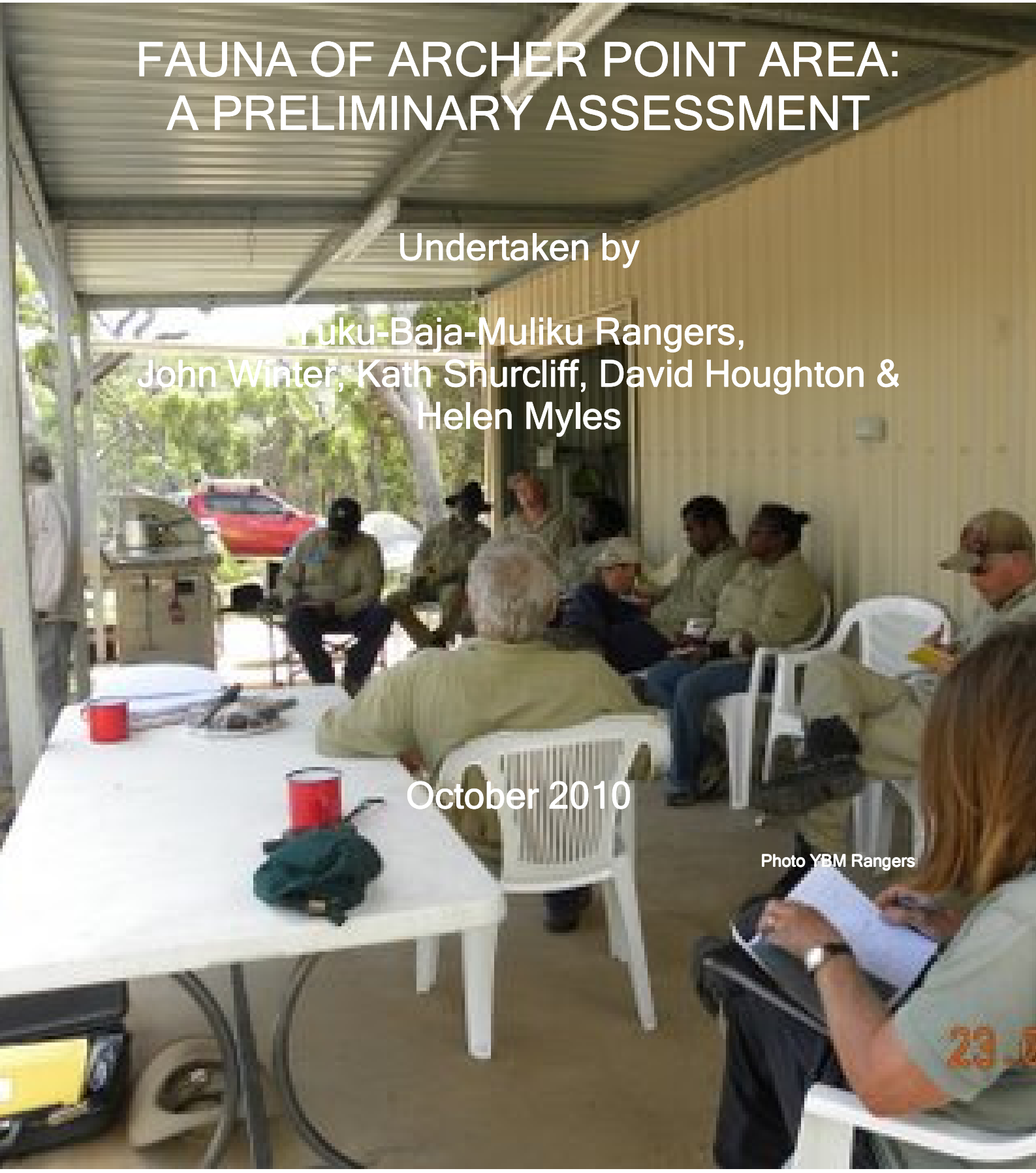
FAUNA OF ARCHER POINT AREA: A PRELIMINARY ASSESSMENT



Undertaken by

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Helen Myles

October 2010

Photo YBM Rangers

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1 SUMMARY

A workshop was run with the Yuku-Baja-Muliku rangers from 23 to 27 August 2010, based at the Ranger Station, Archer Point.

The main aim was to introduce the rangers to the collection and storage of high quality faunal records.

Activities included:

- Development of a strategic outline for the collection of records
- Selection of survey sites;
- Introduction to sampling techniques;
    - Bird observations using standard sampling techniques
    - Spotlighting
    - Importance of repeat sampling at a site
    - Recording of opportunistic sightings
    - Use of camera-traps
- Development of mapping skills
    - Basic map reading
    - Use of a GPS
    - Importance of the Datum and precision rating
    - Introduction to the use of digital data for GIS mapping
- Obtaining records previously collected in the area of interest.

A total of 65 birds, 5 mammals, 1 snake and 2 frogs were recording in the field during the workshop.

2 BACKGROUND

The Yuku-Baja-Muliku Land Trust and its rangers are involved in the management of the Archer Point Indigenous Land Use Agreement (ILUA) incorporating a number of different tenures including National Park and Nature Refuge (Figure 1).

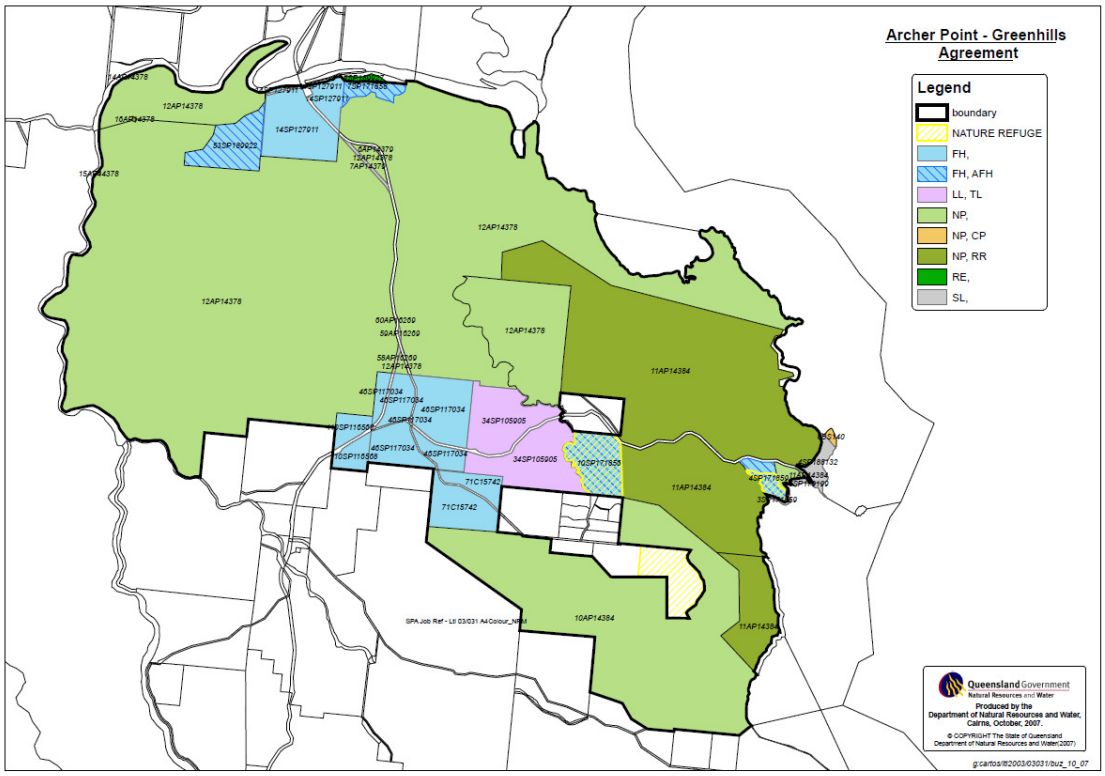

Figure 1. Areas incorporated within the Archer Point Indigenous Land Use Agreement (ILUA)

A fundamental requirement of any conservation and monitoring activity is to know what natural resources are present and where they occur within the area of interest (Williams 2006). Assessing the biodiversity of the fauna is the basis for conserving the natural values of the area.

In order to commence work on assessing biodiversity of the area, Traditional Owners and Yuku-Baja-Muliku rangers invited two scientists to facilitate this process.

3 PARTICIPANTS AND DATES

From 23-27 August 2010, a training and survey workshop was undertaken with the Yuku-Baja-Muliku rangers, based at the Ranger Station, Archer Point.

The participating Yuku-Baja-Muliku rangers included Larissa Hale, Mick Hale, Clive Henderson, Joyce Henderson, George Kulka, Roderick Doughboy, Zak Wain, Nick Atkin, assisted by Andrew Hartwig.

The guiding scientists were Dr John Winter, Wildlife Ecologist and Kath Shurcliff, Ornithologist, assisted by Helen Myles and David Houghton.

The Survey team (Photo JW)

DH KS NA GK JW LH AH MH CH JH RD HM ZW

On the second day the rangers were joined by the Conservation and Land Management Certificate II (CALM) students from the Cooktown State High School under the direction of Cass Sorenson and Joe McIvor. The students participated in some of the activities undertaken by the rangers.

4 AIMS

The aims of the workshop were to introduce the Yuku-Baja-Muliku rangers to:

- Techniques of faunal record collection in the field
- Methods of recording the information for future use in biodiversity planning
- Ensuring the records collected are of the highest quality.

5 AREA OF INTEREST

The present exercise was centred at the Archer Point Ranger Station, situated 1.65 km SW of Archer Point. Sampling was restricted to:

- The area in the immediate vicinity of the Ranger Station
- Sites accessed from Archer Point Road, along a track to the Esk River north of Archer Point Road and
- Areas immediately south of the Annan River accessible each side of the Cooktown Development Road (Figure 2).

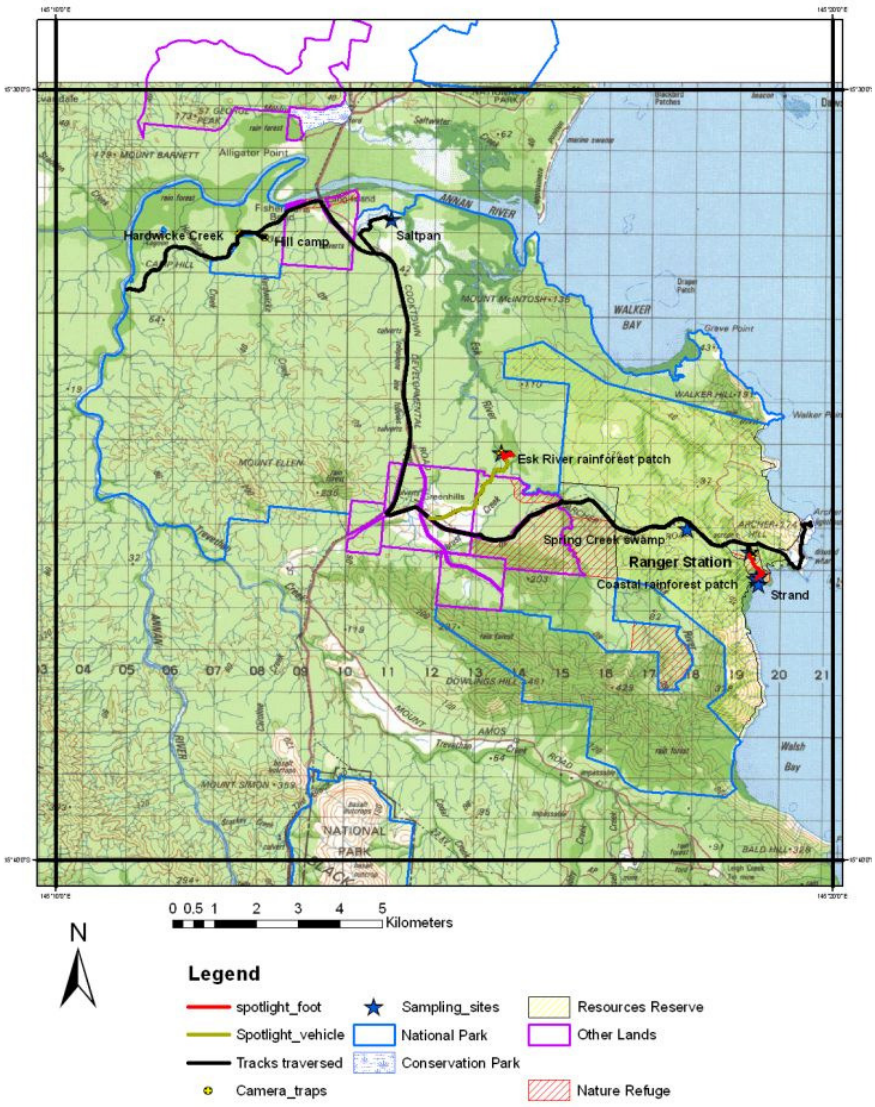

Figure 2. Area of Archer Point survey within a 10' latitude and longitude grid

6 PREVIOUS SURVEYS

Previously recorded information for species in the area of interested was obtained from a number of sources:

- Queensland Department of Environment and Resource Management's Wildnet database
- Birds Australia Birddata database
- Individuals

6.1 WildNet

Figure 3 shows the locality of records obtained from WildNet. Apart from the birds, it is obvious that most records were obtained either along roads or from Black Mountain.

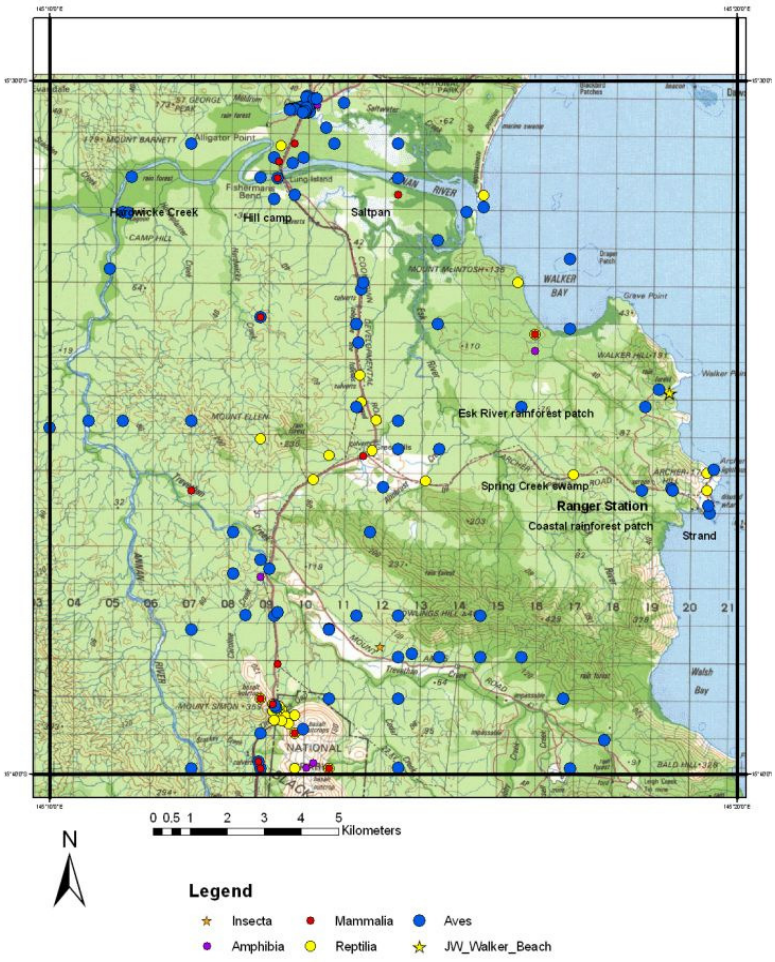

Figure 3. Animals records from the Archer Point 10' grid obtained from WildNet and J.W.Winter.

A total of 206 birds, 23 mammals, 36 reptiles and 13 frogs are listed in WildNet as occurring within the 10' grid prior to this survey (Tables 1 & 2).

Table 1 Birds listed by WildNet (DERM) as occurring within the 10' grid.

Family	Scientific name	Common name
Acanthizidae	*Gerygone albogularis*	white-throated gerygone
Acanthizidae	*Gerygone magnirostris*	large-billed gerygone
Acanthizidae	*Gerygone mouki*	brown gerygone
Acanthizidae	*Gerygone palpebrosa*	fairy gerygone
Acanthizidae	*Sericornis beccarii*	tropical scrubwren
Acanthizidae	*Sericornis magnirostra*	large-billed scrubwren
Acanthizidae	*Smicrornis brevirostris*	weebill
Accipitridae	*Accipiter cirrocephalus*	collared sparrowhawk
Accipitridae	*Accipiter fasciatus*	brown goshawk
Accipitridae	*Aquila audax*	wedge-tailed eagle
Accipitridae	*Aviceda subcristata*	Pacific baza
Accipitridae	*Haliaeetus leucogaster*	white-bellied sea-eagle
Accipitridae	*Haliastur indus*	brahminy kite
Accipitridae	*Haliastur sphenurus*	whistling kite
Accipitridae	*Hamirostra melanosternon*	black-breasted buzzard
Accipitridae	*Lophoictinia isura*	square-tailed kite
Accipitridae	*Milvus migrans*	black kite
Accipitridae	*Pandion cristatus*	eastern osprey
Acrocephalidae	*Acrocephalus australis*	Australian reed-warbler
Alcedinidae	*Ceyx azureus*	azure kingfisher
Anatidae	*Anas castanea*	chestnut teal
Anatidae	*Anas gracilis*	grey teal
Anatidae	*Anas superciliosa*	Pacific black duck
Anatidae	*Aythya australis*	hardhead
Anatidae	*Dendrocygna arcuata*	wandering whistling-duck
Anatidae	*Dendrocygna eytoni*	plumed whistling-duck
Anatidae	*Malacorhynchus membranaceus*	pink-eared duck
Anatidae	*Nettapus coromandelianus*	cotton pygmy-goose
Anatidae	*Nettapus pulchellus*	green pygmy-goose
Anatidae	*Tadorna radjah*	radjah shelduck
Anhingidae	*Anhinga novaehollandiae*	Australasian darter
Anseranatidae	*Anseranas semipalmata*	magpie goose
Apodidae	*Aerodramus terraereginae*	Australian swiftlet
Apodidae	*Hirundapus caudacutus*	white-throated needletail
Ardeidae	*Ardea ibis*	cattle egret
Ardeidae	*Ardea intermedia*	intermediate egret
Ardeidae	*Ardea modesta*	eastern great egret
Ardeidae	*Ardea pacifica*	white-necked heron
Ardeidae	*Ardea sumatrana*	great-billed heron
Ardeidae	*Butorides striata*	striated heron
Ardeidae	*Egretta garzetta*	little egret
Ardeidae	*Egretta novaehollandiae*	white-faced heron
Ardeidae	*Egretta picata*	pied heron
Ardeidae	*Egretta sacra*	eastern reef egret

Ardeidae	*Ixobrychus flavicollis*	black bittern
Artamidae	*Artamus leucorynchus*	white-breasted woodswallow
Artamidae	*Cracticus mentalis*	black-backed butcherbird
Artamidae	*Cracticus nigrogularis*	pied butcherbird
Artamidae	*Cracticus quoyi*	black butcherbird
Artamidae	*Cracticus tibicen*	Australian magpie
Artamidae	*Cracticus torquatus*	grey butcherbird
Burhinidae	*Burhinus grallarius*	bush stone-curlew
Burhinidae	*Esacus magnirostris*	beach stone-curlew
Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo
Cacatuidae	*Calyptorhynchus banksii*	red-tailed black-cockatoo
Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike
Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike
Campephagidae	*Coracina tenuirostris*	cicadabird
Campephagidae	*Lalage leucomela*	varied triller
Campephagidae	*Lalage sueurii*	white-winged triller
Caprimulgidae	*Caprimulgus macrurus*	large-tailed nightjar
Charadriidae	*Charadrius ruficapillus*	red-capped plover
Charadriidae	*Elseyornis melanops*	black-fronted dotterel
Charadriidae	*Erythrogonys cinctus*	red-kneed dotterel
Charadriidae	*Vanellus miles*	masked lapwing
Ciconiidae	*Ephippiorhynchus asiaticus*	black-necked stork
Cisticolidae	*Cisticola exilis*	golden-headed cisticola
Columbidae	*Chalcophaps indica*	emerald dove
Columbidae	*Ducula bicolor*	pied imperial-pigeon
Columbidae	*Geopelia cuneata*	diamond dove
Columbidae	*Geopelia humeralis*	bar-shouldered dove
Columbidae	*Geopelia striata*	peaceful dove
Columbidae	*Macropygia amboinensis*	brown cuckoo-dove
Columbidae	*Phaps chalcoptera*	common bronzewing
Columbidae	*Ptilinopus magnificus*	wompoo fruit-dove
Columbidae	*Ptilinopus regina*	rose-crowned fruit-dove
Columbidae	*Ptilinopus superbus*	superb fruit-dove
Coraciidae	*Eurystomus orientalis*	dollarbird
Corvidae	*Corvus orru*	Torresian crow
Cuculidae	*Cacomantis castaneiventris*	chestnut-breasted cuckoo
Cuculidae	*Cacomantis flabelliformis*	fan-tailed cuckoo
Cuculidae	*Cacomantis variolosus*	brush cuckoo
Cuculidae	*Centropus phasianinus*	pheasant coucal
Cuculidae	*Chalcites basalis*	Horsfield's bronze-cuckoo
Cuculidae	*Chalcites lucidus*	shining bronze-cuckoo
Cuculidae	*Chalcites minutillus minutillus*	little bronze-cuckoo
Cuculidae	*Chalcites minutillus russatus*	Gould's bronze-cuckoo
Cuculidae	*Eudynamys orientalis*	eastern koel
Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo
Dicruridae	*Dicrurus bracteatus*	spangled drongo
Estrildidae	*Lonchura castaneothorax*	chestnut-breasted mannikin
Estrildidae	*Poephila cincta atropygialis*	black-throated finch (black-rumped subspecies)
Estrildidae	*Taeniopygia bichenovii*	double-barred finch
Eurostopodidae	*Eurostopodus argus*	spotted nightjar

Falconidae	*Falco berigora*	brown falcon
Falconidae	*Falco cenchroides*	nankeen kestrel
Falconidae	*Falco longipennis*	Australian hobby
Fregatidae	*Fregata ariel*	lesser frigatebird
Gruidae	*Grus rubicunda*	brolga
Halcyonidae	*Dacelo leachii*	blue-winged kookaburra
Halcyonidae	*Dacelo novaeguineae*	laughing kookaburra
Halcyonidae	*Tanysiptera sylvia*	buff-breasted paradise-kingfisher
Halcyonidae	*Todiramphus chloris*	collared kingfisher
Halcyonidae	*Todiramphus macleayii*	forest kingfisher
Halcyonidae	*Todiramphus pyrrhopygius*	red-backed kingfisher
Halcyonidae	*Todiramphus sanctus*	sacred kingfisher
Hirundinidae	*Hirundo neoxena*	welcome swallow
Hirundinidae	*Petrochelidon nigricans*	tree martin
Jacanidae	*Irediparra gallinacea*	comb-crested jacana
Laridae	*Chlidonias hybrida*	whiskered tern
Laridae	*Chroicocephalus novaehollandiae*	silver gull
Laridae	*Gelochelidon nilotica*	gull-billed tern
Laridae	*Onychoprion anaethetus*	bridled tern
Laridae	*Sternula albifrons*	little tern
Laridae	*Thalasseus bengalensis*	lesser crested tern
Laridae	*Thalasseus bergii*	crested tern
Laridae	*Thalasseus bergii*	crested tern
Laridae	*Thalasseus bergii*	crested tern
Maluridae	*Malurus amabilis*	lovely fairy-wren
Maluridae	*Malurus melanocephalus*	red-backed fairy-wren
Megaluridae	*Cincloramphus mathewsi*	rufous songlark
Megapodiidae	*Alectura lathami*	Australian brush-turkey
Megapodiidae	*Megapodius reinwardt*	orange-footed scrubfowl
Meliphagidae	*Cissomela pectoralis*	banded honeyeater
Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater
Meliphagidae	*Lichenostomus flavus*	yellow honeyeater
Meliphagidae	*Lichenostomus versicolor*	varied honeyeater
Meliphagidae	*Lichmera indistincta*	brown honeyeater
Meliphagidae	*Meliphaga gracilis*	graceful honeyeater
Meliphagidae	*Meliphaga lewinii*	Lewin's honeyeater
Meliphagidae	*Meliphaga notata*	yellow-spotted honeyeater
Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater
Meliphagidae	*Melithreptus gularis laetior*	golden-backed honeyeater
Meliphagidae	*Myzomela obscura*	dusky honeyeater
Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater
Meliphagidae	*Philemon argenticeps*	silver-crowned friarbird
Meliphagidae	*Philemon buceroides*	helmeted friarbird
Meliphagidae	*Philemon citreogularis*	little friarbird
Meliphagidae	*Philemon corniculatus*	noisy friarbird
Meliphagidae	*Ramsayornis fasciatus*	bar-breasted honeyeater
Meliphagidae	*Ramsayornis modestus*	brown-backed honeyeater
Meliphagidae	*Trichodere cockerelli*	white-streaked honeyeater
Meliphagidae	*Xanthotis macleayanus*	Macleay's honeyeater
Meropidae	*Merops ornatus*	rainbow bee-eater

Monarchidae	*Grallina cyanoleuca*	magpie-lark
Monarchidae	*Machaerirhynchus flaviventer*	yellow-breasted boatbill
Monarchidae	*Monarcha melanopsis*	black-faced monarch
Monarchidae	*Myiagra alecto*	shining flycatcher
Monarchidae	*Myiagra rubecula*	leaden flycatcher
Monarchidae	*Symposiarchus trivirgatus*	spectacled monarch
Nectariniidae	*Dicaeum hirundinaceum*	mistletoebird
Nectariniidae	*Nectarinia jugularis*	olive-backed sunbird
Neosittidae	*Daphoenositta chrysoptera*	varied sittella
Oriolidae	*Oriolus flavocinctus*	yellow oriole
Oriolidae	*Oriolus sagittatus*	olive-backed oriole
Oriolidae	*Sphecotheres vieilloti*	Australasian figbird
Orthonychidae	*Orthonyx spaldingii*	chowchilla
Otididae	*Ardeotis australis*	Australian bustard
Pachycephalidae	*Colluricincla boweri*	Bower's shrike-thrush
Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush
Pachycephalidae	*Colluricincla megarhyncha*	little shrike-thrush
Pachycephalidae	*Pachycephala rufiventris*	rufous whistler
Pachycephalidae	*Pachycephala simplex peninsulae*	grey whistler
Paradisaeidae	*Ptiloris victoriae*	Victoria's riflebird
Pardalotidae	*Pardalotus striatus*	striated pardalote
Pelecanidae	*Pelecanus conspicillatus*	Australian pelican
Petroicidae	*Microeca flavigaster*	lemon-bellied flycatcher
Petroicidae	*Poecilodryas superciliosa*	white-browed robin
Petroicidae	*Tregellasia capito*	pale-yellow robin
Phalacrocoracidae	*Microcarbo melanoleucos*	little pied cormorant
Phalacrocoracidae	*Phalacrocorax sulcirostris*	little black cormorant
Phasianidae	*Coturnix ypsilophora*	brown quail
Pittidae	*Pitta versicolor*	noisy pitta
Podargidae	*Podargus papuensis*	Papuan frogmouth
Podicipedidae	*Tachybaptus novaehollandiae*	Australasian grebe
Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler
Psittacidae	*Aprosmictus erythropterus*	red-winged parrot
Psittacidae	*Glossopsitta pusilla*	little lorikeet
Psittacidae	*Platycercus adscitus*	pale-headed rosella
Psittacidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet
Psittacidae	*Trichoglossus haematodus moluccanus*	rainbow lorikeet
Ptilonorhynchidae	*Ptilonorhynchus nuchalis*	great bowerbird
Rallidae	*Gallinula tenebrosa*	dusky moorhen
Rallidae	*Porphyrio porphyrio*	purple swamphen
Recurvirostridae	*Himantopus himantopus*	black-winged stilt
Recurvirostridae	*Recurvirostra novaehollandiae*	red-necked avocet
Rhipiduridae	*Rhipidura albiscapa*	grey fantail
Rhipiduridae	*Rhipidura leucophrys*	willie wagtail
Rhipiduridae	*Rhipidura rufifrons*	rufous fantail
Rhipiduridae	*Rhipidura rufiventris*	northern fantail
Scolopacidae	*Actitis hypoleucos*	common sandpiper
Scolopacidae	*Calidris acuminata*	sharp-tailed sandpiper
Scolopacidae	*Calidris ferruginea*	curlew sandpiper
Scolopacidae	*Calidris ruficollis*	red-necked stint

Scolopacidae	*Limicola falcinellus*	broad-billed sandpiper
Scolopacidae	*Numenius phaeopus*	whimbrel
Scolopacidae	*Tringa nebularia*	common greenshank
Scolopacidae	*Tringa stagnatilis*	marsh sandpiper
Scolopacidae	*Xenus cinereus*	terek sandpiper
Strigidae	*Ninox boobook*	southern boobook
Strigidae	*Ninox connivens*	barking owl
Sturnidae	*Aplornis metallica*	metallic starling
Threskiornithidae	*Platalea regia*	royal spoonbill
Threskiornithidae	*Threskiornis molucca*	Australian white ibis
Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis
Timaliidae	*Zosterops lateralis*	silvereye

Table 2 Frogs, mammals and reptiles listed by WildNet (DERM) as occurring within the 10' grid.

Class	Family	Scientific name	Common name
Frogs			
	Bufonidae	Rhinella marina	cane toad
	Hylidae	Litoria bicolor	northern sedgefrog
	Hylidae	Litoria caerulea	common green treefrog
	Hylidae	Litoria infrafrenata	white lipped treefrog
	Hylidae	Litoria lesueuri sensu lato	stony creek frog
	Hylidae	Litoria nasuta	striped rocketfrog
	Hylidae	Litoria nigrofrenata	tawny rocketfrog
	Hylidae	Litoria pallida	pallid rocketfrog
	Hylidae	Litoria rubella	ruddy treefrog
	Hylidae	Litoria sp.	
	Limnodynastidae	Limnodynastes convexiusculus	marbled frog
	Microhylidae	Cophixalus saxatilis	Black Mountain boulderfrog
	Ranidae	Hylarana daemeli	Australian woodfrog
Mammals			
	Canidae	Canis familiaris	dog
	Dasyuridae	Dasyurus hallucatus	northern quoll
	Hipposideridae	Hipposideros diadema reginae	diadem leaf-nosed bat
	Macropodidae	Macropus agilis	agile wallaby
	Macropodidae	Macropus parryi	whiptail wallaby
	Macropodidae	Macropus robustus	common wallaroo
	Macropodidae	Petrogale godmani	Godman's rock-wallaby
	Molossidae	Mormopterus loriae ridei	little north-eastern freetail bat
	Muridae	Melomys cervinipes	fawn-footed melomys
	Muridae	Rattus fuscipes	bush rat
	Muridae	Rattus leucopus	Cape York rat
	Muridae	Rattus sordidus	canefield rat
	Muridae	Uromys caudimaculatus	giant white-tailed rat
	Muridae	Zyzomys argurus	common rock-rat
	Petauridae	Dactylopsila trivirgata	striped possum

	Phalangeridae	Trichosurus vulpecula	common brushtail possum
	Pteropodidae	Pteropus scapulatus	little red flying-fox
	Pteropodidae	Syconycteris australis	eastern blossom bat
	Rhinolophidae	Rhinolophus philippinensis	greater large-eared horseshoe bat
	Suidae	Sus scrofa	pig
	Vespertilionidae	Chalinolobus nigrogriseus	hoary wattled bat
	Vespertilionidae	Nyctophilus bifax	northern long-eared bat
	Vespertilionidae	Vespadelus pumilus	eastern forest bat
Reptiles			
	Agamidae	Diporiphora bilineata	two-lined dragon
	Agamidae	Diporiphora sp.	a dragon
	Boidae	Antaresia maculosa	spotted python
	Boidae	Aspidites melanocephalus	black-headed python
	Boidae	Liasis mackloti	water python
	Boidae	Morelia amethistina	amethystine python (New Guinean form)
	Boidae	Morelia kinghorni	amethystine python (Australian form)
	Boidae	Morelia spilota	carpet python
	Colubridae	Boiga irregularis	brown tree snake
	Colubridae	Dendrelaphis calligastra	northern tree snake
	Colubridae	Stegonotus cucullatus	slaty-grey snake
	Elapidae	Demansia torquata	collared whip snake
	Elapidae	Demansia vestigiata	black whip snake
	Elapidae	Furina tristis	brown-headed snake
	Elapidae	Oxyuranus scutellatus	coastal taipan
	Gekkonidae	Cyrtodactylus tuberculatus	ring-tailed gecko
	Gekkonidae	Gehyra dubia	a gecko
	Gekkonidae	Heteronotia binoei	Bynoe's gecko
	Gekkonidae	Nactus galgajuga	a gecko
	Scincidae	Carlia jarnoldae	a skink
	Scincidae	Carlia rostralis	a skink
	Scincidae	Carlia schmeltzii	a skink
	Scincidae	Carlia vivax	a skink
	Scincidae	Cryptoblepharus litoralis litoralis	coastal snake-eyed skink
	Scincidae	Cryptoblepharus virgatus	striped snake-eyed skink
	Scincidae	Ctenotus nullum	a skink
	Scincidae	Eremiascincus pardalis	a skink
	Scincidae	Eulamprus brachysoma	a skink
	Scincidae	Glaphyromorphus nigricaudis	a skink
	Scincidae	Glaphyromorphus pumilus	a skink
	Scincidae	Liburnascincus scirtetis	a skink
	Scincidae	Lygisaurus laevis	a skink
	Scincidae	Morethia taeniopleura	fire-tailed skink
	Varanidae	Varanus sp.	goanna
	Varanidae	Varanus tristis	black-tailed monitor
	Varanidae	Varanus varius	lace monitor

6.2 Birds Australia

Birds Australia is an alternative source of information on birds and 160 species are listed as occurring within the Archer Point 10' grid (Table 3).

Table 3. Birds listed in the Bird Atlas of Australia as occurring within the Archer Point 10' grid containing the point 145.23988, -15.54938.

Common Name	Scientific Name
Australian Brush-turkey	*Alectura lathami*
Orange-footed Scrubfowl	*Megapodius reinwardt*
Brown Quail	*Coturnix ypsilophora*
Magpie Goose	*Anseranas semipalmata*
Plumed Whistling-Duck	*Dendrocygna eytoni*
Wandering Whistling-Duck	*Dendrocygna arcuata*
Radjah Shelduck	*Tadorna radjah*
Cotton Pygmy-goose	*Nettapus coromandelianus*
Green Pygmy-goose	*Nettapus pulchellus*
Grey Teal	*Anas gracilis*
Pacific Black Duck	*Anas superciliosa*
Hardhead	*Aythya australis*
Australasian Grebe	*Tachybaptus novaehollandiae*
Peaceful Dove	*Geopelia striata*
Bar-shouldered Dove	*Geopelia humeralis*
Wompoo Fruit-Dove	*Ptilinopus magnificus*
Pied Imperial-Pigeon	*Ducula bicolor*
Large-tailed Nightjar	*Caprimulgus macrurus*
Australian Swiftlet	*Aerodramus terrareginae*
White-throated Needletail	*Hirundapus caudacutus*
Lesser Frigatebird	*Fregata ariel*
Australasian Darter	*Anhinga novaehollandiae*
Little Pied Cormorant	*Microcarbo melanoleucos*
Little Black Cormorant	*Phalacrocorax sulcirostris*
Australian Pelican	*Pelecanus conspicillatus*
Black-necked Stork	*Ephippiorhynchus asiaticus*
Black Bittern	*Ixobrychus flavicollis*
White-necked Heron	*Ardea pacifica*
Eastern Great Egret	*Ardea modesta*
Intermediate Egret	*Ardea intermedia*
Great-billed Heron	*Ardea sumatrana*
Cattle Egret	*Ardea ibis*
Pied Heron	*Egretta picata*
White-faced Heron	*Egretta novaehollandiae*

Little Egret	*Egretta garzetta*
Eastern Reef Egret	*Egretta sacra*
Australian White Ibis	*Threskiornis molucca*
Straw-necked Ibis	*Threskiornis spinicollis*
Royal Spoonbill	*Platalea regia*
Eastern Osprey	*Pandion cristatus*
Black-shouldered Kite	*Elanus axillaris*
Square-tailed Kite	*Lophoictinia isura*
Black-breasted Buzzard	*Hamirostra melanosternon*
Pacific Baza	*Aviceda subcristata*
White-bellied Sea-Eagle	*Haliaeetus leucogaster*
Whistling Kite	*Haliastur sphenurus*
Brahminy Kite	*Haliastur indus*
Black Kite	*Milvus migrans*
Brown Goshawk	*Accipiter fasciatus*
Collared Sparrowhawk	*Accipiter cirrocephalus*
Nankeen Kestrel	*Falco cenchroides*
Brown Falcon	*Falco berigora*
Brolga	*Grus rubicunda*
Purple Swamphen	*Porphyrio porphyrio*
White-browed Crake	*Amaurornis cinerea*
Dusky Moorhen	*Gallinula tenebrosa*
Bush Stone-curlew	*Burhinus grallarius*
Beach Stone-curlew	*Esacus magnirostris*
Australian Pied Oystercatcher	*Haematopus longirostris*
Black-winged Stilt	*Himantopus himantopus*
Pacific Golden Plover	*Pluvialis fulva*
Red-capped Plover	*Charadrius ruficapillus*
Lesser Sand Plover	*Charadrius mongolus*
Greater Sand Plover	*Charadrius leschenaultii*
Black-fronted Dotterel	*Elseyornis melanops*
Red-kneed Dotterel	*Erythrogonys cinctus*
Masked Lapwing	*Vanellus miles*
Comb-crested Jacana	*Irediparra gallinacea*
Bar-tailed Godwit	*Limosa lapponica*
Whimbrel	*Numenius phaeopus*
Eastern Curlew	*Numenius madagascariensis*
Terek Sandpiper	*Xenus cinereus*
Common Sandpiper	*Actitis hypoleucos*
Grey-tailed Tattler	*Tringa brevipes*
Ruddy Turnstone	*Arenaria interpres*
Red-necked Stint	*Calidris ruficollis*
Sharp-tailed Sandpiper	*Calidris acuminata*

Curlew Sandpiper	*Calidris ferruginea*
Little Tern	*Sternula albifrons*
Caspian Tern	*Hydroprogne caspia*
Crested Tern	*Thalasseus bergii*
Silver Gull	*Chroicocephalus novaehollandiae*
Red-tailed Black-Cockatoo	*Calyptorhynchus banksii*
Sulphur-crested Cockatoo	*Cacatua galerita*
Rainbow Lorikeet	*Trichoglossus haematodus*
Scaly-breasted Lorikeet	*Trichoglossus chlorolepidotus*
Red-winged Parrot	*Aprosmictus erythropterus*
Pheasant Coucal	*Centropus phasianinus*
Eastern Koel	*Eudynamys orientalis*
Channel-billed Cuckoo	*Scythrops novaehollandiae*
Horsfield's Bronze-Cuckoo	*Chalcites basalis*
Little Bronze-Cuckoo	*Chalcites minutillus*
Fan-tailed Cuckoo	*Cacomantis flabelliformis*
Brush Cuckoo	*Cacomantis variolosus*
Barking Owl	*Ninox connivens*
Azure Kingfisher	*Ceyx azureus*
Laughing Kookaburra	*Dacelo novaeguineae*
Blue-winged Kookaburra	*Dacelo leachii*
Forest Kingfisher	*Todiramphus macleayii*
Sacred Kingfisher	*Todiramphus sanctus*
Collared Kingfisher	*Todiramphus chloris*
Rainbow Bee-eater	*Merops ornatus*
Dollarbird	*Eurystomus orientalis*
Noisy Pitta	*Pitta versicolor*
Great Bowerbird	*Ptilonorhynchus nuchalis*
Red-backed Fairy-wren	*Malurus melanocephalus*
Lovely Fairy-wren	*Malurus amabilis*
Weebill	*Smicrornis brevirostris*
Large-billed Gerygone	*Gerygone magnirostris*
Fairy Gerygone	*Gerygone palpebrosa*
White-throated Gerygone	*Gerygone albogularis*
Striated Pardalote	*Pardalotus striatus*
Lewin's Honeyeater	*Meliphaga lewinii*
Yellow-spotted Honeyeater	*Meliphaga notata*
Graceful Honeyeater	*Meliphaga gracilis*
Varied Honeyeater	*Lichenostomus versicolor*
Yellow Honeyeater	*Lichenostomus flavus*
Brown-backed Honeyeater	*Ramsayornis modestus*
Dusky Honeyeater	*Myzomela obscura*
Scarlet Honeyeater	*Myzomela sanguinolenta*

Brown Honeyeater	*Lichmera indistincta*
White-streaked Honeyeater	*Trichodere cockerelli*
White-throated Honeyeater	*Melithreptus albogularis*
Blue-faced Honeyeater	*Entomyzon cyanotis*
Helmeted Friarbird	*Philemon buceroides*
Silver-crowned Friarbird	*Philemon argenticeps*
Noisy Friarbird	*Philemon corniculatus*
Little Friarbird	*Philemon citreogularis*
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*
White-bellied Cuckoo-shrike	*Coracina papuensis*
Cicadabird	*Coracina tenuirostris*
Varied Triller	*Lalage leucomela*
Rufous Whistler	*Pachycephala rufiventris*
Little Shrike-thrush	*Colluricincla megarhyncha*
Grey Shrike-thrush	*Colluricincla harmonica*
Australasian Figbird	*Sphecotheres vieilloti*
Yellow Oriole	*Oriolus flavocinctus*
Olive-backed Oriole	*Oriolus sagittatus*
White-breasted Woodswallow	*Artamus leucorynchus*
Black Butcherbird	*Cracticus quoyi*
Grey Butcherbird	*Cracticus torquatus*
Spangled Drongo	*Dicrurus bracteatus*
Rufous Fantail	*Rhipidura rufifrons*
Grey Fantail	*Rhipidura albiscapa*
Northern Fantail	*Rhipidura rufiventris*
Torresian Crow	*Corvus orru*
Leaden Flycatcher	*Myiagra rubecula*
Shining Flycatcher	*Myiagra alecto*
Spectacled Monarch	*Symposiarchus trivirgatus*
Magpie-lark	*Grallina cyanoleuca*
Lemon-bellied Flycatcher	*Microeca flavigaster*
White-browed Robin	*Poecilodryas superciliosa*
Australian Reed-Warbler	*Acrocephalus australis*
Rufous Songlark	*Cincloramphus mathewsi*
Welcome Swallow	*Hirundo neoxena*
Metallic Starling	*Aplornis metallica*
Mistletoebird	*Dicaeum hirundinaceum*
Olive-backed Sunbird	*Nectarinia jugularis*
Double-barred Finch	*Taeniopygia bichenovii*
Red-browed Finch	*Neochmia temporalis*

6.3 Individuals

One of the participating scientists (JWW) had visited Walker Beach, south of Walker Point, on the 25/26 June 1973. He and three colleagues recorded two mammals and 15 birds in the course of an overnight stay using 32 traps (Table 4).

Table 4. Fauna recorded at Walker Beach, 1.1 km SSE Walker Hill, -15.57488052 S, 145.3168386 E, GDA94, precision 250 m, 25 to 26 June 1973.

Class	Common name	Scientific name	Recorders
Birds	Spectacled Monarch	Monarcha trivirgatus	J.W.Winter, J.James
	Yellow-spotted Honeyeater	Meliphaga notata	J.W.Winter, J.James
	Wompoo Fruit-Dove	Ptilinopus magnificus	J.W.Winter, J.James
	Rainbow Lorikeet	Trichoglossus haematodus	J.W.Winter, J.James
	Rose-crowned Fruit-Dove	Ptilinopus regina	J.W.Winter, J.James
	Helmeted Friarbird	Philemon buceroides	J.W.Winter, J.James
	Mistletoebird	Dicaeum hirundinaceum	J.W.Winter, J.James
	Leaden Flycatcher	Myiagra rubecula	J.W.Winter, J.James
	Varied Triller	Lalage leucomela	J.W.Winter, J.James
	Yellow-eyed Cuckoo-shrike	Coracina lineata	J.W.Winter, J.James
	Figbird	Sphecotheres viridis	J.W.Winter, J.James
	Yellow-bellied Sunbird	Nectarinia jugularis	J.W.Winter, J.James
	Bar-shouldered Dove	Geopelia humeralis	J.W.Winter, J.James
	White-bellied Sea-Eagle	Haliaeetus leucogaster	J.W.Winter, J.James
	Dusky Honeyeater	Myzomela obscura	J.W.Winter, J.James
Mammals	Fawn-footed Melomys	Melomys cervinipes	J.W.Winter, John James
	Agile Wallaby	Macropus agilis	P.J.Stanton, P.S.Lavarack

In addition two other participating scientists (KS, DH) had recorded birds from Archer Point during a number of visits between January 2000 and August 2010 (Figure 4).

30/08/2010 Archer Point, s of Cooktown Bird List

Eremaea Birds

A free birding atlas to which anyone can contribute.

Home Overview Login Registration Enquiry

Select another site, season and period

Archer Point, s of Cooktown

Description:	open ocean, rock islets, tidal mud flats and creek with limited mangroves access via main road off Lakeland-Cooktown highway
Region:	Australia: Queensland
Season:	January to December
Period:	1/01/2000 to 29/08/2010
Lists:	4
Species:	24
Best Single-Day List:	13 species, Kath Shurcliff & Dave Houghton 17/09/2009.
Prepared:	30/08/2010

Common Names ○ Clements (international) ● Systematics and taxonomy of Australian birds. Christidis and Boles. 2008.

The reporting rate for a single observation is 25%.

Anhingas					
Australasian Darter	25%				
Frigatebirds					
Lesser Frigatebird	25%				
Herons, Egrets and Bitterns					
Great Egret	25%	White-faced Heron	25%	Eastern Reef Egret	100%
Ibises and Spoonbills					
Straw-necked Ibis	25%				
Hawks, Eagles and Kites					
Whistling Kite	25%				
Thick-knees					
Beach Stone-curlew	100%				
Plovers and Lapwings					
Pacific Golden Plover	25%	Greater Sand Plover	50%		
Lesser Sand Plover	25%	Red-capped Plover	50%		
Sandpipers and Allies					
Grey-tailed Tattler	75%	Bar-tailed Godwit	25%		
Whimbrel	75%	Red-necked Stint	50%		
Gulls, Terns and Skimmers					
Little Tern	25%	Crested Tern	50%		
Pigeons and Doves					
Bar-shouldered Dove	25%				
Honeyeaters					
Yellow-spotted Honeyeater	25%	Varied Honeyeater	75%	Helmeted Friarbird	25%
Flowerpeckers					
Mistletoebird	50%				
Sunbirds and Spiderhunters					
Olive-backed Sunbird	25%				

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eremaea.com/SiteSpeciesList.aspx?Cont... 1/1

Figure 4. Birds recorded by Kath Shurcliff and David Houghton at Archer Point between 1/1/2000 and 2/8/2010. Source: Eremaea Birds.

7 PROCESSES

Each day participants spent some time indoors in a number of activities and part of the time in the field collecting data.

In broad terms the method employed was to:

- Provide a broad framework for the collection and recording of data
- Obtain an indication of what the rangers knew of the area
- Determine if the rangers had any particular animals or places they wished to include
- Collect data in the field
- Demonstrate how to record and store the data in a manner that can be used in a Geographical Information System (GIS)
- Ensure that the Western Scientific approach was not seen as replacing the Indigenous Perspective of the environment, and that the two could work well together.

The approach was kept deliberately flexible to accommodate specific interests and skills of the rangers, any particular activities they wished included, animals most readily seen or heard in the area and the major habitats easily accessible.

7.1 Framework

At the beginning of the workshop a framework of the concepts to be covered was provided. It was divided into four general areas, depicting the steps taken when recording fauna:

- What is it?
- Where is it?
- How many?, and
- What to do with the record.

As one of the first tasks, the rangers listed the types of habitat they recognised within the area of interest under the heading *Where is it* (Figure 5) and indicated on a *mud map* where they occurred (Figure 6).

Fleshing out the framework continued with brief discussions on the issues, including an indication that more detailed treatment of many of the issues would occur in the course of the workshop (Table 5, Figure 7).

Figure 5. Constructing the concepts of fauna recording (Photo YBM rangers).

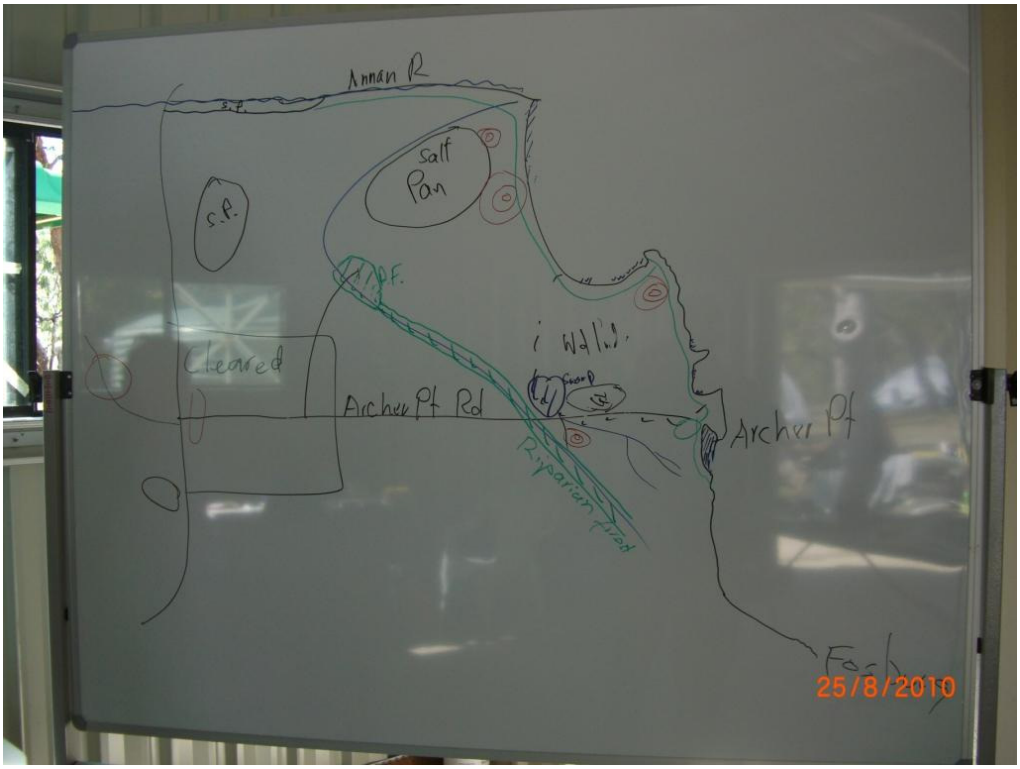

Figure 6. Mud map of major habitats within the study area as identified by YBM rangers (Photo HM).

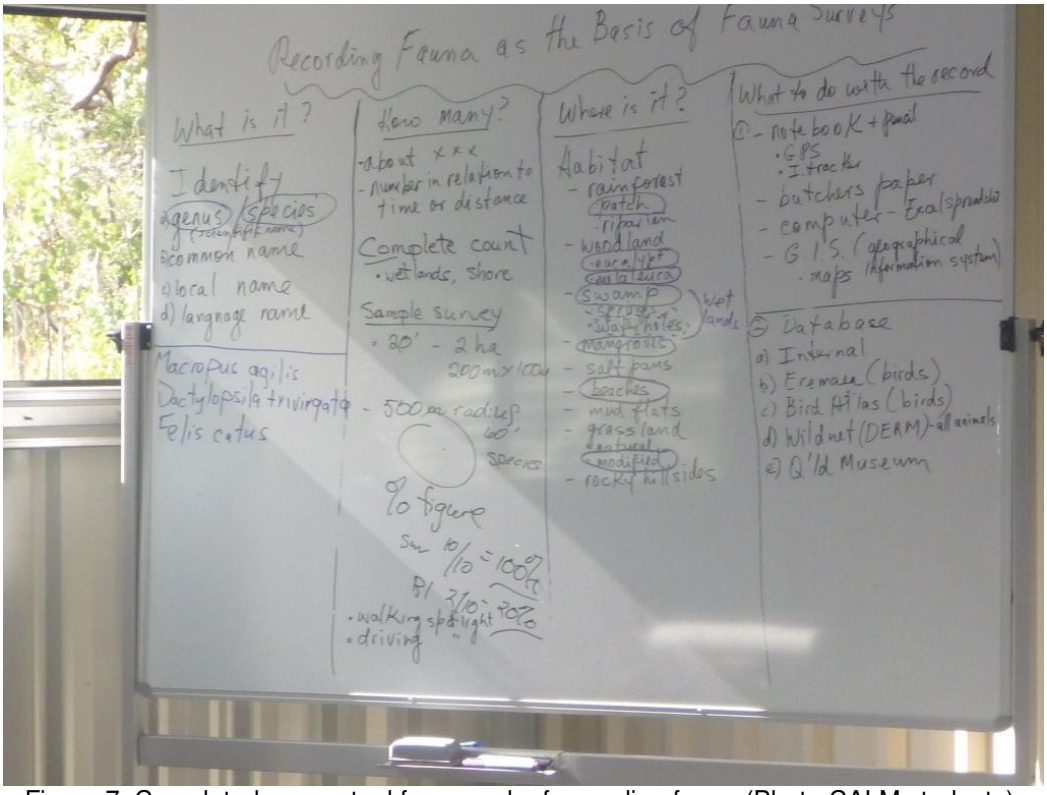

Figure 7. Completed conceptual framework of recording fauna (Photo CALM students).

Table 5. Conceptual framework of workshop.

Recording Fauna as the Basis of Fauna Surveys			
What is it?	**How many?**	**Where is it?**	**What to do with the record?**
Identify with certainty Do not record if uncertain of identity "*If in doubt leave it out*" ***Categories of naming*** Scientific name *Genus species* (Internationally unique name) Common name (Standardised for birds & mammals in Australia, but not for reptiles and frogs) Local name (Useful, but species may be lumped together) Language name (Name given by local Indigenous people which may use a different paradigm of naming from the species-based paradigm)	**Ways of recording numbers** ***Estimate*** Give as a number 'about 50', not as few or many ***Presence*** A sampling technique may merely record the presence of a species, often used for a defined area over a specified time e.g. Birds Australia 500 m radius (up to 60 minutes) ***Complete count*** Where all individuals can be seen e.g. large water birds on a swamp, or waders on a beach ***Numbers in relation to time/area/distance*** - Birds Australia 20 minute over 2 ha (200 x 100m) - Spotlighting, distance &/or time - Trapping number of traps set for number of nights ('trap-nights') 4. **Opportunistic** A chance observation of a species of interest or rarely seen e.g. tree-kangaroo, red goshawk, black-headed python	**Recording habitat & locality** ***Habitats*** Rainforest patch riparian Woodland eucalypt melaleuca Wet lands swamp springs water holes Mangroves Salt pans Beaches Mud flats Grassland natural modified Rocky hillsides ***Locality*** Map reading GPS Datum Precision	**Recording** 1. ***In the field use***: - note book & pencil - GPS - Itracker 2. ***back in the office transfer records to***: - butchers paper - computer spreadsheet GIS database ***Categories of databases*** a. Internal b. Eremaea (birds only) c. Bird Atlas (birds only) d. WildNet (DERM) all animals e. Q'ld Museum (specimens only)

7.2 Quality of data collected

Emphasis was placed on the desirability of collecting high quality data. Frequently the rangers were reminded that a few high quality records were better than a mass of low quality data.

Any records of fauna that could not be identified for certain must not be submitted. In addition it was emphasised that the inclusion of poor data can lead to incorrect management outcomes

Two phrases were introduced as mantras for data collectors:

- "If in doubt leave it out"
- "GIGO – **G**arbage **I**n **G**arbage **O**ut".

7.3 What's in a name?

Rangers were introduced to the complexity of naming species in order to overcome any confusing possibly arising when people use different names for the same animal.

The ***Scientific Name*** is a two word name comprising genus and species which is unique to that species e.g. *Litoria caerulea* (common green treefrog). This ensures that anyone referring to that species uses a name that is standard throughout the world. Closely related species will have the same generic name, but a different species name e.g. *Litoria infrafrenata* (white lipped treefrog).

Scientific names can change, but changes have to follow strict rules of The International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature 2000). For example the cane toad was long known as *Bufo marinus*, but recently scientists determined that it actually belonged in the genus *Rhinella*, so the new name is *Rhinella marina.*

Common names are very useful, and many people find them easier to remember than the scientific name. In Australia, the common names of birds and mammals have been standardised and are the ones used in most field guides.

This is not the case, however, for frogs and reptiles, mainly because their scientific descriptions are still undergoing changes and new species are continually being described. Although common names are used for the frogs and reptiles, there is as yet no agreed standard list for the Australian species. With frogs the common names used by the Queensland Museum and the Queensland Department of Environment and Resource Management's WildNet database differ considerably from those used in the latest field guide by Tyler and Knight (2009) as shown in Table 6.

Table 6. Scientific and common names of frogs recorded in the Archer Point area, demonstrating the different common names used in DERM's WildNet and by Tyler and Knight (2009) in their *Field Guide to the Frogs of Australia*.

Scientific name	Common name in WildNet	Common name in Tyler & Knight	Different scientific name in Tyler & Knight
Cophixalus peninsularis	Cape York nurseryfrog	Cape York frog	
Limnodynastes convexiusculus	marbled frog		
Litoria bicolour	northern sedgefrog	northern dwarf tree frog	
Litoria caerulea	common green treefrog	green tree frog	
Litoria infrafrenata	white lipped treefrog	white-lipped tree frog	
Litoria lesueuri sensi lato	stony creek frog	Lesueur's frog	
Litoria nasuta	striped rocketfrog	rocket frog	
Litoria nigrofrenata	tawny rocketfrog	bridle frog	
Litoria pallida	pallid rocketfrog	pale frog	
Litoria rothii	northern laughing treefrog	Roth's tree frog	
Litoria rubella	ruddy treefrog	red tree frog	
Hylarana daemeli	Australian woodfrog	water frog	*Rana daemeli*
Rhinella marina	cane toad	cane toad	*Bufo marinus*

Local names are those used by people in the area where the records are made. Again they can be useful because of the ease of use. Some local names, such as the jabiru for the black-necked stork, apply to only one bird and are used throughout Australia. Others, however, may apply to more than one species within an area. For example the local name *blue jay* is used for both the white-bellied cuckoo-shrike and the black-faced cuckoo-shrike, and *leatherhead* can apply to both the noisy friarbird and helmeted friar bird. Another catch is that a local name may apply to different species in different regions. For example throughout much of Cape York Peninsula the local name *red kangaroo* is given to the antilopine wallaroo, whereas it applies to the true red kangaroo elsewhere.

Language names are those used by the local indigenous language and may follow very different rules to those used for naming individual species.

7.4 Description of habitats

In the course of the workshop participants fleshed out descriptions of the habitats visited.

7.4.1 Woodland

A dry eucalypt woodland was the most extensive habitat covering the area of interest, usually with a canopy 15 to 20 m tall, a moderately dense understorey/shrub layer and grassy ground cover (Figure 8). It occurred as a fine scale mosaic of different species depending on drainage, soils and parent rock.

In some areas, for example along the track into the Esk River rainforest patch on poorly drained alluvial type soils, a pronounced understorey of the broad-leaved paperbark tree (*Melaleuca viridiflora*) was present.

A very tall (20-25 m) paperbark woodland occurred on swampy ground in the headwaters of Spring Creek. The canopy trees were predominantly a very tall paperbark (*Melaleuca sp.*). The understorey consisted of a variety of species which included the swamp mahogany (*Lophostemon suaveolens*) and red beech (*Dilenia alata*) (Figure 9).

A low to medium height (about 12 m) grassy woodland with the broad-leaved paperbark tree tree (*Melaleuca viridiflora*) as the main canopy species occurred adjacent to the salt pan visited south of the Annan River (Figure 10).

Figure 8. Eucalypt Woodland along Ranger Track in the vicinity of the Ranger Station (Photo YBM rangers)

Figure 9. Tall Melaleuca swamp forest in headwaters of Spring Creek (Photo CALM students)

Figure 10. Broad-leaved melaleuca (*Melaleuca viridiflora*) woodland adjacent to the salt pan site (Photo YBM rangers).

7.4.2 Rainforest

It was not an extensive habitat, but recognised as important by the rangers because of its obvious difference from woodland both in its plants and animals. It occurred as narrow riparian strips, no more than abut 50 m wide, along the main water courses such as the Esk River and Hardwicke Creek (Figure 11). At one point along the Esk the rainforest expanded into a more substantial patch. A second rainforest patch occurred on the footslope of the coastal hills immediately seaward of the Ranger Station and abutting a mangrove strip. The rainforest trended towards a relatively dry, though evergreen, type with a leafy ground cover and shrubs, mostly of canopy species saplings. Life forms such ferns and gingers, indicative of a more constantly wetter climate, were not evident.

Figure 11. Rainforest riparian strips along the Esk River (upper, note river bed in background) (Photo - camera-trap) and Hardwicke Creek (lower, note transition to grassy eucalypt woodland in background) (Photo – camera-trap).

7.4.3 Mangroves

The most extensive area of mangroves was at the mouth of the Annan River and in Walker Bay immediately to the south. Elsewhere mangroves existed as narrow strips in some of the smaller bays, including the mangrove habitat sampled immediately seaward of the Ranger Station (Figure 12).

Figure 12. Mangroves at the site sampled seaward of the Ranger Station (Photo YBM rangers & CALM students)

7.4.4 Saltpans

Saltpans were most extensive along the lower reaches of the Annan River, east of the Cooktown Development Road and south of the river. The one sampled was at the western end of this chain and consisted of exposed salt encrusted mud, succulent plants, stunted mangroves and rushes bordering open brackish water (Figure 13). On the landward side a narrow band, up to 50 m wide, of small leaved paperbarks (*Melaleuca sxx*) with bare ground cover transitioned abruptly to a low eucalypt woodland with a broad-leaved paperbark (*Melaleuca viridiflora*) understorey and grassy ground cover.

Figure 13. Salt pan on southern side of lower reaches of Annan River, Mt Cook in the background (Photo YBM rangers)

7.4.5 Strand

The strand habitat sampled consisted of sandy cum muddy beach which at low tide extended seaward for 50-100 m, and was backed by mangroves in the small estuary of Spring Creek, east of the Ranger Station.

7.4.6 Wetlands

Wetlands were not extensive within the area of interest, but provided markedly different habitat to the surrounding woodlands and are important for biodiversity of the area. They included:

- Waterholes along the Esk River, which is not a permanently flowing river
- Small permanent springs at the head of Spring Creek
- The tall paperbark swampland at the head of Spring Creek (Figure 9)
- Open water adjacent to salt pans (Figure 13).

Sampling took place at waterholes on the Esk River immediately adjacent to the rainforest patch, open water as part of the Annan River saltpan and the Spring Creek paperbark swamp.

7.4.7 Grasslands

Natural – A few areas of natural open grassland occur within the survey area, but none were visited. A grassy understorey is common, however, throughout much of the eucalypt woodland.

Modified – Grassland as the result of clearing, recently burnt, occurred at the western end of Archer Point Road areas had been cleared of trees in the past to provide open grasslands for grazing. A section of this type of habitat was traversed by the western end of the Esk River rainforest patch track (Figure 14).

Figure 14. Open grassland areas as a result of clearing along Archer Point Road (Photo YBM rangers)

7.4.8 Rocky Hillsides

This habitat exists as hillsides with scattered exposed boulders rather than cliffs or rock platforms. The hillsides are a feature of the coastal landscape as headlands– Grave Point, Walker Point and Archer Point – covered with windswept stunted vegetation. The most extensive area of rocky hillsides exists on the Dowling Range forming the southern boundary of the area of interest. Vegetation on the range is grassy eucalypt woodland on the lower and mid slopes with patches of rainforest along the crest and down gullies.

This habitat was not sampled.

7.5 Map reading

An afternoon session was held in which the rudiments of map reading and understanding the coordinates displayed by GPSs were covered (Figure 15). Topics included understanding:

- Map scales
- The difference between grid coordinates (a 1 x 1 km square grid on the 1:50,000 and 1:100,000 maps) and geographical coordinates (latitude and longitude)
- How to read grid coordinates from the map
- The three commonly used Datums, particularly the 200 m difference between the older AGD66 (Australian Geodetic Datum 1966) Datum and the more modern WGS84 (World Geodetic System 1984) or GDA94 (Geocentric Datum of Australia 1994) Datums.

Figure 15. Map reading (Photo YBM rangers, CALM students)

7.6 Field Data Collection

Three methods were used to obtain original data in the field:

1. Bird surveys:
    a. In a uniform habitat within 500 m of a specified point
    b. 20 minute search within a two hectare area (100 x 200 m)
    c. Complete counts from a vantage point, for wetlands and strand

2. Spotlighting:
    a. Vehicle traverse (distance and time recorded)
    b. On foot within specified habitats (time recorded)

3. Opportunistic records of any vertebrate not recorded during the systematic surveys.

The localities at which fauna was recorded during the present survey is shown in Figure 16.

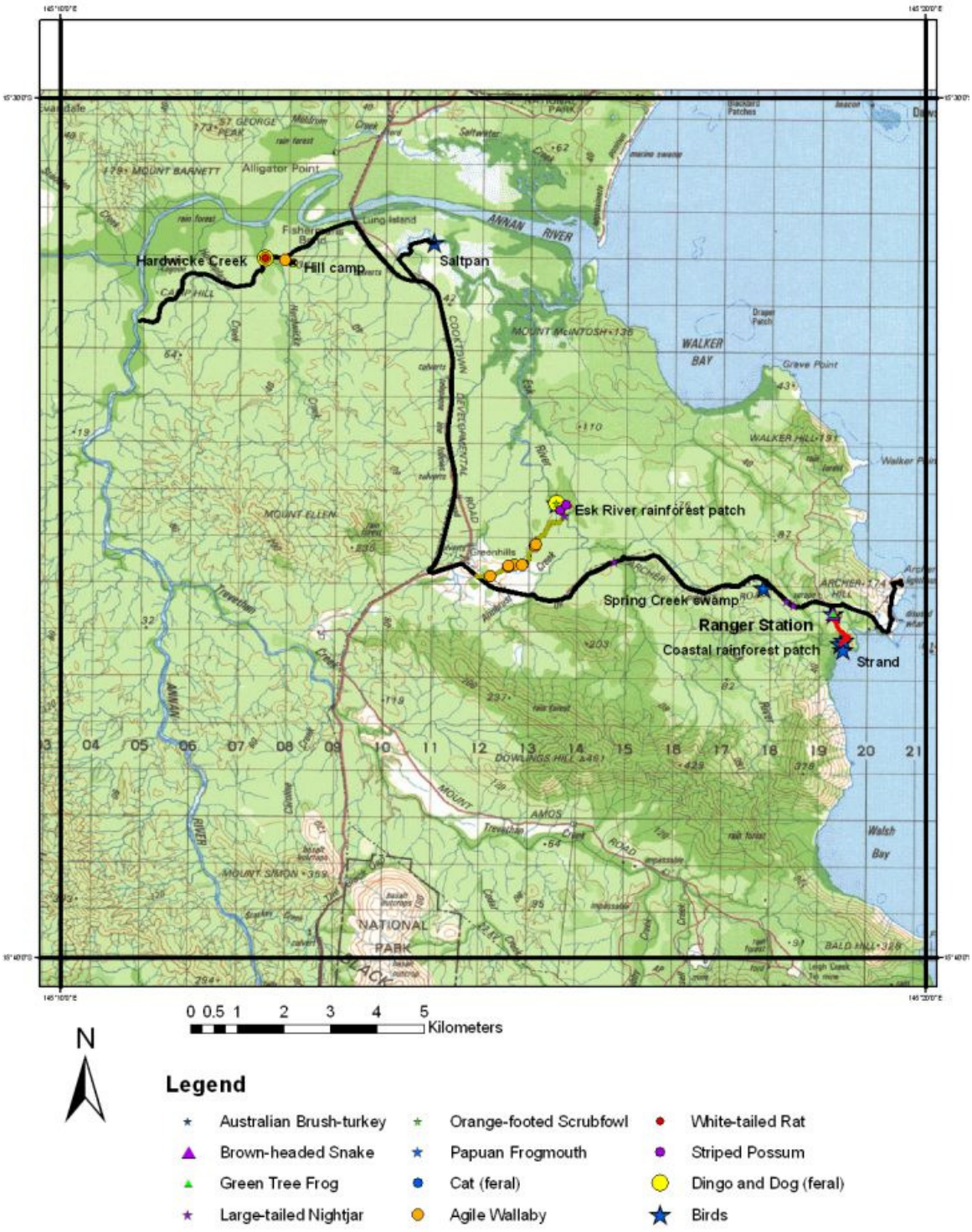

Figure 16. Localities at which fauna recorded during the present survey

7.6.1 Bird Surveys

Family Guide
The rangers were provided with a 16-page family guide, which is based on answering three questions – what was the bird doing? what was its overall size? what was its bill shape? Silhouettes illustrate typical shapes of each family. In this way, rather than trying to keep several hundred species clear in one's head, this number is reduced down to about 60 families. By being sure what family a bird is in, it is then relatively easy to turn to the correct section of a field guide, to identify the species.

Threee ways of doing bird surveys were demonstrated, using standard Birds Australia methods:

- 500 metre radius from a central point, recording all species seen or heard in 30+ minutes
- Two hectare – 20 minute area search, recording all individuals of all species seen or heard
- Complete counts of all shore birds or wetland birds, seen from a vantage point.

To gain an overall baseline of what birds were within what habitats, each of these habitats was surveyed using method 1. All species seen or heard within an area of 500 m from a central point were listed, during a period of at least 30 minutes, but often longer. The central point was recorded using a GPS (Figure 17). As all but two habitats were visited at least three times, it was possible to see if most of the likely species in these habitats had been recorded, by graphing the cumulative number of species seen over all visits.

Figure 17. Kath Shurcliff leading a bird survey (Photo YBM rangers).

A total of 65 bird species were recorded (Table 7). The Birds Australia database indicates that there are a total of 160 species recorded previously in the 10-minute cell that includes most of Yuku-Baja-Muliku area (see Table 3 for complete list). This cell also includes Keating's Lagoon, which is a wetland that is frequently visited by birders, and includes numerous wetland birds not recorded in the present survey. However, five species were recorded that have not been previously recorded on the Birds Australia database – Rose-crowned Fruit-Dove, Superb Fruit-Dove, Grey Goshawk, Tropical Scrubwren and Silvereye. Not many shorebirds were recorded as only one site was visited, and shorebirds are just now returning to Australia from their northern migration.

Table 7. Yuku-Baja-Muliku Bird Survey – 23-27 August 2010

Species	Scientific Name	Conservation Status	Overall Reporting	Feeding Category	Esk River Rainforest	Beach Rainforest	Eucalypt woodland	Mangrove, Beach	Spring Creek swamp	Saltpan, Melaleuca	Incidental
Casuary, Emu											
* Emu	*Dromaius novaehollandiae*		L	G							
Moundbuilders											
Australian Brush-turkey	*Alectura lathami*		L	G							
Orange-footed Scrubfowl (Scrub hen)	*Megapodius reinwardt*		L	G							
Geese											
Magpie Goose	*Anseranas semipalmata*		H+	M							
Ducks											
Wandering Whistling-duck	*Dendrocygna arcuata*		L	W							
Radjah Shelduck (Burdekin)	*Tadorna radjah*		M	W							
Green Pygmy-goose	*Nettapus pulchellus*		L	W	18						
Grey Teal	*Anas gracilis*		M	W	178						
Pacific Black Duck	*Anas superciliosa*		H+	W	17						
* Hardhead	*Aythya australis*		L	W	2						
Grebes											
Australasian Grebe	*Tachybaptus novaehollandiae*		M	W	20						
Moundbuilders											
Orange-footed Scrubfowl	*Megapodius reinwardt*			G	x						
Pigeons and Doves											
Peaceful Dove	*Geopelia striata*		L	G	x		x				
Bar-shouldered Dove	*Geopelia humeralis*		M	G	x	x	h		h	h	
Rose-crowned Fruit-dove	*Ptilinopus regina*			Fr		x					
Wompoo Fruit-dove	*Ptilinopus magnificus*			Fr	h						
Superb Fruit-dove	*Ptilinopus superbus*			Fr	h						
Pied Imperial Pigeon	*Ducula bicolor*			Fr		h					
Frogmouths											
Papuan Frogmouth	*Podargus papuensis*		M	I	x				x		
Nightjars											
Large-tailed Nightjar	*Caprimulgus macrurus*		L	I	x						
Storks											
Black-necked Stork (Jabiru)	*Ephippiorhynchus asiaticus*		M	W						4	

Herons, Egrets											
Eastern Great Egret	*Ardea modesta*			W						3	
Eastern Reef Egret	*Ardea sacra*		L	W				7			
White-faced Heron	*Egretta novaehollandiae*		L	W				3		1	
Little Egret	*Egretta garzetta*			W						1	
Ibis, Spoonbills											
Australian White Ibis	*Threskiornis molucca*			G						1	
Birds of Prey											
Eastern Osprey	*Pandion cristatus*			W				2			
White-bellied Sea-eagle	*Haliaeetus leucogaster*			W			x				
Whistling Kite	*Haliastur sphenurus*		M	A	x			1			
Brahminy Kite	*Haliastur indus*			W							x
Grey Goshawk	*Accipiter novaehollandiae*		L	A			x				
Falcons											
Nankeen Kestrel	*Falco cenchroides*			A				1			
Brown Falcon	*Falco berigora*			A							x
Falcon unidentified	*Falco sp.*			A			x				
Stone-curlews											
Beach Stone-curlew	*Esacus magnirostris*	V	L	W				2			
Plovers											
Red-capped Plover	*Charadrius ruficapillus*		L	M				2			
Sandpipers											
Whimbrel	*Numenius phaeopus*		L	M				7			
Grey-tailed Tattler	*Tringa brevipes*		H+	M				22			
Terns, Gulls											
Crested Tern	*Thalasseus bergii*		L	W				2			
Cockatoos											
Sulphur-crested Cockatoo	*Cacatua galerita*		M	Fr	x		x		x		
Parrots											
Rainbow Lorikeet	*Trichoglossus haematodus*		H	Fl	x	x		x	x	x	
Scaly-breasted Lorikeet	*Trichoglossus chlorolepidotus*			Fl	h						
Red-winged Parrot	*Aprosmictus erythropterus*			Fr	x						
Cuckoos											
Pheasant Coucal	*Centropus phasianinus*		L	G	x		h				
Little Bronze-Cuckoo	*Chalcites minutillus*		L	I	x	h	h				
Brush Cuckoo	*Cacomantis variolosus*		L	I			h				
Kingfishers											
Forest Kingfisher	*Todiramphus macleayii*		M	I			x				
Sacred Kingfisher	*Todiramphus sanctus*			I				x			
Blue-winged Kookaburra	*Dacelo leachii*		M	I					x	h	
Bee-eaters											
Rainbow Bee-eater	*Merops ornatus*		M	A	x	x	x	x		x	
Songbirds – Pittas											
Noisy Pitta	*Pitta versicolor*			G		h					
Bowerbirds											
Great Bowerbird	*Ptilonorhynchus nuchalis*		L	Fr	h	x	x	x		h	
Scrubwrens, Gerygones											
Tropical Scrubwren	*Smicrornis beccarii dubius*	R		I	x						

Fairy Gerygone	*Gerygone palpebrosa*		M	I	x	x					
Honeyeaters											
Yellow-spotted Honeyeater	*Meliphaga notata*		M	Fl	x	x	x	x	x		
Dusky Honeyeater	*Myzomela obscura*		M	Fl	x		x		x		
Varied Honeyeater	*Lichenostomus versicolor*			Fl				x			
White-throated Honeyeater	*Melithreptus albogularis*		H	Fl	h		h			h	
Helmeted Friarbird (Leatherhead)	*Philemon buceroides*		M	Fl	h	h	x	x	h		
Cuckoo-shrikes, Trillers											
White-bellied Cuckoo-shrike (Blue jay)	*Coracina papuensis*		M	I	x	x	x			x	
Cicadabird	*Coracina tenuirostris*		L	I	h						
Varied Triller	*Lalage leucomela*		M	I	h	x	x	x		x	
Whistlers											
Little Shrike-thrush	*Colluricincla megarhyncha*		L	I	h	x	h				
Orioles											
Australian Figbird	*Sphecotheres vieilloti*		L	Fr	x	x	x				
Yellow Oriole	*Oriolus flavocinctus*		H	Fr	x		h			h	
Woodswallows, Butcherbirds											
Black Butcherbird	*Cracticus quoyi*		M	I	x						
Drongos											
Spangled Drongo	*Dicrurus bracteatus*		M	I	x		x	x			
Fantails											
Rufous Fantail	*Rhipidura rufifrons*			I	x						
Crows, Ravens											
Torresian Crow	*Corvus orru*										x
Monarch Flycatchers											
Shining Flycatcher	*Myiagra alecto*			I		h					
Leaden Flycatcher	*Myiagra rubecula*		L	I		x	x				
Spectacled Monarch	*Symposiarchus trivirgatus*			I	x						
White-eyes											
Silvereye	*Zosterops lateralis*			Fr	x						
Sunbirds, Flowerpeckers											
Mistletoebird	*Dicaeum hirundinaceum*		H	Fr	x	x	x	h	x		
Olive-backed Sunbird	*Nectarinia jugularis*		H	Fl	h	x	x	x	x	x	
Total Species					35	19	25	21	10	15	3
Total Effort (minutes)					140	87	155	145	105	80	

The cumulative graphs show that most species were probably seen in the coastal patch rainforest and the strand (Figure 18). In contrast, substantial numbers of new species were still being added in the woodland, and Esk River rainforest, indicating that additional survey time was needed in these habitats to obtain a more complete list. It is interesting to note that the graphs did not start to level out until about 2 hours had been spent in any habitat, indicating that 1.5 to 2 hours needs to be spent in each habitat for any given survey period.

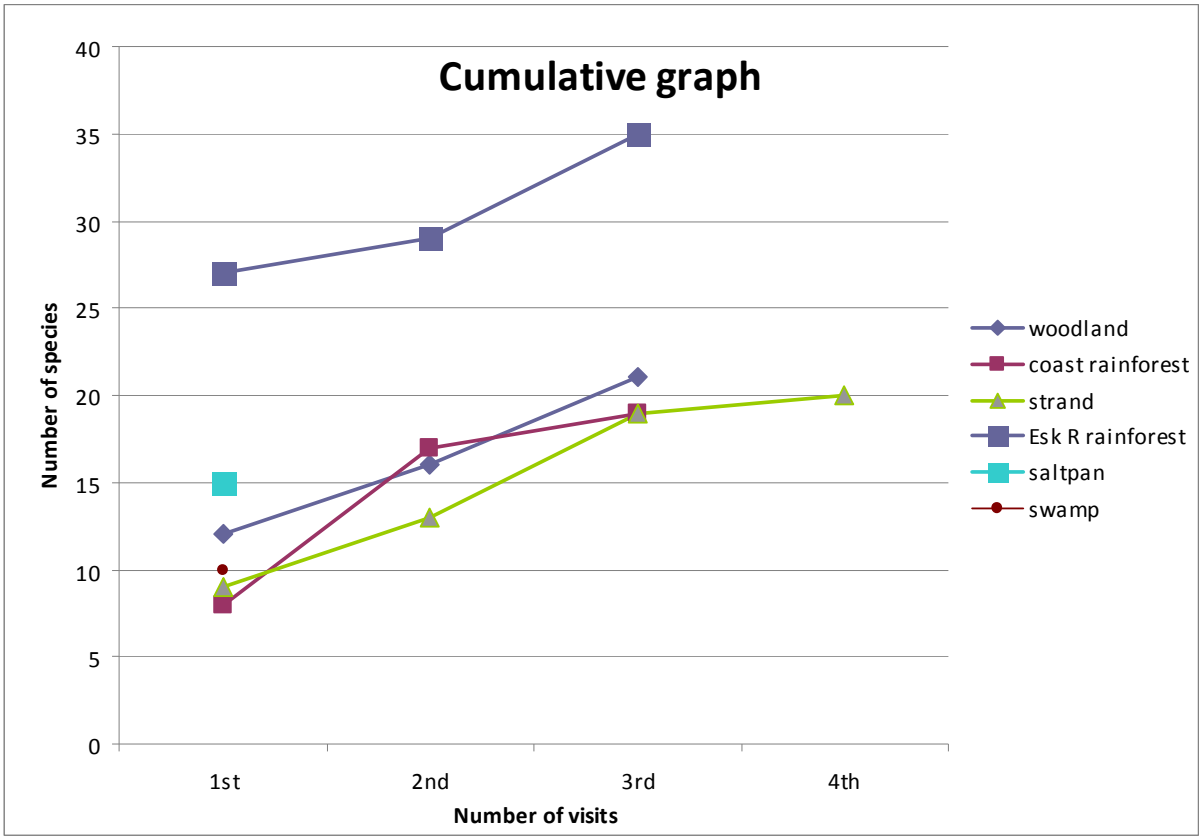

Figure 18. Cumulative numbers of bird species in major habitats visited

Most of the land birds recorded were not of special conservation note. The exceptions were Beach Stone-curlew noted as vulnerable, and Tropical Scrubwren as a restricted range species. In addition, the migratory waders (Whimbrel and Grey-tailed Tattler) are species which are part of the international agreement on migratory waders, as part of the East Asia-Australasian flyway. A blue-flagged Grey-tailed Tattler was observed, which had been banded in northern Japan, as part of the ongoing research into these flyways.

Although not recorded any during the surveys, Red-backed Fairy-wrens should be noted wherever these occur, since they are likely to be good indicators of impacts of fire regimes.

7.6.2 Spotlighting

Two types of spotlighting surveys were undertaken:

1. A timed/distance survey from a vehicle driving at very low speed (<10 km/hr, low ratio/2nd gear) with two or more hand held spotlights (30 watt) and
2. A timed search on foot with two spotlights of approximately 30 watts and several head torches (Figure 19).

The vehicle and foot spotlight surveys along the Esk track and in the Esk River rainforest patch were repeated, whereas the Ranger Track foot spotlighting was undertaken on one night only.

Figure 19. John Winter leading a spotlight survey (Photo HM).

Although the number of animals recorded was not large, spotlighting recorded some species – striped possum and feral cat – that were not recorded using other methods (Table 8). The repeat spotlighting demonstrated that the results vary from night to night and, as for the birds, a number of visits need to be made to any one locality to ensure a full complement of species for the area is obtained.

Table 8. Spotlighting results.

Date	23/8/2010	24/8/2010	23/8/2010	24/8/2010	25/8/2010
Locality	Esk R track	Esk R track	Esk R rainforest	Esk R rainforest	Ranger's Track
Type	Vehicle	Vehicle	Foot	Foot	Foot
Distance (m)	5600	6000			
Time started	20:40	19:57	21:22	20:47	20:15
Time spent hr:mn	1:19	1:24	0:33	1:15	1:27
Species recorded					
Agile wallaby	1	3			
Striped possum	1		1		
Feral cat	1				
Large-tailed nightjar	2	heard	heard		
Papuan frogmouth				1	
Unidentified (dog?)		1			
Total	**5**	**5**	**2**	**1**	**0**

7.6.3 Camera-traps

Four camera-traps were set at localities thought to be most likely to record animals, particularly northern quolls. Two were set in the Hardwicke Creek area where northern quolls had been

seen previously, one in the Esk river rainforest patch and one near the Ranger Station. Two of the cameras recorded animals (Table 9, Figure 20).

Table 9. Camera-traps baited with chicken necks.

Locality	No. of nights set	Habitat	Species recorded	Comments
Hardwicke Cr	4	Riparian rainforest strip	Dingo (2 individuals) Agile wallaby White-tailed rat Brush turkey Cow	
Hardwicke Cr hill	4	Building in grassy eucalypt woodland on hill	none	Seen in the building on several occasions by CH and JH
Esk River	4	Riparian rainforest patch	Dingo Orange-footed scrub fowl	
Ranger Station	4	Grassy eucalypt woodland on upper slope	none	Waving grass repeatedly triggered the camera

Figure 20. A brush turkey and a dingo captured by camera traps

7.6.4 Opportunistic records

Any species seen outside the systematic search methods were recorded in a field note book, point localities obtained using a GPS, and sometimes photographed (Figure 21). Species recorded opportunistically included the brown falcon, Brahminy kite, Torresian crow, brown-headed snake, common green tree frog and striped rocketfrog (Figure 22).

Figure 21. Data recording in field note books (Photo YBM rangers).

Figure 22. Some species recorded during the survey- common green treefrog, brown-headed snake, Papuan frog mouth and reef heron (Photos; YBM rangers, JW, CALM students, CALM students)

8 WHAT NEXT?

A session held on the last day of the workshop listed a number of activities to be undertaken in order to maintain and build on the results obtained during the week to expand on information required to develop a biodiversity plan for the area (Figure 23).

The activities recommended to be taken in this session can be expanded under a number of headings.

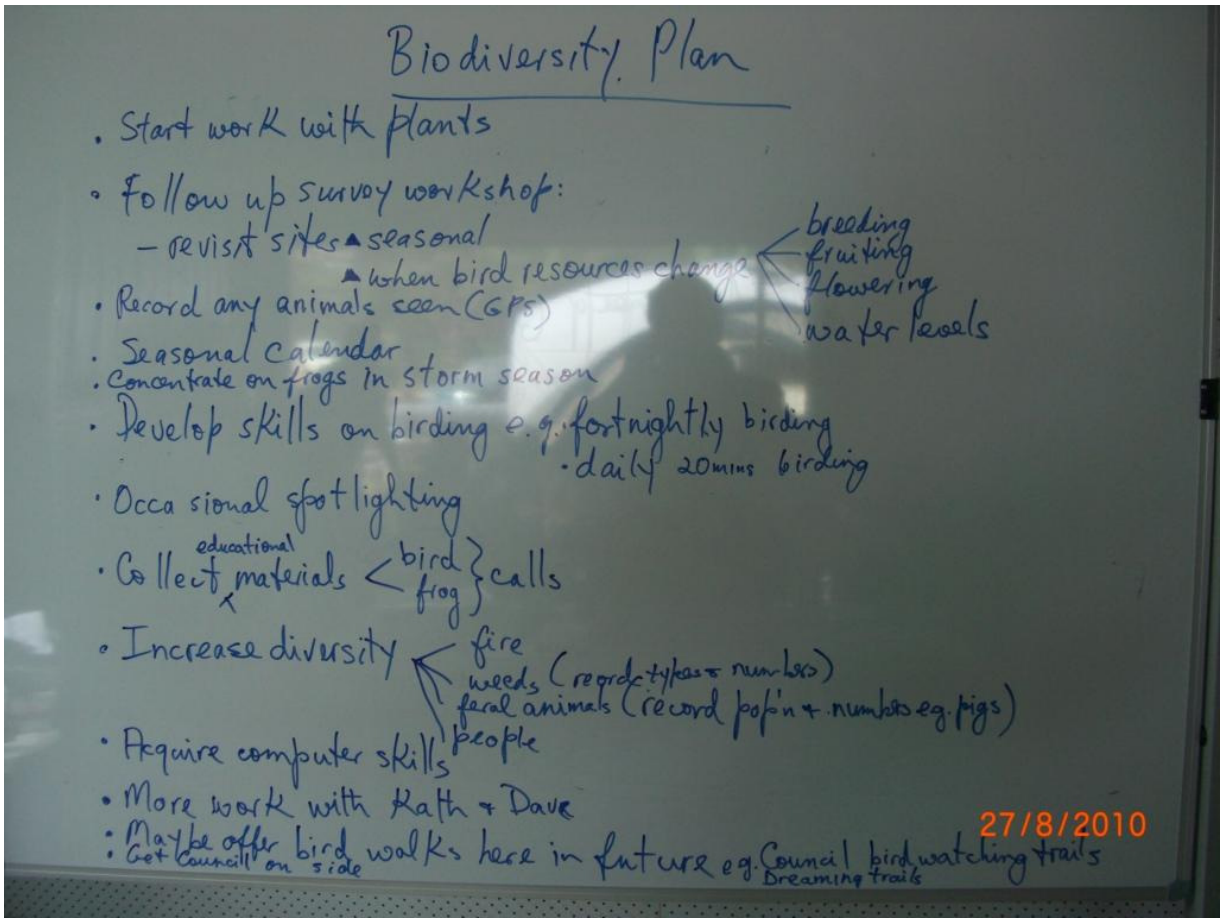

Figure 23. Actions to be undertaken to implement a Biodiversity Plan (Photo HM)

8.1 Plants

The rangers recognised that the skills obtained during the current workshop on animals needed to be complemented with similar skills on plants. This would best be done by running a similar workshop on plants.

8.2 Birds

Birds are the group for which the most data can be gathered with relative ease because birds are easily identified, numerous, active during the day, different species occur in the different habitats and sampling techniques are easily learn.

During the workshop birds were the group of animals with which the rangers became most proficient at identifying species and in the techniques of sampling.

In summary, the following are recommended for follow-up actions:

- Continue to improve identification skills of birds through direct observation and recognition of calls. Obtain CDs of bird calls and down load to MP3 player for field use. CDs of north east Queensland bird calls include David Stewart's, available through www.thebirdingshop.com , or the 3 CD set “Bird Calls of NE Queensland” by Fred van Gessel, obtainable from www.birdwatchers.com.au .

- Plan a survey program based upon the seasonal calendar being developed to track how birds respond to these different changes. Record flowering, fruiting, general water levels and other important bird resources during surveys.

- Additional surveys should be done for wetlands in the area, a few more locations for eucalypt and melaleuca woodlands (including rocky hillslopes), and the beach flats at the mouth of the Annan River, to make the surveys more comprehensive.

- Monitoring of shorebirds can be done by noting congregations of shorebirds at roost sites (usually at high tide) during routine field work. Overall counts and individual species should be completed wherever these are noted. Identification guides for waders are available through the www.shorebirds.org.au website. Numbers of shorebirds are likely to increase from September-March.

- Whenever control burns are planned, a 20-minute bird count should be completed before and after the burn to gauge immediate impact of such burns, and to avoid burning when bird species are nesting.

- A 20-minute bird count can be done before other activities, such as sicklepod control in the Esk River rainforest patch, are started.

- Data can be entered on one or all the established databases, Eremaea, Birds Australia, WildNet, for easy storage and retrieval of reports, and to assist with keeping these national/state databases up to date (see Appendix I for details of databases).

8.3 Spotlighting

Although spotlighting results in far fewer records than day time birding, it does target a different group of species which include many of the mammals, the nocturnal birds (owls, nightjars, frogmouths), reptiles and frogs. Additional spotlighting can be done by:

- Repeat sampling along the Esk River Transect, both from a vehicle along the access track and on foot in the rainforest patch as well as on foot down the track from the Ranger Station to the beech
- Sampling at other new localities.

8.4 Frogs

Few frogs were encountered during the present workshop due to their inactivity because of the dry conditions at the end of the dry season.

The best time to search for frogs is following the first major storms towards the end of the year when they become active and start breeding.

As with birds, knowing the calls of frogs is necessary to adequately sample this group. David Stewart's CD *Australian Frog Calls Tropical North-East* is available from ttp://www.naturesound.com.au/.

8.5 Opportunistic records

Many species can easily be missed during the formal sampling periods. They tend to be species that are cryptic (shy, stay hidden), cover large areas or do not occur in large numbers. Whenever they are seen they can be recorded and their locality determined using a GPS or from the 1:50,000 topographic map. The essential data to be recorded for each sighting is:

- Species identity (only if absolutely certain of it – remember 'If in doubt leave it out')
- Date
- Name of recorder/s
- A locality name
- Coordinates together with precision and Datum
- Remarks

Start with species of interest to the rangers and which are easily identified. More can be added as the rangers become better in their ability to confidently identify species. Table 10 provides a list of possible species that the rangers may wish to record.

Table 10. Species for recording whenever seen.

Class	Name	Comments
Birds	Southern cassowary	
	Emu	
	Wedge-tailed eagle	
	White-bellied sea-eagle	
	Other birds	Check with Kath for suitable additions
Mammals	Agile wallaby	Learn to tell it apart from the common wallaroo, antilopine wallaroo, pretty-faced wallaby and swamp wallaby
	Godman's rock-wallaby	
	Bennett's tree-kangaroo	

	Northern quoll	
	Common brushtail possum	
	Common ringtail possum	
	Red-legged pademelon	
	Feathertail glider	
	Sugar/Squirrel glider	Very difficult to tell these apart but worth recording as *Petaurus sp.* Send tails, bodies hung up on fences or brought in by cats to the Queensland Museum for identification
	Small bats	Send any found hung up on fences or brought in by cats to the Queensland Museum for identification
Reptiles	Lace monitor	But learn to tell it from other goanas
	Black-headed python	
	Other pythons	Learn to tell the difference between amethystine, carpet and spotted pythons, all of which have the same general body pattern
	Other snakes	Only if obtained as a specimen and sent to the Queensland Museum for identification
	Frilled lizard	
Frogs	Common green treefrog	Learn to tell it apart from the other large green frog, the white-lipped treefrog

8.6 Improve computer skills

The ability to use computers is now essential for the recording, processing and reporting on information collected on fauna and flora. The programs most commonly used are:

- Spread sheet e.g. Excel – for the entry of records prior to the entry to some databases such as WildNet or GIS programs
- Databases – learn to enter data into Eremaea, Birds Australia's Bird Records and WildNet (see Appendix I)
- Written documents e.g. Microsoft Word – for the writing of reports
- Power Point – for presentations at ranger meetings
- GIS (Geographical Information System) – for mapping records (See Figure 16 in this report)

8.7 Involvement with others

The rangers considered it would be beneficial to undertake activities with other organisations, groups and individuals within the local community by:

- Rangers providing bird tours for visitors
- Cooperation between Yaku-Baja-Muliku and the Cook Shire Council to produce Bird Watching Trails or Dreaming Trails for the area
- Inviting local people with expert knowledge to work with them.

9 ACKNOWLEDGMENTS

The Yuku-Baja-Muliku rangers and other facilitators of this workshop wish to thank Cass Sorenson for the considerable help given in making the event a success. We also appreciated the interaction with the group of students from the Cooktown State High School 'Conservation and Land Management Certificate' course who participated in the latter part of the workshop.

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1:100,000 Helenvale, sheet 7966
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11 APPENDIX I. DATABASES

Several databases are available for storing faunal data. Each has its own uses, advantages and disadvantages.

11.1 Eremaea

Eremaea Birds

A free birding atlas to which anyone can contribute.

http://www.eremaea.com/

Eremaea is a free database available for storing bird records on the web. To start using the database all that is needed is to register which does not cost anything. It is possible to access bird records entered by other users, though there are some restrictions (see Figure 24). When entering records into Eremaea, there is the provision to also enter the records into the Birds Australia database (see next).

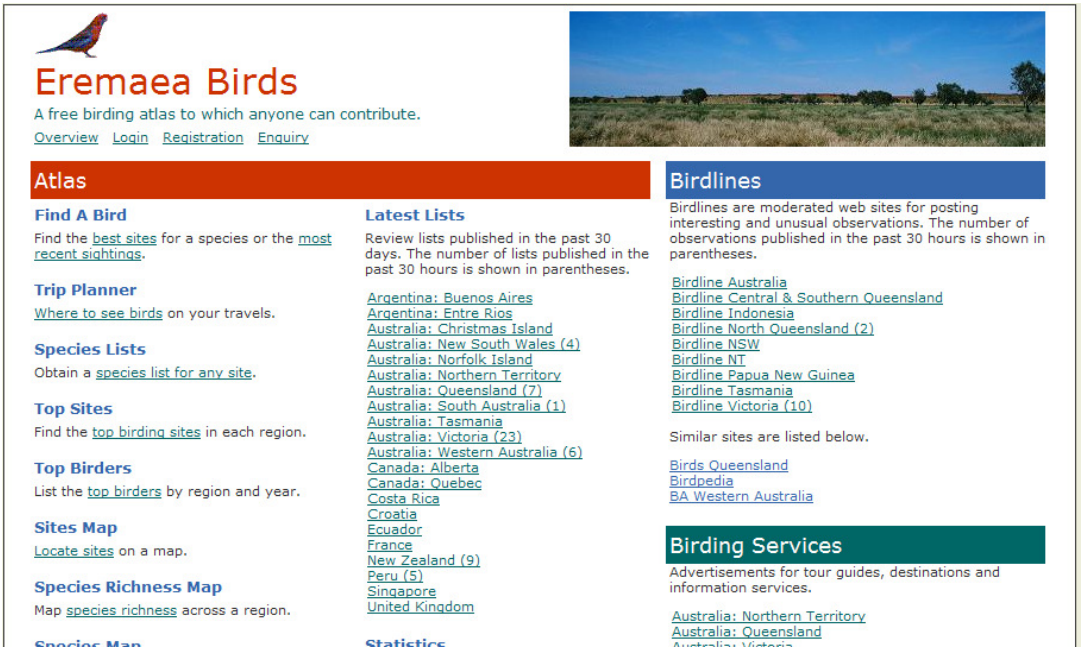


Figure 24. Part of Eremaea's Home page

11.2 Birds Australia - Birdata

Birds Australia, the national bird organisation, has a database for bird records called Birdata (Figure 25).

Birdata allows non-members of Birds Australia to download species lists for a degree square of latitude and longitude, for example one centred on the Cooktown area (Figure 26) and species distribution maps (Figure 27). Only members of Birds Australia can enter bird records into Birdata and obtain more detailed species lists, such as that for a 10 minute latitude and longitude square (Figure 28). Membership for organisations such as Yuku-Baja-Muliku is $119 per year. Point data for birds, suitable for using in Geographical Information Systems (GIS) requires a special request to Birds Australia and involves a fee.

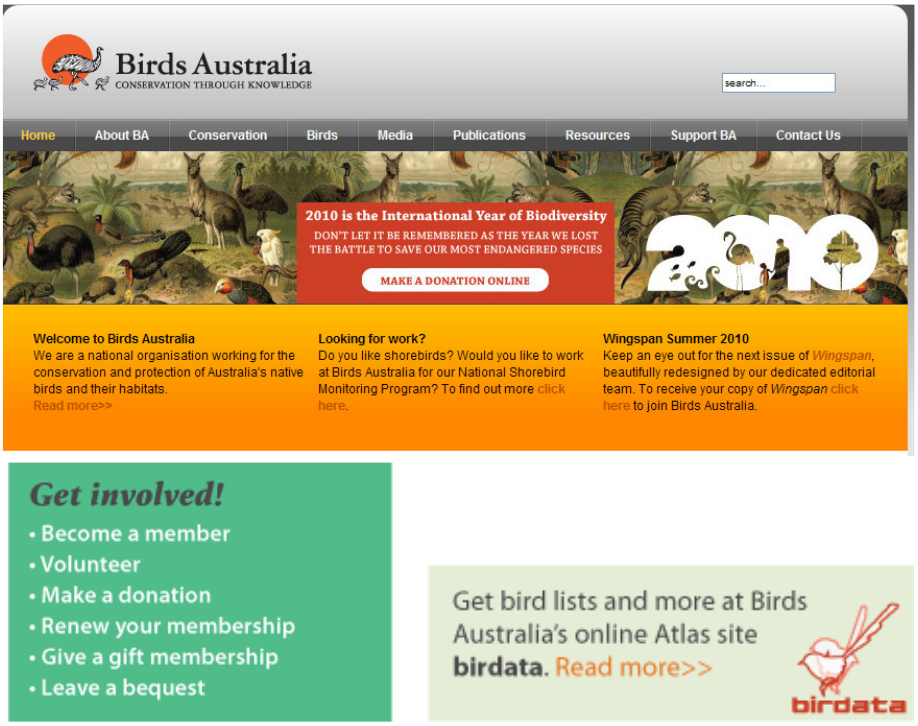
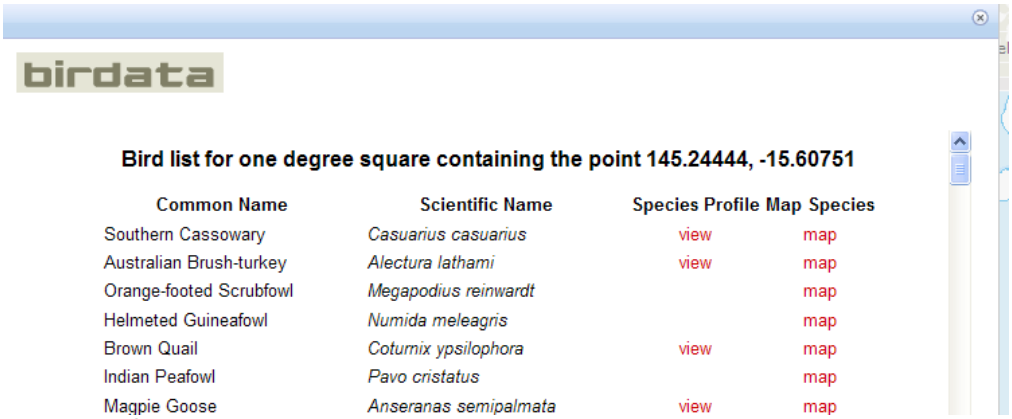


Figure 25. Sections of Birds Australia Home page http://www.birdsaustralia.com.au/



birdata

Bird list for one degree square containing the point 145.24444, -15.60751

Common Name	Scientific Name	Species Profile	Map Species
Southern Cassowary	*Casuarius casuarius*	view	map
Australian Brush-turkey	*Alectura lathami*	view	map
Orange-footed Scrubfowl	*Megapodius reinwardt*		map
Helmeted Guineafowl	*Numida meleagris*		map
Brown Quail	*Coturnix ypsilophora*	view	map
Indian Peafowl	*Pavo cristatus*		map
Magpie Goose	*Anseranas semipalmata*	view	map

Figure 26. Section of a bird list down loaded from Birdata for the degree square centred on Cooktown.

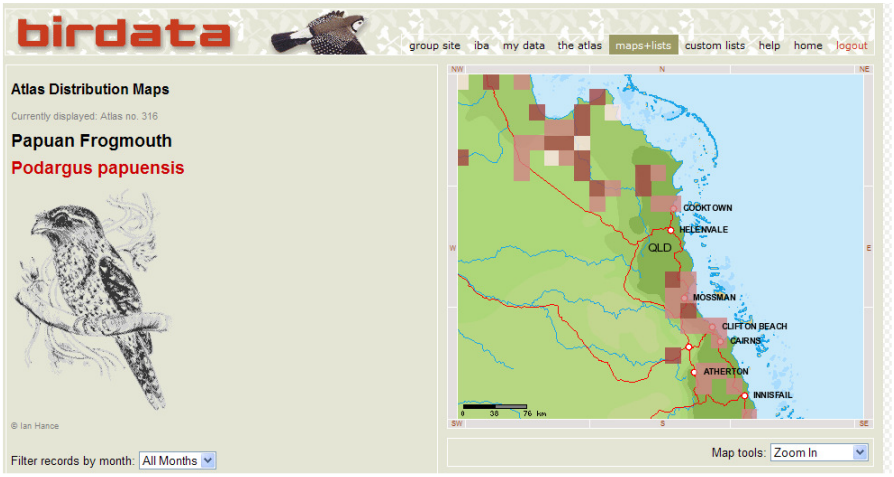
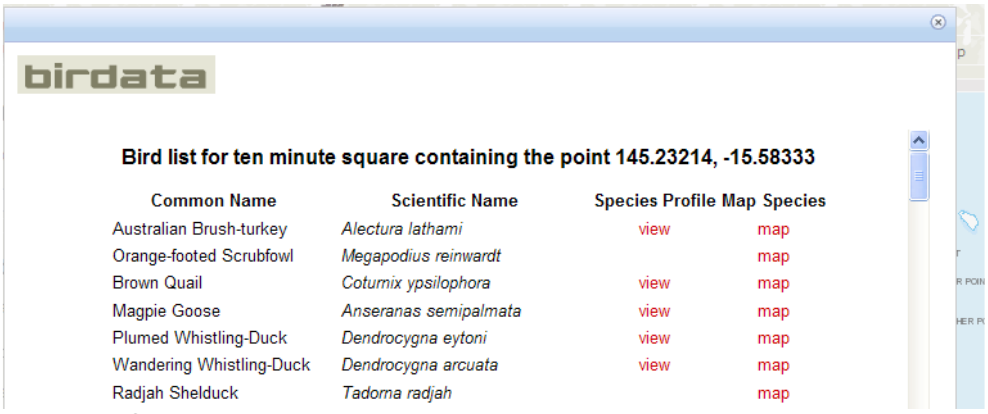


Figure 27. Distribution of Papuan frogmouth downloaded from Birdata.



birdata

Bird list for ten minute square containing the point 145.23214, -15.58333

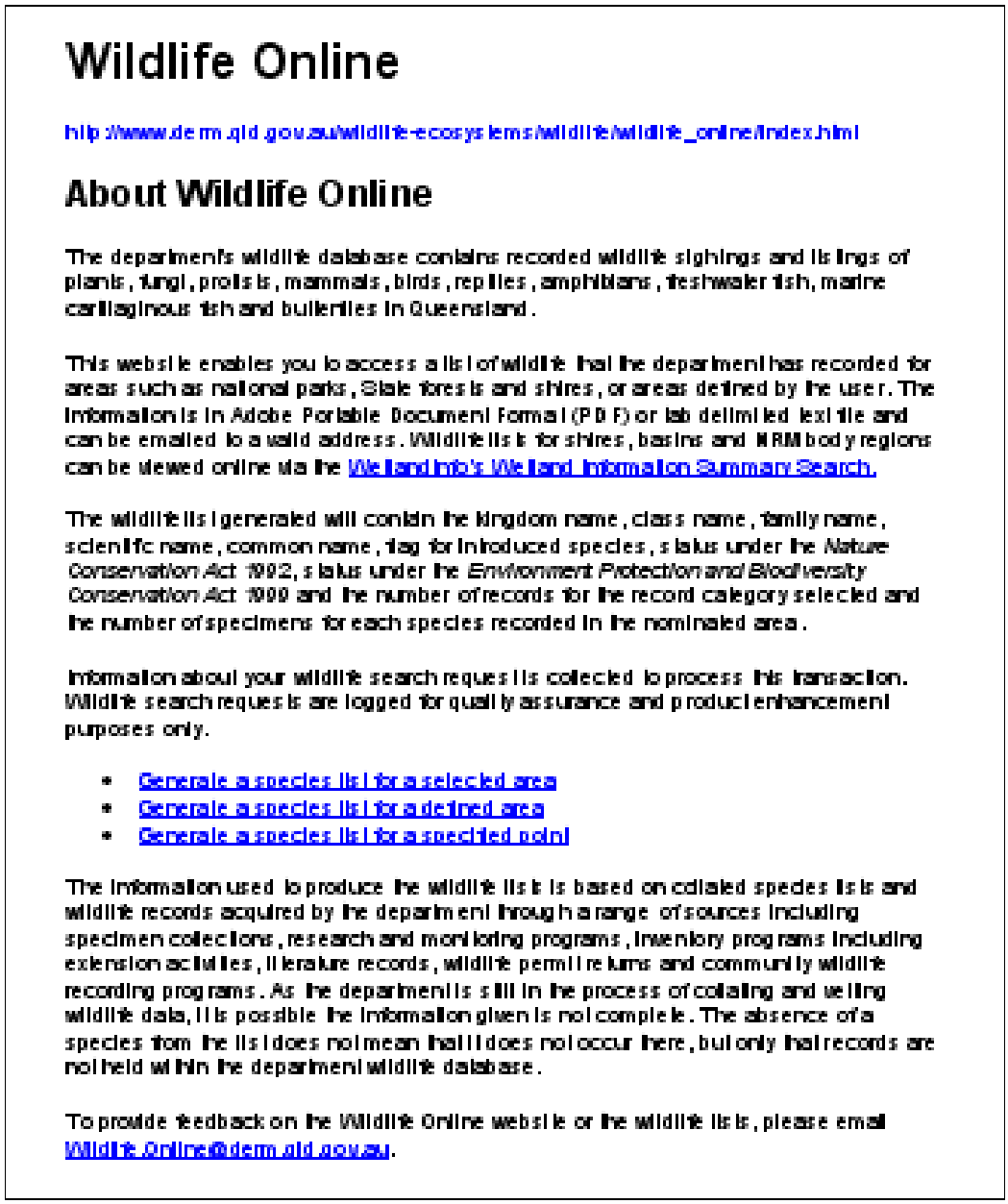
Common Name	Scientific Name	Species Profile	Map Species
Australian Brush-turkey	*Alectura lathami*	view	map
Orange-footed Scrubfowl	*Megapodius reinwardt*		map
Brown Quail	*Coturnix ypsilophora*	view	map
Magpie Goose	*Anseranas semipalmata*	view	map
Plumed Whistling-Duck	*Dendrocygna eytoni*	view	map
Wandering Whistling-Duck	*Dendrocygna arcuata*	view	map
Radjah Shelduck	*Tadorna radjah*		map

Figure 28. Section of a bird list down loaded from Birdata for the 10' square centred on the Archer Point area.

11.3 WildNet

WildNet is the Queensland Department of Environment and Natural Resources' (DERM) database for the storage of plant and animal records. A description of the information available from the records stored in WildNet is provided in *Wildlife Online* (Figure 29)

http://www.derm.qld.gov.au/wildlife-ecosystems/wildlife/wildlife_online/index.html



Wildlife Online

http://www.derm.qld.gov.au/wildlife-ecosystems/wildlife/wildlife_online/index.html

About Wildlife Online

The department's wildlife database contains recorded wildlife sightings and listings of plants, fungi, protists, mammals, birds, reptiles, amphibians, freshwater fish, marine cartilaginous fish and butterflies in Queensland.

This website enables you to access a list of wildlife that the department has recorded for areas such as national parks, State forests and shires, or areas defined by the user. The information is in Adobe Portable Document Format (PDF) or tab delimited text file and can be emailed to a valid address. Wildlife lists for shires, basins and NRM body regions can be viewed online via the WetlandInfo's Wetland Information Summary Search.

The wildlife list generated will contain the kingdom name, class name, family name, scientific name, common name, flag for introduced species, status under the *Nature Conservation Act 1992*, status under the *Environment Protection and Biodiversity Conservation Act 1999* and the number of records for the record category selected and the number of specimens for each species recorded in the nominated area.

Information about your wildlife search request is collected to process this transaction. Wildlife search requests are logged for quality assurance and product enhancement purposes only.

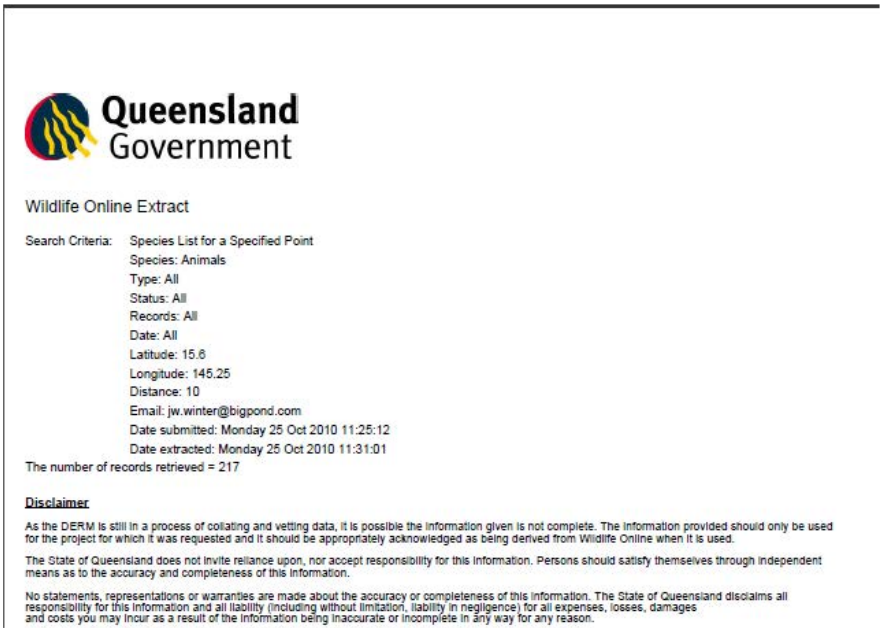
- Generate a species list for a selected area
- Generate a species list for a defined area
- Generate a species list for a specified point

The information used to produce the wildlife list is based on collated species lists and wildlife records acquired by the department through a range of sources including specimen collections, research and monitoring programs, inventory programs including extension activities, literature records, wildlife permit returns and community wildlife recording programs. As the department is still in the process of collating and vetting wildlife data, it is possible the information given is not complete. The absence of a species from the list does not mean that it does not occur there, but only that records are not held within the department wildlife database.

To provide feedback on the Wildlife Online website or the wildlife lists, please email Wildlife.Online@derm.qld.gov.au.

Figure 29. DERM's description of Wildlife Online which is based on the WildNet database.

Lists of species for specified areas can be obtained from DERM's Wildlife Online website (Figure 30).



Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point
Species: Animals
Type: All
Status: All
Records: All
Date: All
Latitude: 15.6
Longitude: 145.25
Distance: 10
Email: jw.winter@bigpond.com
Date submitted: Monday 25 Oct 2010 11:25:12
Date extracted: Monday 25 Oct 2010 11:31:01

The number of records retrieved = 217

Disclaimer

As the DERM is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all responsibility for this information and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

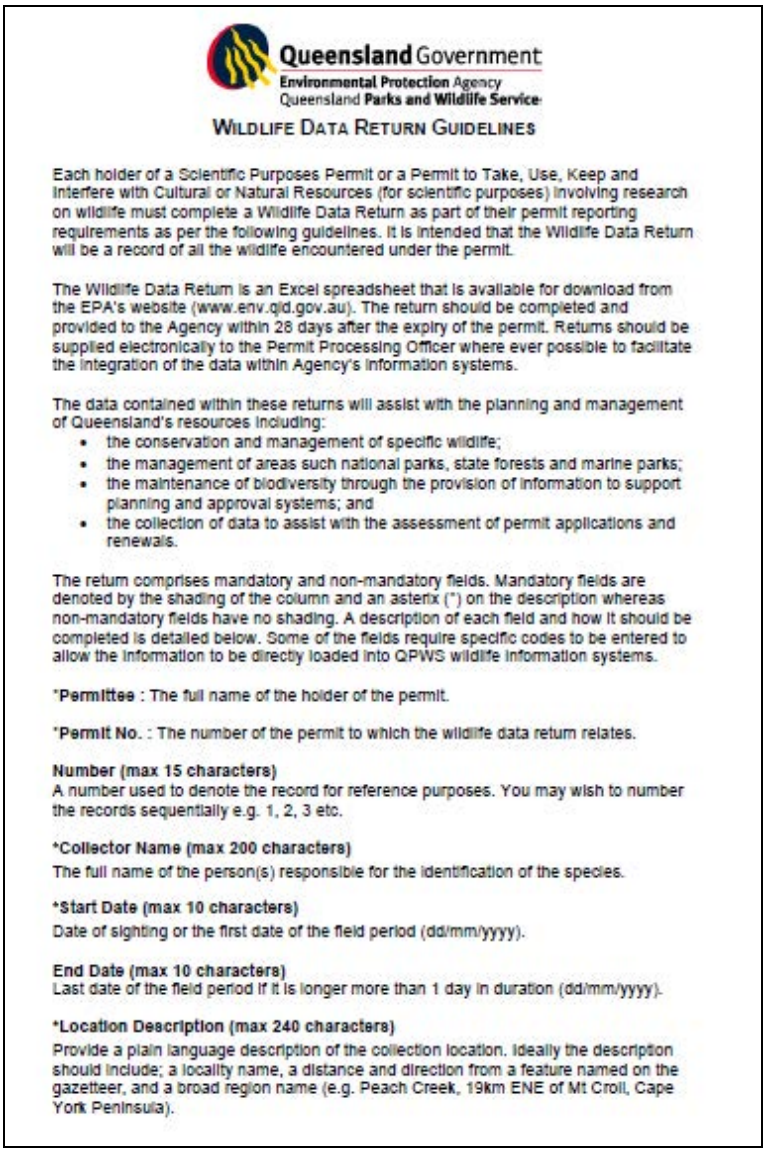
Figure 30. First page of the list of species obtained from DERM's Wildlife Online for an area centred on Greenhills with a 10 kilometre radius (File - WildNet species list request Greenhills.pdf).

Organisations such as Yuku-Baja-Muliku can submit records to be entered into WildNet using a spread sheet provided by DERM together with an explanatory sheet (Table 11, Figure 31, Files - WildNet_Data_Entry_Fields.xls, WildNet_Explanatory_Notes.pdf).

Table 11. Fields used for entering records into WildNet

Field name	Field size		***Field name***	Field size
Number	maximum 15 characters		***Slope***	max 3 characters
Collector's name/s	maximum 200 characters		***Aspect***	max 3 characters
Start date	maximum 10 characters		***Scientific name***	maximum 240 characters
End date	maximum 10 characters		***Common name***	maximum 240 characters
Location description	maximum 240 characters		***Count***	max 6 characters
Latitude	maximum 15 characters		***Count type***	max 5 characters
Longitude	maximum 15 characters		***Age code***	max 5 characters
Zone	max 2 characters		***Sex code***	max 5 characters
Easting	max 6 characters		***Breeding code***	max 5 characters

Northing	max 7 characters		***Identification method***	max 5 characters
Datum	max 5 characters		***Collector's code***	maximum 20 characters
Precision	max 5 characters		***Specimen registration***	maximum 20 characters
Altitude	max 5 characters		***Specimen location***	maximum 60 characters
Vegetation code	max 5 characters		***Collection notes***	maximum 240 characters
Landform code	max 5 characters		***Vetting code***	max 5 characters
	Essential fields			
	One set of group required			



Queensland Government
Environmental Protection Agency
Queensland Parks and Wildlife Service

WILDLIFE DATA RETURN GUIDELINES

Each holder of a Scientific Purposes Permit or a Permit to Take, Use, Keep and Interfere with Cultural or Natural Resources (for scientific purposes) involving research on wildlife must complete a Wildlife Data Return as part of their permit reporting requirements as per the following guidelines. It is intended that the Wildlife Data Return will be a record of all the wildlife encountered under the permit.

The Wildlife Data Return is an Excel spreadsheet that is available for download from the EPA's website (www.env.qld.gov.au). The return should be completed and provided to the Agency within 28 days after the expiry of the permit. Returns should be supplied electronically to the Permit Processing Officer where ever possible to facilitate the integration of the data within Agency's information systems.

The data contained within these returns will assist with the planning and management of Queensland's resources including:

- the conservation and management of specific wildlife;
- the management of areas such national parks, state forests and marine parks;
- the maintenance of biodiversity through the provision of information to support planning and approval systems; and
- the collection of data to assist with the assessment of permit applications and renewals.

The return comprises mandatory and non-mandatory fields. Mandatory fields are denoted by the shading of the column and an asterix (*) on the description whereas non-mandatory fields have no shading. A description of each field and how it should be completed is detailed below. Some of the fields require specific codes to be entered to allow the information to be directly loaded into QPWS wildlife information systems.

***Permittee** : The full name of the holder of the permit.

***Permit No.** : The number of the permit to which the wildlife data return relates.

Number (max 15 characters)
A number used to denote the record for reference purposes. You may wish to number the records sequentially e.g. 1, 2, 3 etc.

***Collector Name (max 200 characters)**
The full name of the person(s) responsible for the identification of the species.

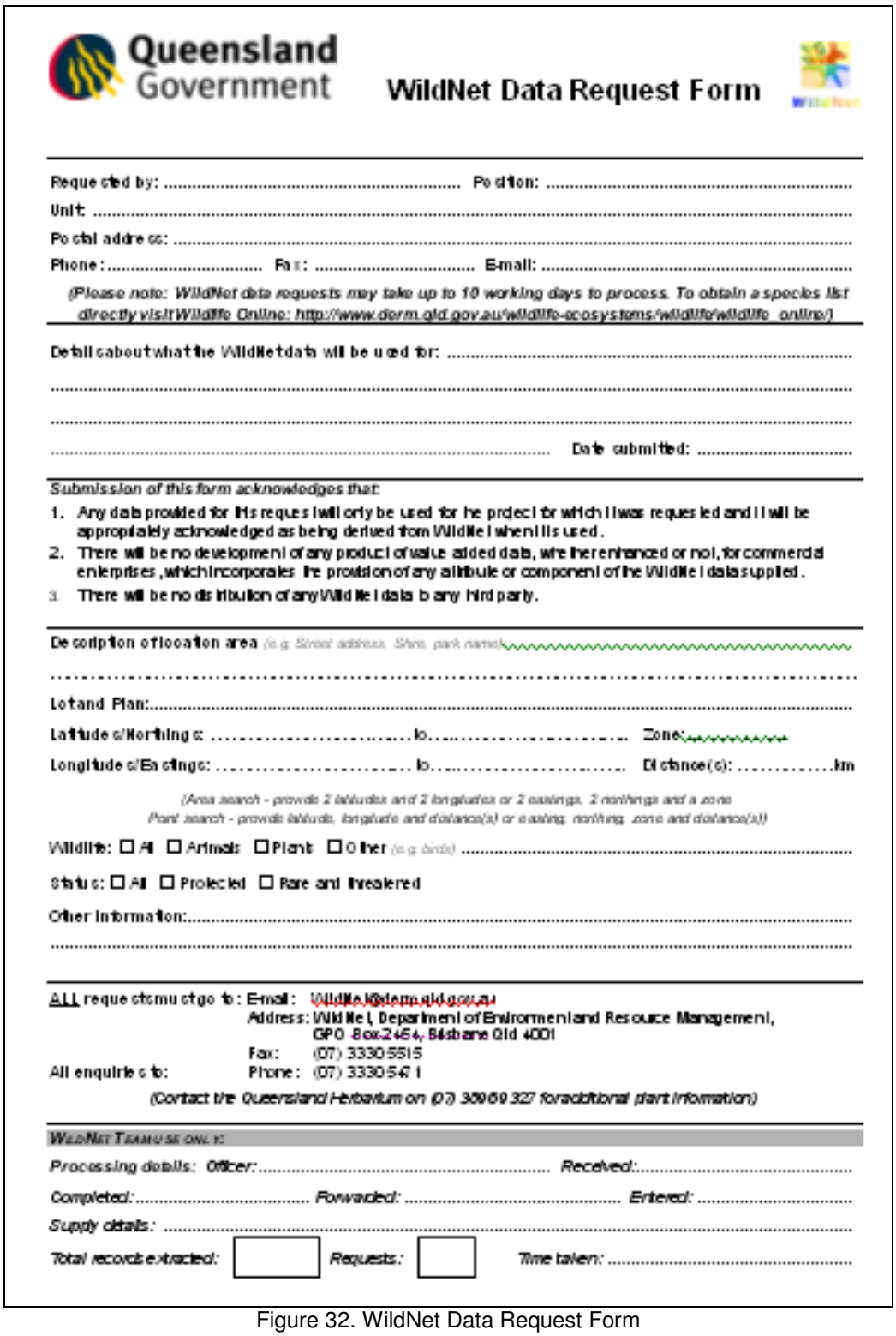
***Start Date (max 10 characters)**
Date of sighting or the first date of the field period (dd/mm/yyyy).

End Date (max 10 characters)
Last date of the field period if it is longer more than 1 day in duration (dd/mm/yyyy).

***Location Description (max 240 characters)**
Provide a plain language description of the collection location. Ideally the description should include; a locality name, a distance and direction from a feature named on the gazetteer, and a broad region name (e.g. Peach Creek, 19km ENE of Mt Croll, Cape York Peninsula).

Figure 31. First page from DERM's explanatory notes of data entry fields.

Organisations such as Yuku-Baja-Muliku can also request individual records from WildNet by using the WildNet Data Request Form (Figure 32).



Queensland Government

WildNet Data Request Form

Requested by: ..... Position: .....

Unit: .....

Postal address: .....

Phone: ..... Fax: ..... E-mail: .....

(Please note: WildNet data requests may take up to 10 working days to process. To obtain a species list directly visit Wildlife Online: http://www.derm.qld.gov.au/wildlife-ecosystems/wildlife/wildlife_online/)

Detail about what the WildNet data will be used for: .....

.....

.....

..... Date submitted: .....

Submission of this form acknowledges that:

1. Any data provided for this request will only be used for the project for which it was requested and it will be appropriately acknowledged as being derived from WildNet when it is used.
2. There will be no development of any product of value added data, whether enhanced or not, for commercial enterprises, which incorporates the provision of any attribute or component of the WildNet data supplied.
3. There will be no distribution of any WildNet data to any third party.

Description of location area *(e.g. Street address, Shire, park name)*: .....

.....

Lot and Plan: .....

Latitude s/Northing s: ..... to ..... Zone: .....

Longitude s/Eastings: ..... to ..... Distance(s): .....km

(Area search - provide 2 latitudes and 2 longitudes or 2 eastings, 2 northings and a zone
Point search - provide latitude, longitude and distance(s) or easting, northing, zone and distance(s))

Wildlife: ☐ All ☐ Animals ☐ Plants ☐ Other *(e.g. birds)* .....

Status: ☐ All ☐ Protected ☐ Rare and threatened

Other information: .....

.....

ALL requests must go to: E-mail: [redacted]
Address: WildNet, Department of Environment and Resource Management,
GPO Box 2454, Brisbane Qld 4001
Fax: (07) 3330 5515
All enquiries to: Phone: (07) 3330 5471

(Contact the Queensland Herbarium on (07) 3896 9327 for additional plant information)

WILDNET TEAM USE ONLY:

Processing details: Officer: ..... *Received:* .....

Completed: ..... *Forwarded:* ..... *Entered:* .....

Supply details: .....

Total records extracted: ☐ *Requests:* ☐ *Time taken:* .....

Figure 32. WildNet Data Request Form

11.4 Queensland Museum

Specimens collected in the course of a fauna survey are lodged with the Queensland Museum which maintains a database of all specimens. Specimens sent to the Museum should be fully labelled with fields similar to those used for submission of records to WildNet. The Museum can be contacted regarding the shipment of specimens.

The importance of the animal collection is explained from an extract of the Museum's web site in the text box below.

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http://www.southbank.qm.qld.gov.au/Collections/Biodiversity+and+Geosciences

12 Biodiversity & Geosciences collections

Together, the Biodiversity and Geosciences collections form our Natural History collections.

12.1 Importance of Natural History Collections

Museums of natural history were established centuries ago to acquire material evidence of life on earth. These collections are verifiable objects that underpin biodiversity research; to count the numbers of species; and to differentiate between them. Museums are therefore uniquely capable of making assessments of the significance of our biodiversity at genetic, species and ecosystem levels.

Our collections are a unique major international resource accessed by the international community. They reflect Queensland's unique natural environments and the key taxa that form them, including living and fossil species.

12.2 Role of Collections

- Underpin biodiversity research, providing verifiable information about life – past and present.
- Provide material evidence that can be used unequivocally for environmental assessment, planning, management and conservation decisions.
- Contain DNA that can be used for recognising species; their evolutionary relationships; conservation biology; and today they are also important for biotechnology.
- Include pivotal assets of iconic ecosystems, forming a large part of our cultural identity.
- Define areas that contain high numbers of species and unique species, which are fundamental data used for managing conservation priorities.
- Provide material for displays.

Our current collection priorities reflect the contemporary needs of the Museum, our current staff capabilities and collaborations, state and national Research & Development priorities, and external funding opportunities.

12.3 Type specimens – the Queensland Museum's crown jewels

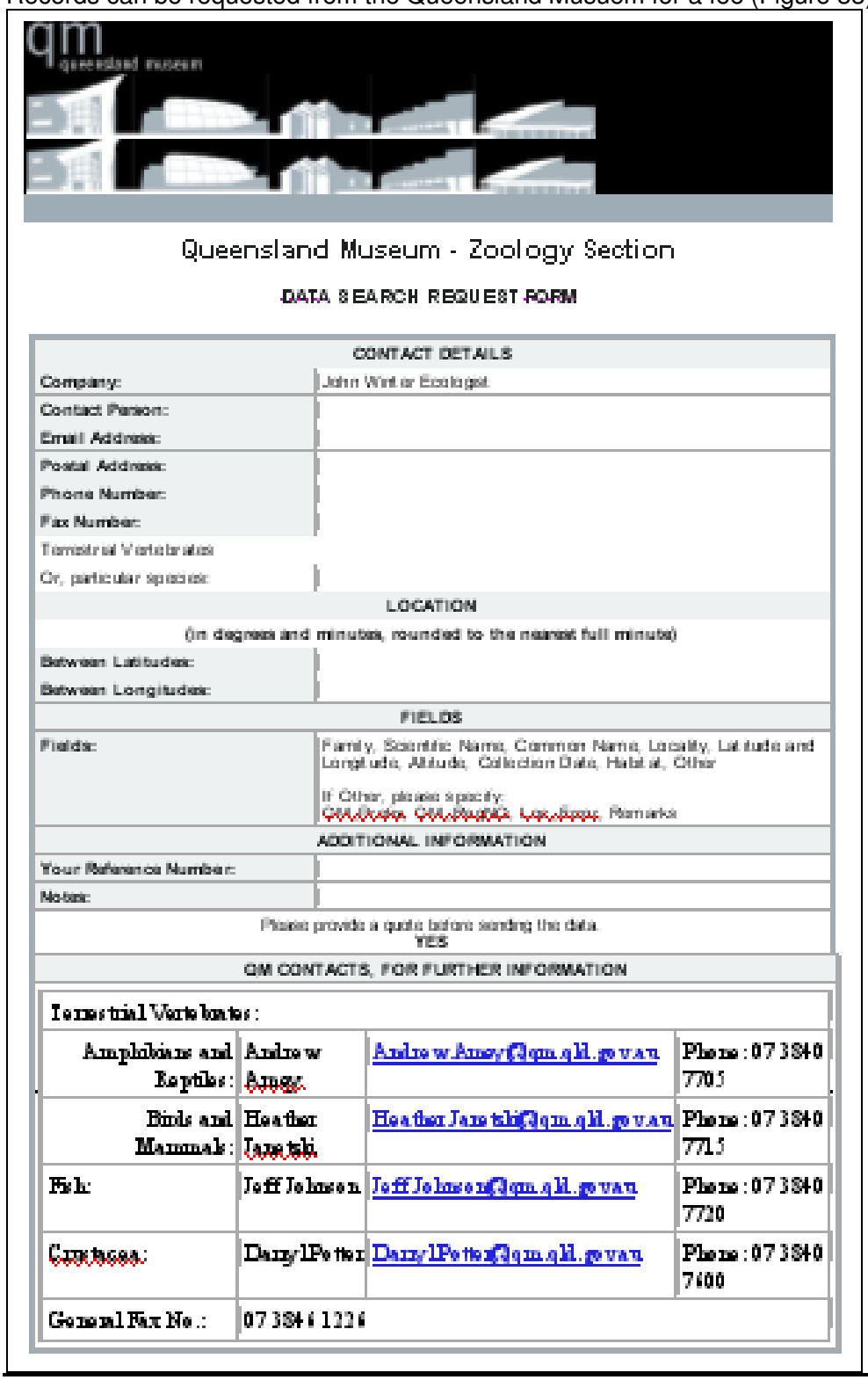
When a new species is discovered, it must be described, named and published in the peer-reviewed literature.

At that time, a single specimen must be nominated to represent (underpin) the concept of that species. This name-bearing specimen is called a primary type or holotype. These holotypes are irreplaceable specimens of the highest biological significance. Without them researchers are unable to verify or validate the concept of the species they represent when using newer technologies or checking the accuracy of earlier descriptions.

When a new species is described and a holotype is established, it is also usual for one or more other specimens to be nominated as secondary types. These are called paratypes, but with a number of other subcategories also recognised. These secondary types are intended to represent the range of variability within a species; or sexual dimorphism; or some other natural biological trait.

If a holotype is lost or destroyed it can only be replaced by a neotype, usually collected from the same locality as the original specimen, or selected from amongst secondary types if there are any. Elevating a specimen to a neotype must also go through the process of being described and published to be recognised under the International Code of Zoological Nomenclature

Records can be requested from the Queensland Musuem for a fee (Figure 33)



Queensland Museum - Zoology Section

DATA SEARCH REQUEST FORM

CONTACT DETAILS	
Company:	John Winter Ecologist
Contact Person:	
Email Address:	
Postal Address:	
Phone Number:	
Fax Number:	
Terrestrial Vertebrates	
Or, particular species:	
LOCATION	
(in degrees and minutes, rounded to the nearest full minute)	
Between Latitudes:	
Between Longitudes:	
FIELDS	
Fields:	Family, Scientific Name, Common Name, Locality, Latitude and Longitude, Altitude, Collection Date, Habitat, Other If Other, please specify: QM Photo, QM Photo#, Loc. Spec, Remarks
ADDITIONAL INFORMATION	
Your Reference Number:	
Notes:	
Please provide a quote before sending the data. YES	

QM CONTACTS, FOR FURTHER INFORMATION			
Terrestrial Vertebrates:			
Amphibians and Reptiles:	Andrew Amey	Andrew.Amey@qm.qld.gov.au	Phone: 07 3840 7703
Birds and Mammals:	Heather Janetzki	Heather.Janetzki@qm.qld.gov.au	Phone: 07 3840 7715
Fish:	Jeff Johnson	Jeff.Johnson@qm.qld.gov.au	Phone: 07 3840 7720
Crustacea:	Darryl Potter	Darryl.Potter@qm.qld.gov.au	Phone: 07 3840 7400
General Fax No.:	07 3846 1226		

Figure 33. Queensland Museum Data Search Request Form for individual records.

12.4 Internal Database

Yuku-Baja-Muliku may also wish to set up a database of its own using a program such as MicroSoft Office Access. A database allows for much easier manipulation of records than a simple spreadsheet.