

## INCIDENCE OF RESIDENT AND MIGRATORY BIRD SPECIES COLLECTED FROM BURULLUS PROTECTED AREA IN KAFR EL-SHEIKH GOVERNORATE.

Soliman, A.M. and M.M. Mortada

Plant Protection Research Institute, ARC, Dokki, Giza, Egypt

### ABSTRACT

Resident and visitor bird species were collected from Burullus protected area in Kafr El-Sheikh Governorate during two successive years 2007/2008. Data revealed that 24 bird species in 17 families and 10 orders were recorded during the survey. The most common resident species in this habitat were: moorhen, *Gallinula chloropus*, Purple gallinule, *Porphyrio porphyrio*, little tern, *Sterna albifrons*, King fisher, *Alcedo rudis*, little Bittern, *Ixobrychus minutus*-Senegal coucal, *Centroipus senegalensis* and little grebe, *Tachybatus ruficollis*. While, the most common winter visitors were gray wagtail, *Motacilla cinerea*, northern Pochard, *Aythya ferina*, teal, *Anas crecca*, Wigeon, *Anas penelop*, Shovler, *Anas clypeata*, Black-headed Gull, *Larus fuscus*, pied avocet, *Recurvirostra avosetta* Gray heron, *Ardea cinerea* and little Bittern, *Ixobrychus minutus*.

Also, twelve species were recorded as autumn passer i.e. swallows, *Hirundo rustica*, Gray wagtail, *Motacilla cinerea*, common quail, *Coturnix coturnix*, northern pochard, *Aythya ferina*, Teal, *Anas crecca*, Wigeon, *Anas Penelope*, Shoveler, *Anas clypeata*, little tern, *Sterna albifrons*, red shank, *Tringa erythropus* Bee eater, *Merops apiaster*, little bittern, *Ixobrychus minutus* and turtle dove, *Streptopelia turtur*.

### INTRODUCTION

Egypt occupies the north-eastern corner of the African continent, with a surface area of more than one million square kilometers or about 3% of the total area of Africa (Zahran and Willis, 1992).

Avifauna is an important component of Egypt's biological resources; indeed it is the most diverse and prominent of all of the country's non-aquatic vertebrate fauna. More than 470 bird species are known from Egypt. Most of bird species found in Egypt are non-breeding migrants, which pass through the country or spend only the winter and are of palearctic origin (Kasas, 1993).

These wintering and transient bird populations although not present in Egypt all or most of the time, are an important component of country's biodiversity.

Only about 150 species can be considered resident breeding birds, although some of these also migrate further south during the winter (Bijlsma, 1987).

A total of 34 important bird areas (IBA) have been identified in Egypt, all of which meet one or more the selection criteria for globally important bird area. The total area covered by IBAs in Egypt is some 35000 km<sup>2</sup> or about 3.5% of Egypt's territory. Wetland habitats (both inland and coastal) are the best represented occurring in 25 or 74% of IBAs (Baha El-Din, 1998).

Burullus is one of the most important wintering grounds for the vulnerable ferruginous duck in the eastern Mediterranean. Burullus is also an important breeding site for several waterbirds and wetland species. About 35 species of birds are known to breed at Burullus. The most prominent of these include: Little Grebe, Little Bittern, Purple Gallinule, Little Tern, Kentish Plover, Spur-Winged Plover, Common Pratincole, Egyptian Nightjar, Pied Kingfisher, Senegal Coucal and Clamorous reed warbler (Baha El-Din, 1991).

The objective of the current survey were to collect data on the status and distribution of bird species at lake Burullus protected area.

## **MATERIALS AND METHODS**

### **Lake Burullus facts:**

Location : 31°22`-31°36` N, 30°33`-31°07` E  
Area : 460 km<sup>2</sup>  
Governorate : Kafr El-Sheikh

### **Description:**

The protected area is composed primarily of lake Burullus, a large, shallow, fresh to brackish, coastal lagoon located between the two Nile branches forming the delta. It is elongate in shape extending for about 54 km from east to west with a width of between six and 21 km and an estimated average depth of 0.75-1.00 m.

The lake is separated from the sea by a broad, dune-covered, sand barrier which varies in width from a few hundred meters in the east to five kilometers in the west. There are many islands (about 50) scattered throughout the lake with a total area of 0.7 km<sup>2</sup> (Van Pelt *et al.*, 1992).

### **Methods:**

The different bird species, either resident or migratories, were surveyed during two successive years (2007 and 2008). Identification of bird species occurred according to the "birds of Britain and Europe" (Heinze *et al.*, 1984). Population density of bird species was studied according to the method of (Riedinger and Libay, 1979) by the aid of field glass binocular from surrounding hill sides that achieved clear views of the experimental plots.

This procedure was carried out in the beginning of the most of each season during the two studied areas. The survey, as well as, the population density were run daily during one hour at sunrise and one hour at sunset for four successive days in the beginning of each month. Survey efforts alternated between periods of walking quietly and periods of fixed-point observation.

## **RESULTS AND DISCUSSION**

A total of 24 bird species in 17 families and 10 orders were recorded during the survey of two years; 2007, 2008. Data in Table (1) revealed that the most common resident species in this habitat were: moorhen, *Gallinula chloropus*, purple gallinule, *Porphyrio porphyrio*, little tern, *Sterna albifrons*, king Fisher, *Alcedo rudis*, little Bittern, *Ixobrychus minutus*, Senegal Coucal, *Centroipus senegalensis* and little grebe, *Tachybatus ruficollis*.

Table (1): Occurrence of resident and migratory bird species collected from Burullus protected area during 2007/2008.

Taxa passeri	English name	Arabic name	Resident	Winter visitor	Summer visitor	Autumn passer	Spring passer
<b>Order: Paserifomes</b> <b>Family: Hirundinidae</b> <i>Hirundo rustica</i>	Swallows	عصفور الجنة		Rare		Common	Common
<b>Family: Motacillidae</b> <i>Motacilla cinerea</i>	Gray wagtail	ابو فصادة		Common		Common	Common
<b>Family: Sylviidae</b> <i>Acrocephalus stentoreus</i>	Clamorous reed Warbler	هازجة القصب الصياحه	Accidental				
<b>Family: Alaudidae</b> <i>Calandrella cinerea</i>	Short-toed lark	لقيرة قصيرة الاذنين	Rare	Rare			
<b>Order: Gruiformes</b> <b>Family: Rallidae</b> <i>Gallinula chloropus</i> <i>Porphyrio porphyrio</i> <i>Fulica atra</i>	Moorhen Purple gallinle Coot	دجاج الماء دجاج سلطاني الغر	Common Common Rare				
<b>Order: Galliformes</b> <b>Family: Phasianidae</b> <i>Coturnix coturnix</i>	Common quail	السمان	Rare	UC		Common	Common
<b>Order: Anseriformes</b> <b>Family: Anatidae</b> <i>Aythya ferina</i> <i>Anas crecca</i> <i>Anas penelope</i> <i>Anas clypeata</i>	Northern Pochard Teal Wigeon Shoveler	البيط الغواص شرشير الصواى الكيش		Common Common Common Common		Common Common Common Common	Common Common Common Common
<b>Order: Charadriiformes</b> <b>Family: Laridae</b> <i>Sterna albifrons</i> <i>Larus fuscus</i>	Little tern Blck-headed Gull	الخرشنة النورس	Common	Common		Rare Common	Common Common
<b>Family: Recurvirostridae</b> <i>Recurvirostra avosetta</i>	Pied avocet	النكات	Rare	Common	Rare		
<b>Family: Charadriidae</b> <i>Hoplopterus spinosus</i>	Plover	زقزاق بلدى	Rare				
<b>Family: Scolopacidae</b> <i>Tringa erythropus</i>	Red shank	طيوطى		Rare		Common	Common
<b>Order: Coraciformes</b> <b>Family: Alcedinidae</b> <i>Alcedo rudis</i>	King fisher	صيد السمك الابقع	Common				
<b>Family: Meropidae</b> <i>Merops apiaster</i>	Bee eater	السوروار الاوربي			Rare	Common	Common
<b>Order: Ciconiiformes</b> <b>Family: Ardeidae</b> <i>Ardea cinerea</i> <i>Ixobrychus minutus</i>	Gray heron Little Bittern	البلنسون الرمادى الواق	Uncommon Common	Common	Rare	Common	
<b>Order: Columbiformes</b> <b>Family: Columbidae</b> <i>Streptopelia turtur</i>	Turtle dove	القمرى				Common	Common
<b>Order: Cuculiformes</b> <b>Family: Cuculidae</b> <i>Centropus senegalensis</i>	Senegal cocal	المك	Common				
<b>Order: Podicipediformes</b> <b>Family: Podicipedidae</b> <i>Tachybatus ruficollis</i>	Little grebe	الغطاس	Common				

During the survey, a total of 9 species were recorded as a common winter visitors with high numbers i.e. gray wagtail, *Motacilla cinerea*. Northern Pochard, *Aythya ferina*. Teal, *Anas crecca* Wigeon, *Anas Penelope* Shoveler, *Anas clypeata* black-headed Gull, *Larus fuscus* Pied avocet, *Recurvirostra avosetta* Gray heron, *Ardea cinerea* and little Bittern, *Ixobrychus minutus*.

Most bird species were not detected during summer. However, four species occurred but with low population density, i.e. Coot, *Fulica atra*. Black-headed gull, *Larus fuscus* Pied avocet, *Recurvirostra avosetta* and bee eater, *Merops apiaster*.

On the other hand, twelve species were recorded as Autumn Passer with high density, i.e. swallows, *Hirundo rustica* Gray wagtail, *Motacilla cinerea*, common quail, *Coturnix coturnix* Northern Poachard, *Aythya ferina* teal, *Anas crecca* Wigeon, *Anas penelope* Shoveler, *Anas clypeata* little tern, *Sterna albifrons* redshank, *Tringa erythropus* Bee eater, *Merops apiaster*-little Bittern, *Ixobrychus minutus* and turtle dove, *Streptopelia turtur*.

The same twelve bird species were also noticed with high population in spring as common passer.

Four other species were recorded in few numbers as summer visitors i.e. coot, *Fulica atra*-black-headed Gull, *Larus fuscus*-Pied avocet, *Recurvirostra avosetta* and Bee-eater, *Merops apiaster*.

On the other hand, clamorous reed warbler, *Acrocephalus stentoreus* accidentally surveyed in few numbers. Also, data revealed that gray heron, *Ardea cinerea* was uncommon resident and was scarce in summer.

Burulus is one of Egypt's most important wetland for wintering waterfowl, holding a total of 98.887 in winter 1989/90 (Meininger & Atta, 1994), which represents the second largest concentration recorded in Egypt that winter. The lake supports the largest number of some wintering water fowl in the country including wigeon, northern shoveler, ferruginous duck, Northern Pochard, European coot and redshank.

Water bird catching is widely practiced on the lake in winter. Quail nets, shotguns and lime are used along the sandbar to catch thousands of migrants in the autumn (Baha El-Din, 1991).

Stanley and Warne (1993) mentioned that about 35 species of birds are known to breed at Burullus. The most prominent of these include: little Grebe, little Bittern, purple Gallinule, little tern, Kentish plover, spur-winged plover, common pratincole, Egyptian nightjar, pied king fisher, Senegal coucal and Clamorous reed warbler.

## REFERENCES

- Baha El-Din, M. (1991). Toward developing a biological resources management strategy for Egypt for the Egyptian Environmental Master Plan. Report to the International Co-Operation unit. EEAA.
- Baha El-Din, S.M. (1998). Towards establishing a network plan for protected areas in Egypt. Report to the Nature Conservation sector, EEAA.
- Bijlsma, R.G. (1987). Bottleneck areas for migratory birds in the Mediterranean region. ICBP study Report No. 18, Cambridge.

- Heinze, L.H.; Fitter, R. and Parslow, J. (1984). The birds of Britain and European with North Africa and the Middle East. Collins, 8 Garlton. St. London. W.
- Kassas, M. (1993). Habitat diversity: Egypt. Publication of National Biodiversity Unit No. 1
- Meininger, P.L. and Atta, G. (1994). Ornithological studies in Egyptian wetlands 1989/90. FORE-report No. 94-01, Netherlands.
- Reidinger, R.F. and J.L. Libay (1979). Perches coated with glue reduce bird damage in rice field plots. Proceeding Eighth Birth Control, Seminar, Bowling Green, Ohio. Nov., 201-206.
- Stanley, D.J. and Warne, A.G. (1993). Nile Delta: Recent geological evolution and human impact. Science. 260: 628-634.
- Van Pelt, M.J.F.; Molemaker, R.F.; Tuinhof, A.; Smidt, E.; Wintermans, G.I.M. and Spliethoff, P.C. (1992). Lake Burullus; ecology, economy and Nile water conservation, VOI. 1-3. Report for: Ministry of Public Work and Water Resources, EEAA and the Netherlands Government.
- Zahran, M.A. and Willis, A.J. (1992). The Vegetation of Egypt. Chapman & Hall, London.

### حصر لانواع الطيور المقيمة والزائرة لبحيرة البرلس بمحافظة كفرالشيخ عامى

٢٠٠٨/٢٠٠٩م

احمد محمود سليمان و محمد محمد مرتضى  
معهد بحوث وقاية النباتات - مركز البحوث الزراعية - الدقى - جيزة

تم اجراء حصر لانواع الطيور المقيمة والزائرة لبحيرة البرلس بمحافظة كفرالشيخ عامى ٢٠٠٨ ، ٢٠٠٩م.

واظهرت النتائج المتحصل عليها انه تم حصر ٢٤ طائر يتبع ١٧ عائلة ، ١٠ رتبه.

وكانت اهم انواع الطيور المقيمة داخل البحيرة هى دجاجة الماء ، الدجاج السلطانى ، الخرشنه ، صياد السمك الابقع ، الواق ، المك ، الغطاس. بينما كانت اهم الطيور الزائرة فى فصل الشتاء ، ابو فصاد ، البط الغواص ، الشرشير ، الصواى ، الكيش ، النورس ذات الرأس السوداء ، النكات ، البلشون الرمادى ، الواق.

كما سجل ١٢ نوع من الطيور الزائرة فى فصل الخريف وهى عصفور الجنة ، ابو فصاده ، السمان ، البط الغواص ، الشرشير ، الصواى ، الكيش ، الخرشنه ، طيطويج، الوروار الاوروبى ، الواق ، القمرى.