NOTES ON MID-WINTER WATERBIRD POPULATION OF SOME SELECTED WETLANDS OF BANKURA AND PURULIYA DISTRICTS, WEST BENGAL

N. C. NANDI, S. BHUINYA AND S. R. DAS
Zoological Survey of India, M-Block, New Alipore, Kolkata-700 053, India

INTRODUCTION

Knowledge about the composition, population trends and distribution of waterbirds is a fundamental tool for conservation and management of wetlands as well as winged species. Information on these aspects including arrival and departure schedules of overwintering waterfowl is scanty in India (Ali and Ripley, 1983; Ambedkar and Daniel, 1990; Lopez and Mundkar, 1997; Bhupathy et al., 1998) and also in West Bengal (Prakiti Samsad 1999). Due to this reason, mid-winter survey was made at the end of January, 2000, to study the diversity and distribution of waterbirds from eight selected wetlands, four each in Bankura and Puruliya districts, West Bengal. Waterbirds were counted from vantage points using a binocular and also a boat in Saheb bundh, Adra of Puruliya district. Counting was made only once either from 7.30 to 11.30 hrs in the morning or from 14.00 to 17.00 hrs in the afternoon.

RESULTS AND DISCUSSION

The composition and count data of the waterbirds encountered during the course of survey was presented in Table 1, as well as ecological parameters in Table 2. These waterbirds represent a total of 34 species comprising of 11 resident (R), 12 resident migrant (RM) and 9 migrant (M) categories belonging to 24 genera, 7 families and 6 orders. In general, it includes 32 species of waterfowls and 2 species of waders viz., Yellow-wattled Lapwing, Vanellus malabaricus and Green Shank, Tringa nebularia. Among waterfowls, there were 12 species of ducks and geese, 8 species of herons, egrets and bitterns, 4 species of rails and the rest 6 species comprising of grebes, cormorants, etc. All the 9 migrant avian species were waterfowls (Anatidae) representing ducks and geese from wetlands of Puruliya district only. Amongst the resident anatid ducks, the Lesser Whistling Teal, Dendrocygna javanica were found in large flocks in both the districts, namely, Jamuna bundh of Bankura district and Saheb bundh of both Adra and Puruliya town of Puruliya district. The other resident anatids include Comb Duck, Sarkidiornis melanotos and Cotton Teal, Nettapus coromandelianus. The breeding population of resident ducks could not be observed in
Table 1. Composition and count data of waterbirds in some selected freshwater wetlands of Bankura and Puruliya Districts, West Bengal.

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>English name</th>
<th>Scientific name</th>
<th>Bankura district</th>
<th>Puruliya district</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>JB</td>
<td>KB</td>
</tr>
<tr>
<td>A.</td>
<td><strong>Waterfowl</strong></td>
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</tr>
<tr>
<td></td>
<td>Order PODICIPEDIFORMES</td>
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<tr>
<td></td>
<td>Family PODICIPEDIDAE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Little Grebe, <em>Tachybaptus ruficollis</em> (R)</td>
<td>25</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>B.</td>
<td><strong>Order PELECANIFORMES</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td><strong>Family PHALACROCORACIDAE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Cormorant, <em>Phalacrocorax carbo</em> (RM)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>Indian Shag, <em>Phalacrocorax fuscicollis</em> (RM)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>Little Cormorant, <em>Phalacrocorax niger</em> (RM)</td>
<td>21</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>5.</td>
<td>Darter, <em>Anhinga rufa</em> (RM)</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>C.</td>
<td><strong>Order CICONIFORMES</strong></td>
<td></td>
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<tr>
<td></td>
<td><strong>Family ARDEIDAE</strong></td>
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<tr>
<td>6.</td>
<td>Grey Heron, <em>Ardea cinerea</em> (RM)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>7.</td>
<td>Purple Heron, <em>Ardea purpurea</em> (RM)</td>
<td>3</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>8.</td>
<td>Pond Heron, <em>Ardeola grayi</em> (R)</td>
<td>12</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>9.</td>
<td>Cattle Egret, <em>Bubulcus ibis</em> (RM)</td>
<td>18</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>10.</td>
<td>Large Egret, <em>Ardea alba</em> (RM)</td>
<td>6</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>11.</td>
<td>Smaller Egret, <em>Egretta intermedia</em> (RM)</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>12.</td>
<td>Little Egret, <em>Egretta garzetta</em> (R)</td>
<td>3</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>13.</td>
<td>Chestnut Bittern, <em>Ixobrychus cinnamomeus</em> (RM)</td>
<td>2</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>D.</td>
<td><strong>Family ANATIDAE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Greylag Geese, <em>Anser anser</em> (M)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>15.</td>
<td>Pintail, <em>Anas acuta</em> (M)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>16.</td>
<td>Common Teal, <em>Anas crecca</em> (M)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>17.</td>
<td>Gadwall, <em>Anas strepera</em> (M)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>18.</td>
<td>Wigeon, <em>Anas penelope</em> (M)</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>
Table 1. Contd.

<table>
<thead>
<tr>
<th>Sl. No.</th>
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<th>Puruliya district</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>JB</td>
<td>KB</td>
</tr>
<tr>
<td>19.</td>
<td>Garganey, <em>Anas querquedula</em> (M)</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>20.</td>
<td>Common Pochard, <em>Aythya ferina</em> (M)</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>21.</td>
<td>Tufted Pochard, <em>Aythya fuligula</em> (M)</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>22.</td>
<td>Redcrested Pochard, <em>Netta rufina</em> (M)</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>24.</td>
<td>Lesser Whistling Teal, <em>Dendrocygna javanica</em> (R)</td>
<td></td>
<td>1520*</td>
<td>255</td>
</tr>
<tr>
<td>25.</td>
<td>Comb Duck, <em>Sarkidiornis melanotos</em> (R)</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Order GRUIFORMES
Family RALLIDAE

26. Whitebreasted Waterhen, *Amaurornis phoenicurus* (R) 5 8 - 3 4 2 - -
27. Indian Moorhen, *Gallinula chloropus* (RM) 9 8 11 - 103 22 - -
28. Purple Moorhen, *Porphyrio porphyria* (R) 16 11 - - 72 14 - -
29. Coot, *Fulica atra* (RM) - - - 4 7 115 - 10
30. Watercock, *Gallicrex cinerea* (R) 4 7 - - - - -

Order CHARADRIIFORMES
Family JACANIDAE

31. Pheasant-tailed Jacana, *Hydrophasianus chirurgus* (R) 2 2 - - - - -
32. Bronzewinged Jacana, *Metapidius indicus* (R) 75 24 - - 24 13 6 2

B. Waders

Order CHARADRIIFORMES
Family CHARADRIIDAE

33. Yellowwattled Lapwing, *Vanellus malabaricus* (R) - - - - - - 1 1
34. Green Shank, *Tringa nebularia* (M) - - - - 2 12 - 4

Total number of species 20 19 9 13 24 29 12 26

Note: R = Resident, RM = Resident migrant, M = Migrant, * = Not representing total count.

JB = Jamuna bundh, KB = Krishna bandh, LB = Lal bundh, KJB = Kulaijurir bundh, SBP = Saheb bundh, Purulia, SBA = Saheb bundh, Adra, RB = Rani bundh, IB = Indra beel.
these two districts but Cotton Teal was found to breed happily in Goldighi, an urban artificial reservoir-cum-recreational park complex maintained by the Forest Department, Government of West Bengal in the heart of Rampurhat town in the adjacent district of Birbhum, West Bengal.

Table 2. Salient features of selected wetlands of Bankura and Puruliya districts, West Bengal.

<table>
<thead>
<tr>
<th>Name of district</th>
<th>Bankura</th>
<th>Puruliya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of wetland</td>
<td>JB</td>
<td>KB</td>
</tr>
<tr>
<td>Date of observation (in 2000)</td>
<td>3 Feb</td>
<td>2 Feb</td>
</tr>
<tr>
<td>Time of observation</td>
<td>AM</td>
<td>AM</td>
</tr>
<tr>
<td>Nearest town/village</td>
<td>Bishnupur</td>
<td>Bishnupur</td>
</tr>
<tr>
<td>Locality type</td>
<td>Semi-urban</td>
<td>Rural</td>
</tr>
<tr>
<td>Approximate area (ha)</td>
<td>25</td>
<td>45</td>
</tr>
<tr>
<td>Vegetation cover</td>
<td>70%</td>
<td>60%</td>
</tr>
<tr>
<td>Wetland use</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>Protection</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>Poaching</td>
<td>Rare</td>
<td>Rare</td>
</tr>
</tbody>
</table>

Abbreviations:
1. Name of wetland: JB = Jamuna Bundh; KB = Krishna Bundh; LB = Lal Bundh; KJB = Kulaijurir Bundh; SBP = Saheb Bundh, Puruliya; SBA = Saheb Bundh, Adra; RB = Rani Bundh; IB = Indra Beel.
2. Time of observation: AM = Morning (7.30 – 11.30 AM); PM = Afternoon (14.00 – 17.00 PM).
3. Wetland use and protection: H = High; M= Medium; L = Low.

In overall, the highest diversity of waterbirds was encountered in Saheb bundh, Adra of Puruliya district and lowest in the Lal bundh, Bishnupur of Bankura district. The richness and diversity of species appears to be associated with the size, availability of food, both macrophytes and macroinvertebrates, and safe refuge of the habitats/wetlands. Migratory waterfowls were recorded from wetlands of Puruliya district only. They were located at rural, semi-urban and urban environments having thick growth of marginal macrophytes. The occurrences of these migratory species in urban (SBP) and semi-urban (SBA) wetlands with recreational boating activities indicate their tolerance to minor man-made noises/disturbances. However, it has been noted that these wetlands of Bankura and Puruliya districts remained ornithologically unexplored (Majumdar et al., 1992; NEWS, 1998) although Prakiti Samsad (1999) surveyed extensively in Southern West Bengal. Mention may be made that NEWS (1998) made an inventory of waterbirds of Saheb Bundh, Puruliya in which a total of 24 species have been listed without any count data of the species. The occurrence and abundance of resident and resident-migrant species viz., Little Grebe,
Jacanas, Rails, etc., which were a common sight in rural wetlands/waterbodies of Lower Bengal even 20 years ago has drastically declined due to habitat destruction, distortion and human impact in these freshwater environments. It is, therefore, urged to the local people and the panchayats to take up appropriate conservation measures for the protection of the wetlands as well as waterfowls offering a safe refuge to both migrant and resident species so that they may merrily overwinter and/or breed undisturbed adding attraction, aesthetic value and beauty to these wetlands.

ACKNOWLEDGEMENTS

We are thankful to Dr. J. R. B. Alfred, Director, Zoological Survey of India, Calcutta, for facilities and encouragement.

REFERENCES


