"To encourage the observation and study of the birds of the Toowoomba area."

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NEWS-SHEET No. 55- JULY, 1980.

No doubt you are all aware of the work currently being invested in the production of the R.A.O.U. Atlas of Australian Birds.For the successful completion of this major task it is essential that information be obtained about bird distributions in all parts of Australia.Unfortunately there are some areas where little or no information has been obtained, and to overcome this problem "Atlassing trips" are periodically organized to cover those areas.
Full details are as yet unavailable, but for anyone interested, a trip is being arranged to cover an area on the Boyne River, West of Kingaroy. It will be on the 13/14th September. Details will be published as they become available.
In the May News-sheet I put forward the suggestion that this Club become involved in a survey of bird species subject to an open hunting season. Further to this, in the June News-sheet I called for expressions of interest in the survey so that a decision could be reached on whether to go ahead or not. So far, few replies have been received by the Club Secretary.
I would like to point out that involvement in this survey need not be restricted to only those members resident in the Toowoomba area.It is an exercise in which all members can become involved. All that is necessary is:
(1) that the sites monitored are unambiguously defined and
(2) that monitoring is carried out regularly-eg. monthly.
It is up to the individual how many sites and how great an area he or she wishes to cover.
Procedural details will be worked out and standard record sheets etc provided if the decision is made to go ahead.As a point of interest, the Bird Observers Club is currently carrying out a similar survey of Latham's Snipe in Victoria.
Most likely this news will arrive too late, but I have been informed that the "Stamp Day" to be held by the Lockyer Valley Stamp Club has been postponed from July 13th to August 3rd. Venue remains unchanged.
You may have noticed lately that the News-sheet has been getting a bit thin.So if YOU have any "bird stories", how about sending them in and fattening it up a little.

John Gregor ,Editor.

MIMICRY OF THE COMMON STARLING.

During past months I have been listening to a certain Starling that perches on the telephone wires where I ride past frequently. This starling first caught my attention when I heard the call of the Willie Wagtail, to my surprise, coming from the starling.

Here are nine calls that I have been able to identify from this bird: Masked Lapwing, Golden Whistler, Willie Wagtail, Lewin's Honeyeater, Brown Honeyeater, Silvereye, Common Mynah, Australian Magpie Lark, Pied Currawong.
If other members can offer any further information it would be much appreciated.

Shane Brady.

FLIGHT.

To watch an Eagle soaring above us is possibly one of the most appealing aspects of bird watching.The bird's mastery of the sky leaves us earthbound observers envious.Not for him the trip to the airline office weeks beforehand to save money by advance booking or the long wait at the airport for stand-by seats. With the Eagle, or any other bird (except for certain flightless species) it is simply "up, up and away."

But how is it done? That question must have puzzled many observers in the days before the science of aerodynamics-- and over the years the principles involved have been studied and applied to man's machines. But the rigid wing of a fixed wing aircraft with its two or three movable features is a simple device compared to the wing of a bird.

American aircraft designers installed instruments and a camera in an aircraft and sent it aloft to follow a bird of prey so that they could measure and record data of its flight. The bird they tested was an American Black Vulture (Coragyps atratus) which is not generally considered a good soarer.The results of the experiment astonished the designers. The resistance of the bird's body to the air was practically nil,like a thin plate. The Vulture's wing was later tested in a wind tunnel, used for measuring airflow around aircraft wings. There, the results were so poor that an aircraft given a similar aerofoil could not have left the ground.The experiment proved the superiority of the living creature which can mould and alter the wing to the resistance of the surrounding air.

This same ability has frustrated pilots of sports gliders seeking thermal updrafts that make their soaring faster and easier.It sometimes happens that the pilots share a thermal with a soaring raptor. But because of the birds ability to adjust its aerodynamic qualities it can increase its rate of climb and is soon circling high above the glider. Try as he might the pilot is left behind.

Wings of birds and aircraft share the same general aerofoil shape,with a thickened leading edge and tapered trailing edge creating a streamlined shape with a convex upper surface and concave undersurface. Air flowing past the upper surface travels faster than the air flowing beneath.This phenomenon creates a lower air pressure above the wing.

The difference in the pressures above and below creates lift. If the wing is tilted upwards in relation to the airflow greater force is created on the wing underside thus increasing lift. The degree of tilt is called the angle of attack. However when a certain point of tilt is reached air can no longer flow smoothly over the upper surface and the turbulence thus caused destroys lift and initiates stall. On the leading edge of a birds wing is a group of feathers (the alula or bastard wing)which keeps the airflow smooth as the wing tilts, thus permitting a steeper angle of attack.

The ratio between the length and breadth of the wing is the aspect ratio. Thus a long, narrow wing would have a high aspect ratio, which makes it more efficient for sustained gliding and soaring (the Wandering Albatross is a good example). All birds,of course,reflect an adaptation to a particular mode of existence and compromises are made in wing shape and body weight to suit the the environmental niche exploited by the particular species.Thus an eagle has a wing of lower aspect ratio than the albatross,but the eagle can still soar and glide very well and can take off and alight in more restricted conditions than are required by the big sea bird.

Wing loading is an important factor controlling the flying performance. It is the weight carried by a given unit area of wing and varies with the weight of the bird and the area of the wing.Birds with a different aspect ratio could have a similar wing loading.

Generally, a lower wing loading enables a much slower flight ability.A higher loading assists high speed diving. The flight patterns of a Spotted Harrier and Peregrine Falcon illustrate this point.The long, broad wings of the Harrier have to support a smaller proportion of body weight than does a similar area of the Falcon's pointed wings. Wing loading also governs the diameter of the turning circle: the lower the loading the smaller the circle. Smaller soaring birds thus could utilize smaller thermals earlier in the day than bigger birds with higher wing loading.

Basically, the wings lift and propel the bird and the tail steers but the functions overlap,as do the rudder and aileron in a fixed wing aircraft.Tails are important for steering in confined areas such as among trees. The Goshawk is the example here.Its tail is longer in proportion to body size than the tail of a bird which does not need to turn sharply in and out of forested areas.

Some birds combine long secondary feathers which almost meet the spread tail and provide an almost continuous flying surface. But there is much variation in the proportions, governed by the particular bird's needs.

I have touched here on just a few of the factors that get our big raptor soaring above us. It is an interesting subject with many complexities. When we compare the helicopters of the bird world, the tiny hummingbirds with their 70 wingbeats per second,to the dynamic soaring ability of the albatross at sea where there are few, if any, thermal updrafts, we see a vast subject which defies critical analysis. For us earthlings the answer is perhaps after all,to trudge down to the airline office and make advance bookings.

References: The Birds.(Life Nature Library).Roger Tory Peterson.
Birds of Prey of Britain and Europe.Dr. M.Bouchner. Hamlyn.
Dell Encyclopedia of Birds. Bertel Bruun. Delacorte Press.
Birds of Prey, Ecology and Biology.L. Brown.Hamlyn.
Birds of Prey of the World.Grossman and Hamlet. Bonanza Books.

Ron Hopkinson.

WILL THEY DO IT AGAIN?

The following article entitled "Observations on a pair of Australian Magpies Nesting on a Building" by Neil McKilligan appeared in the June 1979 issue of the"Darling Downs Naturalist".

"The Australian magpie usually nests in a eucalypt or other tree 6-16 metres above ground.In Eastern Australia they live in groups of 2-10 birds and defend a common territory of 2-18 ha in which they nest and feed. They are polygamous with only one of the males in the group being the 'husband' of all the females.(Readers Digest 1976).

The pair described here nested atop a concrete wall adjacent to a classroom window at the Darling Downs Institute of Advanced Education at about 12 m above ground level. I know of no other instance of magpies nesting on a building and it is therefore of interest to describe the nest site. Furthermore, since the birds could be observed at the nest from as close as 1 metre without disturbing them, they provided an unusual opportunity for close observation of their nesting activities. Observations were made irregularly during the incubation and brooding periods from 17th November to 5th December on 10 days between 1000 and 1700 hours.The longest continuous watch was 4 hrs. 25 mins.

The nest was about 150 metres from the nearest magpie nesting trees, but it is not known whether these birds were part of a larger group. They nested late in the breeding season which extends from July to December with a peak in August-December (Anon, 1978). The nest was perhaps flatter than the usual basket of twigs but it was strongly constructed. It sat securely on the hollow edge of an upright 'besserblock' which forms the outer part of a small wall projecting at right angles from the building and was tucked into the angle formed by this block and an overhanging concrete sunshade which descends obliquely to meet the 'besserblocks' outer edge.Three eggs were laid, but only one hatched, this one between 24-27 November.The nestling seemed to develop normally up to the appearance of flight feathers but disappeared shortly after 5th December. This nesting failure is not surprising since even in large Magpie groups nesting in trees the production rate is only about one per 3 adults per year.(Reader's Digest, 1976).

Adult female magpies can be distinguished from males by having a grey rather than a pure white nape and rump. The usual sex roles for this species are for the female to select the nest site, incubate the eggs, and rear the young.The male sometimes assists with brooding and rearing (Anon, 1978). In this case only the female was seen incubating,brooding and feeding the nestling. She fed it a spider on one occasion. The male visited the nest infrequently, arriving only once during three watches totalling 9 hours 23 minutes. On that visit, he fed the incubating female a bladder cicada Cystosoma saundersi. The female had therefore to find most of her own food and probably all the nestling's while the male presumably defended the territory. She left the nest each afternoon for short periods to preen on a nearby ledge and to feed on grassland about 60 metres distant.These feeding forays lasted up to 12 minutes during which the eggs (or nestling) were unattended.

Clearing woodland for agriculture is said to have increased Magpie feeding habitat but reduced their breeding habitat.(Reader's Digest 1976).There certainly seems to be a shortage of nesting trees near the D.D.I.A.E. and this may have forced this pair of birds to use a building. What is surprising is that this is an isolated instance. Possibly, the exteriors of most buildings do not have the physical configuration which is sufficiently 'tree-like' to attract a Magpie.

The building they,nested on at D.D.I.A.E. is only two years old and had the very unusual facade of small sunshades with 'besserblock' supports which the magpies used in nesting. I can only speculate that this rare use of a building for nesting by this species resulted from the unusual combination of a shortage of nesting trees and a built structure which provided a suitable alternative site. I look forward with interest to the next breeding season.This building could potentially provide nest sites for 98 pairs of Magpies."

And so ends Neil's article. However that was not the end of the story. The next year (1979) a pair of Australian Magpies nested on the adjacent building, though whether it was the same pair is unknown.

The nest in this case was constructed on an open sill about 25 cm. wide, flush up against a plate glass window about 10 metres above ground level. While this was convenient for observation purposes, it also led to the almost inevitable result that the nest was blown down during high winds.

Initially, four eggs were laid, of which three hatched. In support of the somewhat grim statistics which Neil quoted,only one of the nestlings lived to leave the nest as a fully fledged bird.

With the breeding season of the Australian Magpie upon us again, the question arises--will they do it again, and if so why?

References: Anon 1978 Wildlife series, The Magpie. Queensland National Parks and Wildlife Service.
Reader's Digest Complete Book of Australian Birds. 1976. Pub. Reader's Digest Services Pty. Ltd.
R. Young. Unpublished notes. 1979.

John Gregor.

FIELD DAY REPORT.JUBILEE PARK.22-6-80.

It was a pleasure to be part of the extra large number of members, both young and not so young, who rolled up at the Park entrance on Sunday.
Those first to arrive were greeted by a Red Wattlebird, while high-pitched screeches overhead betrayed the presence of a flock of Little Lorikeets.As we worked our way downhill, the tailenders were fortunate enough to see a Brown Goshawk in a gum for a few minutes. It was soon evident that a certain species had a monopoly on most of the park--Yellow-faced Honeyeaters were abundant, and for once Lewin's Honeyeaters had to play second fiddle.

A delightful sight was that of an Eastern Spinebill hovering over a lantana bush, its rich brown hues giving it unquestionable beauty. Further on, a profusely flowering eucalypt yielded White-naped Honeyeaters and a male Golden Whistler.After a short rest we about turned and came across a party of Red-browed Firetails in lantana bordering the track. Members with better positioning were able to identify an obscure bird as a Varied Triller.

A couple of members finished off on Prince Henry Drive where a Wedge-tailed Eagle was seen.Overall, a most enjoyable day--the chance to talk "birds" to our fellow members making up for the average quality of the birds seen.

Michael Atzeni.

SPECIES LIST.JUBILEE PARK. 22-6-80.

Brown Goshawk
Wedge-tailed Eagle
Little Lorikeet
Pale-headed Rosella
Laughing Kookaburra
Varied Triller
Rose Robin
Eastern Yellow Robin
Golden Whistler
Grey Fantail
Eastern Whipbird
White-browed Scrubwren

Species list c'td.

Brown Thornbill	Spotted Pardalote
White-throated Treecreeper	Striated Pardalote
Red Wattlebird	Silvereye
Noisy Friarbird	Red-browed Firetail
Little Friarbird	Grey Butcherbird
Noisy Miner	Pied Butcherbird
Lewin's Honeyeater	Australian Magpie
Yellow-faced Honeyeater	Pied Currawong
White-naped Honeyeater	Australian Raven
Eastern Spinebill	

MEMBER'S BIRD NOTES.

Great Cormorant. 14.6.80. Apex Lake, Gatton. REH.
Black-necked Stork. 14/15.6.80. Apex Lake, Gatton. REH.
Radjah Shelduck. 8.6.80. Karumba, N.Q. RGH.
Pink-eared Duck. 4.6.80. Burketown, N.Q. RGH.
White-bellied Sea-Eagle.(2).14.6.80. Apex Lake, Gatton. REH.
Sarus Crane. 1.6.80. Karumba. N.Q. RGH.
Australian Bustard. 3.6.80. Normanton, N.Q. RGH.
Black-fronted Plover. 29.6.80. Apex Lake, Gatton. JG.
Australian Pratincole. 3.6.80. Normanton, N.Q. RGH.
Masked Owl.13.6.80. Yungaburra, Atherton Tableland, RGH.
Red-capped Robin. 11.6.80. Whittle St. Gatton. SE. PE.
" " " 11.6.80. D.D.I.A.E. JG.
Grey-fronted Honeyeater. 5.6.80. Karumba, N.Q. RGH.
Eastern Spinebill. Through June. 2 Loch St., T'mba. JG.
Mistletoebird. 27.6.80. 10 Ocean St. T'mba. JCC. JEC.
Black-throated Finch.2.6.80. Croydon, N.Q. RGH.
Great Bowerbird.10.6.80. Gilbert River. RGH.

JCC:Jim Corbin. JEC:Jane Corbin. PE:Phillip Elmes. SE:Sue Elmes
JG:John Gregor. REH:Ron Hopkinson. RGH:Rod Hobson.

FIELD DAY FOR JULY.

Date:Sunday, July 20th., 1980. Place: Oakey and Brookvale Park.
Assembly Point: Pigott's Car Park. Time: 8.15am for departure 8.30am.

PUBLICATIONS RECEIVED.

The Darling Downs Naturalist- June 1980.
Urimbirra- June 1980.
The Bird Observer-June 1980.

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