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## A checklist of avifaunal diversity of morel dam area district Dausa Rajasthan India

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### Abstract

The present Study was conducted on Morel dam district dausa Rajasthan to illustrate the present status of diversity of dam. This paper documents a list of wetland birds with reference to the migratory birds of Morel Dam, Lalsot District, Dausa, Rajasthan. Till date, there is no report on the wetland birds of Morel Dam and the present study is therefore first of its kind. Hence, the study becomes the preliminary data for future investigation and during the study, around 140 species of birds belonging to 51 families were collected. We regularly visited Morel Dam and nearby places in kankariya and pilukheda village of Dausa district for bird watching. Survey was made for the period of 24 months from April 2019 to march 2021. During the said survey we have recorded a total of 145 bird species representing 19 orders, 51 families. Among the families Scolopocidae represent maximum number (12) of birds followed by Anatidae(11), Ardeidae(10), Muscicapidae (8), Laridae(7) Motacillidae (6) and Sturnidae and lanidae (5). Passeriformes dominating the study area by representing maximum number (53) of bird species followed by Charadriiformes (26), Pelicaniformes(15), Anseriformes (11), Coraciiformes (6), Gruiformes (5), Suliformes and Columbiformes (4). Among the birds recorded Oriental darter, Common crane, Painted stork, Dalmatian pelican, Wolly-necked stork, Eurasian curlew, Greatthick-knee, Black-headed Ibis, Black headed ibis, and River Tern are the 10 (6.8 %) species belongs to Near Threatened category Common pochard 1(.68%)vulnerable and indian skimmer 1 (.68%) bird species belongs to endangered and 130 species belongs to least concerned category of IUCN. Morel Dam supports 69 species of water birds belonging to 18 families out of which 42 are migratory species and 40 are residential bird species. Beside the water birds, 76 terrestrial bird species were observed in close proximity of Morel Dam.

**Keywords:** avifauna, checklist, morel dam, Dausa, black-headed Ibis, River Tern, dalmatian pelican, greater flamingo, black headed Gul, Indian Skimmer

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### Introduction

Morel dam is the biodiversity rich part of the district dausa, it is home of number of species of the birds. It provides very good habitat for winter visitor guests. Morel dam near kankariya village is surrounded by agricultural lands with adjacent government lands. Total 145 species belonging to 19 orders and 51 families of bird were identifying by using the standard point count methods. Morel dam is the biodiversity rich part of the district dausa, it is home of number of species of the birds. It provides very good habitat for winter visitor guests. Morel Dam near kankariya village is surrounded by agricultural lands with adjacent forestlands. Dams disrupt a river's natural course and flow, replace turbulent river sections with still water bodies, impacting flow and temperature regimes and sediment transport, alter water temperatures in the stream, redirect river channels, transform floodplains, and disrupt river continuity (Liermann *et al.*, 2012; Fearnside, 2013).<sup>[1]</sup>

This wetland is the major wetland which potentially offers a resting reserve for the migratory birds coming from the Trans Himalayan zone in the winter season when the wetlands in the Europe and North & Central Asia become frozen due to onset of winters. The present study has been conducted to record the avifaunal diversity in and around the morel dam though many of the bird species are seen in and around the dam, no study has been conducted so far on the bird diversity in this area. Dalmatian pelican, Great white pelican, Greater flamingo, Bar headed geese, White fronted goose, Common Pochard, Northern Pintail, Brahminy shelduck, Northern Shoveller, Indian skimmer, Gray leg goose, Pallas gul, Black headed gull, Black-tailed godwit etc. are some of the bird species which are the winter migrants to Morel dam. It is observed that out of these 145 species 132 are least concern and 10 is near threatened one vulnerable and one species is endangered. Birds, the most fascinating creatures of nature have always been a subject of research since times immemorial. Now a day's birds are being studied based on field observations concerning wider domain of avian natural history including, amongst others, diversity, habitat, distribution on local, regional and continental basin etc. Also birds have been studied focusing attention on breeding, feeding, mating, courtship dance, clutch size, territorial behavior, camouflaging etc. Total 145 species belonging to 19 orders and 51 families of bird were identifying by using the standard point count methods. Birds are excellent model organisms for understanding key issues in ecology, animal behavior, evolutionary biology and conservation. Avifauna is one of the most important ecological indicators to evaluate the quality of habitats. Birds play a useful role in the control of insect of pests of agricultural crops, as predators

of rodents, as scavengers, as seed dispensers and as pollinating agents. Therefore birds are reared not only for preserving ecological balance but also for products of economic importance such as down's feather (Simone *et al.*, 2002) [2]. Migration in birds is essential for breeding, feeding and nesting in birds, it is also important to avoid cold winter of the ice covered parts of the world. In winter from November onward migratory birds start visiting ponds, lakes, rivers and dams of the central India. These birds visiting every year and are very important to maintain dynamics of the prey predator system of the water reservoirs. Humans are the dominant ecological and evolutionary force on the planet today, transforming habitats, polluting environments, changing climates, introducing new species, and causing other species to decline in number or go extinct. Increasing anthropogenic activities, increasing load of irrigation and irregular raining results in to the shrinkage of these wetlands and hence it is necessary to keep watch on local resident and migratory birds of these important habitats and monitor them for the sustainable wetland management.

### Settelite image of Morel dam

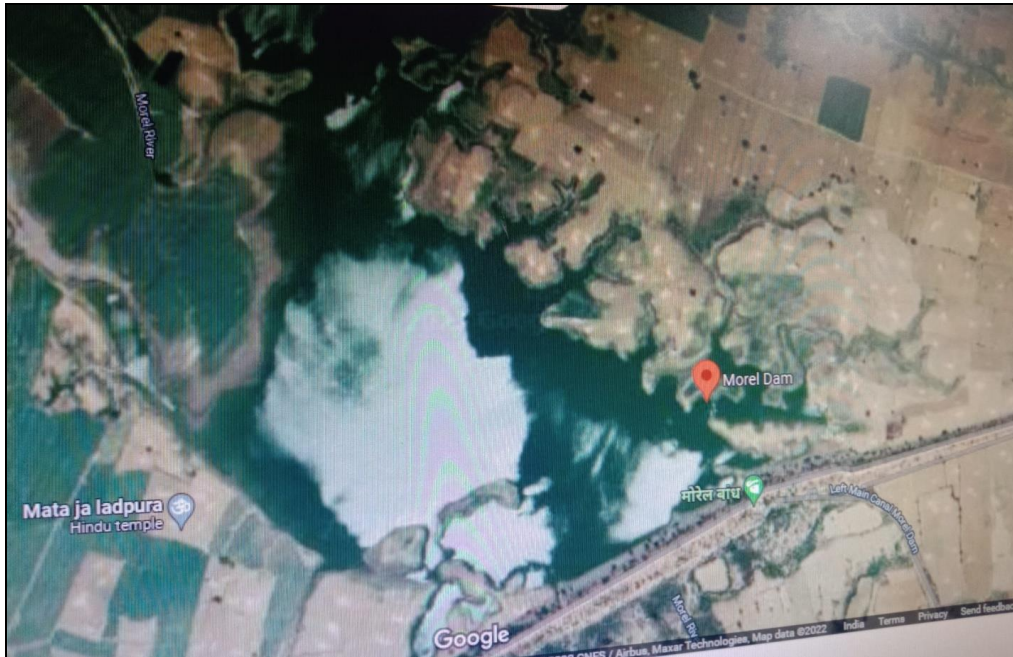


Fig 1



Fig 2

### Study area

Morel Dam, is homogeneous earthen dam on Morel river near kankariya and Pilukhera village Dausa district in state of Rajasthan in India and located at 26°39'34"N longitude and 76°13'14"E latitude. Mainly used for irrigation purposes and commercial fishing. It is too shallow towards its periphery resulting in production of muddy marshes towards the margin. It is surrounded by agricultural lands with adjacent government lands. Morel dam is a major irrigation project of Dausa and Sawaimadhopur district which was constructed in 1952. This dam is situated 15 km away from lalsot tehsil headquarter on the morel river near kankariya village Dausa Sawaimadhopur road. Morel river is a tributary of banas river. Morel river joins banas river near Malarnadungar railway station. The catchment area of this dam is 3345 Sq km and the total CCA 19393 Hac. the total length of the dam is 5364 meters. The total fill gauge of the dam is 30 foot with a total fill capacity of 2707 Mcft with 2496 Mcft of live and 211 Mcft of dead storage. This dam irrigates an area of about 5013 hectares. Two canal from this dam are irrigated by the eastern canal and the main canal. The level of the eastern canal is 6 feet higher than the level of the main canal. Eastern canal is under the control of executive engineer water resources division, Dausa and main canal is controlled by the executive engineer water resources division, Sawaimadhopur. The Dam is an attracting sight for many wetland birds as the Dam supports good nesting habit and habitats No aquatic weeds and lilies are found in submerging area of the dam. The vegetation across the dam dwells with the Neem, Acacia drepanolobium, Acacia nilotica, Acacia leucophloea, Prosopis cineraria, Zuliflorasp, Calotrophissp, Dichrostachys cineria, Ficus religiosa, Ficus bengalensis, Caparis deciduas, Saccharum spontaneum, Saccharum munja, Saccharum officinarum, wheats, gram and mustard field and grasses. Animal food sources include Zooplankton, Pisces, Molluscans and insects. The present study aims to document the checklist of avifaunal diversity of Morel dam, lalsot Dausa since no avifaunal studies are carried out on the birds prevailing in this area.

### Materials and methods

The checklist is prepared based on the field work conducted during february 2019 to march 2021. For documentation of Avifauna we have travelled along the road side, along the edge of reservoir, wetland area of Morel Dam, back water and in nearby places. The birds are observed and recorded at various locations of the selected site, Binoculars and cameras were used for bird watching and to take photograph them. Waterfowl and terrestrial bird population was observed and documented every week in the morning and evening hours. The relative abundance of birds was estimated and their monthly fluctuation was recorded and is classified on the basis of "The Book of Indian birds [3]." and e-Birds. The birds were identified using field guides by Kazmierczak (2000), [4] Grimmett and Inskipp (2007), [5] Grimmett *et al.* (1998, 2011) [6] and, Rasmussen and Anderton (2012) [7]. Only the confirmed bird species are added to checklist. The status of threatened category of birds is adopted from IUCN Red List of Threatened Species (2017) [8].

### Results and Discussion

During the above said survey we have recorded a total of 145 bird species representing 19 orders, 51 families. Table 1 shows a complete check list of the bird species documented at Morel Dam and its vicinity. The details such as common and scientific names, IUCN status and migratory and resident status of the wetland birds are presented in Table 2. Among the families scolopacidae represent the highest number of bird species number (12) followed by Anatidae (11) Ardeidae (10) Muscicapidae (8), Laridae (7) and Motacillidae (6.) Lanidae, Hirundinidae and Sturnidae represent 5 species each. Rallidae, Columbidae consist 4 species each. Phalacrocoracidae, Charadriidae, Ciconiidae, Threskiornithidae, Alcedinidae, Leiothrichidae and Cistcolidae represent 3 species each. Recurvirostridae, Coraciidae, Pelecanidae, Corvidae, Ploceidae, Pycnonotidae, Phasianidae, Psittaculidae represent 2 species each. The least number one of bird species are represented by families Anhingidae, Podicipedidae, Burhinidae, Rostratulidae, Phoenicopteridae, Gruidae, Meropidae, Sylviidae, Vangidae, Nectariniidae, Dicruridae, Passeridae, Estrildidae, Oriolidae, Phylloscopidae, Emberizidae, Upupidae, Megalaimidae, Picidae, Strigidae, Alaudidae, Pelecanidae, Campaphagidae, Falconidae. The detailed order wise number of bird species recorded is listed in Table 3. In this study Passeriformes represents (54) of the bird species recorded. It is followed Charadriiformes (26), Pelicaniformes (15). Anseriformes (9), Coraciiformes represent (6). Gruiformes (5) Suliformes and Columbiformes consists 4 species each. Ciconiiformes, Cuculiformes and Accipitriformes consist 3 species each. Galliformes, Piciformes, Psittaciformes represent 2 species each. Rest of the families Podicipediformes, Phoenicopteriformes, Bucerotiformes, Strigidae and falconiformes represents one bird species each. Out of total 145 species, 82 were resident, 63 were winter migratory birds recorded. Most of the migratory species were winter visitors.

Among the birds recorded ten globally threatened species were recorded, such as Oriental darter, Common crane, Painted stork, Dalmatian pelican, Wolly-necked stork, Eurasian curlew, Great thick-knee, Black-headed Ibis, Black headed ibis, and River Tern are the 10 species belongs to Near threatened category, Common pochard 1 species vulnerable and indian skimmer 1 bird species belongs to endangered are listed in the near threatened category (IUCN 2017). These water birds were found to utilize different wetland habitats extensively for foraging, nesting and roosting on the emergent and fringed vegetation. Water birds, being generally at or near the top of most wetland food chains are highly susceptible to habitat disturbances and are therefore good indicators of general condition of aquatic habitats (Kushlan, 1992; Kler, 2002) [9, 10]. The rich diversity of the wetland birds documented during the present study may be because of availability of varied sources of feed as



well as foraging. The wetland birds are in general being heterogeneous in their feeding habits (Ali and Ripley, 1987) <sup>[11]</sup>. Thus wetland birds exploit a variety of habitats and depend upon a mosaic of microhabitats for their survival. Wheat, gram fields with stray trees and scattered vegetation cover might have extended comfortable shelter and suitable foraging grounds for the wetland birds. This habitat by supporting different food sources like fish, crustaceans, Mollusca, invertebrates, and planktons further add to the diversity of wetland birds. This indicates that the habitat is more suitable and supports all the visitor birds as well as resident birds by providing immense food and little space to breed. Every year from October onwards a considerable number of water birds reach the wetland. Highest bird density was recorded during winter months, when the anthropogenic activities are minimum. The peak winter population of the migratory birds was seen during the month of December and January. The basic requirement of the migratory water birds at their wintering sites are adequate food supply and safety (Bharat Lakshmi, 2006) <sup>[12]</sup>, almost all of them leave the wetland by february-end or March.

### Conclusion

the expansion of rice fields.

Study concludes that the water body is facing multifold pressure due to anthropogenic pressure. The land area of morel dam is being cultivated by unauthorized people which is ending the habitat of many bird species. The Agro-ecosystem of this area are degraded or destroyed due to encroachment for the expansion of agriculture fields. Birds are good ecological indicators (Bhattacharya & Roy,2013) <sup>[13]</sup> and good monitors of environmental changes (Furness & Greenwood,1996) <sup>[14]</sup>. Insectivorous birds act as a natural pest control and hence can be beneficial to farmers. Ruthless use of pesticides may lead to the depletion of insects thereby to the disappearance of insectivorous birds. In view of the large number of migratory and resident birds on the morel dam, it is necessary to protect this dam and declare as a conservation reserve.

**Table 1:** Showing Complete Check List of bird species recorded in Morel dam and its Vicinity.

s.no.	Order	Family	Scientific name	Common name	Migratory status	IUCN status
1	Anseriformes	Anatidae	<i>Dendrocygna javanica</i>	lesser whistling duck	R	LC
2	Anseriformes	Anatidae	<i>Anser indicus</i>	Bar-headed goose	M	LC
3.	Anseriformes	Anatidae	<i>Anser albifrons</i>	White- fronted goose	M	LC
4	Anseriformes	Anatidae	<i>Sarkidiornis melanotos</i>	knob-billed duck	R	LC
5	Anseriformes	Anatidae	<i>Anas poecilorhyncha</i>	Indian spot-billed duck	R	LC
6	Anseriformes	Anatidae	<i>Anas carolinensis</i>	Green-winged teal	M	LC
7	Anseriformes	Anatidae	<i>Tadorna ferruginea</i>	Ruddy shelduck	M	LC
8	Anseriformes	Anatidae	<i>Aythya ferina</i>	Common pochard	M	VU
9.	Anseriformes	Anatidae	<i>Tadorna tadorna</i>	Common shelduck	M	LC
10.	Anseriformes	Anatidae	<i>Mareca strepera</i>	Gadwall	M	LC
11.	Anseriformes	Anatidae	<i>Anas acuta</i>	Northern pintail	M	LC
12.	Suliformes	Anhingidae	<i>Anhinga melanogaster</i>	Oriental darter	M	NT
13.	Suliformes	Phalacrocoracidae	<i>Microcarbo niger</i>	little cormorant	R	LC
14.	Suliformes	Phalacrocoracidae	<i>Phalacrocorax carbo</i>	Great cormorant	R	LC
15.	Suliformes	Phalacrocoracidae	<i>Phalacrocorax fuscicollis</i>	Indian cormorant	R	LC
16.	Podicipediformes	Podicipedidae	<i>Tachybaptus ruficollis</i>	little grebe	R	LC
17.	Charadriiformes	Laridae	<i>Chroicocephalus ridibundus</i>	Black-headed gull	M	LC
18.	Charadriiformes	Laridae	<i>Ichthyaetus ichthyaetus</i>	Pallas's gull	M	LC
19.	Charadriiformes	Laridae	<i>Larusca chinnans</i>	Caspian gull	M	LC
20.	Charadriiformes	Laridae	<i>Larus fuscus</i>	lesser black-backed gull	M	LC
21.	Charadriiformes	Laridae	<i>Chlidonias hybrida</i>	Whiskered tern	M	LC
22.	Charadriiformes	Laridae	<i>Sterna aurantia</i>	Indian river tern	R	NT
23.	Charadriiformes	Laridae	<i>Rynchops albicollis</i>	Indian Skimmer	R	EN
24.	Charadriiformes	Burhinidae	<i>Esacus recurvirostris</i>	Great thick-knee	R	NT
25.	Charadriiformes	Recurvirostridae	<i>Himantopus himantopus</i>	Black-winged stilt	R	LC
26.	Charadriiformes	Recurvirostridae	<i>Recurvirostra avosetta</i>	Pied avocet	M	LC
27.	Charadriiformes	Charadriidae	<i>Vanellus indicus</i>	Red-wattled lapwing	R	LC
28.	Charadriiformes	Charadriidae	<i>Charadrius alexandrinus</i>	Kentish plovers	M	LC
29.	Charadriiformes	Charadriidae	<i>Charadrius dubius</i>	little ringed plover	M	LC
30.	Charadriiformes	Rostratulidae	<i>Rostratula benghalensis</i>	Greater painted-snipe	R	LC
31.	Charadriiformes	Scolopacidae	<i>Limosa limosa</i>	Black-tailed godwit	M	NT
32.	Charadriiformes	Scolopacidae	<i>Calidris pugnax</i>	Ruff	M	LC
33.	Charadriiformes	Scolopacidae	<i>Calidris temminckii</i>	Temminck's stint	M	LC

34.	Charadriiformes	Scolopacidae	<i>Calidris minuta</i>	little stint	M	LC
35.	Charadriiformes	Scolopacidae	<i>Gallinago gallinago</i>	Common snipe	M	LC
36.	Charadriiformes	Scolopacidae	<i>Actitis hypoleucos</i>	Common sandpiper	M	LC
37.	Charadriiformes	Scolopacidae	<i>Tringa ochropus</i>	Green sandpiper	M	LC
38.	Charadriiformes	Scolopacidae	<i>Tringa stagnatilis</i>	Marsh Sandpiper	M	LC
39.	Charadriiformes	Scolopacidae	<i>Tringa erythropus</i>	Spotted redshank	M	LC
40.	Charadriiformes	Scolopacidae	<i>Tringa nebularia</i>	Common greenshank	M	LC
41.	Charadriiformes	Scolopacidae	<i>Numenius sarquata</i>	Eurasian curlew	M	NT
42.	Charadriiformes	Scolopacidae	<i>Tringa glareola</i>	Wood sandpiper	M	LC
43.	Phoenicopteriformes	Phoenicopteridae	<i>Phoenicopus roseus</i>	Greater flamingo	M	LC
44.	Ciconiiformes	Ciconiidae	<i>Anastomus oscitans</i>	Asian openbill	M	LC
45.	Ciconiiformes	Ciconiidae	<i>Ciconia episcopus</i>	Woolly-necked stork	M	NT
46.	Ciconiiformes	Ciconiidae	<i>Mycteria leucocephala</i>	Painted stork	R	NT
47.	Gruiformes	Gruidae	<i>Grus grus</i>	Common crane	M	NT
48.	Gruiformes	Rallidae	<i>Gallinula chloropus</i>	Common moorhen	R	LC
49.	Gruiformes	Rallidae	<i>Porphyrio poliocephalus</i>	Grey-headed swamphen	R	LC
50.	Gruiformes	Rallidae	<i>Porphyrio porphyrio</i>	Purple swamphen	R	LC
51.	Gruiformes	Rallidae	<i>Amaurornis phoenicurus</i>	White-breasted waterhen	R	LC
52.	Pelecaniformes	Ardeidae	<i>Ixobrychus sinensis</i>	Yellow bittern	R	LC
53.	Pelecaniformes	Ardeidae	<i>Ardea cinerea</i>	Grey heron	R	LC
54.	Pelecaniformes	Ardeidae	<i>Ardea purpurea</i>	Purple heron	M	LC
55.	Pelecaniformes	Ardeidae	<i>Nycticorax nycticorax</i>	Black crown night heron	R	LC
56.	Pelecaniformes	Ardeidae	<i>Ardea alba</i>	Great egret	R	LC
57.	Pelecaniformes	Ardeidae	<i>Egretta agardetta</i>	little egret	R	LC
58.	Pelecaniformes	Ardeidae	<i>Bubulcus ibis</i>	Cattle egret	R	LC
59.	Pelecaniformes	Ardeidae	<i>Ardeola grayii</i>	Indian pond heron	R	LC
60.	Pelecaniformes	Ardeidae	<i>Egretta gularis</i>	Western reef heron	M	LC
61.	Pelecaniformes	Ardeidae	<i>Ardea intermedia</i>	Intermediate Egret	R	LC
62.	Pelecaniformes	Threskiornithidae	<i>Threskiornis melanocephalus</i>	Black-headed ibis	R	NT
63.	Pelecaniformes	Threskiornithidae	<i>Platalea leucorodia</i>	Eurasian spoonbill	R	LC
64.	Pelecaniformes	Threskiornithidae	<i>Plegadis falcinellus</i>	Glossy ibis	M	LC
65.	Pelecaniformes	Pelecanidae	<i>Pelecanus crispus</i>	Dalmatian pelican	M	NT
66.	Pelecaniformes	Pelecanidae	<i>Pelecanus onocrotalus</i>	Great white pelican	M	LC
67.	Coraciiformes	Alcedinidae	<i>Alcedo atthis</i>	Common kingfisher	R	LC
68.	Coraciiformes	Alcedinidae	<i>Halcyon smyrnensis</i>	White-throated kingfisher	R	LC
69.	Coraciiformes	Alcedinidae	<i>Ceryle rudis</i>	Pied kingfisher	R	LC
70.	Coraciiformes	Meropidae	<i>Merops orientalis</i>	Green bee-eater	R	LC
71.	Coraciiformes	Coraciidae	<i>Coracias garrulus</i>	European roller	R	LC
72.	Coraciiformes	Coraciidae	<i>Coracias benghalensis</i>	Indian roller	R	LC
73.	Passeriformes	Motacillidae	<i>Motacilla flava</i>	Western yellow wagtail	M	LC
74.	Passeriformes	Motacillidae	<i>Motacilla citreola</i>	Citrine wagtail	M	LC
75.	Passeriformes	Motacillidae	<i>Motacilla cinerea</i>	Grey wagtail	M	LC
76.	Passeriformes	Motacillidae	<i>Motacilla alba</i>	White wagtail	M	LC
77.	Passeriformes	Motacillidae	<i>Motacilla maderaspatensis</i>	White-browed wagtail	M	LC
78.	Passeriformes	Motacillidae	<i>Anthus rufulus</i>	Paddyfield pipit	R	LC
79.	Passeriformes	Muscicapidae	<i>Saxicola caprata</i>	Pied bush chat	M	LC
80.	Passeriformes	Muscicapidae	<i>Copsychus fulvicatus</i>	Indian robin	R	LC
81.	Passeriformes	Muscicapidae	<i>Copsychus saularis</i>	Oriental magpie-robin	R	LC
82.	Passeriformes	Muscicapidae	<i>Saxicola maurus</i>	Siberian stonechat	M	LC
83.	Passeriformes	Muscicapidae	<i>Oenanthe picata</i>	Variable wheatear	M	LC
84.	Passeriformes	Muscicapidae	<i>Oenanthe deserti</i>	Desert wheatear	M	LC
85.	Passeriformes	Muscicapidae	<i>Ficedula parva</i>	Red-breasted flycatcher	M	LC
86.	Passeriformes	Muscicapidae	<i>Oenanthe isabellina</i>	isabelline wheatear	M	LC
87.	Passeriformes	Leiothrichidae	<i>Argya striata</i>	Jungle babbler	R	LC
88.	Passeriformes	Leiothrichidae	<i>Argya caudate</i>	Common babbler	R	LC
89.	Passeriformes	Leiothrichidae	<i>Argya malcolmi</i>	Large gray babbler	R	LC
90.	Passeriformes	Sylviidae	<i>Curruca curruca</i>	lesser whitethroat	M	LC

91.	Passeriformes	Sturnidae	<i>Sturnia pagodarum</i>	Brahminy starling	R	LC
92.	Passeriformes	Sturnidae	<i>Acrida thestristis</i>	Common myna	M	LC
93.	Passeriformes	Sturnidae	<i>Gracupica contra</i>	Asian pied starling	R	LC
94.	Passeriformes	Sturnidae	<i>Acridotheres ginginianus</i>	Bank myna	R	LC
95.	Passeriformes	Sturnidae	<i>Pastor roseus</i>	Rosy starling	M	LC
96.	Passeriformes	Hirundinidae	<i>Cecropis daurica</i>	Red-rumpedswallow	R	LC
97.	Passeriformes	Hirundinidae	<i>Hirundo rustica</i>	Barn swallow	R	LC
98.	Passeriformes	Hirundinidae	<i>Hirundo smithii</i>	Wire-tailed Swallow	R	LC
99.	Passeriformes	Hirundinidae	<i>Petrochelidon fluvicola</i>	Streak-throated swallow	R	LC
100.	Passeriformes	Hirundinidae	<i>Ptyonoprogne concolor</i>	Dusky crag martin	R	LC
101.	Passeriformes	Vangidae	<i>Tephrodornis pondicerianus</i>	Common woodshrike	M	LC
102.	Passeriformes	Nectariniidae	<i>Cinnyris asiaticus</i>	Purple sunbird	R	LC
103.	Passeriformes	Dicruridae	<i>Dicrurus macrocercus</i>	Black drongo	R	LC
104.	Passeriformes	Passeridae	<i>Passer domesticus</i>	House sparrow	R	LC
105.	Passeriformes	Corvidae	<i>Corvus splendens</i>	House crow	R	LC
106.	Passeriformes	Corvidae	<i>Corvus culminatus</i>	Indian Jungle Crow	R	LC
107.	Passeriformes	Estrildidae	<i>Euodice malabarica</i>	Indian silverbill	R	LC
108.	Passeriformes	Oriolidae	<i>Oriolus kundoo</i>	Indian golden oriole	R	LC
109.	Passeriformes	Laniidae	<i>Lanius schach</i>	Long-tailed shrike	R	LC
110.	Passeriformes	Laniidae	<i>Lanius vittatus</i>	Bay-backed shrike	R	LC
111.	Passeriformes	Laniidae	<i>Lanius cristatus</i>	Brown shrike	R	LC
112.	Passeriformes	Laniidae	<i>Lanius isabellinus</i>	Isabelline shrike	M	LC
113.	Passeriformes	Laniidae	<i>Lanius excubitor</i>	Great grey shrike	R	LC
114.	Passeriformes	Ploceidae	<i>Ploceus philippinus</i>	Baya weaver	R	LC
115.	Passeriformes	Ploceidae	<i>Euodice malabarica</i>	Indian Silverbill	R	LC
116.	Passeriformes	Pycnonotidae	<i>Pycnonotus leucotis</i>	White-eared bulbul	M	LC
117.	Passeriformes	Pycnonotidae	<i>Pycnonotus cafer</i>	Red-vented bulbul	R	LC
118.	Passeriformes	Phylloscopidae	<i>Phylloscopus collybita</i>	Common chiffchaff	M	LC
119.	Passeriformes	Emberizidae	<i>Emberiza bruniceps</i>	Red-headed Bunting	M	LC
120.	Passeriformes	Cistcolidae	<i>Prinia hodgsonii</i>	Grey-breasted Prinia	R	LC
121.	Passeriformes	Cistcolidae	<i>Priniasocialis</i>	Ashy Prinia	R	LC
122.	Passeriformes	Cistcolidae	<i>Prinia inornata</i>	Plain Prinia	R	LC
123.	Passeriformes	Alaudidae	<i>Eremopterix griseus</i>	Ashy-crowned Sparrow Lark	R	LC
124.	Passeriformes	Alaudidae	<i>Alauda arvensis</i>	Eurasian skylark	M	LC
125.	Passeriformes	Alaudidae	<i>Galerida cristata</i>	Crested lark	R	LC
126.	Passeriformes	Campephagidae	<i>Coracina macei</i>	large cuckooshrike	M	LC
127.	Columbiformes	Columbidae	<i>Columba livia</i>	Rock pigeon	R	LC
128.	Columbiformes	Columbidae	<i>Spilopelia senegalensis</i>	Laughing dove	R	LC
129.	Columbiformes	Columbidae	<i>Streptopelia tranquebarica</i>	Red collared-dove	R	LC
130.	Columbiformes	Columbidae	<i>Streptopelia decaocto</i>	Eurasian collared -dove	R	LC
131.	Galliformes	Phasianidae	<i>Francolinus pondicerianus</i>	Gray francolin	R	LC
132.	Galliformes	Phasianidae	<i>Pavocristatus</i>	Indian peafowl	R	LC
133.	Bucerotiformes	Upupidae	<i>Upupa epops</i>	Eurasian hoopoe	R	LC
134.	Piciformes	Megalaimidae	<i>Psilopogon haemacephalus</i>	Coppersmith barbet	R	LC
135.	Piciformes	Picidae	<i>Dinopium benghalense</i>	Black-rumpedflameback	R	LC
136.	Cuculiformes	Cuculidae	<i>Centropus sinensis</i>	Greater coucal	R	LC
137.	Cuculiformes	Cuculidae	<i>Hierococcyx varius</i>	Common hawk-cuckoo	R	LC
138.	Cuculiformes	Cuculidae	<i>Clamator jacobinus</i>	Jacobin cuckoo	M	LC
139.	Psittaciformes	Psittaculidae	<i>Psittaculakrameri</i>	Rose-ringed parakeet	R	LC
140.	Psittaciformes	Psittaculidae	<i>Psittacula cyanocephala</i>	Plum -headed Parakeet	R	LC
141.	Strigiformes	Strigidae	<i>Athene brama</i>	Spotted owlet	R	LC
142.	Accipitriformes	Accipitridae	<i>Accipiter badius</i>	Shikra	R	LC
143.	Accipitriformes	Accipitridae	<i>Milvus migrans</i>	Black kite	R	LC
144.	Accipitriformes	Accipitridae	<i>Elanus caeruleus</i>	Black-winged kite	R	LC
145.	Falconiformes	Falconidae	<i>Falco peregrinus</i>	Peregrine falcon	M	LC

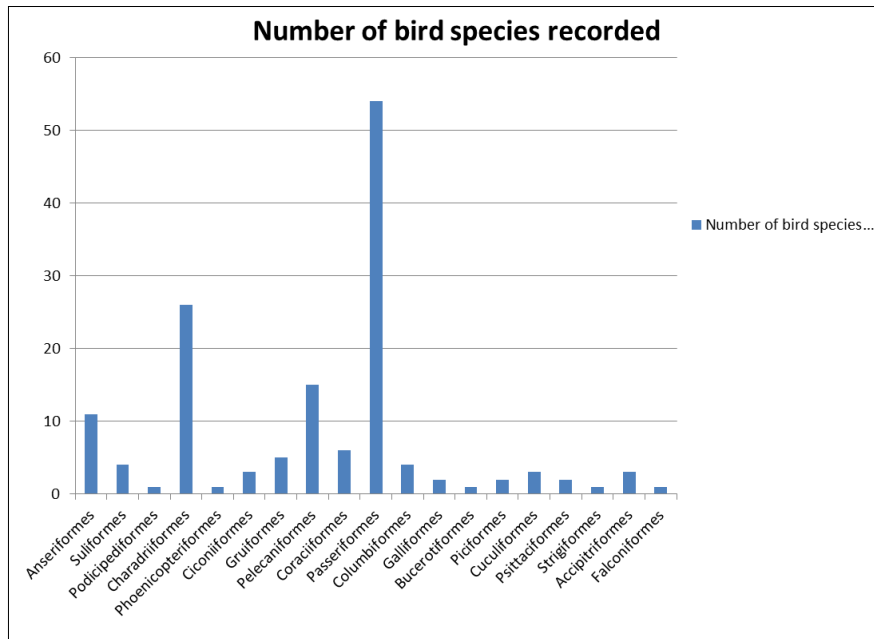
**Table 2:** Showing family wise number of bird species recorded in Morel Dam and its Vicinity

S. n.	Name of the Family	Number of bird species recorded	S.n.	Name of the Family	Number of bird species recorded
1	Anatidae	11	27.	Vangidae	1
2	Anhingiidae	1	28.	Nectariniidae	1
3	Phalacrocoracidae	3	29.	Dicruridae	1
4	Podicipedidae	1	30.	Passeridae	1
5	Laridae	7	21.	Corvidae	2
6	Burhinidae	1	32.	Estrildidae	1
7	Recurvirostridae	2	33.	Oriolidae	1
8	Charadriidae	3	34.	Laniidae	5
9	Rostratulidae	1	35.	Ploceidae	2
10	Scolopacidae	12	36.	Pycnonotidae	2
11	Phoenicopteridae	1	37.	Phylloscopidae	1
12	Ciconiidae	3	38.	Emberizidae	1
13	Gruidae	1	39.	Cistcolidae	3
14	Rallidae	4	40.	Alaudidae	3
15	Ardeidae	10	41.	Columbidae	4
16	Threskiornithidae	3	42.	Phasianidae	2
17	Alcedinidae	3	43.	Upupidae	1
18	Meropidae	1	44.	Megalaimidae	1
19	Coraciidae	2	45.	Picidae	1
20	Motacillidae	6	46.	Cuculidae	3
21	Muscicapidae	8	47.	Psittaculidae	2
22	Leiothrichidae	3	48.	Strigidae	1
23	Sturnidae	5	49.	Accipitridae	3
24	Hirundinidae	5	50.	Campaphagidae	1
25	Pelicinidae	2	51.	Falconidae	1
26	Sylviidae	1			

**Table 3:** Showing order wise number of bird species recorded in Morel dam and its Vicinity.

SI. No.	Name of the Order	Number of bird species recorded
1	Anseriformes	11
2	Suliformes	4
3	Podicipediformes	1
4	Charadriiformes	26
5	Phoenicopteriformes	1
6	Ciconiiformes	3
7	Gruiformes	5
8	Pelecaniformes	15
9	Coraciiformes	6
10	Passeriformes	54
11	Columbiformes	4
12	Galliformes	2
13	Bucerotiformes	1
14	Piciformes	2
15	Cuculiformes	3
16	Psittaciformes	2
17	Strigiformes	1
18	Accipitriiformes	3
19	Falconiformes	1

**Order wise number of bird species recorded in Morel dam and its Vicinity.**

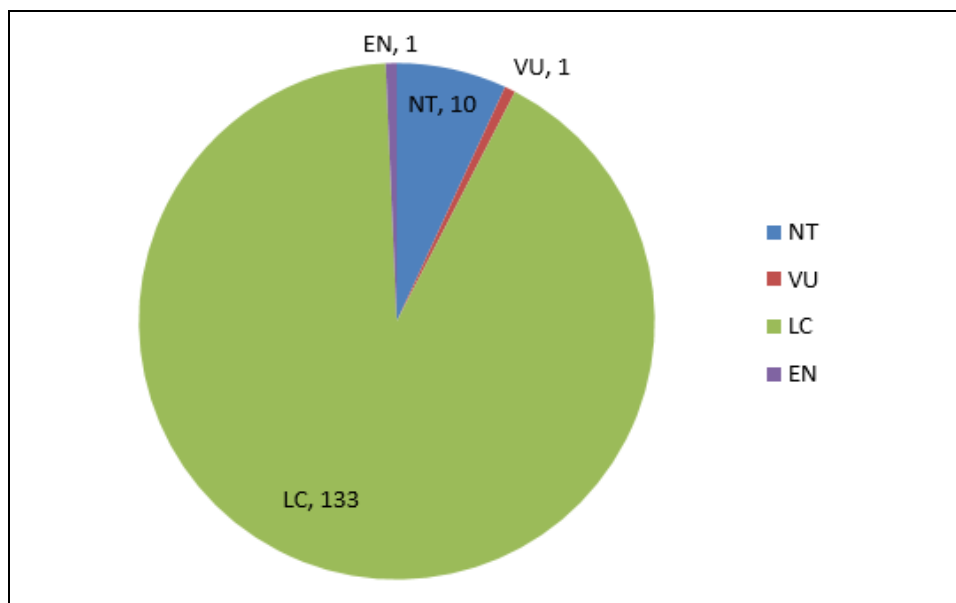


**Fig 3**

**Table 4:** Shows Conservation Status of Birds Recorded in Morel dam and its Vicinity

S.N.	Order	Family	Scientific name	Common name	Conservation status
1.	Suliformes	Anhingidae	<i>Anhinga melanogaster</i>	Oriental darter	NT
2.	Charadriiformes	Laridae	<i>Sterna aurantia</i>	Indian river tern	NT
3.	Charadriiformes	Scolopacidae	<i>Limosa limosa</i>	Black tailed godwit	NT
4.	Charadriiformes	Laridae	<i>Rynchops albicollis</i>	Indian Skimmer	EN
5.	Gruiformes	Gruidae	<i>Grus grus</i>	Common crane	NT
6.	Ciconiiformes	Ciconiidae	<i>Mycteria leucocephala</i>	Painted stork	NT
7.	Pelecaniformes	Threskiornithidae	<i>Threskiornis melanocephalus</i>	Black-headed ibis	NT
8.	Pelecaniformes	Pelecanidae	<i>Pelecanus crispus</i>	Dalmatian pelican	NT
9.	Ciconiiformes	Ciconiidae	<i>Ciconia episcopus</i>	Woolly-necked stork	NT
10.	Charadriiformes	Scolopacidae	<i>Numenius arquata</i>	Eurasian curlew	NT
11.	Charadriiformes	Burhinidae	<i>Esacus recurvirostris</i>	Great thick-knee	NT
12.	Anseriformes	Anatidae	<i>Anthya ferina</i>	Common pochard	VU

**Abbreviations used:** LC- Least Concerned, VU-Valnarable, NT- Near Threatened.



**Fig 4:** Shows Conservation Status of Birds Recorded in Morel dam and its Vicinity



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