



Western Australian Bird Notes

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A Birdwatchers Guide to Vocal Mimicry

Few realise that mimicry, both visual and vocal, is an important part of the learning process and that we all use it with varying degrees of success. So it is with birds.

Many birds learn their calls and songs by mimicking their parents so it is not surprising that young birds reared in captivity should mimic the sounds of their captors and that they rapidly learn that successful imitation brings rewards in attention and food. Consequently some species that mimic only their kin in the wild will acquire a much wider vocabulary in captivity.

This may also happen when birds remain around houses to seek food. Australian Magpies, that otherwise keep to their own 'language', will in this situation mimic neighing horses, barking dogs and human voices, as will lyrebirds and bowerbirds, which mimic also in an entirely different context. This has led to much confusion in the vast and often speculative literature on mimicry and the following is an attempt to set the record straight for some of our Australian mimics that were listed by Chisholm (1932, 1937). His list of WA mimics is:-

Redthroat, White-browed Scrub-Wren, Singing Bushlark, Richard's Pipit, Grey Butcherbird, Silvereye, Mistletoebird, Crested Shrike-tit, Olive-backed Oriole, Yellow Oriole, Jacky Winter, Grey Shrike-thrush, White-browed Woodswallow, Spangled Drongo, Pied Butcherbird, Australian Magpie, Spotted Bowerbird, Great Bowerbird, Inland Thornbill, Chestnut-rumped Thornbill, Slaty-backed Thornbill, Western Thornbill, Slender-billed Thornbill, Yellow-rumped Thornbill.

Mimicry of bird and mammal sounds is an important element in the vocal display of lyrebirds during the winter breeding season when the models are silent. Mimicry is learned by young birds from adult males and not from the models. Individuals may subsequently add to their repertoire but this seems to be rare. They do not mimic saws, axes etc except in the situation previously mentioned.

Birdwatchers may be fooled by the mimicry but birds are not. For lyrebirds mimicry acts as a non-threatening, unimportant subject to keep the lines of communication open. Lyrebirds

do not mimic Australian Ravens that are predators of lyrebird eggs.

Satin Bowerbirds (in display) mimic Laughing Kookaburras and Ravens at Tidbinbilla and at Lamington, mimic Lewin Honeyeaters and Torresian Crows. Outside the breeding season and when feeding in flocks bowerbirds have a much wider vocabulary.

Spotted Bowerbirds at Exmouth mimic in display only when disturbed by humans or by other bird species. In these situations they often include the calls of predators. This may be to increase threatening behaviour. When feeding in flocks they mimic more freely and in other bowerbirds the pattern is much the same.

Singing Bushlarks mimic in display flight, mainly of ground-living birds. This and the overt visual display prevents confusion. The mimicry serves to enhance the vocal display.

Many of the passerine birds listed by Chisholm (1932 & 1937) as mimics do so only in sub-song. In young birds this is often simply a part of song learning and fragments of the mimicked calls may be used to enhance the learned song. In adult sub-song however the purpose of mimicry is as yet unclear. I have suggested (1991) that it may be a form of phatic communication to strengthen the social bond and that there is no intent to deceive or express aggression.

Vocal mimicry is part of the learning process and occurs in both passerine and non-passerine Australian birds. Deception is not the purpose, but mimicry of predators may serve to increase threatening behavior. It is uncommon in full song where it is restricted to natural sounds of birds and mammals. Mimicry is more often heard in sub-song and when birds are in close contact with humans, when other than bird or mammal sounds may be included.

Present knowledge of mimicry has been ably reviewed by Bayliss (1982). Many Australian passerine birds, including some honeyeaters, are known to mimic the calls of other species but very little is known about the reasons for this.

Birdwatchers can contribute to the existing knowledge by noting the dates and situations in which mimicry is heard and the species mimicked and sending the information to WA Bird Notes.

N. Robinson

References:

Bayliss, JR (1982) *Avian Vocal Mimicry: Its Function and Evolution*. In *Acoustic Communication in Birds*. DE Kroodsma & EH Miller (Eds). Academic Press, New York 51-84.

Chisholm, AH (1932) *Vocal mimicry among Australian Birds*. Ibis 13; 605-624.

Chisholm, AH (1937) *The problem of vocal mimicry*. Ibis 14: 703-721.

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Observations

Compiled by the Observations Committee. Shires are in brackets.

SOUTH-WEST (Shark Bay to Cape Arid)

Yellow-nosed Albatross - 800-1000, mid-July, 93, Canal Rocks (Busselton) - JH

Slender-billed Prion - 1, 2/8/93, Cape Naturaliste (Busselton) - MC, RL

Flesh-footed Shearwater - 7, 7/4/93, North Mole (Fremantle) early for the area - MC

Red-tailed Tropicbird - 1, mid July 93, sugarloaf Rock (Busselton) - unusual time of year - JH

Great Egret - 47, 10/4/93, in 500 m stretch of Phillips River, just N. of Fitzgerald River NP (Ravensthorpe) - MB

Rufous Night Heron - c.40, 15/5/93, "Lowlands", 5 km SW of Mundijong (Serpentine-Jarrahdale) - MR

Freckled Duck - 2, 5/7/93, Blue Gum Lake (Melville) - IB

Australian Shelduck - 1500, 12/4/93, salt lake just W. of Pingrup (Kent) - MB

Black-breasted Buzzard - 2, 20/5/93, 90 km N. Northampton (Northampton) - JRo* 1, 21/7/93, Weld Range (Cue) - DB

Peregrine Falcon - 2, 4/7/93, nr stick nest, Julimar Forest (Toodyay) - GL, IL

Malleefowl - 1, 20/5/93, 120 km N. Northampton on NW Coastal Hwy (Shark Bay) - JRo

Hooded Plover - 2, 2-3/8/93, Cape Naturaliste (Busselton) - MC, RL

Marsh Sandpiper - 7, 22/5/93, McLarty Lake (Murray) (late in year for this species) - JH

Pectoral Sandpiper - 1, 8/5/93, McLarty Lake (Murray) (unusually late in year) - JH

Little Stint - 1, 20/3/93, McLarty Lake (Murray) - TK, JH, JD

Long-toed Stint - 2, 8/5/93, McLarty Lake (Murray) (unusually late in year) - JH

Ruff - 1, 8/5/93, McLarty Lake (Murray) (late record) - JH

Great Skua - 1, 2/8/93, Cape Naturaliste (Busselton) - MC, RL

Roseate Tern - 2, 30/5/93, Woodman Point (Cockburn) - PT, RN

Long-billed Corella - 11, 4/93, Lake Joondalup South (Wanneroo) - NH

Rainbow Lorikeet - 3-4, Apr-May, Canning (Canning) - TS

Ground Parrot ? (possible only) - 1, 22/5/93, Betty's Beach, E. of Albany (Albany) - RG

Western Rosella - 2, 9/3/93, Wembley Downs (Perth) (rare in urban areas; ? aviary escapees) - ACa

Ground Cuckoo-shrike - 8, 23/7/93, Weld Range (Cue) - DB

Red-capped Robin - 1 male, 16/5/93, "Lowlands", about 5 km SW of Mundijong (Serpentine-Jarrahdale) (uncommon on the Swan Coastal Plain) - AB & RAOU excursion

Western Yellow Robin - 5, including 1 immature, 15-16/5/93, about 5 km SW of Mundijong (Serpentine-Jarrahdale) (uncommon on Swan Coastal Plain) - JR & RAOU excursion

Yellow-plumed Honeyeater - 1, 16/5/93, in Flooded Gums, "Lowlands", about 5 km SW of Mundijong (Serpentine-Jarrahdale) (rare on Swan Coastal Plain) - AB & RAOU excursion

Diamond Firetail - 4, 7/93, Fremantle (Fremantle) E. States bird, ? escapees - APB

Australian Magpie-lark - about 60, 20/5/93, Northampton (Northampton) (large flocks not often reported; probably a migratory or nomadic flock) - JRo

ARID ZONE (including the Pilbara, Gascoyne, interior and Nullarbor)

Square-tailed Kite - 1, 17/6/93, near Paraburdoo (Meekatharra) - FO

Little Button-quail - nest with 3 eggs, 9/7/93, Well 33, Canning Stock Route (East Pilbara) - PBT

Alexandra's Parrot - 200-300 (in flocks up to 80), 6-9/7/93, between Wells 37 & 43 - PBT * 40, 13/6/93, between Wells 40 & 41 - VM * both Canning Stock Route (East Pilbara)

Blue Bonnet - 2, 2/7/93 and 3, 20/7/93, near Pannikin Cave and 6, 5/7/93, south-east of Cocklebidy (Dundas) (unusual this far south) - GW, RW

Nullarbor Quail-thrush - 1, 28/4/93, 50 km NNE of Rawlinna (Kalgoorlie-Boulder) - Ach

KIMBERLEY

Australian Pelican - 20 + (breeding also recorded), 24/5/93, Lacepede Islands (Broome) - FO, KC

Masked Booby - 160 (breeding also recorded), 11/5/93, Adele Island (Wyndham-East Kimberley) - FO, KC

Red-footed Booby - 3, 11/5/93, Adele Island (Wyndham-East Kimberley) - FO, KC

Brown Booby - estimated 5000 (breeding recorded), 11/5/93, Adele Island (Wyndham-East Kimberley) - FO, KC * estimated 5000 (breeding recorded), 24/5/93, Lacepede Islands (Broome) - FO, KC

Pied Cormorant - 20 (breeding recorded), 11/5/93, Adele Island (Wyndham-East Kimberley) - FO, KC

Least Frigatebird - estimated 2000 (breeding recorded), 11/5/93, Adele Island (Wyndham-East Kimberley) - FO, KC * estimated 2000 (breeding recorded), 24/5/93, Lacepede Islands (Broome) - FO, KC

Great-billed Heron - 1, 12/5/93, Prince Regent River (Wyndham-East Kimberley) - FO, KC * 1, 21/5/93, Isdell River (Derby-West Kimberley) - FO, KC

Little Bittern - 2, 31/7/93, Lake Kununurra, 2 km SSE of the racecourse (Wyndham-East Kimberley), in Typha with low trees in a deep backwater; one bird giving Advertising Calls (believed to be indicative of breeding HANZAB p 1024), another bird (female/immature) seen in flight - (records of this species at Kununurra at this time of year are few and may

indicate residency) - RJ

Black Swan - 2 broods, 4/7/93, Lake Gregory nr Stafford Bore (Halls Creek) (breeding rare in the Kimberley) - PBT

Red-backed Button-quail - 2, 6/4/93, Jogonalong Flat, Parry Floodplain (Wyndham-East Kimberley) (previous records from NE Kimberley have been January-March) - RJ

Australian Crake - 2, 6/3/93, in shallowly inundated ? Diplachne sp. grass at Gooda Gooda (Nile Mile) Claypan, SE of Wyndham (Wyndham-East Kimberley) - BW

Chestnut Rail - 1, 13/5/93, Camp Creek, off Prince Regent River (Wyndham-East Kimberley) - FO, KC

Ruddy Turnstone - about 2000, mostly in breeding plumage, 11/5/93, Adele Island (Wyndham-East Kimberley) - FO, KC

Redshank - 1, 12/4/93; 9, 9-12/5/93 (including 4 in breeding plumage), 6, 5/8/93, Crab Creek (Broome) - BBO, GS

Snipe *Gallinago sp* - 4, 6/4/93, Jogonalong Flat in dry grass and marsh (Wyndham-East Kimberley) - BW, RJ

Asian Dowitcher - 35, 8/6/93, Roebuck Bay (Broome) - BBO * 54, 11/6/93, Richard's Point, Roebuck Bay (Broome) - GS

Black-tailed Godwit - 190, 6/4/93, shallowly inundated claypans near Marglu Billabong (Wyndham-East Kimberley) - RJ, BW

Common Tern - 4, (including 1 in breeding plumage), 10/6/93, Broome jetty (Broome) - GS

Little Tern - about 300, 24/5/93, Lacepede Islands (Broome) - FO, KC

Flock Bronzewing - 12, 28/5/93, Lake Eda (Broome) - FO

Pink Cockatoo - 2, 3/7/93, Wolf Creek Crater (Halls Creek) (rarely recorded in this area) - PBT

Port Lincoln Ringneck - 2, Broome, near cemetery (Broome) (? aviary escapees) - BK

Southern Boobook - 15, 22/6/93, Drysdale River (Wyndham-East Kimberley) - GS

Welcome Swallow - 6, 22/5/93, Gantheaume Point, Broome, with Tree Martins (Broome) - GS * 1, 9/5/93 and 2, 29/5/93, Gantheaume Point (Broome) - FO (rare in the Kimberley)

White Wagtail ? (possible only) - 1, 24-26/2/93, Willie Creek (Broome) - CD

Ground Cuckoo-shrike - 7, 23/7/93, Drysdale River (Wyndham-East Kimberley) - GS

Mangrove Robin - 1, Cygnet Bay, N. Broome (Broome) - GS

Kimberley Flycatcher - 1, 30/6/93 mangroves at Crab Creek (Broome) - FO (at or near southern limit of species)

White-browed Robin - 1, 21/5/93, rainforest near Isdell River (West Kimberley) - FO, KC

Crested Bellbird - 1, 27/4/93, Beagle Bay (Broome) (northern margin of range) - GS

Tawny Grassbird - 5+, 11/5/93, Adele Island (Wyndham-East Kimberley) - FO, KC

Spinifexbird - 1, 4/7/93, near Lake Gregory (south) (Halls Creek) - PBT

Rufous-crowned Emu-wren - 3, groups, 4/7/93, near Lake Gregory (south) (Halls Creek) - PBT

Black Grasswren - 2, 19-20/5/93, Sale River (Derby-West Kimberley) - FO, KC

Redthroat - 2, 17/6/93, near Paraburdoo airport (Meekatharra) (at or near northern margin of range) - FO

Green-backed Gerygone - 3, 28/6/93, Point Springs NR (40 km NNE of Kununurra) (Wyndham-East Kimberley) (rarely recorded in East Kimberley) - FO

Grey-headed Honeyeater - 2, 20/5/93, Entrance Point, Broome (Broome) - GS (near northern limit of species)

Bar-breasted Honeyeater - 10+ and many nests, 12-13/5/93, Camp Creek off Prince Regent River (Wyndham-East Kimberley) - FO, KC

Crimson Chat - 15, 9/5/93, pindan behind Cable Beach, Broome (Broome) (uncommon this far north) - GS

Painted Firetail - 3, 6/5/93, Entrance Point (Broome) - GS * 3, 31/5/93, Geike Gorge (Derby-West Kimberley) - FO (both records near N. margin of range)

Gouldian Finch - 3 juveniles, 4/5/93; 7 juveniles, 5/5/93; 2 juveniles and 1 adult, 7/5/93, near Lombardina (Broome) - BBO * 4 (2 adult, 2 juvenile), 19/7/93, The Grotto (25 km from Wyndham) (Wyndham-East Kimberley) - FO

White-browed Woodswallow - 2, 2/7/93, about 5km E of Ngumban Cliffs, E. of Fitzroy Crossing (Derby-West Kimberley) PBT (not often recorded in Kimberley).

Observer Codes

AB = Allan Burbidge	JRO = John Rodger
ACa = Ashton Cavanagh	JS = Jennifer Shanks
ACH = Andy Chapman	KC = Kevin Coate
APB = Agriculture	MB = Mary Bremner
Protection Board	MC = Michael Craig
BBO = Broome Bird	MR = Midge Richardson
Observatory	NH = Neil Hamilton
BK = Brian Kane	PT = Peregrine Bird
	Tours
BW = Brice Wells	PT = Pat Todd
DB = David Barton	RG = Ray Garstone
FO = Frank O'Connor	RJ = Roger Jaensch
GL = Graham Little	RL = Romeny Lynch
GS = George Swann	RN = Richard Nowotny
GW = George Watkins	RW = Rita Watkins
IL = Ingrid Little	TK = Tony Kirkby
JD = John Darnell	TS = Tony Start
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Notes For Contributors

The Editor requests contributors to note :-

- *WABN normally only publishes material on WA birds
- *contributions should be written or typed with Double Spacing
- *WABN uses RAOU recommended English names
- *copy will be edited where appropriate
- *contributions will be published unless the contributor is informed to the contrary

Deadline for the December Issue

14 November 1993

Members Contributions

KLEPTOPARASITISM

On the 21st April Glen Moore and I were at the North Mole Fremantle looking at some skuas. The previous day I had seen 11 Arctic and 13 Pomarine Jaegers from the same spot, but on the 21st numbers were lower and we only saw 8 Arctic Jaeger, although there was a group of 7 Flesh-footed Shearwaters that had not been present the previous day.

In the mid-afternoon we made the following observation. We were both looking at a Crested Tern as it flew shorewards from the ocean. About 200 metres out it was attacked by a dark phase Arctic Jaeger. Fifty metres closer another dark bird, which we presumed to be a skua, joined in the attack and they both chased and harried the Crested Tern for about fifteen seconds. When the tern was about 60 metres from the Mole the second attacker veered away, revealing itself to be a Flesh-footed Shearwater!

The first bird continued to chase the tern to within 40 metres of the Mole, when it also veered away, revealing itself to be a dark phase Arctic Jaeger. The Crested Tern continued on its way, meal intact and made it safely to shore.

We were most surprised to see a Flesh-footed Shearwater chasing a tern. Upon investigation of the literature the only evidence of kleptoparasitism in the Procellariiformes I could find was for a Black-browed Albatross. This confirmed our earlier suspicion that an observation of kleptoparasitism in the Flesh-footed Shearwater is very unusual and may not have been previously recorded.

M. Craig

OFFSHORE PERTH IN MAY

During May 1993 I was involved with a series of sea trials in Cockburn Sound, Gage Roads and an area of sea reaching north to Moore River and out to approximately 30 nautical miles west of Rottneest. There were periods during the trials when I was able to look for sea birds and the following are some of the observations I made.

In early May I recorded small numbers of immature Australasian Gannets, two or three Great Skuas and several Arctic or Pomarine Skuas, the latter eluding positive identification at that time. As the month progressed the number of immature Australasian Gannets increased dramatically, a feature possibly related to the weather conditions which gradually deteriorated during the month. On May 28th, in a strong south westerly blow there were well over 100 immature gannets in the Cockburn Sound. I saw perhaps only 7 adult birds.

On a calm day in mid May there was a Pelican "invasion" which lasted three days. There were about twenty birds, feeding in an area the size of a football pitch in deep water in the middle of Cockburn Sound. With the Pelicans were Pied Cormorants and Little Black Cormorants, together with the usual throng of Silver Gulls. After three days the Pelicans were gone.

A few days later we were motoring southwards in the Parmelia Channel and noticed to our left a huge flock of Silver Gull in a broad band from the channel markers towards Woodman Point. At first I thought they were flying to Carnac Island to roost, but on looking closer they appeared to be

wheeling around in small groups within a whole flock and taking an active interest in something in the sea. The number of birds involved was several thousand and even the non bird watchers on board were impressed with the sight of so many birds.

Great Skuas were always present when other birds were feeding. I watched one relentlessly chase an adult Australasian Gannet low over the water, where the skua attacks eventually forced the gannet into the water. There it was repeatedly attacked, several Silver Gull joining in the melee and adding confusion to the scene. During a brief pause the gannet managed to take-off only to be attacked again: this time a fish was given up to the Great Skua and the Australasian Gannet was left to fly off alone. Great Skuas were the only birds not to be intimidated by the approach of our vessel. If they were swimming in the water they would usually swim as though nonchalantly out of the way. Most other sea birds flew off well before our approach.

My most exciting Great Skua experience occurred when one approached our vessel and flew about 8 metres in front of our wheelhouse and attacked our bow mounted radio aerial, pecking the top of the aerial as it waved around in the wind. This was not a bad effort considering the aerial was on a 40 metre boat travelling at 35 knots (65 km/hr).

Arctic/Pomarine Skua identification continued to be a problem. There were about five birds always present in the same area, broadly in line between Beacon Head on Garden Island to about half a nautical mile south of Woodman Point. I had seen the same species in this area previously during the summer months. I had one good sighting and believe the birds to be Pomarine Skuas. These winter residents may be immature or non breeding adult birds.

Some of our sea trials took us up to 30 nautical miles west of Rottneest, on days characterized by sunny conditions, light south-easterly winds on 2 metre south-westerly swells. Yellow-nosed Albatross and Flesh-footed Shearwaters were numerous. The shearwaters showed very little interest in our vessel: however, the albatross always looked closely and usually followed, quartering our wake and the breaking waves of our wash.

On days without wind the Yellow-nosed Albatrosses would usually be found loafing in the water, usually in the company of two Flesh-footed Shearwaters, as often as not near rock lobster markers. On calm days in early May, we would come up on small rafts of twenty to thirty shearwaters, which would fly off as we approached.

On the 11th and 12th of May while about 10 nautical miles south-west of Cape Vlamingh we noticed what appeared to be a large pod of dolphins about 500 metres in front of us. Dolphin sightings were a daily and always agreeable event. However, the disturbance in the water turned out to be a large fish boil, above which several Australasian Gannet, Crested Tern, Bridled Tern, Flesh-footed Shearwaters and even a few Silver Gulls wheeled. The gannets and terns were diving into the water and the gulls and shearwaters scavenging the sea surface. As we got closer we were fortunate to see several large Yellow-fin Tuna leaping clear of the water in pursuit of the smaller fish.

Whenever I saw Wilson's Storm-petrels (which was daily) I noticed they always flew in front of our vessel for about a minute before veering off to one side and disappearing from view in the wave troughs. Being such a small bird they were almost impossible to see unless within 100 metres of the boat.

During the week of May 26th when the weather was quite rough we were working our vessel between Fairway Landfall buoy and the buoy marking the northern extent of Kingston Reefs, Rottnest. I noticed that each time we turned and motored East we would pick-up two Wilson's Storm-petrels. It seemed as if it was their patch of ocean to patrol for the week.

Inevitably with work to do on board I missed many sightings. My experience has whetted my appetite and I look forward to further sea trips hopefully in the company of fellow RAOU members who can help with identification.

J. Bennett

ALBATROSS AT CANAL ROCKS

In mid July I received a call from Bryan Barrett regarding the potential of seabird watching in the Dunsborough district, particularly albatross.

The next weekend Tony Kirkby and I visited the area. At Sugarloaf Rock there were 20-30 albatross an hour passing by, all Yellow-nosed. During the lulls we were able to whistle up White-browed Scrub-wren in the coastal heath.

One Red-tailed Tropicbird was seen close to the Rock, repeatedly returning to the same spot. Silver Gulls were breeding and there were young in all stages of maturation. A Southern Giant-Petrel flew past.

There were no seabirds at Cowaramup Bay but we were able to get within 3 metres of a pair of Southern Emu-wren in the coastal heath.

At Canal Rocks we noticed activity 500-1000 metres off shore. There were two flocks of birds 500 metres apart resting on the water. Some birds were flying over the group and some flying between the two groups. In total there were 800 to 1000 Yellow-nosed Albatross with the odd Black-browed Albatross.

It was a good day and within easy reach of Perth.

J. Hunt

MORE NESTING TOGETHER

Frank O'Connor's article on Willie Wagtails and Australian Magpie-Larks nesting close together struck a chord in my memory. I turned up a note from September 1988 at Coolgardie. At the rear of our motel, in the one small tree in a barren area was an Australian Magpie-Lark's nest with three well-fledged young being fed by the busy parents. It was some time before I saw a much better concealed Willie Wagtail's nest about 60 cms below.

My notes mention that strict territorial rights were exercised by the magpie-larks and that the Willie Wagtails were chased from nearby branches, fences and other perches, but that no aggression was shown in the area close to the Willie Wagtail's nest.

P. Anson

KORUP SWAMP

After reading about Korup Swamp in the May WABN, we decided to pay it a visit. As we now live in the Albany area, we set off on the morning of Friday, 4 June and found the gate mentioned in the article. The directions in "Bird Notes" were accurate to the tenth of a kilometre. The lake is not visible from the gate/road, but we had no difficulty in finding it.

There had been heavy rain a week before our visit, the ditches were full of water and at one point water covered the road. The "swamp" turned out to be a fairly large lake and the edges were too wet to move around it or get close except at one point.

Bird life was rather disappointing. We saw only two Black Swan and two ducks — too far away to identify.

L. and C. Davies

RUFF BEHAVIOUR

On Saturday 13th March, I parked just off the road near the Argyle Diamond Mine where I could observe a small swampy area created by the heavy rains of late January and February. I observed a migratory wader about 10 metres away standing in some sparse swampy grass (about 20 to 25 cm high) next to some typha reeds, which I was to identify as a Ruff.

After a few minutes, it flew a few metres and landed on the sandy bank of a shallow channel. A second wader immediately flew in and the Ruff cowered (almost sat down in the edge of the water) and then they played 'tag' for a short while, before they flew to an open sandy area behind a small, sparse bush about 25 to 30 metres from me on the edge of the channel. The second wader walked around behind some grassy tufts (and I didn't see it again), but the Ruff sat down on the sand.

I got out of the car and moved to a spot on the road with a clear view of the Ruff at about 20 metres distant. I observed it for several minutes while scanning through a field guide before it eventually stood up.

It walked without any hurry across the few metres of sand, stopping every two or three steps and bobbing its tail very frequently (although its head stayed fairly still.) It eventually walked into fairly dense grass tussocks (about 40 to 50 cm tall) about four or five metres from the water. I did not see it again.

The most remarkable feature of the bird was its behaviour which I was surprised was not mentioned in any reference. The bobbing of the tail (similar to the Wood Sandpiper although it kept its head up), the sitting down on the sand, the standing in the grass, the wading in shallow water along the channel, the stop start walking across the sand and finally the disappearance into long grass out of the water were all behaviour with which I was unfamiliar among other waders.

F. O'Connor

FLOCKING GERYGONES

On a bright windless winter's day during the mid-afternoon of 9 June, I was walking along the east side of Thompson's Lake when a little flock of small, very active birds flew into the top of nearby trees. I assumed them to be Silveryeyes but my squeaker (polystyrene on glass) appeared to attract them to the small tree under which I was lurking to confirm their identity. To my astonishment, they were Western Gerygone, at least twenty and perhaps as many as forty, for their frenetic activity made it impossible to get an accurate count.

I felt diffident about reporting what I assumed to be such an unlikely incident, but I mentioned it to Chris Wilder who said she had heard of two similar incidents of passerine flocking, neither of which had been reported for a similar reason. One of these was of over 30 Golden Whistler at Dryandra.

I mentioned both incidents to Stephen Ambrose as an adjunct to my ABC report and he responded "These are interesting observations....The record of Golden Whistlers at Dryandra is also significant because this species does tend to flock before migration at this time of the year, but is seldom observed in the West."

I was encouraged therefore, to write this account in the hope that other diffident observers might be encouraged to report similar flockings for publication in WA Bird Notes.

P. Anson

A THREE LAKE COMPARISON

The three lakes, Namming, Hurstview and Guraga are close; the centres of the first two being within 3 kilometres of the centre of Guraga. Observations at the three lakes during the day does not appear to show much bird interconnection, except for Black Swan (overnight Namming, day Guraga) and Australian Shelduck (day flights between Hurstview and Guraga).

Having counted the waterbirds at each of the lakes monthly, Guraga 1987 & 1988, Hurstview 1988 to 1991 and Namming 1988 to 1992 some comparison between them seems possible. Comparisons need be made with caution as the data is obtained from non-identical years.

However some comparative patterns are discernible which are of interest. They appear to hinge on the differences in the particular geographical characteristics of each lake during the period considered by this review, 1988 — 1992. All the lakes are at highest water level in August-September and lowest in March-April, like most along the coastal plain.

The following table summarises the main physical features of the lakes.

	Namming	Guraga	Hurstview
Area	about 60 hectares	about 227 hectares	about 65 hectares
Shore length	about 3.5 km	about 5.5 km	about 3.7 km
Surrounds	Bush for over 10 km to N, S & W, Grazing land for 5 km to Brand Hwy on E	Bush for over 10 km to N, S & W, also to E for 2.25 km to Brand Hwy.	Wholly surrounded by grazing land, mainly cattle. Nearest bush 1.75 km strip between Guraga & Brand Hwy.
Depth	Generally deepest of 3. Reaches over 2.5 m each year, lowest about 1 m. Does not dry.	During survey period max. 1.8 m lowest 450 mm. Was dry out of survey period.	Deepest 1.6 m to low under 500 mm. Over 50% dries annually.
Weed	Little ever visible	Considerable quantity	Some 30/40% with weed.
Shoreline Vegetation	Living paperbark & Flooded Gums for over 95% of edge Inundated for much of year	Over 200 m from edge to shrubs. No living plants above water.	Some living Casuarina spp & gums, also in the water, also many dead.
Shoreline	Little shelving sandy shore Little mud, though much beneath trees at low water.	Virtually surrounded by sandy shore, much slightly shelving Not much mud	Mainly muddy shore but some smallish sandy areas.

It may be hypothesised that the physical geographic differences set out in the above table may have the following outcomes :—

Namming might be expected to have more diving species, as it is consistently the deepest and being surrounded by trees many of which become inundated at the deeper times, might be expected to have more breeding species.

Guraga might be expected to have the most shoreline birds, having the greatest length/expanse of shoreline, with Hurstview second.

The presence of both mud and sand at Hurstview might result in a greater number of shoreline species by comparison with Guraga, while Namming with little shelving shore would be anticipated to be poor for shoreline birds.

Guraga might be expected to have about twice + the numbers of dabbling species of each of the others, having about

double the length of shoreline (and four times the area, as well as much greater weed in the water) with Namming and Hurstview similar, by virtue of being of similar size.

To examine these hypotheses the monthly averages over the years of the surveys of diving, shoreline and dabbling species of the three lakes were compared. The species taken into account were those present at one or more of the lakes during the surveys. These were:—

for Diving Species (total 10):— Great Crested Grebe, Hoary-headed and Australasian Grebe, Darter, Great, Little Black and Little Pied Cormorant, Hardhead, Blue-billed and Musk Duck.

for Shoreline Species (total 25) — Banded Lapwing, Grey and Pacific Golden Plover, Red-kneed Dotterel, Hooded, Double-banded, Large Sand, Red-capped and Black-fronted Plover, Black-winged and Banded Stilt, Red-necked Avocet, Wood and Common Sandpiper, Greenshank, Marsh Sandpiper, Black-tailed and Bar-tailed Godwit, Sharp-tailed and Pectoral Sandpiper, Red-necked and Long-toed Stint, Curlew and Broad-billed Sandpiper and Ruff.

for Dabbling Species (total 12) — Black Swan, Freckled Duck, Australian Shelduck, Pacific Black Duck, Grey Teal, Chestnut Teal, Australasian Shoveler, Pink-eared Duck, Maned Duck and Eurasian Coot.

The breeding species hypothesis adhered to expectation: Namming 8, Hurstview 4, Guraga 1.

As a matter of interest, Hurstview had a total of 45 species, Namming and Guraga both 43. While Namming had 20 or more species on 40% of visits, Hurstview had such species diversity on only 24% of visits and Guraga 17%. The greater overall diversity of habitat at Lake Namming may have contributed to this result.

The following chart for diving birds shows Namming to have many more than either Guraga or Hurstview from January to July. Numbers are comparable in August after which both Guraga and Hurstview are ahead of Namming, though mainly

