

A PRELIMINARY OBSERVATION ON THE BIRDS OF LONAR CRATER LAKE, BULDHANA DISTRICT, MAHARASHTRA

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Lonar lake (19°59'N-74°34'E) is situated in Mehkar taluka of Buldhana district of Maharashtra. This is the only crater in basaltic rock formed by the meteoritic impact in India, ranking third largest in the world. The Lonar crater has a circular outline with a diameter of 1830m and a depth of 150m with steep vertical slopes. The temperature fluctuates between 27°-45°C from winter to summer and rainfall from 500 to 800mm.

Voluminous information has been generated on the geochemistry and water quality parameters of this unique lake system (Badve *et al.*, 1993). Very few works have been done on the flora and fauna of this habitat. A report prepared by the Econet, Pune (Anonymous, 1999), listed 36 species of birds from the region. The nomenclature and classification is after Manakadan & Pittie (2001).

While conducting hydrobiological studies on the Lonar Lake from 1-7 November 2000, we observed and maintained a record of the birds of the area from different habitats, including inhabited open areas, scrub jungles of the slopes, the saline lake and its basins. Birds observed in these habitats were segregated into Common (C), Uncommon (UC), Rare (R) and Not Found (NF) categories based on their occurrence during the survey. The characteristics of the three important habitats are as follows.

(i) Crater basin and lake: The lake is mostly circular in shape except on its north-eastern side, where siltation caused by the Dhara (a perennial stream) has created small mudflats. The shallow nature of the habitat has provided good growth of aquatic reeds and sedges dominated by *Typha angustifolia*, *Fimbristylis* sp., *Cyperus* sp., etc. The most striking feature of the lake is its extreme salinity and high alkalinity (pH above 10.5) due to the confined nature of the lake, bounded by the crater wall. Average depth of the lake varies from 2m in summer to 4m in rainy season. The flat lake basin area is covered with natural forests in some parts, while some parts are planted with *Eucalyptus* sp., *Delonix regia*, *Polyalthia longifolia*, *Leucaena leucocephala*, *Prosopis juliflora*, etc. by the afforestation programme of the forest department. There is a 21ha patch of cultivated land of banana and other vegetables at the base of the ravine fed by the perennial streams.

(ii) Slopes of the crater: The slopes of the crater are quite steep and descend to an average depth of 136m as measured from the crest of the rim. The eastern slopes are gentler with a broad gully formation in the north-eastern part towards Lonar town, where a perennial spring originates and flows into the crater. The two main streams are Dhara and Sita-Nahani. The slopes are covered with bushy vegetation over most of the

parts. The vegetation appears to be of a stunted form and completely deciduous in nature, dominated with *Butea monosperma*, *Aegle marmelos*, *Zizyphus oenoplia*, *Lantana camara*, *Cassia auriculata*, *Capparis* sp. etc.

(iii) The rim and outside crater: The Lonar crater has a 30m high rim with a diameter averaging 1830m at the rim crest; the northeastern side is much open. The outside of the crater has very gentle slopes, which eventually merges with the surrounding countryside interspersed with agricultural lands.

Even though the Lonar crater has a very small area, the diversity of different micro-ecosystems and the micro-climatic conditions accommodates a total of 110 species of birds belonging to 41 families (Table 1). Of these, 22 are migratory, 80 are residents and eight are considered to be local migrants (Abdulali, 1981). The number of species recorded was high on the rim and outside the crater (91), followed by slopes of the crater (89) and 35 species from the lake and its basin. Birds such as Small Blue Kingfisher, White-breasted Kingfisher, Small Bee-eater, Common Swallow, Wire-tailed Swallow, Red-rumped Swallow, Indian Great Reed Warbler, Blyth's Reed Warbler, Paddyfield Pipit, Richard's Pipit, Grey Wagtail and Large Pied Wagtail were generalists present in all the three habitats. A good number of Indian Peafowl were observed mainly on the slopes of the crater.

Migratory waterfowls such as Brahminy Shelduck, Northern Shoveller, Marsh Sandpiper, Green Sandpiper, Wood Sandpiper and Common Sandpiper were found to be using the lake basin area for foraging. Even though the lake water is without fish species, some piscivorous species like little cormorants, egrets and herons inhabit the lake water area. Even though the lake water is highly saline, freshwater bird species such as Green Sandpiper and duck species were found to use the lake as a foraging ground. Presence of these species is due to the inflow of the perennial freshwater streams at the north-eastern area of the lake.

A roosting population of waterfowls including herons, egrets and ibises were observed on the north-eastern lake basin area. The bushy growth of *Prosopis juliflora* and *Acacia* sp. was observed to accommodate as much as 1000s of waterfowls to the area. The roosting birds were observed to arrive by 17.50hr and occupy the roost by 18.40hr. Most of them were seen coming from the eastern and north-eastern direction. Their return flight started from early morning by 05.50hr and lasted up to 07.15hrs. The roost was dominated with Median Egrets followed by Little Egrets, Pond Herons, Cattle Egrets, Large Egrets and White Ibis.

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Table 1. Systematic list of birds observed at Lonar crater lake, Maharashtra

	Scientific Name	Common Name	Status	Occurrence		
				Lake	Rim	Outside
1	Family: Podicipididae <i>Tachybaptus ruficollis</i> (Pallas)	Little Grebe	R	C	NF	C
2	Family: Phalacrocoracidae <i>Phalacrocorax niger</i> (Vieillot)	Little Cormorant	R	R	NF	C
3	Family: Ardeidae <i>Ardea cinerea</i> Linnaeus	Grey Heron	LM	R	NF	UC
4	<i>Ardeola grayii</i> (Sykes)	Indian Pond Heron	R	UC	UC	C
5	<i>Bubulcus ibis</i> (Linnaeus)	Cattle Egret	R	C	C	C
6	<i>Mesophoyx intermedia</i> (Wagler)	Median Egret	R	C	NF	C
7	<i>Egretta garzetta</i> (Linnaeus)	Little Egret	R	UC	NF	C
8	Family: Threskiornithidae <i>Threskiornis melanocephalus</i> (Latham)	Oriental White Ibis	LM	R	NF	NF
9	Family: Anatidae <i>Tadorna ferruginea</i> (Pallas)	Brahminy Shelduck	M	R	NF	NF
10	<i>Anas poecilorhyncha</i> J.R. Forester	Spot-billed Duck	R	R	NF	UC
11	<i>Anas clypeata</i> Linnaeus	Northern Shoveller	M	C	NF	C
12	Family: Accipitridae <i>Elanus caeruleus</i> (Desfontaines)	Black-shouldered Kite	LM	NF	UC	UC
13	<i>Accipiter badius</i> (Gmelin)	Shikra	R	NF	UC	UC
14	Family: Falconidae <i>Falco tinnunculus</i> Linnaeus	Common Kestrel	M	NF	UC	NF
15	Family: Phasianidae <i>Perdicula argoondah</i> (Sykes)	Rock Bush Quail	R	NF	UC	R
16	<i>Pavo cristatus</i> Linnaeus	Indian Peafowl	R	NF	C	R
17	Family: Rallidae <i>Amauorornis phoenicurus</i> (Pennant)	White-breasted Waterhen	R	C	R	C
18	<i>Gallinula chloropus</i> (Linnaeus)	Common Moorhen	R	R	NF	NF
19	<i>Porphyrio porphyrio</i> (Linnaeus)	Purple Moorhen	R	UC	NF	R
20	<i>Fulica atra</i> Linnaeus	Common Coot	M	UC	NF	UC
21	Family: Recurvirostridae <i>Himantopus himantopus</i> (Linnaeus)	Black-winged Stilt	R	C	NF	C
22	Family: Charadriidae <i>Vanellus indicus</i> (Boddaert)	Red-wattled Lapwing	R	C	UC	C
23	Family: Scolopacidae <i>Tringa stagnatilis</i> (Linnaeus)	Marsh Sandpiper	M	C	R	UC
24	<i>Tringa ochropus</i> Linnaeus	Green Sandpiper	M	C	UC	C
25	<i>Tringa glareola</i> Linnaeus	Wood Sandpiper	M	UC	NF	UC
26	<i>Actitis hypoleucos</i> Linnaeus	Common Sandpiper	M	C	C	C
27	Family: Laridae <i>Sterna aurantia</i> J.E. Gray	River Tern	LM	NF	NF	UC
28	Family: Columbidae <i>Streptopelia orientalis</i> (Latham)	Oriental Turtle Dove	R	NF	UC	UC
29	<i>Streptopelia decaocto</i> (Fridvaldszky)	Eurasian Collared Dove	LM	NF	UC	C
30	<i>Streptopelia senegalensis</i> (Linnaeus)	Little Brown Dove	R	NF	C	C
31	<i>Streptopelia chinensis</i> (Scopoli)	Spotted Dove	R	NF	NF	UC
32	<i>Chalcophaps indica</i> (Linnaeus)	Emerald Dove	R	NF	R	NF
33	Family: Psittacidae <i>Psittacula krameri</i> (Scopoli)	Rose-ringed Parakeet	R	NF	C	C
34	Family: Cuculidae <i>Clamator jacobinus</i> (Boddaert)	Pied Crested Cuckoo	BM	NF	NF	UC
35	<i>Hierococcyx varius</i> (Vahl)	Brainfever Bird	R	NF	R	R
36	<i>Eudynamis scolopacea</i> (Linnaeus)	Asian Koel	R	NF	C	C
37	<i>Centropus sinensis</i> (Stephens)	Greater Coucal	R	NF	C	C
38	Family: Tytonidae <i>Tyto alba</i> (Scopoli)	Barn Owl	R	NF	R	R
39	Family: Strigidae <i>Bubo bubo</i> (Linnaeus)	Eurasian Eagle Owl	R	NF	R	R
40	<i>Athene brama</i> (Temminck)	Spotted Owlet	R	NF	C	C
41	Family: Caprimulgidae <i>Caprimulgus</i> spp	Nightjar ?	R	NF	UC	UC
42	Family: Apodidae <i>Apus affinis</i> (J.E. Gray)	House Swift	R	NF	UC	C

	Scientific Name	Common Name	Status	Occurrence		
				Lake	Rim	Outside
	Family: Alcedinidae					
43	<i>Alcedo atthis</i> (Linnaeus)	Small Blue Kingfisher	R	R	UC	C
44	<i>Halcyon smyrnensis</i> (Linnaeus)	White-breasted Kingfisher	R	C	UC	C
	Family: Meropidae					
45	<i>Merops orientalis</i> Latham	Small Bee-eater	R	C	C	C
	Family: Coraciidae					
46	<i>Coracias benghalensis</i> (Linnaeus)	Indian Roller	R	NF	R	C
	Family: Upupidae					
47	<i>Upupa epops</i> Linnaeus	Common Hoopoe	R	NF	UC	C
	Family: Bucerotidae					
48	<i>Ocyrceros birostris</i> (Scopoli)	Indian Grey Hornbill	R	NF	UC	UC
	Family: Capitonidae					
49	<i>Megalaima zeylanica</i> (Gmelin)	Brown-headed Barbet	R	NF	NF	R
50	<i>Megalaima rubricapilla</i> (Gmelin)	Crimson-throated Barbet	R	NF	R	NF
51	<i>Megalaima haemacephala</i> (Muller)	Coppersmith Barbet	R	NF	C	UC
	Family: Alaudidae					
52	<i>Eremopterix grisea</i> (Scopoli)	Ashy Crowned Finch Lark	R	NF	UC	C
53	<i>Ammomanes phoenicurus</i> (Franklin)	Rufous-tailed Finch Lark	R	NF	R	UC
54	<i>Calandrella brachydactyla</i> (Leisler)	Greater Short-toed Lark	M	NF	NF	C
	Family: Hirundinidae					
55	<i>Hirundo concolor</i> Sykes	Dusky Crag Martin	R	NF	UC	UC
56	<i>Hirundo rustica</i> Linnaeus	Common Swallow	M	C	C	C
57	<i>Hirundo smithii</i> Leach	Wire-tailed Swallow	R	C	R	R
58	<i>Hirundo daurica</i> Linnaeus	Red-rumped Swallow	R	UC	UC	UC
	Family: Laniidae					
59	<i>Lanius excubitor</i> Linnaeus	Great Grey Shrike	R	NF	R	UC
60	<i>Lanius vittatus</i> Valenciennes	Bay-backed Shrike	R	NF	UC	C
	Family: Oriolidae					
61	<i>Oriolus oriolus</i> (Linnaeus)	Eurasian Golden Oriole	LM	NF	R	NF
	Family: Dicruridae					
62	<i>Dicrurus macrocercus</i> Vieillot	Black Drongo	R	NF	UC	C
63	<i>Dicrurus leucophaeus</i> Vieillot	Ashy Drongo	M	NF	R	NF
64	<i>Dicrurus caerulescens</i> (Linnaeus)	White-bellied Drongo	R	NF	UC	NF
	Family: Sturnidae					
65	<i>Sturnus pagodarum</i> (Gmelin)	Brahminy Myna	R	NF	C	C
66	<i>Acridotheres tristis</i> (Linnaeus)	Common Myna	R	NF	C	C
	Family: Corvidae					
67	<i>Corvus splendens</i> Vieillot	House Crow	R	NF	C	C
68	<i>Corvus macrorhynchos</i> Wagler	Jungle Crow	R	NF	C	C
69	<i>Dendrocitta vagabunda</i> (Latham)	Indian Treepie	R	NF	C	C
	Family: Campephagidae					
70	<i>Coracina macei</i> (Lesson)	Large Cuckoo Shrike	R	NF	R	NF
71	<i>Tephrodornis pondicerianus</i> (Gmelin)	Common Wood Shrike	R	NF	R	UC
	Family: Irenidae					
72	<i>Aegithina tiphia</i> (Linnaeus)	Common Iora	R	NF	C	C
	Family: Pycnonotidae					
73	<i>Pycnonotus cafer</i> (Linnaeus)	Red-vented Bulbul	R	NF	C	C
	Family: Muscicapidae					
	Subfamily: Timalinae					
74	<i>Chrysomma sinense</i> (Gmelin)	Yellow-eyed Babbler	R	NF	R	NF
75	<i>Turdoides caudatus</i> (Dumont)	Common Babbler	R	NF	R	NF
76	<i>Turdoides malcolmi</i> (Sykes)	Large Grey Babbler	R	NF	C	C
77	<i>Turdoides striatus</i> (Dumont)	Jungle Babbler	R	NF	C	UC
	Subfamily: Muscicapinae					
78	<i>Muscicapa daurica</i> Pallas	Asian Brown Flycatcher	LM	NF	R	NF
	Subfamily: Monarchinae					
79	<i>Terpsiphone paradisi</i> (Linnaeus)	Paradise Flycatcher	R	NF	UC	NF
	Subfamily: Rhipidurinae					
80	<i>Rhipidura albicollis</i> (Vieillot)	White-throated Fantail Flycatcher	M	NF	UC	NF
	Subfamily: Sylviinae					
81	<i>Cisticola juncidis</i> (Rafinseque)	Streaked Fantail Warbler	R	NF	R	UC
82	<i>Prinia inornata</i> Sykes	Plain Prinia	R	NF	UC	R
83	<i>Prinia socialis</i> Sykes	Ashy Prinia	R	NF	C	UC

	Scientific Name	Common Name	Status	Occurrence		
				Lake	Rim	Outside
84	<i>Orthotomus sutorius</i> (Pennant)	Common Tailor Bird	R	NF	C	C
85	<i>Acrocephalus stentoreus</i> (Emprich & Ehrenberg)	Indian Great Reed Warbler	R	C	C	C
86	<i>Acrocephalus dumetorum</i> Blyth	Blyth's Reed Warbler	M	C	C	UC
87	<i>Sylvia curruca</i> (Linnaeus)	Common Lesser Whitethroat	M	NF	UC	UC
88	<i>Phylloscopus trochiloides</i> (Sundevall)	Greenish Leaf Warbler	M	NF	C	C
89	<i>Phylloscopus occipitalis</i> (Blyth)	Western Crowned Warbler	M	NF	R	R
Subfamily: Turdinae						
90	<i>Copsychus saularis</i> (Linnaeus)	Oriental Magpie Robin	R	NF	C	C
91	<i>Cercomela fusca</i> (Blyth)	Indian Chat	R	NF	UC	UC
92	<i>Saxicola carprata</i> (Linnaeus)	Pied Bush Chat	R	NF	C	UC
93	<i>Saxicoloides fulicata</i> (Linnaeus)	Indian Robin	R	NF	C	C
94	<i>Monticola solitarius</i> (Linnaeus)	Blue Rock Thrush	M	NF	UC	NF
Family: Paridae						
95	<i>Parus major</i> Linnaeus	Great Tit	R	NF	UC	NF
Family: Motacillidae						
96	<i>Anthus trivialis</i> (Linnaeus)	Eurasian Tree Pipit	M	NF	UC	UC
97	<i>Anthus rufus</i> Vieillot	Paddyfield Pipit	R	C	C	C
98	<i>Anthus richardi</i> Vieillot	Richard's Pipit	M	R	UC	R
99	<i>Motacilla citreola</i> Pallas	Citrine Wagtail	M	UC	R	NF
100	<i>Motacilla cinerea</i> Tunstall	Grey Wagtail	M	C	C	C
101	<i>Motacilla alba</i> Linnaeus	White Wagtail	M	UC	NF	NF
102	<i>Motacilla maderaspatensis</i> Gmelin	Large Pied Wagtail	R	UC	R	C
Family: Dicaeidae						
103	<i>Dicaeum agile</i> Tickell	Thick-billed Flowerpecker	R	NF	UC	UC
Family: Nectariniidae						
104	<i>Nectarinia asiatica</i> (Latham)	Purple Sunbird	R	NF	C	C
Family: Zosteropidae						
105	<i>Zosterops palpebrosa</i> (Temminck)	Oriental White-eye	R	NF	R	R
Family: Passeridae						
Subfamily: Passerinae						
106	<i>Passer domesticus</i> (Linnaeus)	House Sparrow	R	NF	UC	C
107	<i>Petronia xanthocollis</i> (Burton)	Yellow-throated Sparrow	R	NF	UC	UC
Subfamily: Ploceinae						
108	<i>Ploceus philippinus</i> (Linnaeus)	Baya Weaver	R	NF	C	UC
Family: Estrildae						
109	<i>Lonchura malabarica</i> (Linnaeus)	White-throated Munia	R	NF	C	UC
110	<i>Lonchura punctulata</i> (Linnaeus)	Spotted Munia	R	NF	NF	UC

Status: R - Resident; M - Migrant; LM - Local Migrant; BM - Breeding Migrant

Occurrence: C - Common; UC - Uncommon; R - Rare; NF - Not Found

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