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"TO ENCOURAGE THE OBSERVATION AND STUDY OF THE BIRDS OF THE TOOWOOMBA AREA."

No. 180 - January 1991

**A PAIR OF MASKED OWLS (*Tyto novaehollandiae*) IN REDWOOD PARK.**

The evening of October four last had lengthened into a sultry night. Pat McConnell, Keith Treschman and I had been in Redwood Park since late that afternoon and the time was now close on 8.00 p.m. We were intent on discovering some of Redwood's nocturnal inhabitants, be they avian or otherwise. By this time, however, save for the crepuscular pyrotechnics of the fire-flies, our labours had been without success. At this stage, disgruntled with the impedimenta that such undertakings involve, I could only wave a despondent beam over the surrounding scrub; the beam reflecting empty handed. Fortunately, Keith could still muster some enthusiasm as, on plying his spot along an overhanging limb, our first owl was illuminated. Immediate excitement, the bird an obvious *Tyto*, a monkey face, peered upon us from its lofty vantage; hunched of back, saturnine and sallow, an avian Uriah Heep.

During the frantic juggling of binoculars and spotlights, the entangling of leads and up-setting of batteries, the object of our disarray remained passive, aplomb of this Earth bound rabble. We were able to indulge ourselves to the full of this bird, reiterating field marks with frenetic relish, leafing through guides in the bright light blaze, comparing Barn Owl with Masked, *alba* with *novaehollandiae*. We viewed the bird for about five minutes, our view unimpeded by intervening vegetation, the subject bracketed in the beams of two spot lights. At this stage, the owl, tiring of our unsolicited attentions, took to wing, decamped, giving vent to a long drawn, rasping cry in so doing. We were sure of our breed by now; a male Masked Owl judging by attitude, size and field marks.

As we were preparing to leave, jubilant, I happened to notice an Owl-form silhouetted against the night sky a little way off. Thinking this to be the same bird, we again brought the spotlights to bear. This bird thus exposed, perched with its back to us, immediately impressed us with its much greater size. Clearly then, this was the distaff side of the duo. Rotating her head through one hundred and eighty degrees, this female viewed us with aloof mien. We now had clear views of a most distinguishing field mark, the dark eye surrounds terminating in pendant chocolate "tear-drops"; these much more conspicuous than in the male. We again had good views of this bird before she, too, melted into the dark, bringing a most memorable experience to its finale.

Why Masked Owls and not the more common, and similar Barn Owls? I must confess that it was hard to distinguish individual colour patterns in the raw light. Both birds appeared very dark dorsally with very light facial discs and ventral surfaces. The diagnostic features noted were the great size disparity between both birds. The female Masked Owl is considerably larger than the male whereas both sexes in the Barn Owl are of the same size. The legs of these owls were feathered to the feet, a feature separating them from the Barn Owls and the eyes of Masked Owls have the very conspicuous plumage pattern around them as mentioned above. Both the owls in question were perched in a hunched posture, typical of Masked Owls, whereas the Barn owl has a bolt-upright posture. The habitat type is also in agreement with that preferred by *T. novaehollandiae*, Masked owls.

I have only experienced this species on one other instance, that being a female bird in this same park on 14.11.89. It is stated that a pair of these owls in Eastern Australia, maintain a territory of 500 - 1 000 hectares. This being the case, the female bird which I sighted on 14.11.89 could very well be the same female of the pair in question. On the former instance I sighted the female bird at about 2.00 p.m. in the afternoon, she having been flushed from her roost and harried by a troupe of Pied Currawongs.

Pat M<sup>C</sup>Connell recorded, and photographed, a Masked Owl, dead on the roadside near Hampton in 1982. These are the only regional records of this species of which I am aware. Several subsequent forays for these owls have proved singularly unsuccessful. Perhaps the old fisherman's adage holds true "You should have been here yesterday." These magnificent night hunters, wraith-like, have dissolved back into the night scrubs of redwood.

Rod Hobson

## BIRD BEHAVIOUR

### Part 12 of a Series.

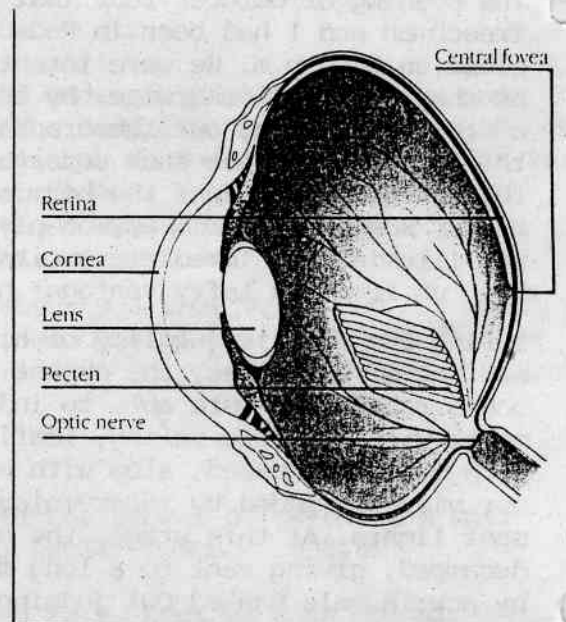
#### VISION

It is to be expected that animals which travel at speed should have good eyesight to perceive instantaneously the position of objects around them. The size of the eyeballs is an indication of the importance of vision in the lives of birds: hawks and owls have eyeballs as large as the human eye, and, in some, the eyeballs almost meet in the middle of the skull, dwarfing the brain. They cannot rotate much in their sockets, hence the fixed stare of hawks and owls, although the eyes are not so immovable as is sometimes stated. In compensation, such birds have flexible necks and can turn their heads to look around them. The owls are famous for turning their heads almost completely around to follow someone circling them. When they get to 270° from the front, they rapidly swivel round in the opposite direction and continue the scan.

In basic structure and function, there is little difference between bird and mammal eyes. Most birds' eyeballs are rather flattened, but raptors owls and others with increased visual acuity have globular or tubular eyes, which increase the distance between lens and retina. The focusing power of the vertebrate eye comes from the refraction (bending) of the light as it enters the cornea and passes through the lens. In both birds and mammals, accommodation, or the fine adjustment of focusing to different distances, is carried out by changing the shape, and hence the strength, of the lens. Birds obtain additional focusing power by changing the curvature of the cornea through contraction of a surrounding muscle, and most species have twice the focusing power of the human eye. This allows them to focus on food at very short range, but also gives them the accurate distance vision necessary for flight.

The retina of the bird's eye is composed of cone and rod cells as in human eyes. Rod cells are sensitive to low light levels and predominate in owls; cones are used for colours and are used for resolving fine detail in good light. Birds of prey have a concentration of visual cells in the upper part of the retina, which is the area on which images of the ground will fall when they are in flight. When perching, they often turn their heads upside down to look at other birds overhead.

The acuity of birds' vision has often been said to be far superior to our own. This assertion was supported by anecdotes of birds catching sight of tiny or distant objects out of range of the human observer.



A cross-section through the eyeball of a bird. The pecten, a structure found only in the eyes of birds, is filled with blood vessels.

Physiologists have now refuted these claims with experiments showing that birds of prey have an acuity no more than two and a half times better than that of man. Other birds actually have less acute vision than ours. Birds appear so keen eyed because they are continually surveying their surroundings, and their eyes can pick out details at a glance while humans make a slow scan.

The ability of nocturnal birds to see in dim light is also much exaggerated. The light collecting power of the eye depends on the aperture of the iris, that is, the size of the pupil. It is expressed in the photographers' f-number, which is an indication of the brightness of the image falling on the retina. Human eyes have an f-value of 2.1. Owls' eyes have a value of 1.3, which means that the image is two and a half times brighter, but this is not a significant difference in practice, and the conclusion is that owl and human eyes have similar light-collecting powers.

Birds' eyes like those of humans, have a pit in the retina, called the fovea, which is packed with cone cells. This is the centre for the most acute vision and nearly all birds have a central fovea which receives light on the plane of the eye. Many birds have a second, "temporal", fovea set in the rear part of the retina to enable them to look forward. Temporal foveas are found in high-speed hunting birds such as raptors, kingfishers, terns and swallows, which need good forward vision for catching their prey. The fovea is important for sensitive daytime vision, and owls usually have no central fovea. The temporal fovea is not well developed either.

by Barbara Weller

Adapted from "Bird Behaviour" by Robert Burton, Granada Publishing 1985.

#### LYREBIRD ANTICS:

On a recent camping trip to Girraween National Park near Stanthorpe, there were two birds I hoped to see - the Lyrebird and the Turquoise Parrot. I have often searched for these two species but they have managed to elude me. Having obtained directions from the ranger as to where to find Turquoise Parrots, I decided to set off early the next morning to try to find them. I was all set to leave the camp-site when suddenly the unmistakable mimic song of a Lyrebird dominated the morning air. The bird was very close to our camp and I soon found it about 20 metres away perched in a low dead tree clearly visible even without binoculars. After a few minutes a Currawong started to annoy the Lyrebird, so she ( I had now identified it as a female Superb Lyrebird - *Menura superba* ) gave chase to it, bounding from rock to rock and onto low branches all the time trying to chase the Currawong away. Sometimes she would fan out her long tail. After about five minutes she gave up and started scratching at leaf litter, hunting for food and hopping from one rock to the next closely followed by a very excited bird-watcher. After a while I lost sight of her in the thicker scrub but I decided to return again the next morning.

The next morning I followed the call once again and found a female scratching through the leaf litter on the top of a large granite boulder, clearly visible in the morning light. I noted her grey/brown body, rufous/red throat patch and long grey uniform tail feathers. She was about the size of a Scrub Turkey with a long tail, and strong clawed feet. A very loud melodious mimic call nearby heralded the presence of her male companion but he managed to elude me.

By now my appetite was well and truly wetted so I decided to sit and wait for them the next morning but I was out of luck, they did not return to that area. Those shy birds had seemingly disappeared into the higher, thicker country behind the camping ground. I still consider the sighting to be a MEGATICK and I would like to return one day to try to find the male. I also found a Turquoise Parrot (female) later on, on the first day I sighted the Lyrebird. She was sitting on a low branch near the creek clearly visible for some minutes. Although these were the highlights of the trip, it was also enjoyable to sit outside your tent and see Satin Bowerbirds, Crimson Rosellas, King Parrots, Red Wattlebirds and Superb Fairy Wrens picking at wattle seeds or the crumbs from your lunch.

Barbara Weller

**MEMBERS' BIRD NOTES:**

Black-necked Stork	3.11.90	Karrasch's Lagoon	R.G.Hobson
Grey Goshawk	15.10.90	Horn Park	B.Weller
" "	18.10.90	Redwood Park	L.Beaton et al
Peregrine Falcon	9.10.90	Helidon	R.G.Hobson
Painted Button-quail	2.10.90	Phillip's Road, Grantham	"
" "	11.11.90	" "	"
" "	20.11.90	" "	"
Whiskered Tern (13 birds, breeding plumage)	18.11.90	Karrasch's Lagoon	"
White-throated Nightjar (7+)	6.11.90	Helidon	P.M <sup>C</sup> Connell et al
Spotted Nightjar	5.11.90	Helidon	R.G.Hobson
Powerful Owl (calling)	5.10.90	Redwood Park	P.M <sup>C</sup> Connell et al
Southern Boobook	14.10.90	" "	L.Beaton
Sacred Kingfisher	10.10.90	Raff & Bridge Streets	J.Deuble
Red Wattlebird (2 adults, 2 young)	10.10.90	Centenary Heights S.H.S.	L.Beaton
Little wattlebird	10.10.90	Near Lake Clarendon	R.G.Hobson

**BIRD OUTING WITH AMERICAN BIOLOGY STUDENTS:**

On Monday morning of February 4, I will be taking 18 American Biology students and their three lecturers bird watching. Any member of the Bird Club is welcome to join us. The group will be camping on the U.C.S.Q. campus adjacent to the soccer oval which is across the street from the Education Centre in Baker Street. We will be meeting at Redwood Park lower entrance at 8.00 a.m. and from there we will go to Hood's Lagoon and then back to the Toowoomba Waterbird Habitat for lunch.

We are also holding a bush dance on Sunday night February 3 from ~~7.30~~<sup>8.00</sup> p.m. at Denolay Hall, Margaret Street. (Cost \$3.00 includes supper) Members of the Folk Club will be playing live music. Any members of the T.B.C. are welcome to join us. For more information phone Marilyn Jacobs on 35 8594.

**FUTURE OUTINGS**

- Sunday, 27 January 1990      Cooby Dam. Meet at Picnic Ground below the dam wall at 7.00 a.m. Leader Lesley Beaton 308481
- Sunday, 24 February 1990      Ravensbourne National Park. meet at first picnic ground at 7.30.a.m.

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