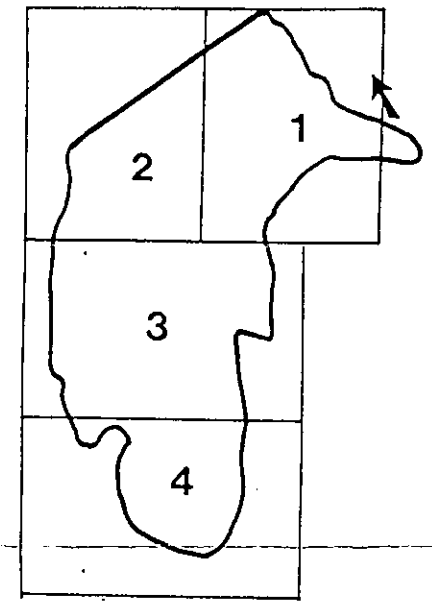
1. Hall woodland remnants
2. Mulligans Flat
2a. Gungahlin Hill
2b. Gungahlin wetlands
3. Lake Ginninderra Peninsula
4. Mt Ainslie-Majura
4a. Campbell Park
5. Greenwood Hill
6. Black Mountain and adjacent bushland
7. Jerrabomberra wetlands
8. O'Malley-Isaacs Ridge and adjacent areas
9. Mugga Lane woodland
10. Mt Wanniassa
11. Tuggeranong Hill
11a. Point Hut Crossing
12. Lower Cotter catchment (approx)
13. Castle Hill
14. Rob Roy Range lower slopes
15. Mt Tennent - Blue Gum Ck

Murrumbigdee and Molonglo River corridors


Wattle Park
Braeside
Fairview
Eastlin
Gledeswood
Lochleigh
Dellwood
Hall
Sportsground
Cemetery
Sunny Corner
Gold Creek
Stray Leaf
East View
Tea Gardens
Rosewood
HARCOURT HILL
Nine Elms
Gungaderra Creek
Gungaderra
Wells Station
Up Top
Wattle Valley
GUNGAHLIN HILL
652
Gungahlin Cemetery
Mitchell
Norwood Park Crematorium
Canberra Park
Bendoura
Motor Racing Club
Rifle range
GREENWOOD HILL
818
The Willows
MT MAJURA
880
MAJURA ROAD
PINE PLANTATION
Belconnen
Gungahlin
CRACE HILL
622
Showground
Racecourse
College Of Advanced Education
Lake Ginninderra
Avonley
GLADE
670
Cherrybum
Gladefield
Majura
Doughboy Ck
Woolshed Creek
Campbell Park Offices
Dove Cottage
Black Mountain Reserve
MT PAINTER
743
Glenloch
Coppins Cr
Australian National University
ACTEW
Reservoir
Lookout
MT AINSLIE
842
Mastvue Flights Reservoir
NORTH CANBERRA
SOUTH CANBERRA
CANBERRA
Canberra Airport
Malcolm Vale
Dundee
Warrajonga
Molonglo River
Fairbairn Pine Plantation
Monument
DUNDEE 648
PIALLIGO AVENUE
MT REEDY
764
KOWEN PINE FOREST
Kowen Forestry Settlement
Locked gate
MT ATKINSON
763
Weston Creek
Woden Valley
Gordon
Chifley
Waramanga
Stirling
Curtin
Hughes
Deakin
Forrest
Yarralumla
Government House
Canberra Golf Course
Federal Golf Course
Gloucester Golf Course
Velodrome
Symonston
Bonshaw
Hindmarsh
Mugga Mugga
Callum Brae
Isaacs
Mawson
Long Gully
Taylor
Tuggeranong
Kambah
Wanniassa
Mt Wanniassa
Kyralika
Sewage treatment plant
Village Cr
Tuggeranong Cr
Monaro Highway
Woden
Stonyhurst
Fraser Park National Speedway
Tralee
Jerrabomberra
Environa
Courance
Landing ground
Pine Island
Simpsons Hill
Aroma
Tuggeranong Pine Plantation
Melrose Valley
Dunns Ck
Monks Ck
Barneys Hill
Ford
Tidbinbilla
Queanbeyan
Kangaloo
Scabbins Flat Cr
Burbong
Burbong Hill
804
Stony Creek Flat
Wamma Wanna
Landing ground
Mt Arawang
Mt Taylor
Mt Tennant
Mt Pleasant
Mt Painter
Mt Wanniassa
Mt Majura
Mt Reedy
Mt Atkinson
Pialligo
Eyemwick
Hall
Murryong
Felled Timbers
Carlton
Mill Post
Bald Hill
Quarry
Cohen
Highway
Falgum
Rockleigh
Sheriton
Daily Station
Creek
Goodoo Hill
765
Old Joe
Ginns Gap
Federal Highway
Poppet Hill
931
New South Wales
Australian Capital Territory
Munyong
Outstation
Woo
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SHEET 1
ACT Bird Atlas

ACT Bird Atlas

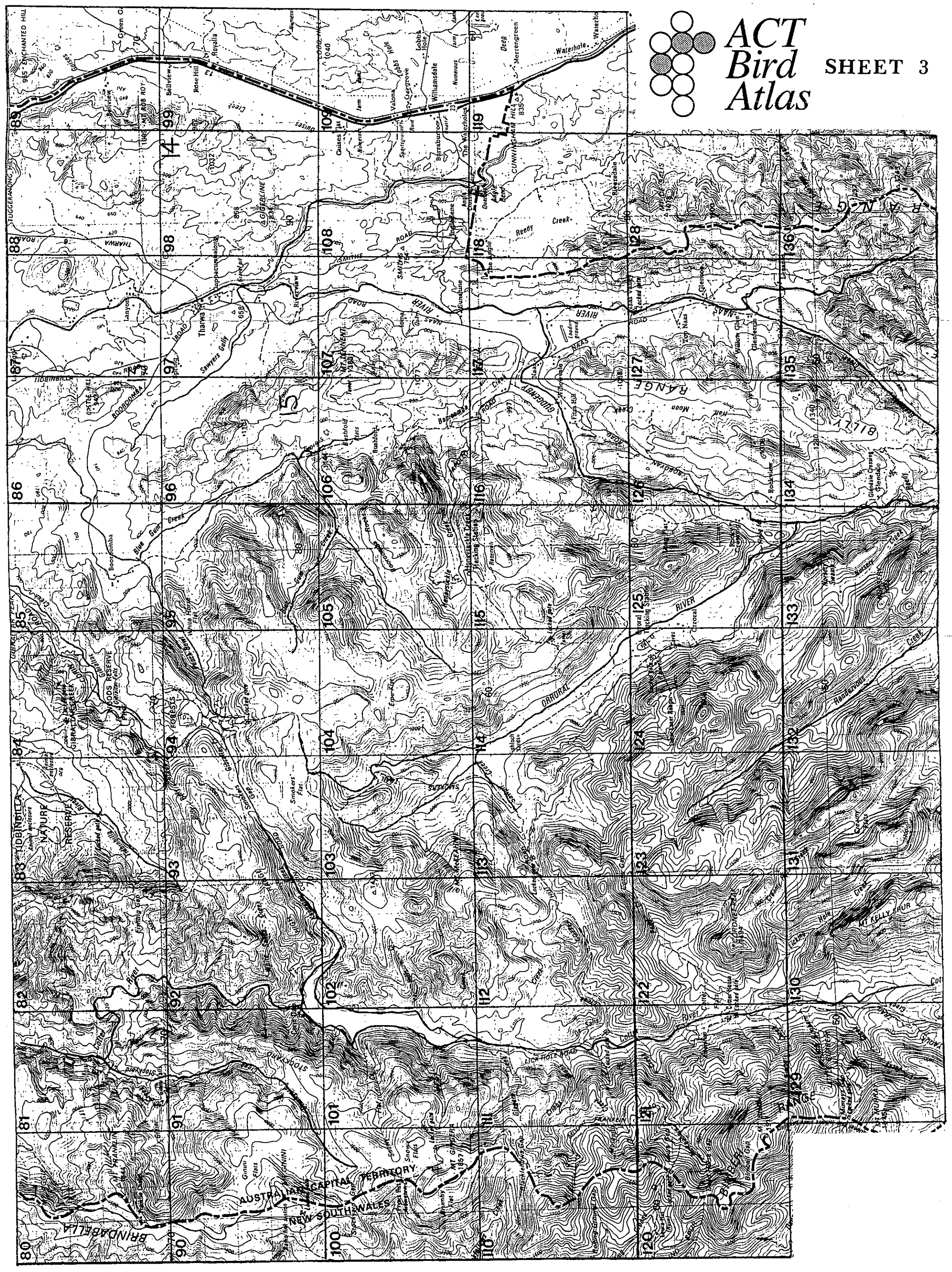
SHEET 2



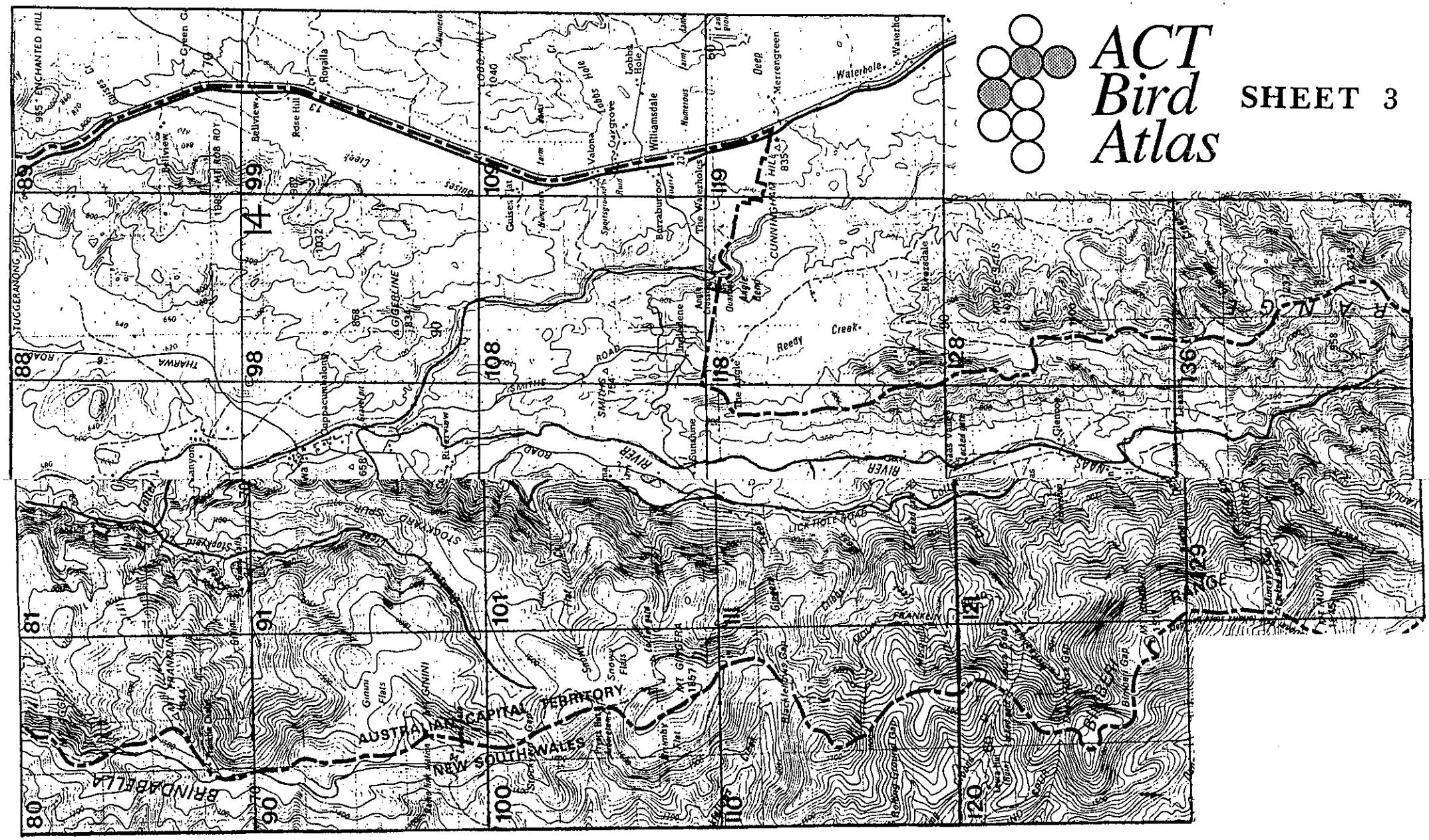
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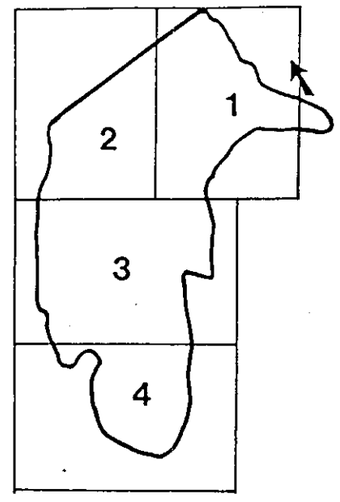
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APPENDIX 4. HABITATS

GL = grassland SW = savannah woodland

WL = woodland AW = alpine woodland

OF = open forest CF = closed forest

A = aquatic R = riverine

U = urban * = present V = vagrant

	GL	SW	WL	AW	OF	CF	A	R	U
Emu	*	*	*		*				
Great Crested Grebe							*	*	
Hoary-headed Grebe							*	*	
Australasian Grebe							*	*	
Wedge-tailed Shearwater									V
Australian Pelican							*	*	
Darter							*	*	
Great Cormorant							*	*	
Pied Cormorant							*	*	
Little Black Cormorant							*	*	
Little Pied Cormorant							*	*	
Pacific Heron							*	*	
White-faced Heron							*	*	
Cattle Egret							*		
Great Egret							*		
Little Egret							*		
Intermediate Egret							*		
Rufous Night Heron							*	*	
Little Bittern							*		
Glossy Ibis							*		
Sacred Ibis	*						*		
Straw-necked Ibis	*								
Royal Spoonbill							*		
Yellow-billed Spoonbill							*		
Plumed Whistling Duck							V		
Black Swan							*	*	
Australian Shelduck							*		
Pacific Black Duck							*	*	
Mallard							*		
Grey Teal							*	*	
Chestnut Teal							*		
Australasian Shoveler							*		
Pink-eared Duck							*		
Hardhead							*		

	GL	SW	WL	AW	OF	CF	A	R	U
Maned Duck							*	*	
Blue-billed Duck							*		
Musk Duck							*		
Black-shouldered Kite	*	*							
Black Kite									
Whistling Kite							*	*	
Brown Goshawk			*	*	*	*			*
Collared Sparrowhawk			*	*	*	*			*
Grey Goshawk							V	V	
White-bellied Sea-Eagle							*	*	
Wedge-tailed Eagle	*	*	*	*	*		*	*	
Little Eagle	*	*	*					*	
Spotted Harrier	V								
Marsh Harrier							V		
Black Falcon									V
Peregrine Falcon		*	*	*	*			*	
Australian Hobby		*	*	*	*				*
Brown Falcon	*	*	*						
Australian Kestrel	*	*	*						
Stubble Quail	*	*							
Brown Quail	*	*							
Painted Button-quail			*	*	*	*			
Buff-banded Rail							*		
Lewin's Rail							*		
Baillons Crake							*		
Australasian Crake							*		
Spotless Crake							*		
Dusky Moorhen							*	*	
Eastern Swamphen							*	*	
Eurasian Coot							*	*	
Masked Lapwing	*						*	*	
Banded Lapwing	*								
Red-kneed Dotterel							*		
Double-banded Plover							*		
Red-capped Plover							*		
Black-fronted Plover							*	*	
Black-winged Stilt							*		
Red-necked Avocet							*		
Common Sandpiper							*	*	
Greenshank							*		
Latham's Snipe							*		
Sharp-tailed Sandpiper							*		
Curlew Sandpiper							*		
Silver Gull							*		*
Whiskered Tern							*		

	GL	SW	WL	AW	OF	CF	A	R	U
Caspian Tern							*		
Superb Fruit-Dove									V
Feral Pigeon									*
Peaceful Dove			*						
Diamond Dove						V			
Common Bronzewing			*	*	*				
Brush Bronzewing						*			
Crested Pigeon	*	*							*
Wonga Pigeon						*			
Yellow-tailed Black-Cockatoo				*	*	*		*	
Gang-gang Cockatoo			*	*	*	*			*
Galah	*	*	*						*
Little Corella									V
Sulphur-crested Cockatoo	*	*	*	*	*	*			*
Rainbow Lorikeet									*
Scaly-breasted Lorikeet								V	
Little Lorikeet						*			
Australian King-Parrot			*		*	*			*
Superb Parrot		*	*						*
Cockatiel									V
Budgerigar								V	
Crimson Rosella		*	*	*	*	*		*	*
Eastern Rosella		*	*		*				*
Port Lincoln Ringneck									
Red-rumped Parrot		*	*						*
Pallid Cuckoo		*	*		*				*
Brush Cuckoo						*			
Fan-tailed Cuckoo		*	*	*	*	*			*
Black-eared Cuckoo									
Horsfield's Bronze-Cuckoo		*	*		*				*
Shining Bronze-Cuckoo		*	*	*	*	*			*
Common Koel									V
Powerful Owl						*			
Southern Boobook					*	*			*
Barking Owl						V			
Barn Owl	V								V
Tawny Frogmouth			*		*	*			*
Australian Owlet-nightjar			*	*	*	*			
White-throated Nightjar									V
White-throated Needletail	*	*	*	*	*	*			*
Fork-tailed Swift									V
Azure Kingfisher							*	*	
Laughing Kookaburra		*	*	*	*	*		*	*

	GL	SW	WL	AW	OF	CF	A	R	U
Red-backed Kingfisher							V		
Sacred Kingfisher			*	*	*				*
Rainbow Bee-eater								*	
Dollarbird		*	*		*				
Superb Lyrebird						*			
Singing Bushlark	*								
Skylark	*								
Welcome Swallow							*	*	
Tree Martin		*	*		*				
Fairy Martin	*								
Richard's Pipit	*								
Black-faced Cuckoo-shrike		*	*	*	*				*
White-bellied Cuckoo-shrike									V
Cicadabird						*			
White-winged Triller		*	*						*
White's Thrush						*			
Blackbird								*	*
Rose Robin						*			
Flame Robin	*	*	*	*					
Pink Robin						*			
Scarlet Robin		*	*	*	*				
Red-capped Robin		V							
Hooded Robin		*	*						
Eastern Yellow Robin					*	*		*	
Jacky Winter			*						
Crested Shrike-tit			*		*	*			
Olive Whistler				*		*			
Golden Whistler			*	*	*	*			*
Rufous Whistler			*	*	*	*			*
Grey Shrike-thrush				*	*	*			
Black-faced Monarch									V
Leaden Flycatcher			*		*				*
Satin Flycatcher						*			
Restless Flycatcher		*	*						
Rufous Fantail						*			
Grey Fantail			*		*	*			*
Willie Wagtail								*	
Eastern Whipbird						*			
Spotted Quail-thrush				*	*	*			
Clamorous Reed-Warbler							*	*	
Little Grassbird							*		
Golden-headed Cisticola	*						*	*	
Rufous Songlark		*	*		*				
Brown Songlark	*								
Superb Fairy-wren			*	*	*			*	*

	GL	SW	WL	AW	OF	CF	A	R	U
Pilotbird						*			
White-browed Scrubwren					*	*		*	*
Speckled Warbler			*		*				
Weebill		*	*		*				*
Western Gerygone		*	*		*				*
White-throated Gerygone		*	*		*				*
Brown Thornbill					*	*		*	
Buff-rumped Thornbill			*	*	*			*	*
Yellow-rumped Thornbill	*	*	*						*
Yellow Thornbill			*		*			*	
Striated Thornbill		*	*	*	*	*		*	*
Southern Whiteface		*	*						
Varied Sittella			*	*	*				*
White-throated Treecreeper			*	*	*	*			
Red-browed Treecreeper					*	*			
Brown Treecreeper			*		*				
Red Wattlebird			*		*	*			*
Spiny-cheeked Honeyeater									V
Noisy Friarbird			*		*				*
Little Friarbird					*				
Regent Honeyeater			*		*				
Noisy Miner			*						
Yellow-faced Honeyeater			*		*	*		*	
White-eared Honeyeater					*	*			
Yellow-tufted Honeyeater			*						
Fuscous Honeyeater					*				
White-plumed Honeyeater		*	*		*			*	
Brown-headed Honeyeater			*	*	*	*			
White-naped Honeyeater					*	*			
Crescent Honeyeater					*	*			
New Holland Honeyeater					*	*			
Eastern Spinebill					*	*			
Scarlet Honeyeater									V
White-fronted Chat							*	*	
Mistletoebird		*	*		*	*			*
Spotted Pardalote		*	*	*	*	*			*
Striated Pardalote		*	*	*	*	*			*
Silvereye		*	*		*	*			*
European Goldfinch	*	*							*
European Greenfinch									*
House Sparrow									*
Red-browed Firetail			*		*			*	
Diamond Firetail	*	*	*						
Zebra Finch								V	V

	GL	SW	WL	AW	OF	CF	A	R	U
Double-barred Finch			*					*	
Common Starling	*	*							*
Common Myna									*
Olive-backed Oriole			*		*				*
Satin Bowerbird					*	*			*
White-winged Chough			*		*				*
Australian Magpie-lark	*	*	*						*
Masked Woodswallow			V						
White-browed Woodswallow			*		*				
Dusky Woodswallow		*	*	*					
Grey Butcherbird					*	*			
Pied Butcherbird					V				
Australian Magpie	*	*	*	*					*
Pied Currawong			*	*	*	*			*
Grey Currawong			*	*	*	*			*
Australian Raven	*	*	*	*	*	*			*
Little Raven	*			*					

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APPENDIX 6. GLOSSARY

Altitudinal migrant
A species that breeds during the summer at high altitude and winters at lower altitude.

Breeding
Breeding includes the following types of observations: nest building, carrying nesting material, eggs, nestlings, fledglings, adults carrying food for young.

Cryptic
Secretive in habits.

Irruptive
Prone to unpredictable, sudden appearance in large numbers in areas where it is otherwise usually absent.

Pinion
To cut certain wing muscles to render flightless.

Resident
Sedentary occupant of a location all year round.

Vagrant
A bird that has strayed far from its normal range.

Visitor
A nonbreeding species in the ACT for which no seasonal patterns are evident.

+